

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

EXPERIMENTAL

(Nature of Service)

XT FX

(Class of Station)

WO9XZL

(Call Sign)

1027-EX-ST-2019

(File Number)

NAME Appareo Systems LLC

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:

The device is used partly to connect with equipment to offload data to a mesh network, and for long range telematics for military terrain obstacle mapping.

Station Locations

- (1) Fargo (CASS), ND - NL 46-54-10; WL 96-48-37
- (2) Redondo Beach (LOS ANGELES), CA - NL 33-53-34; WL 118-22-30
- (3) Aberdeen (HARFORD), MD - NL 39-27-49; WL 76-07-18

Frequency Information

Fargo (CASS), ND - NL 46-54-10; WL 96-48-37

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
420-450 MHz	FX	1M00F7D	2.43 W (ERP)	1.0E-6 %
863-930 MHz	FX	34K0F1W	102.04 mW (ERP)	1.0E-6 %

This authorization effective August 02, 2019 and
will expire 3:00 A.M. EST February 01, 2020

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

Fargo (CASS), ND - NL 46-54-10; WL 96-48-37

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1616-1626.5 MHz	FX	41K7V7W	8.12 W (ERP)	1.0E-6 %
1616-1626.5 MHz	FX	41K7V7D	1.85 W (ERP)	1.0E-6 %
2.4-2.5 GHz	FX	1M00G7D	167.88 mW (ERP)	1.0E-6 %
3.244-4.99 GHz	FX	500MM1D	0.37 mW (ERP)	
5.25-6 GHz	FX	500MM1D	0.37 mW (ERP)	

Redondo Beach (LOS ANGELES), CA - NL 33-53-34; WL 118-22-30

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
420-450 MHz	FX	1M00F7D	2.43 W (ERP)	
863-930 MHz	FX	34K0F1W	102.04 mW (ERP)	
1616-1626.5 MHz	FX	47K1V7D	8.12 W (ERP)	
1616-1626.5 MHz	FX	47K1V7D	1.85 W (ERP)	

Frequency Information

Redondo Beach (LOS ANGELES), CA - NL 33-53-34; WL 118-22-30

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2.4-2.5 GHz	FX	1M00G7D	167.88 mW (ERP)	
3.244-4.99 GHz	FX	500MM1D	0.37 mW (ERP)	
5.25-6 GHz	FX	500MM1D	0.37 mW (ERP)	

Aberdeen (HARFORD), MD - NL 39-27-49; WL 76-07-18

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
420-450 MHz	FX	1M00F7D	2.43 W (ERP)	
863-930 MHz	FX	34K0F1W	102.04 mW (ERP)	
1616-1626.5 MHz	FX	41K7V7D	8.12 W (ERP)	
1616-1626.5 MHz	FX	41K7V7D	1.85 W (ERP)	
2.4-2.5 GHz	FX	1M00G7D	167.88 mW (ERP)	
3.244-4.99 GHz	FX	500MM1D	0.37 mW (ERP)	

Frequency Information

Aberdeen (HARFORD), MD - NL 39-27-49; WL 76-07-18

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
5.25-6 GHz	FX	500MM1D	0.37 mW (ERP)	

Special Conditions:

- (1) Appareo Systems LLC must not transmit in the 4990 - 5000 MHz band, IAW Footnote US246.
- (2) Appareo Systems LLC must not transmit in the 5000 - 5250 MHz band in order to protect Air Traffic operations.
- (3) Appareo Systems LLC must notch out the following (+/- 8.5 MHz): 5285 MHz, 5300 MHz, 5330 MHz, 5340 MHz, 5350 MHz, 5380 MHz, 5425 MHz, 5435 MHz, 5445 MHz, 5675 MHz, 5690 MHz, 5705 MHz, 5720 MHz, 5730 MHz, 5740 MHz, 5775 MHz, 5800 MHz.
- (4) Prior to operations at the Redondo Beach, CA (NL 33-53-34; WL 118-22-30) location, Appareo Systems, LLC must contact the WAFC at 760-939-6832.
- (5) Prior to operations at the Aberdeen, MD (NL 39-27-49; WL 76-07-18) location, Appareo Systems, LLC must contact the Pax River AFC at 301-342-1194.
- (6) Appareo Systems, LLC should be aware that IAW Footnote US342 that the 3332 - 3339 MHz and the 3345.8 - 3352.5 MHz bands are limited to the Radio Astronomy services and all practicable steps should be taken to protect those bands from interference. Use in other geographic areas may not be able to be supported.
- (7) Prior to commencing any operations in the frequencies below, the applicant must obtain consent from the following within 50 miles of the contours of the testing area:
 SMR licensees (809-824 MHz/854-869 MHz)
 B/ILT licensees (809-824 MHz/854-869 MHz)
 Cellular licensees (824-849 MHz/869-894 MHz)
 Commercial Air-Ground licensee (849-851 MHz/894-896 MHz)
 SMR licensees (896-901 MHz/935-940 MHz)
 B/ILT licensees (896-901 MHz/935-940 MHz)
 Narrowband PCS licensees (901-902/930-931/940-941 MHz)
 Location & Monitoring Service licensees (902-928 MHz)
 Paging Service licensees in 929 MHz and 931 MHz
- (8) Appareo Systems LLC must obtain consents from the Broadband Radio Service licensees prior to operation in 2496- 2500 MHz band.
- (9) Appareo Systems LLC must maintain operation separation from the grandfathered earth stations as defined in Part 90, Subpart Z, or coordinate an agreement with the grandfathered earth station licensees prior to operation in 3650-3700 MHz band.
- (10) Appareo Systems LLC must consult the ULS database to ensure that the operation will not cause harmful interference to any existing registered stations in the 3650-3700 MHz band, and notify the registered users in the proposed geographic areas prior to operation in this band.

Special Conditions:

- (11) Appareo Systems LLC must coordinate with the local Society of Broadcast Engineers frequency coordinator prior to operation in 2450-2500 MHz band.
- (12) Appareo Systems LLC must coordinate with the affected Fixed Microwave Service licensees prior to operation in 928-929 MHz, 2450-2500 MHz, 3700-4200 MHz and 5925-6000 MHz bands.
- (13) Operations using the 1617.775-1626.5 MHz frequency band are subject to the following conditions:
 - a. POINT OF COMMUNICATION: Iridium's NGSO (non-geostationary orbit space stations) satellites (call sign S2110).
 - b. licensee is authorized to operate station(s) in the 1617.775-1618.725 MHz frequency band via Iridium's NGSO satellites for mobile-satellite service on a shared basis with Globalstar system.
 - c. licensee is authorized to operate station(s) in the 1618.725-1626.5 MHz frequency band via Iridium's NGSO satellites for mobile-satellite service on an exclusive basis.
 - d. Iridium's use of the 1617.775-1626.5 MHz frequency band is subject to Section 25.213 and footnote 5.372 of the Table of Frequency Allocation, which require protection of stations in the radio astronomy service operating in the band 1610.6-1613.8 MHz band.