

The Boeing Company

Request for Experimental License

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by

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The Boeing Company
Frequency Management Services M/C 2T-22
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In Accordance With NTIA Manual Paragraph 8.3.28

1. Individual authorization is for indoor use only, and is required for each device at a specific site. ***Operation will be conducted indoors. The device information is provided in application and specific site information provided below.***
2. Applications for frequency assignment should be applied for as an XT station class with a note indicating the device is to be used as an "Experimental RNSS Test Equipment for the purpose of testing GPS receivers" and describing how the device will be used. ***Description of operation provided in confidential portion of request and Boeing concurs to the XT station class.***
3. Approved applications for frequency assignment will be entered in the GMF. ***Boeing concurs.***
4. The maximum length of the assignment will be two years, with possible renewal. ***Boeing concurs.***
5. The area of potential interference to GPS reception (e.g., military or contractor facility) has to be under the control of the user. ***The site is under Boeing's control.***
6. The maximum equivalent isotropically radiated power (EIRP) must be such that the calculated emissions are no greater than -140 dBm/24 MHz as received by an isotropic antenna at a distance of 100 feet (30 meters) from the building where the test is being conducted. The calculations showing compliance with this requirement must be provided with the application for frequency assignment and should be based on free space propagation with no allowance for additional attenuation (e.g., building attenuation.) ***Link budgets provided below and meet specified levels. Calculations do not allow for building attenuation.***
7. GPS users in the area of potential interference to GPS reception must be notified that GPS information may be impacted for periods of time. ***GPS users in area will be notified.***

8. The use is limited to activity for the purpose of testing RNSS equipment/systems. ***Use will be limited to testing RNSS equipment.***

9. A "Stop Buzzer" point of contact for the authorized device must be identified and available at all times during GPS re-radiation operation of the device under any condition. ***Stop Buzzer information provided below.***

Link Budgets

	Configuration 1 (L1)	Configuration 1 (L2)
Simulator Output	- 83 dBm	- 86 dBm
Adjustable Level	+ 7 dB	+ 7 dB
Variable Attenuator	- 39 dB	- 39 dB
Line Loss + Connectors	- 10 dB	- 10 dB
Power at 0 dB Gain Hat	- 125 dBm	- 128 dBm
Free Space Loss (100 feet from building)	- 66.6 dB	- 64.4 dB
Total	- 191.6 dBm	- 192.4 dBm

	Configuration 2 (L1/L2)
Simulator Output	- 68 dBm
30 dB Pad	- 30 dB
6 Way Splitter	- 8.4 dB
4 Way Splitter	- 6.6 dB
Cable Loss	- 5.4 dB
Power at 0 dB Gain Hat	- 118.4 dBm
Free Space Loss (100 feet from building)	- 66.1 dB
Single Hat Operation Total	- 184.5 dBm
Two Hat Operation Total	- 181.5 dBm

	Configuration 3 (L1/L2)
Simulator Output	- 77 dBm
30 dB Pad	- 30 dB
2 Way Splitter	- 3 dB
Cable Loss	- 2.86 dB
Power at 0 dB Gain Hat	- 112.86 dBm
Free Space Loss (100 feet from building)	- 66.1 dB
Total	- 178.9 dBm

Building 598 Location

The Boeing Company
Bldg 73-598
2600 N 3rd Street
St Charles (ST Charles County), MO 63301-0060
38° 48' 48"N
090° 28' 21"W
WGS84/NAD83



Figure 1 – Boeing, St Charles, MO (Building 73-598)

Frequencies, Power and Emission for Building 598

Frequency	Maximum ERP	Emission
1575.42 MHz (L1 GPS)	-68 dBm	24M00G1D
1227.6 MHz (L2 GPS)	-68 dBm	24M00G1D

Building 599 Location

The Boeing Company

Bldg 73-599

2600 N 3rd Street

St Charles (ST Charles County), MO 63301-0060

38° 48' 34"N

90° 28' 13"W

WGS84/NAD83



Figure 2 – Boeing, St Charles, MO (Building 73-599)

Frequencies, Power and Emission for Building 599

Frequency	Maximum ERP	Emission
1575.42 MHz (L1 GPS)	-76 dBm	24M00G1D
1227.6 MHz (L2 GPS)	-79 dBm	24M00G1D

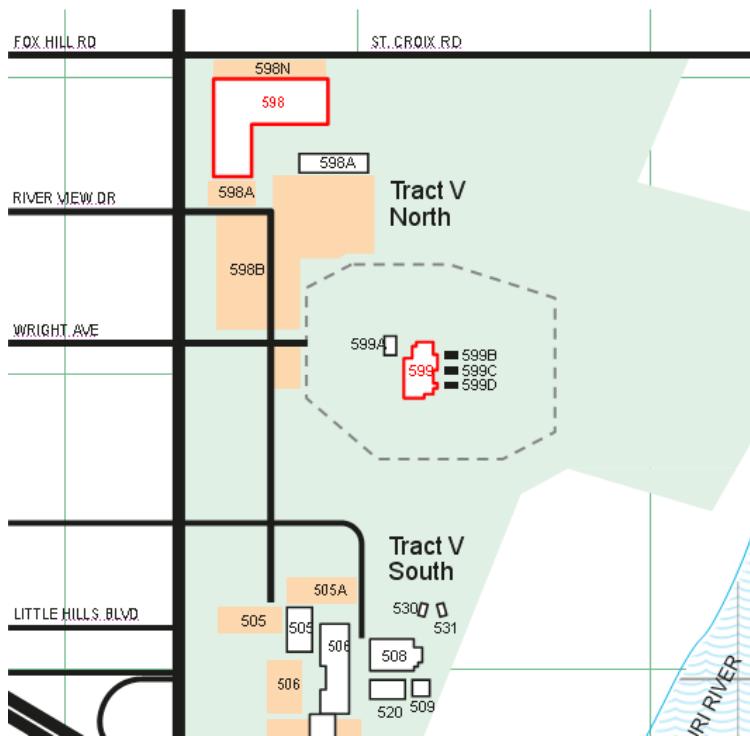


Figure 3 – Boeing, St Charles, MO
(Tract V Composite Picture – Bldgs 73-598 and 73-599 highlighted in red)

Schedule

The requested STA is to be effective for 2-years upon a grant from the FCC/OET. Operations will be anytime, 24 hours a day, 7 days a week, as necessary.

Stop Buzzer Contact Information

The equipment will be operated by Boeing employees.

James R. Johnson
 Manager, Prod Test Engr
 Email: james.r.johnson5@boeing.com
 Office: 314-232-5448

Darwin Estep
 Engineer
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 Office: 314-232-5463