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Re: FCC ID HSW-HN1510
Applicant: Cirronet
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For Questions 1 – 4, see theory of operation from original radio specifications uploaded. If this does not address all issues, please let us know.

- 1) The transmitter cannot coordinate its hopping sequence with the hopping sequence of other transmitters, or vice versa, for the purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters. Provide a description on how the device complies with this rule.
- 2) The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudorandomly ordered list of hopping frequencies. Indicate how the pseudorandom hopping sequence is derived. Provide a list of channel frequencies and a sample of a few sequences.
- 3) Each frequency must be used equally on the average by each transmitter. Each new transmission cannot start on the same point in a sequence(except for voice systems.) Some transmissions may need only a few frequency hops to be completed and If the transmission started on the same frequency each time, this frequency would be used more than the others if many short transmissions were sent. Therefore, Describe where the next transmission starts when a sequence is not completed in a previous message.
- 4) 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?
- 5) Which antennas will be for fixed operation? Which antennas will be for mobile operation? The technical description indicates for indoor use. Clarify which antennas will be for indoor use.
[See new manual provided \(pages 2 & 3\)](#)
- 6) Provide a complete manual with warnings.
[See new manual provided.](#)