

ELTA North America Request for FCC Experimental License

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Question 7: Purpose of Experiment

This application is being made to support the testing and evaluation of ELTA radars. These tests will be conducted to test and verify new radar processing software and algorithms, develop equipment designs, conduct production tests and equipment calibration, and demonstrate products to customers. Tests will be conducted on the roof of ELTA's facility located at 8955 Henkels Ln Annapolis Junction, MD in Howard County. This building is a single-story structure located in a mixed-use business development. The antenna, transmitter, and receiver are mounted on the antenna support structure as well as on a 40ft platform in EFW's campus at 4700 Marine Creek Parkway, Fort Worth, Texas. When mounted on the platform, the mount will extend high enough to clear the deck. The 25 acre campus consists of several buildings for engineering, business offices, warehouse space, and manufacturing. All are of steel construction. Other locations will be used for demonstration purposes. These locations are McAllen, TX Hidalgo County, Marana, AZ Pima County, Patagonia, AZ Santa Cruz County, Elgin and Hereford, AZ Cochise County on a designated tower. Those location are isolated and has surrounded with trees and foliage. The antenna, transmitter, and receiver are mounted on the antenna support structure.

It is essential that these tests be performed outside of a laboratory or anechoic chamber to create the necessary radar environment that includes land and foliage clutter, ground moving vehicles, birds, fixed and rotary wing aircraft, second time around radar targets and clutter, and other atmospheric disturbances that affect radar performance.

The ELM-2112FP system is a linear FMCW radar for Foliage Penetration applications. The system will transmit in the 1200-1300 MHz frequency band from a Slotted waveguide antenna. The array has a horizontal beamwidth of 90 degrees and a vertical beamwidth of 15 degrees.