

From: JOHN LOH

To: Anthony Serafini

Date: November 30, 2013

Subject:

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Message:

8.3.28 Response:

- a. Yes, authorization is for indoor use only, and is for 1 device.
- b. Application is for an XT station class and device is to be used as an "Experimental RNSS Test Equipment for the purpose of testing GPS receivers". The device will be used to re-radiate GPS signal to functionally verify GPS receivers.
- c. Understand that approved applications for frequency will be entered in the GMF.
- d. Application is for length of 2 years.
- e. Yes, the area of potential interference to GPS reception is under the control of the user.
- f. The maximum equivalent isotropically radiated power (EIRP) is such that the calculated emissions are no greater than -140 dBm/24 MHz. See Appendix A.
- g. To notify GPS users of potential interference, a sign will be posted at the peripheral of the building. See sample of sign in Appendix B.
- h. Yes, use is limited to activity for the purpose of testing RNSS systems.
- i. "Stop Buzzer" point of contact for the authorized device is identified as in Appendix C.

Appendix A - (EIRP Calculation)

Receive Ant Gain: 38  
Ant Cable Insertion Loss: -10  
Repeater Amp Gain: 24  
Repeater Ant Gain Best Case: 3  
Range in Feet: 100  
Repeated Signal Power @ Range In dBm: -141.09

GPS Carrier Frequency MHz: 1575  
Avg Receive Power L1 dBm North America: -130  
Free Space loss with Isotropic Antennas: -66.09  
Total System Gain: 55  
Total Signal Power @ Range in Watts: 7.8E-18  
Radiated Power dBm: -75  
Transmitted Power (W): 15.8E-12  
Effective Radiated Power (W): 31.6E-12

Appendix B - (GPS Warning Sign)

ATTENTION!

GPS TESTING CONDUCTED IN THIS BUILDING MAY INTERFERE WITH LOCATION SERVICES  
WITHIN 25 FEET OF THIS SIGN  
CALL JOHN LOH (714/979-2228) FOR FURTHER INFO

Appendix C - (Stop Buzzer List)

Primary Contact: John Loh, 714/979-2228, 714/661-0728

Alternate Contact 1: Tuan Nguyen, 714/979-2228, 714/791-8259

Alternate Contact 2: Phat Diep, 714/979-2228, 714/604-5528