

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
RADIO STATION CONSTRUCTION PERMIT
AND LICENSE**

EXPERIMENTAL

(Nature of Service)

WL2XPS

(Call Sign)

XD FX MO

(Class of Station)

0221-EX-CN-2021

(File Number)

NAME Insitu

Subject to the provisions of the Communications Act of 1934, subsequent acts, and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions and requirements set forth in this license, the licensee hereof is hereby authorized to use and operate the radio transmitting facilities hereinafter described for radio communications in accordance with the program of experimentation described by the licensee in its application for license.

Operation: In accordance with Sec. 5.3(j) of the Commission's Rules

Station Locations

- (1) Tillamook, OR - NL 45-25-09; WL 123-48-52
- (2) MOBILE: Tillamook, OR, Airborne up to 10,000 Feet, within 110 km, centered around NL 45-25-09; WL 123-48-52

Frequency Information

Tillamook, OR - NL 45-25-09; WL 123-48-52

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	FX	230KF1D	608 W (ERP)	
2377 MHz	FX	5M00D1D 10M0D1D 20M0D1D	7.8 kW (ERP)	
2395-2483 MHz	FX	5M00D1D 10M0D1D	7.8 kW (ERP)	

This authorization effective June 16, 2021 and
will expire 3:00 A.M. EST April 01, 2022

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Frequency Information

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Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2395-2483 MHz	FX	20M0D1D	7.8 kW (ERP)	
5060-5070 MHz	FX	230KF1D	13200 W (ERP)	

MOBILE: Tillamook, OR, Airborne up to 10,000 Feet, within 110 km, centered around NL 45-25-09; WL 123-48-52

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1090 MHz	MO	8M24M1D	229 W (ERP)	
1370-1390 MHz	MO	230KF1D	1 W (ERP)	
2360-2390 MHz	MO	18M5F9W 9M58G1D 4M79G1D 2M40G1D	2 W (ERP)	
2377 MHz	MO	5M00D1D 10M0D1D 20M0D1D	25 W (ERP)	
2395-2483 MHz	MO	5M00D1D 10M0D1D 20M0D1D	25 W (ERP)	

Frequency Information

MOBILE: Tillamook, OR, Airborne up to 10,000 Feet, within 110 km, centered around NL 45-25-09; WL 123-48-52

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
5060-5070 MHz	MO	230KF1D	2 W (ERP)	
15550 MHz	MO	300MF0N	30 W (ERP)	

Special Conditions:

- (1) The station identification requirements of Section 5.115 of the Commission's Rules are waived.
- (2) One or more frequency assignments were coordinated prior to authorization with FAA Headquarters, 800 Independence Avenue, S.W., Washington, DC 20591; Telephone: 202-267-8699.
- (3) Licensee should be aware that other stations may be licensed on these frequencies and if any interference occurs, the licensee of this authorization will be subject to immediate shut down.
- (4) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (5) Operation is subject to prior coordination with the local Society of Broadcast Engineers, Inc. (SBE) frequency coordinator. Consult the list at <http://sbe.org/wp-content/uploads/freqcoor.pdf> to find the appropriate coordinator.
- (6) Experimental station shall use the minimum power level necessary to establish communications links to minimize potential interference to licensed users.
- (7) Licensee must successfully coordinate with the Fixed Microwave Service licensees in accordance with 47 C.F.R, Part 101.103(d) prior operation in the frequencies from 2450 MHz to 2483 MHz.
- (8) This frequency assignment in one of the bands 1435-1525 and 2360-2395 MHz was coordinated prior to authorization with AFMO who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination.
- (9) Stop Buzzer POC is Insitu Operations Action Center at 509-493-4691.
- (10) Operation on 1370-1390 MHz must comply with out of band emission limits of ITU RES750.

Special Conditions:

- (11) Operation on 1090 Mhz must comply with following conditions:
- 1) Airborne test of Scan Eagle UAS only with UAVIONIX transponder (PN 240-000217-001,FCC ID 2AFFT P200S).
 - 2) For mode 3A, C and S
 - 3) Set mode A code to 1200 or as directed by ATC.
 - 4) PRW is 442W ERP and PRR is 1000K.
 - 5) Test IAW2020-WSA-5397.
 - 6) Flight altitude must conform to the COA definition.
 - 7) Must coordinate with ATC.