

From: Dan Leppold

To: Behnam Ghaffari

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Subject:

FCC File No. 0239-EX-RR-2006

Message:

The comments below are a continuation of the 530 and 1090 MHz information provided earlier this week

1090 MHz information

- peak envelope power (PEP); 770 milliwatts for all antennas.
- type of antenna; 3 types may be used: EMCO 3115, Horn 1-18G, EMCO 3102, log spiral 1-10G antenna, EMCO 3105, double ridged horn 1-12 GHz
- transmit antenna gain; 11(3115), 3 (log-spiral), 8.5 (3105)
- elevation above sea level of the antenna site; about 15 feet
- height above ground of the focal point of the antenna; 6 feet
- antenna polarization; vertical (horn)
- the azimuth that the antenna is pointed or appropriate designator to indicate whether the antenna is rotating, non-directional, etc.; All antenna are non-rotating, antennas are directional.
- pulse repetition rate (PRR) that the equipment is capable of operating on to include PRR stagger sequences if appropriate, whether the PRR is adjustable and what PRR's the equipment can accept, and any other information that would be helpful in understanding the pulse characteristics of the equipment; PRR does not apply. Signal is cw.
- pulse width; PW does not apply. Signal is cw.
- equipment nomenclatures; Low power signal generator is source for antennas.
- whether the equipment is capable of blanking transmissions in certain azimuths and any limitations with respect to blanking; No blanking capability on equipment.
- radius of operations if appropriate; Operation is at Raytheon site (St. Petersburg, FL and Largo, FL only) noted in license renewal only.
- detailed description of the proposed operation to include any technical parameters that will be altered during operations. Licensed emissions are used to evaluate and measure shielding effectiveness of enclosures and buildings within 10 feet of a shielded wall. Signal source with transmitting antenna is on one side, with a receiver and RX antenna on opposite side. Shielding value is determined by measuring received signal strength both with and without the shielding wall between the receiver and the transmitter antennas.
- will interrogations (transmissions) be made on 1090 MHz as well as 1030 MHz (airborne transponders typically only transmit on 1090 MHz and receive on 1030 MHz)? Interrogations does not apply. Signal is cw at 1090 only.
- if transmissions will be made on 1030 MHz, in what modes of operation will the transmitter operate (Modes 1, 2, 3A, 3C, 4, 5, Mode-S)? Is this a TCAS and is TCAS the only reason why the 1030 MHz transmissions are needed (airborne Mode 4 and/or 5 operations will be very difficult if not impossible to authorize and airborne Mode-S is not authorized)? No transmissions will be at 1030 MHz.

The coordination numbers are:

St. Pete: serial number is NG 038737 FAA Coord. number is NG-07-529.

Largo: serial number is NG 038742 FAA Coord. number is NG-07-530.

These are the two original applications that were put in to allow use of M1290 at both sites.