

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

EXPERIMENTAL

(Nature of Service)

WG9XHP

(Call Sign)

XT MO

(Class of Station)

1094-EX-ST-2015

(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 F9-21 commercial GTO mission, from Cape Canaveral.

Station Locations

- (1) MOBILE: Complex 40, Cape Canaveral AFS: Launch vehicle 1st stage, sub-orbital
- (2) MOBILE: Launch vehicle 2nd stage, orbital

Frequency Information

MOBILE: Complex 40, Cape Canaveral AFS: Launch vehicle 1st stage, sub-orbital

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2221.5 MHz	MO	3M27F1D	33.9 W (ERP)	
2273.5 MHz	MO	3M27F1D	33.9 W (ERP)	

This authorization effective November 15, 2015 and will expire 3:00 A.M. EST May 15, 2016

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Launch vehicle 2nd stage, orbital

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2213.5 MHz	MO	3M27F1D 1M00F1D	32.4 W (ERP)	
2251.5 MHz	MO	3M27F1D 2M00F1D	33.9 W (ERP)	
5765 MHz	MO	2M00LXN	193 W (ERP)	

Special Conditions:

- (1) This STA is limited to no earlier than 15 November 2015, to support telemetry, tracking, and command, for the upcoming F9-21 commercial GTO mission. This STA will expire as soon as the vehicle completes its re-entry/splashdown operation or by 15 May 2016, whichever occurs first. Applications for any future launches will need to be submitted to the FCC to be re-coordinated with NTIA.
- (2) The FCC shall ensure that SpaceX is aware that future requests will be considered on a case-by-case basis, especially for requests in the band 2200-2290 MHz, and that SpaceX shall have no expectations that future applications will be approved.
- (3) As soon as possible, but no later than seven business days prior to the planned launch, SpaceX is required to provide the following with the planned launch date/time/window, planned trajectories (1st and 2nd stages), transmission start/end time/receiving stations from liftoff through end of transmission for both the 1st and 2nd stage rockets:
Jimmy Nguyen (jimmy.nguyen@us.af.mil, (301-225- 3729), Air Force Spectrum Management Office (AFSMO)
Rich Rood (richard.l.rood@nasa.gov, 661-276-2138, NASA Dryden SMO)
Farzin Manshadi (farzin.manshadi@jpl.nasa.gov, 818-354-0068, NASA JPL/DSN SMO)
Scott Galbraith (vincent.s.galbraith@nasa.gov, 301-286-5089, NASA GSFC SMO)
Cathy Sham (catherine.c.sham@nasa.gov, 281-483-0124, NASA JSC SMO)
Guy Copeland (Guy.Copeland@navy.mil) 301-225-3833, NMSC)
Johnnie Best (johnnie.w.best1@navy.mil, 301-225-3826, NMSC)
Alfredo Mistichelli (Alfredo.Mistichelli@noaa.gov, 301-713-1647, NOAA/NESDIS).
In the event of last minute changes, 48 hour notice is requested.

Special Conditions:

- (4) Prior to transmitting (both the spacecraft and ground station operation) at Cape Canaveral AFS, Florida or Kennedy Space Center, Florida, SpaceX shall coordinate and schedule its operations by contacting the following:
Steve Parish (Stephen.Parish.1@us.af.mil, 321-853-2012, USAF AFSPC 1 ROPS/DOUS Eastern Range Scheduling Office)
Steven Schindler (steven.f.schindler@nasa.gov, 321-867-2520, NASA KSC SMO)
Ashley Stockbridge (ashley.n.stockbridge@nasa.gov, 321.867.0218, NASA KSC SMO)
Scott Galbraith (vincent.s.galbraith@nasa.gov, 301-286-5089, NASA GSFC SMO)
- (5) The STOP BUZZER POC information, for launch operations shall be provided to Brandon Mitchell at bmittchell@ntia.doc.gov. This phone shall be manned 24/7.
- (6) All transmissions in the band 2200-2290 MHz shall comply with national and international power flux-density limits, except in cases where expected exceedance are pre-coordinated with affected Federal operators identified in conditions 4 and 8.
- (7) SpaceX shall keep a log of all transmissions in the band 2200-2290 MHz that shall be provided to NTIA after the mission. This log should include, at a minimum, the date, time, frequency, e.i.r.p density, and pointing direction of the antennae. The log must be provided to the following no later than 30 days after completion of the mission:
Brandon Mitchell at bmittchell@ntia.doc.gov
Edward Drocella at edrocella@ntia.doc.gov
- (8) SpaceX must coordinate with the Naval Surface Warfare Center, Dahlgren Division (NSWCDD), Mr. James Moneyhon (540) 653-3477 or james.moneyhon@navy.mil, a minimum of 30-days prior to any operations to mitigate harmful interference to Navy and Marine Corps operations. SpaceX must also comply with any and all restrictions that may be levied by the Naval Surface Warfare Center, Dahlgren Division (NSWCDD).
- (9) All SpaceX operations granted on an experimental basis shall be on an unprotected, non-interference basis to authorized federal stations.