

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

EXPERIMENTAL

(Nature of Service)

XD FX MO

(Class of Station)

WJ2XUS

(Call Sign)

0451-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(j) of the Commission's Rules

Station Locations

- (1) McKinney (COLLIN), TX - NL 33-12-00; WL 96-38-24
- (2) Burn Flat (WASHITA), OK - NL 35-00-36; WL 96-37-12; MOBILE: Burn Flat, OK, within 200 km, centered around NL 35-00-36; WL 96-37-12
- (3) Greenville (HUNT), TX - NL 37-07-12; WL 98-22-12; MOBILE: Greenville, TX, within 200 km, centered around NL 33-04-11; WL 96-03-21

Frequency Information

McKinney (COLLIN), TX - NL 33-12-00; WL 96-38-24

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
13.75-14.5 GHz	FX	4M40G1D 2M70G1D 11M5G1D	616 kW (ERP)	
13.75-13.772 GHz	FX	4M40G1D 2M70G1D 11M5G1D	616 kW (ERP)	

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

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

McKinney (COLLIN), TX - NL 33-12-00; WL 96-38-24

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
13.778-14.5 GHz	FX	11M5G1D 2M70G1D 4M40G1D	616 kW (ERP)	

Burn Flat (WASHITA), OK - NL 35-00-36; WL 96-37-12; MOBILE: Burn Flat, OK, within 200 km, centered around NL 35-00-36

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
13.75-14.5 GHz	MO	4M40G1D 2M70G1D 11K5G1D	81 kW (ERP)	
13.75-13.772 GHz	MO	11K5G1D 2M70G1D 4M40G1D	81 kW (ERP)	
13.778-14.5 GHz	MO	4M40G1D 2M70G1D 11K5G1D	81 kW (ERP)	

Greenville (HUNT), TX - NL 37-07-12; WL 98-22-12; MOBILE: Greenville, TX, within 200 km, centered around NL 33-04-11; V

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
13.75-14.5 GHz	MO	4M40G1D 2M70G1D	178 kW (ERP)	

Frequency Information

Greenville (HUNT), TX - NL 37-07-12; WL 98-22-12; MOBILE: Greenville, TX, within 200 km, centered around NL 33-04-11; V

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
13.75-14.5 GHz	MO	11M5G1D	178 kW (ERP)	
13.75-13.772 GHz	MO	4M40G1D 2M70G1D 11M5G1D	178 kW (ERP)	
13.778-14.5 GHz	MO	11M5G1D 2M70G1D 4M40G1D	178 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) The station identification requirements of Section 5.115 of the Commission's Rules are waived.
- (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) POINT OF COMMUNICATION: Geostationary-satellite orbit (GSO) Satellites: SES-2 @ 273 ° EL
- (5) Experimental station shall use the minimum power level necessary to establish communications links to minimize potential interference to licensed users.
- (6) Operations must comply with the Sections 25.203(e), (f), and (g); 25.204(k) and 25.277 of the Commission's Rules.
- (7) Operations of station must be in compliance with the coordination agreements reached between the licensee and Koch Pipeline Company LP/Flint Hills Resources, LC ; Spok, Inc., and UltiSat, Inc.
- (8) Stop Buzzer: Ben Martin 972-952-4507, Alternate Craig Wilson 972-877-3245.
- (9) The aircraft earth stations (ESAAs) are authorized, on a non-protected and non-harmful interference basis, to transmit to the geostationary-orbit space stations using the 14.0-14.5 GHz frequency band that are authorized by the Commissions. The aircraft earth stations authorized herein must immediately terminate operations upon notification that such operation is causing harmful interference to any other radio system lawfully operating in the 14.0-14.5 GHz frequency band. The aircraft earth stations authorized herein cannot claim protection from harmful interference from any radio system lawfully operating in the 14.0-14.5 GHz frequency band.

Special Conditions:

- (10) Operation pursuant to this authorization must be in compliance with the terms of coordination agreements between the proposed operators operating in the 14.0-14.5 GHz frequency band and operators of other Ku-band geostationary space stations within six angular degrees of those space stations. In the event that another GSO FSS space station commences operation in the Ku-band at a location within six degrees of any of these space stations, earth stations operating pursuant to this temporary authority shall cease transmitting to that space station unless and until such operation has been coordinated with the new space station's operator or Licensee demonstrates that such operation will not cause harmful interference to the new co-frequency space station.
- (11) Communications between ESAAs and the Ku-band geostationary space stations must be in compliance with all existing and future space station coordination agreements reached between the Ku-GSO operators and other administrations.
- (12) Licensee's ESAAs must employ a tracking algorithm that is resistant to capturing and tracking adjacent satellite signals, and each station must be capable of inhibiting its own transmission in the event it detects unintended satellite tracking.
- (13) Licensee's ESAAs must be monitored and controlled by a ground-based network control and monitoring center. Such stations must be able to receive "enable transmission" and "disable transmission" commands from the network control center and must cease transmission immediately after receiving a "parameter change" command until receiving an "enable transmission" command from the network control center. The network control center must monitor operation of each earth station to determine if it is malfunctioning, and each earth station must self-monitor and automatically cease transmission on detecting an operational fault that could cause harmful interference to a fixed satellite service network.
- (14) ESAAs authorized herein must not be used for air traffic control communications.
- (15) Aircraft operations are limited to U.S.-registered aircraft.
- (16) This authorization is without prejudice to any determination that the Commission may make regarding pending or future experimental satellite earth station applications.
- (17) Operation is not permitted in 13.772-13.778 GHz band.