

1. Introduction

By the instant application (“Application”), BAE Systems Information and Electronic Systems Integration Inc. (“BAE Systems”) requests that the Commission grant a 2 year experimental license to permit BAE Systems to operate the facilities (the “Facilities”) specified in the instant application.

2. Purpose of the Operation

The testing at BAE Systems’ Merrimack, NH campus antenna range 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.

The purpose of this test, which is a continuation of the operations previously authorized under STA pursuant to call sign WJ9XBF (File No. 1051-EX-ST-2015), is to demonstrate proof of concept operations as support for the development of a counter-RPG tracking radar for Intelligence and Information Warfare Directorate (I2WD) of the US Army Communications-Electronics Research, Development and Engineering Center (CERDEC).

The requested operations are to support the following government contract:

Contract Number: W56KGU-15-C-0067

Agency Customer: Intelligence and Information Warfare Directorate (I2WD)
ATTN: RDER-IWR-AS (MAPS)
6003 Combat Drive
APG, MD 21005

Contract POC: Francis (Frank) L. Gillan
Tel: (443) 861-1407

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

3. Other Issues

A. Antenna Data

For the convenience of the Commission, the following chart defines certain specifications relating to the antennas that are to be used in the experiment:

| Mfg. | Model Number | Frequency Range | Gain | Beamwidth |
|-------------|---------------------|------------------------|-------------------|--|
| Echodyne | MESA-X-EVU | 9.8 – 10.5 GHz | 17 dBi | 2 degrees, E-Plane 7.5 degrees, H-Plane |
| EDO | AS-48461 | 2 – 18 GHz | 16 dBi (@ 10 GHz) | 40 degrees, E-Plane 40 degrees, H-Plane |
| BAE Systems | RCVR/Exciter | 9.8-10.5 GHz | N/A | N/A |

| Mfg. | Model Number | # Units | Experimental Yes/No |
|-------------|---------------------|----------------|----------------------------|
| Echodyne | MESA-X-EVU | 2 | No |
| EDO | AS-48461 | 1 | No |
| BAE Systems | RCVR/Exciter | 1 | Yes |

C. RF Sources

The transmitter will be a BAE Systems custom design. The signal is created by a crystal referenced PLL, then amplified and transmitted through an electronically scanned antenna. The waveform is CW, tunable between 9.8 and 10.5 GHz, transmitting A pair of frequencies separated by 50 KHz to 2 MHz; either simultaneously or alternating at a rate between 10 kHz and 50 kHz.

BAE Systems notes that the transmissions will be non-pulsed signals.

D. Prevention of Interference and Stop Buzzers

BAE Systems hereby advises the Commission that the tests to be conducted under the requested Commission authorization are to be conducted on the BAE Systems Merrimack, New Hampshire facility. This transmission can be placed anywhere within the allocated bandwidth in order to minimize interference. The operation will be sporadic over the license term.

Stop Buzzers:

Primary: Eric Rundquist, 603 809-8960

Alternate: Jake Freedman 603 867-1028