

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

EXPERIMENTAL

(Nature of Service)

WR9XMX

(Call Sign)

XC MO

(Class of Station)

1909-EX-ST-2020

(File Number)

NAME Northrop Grumman Systems 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:

Purpose of operation is to evaluate one-way radio data transmission of command and control for an UAV, and command a software defined payload to transmit at a given frequency and power.

Station Locations

- (1) MOBILE: Max Altitude 6500 ft AMSL Springfield, OH, within 40 km, centered around NL 39-50-35; WL 83-50-37

Frequency Information

MOBILE: Max Altitude 6500 ft AMSL Springfield, OH, within 40 km, centered around NL 39-50-35; WL 83-50-37

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
433 MHz	MO	4M00G1D	2 W (ERP)	
902-928 MHz	MO	230KF1D	19.3 W (ERP)	
2500-2655 MHz	MO	5M00G7D	13 W (ERP)	

This authorization effective January 21, 2021 and
will expire 3:00 A.M. EST July 21, 2021

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Max Altitude 6500 ft AMSL Springfield, OH, within 40 km, centered around NL 39-50-35; WL 83-50-37

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2500-2655 MHz	MO	50K0G7D	13 W (ERP)	
4400-4940 MHz	MO	5M00G7D 50K0G7D	16 W (ERP)	
5725-5875 MHz	MO	5M00G7D 50K0G7D	16 W (ERP)	

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) 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:
 - a. Location & Monitoring Service licensees (902-928 MHz)
- (4) Northrop Grumman Systems Corporation must secure consents from the Educational Broadband Service and Broadband Radio Service licensees prior to accessing to the frequency range from 2500 MHz to 2655MHz.
- (5) For the spot frequency 433 MHz, Northrop Grumman System Corporation must coordinate with HQ ANG (NGB.A2.3.6.A6-ANG.C4CR.Freqs.Org@us.af.mil, 240-612-8156/8154/7478) 96 hours prior and provide a stop buzzer.

Special Conditions:

- (6) For the band 4400 - 4940 MHz, Northrop Grumman Systems Corporation must limit the upper band limit to 4930 MHz in order to avoid interference to ongoing federal operations. Also, notch out the following:
- a. (+/- 15 MHz) 4445 MHz, 4475 MHz, 4505 MHz, 4535 MHz, 4565 MHz
 - b. (+/- 5 MHz) 4615 MHz.
 - c. If notching cannot be accomplished then Northrop Grumman Systems must coordinate with HQ ANG (NGB.A2.3.6.A6-ANG.C4CR.Freqs.Org@us.af.mil, 240-612-8156/8154/7478).
- (7) For the band 5725 - 5875 MHz, Northrop Grumman Systems Corporation must notch out the following:
- a. (+/- 1 MHz) 5720 MHz, 5730 MHz, 5740 MHz, 5775 MHz, 5800 MHz