

SE813

INDOOR VOICE SIREN

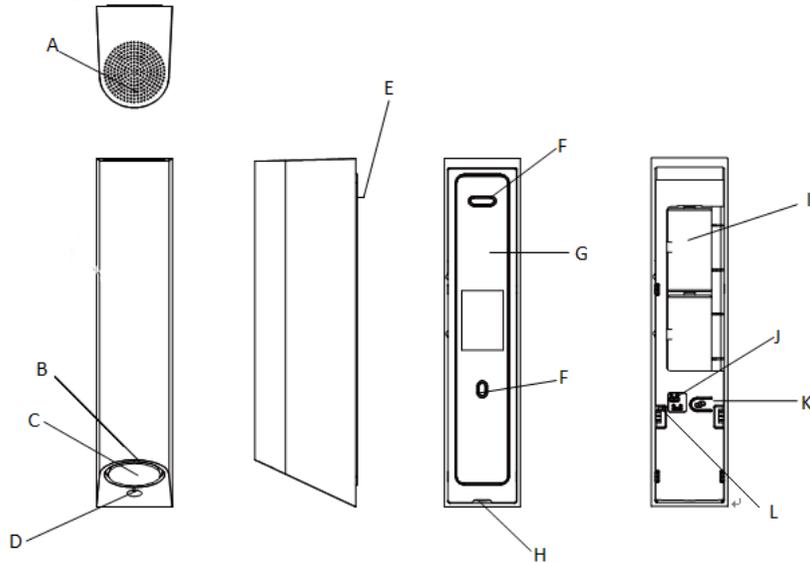
SE813 is a battery operated alarm siren with audio playback capability and built-in temperature/humidity sensor.

Main features:

- Piezoelectric siren emits alarm sound when activated under emergency.
- Playback of prerecorded audio sound from built in speaker. User can download sound files from PC into the unit's memory and played back through commands sent from Z-Wave controller.
- Built in digital temperature and humidity sensor reports environmental condition to the controller.
- Z-Wave Plus certified device and can connect up to 5 Z-Wave controllers simultaneously.
- Supports Z-Wave S2 security protocol. A security-enabled Z-Wave Controller must be used to utilize this security feature.
- Tamper switch to detect removal of its cover.

This product is ideal for smarthome scenarios using voice notification or voice alerts, adding a more user friendly interaction with the system.

Product Overview



A. Voice Speaker	B. LED indicator	C. Siren
D. Temperature Sensor	E. Battery Mylar	F. Screw Mount
G. Backplate	H. Opening slot	I. Battery
J. Mini USB connector	K. Link button	L. Tamper switch

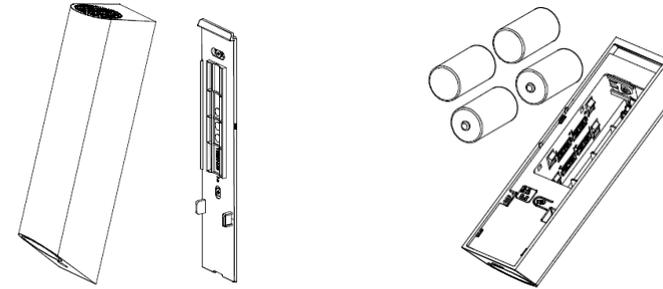
Adding to Z-Wave Network

Auto Inclusion

The voice siren supports Auto Inclusion feature where it will automatically enter Inclusion mode when first powered up after a factory reset.

Note: Depending on country, the unit may be shipped with batteries already inserted. In this case, simply pull out the Battery Mylar, set the Z-Wave controller into Inclusion mode and then proceed to step 4.

1. Carefully remove its back cover by peeling from the opening slot at the bottom.
2. Set the Z-Wave controller into Inclusion mode.
3. Insert the battery into the battery compartment. Note the correct polarity of battery as indicated.



4. The unit's LED will start to blink. The duration of Inclusion mode is 30 seconds.
5. The Inclusion process should be completed when the LED stops blinking.

Note: If you are connecting this unit to a Z-Wave Controller that utilizes the S2 security protocol, you may be asked by your controller to enter a 5-digit Device Specific Key (DSK) that is unique to each unit. This can be found in one of two places:

- on the QR code label on the back of the unit
- on the insert card inside the packaging.

If Auto Inclusion fails, refer to the Troubleshooting section regarding Manual Inclusion.

Downloading Audio file

Preparing the audio file

Before downloading audio files into the voice siren, the audio files need to conform to the format below.

- Format : WAVE format (file extension '.wav')
- Sample rate : 8KHz~32KHz.
- Mono only
- Maximum length : 30 seconds for each file

Note: MP3 file needs to be converted to .wav format.

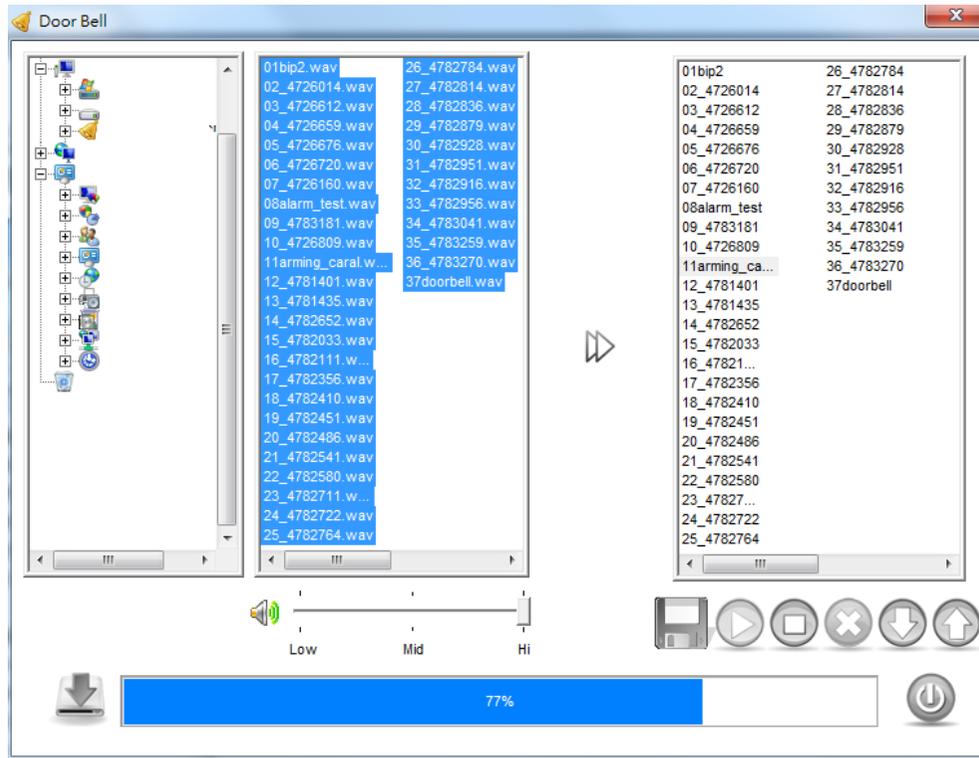
1. Use a sound editor software on a PC to modify the audio files to fulfill the format above.
2. Save the files into a folder. Ensure the total size of all the files do not exceed 2MByte in size, which is roughly 85 seconds of playback.

Downloading to voice siren

A PC running Microsoft Windows Operating System and a Mini USB cable is needed. Ensure also batteries are inserted into the voice siren, otherwise downloading will not work.

1. Connect the voice siren to the USB port of the PC with the Mini USB cable.

- Windows will prompt to ask if you would like to run the software. Allow and proceed.
- The screen below will appear;



- the two columns on the left show the PC folders and the audio files in a selected folder.

- the column on the right is a temporary memory showing the list of files ready to be downloaded to the unit. When the device is first connected, this section is filled up with files currently in the unit's storage.

Note: The voice siren comes with factory preset sounds. These audio files can be used as reference when adjusting loudness of the audio file to suit the unit's speaker.

- Move the new audio files from left to right by selecting the files in the middle column and clicking the double arrow icon.
- Refer to the table below for the icon description.

Icon	Description
	Set File Order
	Pause playback
	Save to PC
	Download To Device

Icon	Description
	Play on PC speaker
	Delete Song
	Exit Program

If necessary, adjust the order of the files using the up/down arrow.

Note:

- The Z-Wave controller plays a sound file based on its order in this file list. If the file order is modified, be sure to update the Z-Wave controller to match the order.
- The second file in the sequence is also used by the unit's tamper switch. When the tamper switch is activated it will always play the file at this location

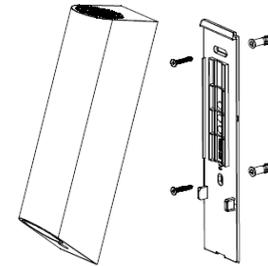
- When the files are ready for download, click the Download To Device icon.
- Once download is complete, click the Exit Program icon to close the software and unplug the USB cable.
- Restart the voice siren by removing one of its batteries and re-inserting the battery back again.

Note: Always restart the unit for the new audio files to take effect.

Mounting the Unit

The voice siren should be mounted in a vertical position about 2 meters from the floor.

- Use the backplate as a template to mark and drill the position of two mounting holes on the wall. Fix the backplate to the wall using the plastic wall plugs and fixing screws provided



- Slide the unit down to its backplate and press against the wall to secure into place.

Operation

- Alarm Activation:**
When siren is activated by the Z-Wave controller, the unit's piezoelectric siren will be sound or 3 minutes (default setting) along with flashing LED.
- Audio playback:**
Through commands from the Z-Wave controller, the unit's speaker will playback downloaded audio files.
- Temperature/Humidity measurement**
These measurements are sent to the controller, through periodic auto reporting or on-demand when requested by the controller.
- Tamper Protection:**
If the unit is removed from its mounting location or its cover is removed, the tamper switch will be activated and a signal will be sent to notify the controller. The unit will then play a sound preset by the user.

Maintenance

Low Battery: Under low battery condition, the voice siren will notify the Z-Wave controller to alert the user of its low battery condition. Replace the batteries as soon as possible.

Programming

Z-Wave Group

The Voice Siren supports **Group 1** Association with 5 Controller nodes.

The following notification/report will be send to the nodes of Group 1:

- When the unit is powered up or the tamper is triggered, a Notification Report will be sent.
- When its battery level drops to unacceptable level, at Battery report will be sent.
- When performing Factory Reset, a Device Reset Locally Notification will be sent.
- Upon voice siren status being changed, the unit will send Switch Binary Report.
- The unit sends Multilevel Sensor Report for temperature and humidity data.

Z-Wave Plus Info

Role Type	Node Type	Installer Icon	User Icon
Slave Sleeping Listening	Z-Wave Plus node	Siren Device Type	Siren Device Type

Association Command Class

Group	Max Node
1	5

Version

Protocol Library	3 (Slave_Enhance_232_Library)
Protocol Version	5.3 (6.71.03)

Manufacturer

Manufacturer ID	Product Type	Product ID
0x0060	0x000C	0x0003

AGI (Association Group Information) Table

Group	Profile	Command Class & Command (List) N bytes	Group Name(UTF-8)
1	General	Battery Report, Device Reset Locally Notification, Notification Report Switch Binary Report Sensor Multilevel Report	Lifeline

Notification

Event	Type	Event	Event Parameter Length	Event Parameter
The power is applied for the first time	0x08	0x01		
Tamper switch being press more than 3 seconds	0x07	0x00	0x01	0x03
Tamper switch being press more than 3 seconds and released	0x07	0x03		

Battery

Battery Report (value)	Description
20~100	Battery Level %
0xFF	Low Battery

Switch Binary

This gets the status of Piezoelectric siren if it is enable/disabled

Sensor Type	Description
0x00	Siren is disabled
0xFF	Siren is enabled with LED flashing

Siren On/Off

This sets the Piezoelectric siren to enable/disable

Basic Set Value	Description
0xFF	Siren set to enabled with LED flashing
0x00	Siren set to disable

Sound Playback

The voice siren follows the Z-Wave Sound Switch Commands Class for playback controls of its audio sounds. Please refer to this specification to use it on the controller.

Command Classes

The module supports Command Classes including...

- COMMAND_CLASS_ZWAVEPLUS_INFO_V2
- COMMAND_CLASS_ASSOCIATION_V2*
- COMMAND_CLASS_ASSOCIATION_GRP_INFO*
- COMMAND_CLASS_TRANSPORT_SERVICE_V2
- COMMAND_CLASS_VERSION_V3*
- COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2*
- COMMAND_CLASS_DEVICE_RESET_LOCALLY*
- COMMAND_CLASS_POWERLEVEL*
- COMMAND_CLASS_SECURITY
- COMMAND_CLASS_SECURITY_2
- COMMAND_CLASS_SUPERVISION*
- COMMAND_CLASS_FIRMWARE_UPDATE_MD_V2*
- COMMAND_CLASS_BATTERY *
- COMMAND_CLASS_NOTIFICATION_V4*
- COMMAND_CLASS_SWITCH_BINARY*
- COMMAND_CLASS_CONFIGURATION*
- COMMAND_CLASS_SENSOR_MULTILEVEL*
- COMMAND_CLASS_SOUND_SWITCH

*Items marked an asterisk are secure command classes.

Z-Wave Configuration Settings

1. Siren alarm period

Parameter Number	Size	Range	Default
1	2	10~600	180 sec.

2. Temperature & Humidity Auto Report period setting

Parameter Number	Size	Range	Default
2	2	1~1440	30mins

3. Sound Playback

Parameter Number	Size	Range	Default
3	1	0~99	0 (0: stop to play sound N: play the N file N=1~99).

Troubleshooting

The table below lists the several steps involved when adding or removing the voice siren from the Z-Wave network.

Action/Status	Description	LED indication
No node ID	The Z-Wave Controller does not allocate a node ID to the unit.	2-second on, 2-second off For 2 minutes
Auto Inclusion	The power is applied for the first time and no node ID has been stored in the module, or after executing reset.	
Manual Inclusion	1. Put the Z-Wave Controller into inclusion mode.	
	2. Press the Link button 3 times within 1.5 seconds to put the unit into inclusion mode.	
Exclusion	1. Put the Z-Wave Controller into exclusion mode.	
	2. Press the Link button 3 times within 1.5 seconds to put the unit into exclusion mode.	
Factory Reset (This procedure should only be used when the controller is inoperable.)	1. Press the Link button 3 times within 1.5 seconds to put the unit into exclusion mode.	
	2. Within 1 second of step 1, press the Link button again and hold for 5 seconds.	
	3. Node ID is excluded. The unit reverts to factory default state.	2-second on, 2-second off For 2 minutes
* Failed or successful results in including/excluding the ID can be viewed on the Z-Wave Controller.		

Note: If you are connecting this unit to a Z-Wave Controller that utilizes the S2 security protocol, you may be asked by your controller to enter a 5 digit Device Specific Key (DSK) that is unique to each unit. This can be found in one of two places:

- on the QR code label on the back of the unit
- on the insert card inside the packaging

Table below lists typical problems encountered:

Symptom	Possible Cause	Recommendation
Device does not work	Battery is not fitted properly or run out of battery power.	Check if batteries are fitted or replace a new battery.
Cannot carry out inclusion and association	Device has been paired to other Z-Wave controller.	1. Perform Exclusion from other controller first then carry out inclusion with new controller. 2. Perform Factory Reset on device and then carry out Inclusion with new controller
	Device is out of range.	1. Relocate the controller closer to the unit. 2. Install a Z-Wave repeater such as smart plugs or other AC devices that can operate as a Repeater.

Specifications

Battery	LR14 battery x 4
Range	Up to 100 meters line of sight
Frequency Range	EU: 868.42MHz, US: 908.42 MHz
Temperature sensor range	-10 ~ 40°C ± 2 °C
Humidity sensor range	0 ~ 80%RH ± 15%RH (30~60%RH)

Specifications are subject to change without notice

Federal Communication Commission Interference Statement

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.

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 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Industry Canada statement:

This device complies with ICSED's license-exempt RSSs. 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.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Radiation Exposure Statement:

This equipment complies with ICSED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ICSED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

WARNING:

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being. When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.



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