

ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR FCC CERTIFICATION

Test Report No. : E075R-020

AGR No. : A074A-071

Applicant : XDMB Inc.

Address : 805 8F Ssangyong IT-1, Sangdaewon-dong, Jungwon-gu, Seongnam-si,
Gyeonggi-do, Korea

Manufacturer : Computime Limited

Address : No. 1, Meixiu Road, Shang-Meilin, Futian Region, Shenzhen, China

Type of Equipment : Digital Satellite Radio (FM Transmitter)

FCC ID. : SICXR10

Model Name : XR9

Multiple Model Name : JXM900R

Serial number : N/A

Total page of Report : 22 pages (including this page)

Date of Incoming : April 16, 2007

Date of Issuing : May 10, 2007

SUMMARY

The equipment complies with the regulation of **FCC CRF 47 PART 15, SUBPART C, SECTION 15.239**.

This test report contains only the results of a single test of the sample supplied for the examination. It is not a general valid assessment of the features of the respective products of the mass-production.

Prepared by: 
Young-Min, Choi / Senior Engineer
EMC Div.
ONETECH Corp.

Reviewed by: 
Y. K. Kwon / Director
EMC Div.
ONETECH Corp.

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1. VERIFICATION OF COMPLIANCE

-. APPLICANT : XDMB Inc.
-. ADDRESS : 805 8F Ssangyong IT-1, Sangdaewon-dong, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea
-. CONTACT PERSON : Mr. Tonny / Marketing Manager
-. TELEPHONE NO : +82-31-741-7007
-. FCC ID : SICXR10
-. MODEL NAME : XR9
-. BRAND NAME : AUDIOVOX
-. SERIAL NUMBER : N/A
-. DATE : May 10, 2007

EQUIPMENT CLASS	DXX – Part 15 Low Power Communication Device Transmitter
E.U.T. DESCRIPTION	Digital Satellite Radio (FM Transmitter)
THIS REPORT CONCERNS	ORIGINAL GRANT
MEASUREMENT PROCEDURES	Charter 13 of ANSI C63.4: 2003
TYPE OF EQUIPMENT TESTED	PRE-PRODUCTION
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	CERTIFICATION
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SECTION 15.239
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	No
FINAL TEST WAS CONDUCTED ON	3 METER OPEN AREA TEST SITE

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. GENERAL INFORMATION

2.1 Product Description

The XDMB Inc., Model XR9 (referred to as the EUT in this report) is a Digital Satellite Radio that has the FM transmitter from 88.1 MHz to 89.3 MHz and 106.7 MHz to 107.9 MHz for audio signal of FM radio receiver. Product specification described herein was obtained from product data sheet or user's manual.

CHASSIS TYPE	Plastic
LIST OF EACH OSC. or CRY. FREQ.(FREQ.>=1MHz)	System Clock: 23.92 MHz, RF Module: 7.3728 MHz Main Board: 7.3728 MHz and 7.6 MHz
POWER REQUIREMENT	DC 6V, 1A from a car battery or AC/DC adaptor
TX FREQUENCY RANGE	88.1 ~ 89.3 MHz and 106.7MHz ~ 107.9MHz (range into 200 kHz Step)
NUMBER OF LAYERS	4 Layers
EXTERNAL CONNECTOR	DC In, GPS Antenna In, Audio Out, AUX

2.2 Model Differences

-. The difference(s) compared to the EUT is as follows:

	Model Name	Model Differences
Basic Model	XR9	-
Multiple Model	ADV800XM	This model is same to basic model, except for the case color and LCD color only.

2.3 Related Submittal(s) / Grant(s)

-. Original submittal only

2.4 Test System Details

The model numbers for all the equipments which were used in the tested system is:

Model	Manufacturer	FCC ID	Description	Connected to
XR9	XDMB Inc.	SICXR10	Digital Satellite Radio (EUT)	-
41-6-1000D	ENG ELECTRIC	N/A	AC/DC Adaptor	EUT
N/A	N/A	N/A	Car Adaptor	EUT
DVP-NS92V	SONY	N/A	DVD Player	EUT
N/A	N/A	N/A	GPS Antenna	EUT

2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4: 2003. Radiated testing was performed at a distance of 3 meters from EUT to the antenna.

2.6 Test Facility

The open area test site and conducted measurement facilities are located on at 307-51 Daessangryung-ri, Chowol-eup, Gwangju-si, Gyeonggi-do, 464-080, Korea. Description details of test facilities were submitted to the Commission on August 30, 2005. (Registration Number: 340658)

3. SYSTEM TEST CONFIGURATION

3.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	XDMB	XR9 Rev_3	N/A
Tuner Board	N/A	YODA 9IS Rev P5	N/A
LCD Panel	N/A	N/A	N/A

3.2 EUT exercise Software

The Model, XR9 is included a FM transmitter designed to operate on function in the 88.1 ~ 89.3 MHz and 106.7MHz ~ 107.9MHz. The EUT has an audio input port, so the input ports were connected to DVD player and than the movie file was transmitted with maximum audio output level during the test.

3.3 Cable Description for the EUT

Ports Name	Shielded	Ferrite Bead	Metal Hood	Length (m)	Connected to
DC In	N	N	EUT END	1.2	AC/DC Adaptor or Car Adaptor
Audio Out	N	N	BOTH END	1.5	-
Antenna In	N	N	EUT END	1.5	GPS Antenna
AUX	N	N	EUT END	1.5	DVD Player

3.4 Equipment Modifications

-. None

3.5 Configuration of Test System

Line Conducted Test: The EUT was connected to adaptor and the power line of adaptor was connected to LISN. All supporting equipments were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.4: 2003 7.2.3 to determine the worse operating conditions.

Radiated Emission Test: Preliminary radiated emissions test were conducted using the procedure in ANSI C63.4: 2003 8.3.1.1 and 13.1.4.1 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 meter open area test site.

Occupied Bandwidth Measurement:

This measurement is performed with the antenna located close enough to give a full-scale deflection of the modulated carrier on the spectrum analyzer.

Tuning Range Measurement:

This measurement is performed with the search coil located close to the EUT enough to get a full-scale of the modulated carrier on the spectrum analyzer.

3.6 Antenna Requirement

For intentional device, according to section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna Construction:

FM transmitter antenna of the EUT is fixed inside the EUT, no consideration of replacement by the user.

4. PRELIMINARY TEST

4.1 AC Power line Conducted Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition (Please check one only)
Transmit the RF Signal continuously	X

4.2 Radiated Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition (Please check one only)
Transmit the RF Signal continuously	X

5. FINAL RESULT OF MEASUREMENT

Preliminary test was done in normal operation mode. And the final measurement was selected for the maximized emission level

5.1 Conducted Emission Test

Humidity Level : 47 % Temperature: 17 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.207 (a)
 Type of Test : Low Power Communication Device Transmitter
 Result : PASSED BY -18.66 dB at 0.21 MHz under

EUT : Digital Satellite Radio Date: May 02, 2007
 Operating Condition : Transmit the RF signal.
 Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

Frequency (MHz)	Line	Peak (dBuV)		Margin (dB)
		Emission level	Q.P Limits	
0.15	H	46.90	66.00	-19.10
0.16	H	46.67	65.46	-18.79
0.19	H	45.14	63.82	-18.68
0.21	H	44.55	63.21	-18.66
0.22	H	43.93	62.82	-18.89
0.25	H	42.64	61.76	-19.12
Frequency (MHz)	Line	Average (dBuV)		Margin (dB)
		Emission level	Limits	
-				
-				

Line Conducted Emission Tabulated Data

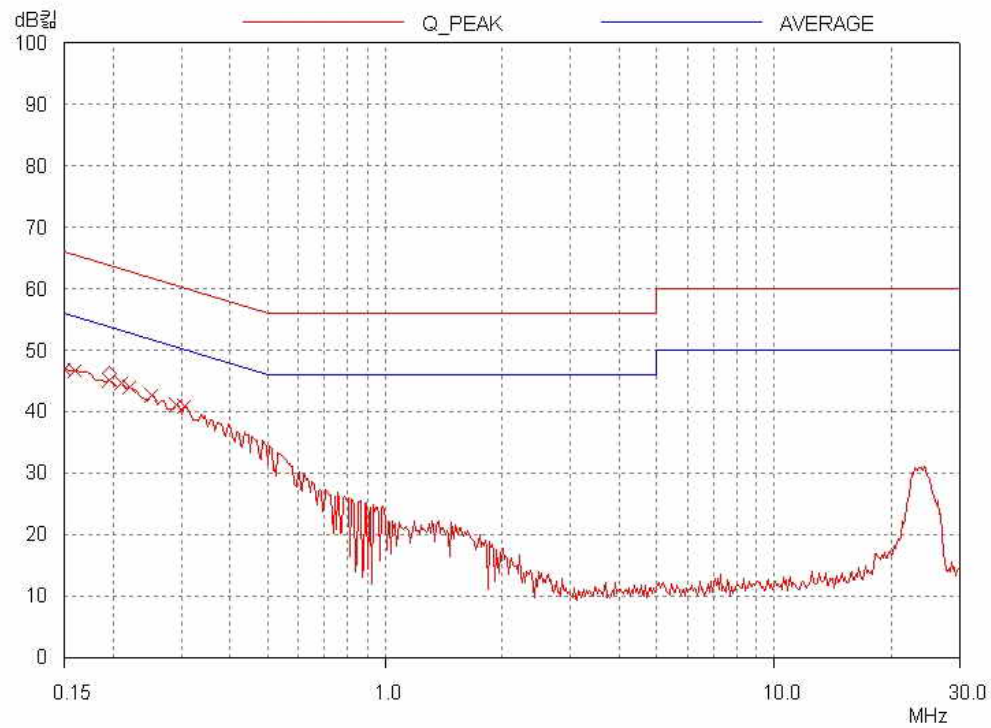
Remark : "H": Hot Line, "N": Neutral line

Average mode was not measured, because peak values were under the Average limit.

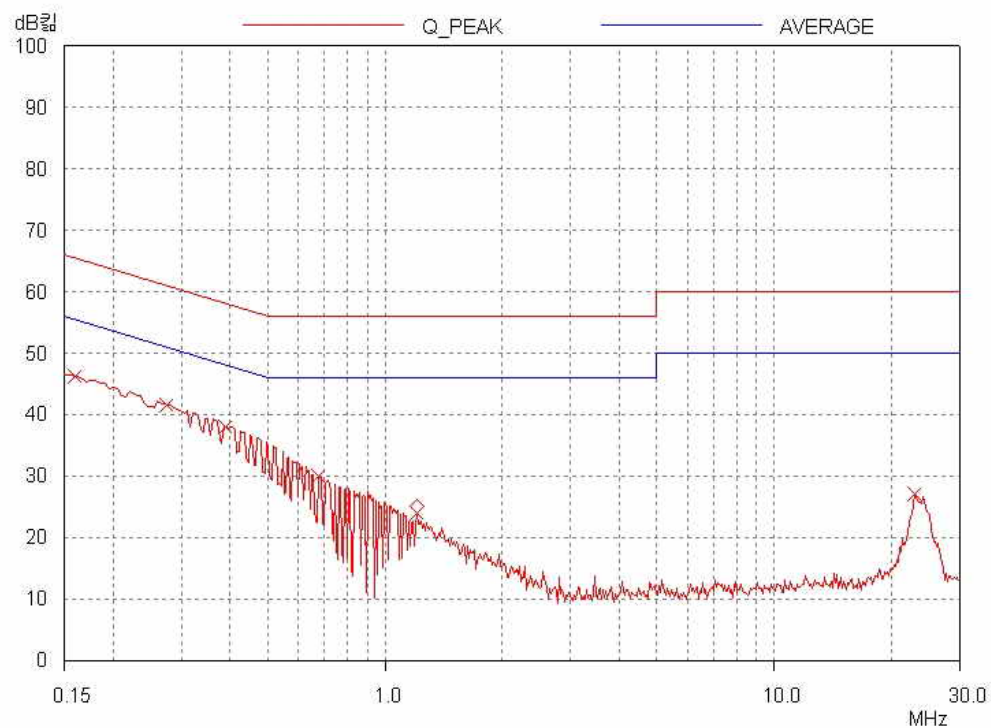
See next page for an overview sweep performed with peak detector.



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HOT LINE



NEUTRAL LINE

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(TEL: +82-31-746-8500, FAX: +82-31-746-8700)

EMC Testing Dept : 307-51 Daessangryung-ri, Chowol-eup, Gwangju-si, Gyeonggi-do, 464-860, Korea. (TEL: +82-31-765-8289, FAX: +82-31-766-2904)

5.2 Radiated Emission Test (Within the permitted 200 kHz band)

The following table shows the highest levels of radiated emission on both polarizations of horizontal and vertical.

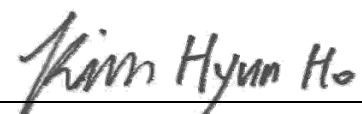
5.2.1 Operating Condition: Used Car Battery

Humidity Level : 48 % Temperature: 18 °C
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.239 (b)
Type of Test : Low Power Communication Device Transmitter
Result : PASSED BY -12.89 dB at 89.30 MHz under average detector mode

EUT : Digital Satellite Radio Date: May 02, 2007
Operating Condition : Transmit the RF signal.
Distance : 3 Meter

Radiated Emission			Ant	Correction Factors		Total	Limit (dBuV/m)	Margin (dB)
Freq. (MHz)	Amp. (dBuV)	Detect Mode	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)		
88.1	25.60	Peak	H	8.19	2.36	36.15	68.00	-31.85
	21.30	Peak	V			31.85	68.00	-36.15
	22.40	Average	H			32.95	48.00	-15.05
	16.80	Average	V			27.35	48.00	-20.65
89.3	26.30	Peak	H	8.42	2.39	37.11	68.00	-30.89
	26.50	Peak	V			37.31	68.00	-30.69
	24.30	Average	H			35.11	48.00	-12.89
	23.20	Average	V			34.01	48.00	-13.99
106.7	22.40	Peak	H	11.24	2.47	36.11	68.00	-31.89
	23.60	Peak	V			37.31	68.00	-30.69
	15.70	Average	H			29.41	48.00	-18.59
	20.30	Average	V			34.01	48.00	-13.99
107.9	26.50	Peak	H	11.39	2.48	40.37	68.00	-27.63
	26.90	Peak	V			40.77	68.00	-27.23
	16.30	Average	H			30.17	48.00	-17.83
	18.30	Average	V			32.17	48.00	-15.83

Radiated Emission Tabulated Data



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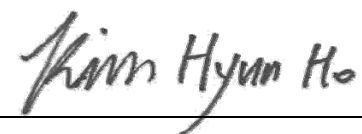
5.2.2 Operating Condition: Used AC/DC Adaptor

Humidity Level : 48 % Temperature: 18 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.239 (b)
 Type of Test : Low Power Communication Device Transmitter
 Result : PASSED BY -13.79 dB at 89.30 MHz under average detector mode

EUT : Digital Satellite Radio Date: May 02, 2007
 Operating Condition : Transmit the RF signal.
 Distance : 3 Meter

Radiated Emission			Ant	Correction Factors		Total	Limit (dBuV/m)	Margin (dB)
Freq. (MHz)	Amp. (dBuV)	Detect Mode	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)		
88.1	24.60	Peak	H	8.19	2.36	35.15	68.00	-32.85
	21.80	Peak	V			32.35	68.00	-35.65
	21.20	Average	H			31.75	48.00	-16.25
	15.90	Average	V			26.45	48.00	-21.55
89.3	26.20	Peak	H	8.42	2.39	37.01	68.00	-30.99
	25.20	Peak	V			36.01	68.00	-31.99
	23.40	Average	H			34.21	48.00	-13.79
	22.30	Average	V			33.11	48.00	-14.89
106.7	20.30	Peak	H	11.24	2.47	34.01	68.00	-33.99
	22.50	Peak	V			36.21	68.00	-31.79
	15.80	Average	H			29.51	48.00	-18.49
	19.20	Average	V			32.91	48.00	-15.09
107.9	22.30	Peak	H	11.39	2.48	36.17	68.00	-31.83
	25.40	Peak	V			39.27	68.00	-28.73
	15.60	Average	H			29.47	48.00	-18.53
	17.10	Average	V			30.97	48.00	-17.03

Radiated Emission Tabulated Data



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5.3 Radiated Emission Test (Outside of the specified 200 kHz band)

The following table shows the highest levels of radiated emission on both polarizations of horizontal and vertical.

5.3.1 Operating Condition: Used Car Battery

Humidity Level : 48 % Temperature: 18 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209 (a)
 Type of Test : Low Power Communication Device Transmitter
 Result : PASSED BY -11.96 dB at 41.50 MHz

EUT : Digital Satellite Radio Date: May 02, 2007
 Operating Condition : Transmit the RF signal.
 Frequency range : 30MHz – 1000MHz
 Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)
 Distance : 3 Meter
 Remark : Other emissions

Radiated Emission		Ant	Correction Factors		Total	FCC CLASS B	
Freq. (MHz)	Amp. (dBuV)	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
41.50	12.40	V	14.11	1.53	28.04	40.00	-11.96
76.30	13.20	V	6.30	1.69	21.19	40.00	-18.81
161.30	10.30	H	15.25	2.81	28.36	43.52	-15.16
230.30	10.60	H	17.39	3.54	31.53	46.02	-14.49
300.40	10.20	V	14.03	3.61	27.84	46.02	-18.18



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5.3.2 Operating Condition: Used AC/DC Adaptor

Humidity Level : 48 % Temperature: 18 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209 (a)
 Type of Test : Low Power Communication Device Transmitter
 Result : PASSED BY -10.98 dB at 41.30 MHz

EUT : Digital Satellite Radio Date: May 02, 2007
 Operating Condition : Transmit the RF signal.
 Frequency range : 30MHz – 1000MHz
 Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)
 Distance : 3 Meter
 Remark : Other emissions

Radiated Emission		Ant	Correction Factors		Total	FCC CLASS B	
Freq. (MHz)	Amp. (dBuV)	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
41.30	13.30	H	14.19	1.53	29.02	40.00	-10.98
76.20	12.30	H	6.30	1.71	20.31	40.00	-19.69
160.30	11.30	V	15.22	2.80	29.32	43.52	-14.20
230.20	10.30	H	17.39	3.54	31.23	46.02	-14.79
320.60	9.60	H	14.85	3.93	28.38	46.02	-17.64



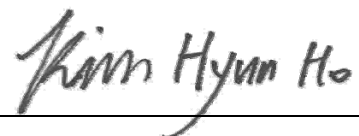
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5.4 Bandwidth of the operating frequency

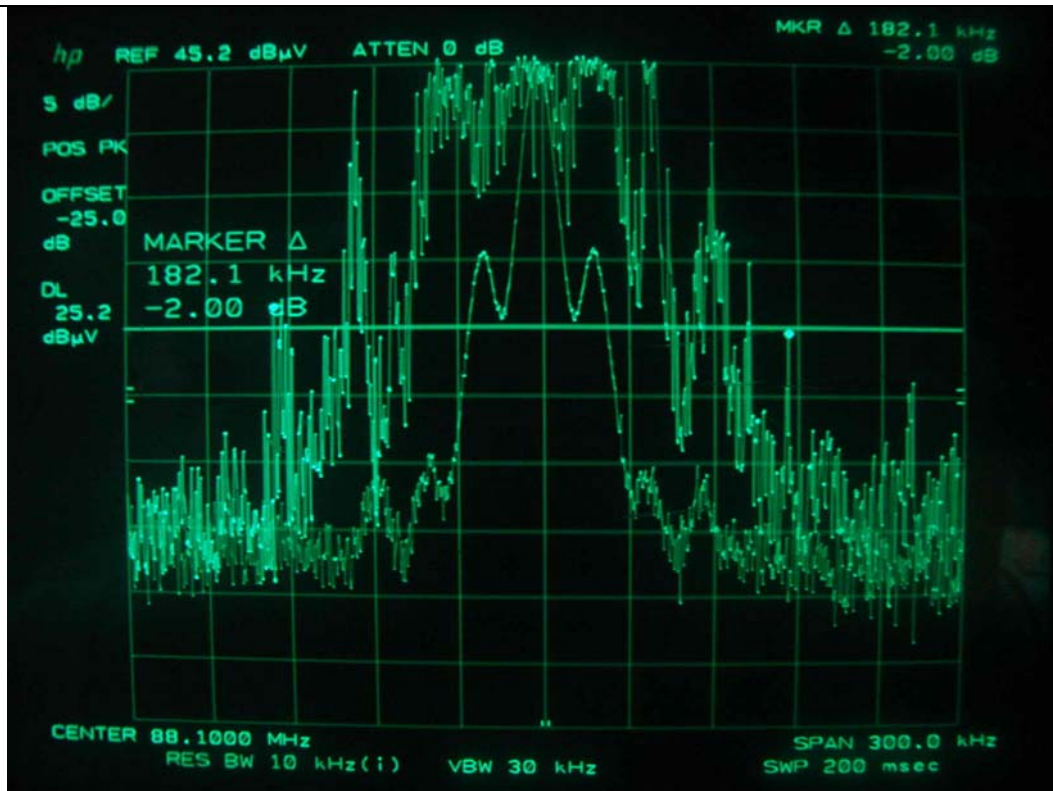
Humidity Level : 48 % Temperature: 18 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.239 (a)
 Result : PASSED

EUT : Digital Satellite Radio Date: May 02, 2007
 Operating Condition : Transmit the RF signal.
 Minimum Resolution
 Bandwidth : 10 kHz

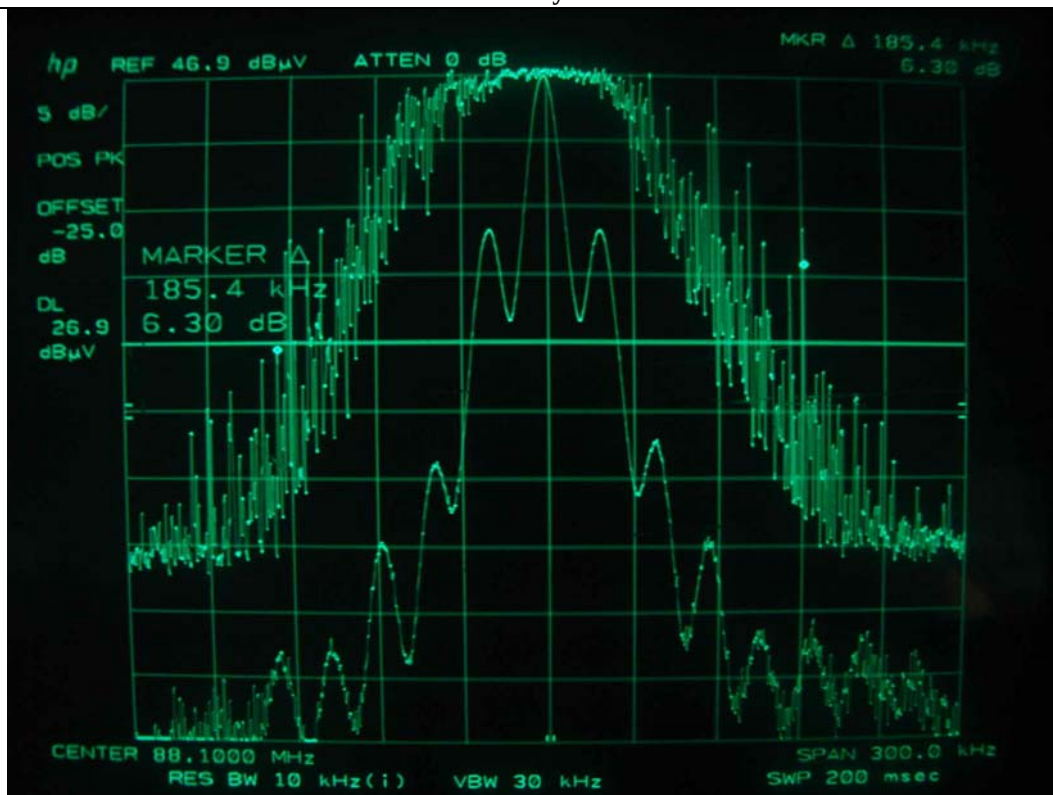
Operating Condition	Frequency (MHz)	Measured Value (kHz)	Limit (kHz)	Margin (kHz)
Used Car Battery	81.1	182.1	200	-17.9
	89.3	183.9		-16.1
	106.7	181.2		-18.8
	107.9	181.8		-18.2
Used AC/DC Adaptor	81.1	185.4		-14.6
	89.3	179.4		-20.6
	106.7	184.8		-15.2
	107.9	181.2		-18.8



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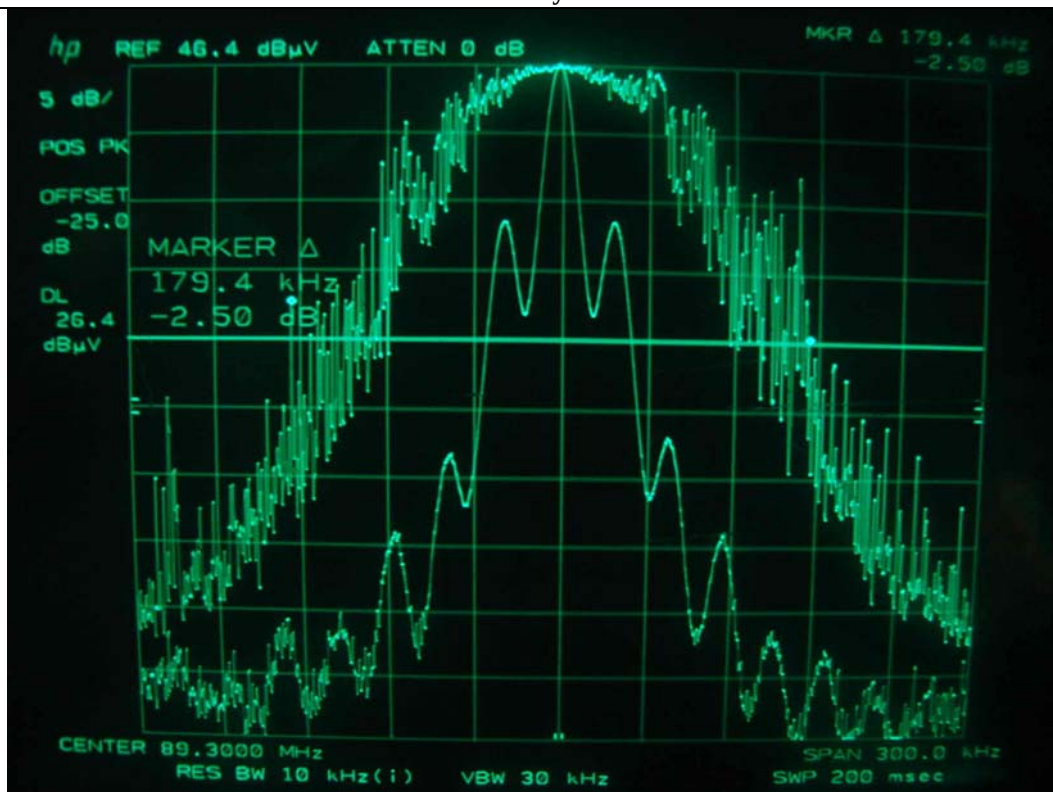
Used Car Battery – 88.1 MHz



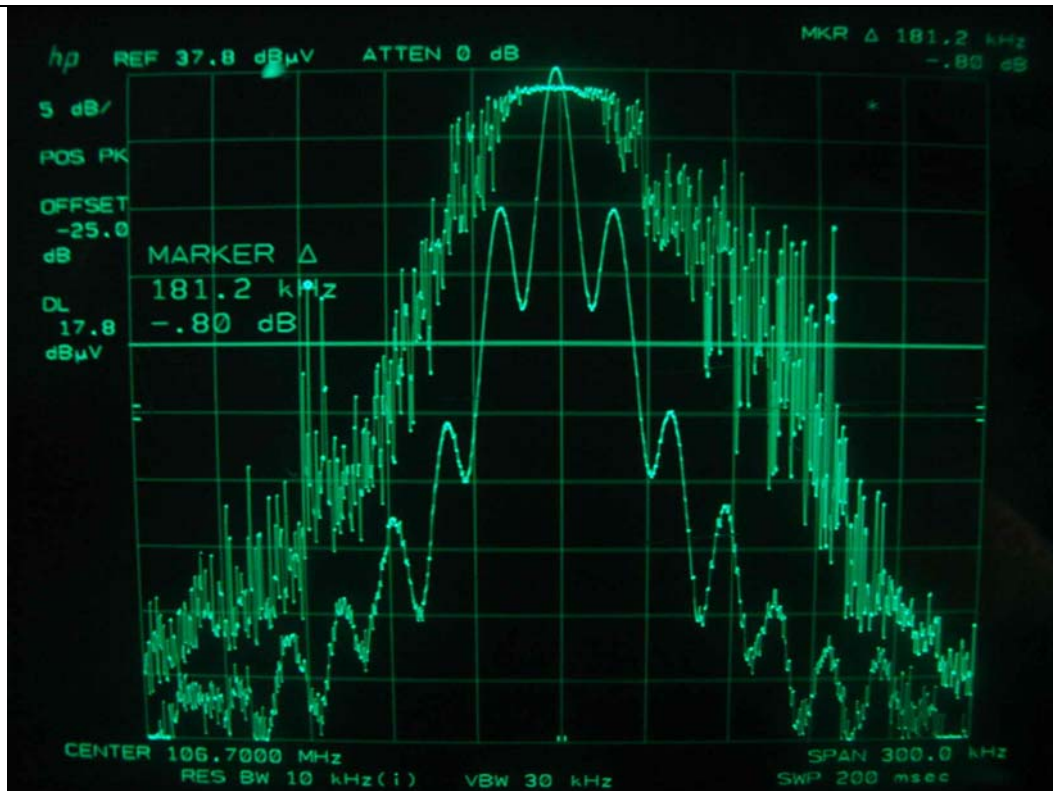
Used AC/DC Adaptor – 88.1 MHz



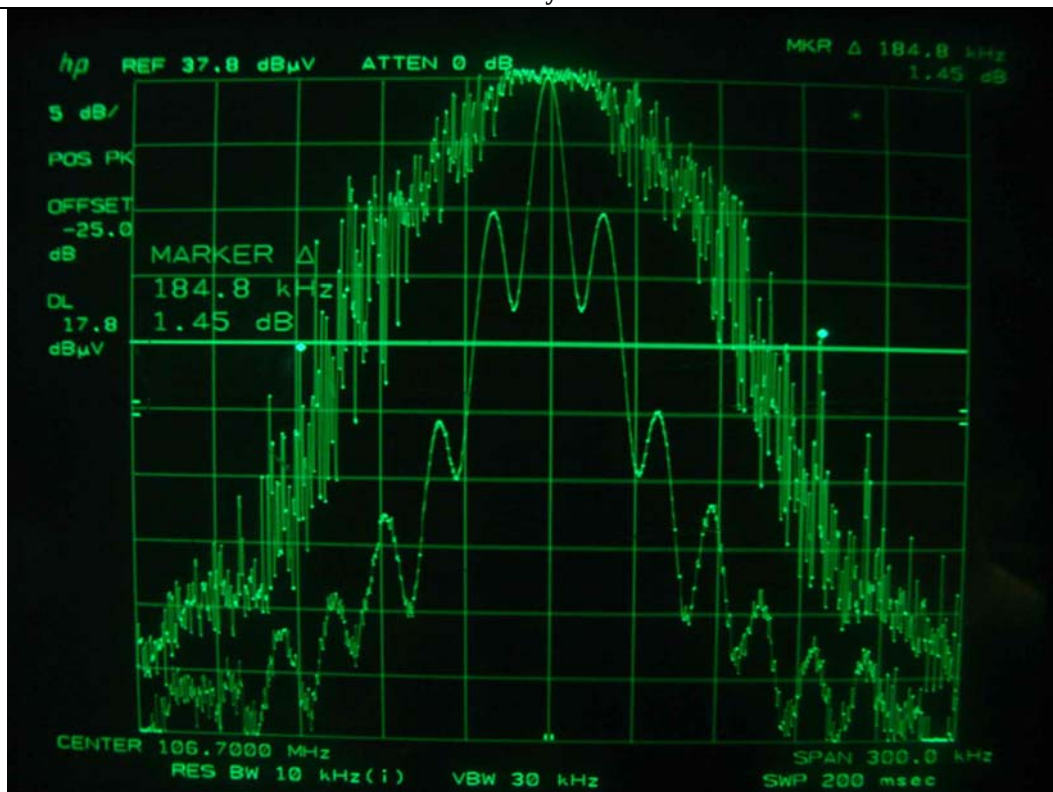
Used Car Battery – 89.3 MHz



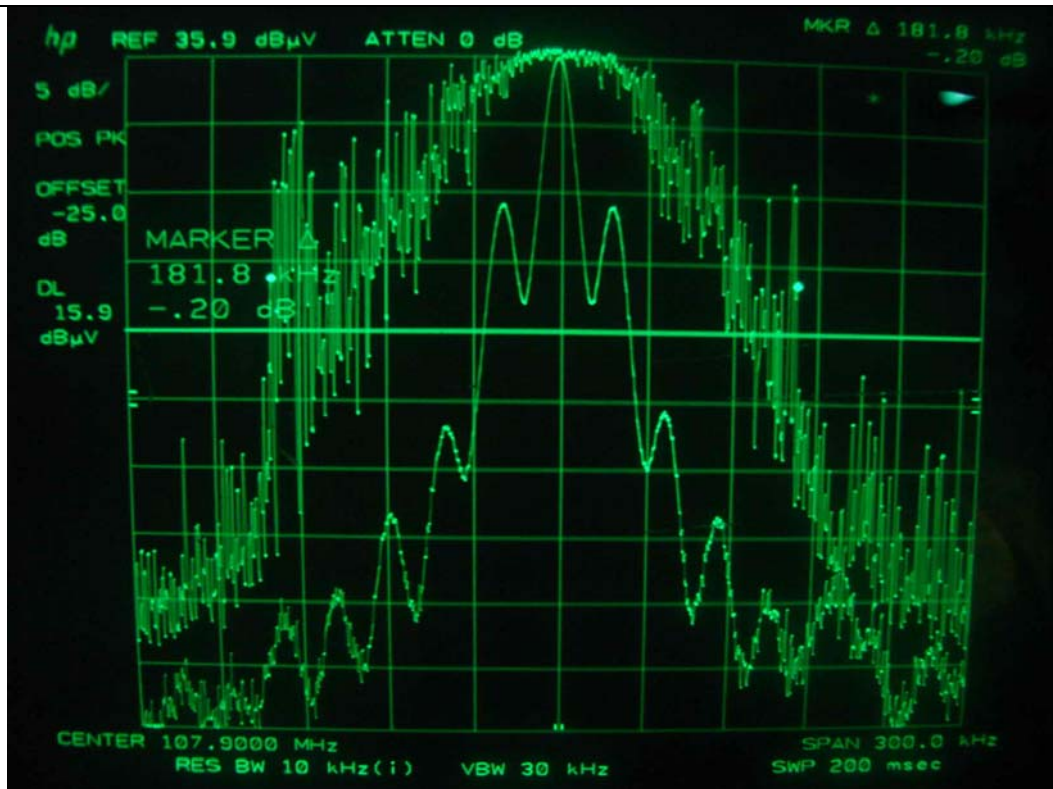
Used AC/DC Adaptor – 89.3 MHz



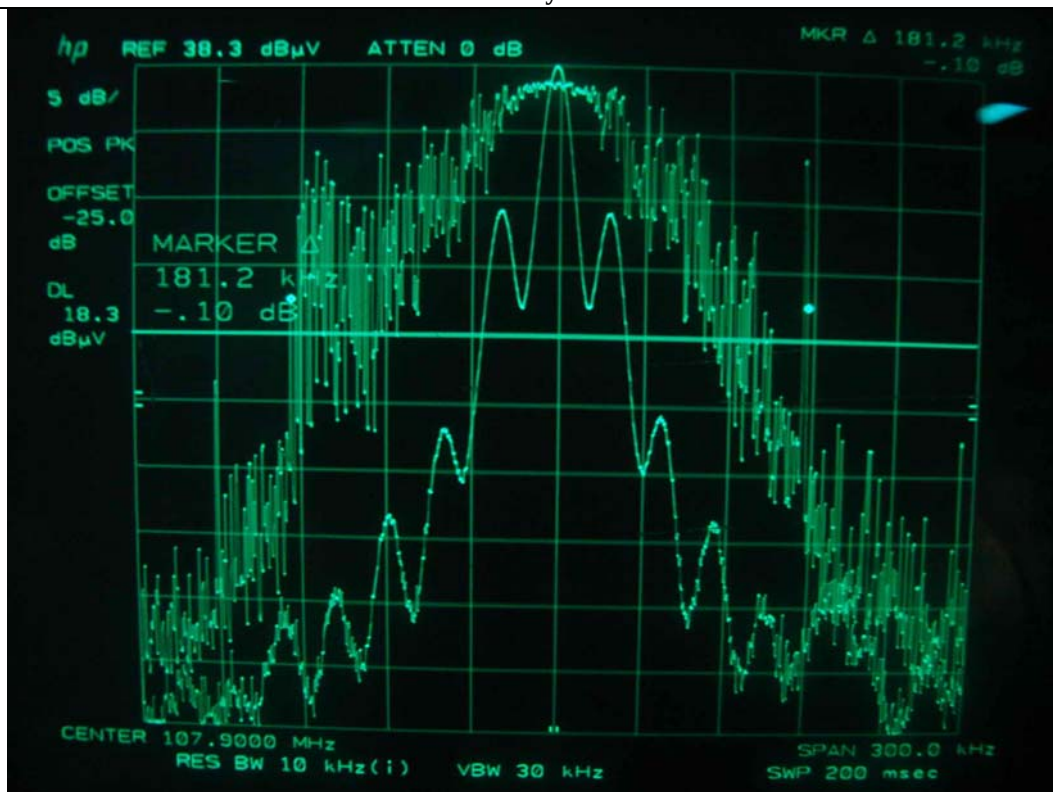
Used Car Battery – 106.7 MHz



Used AC/DC Adaptor – 106.7 MHz



Used Car Battery – 107.9 MHz

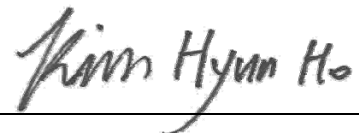


Used AC/DC Adaptor – 107.9 MHz

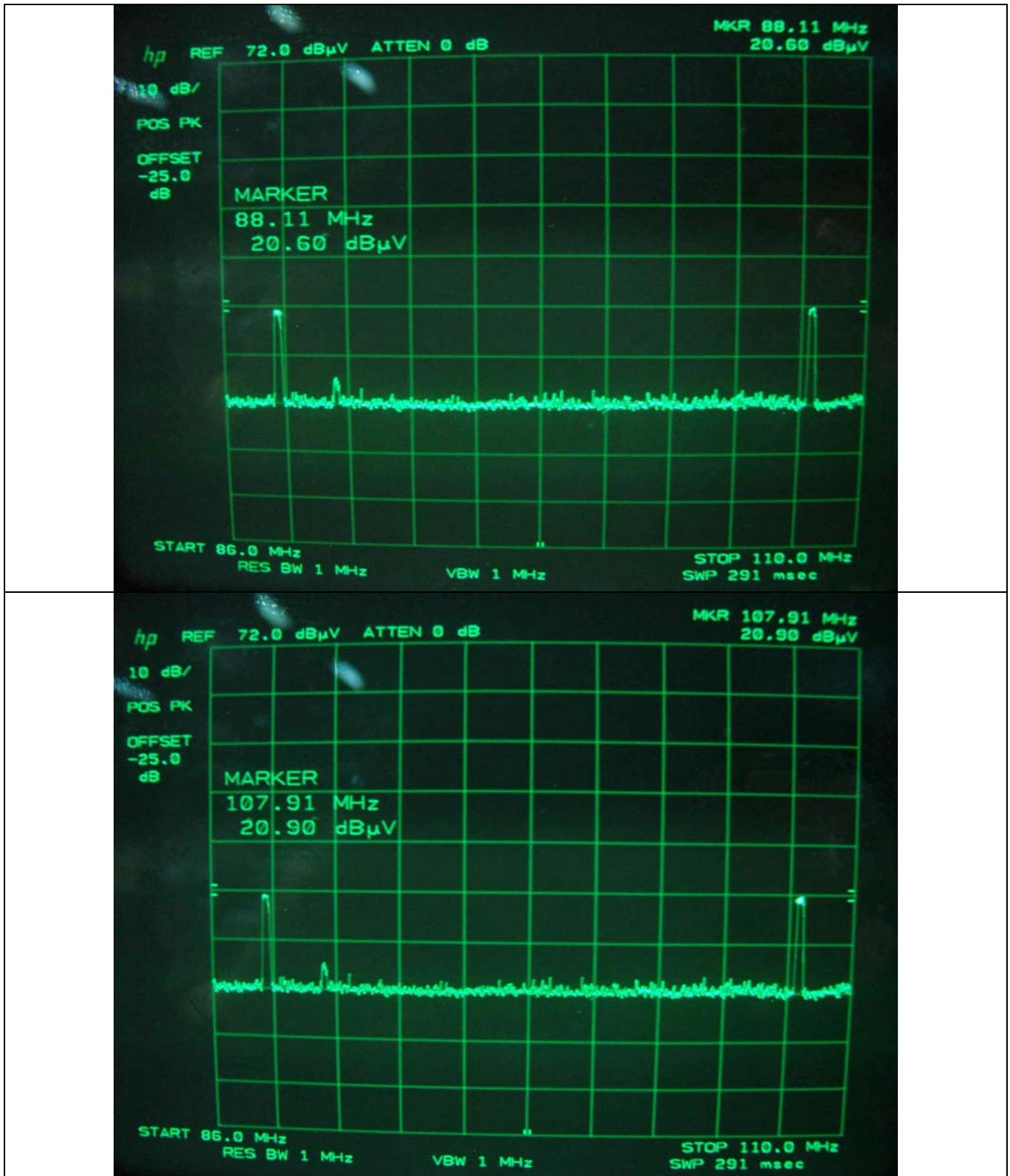
5.5 Tuning Range of the operating frequency

Humidity Level : 38 % Temperature: 18 °C
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.239 (a)
Result : PASSED

EUT : Digital Satellite Radio Date: May 02, 2007
Operating Condition : The lowest and highest frequency was adjusted by manual using up/down button on the side of the EUT and the spectrum was in max hold mode for capturing the spectrum.
Test Result : Met the requirement. Refer to test data in next page.



Tested by: Hyun-Ho, Kim / Test Engineer



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(TEL: +82-31-746-8500, FAX: +82-31-746-8700)

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6. FIELD STRENGTH CALCULATION

Meter readings are compared to the specification limit correcting for antenna and cable losses

+ Meter reading (dBuV)

+ Cable Loss (dB)

+ Antenna Factor (Loss) (dB/meter)

= Corrected Reading (dBuV/meter)

- Specification Limit (dBuV/meter)

= dB Relative to Spec (+/- dB)

7. LIST OF TEST EQUIPMENT

No.	EQUIPMENTS	MFR.	MODEL	SER. NO.	LAST CAL	DUE CAL	USE
1.	Test receiver	R/S	ESVS10	827864/005	DEC/06	12MONTH	■
2.	Test receiver	R/S	ESHS 10	834467/007	MAY/06	12MONTH	■
3.	Spectrum analyzer	Hewlett Packard	8566B	2516A01677	MAY/06	12MONTH	■
4.	TRILOG Broadband Antenna	Schwarzbeck	VULB9163	VULB9163 166	JUN/06	12MONTH	
5.	Biconical antenna	EMCO	3110	9003-1121	JUN/06	12MONTH	
		Schwarzbeck	VHA9103	91031852	FEB/07		■
6.	Log Periodic antenna	EMCO	3146	9001-2614	JUN/06	12MONTH	
		Schwarzbeck	9108-A(494)	62281001	FEB/07		■
7.	LISN	EMCO	3825/2	9109-1867	JUN/06	12MONTH	■
				9109-1869	JUN/06		
		Schwarzbeck	NSLK 8126	8126-404	JUL/06		■
8.	Position Controller	HD GmbH	HD100	N/A	N/A	N/A	■
9.	Turn Table	HD GmbH	DS420S	N/A	N/A	N/A	■
10.	Antenna Master	HD GmbH	MA240	N/A	N/A	N/A	■