683-3, Yubang-Dong, Yongin-Si, Kyunggi-Do, Korea. 449-080
Tel: +82-31-321-2664 Fax: +82-31-321-1664
http://www.digitalemc.com

CERTIFICATE OF COMPLIANCE
FCC Part 15B Certification

Dates of Tests: August 06 ~ 08, 2007
Test Report S/N:DR50110708H
Test Site : DIGITAL EMC CO., LTD.

FCC ID. **P7KRIR-900**

APPLICANT **Diasonic Technology Co., Ltd.**

FCC Classification	**:**	**Part 15 Class B Personal Computers & Peripherals**
Device name	**:**	**Digital Voice Recorder**
Manufacturer	**:**	**Diasonic Technology Co., Ltd.** **#321-43, Suksu-dong, Manan-ku, Anyang-city,** **Kyungki-do, Korea.**
Model name(Brand Name)	**:**	**RIR-900 (TM SLIM)**
Test Device Serial number	**:**	**Identical prototype**
FCC Rule Part(s)	**:**	**FCC Part 15 Subpart B; ANSI C 63.4-2003**
Data of issue	**:**	**August 21, 2007**

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

NVLAP LAB CODE 200559-0

TABLE OF CONTENTS

1. General Informations

This report contains the result of tests performed by:
DIGITAL EMC CO., LTD.
Address : 683-3, Yubang-Dong, Yongin-Si, Kyunggi-Do, Korea. 449-080
http://www.digitalemc.com E-mail : shins@digitalemc.com
Tel: +82-31-321-2664 Fax: +82-31-321-1664

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the "General requirements for the competents of calibration and testing laboratory".
This laboratory is accredited by NVLAP for NVLAP Lab. Code : 200559-0.

Test operator: Engineer

August 21, 2007	Tae-Hun Kim	
Data	Name	Signature

Report Reviewed By: Manager

August 21, 2007	Young-Kyu Shin	
Data	Name	Signature

Ordering party:

Company name	:	Diasonic Technology Co., Ltd.
Address	:	#321-43, Suksu-dong, Manan-ku,
City/town	:	Anyang-city, Kyungki-do
Country	:	Korea.
Zip code	:	430-040
Date of order	:	July 11, 2007

2. Informations about test item

RIR-900

2.1 Equipment information

Kind of Equipment	Digital Voice Recorder
Model No.(Brand Name)	RIR-900 (TM SLIM)
Serial No.	None
Memory Size	2GB
Type of Sample Tested	Pre-Production
Rating Power Supply (Used AC/DC adapter)	Model No : UL110-0515 Manufacture : UNIFIVE Co., Ltd. Input : AC100-120V, 50/60Hz, 0.3A Output : DC5V, 1.5A
High Frequency	32.768kHz, 12MHz
Tested Power Supply	1 Phase 120Vac, 60Hz

2.2 Ancillary Equipment

Equipment	**Model No.**	**Serial No.**	**Manufacturer**
PC	LG	Y8Y	408KIEV102124
LCD Monitor	LENOVO KOREA LCC.INC	6135-AB1	N/A
Printer	SAMSUNG	SRP-770	SRP77008060035
Mouse	CHIC TECHNOLOGY	SMOP5000WX	04010159128
Keyboard	GREAT PLEASURE ELECTRONICS	SWT1000	N/A

2.3 EMI Suppression Device(s)/Modifications

None

3. Test Report

3.1 Summary of tests

FCC Part Section(s)	Parameter	Status (note 1)
Transmitter requirements		
15.109	Radiated Emission	C
15.107	Conducted Emissions	C
Note 1: C= Complies NC=Not Complies NT=Not Tested NA=Not Applicable		

The sample was tested according to the following specification:

FCC Parts 15B; ANSI C-63.4-2003

3.2 Transmitter requirements

3.2.1 Radiated Emission

Procedure:

In the frequency range of 30MHz to 1GHz, the Electric Field strength was measured on a 10m Semi Anechoic Chamber with a reference ground plane and at a distance of 10m. The height of the measuring antenna was varied between 1 to 4 m and the table (height: 0.8m) was rotated a full revolution order to obtain maximum values of the electric field intensity. The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report. For further description of the configuration refer to the picture of the test set-up. Measurements were performed with a quasi-peak detector.

The spectrum analyzer is set to:

RBW = 120 kHz (30MHz ~ 1 GHz)
= 1 MHz (1 GHz ~ 10th harmonic)

VBW ≥ RBW

Trace = max hold

Detector function = peak / Quasi-peak / average

Sweep = auto

Measurement Result: Complies

- Refer to the Next page

Minimum Standard: LIMIT

Frequency (MHz)	Limit (dBuV/m) @ 10m
30 ~ 230	30
230~ 1000	37

Radiated Emissions

Test mode : Play mode

Digital EMC

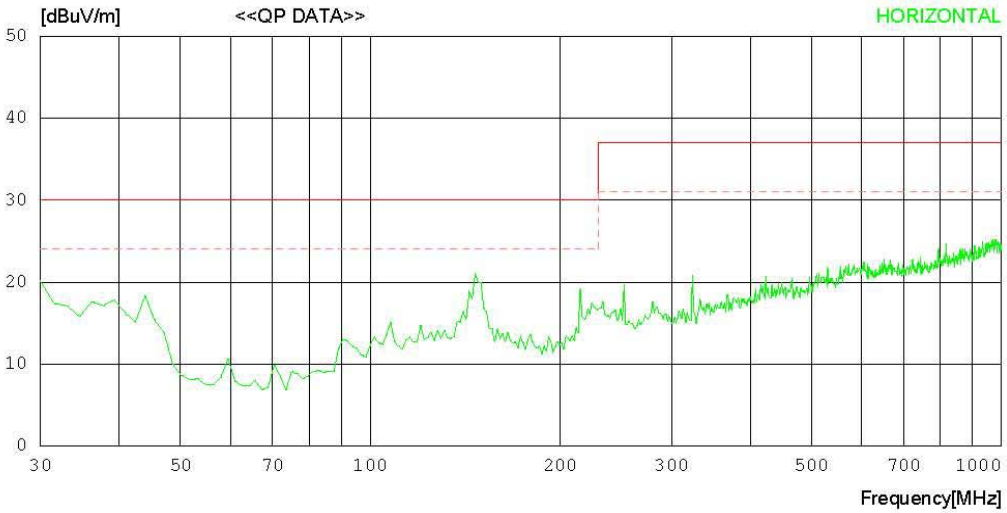
RADIATED EMISSION

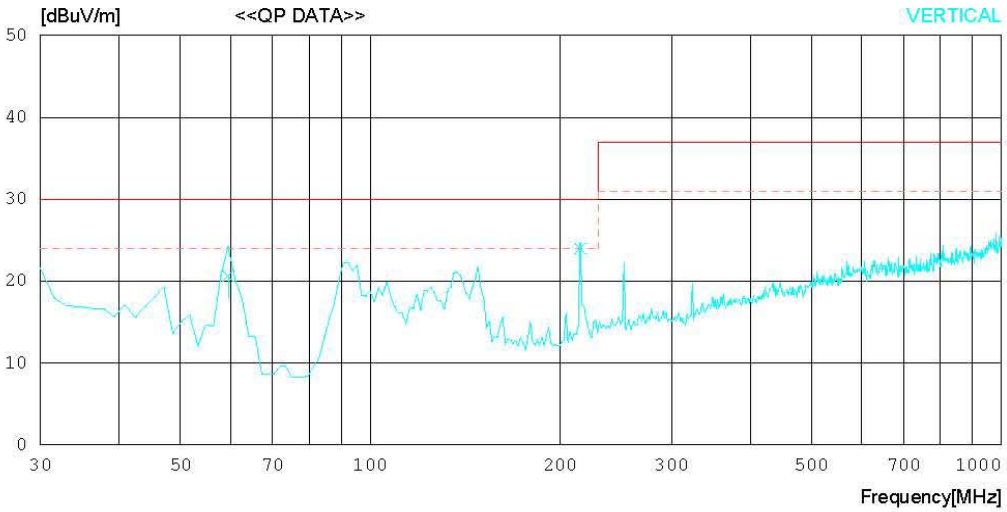
Date : 2007-08-08 22:26:38

Model Name	:	RIR-900	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	22'C 74%
Test Condition	:	RECODING	Operator	:	T.H.KIM

Memo :

LIMIT : CISPR Pub.22 Class B (10m)
MARGIN: 6 dB





RADIATED EMISSION

Date : 2007-08-08 22:26:38

Model Name	:	RIR-900	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	22'C 74%
Test Condition	:	RECODING	Operator	:	T.H.KIM

Memo :

LIMIT : CISPR Pub.22 Class B (10m)
MARGIN: 6 dB

No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Vertical ------										
1	59.535	36.5	5.8	1.0	22.7	20.6	30.0	9.4	201	0
2	214.984	34.1	11.3	1.8	23.2	24.0	30.0	6.0	100	24

Radiated Emissions

Test mode : PC mode

Digital EMC

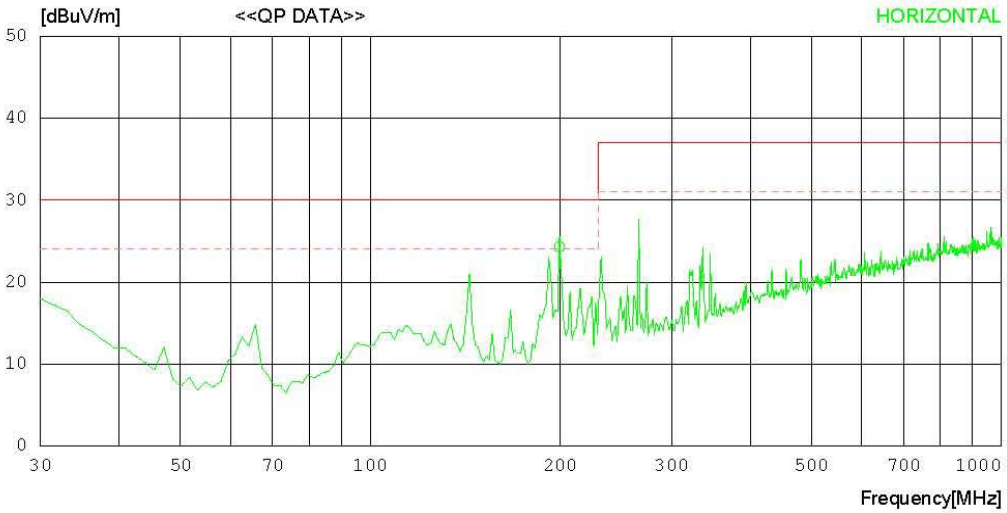
RADIATED EMISSION

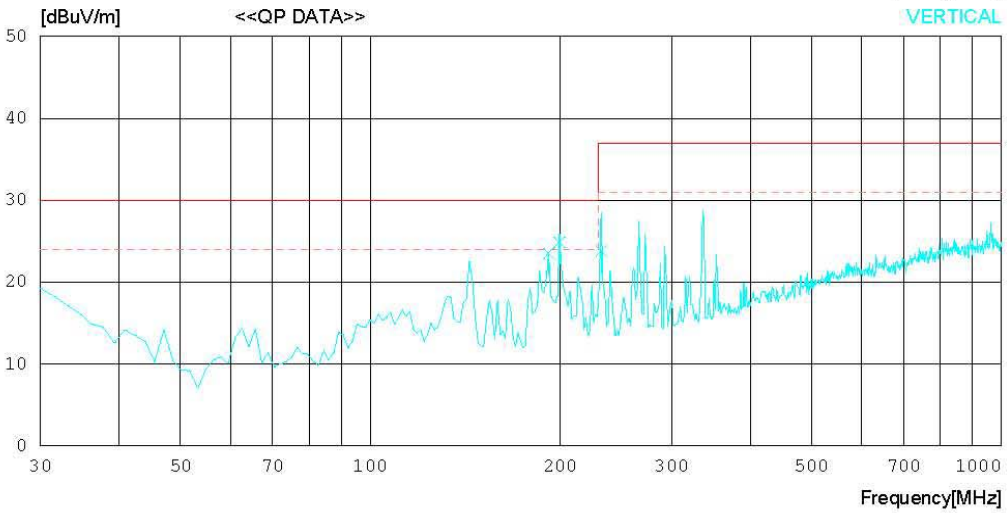
Date : 2007-08-08 23:15:32

Model Name	:	RIR-900	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	22'C 74%
Test Condition	:	PC MODE	Operator	:	T.H.KIM

Memo :

LIMIT : CISPR Pub.22 Class B (10m)
MARGIN: 6 dB





RADIATED EMISSION

Date : 2007-08-08 23:15:32

Model Name	:	RIR-900	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	22'C 74%
Test Condition	:	PC MODE	Operator	:	T.H.KIM

Memo :

LIMIT : CISPR Pub.22 Class B (10m)
MARGIN: 6 dB

No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	199.439	36.8	8.8	1.8	23.1	24.3	30.0	5.7	400	1
----- Vertical ------										
2	191.667	36.3	8.6	1.7	23.1	23.5	30.0	6.5	100	1
3	199.439	37.4	8.8	1.8	23.1	24.9	30.0	5.1	100	1
4	232.084	35.4	9.8	1.9	23.3	23.8	37.0	13.2	100	197

3.2.2 Conducted Emission.

Procedure:

The conducted emissions are measured in the shielded room with a spectrum analyzer in peak hold. While the measurement, EUT had its receiving function. Emissions closest to the limit are measured in the quasi-peak mode (QP) with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation and Exerciser operation. The highest emissions relative to the limit are listed.

Measurement Data: Complies

- During the charging mode, this EUT was not applied because The EUT couldn't the transmission.

Minimum Standard: FCC Part 15.107/CISPR 22

Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 ~ 0.5	66 to 56 *	56 to 46 *
0.5 ~ 5	56	46
5 ~ 30	60	50

* Decreases with the logarithm of the frequency

Measurement Setup

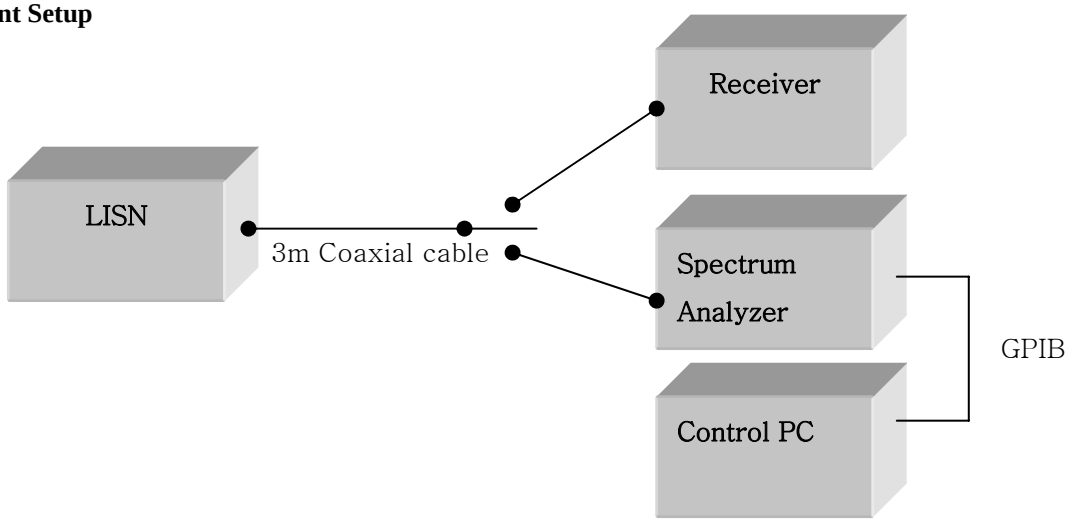
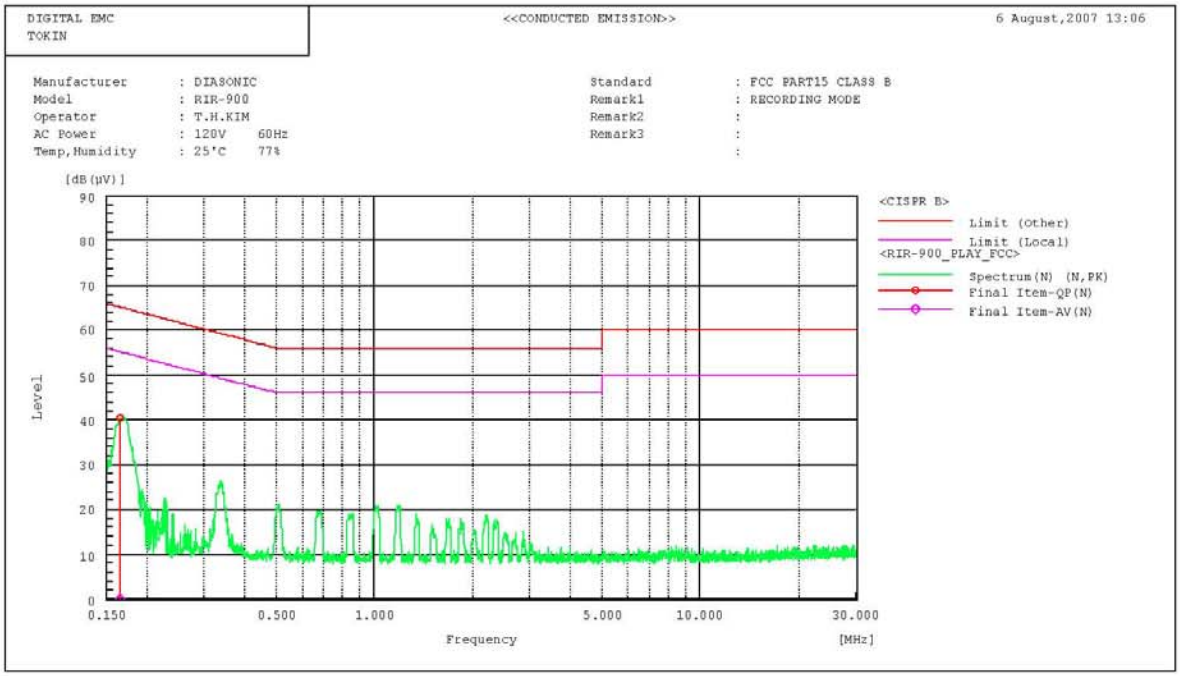
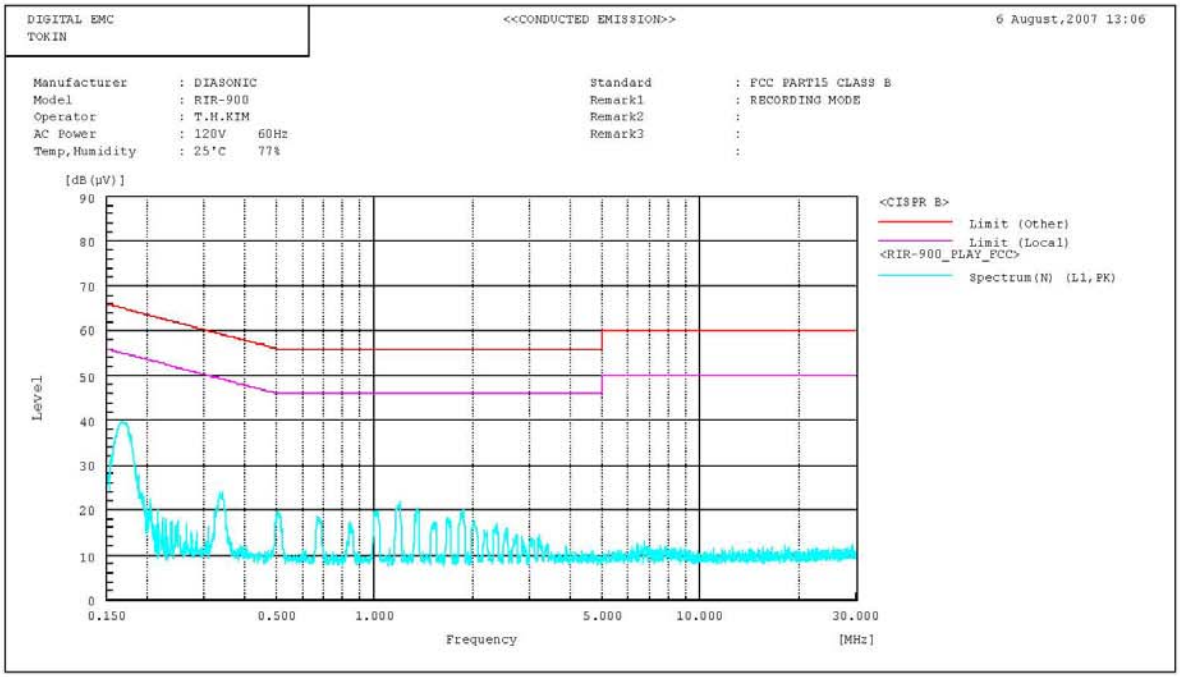


Figure 2: Measurement setup for AC Conducted Emission

Recording Mode / Graph



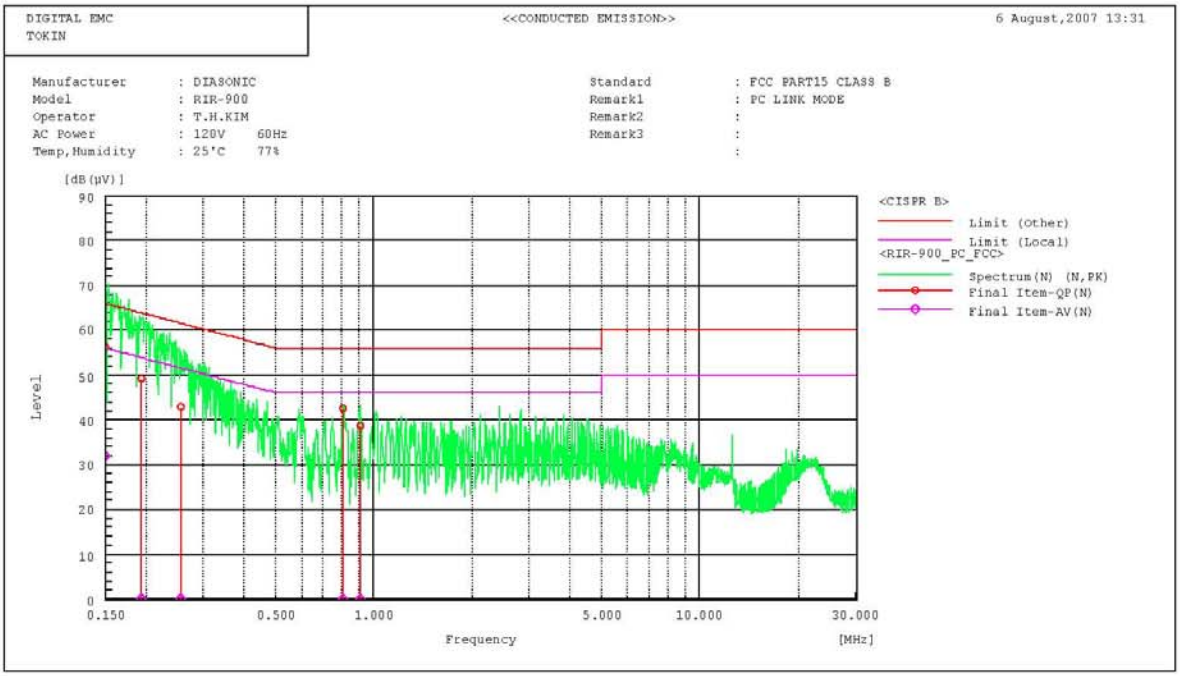


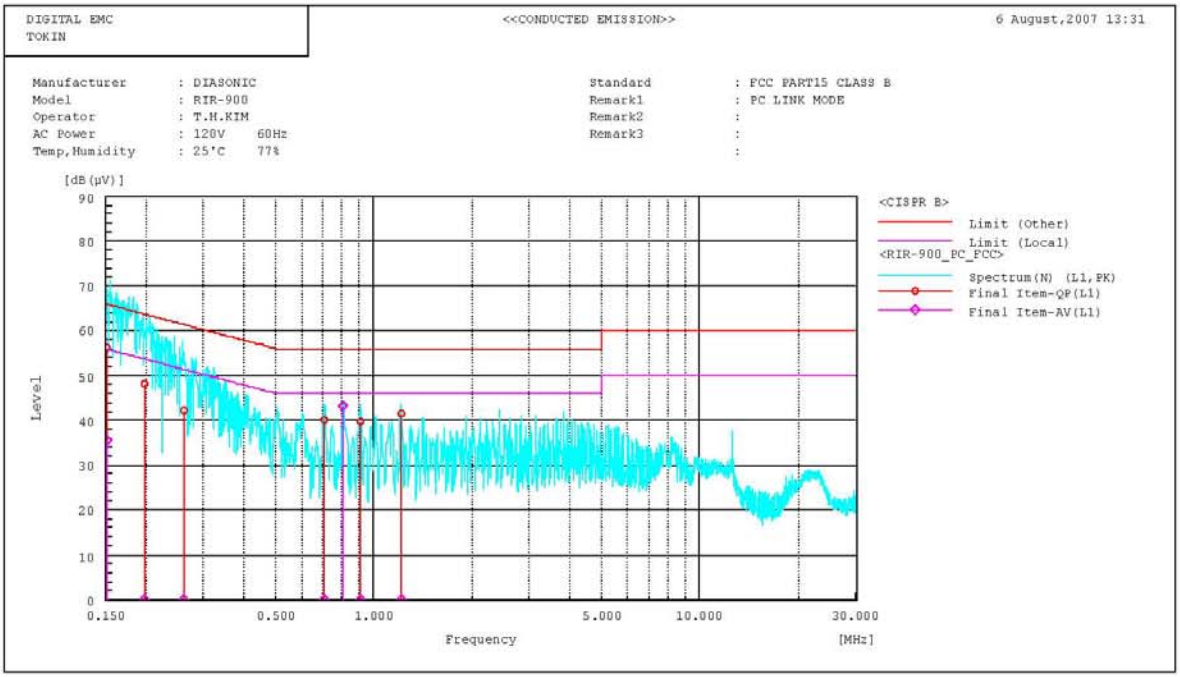
Recording Mode / Data

```
********************************************************************** DIGITAL EMC ******************************************************************
                                                    <<CONDUCTED EMISSION>>
                                                                                                          6 August,2007 13:06

Standard          : FCC PART15 CLASS B
Manufacturer      : DIASONIC
Model             : RIR-900
Operator          : T.H.KIM
AC Power          : 120V    60Hz
Temp,Humidity     : 25'C    77%
Remark1           : RECORDING MODE
Remark2           :
Remark3           :
                  :
*****************************************************************************************************************************************************
Final Result

--- N Phase ---
```

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]	Remark
1	0.166	40.4	0.0	0.1	40.5	0.0	65.2	55.2	24.7	0.0	

PC link Mode / Graph





PC link Mode / Data

********** DIGITAL EMC **********

<<CONDUCTED EMISSION>>

6 August,2007 13:31

Standard : FCC PART15 CLASS B
Manufacturer : DIASONIC
Model : RIR-900
Operator : T.H.KIM
AC Power : 120V 60Hz
Temp,Humidity : 25'C 77%
Remark1 : PC LINK MODE
Remark2 :
Remark3 :
:

Final Result

--- N Phase ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]	Remark
1	0.150	56.2	31.8	0.1	56.3	31.9	66.0	56.0	9.7	24.1	
2	0.193	49.1	0.0	0.1	49.2	0.0	63.9	53.9	14.7	0.0	
3	0.257	42.8	0.0	0.1	42.9	0.0	61.5	51.5	18.6	0.0	
4	0.807	42.6	0.0	0.1	42.7	0.0	56.0	46.0	13.3	0.0	
5	0.908	38.5	0.0	0.1	38.6	0.0	56.0	46.0	17.4	0.0	

--- L1 Phase ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]	Remark
1	0.152	56.0	35.4	0.1	56.1	35.5	65.9	55.9	9.8	20.4	
2	0.199	48.1	0.0	0.1	48.2	0.0	63.7	53.7	15.5	0.0	
3	0.263	42.1	0.0	0.1	42.2	0.0	61.3	51.3	19.1	0.0	
4	0.706	40.1	0.0	0.1	40.2	0.0	56.0	46.0	15.8	0.0	
5	0.807	43.2	43.0	0.1	43.3	43.1	56.0	46.0	12.7	2.9	
6	0.908	39.5	0.0	0.1	39.6	0.0	56.0	46.0	16.4	0.0	
7	1.211	41.4	0.0	0.1	41.5	0.0	56.0	46.0	14.5	0.0	

APPENDIX

TEST EQUIPMENT USED FOR TESTS

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment.

	Type	Manufacturer	Model	Cal.Due.Date (dd/mm/yy)	S/N
01	Spectrum Analyzer	HP	8591E	16/04/08	3649A05889
02	EMI TEST RECEIVER	R&S	ESU	25/01/08	100014
03	Artificial mains network	R&S	ESH2-Z5	08/11/08	828739/006
04	Artificial mains network	Kyoritsu Electrical Works	KNW-242	09/10/07	8-654-15
05	EMI TEST RECEIVER	R&S	ESU	27/04/08	100364
06	COTROLLER	TOKIN	5905A	N/A	N/A
07	DRIVER	TOKIN	5902T2	N/A	14174
08	Amplifier (25dB)	Agilent	8447D	08/08/08	2443A03690
09	BILOG ANTENNA	SCHAFFNER	CBL6112B	08/06/08	2737

