8.3.28 Use of Fixed Devices that Re-Radiate Signals Received from a GPS Antenna

8.3.28 Use of Fixed Devices That Re-Radiate Signals Received from the Global Positioning

System Except as otherwise authorized under Part 7.14, federal agencies and departments may, under the following conditions, operate fixed devices that re-radiate signals received from the Global Positioning System (GPS).

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

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. ***YES***

3. Approved applications for frequency assignment will be entered in the GMF.
YES

4. The maximum length of the assignment will be two years, with possible renewal. ***YES***

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

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.)
SEE EXISTING EXHIBIT FOR EIRP CALCULATIONS-or copy of calculation below

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. ***YES***

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

9. A "Stop Buzzer" point of contact for the authorized device must be identified and available at all times during GPS re-radiation operation of the device under any condition. ***YES—Contact Information is accurate and up-to-date. Steven Clark Sr Electronics Technician 1-801-747-1462***
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Receive Ant Gain	Ant Cable Insertion Loss	Repeater Amp Gain	Repeater Ant Gain Best Case	Range in Feet	Repeated Signal Power @ Range In dBm
35	-6	20	3	100	-144.09

GPS Carrier Frequency MHz	Total System Gain	Range in Miles	Total Signal Power @ Range in Watts
1575	52	0.02	3.9E-18
Avg Receive Power L1 dBm North America		Range in Meters	Radiated Power dBm
-130		31.17	-78
Free Space loss with Isotropic Antennas		Range in Kilometers	Transmitted Power (W)
-66.09		0.03	7.9E-12
			Effective Radiated Power (W)
			15.8E-12
			Effective Radiated Power (dBW)
			-108