



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

DEC 4 2013

Mr. Andy Leimer  
Federal Communications Commission  
Equipment Authorization Branch  
7435 Oakland Mills Road  
Columbia, Maryland 21046

Dear Mr. Leimer:

The Federal Aviation Administration (FAA), Spectrum Engineering Services Group, has reviewed the filing by EMS Aviation for a Class II Permissive Change for the HSD-128, HSD-440, HSD-X, HSD-Xi, HSD-MK2, HSD-MK3, A781, A781-MK2 and A781-MK3 Aeronautical Earth Station Satellite Communications Transceiver models to allow the introduction of high data rate services using new symbol rates and higher modulation schemes of 32QAM and 64 QAM with the existing hardware platform. The FAA has no objections, this proposal noting that EMS has agreed that though the new emission types are not yet defined in RTCA Inc. DO-210 Minimum Operational Performance Standards, EMS will test the terminals, when operating with the new emission types, to validate conformance with:

RTCA/DO-210D, Minimum Operational Performance Standards for Geosynchronous Orbital Aeronautical Mobile Satellite Services (AMSS) Avionics, Change Number 3, Issues Sep 19, 2006, Section 2.2.4.2.5.2 – Harmonics, Discrete Spurious and Noise Density for Equipment without Intermodulation Frequency Control. The in-band unwanted emission measurement exclusion will be changed from +/-35 kHz to +/-560 kHz to accommodate the higher symbol rate of the new emission types.

Should you have any questions or concerns, please contact Mr. Michael Biggs, Senior Electronics Engineer, Spectrum Planning and International Group, at (202) 267-8241 or via email [michael.biggs@faa.gov](mailto:michael.biggs@faa.gov).

Sincerely,

Ian Atkins  
Director, Spectrum Engineering Services