From: Joseph Brassard

To: Leann Nguyen
Date: July 20, 2016

Subject: Request for Info - File # 0504-EX-PL-2016

Message:

1) Items 1 through 9:
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.
The test equipment shall only be used indoors and shall be under the control of the Testco LLC. The only location is our laboratory in Boston, MA.
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.
We are testing a wireless internet service transmission device that requires a GPS timing signal. The vast majority of our testing is done with hard-wired GPS simulators, but our final assembled products will need a radiated GPS signal. This will be done inside a faraday-cage shielded room and/or RF-shielded test boxes.
3. Approved applications for frequency assignment will be entered in the GMF.
We acknowledge the approved application will be entered into the Government Master File.
4. The maximum length of the assignment will be two years, with possible renewal.
Requesting the maximum assignment length of 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.
Testco LLC will only operate the re-broadcast within our RF shielded room, or RF-shielded test boxes, inside our laboratory space in Boston, MA.
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.)
EIRP is no greater than -140 dBm/24 MHz at 100 feet.
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.
Testco LLC will only operate the re-broadcast within our RF shielded room, or RF-shielded test boxes. GPS itself is not measurable within our building as we are on the 2nd floor of a 14 story building, surround ed by other tall office buildings in an urban canyon. No re-broadcasted GPS signals will be measurable outside of our RF shielded room and/or boxes.
8. The use is limited to activity for the purpose of testing RNSS equipment/systems.
Operation is limited to activity for the purpose of testing radio navigation satellite service (RNSS) equipment and systems.
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.
The designated point-of-contact to terminate transmissions if interference occurs is
Joseph Brassard at 617-299-9563.
2) Link Budget

GPS Simulator Transmit power = -125dBm
Rebroadcast Antenna Transmit Gain up to +40dB
3) Point of Contact to terminate use if interference occurs.
The designated point-of-contact to terminate transmissions if interference occurs is Joseph Brassard at 617-299-9563.