

Yale Locks

Z-Wave Plus System Integrators Guide

Yale Real Living Assure Deadbolt and Interconnected Lock

YRD620/YRC620-ZW2

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Yale Z-Wave Plus Info

Manufacturer ID: Assa Abloy (0x0129)

Z-Wave Device Type: Door Lock Keypad

Z-Wave Role Type: Listening Sleeping Slave (LSS)

Product ID: 0x1200

Product Type ID:

0x800E – YRD620/YRC620-ZW2 (Touch Screen interface)

Supported Command Classes

Command Class Z-Wave Plus Info

Command Class Manufacturer Specific

Command Class Security

Command Class Device Reset Locally

Command Class Power Level

Command Class Version

Command Class Battery*

Command Class Door Lock*

Command Class Door Lock Logging*

Command Class Schedule Entry Lock*

Command Class User Code*

Command Class Time Parameters*

Command Class Time*

Command Class Association*

Command Class Association Group Info*

Command Class Notification*

Command Class Configuration*

Command Class Firmware Update Md*

* Command Class Requires Security

Association Table

Group ID	Maximum Nodes	Description	Commands
1	1	Lifeline	Command_Class_Battery, Battery_Report ; Command_Class_Notification, Notification_Report; Command_Class_Configuration, Configuration_Report; Command_Class_Device_reset_locally, Device_Reset_locally_notification

Notifications Table:

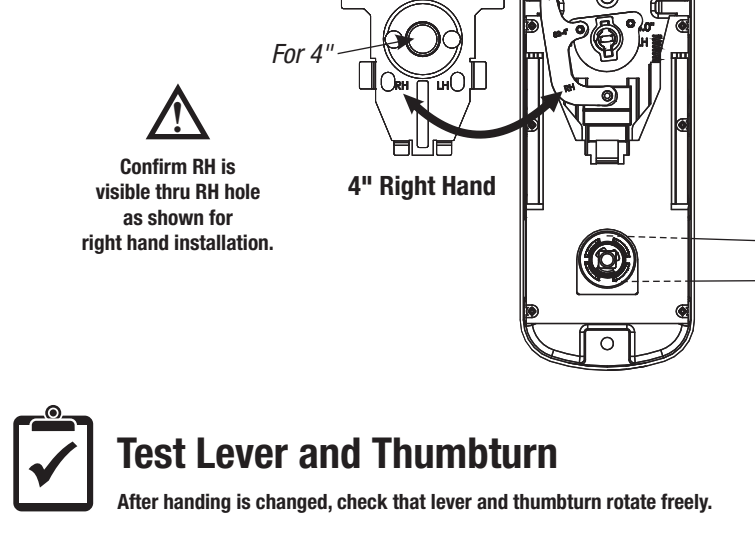
<u>Alarm Reports</u>	<u>Alarm type</u>	<u>Alarm Level (2Bytes)</u>	<u>Description</u>
Master Code changed.	0x70	0x0000	Master code was changed at keypad
		0xFB	Master code was changed over RF
User added		0x(0001-max users)	User added. Alarm level = user slot number
User deleted	0x21	0x(0001-max users)	User was deleted. Alarm level = user slot number
Tamper Alarm	0xA1	0x0001	keypad attempts exceed code entry limit
		0x0002	front escutcheon removed from main
Manual Unlock	0x16	0x0001	by key cylinder or inside thumb-turn
		0x0002	By Inside Button
RF Operate Unlock	0x19	0x0001	by RF module
Keypad Unlock	0x13	0x(0001-max users)	Where Alarm level represents user slot number
Manual Lock	0x15	0x0001	by key cylinder or inside thumb-turn
		0x0002	by one touch function (lock and leave)
		0x0003	By inside button
RF Operate Lock	0x18	0x0001	by RF module
Keypad Lock	0x12	0x (0001 – max users)	Where Alarm level represents user slot number
Deadbolt Jammed	0x09	0x0001	Deadbolt motor jammed Locking
		0x0002	Deadbolt motor jammed Unlocking
Lock Reset to Factory defaults	0x30	0x0000	lock was reset manually to factory defaults lock
		0x0001	was reset over RF with a value of 0x01;
		0x0002	was reset over RF with a value of 0x02; reserved for future use
Non Access	0x26	0x(0001-max users)	A Non Access Code was entered at the lock. Where alarm level represents user slot number
Low Battery Alarms	0xA9	0x(Current %)	Too Low to operate (Starting at 4.3V)
	0xA8	0x(Current %)	Critical Battery Level (Starting at 4.5V)
	0xA7	0x(Current %)	Low Battery (Starting at 4.8V)
Auto Lock Operate Locked	0x1B	0x0001	Auto re-lock cycle complete, locked.

Duplicate Pin-code error	0x71	0x (0001-max users)	Where Alarm level represents user slot number Alarm generated in response to add user RF cmd. This alarm is not generated when attempting to add duplicate pin at the keypad. The lock simply denies it and plays the “Denied”. Trying to duplicate the master code will result in a 0x71 0x00 alarm report.
RF Module Power Cycled	0x82	0x0001	Power to RFM was restored, sent by RF module. The lock doesn’t send any alarm to the RF module when power is cycled.
Disabled user entered at keypad	0x83	0x (0001-max users)	A disabled user pin code was entered at the keypad. Alarm Level represents user slot number.
Valid user but outside of schedule	0x84	0x (0001-max users)	A valid user can be both a normal user and a Non-Access user. If a non-access user is out of schedule this alarm will be sent instead of the non-access alarm. Alarm Level represents user slot number.
Daily Repeating Schedule Set	0x60	User ID	Daily Repeating Schedule(s) were Set (Erased/Set) for User ID specified in Alarm Level. If Alarm Level = 0xFFFF then all users were affected.
Daily Repeating Schedule Enabled/Disabled	0x61	User ID	Daily Repeating Schedule(s) were enabled/disabled for User ID specified in Alarm Level. If Alarm Level = 0xFFFF then all users were affected.
Year Day Schedule Set	0x62	User ID	Year Day Schedule(s) were Set (Erased/Set) for User ID specified in Alarm Level. If Alarm Level = 0xFFFF then all users were affected.
Year Day Schedule Enabled/Disabled	0x63	User ID	Year Day Schedule(s) were Enabled/Disabled for User ID specified in Alarm Level. If Alarm Level = 0xFFFF then all users were affected.
All Schedule Types Set	0x64	User ID	All Schedule Types were Set (erased/set) for User ID specified in Alarm Level. If Alarm Level = 0xFFFF then all users were affected.
All Schedule Types Enabled/Disabled	0x65	User ID	All Schedule types were enabled/disabled for User ID specified in Alarm Level. If Alarm Level = 0xFFFF then all users were affected.

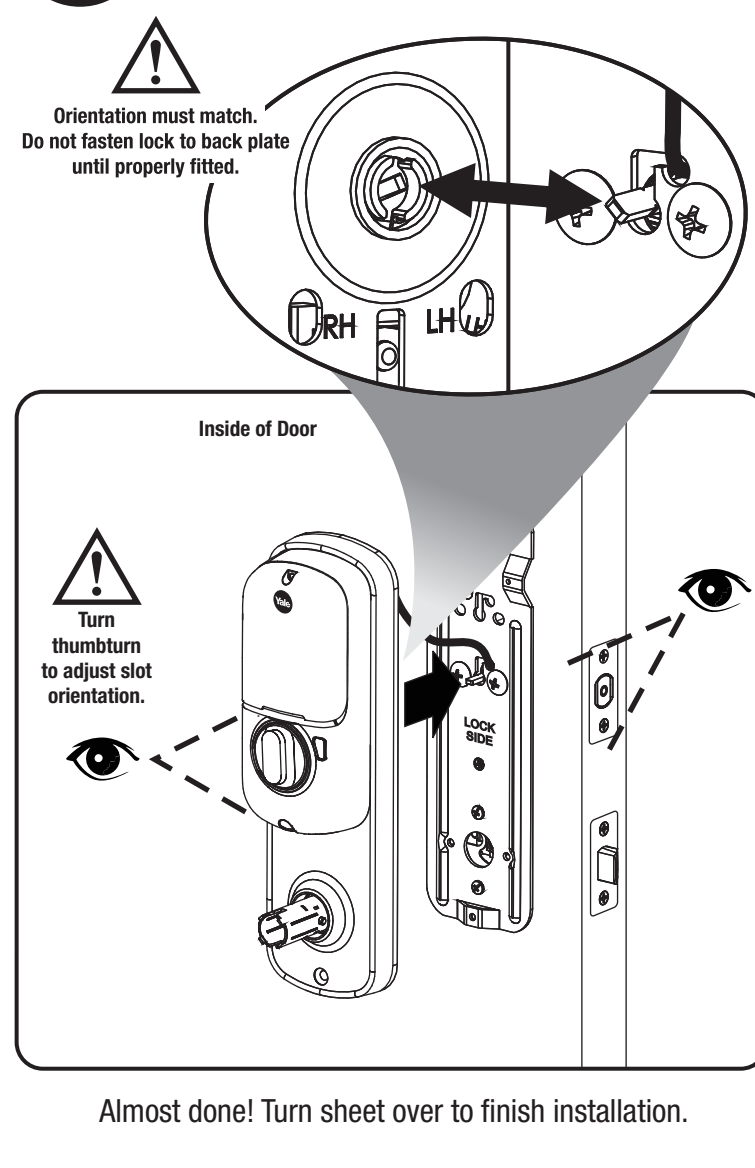
** - The Yale lock also supports a 3rd low battery alarm, too low to operate. This alarm is sent out as a Battery Report (with value = 0xFF) through the Battery Command Class. This is the last low battery alarm level before the product stops functioning.

Configurable Parameters

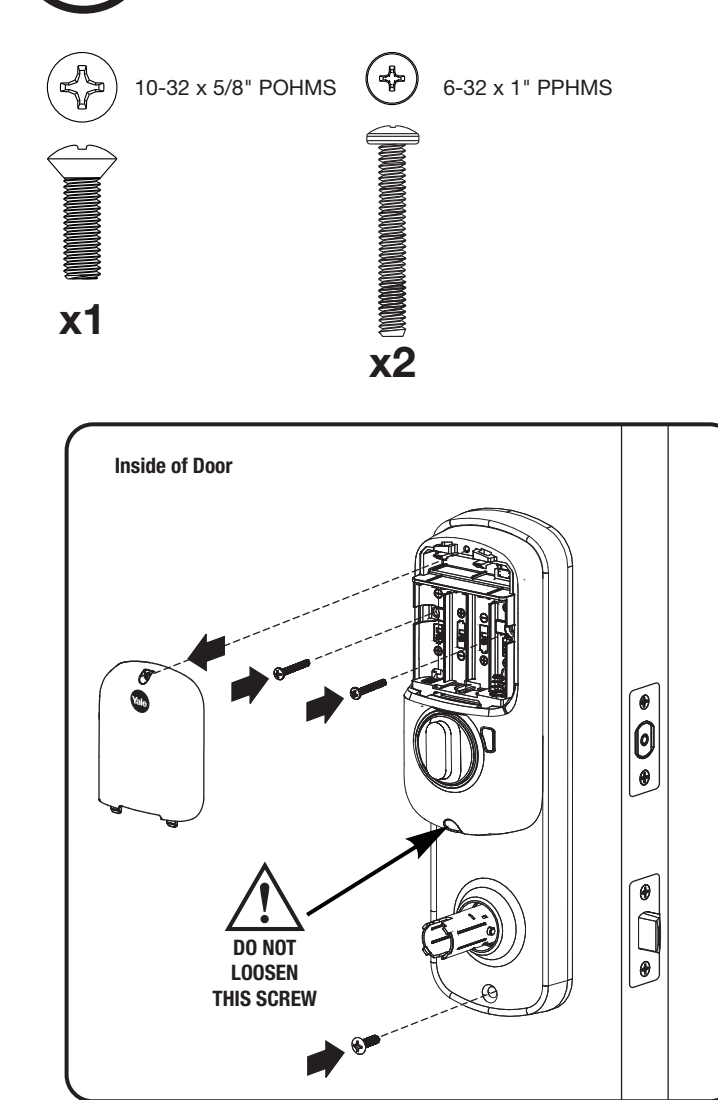
<u>Configuration Parameters</u>	<u>Parameter Number</u>	<u>Size</u>	<u>Description</u>
Silent mode on/off	1	1 byte	Level control, 1 = High Volume, 2 = Low Volume, 3 = Silent. Default is 1 or High Volume
Auto Relock on/off	2	1 byte	0x00 = OFF, 0xFF = ON default is 0x00 or OFF
Auto Relock time	3	1 byte	10 to 180 seconds default is 30 seconds
Wrong Code Entry Limit	4	1 byte	3 to 10 default is 5 times
Language	5	1 byte	1=English, 2=Spanish, 3=French default is 1= English
Shut down time (after wrong code entries)	7	1 byte	10 to 180 seconds default is 60 seconds
operating mode	8	1 byte	00 = normal mode (this is the default mode) 01 = vacation mode, keypad lockout 02 = privacy mode, no keypad. RF Unlock will work
One Touch Locking	11	1 byte	0x00 = OFF, 0xFF = ON default is 0xFF or ON.
Privacy Button	12	1 byte	0x00 = OFF, 0xFF = ON default is 0x00 or OFF
Lock Status LED	13	1 byte	0x00 = OFF, 0xFF = ON default is 0xFF or ON.
Reset To Factory Defaults	15	1 byte	01 = Lock will execute Reset To Factory. No default value
Escape Return Mode	16	1 byte	0x00 = OFF, 0xFF = ON default is 0x00 or OFF Enables the Escape Return mode of operation for the lock.
Eco Mode on/off	21	1 byte	0x00 = OFF, 0xFF = ON default is 0x00 or OFF If supported switches lock to lower power mode of operation with reduced sound and led brightness.



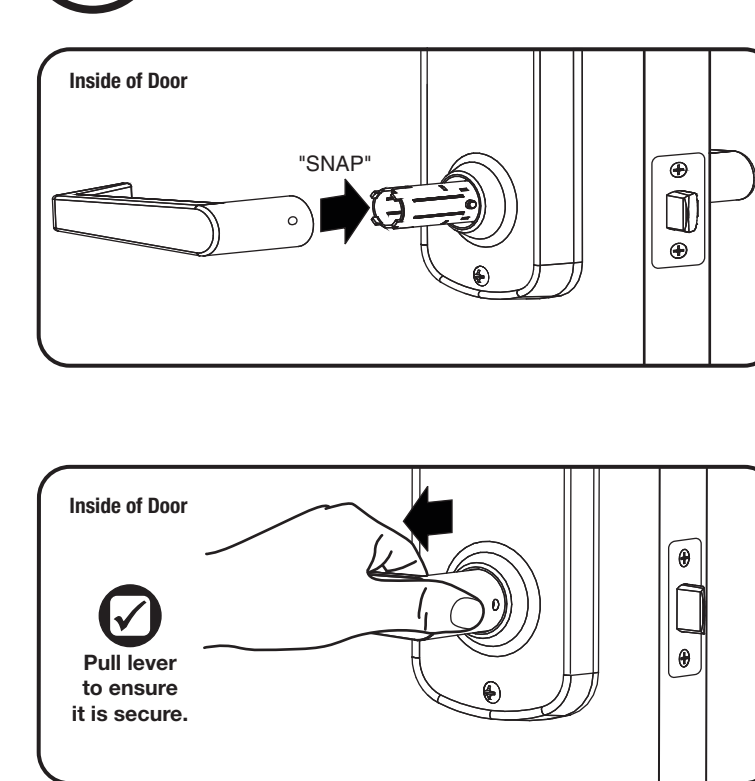
11 Installing Interior Lock



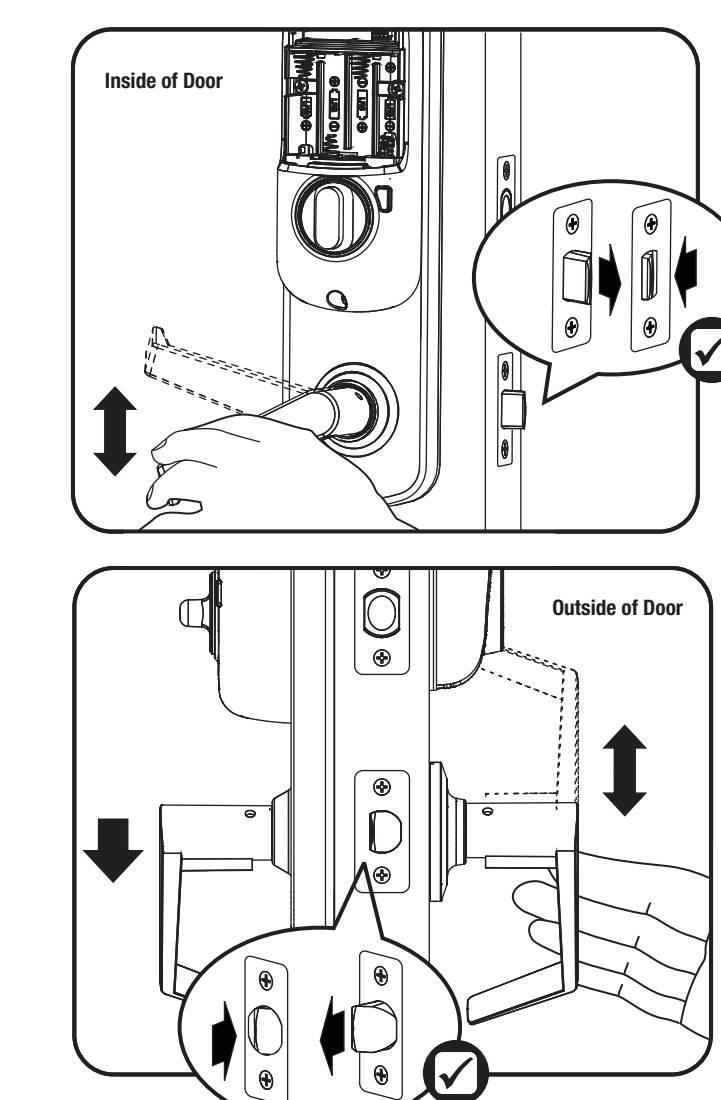
11 Installing Interior Lock continued



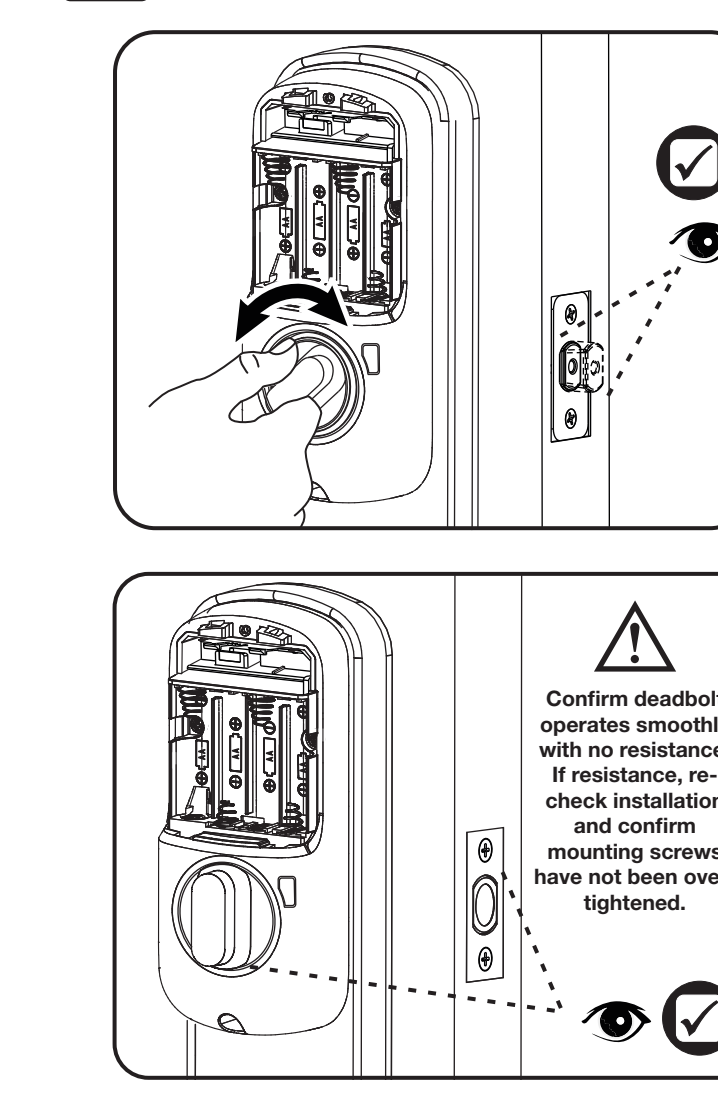
12 Installing Interior Lever



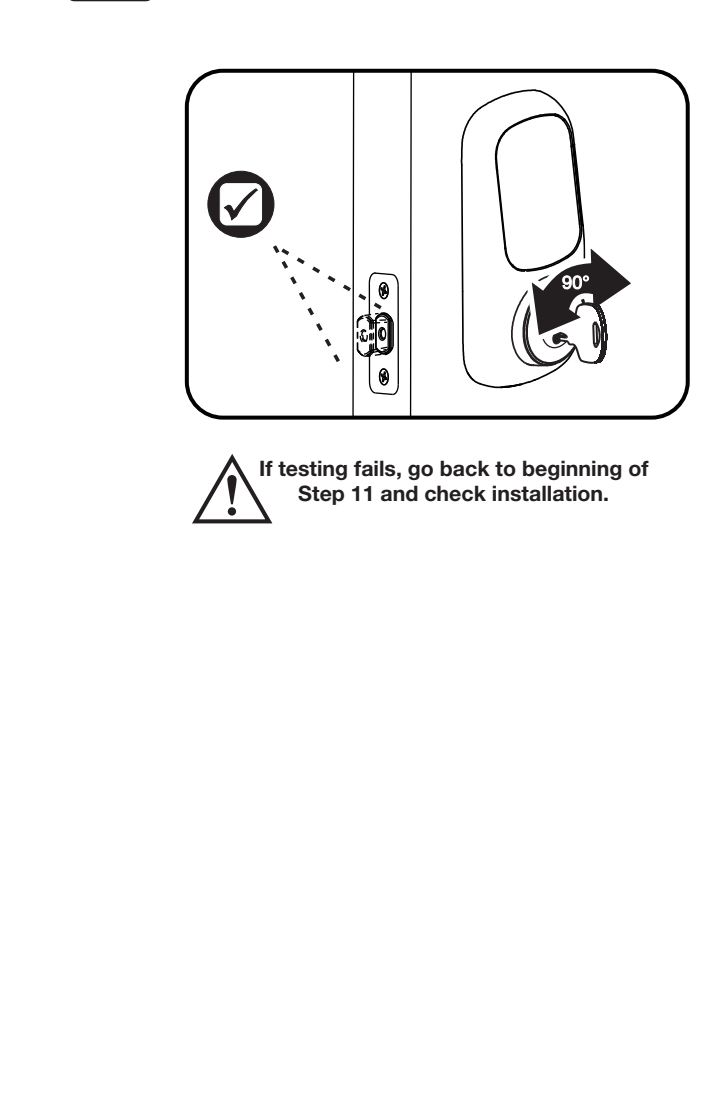
Testing Final Latchbolt Operation



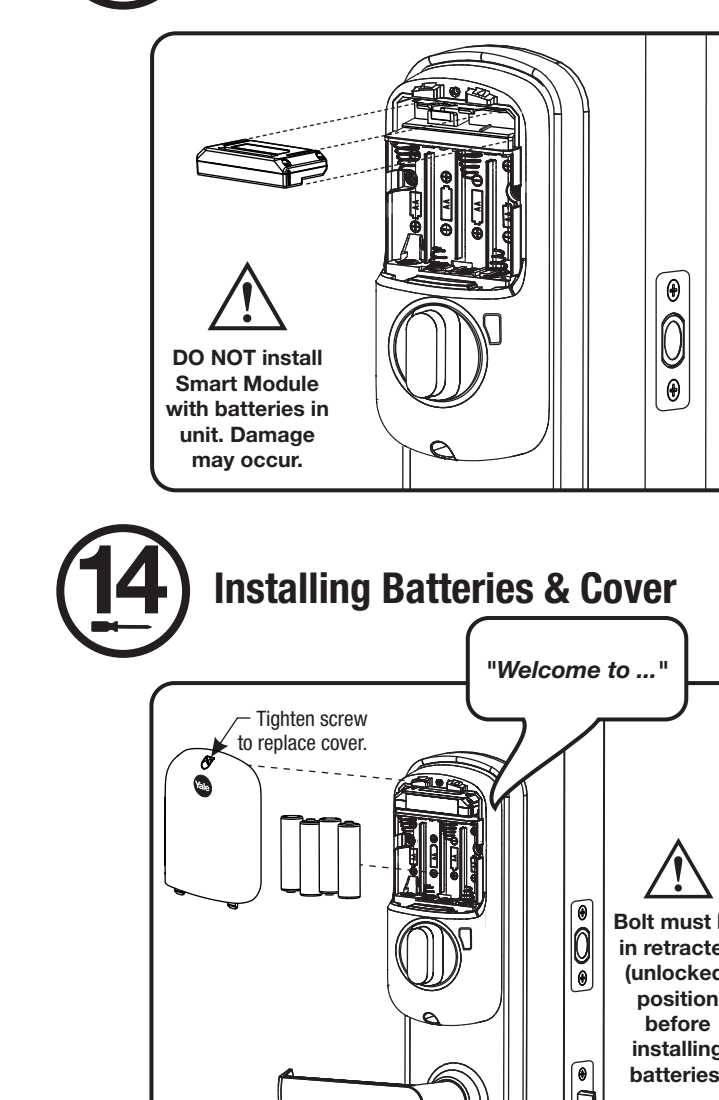
Testing Final Deadbolt Operation



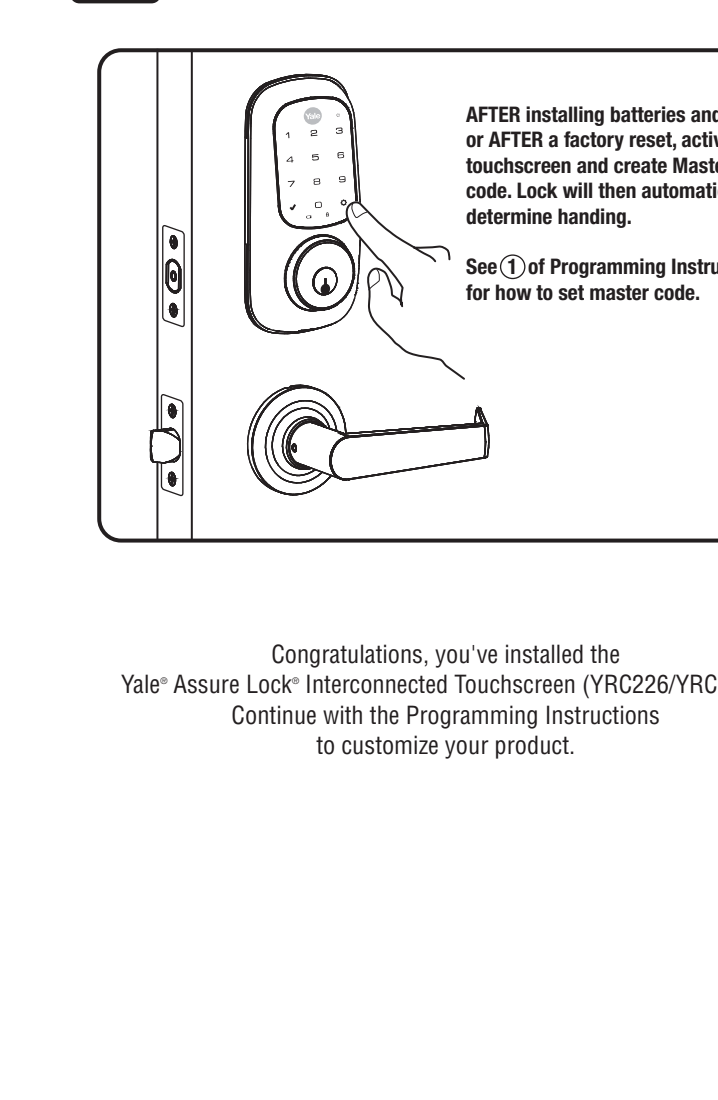
Testing Final Deadbolt Operation



13 Installing Optional Smart Module



Handing the Lock



Hardware Troubleshooting

Cycle lock in both the locked and unlocked positions. If problems are found:

Bolt will not extend and lock jam alarm occurs

- Confirm manual operation.
- Enter your Master PIN code.
- With the bolt retracted, press menu Option 3 for Advanced Lock Settings.
- Press Option 5 to rehand the lock.
- Test the operation; locking the door via the keypad.

Door is binding

- Check that door and frame are properly aligned and door is free swinging.
- Check hinges: They should not be loose or have excessive wear on knuckles.

Bolt will not deadlock

- Check for sufficient clearance of the bolt within the strike-side jamb. Correct this by increasing the depth of the pocket for the bolt.
- Check for misalignment of bolt and/or strike which may be preventing bolt from properly entering the strike. With the door open, extend and retract the bolt; if it is smooth, check the strike alignment.

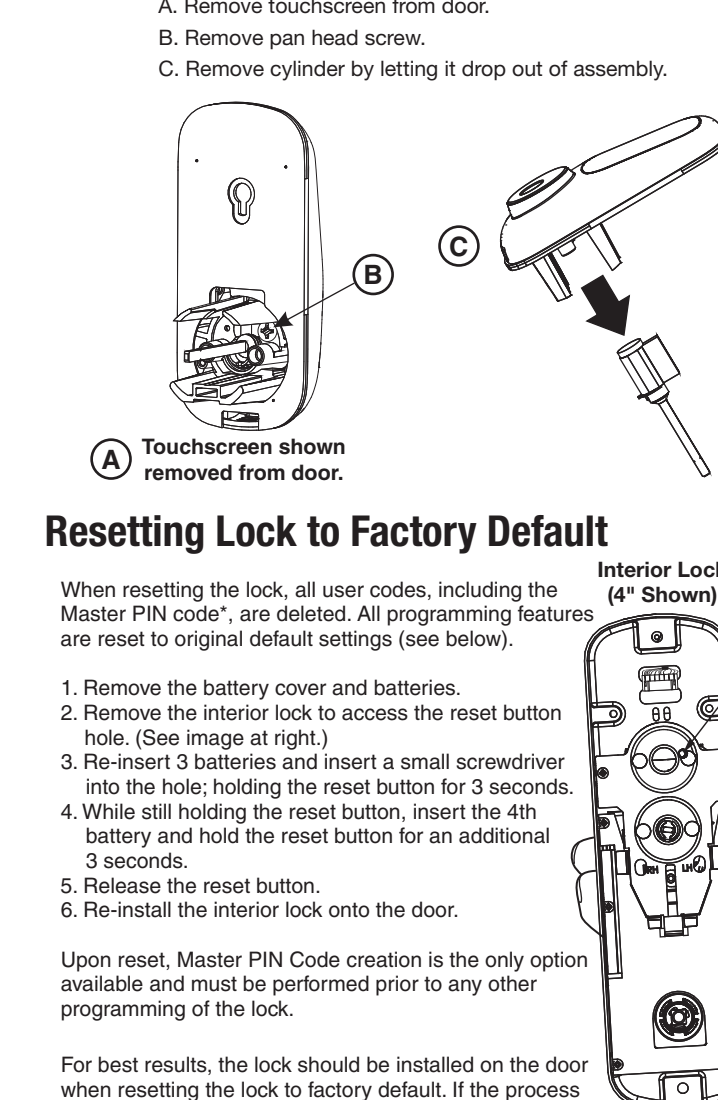
Bolt does not extend or retract smoothly

- Bolt and strike are misaligned, see above.
- Check the backset of door relative to adjustments already made to bolt.
- Verify proper door preparation and re-bore holes that are too small or misaligned.
- Verify keypad wire harness is routed properly (see Step 10).
- Verify bolt is installed with correct side up (see Step 6).

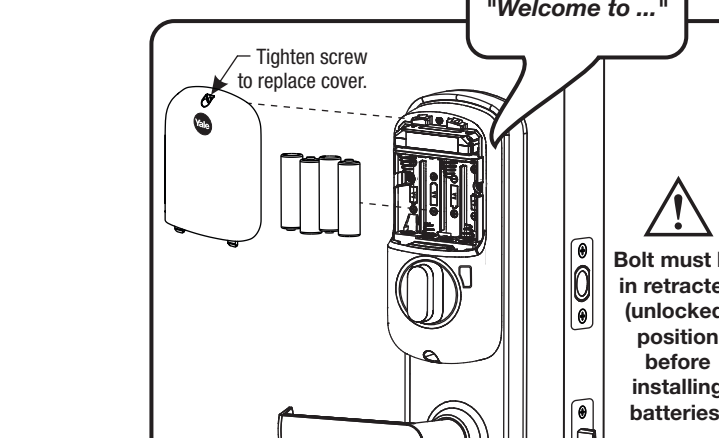
Touchscreen numerics are scrolling

Remove interior lock and check to ensure that the wire harness is routed properly (see Step 10).

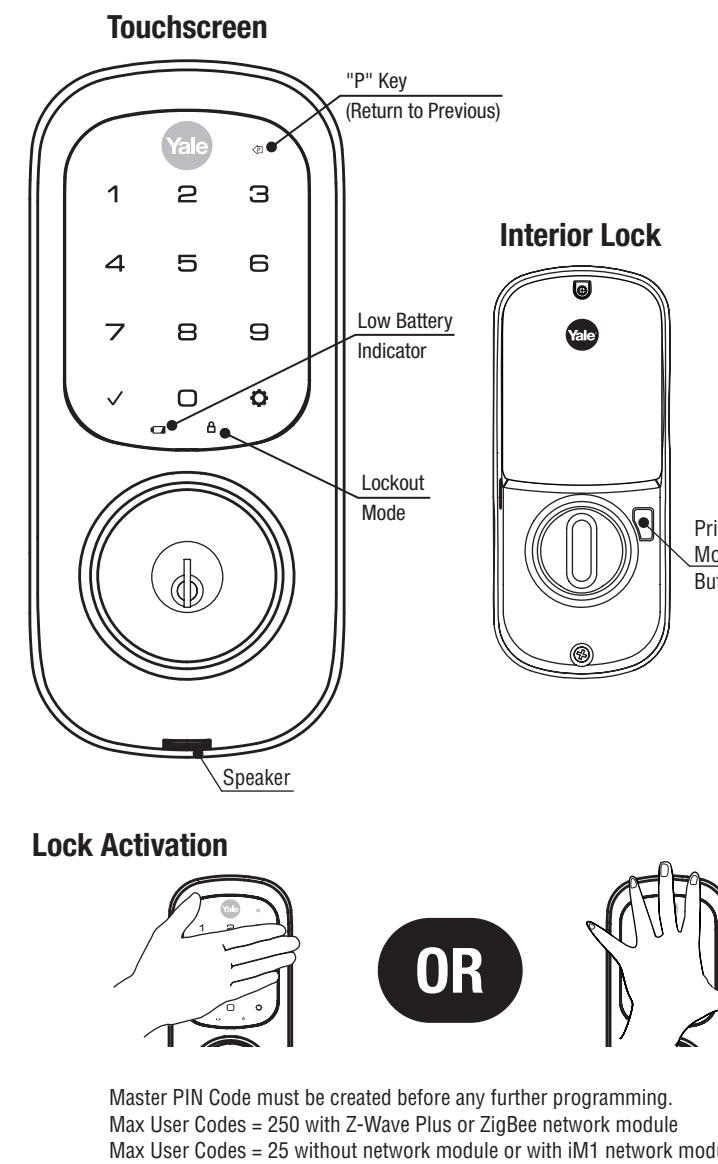
Changing Lock: Replacing Cylinder



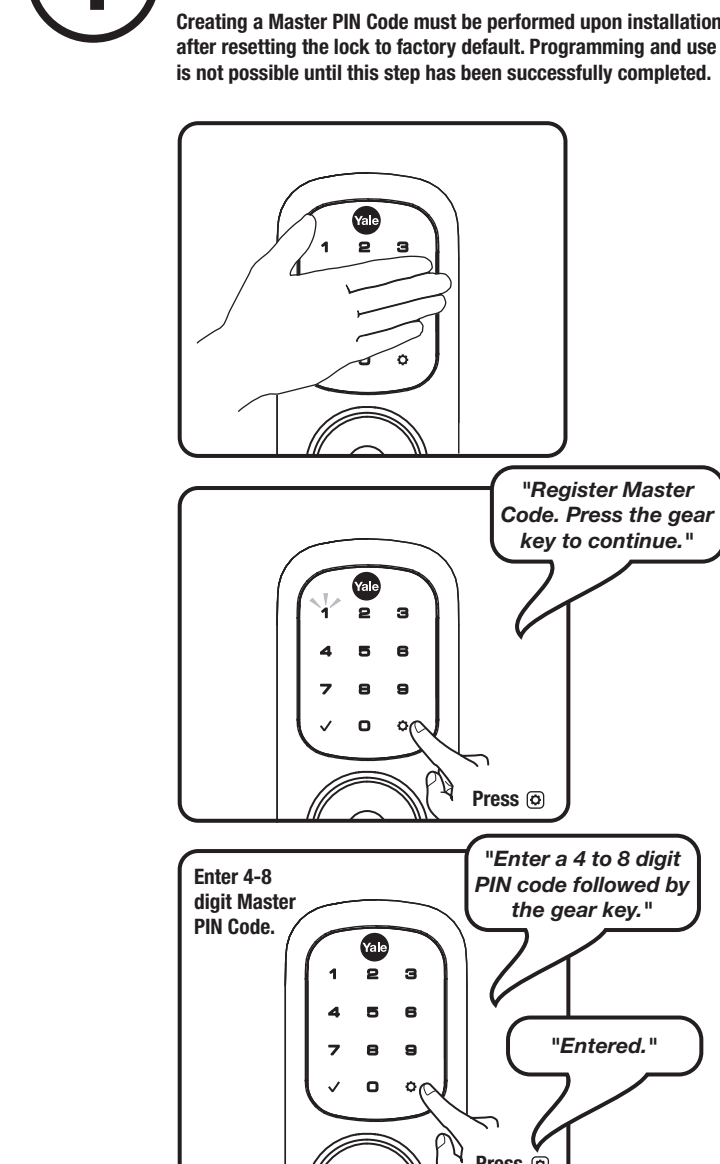
14 Installing Batteries & Cover



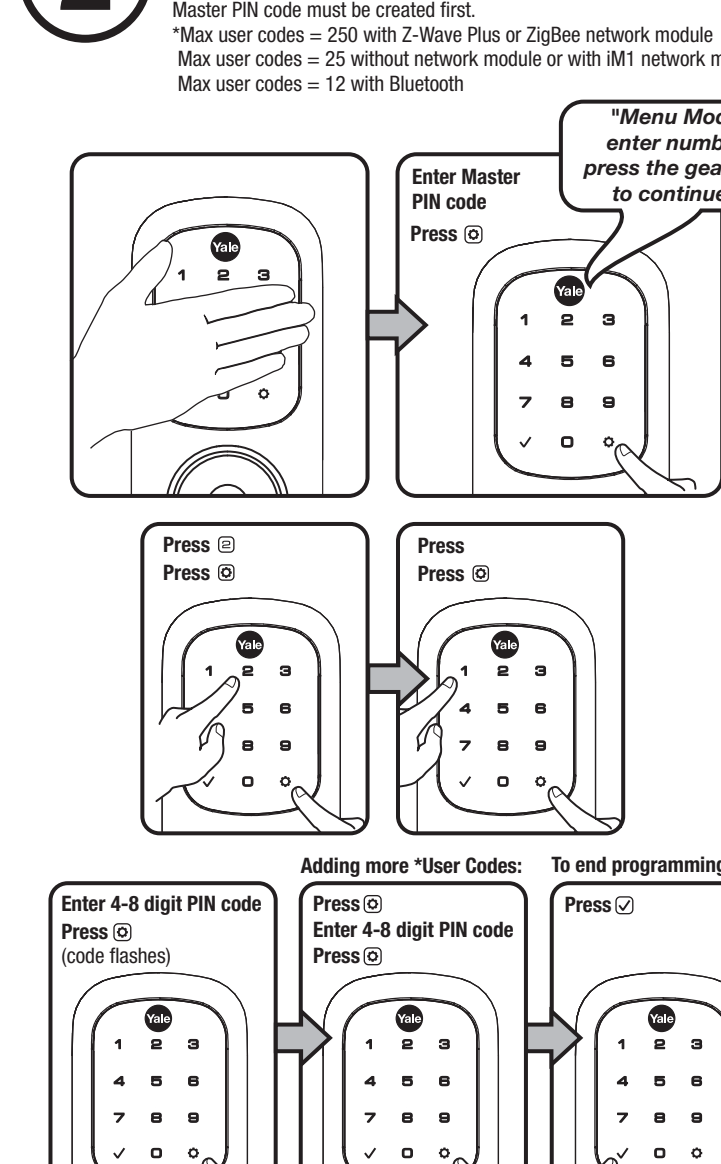
Programming Instructions



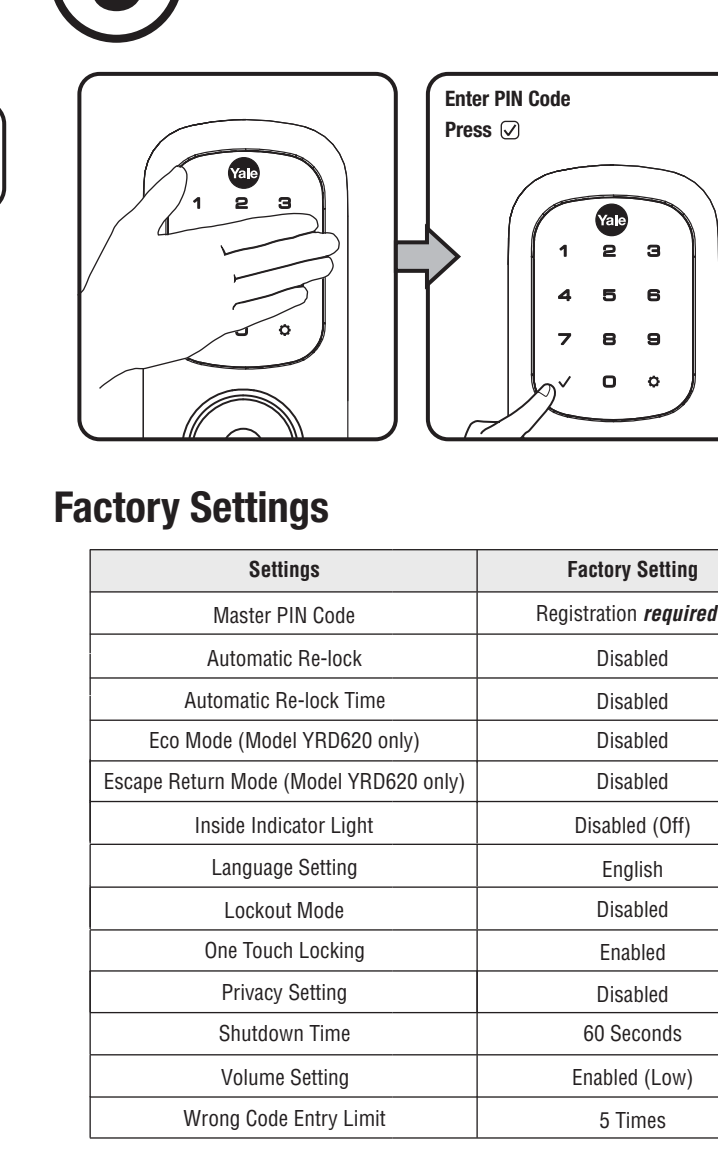
1 Creating Master PIN Code



2 Creating User PIN Codes



3 Unlocking Door with PIN Code



Definitions

All Code Lockout Mode: This feature is enabled by the Master code. When enabled, it restricts all user (except Master) PIN code access. When attempting to enter a code while the unit is in Lockout, the RED locked padlock will appear on the screen.

One Touch Locking: When the latch is retracted, activating the keypad will extend the latch (during Automatic Re-lock duration or when Automatic Re-lock is disabled). When One-Touch Re-lock is **not** in use (**disabled**), any valid PIN code will re-lock the lock.

Previous: While in Menu Mode, pressing this icon cancels the current operation and returns the user to the previous step.

Eco Mode: This feature puts the lock in a lower power mode to save battery life.

Escape Return Mode: To easily come and go without the door locking, disable Auto Re-lock functionality by enabling Escape Return.

Handing the Lock: Lock handing refers to which direction the bolt comes out of the door (right or left). If lock was programmed off the door, the lock may need adjusting. Review Handing the Lock instructions and/or Re-Handing instructions listed in Hardware Troubleshooting.

Language Setting Mode: Choosing English (1), Spanish (2) or French (3) becomes the (default) setting for the lock's voice prompts.

Low Battery: When battery power is low, the Low Battery Warning indicator flashes RED. If battery power is completely lost, use the cylinder key override.

Master PIN Code: The Master PIN code is used for programming and for feature settings. It must be created prior to programming the lock. The Master code will also operate (unlock/lock) the lock.

Network Module Setting: With the optional Network Module installed, this setting becomes available thru the Main Menu (7) and allows the lock to connect with a network controller.

Privacy Mode: Privacy mode is disabled by default. Enable Privacy Mode by pressing the privacy button for 4 seconds to put the lock in do-not-disturb mode (all pin codes are disabled).

SEOS Card: SEOS is a technology to securely manage and authenticate identities.

Shutdown Time: The unit will shutdown (flashing RED) for sixty (60) seconds and not allow operation after the wrong code entry limit (5 attempts) has been met.

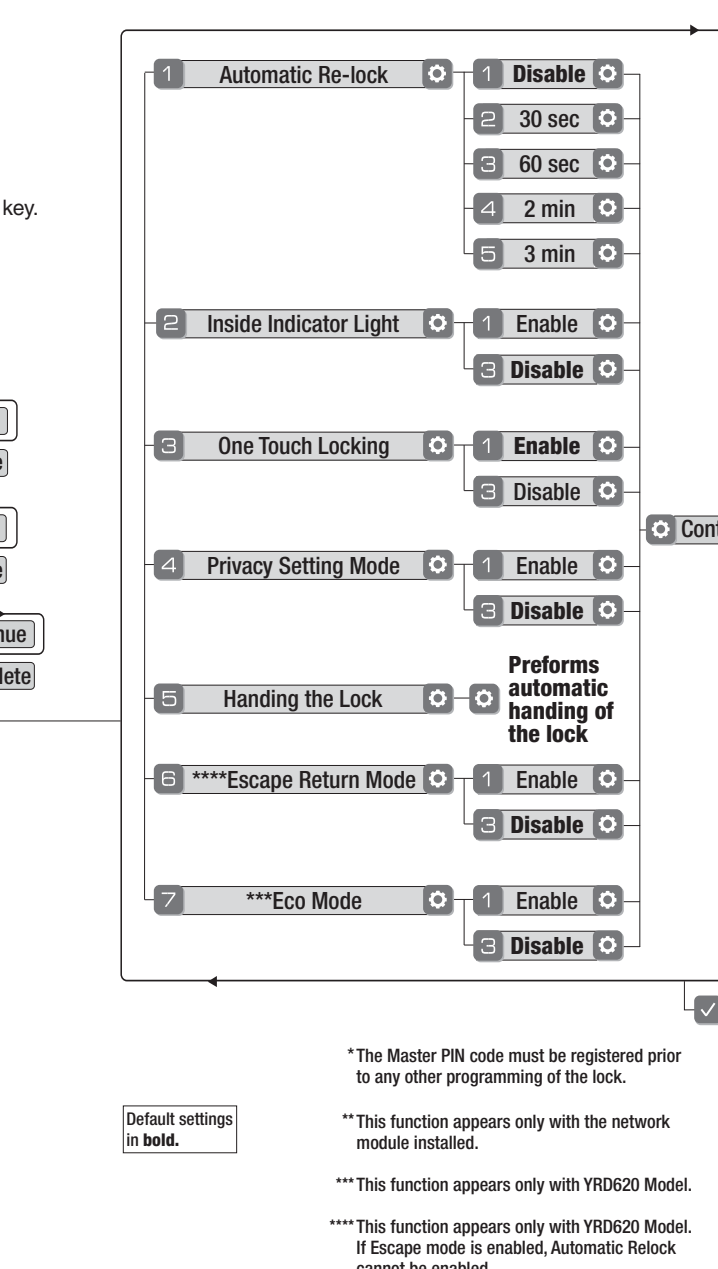
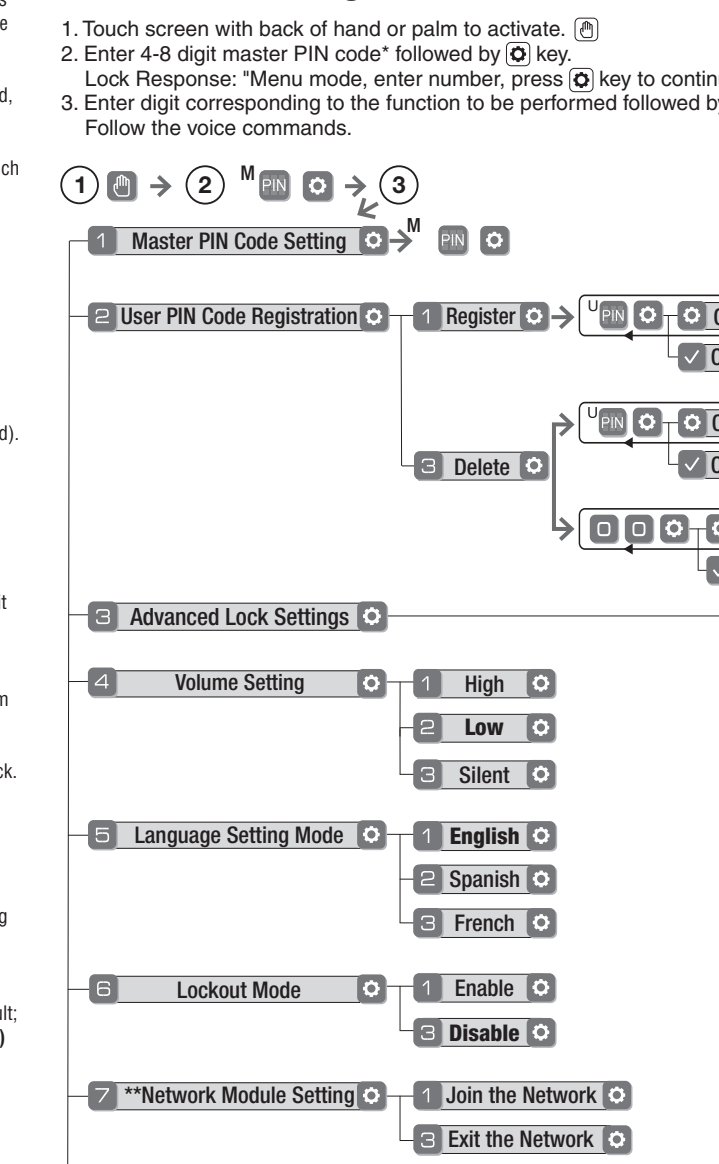
Tamper Alert: Audible alarm sounds if attempting to forcibly remove outside lock from door.

User PIN Code: The user code operates the lock. The maximum number of user codes with Z-Wave Plus or ZigBee network module is 250; without network module or with iM1 network module, maximum is 25; with Bluetooth, maximum is 12. Note: When deleting user pin code(s), screen will display user pin code being deleted.

Volume Setting Mode: The volume setting for PIN code verification is set to **Low (2)** by default; otherwise it can be set to **High (1)** or **Silent (3)** for quiet areas.

Wrong Code Entry Limit: After five (5) unsuccessful attempts at entering a valid PIN code, the unit will shut down and not allow operation for sixty (60) seconds.

Feature Programming Through Menu Mode Using Master PIN code*



Programming Troubleshooting

Symptom	Suggested Action
Lock does not respond – door is open and accessible.	- Touchscreen becomes active when pressed w/whole hand. Use a larger area of the hand or fingers and verify contact with at least 3 areas. - If touchscreen numbers are visible, check to see if they respond when pressed. - Check batteries are installed and oriented correctly (polarity) in the battery case. - Check batteries are in good condition; replace batteries* if discharged. - Check to see if touchscreen harness is fully connected and not pinched.
Lock does not respond – door is locked and inaccessible.	- Batteries may be completely discharged. - Use mechanical key to gain entry and replace batteries*.
Unit is on for a while then shows no reaction. Lights dim.	Batteries do not have enough power. Replace batteries*.
Unit chimes to indicate code acceptance, but the door will not open.	- Check the door gaps for any foreign objects between door and frame. - Check that the wire harness is firmly connected to the PCB.
Unit operates to allow access, but will not automatically re-lock.	- Check to see if Auto Re-lock Mode is enabled. - Disable Auto Re-lock Mode to lock the door (automatically). - If low battery indicator is lit (see below), change batteries*.
PIN codes will not register.	- PIN codes must consist of 4 to 8 digits to register. - The same PIN code cannot be used for multiple users. - Registration/management of PIN codes is set by the authority of the Master Code, which is set first. - Contact the Master user. - User codes must be entered within 5 seconds (while touchscreen is active) or process will have to be restarted. - Check (Z) or gear (G) cannot be used as part of the PIN code.
Upon entering a PIN code and pressing (Z) key, the red padlock icon appears and there are different tones.	- Lockout Mode is enabled. - Only the Master can enable/disable Lockout Mode. - Contact the Master user.
The unit operates, but it makes no sound.	Check to see if Silent Mode is enabled (see Feature #4).
The unit responds	This is the alert to replace the batteries. Replace all four (4) batteries* with new AA Alkaline batteries.
Upon entering a PIN code and pressing the (Z) key, the unit responds "Wrong number of digits".	The digits entered were incorrect or incomplete. Re-enter the correct code followed by the check (Z) key.

CCC:
Class B Equipment
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

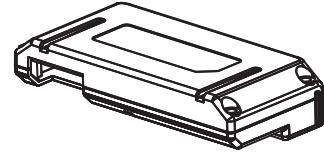
Warning: Changes or modifications to this device, not expressly approved by ASSA ABLOY Residential Group could void the user's authority to operate the equipment.

Industry Canada:
This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.
Cet appareil numérique de la classe A répond à toutes les exigences de l'interférence canadienne causant des règlements d'équipement.

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Please use this procedure only when network primary controller is missing or otherwise inoperable.

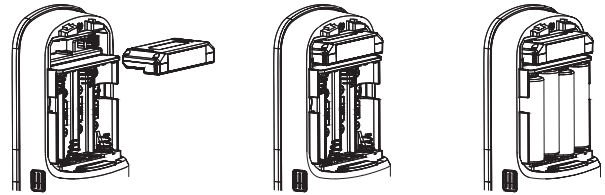


Adding a Yale Z-Wave® Plus Smart Module to your Assure Lock & Z-Wave System

1. Install the Yale Smart Module into the slot above the battery compartment

IMPORTANT: The batteries must be removed before removing the Yale Smart Module:

- Remove battery cover
- Remove batteries
- Insert or remove Yale Smart Module
- Reinstall batteries
- Reinstall battery cover



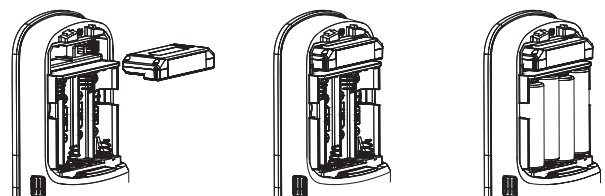
2. Open the Z-Wave system's smart home or alarm app on your smartphone or tablet
3. Follow the in-app instructions for adding a new device
4. On your lock keypad, enter your master entry code followed by the  icon
5. Press the 7 key followed by the  icon
6. Press the 1 key followed by the  icon

Removing a Yale Z-Wave® Plus Smart Module from your Assure Lock & Z-Wave System

1. On your lock keypad, enter your master entry code followed by the  icon
2. Press the 7 key followed by the  icon
3. Press the 3 key followed by the  icon
4. Open the Z-Wave system's smart home or alarm app and follow the instructions for removing a device
5. Remove the Yale Smart Module from the slot above the battery compartment

IMPORTANT: The batteries must be removed before removing the Yale Smart Module:

- Remove battery cover
- Remove batteries
- Insert or remove Yale Smart Module
- Reinstall batteries
- Reinstall battery cover



6. If you're adding a new Yale Smart Module, follow the instructions included with it



Warning: Changes or modifications to this device, not expressly approved by ASSA ABLOY Residential Group could void the user's authority to operate the equipment.

This device is a security enabled Z-Wave Plus product that is able to use encrypted Z-Wave Plus messages to communicate to other security enabled Z-Wave Plus products. This device must be used in conjunction with a Security Enabled Z-Wave Controller in order to fully utilize all implemented functions. This product can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

FCC:

Contain FCC ID: U4A-YRHCPZW0FM

Model: YRMZW2-US

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS.

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Industry Canada:

Contain IC: 6982A-YRHCPZW0FM

Model: YRMZW2-US

Section 7.1.2 of RSS-GEN Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain

should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

En vertu des règlements d'Industrie Canada, cet émetteur radio ne peut fonctionner avec une antenne d'un type et un maximum (ou moins) approuvés pour gagner de l'émetteur par Industrie Canada. Pour réduire le risque d'interférence aux autres utilisateurs, le type d'antenne et son gain doivent être choisies de façon que la puissance isotrope rayonnée équivalente (PIRE) ne dépasse pas ce qui est nécessaire pour une communication réussie.

Section 7.1.3 of RSS-GEN This Device complies with Industry Canada License-exempt RSS standard(s). Operation is subject to the following two conditions: 1) this device may not cause interference, and 2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme avec Industrie Canada RSS standard exemptes de licence(s). Son fonctionnement est soumis aux deux conditions suivantes: 1) ce dispositif ne peut causer des interférences, et 2) cet appareil doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement du dispositif.

This radio transmitter 6982A-YRHCPZW0FM has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio 6982A-YRHCPZW0FM a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

CAN ICES-3B/NMB-3B

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