

Attachments to FCC Form 422 Condor System Inc.
Item numbers below refer to items of Form 422
EXHIBIT 1

Item 4: Particulars of Operation							
		Power					
	Frequency	@ Transmitter terminals	ERP Watts	Mean or Peak output	Emission (see 2.201)	Modulating Signal	Necessary Bandwidth (kHz)
Band	MHz	Watts					
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
1	116 to 151.975 Note 1	150 Note 2,3	150	mean	A3E note 4	3.2 KHz max. audio modulating frequency Note 4	+/- 18 kHz max. per manufacturers data sheet
2	225 to 399.975 note 1	150 note 3,5	150	mean	A3E note 4	3.2 KHz max. audio modulating frequency	+/- 12 KHz per manufacturer data sheet
3	800-1600 note 1	300	1,500	Mean	NØN	N/A	2 MHz note 6
4	2000-4000 Note 1	300	9,500	Mean	NØN	N/A	2 MHz note 6
5	4000 - 8000 note 1	300	10,000	Mean	NØN	N/A	4 MHz note 6
	8,000- 18,000 note 1	400	4,000	Mean	NØN	N/A	60 MHz note 6

Exhibit 1 Notes

- Note 1** For the purpose of the demonstration which is the subject of this license application it is desired to have a minimum of 3 channels (frequencies) assigned which are preferably evenly spaced across the specified range of frequencies in each band, the specific exact frequencies are not important to the purpose of the tests. Simultaneous operation at two frequencies in each band is required for certain of the tests.
- Note 2** The operation in the 116 to 151.975 MHz band is based on the Rockwell Collins AN/ARC-186 the output of which is amplified using a linear amplifier to produce the maximum of 150 watts mean output power.
- Note 3** In its operation the jammer unit will utilize voice and audio modulations to interfere with a single channel of a network using conventional R/T units such as the VHF-186. The experimental application will involve operating and radiating from the equipment for short periods of time to verify proper installation on the aircraft and integrity of RF cable etc. In addition testing will be conducted to determine possible interference between the unit and other avionics equipment on board the A/C. In addition electric field intensity measurements will be conducted to verify safety of operators on board the A/C and of ground personnel near the A/C.
- Note 4** While the AN/ARC-186 equipment is capable of FM (F26) emissions, these modes will not be utilized during the tests for which this license application applies.
- Note 5** The operation in the 225 to 399.975 MHz band is based on the Magnavox RT-1614/ARC-164(V) device which is amplified using a linear amplifier to produce the maximum of 150 watts mean, .
- Note 6** The tests for which this license applies will be performed with no modulating signal applied to the carrier, however due to instability of the transmitter the bandwidth is not zero, the maximum bandwidth as specified by contract is shown in the table.

Exhibit 2

Item 5 Location

The tests are proposed to be conducted while the equipment is installed on a Falcon jet aircraft.

The tests are proposed to be carried out at Jones Riverside Airfield near Tulsa OK, with the aircraft parked at or near the hanger facilities of Aeromet Inc.

The location of the aircraft while the radiation is occurring is shown on FCC form 422 item 5, 36° 02' 01" North latitude by 95° 59' 31" West longitude

No operation of the subject radio equipment covered by this license application will take place while the aircraft is airborne. Airborne operation of the equipment will occur only at US Government test ranges and will be done subject to regulations that apply to those ranges.

Exhibit 3

Item 6, Directional Antennas

Operation in each of the six bands identified in paragraph 4 utilizes separate antennas each of which has specific parameters as shown in the following table.

In bands three through six multiple fixed directional antennas are fitted to the aircraft, transmission from two antennas at the same time in each band is possible .

Antenna orientations shown in the table are referenced to the nose of the aircraft.

During operation of the equipment all of the radiating antennas are less than 6 meters above the ground level.

Band	Frequency	Antenna vertical plane orientation	Antenna vertical plane beam width	Antenna Orientation in the horizontal plane Note 1	Antenna horizontal plane beam width Each antenna
	MHz	Degrees	Degrees	Degrees relative to nose of aircraft	degrees
1	116-151.975	0 (at the horizon)	+/- 45 °	N/A antenna is omni	360
2	225 to 399.975	0 (at the horizon)	+/- 45 °	N/A antenna is omni	360
3	800-1600	0 (at the horizon)	+/- 35 °	Four antennas are mounted, they are oriented at 0, 80, 180 and 280 degrees	+/- 35 °
4	2000-4000	0 (at the horizon)	+/- 25 °	Six antennas are mounted they are oriented at 0, 40, 80, 180, 280 and 320 degrees	+/- 25 °
5	4000 -8000	0 (at the horizon)	+/- 25 °	As for band 4 above	+/- 25 °
	8,000-16,000	0 (at the horizon)	+/- 25 °	two antennas are mounted oriented at 0 and 180 degrees.	+/- 25 °

Note 1 Orientation of the radiating antennas with respect to north can be set by movement of the aircraft if required.

EXHIBIT 4

Item 8 Foreign Government

This license application is in support of developing and testing radio equipment for the Government of Norway under Royal Norwegian Air Force Material Command contract LFK-504705

Exhibit 5

Item 14 Station Identification

The equipment identified as bands one and two in Exhibit 1 item 4 is capable of station identification using normal DSB AM voice

The equipment identified as bands 3 through 5 were not designed for station identification.

EXHIBIT 6 Narrative statement describing in detail the program of experimentation proposed , as required by 5.57.(a) of CFR 47

Condor Systems Inc. has entered into a contract with the government of Norway to develop and produce two sets of equipment which are installed as part of the contract on two customer furnished DA-20 Falcon jet aircraft.

The purpose of the contracted equipment is to support training activities of the Norwegian Navy by providing simulated jamming of radio assets installed on Norwegian ships in specific bands between 109.975 and 18,000 MHz.

The purpose of the tests and measurements which are the subject of this license application are:

1. To verify integrity of the installation of the equipment on the aircraft including coax and waveguide transmission lines and of the various transmitting antennas.
2. To measure the level of electromagnetic fields in and surrounding the aircraft to determine and verify that such fields present no hazard to the occupants of the aircraft, to establish safety procedures to protect ground personnel outside the aircraft and to verify that such fields do not present any hazards with respect to electro-explosive devices to be installed at a later time on the aircraft after return to Norway, in accordance with specific military specifications. The acceptable safe power levels for electro-explosive devices is substantially lower than the levels allowed for human safety.
3. To verify that the operation of the jamming equipment does not adversely affect the proper operation of avionic and other subsystems of the aircraft.

Exhibit 7 Relating to to items 17 and 19

Condors Systems Inc will be the owner and operator of the equipment, while the equipment is being operated within the territory of United States. Following the tests which are to be conducted under this license, the equipment will be sold to the government of Norway, who will operate the equipment outside the United states.