

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

EXPERIMENTAL

(Nature of Service)

WP9XEB

(Call Sign)

XT MO

(Class of Station)

0239-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.

Station Locations

- (1) MOBILE: Albuquerque, NM, within 0.1 km, centered around NL 35-03-27; WL 106-31-31
- (2) MOBILE: Albuquerque, NM, within 0.1 km, centered around NL 35-03-27; WL 106-31-54
- (3) MOBILE: Albuquerque, NM, within 0.1 km, centered around NL 35-03-33; WL 106-31-45
- (4) MOBILE: Moriarty, NM, within 1 km, centered around NL 34-59-04; WL 106-00-23
- (5) MOBILE: Moriarty, NM, within 0.8 km, centered around NL 34-58-09; WL 105-57-53
- (6) MOBILE: Albuquerque, NM, within 3 km, centered around NL 35-09-03; WL 106-48-00
- (7) MOBILE: Albuquerque, NM, within 6.2 km, centered around NL 34-59-05; WL 106-31-04
- (8) MOBILE: Spaceport New Mexico, NM, within 10 km, centered around NL 32-59-26; WL 106-58-29
- (9) MOBILE: Belen, NM, within 5 km, centered around NL 34-38-52; WL 106-49-43
- (10) MOBILE: White Sands, NM, within 100 km, centered around NL 33-00-00; WL 106-30-00
- (11) MOBILE: Laguna, NM, within 1 km, centered around NL 35-01-08; WL 107-24-53
- (12) MOBILE: San Antonio, NM, within 10 km, centered around NL 33-49-00; WL 106-38-49
- (13) MOBILE: Edgewood, NM, within 5 km, centered around NL 35-05-41; WL 106-10-18

This authorization effective January 22, 2020 and
will expire 3:00 A.M. EST February 21, 2020

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Albuquerque, NM, within 0.1 km, centered around NL 35-03-27; WL 106-31-31

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (ERP)	

MOBILE: Albuquerque, NM, within 0.1 km, centered around NL 35-03-27; WL 106-31-54

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 180KF9D	1800 W (ERP)	

Frequency Information

MOBILE: Albuquerque, NM, within 0.1 km, centered around NL 35-03-27; WL 106-31-54

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (ERP)	

MOBILE: Albuquerque, NM, within 0.1 km, centered around NL 35-03-33; WL 106-31-45

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	

Frequency Information

MOBILE: Albuquerque, NM, within 0.1 km, centered around NL 35-03-33; WL 106-31-45

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (ERP)	

MOBILE: Moriarty, NM, within 1 km, centered around NL 34-59-04; WL 106-00-23

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D	1800 W (ERP)	

Frequency Information

MOBILE: Moriarty, NM, within 1 km, centered around NL 34-59-04; WL 106-00-23

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
394.4 MHz	MO	1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (ERP)	

MOBILE: Moriarty, NM, within 0.8 km, centered around NL 34-58-09; WL 105-57-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	

Frequency Information

MOBILE: Moriarty, NM, within 0.8 km, centered around NL 34-58-09; WL 105-57-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (ERP)	

MOBILE: Albuquerque, NM, within 3 km, centered around NL 35-09-03; WL 106-48-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D	1800 W (ERP)	

Frequency Information

MOBILE: Albuquerque, NM, within 3 km, centered around NL 35-09-03; WL 106-48-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
422 MHz	MO	1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (ERP)	

MOBILE: Albuquerque, NM, within 6.2 km, centered around NL 34-59-05; WL 106-31-04

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	

Frequency Information

MOBILE: Albuquerque, NM, within 6.2 km, centered around NL 34-59-05; WL 106-31-04

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (ERP)	

MOBILE: Spaceport New Mexico, NM, within 10 km, centered around NL 32-59-26; WL 106-58-29

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D	1800 W (ERP)	

Frequency Information

MOBILE: Spaceport New Mexico, NM, within 10 km, centered around NL 32-59-26; WL 106-58-29

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
449 MHz	MO	1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (ERP)	

MOBILE: Belen, NM, within 5 km, centered around NL 34-38-52; WL 106-49-43

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	

Frequency Information

MOBILE: Belen, NM, within 5 km, centered around NL 34-38-52; WL 106-49-43

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (ERP)	

MOBILE: White Sands, NM, within 100 km, centered around NL 33-00-00; WL 106-30-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N	24.45 kW (ERP)	

Frequency Information

MOBILE: White Sands, NM, within 100 km, centered around NL 33-00-00; WL 106-30-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
10.175-10.5 GHz	MO	300MF3N	24.45 kW (ERP)	

MOBILE: Laguna, NM, within 1 km, centered around NL 35-01-08; WL 107-24-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (ERP)	

Frequency Information

MOBILE: San Antonio, NM, within 10 km, centered around NL 33-49-00; WL 106-38-49

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (ERP)	

MOBILE: Edgewood, NM, within 5 km, centered around NL 35-05-41; WL 106-10-18

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	180KF9D 40K0F9D	1800 W (ERP)	

Frequency Information

MOBILE: Edgewood, NM, within 5 km, centered around NL 35-05-41; WL 106-10-18

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
375 MHz	MO	1M00F9D	1800 W (ERP)	
394.4 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
422 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
449 MHz	MO	40K0F9D 180KF9D 1M00F9D	1800 W (ERP)	
10.175-10.5 GHz	MO	1K00N0N 4M00N0N 300MF3N	24.45 kW (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) ALL Operations MUST be scheduled with AFC-WSMR, at least 96 hours prior to operations, via e-mail to usarmy.wsmr.imcom-central.list.dodaafc@mail.mil
- (4) AFC-WSMR will schedule the Raytheon operations in the Integrated Frequency Deconfliction System (IFDS). Should IFDS show a conflict, AFC-WSMR reserves the right to have Raytheon stand down their operations until the conflict is resolved - either by Raytheon operating on another, non-conflicting frequency, or by Raytheon waiting until the DoD operations have completed.

Special Conditions:

- (5) Locations 1 through 7, 9, and 11, the antenna orientation FOR THE UHF FTS system, in AZIMUTH, shall be limited from 270 degrees (West), clockwise, through 0 (North), to 45 degrees (Northwest), reference True North. There are NO limitations on pointing angle for the X-Band Radar system.
- (6) Location 8, Raytheon must schedule and coordinate their spectrum requirements with the Spaceport America Technical Operations Manager, who, in turn, will schedule and de-conflict spectrum, and airspace, as applicable, with White Sands Missile Range (WSMR), through the WSMR Test liaison. Final authorization to radiate shall be contingent upon successful scheduling and de-confliction of both spectrum, and airspace, with other, regional, operations.
- (7) Locations 10 and 12, WSMR. Raytheon must schedule their operations as a WSMR Range Mission, through their WSMR Test Sponsor/Liaison. Final authorization to radiate shall be contingent upon successful scheduling and de-confliction of both spectrum, and airspace, with other, regional, operations.
- (8) Further requests for extension of the authority granted herein must be filed on Form 442, "Application for New or Modified Radio Station Authorization under Part 5 of FCC Rules - Experimental Radio Service." Future STA requests to extend this authorization will not be considered.
- (9) Stop Buzzer Points of Contact are Jim Ortega at (520) 794-0227; and Charles Sarver at (505) 220-9999.