

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 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 Internal Research and Development, the purpose of these tests is to demonstrate a radar capability intended for aircraft protection against missile threats. Testing will be conducted using threat simulators and RF transponders to demonstrate that this capability can achieve performance levels needed to support the aircraft self-protection mission.

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

A. Transmitting Equipment

Manufacturer	Model No.	# Units	Experimental Yes/No
BAE Systems	N/A	1	Yes

B. Directionality/Orientation

Manufacturer/ Model Number	Width of Beam at Half Power Point	Orientation in the Horizontal Plane	Orientation in the Vertical Plane
Echodyne MESA-HGA	4° az x 4° el, nominal	Depends on site geometry; electronically scanned +/- 46 degrees	Electronically scanned 0/+46 degrees

C. Modulating Signals

This radar is capable of transmitting the following signals, as indicated by the Emission Designator.

NON is a pure CW tone

1M00F3N transmits alternating tones. The duration of each tone is between 1 msec and 15 msec, and the separation between the tones is < 800 kHz.

3. Interference Mitigation

Potential impact to co-channel operations is significantly mitigated due to the following factors:

- Testing will be limited to ground-based testing with the emitting antenna generally located no higher than 10 feet from the ground. The vast majority of emissions will be directed at other near-ground targets with the elevation of the main beam not exceeding +10 degrees elevation.
- The new, higher gain antenna has a narrow beamwidth of 4 to 6 degrees, which limits the illuminated area/volume.
- Outdoor testing will not be frequent. Test events will occur sporadically throughout the duration of this license with an expected frequency of no more than 1-2 days per month on average throughout the year. The longest duration of outdoor testing will not likely exceed more than one consecutive week and testing will generally occur only for a few hours up to a full typical work-day (9AM to 5PM).
- Outdoor testing will not be continuous. Emissions will be active for short durations no longer than 1 minute at a time (maximum) with an average on-time more on the order of 10-30 seconds. During a test emissions will be activated for these durations periodically with several minutes between emissions at a minimum, if not longer. Overall, during a full day of testing the expected total time spent emitting would be on the order of 30 to 60 minutes on average.

4. Stop Buzzers

Primary: Austin Dionne – 603 540-1620

Alternate: Jacob Freedman - 603 867-1028