

December 22, 2005

Federal Communications Commission
Office of Engineering and Technology
Experimental Licensing Branch

ATTN: Mr. John W. Kennedy

Gentlemen:

Please grant special temporary authority to permit operation of existing flight test telemetry facilities in a manner beyond the scope of our license, N25110FLT. We are licensed to operate in the Marietta, GA area. We wish to conduct a flight test program at this location beginning 15 December 2005 and continuing through 15 June 2006.

Data will be collected during tests on a Lockheed Martin/USAF C-5M aircraft to determine performance characteristics in a special test configuration. This information will be transmitted on L-Band TM frequencies from the aircraft to receiving and tracking equipment located at a fixed ground site in Marietta, GA (Dobbins ARB). Because authorized bandwidth (5MHz) on our current license will not support data requirements, we are requesting 15 MHz bandwidth on two selected frequencies.

Expedited action on our request is urgently needed to permit telemetry transmissions to begin at the earliest possible time. The fleet of USAF C-5 aircraft will be updated with new engines installed and aircraft performance verified in accordance with data accumulated via telemetry transmissions authorized by this STA. The flight test aircraft has already been given new engines, and it has been fully instrumented for data acquisition. It was belatedly perceived that data bit rates required by test plans could not be supported with transmitter bandwidths (5 MHz) currently authorized. We need to begin testing now and greater bandwidth (15 MHz) is required.

Information in support of our STA request is submitted as follows:

1. Applicant: Lockheed Martin Corporation, POB 4906, Baltimore, MD 21220
Attention: Claude E. Wells. Questions on test plans can be referred to test-site point-of-contact R. F. Thompson, Phone 770.494.2893, Fax 770.793.2049, Email r.f.thompson@lmco.com.
2. Description of need: Two telemetry frequencies, 1450.5 MHz and 1480.5 MHz, with 15 MHz bandwidth for each are needed to conduct aircraft flight testing at Marietta, GA.

3. Type of operation: Air-to-ground and ground checkout telemetry transmissions from an aircraft to a fixed ground receiving station will be used to measure aircraft performance at altitudes up to twenty thousand feet within 150 miles of the receiving site.
4. How facilities will be used: Two telemetry transmitters will be used on the aircraft to transmit aircraft operating data to the ground receiving site using standard PCM FM signaling at 5 MBPS.
5. Time and dates of operation: Typical operation will be one to two flights per day during normal work days and week ends, one to three hours per flight, beginning 15 December 2005 and running through 15 June 2006.
6. Class of station and radio service: Class of station is aircraft (Flight Test) and radio service is Aviation (Part 87).
7. Location of transmitters: Marietta GA (Dobbins ARB), Latitude 33 degrees, 54' 24"N, Longitude 084 degrees 31' 09W, and within 150 mile radius.
8. Number of transmitters: Two aircraft mounted telemetry transmitters.
9. Operating frequencies: 1450.5 and 1480.5 MHz.
10. Output power of transmitters: 20 watts (63 watts EIRP).
11. Type of emission: 15M00FXD.
12. Description of antenna: Aircraft will use bi-convex omni-directional antennas, 0 dbi gain, at aircraft operating altitude (0 to 20,000) feet. Receiving antenna will be Scientific-Atlanta 3100R8 Autotracking System, 27.5 db gain, 8' diameter, lightweight, solid-surface paraboloid reflector.
13. Activity of applicant: Applicant is a manufacturer of aircraft and regularly conducts aircraft testing activities.
14. Type of equipment: Telemetry transmitters are to be Aydin Vector ST-410L, J/F-12/06260.

AFTRCC coordination has been granted. Responses have been received indicating that our request to use the specified frequencies at the intended location will be cleared by the affected frequency coordinators and schedulers.

Your favorable consideration to our request will be appreciated.

Yours very truly,

R. F. Thompson
LM Radio Operations

cc: R. W. Johnstone