

Submitted by Joel Thorsheim on behalf of Insitu
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Why an Experimental License is Necessary:

An experimental license is required to support UAS testing at the Pendleton UAS test range using the Scan Eagle 3 platform.

Operation Description:

The radio frequency equipment listed below will be used to support command and control, video downlink, Detect and Avoid Radar, ATC transponder and other data link operations,

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	1370-1390 MHz
Transmitter Data	
Transmitter Model	P-501X005
Transmitter Manufacturer	Freewave Technologies
Transmitter Power Output	1 Watt
Power Output ERP	1 Watt
Emission Data	
Emissions	230KF1D

Table 1 – Freewave C2 Aircraft Data

Frequency Data	
Transmit	2200-2290 MHz 2360-2390 MHz
Transmitter Data	
Transmitter Model	Bandit
Transmitter Manufacturer	L-3
Transmitter Power Output	2 Watts
Power Output ERP	2 Watts
Emission Data	
Emissions	18M5F9W, 9M58G1D, 4M79G1D, and 2M40G1D

Table 2 – L-3 Bandit Payload Aircraft Data

Frequency Data	
Transmit	2267, 2295, 2377, and 2395-2483 MHz
Transmitter Data	
Transmitter Model	MPU5
Transmitter Manufacturer	Persistent Systems
Transmitter Power Output	10 Watt total (3 transmitters with 3.3 Watts each)
Power Output ERP	25 Watts
Emission Data	
Emissions	5M0D1D, 10M0D1D, 20M0D1D

Table 3 – Wave Relay MPU5 Aircraft Data

Frequency Data	
Transmit	15400 - 15700 MHz
Transmitter Data	
Transmitter Model	DAA - R20
Transmitter Manufacturer	Fortem Technologies, Inc.
Transmitter Power Output	2 Watts
Power Output ERP	30 Watts
Emission Data	
Emissions	300MF0N

Table 4 – Fortem RADAR Aircraft Data

Frequency Data	
Transmit	1090 MHz
Transmitter Data	
Transmitter Model	Ping 200S
Transmitter Manufacturer	uAvionix
Transmitter Power Output	229 Watts
Power Output ERP	442 Watts
Emission Data	
Emissions	8M24M1D

Table 5 – uAvionix Transponder Aircraft Data

Frequency Data	
Transmit	1370-1390 MHz
Transmitter Data	
Transmitter Model	P-501X005
Transmitter Manufacturer	Freewave Technologies
Transmitter Power Output	5 Watt
Power Output ERP	608 Watts
Emission Data	

Emissions	230KF1D
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Table 6 – Freewave C2 Ground Control Station Data

Frequency Data	
Transmit	2267, 2295, 2377, and 2395-2483 MHz
Transmitter Data	
Transmitter Model	MPU5
Transmitter Manufacturer	Persistent Systems
Transmitter Power Output	6.6 Watt total (Optional 20 Watt amplifier)
Power Output ERP	2.6 Kilowatts 7.8 Kilowatts (With Amplifier)
Emission Data	
Emissions	5M0D1D, 10M0D1D, 20M0D1D

Table 7 – Wave Relay MPU5 Ground Control Station Data

Table (8) lists the locations/areas of operations, as well as the station class of the operation.

City	State	Latitude	Longitude	Radius (KM)	Station Type
Pendleton UAS Test Range	OR	45-41-21 N	118-50-32 W	2	Fixed/Ground
Pendleton UAS Test Range	OR	45-41-21 N	118-50-32 W	50	Mobile/Airborne 15,000 Feet Altitude

Table 8 – Location Data

Stop Buzzer POC:

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