

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

EXPERIMENTAL
(Nature of Service)

WK2XOS
(Call Sign)

XT FX MO
(Class of Station)

0820-EX-CN-2019
(File Number)

NAME The Boeing Company

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(h) of the Commission's Rules

Station Locations

- (1) Ridley Park (DELAWARE), PA - NL 39-51-36; WL 75-19-15; MOBILE: Within compounds of Boeing facility, Ridley Park, PA, within 5 km, centered around NL 39-51-36; WL 75-19-15
- (2) Middletown (NEW CASTLE), DE - NL 39-31-13; WL 75-43-17; MOBILE: Within compounds of Summit facility, Middletown, DE, within 5 km, centered around NL 39-31-13; WL 75-43-17

Frequency Information

Ridley Park (DELAWARE), PA - NL 39-51-36; WL 75-19-15; MOBILE: Within compounds of Boeing facility, Ridley Park, PA, w

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
30.1 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
32.1 MHz	MO	5K00F1E 8K33F1E 12K5F1E	50 W (ERP)	

This authorization effective November 08, 2019 and
will expire 3:00 A.M. EST November 01, 2021

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

Ridley Park (DELAWARE), PA - NL 39-51-36; WL 75-19-15; MOBILE: Within compounds of Boeing facility, Ridley Park, PA, w

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
32.1 MHz	MO	25K0F1E	50 W (ERP)	
34.1 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
36.7 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
38.525 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
38.7 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
40.1 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	

Frequency Information

Ridley Park (DELAWARE), PA - NL 39-51-36; WL 75-19-15; MOBILE: Within compounds of Boeing facility, Ridley Park, PA, w

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
41.5 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
46.7 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
49.8 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
63 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
66 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
69 MHz	MO	5K00F1E 8K33F1E 12K5F1E	50 W (ERP)	

Frequency Information

Ridley Park (DELAWARE), PA - NL 39-51-36; WL 75-19-15; MOBILE: Within compounds of Boeing facility, Ridley Park, PA, w

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
69 MHz	MO	25K0F1E	50 W (ERP)	
72.5 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
78 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
81 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
84 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
87.975 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	

Frequency Information

Ridley Park (DELAWARE), PA - NL 39-51-36; WL 75-19-15; MOBILE: Within compounds of Boeing facility, Ridley Park, PA, w

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
123.25 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
123.3 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
123.45 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
123.475 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
123.5 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
123.525 MHz	MO	5K00A3E 8K33A3E 12K5A3E	15 W (ERP)	

Frequency Information

Ridley Park (DELAWARE), PA - NL 39-51-36; WL 75-19-15; MOBILE: Within compounds of Boeing facility, Ridley Park, PA, w

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
123.525 MHz	MO	25K0A3E	15 W (ERP)	
123.55 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
130 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
139 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
139.35 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
139.95 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	

Frequency Information

Ridley Park (DELAWARE), PA - NL 39-51-36; WL 75-19-15; MOBILE: Within compounds of Boeing facility, Ridley Park, PA, w

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
140.45 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
140.975 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
141.25 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
142.2 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
142.65 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
143.5 MHz	MO	5K00A3E 8K33A3E 12K5A3E	15 W (ERP)	

Frequency Information

Ridley Park (DELAWARE), PA - NL 39-51-36; WL 75-19-15; MOBILE: Within compounds of Boeing facility, Ridley Park, PA, w

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
143.5 MHz	MO	25K0A3E	15 W (ERP)	
145.75 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
148 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
148.325 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
150.25 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
151.975 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	

Frequency Information

Ridley Park (DELAWARE), PA - NL 39-51-36; WL 75-19-15; MOBILE: Within compounds of Boeing facility, Ridley Park, PA, w

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
152.5 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
154.75 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
159.25 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
161.5 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
166 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	

Frequency Information

Middletown (NEW CASTLE), DE - NL 39-31-13; WL 75-43-17; MOBILE: Within compounds of Summit facility, Middletown, DE

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
30.1 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
32.1 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
34.1 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
36.7 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
38.525 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
38.7 MHz	MO	5K00F1E 8K33F1E 12K5F1E	50 W (ERP)	

Frequency Information

Middletown (NEW CASTLE), DE - NL 39-31-13; WL 75-43-17; MOBILE: Within compounds of Summit facility, Middletown, DE

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
38.7 MHz	MO	25K0F1E	50 W (ERP)	
40.1 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
41.5 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
46.7 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
49.8 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
63 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	

Frequency Information

Middletown (NEW CASTLE), DE - NL 39-31-13; WL 75-43-17; MOBILE: Within compounds of Summit facility, Middletown, DE

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
66 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
69 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
72.5 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
78 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
81 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
84 MHz	MO	5K00F1E 8K33F1E 12K5F1E	50 W (ERP)	

Frequency Information

Middletown (NEW CASTLE), DE - NL 39-31-13; WL 75-43-17; MOBILE: Within compounds of Summit facility, Middletown, DE

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
84 MHz	MO	25K0F1E	50 W (ERP)	
87.975 MHz	MO	5K00F1E 8K33F1E 12K5F1E 25K0F1E	50 W (ERP)	
123.25 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
123.3 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
123.45 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
123.475 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	

Frequency Information

Middletown (NEW CASTLE), DE - NL 39-31-13; WL 75-43-17; MOBILE: Within compounds of Summit facility, Middletown, DE

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
123.5 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
123.525 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
123.55 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
130 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
139 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
139.35 MHz	MO	5K00A3E 8K33A3E 12K5A3E	15 W (ERP)	

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Middletown (NEW CASTLE), DE - NL 39-31-13; WL 75-43-17; MOBILE: Within compounds of Summit facility, Middletown, DE

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
139.35 MHz	MO	25K0A3E	15 W (ERP)	
139.95 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
140.45 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
140.975 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
141.25 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
142.2 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	

Frequency Information

Middletown (NEW CASTLE), DE - NL 39-31-13; WL 75-43-17; MOBILE: Within compounds of Summit facility, Middletown, DE

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
142.65 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
143.5 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
145.75 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
148 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
148.325 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
150.25 MHz	MO	5K00A3E 8K33A3E 12K5A3E	15 W (ERP)	

Frequency Information

Middletown (NEW CASTLE), DE - NL 39-31-13; WL 75-43-17; MOBILE: Within compounds of Summit facility, Middletown, DE

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
150.25 MHz	MO	25K0A3E	15 W (ERP)	
151.975 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
152.5 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
154.75 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
159.25 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	
161.5 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 W (ERP)	

Frequency Information

Middletown (NEW CASTLE), DE - NL 39-31-13; WL 75-43-17; MOBILE: Within compounds of Summit facility, Middletown, DE

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
166 MHz	MO	5K00A3E 8K33A3E 12K5A3E 25K0A3E	15 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) Experimental use is secondary to, and must not interfere with, Flight Test operations. Licensee must coordinate with other users as necessary to minimize interference. Renewal of this License is subject to prior coordination with AFTRCC Frequency Advisory Committee, www.afrcc.org
- (4) The applicant must coordinate with the local Society of Broadcast Engineers frequency coordinator prior to operation in the frequency bands centered at 63 MHz, 66 MHz, 69 MHz, 78 MHz, 81 MHz, 84 MHz, 87.975 MHz, 159.25 MHz, 161.5 MHz, and 166 MHz.
- (5) 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:
 - Paging Service licensees in 152 MHz
 - Paging Service licensees in 152 MHz/158 MHz
- (6) Operation is not permitted using the frequency 136.75 MHz.
- (7) Experimental station shall use the minimum power level necessary to establish communications links to minimize potential interference to licensed users
- (8) Stop Buzzers, Neil Blaho (610) 591-6478 and Dan McNeil (714) 642-7485.
- (9) This authorization is without prejudice to any determination that the Commission may make regarding pending or future experimental satellite earth station applications
- (10) 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.