Wulfsberg Electronics
A Chelton Group Company

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FAA
Spectrum Engineering Division
800 Independence Ave. SW
Washington, DC 20591

Ladies and Gentlemen,

Wulfsberg Electronics is in the process of FCC certifying an aircraft transceiver that operates in the frequency band of 108 to 137 MHz, among other bands. The equipment has a STC (SR09265RC-D), issued on 2/21/2002 to Eurocopter USA. Eurocopter USA is in the process of transferring the STC to Wulfsberg Electronics through the FAA in Ft. Worth.

Description of Equipment:

The communications equipment to be manufactured for aircraft installation consists of a remote mounted Transceiver and a panel mounted Communications Controller. The communications system provides voice communication between aircraft and ground locations for the public safety community over the frequency ranges specified below. The communications system is not flight critical.

Manufacturer's Identification:

The RT-5000 Transceiver and the C-5000 Communications Management Controller make up the Flexcomm II communications system described above.

Antenna Characteristics:

There are nine models of antennas available – some cover the whole frequency range and some cover just part of the range. All of the antennas are designed for aircraft use. The gain versus frequency varies depending on the model. The customer chooses the appropriate model for their needs.

Impedance: 50 ohms
VSWR: 2.5:1 maximum
Radiation Pattern: Omnidirectional in azimuth
Polarization: Vertical
Power Handling: 20 Watts min.
Temperature: -55 to +70 °C
Altitude: 40,000 to 55,000 ft max. depending on the model
Gain: 30 MHz, -22.5 to -11 dBi depending on the model
88 MHz, -12 to -6 dBi depending on the model
108 –174 MHz, -3 to 0 dBi depending on the model
225 – 960 MHz, 0 to +2 dBi depending on the model

Rated Output Power, FCC Emission Type and FCC Frequencies:

FCC Rule Parts	Frequency Range	Power Level	Frequency Tolerance	Emission Designators
90, 90.423	29.7 – 50 MHz	10W/1W	5.0 PPM	16K0F3E
87	118 – 137 MHz	15W/7.5W	7.0 PPM	6K00A3E
80.379, 87.187(l)	156 – 158 MHz	1W	2.5 PPM	16K0F3E
90, 90.423	136 – 174 MHz	10W/1W	2.5 PPM	16K0F3E, 11K0F3E, 20K0F1E, 8K10F1E, 8K0F1D
90, 90.423	403 – 520 MHz	10W/1W	2.5 PPM	16K0F3E, 11K0F3E
90, 90.423	450 – 520 MHz	4W/1W	2.5 PPM	16K0F3E, 11K0F3E, 20K0F1E, 8K10F1E, 8K0F1D
90, 90.423	806 – 870 MHz	10W/1W	1.5 PPM	16K0F3E, 11K0F3E
90, 90.423	806 – 870 MHz	3W/1W	1.5 PPM	16K0F3E, 11K0F3E, 20K0F1E, 8K10F1E, 8K0F1D
90, 90.423	896 – 940 MHz	10W/1W	1.5PPM	11K0F3E

Emission Characteristics:

6K00A3E – 6kHz necessary bandwidth, double sideband amplitude modulated, single channel analog, telephony
16K0F3E – 16kHz necessary bandwidth, frequency modulated, single channel analog, telephony
11K0F3E – 11kHz necessary bandwidth, frequency modulated, single channel analog, telephony
8K10F1E – 8.1kHz necessary bandwidth, frequency modulated, single channel digital without modulating sub-carrier, telephony
8K10F1D - 8.1kHz necessary bandwidth, frequency modulated, single channel digital without modulating sub-carrier, data transmission
20K0F1E – 20 kHz necessary bandwidth, frequency modulated, single channel digital without modulating sub-carrier, telephony

Essential Receiver Characteristics:

Frequency Range: 29.7 MHz to 960 MHz
Receiver Sensitivity FM: 0.6 µV, 12 dB SINAD
Receiver Sensitivity AM: 1.7 µV, 10 dB SINAD
Channel Spacing: 12.5 kHz, 20 kHz, 25 kHz, 30 kHz and 50 kHz
Hum and Noise Squelched: 50 mVRMS max.
Hum and Noise Unsquelched: 100 mVRMS max.
Selectivity 25 kHz FM channel: -60 dB
Selectivity 12.5 kHz FM channel: -60 dB
Selectivity 25 kHz AM channel: -60 dB
Audio Distortion: 5% max.
Frequency Stability: +/- 2.0 PPM
Temperature Range -30°C to +60°C

If the FAA objects to the application for equipment authorization, it should mail its objection with a showing that the equipment is incompatible with the National Airspace System to:

Office of Engineering and Technology Laboratory
Authorization and Evaluation Division
7435 Oakland Mills Rd.
Columbia, MD 21046

Please contact me at 928-708-1543 if you require any additional information.

Regards,

/S/ Mary Beaumont
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