

Federal Communications Commission
Experimental Radio Service
P. O. Box 358320
Pittsburgh, PA 15251-5315

Subject: Request for Special Temporary Authorization (STA)
High Intensity Radiated Field (HIRF) – Wichita, KS

Gentlemen,

This request for a Special Temporary Authorization (STA) is submitted in accordance with CFR 47, Part 5.56. The purpose of this STA is to perform High Intensity Radiated Field (HIRF) Testing on a new Raytheon Aircraft business jet product.

1. **Name and Address:**
Raytheon Aircraft Company
9709 E. Central
Wichita, KS 67201-0085
Attn: Martin Coons, B40 Annex
2. **Need for special action:** This STA is required to conduct HIRF tests on a new Raytheon Aircraft composite business jet aircraft in accordance with directives listed in **Exhibit 1**. The testing window is for a duration of four weeks.
3. **Type of operations:** The tests to be conducted include the use of frequencies from 10 kHz to 18 GHz. Testing using widely spread discrete frequencies would miss possible critical resonant frequencies. The proposed testing include the following:

From 10 kHz to 400 MHz, the equipment under test will be subjected to RF signals coupled by means of injection probes onto its cable bundles. The dwell time will be less than 5 seconds with a 5-second check for frequency availability. Frequencies reserved for emergency services or local aircraft control will be omitted from the test.

A second sweep carrier wave test will be used over the frequency range of 100 MHz to 18 GHz. All of the above test conditions apply.
4. **Time and Date:** Testing is planned to occur between the dates of August 1, 2001 and November 15, 2001. Testing will be done during the hours of 7:00PM and 7:00AM to minimize possible interference situations. If STA is approved, Raytheon Aircraft will coordinate the use of frequencies and dates for testing with the appropriate agencies and Frequency Management offices.
5. **Class of Station:** XR
Call Sign: TBD

Nature of Service: Experimental

6. **Location:** Proposed test will be at the Raytheon Aircraft Electromagnetic Effects (EME) facility in Wichita, KS. This is a company owned facility located at the following coordinates: 37°41'15"N, 97°13'15"W.
7. **Equipment Manufacturer:** (See Exhibit 3)
8. **Frequency Bands:** (See Exhibit 2)
9. **Power Output to Antenna:** 20 to 25 watts (dependent on band tested)
10. **Emission:** (See Exhibit 2)
11. **Antenna Height:** Less than 18 feet above ground.
Antenna Type: (See Exhibit 3)
Gain: 3 dB
Beamwidth: Less than 90°
Polarization: Various
Direction: 360°

Should you require additional information, please contact Martin Coons at 316-676-6977 or martin_coons@rac.ray.com.

Martin Coons
Raytheon Aircraft Company
9709 E. Central
Wichita, KS 67201-0085
MS 974 / B40Annex

Enclosures:

FCC Form 159
Check # 000157062
Exhibit One (Pertinent HIRF Directives)
Exhibit Two (Frequency Band Information)
Exhibit Three (HIRF Equipment Information)

CC: Wade Davis, Jerry Tate