Kristi Key, P.O. Box 90250, 1 Rocket Road, Hawthorne, CA 90250,

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION

EXPERIMENTAL	WJ2XNZ
(Nature of Service)	(Call Sign)
XC FX MO	1837-EX-ST-2019
(Class of Station)	(File Number)

NAME Space Explorations Technologies

This Special Temporary Authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This Special Temporary Authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control the Government of the United States conferred by Section 706 of the Communications Act of 1934.

Special Temporary Authority is hereby granted to operate the apparatus described below:

Purpose Of Operation:
Low-power, pre-flight checkout/testing of flight hardware prior to upcoming launch.

Station Locations

(1) MOBILE: Hawthorne, CA: Mobile within the SpaceX factory, within 0.05 km, centered around NL 33-55-14; WL 118-19-41
(2) MOBILE: CCAFS, FL: Mobile within integration facility DPF, within 0.1 km, centered around NL 28-28-14; WL 80-34-48
(3) MOBILE: CCAFS, FL: Mobile within integration facility NPF, within 0.1 km, centered around NL 28-28-11; WL 80-34-44
(4) MOBILE: CCAFS, FL: Mobile within integration facility PPF, within 0.1 km, centered around NL 28-32-37; WL 80-35-24
(5) Redondo Beach (LOS ANGELES), CA - NL 33-53-33; WL 118-22-15
(6) MOBILE: Mobile within LZ-1 pad area, within 0.5 km, centered around NL 28-29-09; WL 80-32-40
(7) MOBILE: Mobile within LC39A pad area and hangar, within 0.5 km, centered around NL 28-36-29; WL 80-36-15
(8) MOBILE: Mobile within LC40 pad area and hangar, within 0.5 km, centered around NL 28-33-43; WL 80-34-38

This authorization effective November 14, 2019 and
will expire 3:00 A.M. EST May 10, 2020

FEDERAL COMMUNICATIONS COMMISSION

Frequency Information

MOBILE: Hawthorne, CA: Mobile within the SpaceX factory, within 0.05 km, centered around NL 33-55-14; WL 118-19-41

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1575.42 MHz	MO	10M0G1D	10 pW (ERP)	0.001 %
2203.2 MHz	MO	4M20G1D	193 W (ERP)	0.001 %
2216 MHz	MO	4M65F1D	193 W (ERP)	0.001 %

MOBILE: CCAFS, FL: Mobile within integration facility DPF, within 0.1 km, centered around NL 28-28-14; WL 80-34-48

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1575.42 MHz	MO	10M0G1D	10 pW (ERP)	0.001 %
2203.2 MHz	MO	4M20G1D	193 W (ERP)	0.001 %
2216 MHz	MO	4M65F1D	193 W (ERP)	0.001 %

MOBILE: CCAFS, FL: Mobile within integration facility NPF, within 0.1 km, centered around NL 28-28-11; WL 80-34-44

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1575.42 MHz	MO	10M0G1D	10 pW (ERP)	0.001 %

Frequency Information

MOBILE: CCAFS, FL: Mobile within integration facility NPF, within 0.1 km, centered around NL 28-28-11; WL 80-34-44

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2203.2 MHz	MO	4M20G1D	193 W (ERP)	0.001 %
2216 MHz	MO	4M65F1D	193 W (ERP)	0.001 %

MOBILE: CCAFS, FL: Mobile within integration facility PPF, within 0.1 km, centered around NL 28-32-37; WL 80-35-24

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1575.42 MHz	MO	10M0G1D	10 pW (ERP)	0.001 %
2203.2 MHz	MO	4M20G1D	193 W (ERP)	0.001 %
2216 MHz	MO	4M65F1D	193 W (ERP)	0.001 %

Redondo Beach (LOS ANGELES), CA - NL 33-53-33; WL 118-22-15

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1575.42 MHz	FX	10M0G1D	10 pW (ERP)	0.001 %
2028.78 MHz	FX	4M15G1D	10 mW (ERP)	0.001 %

Frequency Information

Redondo Beach (LOS ANGELES), CA - NL 33-53-33; WL 118-22-15

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	FX	4M31G1D	10 mW (ERP)	0.001 %
2203.2 MHz	FX	4M15G1D 4M20G1D	193 W (ERP)	0.001 %
2216 MHz	FX	4M65F1D 2M73F1D	193 W (ERP)	0.001 %
2287.5 MHz	MO	4M80G1D	193 W (ERP)	0.001 %

MOBILE: Mobile within LZ-1 pad area, within 0.5 km, centered around NL 28-29-09; WL 80-32-40

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1575.42 MHz	MO	10M0G1D	10 pW (ERP)	0.001 %
2028.78 MHz	MO	4M15G1D	10 mW (ERP)	0.001 %
2106.40625 MHz	MO	4M31G1D	10 mW (ERP)	0.001 %
2203.2 MHz	MO	4M20G1D 4M15G1D	193 W (ERP)	0.001 %

Frequency Information

MOBILE: Mobile within LZ-1 pad area, within 0.5 km, centered around NL 28-29-09; WL 80-32-40

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2216 MHz	MO	2M73F1D 4M65F1D	193 W (ERP)	0.001 %
2287.5 MHz	MO	4M80G1D	193 W (ERP)	0.001 %

MOBILE: Mobile within LC39A pad area and hangar, within 0.5 km, centered around NL 28-36-29; WL 80-36-15

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1575.42 MHz	MO	10M0G1D	10 pW (ERP)	0.001 %
2028.78 MHz	MO	4M15G1D	10 mW (ERP)	0.001 %
2106.40625 MHz	MO	4M31G1D	10 mW (ERP)	0.001 %
2203.2 MHz	MO	4M15G1D 4M20G1D	193 W (ERP)	0.001 %
2216 MHz	MO	4M65F1D 2M73F1D	193 W (ERP)	0.001 %
2287.5 MHz	MO	4M80G1D	193 W (ERP)	0.001 %

Frequency Information

MOBILE: Mobile within LC40 pad area and hangar, within 0.5 km, centered around NL 28-33-43; WL 80-34-38

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1575.42 MHz	MO	10M0G1D	10 pW (ERP)	0.001 %
2028.78 MHz	MO	4M15G1D	10 mW (ERP)	0.001 %
2106.40625 MHz	MO	4M31G1D	10 mW (ERP)	0.001 %
2203.2 MHz	MO	4M15G1D 4M20G1D	193 W (ERP)	0.001 %
2216 MHz	MO	4M65F1D 2M73F1D	193 W (ERP)	0.001 %
2287.5 MHz	MO	4M80G1D	193 W (ERP)	0.001 %

Special Conditions:

(1) Operation is subject to prior coordination with the local Society of Broadcast Engineers, Inc. (SBE) frequency coordinator. Consult the list at https://www.sbe.org/sections/freq_local.php to find the appropriate coordinator.

(2) The station identification requirements of Section 5.115 of the Commission's Rules are waived.

(3) All operations shall be limited to pre-flight checkout testing of flight hardware in direct support of impending launch.

(4) For operations affecting GPS L1 (1575.42 MHz), power limits must be limited to the equivalent isotropically radiated power (EIRP) must be such that the emissions are no greater than -140 dBm/24 MHz as received by an isotropic antenna at a distance of 100 feet (30 meters) from the building where the test is being conducted. The calculation for maximum EIRP shall be based on free space propagation with no allowance for additional attenuation (e.g., building attenuation). Reference NTIA Manual 8.3.27.f.

Special Conditions:

(5) Prior to commencing operations, provide stop buzzer POC to (jimmy.nguyen@us.af.mil).

(6) Sixty (60) days prior to transmitting at Kennedy Space Center, Florida or Cape Canaveral Air Force Station, FL, SpaceX shall coordinate and schedule their operations with Range Scheduling (1ropschd@us.af.mil, 321.853.5941), Jamie Bjornbak (James.P.Bjornbak@nasa.gov, 321.867.6905, NASA KSC SMO), and NASA GSFC Spectrum Management Office (NASA-DL-GSFC-Spectrum-Management@nasa.gov).