

Yale Locks

Z-Wave Plus System Integrators Guide

Yale Real Living Assure Deadbolt and Interconnected Lock

YRD620/YRC620-ZW2

Contents

Yale Z-Wave Plus Info..... 3

Supported Command Classes 3

Association Table 3

Notifications Table 4

Configurable Parameters 5

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.

The diagram illustrates the components of the Yale YRD216 keypad lock. It is divided into two main sections: the Exterior Escutcheon and the Interior Escutcheon.

Exterior Escutcheon: This is the front-facing keypad. It features a 12-button numeric keypad (0-9) arranged in a 4x3 grid. Above the keypad is a small circular "P" key. Below the keypad is a checkmark icon, a square icon, and a gear icon. At the bottom of the keypad is a small "B" icon. Below the keypad is a circular lock cylinder. At the very bottom of the exterior escutcheon is a speaker grille.

Interior Escutcheon: This is the back-facing plate. It features a small circular "P" key at the top. Below it is a small square icon. At the bottom of the interior escutcheon is a circular lock cylinder. To the right of the lock cylinder is a small square button labeled "Privacy Mode Button".

Labels and Callouts:

- "P" Key (Return to Previous)
- Low Battery Indicator
- Lockout Mode
- Privacy Mode Button
- Speaker

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.

A line drawing of a hand pressing the 'Vale' button on the control panel. The panel has a 'Vale' button at the top, followed by buttons labeled '1', '2', and '3'. Below these are buttons labeled 'A' and 'O'. The hand is shown pressing the 'Vale' button.

Enter 4-8 digit Master PIN Code.

"Enter a 4 to 8 digit PIN code followed by the gear key."

"Registered."

Press 

Enter Master PIN code

Press 0

press the gear key to continue.

The diagram illustrates the three-step process for entering a PIN code on a Yale lock:

- Press **
Press 
- Press **
Press 
- Enter 4-8 digit PIN code**
Press 
(code flashes)

Enter PIN Code
Press ☒

[illegible]

Diagram illustrating the interior of the mobile phone. A hand is shown pressing the **Reset Button**. A **CABLE HOOK** is also indicated.

Upon reset, Master PIN Code creation is the only option available and must be performed prior to any other programming of the lock.

Settings	Factory Setting
Master PIN Code	Registration <i>required*</i>
Automatic Re-lock	Disabled
Automatic Re-lock Time	30 Seconds
Eco Mode (Model YRD620 only)	Disabled
Escape Return Mode (Model YRD620 only)	Disabled
Inside Indicator Light	Disabled (Off)
Language Setting	English
Lockout Mode	Disabled
One Touch Locking	Enabled
Privacy Setting	Disabled
Shutdown Time	60 Seconds
Volume Setting	Enabled (Low)
Wrong Code Entry Limit	5 Times

***The Master PIN code must be registered prior to any other programming of the lock.**

The flowchart illustrates the PIN Code Management Process, starting with 'Master PIN Code Setting' (Step 1) and 'User PIN Code Registration' (Step 2). From 'User PIN Code Registration', the process branches into three options: '1 Register', '3 Delete', and '4 Cancel'. The '1 Register' path leads to a 'U PIN' input screen, followed by 'Continue' and 'Complete' screens. The '3 Delete' path leads to a 'U PIN' input screen, followed by 'Continue' and 'Complete' screens. The '4 Cancel' path leads to a screen with three empty boxes, followed by 'Continue' and 'Complete' screens. The process concludes with 'PIN' and 'Settings' icons.

The screenshot shows the 'Settings' menu with two main options: 'Volume Setting' (labeled 4) and 'Language Setting Mode' (labeled 5). 'Volume Setting' has three sub-options: 'High' (1), 'Low' (2), and 'Silent' (3). 'Language Setting Mode' has three sub-options: 'English' (1), 'Spanish' (2), and 'French' (3). Each option has a gear icon to its right.

```

graph LR
    7[7 **Network Module Setting ⚙️] --> 1[1 Join the Network ⚙️]
    7 --> 3[3 Exit the Network ⚙️]

```

Exit the Network

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 (✓) or gear (⚙) cannot be used as part of the PIN code.
Upon entering a PIN code and pressing (✓) key, the unit displays 'invalid code' error or lock times out with out responding.	• Lockout Mode is enabled. • Only the Master can enable/disable Lockout Mode. • Contact the Master user.
Upon entering a PIN code and pressing the (✓) key, the red padlock icon appears and there are different tones.	• Check to see if the lock is set to Lockout Mode. • Setting/managing Lockout Mode is done through Master Code only. 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 'Low Battery'	• 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 (✓) key, the unit responds 'Wrong number of digits'.	• The digits entered were incorrect or incomplete. Re-enter the correct code followed by the check (✓) key.

** Network Module locks only

Door is binding

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

Bolt will not deadlock

- a. Check for sufficient clearance of the bolt within the strike-side jamb. Correct this by increasing the depth of the pocket for the bolt.
- b. 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

- a. Bolt and strike are misaligned; see above.
- b. Check the basket of door relative to adjustments already made to bolt.
- c. Verify proper door preparation and re-bore holes that are too small or misaligned.
- d. Verify keypad wire harness is routed under the bolt (see Fig. A).
- e. Verify bolt is installed with correct side up (Fig. A).

Figure A

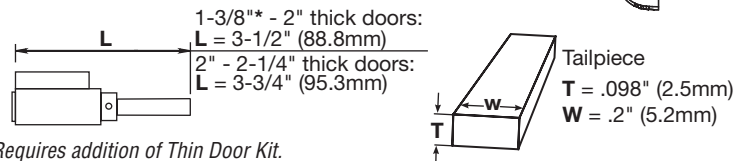
The diagram shows a cross-section of a door lock assembly. A horizontal bolt is shown extending from the door into a strike on the frame. A keypad wire harness is shown entering from the bottom right, passing under the bolt, and then connecting to the lock mechanism. The diagram is labeled 'Figure A'.

Keypad numerics are scrolling

Remove interior escutcheon and check to ensure that the wire harness lies flat against the back recessed area and is properly routed along the side of the escutcheon and tucked under the plastic cable guide.

1. To Remove cylinder:
 - A. Remove outside escutcheon from door.
 - B. Remove rubber gasket.
 - C. Insert small flathead screwdriver under spring.
Gently lift spring. **Note:** Notch on top of cylinder engages spring.
 - D. Remove cylinder by pulling outward towards outside of door.

2. To install new cylinder.
 - A. Reverse previous steps for removing cylinder.



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

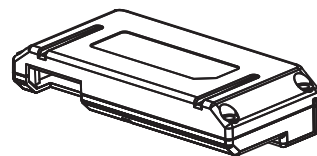
Product Support Tel 1-855-213-5841 • www.yalehome.com

Yale®, Yale Real Living® and Assure Lock® are registered trademarks of ASSA ABLOY Residential Group. Other products' brand names may be trademarks or registered trademarks of their respective owners and are mentioned for reference purposes only.
© Copyright 2019. All rights reserved. Reproduction in whole or in part without the express written permission of ASSA ABLOY Residential Group is prohibited.



Yale® Z-Wave® Plus Smart Module Installation Guide

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

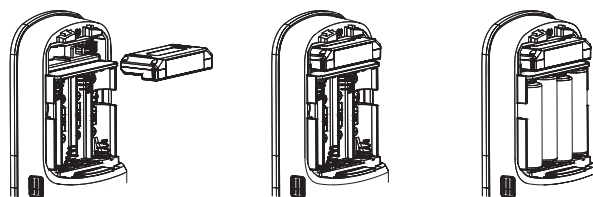


Adding a Yale Z-Wave® Plus Smart Module to your Assure Lock & Z-Wave System

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



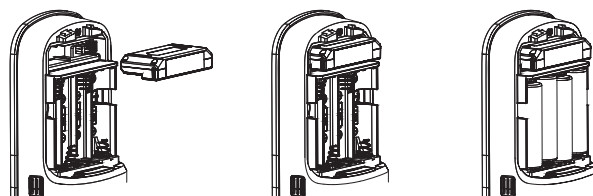
2. Open the Z-Wave system's smart home or alarm app on your smartphone or tablet
3. Follow the in-app instructions for adding a new device
4. On your lock keypad, enter your master entry code followed by the  icon
5. Press the 7 key followed by the  icon
6. Press the 1 key followed by the  icon

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

Yale Locks & Hardware

24/7 Tech Support : 1-855-492-0505 • www.yalehome.com

Yale® is a registered trademark of ASSA ABLOY Residential Group. Other products' brand names may be trademarks or registered trademarks of their respective owners and are mentioned for reference purposes only. © Copyright 2019. All rights reserved. Reproduction in whole or in part without the express written permission of ASSA ABLOY Residential Group is prohibited.