

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

EXPERIMENTAL

(Nature of Service)

XC FX

(Class of Station)

WK2XMU

(Call Sign)

0685-EX-CN-2019

(File Number)

NAME The Boeing 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(h) of the Commission's Rules

Station Locations

(1) Lino Lakes (ANOKA), MN - NL 45-08-03; WL 93-05-45

Frequency Information

Lino Lakes (ANOKA), MN - NL 45-08-03; WL 93-05-45

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
20.2-21.2 GHz	FX	70M1M1D	549541 W (ERP)	
20.2-21.2 GHz	FX	50M0M1D	549541 W (ERP)	
20.2-21.2 GHz	FX	30M0M1D	549541 W (ERP)	
20.2-21.2 GHz	FX	20M0M1D	446684 W (ERP)	

This authorization effective September 24, 2019 and
will expire 3:00 A.M. EST October 01, 2020

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

Lino Lakes (ANOKA), MN - NL 45-08-03; WL 93-05-45

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
20.2-21.2 GHz	FX	10M0M1D	223872 W (ERP)	
20.2-21.2 GHz	FX	5M00M1D	112202 W (ERP)	
20.2-21.2 GHz	FX	1M00M1D	22387 W (ERP)	
30-31 GHz	FX	70M1M1D	204174 W (ERP)	
30-31 GHz	FX	50M0M1D	794328 W (ERP)	
30-31 GHz	FX	30M0M1D	794328 W (ERP)	
30-31 GHz	FX	20M0M1D	794328 W (ERP)	
30-31 GHz	FX	5M00M1D	794328 W (ERP)	
30-31 GHz	FX	10M0M1D	794328 W (ERP)	
30-31 GHz	FX	1M00M1D	316228 W (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 Boeing testing granted shall be conducted IAW the configuration and RF parameters that Boeing coordinated with Air Force (Jimmy Nguyen) and ARSTRAT (Travis Inghram) for this specific test.
- (4) The Boeing Company shall limit operations to the emission designators listed and for the stated occupied bandwidth only. Occupied bandwidths that are less than the above emissions are not authorized.
- (5) As soon as possible but no later than 3 business days prior to any planned testing, the Boeing Company is required to provide Jimmy Nguyen (Email: jimmy.nguyen@us.af.mil, AFSMO) and Travis J. Inghram (Email: travis.j.ingham.civ@mail.mil, ARSTRAT) with the planned testing date/duration and the stop buzzer POC for the testing. If planned testing conflicts with DoD operations, additional evaluations and/or restrictions will be required.
- (6) The Boeing Company must coordinate with the Fixed Microwave Service licensees in adjacent bands, 21.2-22.5 GHz and 31-31.3 GHz, prior to operation in the proposed frequency bands.
- (7) Experimental station shall use the minimum power level necessary to establish communications links to minimize potential interference to licensed users.
- (8) The authorized station must be in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules.
- (9) This authorization is without prejudice to any determination that the Commission may make regarding pending or future experimental satellite earth station applications.
- (10) Operations are on a non-interference basis (NIB) and shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station and it shall cease transmission(s) immediately upon notice of such interference and notify the FCC in writing.
- (11) This authorization is issued for the express purpose of conducting experimental operations described in the related application and required by AF VIPSAM, contract numbers: 4501684463 and USG Prime, contract number HC101318C0002. The use of this radio station in any other manner and 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.
- (12) Stop Buzzer, Robert Ruggieri at (301) 266-0924 or Boeing 24-Hour NOC HOTLINE (855) 556-1001.
- (13) POINT OF COMMUNICATION: INMARSAT-5 F2