The following information is the rest of the information that we have for programming our Zwave units to a hub. Anything else you will need to contact you hub manufacturer to be able to find out how you are suppose to be programming this unit to integrate with your other devices.

ZWave Spec

The following command classes will be supported:

• BASIC

• BATTERY

• CONFIGURATION

• ASSOCIATION

• ALARM\_V1

• MANUFACTURER\_SPECIFIC

• VERSION

Learn Mode

Learn mode will be started by powering up the device with the test button held down. After the conclusion

of learnmode (or timeout), the device will remain awake for 30 seconds.

The device will supports both classic and NWI (network wide inclusion) modes. When entering learn mode,

the device will go into classic mode for 5 seconds. If classic inclusion does not start before the 5 second

timeout, the device will fallback to NWI mode, which will operate for an additional 5 seconds. Once inclusion

starts, the 5 second timeout is invalidated and the device will finish the full inclusion process.

Note: Learn mode can be used for both inclusion and exclusion.

Reset Device

If the device is powered up with the test button held down for 10+ seconds, the device will reset all Z-Wave

settings and leave the network.

Note: The device will not remain awake after resetting and will go into standby.

Basic

Basic command class required by all ZWave devices. By the requirements of the Device Class spec, this

command class does not have to be mapped to any particular functionality for this device.

Battery

This device will support battery command class. The device will send a low battery message as well as a

weekly level message. If a battery value is available, the battery level may also be queried.

Configuration

One configuration parameter is supported by this device. Parameter 1 enables/disables the retry mechanisms

for alarms.

Parameter 1 is a 1 byte field that can be either 0 (disabled) or 1 (enabled). When set to 1, alarms generated

by the BRK board will be sent twice to the nodes in the association group.

Association

The ZWave module will support 1 association group that can hold up to 5 nodes. The 5 node limit is a

restriction on the routing slave library because it cannot store routes for more than 5 nodes.

This association group will be responsible for reporting the different alarms as well as low battery messages.

Alarm

The ZWave module will support Alarm V1 in order to transmit the alarms that come up from the main BRK

board.

Alarm                                    Alarm Type                        Level

Smoke Alarm                    0x01                                      0x00 or 0xFF

CO Alarm                            0x02                                      0x00 or 0xFF

Malfunction Alarm          0x09                                      0x00 or 0xFF

Test Alarm                          0x0C                                      0x00 or 0xFF

Heartbeat Alarm              0x0D                                      0xFF

CO Sensor End of Life    0x0E                                      0x00 or 0xFF

Note: The CO and CO Sensor End of Life Alarm types will only be supported when attached to a BRK

board that supports it.

Smoke Alarm

The device will send a smoke alarm message with a level of 0xFF when smoke has initially been detected or

again after a smoke alarm silence period of 8 minutes has expired if smoke is still present. A level of 0x00 is

sent if the device test/silence button was pressed locally during a smoke alarm or the smoke has cleared.

CO Alarm

The device will send a CO alarm message with a level of 0xFF when dangerous levels of CO has initially

been detected or again after a CO alarm silence period of 4 minutes has expired if CO is still present. A level

of 0x00 is sent if the device test/silence button was pressed locally during a CO alarm or dangerous levels of

CO have cleared.

Malfunction Alarm

The device is self-supervised and monitors the CO and smoke circuitry for proper operation. The device

will send a malfunction alarm message with a level of 0xFF if the CO and smoke circuitry is not operating

properly. The device will issue three rapid “chirps” three Power LED “flashes” every minute if the device is

not working properly. A level of 0x00 is sent if the malfunction condition has cleared.

Test Alarm

The device will send a Test alarm message with a level of 0xFF if the user locally presses the test/silence

button if the device is in a standby condition. The device will then issue (2) cycles of its smoke alarm pattern

for model ZSMOKE and (2) cycles each of smoke/CO alarm pattern for model ZCOMBO if the device is

working properly. A level of 0x00 is sent after test mode completes.

Heartbeat Alarm

The device will send a Heartbeat alarm message with a level of 0xFF every 20 minutes when the device is in

a standby condition.

CO Sensor End of Life

The device is self-supervised and monitors the CO sensor for when it reaches its end-of-life. The device will

send a CO sensor end-of-life alarm message with a level of 0xFF if the CO sensor end-of-life has been reached

or again after a CO sensor end-of-life silence period of 8 hours has expired. The device will issue five rapid

“chirps” and five Power LED “flashes” every minute if the device CO sensor has reached end-of-life or five

Power LED “flashes” only every minute if the device CO sensor end-of-life alarm has been silenced. A level

of 0x00 is sent if the CO sensor end-of-life chirp has been silenced.

Manufacturer Specific

Smoke alarm only (ZSMOKE):

• Manufacturer ID - 0x0138

• Product Type ID - 0x0001

• Product ID - 0x0001

CO/Smoke Combo (ZCOMBO):

• Manufacturer ID - 0x0138

• Product Type ID - 0x0001

• Product ID - 0x0002

This is the information that we have for the wake up command class for the ZCOMBO-

Wake up command class replaces the former heartbeat alarm functionality by allowing the smoke detector to

wake up at a pre-determined interval and allow the controller to send it messages. The wake up interval must

be configured by the controller at inclusion time, which has the following constraints:

• Minimum - 1 hour

• Maximum - 8 hours

• Default - 1 hour

The wake up interval can be set to any value within these constraints. If an invalid node (0, 233 to 255),

the “Wake Up Notification” message will be sent on a broadcast frame. If an interval value of 0 is given, the

default interval will be used.

Upon a wake up event, the device will send a “Wake Up Notification” message to the controller. This message

is sent with an explorer frame to ensure that the message arrives. A 4.5s timer will be started once the “Wake

Up Notification” message is acked (or not not acked). The timer will be reset to 4.5s on every application

level Z-Wave event, meaning that the device will not go back to sleep while another device is communicating

with it. If no events are detected for 4.5s, the device will go back to sleep.

Note: At this point in time, there is no way to tell when a protocol (stack) level event occurs, meaning that

the device may try to go to sleep if a protocol event takes longer than 4.5s, or if multiple protocol events are

linked together to take longer than the timer length.

If a “No More Information” message arrives before the timer has expired, the timer will be canceled and the

device will go back to sleep.

If you have any further questions do not hesitate to email us or give us a call at 1-800-323-9005. Thank you for choosing First Alert.