

Epirus Inc.
Application for Experimental Special Temporary Authority
ELS File No. 1779-EX-ST-2023

NARRATIVE STATEMENT

Pursuant to Section 5.3(j) and Section 5.61 of the FCC's rules, Epirus Inc. hereby respectfully requests a special temporary authority ("STA") from September 25, 2023 to February 28, 2024 to operate in the 15.7-16.6 GHz band to test its EchoDyne EchoShield radar.

A. Purpose of Operation and Need for Special Temporary Authority:

Epirus Inc. requests this STA to allow it to test the EchoDyne EchoShield radar in specific scenarios. The STA is for testing purposes only and not for permanent installation of the radar. The testing under this STA is related to drone detection applications.

B. Location of Proposed Operation:

Epirus proposes to test the radar at a mobile location within the area described below. The setting is Bureau of Land Management (BLM) land in a remote desert area. The radar system will be installed at the coordinates below only during testing that falls within the requested period of the STA; the radar system will not be installed for the entire duration of the requested period.

Location	Coordinates (NAD83)	Radius of Operation
Dumont Dunes, CA	35°41'13.46"N 116°15'0.47"W	5 km

The testing is being done as a part of product integration efforts.

C. Technical Specifications:

1. Frequencies Desired

Epirus requests authorization to operate in the 15.7-16.6 GHz band.

2. Effective Radiated Power

The units to be deployed operate at a peak maximum transmitter power output of 200.0W, and a peak maximum effective radiated power of 77.0kW. Epirus will reduce the actual powers to the minimum power needed for successful testing at the proposed location. Operations will be conducted to comply with rules relating to human exposure to radiation. Epirus will maintain a 50m exclusion radius around the transmitter during its operation to prevent human exposure to radiation.

3. Modulation and Emissions

The EchoShield radar operates using linear FM modulation. The emission designator is 250MQ3N. The emissions will not extend beyond the frequency bands requested.

4. Antenna Information

No antennas will be mounted in a fashion that would require approval under FAA or FCC rules and regulations. The mobile base station radar transmitter antennas will not, under any circumstances, extend more than 6 meters above the ground or a building. Operations will occur in a remote desert setting near Dumont Dunes, CA.

5. Equipment To Be Used

Epirus will conduct the testing with a maximum of 1 unit.

D. Protection Against Causing Interference:

Epirus has conducted a search of the FCC's Universal Licensing System database and determined that there are no licensed operations in the 15.7-16.6 GHz band. In the event that it receives a complaint of harmful interference from the proposed operation, Epirus will take immediate action to address the interference. The company has designated Nathaniel Stein (contact information below) to act as the "stop buzzer" for this purpose.

E. Restrictions on Operation:

Epirus recognizes that the operation of any equipment under experimental authority must not cause harmful interference to authorized facilities. Should interference occur, Epirus will take immediate steps to resolve the interference, including discontinuing operations if necessary.

In addition, Epirus will advise employees using the equipment that permission to operate has been granted under experimental authority issued to Epirus, that such operation is strictly temporary, and that the equipment may not cause harmful interference.

F. Public Interest:

Grant of an authorization will permit Epirus to refine its innovative radar equipment and counter-drone capabilities and enhance public safety.

G. Contact Information:

For questions, please contact:

Andy Lowery, COO and CPO
Epirus, Inc.
19145 Gramercy Pl
Torrance, CA 90501
andy.lowery@epirusinc.com

In the unlikely event interference concerns should arise during the period of authorization requested by this application, please contact the company's "Stop Buzzer" identified below:

Nathaniel Stein
Epirus, Inc.
(314) 363-6995

nathaniel.stein@epirusinc.com