

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

EXPERIMENTAL

(Nature of Service)

XC MO

(Class of Station)

WG2XFP

(Call Sign)

0390-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) MOBILE: Delaplane, within 5 km, centered around NL 38-59-32; WL 77-57-53
- (2) MOBILE: Mercersburg, PA, within 3 km, centered around NL 39-44-29; WL 77-56-03
- (3) MOBILE: OakGrove Park, Arlington, VA, within 3.5 km, centered around NL 38-53-26; WL 77-06-33
- (4) MOBILE: Alexandria, VA, within 4 km, centered around NL 38-46-29; WL 77-06-15
- (5) MOBILE: St Louis Park, within 15 km, centered around NL 44-58-08; WL 93-21-14
- (6) MOBILE: Fort Story, VA, within 2 km, centered around NL 36-55-27; WL 76-00-18

Frequency Information

MOBILE: Delaplane, within 5 km, centered around NL 38-59-32; WL 77-57-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
176-215 MHz	MO	10M0J0N 10M0J1N	0.5 W (ERP)	
460-608 MHz	MO	1M00J0N 20M0J1N	0.5 W (ERP)	

This authorization effective January 23, 2020 and
will expire 3:00 A.M. EST May 01, 2021

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Delaplane, within 5 km, centered around NL 38-59-32; WL 77-57-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
941.725-960 MHz	MO	1M00J0N 20M0J1N	0.5 W (ERP)	
2605-2645 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
5625-5675 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
7900-8000 MHz	MO	1M00J0N	0.5 W (ERP)	
12.9-13 GHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
17.9-18 GHz	MO	1M00J0N	0.5 W (ERP)	

MOBILE: Mercersburg, PA, within 3 km, centered around NL 39-44-29; WL 77-56-03

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
176-215 MHz	MO	10M0J0N 10M0J1N	0.5 W (ERP)	
460-608 MHz	MO	1M00J0N	0.5 W (ERP)	

Frequency Information

MOBILE: Mercersburg, PA, within 3 km, centered around NL 39-44-29; WL 77-56-03

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
460-608 MHz	MO	20M0J1N	0.5 W (ERP)	
614-664 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
2550-2605 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
2605-2645 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
5560-5685 MHz	MO	35M0J0N 35M0J1N	5 W (ERP)	
5560-5595 MHz	MO	35M0J0N 35M0J1N	5 W (ERP)	
5610-5685 MHz	MO	35M0J0N 35M0J1N	5 W (ERP)	
7900-8000 MHz	MO	1M00J0N	0.5 W (ERP)	
12.9-13 GHz	MO	35M0J0N	0.5 W (ERP)	

Frequency Information

MOBILE: Mercersburg, PA, within 3 km, centered around NL 39-44-29; WL 77-56-03

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
12.9-13 GHz	MO	35M0J1N	0.5 W (ERP)	
17.9-18 GHz	MO	1M00J0N	0.5 W (ERP)	

MOBILE: OakGrove Park, Arlington, VA, within 3.5 km, centered around NL 38-53-26; WL 77-06-33

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
176-215 MHz	MO	10M0J0N 20M0J1N	0.5 W (ERP)	
460-608 MHz	MO	1M00J0N 20M0J1N	0.5 W (ERP)	
941.725-960 MHz	MO	20M0J1N 1M00J0N	0.5 W (ERP)	
2605-2645 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
5625-5675 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	

Frequency Information

MOBILE: OakGrove Park, Arlington, VA, within 3.5 km, centered around NL 38-53-26; WL 77-06-33

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
7900-8000 MHz	MO	1M00J0N	0.5 W (ERP)	
12.9-13 GHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
17.9-18 GHz	MO	1M00J0N	0.5 W (ERP)	

MOBILE: Alexandria, VA, within 4 km, centered around NL 38-46-29; WL 77-06-15

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
176-215 MHz	MO	10M0J0N 10M0J1N	0.5 W (ERP)	
460-608 MHz	MO	1M00J0N 20M0J1N	0.5 W (ERP)	
941.725-960 MHz	MO	1M00J0N 18M0J1N	0.5 W (ERP)	
2605-2645 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
5625-5675 MHz	MO	35M0J0N	0.5 W (ERP)	

Frequency Information

MOBILE: Alexandria, VA, within 4 km, centered around NL 38-46-29; WL 77-06-15

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
5625-5675 MHz	MO	35M0J1N	0.5 W (ERP)	
7900-8000 MHz	MO	1M00J0N	0.5 W (ERP)	
12.9-13 GHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	

MOBILE: St Louis Park, within 15 km, centered around NL 44-58-08; WL 93-21-14

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
945 MHz	MO	30M0J0N 30M0J1N	1 W (ERP)	

MOBILE: Fort Story, VA, within 2 km, centered around NL 36-55-27; WL 76-00-18

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
460-608 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
614-664 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
2550-2645 MHz	MO	35M0J0N	0.5 W (ERP)	

Frequency Information

MOBILE: Fort Story, VA, within 2 km, centered around NL 36-55-27; WL 76-00-18

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2550-2645 MHz	MO	35M0J1N	0.5 W (ERP)	
5560-5595 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	
5610-5685 MHz	MO	35M0J0N 35M0J1N	0.5 W (ERP)	

Special Conditions:

- (1) 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.
- (2) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (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) Operation is subject to prior coordination with affected existing Fixed Microwave Service licensees in accordance with 47 CFR, Part 101.103(d).
- (5) No operation is permitted in frequency band 932.675 - 941.725 MHz in the Delaplane, VA and Arlington, VA areas due to possibility of harmful interference to the federal operations.
- (6) Operation subject to notification of narrowband PCS licensees (901-902 MHz), and paging licensees in 931 MHz UHF frequency.
- (7) Licensee shall understand that equipment will not be developed for operational use in the band 7900-8000 MHz.
- (8) Due to anticipated harmful interference to the federal operations, frequency band 17.9-18 GHz is not permitted at Alexandria, VA location.
- (9) Operation is subject to prior coordination with affected Educational Broadband Service/Broadband Radio Service (EBS/BRS) licensees in the band 2550-2645 MHz.
- (10) Operation is not permitted in 5595-5610 MHz band for Mercersburg, PA.

Special Conditions:

- (11) Operation is subject to consent of the following within 50 miles of the test area:
 - o All Cellular licensees (824-849 MHz/869-894 MHz)
 - o Commercial Air-Ground licensee (849-851 MHz/894-896 MHz)
 - o SMR licensees (896-901 MHz/935-940 MHz)
- (12) Coordinate with the Fixed Microwave Service licensees in accordance with 47 CFR, Part 101.103(d).
- (13) Operation is subject to notification of the following within 50 miles of the test area:
 - o Narrowband PCS licensees (901-902 MHz)
 - o Location & Monitoring Service licensees (902-928 MHz)
- (14) Operation is subject to prior coordination with affected existing and future licensees in 614-664 MHz band.
- (15) This authorization is issued for the express purpose of conducting experimental operations described in the related application and required by the U.S. Government; contract numbers: FA8650-18-D-1102, FA8650-15-C-7534, and HR0011-14-C-0066. The use of this radio station in any other manner or for any other purpose will constitute a violation of the privileges herein authorized. Except as subsequently authorized by the Commission, this radio station shall not be operated after the expiration date of the contract designated in the related application and enumerated above.