KRFS Experimental License Modification Request

1 Purpose of Operation

Modification: to add Tucson, Arizona and Fort Sill, Ok location **WF2XXY** callsign

Raytheon Integrated Defense Systems (IDS) to KRFS Multi-Function RF System (Radar). This application is to demonstrate this system as an Unmanned Platform

- File Number: 0045-EX-CM-2017
- Station Locations: FIXED
- Effective: 02/12/2017
- Expiration: 02/11/2019

Note: The KRFS is designed to operate over specific frequency ranges within the range of 15.71 to 17.71 GHz. Specific operating modes are confined to the specific bands as follows:

- 15.71 to 17.71 GHz Radar: C-RAM
- 15.71 to 17.71 GHz Missile Illumination

2 Experimental Explanation

As detailed in paragraph 1 above, Raytheon seeks this STA in order to allow testing and technical demonstrations of the KRFS System (Radar).

3. The modulation techniques per mode are listed in the table below.

Mode	Modulation	PRF	Pulsewidth	Modulation Rate
Radar : C-RAM	Pulse. Bi-Phase or Polyphase	5 KHz – 200 KHz	0.2 – 40.0 usec	20 MHz
Missile Illumination (Transmit only)	FSK Fc ± 1.44 MHz (Mark) Fc ± 0.8 MHz (Space) Fc ± 1.12 MHz (Clear)	33Hz	2.5 ms	**160 KHz**

The peak and mean power per mode are listed in the table below. Because the antenna is an AESA, the peak power levels are specified at the external face of the radome but do not include the antenna gain.

Mode	Peak Power (Block 19b)	MaxTX Duty Cycle	Mean Power (Block 19a)
Radar: C-RAM	5760 Watts	20%	1152 Watts
Missile Illumination	1440 Watts	100%	1440 Watts

4. Stop Buzzer

John F. Adams (803)318-0021 Office (714)262-5019 Cell