

## Responses to FCC Questions:

**Question 1)** The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudorandomly ordered list of hopping frequencies. Provide samples of a few sequences.

Following are the hopping sequences for three different ID codes:

### Sequence #1

0: 902.2	16: 921.0	32: 914.2	48: 918.6
1: 925.8	17: 915.8	33: 909.4	49: 907.0
2: 923.8	18: 924.2	34: 903.8	50: 913.8
3: 916.2	19: 913.0	35: 911.4	51: 927.0
4: 919.8	20: 912.2	36: 920.6	52: 917.8
5: 905.0	21: 919.4	37: 925.0	53: 903.4
6: 904.6	22: 916.6	38: 923.4	54: 909.8
7: 920.2	23: 905.8	39: 926.2	55: 908.6
8: 911.8	24: 910.6	40: 921.8	56: 917.4
9: 913.4	25: 908.2	41: 907.8	57: 927.4
10: 907.4	26: 910.2	42: 911.0	58: 903.0
11: 922.2	27: 906.2	43: 904.2	59: 918.2
12: 906.6	28: 922.6	44: 905.4	60: 915.0
13: 919.0	29: 915.4	45: 917.0	61: 923.0
14: 912.6	30: 921.4	46: 909.0	62: 925.4
15: 924.6	31: 926.6	47: 914.6	

### Sequence #2

0: 925.9	16: 925.1	32: 927.1	48: 915.1
1: 902.3	17: 921.5	33: 914.7	49: 919.1
2: 926.3	18: 916.3	34: 909.9	50: 907.5
3: 924.3	19: 924.7	35: 904.3	51: 914.3
4: 916.7	20: 913.5	36: 911.9	52: 927.5
5: 920.3	21: 912.7	37: 921.1	53: 918.3
6: 905.5	22: 919.9	38: 925.5	54: 903.9
7: 905.1	23: 917.1	39: 923.9	55: 910.3
8: 920.7	24: 906.3	40: 926.7	56: 909.1
9: 912.3	25: 911.1	41: 922.3	57: 917.9
10: 913.9	26: 908.7	42: 908.3	58: 902.7
11: 907.9	27: 910.7	43: 911.5	59: 903.5
12: 922.7	28: 906.7	44: 904.7	60: 918.7
13: 907.1	29: 923.1	45: 905.9	61: 915.5
14: 919.5	30: 915.9	46: 917.5	62: 923.5
15: 913.1	31: 921.9	47: 909.5	

### Sequence #3

0: 924.0	16: 913.6	32: 922.4	48: 910.0
1: 926.4	17: 925.6	33: 927.6	49: 915.6
2: 902.4	18: 922.0	34: 915.2	50: 919.6
3: 926.8	19: 916.8	35: 910.4	51: 908.0
4: 924.8	20: 925.2	36: 904.8	52: 914.8
5: 917.2	21: 914.0	37: 912.4	53: 902.8
6: 920.8	22: 913.2	38: 921.6	54: 918.8
7: 906.0	23: 920.4	39: 926.0	55: 904.4
8: 905.6	24: 917.6	40: 924.4	56: 910.8
9: 921.2	25: 906.8	41: 927.2	57: 909.6
10: 912.8	26: 911.6	42: 922.8	58: 918.4
11: 914.4	27: 909.2	43: 908.8	59: 903.2
12: 908.4	28: 911.2	44: 912.0	60: 904.0
13: 923.2	29: 907.2	45: 905.2	61: 919.2
14: 907.6	30: 923.6	46: 906.4	62: 916.0
15: 920.0	31: 916.4	47: 918.0	

**Question 2)** Section 15.247(a)1 indicates that the system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in

synchronization with the transmitted signals. Please explain how the device complies with this rule when a packet is repeated or when multiple packets are sent. What is the receiver input bandwidth? How does the receiver shift frequencies and determine which frequency to shift to in order to synchronize with this transmitter?

Responses:

- Only one packet is sent per hop and packets are not repeated.
- The receiver bandwidth is 30KHz.
- When it is powered up, the synthesized receiver quickly scans the first 6 frequencies in the frequency table and monitors the RSSI (received signal strength) of each. Of these frequencies the receiver chooses the one with the least noise and waits there to receive a valid transmission from a mating transmitter. When a valid transmission is received, the receiver, which has the same frequency table as the transmitter, will then proceed to hop in the order defined by the table, and the transmitter and receiver will thus be synchronized. Should the receiver not receive any valid transmissions for a period of 1.5 seconds, it will again scan the first 6 frequencies choosing the one with the least noise to wait on.