

Federal Communications Commission  
Experimental Radio service

**Subject :** Request for Special Temporary Authorization (STA)  
High Intensity radiated Field (HIRF) – Gardener, KS  
Ref 0162-EX-ST-2007

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 General aviation category aircraft, further details are given below:

**Name and Address of Applicant**

Garmin International  
1200 E. 151<sup>st</sup> street  
Olathe, KS 66062  
Attn: Steve Haycock, Aviation Engineering

**Need for special action:** The tests to be conducted include the use of frequencies from 100 KHz to 18 GHz. Testing using widely spaced discrete frequencies would miss possible critical resonant frequencies. The proposed testing will include the following.

From 100 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 400 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 June 1 and December 1 of 2007.

**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 N38 Deg, 53.307 Seconds, W094 Deg, 51.650 Seconds.

**Transmitting antennas and equipment**

See attachment 4

**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. Co-ordination with the local FCC and FAA can be accomplished as necessary.

Should you require additional information please contact Steve Haycock at 913 440 2284 or Email [steve.haycock@garmin.com](mailto:steve.haycock@garmin.com)

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