Alaska Center for UAS Integration (ACUASI)
Application for Experimental Special Temporary Authority
ELS File No. 0816-EX-ST-2021

NARRATIVE STATEMENT

Pursuant to Section 5.3(j) and Section 5.61 of the FCC's rules, ACUASI hereby respectfully requests a special temporary authority ("STA") from June 1, 2021 to October 30, 2021 to operate in the 24.45-24.65 GHz band to test its EchoGuard radar.

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

The EchoGuard radar has received equipment authorization from the FCC (FCC ID 2ANLB-MESASSR00053). However, ACUASI requests this STA to allow it to test its own EchoGuard radar procured from Echodyne. The STA is for testing purposes only and not for permanent installation of the radars. The testing under this STA is related to radio navigation applications.

B. Location of Proposed Operation:

ACUASI proposes to test the radar at a fixed location within the area described below.

Location	Coordinates (NAD83)	Radius of Operation
Chatanika, AK	65° 7' 34" N 147° 28' 35" W	100 km

The testing is being done with the FAA's Alaska UAS Test Site as part of the FAA's UAS Integration Pilot Program.

C. Technical Specifications:

1. Frequencies Desired

ACUASI requests authorization to operate in the 24.45-24.65 GHz band.

2. Effective Radiated Power

The units to be deployed operate at a peak maximum transmitter power output of 3.2W, and a peak maximum effective radiated power of 246W. Operations will be conducted to comply with rules relating to human exposure to radiation.

3. Modulation and Emissions

The EchoGuard radar operates using linear FM modulation. The emission designator is 45M0FXN. 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.

5. Equipment to Be Used

ACUASI will conduct the testing with a maximum of 5 units

D. Protection Against Causing Interference:

Echodyne has conducted a search of the FCC's Universal Licensing System database and determined that there are no licensed operations in the 24.45-24.65 GHz band. In the event that it receives a complaint of harmful interference from the proposed operation, ACUASI will take immediate action to address the interference. The company has designated Mr. William Remmert (contact information below) to act as the "stop buzzer" for this purpose.

E. Restrictions on Operation:

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

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

F. Public Interest:

Grant of an authorization will permit ACUASI to verify the performance of the EchoGuard radar equipment with the goal of enhancing public safety.

G. Precedent:

Except for the period of authorization this special temporary authority request is identical to previous ELS File No. 0386-EX-ST-2020. Heretofore the manufacturer Echodyne has submitted all STA requests on behalf of AQUASI as the customer. AQUASI has now assumed this responsibility for testing of its own EchoGuard radar units.

H. Contact Information:

For questions, please contact:

William Remmert, Project Engineer
Alaska Center for UAS Integration
2156 Koyukuk Drive
Fairbanks, AK 99709
(907) 455-2030
wremmert@alaska.edu

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:

William Remmert
Alaska Center for UAS Integration
(907) 455-2030
wremmert@alaska.edu