

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

EXPERIMENTAL

(Nature of Service)

WM9XQP

(Call Sign)

XT FX MO

(Class of Station)

0540-EX-ST-2018

(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:

To operate a developmental system that Lockheed Martin is testing in connection with a Defense Advanced Research Projects Agency ("DARPA") program.

Station Locations

- (1) Goodyear (MARICOPA), AZ - NL 33-25-50; WL 112-21-55
- (2) Buckeye (MARICOPA), AZ; MOBILE: Buckeye, AZ. Flight altitude up to 10,000 ft

Frequency Information

Goodyear (MARICOPA), AZ - NL 33-25-50; WL 112-21-55

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
410 MHz	FX	1M00G1D	1.25 kW (ERP)	0.0003 %
440 MHz	FX	1M00G1D 50M0G1D	1.25 kW (ERP)	0.0003 %
490 MHz	FX	1M00G1D	1.25 kW (ERP)	0.0003 %

This authorization effective April 25, 2018 and
will expire 3:00 A.M. EST October 19, 2018

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

Goodyear (MARICOPA), AZ - NL 33-25-50; WL 112-21-55

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
490 MHz	FX	69M0G1D	1.25 kW (ERP)	0.0003 %
2250 MHz	FX	125MF1D 125MG1D	100 kW (ERP)	0.0003 %
3400 MHz	FX	125MF1D 125MG1D	100 kW (ERP)	0.0003 %

Buckeye (MARICOPA), AZ; MOBILE: Buckeye, AZ. Flight altitude up to 10,000 ft

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
410 MHz	MO	1M00G1D	110 W (ERP)	0.0003 %
410 MHz	FX	1M00G1D	1.25 kW (ERP)	0.0003 %
440 MHz	MO	1M00G1D 50M0G1D	110 W (ERP)	0.0003 %
440 MHz	FX	1M00G1D 50M0G1D	1.25 kW (ERP)	0.0003 %
490 MHz	MO	1M00G1D	110 W (ERP)	0.0003 %

Frequency Information

Buckeye (MARICOPA), AZ; MOBILE: Buckeye, AZ. Flight altitude up to 10,000 ft

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
490 MHz	MO	69M0G1D	110 W (ERP)	0.0003 %
490 MHz	FX	1M00G1D 69M0G1D	1.25 kW (ERP)	0.0003 %
2250 MHz	MO	125MF1D 125MG1D	250 W (ERP)	0.0003 %
2250 MHz	FX	125MF1D 125MG1D	100 kW (ERP)	0.0003 %
3400 MHz	MO	125MF1D 125MG1D	250 W (ERP)	0.0003 %
3400 MHz	FX	125MF1D 125MG1D	100 kW (ERP)	0.0003 %

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.
- (3) Operations in the 449.75-450.25 MHz band must be in compliance with the coordination agreements reached between the Licensee and space operators of Planet Labs, Inc. and Spire Global, Inc.

Special Conditions:

- (4) Licensee must maintain a point of contact available 24 hours per day, seven days per week, with the authority and ability to terminate operations authorized herein, for discussing interference concerns with other licensees, and must submit a letter to be included in its license file with the name and telephone number of the point of contact prior to commencing operation.
- (5) Airborne receiver authorized herein must not be used for air traffic control communications.
- (6) This authorization is without prejudice to any determination that the Commission may make regarding pending or future experimental satellite earth station applications.
- (7) Stop Buzzer: Ryan Terry, Phone: 703-413-5747, Email: ryan.n.terry@lmco.com
- (8) Lockheed Martin Corporation coordinate with the local Society of Broadcast Engineers frequency coordinator prior to operation on 490 MHz to protect the Broadcast Auxiliary Service operations.
- (9) Lockheed Martin Corporation must be able to notch out all of the following +/- 12.5 KHz, 409.175 MHz, 409.600 MHz, 409.800 MHz, 410.000 MHz, 410.300 MHz, 410.075 MHz, 410.100 MHz, 410.575 MHz, and 410.950 MHz from operations otherwise NTIA objects to the use of 410 MHz noted in this application.
- (10) Lockheed Martin must notify DOD AFC AZ, E-mail to mark.k.rossow.civ@mail.mil and tom.j.gomez.civ@mail.mil no less than one day prior to intended testing with the notice providing the intended times of the test. Also, the notice E-mail is to include two positive telephone numbers for STOP BUZZER use should radio frequency interference (RFI) be reported.
- (11) The 449.75-450.25 MHz frequency band shall be excluded from operations in order to prevent interference to NASA space operations.
- (12) Aeronautical Telemetry operations shall not occur within the 2290-2300 MHz frequency band.
- (13) Lockheed Martin Corporation MUST NOT operate in the 2200 - 2290 due to ongoing law enforcement operations in the area.
- (14) Uplink operations on frequencies of 410 MHz, 440 MHz, or 2250 MHz shall not occur when the NASA International Space Station (ISS) (NORAD designation 25544 or international spacecraft ID 1998-067A) is within the horizon to horizon view of the testing location.
- (15) Lockheed Martin shall provide notification of testing times and locations to the NASA Johnson Space Center (JSC) Spectrum Manager, Cathy Sham at catherine.c.sham@nasa.gov, and the NASA JSC Alternate Spectrum Manager, Alan Chu at alan.h.chu@nasa.gov, at least 14 business days prior to operations.
- (16) The Stop Buzzer POC information shall be provided for all operations. This phone shall be manned at all times during operations.
- (17) Lockheed Martin should have no expectations of automatic approval for use of this equipment in future submissions.
- (18) The authorized station must be in compliance with environmental requirement set forth in Section 1.1307 of the Commission's Rules.
- (19) Operations in the band 2305-2320 MHz must comply with the emission limits applicable to these band. See 47 C.F.R. § 27.53(a).