

~~S-3487-EX-1998~~

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August 10, 1998
G-8930-RBD-1234

Federal Communications Commission
Experimental Radio Service
P.O. Box 358320
Pittsburgh, PA 15251-5315

rec'd 8/20/98



Subject: Request for Special Temporary Authorization (STA)
HIRF, Boeing Field, WA

Gentlemen:

This request for a Special Temporary Authorization (STA) is submitted in accordance with CFR 47, Part 5.56. Pertinent **direct drive** testing data in this STA mirrors information submitted in our Special Temporary Authorization previously maintained under FCC File 3736-EX-R-95 (KA2XNF), with effective dates of December 1, 1995 - December 1, 1997.

1. **Name and Address:**
The Boeing Company
Frequency Management M/S 3U-AJ
P.O. Box 3707
Seattle, WA 98124-2207
2. **Need for special action:** This STA is required to conduct High Intensity Radiated Field (HIRF) tests on a new model of Boeing aircraft. The testing window is for a duration of three weeks. Previous direct drive testing at Everett, WA was scheduled under Experimental STA KK8XBU as cited above.
3. **Type of operations:** The tests to be conducted in 50 Hz to 100 MHz are direct drive, swept carrier wave transfer function tests on production airplanes. These tests require driving a transmission line formed by the airplane parked over a wire grid return. Current is driven onto the aircraft by directly attaching the output of a 25 watt amplifier to the nose, wing tip, or engine nacelle. A "stepped swept" test is required to measure as many aircraft and cable resonance's as possible. Testing using widely spaced discrete frequencies would miss critical resonant frequencies. The dwell time per frequency point will be a maximum of 75 milliseconds per point, based on 401 points in a 30 second maximum sweep. The maximum number of sweeps per test will be 64. Intervals between test segments will be approximately two minutes.

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5. **Time and Date:** Testing is planned to occur between the dates of August 20 and September 30, 1998. If approved, Boeing would advise both the FCC Office of Experimental Technology and FAA Northwest Region Frequency Management Office of actual test dates to narrow the actual effective dates of the Authorization.
6. **Class of Station:** XR
Call Sign: TBD
Nature of Service: Experimental
7. **Location:** Boeing Field, Seattle, WA. This location is a Boeing owned facility located at coordinates: 47°32'21" N 122°18'44"W.
8. **Equipment Manufacturer:**
- | Manufacturer | Type | No. Of Equipments |
|--------------|-------|-------------------|
| RF Powerlabs | M125L | 1 |
| Kalmus | 520FC | 1 |
| IFI | M5500 | 1 |
9. **Frequency Bands:** 50 Hz - 100 MHz
10. **Power Output to Antenna:** 20 to 25 watts (band dependent)
11. **Emission:** NON
12. **Antenna height:** Less than 18 feet above ground level
Antenna Type: Equipment is direct drive with no deliberate antenna
Gain: 10dB
Beamwidth: Less than 90° at the ½ power point
Polarization: Various
Direction: 360° North

Should you require additional information, please contact Bob Douglass at 253-657-6421 or bob.douglass@boeing.com email.

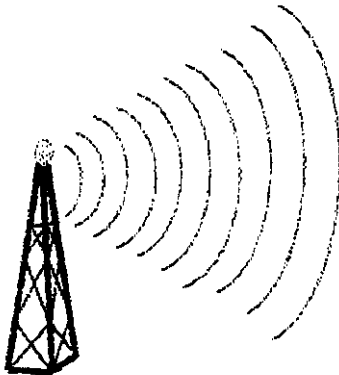


Joel H. Rognaby
Manager, Frequency Management Services
Boeing Shared Services Group
253-657-6095

Enclosures:
FCC Form 159
Check #: 0390774

cc: J. Daniels 19-HL, D.J. Bakke 9W-FX

The Boeing Company
Frequency Management, M/S 3U-AJ
P.O. Box 3707
Seattle, WA 98124-2207



DATE: August 10, 1998

TIME: 3:49 PM

TO: Nancy Hey
FCC/OET

PHONE: 202-418-2432

FAX: ~~202-887-5897~~ 202 418-1918

FROM: Bob Douglass
Frequency Management

PHONE: 253-657-6421

FAX: 253-657-6900

RE: Request for Experimental Licensing to Support HIRF Testing at Boeing Field

CC:

Number of pages including cover sheet: 5

Message

Nancy - here is a request which has a short leadtime. I have sent the original request to the appropriate PO Box at Mellon Bank via Express Mail. They should have it by Wednesday morning.

Bob Douglass