



Exhibit: General Application Letter
Purpose: Form 442 Question 7: Experimentation Description

Federal Communications Commission
Experimental Radio service

Subject : Request for New or Modified Experimental Radio Station Authorization
High Intensity Radiated Fields (HIRF) Threat Development – Gardener, KS
Ref 0050-EX-PL-2013 (Current Project)
Ref 0393-EX-PL-2012 (Previously Approved STA for similar project)

This request for a New Experimental Radio Station Authorization is submitted in accordance with CFR 47, part 5. The purpose of this experimental license is to perform Low Level Swept Coupling (LLSC) testing on a Part 23, 25, 27, or 29 aircraft, for the purpose of aircraft threat development for a High Intensity Radiated Field (HIRF) environment. The threat development determines the required equipment bench test levels. This test is required to satisfy applicable HIRF certification directives. Further details are provided below.

Name and Address of Applicant

Garmin International
1200 E.151st Street
Olathe, KS 66062
Attn: David Kerr, Aviation Engineering

Need for special action: The tests to be conducted include the use of swept frequencies from 500 KHz to 18 GHz with the exception of prohibited frequency bands. Testing using widely spaced discrete frequencies would miss possible critical resonant frequencies. The proposed testing will include the following.

From approximately 500 KHz to 400 MHz, the aircraft under test will be illuminated with a known low level swept frequency electromagnetic field and the resulting induced cable bundle currents will be measured on the aircraft using current probes.

From 100 MHz to 18 GHz, the aircraft under test will be illuminated with a known low level swept frequency electromagnetic field and the resulting electromagnetic field strengths will be measured within the various compartments of the aircraft.

Time and Date: Testing is planned to occur between the dates of March 1, 2013 and March 1, 2015.

Location: Proposed testing will occur at the Garmin Flight test facility at New Century Airport, Gardener, KS. This is a company owned facility at the coordinates N 38° 50' 33", W 94° 53' 39".

Field Generation and Monitoring Test Equipment

Reference the Antenna Exhibit for equipment information.

Frequency Bands and Power:

Reference the Antenna Exhibit for further supplemental information on test frequency, modulation, and Effective Radiated Power (ERP).

Should you require additional information please contact David Kerr at 913-440-5208 or Email david.kerr@garmin.com.

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