



# firefighter™ Audio Detector Installation Instructions

## Product Overview

- Z-Wave+™ enabled device which provides fire and CO (carbon monoxide) status
- Transmits Fire and CO alarm status
- Reports tamper condition when cover is open

## Product Specifications

- For indoor use only
- Detection Distance: 6 inches max
- Operating frequency: 908.42 MHz
- Operating temperature: 0° – 49°C, 32° – 120°F (ambient temperature)
- Operating humidity 5-95% non-condensing
- Battery type required: 3V Lithium CR123A
- Battery life approximately 5 years



## Network Inclusion

The sensor must be added to a Z-Wave network prior to use. To include the sensor in a network both the sensor and the network controller must be in inclusion mode at the same time. *Refer to the instructions provided by the manufacturer of your specific controller for details on initiating the controller's inclusion mode.*

- 1) Verify that the Z-wave Plus controller you are using is compatible with the FireFighter™.
- 2) Either mount or move the FireFighter™ sensor as close as possible to the location the sensor will remain. See installation section below.
- 3) Put your Z-wave Plus Controller into add (inclusion) mode.
- 4) Open the FireFighter™ case and press the learn button on the device for one second. If the LED starts blinking continually, the sensor has not been added. Repeat steps 3 and 4.

## Network Exclusion

- 1) Any sensor can be removed from any Z-Wave Plus controller. Follow the directions to put your Z-Wave Plus Controller into exclusion mode.
- 2) Open the FireFighter™ case and press the learn button on the device for one second. If successfully removed from the Z-Wave Plus network, the devices Green LED should blink slowly continuously.



### Network Inclusion/Exclusion: Key Points to Remember

- Controller inclusion mode must be activated *BEFORE* starting sensor inclusion or exclusion mode.
- The sensor can only be included into one controller network at a time, and must be excluded from one network before inclusion in another
- Exclusion mode on the sensor is initiated following the same exact procedure as inclusion.

## LED Status

The FireFighter™ is equipped with a multi-color LED. The state of the LED will change based on the state of the device.

Insert Battery	= One(or two, if in CO mode below) RED blink, then one GREEN blink
Device not included	= Green light breathing (slow blink)
Learn button pressed	= Solid Yellow (red + green) while in learn mode.
Sound detected	= Flash YELLOW for the duration of the sound
File Alarm Detected	= Solid RED for 3 seconds, then blink red while tone detected
Case Opened	= Red/Green breathing until case closed (while added to a network)

## CO Alarm Detection

In addition to Smoke Alarm detection, the device can detect the presence of a carbon monoxide alarm. By default, the sensor is not guaranteed to detect a CO alarm. The device can be configured to more reliably detect a CO alarm in exchange for a reduced battery life. This mode can be changed by holding down the tamper switch and learn button for 10 seconds. The device should then be reset ( remove battery and replace ) in order to determine the current device setting.

RED + GREEN	= Device will not reliably detect CO, but standard battery life
RED + RED + GREEN	= Device will more reliably detect CO, but with reduced battery life.

## Factory Default

The FireFighter™ can be restored back to factory default settings which will remove its Z-Wave Plus node ID from the sensor (but not the controller) with the following steps. Please use this procedure only when the network primary controller is missing or otherwise inoperable.

- 1) Put the battery into the sensor.
- 2) Do not press the tamper switch.
- 3) Hold the learn button down for 10 seconds until the LED turns RED.
- 4) Release the learn button and wait for the sensor's green LED to "breath" on and off continuously. The sensor is now ready to be added to a Z-Wave Plus network, and all settings have been restored.



## Testing

To test the RF transmission from the mounted position you can generate a tamper by removing the cover. This will send a signal to the control panel. To test the audio detection, press and hold the smoke detector's test button. Ensure the FireFighter™ cover is on and that you wear hearing protection.

NOTE: This system must be checked by a qualified technician at least once every three (3) years. Please test the unit once per week to ensure proper functionality.

## Installation

The package contains the following:

- 1- FireFighter Sensor
- 1- Sensor Mounting Bracket
- 2- Screws for Sensor Mounting Bracket
- 1- Adhesive tape for Sensor Mounting Bracket

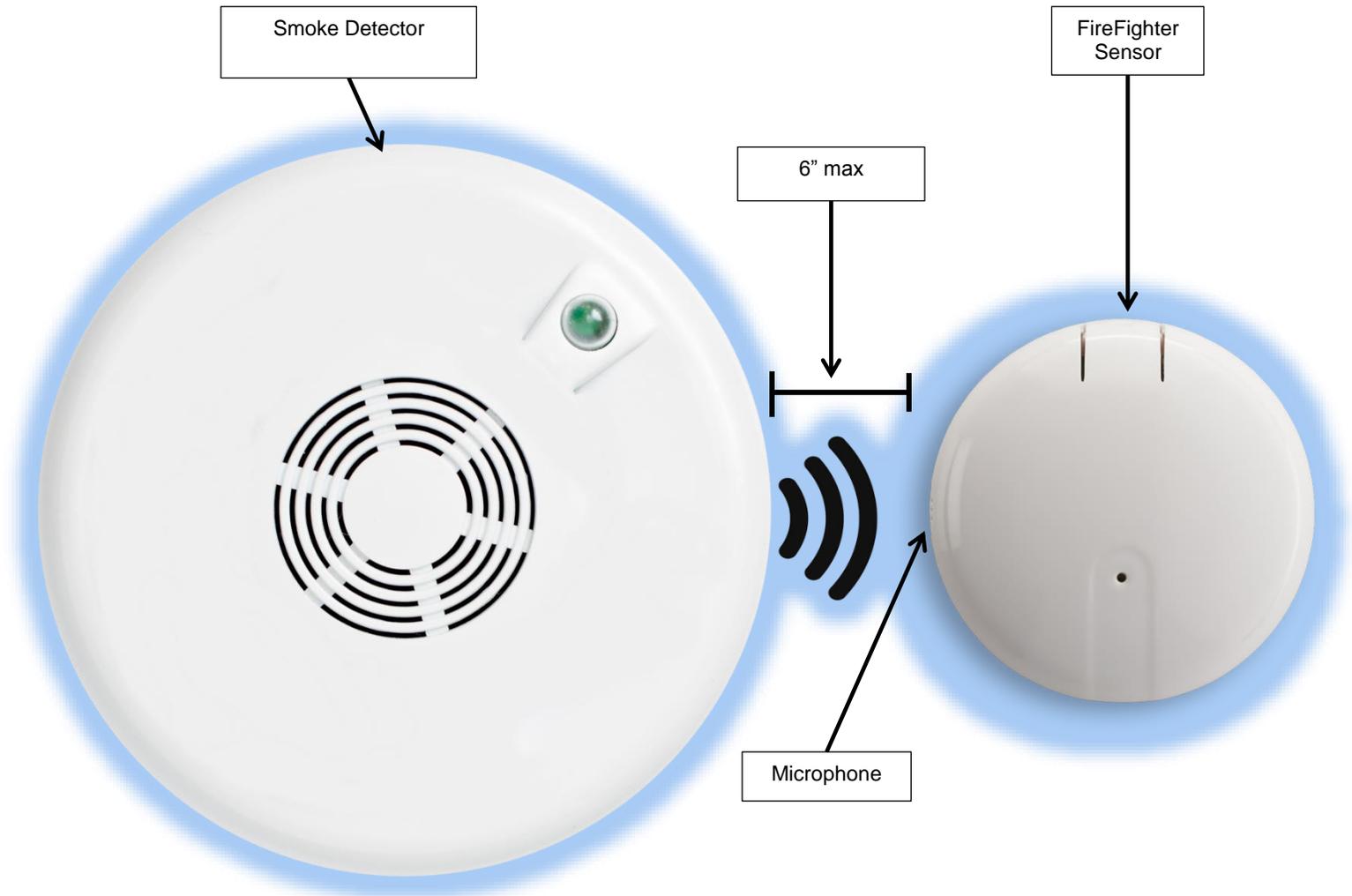


### STEP ONE Identify Location for Sensor:

Determine the location of the smoke or CO detector that you require the FireFighter to detect.

Note, that the sensor must be mounted within 6 inches of the detector with the microphone oriented toward the detector.

First make sure you have a flat clean surface to mount the sensor to. Please **verify** the correct orientation of the sensor **before** you continue on to mounting the sensor.



(Left) Smoke Detector

(Right) Firefighter. Make sure the microphone (holes on side of unit) is pointed toward the smoke detector

**STEP TWO** Mount the sensors mounting plate to a clean dry surface with the adhesive tape and/or the screws provided

**Note:** the arrow should point toward the device that the FireFighter is intended to detect.

**Slide the Firefighter onto the mounting plate.**



## Z-Wave Plus Specific Information

Z-Wave Plus is a wireless mesh network and data protocol that allows devices from many different manufacturers to interoperate. This device implements Z-Wave Plus functionality, Network Wide Inclusion, and Explorer frames. This device is asleep most of the time but can respond to queries on a Wake Up Notification; however for test purposes, the device will stay awake while tampered for testing Z-Wave Plus command class functionality. The following information is intended for software engineers working on Z-Wave Plus controllers and home automation enthusiasts to integrate the Z-Wave Plus FireFighter™ into their system.

Device Classes	Generic Device Class	GENERIC_TYPE_SENSOR_NOTIFICATION
	Specific Device Class	SPECIFIC_TYPE_NOTIFICATION_SENSOR
Command Classes	COMMAND_CLASS_ZWAVEPLUS_INFO	v2
	COMMAND_CLASS_VERSION	v2
	COMMAND_CLASS_MANUFACTURER_SPECIFIC	v2
	COMMAND_CLASS_DEVICE_RESET_LOCALLY	v1
	COMMAND_CLASS_POWERLEVEL	v1
	COMMAND_CLASS_BATTERY	v1
	COMMAND_CLASS_SENSOR_MULTILEVEL	v7
	COMMAND_CLASS_NOTIFICATION_V5	v5
	COMMAND_CLASS_ASSOCIATION	v2
	COMMAND_CLASS_ASSOCIATION_GRP_INFO	v1
	COMMAND_CLASS_WAKE_UP	v2
	COMMAND_CLASS_FIRMWARE_UPDATE_MD	v2
Manufacturer ID	MFG_ID_ECOLINK ( 0x014A )	
Product Type	0x05	
Product ID	0x0F	



## Z-Wave Plus Command Class Notification

These notifications are sent unsolicited to the lifeline Association group.

Notification Type	Event	Cause
Smoke Alarm (0x01)	Smoke Detected, Unknown Location (0x02)	Smoke Alarm Sounding
	Event Inactive (0x00)	Smoke Alarm Silent
CO Alarm (0x02)	Carbon Monoxide Detected, Unknown Location (0x02)	CO Alarm Sounding
	Event Inactive (0x00)	CO Alarm Silent
Home Security (0x07)	Tampering, Product Cover Removed (0x03)	Case Tampered
	Event Inactive (0x00)	Case Restored to Closed Position
Power Management (0x08)	Replace Battery Soon (0x0A)	Battery is Getting Low
	Replace Battery Now (0x0B)	Battery Needs Replacing

## Z-Wave Plus Command Class Basic

For backwards compatibility with older Z-Wave Plus Controllers, the Basic Command Class is supported in the following manner. If either a smoke alarm or a CO alarm is detected, the lifeline nodes will receive an unsolicited Basic Report of 0xFF. When no more smoke or CO alarm sound detected, the lifeline nodes will receive an unsolicited Basic Report of 0x00. The device has no functionality mapped to receiving a Basic Set command, and does not control devices with a Basic Set.

## Z-Wave Plus Command Class Multi Level Sensor

The FireFighter™ has a temperature sensor built into the device and can be queried on a Wake Up Notification with a Multi-Level Sensor Get command. The sensor supports reporting both in Celsius and Fahrenheit.



## **Association**

This sensor has one Association group of 5 nodes. Group one is the lifeline group, which will receive unsolicited messages relating Fire notifications, CO notifications, case tampering notifications, low-battery notifications, and temperature notifications.

## **Network Wide Inclusion**

This sensor also supports Network Wide Inclusion such that the Sensor can be included into the Z-Wave network over the mesh network and not directly near the main controller. This mode is automatically activated after regular inclusion was not successful

## **Wake-Up Notification**

The sensor will wake up every so often to send a Wake-Up Notification to allow the life line master node controller that the sensor is now available for any queued messages that the controller may have for the sensor. The time between Wake-Up Notifications can be configured with the Wake-Up Notification command class to be between 1 hour and 1 week with interval steps of 200 seconds. The sensor will also send a wakeup notification whenever the case is closed.

The FireFighter™ detector does not detect the presence of smoke, heat, or fire directly. It relies solely on the presence of an audio alarm signal generated by an existing smoke or fire detector in proximity to the Firefighter™ detector to make such a determination. The FireFighter™ detector must be used with smoke detectors certified according to UL Standards, and in strict accordance with the installation and operation instructions provided with such detectors. It is the owner's responsibility to ensure that smoke or fire detectors used in conjunction with the FireFighter™ detector are maintained and tested on a regular basis in accordance with the manufacturer's instructions. Ecolink expressly disclaims any responsibility for the failure of the FireFighter™ to detect the presence of smoke or fire due to the failure of any smoke or fire detector used in conjunction with the FireFighter™ to operate properly due to any condition, including improper installation, operation, maintenance or testing of such smoke or fire detector.



## FCC Compliance Statement

This equipment has been tested and found to comply with the limits for Class B digital devices, 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 instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on a different circuit from the receiver
- Consult the dealer or an experienced radio/TV contractor for help.

Warning: Changes or modifications not expressly approved by Ecolink Intelligent Technology Inc. could void the user's authority to operate the equipment.

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

C'et appareil est conforme la norme d'Industrie Canada exempts de licence RSS. Son fonctionnement est soumis aux deux conditions suivantes: (1) c'et appareil ne peut pas provoquer d'interférences, et (2) c'et appareil doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de la dispositif.

**FCC ID: XQC-FFZ5**

**IC: 9863B- FFZ5**

## Warranty

Ecolink Intelligent Technology Inc. warrants that for a period of 3 years from the date of purchase that this product is free from defects in material and workmanship. This warranty does not apply to damage caused by shipping or handling, or damage caused by accident, abuse, misuse, misapplication, ordinary wear, improper maintenance, failure to follow instructions or as a result of any unauthorized modifications.

If there is a defect in materials and workmanship under normal use within the warranty period Ecolink Intelligent Technology Inc. shall, at its option, repair or replace the defective equipment upon return of the equipment to the original point of purchase.

The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of Ecolink Intelligent Technology Inc. neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product. The maximum liability for Ecolink Intelligent Technology Inc. under all circumstances for any warranty issue shall be limited to a replacement of the defective product. It is recommended that the customer check their equipment on a regular basis for proper operation.



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