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January 29, 2004

Federal Communications Commission
Wireless Bureau ELT
P.O. Box 358994
Pittsburgh, PA 15251-5994

Reference: Thrane & Thrane A/S FCC ID: ROJAERO-HSD
Subject: Request for Waiver to FCC Rule Part 1.925

Gentlemen:

1. Attached copy of Fee Form 159 for \$150.00 sent to the Wireless Bureau ELT
2. Following is a description of the referenced unit, which is a High-Speed Data Unit
3. SDU Model TT-5035A; HPA Model TT-5014A

D E S C R I P T I O N

The present device (AERO-HSD⁺ system) is a four-channel high-speed data unit, meant to operate under FCC Rule Part 87.131 with a frequency band of 1631.5 to 1660.5 MHz and 16 QAM modulation. R.F. Power output is 30 watts.

The AERO-HSD⁺ system is a combined AERO-HSD and AERO-H⁺ Satellite Communication (SATCOM) System designed to form part of the INMARSAT Global Area Network (GAN). The AERO-HSD⁺ multi-channel SATCOM system includes a Satellite Data Unit (SDU), High Power Amplifier (HPA) and an Aero H⁺ High Gain Antenna (HGA).

The AERO-HSD⁺ Satellite Data Unit (SDU) provides an AERO-HSD service and an AERO-H⁺ service that can be operated simultaneously. The AERO-HSD⁺ service is a dedicated 64 kbps integrated services digital network (ISDN) or mobile packet data service (MPDS) channel. The AERO-H⁺ service provides two H⁺ voice/data/fax channels (C-channels), and a low speed data/signaling channel.

The HSD service provides two modes of communication: circuit-mode and packet mode.

Modulation types and Interference.

During multi-channel SATCOM RF transmission, the INMARSAT channel frequency assignments ensures that no intermodulation products are generated by AERO-HSD⁺ system, which would interfere with on-aircraft operation of the GNSS.

This is accomplished by performing a check of all candidate transmit frequencies prior to tuning the HSD channel using the algorithm referred to in Section 10.2.2.4.2.6 of DO-210D AMSS MOPS Change 1.

Candidate transmit frequencies include all those associated with H⁺ channel units and the HSD channel unit in the SDU.

Prior to tuning to a new HSD carrier frequency, the SDU will check GNSS interference risk by taking into account this new frequency in the algorithm described on page I. When there

is an interference risk, the SDU shall reject the HSD carrier request with the reason of 'GNSS interference frequency check error'.

Section 87.39 of the Commission Rules require:

1. THAT U.S. registered aircraft employ type-certified communication equipment.
2. THAT communication equipment must meet the technical requirements of Part 87 Subpart D.
3. THAT Subpart D contains a list of authorized emissions (87.131, 87.137) for use in the radio navigation bands
4. THAT there is no provision in the Commission's rules for the use of 16QAM (33.6 KPS, emission designator 38KOFD1W).
5. THAT aircraft must have the capability to communicate with other aircraft and Ground stations, and the capability would be in the public interest. Thus the capability of U.S. registered aircraft would be reduced.

As advised, the Form I59, with authorization to charge our credit card in the amount of \$150.00 has been attached. Please process in the manner acceptable to the Commission.

Also attached is a copy of the Applicant's Agent Authorization letter to this company.

FYI: This device is awaiting F.A.A. APPROVAL .

This application will be submitted via TCB to the FCC once WTB approval is granted.

Accordingly, the Applicant is requesting a Waiver to the Commission's Rules 47CFR, sections 1.925, 87.131, 87.137(a) as applicable.

Your early attention to this request is respectfully requested.

Sincerely yours,

Morton Flom, P. Eng.
M. FLOM ASSOCIATES, INC.
(MF;mgf)

cc: James.Shaffer@fcc.gov