

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

EXPERIMENTAL
(Nature of Service)

WF2XRP
(Call Sign)

XT FX MO
(Class of Station)

0129-EX-RR-2015
(File Number)

NAME Virginia Tech Electrical and Computer Engineering

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(i) of the Commission's Rules

Station Locations

- (1) Blacksburg (MONTGOMERY), VA - NL 37-13-53; WL 80-25-21; MOBILE: Virginia Tech, Blacksburg, VA, within 0.1 km, centered around NL 37-13-53; WL 80-25-21

Frequency Information

Blacksburg (MONTGOMERY), VA - NL 37-13-53; WL 80-25-21; MOBILE: Virginia Tech, Blacksburg, VA, within 0.1 km, center

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
138-144 MHz	FX	25K0F3E 25K0D1D	0.4 W (ERP)	
138-144 MHz	MO	25K0F3E 25K0D1D	0.4 W (ERP)	
150.5-156 MHz	FX	25K0F3E 25K0D1D	0.4 W (ERP)	

This authorization effective April 01, 2015 and will expire 3:00 A.M. EST June 16, 2016

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COMMISSION**



Frequency Information

Blacksburg (MONTGOMERY), VA - NL 37-13-53; WL 80-25-21; MOBILE: Virginia Tech, Blacksburg, VA, within 0.1 km, center

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
150.5-156 MHz	MO	25K0F3E 25K0D1D	0.4 W (ERP)	
157.45-161.575 MHz	FX	25K0F3E 25K0D1D	0.4 W (ERP)	
157.45-161.575 MHz	MO	25K0F3E 25K0D1D	0.4 W (ERP)	
162.0375-174 MHz	FX	25K0F3E 25K0D1D	0.4 W (ERP)	
162.0375-174 MHz	MO	25K0F3E 25K0D1D	0.4 W (ERP)	
220-222 MHz	FX	25K0F3E 25K0D1D	0.4 W (ERP)	
220-222 MHz	MO	25K0F3E 25K0D1D	0.4 W (ERP)	
410-420 MHz	FX	25K0F3E 25K0F1D 25K0D1D	0.4 W (ERP)	

Frequency Information

Blacksburg (MONTGOMERY), VA - NL 37-13-53; WL 80-25-21; MOBILE: Virginia Tech, Blacksburg, VA, within 0.1 km, center

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
410-420 MHz	MO	25K0F3E 25K0F1D 25K0D1D	0.4 W (ERP)	
450-470 MHz	FX	25K0F3E 25K0F1D 25K0D1D	0.4 W (ERP)	
450-470 MHz	MO	25K0F3E 25K0F1D 25K0D1D	0.4 W (ERP)	
470-512 MHz	FX	25K0F3E 25K0F1D 25K0D1D	0.4 W (ERP)	
470-512 MHz	MO	25K0F3E 25K0F1D 25K0D1D	0.4 W (ERP)	
764-862 MHz	FX	25K0F3E 25K0D1D	0.4 W (ERP)	
764-862 MHz	MO	25K0F3E 25K0D1D	0.4 W (ERP)	

Frequency Information

Blacksburg (MONTGOMERY), VA - NL 37-13-53; WL 80-25-21; MOBILE: Virginia Tech, Blacksburg, VA, within 0.1 km, center

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
776-787 MHz	FX	2M00DXD	0.4 W (ERP)	
776-787 MHz	MO	2M00DXD	0.4 W (ERP)	
788-793 MHz	FX	2M00DXD	0.4 W (ERP)	
788-793 MHz	MO	2M00DXD	0.4 W (ERP)	
824-849 MHz	MO	200KF1D	0.4 W (ERP)	
869-894 MHz	FX	200KF1D	0.4 W (ERP)	
1850-1910 MHz	MO	250KF1D	0.4 W (ERP)	
1930-1990 MHz	FX	250KF1D	0.4 W (ERP)	
3400-3600 MHz	FX	20M0DXD	0.4 W (ERP)	
3400-3600 MHz	MO	20M0DXD	0.4 W (ERP)	

Special Conditions:

- (1) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (2) 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.
- (3) Operation is subject to prior coordination with the Society of Broadcast Engineers, Inc. (SBE); ATTN: Executive Director; 9102 North Meridian Street, Suite 305; Indianapolis, IN 46260; telephone, (866) 632-4222; FAX, (317) 846-9120; e-mail, executivedir @ sbe.org; information, www.sbe.org.
- (4) Operation is subject to prior coordination with Fixed Services licensees in the immediate area of the experiment.
- (5) Operation is NOTCH OUT of M162.025, Automatic Identification System (AIS-2), Band 162.0125-162.0375 MHz, 25KHz Channel.
- (6) The designated point-of-contact to terminate transmissions if interference occurs is Vuk Marojevic at (540) 231-2970 or (540) 231-2971.
- (7) The test must be done inside the VA Tech labs and on a non-interference basis.
- (8) Public Safety Homeland Security and FirstNet requested:
 - i. Scope of license limited to applicant facility.
 - ii. License valid for one year, subject to policy changes in license modification.
 - iii. Project limited to testing and may not involve live-duty operations by first responders or others.
 - iv. Applicant must accept interference from any other user of Band 14. FirstNet suggests a parallel coordination be performed with the Virginia State of Police (VASP).
 - v. Applicant must not cause interference to FirstNet operations or those approved to operate in Band 14 per license (i.e., VASP incumbency).
 - vi. Verification by applicant and FirstNet of no current potential for interference with FirstNet operations or those approved to operate in Band 14 per license (i.e., VASP incumbency).
 - vii. Point-of-Contact (POC) established with "kill switch" authority; applicant agrees to cease operations at request of FirstNet within 24 hours of request to kill switch POC.