Kristi Key, 1 Rocket Rd, Hawthorne, CA 90250,

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION

EXPERIMENTAL	WI2XUB
(Nature of Service)	(Call Sign)
XT FX MO	0579-EX-ST-2020
(Class of Station)	(File Number)

NAME Space Explorations Technologies

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:
Spacecraft communication

Station Locations

(1) Cape Canaveral (BREVARD), FL - NL 28-36-30; WL 80-36-15
(2) Cape Canaveral (BREVARD), FL - NL 28-36-30; WL 80-36-13
(3) Cape Canaveral (BREVARD), FL - NL 28-37-27; WL 80-41-12
(4) Vandenberg AFB (SANTA BARBARA), CA - NL 34-43-09; WL 120-31-52
(5) Cape Canaveral (BREVARD), FL - NL 28-32-37; WL 80-35-25
(6) Kodiak (Kodiak Island), AK - NL 57-27-18; WL 152-22-25
(7) MOBILE: Port Canaveral Dock- Ship, within 10 km, centered around NL 28-24-47; WL 80-37-13
(8) MOBILE: Port Canaveral Recovery Location - Ship, within 75 km, centered around NL 28-15-00; WL 80-15-00
(9) MOBILE: Pensacola Naval Air Station Dock - Ship, within 10 km, centered around NL 30-20-44; WL 87-16-01
(10) Inarajan, GU - NL 13-16-56; EL 144-45-19
(11) MOBILE: Pensacola Recovery Location - Ship, within 75 km, centered around NL 29-48-00; WL 87-30-00
(12) Boca Chica (CAMERON), TX - NL 25-59-27; WL 97-10-55
(13) MOBILE: Port Canaveral Dock- Ship, within 10 km, centered around NL 28-24-47; WL 80-37-13
(14) MOBILE: Port Canaveral Recovery Location - Ship, within 75 km, centered around NL 28-15-00; WL 80-15-00

This authorization effective May 05, 2020 and
will expire 3:00 A.M. EST November 05, 2020

FEDERAL COMMUNICATIONS COMMISSION

Station Locations

(15) MOBILE: Pensacola Naval Air Station Dock - Ship, within 10 km, centered around NL 30-20-44; WL 87-16-01

(16) MOBILE: Pensacola Recovery Location - Ship, within 75 km, centered around NL 29-48-00; WL 87-30-00

Frequency Information

Cape Canaveral (BREVARD), FL - NL 28-36-30; WL 80-36-15

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	FX	4M31G1D	3 W (ERP)	0.00003 %

Cape Canaveral (BREVARD), FL - NL 28-36-30; WL 80-36-13

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	FX	4M31G1D	3 W (ERP)	0.00003 %

Cape Canaveral (BREVARD), FL - NL 28-37-27; WL 80-41-12

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	FX	4M31G1D	609 W (ERP)	0.00003 %

Vandenberg AFB (SANTA BARBARA), CA - NL 34-43-09; WL 120-31-52

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	FX	4M31G1D	609 W (ERP)	0.00003 %

Frequency Information

Cape Canaveral (BREVARD), FL - NL 28-32-37; WL 80-35-25

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	FX	4M31G1D	609 W (ERP)	0.00003 %

Kodiak (Kodiak Island), AK - NL 57-27-18; WL 152-22-25

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	FX	4M31G1D	609 W (ERP)	0.00003 %

MOBILE: Port Canaveral Dock- Ship, within 10 km, centered around NL 28-24-47; WL 80-37-13

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	MO	4M31G1D	609 W (ERP)	0.00003 %

MOBILE: Port Canaveral Recovery Location - Ship, within 75 km, centered around NL 28-15-00; WL 80-15-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	MO	4M31G1D	609 W (ERP)	0.00003 %

Frequency Information

MOBILE: Pensacola Naval Air Station Dock - Ship, within 10 km, centered around NL 30-20-44; WL 87-16-01

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	MO	4M31G1D	609 W (ERP)	0.00003 %

Inarajan, GU - NL 13-16-56; EL 144-45-19

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	FX	4M31G1D	609 W (ERP)	0.00003 %

MOBILE: Pensacola Recovery Location - Ship, within 75 km, centered around NL 29-48-00; WL 87-30-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	MO	4M31G1D	609 W (ERP)	0.00003 %

Boca Chica (CAMERON), TX - NL 25-59-27; WL 97-10-55

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	FX	4M31G1D	609 W (ERP)	0.00003 %

Frequency Information

MOBILE: Port Canaveral Dock- Ship, within 10 km, centered around NL 28-24-47; WL 80-37-13

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	MO	4M31G1D	3 W (ERP)	0.00003 %

MOBILE: Port Canaveral Recovery Location - Ship, within 75 km, centered around NL 28-15-00; WL 80-15-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	MO	4M31G1D	3 W (ERP)	0.00003 %

MOBILE: Pensacola Naval Air Station Dock - Ship, within 10 km, centered around NL 30-20-44; WL 87-16-01

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	MO	4M31G1D	3 W (ERP)	0.00003 %

MOBILE: Pensacola Recovery Location - Ship, within 75 km, centered around NL 29-48-00; WL 87-30-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2106.40625 MHz	MO	4M31G1D	3 W (ERP)	0.00003 %

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) The station identification requirements of Section 5.115 of the Commission's Rules are waived.

Special Conditions:

(3) Immediate notification shall be provided to the NASA GSFC Spectrum Management Office at 301.283.5089 or NASA-DL-GSFC-Spectrum-Management@mail.nasa.gov, and the NASA JSC Spectrum Manager, Cathy Sham at 281.483.0124 or catherine.c.sham@nasa.gov (jsc-dl-spectrum-management@mail.nasa.gov), in the event that activation of any SpaceX or SpaceX-contracted station is required to address contingency scenarios 1-3 in Special Condition (6).

(4) Prior to transmitting at Cape Canaveral AFS, FL, SpaceX shall coordinate and schedule their operations with Range Scheduling, COMM: (321)-853-5941, email: 1ropschd@us.af.mil

(5) This STA is limited to contingency command operations for the upcoming SpaceX Dragon 2 mission to the International Space Station (ISS). This STA will expire when the Dragon 2 completes its re-entry/splashdown and recovery operations or 5 November 2020, whichever occurs first. Any future missions shall submit new applications to the FCC to be re-coordinated with the NTIA.

(6) All transmissions from the indicated stations to the Dragon 2 spacecraft during any phase of flight are contingent upon occurrence of one of the following scenarios: 1) a non-recoverable loss of the Tracking and Data Relay Satellite (TDRS) forward link signal to the Dragon 2 spacecraft during a critical mission phase, 2) a declared spacecraft emergency due to a Dragon 2 spacecraft issue, 3) during a 2nd or 3rd rendezvous attempt where mission success is jeopardized, or 4) As excepted below. All transmissions shall cease after successful mitigation of the contingency scenario and transition back to nominal operations.

(7) Exceptions for the use of the 2106.50625 MHz transmissions are permitted below. These operations shall be coordinated at least 14 days prior to the planned event, and all operations shall be on a non-interference basis:

a. System Checkout Activities: System checkout activities are limited to: 1) one pre-launch checkout between a SpaceX station at Cape Canaveral Air Force Station/Kennedy Space Center and the Dragon 2 spacecraft while on the launch pad, 2) one on-orbit checkout with a single SpaceX-contracted ground station prior to joint operation with the International Space Station (ISS) for rendezvous approach, (3) a pre-departure command path checkout between a single SpaceX ground station and a single SpaceX-contracted ground station and the Dragon 2 spacecraft docked to the ISS.
b. Post Dragon 2 Splashdown: Recovery boat transmissions using a frequency of 2106.40625 MHz during nominal recovery operations shall be limited to an ERP less than or equal to 3 Watts (ground station lower power mode). Nominal recovery operations start about 30 minutes after splashdown and last through umbilical power/communication connection, totaling approximately 6 to 8 hours.

(8) SpaceX shall provide the radio frequency communication plan, spacecraft trajectory, event timeline, and operation scenarios to the NASA JSC Spectrum Manager, Cathy Sham (catherine.c.sham@nasa.gov) for coordination with authorized users prior to transmitter activation of planned events. Coordination requests for the on-orbit checkout prior to ISS rendezvous/approach shall be submitted no later than 30 days prior to launch. Coordination requests for departure checkout and splashdown recovery boat command operations shall be submitted no later than 21 days prior to ISS departure. In the event of last-minute changes, a minimum 48-hour notice is required.

Special Conditions:

(9) Prior to operating at Vandenberg Air Force Base in California, SpaceX shall ensure proper UDS documentation is established to support their operations and send a letter to 2 ROPS/DOS officially appointing schedulers to interface with the Western Range Scheduling Office. After this documentation is in place, SpaceX schedulers can coordinate and schedule operations by contacting the Western Range Scheduling Office, 2 ROPS/DOS, at 2ROPS.DOS@us.af.mil or (805) 606-8825.