

1. Introduction

By the instant application (“Application”), BAE Systems Information and Electronic Systems Integration Inc. (“BAE Systems”) requests that the Commission grant Special Temporary Authority (STA) to operate the facilities (the “Facilities”) specified in the instant application.

2. Purpose of the Operation

The testing conducted by BAE Systems is a critical part of the manufacture and delivery of military systems provided to the Armed Forces in support of Homeland Security as well as war efforts. In this case STA is requested to support High Frequency (HF 2-30 MHz) experimentation with wide bandwidth modulations up to 48 kHz per MIL-STD-188-110D. Other modes of operation will include Automatic Link Establishment (ALE) per MIL-STD-188-141D. Operation will be intermittent in nature during daytime hours (EST). The duration is 6 months to cover the contracted testing period.

This experiment will support the following government contract:

Agency: United States Air Force
Contract Number: FA8576-19-9-0001-OTA
Government POC Name and Telephone Number: Su Rosh, System Engineer
AHFRM, 478-926-5737

A waiver of the Station ID requirements of 47 CFR §5.115(a) is respectfully requested.

3. Directionality/Orientation

A directional antenna will be used only at the Fort Huachuca location. The following information is provided with respect to the directional antenna to be used at the Fort Huachuca location.

Antenna	Beamwidth at Half-Power Point	Orientation in Horizontal Plane	Orientation in Vertical Plane
Log Periodic	85 degrees	Yes	No

4. Modulating Signals

100HA1A	On/off keying (Morse Code)
2K80J3E	300 Hz – 3 kHz Voice/tones
2K80R3E	300 Hz – 3 kHz Voice/tones
3K00G1D	75 bps to 9600 bps digital data
6K00G1D	75 bps to 12.8 kbps digital data
9K00G1D	150 bps to 24 kbps digital data
12K0G1D	150 bps to 24 kbps digital data
15K0G1D	150 bps to 24 kbps digital data
18K0G1D	150 bps to 24 kbps digital data
21K0G1D	150 kbps to 48 kbps digital data
24K0G1D	150 kbps to 48 kbps digital data
30K0G1D	150 kbps to 48 kbps digital data
36K0G1D	150 kbps to 48 kbps digital data
42K0G1D	150 kbps to 72 kbps digital data
48K0G1D	150 kbps to 72 kbps digital data

21K0D1D	150 bps to 72 kbps digital data
24K0D1D	150 bps to 96 kbps digital data
30K0D1D	6.4 kbps to 96 kbps digital data
36K0D1D	6.4 kbps to 120 kbps digital data
42K0D1D	6.4 kbps to 192 kbps digital data
48K0D1D	6.4 kbps to 240 kbps digital data
1K24F1B	50 bps to 600 bps RTTY
1K24J2B	50 bps to 600 bps RTTY
2K70J2B	50 bps to 75 bps multiple subcarrier FSK
3K00D1D	75 bps to 12.8 kbps digital data
6K00D1D	150 bps to 12.8 kbps digital data
9K00D1D	150 bps to 24 kbps digital data
12K0D1D	150 bps to 24 kbps digital data
15K0D1D	150 bps to 24 kbps digital data
18K0D1D	150 bps to 48 kbps digital data

5. Interference Mitigation

BAE Systems is well aware of its obligations under Part 5 of the Commission's rules to avoid interference to co-channel licensees in non-experimental services, and will take all steps to ensure compliance with this obligation. In addition, the following factors will help mitigate any interference issues:

BAE Systems will use the radio's spectral awareness capability, which includes broad bandwidth panadapters (built-in spectrum analyzer and waterfall display) to assess the frequencies to be used for occupancy at all locations. This information will then be coordinated between sites via telephonic/email to prevent interference. Transmissions will be intermittent and short in nature during mainly the standard business hours (EDT) time. At the Fort Huachuca site, the antenna will be adjusted in the direction to optimize communication with the other listed sites.

6. Stop Buzzers

The following will be available by wireless telephone and will act as the “stop buzzers” if any issues arise during testing:

PRIMARY:	Larry Strickland - Cell: 727-560-0231
SECONDARY:	Philip M. Alt - 260-615-0543