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May 17, 2010

Ms. Marlene H. Dortch
 Secretary
 Federal Communications Commission
 445 12th Street S.W.
 Washington DC 20554

Re: RM-11596
Ex Parte Statement

Dear Ms. Dortch:

Aerospace and Flight Test Radio Coordinating Council (“AFTRCC”) hereby submits these comments on the Petition for Rulemaking filed by OCAS, Inc. (“OCAS”). AFTRCC appreciates the intent of the proposal, i.e. to reduce the incidence of tower and cable strikes to low-flying aircraft such as helicopters. However, the pursuit of this goal, while laudatory, should not in the process diminish other aspects of aviation safety.¹

Introduction

AFTRCC is an association of the nation’s principal aerospace manufacturers (see Attachment). AFTRCC was founded in 1954 to serve as an advocate for the aerospace industry on matters affecting spectrum policy. Among its many accomplishments is AFTRCC’s role in obtaining allocations of spectrum for flight test telemetry.

AFTRCC is also the recognized non-Federal Government coordinator for the shared, Government/Non-Government spectrum allocated for flight testing. AFTRCC works closely with Government Area Frequency Coordinators, who are responsible for Federal Government use of the spectrum, in an effort to ensure that interference-free flight test operations are protected, and flight safety maximized.

¹ AFTRCC previously submitted a letter for the docket reporting that it had just become aware of the Petition and registering its intention to submit comments. As discussed below, AFTRCC is certified by the Commission to coordinate frequencies which are within the scope of the Petition, and thus has a particular interest in this proceeding. Accordingly, AFTRCC requests leave to file these comments, and asks that this filing be treated as an ex parte submission. A copy is being served on counsel for OCAS, Inc.

Discussion

OCAS proposes that the full range of VHF voice frequencies (with limited exceptions) be identified for its proposed audio-visual warning system (“AVWS”). The frequency range would be 118 up to 137 MHz. This range includes the 17 channels designated by the Commission solely for flight test voice communications under Rule 87.303 in the 123 MHz band, and coordinated by AFTRCC. These frequencies are used for ground-air and air-ground communications between flight test engineers and test pilots. The channels are used to transmit instructions from engineers to pilots (e.g., clearing the pilot to proceed to the next set of measurement points); reports from pilots regarding the condition of the aircraft following a particular test maneuver; advice regarding adverse weather conditions; and to warn pilots of incipient unsafe conditions when telemetry readings convey to the engineers abnormal conditions which the pilots would otherwise be unaware of. For example, during “flutter” tests, aircraft wings and control surfaces are deliberately stressed to the maximum. Flight test engineers monitor the real-time telemetry closely to observe the data derived from numerous strain gauges and, if anomalies are detected, warn the pilot to abort the maneuver. This is accomplished via the dedicated VHF frequencies.

Flight test channels exist to enhance safety in a high-risk enterprise. The Commission has acknowledged this on repeated occasions. In 1984 the Commission stated that flight testing “involves the safety of life and property” and acted “to protect this safety service from harmful interference that could result in loss of life.”²

In 1989, the Commission determined that the flight test telemetry bands should be classified as Restricted and protected from fundamental emissions of unlicensed devices. In so doing the agency stressed that the flight test spectrum “involv[es] safety of life.”³

In 1990, the Commission explained:

“[S]haring of [flight test] frequencies with unlike services is difficult at best because schedules of telemetry flight tests are unpredictable and delays costly. Further, interference cannot be tolerated.”⁴

In addition, the Commission has determined that:

“[F]light test, telemetry, and telecommand operations are vital to the U.S. aerospace industry to produce, deliver, and operate safe and efficient aircraft and space vehicles. Because the nature of the BSS (Sound) operations is 24 hour a day ... and the test and

² *In the Matter of Amendment of Part 2 of the Commission’s Rules Regarding Implementation of the Final Acts of the World Administrative Radio Conference, Geneva, 1979.* FCC 84-306, released July 2, 1984, at 2 (emphasis added).

³ *In the Matter of Revision of Part 15 of the Rules Regarding the Operation of Radio Frequency Devices Without an Individual License*, 4 FCC Rcd 3493, 3502 (1989) (emphasis added).

⁴ *Amendment of the Frequency Allocation and Aviation Services Rules (Parts 2 and 87) to Provide Frequencies for Use by Commercial Space Launch Vehicles*, 5 FCC Rcd 493, 495 (1990) (emphasis added).

telemetry operations are in the proximity of many major metropolitan areas, we believe, as AFTRCC asserts, that the BSS (Sound) transmissions will cause interference to these operations and threaten safety of life and property. Consequently, we do not believe it is feasible to share aeronautical mobile telemetering frequencies with BSS (Sound) or terrestrial broadcasting systems."⁵

Finally, in the case of the VHF frequencies at issue here, the Commission has determined that secondary use of flight test frequencies for air shows could result in significant harmful interference "impair[ing] the efficiency and safety of the flight test industry."⁶

In short, flight test spectrum is a safety service, and requires protection as such.

OCAS states that the effective range of its transmissions is 5-7 km and 6,000 feet vertical. Petition page 4. From there it goes on to urge that its audible warning signals will be heard only by aircraft in "imminent danger" of collision with an obstacle. *Id.* at page 6. However, VHF aeronautical radios are, as ASRI observes, double sideband amplitude modulated. The interference range of such radios is well beyond the service range. These factors increase the interference risk, and one station can cause interference to the reception of two other stations.⁷

AFTRCC is concerned about the risk of interference to the flight test voice frequencies from the proposed OCAS system. The risk is potentially exacerbated by the fact that OCAS systems would be installed, owned, and operated by other than aviation parties, such as owners of high tension power lines, bridges, and the like.

Unlike most of the 118-137 MHz band, eligibility for flight test frequencies has long been restricted to those engaged in activities integral to flight testing, in particular aircraft manufacturing. See Rule 87.301 and .303. If a helicopter or other aircraft is close enough to an OCAS-equipped obstruction to trigger a warning, transmission of such a warning could disrupt critical voice communications between ground engineers and test pilots during flight testing. This could result in a life-threatening emergency for the pilot and others on the ground as well as significant loss of property.

It is due to concerns similar to these that other aviation interests, including the Federal Aviation Administration's Office of Spectrum Engineering Services, have registered concerns about the interference risk, and in fact, opposed OCAS system use of various dedicated

⁵ *Second Notice of Inquiry in GEN. Docket No. 89-554, In the Matter of An Inquiry Relating to Preparation for the International Telecommunication Union World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum*, FCC 90-316, 5 FCC Rcd 6046, 6060, para. 101 (1990) (emphasis added). The Commission went on to say that "We have previously determined that aeronautical flight test and telemetry operations should not share spectrum with unlicensed devices because of the threat to safety of life." *Id.* at 6061 para. 102.

⁶ *In the Matter of Petition to Amend Part 87 of the Commission's Rules to Allot VHF Aeronautical Frequencies for the Coordination of Air Show Events*, Order, DA 90-957, 5 FCC Rcd 4641, 4642 (1990) (emphasis added).

⁷ Comments of Aviation Spectrum Resources, Inc. ("ASRI") filed April 19, 2010, at page 3.

aeronautical frequencies. See memorandum of October 16, 2009 from Oscar Alvarez, Director, AJW-6, to Mark R. Schilling, Acting Manager, Rotorcraft Directorate (opposing the use of Air Traffic Control frequencies in the band 118-137 MHz “due to the potential for radio frequency interference to controller-pilot communications on non-participating aircraft in the vicinity of AVWS operations”⁸; and ASRI (opposing use of aeronautical operational control frequencies). Moreover, the Boeing Company has observed that “Given the important public safety consideration involved in flight test operations, the VHF flight test spectrum should not be used for any other purposes.”⁹

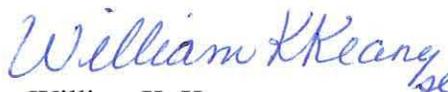
OCAS has taken note of some of these concerns and offered to exclude ATC and AOC channels.¹⁰ With respect to flight test frequencies, it offers the view that “the instances in which flight test facilities and air navigation obstructions are located in close proximity may be ‘few and far between;’” and that, where they may be located in proximity, frequency coordination might be an answer.

However, this does not deal with the fact that a number of major aircraft manufacturing and assembly plants are co-located with, or proximate to, metropolitan airports. This includes places like Seattle, Wichita, St. Louis, and Dallas-Fort Worth, among others. Nor is coordination feasible: In-flight emergencies are not predictable.

Increasing the risk of interference to one group of pilots in the name of reducing the risk of interference to another, should not be considered. Rather, all parties to this proceeding should seek a solution which could enable AVWS to be implemented in a manner which does not compromise the goal OCAS and AFTRCC Member Companies seek to serve: An enhancement of aviation safety generally. To that end, AFTRCC would be pleased to entertain discussions with OCAS concerning its proposal.

Any questions concerning this matter may be directed to the undersigned.

Sincerely,



William K. Keane

*Counsel for Aerospace and Flight Test
Radio Coordinating Council*

⁸ Exhibit 6 to OCAS Petition for Rulemaking.

⁹ *Id.* at page 2.

¹⁰ OCAS Reply Comments filed May 4, 2010 at pages 4-5.

Aerospace and Flight Test Radio Coordinating Council Members



Electronic Sensors & Systems Sector



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CERTIFICATE OF SERVICE

I, Stephanie M. Lemke, Legal Assistant at the law firm of Duane Morris LLP, do hereby certify that on this 17th day of May, 2010, a copy of the foregoing Ex Parte Letter was served via first class mail, postage prepaid upon the following:

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