

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

EXPERIMENTAL

(Nature of Service)

XD      FX

(Class of Station)

WF2XUK

(Call Sign)

0332-EX-CR-2021

(File Number)

NAME Raytheon Company (Missiles and Defense - M)

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) Redstone Arsenal (MADISON), AL - NL 34-37-42; WL 86-35-46
- (2) Redstone Arsenal (MADISON), AL - NL 34-37-43; WL 86-35-43
- (3) Redstone Arsenal (MADISON), AL - NL 34-37-42; WL 86-35-39
- (4) Redstone Arsenal (MADISON), AL - NL 34-37-40; WL 86-35-37
- (5) Redstone Arsenal (MADISON), AL - NL 34-37-37; WL 86-35-37
- (6) Redstone Arsenal (MADISON), AL - NL 34-37-35; WL 86-35-39
- (7) Redstone Arsenal (MADISON), AL - NL 34-37-38; WL 86-35-43

Frequency Information

Redstone Arsenal (MADISON), AL - NL 34-37-42; WL 86-35-46

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 420-430 MHz   | FX            | 66K0F3D<br>90K0F3D  | 0.5 mW (ERP)     |                           |
| 2200-2290 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |

This authorization effective June 01, 2021 and  
will expire 3:00 A.M. EST June 01, 2023

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



## Frequency Information

Redstone Arsenal (MADISON), AL - NL 34-37-42; WL 86-35-46

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 2310-2360 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 2360-2390 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |

Redstone Arsenal (MADISON), AL - NL 34-37-43; WL 86-35-43

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 420-430 MHz   | FX            | 66K0F3D<br>90K0F3D  | 0.5 mW (ERP)     |                           |
| 2200-2290 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |

## Frequency Information

Redstone Arsenal (MADISON), AL - NL 34-37-43; WL 86-35-43

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 2310-2360 MHz | FX            | 27M0Q1D<br>27M0F1D  | 40 W (ERP)       |                           |
| 2360-2390 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |

Redstone Arsenal (MADISON), AL - NL 34-37-42; WL 86-35-39

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 420-430 MHz   | FX            | 66K0F3D<br>90K0F3D  | 0.5 mW (ERP)     |                           |
| 2200-2290 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |

## Frequency Information

Redstone Arsenal (MADISON), AL - NL 34-37-42; WL 86-35-39

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 2310-2360 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 2360-2390 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |

Redstone Arsenal (MADISON), AL - NL 34-37-40; WL 86-35-37

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 420-430 MHz   | FX            | 66K0F3D<br>90K0F3D  | 0.5 mW (ERP)     |                           |
| 2200-2290 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |

## Frequency Information

Redstone Arsenal (MADISON), AL - NL 34-37-40; WL 86-35-37

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 2310-2360 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 2360-2390 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |

Redstone Arsenal (MADISON), AL - NL 34-37-37; WL 86-35-37

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 420-430 MHz   | FX            | 66K0F3D<br>90K0F3D  | 0.5 mW (ERP)     |                           |
| 2200-2290 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |

## Frequency Information

Redstone Arsenal (MADISON), AL - NL 34-37-37; WL 86-35-37

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 2310-2360 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 2360-2390 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |

Redstone Arsenal (MADISON), AL - NL 34-37-35; WL 86-35-39

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 420-430 MHz   | FX            | 66K0F3D<br>90K0F3D  | 0.5 mW (ERP)     |                           |
| 2200-2290 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |

## Frequency Information

Redstone Arsenal (MADISON), AL - NL 34-37-35; WL 86-35-39

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 2310-2360 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 2360-2390 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |

Redstone Arsenal (MADISON), AL - NL 34-37-38; WL 86-35-43

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 420-430 MHz   | FX            | 66K0F3D<br>90K0F3D  | 0.5 mW (ERP)     |                           |
| 2200-2290 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |

## Frequency Information

Redstone Arsenal (MADISON), AL - NL 34-37-38; WL 86-35-43

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 2310-2360 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 2360-2390 MHz | FX            | 27M0F1D<br>27M0Q1D  | 40 W (ERP)       |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5400-5600 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 0.25 W (ERP)     |                           |
| 5650-5900 MHz | FX            | 6M84P0N             | 25 W (ERP)       |                           |

## Special Conditions:

- (1) This frequency assignment in one of the bands 1435-1525, 2310-2320 and 2345-2390 MHz was coordinated prior to authorization with the Gulf Area Frequency Coordinator, Eglin AFB, FL, who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the Gulf AFC, Eglin AFB, FL, as necessary to ensure compatibility with existing uses.
- (2) This frequency assignment in one of the bands 1435-1525, 2310-2320 and 2345-2390 MHz was coordinated prior to authorization with the HQ USAF Frequency Coordinator, Alexandria, VA., who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with the HQ USAF Frequency Coordinator, Alexandria, VA., as necessary to ensure compatibility with existing uses.
- (3) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.

**Special Conditions:**

- (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) The station identification requirements of Section 5.115 of the Commission's Rules are waived.
- (6) Operation must be consented by all WCS licensees (2305-2320 MHz/2345-2360 MHz) within 50 miles of the test area.
- (7) Operation must be consented by SDARS (2320-2345 MHz) licensee(s) within 50 miles of the test area.
- (8) The designated point-of-contact to terminate transmissions if interference occurs is Jim Ortega at (520) 794-0227.