

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

EXPERIMENTAL

(Nature of Service)

WK9XET

(Call Sign)

XT      FX MO

(Class of Station)

1101-EX-ST-2016

(File Number)

NAME First RF 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:**

Testing a communications system in the lightly regulated E-band.

**Station Locations**

- (1) Longmont (BOULDER), CO - NL 40-07-12; WL 105-14-27; MOBILE: FirstRF is an authorized tenant of NIST TMFS, Longmont, CO, within 15 km, centered around NL 40-07-12; WL 105-14-27
- (2) MOBILE: Boulder, CO, within 0.2 km, centered around NL 40-02-00; WL 105-13-44

**Frequency Information**

Longmont (BOULDER), CO - NL 40-07-12; WL 105-14-27; MOBILE: FirstRF is an authorized tenant of NIST TMFS, Longmont

| Frequency | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|---------------------|------------------|---------------------------|
| 382.5 MHz | MO            | 280KF1D             | 1 W (ERP)        | 0.00025 %                 |
| 382.5 MHz | FX            | 280KF1D             | 1 W (ERP)        | 0.00025 %                 |

This authorization effective August 01, 2016 and  
will expire 3:00 A.M. EST January 01, 2017

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



## Frequency Information

Longmont (BOULDER), CO - NL 40-07-12; WL 105-14-27; MOBILE: FirstRF is an authorized tenant of NIST TMFS, Longmont

| Frequency | Station Class | Emission Designator                      | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|------------------------------------------|------------------|---------------------------|
| 383.5 MHz | MO            | 280KF1D                                  | 1 W (ERP)        | 0.00025 %                 |
| 383.5 MHz | FX            | 280KF1D                                  | 1 W (ERP)        | 0.00025 %                 |
| 71-76 GHz | FX            | 1G15G1D<br>180MG1D<br>18M0G1D<br>1M80G1D | 63096 W (ERP)    | 0.0001 %                  |
| 71-76 GHz | MO            | 1G15G1D<br>180MG1D<br>18M0G1D<br>1M80G1D | 63096 W (ERP)    | 0.0001 %                  |
| 81-86 GHz | FX            | 1G15G1D<br>180MG1D<br>18M0G1D<br>1M80G1D | 63096 W (ERP)    | 0.0001 %                  |
| 81-86 GHz | MO            | 1G15G1D<br>180MG1D<br>18M0G1D<br>1M80G1D | 63096 W (ERP)    | 0.0001 %                  |

## Frequency Information

MOBILE: Boulder, CO, within 0.2 km, centered around NL 40-02-00; WL 105-13-44

| Frequency | Station Class | Emission Designator                      | Authorized Power | Frequency Tolerance (+/-) |
|-----------|---------------|------------------------------------------|------------------|---------------------------|
| 382.5 MHz | MO            | 280KF1D                                  | 1 W (ERP)        | 0.00025 %                 |
| 383.5 MHz | MO            | 280KF1D                                  | 1 W (ERP)        | 0.00025 %                 |
| 71-76 GHz | MO            | 1G15G1D<br>180MG1D<br>18M0G1D<br>1M80G1D | 63096 W (ERP)    | 0.0001 %                  |
| 81-86 GHz | MO            | 1G15G1D<br>180MG1D<br>18M0G1D<br>1M80G1D | 63096 W (ERP)    | 0.0001 %                  |

## 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) First RF Corporation must be made aware that in Boulder, CO, there is a National Science Foundation (NSF) Radio Astronomy Service operating in the 70 - 80 GHz band. The NSF will monitor their operations to ensure no interference is experienced.
- (4) First RF Corporation must successfully coordinate with the existing users prior to accessing to 71-76 GHz and 81-86 GHz.
- (5) FirstRF Corporation must adhere to the following frequency bands in order to protect existing federal agency operations:
  - a. 71-76 GHz, FirstRF will need to start band at 73 GHz
  - b. 81-86 GHz, FirstRF will need to start band at 83 GHz