

Use of Fixed Devices That Re-radiate Signals Received From The Global Positioning System

1. *Individual authorization is for indoor use only, and is required for each device at a specific site.*

This request is for a single GPS re-radiation equipment installation indoors at the Promega Hangar.

2. *Applications for frequency assignment should be applied for as an XT station class with a note indicating the device is to be used as an "Experimental RNSS Test Equipment for the purpose of testing GPS receivers" and describing how the device will be used.*

Not Applicable. The singular system will be used to provide indoor access to GPS signals providing time and position information for test and verification of aircraft avionics systems during ground tests and prior to flight.

3. *Approved applications for frequency assignment will be entered in the GMF.*
Not Applicable

4. *The maximum length of the assignment will be two years, with possible renewal.*
It is understood the license will require review and renewal after two years.

5. *The area of potential interference to GPS reception (e.g., military or contractor facility) has to be under the control of the user.*

The area of potential interference due to any of these systems is well within the perimeter and operational control of Promega Hangar. Reference attached drawings for detail.

6. *The maximum equivalent isotropically radiated power (EIRP) must be such that the calculated emissions are no greater than -140 dBm/24 MHz as received by an isotropic antenna at a distance of 100 feet (30 meters) from the building where the test is being conducted. The calculations showing compliance with this requirement must be provided with the application for frequency assignment and should be based on free space propagation with no allowance for additional attenuation (e.g., building attenuation.)*

The GPS Networking model being installed will be set to a maximum transmitter output of 35 pWatts. This results in a maximum of -140dBm at 100' due to free space loss. However, the output power will be adjusted down to a nominal minimum operational level. See exhibit 3 data.

7. *GPS users in the area of potential interference to GPS reception must be notified that GPS information may be impacted for periods of time.*

GPS users within the interference risk area will be fully informed of the operation of a local GPS re-rad system.

8. *The use is limited to activity for the purpose of testing RNSS equipment/systems.*

It is anticipated the re-rad system in the Promega Hangar area are anticipated to be operational 24/7, however, this installation has a very low risk of causing interference to external GPS users. The need is anticipated to be occasional ground test use and for short periods prior to flight.

9. *A "Stop Buzzer" point of contact for the authorized device must be identified and available at all times during GPS re-radiator operations. The POCs and phone numbers are as follows:*

Promega Hangar - (608) 443-3530 9am-5pm Mon - Fri

Raymond Felber - (608) 334-9294 24 / 7