

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

EXPERIMENTAL

(Nature of Service)

WK9XKR

(Call Sign)

XT FX MO

(Class of Station)

0354-EX-ST-2017

(File Number)

NAME FCL Tech, Inc.

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:

This operation will test potential new communications applications and equipment.

Station Locations

- (1) Camarillo (VENTURA), CA - NL 34-12-31; WL 119-04-42
- (2) MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42
- (3) Camarillo (VENTURA), CA - NL 34-12-31; WL 119-04-42
- (4) MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42
- (5) MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42
- (6) Camarillo (VENTURA), CA - NL 34-12-31; WL 119-04-42
- (7) MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42
- (8) MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42
- (9) MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42
- (10) MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42
- (11) MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42
- (12) Camarillo (VENTURA), CA - NL 34-12-31; WL 119-04-44
- (13) Camarillo (VENTURA), CA - NL 34-12-31; WL 119-04-42
- (14) MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42

This authorization effective June 15, 2017 and
will expire 3:00 A.M. EST October 11, 2017

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

Camarillo (VENTURA), CA - NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
902.4-927.6 MHz	FX	280KF1D 480KF1D	24274 mW (ERP)	

MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
902.4-927.6 MHz	MO	280KF1D 480KF1D	1928 mW (ERP)	

Camarillo (VENTURA), CA - NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
18-20 GHz	FX	2G00DXD 2G00DXD 2G00DXD	48434 W (ERP)	

MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27.5-29.7 GHz	MO	2G00DXD 2G00DXD 2G00DXD	3847 W (ERP)	

Frequency Information

MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27.5-29.7 GHz	MO	2G00DXD	1928 W (ERP)	
		2G00DXD		
		2G00DXD		

Camarillo (VENTURA), CA - NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2375-2395 MHz	FX	12M0F1D	39 W (ERP)	
2395-2475 MHz	FX	12M0F1D	6097 W (ERP)	
5250-5850 MHz	FX	12M0F1D	6097 W (ERP)	

MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2375-2475 MHz	MO	12M0F1D	19282 mW (ERP)	
5250-5850 MHz	MO	12M0F1D	19282 mW (ERP)	

Frequency Information

MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27.5-29.7 GHz	MO	2G00DXD	15316 mW (ERP)	0.0001 %

MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27.5-29.7 GHz	MO	2G00DXD	767 W (ERP)	0.0001 %

MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
30-32 GHz	MO	2G00DXD	48434 W (ERP)	0.0001 %

MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
24-27.5 GHz	MO	2G00DXD	767 W (ERP)	0.0001 %

Camarillo (VENTURA), CA - NL 34-12-31; WL 119-04-44

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2375-2395 MHz	FX	20M0D7W	39 W (ERP)	

Frequency Information

Camarillo (VENTURA), CA - NL 34-12-31; WL 119-04-44

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2375-2395 MHz	FX	10M0D7W 5M00D7W	39 W (ERP)	

Camarillo (VENTURA), CA - NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2375-2395 MHz	FX	5M00D7W 10M0D7W 20M0D7W	39 W (ERP)	

MOBILE: Camarillo, CA, within 50 km, centered around NL 34-12-31; WL 119-04-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2375-2395 MHz	MO	5M00D7W 10M0D7W 20M0D7W	39 W (ERP)	

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) FLC Tech, INC must obtain consents from the Broadband Radio Service licensees prior to operation in 2375-2475 MHz and 18-20 GHz band.
- (4) FLC Tech, INC must coordinate with the Fixed Microwave Service licensees prior to operation in 2375-2475 MHz, 18-20 GHz, 24-27.5 GHz.
- (5) FCL Tech, INC must coordinate with the local Society Broadcast Engineer frequency coordinator prior to operation in 2375-2475 MHz and 18-20 GHz bands.

Special Conditions:

- (6) FCL Tech, INC must coordinate and comply with all restrictions levied by Western Area Frequency Coordinator (WAFC):

Mr. Jamie Heaton
130 Easy Rd STOP 3008 Bldg 31454, Room 230
China Lake, CA. 93555-6109
NIPR: jamie.heaton@navy.mil
SIPR: jamie.heaton@navy.smil.mil
DSN: 437-6832
COM: 760-939-6832
FAX: 760-939-0384 DSN-437
STE: 760-939-0384 DSN-437

Mr. Andrew Foltz
China Lake, CA 93555-6109
NIPR: andrew.foltz@navy.mil
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DSN: 437-6948
COM: 760-939-6948
CELL: 760-608-3586
FAX: 760-939-0384 DSN-437
STE: 760-939-0384 DSN-437

- (7) FCL Tech, INC must also be aware concerning out-of-band emissions above 5850 MHz into the DSRC band used for transportation safety applications.
- (8) FCL Tech, INC must be "notification" of the Location & Monitoring Service licensees (902-928 MHz) within 50 miles of the test area.
- (9) FCL Tech must coordinate with WAFC prior to transmit.
- (10) FCL must not utilize the bands 1700 - 1850 MHz and 4400 - 4950 MHz, due to ongoing law enforcement activities in the request area.
- (11) FCL must notch the following frequencies:
- 5665 MHz +/- 6 MHz
5700 MHz +/- 6 MHz
5750 MHz +/- 7.5 MHz
- (12) FCL must exclude the 31.3 -31.8 GHz frequency band in accordance with Footnote US246 in order to prevent potential impacts to NASA passive sensors.
- (13) Operation is NOT PERMITTED using the frequency band 27.5-30 GHz for going upward because it is potential for harmful interference to existing license satellite operations.

Special Conditions:

- (14) Within five business days prior to operating, FCL Technologies, Inc., must notify licensees of earth stations operating in the 18-20 GHz band within 25 kilometers of the locations from which experimental operations will occur. Also, FCL Technologies, Inc., must notify satellite operators in the 24.0-27.5 GHz bands. FCL Technologies, Inc. must also provide such notification to the National Spectrum Managers Association frequency coordinators by email. (see http://wireless.fcc.gov/services/index.htm?job=licensing_1&id=microwave). The notice must include the name and contact information of the stop buzzer personnel that will be available to cease operations in the event of reported interference. The notification should include the testing parameters (specific location(s), antenna gain(s), antenna height(s), antenna orientation, antenna patterns, eirp density) and day and times of each test. Consult the IBFS database to identify licensed earth station in the 18 - 20 GHz band and satellite operators in the 24 - 30 GHz band.
- (15) Experimental station shall use the minimum power level necessary to establish communications links to minimize potential interference to licensed users.
- (16) No automatic renewal for this authorization.
- (17) This authorization is without prejudice to any determination that the Commission may make regarding pending or future experimental satellite earth station applications
- (18) Operations are on a non-interference basis (NIB) and shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station and it shall cease transmission(s) immediately upon notice of such interference and notify the FCC in writing.
- (19) Operation in the 24-30 GHz transmitting downward from an aircraft as specified by the condition below:
 - When the aircraft is operating in a southern direction relative to the receive fixed station in the 24.0-30.0 GHz band, the transmitting main beam pointing antenna is limited to azimuth angles between 280 to 360 degrees and 0 degrees to 80 degrees and elevation angles between -20 to -90 degrees below the horizon only. Elevation angles greater than -20 degrees from the horizon are prohibited.
 - When the aircraft is operating in a northern direction relative to the receive fixed station in the 24.0-30.0 GHz band, the maximum output power is limited to 2 W, the maximum ERP is limited to 32.812 kW ERP, and the transmission must not exceed a maximum EIRP density of -50 dBW/Hz. Elevation angles greater than -15 degrees from the horizon are prohibited.
- (20) Operations in the 18-20 GHz band, the transmitting main beam pointing antenna is limited to elevation angle between 0 to 90 degrees above the horizon in a fixed ground station.
- (21) The power is limited to 39 watts ERP for the band 2375-2395 MHz.
- (22) This authorization SUPERSEDES the previous issued authorization with the same call sign and file number: amend special conditions.