

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the Matter of )  
 )  
Review of Part 87 of the Commission's Rules )  
Concerning the **Aviation Radio Service** ) **WT Docket No. 01-289**  
 )  
To: The Commission )

**REPLY COMMENTS OF ROCKWELL COLLINS, INC.**

Rockwell Collins, Inc. ("Rockwell Collins") pursuant to Section 1.415 of the Federal Communications Commission's ("Commission's") or ("FCC's") rules **hereby files electronic reply comments in the above** referenced proceeding, which seeks to **revise** the Part 87 rules governing Aviation Radio Service.

As pointed out in the Comments filed in the above docket. Rockwell Collins manufactures a complete **line** of civilian and military aeronautical radio communications, navigation, **and surveillance equipment, including** Instrument Landing System (ILS) receivers, L-Band Distance Measuring Equipment (DME), Traffic Alert and Collision Avoidance units, Air Traffic Control Radar Transponders, L-Band **Aeronautical mobile satellite communications equipment, C-Band** Radio Altimeters, **Microwave** Landing System (MLS) receivers and weather radars. Therefore, Rockwell Collins is a party in interest to this proceeding.

**DISCUSSION**

The Commission presented numerous issues in the above docket. Rockwell Collins limited its comments to issues **concerning** the Aeronautical Mobile **Satellite:(Route) Service**

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<sup>1</sup> See In the Matter of Part 87 of Commission's Rules Concerning Aviation Radio Service, WT Docket No. 01-289, Second Report and Order and Second Further Notice of Proposed Rule Making, 77 Fed. Reg. 70710 (December 6, 2006)("NPRM").

("AMS(R)S") operations in the 1.6 GHz, 2.0 GHz, and 5 GHz, and other frequency bands as well as channel spacing in the aeronautical enroute service. However, Rockwell Collins respectfully requests the Commission accept additional comments as well as reply comments.

**A. AMS(R)S Operations in the 1.6GHz, 2.0GHz, and 5 GHz and Other Frequency Bands**

Inmarsat Ventures Limited ("Inmarsat") submitted comments that urges the Commission to open the entire L-Band for AMS(R)S.<sup>2</sup> Rockwell Collins supports Inmarsat's proposal to include the lower L-Band (1525.0-1545.0 MHz and 1626.5-1646.5 MHz) within the frequency ranges permitted for operation of AMS(R)S. Equipment manufactured by Rockwell Collins is currently capable of supporting AMS(R)S operations in these bands.

Rockwell Collins suggests that note 2 in section 87.139(i)(1) be modified. The current emissions limitations specified in 87.139(i)(1) includes a reference to note 2 in the frequency bands of 1626.5 -1660 MHz and 1660 – 1670 MHz. Note 2 currently states, "Attenuation measured within the transmit band excludes the band +/- 35 kHz of the carrier frequency."<sup>3</sup> The specific +/- 35 kHz bandwidth exclusion was based upon the characteristics of 21000 bps Quadrature Phase Shift Key (QPSK) modulation, which was the widest bandwidth signal included in Inmarsat's Classic Aero services. Since the regulation was last updated, Inmarsat has introduced the Swift64 service (and plans to introduce the SwiftBroadband service) which uses a higher bandwidth modulation. Rockwell Collins recommends that the FCC revise note 2 to permit the sidebands of higher bandwidth modulations to be excluded in the 1626.5 -1660 MHz and 1660 – 1670 MHz frequency bands.

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<sup>2</sup> See Inmarsat Comment for *Order and Second Further Notice of Proposed Rulemaking*, WT Docket No. 01-289, at 2-3.

<sup>3</sup> See 47 CFR 87.139(i)(1).

Rockwell Collins would like to correct its comment for the **suggested modification** of Section 87.139(i)(1). Rockwell Collins proposed having separate emissions limits for antennas and **equipment and wiring.**<sup>4</sup> **The first** frequency band for the **proposed** emissions limits for **antennas** was **erroneously stated** as “0.01 – 1559” instead of “0.01 – 1525”. Accordingly, the first two lines for the **proposed** emissions limits for antennas should be changed to read:

Frequency (MHz)	Attenuation (dB) <sup>1</sup>
0.01 – 1525	-135 dB/4kHz

E. **Channel Spacing in the Aeronautical Enroute Service**

**Aviation** Spectrum Resources: Inc. (“ASRI”), which assumed the **role** as industry frequency manager for the **United States** civil aviation from ARINC, submitted comments that **supports** the introduction of 8.33 kHz channel spacing in the **Aeronautical Enroute Service** in the **United States.**<sup>5</sup> **As** stated in Rockwell Collins’ Comments, we **agree that** 8.33 kHz channelization **should introduced** into **U.S. airspace.**<sup>6</sup> This would bring the **U.S. in line** with **Europe** where this standard has been in **use** for a number of years and **many** air transport aircraft that operate in **both Europe and the U.S. are already** equipped with **8.33 kHz-capable** radios. Rockwell Collins suggested that the FCC wait until the **FAA/EUROCONTROL Future Communications Study Group** (“FCS”) issues its final **recommendation before** adopting a definitive standard.<sup>7</sup> The long-term viability of 8.33 kHz spacing is **under review** by the FCS. Rockwell Collins **supports** the ASRI proposal for permissive use of 8.33 kHz channel spacing as

<sup>4</sup> See Rockwell Collins Comment for *Order and Second Further Notice of Proposed Rulemaking*, WT Docket No. 01-289, at 6.

<sup>5</sup> See ASRI Comment for *Order and Second Further Notice of Proposed Rulemaking*, WT Docket No. 01-289, at 4 - 5.

<sup>6</sup> See Rockwell Collins Comment at 8.

<sup>7</sup> *Id* at 8-9.

a near-term solution to aeronautical enroute communications capacity concerns. However, we caution against irrevocably committing to a near-term solution that may differ from an internationally adopted long-term solution that could be identified within the next year,

Additionally, ASRI submitted comments which urges the Commission to amend Section 87.133 to require aircraft transmitters that use 8.33 kHz channel spacing to achieve 0.0005% frequency stability.<sup>8</sup> Rockwell Collins supports this proposal. VME equipment manufactured by Rockwell Collins that uses 8.33 kHz channel spacing already meets this standard.

### CONCLUSION

Rockwell Collins supports the Commission's desire to reflect technological advances affecting the aviation radio service. By revising the technical regulatory requirements, the Commission can fulfill its desire to accommodate advances in digital communications technology. Rockwell Collins looks forward to working with the Commission on these important issues. Please direct any question to John Giff at 703-516-8113.

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<sup>8</sup> See ASRI Comment at 6.

Respectfully Submitted,

ROCKWELL COLLINS, INC.

By: /s/ Electronically Filled

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