

Form 442 Question 4: Government Project Description
MIT Lincoln Laboratory
Experimental License Application
File Number: 0709-EX-CN-2020

The proposed experiment fulfills requirements for work supported by the Department of the Air Force under Air Force Contract No. FA8702-15-D-0001.

MIT Lincoln Laboratory is requesting authorization to conduct tests with FCC approved Furuno marine radars, model DRS25A (FCC ID: ADB9ZWRTR095A), which when operated on a voluntary ship, do not require an individual license. However, for these tests the radars will be operated on land. The purpose of the testing is to determine the capabilities of other technologies used in conjunction with the radars to detect and respond to threats. The radars will be mounted on vehicles and operated within several small areas within a 100 km radius of Globe, AZ.

The DRS25A radar with the XN12A open array antenna has a narrow beamwidth, 1.9 degrees horizontal and 22 degrees vertical. The energy, at that frequency, is highly focused and will dissipate quickly, with very low energy in the sidelobes. The radars will be mounted on the vehicles to meet radiation safety requirements.

The software defined radio transmitters will be used as calibration sources during the tests. They will transmit a 2 W ERP signal with an omni antenna.

The proposed tests will be conducted over a brief time period. The radars are expected to be in use for two consecutive weeks about every six months and will be operated during the workday during those two weeks.