

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
RADIO STATION CONSTRUCTION PERMIT
AND LICENSE

EXPERIMENTAL
(Nature of Service)

XT MO
(Class of Station)

WP2XVF
(Call Sign)

0546-EX-CN-2025
(File Number)

NAME Space Telecommunications, Inc.

Subject to the provisions of the Communications Act of 1934, subsequent acts, and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions and requirements set forth in this license, the licensee hereof is hereby authorized to use and operate the radio transmitting facilities hereinafter described for radio communications in accordance with the program of experimentation described by the licensee in its application for license.

Operation: In accordance with Sec. 5.3(h) of the Commission's Rules

Station Locations

- (1) MOBILE: LEO On Spacecraft S Band TMTC, nongeostationary, SP
- (2) MOBILE: LEO On Spacecraft UHF, Nongeostationary, SP
- (3) MOBILE: LEO On Spacecraft S-Band Feeder Link, nongeostationary, SP
- (4) MOBILE: LEO On Spacecraft S-Band Service Link, nongeostationary, SP
- (5) MOBILE: LEO On Spacecraft High ISL, nongeostationary, SP
- (6) MOBILE: LEO On Spacecraft Low ISL, nongeostationary, SP

Frequency Information

MOBILE: LEO On Spacecraft S Band TMTC, nongeostationary, SP

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2245 MHz	MO	210KF1D	0.416 W (ERP)	0.002 %

This authorization effective July 13, 2026 and
will expire 3:00 A.M. EST October 01, 2027

FEDERAL
COMMUNICATIONS
COMMISSION



Frequency Information

MOBILE: LEO On Spacecraft UHF, Nongeostationary, SP

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
401.5 MHz	MO	2K40F1D	2.38 W (ERP)	0.002 %

MOBILE: LEO On Spacecraft S-Band Feeder Link, nongeostationary, SP

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2245 MHz	MO	5M00D7W	4.85 W (ERP)	0.002 %

MOBILE: LEO On Spacecraft High ISL, nongeostationary, SP

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
20150 MHz	MO	2M00D7W	29.78 W (ERP)	0.01 %

MOBILE: LEO On Spacecraft Low ISL, nongeostationary, SP

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
17250 MHz	MO	2M00D7W	29.78 W (ERP)	0.01 %

Special Conditions:

- (1) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (2) Following launch of the 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.

Special Conditions:

- (3) Upon receipt of a conjunction warning from the JSpOC or other source, the licensee must review the warning and take all possible steps to assess and, if necessary, to mitigate collision risk, including, but not limited to: contacting the operator of any active spacecraft involved in such warning; sharing ephemeris data and other appropriate operational information with any such operator; modifying spacecraft attitude and/or operations.
- (4) An experimental license issued by the Federal Communications Commission (FCC) authorizes transmissions under U.S. control, within U.S. borders and its territories. For any transmission outside the U.S., the applicant must comply with applicable laws, regulations, and licensing procedures of the ITU, other countries, and the U.S., as well as the conditions of this authorization.
- (5) The operation is limited to TT&C activities.
- (6) This operation is for experimental purposes only. Widely divergent and unrelated experiments must not be conducted under this license. Experimental licensees are not permitted to provide commercial service, charge fees, or receive payments for products or services of operation.
- (7) All operations are on a strict non-interference basis to authorized federal users. Numerous factors such as future federal space missions brought-into-use after granting this authorization may prohibit its extension or renewal.
- (8) Space-to-Earth transmissions centered at 2245 MHz and using an emission bandwidth of 210 kHz shall not exceed an Effective Radiated Power (ERP) of 0.416 W to ensure conformance with the power flux-density (PFD) limits in Article 21 of the Radio Regulations. Additionally, these links shall not exceed a duty cycle (time transmitting relative to time visible to an authorized ground station) of 0.5%. Additionally, use of downlink transmissions centered at 2245 MHz with an emission bandwidth of 210 kHz shall be strictly limited to durations when the CTC-1A/B/C spacecraft is visible to one of the earth station locations listed below:
 - A.Svalbard, Norway
 - B.Tromsø, Norway
 - C.Troll, Antarctica
 - D.Awarua, New Zealand
 - E.Mingenew, Australia
 - F.Jeju, South Korea
 - G.Absheron, Azerbaijan
 - H.Punta Arenas, Chile
 - I.Kandy, Sri Lanka
 - J.Mon Loisir, Mauritius
 - K.Santa Maria, Azores, Portugal
 - L.Unst, UK
- (9) Space-to-Earth transmissions centered at 2245 MHz and using an emission bandwidth of 5 MHz shall not exceed a duty cycle of 3% and are strictly limited to durations when the CTC-1A/B/C spacecraft is visible to Lagos, Nigeria. Furthermore, measured data for this mode must conform to the emission mask provided in Section 5.6.2 of the NTIA Manual, and measured data demonstrating compliance must be submitted to the FCC prior to its use.

Special Conditions:

- (10) Space-to-Earth transmissions centered at 401.5 MHz and using an emission bandwidth of 2.4 kHz shall not exceed a duty cycle of 0.5% and are strictly limited to durations when the CTC-1A/B/C spacecraft is visible to one of the earth station locations listed below:
A. Melbourne, FL
B. Upland, IN
C. Unst, UK
- (11) Space Telecommunications, Inc. shall ensure that space-to-Earth transmissions centered at 401.5 MHz with an emission bandwidth of 2.4 kHz are ceased and no receive operations are permitted when the conjunction angle formed by the location 38° 38' 09" N 90° 13' 38" W, the CTC-1A/B/C spacecraft, and the NASA ACS3 (NORAD ID: 59588) spacecraft is less than or equal to 20 degrees.
- (12) This authorization does not directly authorize any transmissions in the 2025-2110 MHz band. However, for electromagnetic compatibility with Federal systems, Space Telecommunications, Inc. specified an uplink (Earth-to-space) centered at 2067.5 MHz with an emission bandwidth of 52.6 kHz and an uplink centered at 2072.5 MHz with an emission bandwidth of 5 MHz. Any deviation from these two modes shall be cause for revocation of this license. Space Telecommunications, Inc. shall ensure that earth station operations adhere to the following constraints to protect Federal space systems:
oThe uplink centered at 2067.5 MHz shall not exceed a duty cycle of 1%.
oThe uplink centered at 2072.5 MHz shall not exceed a duty cycle of 3%.
Additionally, the uplink centered at 2072.5 MHz shall be completely ceased when any of the following satellites are within 5 degrees of the earth station antenna boresight: AXAF-1 (NORAD ID: 25867), ACS3 (NORAD ID: 59588), EZIE (NORAD ID: 63247, 63249, and 63250), GRACE-FO (NORAD ID: 43476 and 43477), IXPE (NORAD ID: 49954), Pandora (NORAD ID: TBD, Expected Launch in Dec 2025), PTD-R (NORAD ID: 60523), and TROPICS (NORAD ID: 56442, 56444, 56753, and 56754).
- (13) Space Telecommunications, Inc. shall submit the appropriate advance publication and information to the International Telecommunications Union (ITU) prior to operations of the CTC-1A/B/C spacecraft, and transmissions from foreign earth stations to the CTC-1A/B/C spacecraft shall obtain the appropriate regulatory approvals from the respective foreign administrations prior to operations.
- (14) POINT-OF-COMMUNICATIONS: CTC-1A
- (15) Stop buzzer, Adam Wexler at (321) 987-0915.
- (16) Operation using 2185 MHz is not permitted.
- (17) This authorization supersedes the previously issued authorization with the same Callsign and file number, with the frequency removed.