

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

EXPERIMENTAL

(Nature of Service)

XC MO

(Class of Station)

WG2XMH

(Call Sign)

0229-EX-ML-2014

(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(c) of the Commission's Rules

Station Locations

- (1) MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35
- (2) MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency Information

MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1.641 MHz	FX	NON	100 W (ERP)	
1.776 MHz	FX	NON	100 W (ERP)	
2.165 MHz	FX	NON	100 W (ERP)	
2.489 MHz	FX	NON	100 W (ERP)	

This authorization effective April 23, 2015 and
will expire 3:00 A.M. EST May 22, 2016

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2.801 MHz	FX	N0N	100 W (ERP)	
3.248 MHz	FX	N0N	100 W (ERP)	
3.395 MHz	FX	N0N	100 W (ERP)	
4.736 MHz	FX	N0N	100 W (ERP)	
5.44 MHz	FX	N0N	100 W (ERP)	
6.183 MHz	FX	N0N	100 W (ERP)	
7.049 MHz	FX	N0N	100 W (ERP)	
8.069 MHz	FX	N0N	100 W (ERP)	
9.288 MHz	FX	N0N	100 W (ERP)	
10.552 MHz	FX	N0N	100 W (ERP)	

Frequency Information

MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
11.9 MHz	FX	N0N	100 W (ERP)	
13.5 MHz	FX	N0N	100 W (ERP)	
15.536 MHz	FX	N0N	100 W (ERP)	
17.84 MHz	FX	N0N	100 W (ERP)	
20.3 MHz	FX	N0N	100 W (ERP)	
20.95 MHz	FX	N0N	100 W (ERP)	
23.204 MHz	FX	N0N	100 W (ERP)	
24.624 MHz	FX	N0N	100 W (ERP)	
26 MHz	FX	N0N	100 W (ERP)	
27.912 MHz	FX	N0N	100 W (ERP)	

Frequency Information

MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
30 MHz	FX	N0N	100 W (ERP)	
30.628 MHz	FX	N0N	100 W (ERP)	
33.206 MHz	FX	N0N	100 W (ERP)	
36.231 MHz	FX	N0N	100 W (ERP)	
39 MHz	FX	N0N	100 W (ERP)	
42 MHz	FX	N0N	100 W (ERP)	
46 MHz	FX	N0N	100 W (ERP)	
47.5 MHz	FX	N0N	100 W (ERP)	
53.9 MHz	FX	N0N	100 W (ERP)	
56 MHz	FX	N0N	100 W (ERP)	

Frequency Information

MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
61.464 MHz	FX	N0N	100 W (ERP)	
66 MHz	FX	N0N	100 W (ERP)	
70.6 MHz	FX	N0N	100 W (ERP)	
79 MHz	FX	N0N	100 W (ERP)	
82.808 MHz	FX	N0N	100 W (ERP)	
88 MHz	FX	N0N	100 W (ERP)	
93.05 MHz	FX	N0N	100 W (ERP)	
101.235 MHz	FX	N0N	100 W (ERP)	
105.155 MHz	FX	N0N	100 W (ERP)	
139 MHz	FX	N0N	100 W (ERP)	

Frequency Information

MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
142 MHz	FX	N0N	100 W (ERP)	
148 MHz	FX	N0N	100 W (ERP)	
150.5 MHz	FX	N0N	100 W (ERP)	
163 MHz	FX	N0N	100 W (ERP)	
173 MHz	FX	N0N	100 W (ERP)	
176.5 MHz	FX	N0N	100 W (ERP)	
183 MHz	FX	N0N	100 W (ERP)	
200 MHz	FX	N0N	100 W (ERP)	
208 MHz	FX	N0N	100 W (ERP)	
219 MHz	FX	N0N	100 W (ERP)	

Frequency Information

MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
221.05 MHz	FX	N0N	100 W (ERP)	
229.5 MHz	FX	N0N	100 W (ERP)	
236.7 MHz	FX	N0N	100 W (ERP)	
245.65 MHz	FX	N0N	100 W (ERP)	
253.25 MHz	FX	N0N	100 W (ERP)	
256 MHz	FX	N0N	100 W (ERP)	
262.925 MHz	FX	N0N	100 W (ERP)	
270.05 MHz	FX	N0N	100 W (ERP)	
277.2 MHz	FX	N0N	100 W (ERP)	
284.9 MHz	FX	N0N	100 W (ERP)	

Frequency Information

MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
292.3 MHz	FX	N0N	100 W (ERP)	
299.05 MHz	FX	N0N	100 W (ERP)	
305.7 MHz	FX	N0N	100 W (ERP)	
312 MHz	FX	N0N	100 W (ERP)	
317.875 MHz	FX	N0N	100 W (ERP)	
324.1 MHz	FX	N0N	100 W (ERP)	
338.175 MHz	FX	N0N	100 W (ERP)	
350.1 MHz	FX	N0N	100 W (ERP)	
361.45 MHz	FX	N0N	100 W (ERP)	
367.325 MHz	FX	N0N	100 W (ERP)	

Frequency Information

MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
374.2 MHz	FX	N0N	100 W (ERP)	
379.75 MHz	FX	N0N	100 W (ERP)	
402 MHz	FX	N0N	100 W (ERP)	
430 MHz	FX	N0N	100 W (ERP)	
445 MHz	FX	N0N	100 W (ERP)	
459 MHz	FX	N0N	100 W (ERP)	
471 MHz	FX	N0N	100 W (ERP)	
485 MHz	FX	N0N	100 W (ERP)	
500 MHz	FX	N0N	100 W (ERP)	
503 MHz	FX	N0N	100 W (ERP)	

Frequency Information

MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
529 MHz	FX	N0N	100 W (ERP)	
556 MHz	FX	N0N	100 W (ERP)	
584 MHz	FX	N0N	100 W (ERP)	
608 MHz	FX	N0N	100 W (ERP)	
638 MHz	FX	N0N	100 W (ERP)	
656 MHz	FX	N0N	100 W (ERP)	
683 MHz	FX	N0N	100 W (ERP)	
710 MHz	FX	N0N	100 W (ERP)	
745 MHz	FX	N0N	100 W (ERP)	
784 MHz	FX	N0N	100 W (ERP)	

Frequency Information

MOBILE: Owego, NY, within 20 km, centered around NL 42-07-25; WL 76-11-35

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
799 MHz	FX	N0N	100 W (ERP)	
900 MHz	FX	N0N	100 W (ERP)	
942 MHz	FX	N0N	100 W (ERP)	
1400 MHz	FX	N0N	100 W (ERP)	
1760 MHz	FX	N0N	100 W (ERP)	
1830 MHz	FX	N0N	100 W (ERP)	
1932 MHz	FX	N0N	100 W (ERP)	
2000 MHz	FX	N0N	100 W (ERP)	

MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1.641 MHz	MO	N0N	0.01 W (ERP)	

Frequency Information

MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1.776 MHz	MO	N0N	0.01 W (ERP)	
2.165 MHz	MO	N0N	0.01 W (ERP)	
2.489 MHz	MO	N0N	0.01 W (ERP)	
2.801 MHz	MO	N0N	0.01 W (ERP)	
3.248 MHz	MO	N0N	0.01 W (ERP)	
3.395 MHz	MO	N0N	0.01 W (ERP)	
4.736 MHz	MO	N0N	0.01 W (ERP)	
5.44 MHz	MO	N0N	0.01 W (ERP)	
6.183 MHz	MO	N0N	0.01 W (ERP)	
7.049 MHz	MO	N0N	0.01 W (ERP)	

Frequency Information

MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
8.069 MHz	MO	N0N	0.01 W (ERP)	
9.288 MHz	MO	N0N	0.01 W (ERP)	
10.552 MHz	MO	N0N	0.01 W (ERP)	
11.9 MHz	MO	N0N	0.01 W (ERP)	
13.5 MHz	MO	N0N	0.01 W (ERP)	
15.536 MHz	MO	N0N N0N	0.01 W (ERP)	
17.84 MHz	MO	N0N	0.01 W (ERP)	
20.3 MHz	MO	N0N	0.01 W (ERP)	
20.95 MHz	MO	N0N	0.01 W (ERP)	
23.204 MHz	MO	N0N	0.01 W (ERP)	

Frequency Information

MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
24.624 MHz	MO	N0N	0.01 W (ERP)	
26 MHz	MO	N0N	0.01 W (ERP)	
27.912 MHz	MO	N0N	0.01 W (ERP)	
30 MHz	MO	N0N	0.01 W (ERP)	
30.628 MHz	MO	N0N	0.01 W (ERP)	
33.206 MHz	MO	N0N	0.01 W (ERP)	
36.231 MHz	MO	N0N	0.01 W (ERP)	
39 MHz	MO	N0N	0.01 W (ERP)	
42 MHz	MO	N0N	0.01 W (ERP)	
46 MHz	MO	N0N	0.01 W (ERP)	

Frequency Information

MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
47.5 MHz	MO	N0N	0.01 W (ERP)	
53.9 MHz	MO	N0N	0.01 W (ERP)	
56 MHz	MO	N0N	0.01 W (ERP)	
61.464 MHz	MO	N0N	0.01 W (ERP)	
66 MHz	MO	N0N	0.01 W (ERP)	
70.6 MHz	MO	N0N	0.01 W (ERP)	
79 MHz	MO	N0N	0.01 W (ERP)	
82.808 MHz	MO	N0N	0.01 W (ERP)	
88 MHz	MO	N0N	0.01 W (ERP)	
93.05 MHz	MO	N0N	0.01 W (ERP)	

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MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
101.235 MHz	MO	N0N	0.01 W (ERP)	
105.155 MHz	MO	N0N	0.01 W (ERP)	
139 MHz	MO	N0N	0.01 W (ERP)	
142 MHz	MO	N0N	0.01 W (ERP)	
148 MHz	MO	N0N	0.01 W (ERP)	
150.5 MHz	MO	N0N	0.01 W (ERP)	
163 MHz	MO	N0N	0.01 W (ERP)	
173 MHz	MO	N0N	0.01 W (ERP)	
176.5 MHz	MO	N0N	0.01 W (ERP)	
183 MHz	MO	N0N	0.01 W (ERP)	

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MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
200 MHz	MO	N0N	0.01 W (ERP)	
208 MHz	MO	N0N	0.01 W (ERP)	
219 MHz	MO	N0N	0.01 W (ERP)	
221.05 MHz	MO	N0N	0.01 W (ERP)	
229.5 MHz	MO	N0N	0.01 W (ERP)	
236.7 MHz	MO	N0N	0.01 W (ERP)	
245.65 MHz	MO	N0N	0.01 W (ERP)	
253.25 MHz	MO	N0N	0.01 W (ERP)	
256 MHz	MO	N0N	0.01 W (ERP)	
262.925 MHz	MO	N0N	0.01 W (ERP)	

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MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
270.05 MHz	MO	N0N	0.01 W (ERP)	
277.2 MHz	MO	N0N	0.01 W (ERP)	
284.9 MHz	MO	N0N	0.01 W (ERP)	
292.3 MHz	MO	N0N	0.01 W (ERP)	
299.05 MHz	MO	N0N	0.01 W (ERP)	
305.7 MHz	MO	N0N	0.01 W (ERP)	
312 MHz	MO	N0N	0.01 W (ERP)	
317.875 MHz	MO	N0N	0.01 W (ERP)	
324.1 MHz	MO	N0N	0.01 W (ERP)	
338.175 MHz	MO	N0N	0.01 W (ERP)	

Frequency Information

MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
350.1 MHz	MO	N0N	0.01 W (ERP)	
361.45 MHz	MO	N0N	0.01 W (ERP)	
367.325 MHz	MO	N0N	0.01 W (ERP)	
374.2 MHz	MO	N0N	0.01 W (ERP)	
379.75 MHz	MO	N0N	0.01 W (ERP)	
402 MHz	MO	N0N	0.01 W (ERP)	
430 MHz	MO	N0N	0.01 W (ERP)	
445 MHz	MO	N0N	0.01 W (ERP)	
459 MHz	MO	N0N	0.01 W (ERP)	
471 MHz	MO	N0N	0.01 W (ERP)	

Frequency Information

MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
485 MHz	MO	N0N	0.01 W (ERP)	
500 MHz	MO	N0N	0.01 W (ERP)	
503 MHz	MO	N0N	0.01 W (ERP)	
529 MHz	MO	N0N	0.01 W (ERP)	
556 MHz	MO	N0N	0.01 W (ERP)	
584 MHz	MO	N0N	0.01 W (ERP)	
608 MHz	MO	N0N	0.01 W (ERP)	
638 MHz	MO	N0N	0.01 W (ERP)	
656 MHz	MO	N0N	0.01 W (ERP)	
683 MHz	MO	N0N	0.01 W (ERP)	

Frequency Information

MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
710 MHz	MO	N0N	0.01 W (ERP)	
745 MHz	MO	N0N	0.01 W (ERP)	
784 MHz	MO	N0N	0.01 W (ERP)	
799 MHz	MO	N0N	0.01 W (ERP)	
820 MHz	MO	N0N	0.01 W (ERP)	
860 MHz	MO	N0N	0.01 W (ERP)	
900 MHz	MO	N0N	0.01 W (ERP)	
942 MHz	MO	N0N	0.01 W (ERP)	
1025 MHz	MO	N0N	0.01 W (ERP)	
1400 MHz	MO	N0N	0.01 W (ERP)	

Frequency Information

MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1530 MHz	MO	N0N	0.04 W (ERP)	
1540 MHz	MO	N0N	0.04 W (ERP)	
1630 MHz	MO	N0N	0.04 W (ERP)	
1645 MHz	MO	N0N	0.04 W (ERP)	
1660 MHz	MO	N0N	0.04 W (ERP)	
1682 MHz	MO	N0N	0.04 W (ERP)	
1760 MHz	MO	N0N	0.01 W (ERP)	
1830 MHz	MO	N0N	0.01 W (ERP)	
1932 MHz	MO	N0N	0.01 W (ERP)	
2000 MHz	MO	N0N	0.01 W (ERP)	

Frequency Information

MOBILE: Antenna mounted on rotary wing aircraft 152m AGL, within 0.02 km, centered around NL 42-07-25; WL 76-11-34

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2100 MHz	MO	N0N	0.01 W (ERP)	
2200 MHz	MO	N0N	0.01 W (ERP)	
2300 MHz	MO	N0N	0.01 W (ERP)	
2330 MHz	MO	N0N	0.01 W (ERP)	
2340 MHz	MO	N0N	0.01 W (ERP)	

Special Conditions:

- (1) Subject to prior coordination with American Society for Healthcare Engineering of the American Hospital Association (ASHE/AHA): Dale Woodin, ASHE Advocacy Director; American Hospital Association, One North Franklin; Chicago, IL 60606; (312) 422-3812, (312) 422-4571 (fax), dwoodin@aha.org.
- (2) Operation is subject to prior coordination with the Associated Public Safety Communications Officers, Inc. (APCO); ATTN: Director of Frequency Coordination; 351 North Williamson Blvd.; Daytona Beach, FL 32114-1112; Telephone: (386) 322-2500.
- (3) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (4) 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.
- (5) Operation is subject to prior coordination with the Society of Broadcast Engineers, Inc. (SBE); ATTN: Executive Director; 9102 North Meridian Street, Suite 305; Indianapolis, IN 46260; telephone, (866) 632-4222; FAX, (317) 846-9120; e-mail, executivedir @ sbe.org; information, www.sbe.org.
- (6) Operations in the upper and lower 700 MHz bands must be prior coordinated with affected existing and new Part 27 and Part 74 licensees to avoid interference.
- (7) Must successfully secure consent from the existing and future AWS licensees prior to accessing to 1760 MHz, 2000 MHz and 2200 MHz.

Special Conditions:

- (8) Coordinate with the local SBE frequency coordinator prior to accessing to 26 MHz, 56 MHz, 942 MHz, 61.464-88 MHz, 163-208 MHz, and 471-683 MHz.
- (9) Coordinate with the Fixed Microwave Service Licensees prior to operation on 942 MHz.
- (10) This authorization is issued for the express purpose of conducting experimental operations described in the related application and required by the U.S. Government; contract number N00019-14-C-0005. The use of this radio station in any other manner or for any other purpose will constitute a violation of the privileges herein authorized. Except as subsequently authorized by the Commission, this radio station shall not be operated after the expiration date of the contract designated in the related application and enumerated above.
- (11) Antenna height shall not exceed 152 Meters (500 ft.) AGL.
- (12) Transmit power at 1025 MHz CW frequency from Apr 2015 to June 30, 2015. Operation must be ceased after June 30; 2015. This test is not for developing new equipment. After the conclusion of the test, there is no continued usage for this frequency. This transmission is very infrequent, very short, and less than 3 total operations. Each operation only transmits 10 times with 50 micro-sec dwell time. The 3 operations consist of 2 dry runs at the test site plus 1 actual testing. All transmissions will be from 10 antennas (HENCE 10 TIMES), one at a time on a helicopter hovering normally around a point 500 ft. above ground.