

KORD-FM

RF Radiation Compliance

OET Bulletin 65 Edition 97-01

September 24, 2009

KORD-FM

RF Radiation Compliance

This report is to show compliance with the FCC established guidelines for exposure to RF electromagnetic fields as described in OET Bulletin 65 Edition 97-01. The stations and methods are described below.

Facilities:

Facility ID	Call Sign	Freq	Antenna	HAGL	ERP	Coordinates
16726	KORD-FM	102.7	8 Bay	88 Meters	100kw V / H	46 05 58 119 07 40
77777	KUJ-FM	99.1	3 Bay Directional	70.1 Meters	52kw V / H	46 05 58 119 07 40
53140	KEGX-FM	106.7	8 Bay	109.7Meters	100kw V / H	46 05 58 119 07 40

Proper signage was posted on the fenced area.

Survey Meter

The measurements were performed using a NARDA Model 8718 B meter S/N 6053 and a NARDA Model 8764D probe S/N 6010. The meter and probe designed to measure electromagnetic fields with respect to human exposure from 100 kHz to 300 GHz. The instrument was last calibrated on 5-27-05. A certificate of calibration is included with this report.

Spatial averaging was used during the measurements.

General Population / Uncontrolled Exposure:

In regard to General Population / Uncontrolled Exposure. A Narda survey meter model 8718B with an 8761D probe was used in the area. The probe is calibrated in percent of limit for Uncontrolled Exposure ($200\mu W / cm^2 = 100\%$) from 300 KHz to 3.0 GHz. Max hold was used while walking around the area with the probe being moved between ground and the 2 meter level. The transmitter site is fenced around the perimeter of the building and tower and the access gate to the site is locked. There is additional fencing around each guy anchor. The highest level recorded outside the fenced area was $177\mu W / cm^2$ located 24 feet due West of the transmitter sites main gate.

The measurements taken meet with the OET Bulletin 65 Edition 97-01 for General Population / Uncontrolled Exposure.

Occupational / Controlled Exposure:

The Occupational / Controlled Exposure measurements were made using the same meter and methods as the General Population / Uncontrolled measurements. The highest recorded level inside the fenced area was $453\mu W/cm^2$ located 5' inside the main gate to the transmitter site.

The station is shown to be in compliance with OET Bulletin 65 Edition 97-01 for both General Population / Uncontrolled Exposure and Occupational / Controlled Exposure.

A spreadsheet showing the levels is included in this report. Spatial averaging was used during these measurements.

Table 1 from OET Bulletin 65 Edition 97-01 is provided to show the maximum limit for permissible exposure (MPE).

All measurements were taken on by myself Richard Jones on September 24, 2009 and are true and accurate to the best of my knowledge.

Richard Jones
RJ Engineering

KORD-FM

102.7 Mhz

KORD-FM	Ref#	Field Strength mW / cm^2	Location
Run Ref. Number: 00	1	0.137	8' Outside Main Gate
Date: 9-24-09 Start Time: 16:20	2	0.140	57' Outside Main Gate
	3	0.151	Outside Fence 60' West of Power Transformer
	4	0.154	63' West of SW Fence Corner
	5	0.080	SW Outer Guy Anchor
	6	0.148	SW Inner Guy Anchor
Model 8718 S/N: 6053	7	0.105	105' South of Tower
	8	0.137	45' East of SE Corner of Fence
Probe: 8761DS/N: 06010	9	0.116	East Outer Guy Anchor
	10	0.126	East Inner Guy Anchor
	11	0.145	54' East of Tower
	12	0.143	39' East of NE Corner of Fence
	13	0.128	30' East of NE Corner Fence
	14	0.133	36' NE of KORD Building
	15	0.143	45' NW of KORD Building
Freq: 102.7 MHz Cor. Factor: 1.00	16	0.141	18' from NW Corner of Fence
	17	0.182	NW Inner Guy Anchor
Avg Mode: N/A	18	0.058	NW Outer Guy Anchor
	19	0.177	24' West of Middle of the Main Gate
	20	0.435	5' Inside of Main Gate
	21	0.310	Near KORD Generator

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)**(A) Limits for Occupational/Controlled Exposure**

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

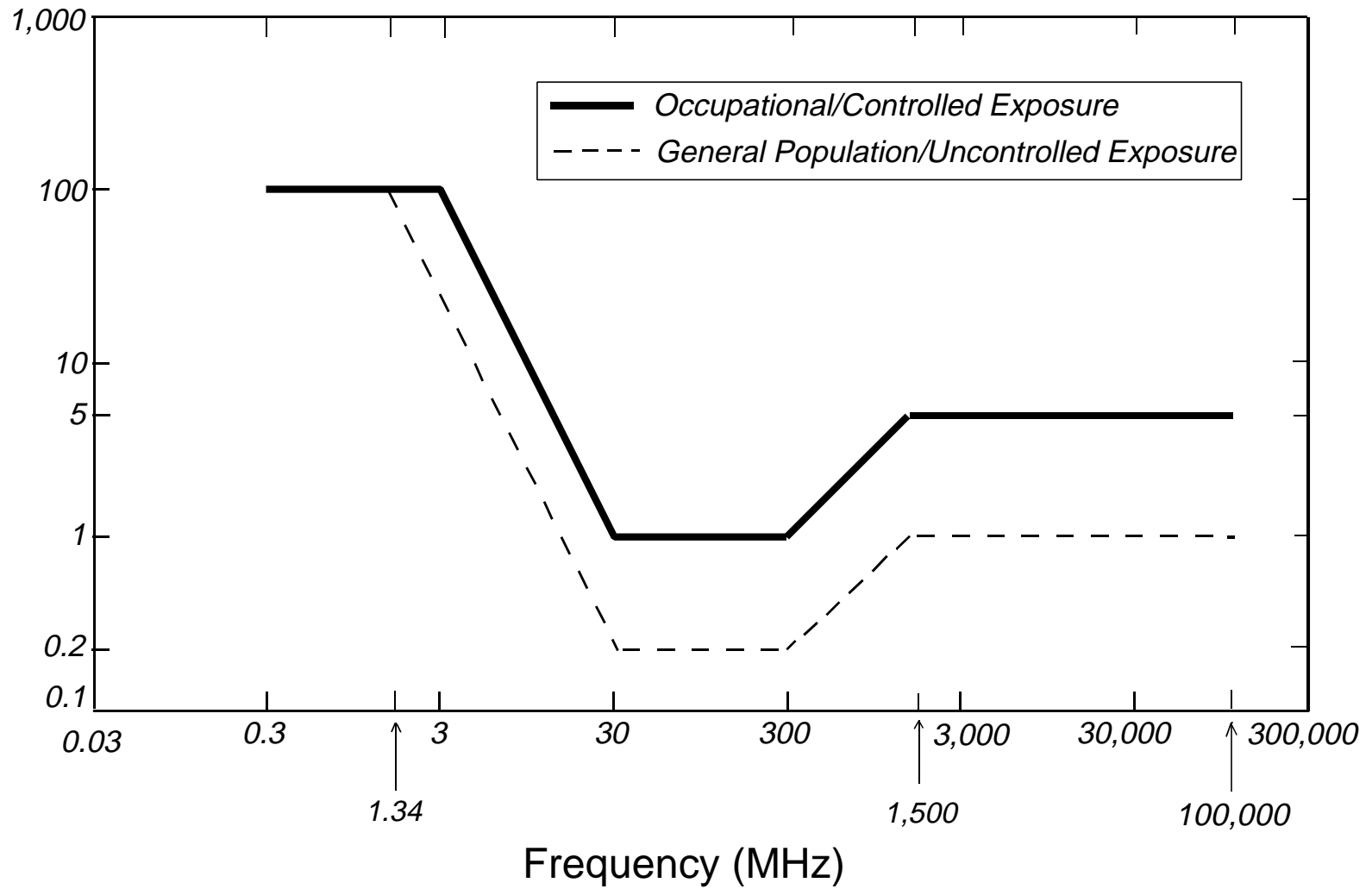
f = frequency in MHz

*Plane-wave equivalent power density

NOTE 1: **Occupational/controlled** limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: **General population/uncontrolled** exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

Figure 1. *FCC Limits for Maximum Permissible Exposure (MPE)*
Plane-wave Equivalent Power Density





Certificate of Calibration

L-3 Communications, Narda Microwave-East, hereby certifies that the referenced instrument has been calibrated by qualified personnel to Narda's approved test procedures.

Furthermore, the instrument meets, or exceeds, all published specifications and the calibration has been performed with test instrumentation that, where applicable, is traceable to the National Institute of Standards and Technology.

Narda's calibration measurements are traceable to the National Institute of Standards and Technology to the extent allowed by the bureau's calibration facilities.

Customer: **RJ ENGINEERING**
BILLINGS, MT 59105

Certificate #: 54565 1

Model #: 8718B

Serial #: 06053

Description: METER

PO #: VISA-JONES

Date Calibrated: 05/27/2005

R.O. #: 54565

A handwritten signature in black ink, appearing to read 'Vince Donovan'.

Vince Donovan
Manager of Instruments Assembly and Test

A handwritten signature in black ink, appearing to read 'John C. Stine'.

John C. Stine
Director of Quality Assurance

This certificate shall not be reproduced, except in full, without written approval from L-3 Communications, Narda Microwave-East