David J. Den Herder, 1030 15th Street, NW, Suite 220E, Washington, DC 20009,

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION

EXPERIMENTAL	WF9XGI
(Nature of Service)	(Call Sign)
XT FX MO	0167-EX-ST-2015
(Class of Station)	(File Number)

NAME Space Exploration Technologies Corp.

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:
Capsule communications for SpX-6 mission. ISS commercial re-supply run for NASA customer.

Station Locations

(1) Cape Canaveral AFS (BREVARD), FL - NL 28-33-42; WL 80-34-38; MOBILE: Space: Dragon S-Band Directional Array
(2) Cape Canaveral AFS (BREVARD), FL - NL 28-33-42; WL 80-34-38; MOBILE: Space: Dragon S-Band Omni
(3) Cape Canaveral AFS (BREVARD), FL - NL 28-33-42; WL 80-34-38; MOBILE: Space: Dragon CUCU Patch Hemispherical
(4) Kennedy Space Center (BREVARD), FL - NL 28-37-25; WL 80-41-11
(5) Truth or Consequence (SIERRA), NM - NL 32-59-13; WL 106-58-37

Frequency Information

Cape Canaveral AFS (BREVARD), FL - NL 28-33-42; WL 80-34-38; MOBILE: Space: Dragon S-Band Directional Array

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2216 MHz	MO	546KG1D	167 W (ERP)	

This authorization effective April 01, 2015 and
will expire 3:00 A.M. EST October 01, 2015

FEDERAL COMMUNICATIONS COMMISSION

Frequency Information

Cape Canaveral AFS (BREVARD), FL - NL 28-33-42; WL 80-34-38; MOBILE: Space: Dragon S-Band Omni

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2205.5 MHz	MO	567KF1D	30 W (ERP)	
		2M45F1D		
2216 MHz	MO	12K4G1D	33 W (ERP)	

Cape Canaveral AFS (BREVARD), FL - NL 28-33-42; WL 80-34-38; MOBILE: Space: Dragon CUCU Patch Hemispherical

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
400.5 MHz	MO	338KG1D	2.5 W (ERP)	

Kennedy Space Center (BREVARD), FL - NL 28-37-25; WL 80-41-11

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2040.5675 MHz	FX	5K40G2D	100 W (Output Power)	

Truth or Consequence (SIERRA), NM - NL 32-59-13; WL 106-58-37

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2040.5675 MHz	FX	5K40G2D	6100 W (ERP)	

Special Conditions:

(1) Operation is subject to prior coordination with the Society of Broadcast Engineers, Inc. (SBE); ATTN: Executive Director; 9102 North Meridian Street, Suite 305; Indianapolis, IN 46260; telephone, (866) 632-4222; FAX, (317) 846-9120; e-mail, executivedir @ sbe.org; information, www.sbe.org.

(2) All SpaceX operations granted on an experimental basis shall be on an unprotected, non-interference basis to authorized federal stations.

(3) 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.

(4) As soon as possible, but no later than seven 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)
Ken Stowe (ken.stowe@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.

(5) 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, COMM)
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)

(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) 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 bmitchell@ntia.doc.gov
Edward Drocella at edrocella@ntia.doc.gov

(8) Space Exploration Technologies 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).

Special Conditions:

(9) This STA is limited to no earlier than 08 April 2015, to support the Dragon capsule telemetry, tracking, and command, for the upcoming SpX-6 mission to the International Space Station. This STA will expire as soon as the Dragon capsule completes its re-entry/splashdown operation or by 01 October 2015, whichever occurs first. Applications for any future launches will need to be submitted to the FCC to be re-coordinated with NTIA.

(10) Due to harmful interference expected to U.S. Government systems and operation, SpaceX Dragon downlink (2205.5 MHz and 2216 MHz) is prohibited to Sierra, NM (NL 32-59-13; WL 106-58-37) or any other western U.S. ground stations such as Navy Air Warfare Center San Nicolas Island, Western Range Telemetry Asset CA, Telemetry Asset Hawaii, the Pacific Missile Range in Kauai, Hawaii, and the AFSCN ground station at Vandenberg AFB, CA.

(11) 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 5 and 8.

(12) During Dragon on-orbit mission phase (free flight or attached to the International Space Station), downlink operation is coordinated with NASA JSC SMO (Cathy Sham, catherine.c.sham@nasa.gov, 281.483-0124) at least 48 hours prior to any planned transmission operation. For departure/re-entry support, coordination will be initiated at least 5 days prior to the communications activation for departure and re-entry/splashdown support. Planned communication timeline with start/end time, receiving ground station locations, transmit parameters/power/bandwidth and spacecraft trajectory/orbital locations shall be provided at the time of initiating coordination request.

(13) This authorization SUPERSEDES the previously issued authorization with the same call sign and file number: adds Special Condition (12).