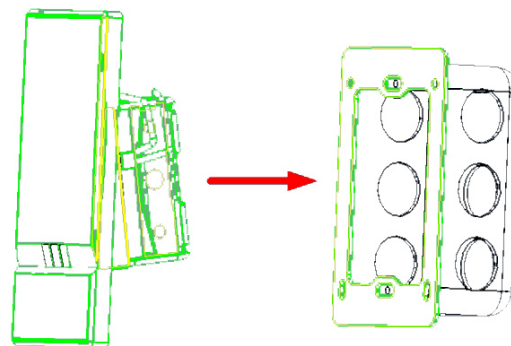
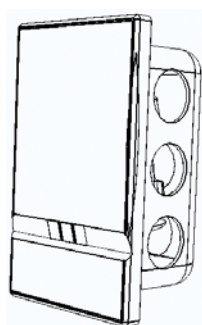


## K595 Installation Manual

### K595 Overview

The K595 radio frequency (RF) transmitter functions as a battery powered motion sensor. It can wirelessly transmit detected motion information to the INNCOM E528 Deep Mesh thermostat or other INNCOM Deep Mesh device that requires motion detection for energy management. The K595 is typically used in conjunction with a door switch in an energy management system.



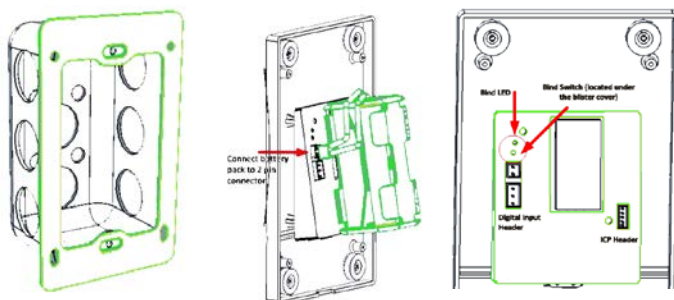
4. After binding is complete; attach the unit to the wall mounting bracket. Take care to align the guide posts so that the unit snaps into place.

### Requirements

- K595 finished assembly
- 2 × 2 battery pack and 4 AA batteries
- I/O Map to be configured into K595 to set functionality (Table 1)
- E528 thermostat loaded deep mesh RF software  
OR
- E529.RF battery thermostat loaded with E529.RF Deep Mesh software version 5.1 or later and radio software DM\_FPS\_9600\_V1\_08.hex or later

### Installation

- Mount within operational range (70 ft indoors) of any other Deep Mesh devices
- Avoid interference sources like metallic boxes, WiFi access points, or metal pipes
- Do not mount in areas of high humidity



1. Install metal bracket using the two supplied 6/32 screws to an American single gang box. Careful not to bend the bracket.
2. Install the 4 AA batteries into the 2 x 2 battery pack and attach it to the 2 pin connector on the unit.
3. Bind the unit by pressing the switch located under the blister cover in the area circled. Refer to the "Binding" section of this document.

### Prepare Binding Device with an e528.4G or E529.LX to Bind

<b>Enter Service Parameter Mode</b>	<ol style="list-style-type: none"> <li>1. Press and hold °F/°C button</li> <li>2. Press and release the OFF/AUTO button</li> <li>3. Press and release the DISPLAY button</li> <li>4. Release the °F/°C button</li> </ol>	<ol style="list-style-type: none"> <li>1. Screen displays rld (RoomID)</li> </ol>
<b>Set Room ID</b>	<ol style="list-style-type: none"> <li>1. Press the OFF/AUTO button</li> <li>2. Use UP / DOWN arrow button to find value. Press DISPLAY to set.</li> <li>3. Find/set value as above.</li> <li>4. Find/set value as above.</li> </ol>	<ol style="list-style-type: none"> <li>1. Room ID scrolls. After scrolling, highest Room ID digit will display (=to PAR 10 on an E528)</li> <li>2. Next 2 Room ID digits are displayed (=to PAR 11)</li> <li>3. Last 2 Room ID digits display (=to PAR 12)</li> <li>4. New Room ID scrolls across display to confirm.</li> </ol>
<b>Set PAN ID</b>	<ol style="list-style-type: none"> <li>1. In Service Mode, go to PAN (PAN ID) on the display and press the OFF/AUTO button.</li> <li>2. Use the UP /DOWN buttons to change the displayed value to the desired PAN ID value.</li> <li>3. Press the DISPLAY button to set the new value.</li> </ol>	<ol style="list-style-type: none"> <li>1. Current value displays.</li> <li>2. Value changes to a number between 1 and 255). <b>[Note: It cannot be set to 0].</b></li> <li>3. E529.LX will beep to indicate the value has been entered.</li> </ol>
<b>Set RF Channel</b>	<ol style="list-style-type: none"> <li>1. In Service Mode, go to rF (RF Channel) on the display and press the OFF/AUTO button.</li> <li>2. Use the UP /DOWN buttons to change the displayed value to the desired RF Channel value.</li> </ol> <p>Only use the following RF Channels to minimize interference with other RF sources such as WiFi Access points: <b>26 , 25 , 20 or 15.</b></p>	<ol style="list-style-type: none"> <li>1. Current value displays.</li> <li>2. Value changes to a number between 11 and 26 (default is 26).</li> <li>3. E529.LX will beep to indicate the value has been entered.</li> </ol> <p>For multi-floor installations, alternating RF Channel between 25 and 26 can minimize cross-floor interference between thermostat radios.</p>
<b>Set RF Power</b>	<ol style="list-style-type: none"> <li>1. In Service Mode, go to Loc (Local Parameters) on the display and press the OFF/AUTO button.</li> <li>2. Change local parameter value to 4 (RF Tx Power) and press DISPLAY button.</li> <li>3. Use the UP/ DOWN arrows to change the RF Tx Power (default value is 0—use a higher value only to improve communication).</li> </ol>	<ol style="list-style-type: none"> <li>1. Display shows <b>P</b> and a number representing the selected local parameter.</li> <li>2. <b>Loc</b> value displays.</li> <li>3. Press DISPLAY to set</li> </ol>

## Binding

### Prepare Binding with an E528.LX

<b>Enter Service Parameter Mode</b>	Press and hold °F/°C button Press and release the OFF/AUTO button Press and release the DISPLAY button Release the °F/°C button	Screen displays <b>P1</b> (parameter 1) Use UP / DOWN arrow button to scroll through parameters (1–255). Use OFF/AUTO to toggle parameter value V.
<b>Set Room ID (PAR 10, 11, 12)</b>	Use OFF/AUTO and UP/DOWN arrows to set the Room ID in parameters 10, 11 and 12.	Examples: RoomID=2456 PAR 10=0 PAR 11=24 PAR 12=56 RoomID=24351 PAR 10=2 PAR 11=43 PAR 12=51 RoomID=406 PAR 10=0 PAR 11=4 PAR 12=6
<b>Set RF Transmit Power and RF Channel (PAR 243)<sup>1</sup></b>	Set PAR 243 to desired RF Tx Power : RF Channel 0dB : RF Channel 26 0dB : RF Channel 25 0dB : RF Channel 20 0dB : RF Channel 15 +3dB : RF Channel 26 +3dB : RF Channel 25 +3dB : RF Channel 20 +3dB : RF Channel 15 Only use the above RF Channels to minimize interference with other RF sources such as WiFi Access points.	Displayed PAR 243 Value 0F.h 0E.h 09.h 04.h 1F.h 1E.h 19.h 14.h For multi-floor installations, alternating RF Channel between 25 and 26 can minimize cross-floor interference between thermostat radios.
<b>Set PAN ID (PAR 242)</b>	Set PAR 242 to desired PAN ID. The PAN ID can be any value 1 to 255 and must match the PAN ID set into the PC-803 Edge Router that manages this room	PAR 242 is displayed in hex 01.h (1) to FF.h (255) Ex: PAN ID=45 – PAR 242=2d.h PAN ID=150 –PAR 242=96.h
<b>RESET E528.LX</b>	Set PAR 1 value=0 and press DISPLAY button	

### Binding the K595

The binding process for the K595 is dependent on the software. The K595 uses a **reverse bind** by first placing the E528.LX/E529.LX into a “ready to teach” mode and then initiating the bind from the K595 by pressing button located under the blister cover.

1. Insert 4 AA batteries in the battery back and connect it to the unit if not already installed
2. Enter the Service Parameter mode on the E528.LX/E529.LX (as described above)
3. Prepare the thermostat to bind the K595

- For the E528.LX
  - Go to Parameter 15 (target address for teach commands).
  - Press OFF/AUTO to view value.
  - Change value using UP/DOWN arrows.
  - Press OFF/AUTO to return to Parameter number mode and scroll to Parameter 14.
  - Press OFF/Auto to view value of I/O Map.
  - Enter the number of the I/O Map (see Table1 below) to be enabled in the bind.
- For the E528.4G and e529.LX, go to ADR (target address for teach commands)
  - Press OFF/AUTO to view value.
  - Change value using the UP/DOWN arrows, then press DISPLAY.
  - Exit **ADR** using OFF/AUTO (display shows **Pn6**).
  - Press UP 5 times until Io (teach I/O Map) displays.
  - Press OFF/AUTO to view value and change it to the map required for this installation (see Table 1 below).
  - Press the blue S1 switch on the K595 to initiate binding. The K595 will broadcast a Bind Request message. If the thermostat saw the Bind Request, it will reply with a Bind Offer message. Upon seeing the Bind Offer from the E528/E529, the K595 will bind itself to the advertised Room ID and RF Settings.
- If binding is successful, the K595 will
  - Flash its LED 3 times
  - Send the thermostat a message to sound its buzzer
  - Reset itself
  - Send a device startup message that includes the K595 software version and its battery status.

**Note:** The following table is for example only; the final mapping will be determined by Application Engineering, and they should be consulted on any questions.

**K595 I/O Maps**

I/O Map	Description	Default Address
0	Entry Door	209
1	Entry Door Inverted	209
2	Window	210
3	Window Inverted	210
4	Mini Bar	219
5	Mini Bar Inverted	219
6	Safe Inverted	219
7	Safe	219
8	Common Door	219
9	Common Door Inverted	219
10	Connecting Door	219
11	Connecting Door Inverted	219
12	Window Segment 0	211
13	Window Segment 0 Inverted	211
14	Window Segment 1	212
15	Window Segment 1 Inverted	212
16	Window Segment 2	213
17	Window Segment 2 Inverted	213
18	Window Segment 3	214
19	Window Segment 3 Inverted	214
20	Window Segment 4	215

I/O Map	Description	Default Address
21	Window Segment 4 Inverted	215
22	Window Segment 5	216
23	Window Segment 5 Inverted	216
24	Window Segment 6	217
25	Window Segment 6 Inverted	217
26	Window Segment 7	218
27	Window Segment 7 Inverted	218
28	Smoke	219
29	Smoke Inverted	219
30	Key Tag	219

## K595 Functionality Testing

K595 functionality depends on the specific I/O Map used in the binding.

### Testing Motion Detection

After the unit is bound to the thermostat, press the bind switch two times on the K595. The unit will transition into the PIR walk test mode for 60 seconds, which will sound the piezo on the thermostat when the K595 detects motion.

## References

<sup>1</sup> RF Transmit Power (Tx) and RF Channel are displayed together in hexadecimal (hex) notation as RF Tx Power RF Channel.h. Hexadecimal is a Base 16 notation using the alphanumeric figures 0 through F. See a [conversion chart](#) or website like [Statman.info](#) for help. Tx is limited to four fixed values—0=0dB, 1=+3dB, 2=-6dB, 3=-25dB. 0db is default Tx power. +3db is 2x (twice) the default Tx power. **Use only 0db or +3dB.**