

## ***EXHIBIT B***

### ***Measurement Report***

# **MEASUREMENT REPORT of CORDLESS TELEPHONE**

**Applicant :** DBTEL INCORPORATED  
**Model :** DB-8132  
**EUT :** 900 MHz Analog Cordless Phone with CIDCW  
**FCC ID :** BW3DB-8132  
**Report No. :** D0415902

Test by :

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

**TEL : 886-2-27881332      FAX : 886-2-27857408**  
**No. 5-3, Lane 21, Yen Chiu Yuan Rd., Sec. 4, Taipei, 11521 Taiwan R.O.C.**

# CERTIFICATION

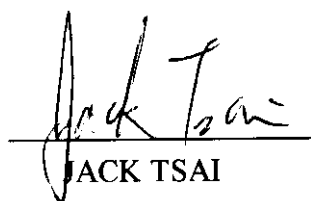
**We here by verify that:**

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.**, No. 5-3, Lane 21, Yen-Chiu-Yuan Rd., Sec. 4, Taipei, 11521 Taiwan, R.O.C. Also, we attest to the accuracy of each.

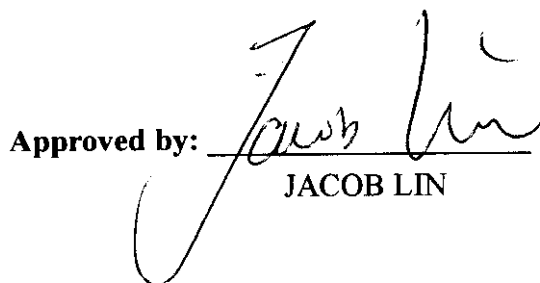
We further submit that the energy emitted by the sample EUT tested as described in the report is **in compliance with** the technical requirements set forth in the FCC Rules Part 15 Subpart C Section 15.249.

**Applicant** : DBTEL INCORPORATED  
**Model** : DB-8132  
**EUT** : 900 MHz Analog Cordless Phone with CIDCW  
**FCC ID** : BW3DB-8132  
**Report No.** : D0415902  
**Test Date** : Oct. 31, 1998

Prepared by:

  
JACK TSAI

Approved by:

  
JACOB LIN

Test by :

**Training Research Co., Ltd.****TEL: 886-2-27881332****FAX: 886-2-7857408****No. 5-3, Lane 21, Yen Chiu Yuan Rd., Sec. 4, Taipei, 11521 Taiwan R.O.C.**

# Tables of Contents

<b>Tables Of Contents.....</b>	<b>3</b>
 <b>I. GENERAL</b>	
1.1 Introduction.....	5
1.2 Description of EUT.....	5
1.3 Description of Support Equipment.....	5
1.4 Configuration of System Under Test.....	6
1.5 Test Procedure.....	6
1.6 Location of the Test Site.....	6
1.7 General Test Condition.....	7
 <b>II. Conducted Emissions Measurements</b>	
2.1 Test Condition & Setup.....	8
2.2 List of Test Instruments.....	8
2.3 Test configuration.....	9
2.4 Test Result of Conducted Emissions.....	10
 <b>III. Radiated Emissions Measurements</b>	
3.1 Test Condition & Setup.....	13
3.2 List of Test Instruments.....	14
3.3 Test Instruments Configuration.....	15
3.4 Test Result of Radiated Emissions .....	17
3.5 Test Result of Spurious Radiated Emissions.....	18
 <b>V. Verify Frequencies and Channels.....</b>	 <b>34</b>
 <b>TABLES</b>	
Table 1 Power Line Conducted Emissions [Charge Mode].....	10
Table 2 Power Line Conducted Emissions [Channel 01].....	11
Table 3 Power Line Conducted Emissions [Channel 20].....	12
Table 4 Open Field Fundamental Emissions.....	17
Table 5 Open Field Radiated Emissions [Base Channel 01 Horizontal 30MHz – 1GHz].....	18

Table 6	Open Field Radiated Emissions [Base Channel 01 Horizontal 1GHz – 18GHz].....	19
Table 7	Open Field Radiated Emissions [Base Channel 01 Vertical 30MHz – 1GHz].....	20
Table 8	Open Field Radiated Emissions [Base Channel 01 Vertical 1GHz – 18GHz].....	21
Table 9	Open Field Radiated Emissions [Base Channel 20 Horizontal 30MHz – 1GHz].....	22
Table 10	Open Field Radiated Emissions [Base Channel 20 Horizontal 1GHz – 18GHz].....	23
Table 11	Open Field Radiated Emissions [Base Channel 20 Vertical 30MHz – 1GHz].....	24
Table 12	Open Field Radiated Emissions [Base Channel 20 Vertical 1GHz – 18GHz].....	25
Table 13	Open Field Radiated Emissions [Handset Channel 01 Horizontal 30MHz – 1GHz].....	26
Table 14	Open Field Radiated Emissions [Handset Channel 01 Horizontal 1GHz – 18GHz].....	27
Table 15	Open Field Radiated Emissions [Handset Channel 01 Vertical 30MHz – 1GHz].....	28
Table 16	Open Field Radiated Emissions [Handset Channel 01 Vertical 1GHz – 18GHz].....	29
Table 17	Open Field Radiated Emissions [Handset Channel 20 Horizontal 30MHz – 1GHz].....	30
Table 18	Open Field Radiated Emissions [Handset Channel 20 Horizontal 1GHz – 18GHz].....	31
Table 19	Open Field Radiated Emissions [Handset Channel 20 Vertical 30MHz – 1GHz].....	32
Table 20	Open Field Radiated Emissions [Handset Channel 20 Vertical 1GHz – 18GHz].....	33
Table 21	Verify the Frequency Pairs.....	34
Appendix A	.....	35

## **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 Phone with CIDCW  
**Model** : DB-8132  
**FCC ID** : BW3DB-8132  
**Frequency Range** : Base: 902.30 – 906.10 MHz  
Handset: 923.90 – 927.70 MHz  
**Support Channel** : 20 Channel  
**Power Type** : Base Powered by 120 Vac 60 Hz / 9 Vdc 300 mA  
Handset powered by 3.6 V / 610 mAh.  
**Power Cord** : Nonshielded  
**Data Cable** : RJ-11C x 1 => Nonshielded, 7' long, Plastic hoods, No bead  
Headset & Mic. => Nonshielded, 217cm long, Plastic hoods,  
No bead  
**Applicant** : DBTEL INCORPORATED  
29 Tzu Chiang Street, Tu-Cheng, Taipei Hsien,  
Taiwan, R. O. C.

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

In order to construct the minimum testing, following equipment were used as the support units.

**PABX** : **King Design**  
**Model No.** : KD8705-A  
**Serial No.** : GVI01101186  
**Power type** : 110 VAC 50/60Hz  
**Power cord** : Non - Shielded

### 1.4 Configuration of System Under Test

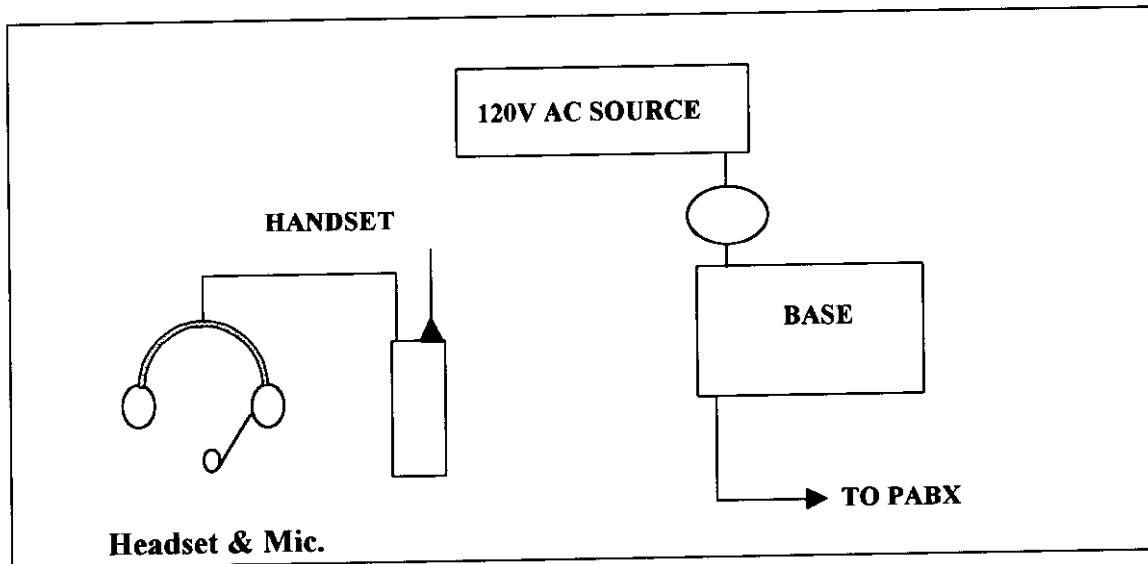


Fig. 1 Configuration of system under test

During testing the EUT was connected to PABX. 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, open-field test site maintained by Training Research Co., Ltd. No. 5-3, Lane 21, Yen-Chiu-Yuan Rd., Sec. 4, Taipei, 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. 1F, No. 569, Chung Hsiao E. Sec. 7, Taipei, 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, Ch20 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**

Manufacturer	Device	Model	Input impedance
Hewlett Packard	100Hz-1.5GHz Spectrum Analyzer	HP8591EM	50.00
EMCO	Line Impedance Stabilization Network	3825/2	50.00
TRC	Shielded Room	TRC-SR!	N/A

## 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. :** DB-8132

**EUT :** 900MHz Analog Cordless Phone with CIDCW

**Table 1 Power Line Conducted Emissions (Charge Mode)**

Power	Connected	Emissions	FCC	Class B
Conductor	Frequency (KHz)	Peak Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
Line 1	452.00	32.61	48.00	-15.39
	470.00	30.74	48.00	-17.26
	496.00	30.46	48.00	-17.54
	524.00	28.74	48.00	-19.26
	538.00	28.62	48.00	-19.38
	556.00	26.98	48.00	-21.02
	568.00	28.04	48.00	-19.96
	590.00	24.23	48.00	-23.77
	637.00	23.27	48.00	-24.73
	3590.00	25.40	48.00	-22.60
LINE 2	486.00	30.21	48.00	-17.79
	524.00	28.21	48.00	-19.79
	545.00	26.52	48.00	-21.48
	556.00	26.35	48.00	-21.65
	568.00	23.60	48.00	-24.40
	590.00	23.27	48.00	-24.73
	612.00	22.85	48.00	-25.15
	645.00	21.65	48.00	-26.35
	1307.00	22.85	48.00	-25.15
	3590.00	25.23	48.00	-22.77

### 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 01)

Power	Connected	Emissions	FCC	Class B
Conductor	Frequency (KHz)	Peak Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
Line 1	455.00	22.58	48.00	-25.42
	480.00	31.76	48.00	-16.24
	502.00	30.78	48.00	-17.22
	530.00	29.24	48.00	-18.76
	560.00	29.08	48.00	-18.92
	579.00	28.20	48.00	-19.80
	612.00	24.85	48.00	-23.15
	628.00	24.67	48.00	-23.33
	705.00	22.61	48.00	-25.39
	3590.00	22.90	48.00	-25.10
LINE 2	452.00	32.64	48.00	-15.36
	470.00	30.64	48.00	-17.36
	483.00	30.93	48.00	-17.07
	502.00	30.09	48.00	-17.91
	521.00	29.63	48.00	-18.37
	538.00	28.50	48.00	-19.50
	579.00	26.88	48.00	-21.12
	590.00	25.25	48.00	-22.75
	612.00	23.58	48.00	-24.42
	633.00	25.57	48.00	-22.43

## 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 3 Power Line Conducted Emissions (Channel 20)

Power	Connected	Emissions	FCC	Class B
Conductor	Frequency (KHz)	Peak Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
Line 1	461.00	32.95	48.00	-15.05
	489.00	31.28	48.00	-16.72
	505.00	30.42	48.00	-17.58
	538.00	28.44	48.00	-19.56
	549.00	28.13	48.00	-19.87
	582.00	27.26	48.00	-20.74
	601.00	25.77	48.00	-22.23
	637.00	24.43	48.00	-23.57
	3590.00	26.63	48.00	-21.37
	24120.00	22.32	48.00	-25.68
LINE 2	452.00	32.15	48.00	-15.85
	473.00	29.92	48.00	-18.08
	486.00	23.84	48.00	-24.16
	515.00	28.50	48.00	-19.50
	530.00	28.05	48.00	-19.95
	564.00	28.24	48.00	-19.76
	597.00	24.07	48.00	-23.93
	615.00	22.97	48.00	-25.03
	1324.00	23.18	48.00	-24.82
	3590.00	25.65	48.00	-22.35

## 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.

### III. Radiated Emissions Measurements

#### 3.1 Test Condition & Setup

Prior to open-field testing, the EUT was placed in a shielded enclosure and scanned at a close 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 open-field 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, open-field test site. 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 8594EM Spectrum Analyzer, EMCO whole range Antenna is used to measure frequency from 30 MHz to 1GHz. The final test is used the spectrum HP 8594EM 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 GMHz.

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 polarizations.

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 , HP8568b 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 (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) at the appropriate frequency.

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

$$F_{la}(\text{dBuV/m}) = F_{lr}(\text{dBuV}) + \text{Correction Factors}$$

$F_{la}$  : Actual Field Intensity

$F_{lr}$  : Reading of the Field Intensity

$$\text{Correction Factors} = \text{Antenna Factor} + \text{Cable Loss}$$

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

$$F_{la}(\text{dBuV/m}) = F_{lr}(\text{dBuV}) + \text{Correction Factor}$$

$F_{la}$  : Actual Field Intensity

$F_{lr}$  : 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	.100Hz – 1.5GHz Spectrum Analyzer	HP8568B	50.00
Hewlett Packard	.10KHz – 1GHz Quasi-peak Adapter	HP85650A	50.00
Hewlett Packard	.20Hz – 2GHz RF Preselector	HP85685A	50.00
Hewlett Packard	.50KHz – 22GHz Spectrum Analyzer	HP8592A	50.00
Hewlett Packard	.9KHz – 2.9GHz Spectrum Analyzer	HP8594EM	50.00

### 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.** : DB-8132  
**EUT** : 900MHz Analog Cordless Phone with CIDCW

**Table4 Open Field Fundamental Emissions**

Channel	Frequency (MHz)	A.P. (H/V)	A.H. (CM)	Table (degree)	Amplitude (Peak ) (dBuV/m)	Limit (dBuV)	Margin (dBuV)
Base 01	902.300	H	100.00	225.00	61.43	94.00	-32.57
		V	100.00	310.00	58.95	94.00	-35.05
Base 20	906.108	H	100.00	20.00	64.97	94.00	-29.03
		V	100.00	215.00	62.08	94.00	-31.92
Handset 01	923.908	H	100.00	195.00	63.15	94.00	-30.85
		V	100.00	202.00	71.13	94.00	-22.87
Handset 20	927.708	H	100.00	18.00	63.79	94.00	-30.21
		V	100.00	307.00	67.96	94.00	-26.04

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 polarizations, EUT orientation, etc. are recorded on the following.

**Model No.** : DB-8132

**EUT** : 900MHz Analog Cordless Phone with CIDCW

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

Radiated Emission				Correction Factors	Corrected Amplitude (dBuV/m)	FCC Class B (3 M)	
Frequency (MHz)	Amplitude (dBuV/m)	Ant. H. (cm)	Table (°)	(dB)		Limit (dBuV/m)	Margin (dB)
40.000	39.10	3.01	257	-20.25	18.85	40.00	-21.15
160.000	46.96	1.00	251	-22.80	24.16	43.50	-19.34
389.990	52.99	3.02	7	-13.47	39.52	46.00	-6.48
399.990	42.23	3.02	12	-13.07	29.16	46.00	-16.84
451.150	54.73	1.00	132	-10.18	44.55	46.00	-1.45
467.300	38.25	1.00	183	-10.85	27.40	46.00	-18.60
479.780	35.89	1.00	278	-10.53	25.36	46.00	-20.64
***							

Note:

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



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

Radiated Emission				Correction Factors	Distance	Corrected Amplitude	FCC Class B (3 M)	
Frequency (GHz)	Amplitude (dBuV/m)	Ant. H. (cm)	Table (°)	( dB )	( dB )	(dBuV/m)	Limit (dBuV/m)	Margin (dB)
1.867	60.64	100.00	169	-8.67	-9.54	42.43	54	-11.57
2.793	64.47	100.00	28	-6.84	-9.54	48.09	54	-5.91
3.737	60.27	100.00	155	-5.64	-9.54	45.09	54	-8.91
4.672	49.39	100.00	312	3.91	-9.54	43.76	54	-10.24

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	Corrected Amplitude (dBuV/m)	FCC Class B ( 3 M )	
Frequency (MHz)	Amplitude (dBuV/m)	Ant. H. (cm)	Table ( ° )	(dB)		Limit (dBuV/m)	Margin (dB)
40.000	53.03	1.00	229	-20.25	32.78	40.00	-7.22
160.000	40.94	1.00	187	-22.80	18.14	43.50	-25.36
389.990	52.72	1.00	7	-13.47	39.25	46.00	-6.75
399.990	41.14	1.00	140	-13.07	28.07	46.00	-17.93
451.150	54.00	1.00	73	-10.18	43.82	46.00	-2.18
467.300	39.22	1.00	119	-10.85	28.37	46.00	-17.63
479.780	38.10	3.02	31	-10.53	27.57	46.00	-18.43
***							

Note:

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

Table 9. Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 20, Base Horizontal]

Radiated Emission				Correction Factors	Corrected Amplitude (dBuV/m)	FCC Class B (3 M)	
Frequency (MHz)	Amplitude (dBuV/m)	Ant. H. (cm)	Table (°)	(dB)		Limit (dBuV/m)	Margin (dB)
40.000	38.76	3.02	69	-20.25	18.51	40.00	-21.49
120.00	40.37	1.00	254	-23.26	17.11	43.50	-26.39
209.680	36.50	3.02	28	-20.08	16.42	43.50	-27.08
250.400	35.55	3.02	116	-18.66	16.89	46.00	-29.11
372.280	39.25	1.00	277	-13.67	25.58	46.00	-20.42
449.990	40.40	1.00	22	-10.11	30.29	46.00	-15.71
453.050	50.75	4.00	134	-10.29	40.46	46.00	-5.54
***							

Note:

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

Table 10. Open Field Radiated Emissions For 1GHz ~ 18GHz [Channel 20, Base Horizontal]

Radiated Emission				Correction Factors	Distance	Corrected Amplitude	FCC Class B ( 3 M )	
Frequency (GHz)	Amplitude (dBuV/m)	Ant. H. (cm)	Table ( ° )	( dB )	( dB )	(dBuV/m)	Limit (dBuV/m)	Margin (dB)
1.867	60.64	100.00	199	-8.67	-9.54	42.43	54	-11.57
2.802	63.97	100.00	168	-6.84	-9.54	47.59	54	-6.41
3.755	59.77	100.00	211	-5.64	-9.54	44.59	54	-9.41
4.690	48.39	100.00	306	3.91	-9.54	42.76	54	-11.24

Note:

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

Table 11. Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 20, Base Vertical]

Radiated Emission				Correction Factors	Corrected Amplitude (dBuV/m)	FCC Class B ( 3 M )	
Frequency (MHz)	Amplitude (dBuV/m)	Ant. H. (cm)	Table ( ° )	(dB)		Limit (dBuV/m)	Margin (dB)
40.000	53.23	1.00	258	-20.25	32.98	40.00	-7.02
120.000	43.69	1.00	136	-23.26	20.43	43.50	-23.07
209.680	37.25	1.00	192	-20.08	17.17	43.50	-26.33
250.400	36.46	1.00	1	-18.66	17.80	46.00	-28.20
372.280	40.06	1.00	41	-13.67	26.39	46.00	-19.61
449.990	39.31	1.00	1	-10.11	29.20	46.00	-16.80
453.050	53.00	1.00	95	-10.29	42.71	46.00	-3.29
***							

Note:

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

Table 12. Open Field Radiated Emissions for 1GHz ~ 18GHz [Channel 20, Base Vertical]

Radiated Emission				Correction Factors	Distance	Corrected Amplitude	FCC Class B ( 3 M )	
Frequency (GHz)	Amplitude (dBuV/m)	Ant. H. (cm)	Table ( ° )	( dB )	( dB )	(dBuV/m)	Limit (dBuV/m)	Margin (dB)
1.867	66.33	100.00	177	-8.67	-9.54	48.12	54	-5.88
2.802	65.83	100.00	18	-6.84	-9.54	49.45	54	-4.55
3.755	59.63	100.00	111	-5.64	-9.54	44.45	54	-9.55
4.690	48.08	100.00	355	3.91	-9.54	42.45	54	-11.55

Note:

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

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

Radiated Emission				Correction Factors	Corrected Amplitude	FCC Class B (3 M)	
Frequency (MHz)	Amplitude (dBuV/m)	Ant. H. (cm)	Table (°)	(dB)	(dBuV/m)	Limit (dBuV/m)	Margin (dB)
171.820	50.53	3.02	232	-22.11	28.42	43.50	-15.08
329.990	36.29	1.00	341	-14.39	21.90	46.00	-24.10
339.990	36.31	1.00	323	-14.64	21.67	46.00	-24.33
445.800	36.46	1.00	254	-8.99	27.47	46.00	-18.53
449.990	38.78	3.02	178	-10.11	28.67	46.00	-17.33
461.950	40.28	1.00	60	-10.75	29.53	46.00	-16.47
469.990	34.40	3.02	1	-10.90	23.50	46.00	-22.50
***							

Note:

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

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

Radiated Emission				Correction Factors	Distance	Corrected Amplitude	FCC Class B ( 3 M )	
Frequency (GHz)	Amplitude (dBuV/m)	Ant.H. (cm)	Table ( ° )	( dB )	( dB )	(dBuV/m)	Limit (dBuV/m)	Margin (dB)
1.808	50.30	100.00	321	-8.67	-9.54	32.09	54	-21.91
2.768	50.97	100.00	258	-6.84	-9.54	34.59	54	-19.41
2.798	54.31	100.00	144	-6.84	-9.54	37.93	54	-16.07
3.698	50.77	100.00	269	-5.64	-9.54	35.59	54	-18.41

Note:

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



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

Radiated Emission				Correction Factors	Corrected Amplitude (dBuV/m)	FCC Class B (3 M)	
Frequency (MHz)	Amplitude (dBuV/m)	Ant. H. (cm)	Table (°)	(dB)		Limit (dBuV/m)	Margin (dB)
171.820	40.78	1.00	209	-22.11	18.67	43.50	-24.83
329.990	36.21	3.02	126	-14.39	21.82	46.00	-24.18
339.990	40.23	3.02	270	-14.64	25.59	46.00	-20.41
445.800	51.69	1.00	16	-8.99	42.70	46.00	-3.30
449.990	38.96	3.02	37	-10.11	28.85	46.00	-17.15
461.950	38.49	1.00	323	-10.75	27.74	46.00	-18.26
469.990	34.62	1.00	2	-10.90	23.72	46.00	-22.28
***							

Note:

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

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

Radiated Emission				Correction Factors	Distance	Corrected Amplitude	FCC Class B ( 3 M )	
Frequency (MHz)	Amplitude (dBuV/m)	Ant.H. (cm)	Table ( ° )	( dB )	( dB )	(dBuV/m)	Limit (dBuV/m)	Margin (dB)
1.808	52.14	100.00	31	-8.67	-9.54	33.93	54	-20.07
2.768	50.97	100.00	268	-6.84	-9.54	34.59	54	-19.41
2.798	53.14	100.00	177	-6.84	-9.54	36.76	54	-17.24
3.698	57.44	100.00	290	-5.64	-9.54	42.26	54	-11.74

Note:

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

Table 17. Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 20, Handset Horizontal]

Radiated Emission				Correction Factors	Corrected Amplitude	FCC Class B ( 3 M )	
Frequency (MHz)	Amplitude (dBuV/m)	Ant. H. (cm)	Table ( ° )	(dB)	(dBuV/m)	Limit (dBuV/m)	Margin (dB)
171.820	50.64	3.01	37	-22.11	28.53	43.50	-14.97
389.990	52.60	1.00	7	-13.47	39.13	46.00	-6.87
399.990	43.45	3.01	123	-13.07	30.38	46.00	-15.62
429.990	49.15	3.01	193	-9.77	39.38	46.00	-6.62
447.710	36.34	1.00	258	-9.50	26.84	46.00	-19.16
463.860	40.64	1.00	59	-10.78	29.86	46.00	-16.14
895.413	31.65	1.00	299	-14.02	17.63	46.00	-28.37
***							

Note:

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

Table 19. Open Field Radiated Emissions for 30MHz ~ 1GHz [Channel 20, Handset Vertical]

Radiated Emission				Correction Factors	Corrected Amplitude (dBuV/m)	FCC Class B (3 M)	
Frequency (MHz)	Amplitude (dBuV/m)	Ant. H. (cm)	Table (°)	(dB)		Limit (dBuV/m)	Margin (dB)
171.820	38.96	1.00	62	-22.11	16.85	43.50	-26.65
389.990	52.58	1.00	6	-13.47	39.11	46.00	-6.89
399.990	43.45	3.02	7	-13.07	30.38	46.00	-15.62
429.990	51.81	3.02	257	-9.77	42.04	46.00	-3.96
447.710	50.86	1.00	299	-9.50	41.36	46.00	-4.64
463.860	40.69	1.00	289	-10.78	29.91	46.00	-16.09
895.413	44.21	1.00	17	-14.02	30.19	46.00	-15.81
***							

Note:

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

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

Radiated Emission				Correction Factors	Distance	Corrected Amplitude	FCC Class B ( 3 M )	
Frequency (GHz)	Amplitude (dBuV/m)	Ant.H. (cm)	Table ( ° )	( dB )	( dB )	(dBuV/m)	Limit (dBuV/m)	Margin (dB)
1.853	53.64	100.00	352	-8.67	-9.54	35.43	54	-18.57
2.805	52.47	100.00	158	-6.84	-9.54	36.09	54	-17.91
3.705	56.94	100.00	18	-5.64	-9.54	41.76	54	-12.24
4.635	41.89	100.00	238	3.91	-9.54	36.26	54	-17.74

Note:

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

## V. Verify Frequencies and Channels

Table 21. Verify the Frequency Pairs

Channel	Handset (MHz)	Base (MHz)	Channel	Handset (MHz)	Base (MHz)
1	923.900	902.300	14	926.500	904.900
2	924.100	902.500	15	926.700	905.100
3	924.300	902.700	16	926.900	905.300
4	924.500	902.900	17	927.100	905.500
5	924.700	903.100	18	927.300	905.700
6	924.900	903.300	19	927.500	905.900
7	925.100	903.500	20	927.700	906.100
8	925.300	903.700			
9	925.500	903.900			
10	925.700	904.100			
11	925.900	904.300			
12	926.100	904.500			
13	926.300	904.700			

Note:

1. 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 65,530 possible security codes.

### Verify the “Automatic Channel Selection Mechanism”

1. Using another cordless phone (EUT 1) which was set at channel one (43.72), then using 2.5 kHz modulation signal to the handset's microphone.
2. Turn on the handset of EUT 2, recorded the frequency of base.
3. Then push the “Channel” button which is set for channel - scanning and listened to the handset if the 2.5 kHz can heard on the handset of EUT 2.
4. Repeated step 3 more than 30 times, then checked if channel one get recorded.
5. Adjusted the channel to 15, repeated all step again.

**Result : EUT 2 was unable to occupy the channel being used.**

## **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

11:38:37 NOV 06, 1998

REF -20.0 dBm ATTEN 10 dB

CNTR 902.0304 MHz  
-85.67 dBm

PEAK  
LOG  
10  
dB/

MARKER  
NORMAL

MARKER  
DELTA

MKR CNT  
ON OFF

MKNOISE  
ON OFF

MARKERS  
OFF

MORE  
1 of 2

COUNTER  
902.0304 MHz  
-86.14 dBm

WA SB  
SC FC  
CORR

CENTER 902.000 MHz  
#RES BW 30 kHz

VBW 30 kHz

SPAN 1.000 MHz  
SWP 75 msec

11:41:47 NOV 06, 1998

REF -20.0 dBm ATTEN 10 dB

CNTR 902.2984 MHz  
-33.89 dBm

PEAK  
LOG  
10  
dB/

MARKER  
→ CF

MARKER  
DELTA

NEXT  
PEAK

NEXT PK  
RIGHT

NEXT PK  
LEFT

PEAK  
EXCURSN

CENTER  
902.000 MHz

WA SB  
SC FC  
CORR

CENTER 902.000 MHz  
#RES BW 30 kHz

VBW 30 kHz

SPAN 1.000 MHz  
SWP 75 msec

Appendix A-1  
Check Frequency on 902 - 928MHz



11:48:10 NOV 06, 1998

CNTR 928.0053 MHz  
-83.88 dBm

REF -20.0 dBm ATTEN 10 dB

PEAK  
LOG  
10  
dB/

MARKER  
NORMAL

MARKER  
DELTA

MKR CNT  
ON OFF

MKNOISE  
ON OFF

MARKERS  
OFF

MORE  
1 of 2

WA SB  
SC FC  
CORR

CENTER 928.000 MHz  
#RES BW 30 kHz

VBW 30 kHz

SPAN 1.000 MHz  
SWP 75 msec

11:48:40 NOV 06, 1998

CNTR 927.7009 MHz  
-26.96 dBm

REF -20.0 dBm ATTEN 10 dB

PEAK  
LOG  
10  
dB/

MARKER  
→ CF

MARKER  
DELTA

NEXT  
PEAK

NEXT PK  
RIGHT

NEXT PK  
LEFT

PEAK  
EXCURSN

WA SB  
SC FC  
CORR

CENTER 928.000 MHz  
#RES BW 30 kHz

VBW 30 kHz

SPAN 1.000 MHz  
SWP 75 msec

Appendix A-2  
Check Frequency on 902 - 928MHz