

Federal Communications Commission
Experimental Radio Service
PO Box 358320
Pittsburgh, PA 15251-5315

Subject: Request for Special Temporary Authorization (STA)
High Intensity Radiated Field (HIRF) – Wichita, KS
Ref 0142-EX-ST-2002

Gentlemen,

This request is 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. This application withdraws

1 Name and Address

Raytheon Aircraft Company
9709 E. Central
Wichita, KS 67201-0085
Attn: Steve Haycock, B-99 Annex.

2 Need for special action: This STA is required to conduct HIRF tests on new Raytheon Aircraft in accordance with exhibit 1. There will be two tests each of a 4-week duration.

3 Type of operations: The tests to be conducted include the use of frequencies from 500 KHz to 18 GHz. Testing using widely spread discrete frequencies would miss possible critical resonant frequencies. The proposed testing includes the following:

From 500 KHz to 400 MHz, the equipment under test will be subjected to RF signals coupled by means of injection probes on to its cable bundles. The dwell time will be less than 1 second. 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 500 KHz to 18 GHz. For Specific frequencies transmitted, refer to exhibit 2. All the above test conditions apply.

4 Time and Date: Testing is planned to occur between the dates of May 1, 2002 and December 20, 2002. If STA is approved, Raytheon Aircraft will coordinate the use of frequencies and dates of testing with the appropriate agencies and frequency management offices.

5 Call 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 at the coordinates 37°41'15"N, 97°13'15" W.

7. Equipment Manufacturer:

(See exhibit 3 for a complete listing of all equipment)

Antenna Height: Less than 18 feet above ground

Emco Model 3109 biconical to be used from 20 MHz to 200 MHz

Max gain = 6.5 dBI

Max Beam width = 155°

Emco Model 3106 double-ridged antenna to be used from 200 to 400 MHz

Max beam width = 95°

Max gain = 19dBI

Emco Model 3115 double-ridged antenna to be used from 1 to 18 GHz

Max gain = 17dBI

Max beamwidth = 72°

6. Frequency Bands:

See exhibit 2 for a complete listing of specific frequencies to be transmitted.

All frequencies are for Continuous Wave. The powers quoted are for maximum Effective Isotropic Radiated Power (EIRP) at the transmitter.

Coordination with local FCC and FAA can be accomplished as necessary.

Should you require additional information please contact Steve Haycock at 316 676 6445 or Steve_d_Haycock@rac.ray.com.

Steve Haycock
Raytheon Aircraft Company
9709 E. Central
Wichita, KS67201-0085
B-99 Annex

Enclosures:

Exhibit 1 (Pertinent HIRF Directives)

Exhibit 2 (Frequency Band Information)

Exhibit 3 (HIRF Equipment Information)