

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
RADIO STATION CONSTRUCTION PERMIT
AND LICENSE**

EXPERIMENTAL

(Nature of Service)

WJ2XSD

(Call Sign)

XT MO

(Class of Station)

0588-EX-CR-2021

(File Number)

NAME Northrop Grumman Systems Corporation

Subject to the provisions of the Communications Act of 1934, subsequent acts, and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions and requirements set forth in this license, the licensee hereof is hereby authorized to use and operate the radio transmitting facilities hereinafter described for radio communications in accordance with the program of experimentation described by the licensee in its application for license.

Operation: In accordance with Sec. 5.3(J) of the Commission's Rules

Station Locations

(1) MOBILE: Palm Bay, FL, within 3.22 km, centered around NL 27-33-38; WL 80-25-23

Frequency Information

MOBILE: Palm Bay, FL, within 3.22 km, centered around NL 27-33-38; WL 80-25-23

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
77 MHz	MO	100KP0N	360 kW (ERP)	
152 MHz	MO	100KP0N	360 kW (ERP)	
161 MHz	MO	100KP0N	360 kW (ERP)	
174 MHz	MO	100KP0N	360 kW (ERP)	

This authorization effective December 01, 2021 and
will expire 3:00 A.M. EST December 01, 2022

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Palm Bay, FL, within 3.22 km, centered around NL 27-33-38; WL 80-25-23

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
184 MHz	MO	100KP0N	360 kW (ERP)	
194 MHz	MO	100KP0N	360 kW (ERP)	
205 MHz	MO	100KP0N	360 kW (ERP)	
215 MHz	MO	100KP0N	360 kW (ERP)	
386.629 MHz	MO	100KP0N	360 kW (ERP)	
390.495 MHz	MO	100KP0N	360 kW (ERP)	
392.438 MHz	MO	100KP0N	360 kW (ERP)	
394.4 MHz	MO	100KP0N	360 kW (ERP)	
396.372 MHz	MO	100KP0N	360 kW (ERP)	
398.344 MHz	MO	100KP0N	360 kW (ERP)	

Frequency Information

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Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
502.892 MHz	MO	100KP0N	360 kW (ERP)	
507.921 MHz	MO	100KP0N	360 kW (ERP)	
510.448 MHz	MO	100KP0N 100KP0N 100KP0N	360 kW (ERP)	
513 MHz	MO	100KP0N	360 kW (ERP)	
515.565 MHz	MO	100KP0N	360 kW (ERP)	
518.13 MHz	MO	100KP0N	360 kW (ERP)	
523.311 MHz	MO	100KP0N	360 kW (ERP)	
655 MHz	MO	100KN0N	360 kW (ERP)	
905 MHz	MO	100KP0N	360 kW (ERP)	
1677 MHz	MO	100KP0N	360 kW (ERP)	

Frequency Information

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Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1818.449 MHz	MO	100KP0N	360 kW (ERP)	
1836.634 MHz	MO	100KP0N	360 kW (ERP)	
1845.771 MHz	MO	100KP0N	360 kW (ERP)	
1855 MHz	MO	100KP0N	360 kW (ERP)	
1864.275 MHz	MO	100KP0N	360 kW (ERP)	
1873.55 MHz	MO	100KP0N	360 kW (ERP)	
1892.286 MHz	MO	100KP0N	360 kW (ERP)	
2401.725 MHz	MO	100KP0N	360 kW (ERP)	
2425.743 MHz	MO	100KP0N	360 kW (ERP)	
2437.811 MHz	MO	100KP0N	360 kW (ERP)	

Frequency Information

MOBILE: Palm Bay, FL, within 3.22 km, centered around NL 27-33-38; WL 80-25-23

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2450 MHz	MO	100KP0N	360 kW (ERP)	
2462.25 MHz	MO	100KP0N	360 kW (ERP)	
2474.5 MHz	MO	100KP0N	360 kW (ERP)	
2650 MHz	MO	100KP0N	360 kW (ERP)	
3180 MHz	MO	100KP0N	360 kW (ERP)	
3380 MHz	MO	100KP0N	360 kW (ERP)	
4715 MHz	MO	100KP0N	360 kW (ERP)	
4940 MHz	MO	100KP0N	360 kW (ERP)	
5257.426 MHz	MO	100KP0N	360 kW (ERP)	
5283.582 MHz	MO	100KP0N	360 kW (ERP)	

Frequency Information

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Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
5310 MHz	MO	100KP0N	360 kW (ERP)	
5336.55 MHz	MO	100KP0N	360 kW (ERP)	
5363.1 MHz	MO	100KP0N	360 kW (ERP)	
5416.731 MHz	MO	100KP0N	360 kW (ERP)	
8550 MHz	MO	100KP0N	360 kW (ERP)	
8750 MHz	MO	100KP0N	360 kW (ERP)	
8950 MHz	MO	100KP0N	360 kW (ERP)	
9690 MHz	MO	100KP0N	360 kW (ERP)	
12910 MHz	MO	100KP0N	360 kW (ERP)	
13920.204 MHz	MO	100KP0N	360 kW (ERP)	

Frequency Information

MOBILE: Palm Bay, FL, within 3.22 km, centered around NL 27-33-38; WL 80-25-23

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14059.406 MHz	MO	100KP0N	360 kW (ERP)	
14129.353 MHz	MO	100KP0N	360 kW (ERP)	
14200 MHz	MO	100KP0N	360 kW (ERP)	
14271 MHz	MO	100KP0N	360 kW (ERP)	
14342 MHz	MO	100KP0N	360 kW (ERP)	
14485.42 MHz	MO	100KP0N	360 kW (ERP)	
14610 MHz	MO	100KP0N	360 kW (ERP)	
14890 MHz	MO	100KP0N	360 kW (ERP)	

Special Conditions:

- (1) Operation in the 1850-1910 or 1930-1990 MHz band requires prior frequency coordination with 2 GHz microwave users and consent of PCS licensees to avoid interference.
- (2) Operation requires consent of affected Educational Broadband Service/Broadband Radio Service (EBS/BRS) licensees.
- (3) Licensee is required to coordinate operations with existing microwave users in the area to avoid interference.

Special Conditions:

- (4) Operation is subject to prior coordination with the local Society of Broadcast Engineers, Inc. (SBE) frequency coordinator. Consult the list at <http://sbe.org/resources/frequency-coordination/> to find the appropriate coordinator.
- (5) 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.
- (6) Test is ground to air operations only. The receiver aircraft will be East of Melbourne FL at 43K AGL, 70NM over the ocean. The ground equipment will stay setup fixed at test location.
- (7) Stop Buzzer POC Vince LoPiccolo
Phone: 321-951-6628,
email: Vince.LoPiccolo@ngc.com
- (8) Licensee must successfully secure consents from the Upper Microwave Flexible Use Service licensees in the proposed area prior to accessing to 655 MHz
- (9) Licensee must successfully secure consents from the Broadband Radio Service licensees around the proposed transmitter site prior to accessing to 2650 MHz.
- (10) Licensee must successfully coordinate with the local Society of Broadcast Engineers frequency coordinator prior to commencing the proposed operations.
- (11) Licensee must successfully coordinate with the Fixed Microwave Service licensees in the proposed venue in accordance with 47 C.F.R, Part 101.103(d) prior to accessing to 2450 MHz, 2462.25 MHz, 2474.5 MHz and 12910 MHz.
- (12) Prior to commencing any operations in the 13920.204 MHz , 14059.406 MHz, 14129.353 MHz , 14200 MHz , 14271 MHz , 14342 MHz frequency bands, experimental licensee must notify licensee of SES Americom, Inc. (Call signs: E170198. Ms Petra A Vorwig, Phone Number: 202-478-7143 , Fax Number: 202-478-7111, E-Mail: E-Mail: petra.vorwig@ses.com). 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, EIRP, EIRP density) and day and times of each test.
- (13) Experimental licensee is prohibited from operating at 3620 MHz
- (14) Prior to commencing any operations in the frequencies below, the experimental licensee must obtain consent from the following within 50 miles of the contours of the testing area:
 - a. Paging Service licensees in 152 MHz
 - b. Location & Monitoring Service licensees (902-928 MHz)
 - c. Broadband PCS licensees (1850-1910 MHz/1930-1990 MHz)

Special Conditions:

- (15) This authorization is issued for the express purpose of conducting experimental operations described in the related application and required by CONTRACT NUMBER : FA8600-22-C-9053. The use of this radio station in any other manner or for any other purpose will constitute a violation of the privileges herein authorized. Except as subsequently authorized by the Commission, this radio station shall not be operated after the expiration date of the contract designated in the related application and enumerated above.