

Exhibit 1 – Government Contract and Program Description

The GPS re-radiation equipment will be used inside the Lockheed Martin manufacturing facility in Fort Worth to test the GPS receiver installed in production F35 aircraft while in Final Assembly. Testing the F35 GPS receiver while in Final Assembly is projected to save a significant cost over the lifetime of the program. The F35 is being produced for the US Air Force, US Navy, US Marines, and several US government sponsored Foreign Military Sales. The related government contract is:

One GPS re-radiation system will be used to test the GPS receiver installed in the F35 Cooperative Avionics Test Bed (CATB) aircraft while the aircraft is in the hanger. The GPS re-rad system will allow the CATB systems to synchronize with GPS time and verify positional information prior to flights and during ground testing.

Exhibit 2 – Stop Buzzer POC

A Stop Buzzer POC may be contacted as follows: (Please call in the order listed.)

Function:	Time Period:	Name:	Phone No.
1st Shift, Supervisor	7:00 – 15:45	Roger (Troy) Blackburn	(817) 777-8387
2nd Shift Supervisor	15:45 – 24:00	John Van Meter	(817) 734-5987
CATB, Bldg 8 Bay 1	When Operating	Bruce Putney	(817) 763-7205 (817) 372-3135 (mobile)
CATB Sr. Manager	When Operating	Kenneth Gigliotti	817-777-1188
Alternate:			
Frequency Manager	24/7 Missed Calls will be returned.	Don Barnett	(817) 777-3826 (817) 692-0575 (mobile)

Exhibit 3 - Compliance with NTIA Manual

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.

This request is for three systems. All three will be indoor applications.

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.

Each system will be used to test GPS receivers. The CATB system will also be used to provide

indoor access to GPS signals providing time and position information for test and verification of F35 avionics systems during ground tests and prior to flight.

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

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 fenced perimeter and operational control of Lockheed Martin. 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 Source model being installed will be set to a maximum transmitter output of 39.8 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.

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 systems in the F35 Final Assembly area are anticipated to be operational 24/7, however, this installation has a very low risk of causing interference to external GPS users. The CATB system will only be operated as needed. 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 listed (Exhibit 2) are for the Final Assembly area supervisors. The phone numbers have a high probability of being answered 24/7. The CATB POC is the Program Principle Engineer and will be available any time the CATB installation is active. The local Frequency Manager is also listed and the listed cell phone will be answered 24/7, or calls returned as soon as possible, as backup.