

***EXHIBIT B***

***Test Report***

# **MEASUREMENT REPORT of CORDLESS TELEPHONE**

**Applicant** : Sony Corporation  
**Model No.** : SPP-N1003, SPP-N1000, SPP-N1001, SPP-N1004  
**EUT** : 900MHz Analog Cordless Telephone  
**FCC ID** : AK8SPPN1000  
**Report No.** : S2515708

**Test by :**

***Training Research Co., Ltd.***

***TEL : 886-2-26935155 FAX : 886-2-26934440***

***2, Lane 194, Huan-Ho Street, Hsichih, Taipei Hsien 221, Taiwan, R.O.C.***

# CERTIFICATION

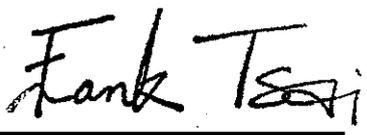
**We here by verify that:**

The test data, data evaluation, test procedures and equipment configurations shown in this report were made mainly in accordance with the procedures given in ANSI C63.4 (1992) as a reference. All test were conducted by *Training Research Co., Ltd.*, 2, Lane 194, Huan-Ho Street, Hsichi, Taipei Hsien 221, Taiwan, R.O.C. Also, we attest to the accuracy of each.

We further submit that the energy emitted by the sample EUT tested as described in the report is **in compliance with** the technical requirements set forth in the FCC Rules Part 15 Subpart C Section 15.249.

**Applicant** : Sony Corporation  
**Model No.** : SPP-N1003, SPP-N1000, SPP-N1001, SPP-N1004  
**EUT** : 900MHz Analog Cordless Telephone  
**FCC ID** : AK8SPPN1000  
**Report No.** : S2515708  
**Test Date** : May. 5, 2000

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Report No.: S2515708, 900MHz Analog Cordless Telephone, FCC Part 15 Class B

Test date: 05/05/2000, Training Research Co., Ltd., TEL:886-2-26935155, Fax:886-2-26934440

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## **I. GENERAL**

### **1.1 Introduction**

The following measurement report is submitted on behalf of Applicant in support of a Cordless Telephone certification in accordance with Part 2 Subpart J and Part 15 Subpart A and C of the Commission's Rules and Regulations.

### **1.2 Description of EUT**

**EUT** : 900MHz Analog Cordless Telephone  
**Model No.** : SPP-N1003, SPP-N1000, SPP-N1001, SPP-N1004  
**FCC ID** : AK8SPPN1000  
**Frequency Range** : Base: 924.90 – 926.30 MHz  
Handset: 902.20 – 903.60 MHz  
**Support Channel** : 15 Channel  
**Power Type** : Base Powered by 120 Vac 60 Hz / 9 Vdc 200 mA  
Handset powered by 2.4 V / 600 mAh.  
**Power Cord** : Non-shielded, No ferrite bead, 187cm long  
**Data Cable** : RJ-11 x 1 => Non-shielded, 7' long, Plastic hoods, No bead  
**Applicant** : Sony Corporation  
6-7-35, Kitashinagawa Shinagawa Ku, Tokyo, Japan.

### **1.3 Description of Support Equipment**

**Headset & Mic.** : SONY  
Model No. : N/A  
Serial No. : N/A  
Data Cable : Shielded, 117cm long, Plastic hoods, No bead  
**PABX** : **King Design**  
Model No. : KD8705-A  
Serial No. : GV101101186  
Power type : 110 VAC 50/60Hz  
Power cord : Non-shielded  
**Telephone** : **HUSTON**  
Model No. : 4782  
Serial No. : N/A  
Power type : Powered by PSTN  
Data Cable : Non-shielded, 7 feet long

**1.4 Configuration of System Under Test**

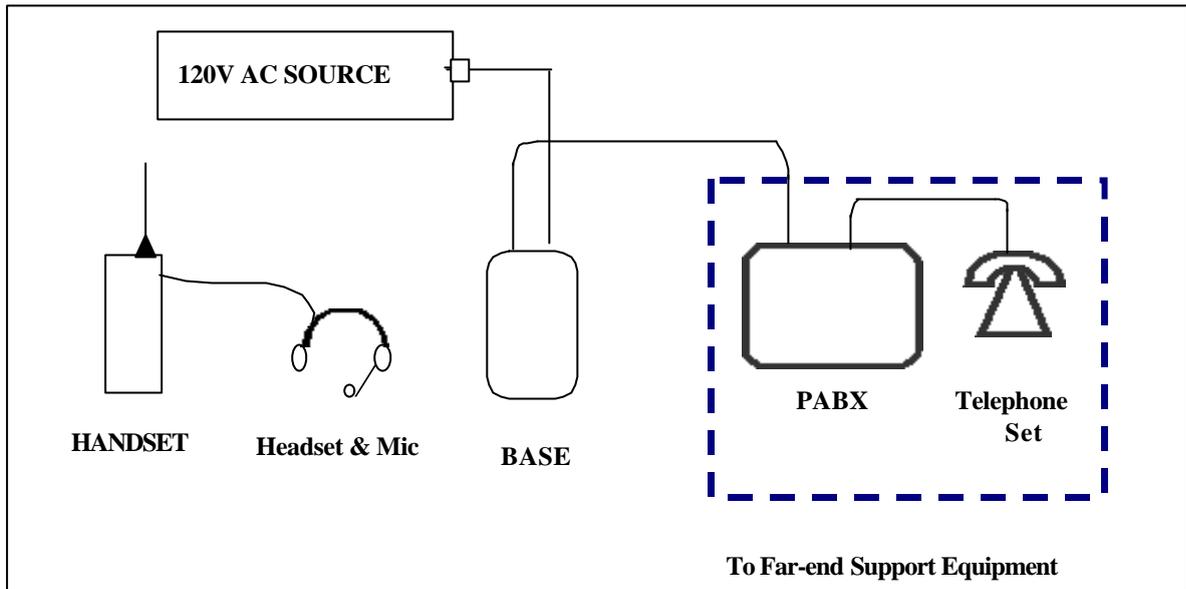


Fig. 1 Configuration of system under test

During testing the EUT was connected with three terminated. A diagram of the complete test configuration was shown in Fig 1.

**1.5 Test Procedure**

All measurements contained in this report were performed mainly according to the techniques described in Measurement procedure ANSI C63.4 (1992).

**1.6 Location of the Test Site**

The radiated emissions measurements required by the rules were performed on the **three-meter, Anechoic Chamber (Registration Number: 93906)** maintained by *Training Research Co., Ltd.* 1F., No. 2, Lane 194, Huan-Ho Street, Hsichih, Taipei Hsien 221, Taiwan, R.O.C. Complete description and measurement data have been placed on file with the commission. The conducted power line emissions tests and other test items were performed in a shielded enclosure also located at Training Research Co., Ltd. B1, No. 2, Lane 194, Huan-Ho Street, Hsichih, Taipei Hsien 221, Taiwan, R.O.C. *Training Research Co., Ltd.* is listed by the FCC as a facility available to do measurement work for others on a contract basis.

### **1.7 General Test Condition**

The conditions under which the EUT operates were varied to determine their effect on the equipment's emission characteristics. The final configuration of the test system and the mode of operation used during these tests was chosen as that which produced the highest emission levels. However, only those conditions which the EUT was considered likely to encounter in normal use were investigated.

In test, the base and handset are tested separately. They were set in Ch01, Ch15 of EUT and continuously transmitting mode that controlled by test mode of EUT.

## **II. Conducted Emissions Measurements**

### **2.1 Test Condition & Setup**

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table, which is 80 centimeters high, was placed 40 centimeters from the backwall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3825/2 Line Impedance Stabilization Networks (LISNs). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPER quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 450 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 2.4.

There are tree test condition apply in this test item, the test procedure description as the following:

### **2.2 List of Test Instruments**

<u>Manufacturer</u>	<u>Device</u>	<u>Model No.</u>	<u>Input Impedance</u>
Hewlett Packard	100Hz-1.5GHz Spectrum Analyzer	HP8591EM	50.00
EMCO	Line Impedance Stabilization Network	3825/2	50.00
TRC	Shielded Room	TRC-SR1	N/A

### 2.3 Test Configuration of Conducted Emission



Fig. 1 Conducted Emissions Test Configuration (Charging only)

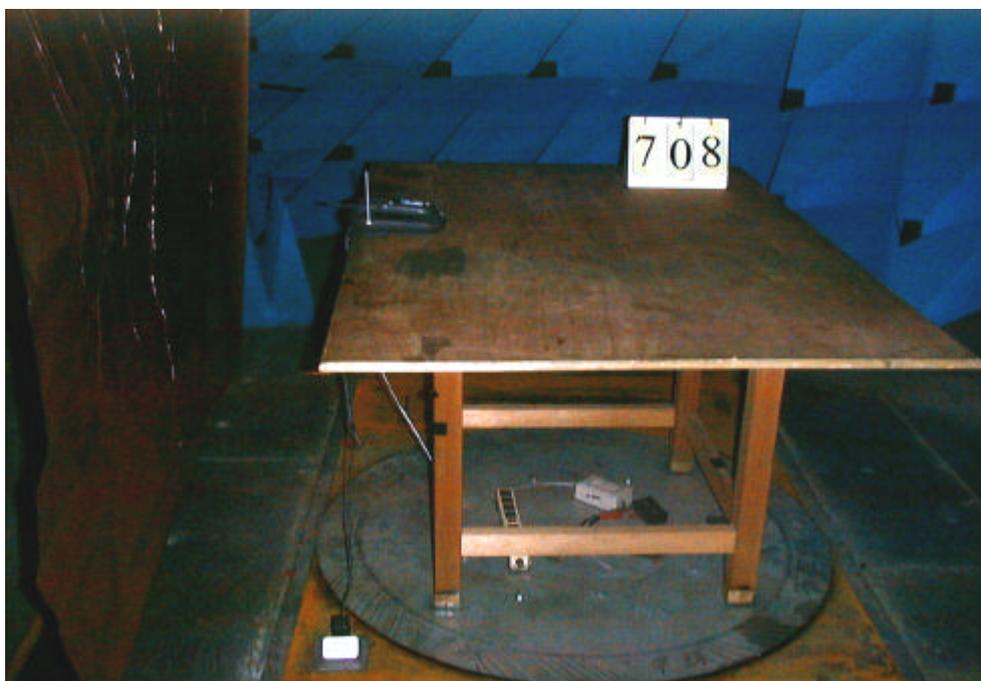


Fig. 2 Conducted Emissions Test Configuration (Charging only)



Fig. 1 Conducted Emissions Test Configuration (Operating only)

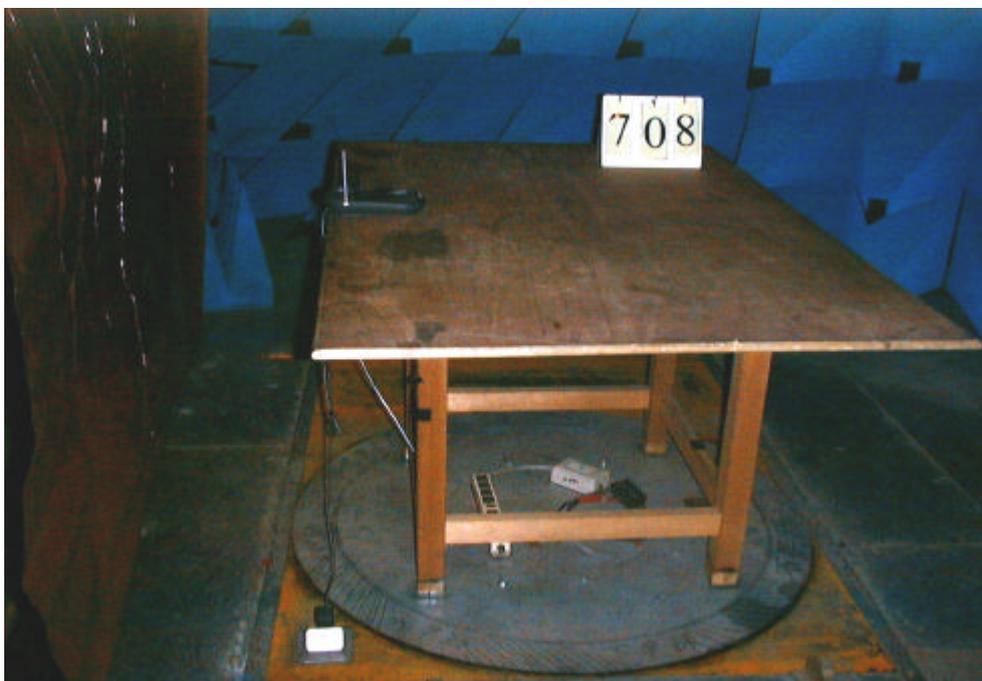


Fig. 2 Conducted Emissions Test Configuration (Operating only)

**2.4 Test Result of Conducted Emissions**

The following table shows a summary of the highest emissions of power line conducted emissions on the HOT and NATURAL conductors of the EUT power cord.

**Model No.** : SPP-N1003, SPP-N1000, SPP-N1001, SPP-N1004  
**EUT** : 900MHz Analog Cordless Telephone

**Table 1 Power Line Conducted Emissions (Channel 1)**

<i>Power Connected Emissions</i>			<i>FCC Class B</i>	
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak Amplitude (dB μV)</i>	<i>Limit (dB μV)</i>	<i>Margin (dB)</i>
Line 1	534.00	20.06	48.00	-27.94
	571.00	20.73	48.00	-27.27
	734.00	20.61	48.00	-27.39
	839.00	20.11	48.00	-27.89
	2040.00	21.31	48.00	-26.69
	2390.00	20.20	48.00	-27.80
	3970.00	21.71	48.00	-26.29
	7990.00	22.82	48.00	-25.18
	28570.00	20.21	48.00	-27.79
	29800.00	20.26	48.00	-27.74
LINE 2	480.00	21.22	48.00	-26.78
	534.00	24.04	48.00	-23.96
	568.00	21.40	48.00	-26.60
	593.00	20.67	48.00	-27.33
	641.00	23.29	48.00	-24.71
	697.00	20.94	48.00	-27.06
	803.00	22.49	48.00	-25.51
	1232.00	21.87	48.00	-26.13
	3970.00	21.94	48.00	-26.06
	28570.00	20.41	48.00	-27.59

Note:

1. Margin = Peak Amplitude - Limit
2. A "+" sign in the margin column means the emission is OVER the Class B Limit and "-" sign of means UNDER the Class B limit.

**Table 2 Power Line Conducted Emissions (Channel 15)**

<i>Power Connected Emissions</i>			<i>FCC Class B</i>	
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak Amplitude (dB μV)</i>	<i>Limit (dB μV)</i>	<i>Margin (dB)</i>
Line 1	3190.00	23.11	48.00	-24.89
	3540.00	23.67	48.00	-24.33
	3700.00	24.42	48.00	-23.58
	3840.00	24.22	48.00	-23.78
	4140.00	23.46	48.00	-24.54
	4700.00	24.99	48.00	-23.01
	4810.00	25.99	48.00	-22.01
	4980.00	26.51	48.00	-21.49
	5220.00	24.47	48.00	-23.53
	8040.00	33.12	48.00	-14.88
LINE 2	483.00	22.50	48.00	-25.50
	534.00	24.55	48.00	-23.45
	641.00	24.76	48.00	-23.24
	1232.00	22.48	48.00	-25.52
	3810.00	23.04	48.00	-24.96
	3970.00	25.11	48.00	-22.89
	5010.00	23.22	48.00	-24.80
	5190.00	23.74	48.00	-24.26
	7990.00	22.69	48.00	-25.31
	8260.00	34.60	48.00	-13.40

**Table 3 Power Line Conducted Emissions (Charging)**

<i>Power Connected Emissions</i>			<i>FCC Class B</i>	
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak Amplitude (dB μV)</i>	<i>Limit (dB μV)</i>	<i>Margin (dB)</i>
Line 1	467.00	20.10	48.00	-27.90
	534.00	21.17	48.00	-26.83
	564.00	20.71	48.00	-27.29
	645.00	20.50	48.00	-27.50
	798.00	20.27	48.00	-27.73
	1657.00	20.07	48.00	-27.93
	3970.00	22.88	48.00	-25.12
	7990.00	20.15	48.00	-27.85
	29590.00	20.77	48.00	-27.23
	***			
LINE 2	480.00	22.09	48.00	-25.91
	534.00	24.37	48.00	-23.63
	590.00	21.11	48.00	-26.89
	604.00	20.55	48.00	-27.45
	641.00	23.15	48.00	-24.85
	692.00	21.10	48.00	-26.90
	798.00	21.65	48.00	-26.35
	1555.00	20.89	48.00	-27.11
	3970.00	22.71	48.00	-25.29
	28980.00	20.84	48.00	-27.16

. **Radiated Emissions Measurements**

**3.1 Test Condition & Setup**

The EUT was placed in a anechoic chamber and scanned at 3 meter distance to determine its emission characteristics. The physical arrangement of the EUT was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude, directivity, and frequency. The exact system configuration which produced the highest emissions was noted so it could be reproduced later during the final tests. This was done to ensure that the final measurements would demonstrate the worst-case interference potential of the EUT.

Final radiation measurements were made on a three-meter, anechoic chamber. The EUT system was placed on a nonconductive turntable, which is 0.8 meters height, top surface 1.0 x 1.5 meter.

The spectrum was examined from 30 MHz to 1000 MHz using an Hewlett Packard 85460A EMI Receiver, M.E.whole range Bi-Log antenna (Model No.: VULB9160) is used to measure frequency from 30 MHz to 1GHz.The final test is used the spectrum HP 85460A and spectrum was examined from 1 GHz to 18GHz using an Hewlett Packard 8592A Spectrum Analyzer, EMCO Horn Antenna (Model 3115) for 1 G - 18 GHz.

At each frequency, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. There are two spectrum analyzers use on this testing , HP 85460A for frequency 30MHz to 1000MHz, and HP8592A for frequency 1 GHz to 18 GHz. No post-detector video filters were used in the test. The spectrum analyzer's 6 dB bandwidth was set to 120 KHz (spectrum was examined from 30 MHz to 1000 MHz), the spectrum analyzer's 6 dB bandwidth was set to 1 MHz (spectrum was examined from 1 GHz to 18GHz) and the analyzer was operated in the maximum hold mode.

The actual field intensity in decibels referenced to 1 microvolt per meter ( $\text{dB } \mu\text{V/m}$ ) is determined by algebraically adding the measured reading in  $\text{dB } \mu\text{V}$ , the antenna factor (dB), and cable loss (dB) at the appropriate frequency.

**For frequency between 30MHz to 1000MHz**

$$F_{Ia} \text{ (dBuV/m)} = F_{Ir} \text{ (dBuV)} - \text{Correction Factors}$$

F<sub>Ia</sub> : Actual Field Intensity

F<sub>Ir</sub> : Reading of the Field Intensity

$$\text{Correction Factor} = \text{Antenna Factor} + (\text{Cable Loss} - \text{Amplitude Gain})$$

**For frequency between 1GHz to 18GHz**

$$F_{Ia} \text{ (dBuV/m)} = F_{Ir} \text{ (dBuV)} + \text{Correction Factor}$$

F<sub>Ia</sub> : Actual Field Intensity

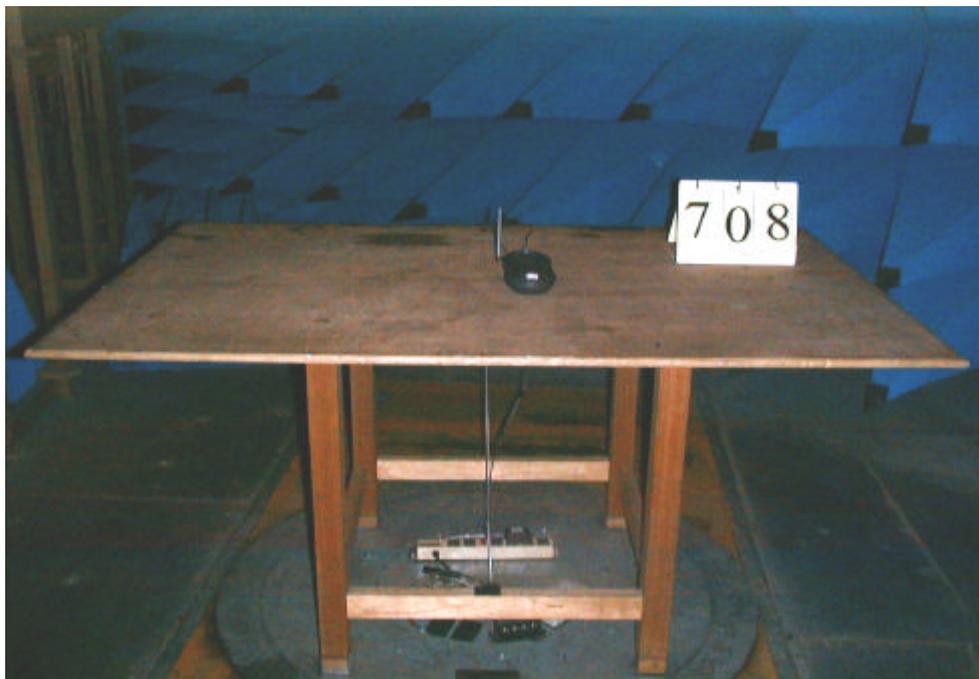
F<sub>Ir</sub> : Reading of the Field Intensity

$$\text{Correction Factors} = \text{Antenna Factor} + \text{Cable Loss} - \text{Distance Factor (9.54dB)} \\ - \text{Amplifier Gain}$$

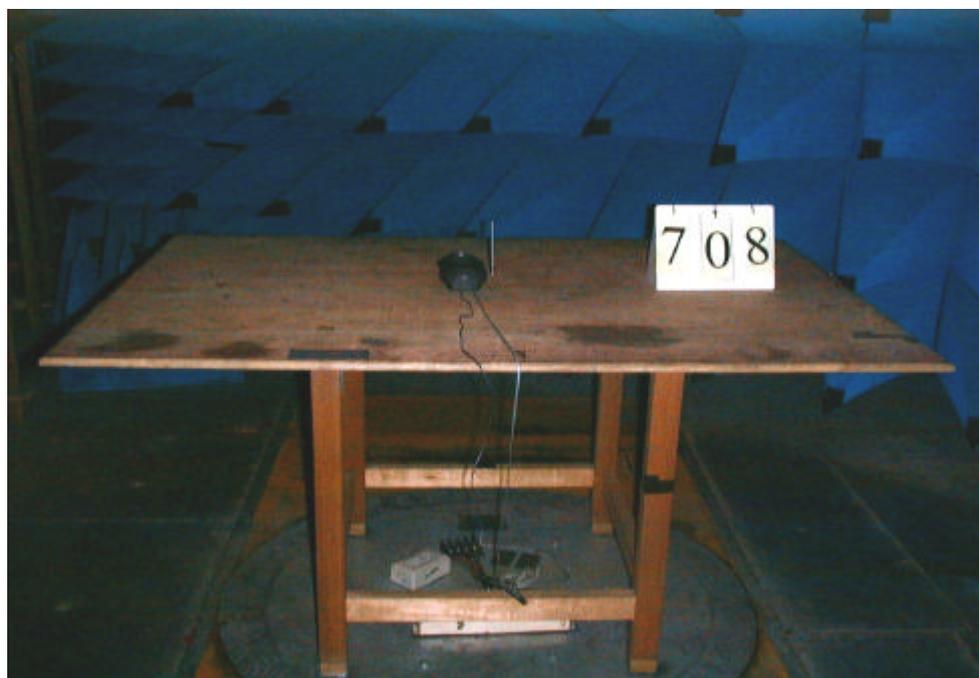
**3.2 List of Test Instruments**

Manufacturer	Device	Model	Input Impedance
Hewlett Packard	9KHz – 6GHz EMI Receiver	HP85460A	50.00
M.E.	30MHz-1.5GHz Bi-Log Antenna	VULB 9160	50.00
Hewlett Packard	50KHz – 22GHz Spectrum Analyzer	HP8592A	50.00

### 3.3 Test Configuration of Radiated Emission



Picture 1 Front View of the Test Configuration (BASE)



Picture 2 Rear View of the Test Configuration (BASE)



Picture 1 Front View of the Test Configuration (HANDSET)



Picture 2 Rear View of the Test Configuration (HANDSET)

**The test configuration for frequency between 1 GHz to 18 GHz is same as above.**

**3.4 Test Result of Radiated Emissions**

The peak values of fundamental emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following.

**Model No.** : SPP-N1003, SPP-N1000, SPP-N1001, SPP-N1004  
**EUT** : 900MHz Analog Cordless Telephone

**Table 4 Open Field Fundamental Emissions**

Channel	Frequency (MHz)	A.P. (H/V)	A.H. (m)	Table (degree)	Amplitude (Peak ) (dB μ V/m)	Limit (dB μ V)	Margin (dB μ V)
Base 01	924.90	H	1.00	0	61.20	94.00	-32.80
		V	2.49	0	64.68	94.00	-29.32
Base 15	926.30	H	1.00	3	51.94	94.00	-42.06
		V	1.00	135	87.60	94.00	-6.40
Handset 01	902.20	H	3.92	0	51.07	94.00	-42.93
		V	2.43	0	50.97	94.00	-43.03
Handset 15	903.60	H	1.00	112	83.12	94.00	-10.88
		V	1.00	78	83.40	94.00	-10.60

Note:

1. A. P. means antenna polarization, horizontal and vertical.
2. A. H. means antenna height.
3. Table means turntable turning position.
4. Amplitude means the fundamental emission measured.
5. Margin = Amplitude-limit

**3.5 Test Result of Spurious Radiated Emissions**

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following.

**Model No.** : SPP-N1003, SPP-N1000, SPP-N1001, SPP-N1004  
**EUT** : 900MHz Analog Cordless Telephone

**Table 5 Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 01, Base Horizontal]**

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	FCC Class B (3 m)	
Frequency (MHz)	Amplitude (dB μ V/m)	Ant. H. (m)	Table ( ° )			Limit (dB μ V/m)	Margin (dB)
32.338	4.12	2.43	51	-23.39	27.51	40.00	-12.49
36.516	2.42	1.00	45	-21.67	24.09	40.00	-15.91
445.750	18.10	2.43	59	-20.37	38.47	46.00	-7.53
462.457	14.04	2.43	117	-20.73	34.77	46.00	-11.23
891.487	10.46	1.00	134	-27.21	37.67	46.00	-8.33
***							

Note:

1. Margin = Corrected – Limit.
2. Peak Amplitude – Correction Factors = Corrected
3. Correction Factor = Antenna Factor + (Cable Loss – Amplitude Gain)

**Table 6 Open Field Radiated Emissions for 1GHz ~ 18GHz [Channel 01, Base Horizontal]**

<b>Radiated Emission</b>				<b>Correction Factors</b> ( dB )	<b>Distance</b> ( dB )	<b>Corrected Amplitude</b> (dB μ V/m)	<b>FCC Class B ( 3 m )</b>	
<b>Frequency (GHz)</b>	<b>Amplitude (dB μ V/m)</b>	<b>Ant. H. (cm)</b>	<b>Table ( ° )</b>				<b>Limit (dB μ V/m)</b>	<b>Margin (dB)</b>
2.228	54.14	100.00	228	-8.67	-9.54	35.93	54.00	-18.07
2.772	50.47	100.00	7	-6.84	-9.54	34.09	54.00	-19.91
4.428	39.72	100.00	114	3.91	-9.54	34.09	54.00	-19.91
5.433	36.08	100.00	123	9.72	-9.54	36.26	54.00	-17.74
6.448	37.41	100.00	204	9.72	-9.54	37.59	54.00	-16.41
7.357	39.91	100.00	22	9.72	-9.54	40.09	54.00	-13.91
8.267	40.41	100.00	91	9.72	-9.54	40.59	54.00	-13.41
***								

Note:

1. Margin = Corrected - Limit.
2. Peak Amplitude + Correction Factor + Distance = Corrected

**Table 7 Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 01, Base Vertical]**

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	FCC Class B ( 3 m )	
Frequency (MHz)	Amplitude (dB μ V/m)	Ant. H. (m)	Table ( ° )			Limit (dB μ V/m)	Margin (dB)
34.085	5.34	3.93	140	-21.94	27.28	40.00	-12.72
36.290	3.53	3.93	149	-20.90	24.43	40.00	-15.57
446.422	6.47	2.49	0	-20.43	26.90	46.00	-19.10
462.444	16.67	1.00	104	-21.12	37.79	46.00	-8.21
891.764	1.74	1.00	0	-28.12	29.86	46.00	-16.14
***							

**Table 8 Open Field Radiated Emissions for 1GHz ~ 18GHz [Channel 01, Base Vertical]**

<b>Radiated Emission</b>				<b>Correction Factors</b> ( dB )	<b>Distance</b> ( dB )	<b>Corrected Amplitude</b> (dB μ V/m)	<b>FCC Class B ( 3 m )</b>	
<b>Frequency (GHz)</b>	<b>Amplitude (dB μ V/m)</b>	<b>Ant. H. (cm)</b>	<b>Table ( ° )</b>				<b>Limit (dB μ V/m)</b>	<b>Margin (dB)</b>
1.850	51.64	100.00	33	-8.67	-9.54	33.43	54.00	-20.57
2.228	60.30	100.00	281	-8.67	-9.54	42.09	54.00	-11.91
2.312	53.30	100.00	217	-8.67	-9.54	35.09	54.00	-18.91
2.772	48.64	100.00	146	-6.84	-9.54	32.26	54.00	-21.74
4.428	39.06	100.00	29	3.91	-9.54	33.43	54.00	-20.57
5.433	36.41	100.00	214	9.72	-9.54	36.59	54.00	-17.41
6.448	37.75	100.00	36	9.72	-9.54	37.93	54.00	-16.07
7.357	40.41	100.00	208	9.72	-9.54	40.59	54.00	-13.41
8.267	40.58	100.00	169	9.72	-9.54	40.76	54.00	-13.24
9.178	41.41	100.00	94	9.72	-9.54	41.59	54.00	-12.41
***								

**Table 9 Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 15, Base Horizontal]**

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	FCC Class B ( 3 m )	
Frequency (MHz)	Amplitude (dB μ V/m)	Ant. H. (m)	Table ( ° )			Limit (dB μ V/m)	Margin (dB)
33.210	3.00	3.93	76	-22.95	25.95	40.00	-14.05
36.716	4.02	3.93	127	-21.58	25.60	40.00	-14.40
195.444	2.90	1.00	115	-13.12	16.02	43.50	-27.48
447.037	7.30	2.43	0	-20.43	27.73	46.00	-18.27
893.606	4.08	1.00	0	-27.30	31.38	46.00	-14.62
***							

**Table 10 Open Field Radiated Emissions For 1GHz ~ 18GHz [Channel 15, Base Horizontal]**

<b>Radiated Emission</b>				<b>Correction Factors</b> ( dB )	<b>Distance</b> ( dB )	<b>Corrected Amplitude</b> (dB μ V/m)	<b>FCC Class B</b> ( 3 m )	
<b>Frequency</b> (GHz)	<b>Amplitude</b> (dB μ V/m)	<b>Ant. H.</b> (cm)	<b>Table</b> ( ° )				<b>Limit</b> (dB μ V/m)	<b>Margin</b> (dB)
2.232	53.47	100.00	95	-8.67	-9.54	35.26	54.00	-18.74
2.315	52.30	100.00	217	-8.67	-9.54	34.09	54.00	-19.91
2.777	51.31	100.00	116	-6.84	-9.54	34.93	54.00	-19.07
5.402	35.41	100.00	108	9.72	-9.54	35.59	54.00	-18.41
6.473	37.41	100.00	256	9.72	-9.54	37.59	54.00	-16.41
7.285	39.75	100.00	337	9.72	-9.54	39.93	54.00	-14.07
8.387	39.91	100.00	8	9.72	-9.54	40.09	54.00	-13.91
9.267	40.91	100.00	56	9.72	-9.54	41.09	54.00	-12.91
***								

**Table 11 Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 15, Base Vertical]**

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	FCC Class B ( 3 m )	
Frequency (MHz)	Amplitude (dB μ V/m)	Ant. H. (m)	Table ( ° )			Limit (dB μ V/m)	Margin (dB)
91.440	5.95	2.44	39	-10.85	16.80	43.50	-26.70
125.493	6.00	2.44	41	-13.95	19.95	43.50	-23.55
447.111	6.39	2.44	0	-20.46	26.85	46.00	-19.15
463.188	18.07	1.00	96	-21.13	39.20	46.00	-6.80
893.592	0.45	1.00	2	-28.17	28.62	46.00	-17.38
***							

Note:

- 4. Margin = Corrected – Limit.
- 5. Peak Amplitude – Correction Factors = Corrected
- 6. Correction Factor = Antenna Factor + (Cable Loss – Amplitude Gain)

**Table 12 Open Field Radiated Emissions for 1GHz ~ 18GHz [Channel 15, Base Vertical]**

<b>Radiated Emission</b>				<b>Correction Factors</b> ( dB )	<b>Distance</b> ( dB )	<b>Corrected Amplitude</b> (dB μ V/m)	<b>FCC Class B</b> ( 3 m )	
<b>Frequency</b> (GHz)	<b>Amplitude</b> (dB μ V/m)	<b>Ant. H.</b> (cm)	<b>Table</b> ( ° )				<b>Limit</b> (dB μ V/m)	<b>Margin</b> (dB)
2.232	56.97	100.00	75	-6.84	-9.54	40.59	54.00	-13.41
2.315	50.44	100.00	9	-5.64	-9.54	35.26	54.00	-18.74
2.777	39.89	100.00	197	3.91	-9.54	34.26	54.00	-19.74
6.473	43.22	100.00	25	3.91	-9.54	37.59	54.00	-16.41
8.387	40.41	100.00	316	9.72	-9.54	40.59	54.00	-13.41
9.267	40.58	100.00	377	9.72	-9.54	40.76	54.00	-13.24
***								

**Table 13 Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 01, Handset Horizontal]**

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	FCC Class B ( 3 m )	
Frequency (MHz)	Amplitude (dB μ V/m)	Ant. H. (m)	Table ( ° )			Limit (dB μ V/m)	Margin (dB)
37.387	3.03	3.91	133	-21.30	24.33	40.00	-15.67
41.718	5.63	3.92	17	-19.23	24.86	40.00	-15.14
55.292	11.16	2.44	45	-13.07	24.23	40.00	-15.77
936.228	1.86	3.92	0	-28.30	30.16	46.00	-15.84
***							

**Table 14 Open Field Radiated Emissions For 1GHz ~ 18GHz [Channel 01, Handset Horizontal]**

<b>Radiated Emission</b>				<b>Correction Factors</b> ( dB )	<b>Distance</b> ( dB )	<b>Corrected Amplitude</b> (dB μ V/m)	<b>FCC Class B ( 3 m )</b>	
<b>Frequency (GHz)</b>	<b>Amplitude (dB μ V/m)</b>	<b>Ant. H. (cm)</b>	<b>Table ( ° )</b>				<b>Limit (dB μ V/m)</b>	<b>Margin (dB)</b>
1.354	58.33	100.00	11	-8.67	-9.54	40.12	54.00	-13.88
1.803	52.80	100.00	105	-8.67	-9.54	34.59	54.00	-19.41
1.838	54.30	100.00	28	-8.67	-9.54	36.09	54.00	-17.91
1.872	53.30	100.00	60	-8.67	-9.54	35.09	54.00	-18.91
2.255	52.14	100.00	164	-8.67	-9.54	33.93	54.00	-20.07
2.705	49.47	100.00	197	-6.84	-9.54	33.09	54.00	-20.91
6.497	37.58	100.00	350	9.72	-9.54	37.76	54.00	-16.24
7.387	39.58	100.00	236	9.72	-9.54	39.76	54.00	-14.24
***								

**Table 15 Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 01, Handset Vertical]**

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB $\mu$ V/m)	FCC Class B ( 3 m )	
Frequency (MHz)	Amplitude (dB $\mu$ V/m)	Ant. H. (m)	Table ( ° )			Limit (dB $\mu$ V/m)	Margin (dB)
37.138	1.01	2.42	116	-20.54	21.55	40.00	-18.45
451.108	12.24	1.00	70	-20.61	32.85	46.00	-13.15
467.840	6.20	1.00	124	-21.21	27.41	46.00	-18.59
936.283	2.52	2.43	0	-29.72	32.24	46.00	-13.76
***							

**Table 16 Open Field Radiated Emissions for 1GHz ~ 18GHz [Channel 01, Handset Vertical]**

<b>Radiated Emission</b>				<b>Correction Factors</b> ( dB )	<b>Distance</b> ( dB )	<b>Corrected Amplitude</b> (dB μ V/m)	<b>FCC Class B</b> ( 3 m )	
<b>Frequency</b> (GHz)	<b>Amplitude</b> (dB μ V/m)	<b>Ant. H.</b> (cm)	<b>Table</b> ( ° )				<b>Limit</b> (dB μ V/m)	<b>Margin</b> (dB)
1.354	59.32	100.00	27	-8.67	-9.54	41.11	54.00	-12.89
1.803	57.14	100.00	338	-8.67	-9.54	38.93	54.00	-15.07
1.838	57.80	100.00	245	-8.67	-9.54	39.59	54.00	-14.41
1.872	56.14	100.00	107	-8.67	-9.54	37.93	54.00	-16.07
2.255	52.30	100.00	195	-8.67	-9.54	34.09	54.00	-19.91
2.705	49.47	100.00	263	-6.84	-9.54	33.09	54.00	-20.91
6.497	36.58	100.00	5	9.72	-9.54	36.76	54.00	-17.24
7.387	39.91	100.00	81	9.72	-9.54	40.09	54.00	-13.91
***								

**Table 17 Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 15, Handset Horizontal]**

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	FCC Class B ( 3 m )	
Frequency (MHz)	Amplitude (dB μ V/m)	Ant. H. (m)	Table ( ° )			Limit (dB μ V/m)	Margin (dB)
54.890	1.18	2.44	19	-13.24	14.42	40.00	-25.58
451.097	5.66	3.93	100	-20.58	26.24	46.00	-19.76
451.747	7.87	1.00	102	-20.58	28.45	46.00	-17.55
468.012	5.60	1.00	95	-20.82	26.42	46.00	-19.58
936.988	10.97	1.00	6	-28.33	39.30	46.00	-6.70
***							

**Table 18 Open Field Radiated Emissions For 1GHz ~ 18GHz [Channel 15, Handset Horizontal]**

<b>Radiated Emission</b>				<b>Correction Factors</b> ( dB )	<b>Distance</b> ( dB )	<b>Corrected Amplitude</b> (dB μ V/m)	<b>FCC Class B</b> ( 3 m )	
<b>Frequency</b> (GHz)	<b>Amplitude</b> (dB μ V/m)	<b>Ant. H.</b> (cm)	<b>Table</b> ( ° )				<b>Limit</b> (dB μ V/m)	<b>Margin</b> (dB)
1.350	58.27	100.00	25	-8.67	-9.54	40.06	54.00	-13.94
1.807	54.64	100.00	319	-8.67	-9.54	36.43	54.00	-17.57
1.840	54.80	100.00	46	-8.67	-9.54	36.59	54.00	-17.41
1.873	53.14	100.00	59	-8.67	-9.54	34.93	54.00	-19.07
2.258	51.80	100.00	287	-8.67	-9.54	33.59	54.00	-20.41
2.708	49.31	100.00	206	-6.84	-9.54	32.93	54.00	-21.07
6.497	36.58	100.00	341	9.72	-9.54	36.76	54.00	-17.24
7.398	38.58	100.00	190	9.72	-9.54	38.76	54.00	-15.24
***								

**Table 19 Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 15, Handset Vertical]**

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	FCC Class B ( 3 m )	
Frequency (MHz)	Amplitude (dB μ V/m)	Ant. H. (m)	Table ( ° )			Limit (dB μ V/m)	Margin (dB)
41.471	5.38	1.00	102	-18.62	24.00	40.00	-16.00
450.603	5.71	2.43	138	-20.59	26.30	46.00	-19.70
468.365	4.47	1.00	119	-21.22	25.69	46.00	-20.31
936.963	9.61	2.43	130	-29.75	39.36	46.00	-6.64
***							

**Table 20 Open Field Radiated Emissions for 1GHz ~ 18GHz [Channel 15, Handset Vertical]**

<b>Radiated Emission</b>				<b>Correction Factors</b> ( dB )	<b>Distance</b> ( dB )	<b>Corrected Amplitude</b> (dB μ V/m)	<b>FCC Class B</b> ( 3 m )	
<b>Frequency</b> (GHz)	<b>Amplitude</b> (dB μ V/m)	<b>Ant. H.</b> (cm)	<b>Table</b> ( ° )				<b>Limit</b> (dB μ V/m)	<b>Margin</b> (dB)
1.349	59.26	100.00	67	-8.67	-9.54	41.05	54.00	-12.95
1.807	59.47	100.00	41	-8.67	-9.54	41.26	54.00	-12.74
1.840	58.97	100.00	189	-8.67	-9.54	40.76	54.00	-13.24
1.873	57.47	100.00	5	-8.67	-9.54	39.26	54.00	-14.74
2.258	51.64	100.00	239	-8.67	-9.54	33.43	54.00	-20.57
2.708	48.64	100.00	285	-6.84	-9.54	32.26	54.00	-21.74
6.497	36.75	100.00	149	9.72	-9.54	36.93	54.00	-17.07
***								

**. Verify Frequencies and Channels**

*Table 21 Verify the Frequency Pairs*

Channel	Handset (MHz)	Base (MHz)
1	902.20	924.90
2	902.30	925.00
3	902.40	925.10
4	902.50	925.20
5	902.60	925.30
6	902.70	925.40
7	902.80	925.50
8	902.90	925.60
9	903.00	925.70
10	903.10	925.80
11	903.20	925.90
12	903.30	926.00
13	903.40	926.10
14	903.50	926.20
15	903.60	926.30

*Note: This is for sure that all frequencies are in 902 MHz to 928 MHz.*

**Section 15.214(d) The security code is set automatic :**

Every time when you place the handset in the base, your cordless will randomly select one of 65,000 possible security codes.

## *Appendix A*

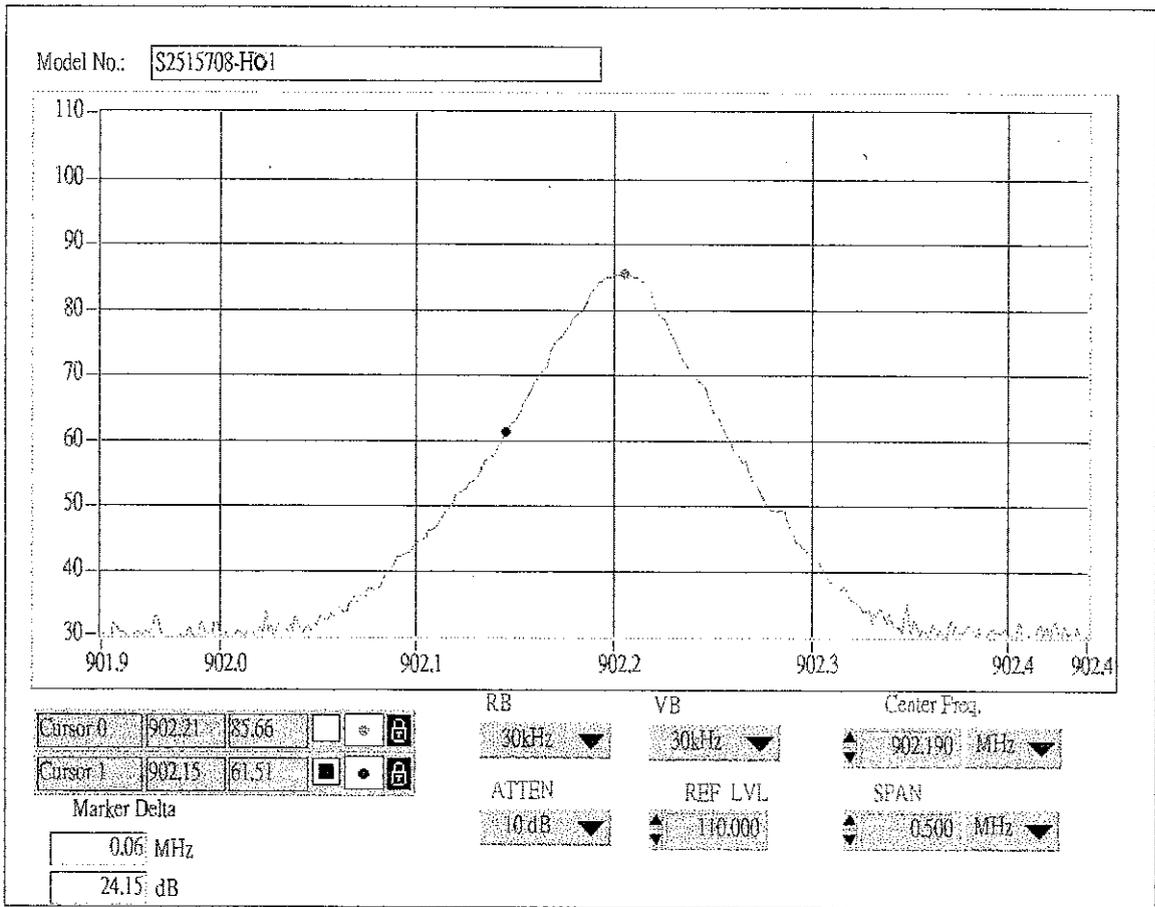
The antenna of the device is screwed inside the device, the user can not remove it freely without any tools from outside the device. This is comply with the FCC rules part 15.203



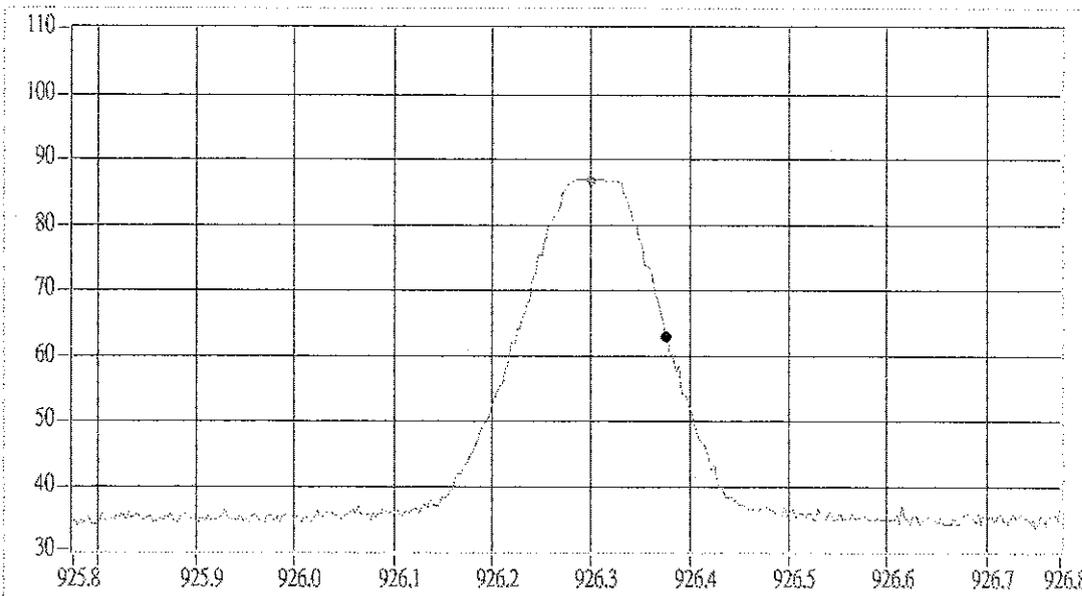


## *Appendix B*

§ 15.245 (b)(3) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.



Model No.: S2515708-B15



Cursor 0	926.30	86.91	<input type="checkbox"/>	*	
Cursor 1	926.38	63.13	<input checked="" type="checkbox"/>	*	
Marker Delta					
	-0.08 MHz				
	23.78 dB				

RB	VB	Center Freq.
30 kHz	30 kHz	926.275 MHz
ATTEN	REF LVL	SPAN
10 dB	130.000	1.000 MHz