

**1. Introduction**

By the instant application (“Application”), BAE Systems Information and Electronic Systems Integration Inc. (“BAE Systems”) requests that the Commission grant a two year conventional experimental license for 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 support of both Internal Research and Development as well as the contract listed below, the purpose of these tests is to demonstrate a radar capability intended for aircraft protection against missile threats. Testing will be done using threat simulators and RF transponders to demonstrate that this capability can achieve performance levels needed to support the aircraft self-protection mission. These tests will also support ground vehicle self-protection.

In addition to IR&D, the following government contract will be supported by these operations:

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. Transmitting Equipment**

<b>Manufacturer</b>	<b>Model No</b>	<b>RF Power</b>	<b># Units</b>	<b>Modulating Signal(s)</b>	<b>Experimental? Yes/No</b>
BAE Systems	N/A	20 W, CW	2	No modulation	Yes

## B. Antenna Data

Manufacturer	Model Number	Gain	Width of Beam @ 1/2 Power Point	Orientation in Horiz. Pane	Orientation in Vert. Pane
Echodyne	MESA-K-EVU	21 dB	4° az x 12° el	Depends on site geometry; electronically scanned +/- 60 degrees	Electronically scanned 0+/-40 degrees.

### 4. Interference Mitigation

The antenna under test has a narrow, electronically steerable beam with -16 dB average side lobes. Testing will typically consist of pointing this beam towards targets with a fixed location and the main beam will not scan a large area. Generally during testing emission will be limited to short periods of less than 1 minute and only periodically with an overall duty cycle of less than 10% during tests. Testing will be sporadically planned and executed throughout the course of this license, typically for one to three days at a time at an expected frequency of once or twice a month. Testing will typically only occur between the hours of 8AM and 6PM EST on week days. During testing, targets will primarily be located on the ground and emission will be typically limited to no more than 10 degrees above the horizon. It is expected that these typical test conditions will represent 90% or more of the testing done under this license.

### 5. Stop Buzzers

Primary: Austin Dionne 603-540-1620  
Alternate: Jacob Freedman 603-867-1028  
Alternate: Joseph McGaughey 512-929-2725