Connecting Banner 1-Wire Serial Vibration Sensors and Radios

Connect a 1-Wire Vibration Sensor to a Sure Cross Radio

Follow these instructions to connect a Banner 1-wire serial vibration sensor to a Sure Cross® radio.

1. Connect the QM30VT1 Vibration Sensor to the Sure Cross® Node.

   The QM30VT1 sensor has a cable with a 5-pin M12 quick disconnect connector. If a longer cable is needed, use a double-ended 5-pin M12 cable. The total length of the cable should not exceed 30 feet unless a DX80DR9M-H10 MultiHop Data Radio is used.
2. Verify the sensor is connected to the radio before entering binding mode.

   If the Node (or server radio) is bound to its Gateway (or client radio) before the sensor is installed, cycle power to the radio. To cycle power to the radio, triple-click button 2, then double-click button 2 (or the binding button, depending on your client radio model).

If you are using a Solutions Kit, use the HMI to bind your radios. Follow the instructions in the Vibration Solutions Kit Quick Start Guide to put the kit into binding mode.

Bind Radios to Form Networks

Binding Nodes to a Gateway ensures the Nodes only exchange data with the Gateway they are bound to. For a more detailed definition of binding mode, refer to the *Advanced Setup* section of the *Sure Cross Wireless I/O Networks* instruction manual (p/n 132607).

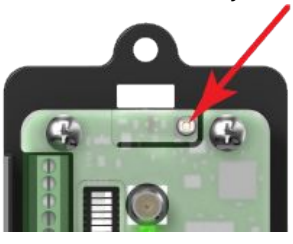
Apply power to the Gateway and Nodes.

1. Enter binding mode on the Gateway.
   - If you have a two-button Gateway, triple-click button 2
   - If you have a one-button Gateway, triple-click the button
   - If you have a Gateway with no buttons, remove the rotary dial access cover and set both the right and left rotary dials to 0, then set both the right and left rotary dials to F.
   - If you have a DXM, under the **ISM Radio** menu, use the down arrow button to highlight the **Binding** menu. Click **ENTER**.

   Two-button Gateway

   One-button Gateway

   The LEDs flash alternately when the Gateway is in binding mode. Any Node entering binding mode will bind to this Gateway.
2. Use the Node's rotary dials to assign a valid decimal Node Address (between 01 and 47). The left rotary dial represents the tens digit (0 through 4) and the right dial represents the ones digit (0 through 9) of the Node Address.
3. Enter binding mode on the Node.
   - If you have a two-button Node, triple-click button 2.
   - If you have a one-button Node, triple-click the button.
   - If you have a Node with no buttons, remove the top cover and set both the left and right rotary dials to F to enter binding mode. [1]

   The Node enters binding mode and locates the Gateway in binding mode.

   For two LED models, the red LEDs flash alternately. After binding is complete, both LEDs are both solid red for a few seconds.

   For one-LED models, the red and green LED flashes alternately while the Node searches for the Gateway. After binding is complete, the LED is red and green for four seconds (looks amber), then the red and green flash simultaneously (looks amber) four times.

   The Node automatically exits binding mode, cycles its power, then enters RUN mode.
4. For DXM models, click **BACK** to exit binding for that specific Node address.
5. Repeat steps 2 through 4 for all Nodes that will communicate to this Gateway.
6. Exit binding mode on the Gateway.
   - If you have a two-button Gateway, single-click either button.
   - If you have a one-button Gateway, single-click the button.

[1] Some older M-GAGE Nodes (models DX80N*X1W0P0ZR) may require F-F binding despite having a single button. Refer to the Node's datasheet for specific information.

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- If you have a Gateway with no buttons, change the Gateway's rotary dials to a valid Network ID.
- If you have a DXM, click **BACK** until you return to the main menu.

When installing special kits with pre-mapped I/O, indicated by device model numbers beginning in DX80K, return the rotary dials to their original positions after binding. If the rotary dials are not returned to their original positions, the I/O mapping will not work.

After the binding process is complete, data begins transmitting to the Gateway.

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