

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION**

EXPERIMENTAL

(Nature of Service)

WG9XHP

(Call Sign)

XT MO

(Class of Station)

0725-EX-ST-2017

(File Number)

NAME Space Exploration Technologies Corp. (SpaceX)

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:

Launch vehicle communications, for CRS-12 NASA cargo mission, from Cape Canaveral.

Station Locations

- (1) MOBILE: Pad 39a, KSC: Launch vehicle stage 1, sub-orbital
- (2) MOBILE: Pad 39a: Launch vehicle 2nd stage, orbital

Frequency Information

MOBILE: Pad 39a, KSC: Launch vehicle stage 1, sub-orbital

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2211 MHz	MO	3M22F1D	34.9 W (ERP)	0.000225 %
2255.5 MHz	MO	3M22F1D	31.8 W (ERP)	0.000225 %

This authorization effective July 01, 2017 and will expire 3:00 A.M. EST December 01, 2017

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Pad 39a: Launch vehicle 2nd stage, orbital

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2232.5 MHz	MO	3M22F1D	9.4 W (ERP)	0.000225 %
2272.5 MHz	MO	3M22F1D	9.6 W (ERP)	0.000225 %

Special Conditions:

- (1) This STA is limited to telemetry and tracking operations for a single Falcon 9 launch to support the delivery of Dragon capsule to Low Earth Orbit, as part of the NASA Commercial Cargo Resupply program (CRS-12). This STA is limited to the single SpaceX CRS-12 mission. This STA will expire as soon as the launch has been completed or 01 December 2017, whichever occurs first. Any future launches shall submit applications to the FCC to be re-coordinated with the NTIA.
- (2) SpaceX shall be aware that future non-federal launches will be considered on a case-by-case basis, especially for requests in the band 2200-2290 MHz, and SpaceX shall have no expectations that future launches will be approved.
- (3) SpaceX shall keep a log of all transmissions in the band 2200-2290 MHz that shall be provided to the NTIA after the mission. This log shall include, at a minimum, the date, time, frequency, e.i.r.p density, pointing direction of the antennae. The log shall be provided to the following NTIA personnel no later than three (3) weeks after completion of the mission:
Brandon Mitchell at bmitchell@ntia.doc.gov
Ed Drocella at edrocella@ntia.doc.gov
- (4) Prior to transmitting at Complex 39a, Kennedy Space Center, Florida, SpaceX shall coordinate and schedule their operations with Range Scheduling Office, 321-853-5941, email: 1ropschd@us.af.mil, Jamie Bjornbak (James.P.Bjornbak@nasa.gov, 321-867-6905, NASA KSC SMO), and Scott Galbraith (Vincent.s.Galbraith@nasa.gov, 301-286-5089, NASA GSFC SMO).
- (5) As soon as possible, but no later than 60 business days prior to the planned launch, SpaceX is required to provide, as a minimum, launch date/time/window and planned first- and second-stage trajectories, transmission frequencies with associated earth stations and duration/cut-off time to Jimmy Nguyen (jimmy.nguyen@us.af.mil, AFSMO), Felipe Arroyo (felipe.arroyo-1@nasa.gov, NASA/WFF), Scott Galbraith (vincent.s.galbraith@nasa.gov, NASA/GSFC), Kevin Vipavetz (kevin.g.vipavetz@nasa.gov, NASA/LaRC), NOAA Satellite Operations Control Center (philip.l.whaley@noaa.gov), Johnnie Best, (johnnie.w.best1@navy.mil, NMSC) and Cathy Sham (catherine.c.sham@nasa.gov). In the event of last-minute changes, 48-hour notice is required.

Special Conditions:

- (6) 60 days prior to transmitting at Cape Canaveral AFS, Florida, SpaceX shall coordinate and schedule their operations with Range Scheduling, COMM: (321) 853-5941, email: 1ropschd@us.af.mil, Jamie Bjornbak (James.P.Bjornbak@nasa.gov, 321.867.6905, NASA KSC SMO), and Scott Galbraith (vincent.s.galbraith@nasa.gov, 301-286-5089, NASA GSFC SMO). SpaceX is required to provide to the Range Scheduling Office, as a minimum, launch date/time/window and planned first- and second- stage trajectories, transmission frequencies with associated earth stations and duration/cut- off times.
- (7) All transmissions in the band 2200-2290 MHz shall comply with national and international power flux density limits, unless otherwise coordinated and agreed. PFD analysis and exceedances shall be provided in the FCC application and provided to the NTIA for US Government review.
- (8) Due to potential harmful interference to naval activities, SpaceX RF operations plan shall be submitted, at least 60 days prior to planned launch date, to the Naval Surface Warfare Center, Dahlgren Division (NSWCDD), Mr. James Moneyhon (540)653-3477, or james.moneyhon@navy.mil, for assessment. In order to mitigate the potential for interference with these naval activities, four blackout zones (BOZs) shall be assumed as follows: (1) 1500 nautical mile radius centered at 22N160W; (2) 1500 nautical mile radius centered at 33.25N119.57W; (3) 1500 nautical mile radius centered at 4.11N175.2W; and (4) 1500 nautical mile radius centered at 57.46N152.38W. These BOZs shall be implemented, unless otherwise coordinated and agreed to by the Naval Surface Warfare Center, Dahlgren Division (NSWCDD). In addition, SpaceX must also comply with any and all restrictions that may be levied by NSWCDD.
- (9) The STOP BUZZER POC information for launch operations shall be provided to NTIA (bmitchell@ntia.doc.gov). This phone shall be manned 24/7.
- (10) Radio frequency plan for in-orbit rendezvous operations shall be provided to NASA/JSC Spectrum Manager, Cathy Sham (catherine.c.sham@nasa.gov) for coordination with authorized users prior to scheduling. Requests shall be provided at least 7 business days prior to any planned transmission.