

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

EXPERIMENTAL

(Nature of Service)

WF2XLH

(Call Sign)

XC FX

(Class of Station)

0166-EX-TC-2019

(File Number)

NAME Raytheon Company

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(c) of the Commission's Rules

Station Locations

(1) Tucson (PIMA), AZ - NL 32-06-15; WL 110-57-13

Frequency Information

Tucson (PIMA), AZ - NL 32-06-15; WL 110-57-13

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
200-2000 MHz	FX	NON	200 mW (ERP)	
2000-18000 MHz	FX	NON	5 W (ERP)	

Special Conditions:

- (1) Licensee must accept interference from others operating in the band and must not cause interference to FirstNet operations or those approved to operate in Band 14 per license (i.e. AT&T testing or public safety entities authorized to operate on Band 14).
- (2) Operation is subject to prior coordination with affected Educational Broadband Service/Broadband Radio Service (EBS/BRs) licensees.

This authorization effective January 22, 2020 and
will expire 3:00 A.M. EST January 31, 2020

**FEDERAL
COMMUNICATIONS
COMMISSION**



Special Conditions:

- (3) Licensee POC shall submit a "Stop Buzzer" contact to FirstNet at peter.tomczak@firstnet.gov upon authorization issuance with "kill switch" authority; license POC agrees to immediately cease operations on Band 14 if notified of any interference concerns until any issues are resolved.
- (4) Licensee agrees that this license may be subject to further review by the FCC and possible re-coordination with FirstNet.
- (5) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (6) Licensee is required to coordinate operations with existing microwave users in the area to avoid interference.
- (7) 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.
- (8) Operation in the 1695-1780 MHz, 1915-1920 MHz, 1995-2020 MHz or 2110-2200 MHz band requires consent of local Advanced Wireless Service (AWS) licensee(s) to avoid interference.
- (9) Licensee must prior coordinate testing with other authorized Band 14 operations. Failure to effectively coordinate shall result in FirstNet seeking immediate suspension of the experimental license by the FCC.
- (10) Operation is subject to prior coordination with the local Society of Broadcast Engineers, Inc. (SBE) frequency coordinator. Consult the list at https://www.sbe.org/sections/freq_local.php to find the appropriate coordinator.
- (11) Raytheon Missile Systems may not operate in the following bands: 328.6 – 335.4 MHz, 960 – 1390 MHz, 1559 – 1610 MHz, 2700 – 2900 MHz, 5000 – 5250 MHz, or any bands protected under Footnote US246.
- (12) Raytheon Missile Systems must notch out the following (+/- 4 MHz) 4455 MHz.
- (13) Raytheon Missile Systems must coordinate with the Navy POC at (520) 794-4218 at least 24 hours prior to testing.
- (14) Raytheon Missile Systems must coordinate with Mr. Dan Mertly, nrao-rfi@nrao.edu, or (575) 835-7128 for any bands covered under Footnote US342.
- (15) Raytheon Missile Systems must ensure that the use of 5091-5150 MHz is in compliance with WRC-15 Resolution 418 limits.
- (16) Raytheon Missile Systems must limit all operations to 30mW CW transmissions, not to exceed 3.2 milliseconds in duration per frequency step, with transmission steps no less than 10 MHz increments, and a duty cycle not to exceed 1.2%. Testing shall be limited to 15 tests per day, with no single frequency used more than a total of 3 minutes each day.

Special Conditions:

- (17) Prior to commencing any operations in the frequencies below, the applicant must obtain consent from the following within 50 miles of the contours of the testing area:
- AMTS Licensee (217-218 MHz/219-220 MHz)
 - 218-219 MHz Service licensees
 - 220-222 MHz Service licensees
 - Paging Service licensees in 454 MHz/459 MHz
 - General Aviation Air-Ground Service in 454 MHz/459 MHz
 - 700 MHz Lower Band licensees (698-746 MHz)
 - 700 MHz Upper Band licensees (746-758 MHz and 775-788 MHz)
 - 700 MHz Guard Band licensees (757-758 MHz/787-788 MHz)
 - SMR licensees (809-824 MHz/854-869 MHz)
 - B/ILT licensees (809-824 MHz/854-869 MHz)
 - Cellular licensees (824-849 MHz/869-894 MHz)
 - Commercial Air-Ground licensee (849-851 MHz/894-896 MHz)
 - SMR licensees (896-901 MHz/935-940 MHz)
 - B/ILT licensees (896-901 MHz/935-940 MHz)
 - Narrowband PCS licensees (901-902/930-931/940-941 MHz)
 - Location & Monitoring Service licensees (902-928 MHz)
 - Paging Service licensees in 929 MHz and 931 MHz
 - 1390-92 MHz Band Licensees
 - 1392-1395 MHz/1432-1435 MHz Band licensees
 - 1670-1675 MHz Band licensee (Crown Castle International,) and the lessee (One Dot Six Corp)
 - Broadband PCS licensees (1850-1910 MHz/1930-1990 MHz)
 - WCS (2305-2320 MHz/2345-2360 MHz) licensee (AT&T)