

## APPLICATION FOR NEW EXPERIMENTAL LICENSE

### Introduction

*Purpose of Application.* AURA Network Systems OpCo, LLC (“AURA”) files this application for a new conventional experimental radio license for twelve months, beginning immediately upon grant, to use 454.675-454.975 MHz and 459.675-459.975 MHz, which are associated with the general aviation air-ground radiotelephone service (“AGRAS”),<sup>1</sup> in order to conduct market trials using manned and unmanned aircraft.<sup>2</sup>

### Purpose and Technology

An experimental license will allow AURA to test its antennas with manned and unmanned aircraft at the three locations in California described below. Testing will be performed in the air and on the ground.

AURA expects to begin testing on or about March 1, 2022, and anticipates that testing will take place over twelve months on an intermittent basis at the three locations listed in this application. The radius of operations will be limited to 100 miles (160.93 kilometers).

AURA understands that use of the requested frequencies pursuant to an experimental authorization is limited to conducting its market trials.<sup>3</sup>

### *Transmitting Equipment and Antenna*

At each location, AURA will utilize no more than four software-defined radios operating a 802.16-based air interface. The radios were built by ONDAS Networks, Inc. (“ONDAS”) and GIRD Systems, Inc. (“GIRD”), both of which design and manufacture radios for mission critical applications. AURA will also utilize onboard radios built by ONDAS and GIRD.

The antennas will be placed on buildings or poles at airfields. In no instance will the antennas extend more than 19.685 feet (6 meters) above an existing structure. Additionally, radios will be placed on manned and unmanned aircraft.

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<sup>1</sup> See 47 C.F.R. § 22.805.

<sup>2</sup> See 47 C.F.R. §§ 5.3(k), 5.602.

<sup>3</sup> See 47 C.F.R. § 5.602.

## Frequencies

AURA already has primary use of the AGRAS spectrum via *de facto* transfer leases of spectrum licensed to A2G Communications, LLC.<sup>4</sup> The Commission's rules prohibit other parties from licensing the requested spectrum for primary use at nearby locations,<sup>5</sup> reducing the risk of harmful interference to co-channel users.

## Location of Operations

The proposed operations will occur within the radius of operations at the following locations:

	Address	City	State	ZIP	Latitude	Longitude
1.	950 N Rengstorff Ave	Mountain View	CA	94043	37° 25' 05.88" N	122° 05' 37.98" W
2.	San Martin Airport	San Martin	CA	95046	37° 4' 56.14" N	121° 35' 55.63" W
3.	Hollister Airport	Hollister	CA	95023	36° 53' 26.54" N	121° 24' 20.49" W

## Stop Buzzer

At all times in which the transmitters are in use, AURA will maintain a single point of control and stop buzzer capability. The stop buzzer contact will be capable of addressing interference concerns and resolving any harmful interference through any and all available means. The stop buzzer contact information is:

Name: Michael Gagne  
Telephone: (240) 508-6220  
Email: mgagne@auranetworksystems.com

## Interference Protection and Deference to Licensed Users

AURA has exclusive use of the requested channels in this area, reducing the risk of harmful interference to co-channel users,<sup>6</sup> and commits to respecting adjacent-band users. Should any interference occur as a result of its market trials, AURA will take immediate steps to resolve the interference, including discontinuing operations, if necessary.

## Request for Waiver

AURA requests a waiver of the station identification requirements in Section 5.115 of the Commission's rules.<sup>7</sup> Grant of the requested waiver will serve the public interest by allowing

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<sup>4</sup> See e.g., Call Sign KWU510, Lease No. L000040308 (located near Milpitas, CA, which is 32 miles from the San Martin location and 49 miles from the Hollister location requested in this application.).

<sup>5</sup> See 47 C.F.R. § 22.813(a) (imposing distance separation requirements of 497 miles for co-channel authorizations).

<sup>6</sup> See e.g., Call Sign KWU424, Lease No. L000040300; File No. 0009822180 (ext. granted Dec 29, 2021), (granted Dec. 24, 2019) see also 47 C.F.R. § 22.813(a).

<sup>7</sup> 47 C.F.R. § 5.115.

AURA to determine the most effective combination of equipment and network parameters to securely and reliably enable data and navigation capabilities for aircraft as part of this market trial.