Astronics AeroSat Corporation

Application to Modify Experimental License
Call Sign: WH2XJQ
File No.: 0392-EX-RR-2016

Astronics AeroSat Corporation ("Astronics AeroSat") hereby seeks modification of its existing experimental license, Call Sign WH2XJQ. Astronics AeroSat currently has authority to test and demonstrate up to five (5) earth stations aboard aircraft ("ESAAs") – three (3) Astronics AeroSat HR6400 (otherwise known as the "F-Series" F-210) and two (2) HR129 (otherwise known as the "T-Series" T-210) terminals - in the 14.0-14.5 GHz band.[1] In the present application, Astronics AeroSat respectfully requests authority to increase the total number of authorized ESAA terminals to twenty (20), ten (10) of each terminal type, and add new satellite points of communication that reflect the range of available satellite in the network that may be accessed by the terminals. Experimental testing and demonstration operations will continue to be conducted within the contiguous United States ("CONUS") and adjacent international waters until October 1, 2017, pursuant to the terms and conditions included in the subject experimental license, and will support Astronics AeroSat's continuing development of its ESAA terminals.

I. Background

As the Commission is aware, the HR129 and HR6400 terminals comply fully with Section 25.227 of the Commission's Rules governing ESAAs, although the terminals will

[1] *See* Astronics AeroSat Corporation, Call Sign WH2XJQ (various file numbers). Astronics AeroSat notes that in a submission adding the HR129, the terminal was inadvertently identified as the "HR123" terminal. *See* Letter to Nnake Nweke, Chief, Experimental Licensing Branch, *Astronics AeroSat Corporation, Call Sign WH2XJQ, File No. 0579-EX-PL-2014; Addition of New Antenna Type for Experimental Testing and Demonstration* (filed on January 20, 2015).

be operated pursuant to limited testing and demonstration experimental authority. Moreover, Astronics AeroSat acknowledges and accepts that the conditions in its existing experimental license will continue to apply, including operating on an unprotected, non-interference basis and adhering to requirement to immediately cease operations in the event of harmful interference. The HR129 and HR6400 operate within the same emissions envelope and operation of the terminals is consistent with Part 5 of the Commission's Rules.

Astronics AeroSat fully incorporates by reference the information included as part of the previous experimental application and filings,[2] and confirms that the terminal parameters of the authorized experimental operations will not change. These parameters are fully consistent with the Commission's two-degree spacing policies and thus use of the HR6400 and HR129 terminals to access to new CONUS-coverage satellites will not increase the potential for interference from Astronics AeroSat's experimental operations.

II. Protection of Users in the 14.0-14.5 GHz Band

Astronics AeroSat understands that operations under this experimental license are conducted on an unprotected, non-interference basis only and are conditioned upon protection of co-frequency operations. Astronics AeroSat notes that there have been no reported cases of interference relating to its operations under its existing experimental or commercial licenses and, given the limited testing operations under the subject experimental license, it is unlikely that interference will occur. Astronics AeroSat,

[2] *See id.*

however, will immediately cease operations to the extent harmful interference is caused to another user of the 14.0-14.5 GHz band.

III. New Satellite Points of Communication

Astronics AeroSat notes that its current experimental license does not specify authorized satellite points of communications, although satellites have been specified in its underlying applications.[3] In addition to those satellites, Astronics AeroSat seeks FCC authority to communicate with the following new satellite points of communication in the context of this application: Eutelsat 115WB (Satmex 7) at 114.9°W and IS-29E at 50° W.

Astronics AeroSat confirms that the proposed satellite points of communication can be used for testing and demonstration of ESAA terminals consistent with Commission rules and policies. Each of the proposed satellites has been previously authorized by the Commission to provide service in the U.S. market and thus their operating parameters have been previously reviewed and approved. In addition, Astronics AeroSat is submitting certifications from the satellite operators confirming that the proposed operations are consistent with the coordination agreements of the serving satellites. Of course, Astronics AeroSat will provide any additional information that may be appropriate for the Commission to consider the instant request.

IV. Conclusion

Astronics AeroSat respectfully requests that the Commission grant its application to modify its experimental license to increase the number of authorized ESAA terminals to

[3] *See* Astronics AeroSat Corporation, Call Sign WH2XJQ, File No. 0579-EX-PL-2014 (adding the Eutelsat 117WA satellite); File No. 002-EX-ML-2015 (adding the Galaxy 3C, Telstar-14R, and Telstar-11N satellites); File No. 0146-EX-ML-2015 (adding the SES-6, Galaxy 16, Galaxy 17 and AMC-16 satellites); 0184-EX-ML-2015 (adding the SES-1 satellite).

twenty (20) total and add new satellite points of communication for the HR129 and HR6400 terminals. Granting the modification will serve the public interest by allowing Astronics AeroSat to continue to test and demonstrate ESAA terminal performance with new satellites and potential service applications.