

***EXHIBIT B***

***Test Report***

Report No.

M1215638

Specifications  
Test Method

FCC Part 15 - Notification  
ANSI C63.4 1992

Applicant  
address

NO. 85, CHANG HSING FIRST STREET, TAI-TZU VILLAGE  
JEN-TE HSIAN, TAINAN HSIEN, TAIWAN

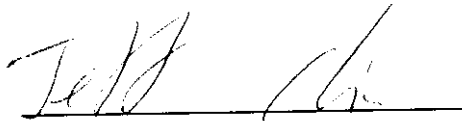
Applicant  
Items tested  
Model No.

WA-GOL INDUSTRIAL CO., LTD  
WIRELESS MICROPHONE RECEIVER  
MR-F09

Results  
Sample received  
date

As detailed within this report  
06 / 08 /1998 (month / day / year )

Prepared by



project engineer

Authorized by



Vice General Manager  
(Jacob Lin )

Issue date

(month / day / year )

**Modifications**

**None**

Tested by  
Office and  
Open site at

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★ FCC ID : JEBMR-F09

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## ***Chapter 1 Introduction***

### ***Description of EUT :***

These products are professionally designed wireless microphone and receiver system made-up of diverse circuit. They can receive two frequencies from 174 MHz to 216 MHz. It is a dual channel receiver and worn by a performer and other participants in a program, filming, reporting ... etc.

### ***Connection of EUT :***

- (1)Connect the EUT's audio output to guitar amplifier by an audio cable.
- (2)Plug the adapter into the EUT.
- (3)Pull out the antenna vertically .

### ***Test method :***

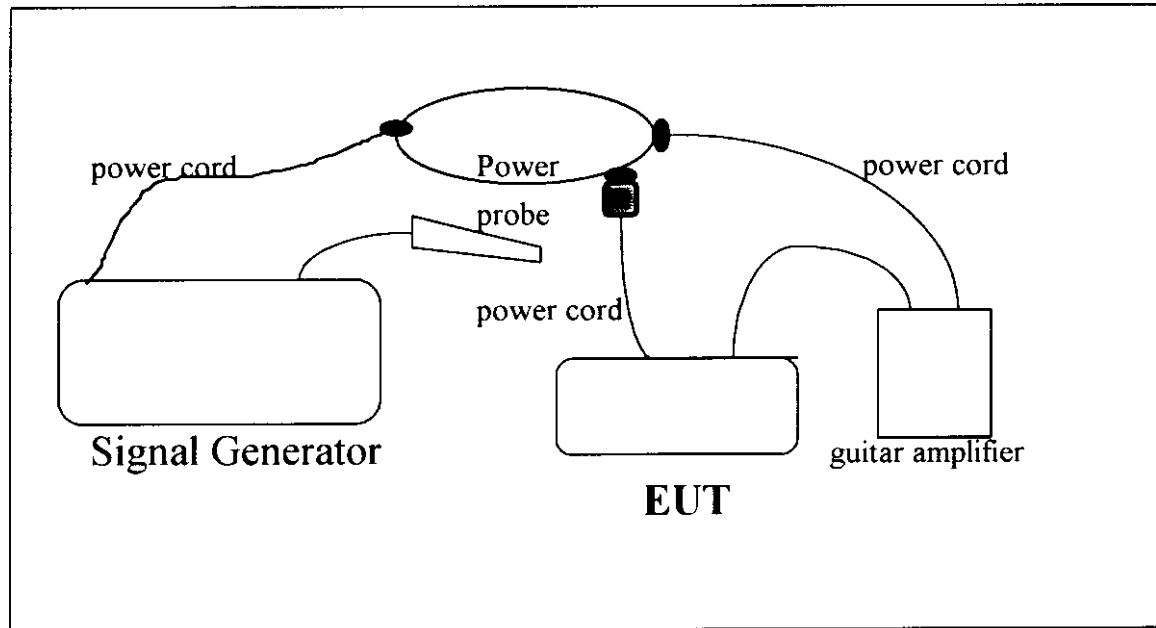
There were three EUTs tested which are operated at 174.6MHz, 195.6MHz and 215.6 MHz separately. Turn on the receiver and the speaker . There is a signal generator connected with a field probe , which can transmit the receiving frequency , put near the EUT .

(If the emission is close to the ambience, the resolution BW and view resolution will be reduced and the data will be recorded by detection of maximum hold peak mode.)

### ***Statement of transition provision for compliance with the rules***

The EUT receives the signal which only send from the wireless microphone. The EUT won't be influenced by the transition provision, it will be continue to comply with the regulations of the FCC Part 15 . ( The relative wireless microphone FCC ID : JEBMX-66E ).

***The testing configuration of test setup is showing in the next page.***

**Configuration of test setup****Connections :**

- \* The Adapter 120Vac/12Vdc,400 mA, 190 cm long, non-shielded.
- \* The Audio cable dual head 6.3Ø, 126 cm, non-shielded.

*List of support equipment*

**Conducted (Radiated) test :**

**Guitar Amplifier :** Dragon (KIKUTANI MUSIC COL,LTD. )

Model No. : GA-10 ( RMS-100 )

Power type : 110VAC, 60Hz

Power code : Non-shield, 1.2m long

⊙

**Field Probe :** HP Field Probe 30MHz~1GHz

Model No. : HP11940A

Serial No. : 2650A03038

**Signal Generator :** HP 9KHz~4000MHz

Model No. : 8648D

Serial No. : 3613A00117

Power type : 110vac 60Hz

Power cord : Non - Shielded

## Chapter 2 Conducted emission test

### Test condition and set up :

All the equipment is placed and setup according to the ANSI C63.4 - 1992 . The EUT is assembled on a wooden table which is 80 cm high , is placed 40 cm from the back-wall which is a vertical conducting plane . One LISN is for EUT ,the other LISN is for support equipment. They are all placed on the conductive ground .The EUT's LISN is connected to a line switch box for selecting L1 or L2 ,then connect to a preamplifier and spectrum.

The spectrum scans from 450KHz to 30MHz . Conducted emission levels are detected at max. peak mode . But if the max. peak mode failed ,it will be measured by CISPR's quasi-peak detection mode .

While testing, there is a worst-emission plot printed at peak detection mode ,and there are more than 6 highest emissions relative to limit recorded. The plot is kept as the original data, not included in test report .

### List of test Instrument :

Instrument Name	Model No.	Brand	Serial No.	Calibration Date	
				Last time	Next time
Spectrum analyzer	8591EM	H P	3619A00821	08/29/97	08/29/98
LISN (EUT)	3825/2	EMCO	9411-2284	05/15/98	05/15/99
LISN (Support E.)	3825/2	EMCO	9210-2007	05/15/98	05/15/99
Preamplifier	8447F	H P	2944A03706	05/13/98	05/15/99
Line switch box	AC1-003	TRC	-----	05/15/98	05/15/99
Line selector	AC1-002	TRC	-----	05/15/98	05/15/99

The level of confidence of 95% .the uncertainty of measurement of conducted emission is  $\pm 2.4$  dB .

Test Result : Pass (Appendix A)

### Chapter 3 Radiated emission test

#### Test condition and set up :

**Pretest :** Prior to the final test (OATS test), the EUT is placed in a shielded enclosure, GTEM, and scan from 30MHz to 1GHz. This is done to ensure the radiation exactly emits from the EUT.

**Final test :** Final radiation measurements is made on a **3 - meter, open-field** test site. The EUT is placed on a nonconductive table which is 0.8 m height, the top surface is 1.0 x 1.5 meter. All the placement is according to ANSI C63.4 - 1992.

The spectrum is examined from 30 MHz to 1000 MHz measured by HP spectrum.

The EMCO whole range Antenna is used to measure frequency from 30 MHz to 1GHz. The final test is used the spectrum HP 8594EM .

Measure more than six top marked frequencies generated from pretest by computer step by step at each frequency . The EUT is rotated 360 degrees, and antenna is raised and lowered from 1 to 4 meter to find the maximum emission levels. The antenna is used with both horizontal and vertical polarization.

Appropriated preamplifier which is made by TRC is used for improving sensitivity and precautions is taken to avoid overloading . The spectrum analyzer's 6dB bandwidth is set to 120 K Hz , and the EUT is measured at quasi-peak mode.

If the emission is close to the frequency band of ambience ,the data will be rechecked by the tester and the corrected data will be written in the test data sheet. If the emission is just within the ambience ,the data from GTEM will be taken as the final data.

#### List of test Instrument :

Instrument name	Model No.	Brand	Serial No.	Calibration Date	
				Last	Next
Spectrum analyzer	8568B	H P	3004A18617	05/15/98	05/15/99
Quasi-peak Adapter	85650A	H P	2521A00984	05/15/98	05/15/99
RF Pre-selector	85685A	H P	2947A01011	05/15/98	05/15/99
Spectrum analyzer	8594EM	H P	3619A00198	08/07/98	08/07/99
Antenna(30M-2G Hz)	3142	EMCO	9610-1094	10/30/97	10/30/98
Open test side (Antenna ,Amplify, cable calibrated together )				05/15/98	05/15/99

The level of confidence of 95% ,the uncertainty of measurement of radiated emission is  $\pm 4.96$  dB .

**Test Result : Pass (All emissions are under limit 20 dB)**



## Appendix A

### Conducted Emission Test Result ( Frequency 174.6MHz )

Testing room : Temperature : 25 ° C      Humidity : 70 % RH

#### Line 1

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV/m)	Margin (dB)
0.450	29.75	48.00	-18.25
16.923	18.93	48.00	-29.07
18.971	19.22	48.00	-28.78
21.529	20.19	48.00	-27.81
20.405	21.69	48.00	-26.31
22.915	23.24	48.00	-24.76
23.280	25.27	48.00	-22.73
24.009	24.58	48.00	-23.42
25.467	18.71	48.00	-29.29
26.122	17.71	48.00	-30.29

#### Line 2

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
0.450	38.17	48.00	-9.83
1.189	17.01	48.00	-30.99
7.970	16.36	48.00	-31.64
16.191	18.80	48.00	-29.20
17.289	19.30	48.00	-28.70
18.532	18.26	48.00	-29.74
21.675	22.19	48.00	-25.81
21.748	23.34	48.00	-24.66
23.134	26.07	48.00	-21.93
24.009	25.42	48.00	-22.58

( Frequency 195.6 MHz )

**Line 1**

<b>Frequency (MHz)</b>	<b>Amplitude (dBuV)</b>	<b>Limit (dBuV/m)</b>	<b>Margin (dB)</b>
0.450	30.83	48.00	-17.17
11.351	17.89	48.00	-30.11
16.557	17.81	48.00	-30.19
20.798	18.73	48.00	-29.27
21.529	19.34	48.00	-28.66
21.894	21.68	48.00	-26.32
23.061	22.12	48.00	-25.88
23.572	23.59	48.00	-24.41
24.009	25.05	48.00	-22.95
26.632	17.58	48.00	-30.42

**Line 2**

<b>Frequency (MHz)</b>	<b>Amplitude (dBuV)</b>	<b>Limit (dBuV)</b>	<b>Margin (dB)</b>
0.450	37.50	48.00	-10.50
1.189	15.88	48.00	-32.12
18.971	18.79	48.00	-29.21
20.944	18.52	48.00	-29.48
21.529	19.98	48.00	-28.02
22.405	21.83	48.00	-26.17
23.061	23.04	48.00	-24.96
23.353	23.18	48.00	-24.82
24.009	25.45	48.00	-22.55
27.578	17.56	48.00	-30.44

*( Frequency 215.6 MHz )****Line 1***

<i>Frequency (MHz)</i>	<i>Amplitude (dBuV)</i>	<i>Limit (dBuV/m)</i>	<i>Margin (dB)</i>
0.405	32.89	48.00	-15.11
1.189	17.61	48.00	-30.39
15.385	17.27	48.00	-30.73
21.529	21.09	48.00	-26.91
22.186	23.68	48.00	-24.32
22.988	24.41	48.00	-23.59
23.426	24.55	48.00	-23.45
24.009	24.25	48.00	-23.75
24.738	20.04	48.00	-27.96
25.758	17.78	48.00	-30.22

***Line 2***

<i>Frequency (MHz)</i>	<i>Amplitude (dBuV)</i>	<i>Limit (dBuV)</i>	<i>Margin (dB)</i>
0.450	38.32	48.00	-9.68
15.971	18.65	48.00	-29.35
16.996	19.48	48.00	-28.52
21.602	21.09	48.00	-26.91
21.894	22.49	48.00	-25.51
22.915	25.05	48.00	-22.95
23.207	25.54	48.00	-22.46
24.009	25.65	48.00	-22.35
24.738	19.06	48.00	-28.94
25.758	18.26	48.00	-29.74

***Final statement :***

***This test report, measurements made by TRC are traceable to the NIST.***