

Issue Severity:**High:** Act immediately**Medium:** Bosch Security Systems, Inc. strongly recommends you take the action(s) described below.**Low:** Advisory**Products Affected:**

- wLSN Hub (ISW-BHB1-WX)
- wLSN Installation Tool (ISW-BIT1-HAX, -HBX, -HCX)
- Compatible wLSN Devices

1.0 Issue

The Signal-to-Noise Ratio (SNR) recommendations that are shown in the *wLSN Reference Guide* (P/N: F01U009440) do not adequately ensure a trouble-free wireless installation in certain European markets where multi-path signal fading might be present. *Table 1* shows the SNR values that are currently published in the reference guide.

| Table 1: SNR Values using wLSN Hub (ISW-BHB1-WX) | |
|--|----------------------------|
| Signal-to-Noise Ratio | Signal Strength |
| < 9 dB | Unacceptable |
| 9 dB | Marginal (not recommended) |
| 13 dB | Acceptable |
| 16 dB | Good |
| 20 dB | Very good |
| 22 dB | Excellent |

When the SNR values shown in *Table 1* are used to measure signal strength, signal strength can fluctuate significantly in locations where multi-path signal fading is present. As a result, the device might not be able to communicate with the hub. If a communication failure occurs and is not resolved within the defined supervision window, the control panel sends a missing device report to the central monitoring station.



2.0 Resolution

For more accurate measurements, use the SNR values as shown in *Table 2* when performing an RFSS test.



Use the wLSN Installation Tool only in Mode 3. Do not use the Installation Tool in Modes 1 or 2, and do not use the individual wLSN devices to determine an acceptable SNR. The SNR measurements in Modes 1 and 2 and directly from the devices do not correspond to the recommended values indicated in *Table 2*.

| Table 2: Revised SNR Values using wLSN Hub (ISW-BHB1-WX) | |
|--|----------------------------|
| Signal-to-Noise Ratio | Signal Strength |
| < 30 dB | Unacceptable |
| 30 dB | Marginal (not recommended) |
| 35 dB | Acceptable |
| 40 dB | Good |
| 45 dB | Very good |
| 50 dB | Excellent |

To ensure that wLSN devices are operating at acceptable SNR values:

1. Connect to the control panel using a telephone.
Refer to the control panel documentation for connection options.
2. When prompted, enter the installer passcode.
3. Press [1] to enter the System Maintenance Menu, and then press [6] to enter the Wireless Configuration Menu.
4. From the Wireless Configuration Menu, press [7]. When the control panel announces “Enter the number of the programming item,” press [2] for signal strength.
5. When the control panel asks for a point number, press [0][1] to [3][2] for Points 1-32, or [3][5] to [3][8] for Outputs 5-8.
6. After a point or output number is entered, the hub communicates with the selected device to retrieve the signal strength. The control panel announces the signal strength as two alphanumeric characters. For example, “3 5.” Refer to *Table 3* to cross reference the spoken value to an SNR value.

| Table 3: SNR Values from the Control Panel | | |
|--|---------------|-----------------|
| Control Panel Value | SNR | Signal Strength |
| 01 - 09 | 2 dB – 14 dB | Unacceptable |
| 0A - 0F | 15 dB – 23 dB | |
| 10 - 13 | 24 dB – 29 dB | |
| 14 - 16 | 30 dB – 33 dB | Marginal |
| 17 - 1A | 35 dB – 39 dB | Acceptable |
| 1B - 1D | 41 dB – 44 dB | Good |
| 1E - 20 | 45 dB – 48 dB | Very good |
| 21 - 32 | 50 dB – 75 dB | Excellent |

