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NVLAP LAB CODE: 200413-0

July 1, 2004

Test Record

Product Verification
According to FCC Part 15 Subparts C

for

Ever Win International Corp.
MODEL: UFM-2003

TABLE OF CONTENTS

Revision History

Revision	Date	Description of Changes	Author
0.1	June 9. 2004	Initial document	S. Sohn
0.2	July 1,2004	Revised pages::	S. Sohn

Introduction – Test Plan

This report describes the results of all measurements made on portable FM transmitter which falls under the class of intentional radiator by the FCC Part 15 Subpart C Rules and Regulations.

This EUT is designated: **Wireless Audio FM Transmitter for personal use.**

Model : **UFM-2003**

The EUT was tested in full compliance with the FCC Regulations using the methods of FCC Part 15 Subpart C "Intentional Radiators"; ANSI C63.4: 2000 and Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations". The results of the testing indicate that the MSF0001 met the Part 15 C limits and requirements.

1.0 CERTIFICATION OF TEST DATA

Verification statement.

The data, data evaluation and equipment configuration represented herein are a true and accurate representation of the test sample (EUT), and characteristics and measurements obtained as of the dates and the times of the test under the conditions specified and to the methods of FCC Part 15, Subpart C "Intentional Radiators" and Part 2 "Frequency Allocations and radio Treaty Matters; General Rules and regulations"

The test results provided with this report, indicate that the equipment tested:
WIRELESS AUDIO FM TRANSMITTER FOR PERSONAL USE. MODEL : UFM-2003 is compliant with the following Rules and Regulations

A. 47 Code of Federal Regulations, Part 15 Subpart C
B. 47 Code of Federal Regulations, Part 2
C. ANSI C63.4: 2000

Report approved by:

Leon Kogan
Technical Director,

JMR Compliance Engineering, 20400 Plummer Street, Chatsworth CA 91311.
E-mail:emc@jmr.com

2.0 GENERAL INFORMATION

2.1 Client Information

Company Name:	Ever Win International Corp.
Contact:	Alex Samson
Company Address:	17579 Railroad Street City of Industry, CA 91748
Phone:	(818) 709-3786

2.2 Administrative Data

Device tested:	Wireless Audio FM Transmitter for personal use
Model:	UFM-2003
Equipment category:	Intentional Radiators
Accessories:	N/A
Expository Statement:	This device is intended for personal use.
Purpose of test:	Compliance to FCC Rules and Regulations, Part 15, Subpart C
Date of test:	06/29/04
Place of the test:	JMR Electronics, Inc. Compliance Engineering Laboratory 20400 Plummer Street Chatsworth, CA 91311 Phone: (818) 993-4801

3.0 Description of Equipment Under Test (EUT)

3.1 Brief Description of the EUT

The EUT is a portable FM Transmitter which is designed to connect to a personal MP3 player and allow reception of the transmitted signal using a standard FM radio. There are four (4) available channels. Pressing switch will increment the frequency to the next channel.
There is no ON/OFF switch for this product. Circuit goes ON when product is plugged to automobile cigarette lighter outlet. This product also supplies 12v operating power to MP3 player.
Power consumption of FM transmitter IC is 20ma typical at 5v.
Wires connecting to MP3 player are used as the antenna. Alteration of antenna by user is not possible.

The EUT was configured on a table top. device and was tested with standard MP3 player connected. The modulation frequency was provided by external Test Oscillator HP 651B.

Operating frequencies : 88.1, 88.3, 88.5, 88.7 MHz.
Clock frequencies : 7.6 MHz
Power Supply : External 12VDC battery.

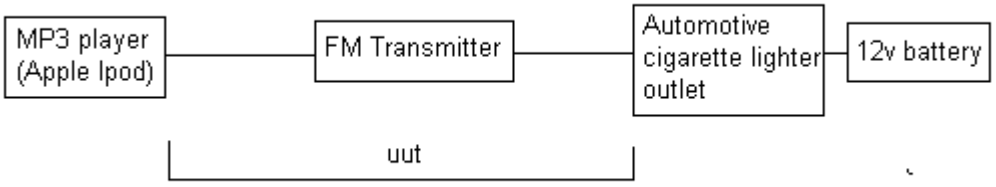
3.2 Test Run

1) The EUT was connected through Monster Stubby cigarette lighter connector to the 12VDC battery
   Apple Ipod, as a standard MP3 player, was connected to the appropriate input/output of the EUT;
2) Test Oscillator HP 651B had been connected to the Aux In input of the docking connector when it was necessary.

For test purposes the following three channels were selected for measurements :
88.1 MHz 88.3 MHz 88.7 MHz

Each channel had generated its frequency continuously for the duration of the testing. The above mentioned set-up allowed the article to perform sufficiently for the test purposes and required time.

3.3 Block Diagram of the Test Setup



3.4 Support Equipment List:

No	Equipment	Model	S/N (last 6)	Notes
1	**HP Test Oscillator**	651B	1230A08435	
2	**MP3 player**	M8976LL/A		Apple Ipod
3	**Standard 12VDC battery**	N/A	N/A	

3.5 Cabling Configuration

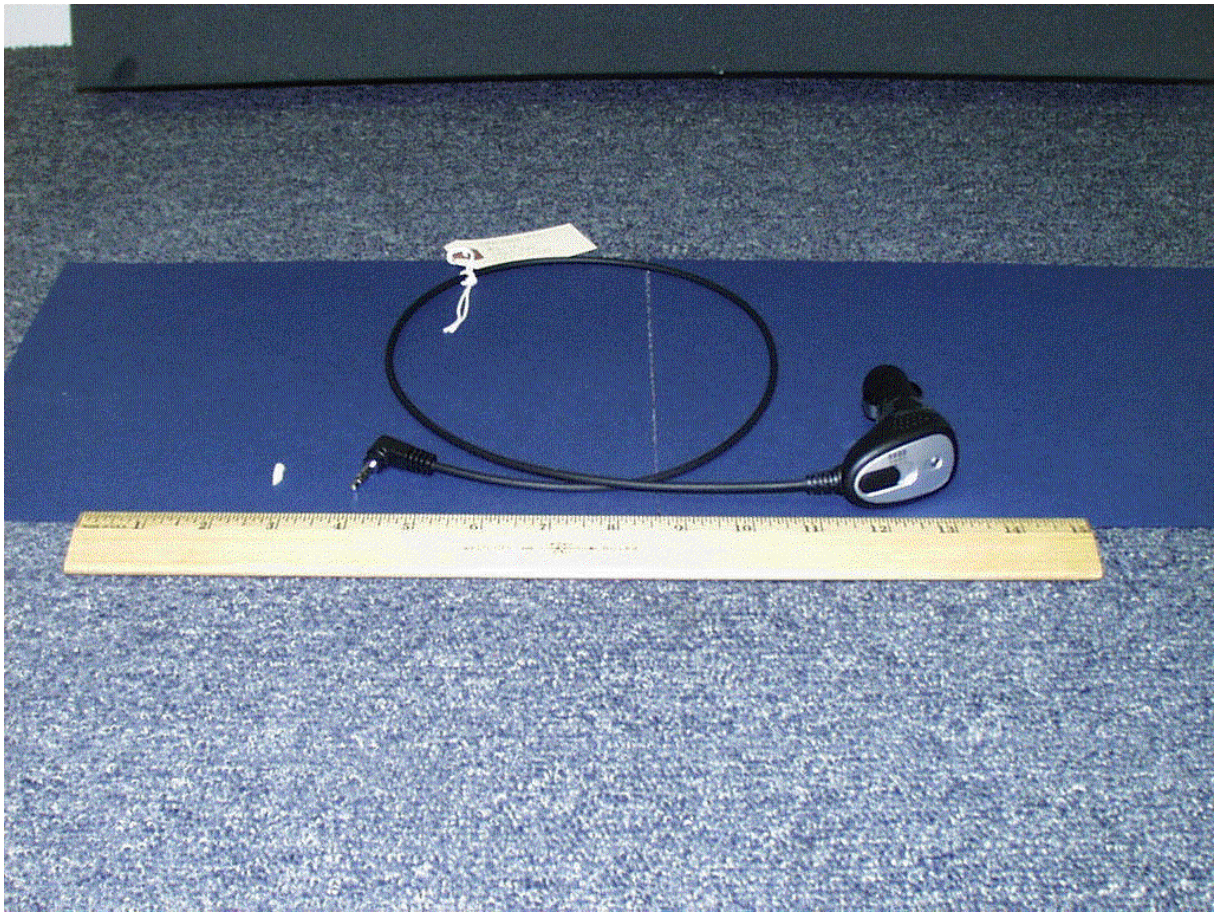
Power Cords:

Unit	HP 651B Test Oscillator
MFG	Standard
Shielded	No
Length	2 m

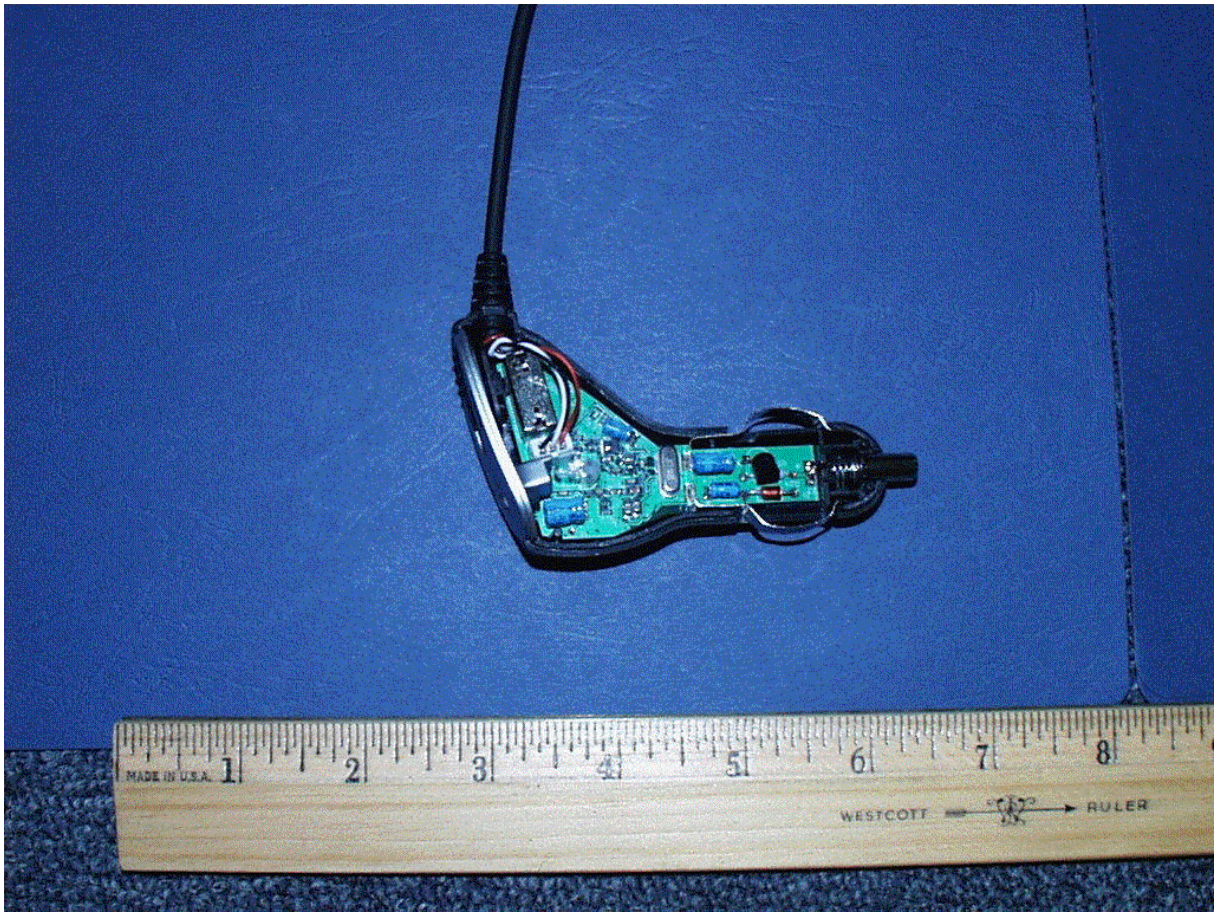
I / O Cables External:

Connection	AUX In of the EUT to Out, 50 Ohm of the HP 651B
Cable	Generic 50 Ohm RF cable
Shielded?	Yes
Connector	BNC, Jack
Length	0.3 m

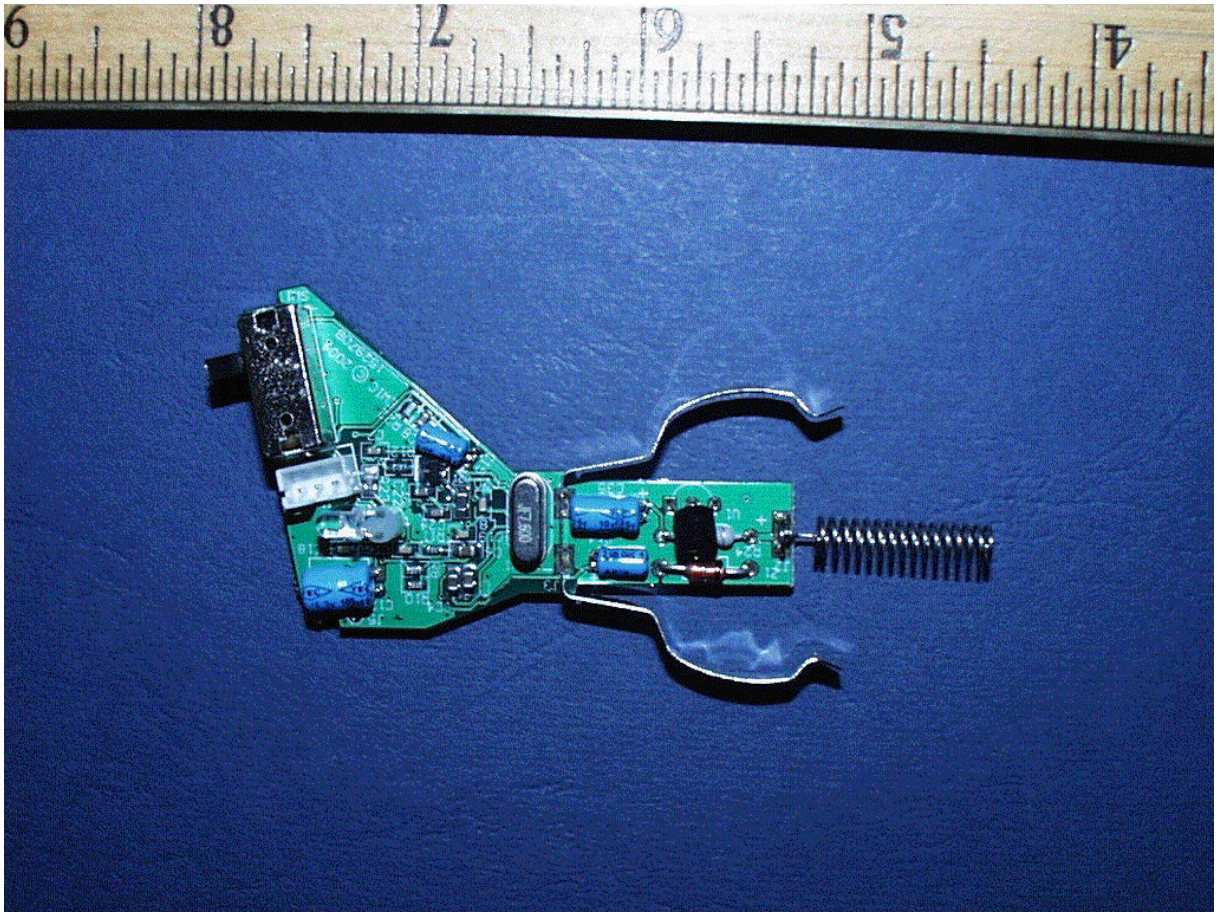
Photos of the EUT



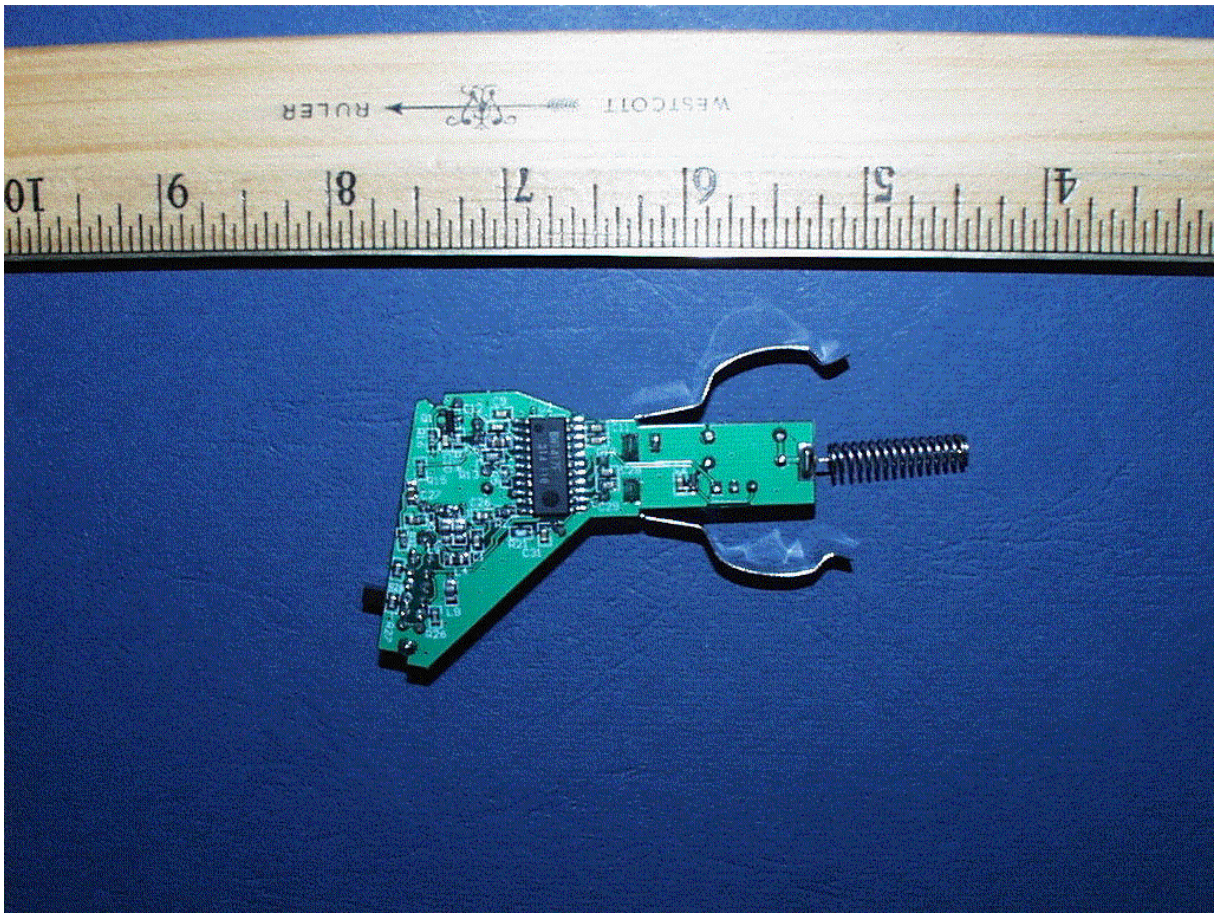
EUT: WIRELESS AUDIO FM TRANSMITTER.
MODEL : UFM-2003



EUT: WIRELESS AUDIO FM TRANSMITTER.
MODEL : UFM-2003
FM Modulator
Open enclosure



EUT: WIRELESS AUDIO FM TRANSMITTER.
MODEL : UFM-2003
FM Modulator
PCB components side



EUT: WIRELESS AUDIO FM TRANSMITTER.
MODEL : UFM-2003
FM Modulator
PCB solder side

3.7 EUT Modifications

N/A

3.8 Photographs of EUT Modifications

N/A

4.0 Test equipment used

Device	Model No.	Serial No.	Last Cal.	Next Cal
Cable 1	8214	CBL-006	06/21/03	06/21/04
Analyzer	HP85462A	3325A00120	04/11/04	04/11/05
Cable 2	8268	CBL-002	06/21/03	06/21/04
Preselector	HP85460A	3330A00117	04/11/04	04/11/05
Qpeak Adapter	HP85462 Internal	Internal	04/11/04	04/11/05
Pre-Amplifier	None			
Tower 1	EMCO 1050	9310-1786	N/A	N/A
Turntable 1	EMCO 1060	9409-1753	N/A	N/A
Bilog Antenna	CBL6112B	2604	08/08/03	08/08/04
DRG Horn Antenna	SAS-200/571	175	10/18/03	10/18/04
Log-Periodic Antenna	CBL6111	11167	11/01/03	11/01/04
Cable1	RG-214/U	CBL-001	06/21/03	06/21/04
Shielded Semi-Anechoic Chamber	RANTEC	N/A	N/A	N/A
Digital Oscilloscope	DL1520	26WZ0171	12/16/03	12/16/04
Temperature and Humidity Recorder	Dickson TH8-24C	5097755	09/18/03	09/18/05

5.0 Field Strength of Fundamental and Emissions within permitted band.

Test Requirements: FCC Part 15 : Subclause 15.239
Test Method: ANSI C63.4: 2000

Limit : The maximum Field Strength authorized within 200 kHz is 250 uV/m @ 3m
Mode of operation: with and without modulation**.**

The test facility consists of a shielded semi-anechoic chamber with attached shielded control room. The semi-anechoic chamber is approximately 18 feet wide by 28 feet long by 19 feet high. A hybrid absorber combines high performance anechoic polyurethane foam with a ferrite tile base to achieve high levels of absorption and power dissipation capability.

The EUT had been placed at the 0.8 m height on the non-conducting table. Antenna is supported by foamed-polystyrene blocks above the table.
Transmitter had been turned ON without modulation and worked at the frequencies of the selected
All data was obtained via a HP 85876A EMI measurement software package using an HP 85462A Receiver which is compliant to CISPR 16. The EUT was configured in various geometric patterns to find the geometric configuration and EUT attitude that produced the largest RF power.
After determination of the maximum emissions configuration the distance of the EUT to the scanning antenna was set to 3 meters.

At each of three selected channels 88.1 MHz, 88.3MHz, and 88.7 MHz Field Strength of Emissions had been measured.

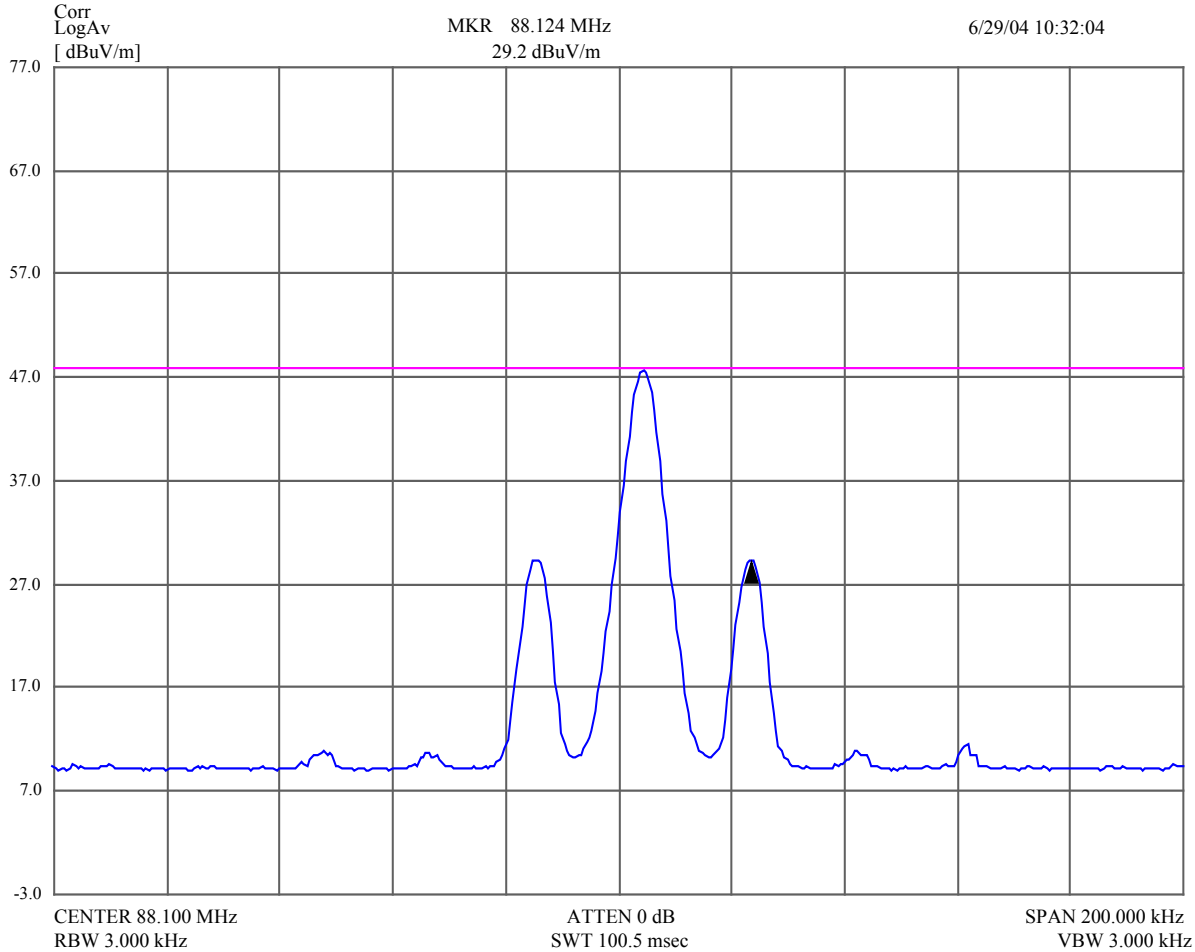
5.1. Channel 88.1 MHz

5.1.1 no modulation

Average value data

Frequency MHz	Avg dBuV/m	Avg Lmt dBuV/m	DelLim-Avg dB	Pol	Hgt cm	Angle deg	Status
88.085504	29.23	48.00	-18.77	Horz	171	8	PASS
88.104496	47.51	48.00	-0.49	Horz	171	8	PASS
88.123504	29.24	48.00	-18.76	Horz	171	8	PASS

Receiver graph of Field Strength of Emissions at 3 m

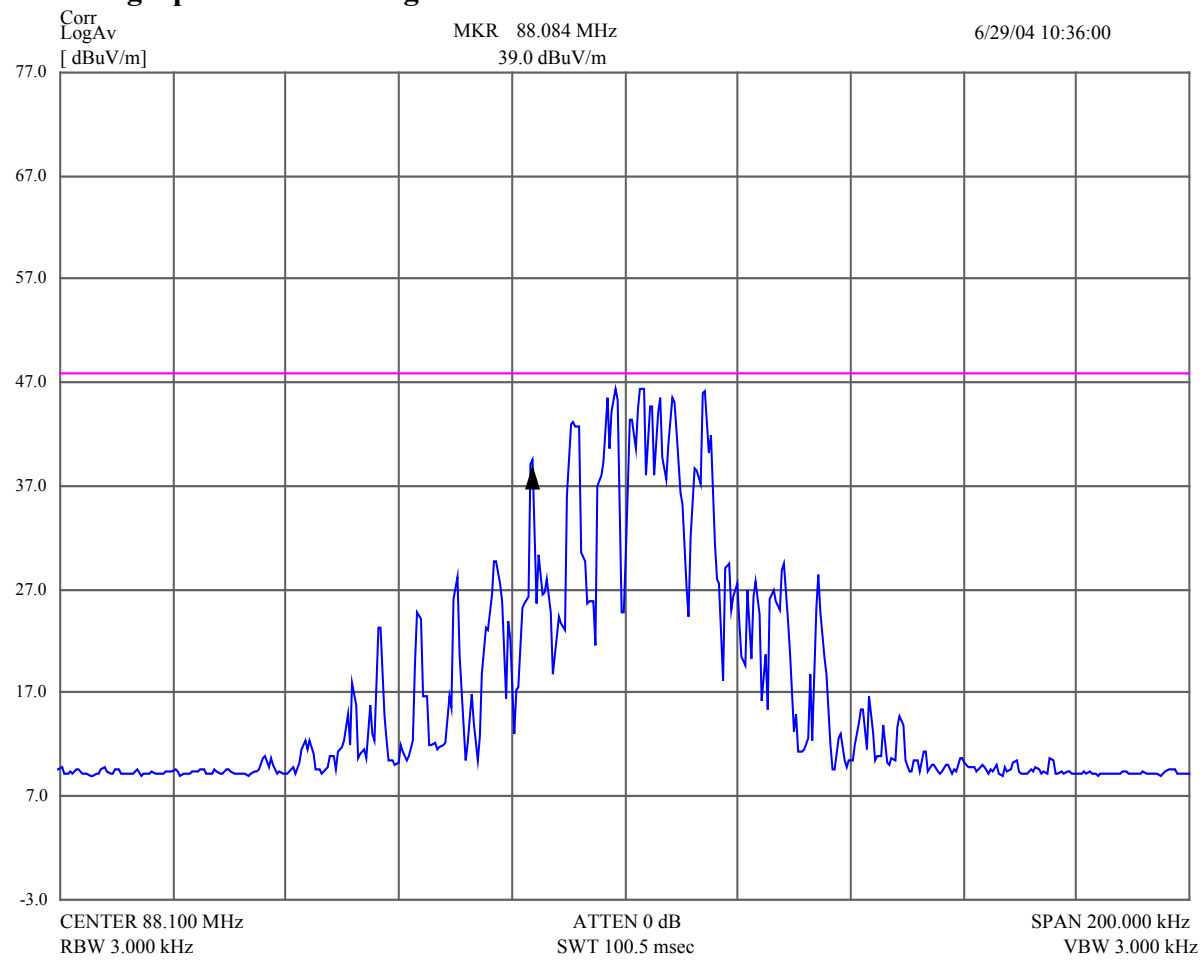


5.1.2 with modulation

Average value data

Frequency MHz	Avg dBuV/m	Avg Lmt dBuV/m	DelLim-Avg dB	Pol	Hgt cm	Angle deg	Status
88.083504	38.97	48.00	-9.03	Horz	179	8	PASS
88.091000	43.00	48.00	-5.00	Horz	179	8	PASS
88.098496	46.28	48.00	-1.72	Horz	179	8	PASS
88.103000	46.24	48.00	-1.76	Horz	179	8	PASS
88.108496	45.49	48.00	-2.51	Horz	179	8	PASS
88.114000	45.96	48.00	-2.04	Horz	179	8	PASS

Receiver graph of Field Strength of Emissions at 3 m



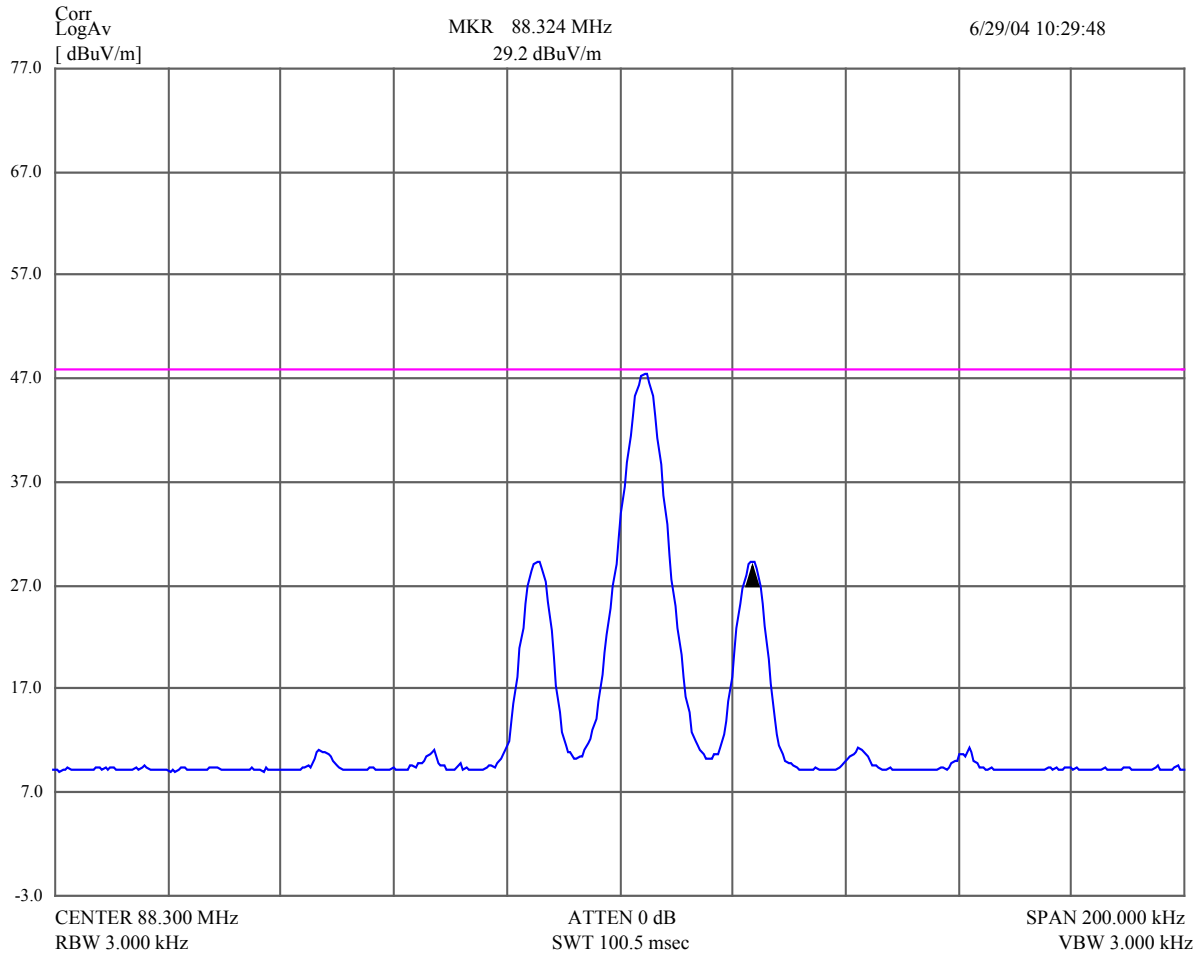
5.2. Channel 88.3 MHz

5.2.1 no modulation

Average value data

Frequency MHz	Avg dBuV/m	Avg Lmt dBuV/m	DelLim-Avg dB	Pol	Hgt cm	Angle deg	Status
88.285504	29.21	48.00	-18.79	Horz	171	8	PASS
88.304496	47.36	48.00	-0.64	Horz	171	8	PASS
88.323504	29.18	48.00	-18.82	Horz	171	8	PASS

Receiver graph of Field Strength of Emission at 3 m

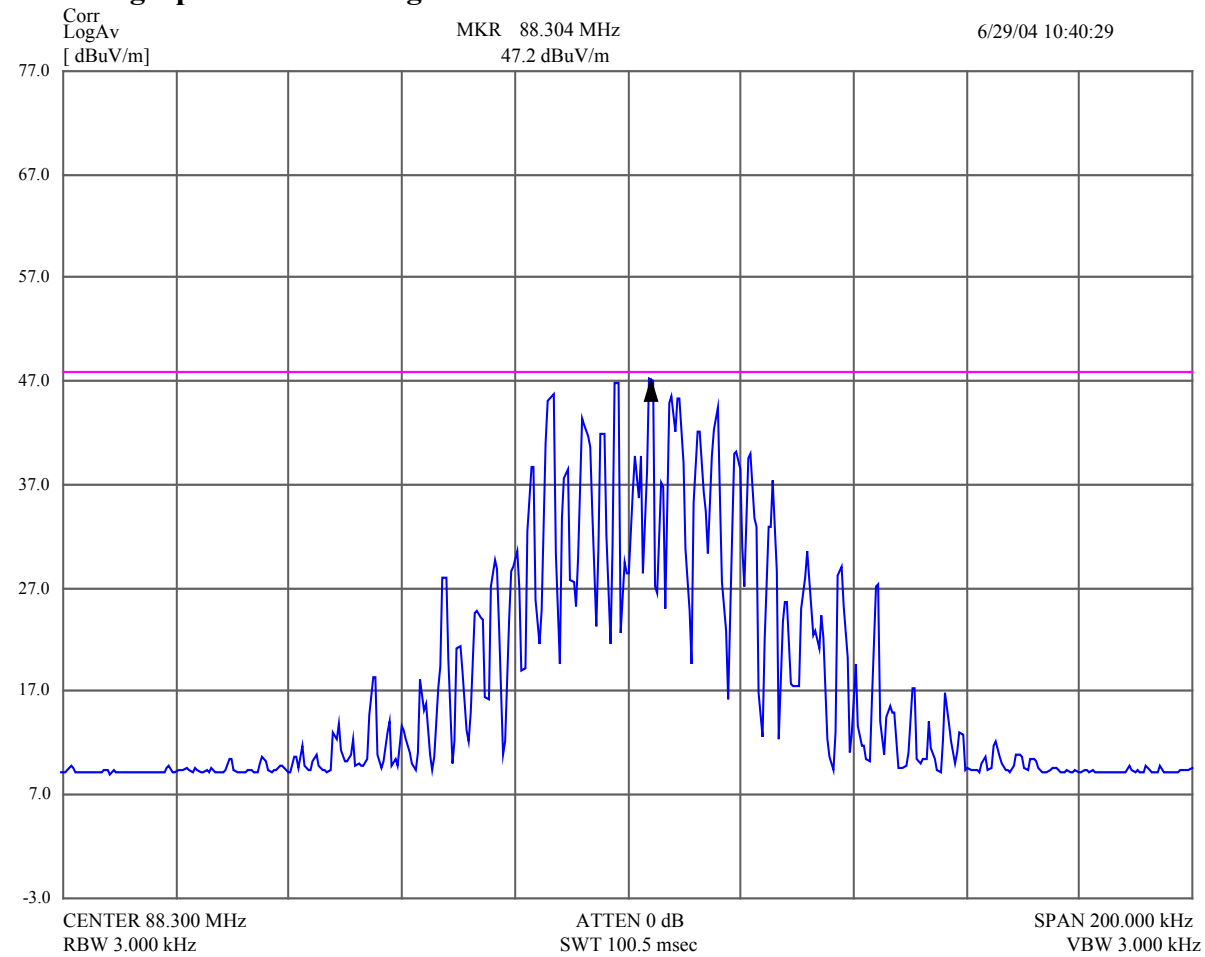


5.2.2 with modulation

Average value data

Frequency MHz	Avg dBuV/m	Avg Lmt dBuV/m	DelLim-Avg dB	Pol	Hgt cm	Angle deg	Status
88.286496	45.24	48.00	-2.76	Horz	193	8	PASS
88.292496	42.70	48.00	-5.30	Horz	193	8	PASS
88.298000	46.65	48.00	-1.35	Horz	193	8	PASS
88.304000	47.24	48.00	-0.76	Horz	193	8	PASS
88.309504	45.24	48.00	-2.76	Horz	193	8	PASS
88.315504	42.32	48.00	-5.68	Horz	193	8	PASS

Receiver graph of Field Strength of Emissions at 3 m



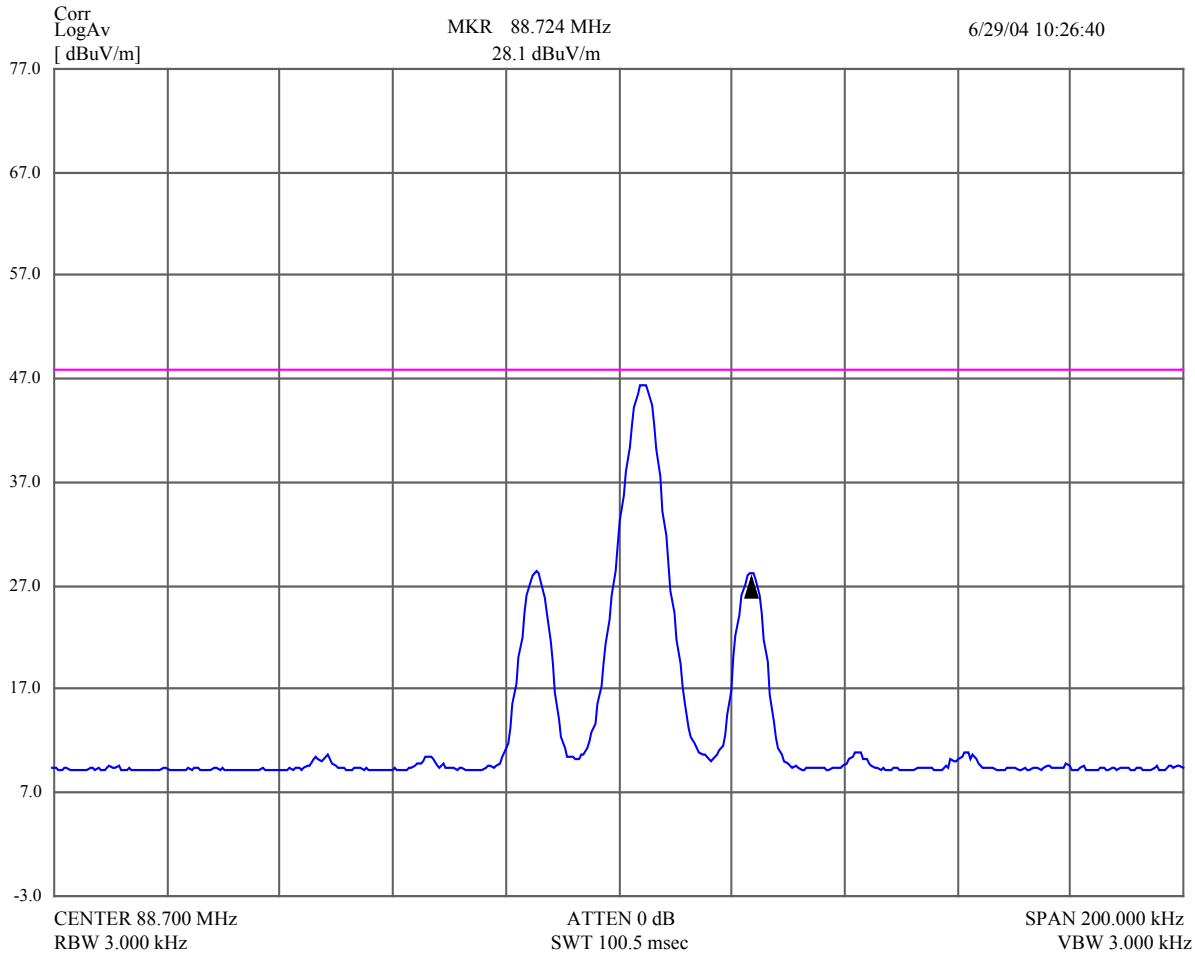
5.3. Channel 88.7 MHz

5.3.1 no modulation

Average value data

Frequency MHz	Avg dBuV/m	Avg Lmt dBuV/m	DelLim-Avg dB	Pol	Hgt cm	Angle deg	Status
88.686000	28.20	48.00	-19.80	Horz	161	8	PASS
88.704000	46.24	48.00	-1.76	Horz	161	8	PASS
88.723504	28.10	48.00	-19.90	Horz	161	8	PASS

Receiver graph of Field Strength of Emissions at 3 m

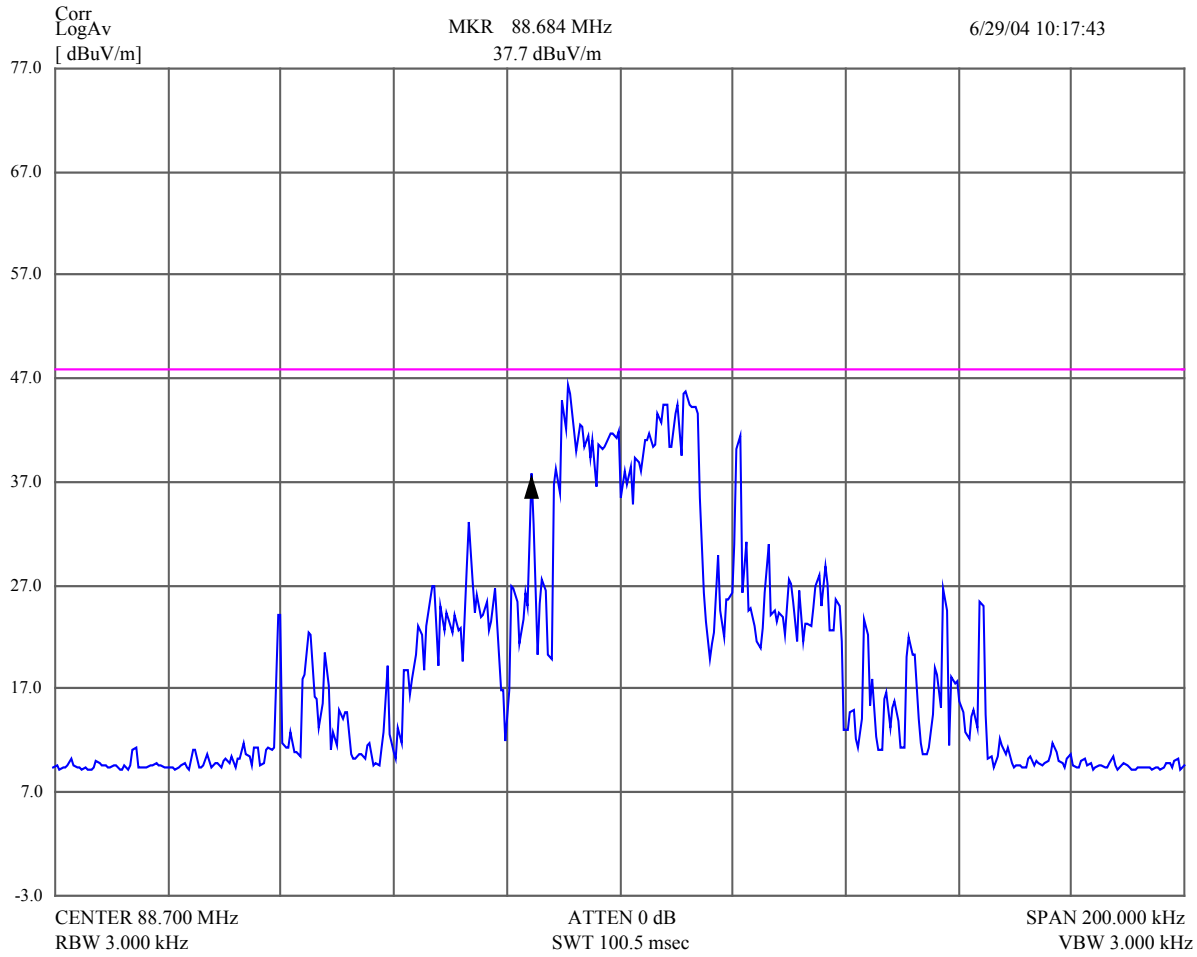


5.3.2 with modulation

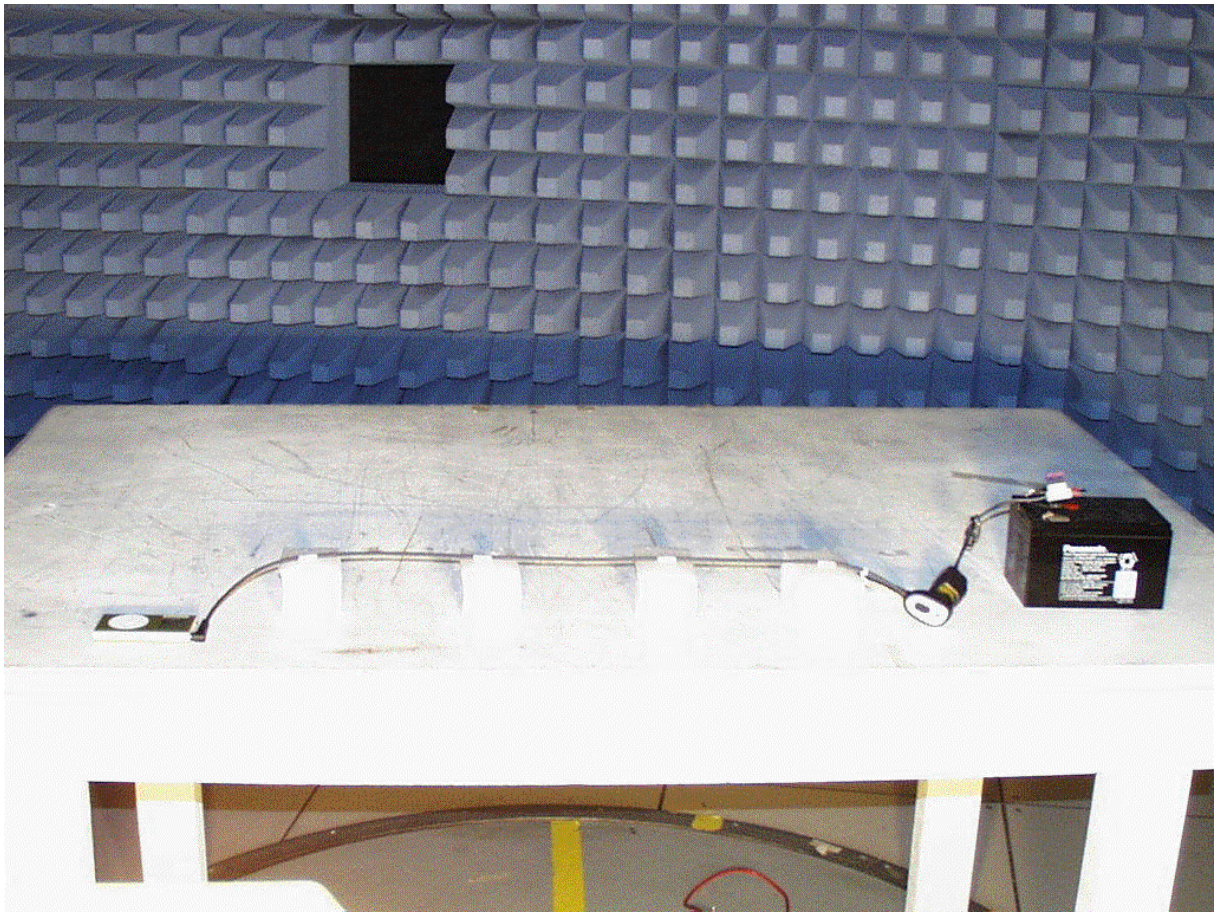
Average value data

Frequency MHz	Avg dBuV/m	Avg Lmt dBuV/m	DelLim-Avg dB	Pol	Hgt cm	Angle deg	Status
88.684496	37.72	48.00	-10.28	Horz	201	8	PASS
88.691000	46.21	48.00	-1.79	Horz	201	8	PASS
88.700000	41.72	48.00	-6.28	Horz	201	8	PASS
88.708000	44.33	48.00	-3.67	Horz	201	8	PASS
88.712000	45.68	48.00	-2.32	Horz	201	8	PASS
88.721504	41.42	48.00	-6.58	Horz	201	8	PASS

Receiver graph of Field Strength of Emissions at 3 m



5.4 Photographs of Test Set-Up



6.0 Radiated Emissions.

Test Requirements:	FCC Part 15 : Subclause 15.209
Test Method:	ANSI C63.4: 2000
Limit :	FCC Part 15 : Subclause 15.209
Mode of operation:	normal

The test facility consists of a shielded semi-anechoic chamber with attached shielded control room. The semi-anechoic chamber is approximately 18 feet wide by 28 feet long by 19 feet high. A hybrid absorber combines high performance anechoic polyurethane foam with a ferrite tile base to achieve high levels of absorption and power dissipation capability.

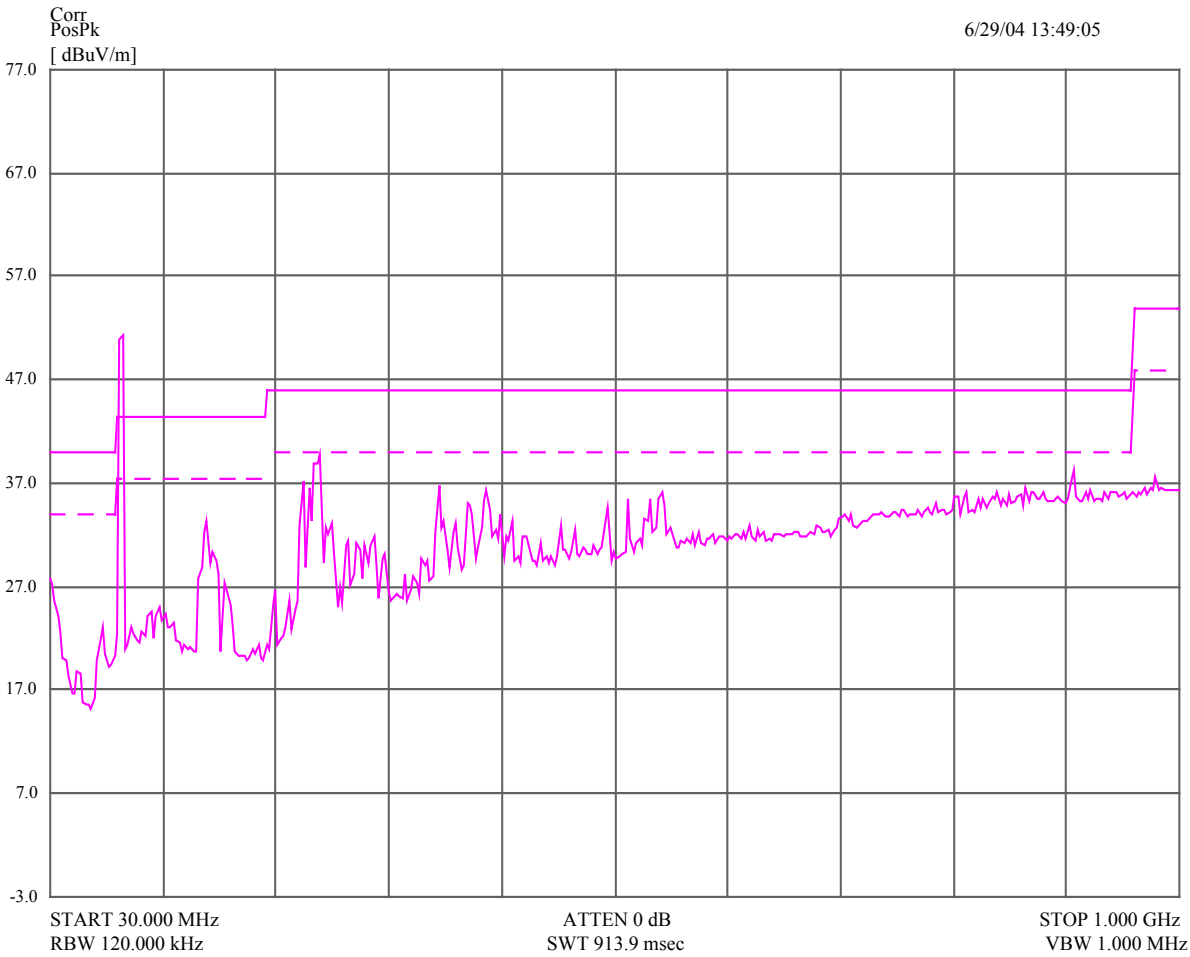
The EUT had been placed at the 0.8 m height on the non-conducting table. Transmitter had been turned ON without modulation and worked at the frequencies of the selected 1, 61 and 80 channels.
All data was obtained via a HP 85876A EMI measurement software package using an HP 85462A Receiver which is compliant to CISPR 16. The EUT was configured in various geometric patterns to find the geometric configuration and EUT attitude that produced the largest RF power.
After determination of the maximum emissions configuration the distance of the EUT to the scanning antenna was set to 3 meters.

At each of three selected channels 88.1 MHz, 88.3MHz, and 88.7 MHz Radiated Emissions had been measured.

6.1. Channel 88.1 MHz

Frequency MHz	QP dBuV/m	QP Lmt dBuV/m	DelLim-QP dB	Pol	Hgt cm	Angle deg	Status
159.986256	27.83	43.50	-15.67	Horz	250	228	PASS
252.003744	36.01	46.00	-9.99	Horz	153	55	PASS
264.001248	33.49	46.00	-12.51	Horz	111	37	PASS
384.001248	33.74	46.00	-12.26	Horz	97	55	PASS
519.998752	32.03	46.00	-13.97	Horz	97	55	PASS

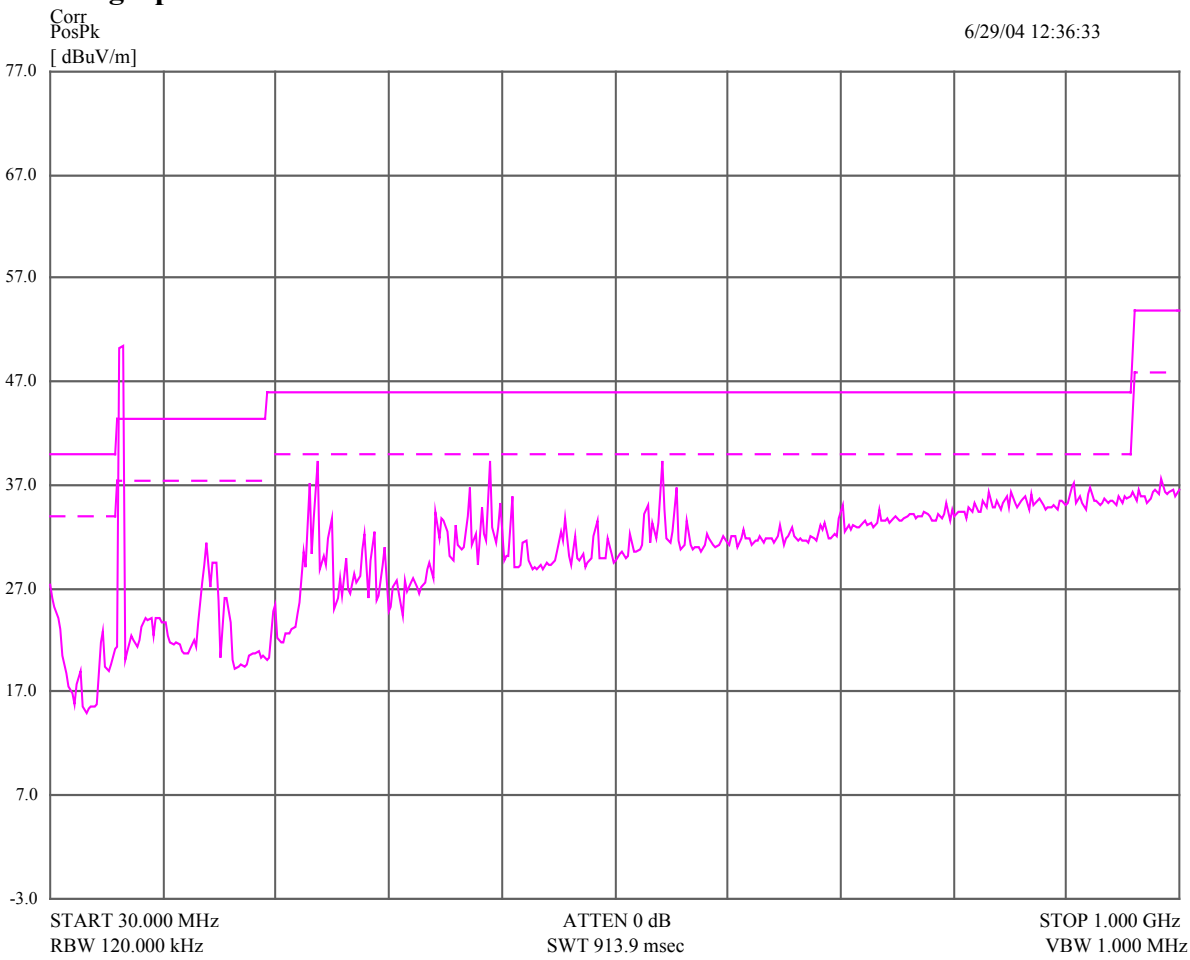
Receiver graph of Radiated Emissions at 3 m



6.2. Channel 88.3 MHz

Frequency MHz	QP dBuV/m	QP Lmt dBuV/m	DelLim-QP dB	Pol	Hgt cm	Angle deg	Status
159.988752	28.45	43.50	-15.05	Horz	227	222	PASS
251.984992	36.26	46.00	-9.74	Horz	97	42	PASS
399.960000	35.97	46.00	-10.03	Horz	97	42	PASS
546.648000	24.90	46.00	-21.10	Horz	97	152	PASS

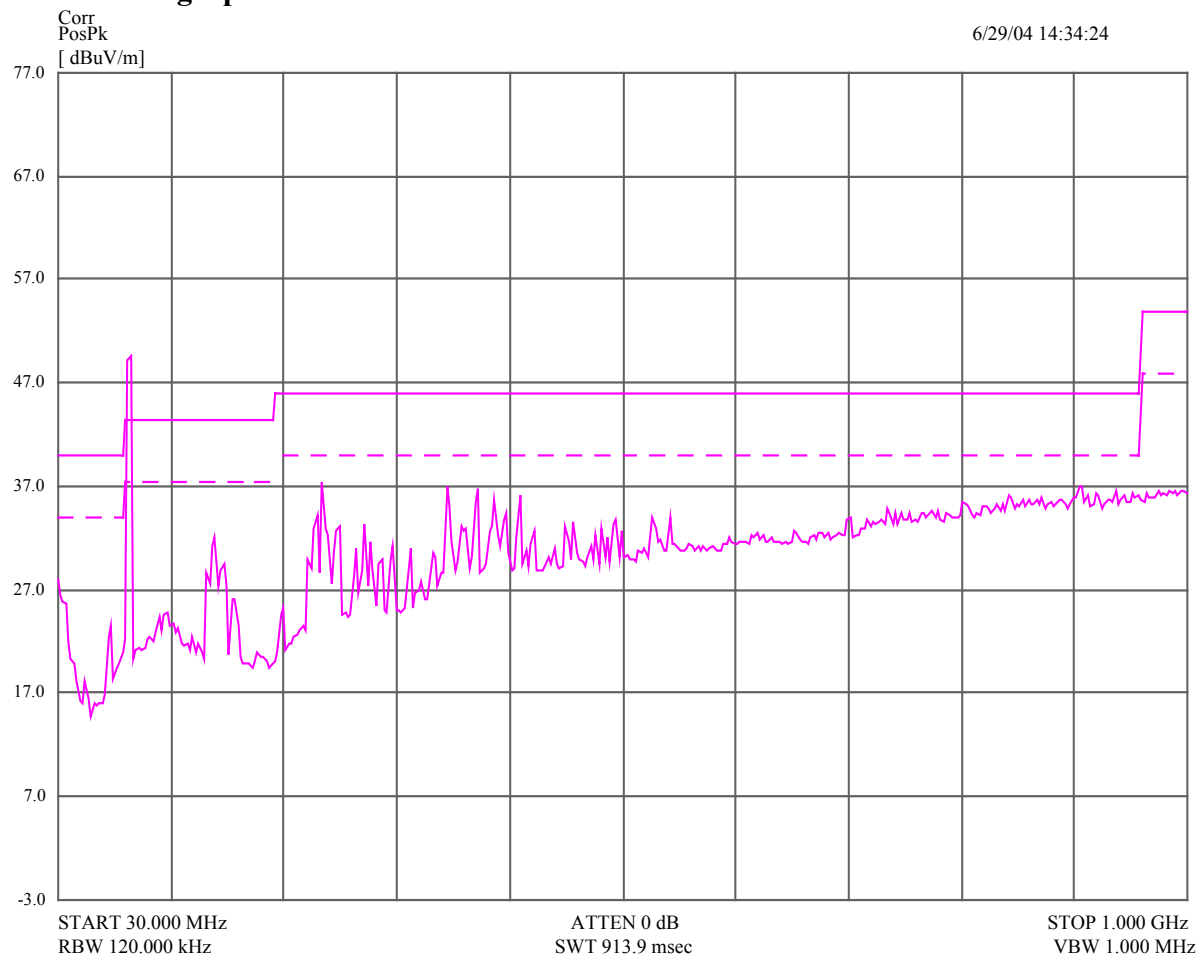
Receiver graph of Radiated Emissions at 3 m



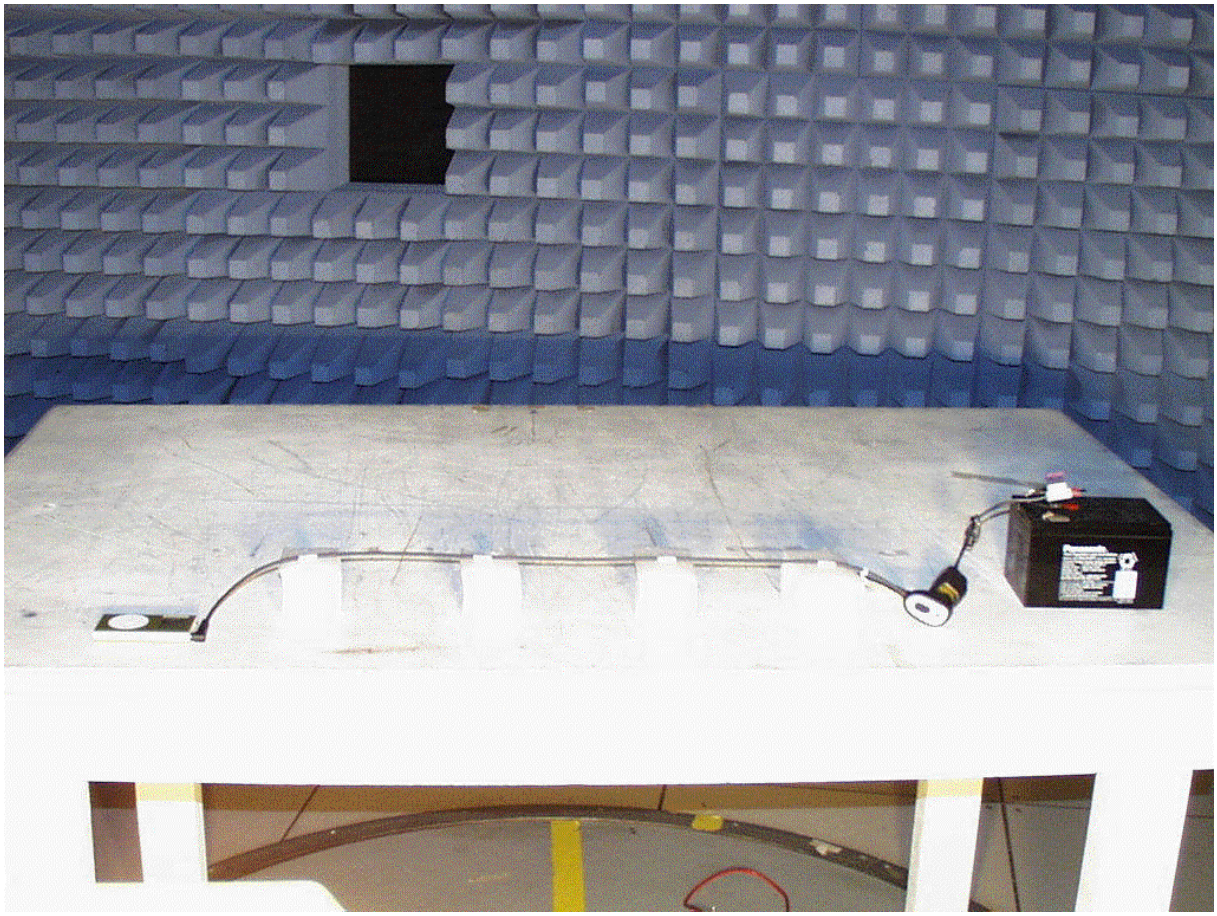
6.3. Channel 88.7 MHz

Frequency MHz	QP dBuV/m	QP Lmt dBuV/m	DelLim-QP dB	Pol	Hgt cm	Angle deg	Status
159.992496	28.47	43.50	-15.03	Horz	303	56	PASS
251.999248	35.57	46.00	-10.43	Horz	129	324	PASS
359.996000	31.86	46.00	-14.14	Horz	129	122	PASS
383.996992	31.67	46.00	-14.33	Horz	123	136	PASS

Receiver graph of Radiated Emissions at 3 m



6.4 Photographs of Test Set-Up



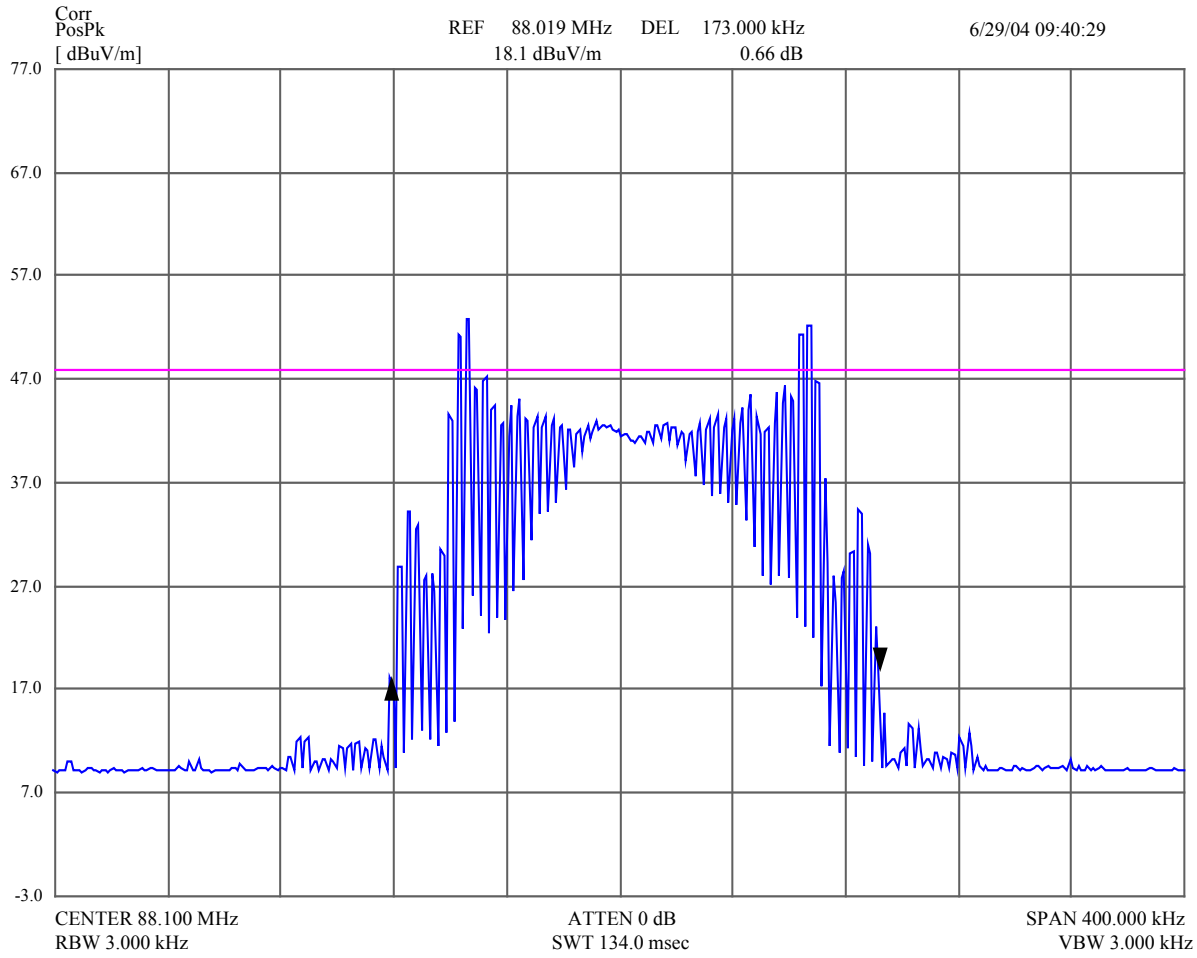
7.0 Occupied channel bandwidth

Test Requirements:	FCC Part 15 : Subclause 15.239
Test Method:	ANSI C63.4: 2000
	FCC Part 2 : Subclause 2.1049 © (1)
Limit :	200 kHz

The channel Bandwidth (BW) is defined as the minimum declared bandwidth within which the transmitter's necessary bandwidth can be contained.

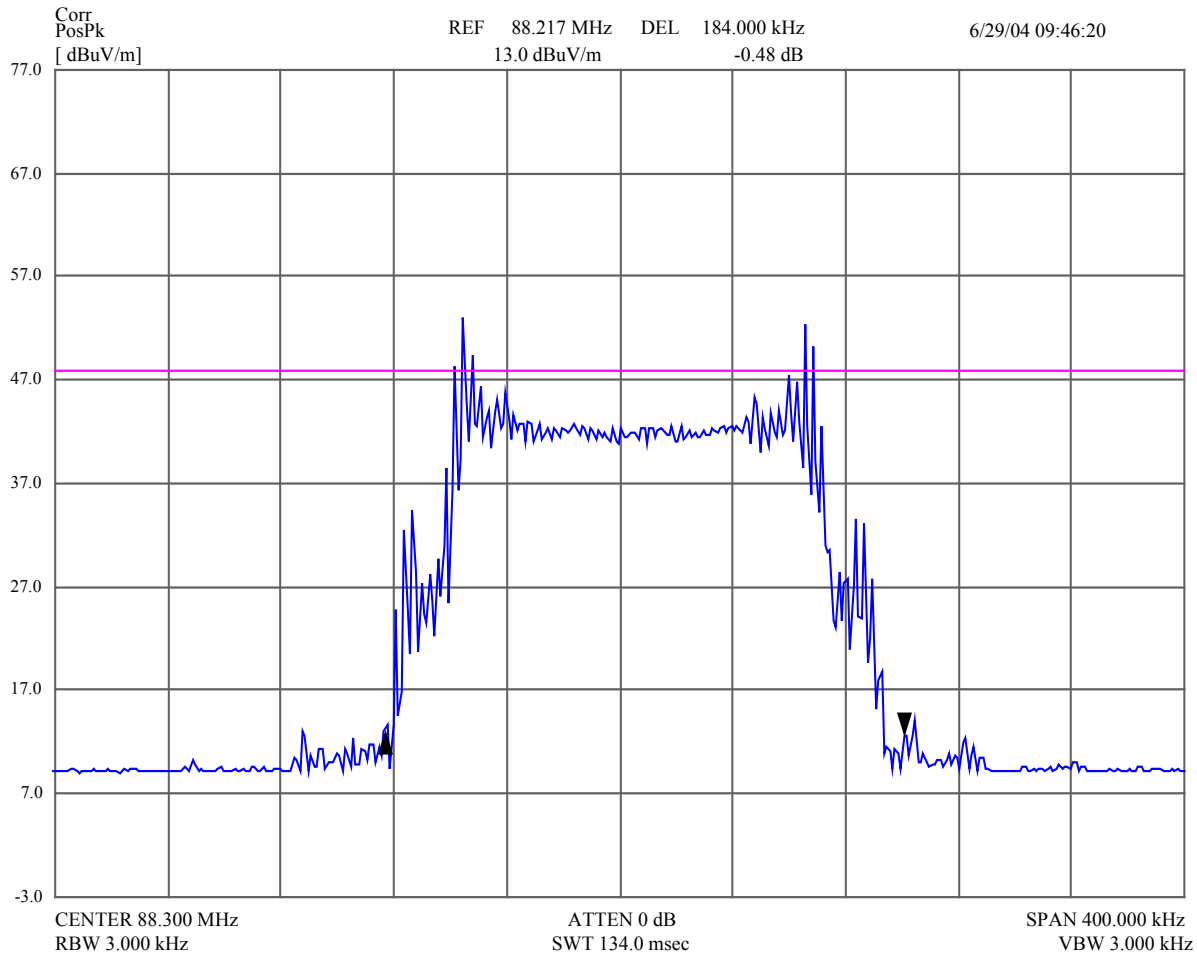
1. The Transmitter was adjusted to work at the selected channels –88.1 MHz, 88.3 MHz and 88.7 MHz. All measurements were conducted by the HP 85462A Spectrum Analyzer;
2. The test Signal generator HP651B was connected to the audio input of the EUT. The fundamental frequency is modulated by 1 kHz sinewave with input level equals to the limiting threshold 580mV.
3. The Channel BW was measured at an amplitude level reduced from the reference level by the 26 dB. :

7.1. Channel 88.1 MHz



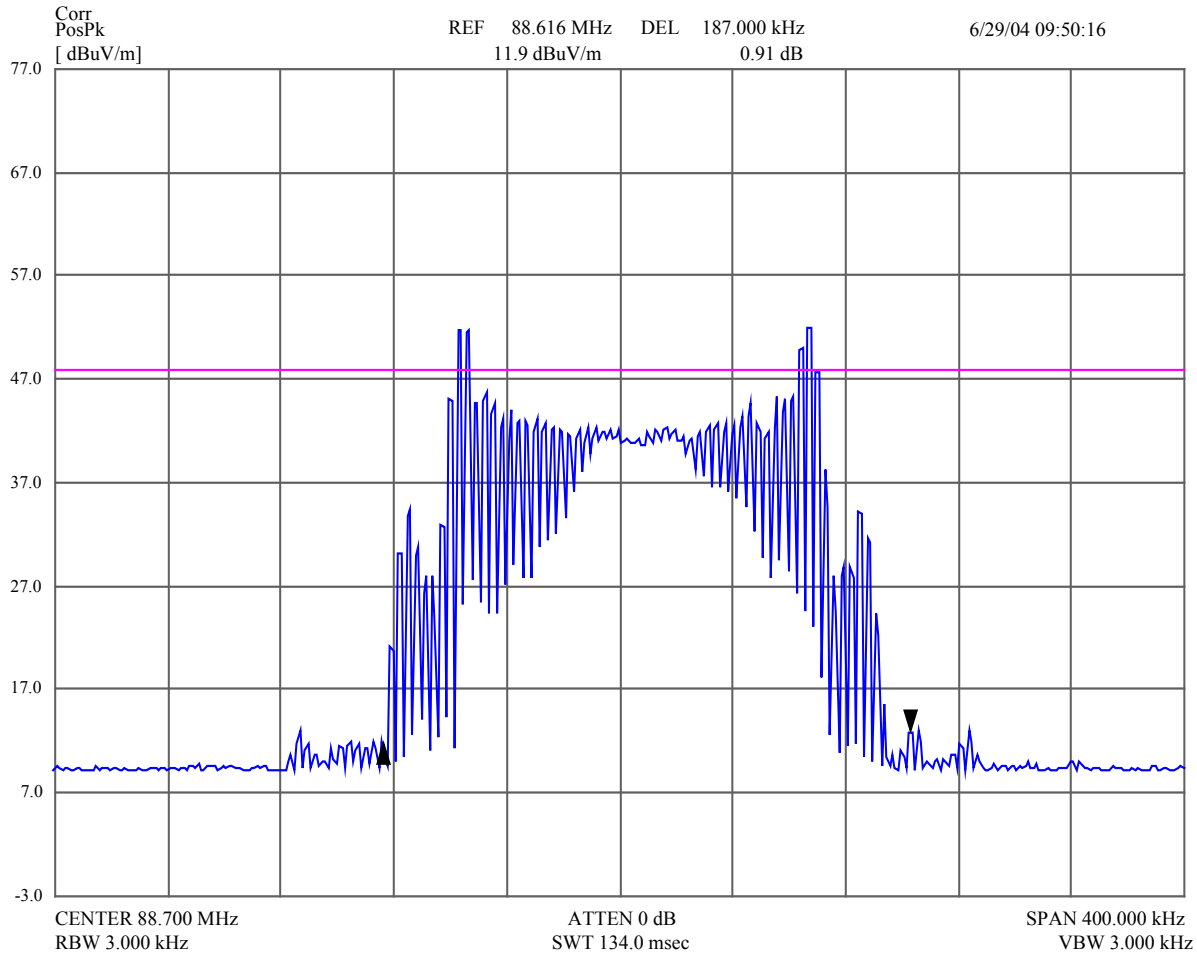
The plot shows the 26 dB bandwidth equals 173 kHz

7.2. Channel 88.3 MHz



The plot shows the 26 dB bandwidth equals 184 kHz

7.3. Channel 88.7 MHz



The plot shows the 26 dB bandwidth equals 187 kHz

7.4 Photographs of Test Set-Up