

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

EXPERIMENTAL

(Nature of Service)

WL2XOQ

(Call Sign)

XC FX MO

(Class of Station)

0134-EX-CN-2021

(File Number)

NAME Rockwell Collins, Inc.

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,c) of the Commission's Rules

Station Locations

- (1) MOBILE: Shueyville, IA Johnson/Linn Counties (aircraft), within 160 km, centered around NL 41-48-18; WL 91-38-20
- (2) MOBILE: Shueyville, IA. Johnson/Linn Counties (van), within 50 km, centered around NL 41-48-18; WL 91-38-20
- (3) Cedar Rapids (LINN), IA - NL 42-01-55; WL 91-38-53
- (4) Iowa City (JOHNSON), IA - NL 41-38-23; WL 91-32-53

Frequency Information

MOBILE: Shueyville, IA Johnson/Linn Counties (aircraft), within 160 km, centered around NL 41-48-18; WL 91-38-20

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1.755-1.85 GHz	MO	20M0G1D 46M0G1D	2.5 W (ERP)	
2.11-2.3 GHz	MO	20M0G1D 46M0G1D	2.5 W (ERP)	0.0001 %
4.4-4.9 GHz	MO	20M0G1D	2.5 W (ERP)	0.0001 %

This authorization effective June 23, 2021 and
will expire 3:00 A.M. EST July 01, 2026

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Shueyville, IA Johnson/Linn Counties (aircraft), within 160 km, centered around NL 41-48-18; WL 91-38-20

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4.4-4.9 GHz	MO	46M0G1D	2.5 W (ERP)	0.0001 %
14.5-17.2 GHz	MO	51M2G1D 23M0G1D 70M2G1D	830 W (ERP)	0.0001 %
26-29.55 GHz	MO	51M2G1D 103MG1D 270MG1D	1220 W (ERP)	0.0001 %

MOBILE: Shueyville, IA. Johnson/Linn Counties (van), within 50 km, centered around NL 41-48-18; WL 91-38-20

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1.755-1.85 GHz	MO	20M0G1D 46M0G1D	2.5 W (ERP)	0.0001 %
2.11-2.3 GHz	MO	20M0G1D 46M0G1D	2.5 W (ERP)	0.0001 %
4.4-4.9 GHz	MO	20M0G1D 46M0G1D	2.5 W (ERP)	0.0001 %
14.5-17.2 GHz	MO	23M0G1D 51M2G1D	19 W (ERP)	0.0001 %

Frequency Information

MOBILE: Shueyville, IA. Johnson/Linn Counties (van), within 50 km, centered around NL 41-48-18; WL 91-38-20

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14.5-17.2 GHz	MO	70M2G1D	19 W (ERP)	0.0001 %
26-29.55 GHz	MO	51M2G1D 103MG1D 270MG1D	19 W (ERP)	0.0001 %

Cedar Rapids (LINN), IA - NL 42-01-55; WL 91-38-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1.755-1.85 GHz	FX	20M0G1D 46M0G1D	2.5 W (ERP)	0.0001 %
2.11-2.3 GHz	FX	20M0G1D 46M0G1D	2.5 W (ERP)	0.0001 %
2.11-2.3 GHz	FX	20M0G1D 46M0G1D	100 W (ERP)	0.0001 %
4.4-4.9 GHz	FX	20M0G1D 46M0G1D	2.5 W (ERP)	0.0001 %
4.4-4.9 GHz	FX	20M0G1D 46M0G1D	158 W (ERP)	0.0001 %

Frequency Information

Cedar Rapids (LINN), IA - NL 42-01-55; WL 91-38-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
14.5-17.2 GHz	FX	23M0G1D 51M2G1D 70M2G1D	12000 W (ERP)	0.0001 %
14.5-17.2 GHz	FX	23M0G1D 51M2G1D 70M2G1D	19 W (ERP)	0.0001 %
14.5-17.2 GHz	FX	23M0G1D 51M2G1D	830 W (ERP)	0.0001 %
26-29.55 GHz	FX	51M2G1D 103MG1D 270MG1D	19 W (ERP)	0.0001 %

Iowa City (JOHNSON), IA - NL 41-38-23; WL 91-32-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1.755-1.85 GHz	FX	20M0G1D 46M0G1D	2.5 W (ERP)	0.0001 %
2.11-2.3 GHz	FX	20M0G1D 46M0G1D	2.5 W (ERP)	0.0001 %
2.11-2.3 GHz	FX	46M0G1D	100 W (ERP)	0.0001 %

Frequency Information

Iowa City (JOHNSON), IA - NL 41-38-23; WL 91-32-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2.11-2.3 GHz	FX	20M0G1D	100 W (ERP)	0.0001 %
4.4-4.9 GHz	FX	20M0G1D 46M0G1D	158 W (ERP)	0.0001 %
4.4-4.9 GHz	FX	20M0G1D 46M0G1D	2.5 W (ERP)	0.0001 %
14.5-17.2 GHz	FX	23M0G1D 51M2G1D 70M2G1D	12000 W (ERP)	0.0001 %
14.5-17.2 GHz	FX	23M0G1D 51M2G1D 70M2G1D	19 W (ERP)	0.0001 %
14.5-17.2 GHz	FX	23M0G1D 51M2G1D	830 W (ERP)	0.0001 %
26-29.55 GHz	FX	51M2G1D 103MG1D 270MG1D	19 W (ERP)	0.0001 %

Special Conditions:

- (1) The station identification requirements of Section 5.115 of the Commission's Rules are waived.

Special Conditions:

- (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) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (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/wp-content/uploads/freqcoor.pdf> to find the appropriate coordinator.
- (5) Licensee must successfully secure consents from the Upper Microwave Flexible Use Service licensees in each proposed area prior to accessing to 26-29.55 GHz band.
- (6) Licensee must successfully obtain consents from the Advanced Wireless Service licensees in each proposed area prior to accessing to 1.755-1.780 GHz and 2.025-2.2 GHz bands.
- (7) Notification shall be provided to the NASA GSFC Spectrum Management Office at NASA-DL-GSFC-SPECTRUMMANAGEMENT@MAIL.NASA.GOV, at least 3 days prior to operation.
- (8) Stop buzzer POC is Zachary Haralson at (319) 263 5659.
- (9) This authorization is issued for the express purpose of conducting experimental operations described in the related application and required by the U.S. Government; contract number FA8750-20-C-1542. 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.
- (10) Operation must coordinate with NASA USGS, SIOUX FALLS.
- (11) Operation The operation should be on a noninterference basis to the operations of NASA GRC, OH, KILEVILL, OH (40-06-00N 083-12-00W) on the same or adjacent channel and no protection can be afforded by that agency.
- (12) During transmission, aircraft shall not exceed the altitude 20k ft.
- (13) Operation is not permitted using the frequency 2.025-2.11 GHz