

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

EXPERIMENTAL

(Nature of Service)

WF9XGI

(Call Sign)

XT FX MO

(Class of Station)

0690-EX-ST-2014

(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:

Space Station commercial re-supply run for NASA.

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 September 17, 2014 and will expire 3:00 A.M. EST February 06, 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 2M45F1D	30 W (ERP)	
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) Due to harmful interference expected to U.S. Government systems and operation, SpaceX Dragon downlinks (2216 MHz and 2205.5 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. During re-entry/splash down phase of this mission, SpaceX use of both 2216 MHz and 2205.5 MHz links over the Pacific Ocean and west coast of California will be pre-coordinated with Cathy Sham (catherine.c.sham@nasa.gov, 281-483-0124) at least 5 days prior to planned ISS departure date to mitigate frequency conflicts with Federal agency systems.
- (3) All SpaceX operations granted on an experimental basis shall be on an unprotected, non-interference basis to authorized federal stations.
- (4) All operations shall be limited to launch vehicle communications. This STA is limited to the single Dragon CRS-4 mission scheduled for no earlier than September 19, 2014, to support the NASA cargo resupply mission to the International Space Station. This STA will expire as soon as the mission is completed or on February 05, 2015 with the splash down of Dragon in the Pacific Ocean, whichever occurs first. Any future launches will need to submit applications to the FCC to be re-coordinated with NTIA.
- (5) 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.
- (6) As soon as possible, but no later than seven days prior to the planned launch, SpaceX is required to provide Mr. Jimmy Nguyen (jimmy.nguyen@pentagon.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) with the planned launch date/time/window/duration. In the event of last minute changes, 48 hour notice is requested.
- (7) Prior to transmitting at Cape Canaveral AFS, Florida, SpaceX shall coordinate and schedule their operations through the Eastern Range Scheduling Office, Mr. Steve Parish, COMM:321-853-2012, Stephen.Parish.1@us.af.mil, Steven Schindler (steven.f.schindler@nasa.gov, 321-867-2520, NASA KSC SMO), and Scott Galbraith (vincent.s.galbraith@nasa.gov, 301-286-5089, NASA GSFC SMO).
- (8) The STOP BUZZER POC information, for launch operations shall be provided to NTIA (bmitchell@ntia.doc.gov). This phone shall be manned 24/7.
- (9) All transmissions in the band 2200-2290 MHz will comply with national and international power flux-density limits, except in cases where expected exceedance is pre-coordinated under conditions (2) and (10).
- (10) SpaceX 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:

- (11) This authorization SUPERSEDES the previously issued authorization with the same call sign and file number: corrects Conditions (4) and (9).