Doorbell 6

Engineering Specification

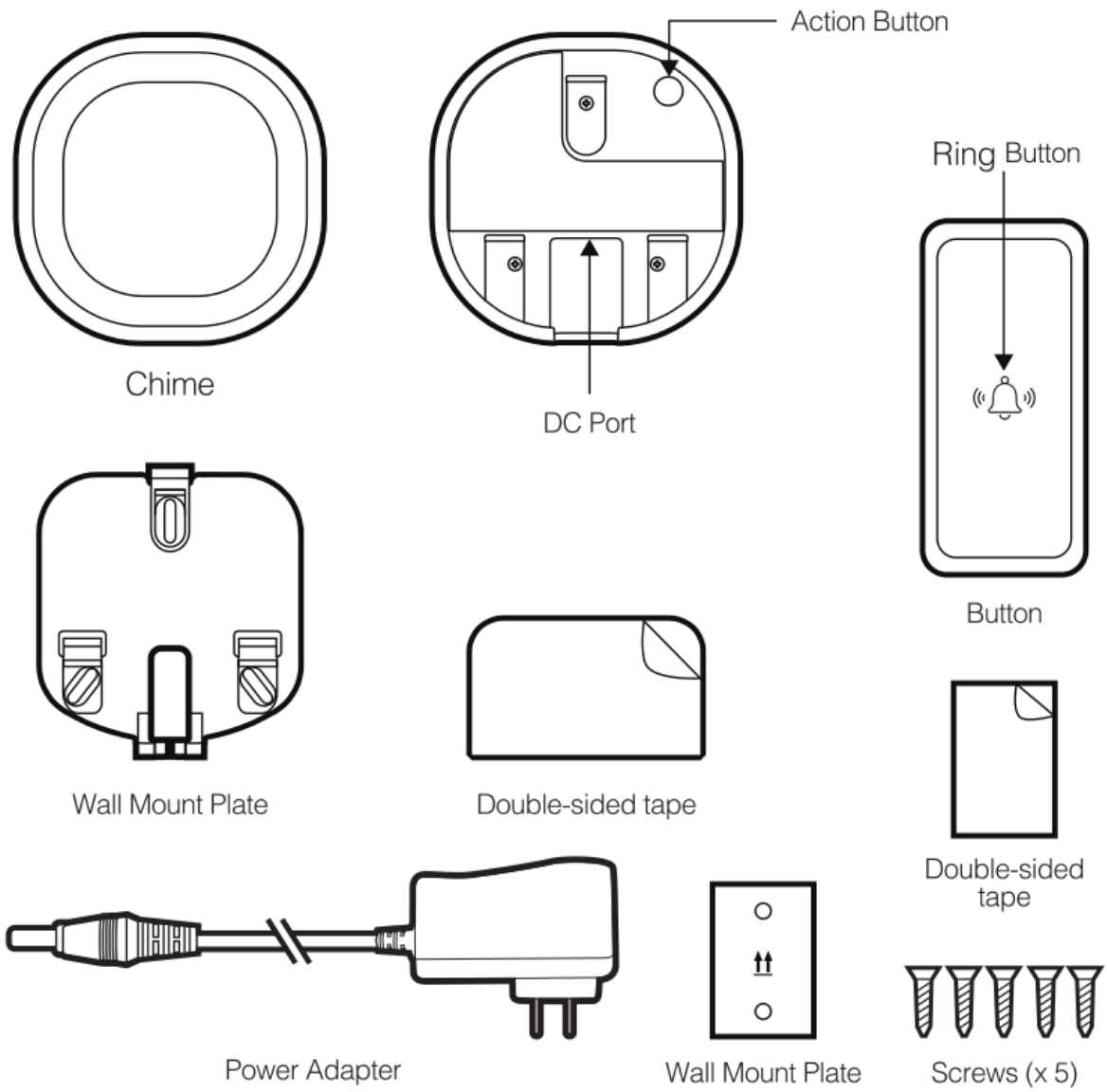
Doorbell 6

Document No.	SPEC-ZW162
Version	6
Description	This document mainly introduces AEOTEC new generation Doorbell 6. The content mainly includes its interfaces, accessories, features, specifications, quick start, and software function definition. Doorbell 6 is a smart doorbell based on Z-Wave and 433.92MHz/FSK. ● Not only a doorbell, but also can be used as a siren via setting. ● Can be wireless controlled by more Button, up to 3. ● Longer Button control distance, up to 120m. ● Built-in multiple tones, up to 30. ● Built-in multiple adjustable Light Effect.
Written By	
Date	
Reviewed By	
Date	
Approved By	
Date	

REVISION RECORD		
Version	Date	Brief description of changes
1	2018.10.26	First revision.
2	2018.10.29	Update.
3	2018.12.29	● Modify Directory Outline. ● Update the picture. ● Add new Chapter PRODUCT QUICK START. ● Add some explanation about Endpoint. ● Modify the function definition of ALL Configuration Parameter.
4	2019.01.14	● Replace Inclusion to Add, Exclusion to Remove, Gateway to Controller. ● Modify the function definition of Configuration Parameter 0x01 (1) and 0xFF (255).
5	2019.01.17	● Distinguish S0 NIF and S2 NIF. ● Modify AGI Profile of Group 2-9, changing from Notification: Siren to Control: Key. ● Modify the valid value of Configuration Parameter 0x01 (1) to 0x08 (08), limiting their highest value. ● Modify the unit of both gradually bright duration and gradually extinguished duration of Configuration Parameter 0x10 (16) to 0x16 (22), changing from 10ms to 20ms; and limit their highest value. ● Modify the valid value of Configuration Parameter 0x34 (52) to 0x36 (54), limiting their highest value.
6	2019.03.01	● Add a Configuration Parameter 0x60(96). Its function is enable or disable the ability that click the Action Button to stop a playing tone, and 0=disable (default), 1=enable.

Table of Content

1 INTERFACES & ACCESSORIES



Terminology	Description
Chime	A component based on Z-Wave and 433.92MHz/FSK technology, and it can be used to play tone when triggered by Z-Wave Command or paired Button. ● Refer to Section 2.1 for details.
Button	A component based on 433.92MHz/FSK technology, and it can be used to wireless control Chime to play tone. ● Refer to Section 2.2 for details.
Action Button	A button in Chime, and it can be used for networking, resetting, and pairing Button, etc. ● Refer to Section 4.1 for details.
Ring Button	A button in Button, and it can be used for wireless controlling Chime to play tone. ● Refer to Section 4.2 for details.

2 FEATURES & SPECIFICATIONS

2.1 Chime

Parameter	Value
Product Identifier	ZW162
Dimensions	76*76*38.5mm
Weight	100g
Color	White
Shell Material	PC-6600
Shell Surface Treatment	Bright scrub
Shell Fire-proof Level	UL94 V-0
Waterproof and Dustproof	Rated IP20 under IEC standard 60529
Operating Temperature	32~104°F (0~40°C)
Relative Humidity	8%~80%
Wireless Technology	Z-Wave (Between Chime and Controller), 433.92MHz/FSK(Between Chime and Button)
Z-Wave Plus	Yes
Z-Wave Module	ZM5101
Z-Wave Version	6.71.03
Z-Wave Library Type	Enhanced 232 Slave
Z-Wave Device Type	Sound Switch
Z-Wave Role Type	Always On Slave
Security Class	Non-Security, S0, S2 Unauthenticated, and S2 Authenticated
Smart Start Compatible	No
Over The Air (OTA)	Support
Multi Channel Device	Yes
Association	Support
Factory Reset	Support
Power-down Memory	Support
Z-Wave Antenna Distance	30m (Indoor) /150m (Outdoor). Between Chime and Controller.
Button Control Distance	120m (Barrier-free sight line distance). Between Chime and Button.
Indicator Light Color	White
Indicator Light Color Temperature	5500K
Indicator Light Power	2W
Buttons and Connectors	Action Button (x1) DC Port (x1)
Input Voltage	DC 5V/2A Power Adapter
Battery	Quantity: 1 Model: PT502035 Capacity: 400mAh Detachable: No Chargeable: Yes. Charging via Power Adapter. Endurance: 4 hours
Working Current	80mA
Standby Current	70mA
Built-in Sensors	Vibration Sensor
Supported Paired Buttons	Max: 3
Tones Storage Size	16M
Supported Tones	Max: 30. No interface to replace the built-in tones. If you want to change these built-in tones, please contact us to customize.
Tone Effect Configurable	Support
Light Effect Configurable	Support

Volume	Max: 105dB
Volume Adjustable	Support
Safety Certifications	US: FCC ID, FCC SDOC EU: CE-EMC, CE-RED, CE-LVD, Battery AU: RCM

2.2 Button

Parameter	Value
Product Identifier	ZW166
Dimensions	85*38*14mm
Weight	35g
Color	White
Shell Material	ABS PA757
Shell Surface Treatment	Bright scrub
Shell Fire-proof level	UL94 HB
Waterproof and Dustproof	Rated IP55 under IEC standard 60529
Operating temperature	32~104°F (0~40°C)
Relative Humidity	8%~80%
Wireless Technology	433.92MHz/FSK(Between Chime and Button)
Button Control Distance	120m (Barrier-free sight line distance). Between Chime and Button.
Indicator Light Color	White
Buttons and Connectors	Ring Button(x1)
Input Voltage	3V lithium battery
Battery	Quantity: 1 Model: CR2450 Capacity: 630mAh Detachable: Yes Chargeable: No Endurance: 2 years
Working Current	20mA
Standby Current	0.1uA
Safety Certifications	US: FCC ID EU: CE-RED, CE-LVD AU: RCM

3 PRODUCT QUICK START

3.1 Important safety information

Please read this Engineering Specification carefully for correct and effective use.

Failure to follow the recommendations set forth by AEOTEC Limited may be dangerous or cause a violation of the law. The manufacturer, importer, distributor, and/or reseller will not be held responsible for any loss or damage resulting from not following any instruction in this guide or in other materials.

Doorbell 6 includes 2 separate components: **Chime** and **Button**. Chime is intended for indoor use in dry locations only. Do not use in damp, moist, and/or wet locations. Button offers IP55 water protection and is suitable for outdoor use without direct exposure to heavy and penetrative rain. Button is constructed with nylon; away from heat and do not expose to flame.

Warning:

To prevent possible hearing damage, test only when wearing appropriate hearing protection.

Contains small parts; keep away from children.

3.2 How to add Chime into Z-Wave network

This product supports Security 2 Command Class. While a Security S2 enabled Controller is needed in order to fully use the security feature. This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

1. Set your Z-Wave Controller into its 'Add Device' mode in order to add Chime into your Z-Wave system. Refer to the Controller's manual if you are unsure of how to perform this step.

2. Power on Chime via the provided power adapter; its LED will be breathing white light all the time.

3. Click Chime Action Button once, it will quickly flash white light for 30 seconds until Chime is added into the network. It will become constantly bright white light after being assigned a NodeID.

4. If your Z-Wave Controller supports S2 encryption, enter the first 5 digits of DSK into your Controller's interface if /when requested. The DSK is printed on Chime's housing.

5. If Adding fairs, it will slowly flash white light 3 times and then become breathing white light; repeat steps 1 to 4. Contact us for further support if needed.

6. If Adding succeeds, it will quickly flash white light 3 times and then become off. Now, Chime is a part of your Z-Wave home control system. You can configure it and its automations via your Z-Wave system; please refer to your software's user guide for precise instructions.

Note:

If Action Button is clicked again during the Learn Mode, the Learn Mode will exit. At the same time, Indicator Light will extinguish immediately, and then become breathing white light.

3.3 How to remove Chime from Z-Wave network

1. Set your Z-Wave Controller into its 'Remove Device' mode in order to remove Chime from your Z-Wave system. Refer to the Controller's manual if you are unsure of how to perform this step.

2. Power on Chime via the provided power adapter; its LED will be off.

3. Click Chime Action Button 6 times quickly; it will bright white light, up to 2s.

4. If Removing fairs, it will keep off; repeat steps 1 to 3. Contact us for further support if needed.

5. If Removing succeeds, it will quickly flash white light 3 times and then become breathing white light. Now, Chime is removed from Z-Wave network successfully.

3.4 How to factory reset Chime

If the primary controller is missing or inoperable, you may need to reset the device to factory settings.

Make sure the Chime is powered. To complete the reset process manually, press and hold the Action Button for at least 20s. The LED indicator will quickly flash white light 3 times and then become breathing white light, which indicates the reset operation is successful. Otherwise, please try again. Contact us for further support if needed.

Note:

1. This procedure should only be used when the primary controller is missing or inoperable.

2. Factory Reset Chime will:

(a) Remove Chime from Z-Wave network;

(b) Delete the Association setting;

(c) Restore the configuration settings to the default. (Except configuration parameter 51/52/53/54)

3.5 How to factory reset Button

There is no way to factory reset Button. If something happens to Button, please try to re-power it. Contact us for further support if needed.

3.6 How to install Chime

Chime and Button communicate wirelessly and can be installed up to 120 meters/393 feet apart. However, the wireless range is reduced by interference from competing wireless signals, doors, and walls. Before installing Chime, test your desired installation location for both Button and Chime first to ensure that a reliable wireless connection can be made between the 2 parts.

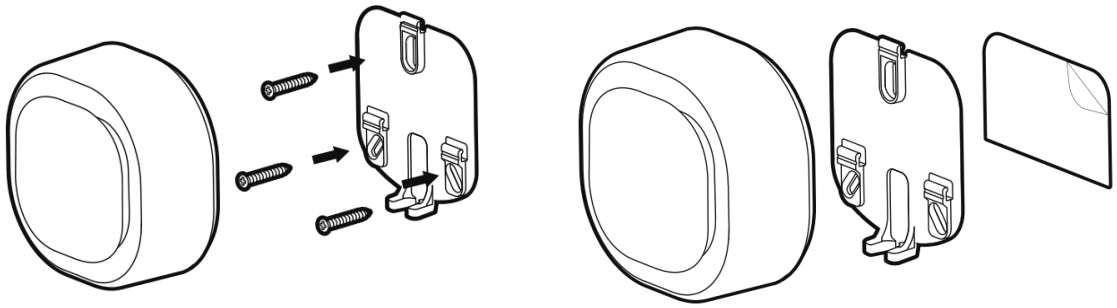
1. Select an installation location for Chime. Do not yet install it.

2. Power on Chime via the provided power adapter.

3. Affix Chime in the desired installation location using the provided mounting plate.

a. Affix the mounting plate to the selected surface; affix it using either 3 × 20mm screws or double-sided tape.

b. Lock your Chime onto the mounting plate.



3.7 How to install Button

Avoid exposing Button to direct sunlight where possible to avoid UV damage and reduced battery performance.

1. Select an installation location for Button. Do not yet install it.

2. Power on Button.

a. Remove the 2 screws from Button's rear to open its battery cover and install the provided CR2450 battery with the positive (+) on top.

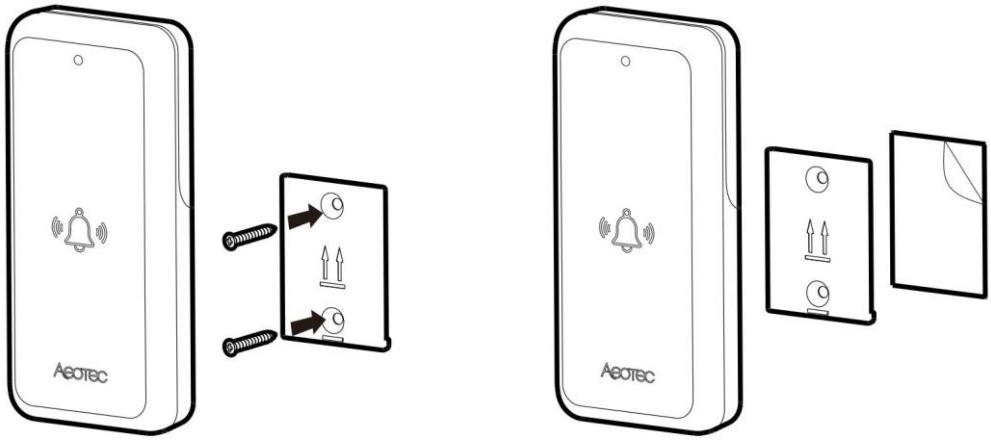
b. Replace the battery cover and the 2 screws.

3. Test the wireless connection by pressing Ring Button to trigger a doorbell alert. Select an alternative installation location for Chime if the connection is poor.

4. Install Button.

a. Affix the mounting plate to the selected surface; affix it using either 2 × 20mm screws or double-sided tape.

b. Lock your Button onto the mounting plate.



3.8 How to pair Button

There are two way to trigger pairing Button:

- Manually quick click Chime Action Button. Can be done both in and out of the network.
- With Configuration Set. Can only be done in the network. Refer to Configuration Parameter 49/50/51 for details.

Below is mainly about manually quick click Chime Action Button to trigger pairing Button.

1. **Different click times will trigger different Pairing Button Mode. Please action as shown below.**

- Click Action Button **3 times** quickly will trigger **Pairing #1 Button Mode**.
- Click Action Button **4 times** quickly will trigger **Pairing #2 Button Mode**.
- Click Action Button **5 times** quickly will trigger **Pairing #3 Button Mode**.

2. **Observe Chime Indicator Light to make sure which Button is waiting for pairing.**

- When **Pairing #1 Button Mode** is triggered, Chime Indicator Light will bright **1 time** ON 0.5s OFF 1s, and then become constantly bright white light, indicating that Pairing #1 Button Mode has already triggered. Pairing time is up to 10 seconds. In this time period, user MUST manually click Ring Button 3 times quickly. Otherwise it cannot be paired successfully.
- When **Pairing #2 Button Mode** is triggered, Chime Indicator Light will bright **2 times** ON 0.5s OFF 1s, and then become constantly bright white light, indicating that Pairing #2 Button Mode has already triggered. Pairing time is up to 10 seconds. In this time period, user MUST manually click Ring Button 3 times quickly. Otherwise it cannot be paired successfully.

- When **Pairing #3 Button Mode** is triggered, Chime Indicator Light will bright **3 times** ON 0.5s OFF 1s, and then become constantly bright white light, indicating that Pairing #3 Button Mode has already triggered. Pairing time is up to 10 seconds. In this time period, user MUST manually click Ring Button 3 times quickly. Otherwise it cannot be paired successfully.

3. Determine pairing results.

- If pairing Button succeeds, Chime Indicator Light will quickly flash white light 3 times and **play the corresponding tone of paired Button**, and then become breathing white light (when Chime is out of the Z-Wave network) or off (when Chime is in the Z-Wave network)
- If pairing Button fairs, Chime Indicator Light will slowly flash white light 3 times and then become breathing white light (when Chime is out of the Z-Wave network) or off (when Chime is in the Z-Wave network).

Note:

- Only one Button can be paired at one time.
- Each successful pairing will overwrite the previous paired Button which has the same Button Number.
- This manually quick click Action Button operation can only be used to trigger pairing, not unpairing.
- If you want to exit Pairing Button Mode, what you need to do is that click the Action Button once.

3.9 How to unpair Button

There is only one way to trigger unpairing Button:

- With Configuration Set. Can only be done in the network. Refer to Configuration Parameter 48 for details.

4 SOFTWARE FUNCTION DEFINITION

4.1 User Behavior Interaction

Note: Indicator Light in the table below refers to Chime Indicator Light, but not Button Indicator Light.

User behavior	Out of the Z-Wave network	In the Z-Wave network
Power OFF	Cut the power.	Cut the power.
Power ON	**Supply the power:** When powered by battery, Indicator Light will be breathing white light for 30s (max). When powered by adapter, Indicator Light will be breathing white light all the time.	**Supply the power:** Indicator Light will become white light for 2s indicating the product has been powered, and then extinguish.
Click Action Button once	**1.Send Node Info for Adding:** When click Action Button once, Indicator Light will quickly flash white light for 30s until Chime is added into the network. It will become constantly bright white light after being assigned a NodeID. If Adding succeeds, it will quickly flash white light 3 times and then off. If Adding fairs, it will slowly flash white light 3 times and then become breathing white light. **2.Exit Classic Inclusion Learn Mode:** If Action Button is clicked again during the Learn Mode, the Learn Mode will exit. At the same time, Indicator Light will extinguish immediately, and then become breathing white light. **3.Exit Paring Button Mode:** Indicator Light will slowly flash white light 3 times and then become breathing white light.	**1.Stop playing tone and light:** Tone will immediately stop, and Indicator Light will extinguish immediately. Please note that this function is related to the value of configuration parameter 0x60(96). **2.Exit Paring Button Mode:** Indicator Light will slowly flash white light 3 times and then become off.
Click Action Button 3 times quickly	**Trigger Pairing #1 Button Mode:** Indicator Light will bright 1 time ON 0.5s OFF 1s, and then become constantly bright white light, indicating that Pairing #1 Button Mode has already triggered. If pairing Button succeeds, Indicator Light will quickly flash white light 3 times and then become breathing white light. If pairing Button fairs, Indicator Light will slowly flash white light 3 times and then become breathing white light.	**Trigger Pairing #1 Button Mode:** Indicator Light will bright 1 time ON 0.5s OFF 1s, and then become constantly bright white light, indicating that Pairing #1 Button Mode has already triggered. If pairing Button succeeds, Indicator Light will quickly flash white light 3 times and then become off. If pairing Button fairs, Indicator Light will slowly flash white light 3 times and then become off.
Click Action Button 4 times quickly	**Trigger Pairing #2 Button Mode:** Indicator Light will bright 2 times ON 0.5s OFF 1s, and then become constantly bright white light, indicating that Pairing #2 Button Mode has already triggered. If pairing Button succeeds, Indicator Light will quickly flash white light 3 times and then become breathing white light. If pairing Button fairs, Indicator Light will slowly flash white light 3 times and then become breathing white light.	**Trigger Pairing #2 Button Mode:** Indicator Light will bright 2 times ON 0.5s OFF 1s, and then become constantly bright white light, indicating that Pairing #2 Button Mode has already triggered. If pairing Button succeeds, Indicator Light will quickly flash white light 3 times and then become off. If pairing Button fairs, Indicator Light will slowly flash white light 3 times and then become off.

Click Action Button 5 times quickly	**Trigger Pairing #3 Button Mode:** Indicator Light will bright 3 times ON 0.5s OFF 1s, and then become constantly bright white light, indicating that Pairing #3 Button Mode has already triggered. If pairing Button succeeds, Indicator Light will quickly flash white light 3 times and then become breathing white light. If pairing Button fairs, Indicator Light will slowly flash white light 3 times and then become breathing white light.	**Trigger Pairing #3 Button Mode:** Indicator Light will bright 3 times ON 0.5s OFF 1s, and then become constantly bright white light, indicating that Pairing #3 Button Mode has already triggered. If pairing Button succeeds, Indicator Light will quickly flash white light 3 times and then become off. If pairing Button fairs, Indicator Light will slowly flash white light 3 times and then become off.
Click Action Button 6 times quickly	**Reserved:** Indicator Light is off from press to release.	**Send Node Info for Removing :** Indicator Light will become white light for up to 2s. If Removing succeeds, Indicator Light will quickly flash white light 3 times and then become breathing white light. If Removing fairs, Indicator Light will become off, but not breathing white light.
Press and hold Action Button for [1, 2s)	**Reserved:** Indicator Light is off from press to release.	**Reserved:** Indicator Light is off from press to release.
Press and hold Action Button for [2, 5s)	**Test the Tone Effect and Light Effect of the Browse Group:** Indicator Light will become white light when press, and display in the **factory default** Tone Effect and Light Effect of the Browse Group when release.	**Test the Tone Effect and Light Effect of the Browse Group:** Indicator Light will become white light when press, and display in the **user-defined** Tone Effect and Light Effect of the Browse Group when release.
Press and hold Action Button for [5, 10s)	**Reserved:** Indicator Light will become brighter white light when press, and become breathing white light when release.	**Test communication quality:** Indicator Light will become brighter white light when press, and quickly flash white light when release, indicating start to test communication quality between Chime and Node 1. At the end of the test, Indicator Light will become solid white light for 2 seconds. If the communication quality is Good, it will quickly flash white light 3 times and then become off. If the communication quality is Weak, it will slowly flash white light 3 times and then become off.
Press and hold Action Button for [10, 20s)	**Reserved:** Indicator Light will become speedup flashing white light when press, and become breathing white light when release.	**Reserved:** Indicator Light will become speedup flashing white light when press, and become off when release.
Press and hold Action Button for [20, ∞)	**Reserved:** When the time reaches 20s, Indicator Light will become quickly flash white light 3 times and then become breathing white light, no matter it is pressed or released.	**Factory Reset:** When the time reaches 20s, Factory Reset is performed no matter Action Button is pressed or released. Chime will send out Device Reset Locally Notification Report via Lifeline, and it will perform factory reset no matter the Nodes in the Lifeline Group receive the Device Reset Locally Notification from Chime or not. Indicator Light will become quickly flash white light 3 times and then become breathing white light, which indicates the

		reset operation is successful. Otherwise, please try again.

4.2 Supplementary Explanation about Button

Function	Description
Wireless Control Chime	When click Ring Button once, Button can wireless control the corresponding paired Chime.
Pairing Chime	When click Ring Button 3 times quickly, Button can be paired to Chime while Chime triggers Pairing Button Mode.
Sending Button Info to Chime	When re-power or click Ring Button, Button will send its Button ID, Battery Voltage and Button Software Version to its corresponding paired Chime.
Automatic sleep	After sending Button Info to Chime, Button will sleep automatically for saving battery life.
Low Battery Light Effect	If #1 Button is low battery, Chime Indicator Light will repeat cycle (ON 100ms, OFF 5s) If #2 Button is low battery, Chime Indicator Light will repeat cycle (ON 100ms, OFF 100ms, ON 100ms, OFF 5s) If #3 Button is low battery, Chime Indicator Light will repeat cycle (ON 100ms, OFF 100ms, ON 100ms, OFF 100m,s ON 100ms, OFF 5s) When the battery voltage of Button is lower than 2.8V, it is judged to be low battery. When the battery voltage of Button restores to over 2.9V, it is judged to return to normal. Low Battery Light Effect will be activated when Chime detects the corresponding paired Button is low battery, and disappears after the battery returns to normal. Low Battery Light Effect has the lowest priority among all light effects, that is, it will be displayed when there is no other light effect. The Light Effect of the 3 Buttons are different. When multiple Buttons is low battery at the same time, the corresponding light effect of the Button with smaller Button number is displayed first.

4.3 Announced Command Classes in NIF

Note: When DUT is included on S0 level, MANUFACTURER_SPECIFIC CC is supported non-securely; while included on S2 level, MANUFACTURER_SPECIFIC CC is supported securely only.

Command Class	Version	Not added	Non-secure added	Securely 0 added		Securely 2 added	
				Non-secure	Secure	Non-secure	Secure
ZWAVEPLUS_INFO	2	Support	Support	Support		Support	
VERSION	2	Support	Support		Support		Support
CONFIGURATION	1	Support	Support		Support		Support
MANUFACTURER_SPECIFIC	2	Support	Support	Support			Support
ASSOCIATION_GRP_INFO	1	Support	Support		Support		Support
ASSOCIATION	2	Support	Support		Support		Support
POWERLEVEL	1	Support	Support		Support		Support
MULTI_CHANNEL_ASSOCIATION	3	Support	Support		Support		Support
MULTI_CHANNEL	4	Support	Support		Support		Support
DEVICE_RESET_LOCALLY	1	Support	Support		Support		Support
TRANSPORT_SERVICE	2	Support	Support	Support		Support	
SECURITY	1	Support	Support	Support		Support	
SECURITY_2	1	Support	Support	Support		Support	
SUPERVISION	1	Support	Support	Support		Support	
FIRMWARE_UPDATE_MD	4	Support	Support		Support		Support

NOTIFICATION	8	Support	Support		Support		Support
SOUND_SWITCH	1	Support	Support		Support		Support

4.4 Basic Command Class mapping

Basic Set Command (Value) maps to Sound Switch Tone Play Set Command (Tone Identifier).

Basic Get Command maps to Sound Switch Tone Play Get Command.

Basic Report Command (Value) maps to Sound Switch Tone Play Report Command (Tone Identifier).

4.5 Z-Wave Plus Info

Parameter	Value
Z-Wave Plus Version	1
Role Type	5 (ZWAVEPLUS_INFO_REPORT_ROLE_TYPE_SLAVE_ALWAYS_ON)
Node Type	0 (ZWAVEPLUS_INFO_REPORT_NODE_TYPE_ZWAVEPLUS_NODE)
Installer Icon Type	0x2200 (ICON_TYPE_GENERIC_SOUND_SWITCH)
User Icon Type	0x2200 (ICON_TYPE_GENERIC_SOUND_SWITCH)

4.6 Manufacturer Specific

Parameter	Value
Manufacturer ID 1	0x03
Manufacturer ID 2	0x71
Product Type ID 1	0x00(EU), 0x01(US), 0x02(AU)
Product Type ID 2	0x03
Product ID 1	0x00
Product ID 2	0xA2

4.7 Version

Parameter	Value
Z-Wave Protocol Library Type	0x03
Z-Wave Protocol Version	0x05
Z-Wave Protocol Sub Version	0x03
Firmware 0 Version	ZM5101 Software Version MSB
Firmware 0 Sub Version	ZM5101 Software Version LSB
Hardware Version	0xA2
Number of firmware targets	0x00

4.8 Notification

Notification Type		Notification Events		Description
Home Security	0x07	State idle	0x00	N/A
		Tampering, product moved	0x09	Chime is tampered and moved.
Power Management	0x08	State idle	0x00	Button’s battery comes back to normal.
		Replace battery soon	0x0A	Button’s battery is in low battery.
Siren	0x0E	State idle	0x00	Chime alarm is inactive.
		Siren active	0x01	Chime alarm is triggered.

4.9 Multi Channel

4.9.1 Endpoint Capability

Parameter	Value
Individual End Points	8
Aggregated End Points	0
Dynamic	0
Identical	1
Generic Device Class	GENERIC_TYPE_AV_CONTROL_POINT
Specific Device Class	SPECIFIC_TYPE_SOUND_SWITCH
Command Classes	COMMAND_CLASS_ZWAVEPLUS_INFO COMMAND_CLASS_SECURITY COMMAND_CLASS_SECURITY_2 COMMAND_CLASS_SUPERVISION COMMAND_CLASS_ASSOCIATION COMMAND_CLASS_ASSOCIATION_GRP_INFO COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION COMMAND_CLASS_NOTIFICATION COMMAND_CLASS_SOUND_SWITCH

Note:

In order to implement multiple different applications, especially the function that customize different Light Effect and Tone Effect for different Endpoints with Configuration CC and Sound Switch CC, and the function that distinguish which paired Button is clicked, although this product has only one speaker and one Indicator Light, we still design it as Multi Channel Device. For easy understanding, we suggest you consider these Endpoints as Virtual Application Resources. In addition, you may get an overview of Endpoint's application function through the Group Name in the AGI. Designed as Multi Channel Device will greatly enrich the product's functions and meet more application scenarios.

4.9.2 Endpoint Priority Definition

Endpoint	Application Function	Priority
1	Browse	1 (Highest)
2	Tampering	4 (Lowest)
3	Doorbell 1	3
4	Doorbell 2	3
5	Doorbell 3	3
6	Environment	2
7	Security	2
8	Emergency	2
Rule Description		Example
An Endpoint is playing tone; at the same time, if another same-priority or high-priority Endpoint is also triggered, then the playing tone will be replaced by the new Endpoint configuration, and the original Endpoint will stop playing.		The Endpoint 2(Doorbell 1) is playing tone; at the same time, if Endpoint 4(Doorbell 2) or Endpoint 6(Environment) is also triggered, then the playing tone will be replaced by Endpoint 4 or Endpoint 6, and Endpoint 2 will stop playing.
An Endpoint is playing tone; at the same time, if another low-priority Endpoint is also triggered, then the playing tone will NOT be replaced by the new Endpoint, and the original Endpoint will keep playing.		The Endpoint 1(Browse) is playing tone; at the same time, if Endpoint 2(Tampering) or Endpoint 3(Doorbell 1) is also triggered, then the playing tone will NOT be replaced by Endpoint 2 or Endpoint 3, and Endpoint 1 will keep playing.

4.9.3 Endpoint responses to receiving Notification Report

Some nodes may only support Lifeline association group, without any other control association groups. And some nodes may not support Multi Channel communication. Considering compatibility, we implement the application function that Endpoint responses to receiving Notification Report. Below is more details.

When Endpoint receives Notification Report issued from other notification nodes, Endpoint will be triggered to play tone and light, as long as the Notification Report is listed in the following table. For example, when Endpoint 6 (Environment) receives Notification Report (Smoke detected) or Notification Report (Water Leak detected) issued from other notification nodes, it will trigger Endpoint 6 to play tone and light corresponding to Endpoint 6's configuration.

Besides, when Root Device receives Notification Report issued from other notification nodes, Root Device will transfer the Notification Report to Endpoint 6, 7 or 8 to trigger playing tone and light, as long as the Notification Report is listed in the following table. For example, when Root Device receives Notification Report (Intrusion), it will trigger Endpoint 7 (Security) to play tone and light corresponding to Endpoint 7's configuration. In other words, this product is also compatible with nodes that do not support Multi Channel communication.

In short, notification nodes in the Z-Wave network can operated with this product to make a notable siren alarm for some environment, security or emergency events.

The table below defines which Notification Report can trigger Endpoint to play tone and light.

Endpoint	Application	Notification Type	Value	Notification Event	Value
1	Browse	N/A	N/A	N/A	N/A
2	Tampering	N/A	N/A	N/A	N/A
3	Doorbell 1	N/A	N/A	N/A	N/A
4	Doorbell 2	N/A	N/A	N/A	N/A
5	Doorbell 3	N/A	N/A	N/A	N/A
6	Environment	Smoke Alarm	0x01	Smoke detected (location provided)	0x01
				Smoke detected	0x02
		CO Alarm	0x02	Carbon monoxide detected (location provided)	0x01
				Carbon monoxide detected	0x02
		CO2 Alarm	0x03	Carbon dioxide detected (location provided)	0x01
				Carbon dioxide detected	0x02
		Heat Alarm	0x04	Overheat detected (location provided)	0x01
				Overheat detected	0x02
				Under heat detected (location provided)	0x05
				Under heat detected	0x06
		Water Alarm	0x05	Water leak detected (location provided)	0x01
				Water leak detected	0x02
		Gas Alarm	0x12	Combustible gas detected (location provided)	0x01
				Combustible gas detected	0x02
				Toxic gas detected (location provided)	0x03
				Toxic gas detected	0x04
7	Security	Access Control	0x06	Window/door is open	0x16
		Home Security	0x07	Intrusion (location provided)	0x01
				Intrusion	0x02
				Tampering, product cover removed	0x03
				Tampering, invalid code	0x04
				Glass breakage (location provided)	0x05
				Glass breakage	0x06
				Motion detection (location provided)	0x07
				Motion detection	0x08
				Tampering, product moved	0x09
8	Emergency	Emergency Alarm	0x0A	Contact police	0x01
				Contact fire service	0x02
				Contact medical service	0x03

4.10 Association Group Info

Root device

ID	Name	Node count	Profile	Function
1	Lifeline	5	General: Lifeline	**Device Reset Locally Notification:** Issued when Factory Reset is performed. **Sound Switch Tone Play Report:** Issued when a tone has started playing. **Sound Switch Configuration Report:** Issued when volume or default tone has changed. **Notification Report (Type=0x0E; Event=0x01):** Issued when Chime starts playing tone. **Notification Report (Type=0x0E; Event=0x00):** Issued when Chime stops playing tone. **Notification Report (Type=0x07; Event=0x09):** Issued when Chime is tampered and moved. **Notification Report (Type=0x08; Event=0x0A):** Issued when Button is low battery. **Notification Report (Type=0x08; Event=0x00):** Issued when Button comes back to normal battery. **Configuration Report (Parameter=0x32):** Issued when Pairing Button Mode is triggered. **Configuration Report (Parameter=0x33):** Issued when Unpairing or Pairing Button Mode finishes.
2	On/Off control (Browse)	5	Control: Key01	Mirror of endpoint 1, group 2
3	On/Off control (Tampering)	5	Control: Key02	Mirror of endpoint 2, group 2
4	On/Off control (Doorbell 1)	5	Control: Key03	Mirror of endpoint 3, group 2
5	On/Off control (Doorbell 2)	5	Control: Key04	Mirror of endpoint 4, group 2
6	On/Off control (Doorbell 3)	5	Control: Key05	Mirror of endpoint 5, group 2
7	On/Off control (Environment)	5	Control: Key06	Mirror of endpoint 6, group 2
8	On/Off control (Security)	5	Control: Key07	Mirror of endpoint 7, group 2
9	On/Off control (Emergency)	5	Control: Key08	Mirror of endpoint 8, group 2

Endpoint 1

ID	Name	Node count	Profile	Function
1	Lifeline	0	General: Lifeline	**Sound Switch Tone Play Report:** Issued when a tone has started playing. **Sound Switch Configuration Report:** Issued when volume or default tone has changed. **Notification Report (Type=0x0E; Event=0x01):** Issued when Endpoint 1 starts playing tone. **Notification Report (Type=0x0E; Event=0x00):** Issued when Endpoint 1 stops playing tone.
2	On/Off control (Browse)	5	Control: Key01	When Endpoint 1 starts playing tone or stops playing tone, Nodes associated are controlled and will receive a Basic Set CC.

Endpoint 2

ID	Name	Node count	Profile	Function
1	Lifeline	0	General: Lifeline	**Sound Switch Tone Play Report:** Issued when a tone has started playing.

				Sound Switch Configuration Report: Issued when volume or default tone has changed. **Notification Report (Type=0x0E; Event=0x01):** Issued when Endpoint 2 starts playing tone. **Notification Report (Type=0x0E; Event=0x00):** Issued when Endpoint 2 stops playing tone.
2	On/Off control (Tampering)	5	Control: Key02	When Endpoint 2 starts playing tone or stops playing tone, Nodes associated are controlled and will receive a Basic Set CC.

Endpoint 3

ID	Name	Node count	Profile	Function
1	Lifeline	0	General: Lifeline	**Sound Switch Tone Play Report:** Issued when a tone has started playing. **Sound Switch Configuration Report:** Issued when volume or default tone has changed. **Notification Report (Type=0x0E; Event=0x01):** Issued when Endpoint 3 starts playing tone. **Notification Report (Type=0x0E; Event=0x00):** Issued when Endpoint 3 stops playing tone. **Notification Report (Type=0x08; Event=0x0A):** Issued when #1 Button is low battery. **Notification Report (Type=0x08; Event=0x00):** Issued when #1 Button comes back to normal battery.
2	On/Off control (Doorbell 1)	5	Control: Key03	When Endpoint 3 starts playing tone or stops playing tone, Nodes associated are controlled and will receive a Basic Set CC.

Endpoint 4

ID	Name	Node count	Profile	Function
1	Lifeline	0	General: Lifeline	**Sound Switch Tone Play Report:** Issued when a tone has started playing. **Sound Switch Configuration Report:** Issued when volume or default tone has changed. **Notification Report (Type=0x0E; Event=0x01):** Issued when Endpoint 4 starts playing tone. **Notification Report (Type=0x0E; Event=0x00):** Issued when Endpoint 4 stops playing tone. **Notification Report (Type=0x08; Event=0x0A):** Issued when #2 Button is low battery. **Notification Report (Type=0x08; Event=0x00):** Issued when #2 Button comes back to normal battery.
2	On/Off control (Doorbell 2)	5	Control: Key04	When Endpoint 4 starts playing tone or stops playing tone, Nodes associated are controlled and will receive a Basic Set CC.

Endpoint 5

ID	Name	Node count	Profile	Function
1	Lifeline	0	General: Lifeline	**Sound Switch Tone Play Report:** Issued when a tone has started playing. **Sound Switch Configuration Report:** Issued when volume or default tone has changed. **Notification Report (Type=0x0E; Event=0x01):** Issued when Endpoint 5 starts playing tone. **Notification Report (Type=0x0E; Event=0x00):** Issued when Endpoint 5 stops playing tone. **Notification Report (Type=0x08; Event=0x0A):** Issued when #3 Button is low battery. **Notification Report (Type=0x08; Event=0x00):** Issued when #3 Button comes back to normal battery.

2	On/Off control (Doorbell 3)	5	Control: Key05	When Endpoint 5 starts playing tone or stops playing tone, Nodes associated are controlled and will receive a Basic Set CC.

Endpoint 6

ID	Name	Node count	Profile	Function
1	Lifeline	0	General: Lifeline	**Sound Switch Tone Play Report:** Issued when a tone has started playing. **Sound Switch Configuration Report:** Issued when volume or default tone has changed. **Notification Report (Type=0x0E; Event=0x01):** Issued when Endpoint 6 starts playing tone. **Notification Report (Type=0x0E; Event=0x00):** Issued when Endpoint 6 stops playing tone.
2	On/Off control (Environment)	5	Control: Key06	When Endpoint 6 starts playing tone or stops playing tone, Nodes associated are controlled and will receive a Basic Set CC.

Endpoint 7

ID	Name	Node count	Profile	Function
1	Lifeline	0	General: Lifeline	**Sound Switch Tone Play Report:** Issued when a tone has started playing. **Sound Switch Configuration Report:** Issued when volume or default tone has changed. **Notification Report (Type=0x0E; Event=0x01):** Issued when Endpoint 7 starts playing tone. **Notification Report (Type=0x0E; Event=0x00):** Issued when Endpoint 7 stops playing tone.
2	On/Off control (Security)	5	Control: Key07	When Endpoint 7 starts playing tone or stops playing tone, Nodes associated are controlled and will receive a Basic Set CC.

Endpoint 8

ID	Name	Node count	Profile	Function
1	Lifeline	0	General: Lifeline	**Sound Switch Tone Play Report:** Issued when a tone has started playing. **Sound Switch Configuration Report:** Issued when volume or default tone has changed. **Notification Report (Type=0x0E; Event=0x01):** Issued when Endpoint 8 starts playing tone. **Notification Report (Type=0x0E; Event=0x00):** Issued when Endpoint 8 stops playing tone.
2	On/Off control (Emergency)	5	Control: Key08	When Endpoint 8 starts playing tone or stops playing tone, Nodes associated are controlled and will receive a Basic Set CC.

4.11 Configuration

Note: R=Read Only, W=Write Only, WR=Write and Read.

<table>
<tr><th>Parameter</th><th>Description</th><th>W/R</th><th>Default</th><th>Size</th></tr>
<tr><td>0x01(1)</td><td>Configure the Light Effect and Tone Play Mode for Endpoint 1(Browse).
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td colspan="8">Light Effect Index</td></tr>
<tr><td colspan="8">Tone Play Mode</td></tr>
<tr><td colspan="8">Reserved</td></tr>
<tr><td colspan="8">Reserved</td></tr>
</table></td><td>WR</td><td>0x01000000</td><td>4</td></tr>
</table>

Light Effect Index

Value	Description
1	#1 Light Effect, mapping to Parameter 16.
2	#2 Light Effect, mapping to Parameter 17.
4	#3 Light Effect, mapping to Parameter 18.
8	#4 Light Effect, mapping to Parameter 19.
16	#5 Light Effect, mapping to Parameter 20.
32	#6 Light Effect, mapping to Parameter 21.
64	#7 Light Effect, mapping to Parameter 22.
127	Use the last valid configuration value.

Tone Play Mode

Value	Description
0	Single playback.
1	Single loop playback.
2	**List loop playback for auto-selecting tone:** If you're not sure which tone to use, you can configure the value of Tone Play Mode to be 2. Then send Basic Set 0xFF to Endpoint 1 or Root Device to trigger auto-selecting tone function. Chime will play built-in tones **in order** and the Default Tone Identifier will be changed each time a new tone is played. When send Basic Set 0x00 to Endpoint 1 or Root Device to stop playing tone, the Default Tone Identifier will store, which means the tone has been selected. Please note that the Tone Play Mode needs to be configured to be 0 or 1 after the tone is selected, otherwise the automatic selection tone function will be retriggered when the Endpoint 1 or Root Device is triggered to play tone and light again.
3	**List random playback for auto-selecting tone:** If you're not sure which tone to use, you can configure the value of Tone Play Mode to be 3. Then send Basic Set 0xFF to Endpoint 1 or Root Device to trigger auto-selecting tone function. Chime will play built-in tones **randomly** and the Default Tone Identifier will be changed each time a new tone is played. When send Basic Set 0x00 to Endpoint 1 or Root Device to stop playing tone, the Default Tone Identifier will store, which means the tone has been selected. Please note that the Tone Play Mode needs to be configured to be 0 or 1 after the tone is selected, otherwise the automatic selection tone function will be retriggered when the Endpoint 1 or Root Device is triggered to play tone and light again.
255	Use the last valid configuration value.

Example:
If you want to use #5 Light Effect and Single loop playback, please configure the value of Light Effect Index field to be 16 and Tone Play Mode field to be 1, that is, the value of the parameter is equal to 0x10010000.

Then, if you send Basic Set or Sound Switch Tone Play Set to Endpoint 1 or Root Device, it will trigger Endpoint 1, actually Chime, to single loop play the tone based on the value of the sending Basic Set or Sound Switch Tone Play Set. At the same time, Chime Indicator Light will display #5 Light Effect based on the configuration of Parameter 20.

In such case, the tone and light will not stop until Endpoint 1 or Root Device receives Basic Set (Value=0) or Sound Switch Tone Play Set (Tone Identifier=0).

Here is another example about "Use the last valid configuration value":
Assume that current value equals to 0x02000000, if you set the value to be 0x7F010000, then **Value1 (Light Effect Index)** will use the last valid configuration value and **Value2 (Tone Play Mode)** will be update to be 1, that is, the final value equals to 0x02010000.

0x02(2)	**Configure the Light Effect and Tone Effect for Endpoint 2(Tampering).**	WR	0x01000001	4

7	6	5	4	3	2	1	0
Light Effect Index							
Intercepting duration of a tone							
Interval between 2 tones							
Tone Play Count							

Light Effect Index

Value	Description
1	#1 Light Effect, mapping to Parameter 16.
2	#2 Light Effect, mapping to Parameter 17.
4	#3 Light Effect, mapping to Parameter 18.
8	#4 Light Effect, mapping to Parameter 19.
16	#5 Light Effect, mapping to Parameter 20.
32	#6 Light Effect, mapping to Parameter 21.
64	#7 Light Effect, mapping to Parameter 22.
127	Use the last valid configuration value.

Intercepting duration of a tone

Value	Description
0	Keep the original duration of a tone itself, without any interception.
1..254	1-254 seconds. Intercept the duration of a tone. If the intercepting duration is shorter than the original duration of a tone, actual single play time is equal to the intercepting duration. If the intercepting duration is longer than the original duration of a tone, actual single play time is equal to the original duration.
255	Use the last valid configuration value.

Interval between 2 tones

Value	Description
0	No interval.
1..254	1-254 seconds. Specify the interval time between 2 tones.
255	Use the last valid configuration value.

Tone Play Count

Value	Description
0	Unlimited playback until stop by user.
1..254	1-254 times. Specify the count that the tone will be repeated to be played.
255	Use the last valid configuration value.

Example:
If you want to use #1 Light Effect, 2s intercepting duration, 3s interval, and 4 times play count, please configure the value of the parameter to be 0x01020304.

Then, if you send Basic Set or Sound Switch Tone Play Set to Endpoint 2, it will trigger Endpoint 2, actually Chime, to play tone. The tone identifier is based on the value of the sending Basic Set or Sound Switch Tone Play Set. And the duration of the tone is intercepted to be 2s. Chime will continuously play the intercepted tone up to 4 times, with 3s interval between 2 tones. At the same time, Chime will display #1 Light Effect based on the configuration of Parameter 16.

Tone and light will stop when the tone play count reaches 4 or Endpoint 2 receives Basic Set (Value=0) or Sound Switch Tone Play Set (Tone Identifier=0).

Here is another example about "Use the last valid configuration value":
Assume that current value equals to 0x01020304, if you set the value to be 0x02FF00FF, then both **Value2 (Intercepting duration of a tone)** and **Value4 (Tone Play Count)** will use the last valid configuration value, but **Value1 (Light Effect Index)** will be update to be 2 and **Value3 (Interval between 2 tones)** to be 0, that is, the final value equals to 0x02020004.

<table>
<tr><td></td><td>Note:
Using Intercepting duration of a tone, Interval between 2 tones and Tone Play Count, you can edit the playback of the built-in tones according to your own ideas, making the tones more diverse and personalized.

This Parameter will also work when Chime is moved, which indicates that perhaps someone is tampering and moving the product. However, please note that the tone and light will stop once the tampering and moving stops.</td><td></td><td></td><td></td></tr>
<tr><td>0x03(3)</td><td>Configure the Light Effect and Tone Effect for Endpoint 3(Doorbell 1).
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td colspan="8">Light Effect Index</td></tr>
<tr><td colspan="8">Intercepting duration of a tone</td></tr>
<tr><td colspan="8">Interval between 2 tones</td></tr>
<tr><td colspan="8">Tone Play Count</td></tr>
</table>
Light Effect Index
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>1</td><td>#1 Light Effect, mapping to Parameter 16.</td></tr>
<tr><td>2</td><td>#2 Light Effect, mapping to Parameter 17.</td></tr>
<tr><td>4</td><td>#3 Light Effect, mapping to Parameter 18.</td></tr>
<tr><td>8</td><td>#4 Light Effect, mapping to Parameter 19.</td></tr>
<tr><td>16</td><td>#5 Light Effect, mapping to Parameter 20.</td></tr>
<tr><td>32</td><td>#6 Light Effect, mapping to Parameter 21.</td></tr>
<tr><td>64</td><td>#7 Light Effect, mapping to Parameter 22.</td></tr>
<tr><td>127</td><td>Use the last valid configuration value.</td></tr>
</table>
Intercepting duration of a tone
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Keep the original duration of a tone itself, without any interception.</td></tr>
<tr><td>1..254</td><td>1-254 seconds. Intercept the duration of a tone.
If the intercepting duration is shorter than the original duration of a tone, actual single play time is equal to the intercepting duration.

If the intercepting duration is longer than the original duration of a tone, actual single play time is equal to the original duration.</td></tr>
<tr><td>255</td><td>Use the last valid configuration value.</td></tr>
</table>
Interval between 2 tones
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>No interval.</td></tr>
<tr><td>1..254</td><td>1-254 seconds. Specify the interval time between 2 tones.</td></tr>
<tr><td>255</td><td>Use the last valid configuration value.</td></tr>
</table>
Tone Play Count
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Unlimited playback until stop by user.</td></tr>
<tr><td>1..254</td><td>1-254 times. Specify the count that the tone will be repeated to be played.</td></tr>
<tr><td>255</td><td>Use the last valid configuration value.</td></tr>
</table>
Please refer to parameter 0x02(2) for more examples.

Note:
Using Intercepting duration of a tone, Interval between 2 tones and Tone Play Count, you can edit the playback of the built-in tones according to your own ideas, making the tones more diverse and personalized.

This Parameter will also work when Chime is triggered by the paired #1 Button to play tone, which indicates that perhaps someone is outside the door.</td><td>WR</td><td>0x02000001</td><td>4</td></tr>
<tr><td>0x04(4)</td><td>Configure the Light Effect and Tone Effect for Endpoint 4(Doorbell 2).
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
</table></td><td>WR</td><td>0x02000001</td><td>4</td></tr>
</table>

	Light Effect Index Intercepting duration of a tone Interval between 2 tones Tone Play Count **Light Effect Index** Value: Description 1: #1 Light Effect, mapping to Parameter 16. 2: #2 Light Effect, mapping to Parameter 17. 4: #3 Light Effect, mapping to Parameter 18. 8: #4 Light Effect, mapping to Parameter 19. 16: #5 Light Effect, mapping to Parameter 20. 32: #6 Light Effect, mapping to Parameter 21. 64: #7 Light Effect, mapping to Parameter 22. 127: Use the last valid configuration value. **Intercepting duration of a tone** Value: Description 0: Keep the original duration of a tone itself, without any interception. 1..254: 1-254 seconds. Intercept the duration of a tone. If the intercepting duration is shorter than the original duration of a tone, actual single play time is equal to the intercepting duration. If the intercepting duration is longer than the original duration of a tone, actual single play time is equal to the original duration. 255: Use the last valid configuration value. **Interval between 2 tones** Value: Description 0: No interval. 1..254: 1-254 seconds. Specify the interval time between 2 tones. 255: Use the last valid configuration value. **Tone Play Count** Value: Description 0: Unlimited playback until stop by user. 1..254: 1-254 times. Specify the count that the tone will be repeated to be played. 255: Use the last valid configuration value. **Please refer to parameter 0x02(2) for more examples.** **Note:** Using Intercepting duration of a tone, Interval between 2 tones and Tone Play Count, you can edit the playback of the built-in tones according to your own ideas, making the tones more diverse and personalized. This Parameter will also work when Chime is triggered by the paired #2 Button to play tone, which indicates that perhaps someone is outside the door.			
0x05(5)	**Configure the Light Effect and Tone Effect for Endpoint 5(Doorbell 3).** 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 Light Effect Index Intercepting duration of a tone Interval between 2 tones Tone Play Count **Light Effect Index** Value: Description 1: #1 Light Effect, mapping to Parameter 16. 2: #2 Light Effect, mapping to Parameter 17. 4: #3 Light Effect, mapping to Parameter 18.	WR	0x02000001	4

	8	#4 Light Effect, mapping to Parameter 19.		
	16	#5 Light Effect, mapping to Parameter 20.		
	32	#6 Light Effect, mapping to Parameter 21.		
	64	#7 Light Effect, mapping to Parameter 22.		
	127	Use the last valid configuration value.		

Intercepting duration of a tone

Value	Description
0	Keep the original duration of a tone itself, without any interception.
1..254	1-254 seconds. Intercept the duration of a tone. If the intercepting duration is shorter than the original duration of a tone, actual single play time is equal to the intercepting duration. If the intercepting duration is longer than the original duration of a tone, actual single play time is equal to the original duration.
255	Use the last valid configuration value.

Interval between 2 tones

Value	Description
0	No interval.
1..254	1-254 seconds. Specify the interval time between 2 tones.
255	Use the last valid configuration value.

Tone Play Count

Value	Description
0	Unlimited playback until stop by user.
1..254	1-254 times. Specify the count that the tone will be repeated to be played.
255	Use the last valid configuration value.

Please refer to parameter 0x02(2) for more examples.

Note:
Using Intercepting duration of a tone, Interval between 2 tones and Tone Play Count, you can edit the playback of the built-in tones according to your own ideas, making the tones more diverse and personalized.

This Parameter will also work when Chime is triggered by the paired #1 Button to play tone, which indicates that perhaps someone is outside the door.

0x06(6)	**Configure the Light Effect and Tone Effect for Endpoint 6(Environment).**	WR	0x04000000	4

7	6	5	4	3	2	1	0
Light Effect Index							
Intercepting duration of a tone							
Interval between 2 tones							
Tone Play Count							

Light Effect Index

Value	Description
1	#1 Light Effect, mapping to Parameter 16.
2	#2 Light Effect, mapping to Parameter 17.
4	#3 Light Effect, mapping to Parameter 18.
8	#4 Light Effect, mapping to Parameter 19.
16	#5 Light Effect, mapping to Parameter 20.
32	#6 Light Effect, mapping to Parameter 21.
64	#7 Light Effect, mapping to Parameter 22.
127	Use the last valid configuration value.

Intercepting duration of a tone

Value	Description
0	Keep the original duration of a tone itself, without any interception.
1..254	1-254 seconds. Intercept the duration of a tone.

	If the intercepting duration is shorter than the original duration of a tone, actual single play time is equal to the intercepting duration. If the intercepting duration is longer than the original duration of a tone, actual single play time is equal to the original duration.
255	Use the last valid configuration value.

Interval between 2 tones

Value	Description
0	No interval.
1..254	1-254 seconds. Specify the interval time between 2 tones.
255	Use the last valid configuration value.

Tone Play Count

Value	Description
0	Unlimited playback until stop by user.
1..254	1-254 times. Specify the count that the tone will be repeated to be played.
255	Use the last valid configuration value.

Please refer to parameter 0x02(2) for more examples.

Note:
Using Intercepting duration of a tone, Interval between 2 tones and Tone Play Count, you can edit the playback of the built-in tones according to your own ideas, making the tones more diverse and personalized.

This Parameter will also work when Chime is triggered by the Notification Report from other nodes to play tone, which indicates that perhaps some environmental anomaly occur.

0x07(7)	WR	0x04000000	4

Configure the Light Effect and Tone Effect for Endpoint 7(Security).

7	6	5	4	3	2	1	0
Light Effect Index							
Intercepting duration of a tone							
Interval between 2 tones							
Tone Play Count							

Light Effect Index

Value	Description
1	#1 Light Effect, mapping to Parameter 16.
2	#2 Light Effect, mapping to Parameter 17.
4	#3 Light Effect, mapping to Parameter 18.
8	#4 Light Effect, mapping to Parameter 19.
16	#5 Light Effect, mapping to Parameter 20.
32	#6 Light Effect, mapping to Parameter 21.
64	#7 Light Effect, mapping to Parameter 22.
127	Use the last valid configuration value.

Intercepting duration of a tone

Value	Description
0	Keep the original duration of a tone itself, without any interception.
1..254	1-254 seconds. Intercept the duration of a tone. If the intercepting duration is shorter than the original duration of a tone, actual single play time is equal to the intercepting duration. If the intercepting duration is longer than the original duration of a tone, actual single play time is equal to the original duration.
255	Use the last valid configuration value.

Interval between 2 tones

Value	Description
0	No interval.

	1..254 | 1-254 seconds. Specify the interval time between 2 tones. 255 | Use the last valid configuration value. **Tone Play Count** Value | Description 0 | Unlimited playback until stop by user. 1..254 | 1-254 times. Specify the count that the tone will be repeated to be played. 255 | Use the last valid configuration value. **Please refer to parameter 0x02(2) for more examples.** **Note:** Using Intercepting duration of a tone, Interval between 2 tones and Tone Play Count, you can edit the playback of the built-in tones according to your own ideas, making the tones more diverse and personalized. This Parameter will also work when Chime is triggered by the Notification Report from other nodes to play tone, which indicates that perhaps some security event occur.			
0x08(8)	**Configure the Light Effect and Tone Effect for Endpoint 8(Emergency).** 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 Light Effect Index Intercepting duration of a tone Interval between 2 tones Tone Play Count **Light Effect Index** Value | Description 1 | #1 Light Effect, mapping to Parameter 16. 2 | #2 Light Effect, mapping to Parameter 17. 4 | #3 Light Effect, mapping to Parameter 18. 8 | #4 Light Effect, mapping to Parameter 19. 16 | #5 Light Effect, mapping to Parameter 20. 32 | #6 Light Effect, mapping to Parameter 21. 64 | #7 Light Effect, mapping to Parameter 22. 127 | Use the last valid configuration value. **Intercepting duration of a tone** Value | Description 0 | Keep the original duration of a tone itself, without any interception. 1..254 | 1-254 seconds. Intercept the duration of a tone. If the intercepting duration is shorter than the original duration of a tone, actual single play time is equal to the intercepting duration. If the intercepting duration is longer than the original duration of a tone, actual single play time is equal to the original duration. 255 | Use the last valid configuration value. **Interval between 2 tones** Value | Description 0 | No interval. 1..254 | 1-254 seconds. Specify the interval time between 2 tones. 255 | Use the last valid configuration value. **Tone Play Count** Value | Description 0 | Unlimited playback until stop by user. 1..254 | 1-254 times. Specify the count that the tone will be repeated to be played. 255 | Use the last valid configuration value.	WR	0x04000000	4

<table>
<tr><td></td><td>Please refer to parameter 0x02(2) for more examples.

Note:
Using Intercepting duration of a tone, Interval between 2 tones and Tone Play Count, you can edit the playback of the built-in tones according to your own ideas, making the tones more diverse and personalized.

This Parameter will also work when Chime is triggered by the Notification Report from other nodes to play tone, which indicates that perhaps some emergency event occur.</td><td></td><td></td><td></td></tr>
<tr><td>0x10(16)</td><td>Configure #1 Light Effect.
<table><tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr><tr><td colspan="8">Gradually bright duration</td></tr><tr><td colspan="8">Gradually extinguished duration</td></tr><tr><td colspan="8">Keep bright duration</td></tr><tr><td colspan="8">Keep extinguished duration</td></tr></table>
Gradually bright duration
<table><tr><th>Value</th><th>Description</th></tr><tr><td>0..127</td><td>The time from Indicator Light extinguished to bright. (Unit = 20ms)</td></tr></table>
Gradually extinguished duration
<table><tr><th>Value</th><th></th></tr><tr><td>0..127</td><td>The time from Indicator Light bright to extinguished. (Unit = 20ms)</td></tr></table>
Keep bright duration
<table><tr><th>Value</th><th>Description</th></tr><tr><td>0..255</td><td>The time of Indicator Light keep bright. (Unit = 100ms)</td></tr></table>
Keep extinguished duration
<table><tr><th>Value</th><th>Description</th></tr><tr><td>0..255</td><td>The time of Indicator Light keep extinguished. (Unit = 100ms)</td></tr></table>
Note:
The Light Effect is displayed cyclically, and the maximum display duration is equal to the total duration of the tone playback. In other words, the Light Effect will be displayed in a loop until stop playing tone.

The minimum set of complete Light Effect is in the order of:
[Gradually bright]->[Keep bright]->[Gradually extinguished]->[Keep extinguished]</td><td>WR</td><td>0x4B191403</td><td>4</td></tr>
<tr><td>0x11(17)</td><td>Configure #2 Light Effect.
<table><tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr><tr><td colspan="8">Gradually bright duration</td></tr><tr><td colspan="8">Gradually extinguished duration</td></tr><tr><td colspan="8">Keep bright duration</td></tr><tr><td colspan="8">Keep extinguished duration</td></tr></table>
Gradually bright duration
<table><tr><th>Value</th><th>Description</th></tr><tr><td>0..127</td><td>The time from Indicator Light extinguished to bright. (Unit = 20ms)</td></tr></table>
Gradually extinguished duration
<table><tr><th>Value</th><th></th></tr><tr><td>0..127</td><td>The time from Indicator Light bright to extinguished. (Unit = 20ms)</td></tr></table>
Keep bright duration
<table><tr><th>Value</th><th>Description</th></tr><tr><td>0..255</td><td>The time of Indicator Light keep bright. (Unit = 100ms)</td></tr></table>
Keep extinguished duration</td><td>WR</td><td>0x32320003</td><td>4</td></tr>
</table>

	Value | Description 0..255 | The time of Indicator Light keep extinguished. (Unit = 100ms) **Note:** The Light Effect is displayed cyclically, and the maximum display duration is equal to the total duration of the tone playback. In other words, the Light Effect will be displayed in a loop until stop playing tone. The minimum set of complete Light Effect is in the order of: [Gradually bright]->[Keep bright]->[Gradually extinguished]->[Keep extinguished]			
0x12(18)	**Configure #3 Light Effect.** 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 Gradually bright duration Gradually extinguished duration Keep bright duration Keep extinguished duration **Gradually bright duration** Value | Description 0..127 | The time from Indicator Light extinguished to bright. (Unit = 20ms) **Gradually extinguished duration** Value | 0..127 | The time from Indicator Light bright to extinguished. (Unit = 20ms) **Keep bright duration** Value | Description 0..255 | The time of Indicator Light keep bright. (Unit = 100ms) **Keep extinguished duration** Value | Description 0..255 | The time of Indicator Light keep extinguished. (Unit = 100ms) **Note:** The Light Effect is displayed cyclically, and the maximum display duration is equal to the total duration of the tone playback. In other words, the Light Effect will be displayed in a loop until stop playing tone. The minimum set of complete Light Effect is in the order of: [Gradually bright]->[Keep bright]->[Gradually extinguished]->[Keep extinguished]	WR	0x00210103	4
0x13(19)	**Configure #4 Light Effect.** 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 Gradually bright duration Gradually extinguished duration Keep bright duration Keep extinguished duration **Gradually bright duration** Value | Description 0..127 | The time from Indicator Light extinguished to bright. (Unit = 20ms) **Gradually extinguished duration** Value | 0..127 | The time from Indicator Light bright to extinguished. (Unit = 20ms) **Keep bright duration** Value | Description 0..255 | The time of Indicator Light keep bright. (Unit = 100ms) **Keep extinguished duration** Value | Description	WR	0x21000003	4

<table>
<tr><td></td><td>
<table>
<tr><td>0..255</td><td>The time of Indicator Light keep extinguished. (Unit = 100ms)</td></tr>
</table>

Note:
The Light Effect is displayed cyclically, and the maximum display duration is equal to the total duration of the tone playback. In other words, the Light Effect will be displayed in a loop until stop playing tone.

The minimum set of complete Light Effect is in the order of:
[Gradually bright]->[Keep bright]->[Gradually extinguished]->[Keep extinguished]
</td><td></td><td></td><td></td></tr>
<tr><td>0x14(20)</td><td>
Configure #5 Light Effect.
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td colspan="8">Gradually bright duration</td></tr>
<tr><td colspan="8">Gradually extinguished duration</td></tr>
<tr><td colspan="8">Keep bright duration</td></tr>
<tr><td colspan="8">Keep extinguished duration</td></tr>
</table>
Gradually bright duration
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0..127</td><td>The time from Indicator Light extinguished to bright. (Unit = 20ms)</td></tr>
</table>
Gradually extinguished duration
<table>
<tr><th>Value</th><th></th></tr>
<tr><td>0..127</td><td>The time from Indicator Light bright to extinguished. (Unit = 20ms)</td></tr>
</table>
Keep bright duration
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0..255</td><td>The time of Indicator Light keep bright. (Unit = 100ms)</td></tr>
</table>
Keep extinguished duration
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0..255</td><td>The time of Indicator Light keep extinguished. (Unit = 100ms)</td></tr>
</table>
Note:
The Light Effect is displayed cyclically, and the maximum display duration is equal to the total duration of the tone playback. In other words, the Light Effect will be displayed in a loop until stop playing tone.

The minimum set of complete Light Effect is in the order of:
[Gradually bright]->[Keep bright]->[Gradually extinguished]->[Keep extinguished]
</td><td>WR</td><td>0x0000000A</td><td>4</td></tr>
<tr><td>0x15(21)</td><td>
Configure #6 Light Effect.
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td colspan="8">Gradually bright duration</td></tr>
<tr><td colspan="8">Gradually extinguished duration</td></tr>
<tr><td colspan="8">Keep bright duration</td></tr>
<tr><td colspan="8">Keep extinguished duration</td></tr>
</table>
Gradually bright duration
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0..127</td><td>The time from Indicator Light extinguished to bright. (Unit = 20ms)</td></tr>
</table>
Gradually extinguished duration
<table>
<tr><th>Value</th><th></th></tr>
<tr><td>0..127</td><td>The time from Indicator Light bright to extinguished. (Unit = 20ms)</td></tr>
</table>
Keep bright duration
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0..255</td><td>The time of Indicator Light keep bright. (Unit = 100ms)</td></tr>
</table>
Keep extinguished duration
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0..255</td><td>The time of Indicator Light keep extinguished. (Unit = 100ms)</td></tr>
</table>
</td><td>WR</td><td>0x00000A00</td><td>4</td></tr>
</table>

Note:
The Light Effect is displayed cyclically, and the maximum display duration is equal to the total duration of the tone playback. In other words, the Light Effect will be displayed in a loop until stop playing tone.

The minimum set of complete Light Effect is in the order of:
[Gradually bright]->[Keep bright]->[Gradually extinguished]->[Keep extinguished]

0x16(22) **Configure #7 Light Effect.** WR 0x21000001 4

7	6	5	4	3	2	1	0
Gradually bright duration							
Gradually extinguished duration							
Keep bright duration							
Keep extinguished duration							

Gradually bright duration

Value	Description
0..127	The time from Indicator Light extinguished to bright. (Unit = 20ms)

Gradually extinguished duration

Value	
0..127	The time from Indicator Light bright to extinguished. (Unit = 20ms)

Keep bright duration

Value	Description
0..255	The time of Indicator Light keep bright. (Unit = 100ms)

Keep extinguished duration

Value	Description
0..255	The time of Indicator Light keep extinguished. (Unit = 100ms)

Note:
The Light Effect is displayed cyclically, and the maximum display duration is equal to the total duration of the tone playback. In other words, the Light Effect will be displayed in a loop until stop playing tone.

The minimum set of complete Light Effect is in the order of:
[Gradually bright]->[Keep bright]->[Gradually extinguished]->[Keep extinguished]

0x20(32) **Configure how to send Basic Set to nodes in Group 2.** WR 3 1

Value	Description
0	Don’t send Basic Set.
1	When Endpoint 1 starts playing tone, send Basic Set 0xFF. When Endpoint 1 stops playing tone, don’t send Basic Set.
2	When Endpoint 1 starts playing tone, send Basic Set 0x00. When Endpoint 1 stops playing tone, don’t send Basic Set.
3	When Endpoint 1 starts playing tone, send Basic Set 0xFF. When Endpoint 1 stops playing tone, send Basic Set 0x00.
4	When Endpoint 1 starts playing tone, send Basic Set 0x00. When Endpoint 1 stops playing tone, send Basic Set 0xFF.

0x21(33) **Configure how to send Basic Set to nodes in Group 3.** WR 3 1

Value	Description
0	Don’t send Basic Set.
1	When Endpoint 2 starts playing tone, send Basic Set 0xFF. When Endpoint 2 stops playing tone, don’t send Basic Set.
2	When Endpoint 2 starts playing tone, send Basic Set 0x00. When Endpoint 2 stops playing tone, don’t send Basic Set.
3	When Endpoint 2 starts playing tone, send Basic Set 0xFF. When Endpoint 2 stops playing tone, send Basic Set 0x00.
4	When Endpoint 2 starts playing tone, send Basic Set 0x00. When Endpoint 2 stops playing tone, send Basic Set 0xFF.

0x22(34) **Configure how to send Basic Set to nodes in Group 4.** WR 3 1

	Value / Description 0 – Don't send Basic Set. 1 – When Endpoint 3 starts playing tone, send Basic Set 0xFF. When Endpoint 3 stops playing tone, don't send Basic Set. 2 – When Endpoint 3 starts playing tone, send Basic Set 0x00. When Endpoint 3 stops playing tone, don't send Basic Set. 3 – When Endpoint 3 starts playing tone, send Basic Set 0xFF. When Endpoint 3 stops playing tone, send Basic Set 0x00. 4 – When Endpoint 3 starts playing tone, send Basic Set 0x00. When Endpoint 3 stops playing tone, send Basic Set 0xFF.			
0x23(35)	**Configure how to send Basic Set to nodes in Group 5.** Value / Description 0 – Don't send Basic Set. 1 – When Endpoint 4 starts playing tone, send Basic Set 0xFF. When Endpoint 4 stops playing tone, don't send Basic Set. 2 – When Endpoint 4 starts playing tone, send Basic Set 0x00. When Endpoint 4 stops playing tone, don't send Basic Set. 3 – When Endpoint 4 starts playing tone, send Basic Set 0xFF. When Endpoint 4 stops playing tone, send Basic Set 0x00. 4 – When Endpoint 4 starts playing tone, send Basic Set 0x00. When Endpoint 4 stops playing tone, send Basic Set 0xFF.	WR	3	1
0x24(36)	**Configure how to send Basic Set to nodes in Group 6.** Value / Description 0 – Don't send Basic Set. 1 – When Endpoint 5 starts playing tone, send Basic Set 0xFF. When Endpoint 5 stops playing tone, don't send Basic Set. 2 – When Endpoint 5 starts playing tone, send Basic Set 0x00. When Endpoint 5 stops playing tone, don't send Basic Set. 3 – When Endpoint 5 starts playing tone, send Basic Set 0xFF. When Endpoint 5 stops playing tone, send Basic Set 0x00. 4 – When Endpoint 5 starts playing tone, send Basic Set 0x00. When Endpoint 5 stops playing tone, send Basic Set 0xFF.	WR	3	1
0x25(37)	**Configure how to send Basic Set to nodes in Group 7.** Value / Description 0 – Don't send Basic Set. 1 – When Endpoint 6 starts playing tone, send Basic Set 0xFF. When Endpoint 6 stops playing tone, don't send Basic Set. 2 – When Endpoint 6 starts playing tone, send Basic Set 0x00. When Endpoint 6 stops playing tone, don't send Basic Set. 3 – When Endpoint 6 starts playing tone, send Basic Set 0xFF. When Endpoint 6 stops playing tone, send Basic Set 0x00. 4 – When Endpoint 6 starts playing tone, send Basic Set 0x00. When Endpoint 6 stops playing tone, send Basic Set 0xFF.	WR	3	1
0x26(38)	**Configure how to send Basic Set to nodes in Group 8.** Value / Description 0 – Don't send Basic Set. 1 – When Endpoint 7 starts playing tone, send Basic Set 0xFF. When Endpoint 7 stops playing tone, don't send Basic Set. 2 – When Endpoint 7 starts playing tone, send Basic Set 0x00. When Endpoint 7 stops playing tone, don't send Basic Set. 3 – When Endpoint 7 starts playing tone, send Basic Set 0xFF. When Endpoint 7 stops playing tone, send Basic Set 0x00. 4 – When Endpoint 7 starts playing tone, send Basic Set 0x00. When Endpoint 7 stops playing tone, send Basic Set 0xFF.	WR	3	1
0x27(39)	**Configure how to send Basic Set to nodes in Group 9.** Value / Description 0 – Don't send Basic Set. 1 – When Endpoint 8 starts playing tone, send Basic Set 0xFF. When Endpoint 8 stops playing tone, don't send Basic Set. 2 – When Endpoint 8 starts playing tone, send Basic Set 0x00.	WR	3	1

<table>
<tr><td></td><td>
<table>
<tr><td></td><td>When Endpoint 8 stops playing tone, don’t send Basic Set.</td></tr>
<tr><td>3</td><td>When Endpoint 8 starts playing tone, send Basic Set 0xFF.
When Endpoint 8 stops playing tone, send Basic Set 0x00.</td></tr>
<tr><td>4</td><td>When Endpoint 8 starts playing tone, send Basic Set 0x00.
When Endpoint 8 stops playing tone, send Basic Set 0xFF.</td></tr>
</table>
</td><td></td><td></td><td></td></tr>
<tr><td>0x30(48)</td><td>Tigger Unpairing Button Mode (Write Only)
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>#3 Button</td><td>#2 Button</td><td>#1 Button</td></tr>
</table>
Valid value:
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>1</td><td>Tigger Unpairing #1 Button Mode.</td></tr>
<tr><td>2</td><td>Tigger Unpairing #2 Button Mode.</td></tr>
<tr><td>3</td><td>Tigger Unpairing #2 and #1 Button Mode.</td></tr>
<tr><td>4</td><td>Tigger Unpairing #3 Button Mode.</td></tr>
<tr><td>5</td><td>Tigger Unpairing #3 and #1 Button Mode.</td></tr>
<tr><td>6</td><td>Tigger Unpairing #3 and #2 Button Mode.</td></tr>
<tr><td>7</td><td>Tigger Unpairing #3, #2 and #1 Button Mode.</td></tr>
</table>
Note:
1. Can trigger unpairing multiple Buttons at one time.
2. User does not need to do anything to Button.
3. Indicator Light will quickly flash white light 3 times when Unpairing Button Mode finishes.</td><td>W</td><td>-</td><td>1</td></tr>
<tr><td>0x31(49)</td><td>Tigger Pairing Button Mode (Write Only)
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>#3 Button</td><td>#2 Button</td><td>#1 Button</td></tr>
</table>
Valid value:
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Exit Pairing Button Mode.</td></tr>
<tr><td>1</td><td>Tigger Pairing #1 Button Mode.</td></tr>
<tr><td>2</td><td>Tigger Pairing #2 Button Mode.</td></tr>
<tr><td>4</td><td>Tigger Pairing #3 Button Mode.</td></tr>
</table>
Note:
1. Can NOT trigger pairing multiple Buttons at one time.
2. Pairing time is up to 10 seconds. In this time period, user MUST manually click Ring Button 3 times quickly. Otherwise it cannot be paired successfully.
3. Each successful pairing will overwrite the previous paired Button which has the same Button Number.</td><td>W</td><td>-</td><td>1</td></tr>
<tr><td>0x32(50)</td><td>Report which Pairing Button Mode is triggered (Read Only)
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>#3 Button</td><td>#2 Button</td><td>#1 Button</td></tr>
</table>
Valid value:
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>There is no Pairing Button Mode being triggered.</td></tr>
<tr><td>1</td><td>Pairing #1 Button Mode is triggered.</td></tr>
<tr><td>2</td><td>Pairing #2 Button Mode is triggered.</td></tr>
<tr><td>4</td><td>Pairing #3 Button Mode is triggered.</td></tr>
</table>
Note:
Once Pairing Button Mode is triggered, node will automatically send this configuration report via Lifeline to inform which Button is waiting for being paired.</td><td>R</td><td>0</td><td>1</td></tr>
</table>

<table>
<tr>
<td>0x33(51)</td>
<td>
Report which Buttons had been paired (Read Only)
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>Reserved</td><td>#3 Button</td><td>#2 Button</td><td>#1 Button</td></tr>
</table>
Valid value:
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>There is no paired Button.</td></tr>
<tr><td>1</td><td>#1 Button had been paired.</td></tr>
<tr><td>2</td><td>#2 Button had been paired.</td></tr>
<tr><td>3</td><td>#2 and #1 Button had been paired.</td></tr>
<tr><td>4</td><td>#3 Button had been paired.</td></tr>
<tr><td>5</td><td>#3 and #1 Button had been paired.</td></tr>
<tr><td>6</td><td>#3 and #2 Button had been paired.</td></tr>
<tr><td>7</td><td>#3, #2 and #1 Button had been paired.</td></tr>
</table>
Note:
Once Unpairing or Pairing Button Mode finishes, node will automatically send this configuration report via Lifeline to inform which Buttons had been paired.

This parameter does not restore to the default value when Chime is removed from the network or reset the factory settings.
</td>
<td>R</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>0x34(52)</td>
<td>
Get the information of #1 Button (Read Only)
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td colspan="8">Button Battery Voltage MSB</td></tr>
<tr><td colspan="8">Button Battery Voltage LSB</td></tr>
<tr><td colspan="8">Button Software Version MSB</td></tr>
<tr><td colspan="8">Button Software Version LSB</td></tr>
</table>
Button Battery Voltage MSB & LSB
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Button is unpaired.</td></tr>
<tr><td>1-32767</td><td>The unit of Battery Voltage is mV.</td></tr>
</table>
Button Software Version MSB & LSB
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Button is unpaired.</td></tr>
<tr><td>1-65535</td><td>For example, if Button Software Version equals to 0x0100, it means its version is 1.00.</td></tr>
</table>
Note:
This parameter does not restore to the default value when Chime is removed from the network or reset the factory settings.
</td>
<td>R</td>
<td>0x00000000</td>
<td>4</td>
</tr>
<tr>
<td>0x35(53)</td>
<td>
Get the information of #2 Button (Read Only)
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td colspan="8">Button Battery Voltage MSB</td></tr>
<tr><td colspan="8">Button Battery Voltage LSB</td></tr>
<tr><td colspan="8">Button Software Version MSB</td></tr>
<tr><td colspan="8">Button Software Version LSB</td></tr>
</table>
Button Battery Voltage MSB & LSB
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Button is unpaired.</td></tr>
<tr><td>1-32767</td><td>The unit of Battery Voltage is mV.</td></tr>
</table>
Button Software Version MSB & LSB
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Button is unpaired.</td></tr>
<tr><td>1-65535</td><td>For example, if Button Software Version equals to 0x0100, it means its version is 1.00.</td></tr>
</table>
</td>
<td>R</td>
<td>0x00000000</td>
<td>4</td>
</tr>
</table>

<table>
<tr><td></td><td>Note:
This parameter does not restore to the default value when Chime is removed from the network or reset the factory settings.</td><td></td><td></td><td></td></tr>
<tr><td>0x36(54)</td><td>Get the information of #3 Button (Read Only)
<table>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td colspan="8">Button Battery Voltage MSB</td></tr>
<tr><td colspan="8">Button Battery Voltage LSB</td></tr>
<tr><td colspan="8">Button Software Version MSB</td></tr>
<tr><td colspan="8">Button Software Version LSB</td></tr>
</table>
Button Battery Voltage MSB & LSB
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Button is unpaired.</td></tr>
<tr><td>1-32767</td><td>The unit of Battery Voltage is mV.</td></tr>
</table>
Button Software Version MSB & LSB
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Button is unpaired.</td></tr>
<tr><td>1-65535</td><td>For example, if Button Software Version equals to 0x0100, it means its version is 1.00.</td></tr>
</table>
Note:
This parameter does not restore to the default value when Chime is removed from the network or reset the factory settings.</td><td>R</td><td>0x00000000</td><td>4</td></tr>
<tr><td>0x60(96)</td><td>Enable or Disable the ability that click the Action Button to stop a playing tone.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Disable</td></tr>
<tr><td>1</td><td>Enable</td></tr>
</table></td><td>WR</td><td>0</td><td>1</td></tr>
<tr><td>0xFF(255)</td><td>Factory Reset or Initialization (Write Only)
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>1431655765
(0x55555555)</td><td>Factory Reset:
Restore the product to factory settings and remove from the network.</td></tr>
<tr><td>Other</td><td>Initialization:
Initialize all configuration parameters to default values.</td></tr>
</table>
Note:
Parameter 51/52/53/54 will not restore the configuration settings to the default when Factory Reset or Initialization is performed.</td><td>W</td><td>-</td><td>4</td></tr>
</table>