

DESCRIPTION OF LICENSE USE

Sikorsky, A Lockheed Martin Company (“Sikorsky”) hereby seeks experimental authority to operate GPS re-radiating equipment at its aircraft facility for strictly indoor equipment testing. Specifically, operational activity at the facility requires functional checks of various military production aircraft GPS avionics systems. Checks of the communications and navigation avionics necessitates the GPS signal for navigational and time information prior to customer delivery.

The Sikorsky manufacturing facility is over 31,000 sq ft in floor size. The GPS re-radiating equipment that is proposed for use is situated in the center of the facility and, accordingly, there is no potential for the signals to radiate beyond the walls. In addition, all GPS re-radiating activity will be conducted with the roll-up door closed, thus ensuring no signal leakage.

Nature of operation:

The requested frequencies correspond to re-radiated L1 and L2 Global Positioning Satellite (GPS) signals, which will be received and then rebroadcasted within the confines of the steel covered building. (See Exhibit 2.)

Transmit Antenna Orientation: 180 degrees vertical, 360 degrees horizontal.
Antenna is directional facing down towards the ground inside steel covered building.

Transmit Antenna Polarization: Right hand circular polarization (RHCP)

Frequencies: 1575.42 MHz , 1227.60 MHz (GPS L1/L2)

Emissions: 20M4W7D

Compliance with NTIA Regulation 8.3.28:

Sikorsky certifies that it will operate the equipment consistent with the conditions set forth in the NTIA Manual, Section 8.3.28: In particular, Lockheed Martin states the following:

8.3.28/Item 1:

- Operations will only be conducted indoors.

8.3.28/Item 2:

- Applicant seeks experimental authority. The device is intended to be used exclusively as experimental RNSS test equipment for the purpose of testing production aircraft communications and GPS-related navigation avionics.

8.3.28/Item 3:

- NTIA action.

8.3.28/Item 4:

- Applicant seeks authority for a 24-month (2 year) term.

8.3.28/Item 5:

- The area of operation of the equipment will be exclusively under the control of Sikorsky personnel authorized for operation of such equipment.

8.3.28/Item 6:

- Operations will be conducted such that no GPS re-radiated signal level greater than or equal to -140 dBm, measured 100 feet from the building perimeter will occur. A diagram of the facility is provided as Exhibit 2.

8.3.28/Item 7:

- Appropriate notification will be provided to GPS users in the area of operation.

8.3.28/Item 8:

- The program activities are limited to testing production line aircraft RNSS avionics

8.3.28/Item 9:

- “Stop buzzer” points of contact for the authorized equipment and available at any point during the operation of said equipment follow:
 - Ed Zygmunt
203-386-3281
Zyggzy.zygmunt@lmco.com
 - Gary Swaim
203-386-7088
Gary.d.swaim@lmco.com