

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
EMS TECHNOLOGIES CANADA, LTD.)	WT Docket No. 11-19
)	
Request Of EMS Technologies Canada, Ltd. for)	
Waiver of Part 87 Emission Mask to Allow)	
Certification and use of Aeronautical Mobile)	
Satellite Service Transceiver)	

ORDER

Adopted: June 22, 2011

Released: June 23, 2011

By the Deputy Chief, Mobility Division, Wireless Telecommunications Bureau:

1. *Introduction.* We have before us a request filed by EMS Technologies Canada, Ltd. (EMS) for waiver of the emission limitations set forth in Section 87.139(i)(1) of the Commission's Rules,¹ to permit equipment certification and use of EMS's aeronautical-mobile satellite service (AMSS)² HSD-MK2 transceiver.³ For reasons set forth below, we grant the waiver request.

2. *Background.* The HSD-MK2 transceiver supports the Inmarsat Classic, Swift64 and SwiftBroadband aircraft communications services, and is intended to be used on aircraft to provide high-speed Internet, voice and video conferencing capabilities.⁴ EMS states that the HSD-MK2 meets the Part 87 requirements for output power, spurious emissions, intermodulation, and priority and preemption; as well as Inmarsat technical requirements; ARINC Characteristics 429, 739, 600, 741 and 781;⁵ and RTCA/DO-210;⁶ and will be certified pursuant to the Federal Aviation Administration Type Certification, Supplemental Type Certification, and/or Technical Standard Order Certification.⁷ On April 29, 2010, the Wireless Telecommunications Bureau's Mobility Division granted EMS's request for waiver of certain

¹ 47 C.F.R. § 87.139(i)(1).

² AMSS is a mobile-satellite service which, in general, includes communications such as public correspondence and airline administrative communications which are not related to safety or regularity of flight. *See, e.g.,* Amendment of Part 87 of the Commission's Rules to Establish Technical Standards and Licensing Procedures for Aircraft Earth Stations, *Report and Order*, PR Docket No. 90-315, 7 FCC Rcd 5895, 5895 n.9 (1992).

³ Letter dated June 2, 2010 from Bruce A. Olcott to James Shaffer, Mobility Division, Wireless Telecommunications Bureau (Waiver Request). On November 29, 2010, EMS clarified its request. *See* Letter dated Nov. 29, 2010 from Bruce A. Olcott to James Shaffer, Mobility Division, Wireless Telecommunications Bureau (Waiver Supplement).

⁴ *See* Waiver Request at 1.

⁵ ARINC was established in 1929 by the airline industry to provide and coordinate aeronautical communications facilities and services. ARINC also organizes aviation industry activities that cooperatively establish voluntary technical Standards and develop shared technical solutions. There are three classes of ARINC Standards – ARINC Characteristics, ARINC Specifications, and ARINC Reports.

⁶ DO-210D, Minimum Operational Performance Standards (MOPS) for Geosynchronous Orbit Aeronautical Mobile Satellite Services (AMSS) Avionics, April 19, 2000.

⁷ *See* Waiver Request at 2.

Part 87 technical rules to permit certification of several AMSS transceivers, including the HSD-MK2.⁸

3. On June 2, 2010, EMS requested an additional waiver for the HSD-MK2, asking for a 9.5 dB relaxation of the spurious and noise output levels specified in Section 87.139(i)(1).⁹ EMS requested 9.5 dB adjustment to the required attenuation for a modulated carrier relative to the maximum emission envelope level, in order to be consistent with the larger authorized bandwidth permitted by the 2010 waiver grant. EMS argued that the total power is more widely distributed over the larger bandwidth, so the relaxed emission limitations would provide the same effective protection levels as is currently specified in the rule.¹⁰ On February 3, 2011, we sought comment on EMS's waiver request.¹¹

4. *Discussion.* Section 1.925(b)(3) of the Commission's Rules provides that we may grant a waiver if it is shown that (a) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and grant of the requested waiver would be in the public interest; or (b) in light of unique or unusual circumstances, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.¹² We find that the waiver requested by EMS is warranted under the circumstances presented. Specifically, we conclude that the underlying purpose of the subject rules would not be served by application to the instant case, and grant of the requested waiver would be in the public interest.

5. Specifically, we conclude that a waiver of Section 87.139(i)(1) would further the underlying purpose of the Commission's rules for AMSS equipment operating in the Aviation Radio Service. As Iridium notes in its comments, current Part 87 rules do not allow for the wider bandwidth, higher transmission speeds and more efficient modulation techniques of newer AMSS systems.¹³ Iridium has no objection to granting EMS's request for waiver, provided that EMS complies with the applicable ARINC and RTCA standards, in order to avoid harmful interference to systems operating in adjacent bands.¹⁴ EMS states that it has no objection to such a condition.¹⁵

6. Accordingly, IT IS ORDERED, pursuant to Sections 4(i) and 303(i) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(i), and Section 1.925 of the Commission's Rules, 47 C.F.R. § 1.925, that the Request for Waiver filed by EMS Technologies Canada, Ltd. on June 2, 2010, and supplemented on November 29, 2010, IS GRANTED, and Section 87.139(i)(1) of the Commission's Rules, 47 C.F.R. § 87.139(i)(1), IS WAIVED to the extent necessary to permit certification of EMS's HSD-MK2 transceiver, ON THE CONDITION that EMS's HSD-MK2 transceiver

⁸ See Letter dated April 9, 2010, from Bruce A. Olcott to James Shaffer, Mobility Division, Wireless Telecommunications Bureau. Specifically, EMS sought waiver of Sections 87.131 (authorized emissions), 87.133 (frequency stability), 87.137 (types of emissions), 87.139(i)(1) and (3) (emission limitations), and 87.141(j) (modulation requirements), 47 C.F.R. §§ 87.131, 87.133, 87.137, 87.139(i)(1), (3), 87.141(j).

⁹ See Waiver Request at 2. On November 29, 2010, EMS supplemented its request to clarify that it applied to the emission limitation for all the frequencies listed in Section 87.139(i)(1) except frequencies 1610.6-1613.8 MHz and 1660-1670 MHz. See Waiver Supplement at 2.

¹⁰ See Waiver Request at 2.

¹¹ Wireless Telecommunications Bureau Seeks Comment on Request of EMS Technologies Canada, Ltd. for Waiver of Part 87 Emission Mask to allow Certification and Use of Aeronautical Mobile Satellite Service Transceiver, *Public Notice*, 26 FCC Rcd 1079 (WTB MD 2011). Iridium Satellite, LLC (Iridium) filed comments, and EMS filed reply comments.

¹² 47 C.F.R. § 1.925(b)(3); see also *WAIT Radio v FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

¹³ See Iridium Comments at 1.

¹⁴ *Id.* at 1-2.

¹⁵ EMS Reply Comments at 2.

comply with ARINC Characteristics 429, 739, 600, 741 and 781 and RTCA/DO-210 “The Minimum Operational Performance Standards (MOPS) for Geosynchronous Orbit Aeronautical Mobile Satellite Services (AMSS) Avionics.”

7. This action is taken under delegated authority pursuant to Sections 0.131 and 0.331 of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Scot Stone
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Wireless Telecommunications Bureau