TEST REPORT

Report Number: 3053114-001
Project Number: 3053114
1/20/2004

Evaluation of the
US Domestic 40 Channel Citizen's Band Transceiver
Model Number: RS9804UDA
FCC ID:
JOFRS9803UDA

FCC Part 2
FCC Part 15
FCC Part 95 Subpart E

For

Radio Sound

Test Performed by:	Test Authorized by:
Intertek 731 Enterprise Drive Lexington, KY 40510	Radio Sound 1713 Cobalt Drive Louisville, KY 40299

Prepared By:_____**Date:**____1/20/2004_____
Bryan C. Taylor, EMC Team Leader

Approved By:_____**Date:**____1/20/2004_____
David J. Schramm, EMC Team Leader

TABLE OF CONTENTS

1 EXECUTIVE SUMMARY

Testing performed for: Radio Sound

Equipment Under Test: RS9804UDA

FCC RULE	DESCRIPTION OF TEST	RESULT	PAGE
§2.1046, §95.639	RF Power Output	Passed	11
§2.1047, §95.637	Modulation Characteristics	Passed	12
§2.1049 §95.633(a)	Occupied Bandwidth	Passed	17
§2.1051, §95.635	Spurious Emissions at Antenna Terminals	Passed	23
§2.1053, §95.635	Field Strength of Spurious Radiation	Passed	30
§2.1055, §95.625(b)	Frequency Stability	Passed	37
§2.1091, §2.1093	Specific Absorption Rate	N/S	See Note [1]
§15.107, §15.207	Power Line Conducted Emissions	NA[2]	39
§15.109	Receiver Spurious Emissions	Passed	40
§15.111	Antenna Power Conducted Limits for Receivers	Passed	45

N/S: Not under scope of this evaluation

[1] Specific Absorption Rate testing was not under the scope of this evaluation.

[2] The RS9804UDA did not have any AC power leads.

2 JOB DESCRIPTION

2.1 Client information

The US Domestic 40 Channel Citizen's Band Transceiver has been tested at the request of

Company: Radio Sound
1713 Cobalt Drive
Louisville, KY 40299

Name of contact: Don Tilley
Telephone: (502)-267-6768
Fax: (502)-267-6794

2.2 Test plan reference:

Tests were performed to the following standards:

?? FCC Part 2
?? FCC Part 15
?? FCC Part 95 Subpart C rules for an intentional radiator

The test procedures described in this test report and ANSI C63.4: 1992 were employed.

2.3 Equipment Under Test (EUT)

The Equipment Under Test (EUT) was an US Domestic 40 Channel Citizen's Band Transceiver that was designed to be installed on a motorcycle.

Radio Sound, Incorporated Model RS9804UDA is a complete AM/FM Stereo Receiver/single compact disc (CD) player Head Unit with an internal, 40 discrete channel, US domestic Citizen's Band Double Sideband Amplitude Modulated Transceiver. One system microprocessor located on the main board of the AM/FM Stereo/CD Player head unit controls the functions of the separate circuit board, which contains the entirety of the CB transceiver circuitry. Only information pertaining directly to the CB transceiver board is detailed in this document. The product is intended solely for installation in a motorcycle chassis using only typical 12VDC negative ground. All CB transceiver functions are operated via remotely located (motorcycle handlebar) controls; no control buttons (with the exception of receive mode local/DX attenuation select) exist on the front panel of the transceiver. A simple external test box which merely houses the common, commercially available control switches (channel select, squelch adjustment, volume control and push to talk/PTT) needed to simplify testing outside of the motorcycle is used during laboratory testing functions.

Product	US Domestic 40 Channel Citizen's Band Transceiver
EUT Model Number	RS9804UDA
EUT Serial Number	0310UD00038A
Whether quantity (>1) production is planned	Quantity production is planned.
Type(s) of Emission	A3E
RF Output Power	3.93 W
Frequency Range	Channel 1 (26.965 MHz) – Channel 40 (27.405 MHz)
Antenna & Gain	48 inch external whip antenna with approximately 50 Ohm Impedance
Detachable Antenna ?	Yes
External input	[x] Audio [] Digital Data

EUT receive date:	12/30/2003
EUT receive condition:	The EUT was received in good condition with no apparent damage.
Test start date:	12/30/2003
Test completion date:	1/6/2004

The test results in this report pertain only to the item tested.

2.3.1 System Support Equipment

Table 2-1 contains the details of the support equipment associated with the Equipment Under Test during the FCC testing.

Table 2-1: System Support Equipment

Description	Manufacturer	Part Number	Serial Number	FCC ID number
FM Antenna	Harada	76248-86	Not Labeled	None
CB Antenna (Standard 0.25 Wave @ 27 MHz)	Harada	76250-98	Not Labeled	None
Main Electrical Wiring Harness	Radio Sound	70985-02	None	None

2.3.2 Cables associated with EUT

Table 2-2 contains the details of the cables associated with the EUT.

Table 2-2: Interconnecting cables between modules of EUT

Cables					
Description	Length	Shielding	Ferrites	Connection	
				From	To
12 AWG DC Power Cable	6 ft	None	None	DC Power Supply	CB Power Input
CB Antenna Cable	7 ft	Coax	None	CB Antenna Port	CB Antenna
FM Radio Antenna Cable	7 ft	Coax	None	FM Radio Antenna Port	FM Antenna
Main Electrical Wiring Harness	6 ft	None	None	Wiring Harness Connections on Radio	Four Speakers and Control Switches

2.3.3 Justification

The EUT was operated in the stand-alone configuration.

2.3.4 Mode(s) of operation

The US Domestic 40 Channel Citizen's Band Transceiver was powered by the plug in wall mount power supply during all testing. The operation during each test was slightly different and is detailed in each test section of this report.

2.4 Modifications required for compliance

No modifications were implemented by Intertek.

2.5 Related Submittal(s) Grants

None

3 TEST FACILITY

The INTERTEK-Lexington is located at 731 Enterprise Drive, Lexington Kentucky, 40510. The radiated emission test site is a 10-meter semi-anechoic chamber. The chamber meets the characteristics of CISPR 16-1: 1993 and ANSI C63.4: 1992. For measurements, a remotely controlled flush-mount metal-top turntable is used to rotate the EUT a full 360 degrees. A remote controlled non-conductive antenna mast is used to scan the antenna height from one to four meters.

Figure 3-1: 10-Meter EMC Site

3.1 Test Equipment

The following test equipment was used for the evaluation.

Description	Manufacturer	Model Number	Serial Number	Calibration due date
Modulation Analyzer	HP	8901A	2142A01663	1/30/04
Signal Generator	HP	8656B	3050U09682	8/19/04
Synthesizer	HP	3325B	2801A02016	8/18/04
Test Receiver	Rohde & Schwarz	ESI26	1088.7490.26	10/2/04
High Pass Filter	Mini-Circuits	NHP-50	893015	2/27/04
Bilog Antenna	ETS	3142B	1674	9/24/04
Loop Antenna	AH Systems	SAS-200/563	206	7/21/04
Pre-Amplifier	Com-Power	PA-010	02522	1/19/2004
Environmental Chamber	Thermotron	SE-1000-5-5	29410	5/14/04

4 RF POWER OUTPUT

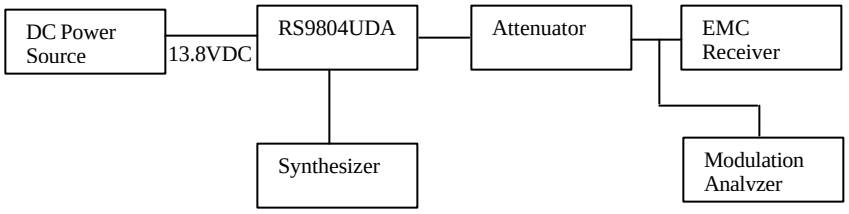
FCC §2.1046, §95.639

4.1 Test Procedure

The transmitter output was connected to a calibrated coaxial cable, the other end of which was connected through a 20 dB attenuator to an EMC receiver. The transmitter was keyed and the output power at the EMC receiver was recorded. The RF output power at the antenna terminal was then determined by added the insertion loss of the attenuator and cable to the receiver reading.

Tests were performed at three frequencies (low, middle, and high channels) and on the highest power levels, which can be setup on the transmitter. Power measurements were made with an un-modulated carrier and with a carrier modulated with a 1kHz sine wave at a level 16 dB above that necessary to produce 50% modulation.

4.2 Block Diagram



4.3 Test Results

The US Domestic 40 Channel Citizen's Band Transceiver met the RF power output requirements of FCC Part 2.1046 and 95.639. The test results are located in Table 4-1.

Table 4-1 RF Power Output

EUT Mode	Frequency (MHz)	Channel	Measured Power (Watts)	Limit for a CB Radio (Watts)
Un-Modulated	26.965	1	3.46	4.0
	27.205	20	3.38	4.0
	27.405	40	3.29	4.0
Modulated with a 1kHz sine wave at a level 16 dB greater than necessary to produce 50% modulation.	26.965	1	3.82	4.0
	27.205	20	3.93	4.0
	27.405	40	3.81	4.0

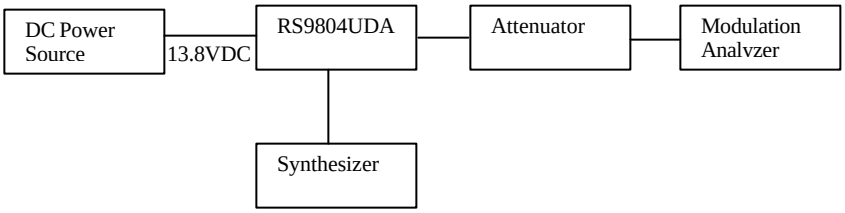
5 MODULATION CHARACTERISTICS

§2.1047, §95.637

5.1 Test Procedure

The CB antenna output connector was connected to an attenuator which was in turn connected to a modulation analyzer. The CB was then powered on and channel 1 was selected. A function generator / synthesizer was coupled to the microphone input, which was used to feed a modulating tone to the CB. The modulated input frequency was then varied from 100 Hz to 5 kHz and the percent modulation was recorded. This procedure was then performed on channels 20 and 40. On each channel, the modulating level was varied from .005 to 10 Vrms.

5.2 Block Diagram



5.3 Test Results

The US Domestic 40 Channel Citizen's Band Transceiver met the requirements of FCC §2.1047 and §95.637. The Modulation vs. Frequency results are located in Figure 5-1 through Figure 5-3. The Modulation vs. Voltage results are located in Figure 5-4 through Figure 5-6. The graphical data presented show that the modulation percent is limited to below 100% in all cases.

Figure 5-1 Modulation Vs. Frequency (Channel 1)

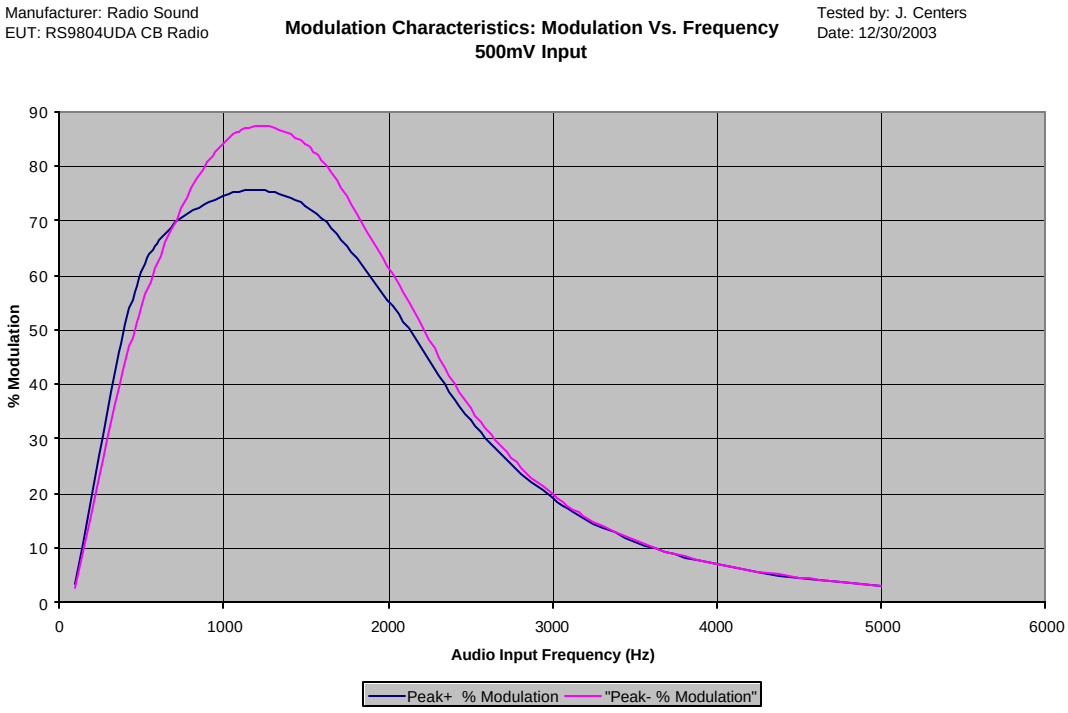


Figure 5-2 Modulation Vs. Frequency (Channel 20)

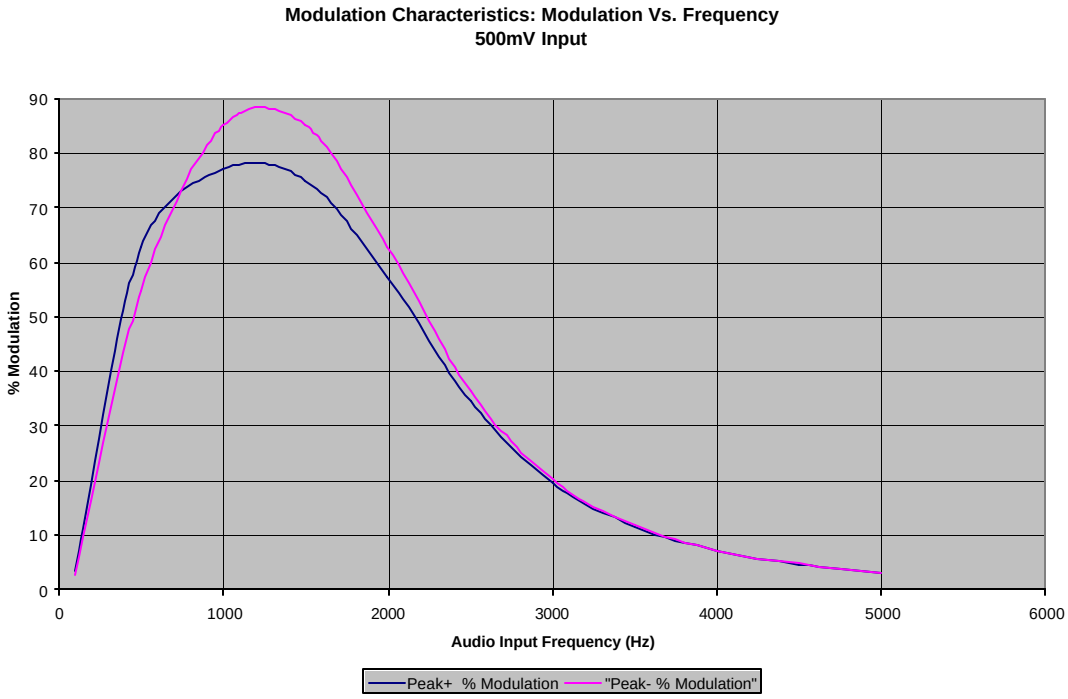


Figure 5-3 Modulation Vs. Frequency (Channel 40)

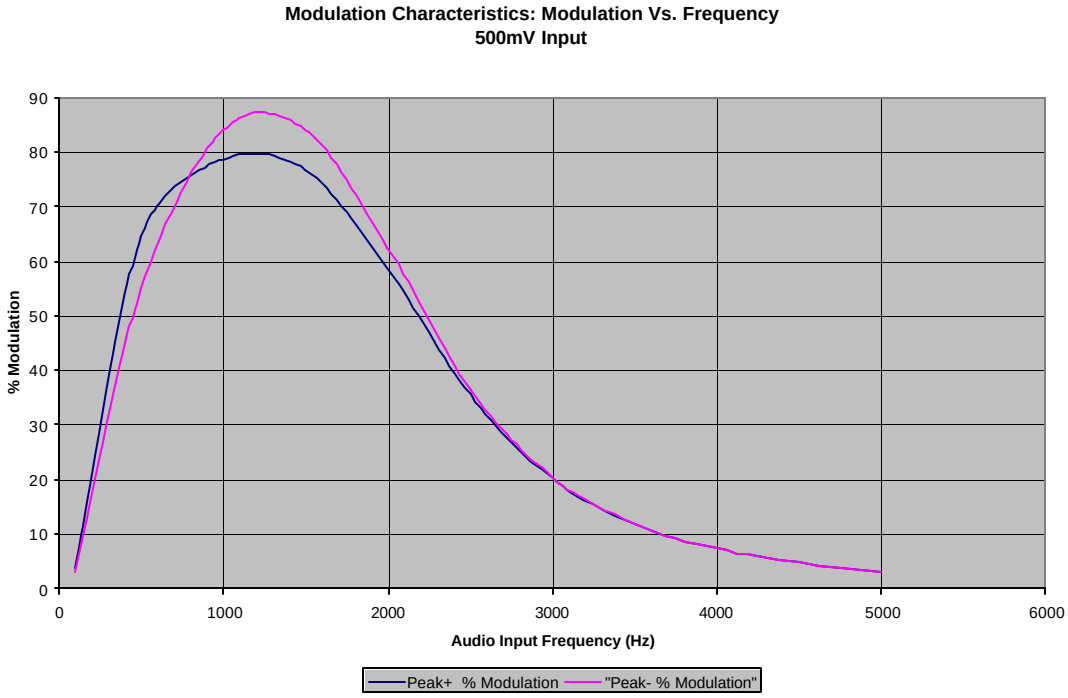


Figure 5-4 Modulation Vs. Voltage (Channel 1)

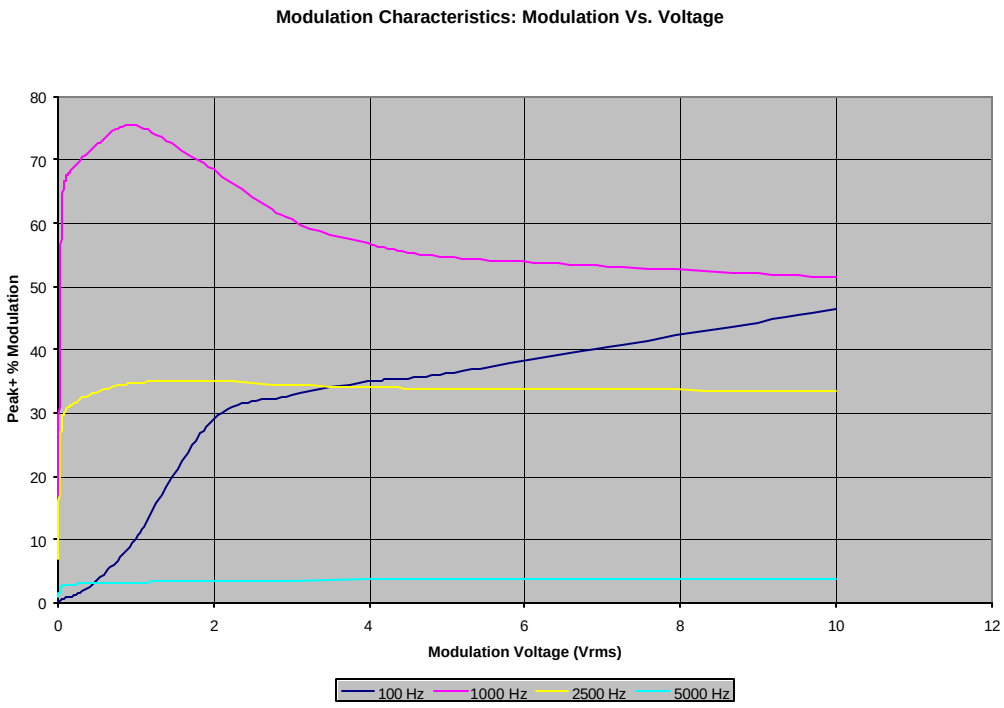


Figure 5-5 Modulation Vs. Voltage (Channel 20)

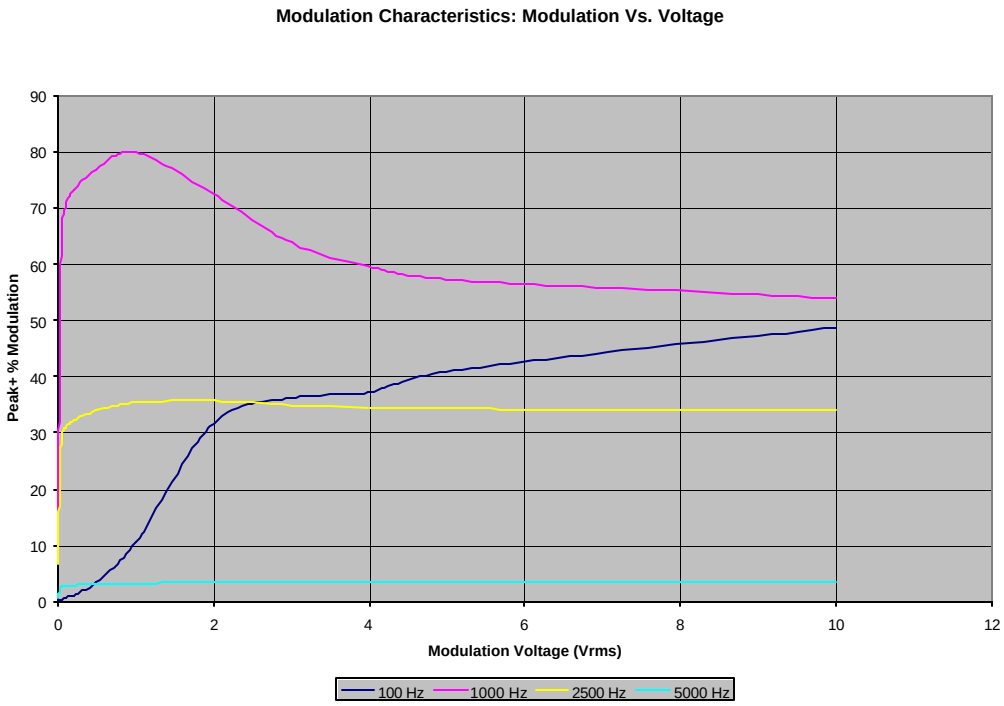
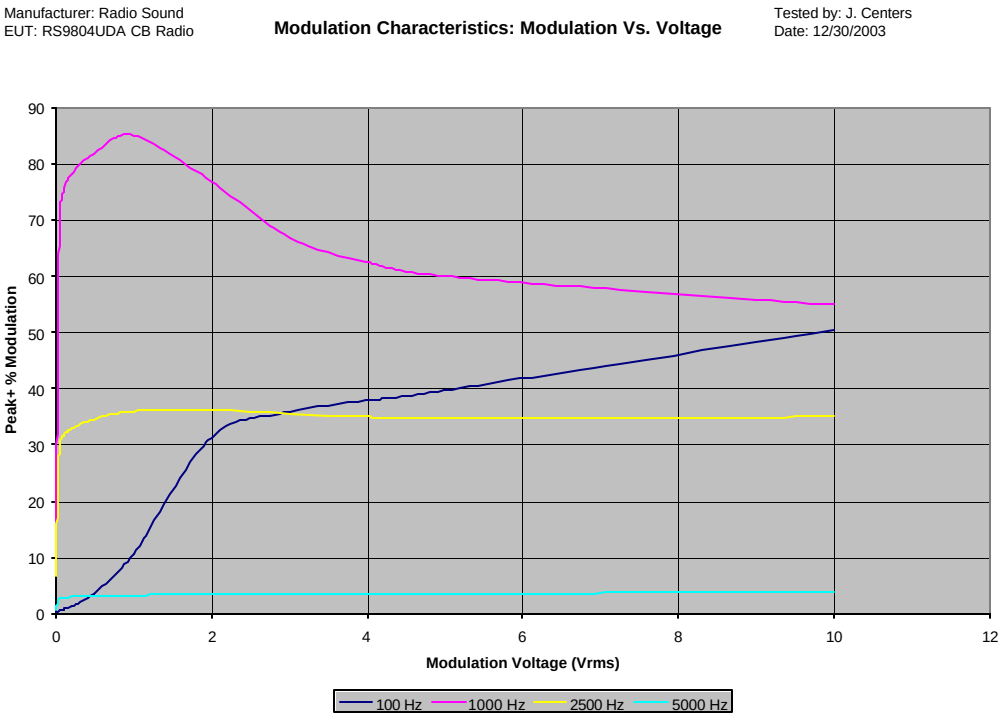


Figure 5-6 Modulation Vs. Voltage (Channel 40)



6 OCCUPIED BANDWIDTH

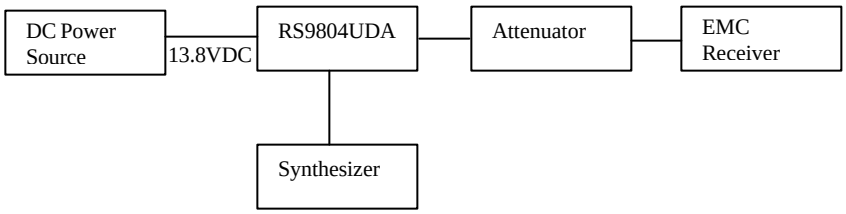
§2.1049, §95.633(a)

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

6.1 Test Procedure

The CB antenna output connector was connected to an attenuator which was connected to an EMC receiver. The CB was powered on and channel 1 was selected. The microphone was then keyed and subjected to a 1 and 2.5 kHz tone using a function generator which was coupled into the microphone input jack. The occupied bandwidth function of the EMC receiver was then used to generate plots of each configuration. This test was then performed on channels 20 and 40 under modulated and un-modulated conditions.

6.2 Block Diagram



6.3 Test Results

The following is the occupied bandwidth data for the US Domestic 40 Channel Citizen's Band Transceiver.

Table 6-1: Occupied bandwidth measurements

Mode	Channel	Resolution Bandwidth	Video Bandwidth	Sweep time	Measured Bandwidth kHz
Un-Modulated	1	1 kHz	1 kHz	1 second	1.3
Un-Modulated	20	1 kHz	1 kHz	1 second	1.3
Un-Modulated	40	1 kHz	1 kHz	1 second	1.3
1kHz Tone	1	1 kHz	1 kHz	1 second	3.05
1kHz Tone	20	1 kHz	1 kHz	1 second	3.05
1kHz Tone	40	1 kHz	1 kHz	1 second	3.05
2.5 kHz Tone	1	1 kHz	1 kHz	1 second	5.61
2.5 kHz Tone	20	1 kHz	1 kHz	1 second	5.61
2.5 kHz Tone	40	1 kHz	1 kHz	1 second	5.66

Figure 6-1: Occupied Bandwidth – Channel 1 Un-Modulated

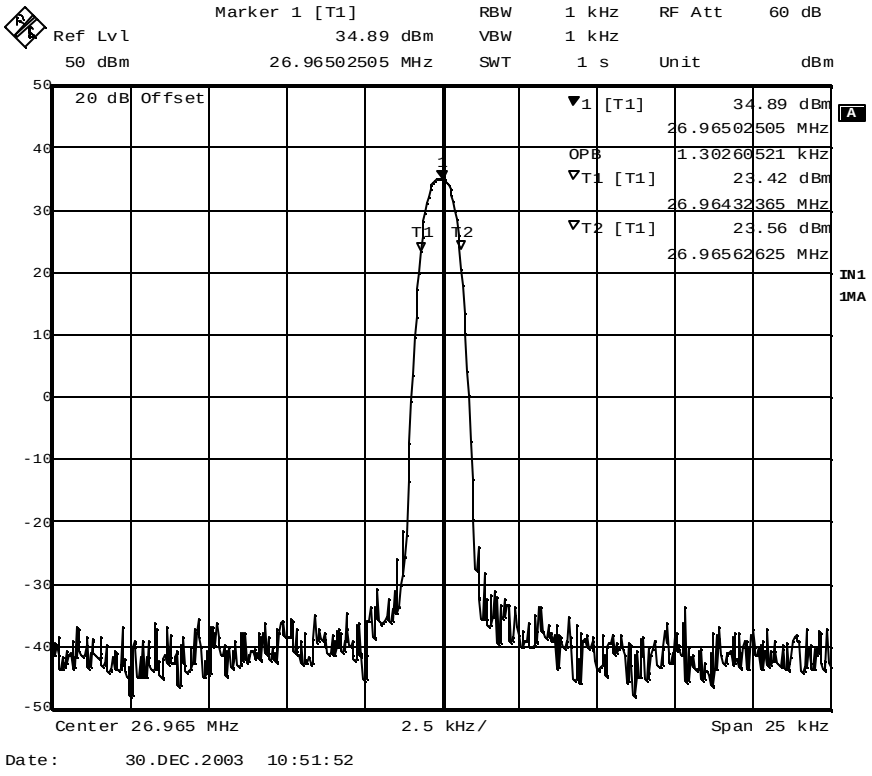


Figure 6-3: Occupied Bandwidth – Channel 20 Un-Modulated

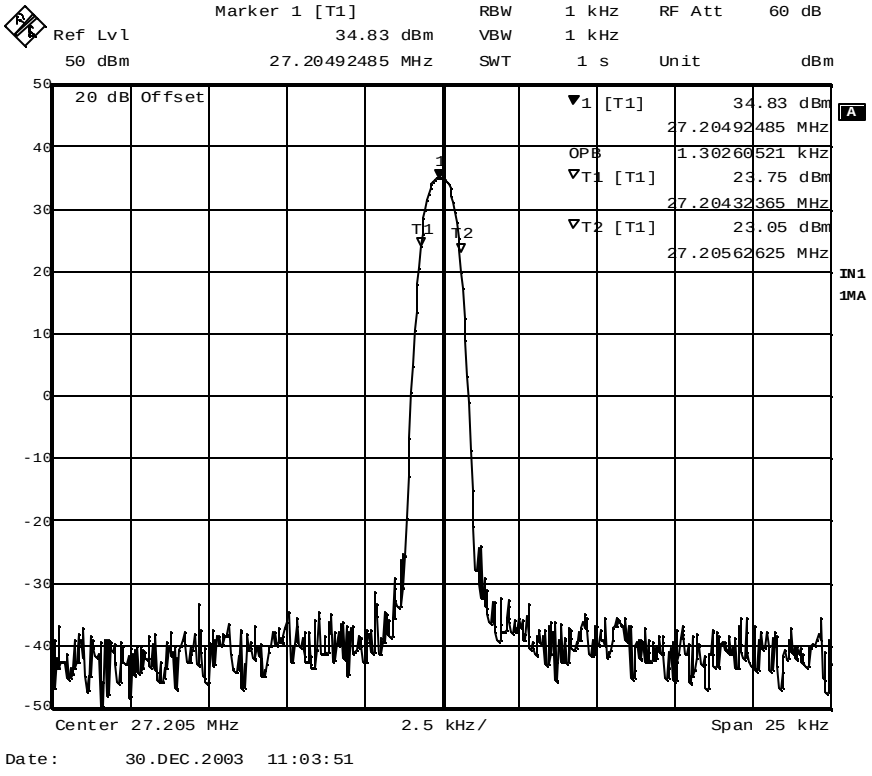


Figure 6-5: Occupied Bandwidth – Channel 40 Un-Modulated

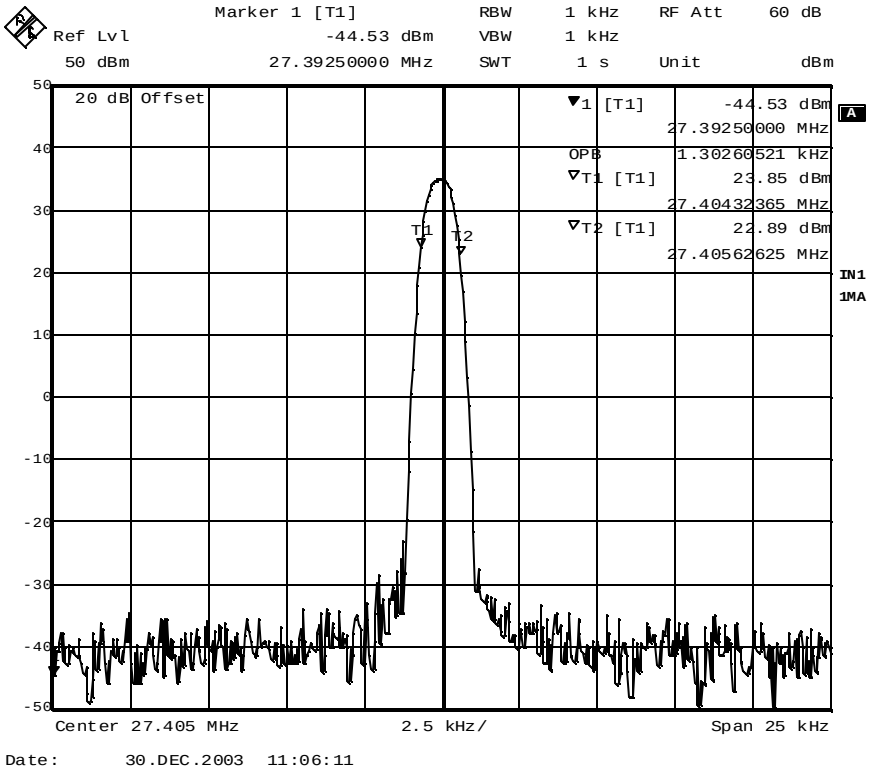


Figure 6-7: Occupied Bandwidth – Channel 1 Modulated with 1kHz Tone

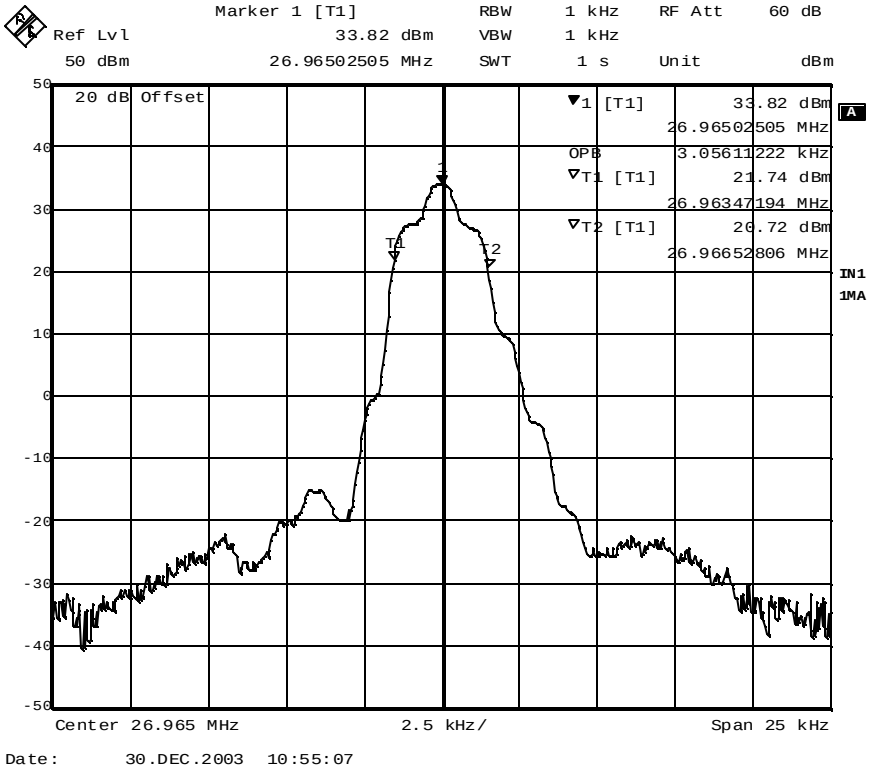


Figure 6-9: Occupied Bandwidth – Channel 20 Modulated with 1kHz Tone

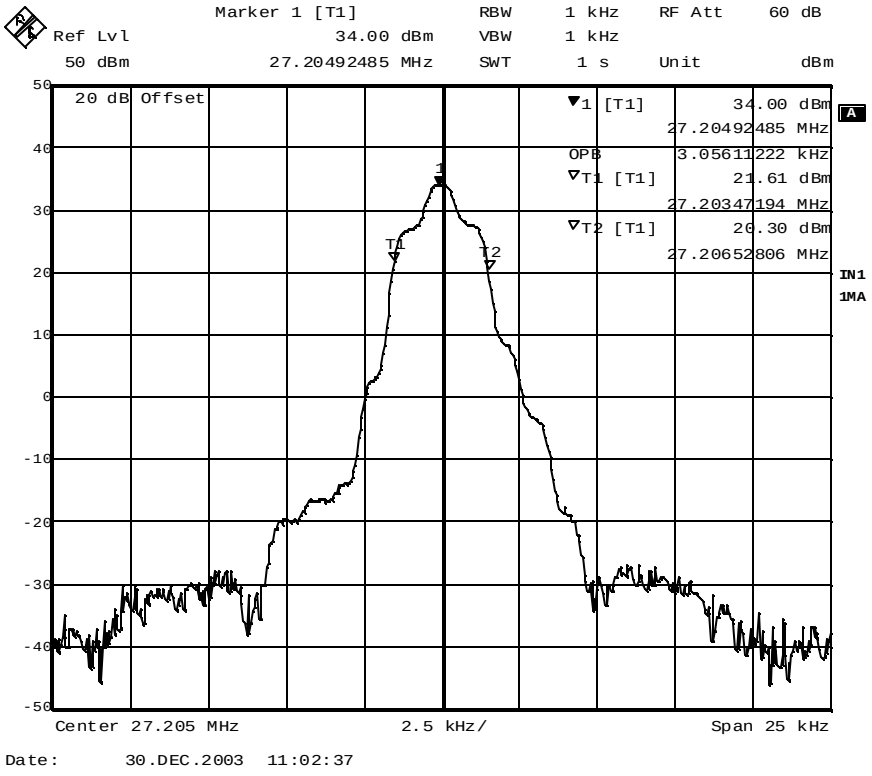


Figure 6-11: Occupied Bandwidth – Channel 40 Modulated with 1kHz Tone

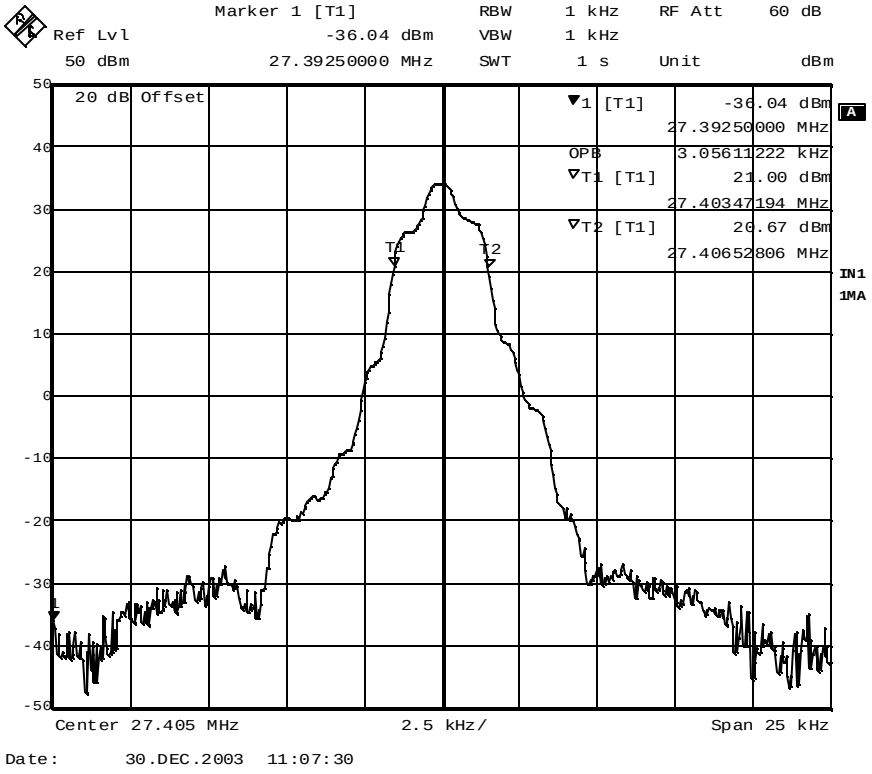


Figure 6-12: Occupied Bandwidth – Channel 1 Modulated with 2.5kHz Tone

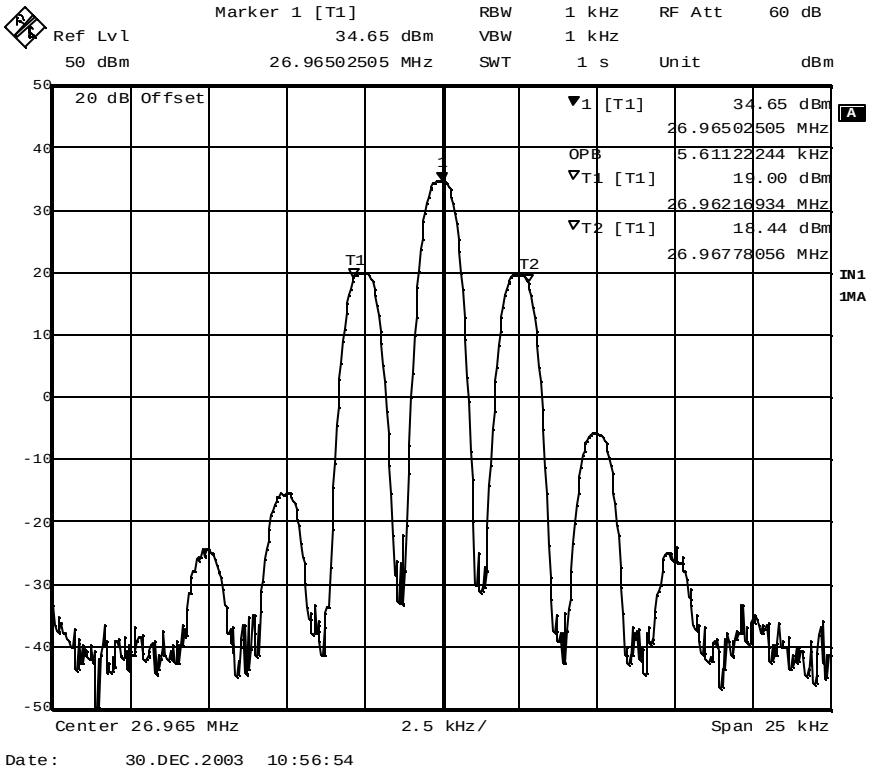


Figure 6-13: Occupied Bandwidth – Channel 20 Modulated with 2.5kHz Tone

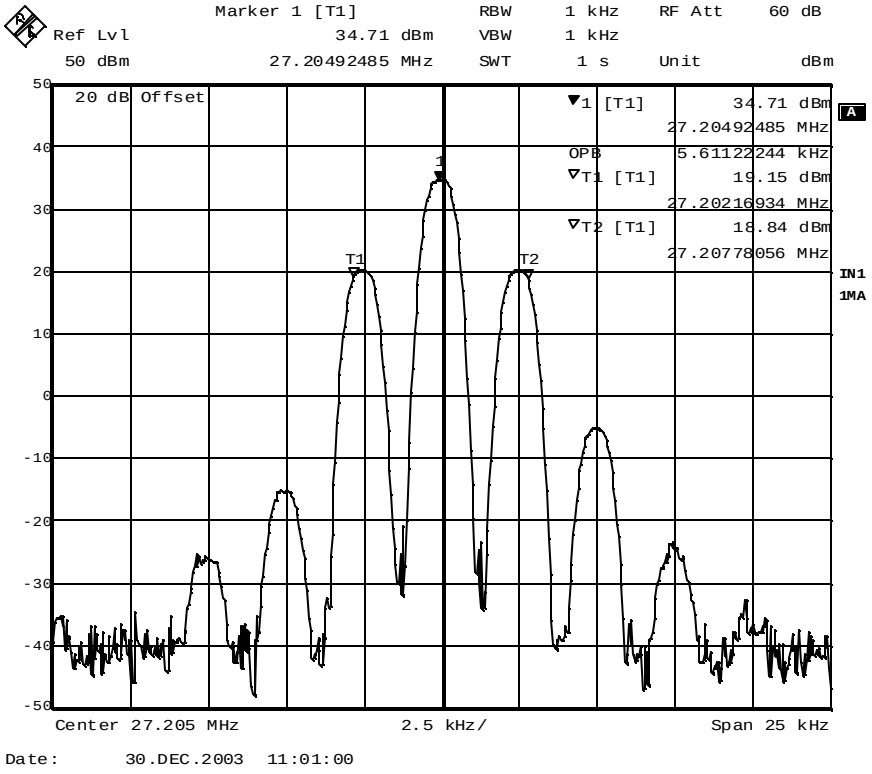
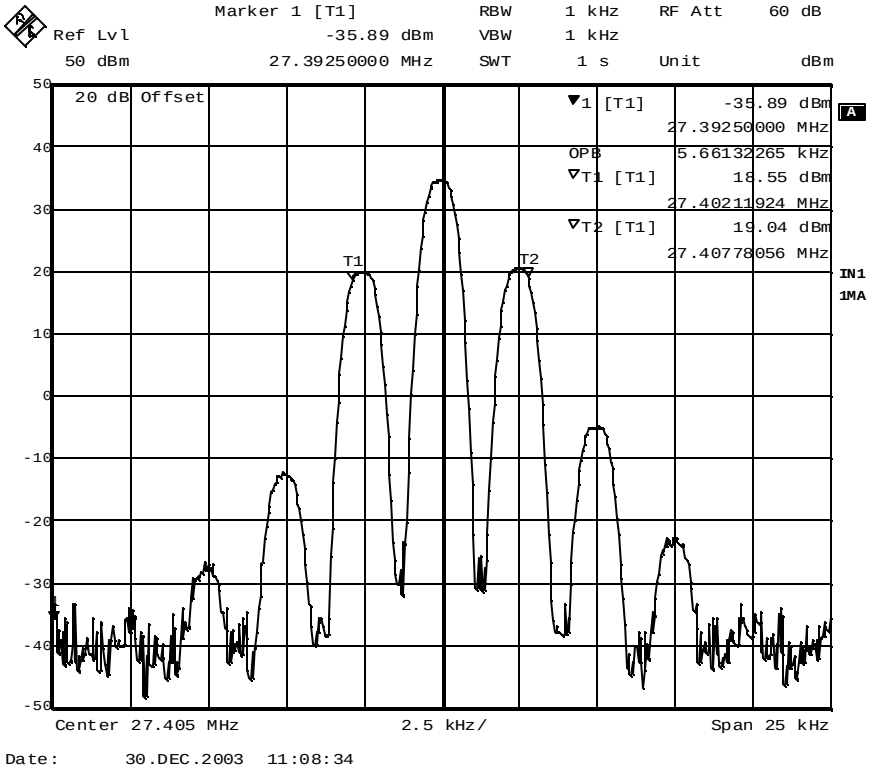


Figure 6-14: Occupied Bandwidth – Channel 40 Modulated with 2.5kHz Tone



7 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

FCC §2.1051

7.1 Test Procedure

This test was performed to show the magnitude of each spurious and harmonic emission that is detectable when the equipment is operated under the conditions specified in 2.1049. The CB antenna output connector was connected to an attenuator, which was in turn connected to an EMC receiver. The CB was powered on and channel 1 was selected. The microphone was then keyed and subjected to a 1 and 2.5 kHz tone using a function generator which was coupled into the microphone input jack. The spectrum was then captured up to the 10th harmonic of the fundamental. This procedure was then performed on channels 20 and 40.

For a CB transmitter, notes (1), (3), (8), and (9) of FCC §95.635(b) apply. These notes state that "the power of each unwanted emission shall be less than TP" by :

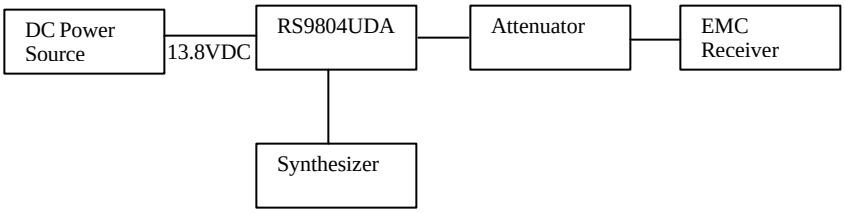
§95.635(b)(1): At least 25 dB (decibels) on any frequency removed from the center of the authorized bandwidth by more than 50% up to and including 100% of the authorized bandwidth.

§95.635(b)(3): At least 35 dB on any frequency removed from the center of the authorized bandwidth by more than 100% up to and including 250% of the authorized bandwidth.

§95.635(b)(8): At least 53 + 10 log10 (T) dB on any frequency removed from the center of the authorized bandwidth by more than 250%.

§95.635(b)(9): At least 60 dB on any frequency twice or greater than twice the fundamental frequency.

7.2 Block Diagram



7.3 Test Results

The US Domestic 40 Channel Citizen's Band Transceiver met the out of band emission at antenna terminal requirements. None of the harmonics or spurious emissions at the antenna terminals exceeded the criteria stated in FCC Part §2.1051, FCC §95.635(a)(b) notes (1), (3), (8), and (9). The "jump" in the noise floor at 1MHz is due to the fact that below 1 MHz a 1kHz resolution bandwidth was used.

Figure 7-1: Spurious Emissions at Antenna Terminals – Channel 1 Un-Modulated

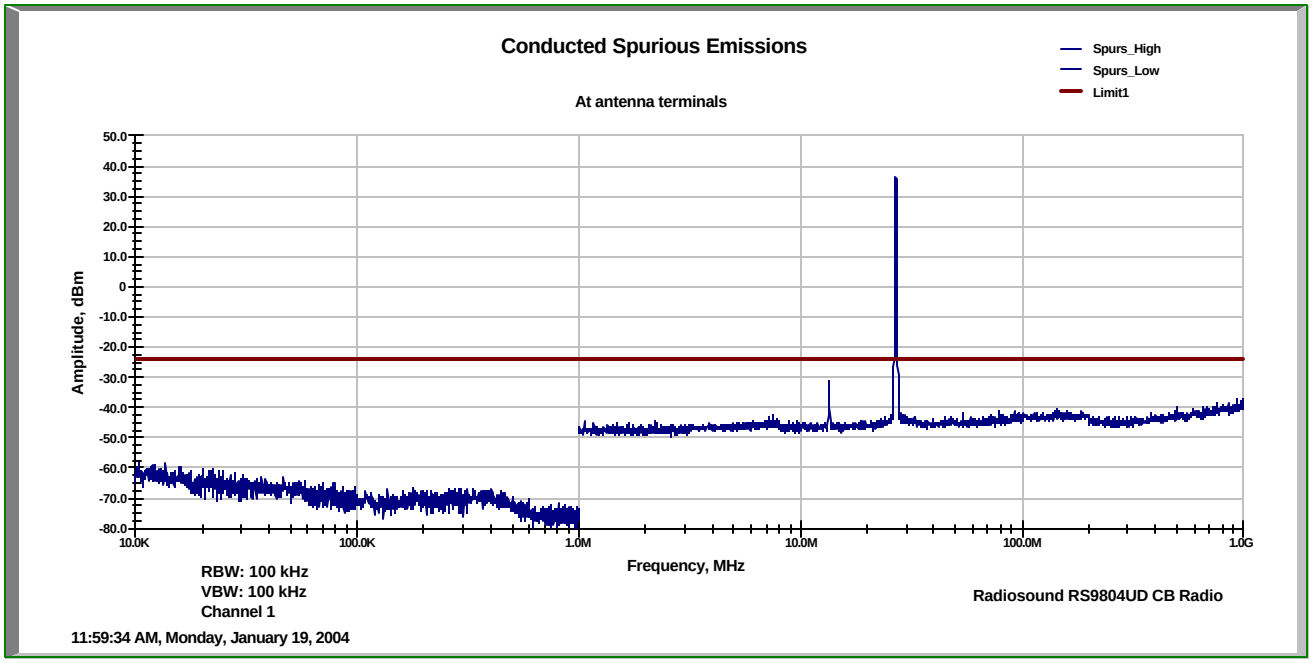


Figure 7-2: Spurious Emissions at Antenna Terminals – Channel 20 Un-Modulated

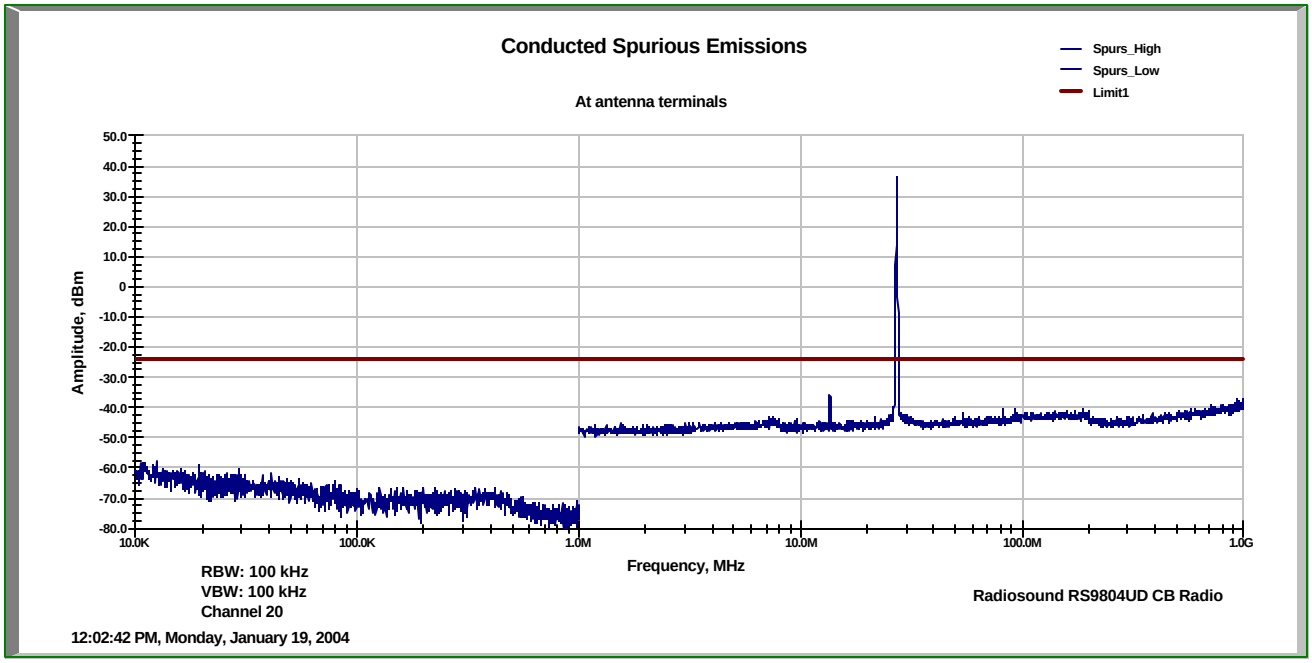

Conducted Spurious Emissions
At antenna terminals
Spurs_High
Spurs_Low
Limit1
Amplitude, dBm
50.0
40.0
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
10.0K
100.0K
1.0M
10.0M
100.0M
1.0G
Frequency, MHz
RBW: 100 kHz
VBW: 100 kHz
Channel 20
Radiosound RS9804UD CB Radio
12:02:42 PM, Monday, January 19, 2004

Figure 7-3: Spurious Emissions at Antenna Terminals – Channel 40 Un-Modulated

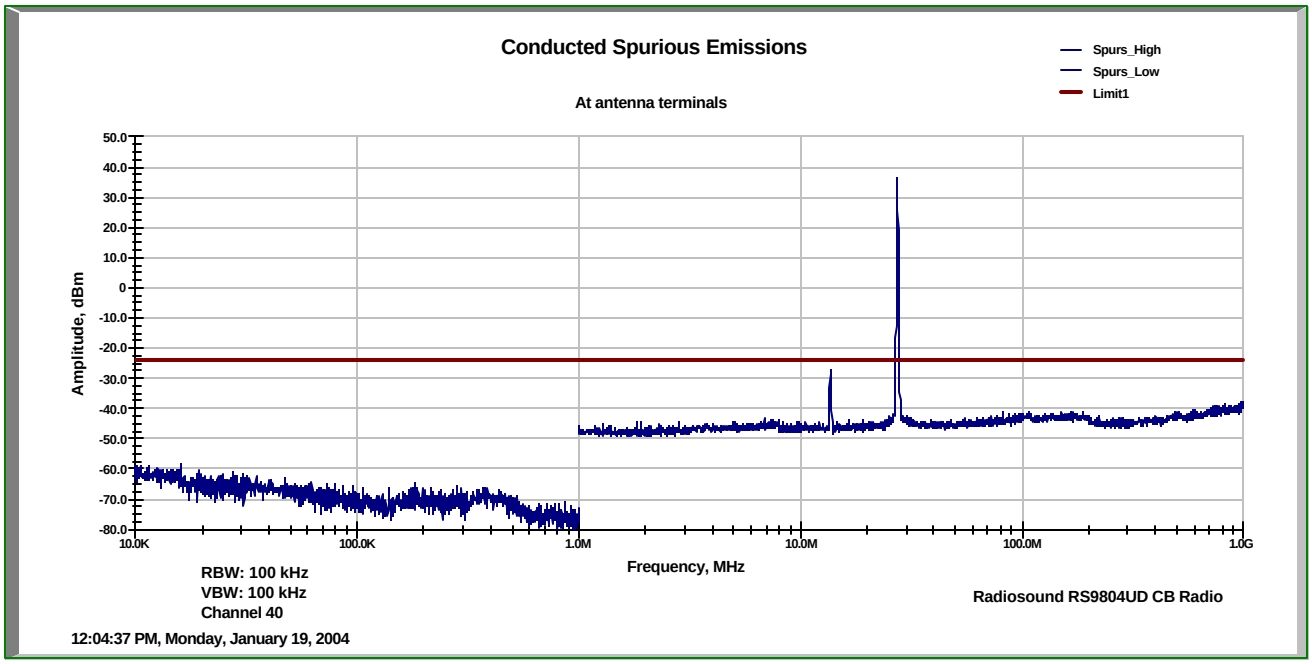


Figure 7-4: Spurious Emissions at Antenna Terminals – Channel 1 with 1kHz Tone

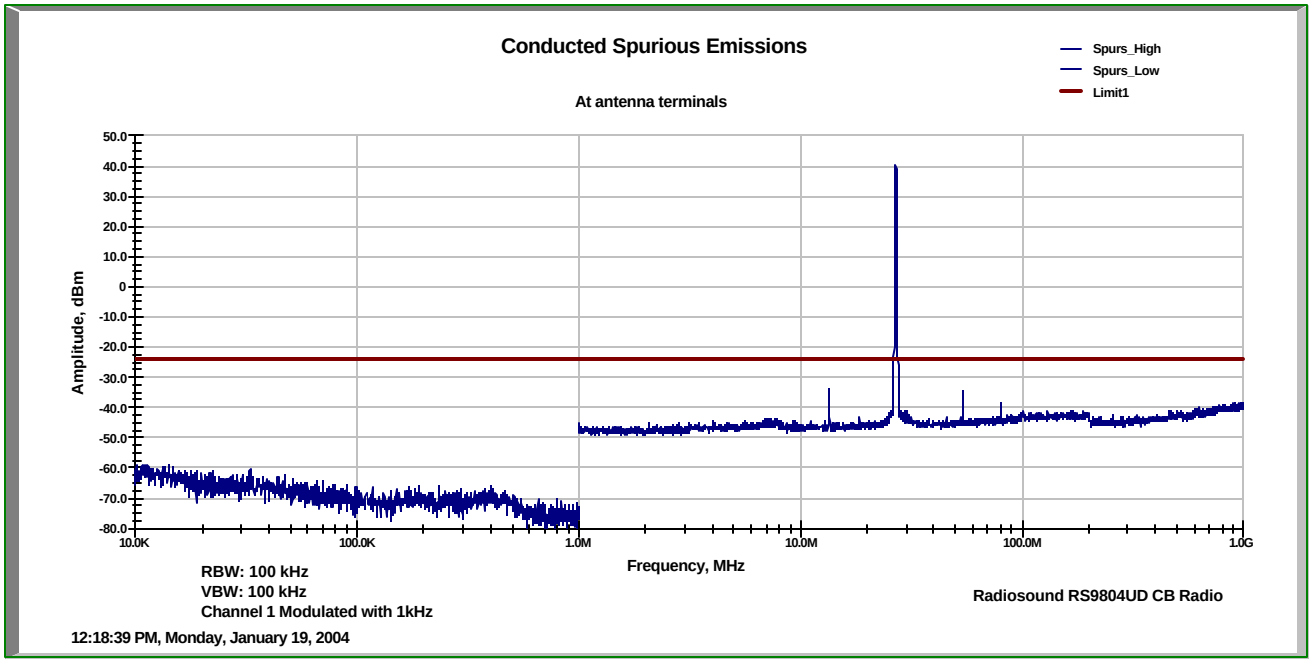


Figure 7-5: Spurious Emissions at Antenna Terminals – Channel 20 with 1kHz Tone

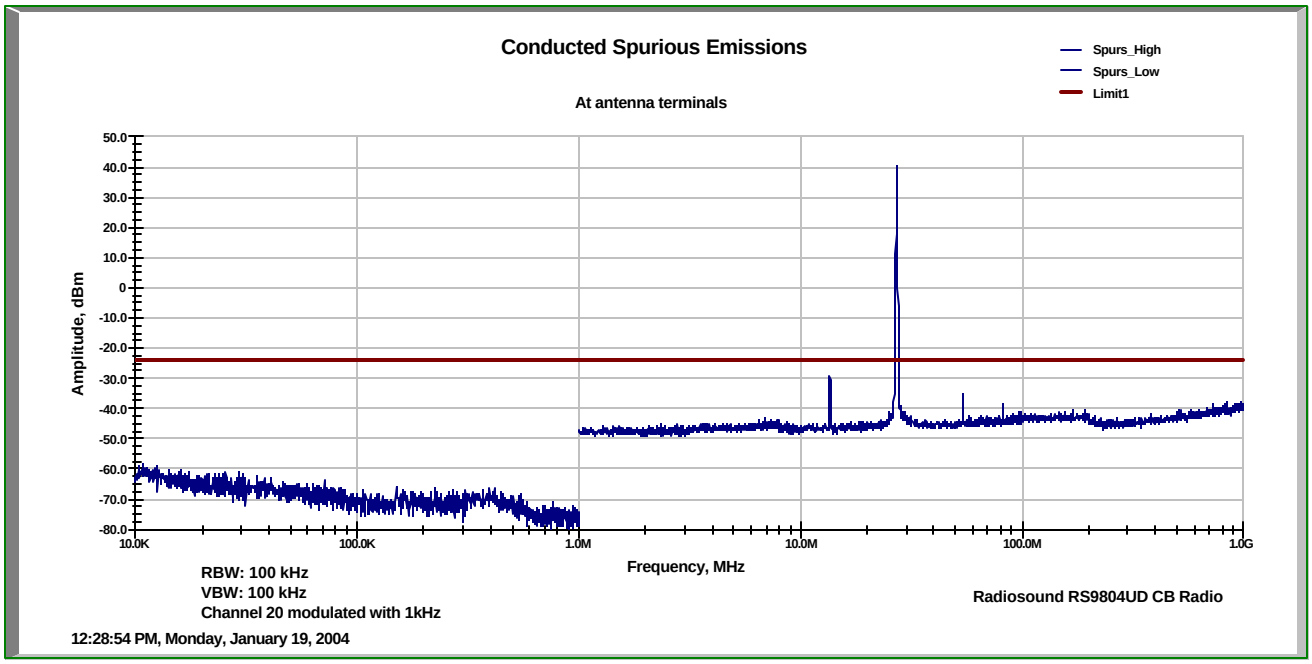


Figure 7-6: Spurious Emissions at Antenna Terminals – Channel 40 with 1kHz Tone

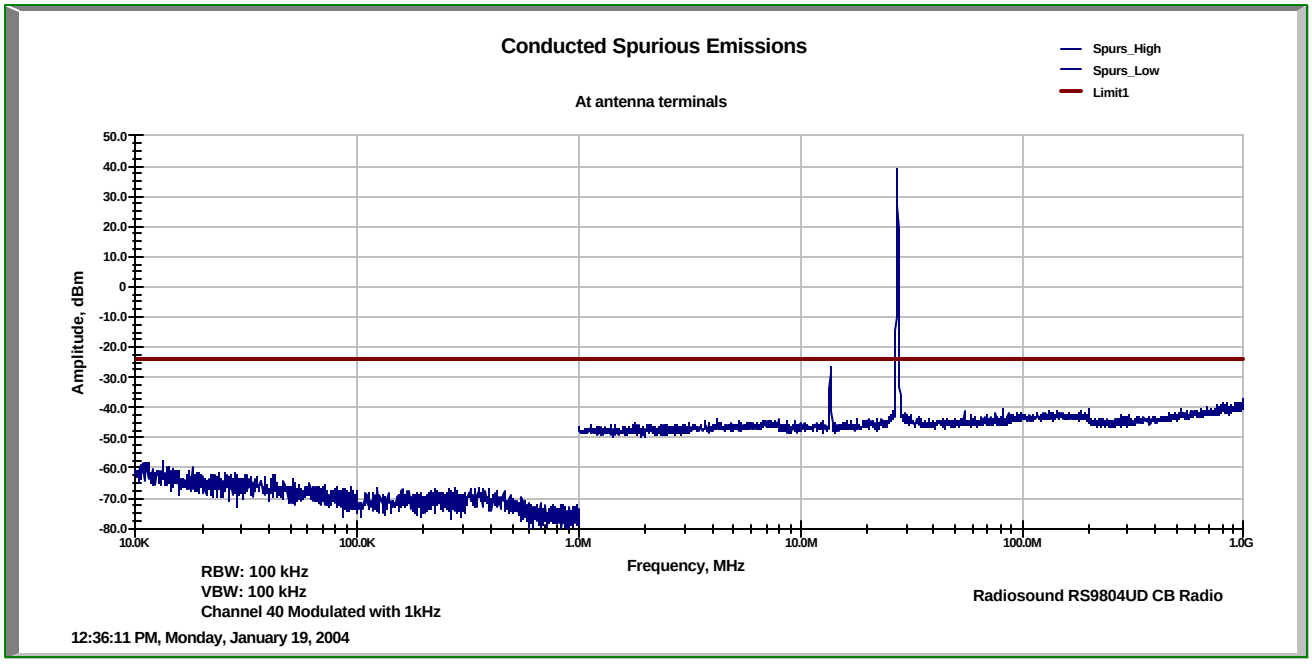


Figure 7-7: Spurious Emissions at Antenna Terminals – Channel 1 with 2.5kHz Tone

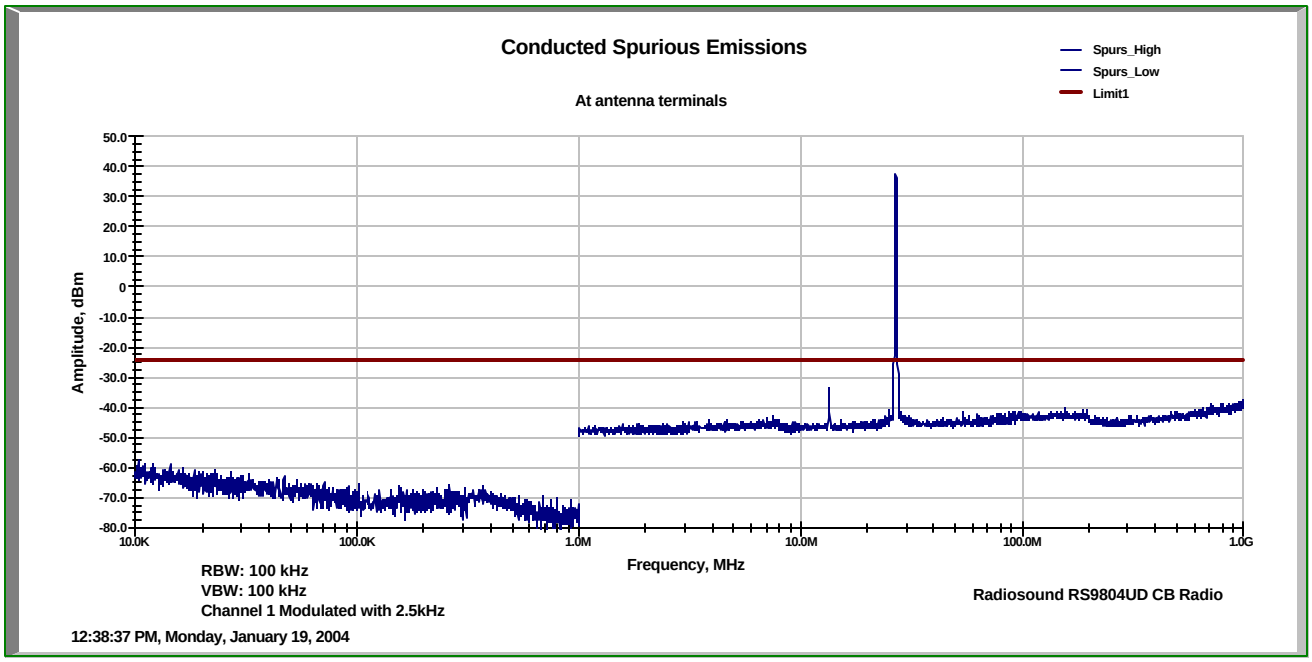


Figure 7-8: Spurious Emissions at Antenna Terminals – Channel 20 with 2.5kHz Tone

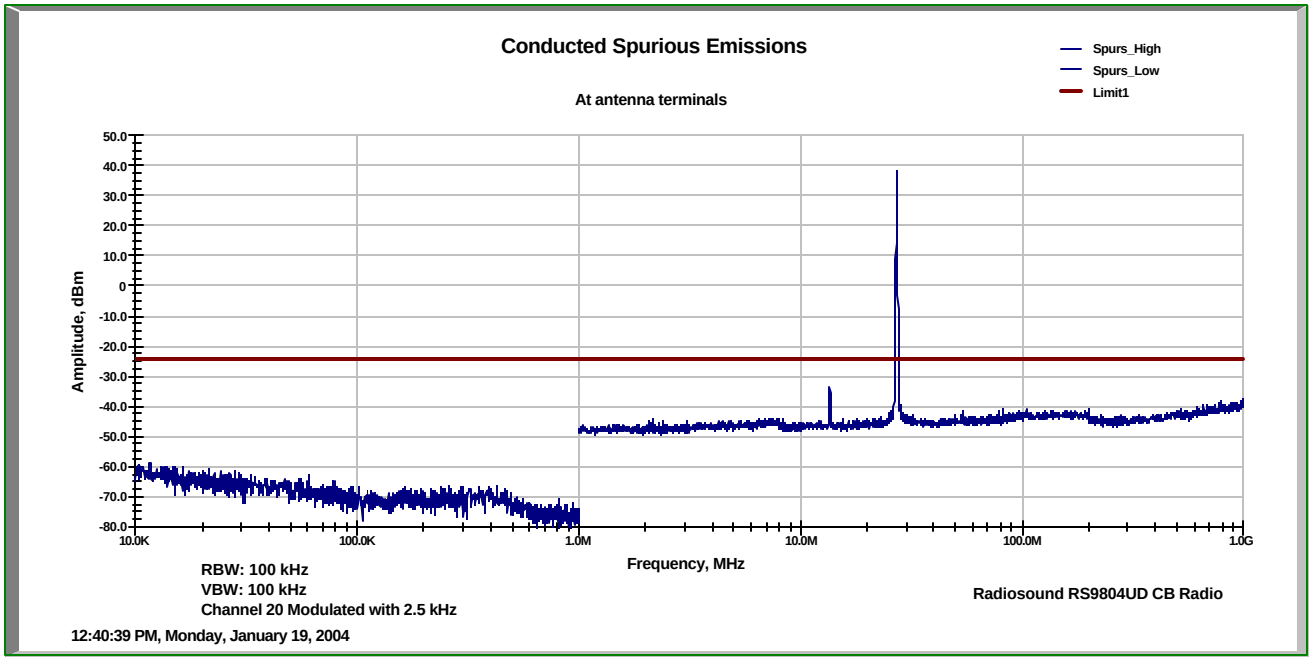
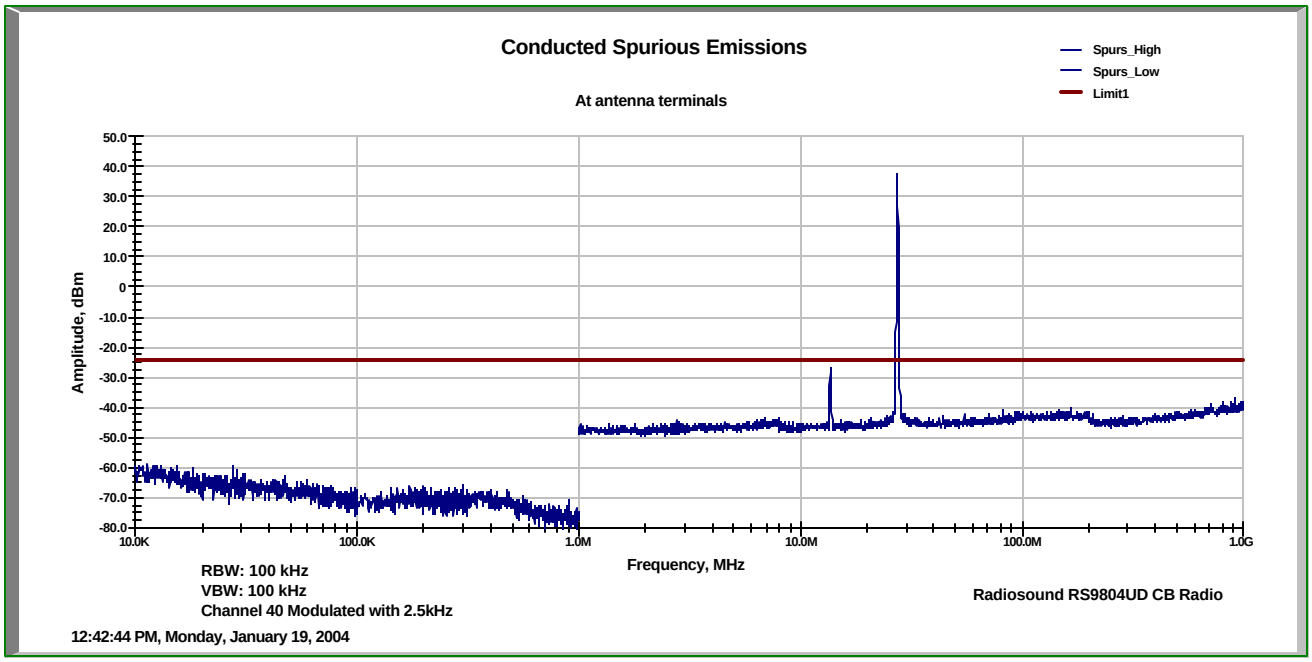


Figure 7-9: Spurious Emissions at Antenna Terminals – Channel 40 with 2.5kHz Tone



8 FIELD STRENGTH OF SPURIOUS RADIATION

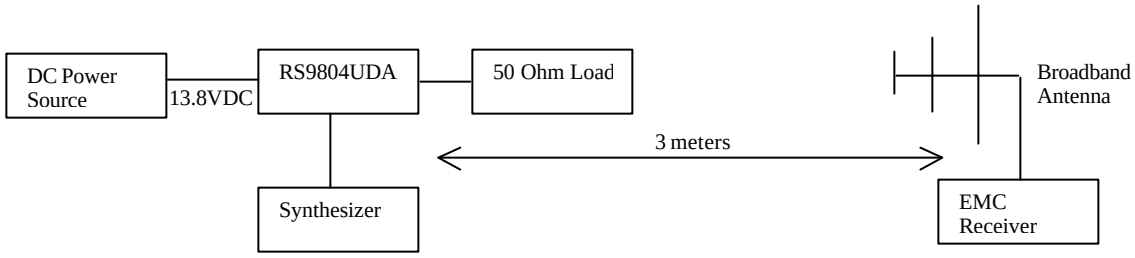
FCC §2.1053, §95.635

8.1 Test Procedure

The EUT was placed on a non-conductive 80 cm high turntable. During this test, the CB antenna port was terminated into a non-radiating 50 Ohm load. The four speakers were connected, as was the FM band receive antenna. All equipment was arranged on the 80 cm high table to closely resemble the geometry during actual installation on a motorcycle. The CB was powered and the microphone was keyed at channels 1, 20 and 40.

The broadband measurement antenna was placed at a distance of 3 meters from the EUT. A bilog antenna was used from 30 MHz to 1 GHz. During the tests, the antenna height and EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The frequency range up to tenth harmonic was investigated for each of three fundamental frequencies (low, middle, and high channels).

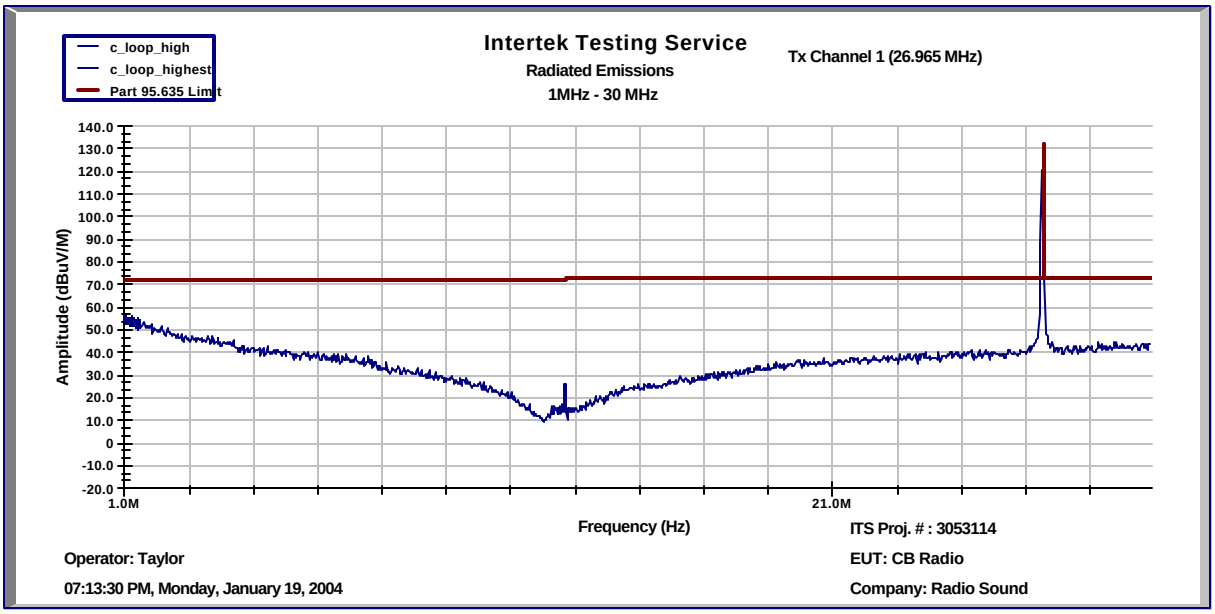
8.2 Block Diagram



8.3 Test Results

The US Domestic 40 Channel Citizen's Band Transceiver met the field strength of spurious radiation requirements of FCC §2.1053 and §95.635. All spurious emissions were attenuated below the transmitter power by at least the levels described in FCC Part §95.635(a)(b) notes (1), (3), (8), and (9). See Figure 8-4 through Figure 8-6 for the graphical test data.

Figure 8-1: Field Strength of Spurious Radiation (Fundamental Channel 1)



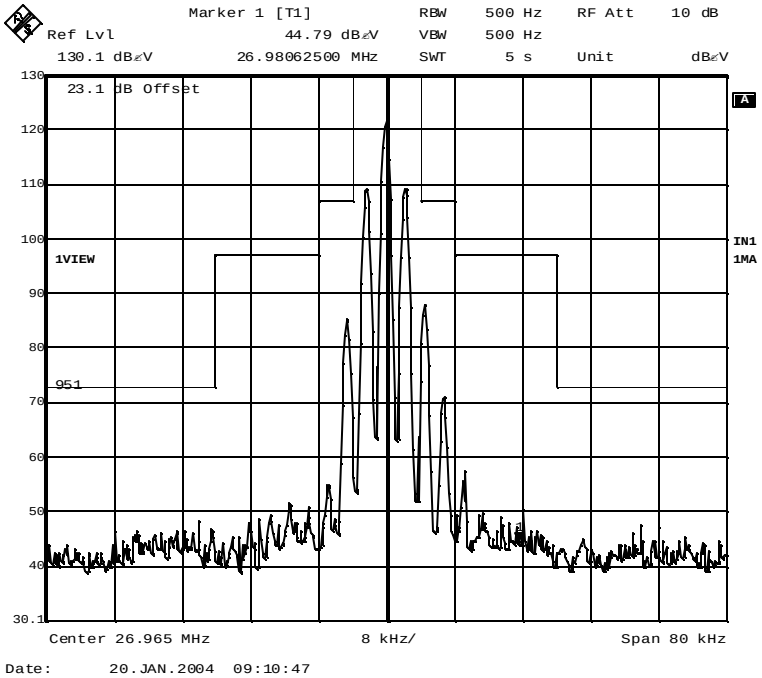
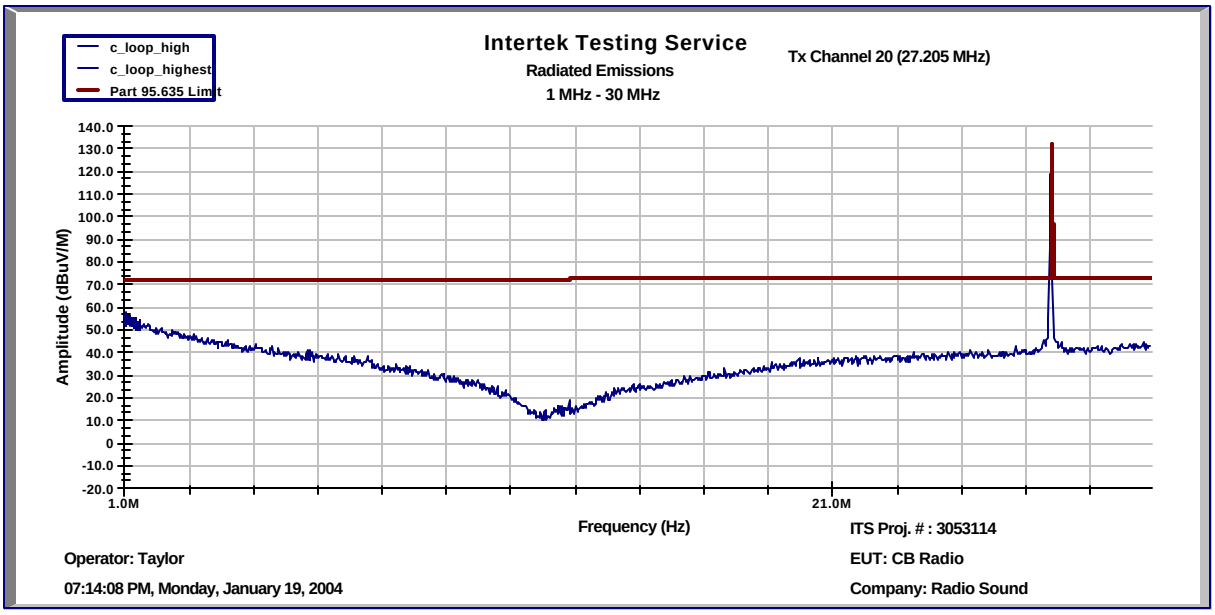


Figure 8-2: Field Strength of Spurious Radiation (Fundamental Channel 20)



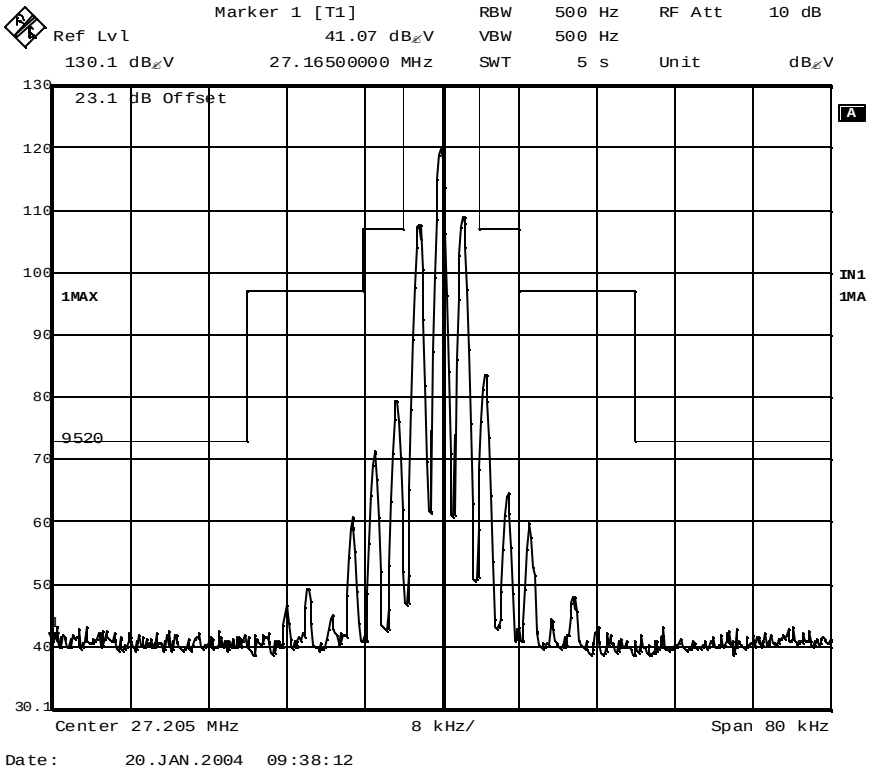
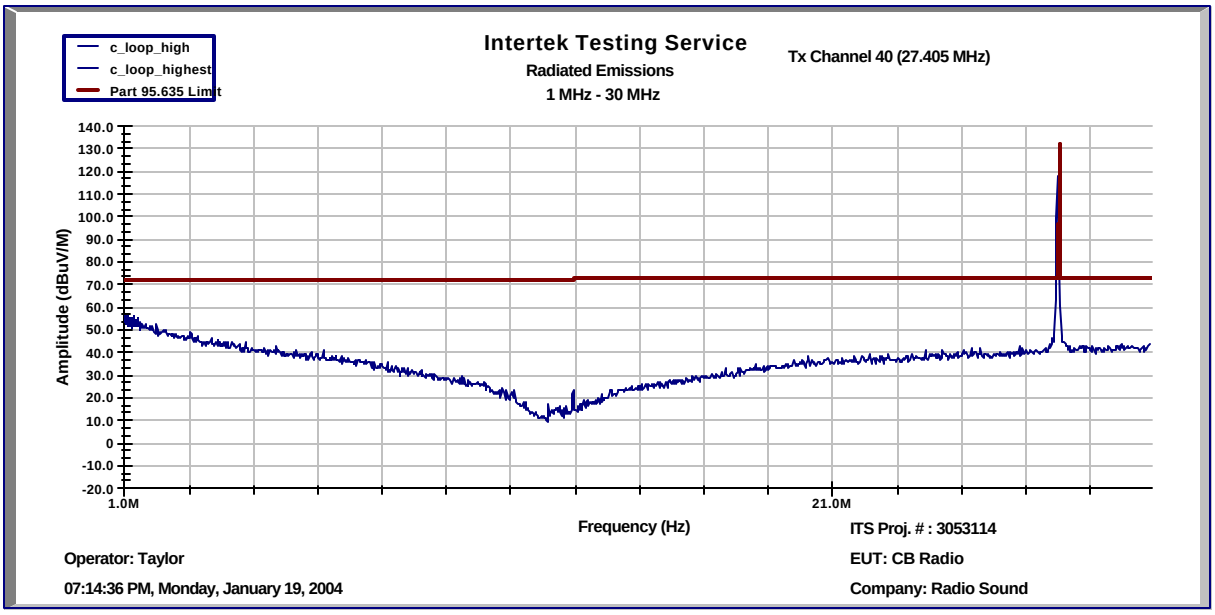


Figure 8-3: Field Strength of Spurious Radiation (Fundamental Channel 40)



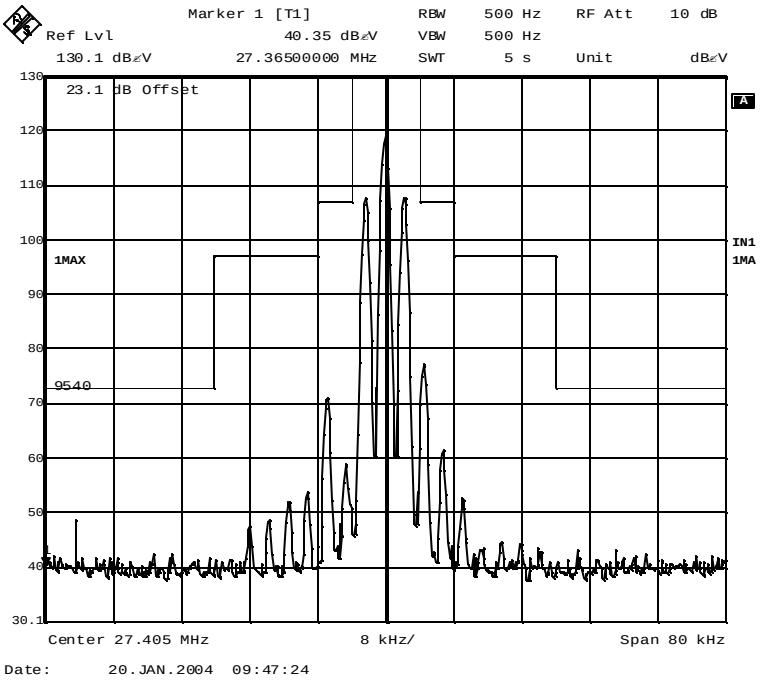
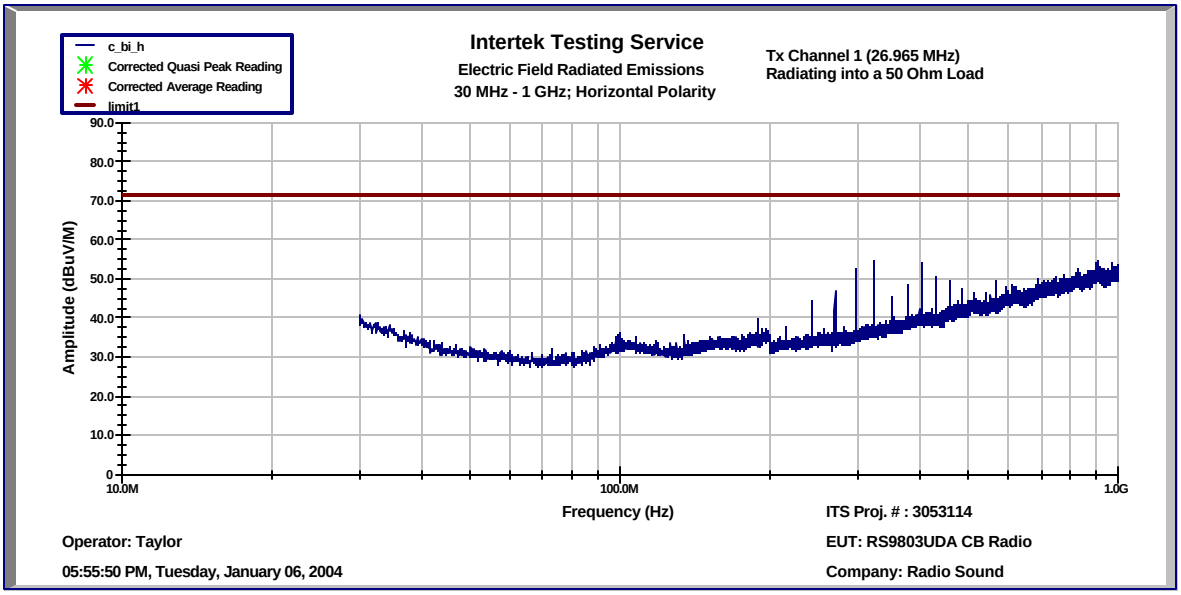


Figure 8-4: Field Strength of Spurious Radiation (30 MHz – 1 GHz) Channel 1



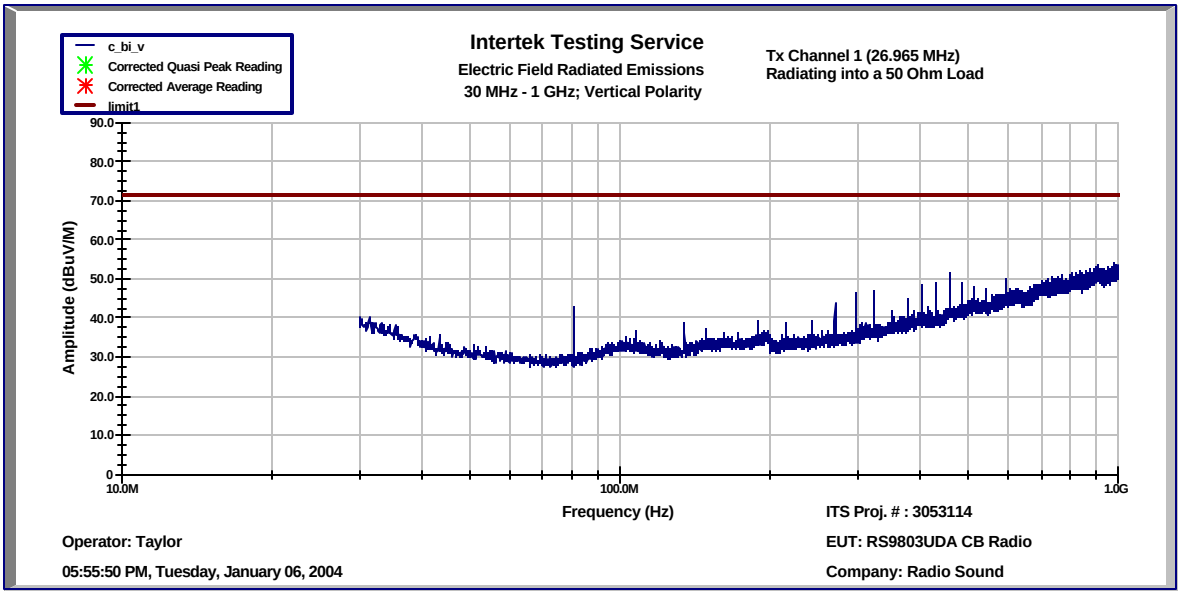
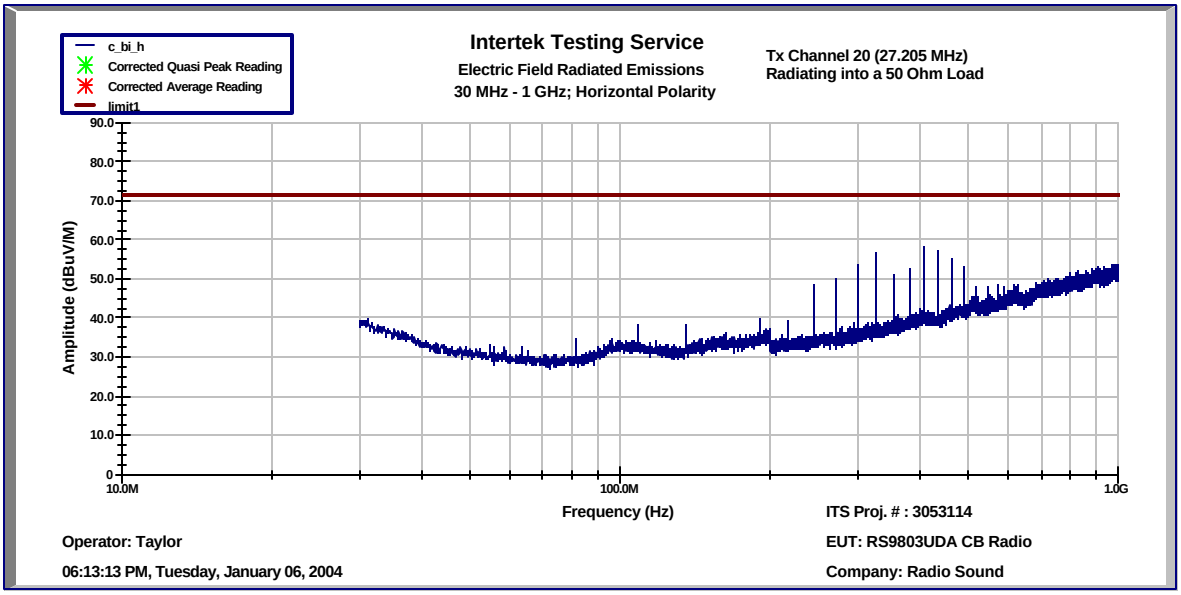


Figure 8-5: Field Strength of Spurious Radiation (30 MHz – 1 GHz) Channel 20



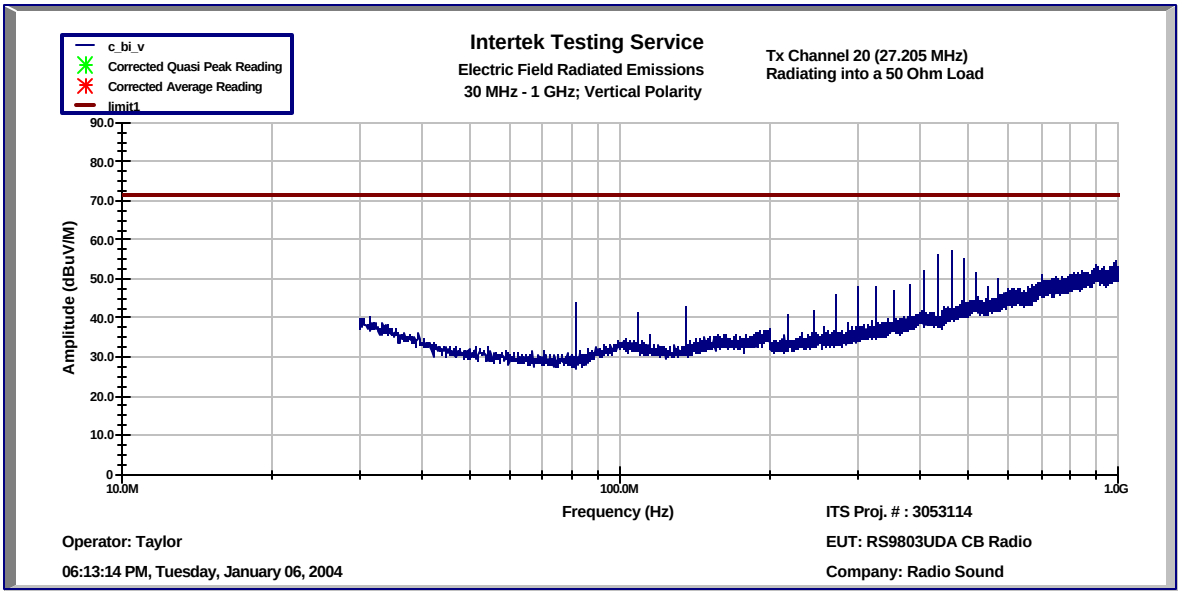
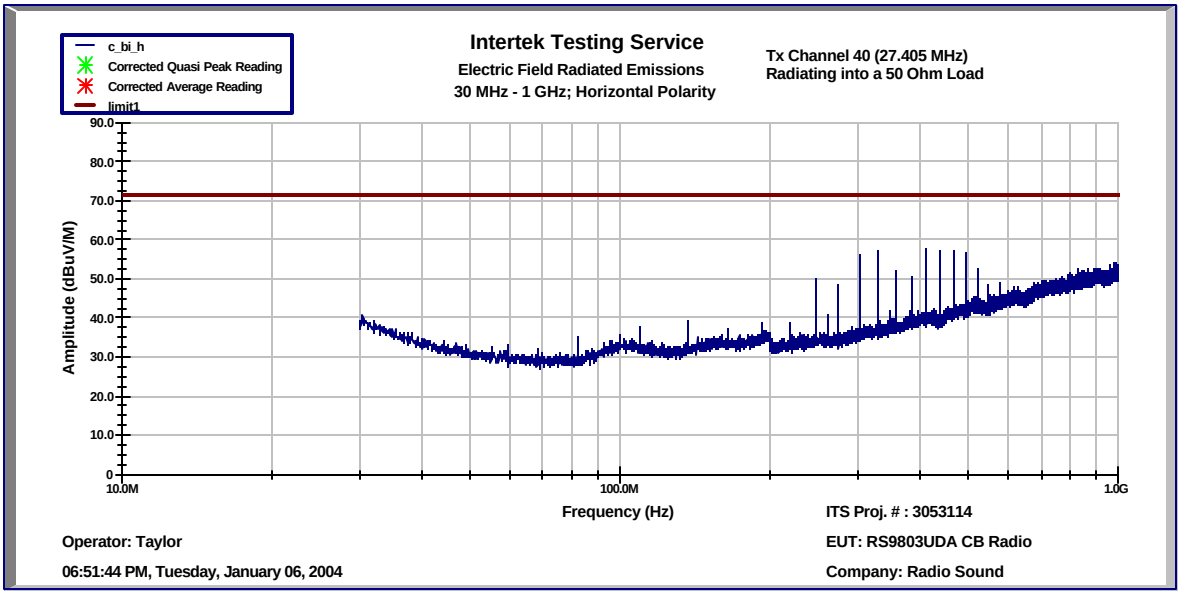
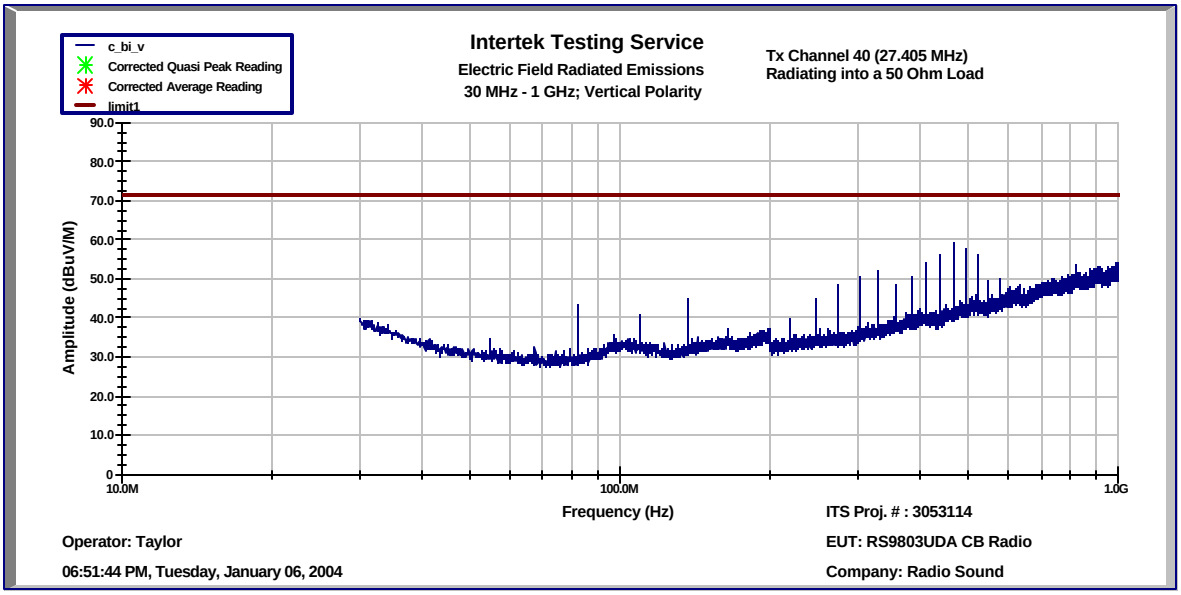


Figure 8-6: Field Strength of Spurious Radiation (30 MHz – 1 GHz) Channel 40





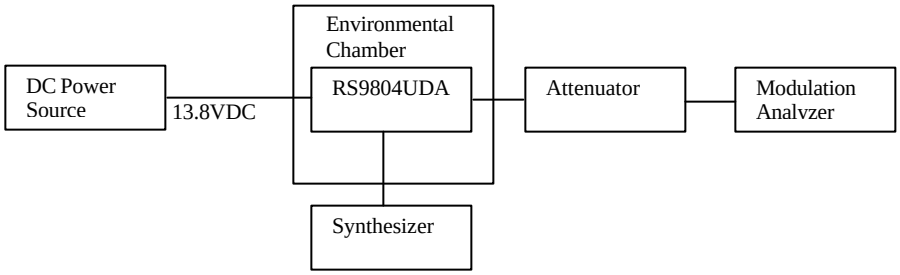
9 FREQUENCY STABILITY

§2.1055, §95.625(b)

9.1 Test Procedure

The CB was placed in an environmental chamber. All cables connecting to the CB were routed through a port in the side of the chamber. The CB antenna output connector was connected to an attenuator, which was in turn connected to the input of a modulation analyzer located outside the chamber. The CB was then powered on and channel 1 was selected. The microphone was then keyed and the frequency was then measured to determine compliance with the .005% frequency tolerance. This procedure was then performed on channels 20 and 40. The procedure was repeated while varying the temperature from -30 to +50 degrees Celsius using 10 degree increments. At 20 degrees the input DC voltage was varied from 85% to 115% of nominal and the frequency measured on channels 1, 20, and 40.

9.2 Block Diagram



9.3 Test Results

In all cases shown below, the output frequency is well within the 0.005% tolerance required by FCC Part §2.1055 and §95.625(b) for CB transmitters.

Table 9-1 Frequency Stability vs. Temperature Data

	Ch.1		Ch. 20		Ch. 40	
Temp (C)	**26.965 MHz**	**% Error**	**27.205 MHz**	**% Error**	**27.405 MHz**	**% Error**
-30	26.9648	-0.0007417	27.2048	-0.0007352	27.4048	-0.0007298
-20	26.9648	-0.0007417	27.2047	-0.0011027	27.4047	-0.0010947
-10	26.9648	-0.0007417	27.2048	-0.0007352	27.4048	-0.0007298
0	26.9648	-0.0007417	27.2048	-0.0007352	27.4048	-0.0007298
10	26.9649	-0.0003709	27.2049	-0.0003676	27.4049	-0.0003649
20	26.9649	-0.0003709	27.2049	-0.0003676	27.4049	-0.0003649
30	26.9648	-0.0007417	27.2048	-0.0007352	27.4048	-0.0007298
40	26.9648	-0.0007417	27.2048	-0.0007352	27.4048	-0.0007298
50	26.9648	-0.0007417	27.2048	-0.0007352	27.4048	-0.0007298

Table 9-2 Frequency Stability vs. Input Voltage Data

Transmit Channel	**Target (MHz)**	**85% (11.73 VDC)**		**100%(13.8 VDC)**		**115% (15.87 VDC)**	
		Freq. (MHz)	**% Error**	**Freq. (MHz)**	**% Error**	**Freq. (MHz)**	**% Error**
Ch. 1	26.965	26.9648	-0.000742	26.9648	-0.000742	26.9648	-0.000742
Ch. 20	27.205	27.2048	-0.000735	27.2048	-0.000735	27.2048	-0.000735
Ch. 40	27.405	27.4048	-0.00073	27.4048	-0.00073	27.4048	-0.00073

10 POWER LINE CONDUCTED EMISSIONS

FCC §15.107, FCC §15.207

10.1 Test Procedure

Not applicable.

10.2 Test Results

Not applicable. The US Domestic 40 Channel Citizen's Band Transceiver did not have any AC power leads.

11 RECEIVER SPURIOUS EMISSIONS

11.1 Test Limits

Table 11-1 Radiated Emission Limit for FCC §15.109

Radiated Emission Limits at 3 meters	
Frequency (MHz)	**Quasi-Peak limits, dB (?V/m)**
25 to 30[3]	32.04
30 to 88	40.0
88 to 216	43.5
216 to 960	46.0
960 and up	54.0

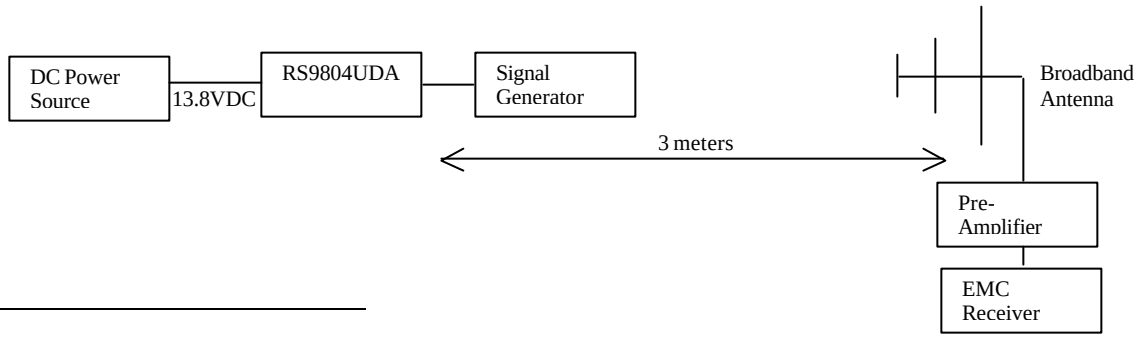
11.2 Test Procedure

Measurements were made over the frequency range of 25 MHz to five times the highest frequency operating within the device. The measuring receiver met the requirements of Section One of CISPR 16 and the measuring antenna was correlated to a balanced dipole. From 25 to 1000 MHz, a quasi-peak detector was used for measurement. Above 1000 MHz, average measurements were performed.

Measurements of the radiated field were made with the antenna located at a distance of 3 meters from the EUT and in vertical and horizontal polarities. The EUT was rotated from 0 to 360 degrees and the antenna adjusted between 1m and 4m in height above the ground plane for maximum meter reading at each test frequency.

The EUT was placed on a non-conductive 80 cm high turntable. During this test, the CB antenna port was connected to a signal generator. The signal generator was used to supply the CB with a CW signal at 26.965 MHz and 60 dBuV so that all the circuitry would operate in receive mode. The four speakers were connected, as was the FM band receive antenna. All equipment was arranged on the 80 cm high table to closely resemble the geometry during actual installation on a motorcycle.

11.3 Block Diagram



[3] This frequency range is for part 15.109 (d) for CB receivers.

11.4 Test Results

The US Domestic 40 Channel Citizen's Band Transceiver met the radiated disturbance requirements of FCC §15.109. The maximized quasi peak data can be found in Figure 11-5. There were no other emissions detected within 10 dB of the limit.

Figure 11-1 FCC §15.109Worse Case Receiver Spurious Emission (25 – 30 MHz Horizontal)

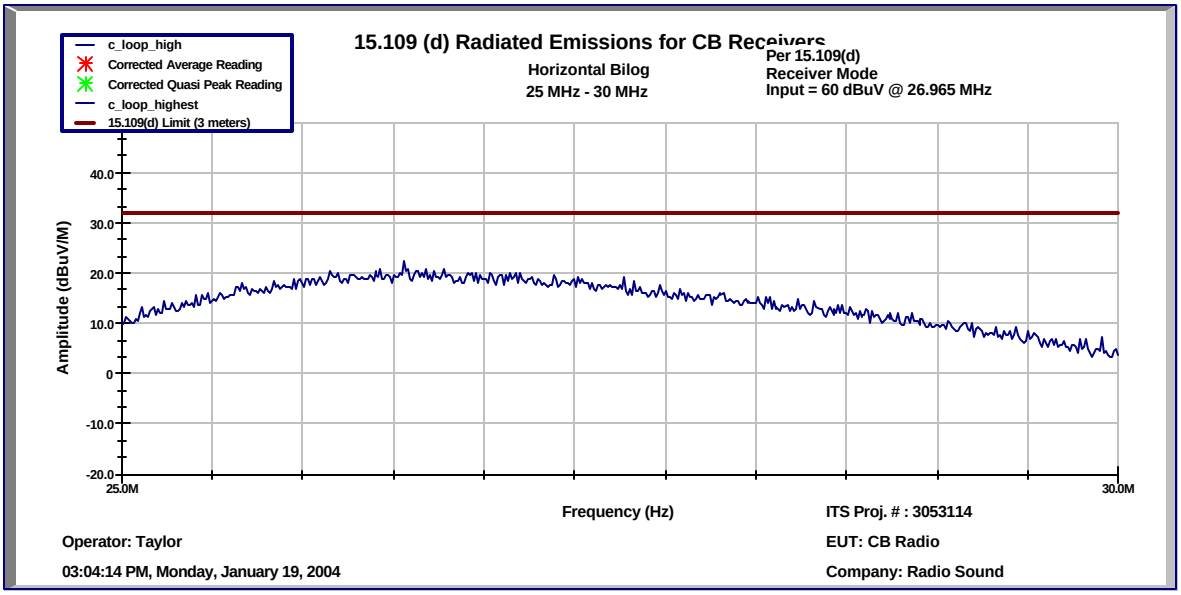


Figure 11-2 FCC §15.109Worse Case Receiver Spurious Emission (25 – 30 MHz Vertical)

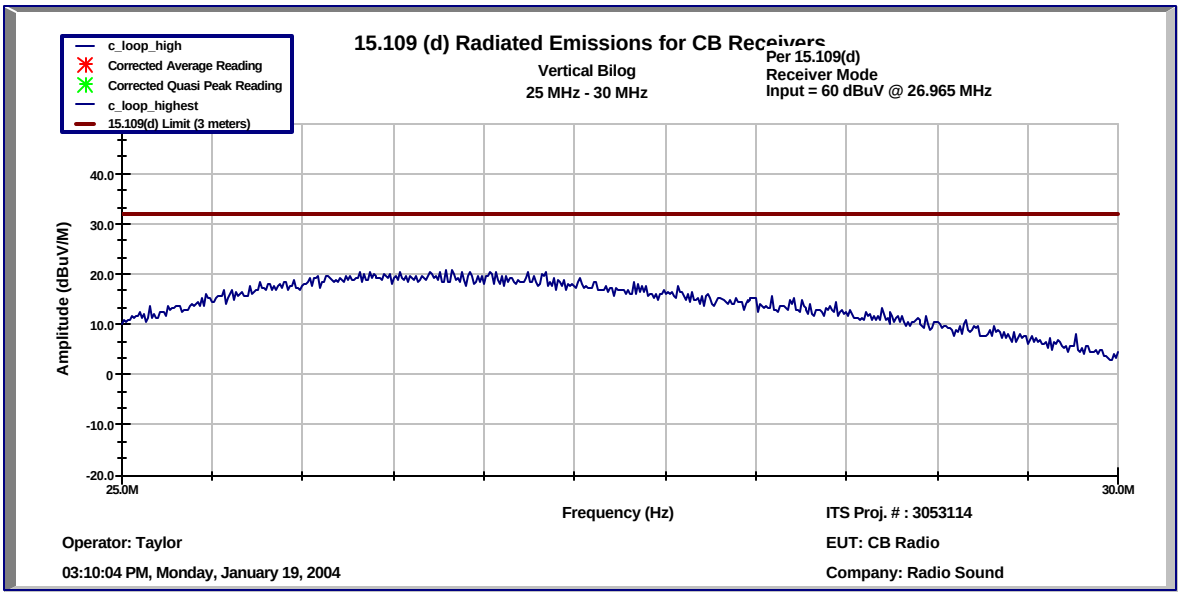

c_loop_high
Corrected Average Reading
Corrected Quasi Peak Reading
c_loop_highest
15.109(d) Limit (3 meters)
15.109 (d) Radiated Emissions for CB Receivers
Vertical Bilog
25 MHz - 30 MHz
Per 15.109(d)
Receiver Mode
Input = 60 dBuV @ 26.965 MHz
Amplitude (dBuV/M)
40.0
30.0
20.0
10.0
0
-10.0
-20.0
25.0M
30.0M
Frequency (Hz)
Operator: Taylor
03:10:04 PM, Monday, January 19, 2004
ITS Proj. # : 3053114
EUT: CB Radio
Company: Radio Sound

Figure 11-3 FCC §15.109Worse Case Receiver Spurious Emission (Horizontal)

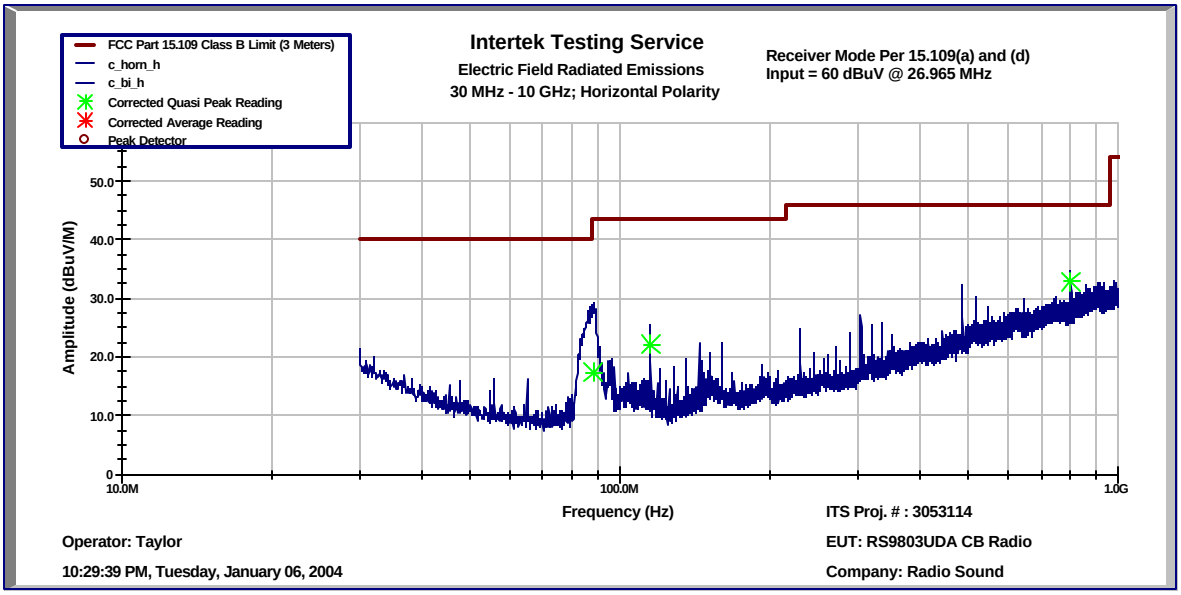


Figure 11-4 FCC §15.109Worse Case Receiver Spurious Emission (Vertical)

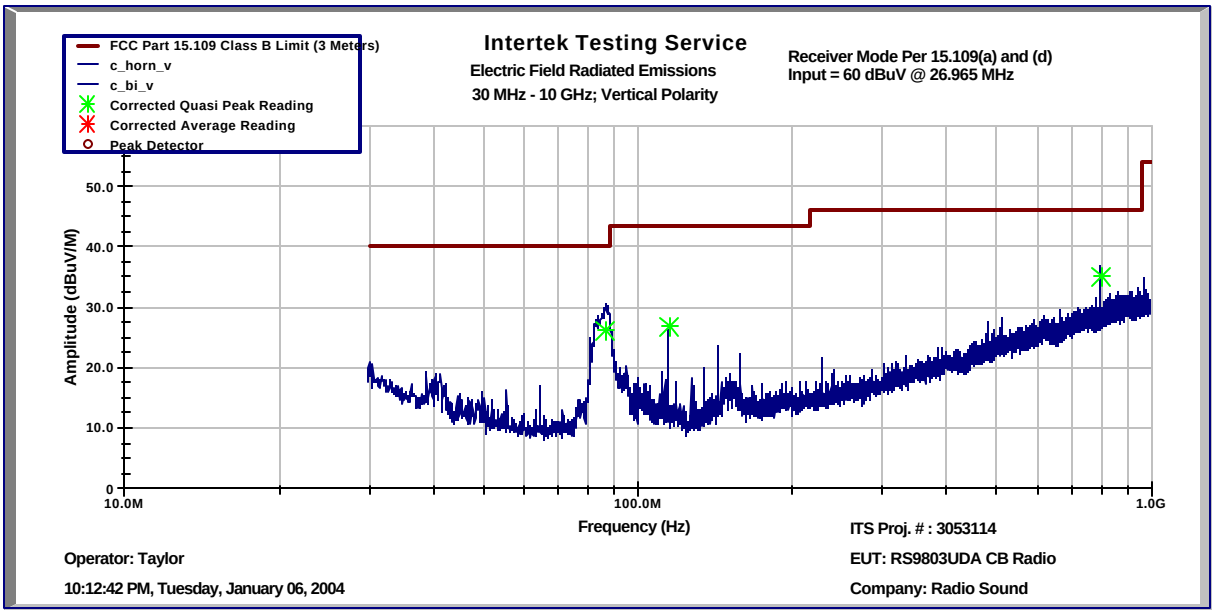


Figure 11-5 FCC §15.109 Maximized Quasi Peak and Average Emissions – Receiver Signal Provided

Frequency (MHz)	Polarity (H/V)	Cab. (dB)	Ant. (dB)	Corr. Reading. (dBuV/m)	Limit (dBuV/m)	Delta (dB)	Azimuth (deg)	Tower (cm)	Results
800.02 MHz	V	2.57	22.8	35.06	46.02	-10.96	262	124	**Compliant**
800.02 MHz	H	2.57	22.8	32.79	46.02	-13.23	321	171	**Compliant**
86.38 MHz	V	0.78	7.48	26.19	40	-13.81	66	102	**Compliant**
115.21 MHz	V	0.96	8.78	26.8	43.52	-16.72	123	99	**Compliant**
115.2 MHz	H	0.96	8.78	22.12	43.52	-21.4	326	245	**Compliant**
88.33 MHz	H	0.79	7.81	17.38	43.52	-26.14	8	194	**Compliant**

12 ANTENNA POWER CONDUCTED LIMITS FOR RECEIVERS

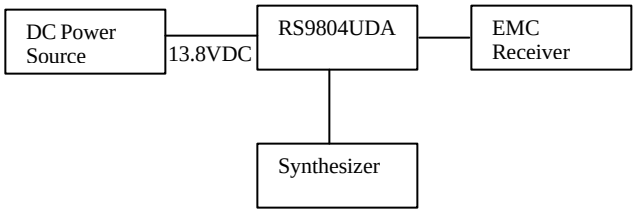
12.1 Test Limits

The power at the antenna terminals of the receiver shall not exceed 2.0 nanowatts (50 dBuV).

12.2 Test Procedure

The transmitter output was connected to a calibrated coaxial cable, the other end of which was connected to an EMC receiver. The output power at the EMC receiver was recorded. The RF output power at the antenna terminal was then determined by added the insertion loss of the attenuator and cable to the receiver reading. The resulting graphical data was then compared to the 2.0 nanowatt (50 dBuV) limit.

12.3 Block Diagram



12.4 Test Results

Figure 12-1 FCC §15.111 Antenna Power Conducted Limits for Receivers