

**Echodyne Corp.**  
**Application for Experimental Special Temporary Authority**  
**ELS File No. 1556-EX-ST-2019**

**NARRATIVE STATEMENT**

Pursuant to Section 5.3(j) and Section 5.61 of the Federal Communications Commission's ("FCC") rules, Echodyne Corp. hereby respectfully requests a special temporary authority ("STA") from September 9, 2019 to March 6, 2020 to operate in the 24.45-24.65 GHz band to test its EchoGuard radar.

In support of this request, the following is shown:

**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, Echodyne requests this STA to allow it to conduct temporary testing with partners at the locations described below.

**B. Location of Proposed Operation:**

Echodyne proposes to test the radars on the ground within a specified area of operation. By this application, Echodyne seeks authority to conduct tests at the following location:

| <b>Location</b> | <b>Coordinates<br/>(NAD83)</b> | <b>Radius of Operation</b> |
|-----------------|--------------------------------|----------------------------|
| Reynolds, ND    | 47° 40' 16"<br>-97° 06' 27"    | 50km                       |
| Huntsville, AL  | 34° 44' 9"<br>-86° 40' 56"     | 30km                       |

Note that the location in North Dakota is for testing with an FAA UAS Test Site, and the location in Alabama is for testing in connection with an Army program.

**C. Technical Specifications:**

**1. Frequencies Desired**

Echodyne 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 4W, and a peak maximum effective radiated power of 486W.

Echodyne will reduce the actual powers to the minimum power needed for successful operation, based on set-up and testing at the proposed locations. 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 190MFXN. The emissions will not extend beyond the frequency bands requested.

### **4. Antenna Information**

No antennas will be mounted in a fashion that will require approval under FAA and FCC rules and regulations.

### **5. Equipment To Be Used**

Echodyne will conduct its testing with a maximum of 13 units.

### **D. Protection Against Causing Interference:**

As noted above, Echodyne has requested authority to operate in the 24.45-24.65 GHz band. It has conducted a search of the Commission's Universal Licensing System ("ULS") database and determined that there are no licensed operations in that spectrum.

In the event that it receives a complaint of harmful interference resulting from the proposed operation, Echodyne will take immediate action to address the interference, including if necessary discontinuing its operations. The company has designated Ms. Mo Swanson, whose contact information is provided below, to act as the "stop buzzer" for this purpose.

Furthermore, the length of the test period is short and the proposed operations will be limited in scope. Echodyne will on average transmit for only 240 minutes over a period of 8 hours on not more than 5 days each week.

In summary, the analysis conducted by Echodyne indicates the proposed operation should not interfere with any licensed operation.

### **E. Restrictions on Operation:**

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

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

### **F. Public Interest:**

Grant of an authorization will permit Echodyne to refine its innovative radar equipment and enhance public safety.

**G. Contact Information:**

For questions, please contact:

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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:

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12112 115<sup>th</sup> Ave NE  
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