

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

EXPERIMENTAL

(Nature of Service)

WF2XQR

(Call Sign)

XD      FX MO

(Class of Station)

0132-EX-CM-2019

(File Number)

NAME Raytheon Missile Systems

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(j) of the Commission's Rules

Station Locations

- (1) Tucson (PIMA), AZ - NL 32-06-23; WL 110-56-17
- (2) MOBILE: airborne, within 100 km, centered around NL 32-06-23; WL 110-56-17

Frequency Information

Tucson (PIMA), AZ - NL 32-06-23; WL 110-56-17

| Frequency | Station Class | Emission Designator           | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|-------------------------------|------------------|---------------------------|
| 4445 MHz  | FX            | 30M0Q1D<br>30M0G1D<br>30M0F1D | 40 W (ERP)       |                           |
| 4475 MHz  | FX            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4505 MHz  | FX            | 30M0F1D<br>30M0G1D            | 40 W (ERP)       |                           |

This authorization effective November 12, 2019 and  
will expire 3:00 A.M. EST August 01, 2020

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



## Frequency Information

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|-----------|---------------|-------------------------------|------------------|---------------------------|
| 4505 MHz  | FX            | 30M0Q1D                       | 40 W (ERP)       |                           |
| 4535 MHz  | FX            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4565 MHz  | FX            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4595 MHz  | FX            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4625 MHz  | FX            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4655 MHz  | FX            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4685 MHz  | FX            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |

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|---------------|---------------|-------------------------------|------------------|---------------------------|
| 4715 MHz      | FX            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4745 MHz      | FX            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4815 MHz      | FX            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 5091-5150 MHz | FX            | 24M0F1D<br>24M0G1D<br>24M0Q1D | 40 W (ERP)       |                           |
| 5925-6700 MHz | FX            | 24M0F1D<br>24M0G1D<br>24M0Q1D | 40 W (ERP)       |                           |

MOBILE: airborne, within 100 km, centered around NL 32-06-23; WL 110-56-17

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|-----------|---------------|---------------------|------------------|---------------------------|
| 4445 MHz  | MO            | 30M0F1D<br>30M0G1D  | 40 W (ERP)       |                           |

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|-----------|---------------|-------------------------------|------------------|---------------------------|
| 4445 MHz  | MO            | 30M0Q1D                       | 40 W (ERP)       |                           |
| 4475 MHz  | MO            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4505 MHz  | MO            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4535 MHz  | MO            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4565 MHz  | MO            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4595 MHz  | MO            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4625 MHz  | MO            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |

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|---------------|---------------|-------------------------------|------------------|---------------------------|
| 4655 MHz      | MO            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4685 MHz      | MO            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4715 MHz      | MO            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4745 MHz      | MO            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 4815 MHz      | MO            | 30M0F1D<br>30M0G1D<br>30M0Q1D | 40 W (ERP)       |                           |
| 5091-5150 MHz | MO            | 24M0F1D<br>24M0G1D<br>24M0Q1D | 40 W (ERP)       |                           |
| 5925-6700 MHz | MO            | 24M0F1D<br>24M0G1D            | 40 W (ERP)       |                           |

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|---------------|---------------|---------------------|------------------|---------------------------|
| 5925-6700 MHz | MO            | 24M0Q1D             | 40 W (ERP)       |                           |

## Special Conditions:

- (1) 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.
- (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) Operation is subject to prior coordination with existing and future Fixed Microwave Service licensees in accordance with 47 CFR, Part 101.103(d).