ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
CERTIFICATION TO FCC PART 15 REQUIREMENTS

for

UNINTENTIONAL RADIATOR

AUTO ALARM SYSTEM RECEIVER

MODEL: EX-10000

FCC ID: BGA104R

REPORT NO: 00E9120

DATE: NOVEMBER 29, 2000

Prepared for
AUDIOVOX CORPORATION
150 MARCUS BLVD., HAUPPAUGE,
N.Y. 11788 U.S.A.

Prepared by
COMPLIANCE ENGINEERING SERVICES, INC.
No. 199, CHUNG SHENG ROAD
HSIN TIEN CITY, TAIPEI, TAIWAN R.O.C.
TEL: (02) 2217-0894
FAX: (02) 2217-1254

NVLAP®

LAB CODE: SL2-IN-E-0005

COMPLIANCE
Certification Services
FCC, VCCI, CISPR, CE, AUSTEL, NZ
UL, CSA, TÜV, BCIQ, DHHS, NVLAP

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TEST DATA

- Fundamental Frequency Plot
- Radiated Emission Data

1. VERIFICATION OF COMPLIANCE

COMPANY NAME	:	AUDIOVOX CORPORATION 150 MARCUS BLVD., HAUPPAUGE, N.Y. 11788 U.S.A.
CONTACT PERSON	:	PAT LAVELLE / EXECUTIVE VICE PRESIDENT
TELEPHONE NO.	:	(516)231-7750
EUT DESCRIPTION	:	AUTO ALARM SYSTEM RECEIVER
MODEL NAME/NUMBER	:	EX-10000
FCC ID	:	BGA104R
DATE TESTED	:	NOVEMBER 17, 2000
REPORT NUMBER	:	00E9120

TYPE OF EQUIPMENT	SECURITY EQUIPMENT (UNINTENTIONAL RADIATOR)
EQUIPMENT TYPE	434 MHz SUPERREGENERATE RECEIVER
MEASUREMENT PROCEDURE	ANSI 63.4 / 1992
LIMIT TYPE	CERTIFICATION
FCC RULE	CFR 47, PART 15.109

The above equipment was tested by Compliance Engineering Services, Inc. for compliance with the requirements set forth in CFR 47, PART 15. This said equipment in the configuration described in this report shows that maximum emission levels emanating from equipment are within the compliance requirements.

Rick Yeo

RICK YEO / EMC MANAGER
COMPLIANCE ENGINEERING SERVICES, INC.

2. PRODUCT DESCRIPTION

AUDIOVOX CORPORATION, Model EX-10000 is the receiving portion of a multi-purpose security device. The associated Transmitter is manufactured by AUDIOVOX CORPORATION Model No: PROOE4B, FCC ID: BGA104T .

3. TEST FACILITY

The open area test sites and conducted measurement facilities used to collect the radiated data are located at No. 199, Chung Sheng Road, Hsin Tien City, Taipei, Taiwan R.O.C. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

The measuring instrument which was utilized in performing the tests documented herein has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment which is traceable to recognized national standards.

4. MEASUREMENT EQUIPMENT USED

Manufacturer	Model Number	Description	Cal Due Date
R&S	SMY 02	Signal Generator (9 KHz – 2.08 GHz)	01/2001
H.P.	8595EM	Spectrum Analyzer (9 KHz – 6.5 GHz)	01/2001
EMCO	3142	Antenna (30-2000 MHz)	06/2001
T.E.C.	PA-102	Preamplifier (0.1 - 2000 MHz)	05/2001
EMCO	3115	Antenna(1 – 18 GHz)	09/2001
MITEQ	NSP2600-44	Preamplifier (1 - 26.5 GHz)	12/2000

5. TEST CONFIGURATION

Set frequency generator to 434 MHz. EUT receiving transmission continuously. All the wires are placed on the turn table to their maximum length to simulate the worse emission conditions.

6. TESTS CONDUCTED

CFR 47, 15.109 RADIATED EMISSION TESTS	CONDUCTED AT 3 METERS

7. RADIATED EMISSION TEST PROCEDURE

The EUT and all other support equipment are placed on a wooden table 80 cm above the ground screen. Antenna to EUT distance is 3 meters. During the test, the table is rotated 360 degrees to maximize emissions and the antenna is positioned from 1 to 4 meters above the ground screen to further maximize emissions. The antenna is polarized in both vertical and horizontal positions.

Monitor the frequency range of interest at a fixed antenna height and EUT azimuth. Frequency span should be small enough to easily differentiate between broadcast stations and intermittent ambients. Rotate EUT 360 degrees to maximize emissions received from EUT. If emission increases by more than 1 dB, or if another emission appears that is greater by 1 dB, return to azimuth where maximum occurred and perform additional cable manipulation to further maximize received emission.

Move antenna up and down to further maximize suspected highest amplitude signal. If emission increased by 1 dB or more, or if another emission appears that is greater by 1dB or more, return to antenna height where maximum signal was observed and manipulate cables to produce highest emissions, noting frequency and amplitude.

8. COHERENT TESTS

During Radiated Emission Tests, R&S signal generator model no: SMY 02 (9K – 2.08G Hz) was used to radiate unmodulated CW signal to EUT at 434 MHz. Please refer to radiated radiate emission plots and data for the highest readings.

9. EQUIPMENT MODIFICATIONS

To achieve compliance to FCC section 15.109, the following change(s) were made during compliance testing:

NOT APPLICABLE

10. TEST CONFIGURATION PHOTOS (Radiated Emission Test)

COMPLIANCE Engineering Service, Inc.
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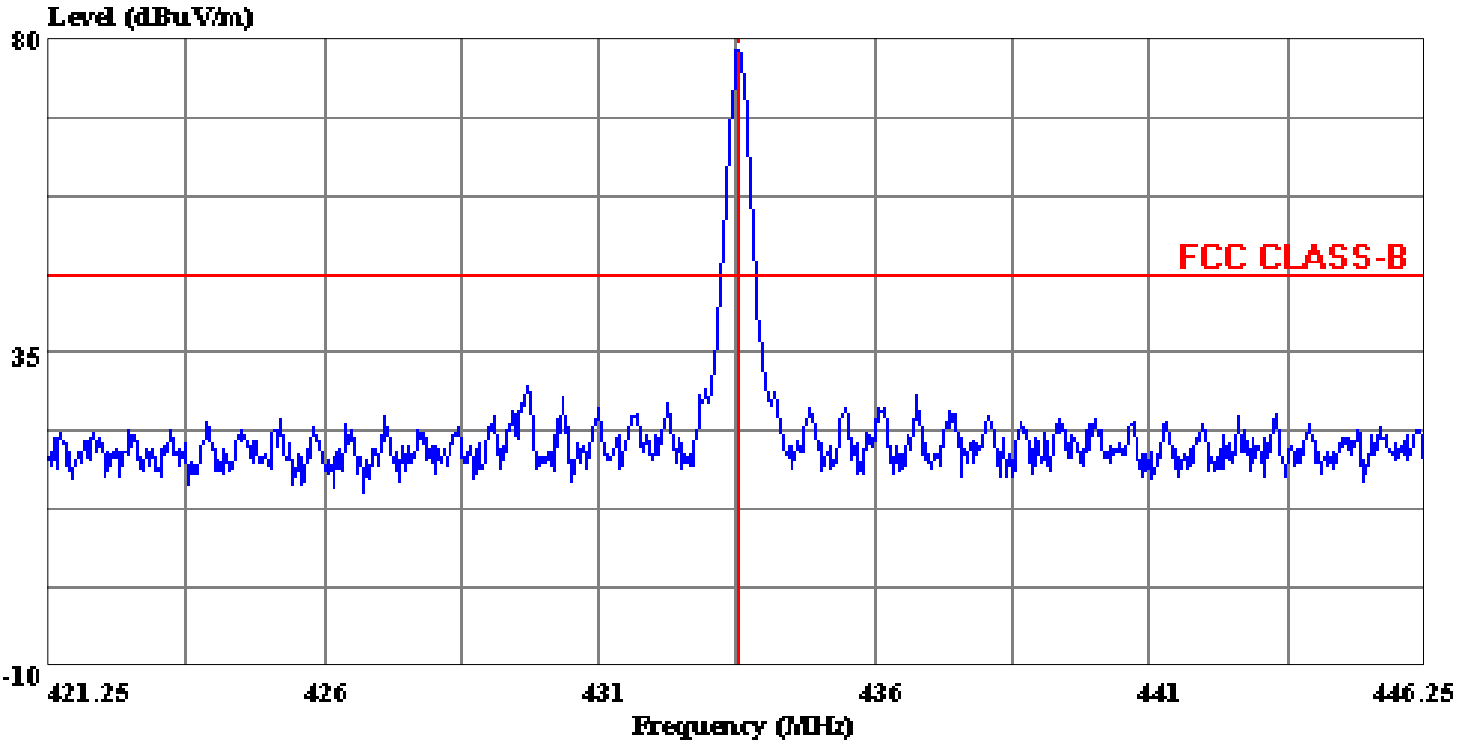

(CCS D-Site)

Trace: 3 Ref Trace:

Condition: VERTICAL
Report No. : 00E9120
Test Engr. : VINCE CHIANG
Company : AUDIOVOX CORPORATION
EUT : EX-10000
Test Config : EUT/DC POWER SUPPLY/S.G.
Type of Test: FCC CLASS B
Mode of Op. : NORMAL MODE

		Freq	Level
		MHz	dBuV/m
1	*	433.800	78.42

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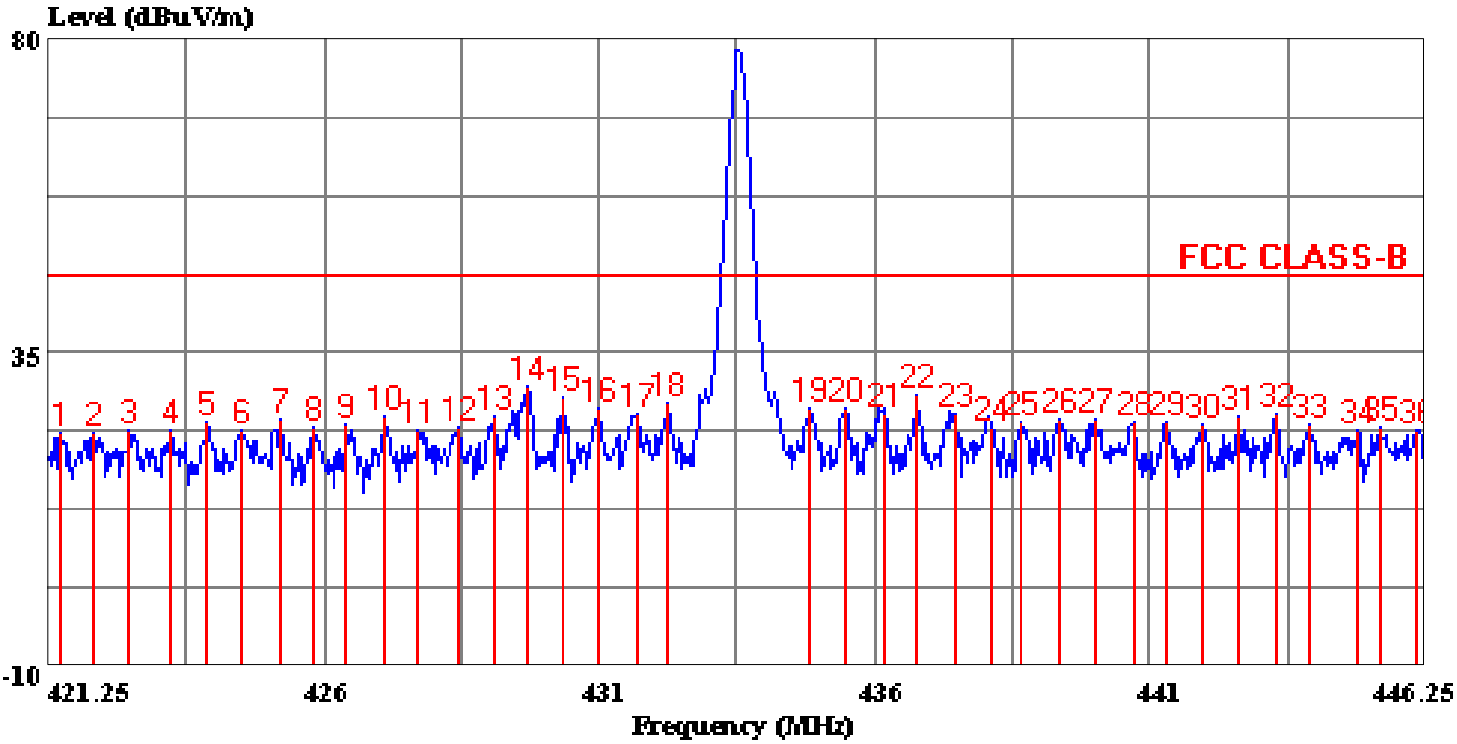

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Report No. : 00E9120
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Company : AUDIOVOX CORPORATION
EUT : EX-10000
Test Config : EUT/DC POWER SUPPLY/S.G.
Type of Test: FCC CLASS B
Mode of Op. : NORMAL MODE

	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	421.450	25.05	17.36	2.45	21.31	23.55	46.00	-22.45	Peak
2	422.050	25.00	17.37	2.45	21.31	23.50	46.00	-22.50	Peak
3	422.725	25.53	17.38	2.45	21.31	24.04	46.00	-21.96	Peak
4	423.450	25.25	17.39	2.45	21.32	23.77	46.00	-22.23	Peak
5	424.125	26.39	17.40	2.44	21.32	24.92	46.00	-21.08	Peak
6	424.775	25.30	17.40	2.44	21.32	23.83	46.00	-22.17	Peak
7	425.450	26.88	17.41	2.44	21.32	25.41	46.00	-20.59	Peak
8	426.075	25.73	17.42	2.45	21.32	24.29	46.00	-21.71	Peak
9	426.675	26.29	17.43	2.46	21.31	24.87	46.00	-21.13	Peak
10	427.350	27.18	17.43	2.47	21.31	25.78	46.00	-20.22	Peak
11	427.950	25.35	17.44	2.49	21.31	23.97	46.00	-22.03	Peak
12	428.725	25.45	17.45	2.50	21.30	24.10	46.00	-21.90	Peak
13	429.325	27.00	17.46	2.51	21.30	25.67	46.00	-20.33	Peak
14	429.950	31.55	17.47	2.52	21.30	30.24	46.00	-15.76	Peak
15	430.575	29.87	17.47	2.54	21.29	28.59	46.00	-17.41	Peak
16	431.250	28.32	17.48	2.55	21.29	27.06	46.00	-18.94	Peak
17	431.950	27.54	17.49	2.56	21.29	26.30	46.00	-19.70	Peak
18	432.500	29.14	17.50	2.57	21.29	27.92	46.00	-18.08	Peak
19	435.075	27.97	17.53	2.62	21.27	26.84	46.00	-19.16	Peak

	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB	
20	435.725	27.97	17.53	2.63	21.27	26.86	46.00	-19.14	Peak
21	436.425	27.41	17.54	2.65	21.27	26.33	46.00	-19.67	Peak
22	437.025	30.05	17.55	2.66	21.26	28.99	46.00	-17.01	Peak
23	437.700	27.28	17.56	2.67	21.26	26.25	46.00	-19.75	Peak
24	438.375	25.20	17.57	2.68	21.26	24.19	46.00	-21.81	Peak
25	438.925	26.12	17.57	2.69	21.26	25.12	46.00	-20.88	Peak
26	439.600	26.27	17.58	2.70	21.25	25.30	46.00	-20.70	Peak
27	440.250	26.37	17.59	2.72	21.25	25.42	46.00	-20.58	Peak
28	440.950	26.17	17.60	2.73	21.25	25.25	46.00	-20.75	Peak
29	441.550	25.89	17.60	2.74	21.24	24.99	46.00	-21.01	Peak
30	442.225	25.48	17.61	2.75	21.24	24.60	46.00	-21.40	Peak
31	442.850	26.57	17.62	2.76	21.24	25.72	46.00	-20.28	Peak
32	443.575	26.98	17.63	2.78	21.23	26.15	46.00	-19.85	Peak
33	444.125	25.33	17.63	2.78	21.23	24.52	46.00	-21.48	Peak
34	445.025	24.54	17.64	2.79	21.23	23.75	46.00	-22.25	Peak
35	445.425	24.90	17.64	2.80	21.23	24.11	46.00	-21.89	Peak
36	446.075	24.69	17.64	2.80	21.23	23.90	46.00	-22.10	Peak

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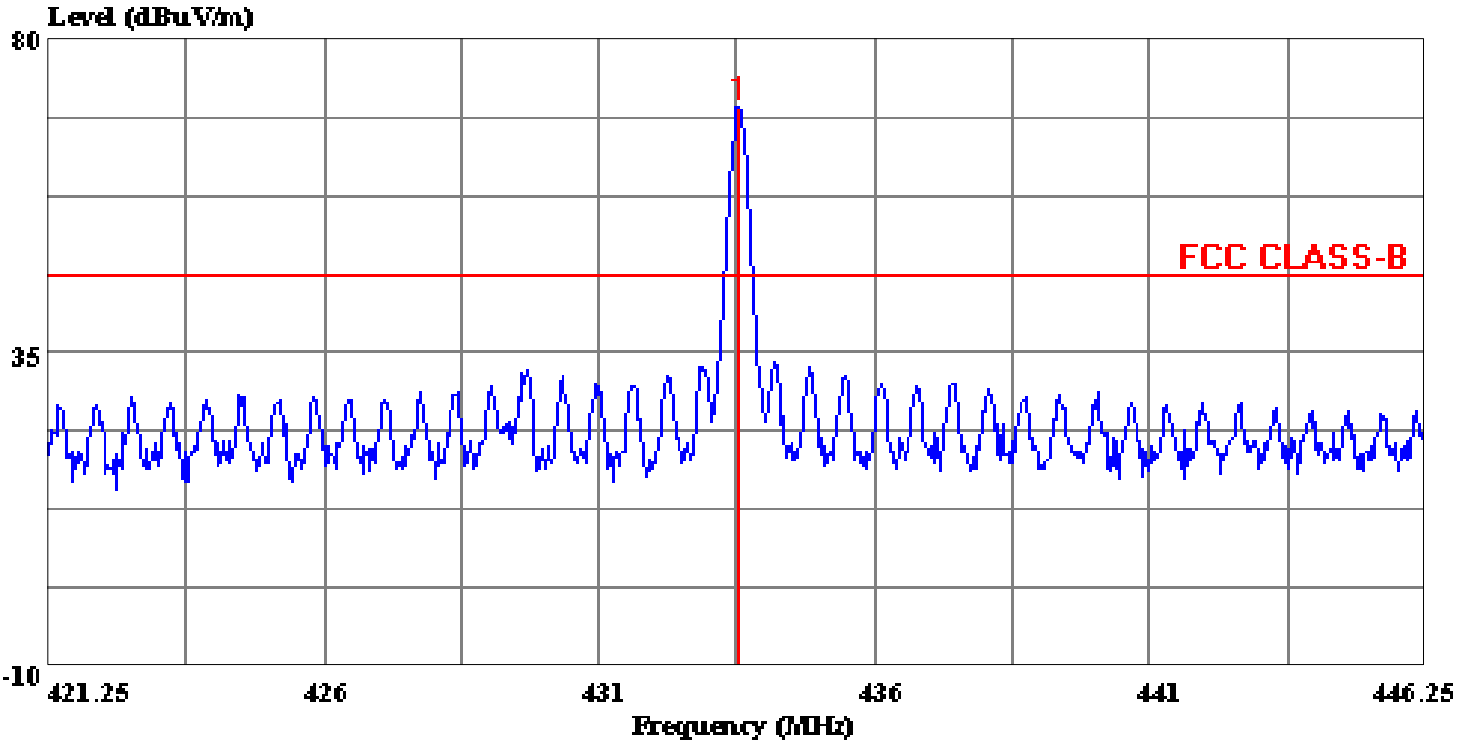

(CCS D-Site)

Trace: 2 Ref Trace:

Condition: HORIZONTAL
Report No. : 00E9120
Test Engr. : VINCE CHIANG
Company : AUDIOVOX CORPORATION
EUT : EX-10000
Test Config : EUT/DC POWER SUPPLY/S.G.
Type of Test: FCC CLASS B
Mode of Op. : NORMAL MODE

		Freq	Level
		MHz	dBuV/m
1	*	433.775	70.35

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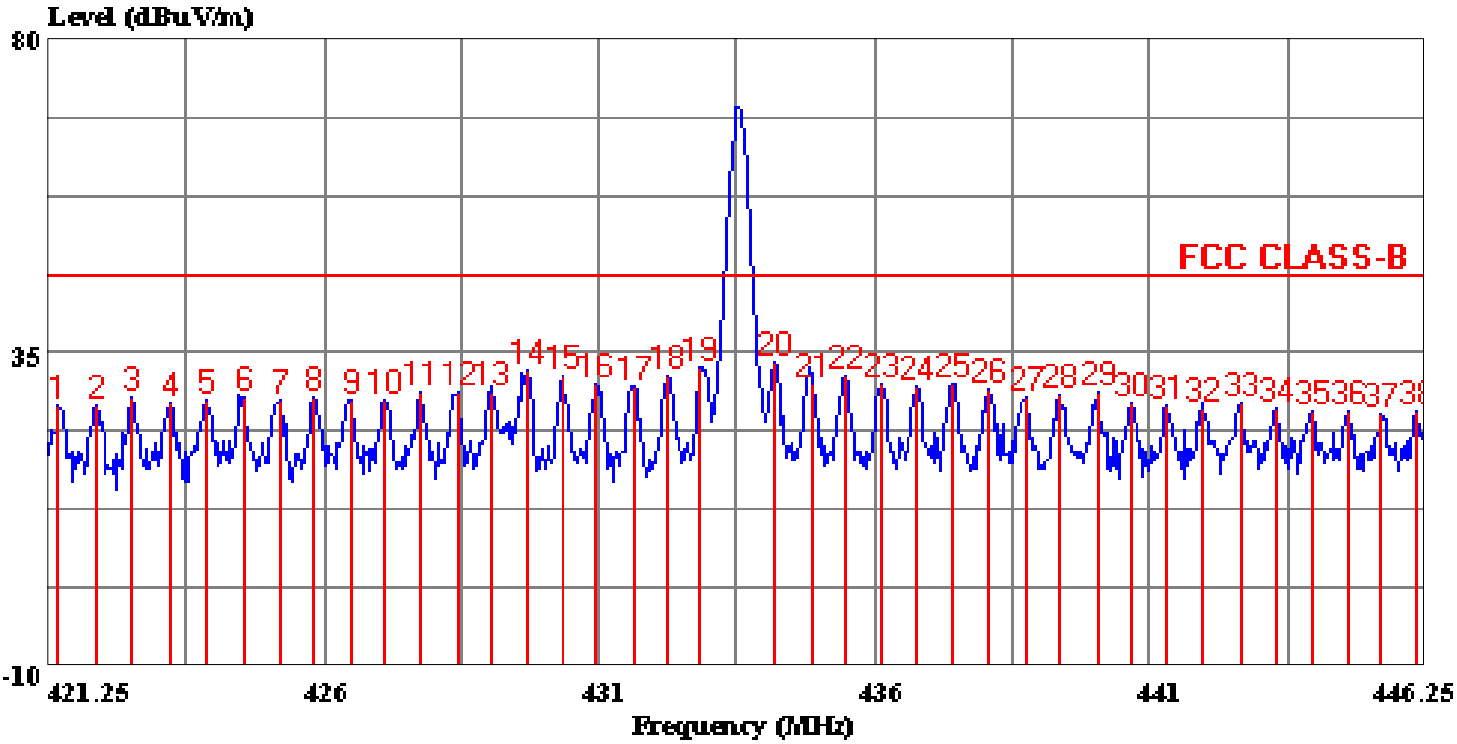

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Type of Test: FCC CLASS B
Mode of Op. : NORMAL MODE

	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	421.425	28.83	17.36	2.45	21.31	27.33	46.00	-18.67	Peak
2	422.125	29.04	17.37	2.45	21.31	27.54	46.00	-18.46	Peak
3	422.750	29.87	17.38	2.45	21.31	28.38	46.00	-17.62	Peak
4	423.475	29.21	17.39	2.45	21.32	27.73	46.00	-18.27	Peak
5	424.100	29.70	17.40	2.44	21.32	28.22	46.00	-17.78	Peak
6	424.800	30.13	17.40	2.44	21.32	28.65	46.00	-17.35	Peak
7	425.450	29.62	17.41	2.44	21.32	28.15	46.00	-17.85	Peak
8	426.075	30.05	17.42	2.45	21.32	28.60	46.00	-17.40	Peak
9	426.750	29.52	17.43	2.46	21.31	28.10	46.00	-17.90	Peak
10	427.325	29.77	17.43	2.47	21.31	28.37	46.00	-17.63	Peak
11	428.000	30.79	17.44	2.49	21.31	29.41	46.00	-16.59	Peak
12	428.700	30.53	17.45	2.50	21.30	29.18	46.00	-16.82	Peak
13	429.300	30.64	17.46	2.51	21.30	29.30	46.00	-16.70	Peak
14	429.925	33.61	17.46	2.52	21.30	32.30	46.00	-13.70	Peak
15	430.575	32.89	17.47	2.54	21.29	31.61	46.00	-14.39	Peak
16	431.200	31.80	17.48	2.55	21.29	30.54	46.00	-15.46	Peak
17	431.900	31.47	17.49	2.56	21.29	30.23	46.00	-15.77	Peak
18	432.500	32.82	17.50	2.57	21.29	31.60	46.00	-14.40	Peak
19	433.100	34.04	17.50	2.58	21.28	32.84	46.00	-13.16	Peak

	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB	
20	434.450	34.80	17.52	2.61	21.28	33.65	46.00	-12.35	Peak
21	435.125	31.65	17.53	2.62	21.27	30.53	46.00	-15.47	Peak
22	435.725	32.64	17.53	2.63	21.27	31.54	46.00	-14.46	Peak
23	436.350	31.60	17.54	2.64	21.27	30.52	46.00	-15.48	Peak
24	437.025	31.30	17.55	2.66	21.26	30.24	46.00	-15.76	Peak
25	437.675	31.65	17.56	2.67	21.26	30.62	46.00	-15.38	Peak
26	438.325	30.84	17.56	2.68	21.26	29.83	46.00	-16.17	Peak
27	439.025	29.62	17.57	2.69	21.25	28.63	46.00	-17.37	Peak
28	439.600	30.00	17.58	2.70	21.25	29.03	46.00	-16.97	Peak
29	440.300	30.23	17.59	2.72	21.25	29.29	46.00	-16.71	Peak
30	440.900	28.63	17.60	2.73	21.25	27.71	46.00	-18.29	Peak
31	441.550	28.40	17.60	2.74	21.24	27.50	46.00	-18.50	Peak
32	442.200	27.89	17.61	2.75	21.24	27.02	46.00	-18.98	Peak
33	442.900	28.60	17.62	2.77	21.24	27.75	46.00	-18.25	Peak
34	443.525	27.92	17.63	2.78	21.23	27.09	46.00	-18.91	Peak
35	444.175	27.33	17.63	2.79	21.23	26.52	46.00	-19.48	Peak
36	444.825	27.41	17.64	2.79	21.23	26.61	46.00	-19.39	Peak
37	445.450	27.08	17.64	2.80	21.23	26.29	46.00	-19.71	Peak
38	446.075	27.38	17.64	2.80	21.23	26.60	46.00	-19.40	Peak

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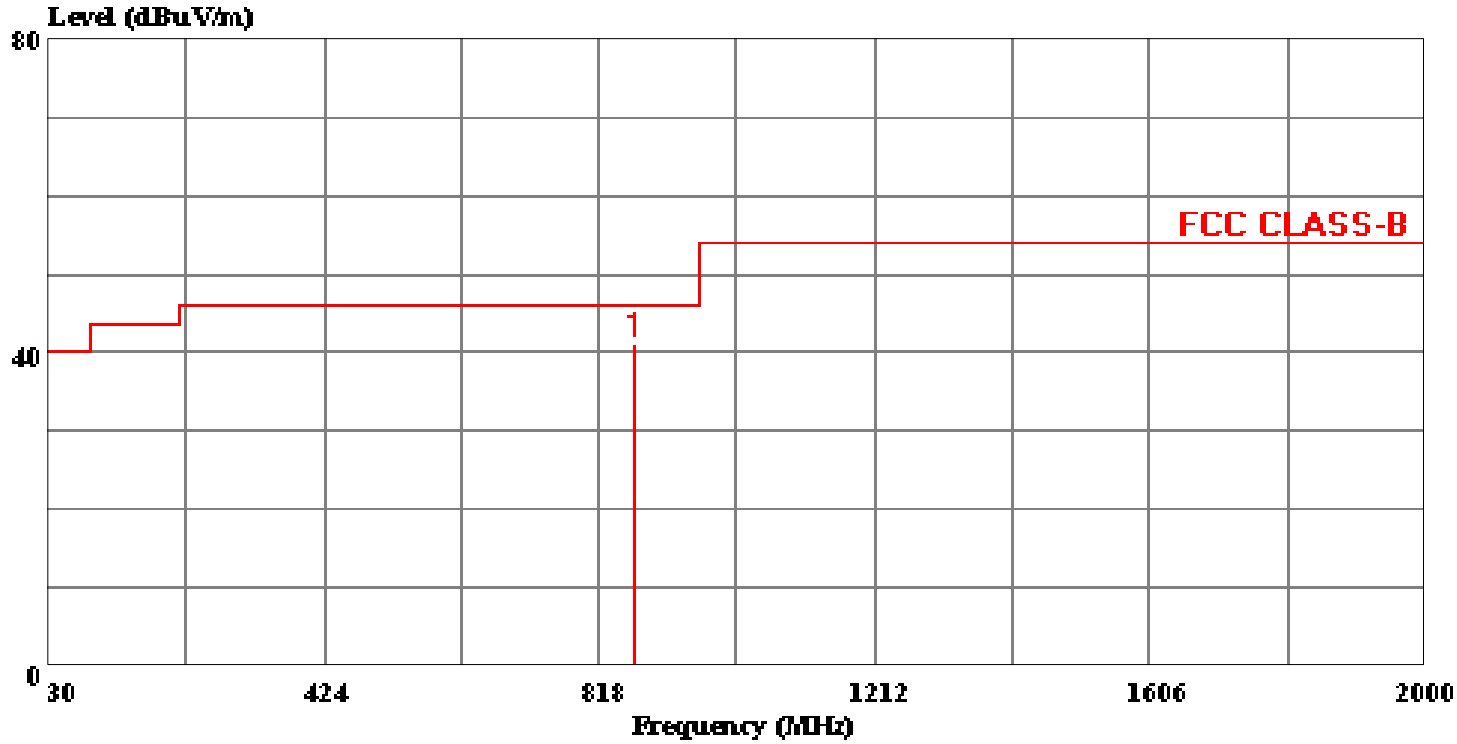

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Trace: Ref Trace:

Condition: VERTICAL
Report No. : 00E9120
Test Engr. : VINCE CHIANG
Company : AUDIOVOX CORPORATION
EUT : EX-10000
Test Config : EUT/DC POWER SUPPLY/S.G.
Type of Test: FCC CLASS B
Mode of Op. : Normal Mode
: Except the readings from fundamental
: graph, no other emissions were found
: between 30-2000MHz.

	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	867.561	34.02	23.37	4.47	20.69	41.17	46.00	-4.83	Peak

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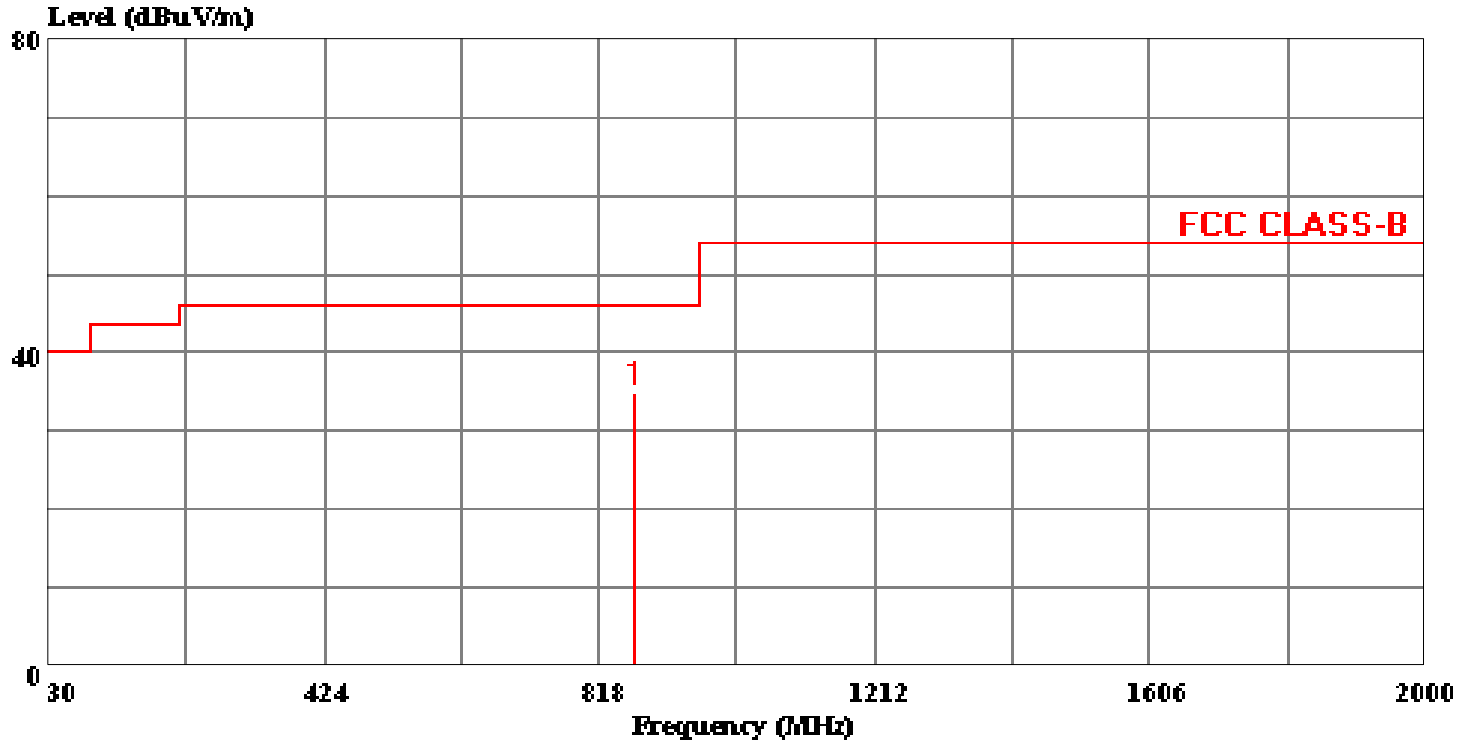

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Trace: Ref Trace:

Condition: HORIZONTAL
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EUT : EX-10000
Test Config : EUT/DC POWER SUPPLY/S.G.
Type of Test: FCC CLASS B
Mode of Op. : Normal Mode
: Except the readings from fundamental
: graph, no other emissions were found
: between 30-2000MHz.

	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	867.600	27.74	23.37	4.47	20.69	34.89	46.00	-11.11	Peak

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Data#: 10 File#: 9120d.emi Date: 2000-11-17 Time: 12:25:04
CCS D-Site

Condition: VERTICAL
Report No. : 00E9120
Test Engr. : VINCE CHIANG
Company   : AUDIOVOX CORPORATION
EUT   : EX-10000
Test Config : EUT/DC POWER SUPPLY/S.G.
Type of Test: FCC CLASS B
Mode of Op. : 6 Worst Data Readings

	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	429.950	31.55	17.47	2.52	21.30	30.24	46.00	-15.76	Peak
2	430.575	29.87	17.47	2.54	21.29	28.59	46.00	-17.41	Peak
3	431.250	28.32	17.48	2.55	21.29	27.06	46.00	-18.94	Peak
4	432.500	29.14	17.50	2.57	21.29	27.92	46.00	-18.08	Peak
5	437.025	30.05	17.55	2.66	21.26	28.99	46.00	-17.01	Peak
6	867.561	34.02	23.37	4.47	20.69	41.17	46.00	-4.83	Peak

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Data#: 11 File#: 9120d.emi Date: 2000-11-17 Time: 12:29:24
CCS D-Site

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Company   : AUDIOVOX CORPORATION
EUT   : EX-10000
Test Config : EUT/DC POWER SUPPLY/S.G.
Type of Test: FCC CLASS B
Mode of Op. : 6 Worst Data Readings

	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	429.925	33.61	17.46	2.52	21.30	32.30	46.00	-13.70	Peak
2	430.575	32.89	17.47	2.54	21.29	31.61	46.00	-14.39	Peak
3	432.500	32.82	17.50	2.57	21.29	31.60	46.00	-14.40	Peak
4	433.100	34.04	17.50	2.58	21.28	32.84	46.00	-13.16	Peak
5	434.450	34.80	17.52	2.61	21.28	33.65	46.00	-12.35	Peak
6	867.600	27.74	23.37	4.47	20.69	34.89	46.00	-11.11	Peak