



ELECTROMAGNETIC RESEARCH INSTITUTE



# EMI TEST REPORT

## Emission of electromagnetic disturbance

**Test Report No.** : ERI-FCC03-0042

**Equipment** : Digital presentation device

**Name of basic model** : DM-P200

**Family model** : N/A

**Manufacturer** : GUANGZHOU DEBAO YUCHANG ELECTRONICS CO.,Ltd

**Applicant** : D.M. Technology Co., Ltd.

**Tested date** : 2003. 6. 18

**Issued date** : 2003. 6. 19

**Test results** : PASS

**Test Standards** : FCC Part 15 Subpart B (Class B) / Verification  
/digital devices & peripherals

### Test Procedure and Items:

- AC Power line Conducted emissions measurement : ANSI C63.4-1992
- Radiated emissions measurement : ANSI C63.4-1992

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**Tested by:** YOUNG-SIK, KIM

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**Approved by:** UK-CHO, RIM

The results in this report apply only to the sample tested.  
This test report shall not be reproduced except in full, without the written approval of **ERI Laboratory**.

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## APPENDIX

(N/A)

## 1. CLIENT INFORMATION

The EUT has been tested by request of :

Company : D.M. Technology Co., Ltd.  
Address : 5<sup>th</sup> F1., Mando Bldg. 730 Dang-dong, Gunpo, Kyunggi-do,  
Korea 435-010  
Name of contact : TONG JIN, PARK  
Telephone : + 82-31-451-4526  
Facsimile : + 82-31-451-4520

## 2. LABORATORY INFORMATION

The 10m full-anechoic chamber and/or EMC facilities are used for these testing.  
These facilities were accredited by KOLAS, EK, MIC of Korea and FCC of USA.

### Address

ELECTROMAGNETIC RESEARCH INSTITUTE.  
66-6, JEIL-RI, YANGJI-MYUN, YOUNGIN-CITY, KYUNGGI-DO, KOREA  
Telephone No. : +82-31-336-1186~7  
Facsimile No. : +82-31-336-1184

### Registered No.

KOLAS : 111  
EK : J  
MIC : KR0030  
FCC Filing No. : 302567

## 3. EQUIPMENT UNDER TEST INFORMATION(EUT)

### 3.1 Identification of the EUT

Type of equipment : Digital Presentation device  
Model name : DM-P200  
Brand name : ALVA  
Manufacturer : GUANGZHOU DEBAO YUCHANG ELECTRONICS CO.,Ltd  
Address : 36-1 bangjiang Village East, Shilian Road, Shiji Town,  
Panyu Qu, Guangzhou City, Guangdong, China  
Telephone : + 86-20-3456-1861  
Facsimile : + 86-20-3456-1832  
Country of origin : CHINA

Rating : 120V, 60Hz

### 3.2 Additional information about the EUT

Class B, Family model list; (N/A)

### 3.3 Peripheral equipment

Defined as equipment needed for correct operation of the EUT.

Description	Model No.	Serial No.	Manufacture
AC/DC adaptor	ADP-60DB	MJD0124008510	Delta electronics Co., Ltd.
Note PC	CM2080	5Y17JNZ9R622	LG
Printer	C6427A	CN13V1B1RY	HP
AC/DC power supply	STP032030E	N/A	D.M. Technology Co., Ltd.
Earphone	N/A	N/A	"
Smart card	N/A	N/A	Transcend

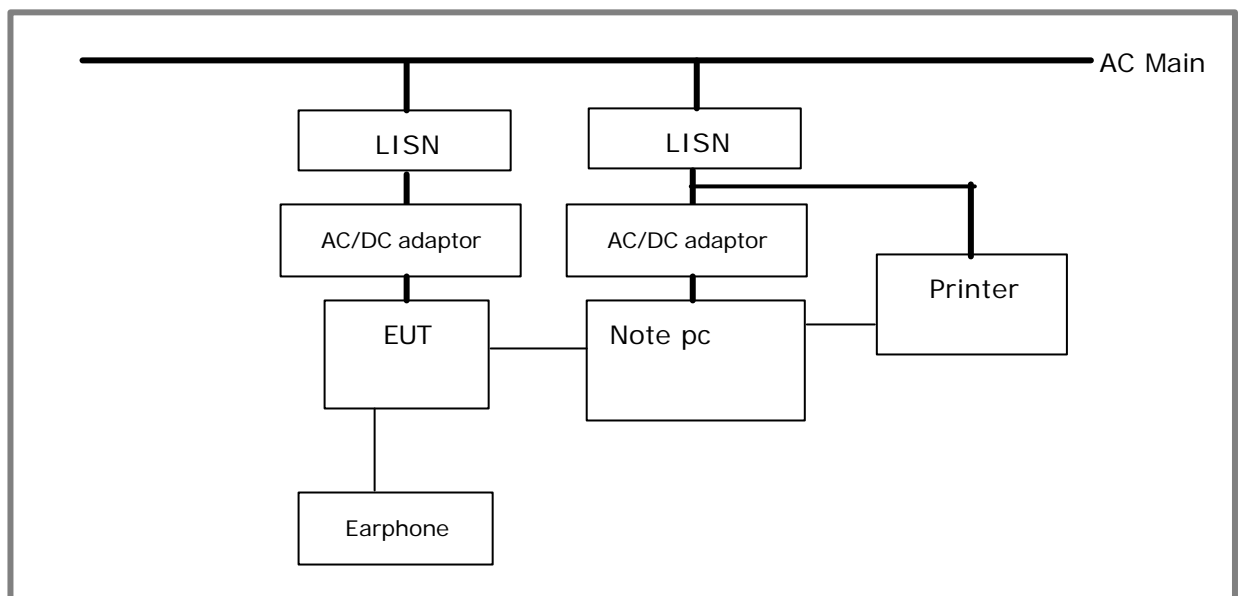
## 4. CONTINUOUS DISTURBANCE VOLTAGE, MAIN TERMINAL

: Frequency range 0.15 MHz to 30 MHz

#### 4.1 Operating environment

Temperature : 23.0  
Relative Humidity : 48.0 %

#### 4.2 Test set-up and test procedures



The mains terminal disturbance voltage was measured with the equipment under

test(EUT) in a shield room. The EUT was connected to an artificial mains network(LISN) placed on the floor. The EUT was placed on non-metallic table 0.4m above the metallic, grounded floor. The distance to other metallic surface was at least 0.8m.

Amplitude measurements were performed with a quasi-peak detector and an average detector.

Operation condition: During the test, we played on the record file.

#### 4.3 Test instrument

Instrument	Model No	Serial No.	Makers	Next cal.date	Used
Test receiver	ESCS30	100021	R&S	2004. 1. 24	
L.I.S.N.	ESH3-Z5	827246/008	R&S	2004. 3. 19	
	ESH3-Z5	831887/018	R&S	2004. 3. 19	
Shield room	8 × 6 × 3.3m/H	-	-	-	

#### 4.4 Test results

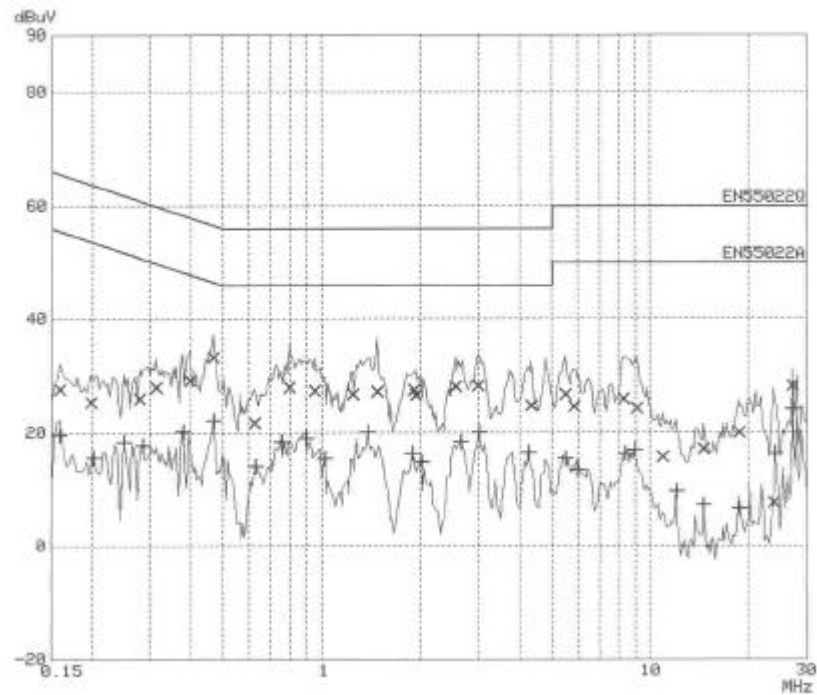
Date of test: Jun 18, 2003.

An overview sweep performed with peak detector & average detector are included in the report **as test reports**.

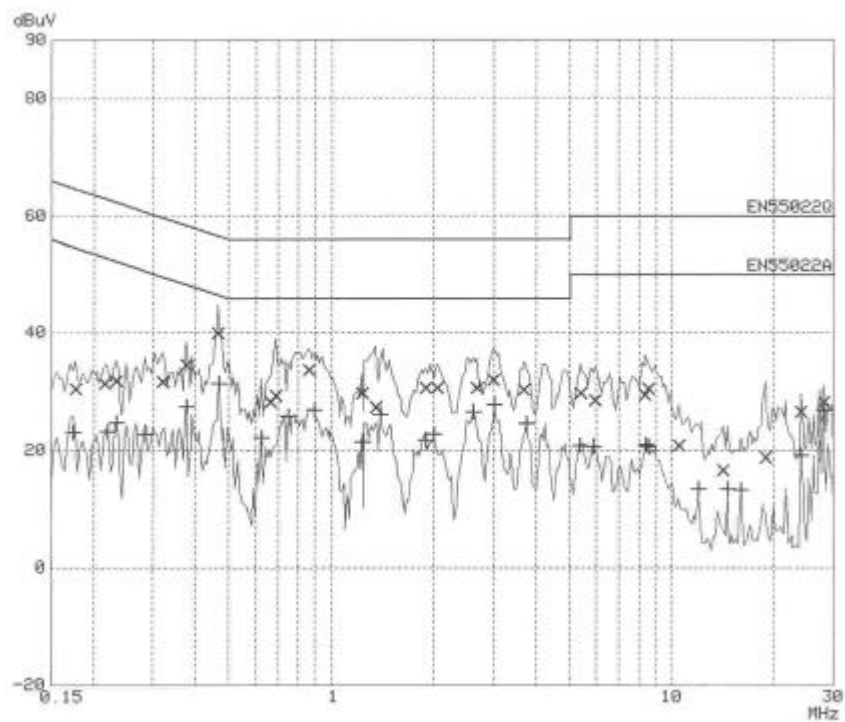
Frequency Range [MHz]	Tested Freq. [MHz]	LISN	Meter Reading		Limits		Margin	
			QP	AV	QP	AV	QP	AV
			[dBuV]		[dBuV]		[dBuV]	
<b>0.15-30</b>	0.177	N	30.5	23.1	65.6	55.6	0.177	N
	0.216	N	31.4	23.2	63.0	53.0	0.216	N
	0.234	N	31.9	24.8	62.3	52.3	0.234	N
	0.321	N	31.7	22.8	59.6	49.6	0.321	N
	0.375	N	34.7	27.5	58.3	48.3	0.375	N
	0.465	N	39.9	31.5	56.5	46.5	0.465	N
	1.890	N	30.7	21.7	56.0	46.0	1.890	N
	2.040	N	30.7	22.8	56.0	46.0	2.040	N
	2.680	N	30.8	26.5	56.0	46.0	2.680	N
	2.980	N	32.1	27.8	56.0	46.0	2.980	N

\* <5 : mean less than 5dB

\* Other frequency keep over 20dB margin.



[Hot line]



[Neutral line]

## 5. RADIATED DISTURBANCE

**: 30MHz – 1000MHz**

### **5.1 Operating environment**

Temperature : 22.0  
Relative Humidity : 55.0 %

### **5.2 Test set-up**

The frequency range investigated was 30 MHz to 1000 MHz.

All readings are quasi-peak unless stated otherwise.

The half-wave dipole antenna was tuned to the frequency found during Preliminary radiated measurements. The EUT, support equipment and Interconnecting cables were re-configured to the set-up to the producing the Maximum emission for the frequency and were placed on top of a 0.8 meter High non-metallic 1 X 1.5 meter table. The EUT, support equipment, and interconnecting cables were re-arranged and manipulated to maximize each EME emission.

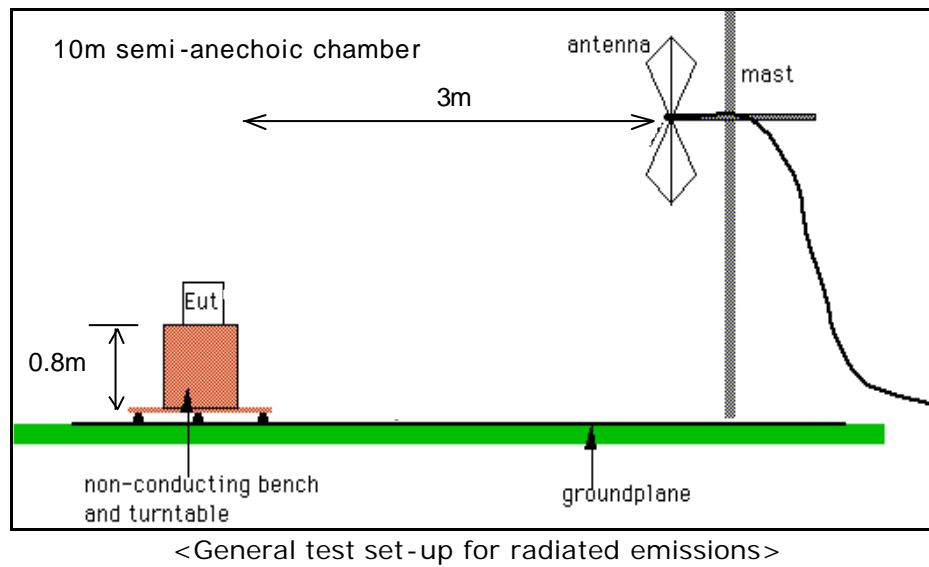
The turntable containing the system was rotated the antenna height was varied 1 to 4 meters

and stopped at the azimuth or height producing the maximum emission.

And this device(EUT) was tested in 3 orthogonal planes.

The antenna measured both horizontal and vertical polarization.





### 5.3 Operation Conditions

During the test, we played on the record file.

### 5.4 Test instrument

Instrument	Model No.	Serial No.	Makers	Next cal.date	Used
Test receiver	ESCS30	100021	R&S	2004. 1. 24	
L.I.S.N.	ESH3-Z5	827246/008	R&S	2004. 3. 19	
	ESH3-Z5	831887/018	R&S	2004. 3. 19	

### 5.5 Test results (Test mode :)

Date of test: Jun 18, 2003.

Freq (MHz)	Reading (dBuV)	Ant	AF (dB)	CL (dB)	Result (dBuV/m)	Limit (dB)	Margin (dB)
97.50	20.16	H	9.22	2.30	31.68	43.50	11.82
102.20	22.25	H	10.31	2.40	34.96	43.50	8.54
146.10	14.74	H	14.70	2.70	32.14	43.50	11.36
150.20	6.87	V	14.99	2.80	24.66	43.50	18.84
229.00	5.74	H	16.70	3.50	25.94	46.00	20.06
243.30	8.90	H	17.10	3.50	29.50	46.00	16.50
287.90	12.06	H	18.45	3.70	34.21	46.00	11.79
433.00	13.82	V	16.27	4.30	34.39	46.00	11.61
489.00	14.51	V	17.06	4.60	36.17	46.00	9.83
622.00	11.34	V	18.88	5.20	35.42	46.00	10.58
685.00	12.29	V	19.79	5.30	37.38	46.00	8.62
853.00	7.10	V	21.51	6.20	34.81	46.00	11.19

\* Receiving Antenna Mode : **Horizontal, Vertical**

\* <5 : mean less than 5dB

Note : Reading = Test Receiver meter, P= Polarization  $\angle$  POL H = Horizontal POL V = Vertical A = Angle, AF = Antenna Factor CL = Cable Loss Result = Field Strength( AF + CL+ Reading)

### Result: Pass

The measured emissions level of the EUT have found the below of the specified limit.