

**NARRATIVE STATEMENT**

Pursuant to Section 5.3(d) and (f) and Section 5.61 of the Federal Communications Commission’s (“FCC”) rules, 47 C.F.R. §§ 5.3(d), (f), 5.61 (2014), Airbus Group HQ Inc., dba A^3 (“A^3”) hereby respectfully requests a special temporary authority (“STA”) from **October 15, 2016 to January 31, 2017**, to operate in the 24.45-24.65 GHz band to test a prototype radar system developed by Echodyne Corp.

In support of this request, the following is shown:

**A. Purpose of Operation and Need for STA:**

A^3 proposes to test a MESA-K-DEV radar development kit from Echodyne Corp to evaluate the technology and confirm its performance.

Grant of an STA will allow A^3 to obtain immediate feedback at the proof-of-concept stage before conducting further testing pursuant to a regular experimental license.

**B. Location of Proposed Operation:**

A^3 proposes to test the radar on the ground to validate its detection of objects moving through its field of view. The radar will be operated at the following fixed locations:

<b>Location</b>	<b>Coordinates (NAD83)</b>	<b>Radius of Operation</b>
Sunnyvale, CA	37° 24' 41.7" -121° 59' 44.4"	< 1 km
Palo Alto, CA	37° 27' 29" -122° 06' 07"	< 1 km

**C. Technical Specifications:**

**1. Frequencies Desired**

A^3 requests authorization to operate in the 24.45-24.65 GHz band.

**2. Effective Radiated Power**

The prototype units to be deployed are configured to operate at a peak maximum transmitter power output of 2W, and a peak maximum effective radiated power of 243W.

A<sup>3</sup> 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 unit operates using linear FM modulation. The primary emission designator is 190MF3N. Other emission modes may be utilized, but in no event will the emissions extend beyond the frequency bands requested.

### **4. Antenna Information**

The fixed base station transmitter antennas will not, under any circumstances, extend more than 6 meters above ground or a building. No antennas will be mounted in a fashion that will require approval under FAA and FCC rules and regulations.

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

A<sup>3</sup> will conduct its testing with a maximum of 2 units.

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

As noted above, A<sup>3</sup> 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 the proposed testing should not interfere with any primary operations in that spectrum. The nearest adjacent channel licensees are: Fibertower Spectrum Holdings, LLC authorized under call sign WMF854 operating on 24.41 GHz; and DIRECT TV Enterprises, LLC authorized under call signs E140116, E130081 and E090173 to operate on 24.75 GHz. A<sup>3</sup> will conduct its operations to ensure against interference to those operations.

In the event that it receives a complaint of harmful interference resulting from the proposed operation, A<sup>3</sup> will take immediate action to address the interference, including if necessary discontinuing its operations. The company has designated Arne Stoschek, whose contact information is provided below, to act as the "stop buzzer" for this purpose.

Furthermore, the length of the test period is short, extending only from October 15 to January 31. During that period, the proposed operations will be limited in scope. A<sup>3</sup> will on average transmit for only 180 minutes over a period of 8 hours on not more than 3 days each week.

In summary, the analysis conducted by A<sup>3</sup> indicates the proposed operation should not interfere with any licensed operation.

**E. Restrictions on Operation:**

A<sup>3</sup> 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.

**F. Public Interest:**

A<sup>3</sup> submits that issuance of an STA as requested is in the public interest, convenience, and necessity. Grant of an STA will permit A<sup>3</sup> to evaluate innovative technology for possible integration into its systems.

**G. Contact Information:**

For questions about this application, or in the unlikely event of interference concerns, please contact:

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