

**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 MER Facilities 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 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 temporary fixed, ground operations will permit continued operation of the facilities previously granted under STA (WJ9XNO) in support of 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:

<b>Mfg.</b>	<b>Model Number</b>	<b># Units</b>	<b>Exper. Yes/No</b>	<b>Frequency Range</b>	<b>Gain</b>	<b>Beamwidth</b>
Echodyne	MESA-K-EVU	4 per radar	No	23.7 – 24.5 GHz	21 dBi	2 degrees, E-Plane 7.5 degrees, H-Plane
Fairview Microwave or equivalent	SH142-20	4 per radar	No	18 – 26.5 GHz	20 dBi	17.5 degrees, E-Plane 17.8 degrees, H-Plane

**B. 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 23.7 and 24.5 GHz, transmitting a pair of frequencies separated by 50 KHz to 2 MHz; either simultaneously or alternating at a rate between 10 kHz and 70 kHz.

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

The transmitter power will be adjusted to assure that the requested ERP level is not exceeded.

**C. 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 6 month period.

Stop Buzzers:

Primary: Eric Rundquist, 603 809-8960  
Alternate: Jake Freedman 603 867-1028