

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

EXPERIMENTAL

(Nature of Service)

WA8XDI

(Call Sign)

XT FX MO

(Class of Station)

1174-EX-ST-2026

(File Number)

NAME Space Exploration Technologies Corp. (SpaceX)

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:

Launch vehicle communications for Starship Orbital Return Demo mission launching from Starbase, TX. The 1st stage booster and the 2nd stage will return to the launch site.

Station Locations

- (1) MOBILE: Starbase TX Orbital Pad; Starship, Boca Chica, TX, centered around NL 25-59-48; WL 97-09-18
- (2) MOBILE: Orbital Pad, LV Booster, Boca Chica TX, centered around NL 25-59-48; WL 97-09-18
- (3) Boca Chica (CAMERON), TX - NL 25-59-48; WL 97-09-12
- (4) Boca Chica (CAMERON), TX - NL 25-59-46; WL 97-09-17
- (5) Boca Chica (CAMERON), TX - NL 25-59-46; WL 97-09-17
- (6) Boca Chica (CAMERON), TX - NL 25-59-47; WL 97-09-17

Frequency Information

MOBILE: Starbase TX Orbital Pad; Starship, Boca Chica, TX, centered around NL 25-59-48; WL 97-09-18

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2230 MHz	MO	4M88G1D	25 W (ERP)	0.000225 %

This authorization effective July 29, 2026 and
will expire 3:00 A.M. ET December 28, 2026

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Starbase TX Orbital Pad; Starship, Boca Chica, TX, centered around NL 25-59-48; WL 97-09-18

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2236 MHz	MO	4M88G1D	25 W (ERP)	0.000225 %

MOBILE: Orbital Pad, LV Booster, Boca Chica TX, centered around NL 25-59-48; WL 97-09-18

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2364.5 MHz	MO	4M88G1D	25 W (ERP)	0.000225 %
2370.5 MHz	MO	4M88G1D	25 W (ERP)	0.000225 %
2376.5 MHz	MO	4M88G1D	25 W (ERP)	0.000225 %
2382.5 MHz	MO	4M88G1D	25 W (ERP)	0.000225 %

Boca Chica (CAMERON), TX - NL 25-59-48; WL 97-09-12

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2056 MHz	FX	4M05G1D	3 W (ERP)	0.00025 %
2062 MHz	FX	4M05G1D	3 W (ERP)	0.00025 %

Frequency Information

Boca Chica (CAMERON), TX - NL 25-59-46; WL 97-09-17

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2056 MHz	FX	4M05G1D	3 W (ERP)	0.00025 %
2062 MHz	FX	4M05G1D	3 W (ERP)	0.00025 %

Boca Chica (CAMERON), TX - NL 25-59-46; WL 97-09-17

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2056 MHz	FX	4M05G1D	3 W (ERP)	0.00025 %
2062 MHz	FX	4M05G1D	3 W (ERP)	0.00025 %

Boca Chica (CAMERON), TX - NL 25-59-47; WL 97-09-17

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2056 MHz	FX	4M05G1D	3 W (ERP)	0.00025 %
2062 MHz	FX	4M05G1D	3 W (ERP)	0.00025 %

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) All SpaceX operations granted on an experimental basis under this STA shall be on an unprotected and non-interference basis to authorized federal stations.

Special Conditions:

- (3) All operations under this STA must be limited to telemetry, tracking and launch vehicle communications for the Starship test vehicle during its Orbital Return Demo, launching from Boca Chica (TX), and the experimental recovery operations following the mission. This STA will expire at the conclusion of recovery operations or 28 December 2026, whichever occurs first. Any requests for future test flights, further extensions, or future missions must submit new applications to the FCC to be coordinated with the NTIA and federal agencies.
- (4) Transmissions in the 2200-2290 MHz band must be strictly limited to second-stage telemetry channels with a bandwidth of 4.88 MHz and center frequencies of 2230 and 2236 MHz. Such transmissions are limited to time durations when Starship is within view of a receiving earth station. Future requests must provide all necessary technical justification for the total requested bandwidth and, to the greatest extent possible, must maximize spectral efficiency by eliminating transmission of redundant telemetry streams using multiple center frequencies.
- (5) SpaceX must ensure that Starship transmissions centered at 2236 MHz are ceased and no earth station receive operations are permitted when the conjunction angle formed by the location 34° 12' 07-N 118° 10' 35- W (angle vertex), Starship, and the International Space Station (NORAD ID: 25544) is less than or equal to five (5) degrees.
- (6) Transmissions under this STA that use center frequencies of 2056 MHz or 2062 MHz must be limited to an ERP less than or equal to 3 Watts.

Special Conditions:

- (7) As soon as possible, but no later than sixty (60) business days prior to the planned launch, SpaceX is required to provide, as a minimum, launch date/time/window and planned first- and second-stage trajectory, transmission frequencies with associated duration/cut-off time to"
- David Stringham (david.stringham.2@spaceforce.mil, USSF SSC 2 ROPS/DOPS)
Dave Everett (david.everett.16@spaceforce.mil, USSF SSC 2 ROPS/DOPS)
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Michael Ferens (michael.t.ferens@nasa.gov, NASA LaRC)
NOAA Satellite Operations Control Center (Matt.G.Sullivan@noaa.gov)
NASA JSC Spectrum Office (JSC-DL-Spectrum-Management@mail.nasa.gov)
- SpaceX must also provide any additional technical or operational information that may be requested by frequency coordination contacts to facilitate successful coordination. In the event of last-minute changes to any data provided for the purpose of coordination, 48-hour notice is required.
- (8) All transmissions in the band 2200-2290 MHz must comply with national and international power flux-density (PFD) limits, unless otherwise coordinated and agreed to. PFD analysis and exceedances must be provided in the FCC application and provided to the NTIA for US Government review.
- (9) The STOP BUZZER POC information for launch operations must be provided to NTIA (ravery@ntia.doc.gov). This phone must be manned 24/7.
- (10) AFTRCC expire 12/28/2026
- (11) Commercial launch service providers should be aware that a satellite integrated into a launch vehicle or deployment device without a current FCC authorization may need to be removed from that vehicle or deployment device if the satellite operator's application for an FCC authorization is not acted upon favorably, or for various reasons cannot be granted within a time frame consistent with the launch schedule. Commercial launch providers should exercise due diligence to verify satellite operator's regulatory approvals prior to launch (FCC Enforcement Advisory DA 18-368).
- (12) Stop Buzzers: Operations Support Coordinator (956) 604-1037.