

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

EXPERIMENTAL

(Nature of Service)

XC MO

(Class of Station)

WK2XEZ

(Call Sign)

0131-EX-CN-2019

(File Number)

NAME Astra Space Inc.

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 & J) of the Commission's Rules

Station Locations

- (1) MOBILE: Astra facilities in Alameda, within 1 km, centered around NL 37-46-34; WL 122-17-38
- (2) MOBILE: Nimitz Test Area, within 2 km, centered around NL 37-47-08; WL 122-19-29
- (3) MOBILE: Castle Airport test area, within 1 km, centered around NL 37-21-31; WL 120-33-36

Frequency Information

MOBILE: Astra facilities in Alameda, within 1 km, centered around NL 37-46-34; WL 122-17-38

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2211 MHz	MO	2M32F1D 2M32F1D	6.31 W (ERP)	0.00002 %
2215 MHz	MO	4M64F1D	6.31 W (ERP)	0.00002 %

This authorization effective June 28, 2019 and
will expire 3:00 A.M. EST July 01, 2021

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Nimitz Test Area, within 2 km, centered around NL 37-47-08; WL 122-19-29

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2211 MHz	MO	2M32F1D	6.31 W (ERP)	0.00002 %
2215 MHz	MO	4M64F1D	6.31 W (ERP)	0.00002 %

MOBILE: Castle Airport test area, within 1 km, centered around NL 37-21-31; WL 120-33-36

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2211 MHz	MO	2M32F1D	6.31 W (ERP)	0.00002 %
2215 MHz	MO	4M64F1D	6.31 W (ERP)	0.00002 %

Special Conditions:

- (1) 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.
- (2) The occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (3) Stop Buzzer Jacob Portukalian
Phone: 626-679-5421
- (4) This authorization is issued for the express purpose of conducting experimental operations described in the related application and required by NASA Contract Number NND17AP14C. 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.