

Correspondence Reference Number: 11012
731 Confirmation Number: EA95581
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- 1) Please provide information showing compliance with the RF safety requirements. Submit the information in a separate exhibit and place it in the RF exposure info folder when submitting it.

ANS: Refer to separate Word attachment: *RF Hazard*

Please note: A new antenna by MaxRad has been added to those already tested and submitted. Radiated emissions data, antenna description, and manufacturer data sheets are being uploaded to FCC.

- 2) Please provide a confidential letter.

ANS: Confidentiality letter is separate Word attachment: *900IPconf*

- 3) You indicate the use of a unique connector. What is the type of unique connector being used?

ANS: This is a Trimble proprietary connector that has been used on 900 MHz radios for several years. Refer to separate .jpg attachments titled: *Unique*

- 4) What is the receiver input bandwidth?

ANS: 902 – 908 MHz– see page 1 of Theory of Operations, in separate Word document *TCOM900_theory_of_op.doc*

- 5) Provide a few samples of the pseudorandom hopping sequence.

ANS: Refer to separate Word attachment: *HOPPINGSEQ*

- 6) The maximum allowed 20 dB bandwidth is 500 kHz. The device does not comply. Please explain.

ANS: There was an error in setting the maximum and determining the 20 dB down points in the original test set-up. Refer to separate .jpg attachments named *New20dB*

7) The channel frequencies have to be separated by the greater of 25 kHz or the 20 dB Bandwidth of the hopping channel. Indicate compliance with this rule.

ANS: Per 15.247a1, the hopping channels must be separated by at least 25 kHz or at least the channel BW, whichever of the two is greater. The channel BW is around 460 kHz. The channels are separated by 509.524 kHz – see page 1 of Theory of Operations, in separate Word document *TCOM900_theory_of_op.doc*

8) 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.

ANS: All transmitters in a network share the same synchronized hopping pattern. They do not avoid simultaneous occupancy, they guarantee simultaneous occupancy! If multiple transmitters transmit at the same time, they will collide. A link-layer protocol uses TDMA to eliminate most simultaneous transmissions.
Transmitters in separate networks are totally un-coordinated.

9) Each frequency must be used equally on the average by each transmitter. Except for voice systems, each new transmission must start at a different point in the sequence so that on average the full sequence is used. Therefore, Describe where the next transmission starts when all frequencies are not used for a previous message. This is required because some transmissions may need only a few frequency hops to be completed. i.e. 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.

ANS: The hopping sequence is never re-started short of completion. It runs continuously, even if there is nothing to transmit. When there is something to transmit, it is transmitted using whatever part of the sequence is current.