

15-Jun-06

To: Army Frequency Management Office, Continental US
Ft. Sam Houston, TX

DoD Coordination Request

UHF EMC/EMI Testing for Aircraft GPS Nav Systems

Cessna Aircraft Company is requesting coordination to conduct 10 to 12 EMC/EMI tests per year (maximum) beginning 15-Jul-06. An FCC authorization is required in addition to DoD coordination. We are seeking a two-year Experimental License (renewable) in order to minimize repeated coordination requests and authorizations associated with Special Temporary Authorizations (STAs).

Dates of Operation

- 15-Jul-06 through 15-Sep-06 (one to two tests) for next scheduled program
- 10 to 12 (max) tests per year thereafter

Purpose and Description of Tests

This test is required by 14 CFR 25.1301(d), 25.1353(a), 25.1431(c) to certify that harmonics from UHF comm radio transmissions will not interfere with GPS Nav systems on board the aircraft. Certification tests are required for each new configuration of UHF comm radio or GPS Nav System on an aircraft model.

Test for interference from UHF 6th harmonics to L1 (1575.42 MHz) receiver. All tests are conducted on the ground with the aircraft GPS Nav systems locked onto GPS satellites. **Transmit 20 seconds only** on 262.575 MHz (Annex F) and watch for loss of satellites. Repeat on adjacent channels 262.550 MHz (Annex D) and 262.600 MHz (Annex C-N).

Transmitters

The transmitter for the next program will be the Bendix King KTR-909 B:

- Output power: NLT 8 W, 10 W Nominal, 18 W max (all models future tests)
- Stability: 0.0005% or better

Emission Designator

- 6K00A3E

Antennas

- Type: ¼ wave monopole blade
- Gain = 0 dBi
- Polarity: Vertical

Requested Frequencies

- 262.550 MHz, 262.575 MHz, 262.600 MHz

- Substitution of other frequencies will not work as we are testing for interference from harmonics to the GPS L1 frequency.

Test Area and Altitude

- 1 KMRAD of 37-38-34.1 N Lat, 97-25-01.2 W Lon
- Max Altitude: 0 ft AGL (1320 ft MSL)

Very Respectfully,

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