

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

EXPERIMENTAL  
(Nature of Service)

WH2XKP  
(Call Sign)

XT      FX MO  
(Class of Station)

0041-EX-CR-2016  
(File Number)

NAME Northrop Grumman Systems 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(j) of the Commission's Rules

Station Locations

- (1) Mojave (KERN), CA - NL 35-03-32; WL 118-09-05; MOBILE: Airborne at max altitude of 50,000 ft, within 185 km
- (2) Red Bluff (TEHAMA), CA - NL 40-09-20; WL 122-15-05; MOBILE: Airborne at max altitude of 50,000 ft, within 185 km
- (3) McClellan Park (SACRAMENTO), CA - NL 38-39-39; WL 121-23-35; MOBILE: Airborne at max altitude of 50,000 ft, within 185 km
- (4) San Diego (SAN DIEGO), CA - NL 32-59-33; WL 117-06-57
- (5) Carlsbad (SAN DIEGO), CA - NL 33-05-45; WL 117-18-59; MOBILE: Airborne at max altitude of 50,000 ft, within 185 km
- (6) Newport (NEWPORT), RI - NL 41-31-57; WL 71-18-26; MOBILE: airborne at max altitude 50,000 ft, within 185 km
- (7) Grand Forks (GRAND FORKS), ND - NL 47-56-38; WL 97-10-40; MOBILE: airborne at max altitude of 50,000 ft, within 185 km

Frequency Information

Mojave (KERN), CA - NL 35-03-32; WL 118-09-05; MOBILE: Airborne at max altitude of 50,000 ft, within 185 km

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 14.62 GHz | MO            | 21M4G1D<br>64M0G1D  | 30 W (ERP)       |                           |

This authorization effective October 01, 2016 and  
will expire 3:00 A.M. EST October 01, 2019

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



## Frequency Information

Mojave (KERN), CA - NL 35-03-32; WL 118-09-05; MOBILE: Airborne at max altitude of 50,000 ft, within 185 km

| Frequency       | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------------|---------------|---------------------|------------------|---------------------------|
| 15.15-15.35 GHz | FX            | 21M4G1D<br>64M0G1D  | 30 W (ERP)       |                           |

Red Bluff (TEHAMA), CA - NL 40-09-20; WL 122-15-05; MOBILE: Airborne at max altitude of 50,000 ft, within 185 km

| Frequency       | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------------|---------------|---------------------|------------------|---------------------------|
| 14.62 GHz       | MO            | 21M4G1D<br>64M0G1D  | 30 W (ERP)       |                           |
| 15.15-15.35 GHz | FX            | 21M4G1D<br>64M0G1D  | 30 W (ERP)       |                           |

McClellan Park (SACRAMENTO), CA - NL 38-39-39; WL 121-23-35; MOBILE: Airborne at max altitude of 50,000 ft, within 185 km

| Frequency       | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------------|---------------|---------------------|------------------|---------------------------|
| 14.62 GHz       | MO            | 21M4G1D<br>64M0G1D  | 30 W (ERP)       |                           |
| 15.15-15.35 GHz | FX            | 21M4G1D<br>64M0G1D  | 30 W (ERP)       |                           |

## Frequency Information

San Diego (SAN DIEGO), CA - NL 32-59-33; WL 117-06-57

| Frequency       | Station Class | Emission Designator | Authorized Power    | Frequency Tolerance (+/-) |
|-----------------|---------------|---------------------|---------------------|---------------------------|
| 15.15-15.35 GHz | FX            | 64M0G1D<br>21M4G1D  | 30 W (Output Power) |                           |

Carlsbad (SAN DIEGO), CA - NL 33-05-45; WL 117-18-59; MOBILE: Airborne at max altitude of 50,000 ft, within 185 km

| Frequency       | Station Class | Emission Designator | Authorized Power    | Frequency Tolerance (+/-) |
|-----------------|---------------|---------------------|---------------------|---------------------------|
| 14.62 GHz       | MO            | 21M4G1D<br>64M0G1D  | 30 W (Output Power) |                           |
| 15.15-15.35 GHz | FX            | 64M0G1D<br>21M4G1D  | 30 W (Output Power) |                           |

Newport (NEWPORT), RI - NL 41-31-57; WL 71-18-26; MOBILE: airborne at max altitude 50,000 ft, within 185 km

| Frequency       | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------------|---------------|---------------------|------------------|---------------------------|
| 14.62 GHz       | MO            | 64M0G1D<br>21M4G1D  | 30 W (ERP)       |                           |
| 15.15-15.35 GHz | FX            | 21M4G1D<br>64M0G1D  | 30 W (ERP)       |                           |

## Frequency Information

Grand Forks (GRAND FORKS), ND - NL 47-56-38; WL 97-10-40; MOBILE: airborne at max altitude of 50,000 ft, within 185 kr

| Frequency       | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------------|---------------|---------------------|------------------|---------------------------|
| 14.62 GHz       | MO            | 21M4G1D<br>64M0G1D  | 30 W (ERP)       |                           |
| 15.15-15.35 GHz | FX            | 21M4G1D<br>64M0G1D  | 30 W (ERP)       |                           |

## Special Conditions:

- (1) The station identification requirements of Section 5.115 of the Commission's Rules are waived.
- (2) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (3) Northrop Grumman Systems Corporation must coordinate with the Western Area Frequency Coordinator (WAFC), Mr. J. Szelog at (760) 939-6948 prior to any California operations to mitigate harmful interference to Navy and Marine Corps assignments. Northrop Grumman Systems Corporation must also comply with any and all restrictions that may be levied by WAFC.
- (4) Upon notification from the FCC, operation on 15.15-15.35 GHz at Red Bluff and San Diego, CA is subject to immediate cessation, if it causes harmful interference to Navy and Marine Corps operations assignments.