

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

EXPERIMENTAL

(Nature of Service)

WG9XHP

(Call Sign)

XT FX MO

(Class of Station)

1096-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. ISS commercial re-supply run, for NASA customer. SpX-8 mission.

Station Locations

- (1) MOBILE: Complex 40, Cape Canaveral AFS: Launch vehicle 1st stage, sub-orbital
- (2) MOBILE: Launch vehicle 2nd stage, orbital
- (3) MOBILE: BOAT, within 20 nautical miles, within 38 km, centered around NL 30-49-54; WL 78-06-29
- (4) MOBILE: BARGE, within 20 nautical miles, within 38 km, centered around NL 30-49-54; WL 78-06-29
- (5) Cape Canaveral AFS (BREVARD), FL - NL 28-33-00; WL 80-34-00

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	28.8 W (ERP)	0.000225 %

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

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

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

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2273.5 MHz	MO	3M27F1D	17 W (ERP)	0.000225 %

MOBILE: Launch vehicle 2nd stage, orbital

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2213.5 MHz	MO	3M27F1D	32.4 W (ERP)	0.000225 %
2251.5 MHz	MO	3M27F1D	33.9 W (ERP)	0.000225 %
5765 MHz	MO	2M00LXN	193 W (ERP)	0.055 %

MOBILE: BOAT, within 20 nautical miles, within 38 km, centered around NL 30-49-54; WL 78-06-29

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2090 MHz	MO	800KG1D	61 W (ERP)	0.00025 %

MOBILE: BARGE, within 20 nautical miles, within 38 km, centered around NL 30-49-54; WL 78-06-29

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2090 MHz	MO	800KG1D	1 W (ERP)	

Frequency Information

Cape Canaveral AFS (BREVARD), FL - NL 28-33-00; WL 80-34-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2090 MHz	FX	800KG1D	1 W (ERP)	0.00025 %

Special Conditions:

- (1) All Space-X operations granted on an experimental basis shall be on an unprotected, non-interference basis (NIB).
- (2) This STA is limited to the single Falcon 9 launch scheduled for no earlier than 15 December 2015, to support the Falcon launch vehicle communications for SpX-8 commercial re-supply run to ISS. This STA will expire as soon as the launch has been completed or by 15 May 2016, whichever occurs first. Any future launches will need to submit applications to the FCC to be re-coordinated with NTIA.
- (3) Space-X 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 Space-X shall have no expectations that future launches will be supported/approved.
- (4) As soon as possible, but no later than seven (7) 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:
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)
In the event of last minute changes, 48 hours' notice is requested.
- (5) Prior to transmitting at Cape Canaveral AFS, Florida, Space-X shall coordinate and schedule their operations through the Eastern Range Scheduling Office, Mr. Steve Parish, Email: stephen.parish.1@us.af.mil; COMM:321-853-2012.
- (6) The STOP BUZZER POC information, for launch operations shall be provided to NTIA (bmitchell@ntia.doc.gov). This phone shall be manned 24/7.
- (7) All transmissions in the band 2200-2290 MHz will comply with national and international power flux-density limits.
- (8) Space-X shall keep a log of all transmissions in the band 2200-2290 MHz that would be provided to NTIA after the mission. This log should include at least date, time, frequency, EIRP density, and pointing direction of the antenna. The log should be provided to the following people at NTIA: bmitchell@ntia.doc.gov and edrocella@ntia.doc.gov.

Special Conditions:

- (9) Space Exploration Technologies Corp 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. Space Exploration Technologies Corp must also comply with any and all restrictions that may be levied by the Naval Surface Warfare Center, Dahlgren Division (NSWCDD).
- (10) As soon as possible, but no later than seven days prior to the planned launch, Space-X is required to provide Mr. Jimmy Nguyen (jimmy.nguyen@us.af.mil, (301-225- 3729), Air Force Spectrum Management Office (AFSMO), with the planned launch date/window. In the event of last minute changes, 48 hour notice is requested.
- (11) As soon as possible, but no later than fourteen days prior to the planned launch, Space-X is required to provide Mr. Jimmy Nguyen (jimmy.nguyen@us.af.mil, (301-225- 3729), Air Force Spectrum Management Office (AFSMO), with any changes in the launch data such as transmissions time for stages and launch trajectory.
- (12) Prior to transmitting at Cape Canaveral AFS, Florida, SpaceX shall coordinate their operations by contacting the following:
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)