David J. Den Herder, 1030 15th Street, NW, Sute 220E, Washington, DC 20005,

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION

EXPERIMENTAL	WF9XGI
(Nature of Service)	(Call Sign)
XT FX MO	1095-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-8 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 December 15, 2015 and
will expire 3:00 A.M. EST June 15, 2016

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) All SpaceX operations granted on an experimental basis shall be on an unprotected, noninterference basis to authorized federal stations. All spacecraft transmission to the ground shall be pre-coordinated for clearance for operation in accordance with each conditions specified below.

(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 Jimmy Nguyen (jimmy.nguyen@us.af.mil, (301-225-3729), Air Force Spectrum Management Office (AFSMO) with the planned launch date/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.

(5) Prior to transmitting (both the spacecraft and ground station operation) at Cape Canaveral AFS, Florida or Kennedy Space Center, 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)
Steve Parish (Stephen.Parish.1@us.af.mil, 321-853-2012)

(6) The STOP BUZZER POC information, for launch operations shall be provided to Brandon Mitchell at 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) 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) This STA is limited to no earlier than 15 Dec 2015, to support the Dragon capsule telemetry, tracking, and command, for the upcoming SpX-8 mission to the International Space Station. This STA will expire as soon as the Dragon capsule completes its re-entry/splashdown operation or by 15 June 2016, whichever occurs first. Applications for any future launches will need to be submitted to the FCC to be re-coordinated with NTIA.

(10) All transmissions in the band 2200-2290 MHz shall comply with national and international power flux-density limits.

Special Conditions:

(11) 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.

(12) Operation at Station Location (5) must be coordinated with the Spaceport America, who, in turn must coordinate with their White Sands Missile Range (WSMR) liaison. The WSMR liaison will schedule the operations as a WSMR Range mission, and will de-conflict the spectrum and airspace with other DoD operations in the region.