Jennifer Warren, 2121 Crystal Drive, Suite 100, Arlington, VA 22202,

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION

EXPERIMENTAL	WH9XMK
(Nature of Service)	(Call Sign)
XT FX MO	0345-EX-ST-2014
(Class of Station)	(File Number)

NAME Lockheed Martin Corporation

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 commercial space launch mission from Space Launch Complex 37B (LC-37B) at Cape Canaveral Air Force Station, Florida.

Station Locations
(1) , ; MOBILE: Launch Vehicle- Suborbital Trajectory

Frequency Information

, ; MOBILE: Launch Vehicle- Suborbital Trajectory

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2233.5-2249.5 MHz	FX	7M68G1D	146.218 W (ERP)	
2233.5-2249.5 MHz	MO	7M68G1D	146.218 W (ERP)	
2240.79-2242.21 MHz	MO	768KG1D	237.137 W (ERP)	

This authorization effective July 29, 2014 and
will expire 3:00 A.M. EST January 30, 2015

FEDERAL COMMUNICATIONS COMMISSION

Frequency Information

, ; MOBILE: Launch Vehicle- Suborbital Trajectory

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2240.79-2242.21 MHz	FX	768KG1D	237.137 W (ERP)	
2253.95-2257.06 MHz	MO	3M11F1D	35.73 W (ERP)	
2253.95-2257.06 MHz	FX	3M11F1D	35.73 W (ERP)	
2270.95-2274.06 MHz	FX	3M11F1D	35.73 W (ERP)	
2270.95-2274.06 MHz	MO	3M11F1D	35.73 W (ERP)	
2287.121-2287.879 MHz	MO	758KG1D	35.73 W (ERP)	
2287.121-2287.879 MHz	FX	758KG1D	35.73 W (ERP)	

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) Licensee should be aware that other stations may be licensed on these frequencies and if any interference occurs, the licensee of this authorization will be subject to immediate shut down.

Special Conditions:

(3) NTIA's response is based on the FCC authorization being an experimental special temporary authority (STA) for launch vehicle communications for the commercial space launch mission from Space Launch Complex 37B (LC-37B) at Cape Canaveral AFS, Florida during the period 29 July 2014 thru 29 January 2015 to support the launch processing operations, in-flight profiles, and a controlled re-entry of the Delta Cryogenic Second Stage (DCSS) vehicle. Any NTIA non-objection is based on the applicant's acknowledgement that construction of this satellite (and this mission) will be entirely at the applicant's risk and will not entitle the applicant to any assurances that its proposed experiment will be subsequently approved or regular services subsequently authorized (see 47CFR § 5.53 "Station authorization required"). NTIA and the federal agencies will need to consider in greater detail the technical and policy issues concerning any operational request. The applicant should be aware that the NTIA response to an operational system may not be the same as the response to this experimental one-time STA.

(4) One policy of concern relates to non-federal use of the band 2200-2290 MHz. Based on DoD concerns (see letter from Defense Secretary-to-Commerce Secretary dated 2 August 1999), non-federal use of the band is limited to commercial space launch on an exception basis. An exception to this policy would be under footnote US303 ("In the band 2285-2290 MHz, non-Federal space stations in the space research, space operations and Earth exploration-satellite services may be authorized to transmit to the Tracking and Data Relay Satellite System subject to such conditions as may be applied on a case-by-case basis. Such transmissions shall not cause harmful interference to authorized Federal stations. The power flux-density at the Earth's surface from such non-Federal stations shall not exceed -144 to -154dBW/m²/4 kHz, depending on angle of arrival, in accordance with ITU Radio Regulation 21.16."). These limits are also contained in the NTIA Manual Section 8.2.36 (Power Flux-Density Limits). The Lockheed Martin request may go beyond what the policy allows, e.g., number of frequencies (4) being requested in the band 2200-2290 MHz may go beyond what is required for a launch. Noting that this application is only for an experimental special temporary authority (STA), NTIA has some flexibility in reviewing this request with the understanding that future use of the band beyond what is allowed per policy, e.g., Secretary Defense letter, will not be allowed. Any application to operate in the band 2200-2290 MHz for non-Federal use is done at the applicant's own risk as they may be denied grants in the future. NTIA is reviewing this application with DoD and will work with the concerned federal agencies to determine what policy may be appropriate in considering future requests. NTIA is hopeful that the outcome of the FCC Notice of Proposed Rule Making and Notice of Inquiry (FCC 13-65) released May 9, 2013 will resolve these issues in the future.

(5) All Lockheed Martin operations granted on an experimental basis shall be on an unprotected, noninterference basis to authorized federal stations.

(6) This STA is to support the single launch to include ground testing of launch vehicle pad operations from Space Launch Complex 37B (LC-37B) at Cape Canaveral AFS, Florida to support the launch processing operations, inflight profiles, and a controlled re-entry of the Delta Cryogenic Second Stage (DCSS) vehicle. This STA will expire as soon as the launch plus 4 days is completed or by January 29, 2015, whichever occurs first. Any future launches will need to submit applications to the FCC to be re-coordinated with NTIA

Special Conditions:

(7) Lockheed Martin 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 Lockheed Martin shall have no expectations that future launches will be approved.

(8) As soon as possible, but no later than seven days prior to the planned testing and launch, Lockheed Martin is required to provide Mr. Jimmy Nguyen (jimmy.nguyen@us.af.mil, (301-225- 3729), Air Force Spectrum Management Office (AFSMO), Catherine Sham (catherine.c.sham@nasa.gov, 281-222-1117, NASA Johnson Space Center SMO), Rich Rood (richard.l.rood@nasa.gov, 661-276-2138, NASA Armstrong SMO), Farzin Manshadi (farzin.manshadi@jpl.nasa.gov, 818-354-0068, NASA JPL/DSN SMO), Scott Galbraith (vincent.s.galbraith@nasa.gov, 301-286-5089, NASA GSFC SMO), the NOAA Satellite Operations Control Center (SOCC) Shift Supervisor (301) 817-4198 with the planned launch date/time/window/duration. In the event of last minute changes, 48 hour notice is requested.

(9) Prior to operating at Cape Canaveral AFS, Florida, Lockheed Martin shall schedule their operations through the Eastern Range Scheduling Office, Mr Steve Parish, COMM:321-853-2012, Stephen.Parish.1@us.af.mil, Steven Schindler (steven.f.schindler@nasa.gov, 321-867-2520, NASA KSC SMO), and Scott Galbraith (vincent.s.galbraith@nasa.gov, 301-286-5089, NASA GSFC SMO).

(10) The STOP BUZZER POC information, for launch operations shall be provided to NTIA (bmitchell@ntia.doc.gov). This phone shall be manned 24/7.

(11) Lockheed Martin shall keep a log of all transmissions in the band 2200-2290 MHz that would be provided to NTIA after the mission. This log should include at least date, time, frequency, EiRP density, and pointing direction of the antenna. The log should be provided to the following people at NTIA: bmitchell@ntia.doc.gov and edrocella@ntia.doc.gov.

(12) Lockheed Martin 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. Lockheed Martin must also comply with any and all restrictions that may be levied by the Naval Surface Warfare Center, Dahlgren Division (NSWCDD).

(13) This license SUPERSEDES the previously issued license with the same call sign and file number: a) to add frequency band 2233.5-2249.5 MHz with associated parameters, b) to reduce the bandwidth and ERP for 2240.79-2242.21 MHz.