FCC ID: ROJAERO-HSU

M. Flom Associates, Inc.
International Compliance Testing Laboratory
3356 N. San Marcos Place, Suite 107
Chandler, AZ 85225
toll-free: (866) 311-3268
fax: (480) 926-3598
http://www.mflom.com
info@mflom.com

Date: September 20, 2004

APPROVED
JAN 10 2005
Public Safety & Private Wireless Division

For the reasons indicated herein
Carl Zulla

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

Reference: Thrane & Thrane A/S FCC ID: ROJAERO-HSU
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, Model TT-5038A when used in conjunction with ROJAERO-HSD previously approved

Description

The previously approved device (ROJAERO-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 ROJAERO-HSU is used in combination with the ROJAERO-HSD as an airborne Satellite Communication (SATCOM) System designed to form part of the INMARSAT Global Area Network (GAN). The ROJAERO-HSU adds additional channel capability to the multi-channel SATCOM system, ROJAERO-HSD, which includes a Satellite Data Unit (SDU), High Power Amplifier (HPA) and an Aero H+ High Gain Antenna (HGA).

The ROJAERO-HSU / ROJAERO-HSD Satellite Data Units (SDU) provide 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.

Modulation types and Interference.

During multi-channel SATCOM RF transmission, the INMARSAT channel frequency assignments ensures that no inter-modulation products are generated by ROJAERO-HSU / ROJAERO-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 HSU / HSD channel using the algorithm referred to in Section 10.2.2.4.2.6 of DO-210D AMSS MOPS Change 1.

FCC ID: ROJAERO-HSU

M. Flom Associates, Inc.
International Compliance Testing Laboratory
3356 N. San Marcos Place, Suite 107
Chandler, AZ 85225
toll-free: (866) 311-3268
fax: (480) 926-3598
http://www.mflom.com
info@mflom.com

Continued . . .

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

Prior to tuning to a new HSU carrier frequency, the SDU will check GNSS interference risk by taking into account this new frequency in the algorithm described on page 1. When there is an interference risk, the SDU shall reject the HSU 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 40K0G1D).
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 159, 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.
- 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,

Michael Schafer,
General Manager

cc: James.Shaffer@fcc.gov

MFA p0470014, d0490033