

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

EXPERIMENTAL

(Nature of Service)

WM9XBN

(Call Sign)

XT MO

(Class of Station)

0579-EX-ST-2019

(File Number)

NAME Physical Optics 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:

To evaluate the performance of low power radar units for drone detect and avoid application.

Station Locations

- (1) MOBILE: , within 4 km, centered around NL 33-50-34; WL 118-18-46
- (2) MOBILE: , within 4 km, centered around NL 33-49-27; WL 118-05-16

Frequency Information

MOBILE: , within 4 km, centered around NL 33-50-34; WL 118-18-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
15.4-15.7 GHz	MO	300MF0N	48 W (ERP)	0.000094 %

This authorization effective April 18, 2019 and
will expire 3:00 A.M. EST October 16, 2019

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COMMUNICATIONS
COMMISSION**



Frequency Information

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Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
15.4-15.7 GHz	MO	300MF0N	48 W (ERP)	0.000094 %

Special Conditions:

- (1) 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.
- (2) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (3) Physical Optics Corporation must adhere to the following:
This experimental station shall only be used for Detect and Avoid operations. It shall not be used for radiolocation purposes such as UAS detection for security perimeters, drone interdiction or counter-UAS purposes.
- (4) For operations in the 15.43-15.63 GHz, the effective EIRP must be in accordance with Recommendation ITU-R S. 1340.
- (5) The radar station mounted on the drone authorized herein must not be used for air traffic control communications.
- (6) The stop buzzer contact for this project Ninad Patnekar
Phone: 3103203088
Email: npatnekar@poc.com
- (7) The authorized station must be in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules.
- (8) The authorized station must be in compliance with environmental requirement set forth in Section 1.1307 of the Commission's Rules.
- (9) Experimental station shall use the minimum power level necessary to establish communications links to minimize potential interference to licensed users.
- (10) This authorization is without prejudice to any determination that the Commission may make regarding pending or future experimental satellite earth station applications.
- (11) 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.
- (12) No automatic renewal for this authorization.