

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

EXPERIMENTAL

(Nature of Service)

WW9XPI

(Call Sign)

XT MO

(Class of Station)

1287-EX-ST-2024

(File Number)

NAME Space Exploration Holdings, LLC

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:**

Additional locations to ongoing test communications between direct-to-cellular payloads on SpaceXs NGSO Gen2 satellites and a limited number of Part 24 certified test devices.

Station Locations

- (1) MOBILE: non-geostationary, SP
- (2) MOBILE: Statewide, OR
- (3) MOBILE: Statewide, NV
- (4) MOBILE: Statewide, KS

**Frequency Information**

MOBILE: non-geostationary, SP

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1990-1995 MHz	MO	1M08D7W 4M50D7W	384591.8 W (ERP)	0.002 %

This authorization effective September 26, 2024 and will expire 3:00 A.M. EST January 17, 2025

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



## Frequency Information

MOBILE: Statewide, OR

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1910-1915 MHz	MO	5M00W7D	1200 mW (ERP)	0.0001 %

MOBILE: Statewide, NV

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1910-1915 MHz	MO	5M00W7D	1200 mW (ERP)	0.0001 %

MOBILE: Statewide, KS

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1910-1915 MHz	MO	5M00W7D	1200 mW (ERP)	0.0001 %

## Special Conditions:

- (1) The proposed operation may cause harmful interference to the Advanced Wireless Service licensees operating in adjacent band, 1995-2000 MHz. SpaceX certify that SpaceX would comply with the out of band emissions limits specified in Section 25.202 of the Commission's Rules regarding frequency tolerance and emission limits prior to the authorization can be issued.
- (2) Following launch of each satellite, the licensee must notify the FCC through electronic submission to the license file, of the status of the satellite (transmissions commenced, etc.), not later than 7 days after commencement or expected commencement of transmissions, and of termination of transmissions, not later than three months after such termination. Note, EchoStar Corporation filed in ELS -File -No. 1287-EX-ST-2024, Letter from Pantelis Michalopoulos, Counsel to EchoStar et al., to Marlene H. Dortch, Secretary, FCC (dated Aug. 14, 2024). We address the filing in ELS File No. 1287-EX-ST-2024 to the extent relevant herein and may revisit those filings where applicable in other related SpaceX applications.

**Special Conditions:**

- (3) All operations of the Gen2 Starlink satellites must also comport with the Commission's decision in the SpaceX Gen2 Partial Grant, Order and Authorization, FCC 22- 91 (rel. Dec. 1, 2022), and the terms and conditions in the SpaceX Gen2 V-band Grant, ICFS File No. SAT-MOD-20230322-00062 (granted-in-part/dismissed-in-part Oct. 13, 2023, reissued Nov. 9, 2023). Except for the addition of testing authority specifically addressed in this grant of STA, operations must also comport with all terms and conditions of the SpaceX Gen2 modification, ICFS File No. SAT-MOD-20230207-00021 (granted-in-part/deferred-in-part December 1, 2023).
- (4) This STA grant is limited to testing in the continental United States with earth stations at the specific locations identified (statewide Kansas, Nevada, and Oregon). Although SpaceX's satellites are capable of operating in the 1429 MHz to 2690 MHz frequencies, testing is limited to the 1910-1915 MHz and 1990-1995 MHz bands. SpaceX may not conduct any commercial operations. SpaceX must obtain additional approval from the Commission before operating its satellites in the 1429 MHz to 2690 MHz frequency range with any locations outside the United States.
- (5) Prior to commencing any operations in the 1910-1915 MHz and 1990-1995 MHz bands, the applicant must obtain consent from T-Mobile, the licensee in this band.
- (6) Operations of earth stations are permissible only in SpaceX/T-Mobile controlled environments, and are not permitted to public consumer devices. Notice will be given to any users that E911 functionality may not be available during test periods.
- (7) One week prior to commencing any operations authorized by this STA, SpaceX shall notify any potentially affected operators, unless the relevant terrestrial provider(s) has been designated to provide notification(s) or conduct coordination processes. For purposes of this STA, a potentially affected operator includes any operators authorized to use the frequency bands covered by this STA and those authorized to operate in frequency bands adjacent to the 1910-1915 MHz and 1990-1995 MHz bands. The notice should include the day and times of each test as well as the name and contact information of the stop buzzer personnel that will be available to cease operations in the event of reported interference.
- (8) The 24/7 point of contact in the United States, with authority and ability to cease all emissions, for this operation is [satellite-operators-pager@spacex.com](mailto:satellite-operators-pager@spacex.com), which links to the pagers of appropriate technical personnel.
- (9) All operations under this grant of STA must be on an unprotected and non-interference basis (NIB), i.e., SpaceX must not cause harmful interference to and must not claim protection from interference caused to it by any other lawfully operating station.
- (10) In the event of any harmful interference caused under this grant of STA, SpaceX must immediately cease operations upon notification of such interference. SpaceX must immediately inform the Commission, in writing, of such an event.

**Special Conditions:**

- (11) SpaceX shall maintain full control of its satellites at all times and shall operate its satellites in accordance with any existing coordination agreements.
- (12) All operations under this grant must stay within the minimum power level, as codified of the Commission's rules, to close the link.
- (13) Earth station operations must not exceed the operational power levels and parameters requested and coordinated. Operations must comply with the parameters below:

Parameters	Earth Stations
Max Power	0.5 W
Max ERP	30.8 dBm
Frequency Tolerance	0.0001%
Emission Designator	5M00W7D
Bandwidth	5 MHz
- (14) SpaceX shall submit the appropriate advance publication and information to the International Telecommunication Union (ITU) prior to any operations. SpaceX must comply with any cross-border agreement(s) relevant to this band.
- (15) Any action taken or expense incurred as a result of operations pursuant to this grant is solely at SpaceX's own risk. Grant of this Experimental STA does not imply grant or denial of any other pending application and is without prejudice to any determination that the Commission may make regarding pending or future SpaceX applications.
- (16) This authorization is subject to modification to bring it into conformance with any rules or policies adopted by the Commission in the future. Accordingly, in making any investments relating to operations authorized in this grant, SpaceX assumes the risk that it may be subject to additional conditions or requirements as a result of any future Commission actions.
- (17) SpaceX must submit a test report in the ELS license file for this grant within 150 days reporting on activities occurring during the first 90 days of the license period and within 240 days following the grant of this license reporting on activities over the entire license period. To the extent possible and commensurate with data gathered during the conduct of the testing, this test report should provide details of SpaceX testing including the theoretical and measured in-band and out-of-band received power along with all assumptions and/or specifications used to calculate/measure those power levels as well as any technical details and operational procedures related to protecting radio astronomy sites. Specifically, measurements should include the simultaneous received power level (e.g., temporal power flux) of individual and multiple satellite beams (from specified geolocation(s) of multiple satellites), with an accounting of both the fundamental channel and adjacent channel received power (i.e. received aggregate power and component beam power of the desired channel and adjacent OOB channel). Note that the FCC rules (47 CFR 5.73(a)(1)) permit the Commission to request periodic reports to evaluate the progress of the experimental program and that the Commission could request that SpaceX supplement any report filed with additional information.

**Special Conditions:**

- (18) SpaceX must, at all times, take all necessary measures to ensure that the STA operation at this earth station does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR §§ 1.1307(b), 1.1310 wherever such exposures might occur. Measures must be taken to ensure compliance with limits for both general population/uncontrolled exposure and for occupational/controlled exposure, as defined in those rule sections. The FCC's OET Bulletin 65 (available online at [www.fcc.gov/oet/rfsafety](http://www.fcc.gov/oet/rfsafety)) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alert signs and protective equipment for workers.