

BlueRadios nSensor Key Fob Demo User's Guide



Quick Start: The key fob demo consists of a master fob and a slave fob, the type is indicated by the label on the back of each fob. Begin by powering on each fob by pressing either button, the master will now be in idle mode and the slave will be advertising. Next, press the left button on the master fob to initiate a connection. Once connected the master's red LED will turn on and the slave's red LED will flash. The demo will now be in mode 1, button mode, pressing either button on the slave fob will toggle the green LED on the master fob. Continue cycling through the different modes using the master right button, or disconnect using the master left button.

Power: The fobs can be powered on by pressing either the left or right button. Pressing both buttons at the same time will power down the fob (both LEDs will momentarily turn on and then off prior to powering down). The fobs will automatically power off after 30 seconds if not connected. The battery will need to be replaced soon if the green LED pulses get noticeably shorter while in idle/advertising mode.

Sensor Modes: The sensor modes are only available when the two key fobs are connected. Each time a connection is made the fobs will default to mode 1, button mode. Use the master right button to cycle through each mode. The master red LED will blink 1,2,3 or 4 times to indicate the current mode you are in after each button press.

1. **Button Mode:** The button mode provides a simple remote control demo. Pressing either button on the slave fob will toggle the master status LED on and off.
2. **Light Mode:** The light sensor is circled in red in the photo above. It will toggle the master status LED on when it measures a light level above 100 lux (light intensity), and off when the light is below 100 lux. 100 lux is roughly equivalent to typical hallway lighting, so in any well-lit area covering and uncovering the sensor with your hand will toggle the master status LED.
3. **Level Mode:** The level sensor uses an accelerometer to toggle the master status LED on when one of the X,Y or Z axes is close to level. It works similarly to a standard bubble level, the LED turns on when the bubble would be centered, and the LED turns off when the bubble would be outside the lines.
4. **Temperature Mode:** The temperature sensor will toggle the master status LED on when the temperature is above 80F (~27C), and off when the temperature is below 80F. This sensor is located on the back of the fob beneath the hole drilled in the plastics. Without a way to quickly alter the temperature this sensor can be hard to demo.

Master Buttons:

- **Left:** Press to connect/disconnect to the slave fob.
- **Right:** Press to cycle through the different sensor modes, the initial mode is button mode.

Master LEDs:

- **Green:** Pulses slowly when powered on and idle, pulses quickly when attempting to make a connection. When connected will toggle on and off based on the current sensor mode.
- **Red:** On when connected, off when disconnected. The red LED will blink 1,2,3 or 4 times to indicate which mode the device is in after a left button press.

Slave Buttons:

- **Left/Right:** Only used in "button mode" to toggle the master status LED.

Slave LEDs:

- **Green:** Pulses when powered on and advertising, off when connected.
- **Red:** Pulses when connected, off when disconnected.

Notes:

- The fobs are using a 200ms connection interval, a slave latency of 0 and a 1s supervision timeout.