

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

EXPERIMENTAL

(Nature of Service)

WF2XCR

(Call Sign)

XT MO

(Class of Station)

0535-EX-CR-2018

(File Number)

NAME The Boeing Company

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: Ground checks on Boeing site, Seattle, WA, within 2 km, centered around NL 47-31-00; WL 122-18-00
- (2) MOBILE: Flights up to 10000 feet around vicinity of Boardman, OR, within 160 km, centered around NL 45-44-54; WL 119-47-38
- (3) MOBILE: Ground checks on Boeing site, St Charles, MO, within 2 km, centered around NL 38-48-41; WL 90-28-18
- (4) MOBILE: Flights up to 10000 feet around vicinity of Fort Leonard Wood, MO, within 160 km, centered around NL 37-38-54; WL 92-12-56
- (5) MOBILE: Flights up to 12000 feet around vicinity of Yuma Proving Ground, AZ, within 50 km, centered around NL 33-08-50; WL 114-25-44
- (6) MOBILE: Flights up to 12000 feet around vicinity of Dugway Proving Ground, UT, within 50 km, centered around NL 40-09-21; WL 113-14-30
- (7) MOBILE: Ground checks only around vicinity of Fort Walton Beach, FL, within 20 km, centered around NL 30-25-22; WL 86-39-13
- (8) MOBILE: Flights up to 12000 feet around vicinity of Fort Picket Army National Guard Base, VA, within 10 km, centered around NL 37-02-57; WL 77-54-44
- (9) MOBILE: Flights up to 12000 feet around vicinity of Cecil Field Naval Air Station, FL, within 16.1 km, centered around NL 30-15-04; WL 81-53-46
- (10) MOBILE: Flights up to 12000 feet around vicinity of Avon Park MacDill Air Force Base Auxilliary Airfield, FL, within 16.1 km, centered around NL 27-38-56; WL 81-20-43
- (11) MOBILE: Flights up to 12000 feet around vicinity of Camp Blanding Army National Gaurd, FL, within 16.1 km, centered around NL 29-57-05; WL 81-58-47
- (12) MOBILE: Flights up to 12000 feet around vicinity of Oceana Naval Air Station, VA, within 10 km, centered around NL 36-49-30; WL 76-01-41
- (13) MOBILE: Flights up to 12000 ft around Point Mugu vicinity, Oxnard, CA, within 10 km, centered around NL 34-07-02; WL 119-06-56

This authorization effective January 01, 2019 and  
will expire 3:00 A.M. EST January 23, 2020

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



## Frequency Information

MOBILE: Ground checks on Boeing site, Seattle, WA, within 2 km, centered around NL 47-31-00; WL 122-18-00

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1802.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 1835 MHz      | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4790 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |
| 4970 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |

MOBILE: Flights up to 10000 feet around vicinity of Boardman, OR, within 160 km, centered around NL 45-44-54; WL 119-47-38

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1787.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |

## Frequency Information

MOBILE: Flights up to 10000 feet around vicinity of Boardman, OR, within 160 km, centered around NL 45-44-54; WL 119-47-38

| Frequency  | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|------------|---------------|---------------------|------------------|---------------------------|
| 1807.5 MHz | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz   | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4790 MHz   | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz   | MO            | 700KF9W             | 2140 W (ERP)     |                           |
| 4970 MHz   | MO            | 700KF9W             | 2140 W (ERP)     |                           |

MOBILE: Ground checks on Boeing site, St Charles, MO, within 2 km, centered around NL 38-48-41; WL 90-28-18

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1802.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 1835 MHz      | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |

## Frequency Information

MOBILE: Ground checks on Boeing site, St Charles, MO, within 2 km, centered around NL 38-48-41; WL 90-28-18

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 4790 MHz  | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz  | MO            | 700KF9W             | 2140 W (ERP)     |                           |
| 4970 MHz  | MO            | 700KF9W             | 2140 W (ERP)     |                           |

MOBILE: Flights up to 10000 feet around vicinity of Fort Leonard Wood, MO, within 160 km, centered around NL 37-38-54; WL 92-12-56

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1802.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 1835 MHz      | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4790 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |

## Frequency Information

MOBILE: Flights up to 10000 feet around vicinity of Fort Leonard Wood, MO, within 160 km, centered around NL 37-38-54;  
WL 92-12-56

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 4970 MHz  | MO            | 700KF9W             | 2140 W (ERP)     |                           |

MOBILE: Flights up to 12000 feet around vicinity of Yuma Proving Ground, AZ, within 50 km, centered around NL 33-08-50;  
WL 114-25-44

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1802.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 1835 MHz      | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4790 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |
| 4970 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |

## Frequency Information

MOBILE: Flights up to 12000 feet around vicinity of Dugway Proving Ground, UT, within 50 km, centered around NL 40-09-21; WL 113-14-30

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1802.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 1835 MHz      | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4790 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |
| 4970 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |

MOBILE: Ground checks only around vicinity of Fort Walton Beach, FL, within 20 km, centered around NL 30-25-22; WL 86-39-13

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1802.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |

## Frequency Information

MOBILE: Ground checks only around vicinity of Fort Walton Beach, FL, within 20 km, centered around NL 30-25-22; WL 86-39-13

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 1835 MHz  | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz  | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4790 MHz  | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz  | MO            | 700KF9W             | 2140 W (ERP)     |                           |
| 4970 MHz  | MO            | 700KF9W             | 2140 W (ERP)     |                           |

MOBILE: Flights up to 12000 feet around vicinity of Fort Picket Army National Guard Base, VA, within 10 km, centered around NL 37-02-57; WL 77-54-44

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1802.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 1835 MHz      | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |

## Frequency Information

MOBILE: Flights up to 12000 feet around vicinity of Fort Picket Army National Guard Base, VA, within 10 km, centered around NL 37-02-57; WL 77-54-44

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 4790 MHz  | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz  | MO            | 700KF9W             | 2140 W (ERP)     |                           |
| 4970 MHz  | MO            | 700KF9W             | 2140 W (ERP)     |                           |

MOBILE: Flights up to 12000 feet around vicinity of Cecil Field Naval Air Station, FL, within 16.1 km, centered around NL 30-15-04; WL 81-53-46

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1802.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 1835 MHz      | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4790 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |



## Frequency Information

MOBILE: Flights up to 12000 feet around vicinity of Cecil Field Naval Air Station, FL, within 16.1 km, centered around NL 30-15-04; WL 81-53-46

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 4970 MHz  | MO            | 700KF9W             | 2140 W (ERP)     |                           |

MOBILE: Flights up to 12000 feet around vicinity of Avon Park MacDill Air Force Base Auxilliary Airfield, FL, within 16.1 km, centered around NL 27-38-56; WL 81-20-43

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1802.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 1835 MHz      | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4790 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |
| 4970 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |

## Frequency Information

MOBILE: Flights up to 12000 feet around vicinity of Camp Blanding Army National Gaurd, FL, within 16.1 km, centered around NL 29-57-05; WL 81-58-47

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1802.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 1835 MHz      | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4790 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |
| 4970 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |

MOBILE: Flights up to 12000 feet around vicinity of Oceana Naval Air Station, VA, within 10 km, centered around NL 36-49-30; WL 76-01-41

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 4490 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |

## Frequency Information

MOBILE: Flights up to 12000 feet around vicinity of Oceana Naval Air Station, VA, within 10 km, centered around NL 36-49-30; WL 76-01-41

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 4790 MHz  | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz  | MO            | 700KF9W             | 2140 W (ERP)     |                           |
| 4970 MHz  | MO            | 700KF9W             | 2140 W (ERP)     |                           |

MOBILE: Flights up to 12000 ft around Point Mugu vicinity, Oxnard, CA, within 10 km, centered around NL 34-07-02; WL 119-06-56

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 433-434.5 MHz | MO            | 12K5F9W             | 0.76 W (ERP)     |                           |
| 1802.5 MHz    | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 1835 MHz      | MO            | 18M0F9W             | 4.85 W (ERP)     |                           |
| 4490 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4790 MHz      | MO            | 15M0F9W             | 8.5 W (ERP)      |                           |
| 4942 MHz      | MO            | 700KF9W             | 2140 W (ERP)     |                           |

## Frequency Information

MOBILE: Flights up to 12000 ft around Point Mugu vicinity, Oxnard, CA, within 10 km, centered around NL 34-07-02; WL 119-06-56

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 4970 MHz  | MO            | 700KF9W             | 2140 W (ERP)     |                           |

## Special Conditions:

- (1) 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.
- (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) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (4) Operation is only permitted using the following frequencies:
  - Frequencies to be used in King, WA: 433-434.5 MHz, 1712.5 MHz, 1745 MHz, 4790 MHz, 4490 MHz, 4942 MHz and 4970 MHz
  - Frequencies to be used in Boardman, OR: 433-434.5 MHz, 1787.5 MHz, 1807.5 MHz, 4790 MHz, 4490 MHz, 4942 MHz and 4970 MHz
  - Frequencies to be used in St. Charles, MO: 433-434.5 MHz, 1712.5 MHz, 1745 MHz, 4790 MHz, 4490 MHz, 4942 MHz and 4970 MHz
  - Frequencies to be used in Ft. Leonard Wood, MO: 433-434.5 MHz, 1802.5 MHz, 1835 MHz, 4790 MHz, 4490 MHz, 4942 MHz and 4970 MHz.
- (5) The designated point-of-contact to terminate transmissions if interference occurs is Kris L. Kokkeby at 951-258-8736.
- (6) Operation in Arizona is subject to prior coordination with the Area Frequency Coordinator, State of Arizona, ATTN: SFIS-FAC-SH, FT. Huachuca, AZ 85613-5000, Phone: (520) 538-6423; FAX (520) 538-8525; DSN 879-6423.
- (7) Operation is subject to prior coordination with the Area Frequency Coordinator located at Nellis AFB, Nevada, prior to use in the States of Nevada, Utah West of 111 W AND Idaho South of 44 N.
- (8) Operation is subject to prior coordination with the Eastern Area Frequency Coordinator located at Patrick AFB, Florida, prior to use within the area bounded by 24 N 31 30'N AND 77 W 83 W.
- (9) Operation is subject to prior coordination with Army Frequency Management Office (AFMO) - CONUS, 1214 Stanley Road, Suite 32, FT. Sam Houston, TX 78234-5032. PHONE: 210-221-2050/2820.
- (10) Operation is subject to coordination with the Area Frequency Coordinator located at the Naval Air Warfare Center Aircraft Division, Patuxent River, Maryland, prior to use within the area enclosed by 100 kilometer radius of headquarters building, Naval Air Warfare Center Aircraft Division, Patuxent River, Maryland.
- (11) Operation on this assignment is subject to immediate cessation, if it causes harmful interference to Federal Government operation assignments.

**Special Conditions:**

- (12) Operation is NOT permitted using the frequencies 1802.5 MHz and 1835 MHz at Oceana Naval Air Station, VA.
- (13) Coordination with Yuma Proving Ground (YPG) Spectrum management office is mandatory prior to any intended use of the frequency bands on YPG or within its restricted airspace by contacting the YPG SMO at (928) 328-7144.