

Submitted by Joel Thorsheim on behalf of Insitu
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Why a Special Temporary Authorization is Necessary:

A Special Temporary Authorization is required to support UAS testing at the Pendleton UAS test range using the Scan Eagle 3 platform to operate a C-Band Command and Control link. The entire 5060-5070 MHz band is being requested temporarily to test various filters across the band. Subsequent requests can then be submitted for specific discrete frequencies.

Operation Description:

The radio frequency equipment listed below will be used to support a C-Band command and control data link. Ground testing only will be conducted at the Bingen location. A Ground Control Station will be used at the Pendleton and Lexington locations to communicate with the airborne UAS that will operate under an approved COA that encompasses the Pendleton UAS test range. The below tables list the radio frequency equipment specifications, including frequency band of operation, transmitter output power, emissions, antenna types and gains, and maximum ERP.

Frequency Data	
Transmit	Request the below frequency bands. 5060 – 5063.5 5064– 5066 5065.5 – 5070
Transmitter Data	
Transmitter Model	MM2-M13 + Frequency Converter
Transmitter Manufacturer	Freewave Technologies + Nuwaves
Transmitter Power Output	1 Watt
Antenna Gain	5 dBi
Antenna Type	Dipole (Vertical)
Power Output ERP	2 Watt
Emission Data	
Emission	230KF1D

Table 1 – Freewave C2 Aircraft Data

Frequency Data	
Transmit	Request the below frequency bands. 5060 – 5063.5 5064– 5066 5065.5 – 5070
Transmitter Data	
Transmitter Model	MM2-M13 + Frequency Converter
Transmitter Manufacturer	Freewave Technologies + Nuwaves
Transmitter Power Output	10 Watt
Antenna Gain	33.3 dBi
Antenna Type	1.2 Meter Parabolic Reflector 3.5 degrees HPBW 360 degrees in azimuth 0 to +70 degrees elevation
Power Output ERP	13,200 Watts
Emission Data	
Emission	230KF1D

Table 2 – Freewave C2 Ground Control Station Data

Table (3) lists the locations/areas of operations, as well as the station class of the operation.

City	State	Latitude	Longitude	Radius (KM)	Station Type
Bingen	WA	45-42-23 N	121-27-23 W	5	Fixed/Ground Testing
Pendleton UAS Test Range (Includes Lexington)	OR	45-41-21 N	118-50-32 W	100	Mobile/Airborne 15,000 Feet Altitude

Table 3 – Location Data

Stop Buzzer POC: Stop Buzzer for this operation is Insitu Operations Action Center at 509-493-4691.

Start Date: August 20, 2020

Start Date: February 15, 2021