

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

EXPERIMENTAL

(Nature of Service)

WJ2XUW

(Call Sign)

XD FX MO

(Class of Station)

0452-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) Will Roger Airport (OKLAHOMA), OK - NL 35-24-02; WL 97-34-58
- (2) MOBILE: Will Roger Airport, OK, within 200 km, centered around NL 35-24-02; WL 97-34-58

Frequency Information

Will Roger Airport (OKLAHOMA), OK - NL 35-24-02; WL 97-34-58

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

MOBILE: Will Roger Airport, OK, within 200 km, centered around NL 35-24-02; WL 97-34-58

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

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Frequency Information

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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) Operations of ESAAs must comply with the Sections 25.227 (Blanket licensing provisions for ESAAs operating with GSO FSS space stations in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz, and 14.0-14.5 GHz bands) and 25.220 (Non-routine transmit/receive earth station operations) of the Commission's Rules.
- (6) Operations of station in the 13.75-14 GHz band must comply with the Footnotes US377, US356, and US 357, and Sections 25.204(e)(2), and 25.204(f) of the Commission's Rules.
- (7) Operations of station must be in compliance with the coordination agreements reached between the licensee and HNS License Sub, LL; Oklahoma Educational Television Authority; NBC Telemundo License LLC; LIFE CHURCH; Koch Pipeline Company LP/Flint Hills Resources, LC; and Creative Educational Media Corporation Inc.
- (8) Stop Buzzers is Thomas Taylor at (972) 952-3556.
- (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 13.75-14.5 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 13.75-14.5 GHz frequency band. The aircraft earth stations authorized herein cannot claim protection from harmful interference from any radio system lawfully operating in the 13.75-14.5 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 13.75-14.5 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 SES-2 Ku-band geostationary space stations must be in compliance with all existing and future space station coordination agreements reached between the SES-2 operator and other Ku-band 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) Licensee must maintain a point of contact available 24 hours per day, seven days per week, with the authority and ability to terminate operations authorized herein, for discussing interference concerns with other licensees, and must submit a letter to be included in its license file with the name and telephone number of the point of contact prior to commencing operation.
- (15) ESAAs authorized herein must not be used for air traffic control communications.
- (16) Aircraft operations are limited to U.S.-registered aircraft.