

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

EXPERIMENTAL

(Nature of Service)

WE2XQD

(Call Sign)

XD MO

(Class of Station)

0221-EX-RR-2010

(File Number)

NAME Lockheed Martin Corporation

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(i) of the Commission's Rules

Station Locations

- (1) MOBILE: Gaithersburg, Maryland, within 50 km, centered around NL 39-09-17; WL 77-12-57
- (2) MOBILE: 8000 Harbour View Blvd. Suffolk, Virginia, within 20 km, centered around NL 36-53-42; WL 76-25-59
- (3) MOBILE: Creech Air Force Base, Indian Springs, Nevada, within 20 km, centered around NL 36-35-13; WL 115-40-24
- (4) MOBILE: One Space Park Dr., Redonodo Beach, CA 90278, within 16 km, centered around NL 33-53-28; WL 118-22-04
- (5) MOBILE: Hanscom AFB, MA, within 20 km, centered around NL 42-27-33; WL 71-16-21
- (6) MOBILE: Fort Bragg, NC, within 20 km, centered around NL 35-09-14; WL 78-59-56
- (7) MOBILE: Fort Benning, GA, within 20 km, centered around NL 32-21-33; WL 84-58-56
- (8) MOBILE: Fort Gordon, GA, within 20 km, centered around NL 33-25-35; WL 82-08-41
- (9) MOBILE: Sunnyvale, CA, within 9 km, centered around NL 37-24-55; WL 122-02-07
- (10) MOBILE: Fort Worth, TX, within 20 km, centered around NL 32-45-30; WL 97-29-17

Frequency Information

MOBILE: Gaithersburg, Maryland, within 50 km, centered around NL 39-09-17; WL 77-12-57

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	
		4M00G1D		

This authorization effective August 01, 2010 and
will expire 3:00 A.M. EST August 01, 2012

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Gaithersburg, Maryland, within 50 km, centered around NL 39-09-17; WL 77-12-57

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	
		4M00G1D		

MOBILE: 8000 Harbour View Blvd. Suffolk, Virginia, within 20 km, centered around NL 36-53-42; WL 76-25-59

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	
		4M00G1D		
		4M00G1D		
		4M00G1D		

MOBILE: Creech Air Force Base, Indian Springs, Nevada, within 20 km, centered around NL 36-35-13; WL 115-40-24

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	
		4M00G1D		
		4M00G1D		
		4M00G1D		

MOBILE: One Space Park Dr., Redonodo Beach, CA 90278, within 16 km, centered around NL 33-53-28; WL 118-22-04

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	
		4M00G1D		
		4M00G1D		

Frequency Information

MOBILE: One Space Park Dr., Redonodo Beach, CA 90278, within 16 km, centered around NL 33-53-28; WL 118-22-04

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	

MOBILE: Hanscom AFB, MA, within 20 km, centered around NL 42-27-33; WL 71-16-21

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	
		4M00G1D		
		4M00G1D		
		4M00G1D		

MOBILE: Fort Bragg, NC, within 20 km, centered around NL 35-09-14; WL 78-59-56

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	
		4M00G1D		
		4M00G1D		
		4M00G1D		

MOBILE: Fort Benning, GA, within 20 km, centered around NL 32-21-33; WL 84-58-56

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	
		4M00G1D		
		4M00G1D		

Frequency Information

MOBILE: Fort Benning, GA, within 20 km, centered around NL 32-21-33; WL 84-58-56

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	

MOBILE: Fort Gordon, GA, within 20 km, centered around NL 33-25-35; WL 82-08-41

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	
		4M00G1D		
		4M00G1D		
		4M00G1D		

MOBILE: Sunnyvale, CA, within 9 km, centered around NL 37-24-55; WL 122-02-07

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.81 kW (ERP)	
		4M00G1D		
		4M00G1D		
		4M00G1D		

MOBILE: Fort Worth, TX, within 20 km, centered around NL 32-45-30; WL 97-29-17

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.18 kW (ERP)	
		4M00G1D		
		4M00G1D		

Frequency Information

MOBILE: Fort Worth, TX, within 20 km, centered around NL 32-45-30; WL 97-29-17

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14-14.5 GHz	MO	4M00G1D	39.18 kW (ERP)	

Special Conditions:

- (1) All operations subject to prior coordination with Area Frequency Coordinator Pacific Missile Range, Point Mugu, California: (805) 989-7983.
- (2) The station identification requirements of Section 5.115 of the Commission's Rules are waived.
- (3) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (4) NTIA requests that prior to operation at Indian Springs, NV, Lockheed Martin accomplishes coordination with the DoD Area Frequency Coordinator at Nellis Air Force Base, NV, telephone (702) 652-3393.
- (5) POINTS OF COMMUNICATION: SES Americom AMC-3, SES Americom AMC-5, SES Americom AMC-6 and SES Americom AMC-9 Satellites.
- (6) Prior to commencement of operations with each of SES Americom AMC-3, AMC-5, AMC-6 and AMC-9, pursuant to this experimental license, Lockheed Martin shall obtain a certification from SES Americom that SES Americom has notified all satellite operators with co-frequency operations within 6 degrees longitude of each of SES Americom AMC-3, AMC-5, AMC-6 and AMC-9, generally describing the experimental operations authorized herein, including the term thereof, and providing a point of contact for the purpose of resolving any complaints of interference. Lockheed Martin shall obtain a similar certification from SES Americom if, during the term of this experimental license, SES Americom AMC-3, AMC-5, AMC-6 or AMC-9 move orbit locations, or if a satellite operator commences co-frequency operations within 6 degrees longitude of each of SES Americom AMC-3, AMC-5, AMC-6 and AMC-9. If the point of contact receives a complaint of harmful interference, the party receiving the complaint (if not Lockheed Martin) will notify Lockheed Martin, and Lockheed Martin shall immediately cease such operations or adjust such operations to avoid harmful interference. Lockheed Martin will submit a copy of SES Americom's certification(s) to the Commission for incorporation into the record of this file.
- (7) In accordance with Article 4.4 of the ITU Radio Regulations, the operations authorized herein shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station operating in accordance with the provisions of the ITU Constitution, the ITU Convention, and the ITU Radio Regulations.

Special Conditions:

- (8) National Science Foundation (NSF) requests that licensee:
- 1) Coordinate operation at the Taunton, MA site with the National Radio Astronomy Observatory's VLBA site at Hancock, NH. (POC Mr. Dan Mertely at Socorro, NM, Phone: 505- 835-7027 and e-mail: dmertely@nrao.edu).
 - 2) Coordinate operation at the Fredericksburg, VA site with Wes Sizemore at Green Bank. (Phone: 304-456-2107, e-mail: wsizeamor@nrao.edu).
- (9) Note that if, during the term of this authorization, NASA seeks to provide protection to a future TDRSS site that has been coordinated through the National Telecommunications and Information Administration (NTIA) Interdepartment Radio Advisory Committee (IRAC) Frequency Assignment Subcommittee process, NTIA will notify the Commission that the site is nearing operational status. Upon notice from the Commission, licensee must cease operations in the 14.0-14.2 GHz band within 125 km of the new TDRSS site until Lockheed Martin Corp. has coordinated with the new site. After coordination, operations will then again be permitted in the 14.0-14.2 GHz band within 125 km of the new TDRSS site, subject to any operational constraints developed in the coordination process.
- (10) No transmissions are permitted between 14.0 GHz and 14.2 GHz within 125 km of White Sands, NM (latitude: 32° 20' 59" N, longitude 106° 36' 31" W and latitude: 32° 32' 40" N, longitude 106° 36' 48" W).
- (11) Prior to operating in the 14.47-14.5 GHz frequency band, in the listed locations, Lockheed Martin Corp. will coordinate with the National Academy of Sciences (NSF) and notify the Commission of the results of that coordination:
Within 45 km of the radio observatory on St. Croix, Virgin Islands (latitude 17° 46' N, longitude 64° 35' W);
Within 125 km of the radio observatory on Mauna Kea, Hawaii (latitude 19° 48' N, longitude 155° 28' W);
Within 90 km of the Arecibo Observatory on Puerto Rico (latitude 18° 20' 46" N, longitude 66° 45' 11" W); and
Within 160 km of the radio observatories listed in US203 as observing in the 14.47-14.5 GHz band.
- (12) The designated point-of-contact to terminate transmissions if interference occurs are Mr. Joseph Gothard at (301) 240-6226 or (301) 325-8651, Mr. Jordan Thomas at (301) 240-6588 or (240) 643-5112.
- (13) Licensee shall comply with the Minimum Angle of Antenna Elevation criteria set forth in Part 25.205 of the FCC's rules.
- (14) No transmissions are permitted between 14.0 GHz and 14.2 GHz within 125 km of Blossom Point, MD (latitude: 38° 25' 44" N, longitude 77° 05' 20" W).
- (15) At Fort Benning, GA, Lockheed Martin needs to schedule the transmission plan use with DoD Gulf Area Frequency Coordinator at (850) 882-4416.
- (16) All operations at Hanscomb AFB, MA, are subject to prior coordination with Andrew Clegg at (703) 292-4892 or e-mail ESM@NSF.GOV in order to protect Hancock, NH Very Large Baseline Array.