

Report No. : AK036297-001 Date : 2008-10-03

Application No. : LK228236(1)

Applicant : Tronicbros & Eclat Createurs Holdings

1210, 12/F, The Metropolis Tower, 10 Metropolis Drive, Hunghom,

Kowloon, Hong Kong

Sample Description : One(1) submitted sample(s) stated to be <u>Sportsman's Wireless Doorbell</u>

of Model No. DB802, DB803

Radio Frequency : 315MHz Receiver

Rating : 3 x 1.5V AA size batteries No. of submitted sample : Three (3) piece(s) ***

Date Received : 2008-09-23.

Test Period : 2008-09-24 to 2008-09-26.

Test Requested : FCC Part 15 Certification.

Test Method : 47 CFR Part 15 (10-1-07 Edition)

ANSI C63.4 - 2003

Test Result : See attached sheet(s) from page 2 to 11.

Conclusion : The submitted sample was found to comply with requirement of FCC Part 15

Subpart B.

Remark : All two models are the same in circuitry, components and construction.

Therefore, model DB802 was chosen to be the representative of the test sample.

For and on behalf of

CMA Industrial Development Foundation Limited

Authorized Signature :

Mr WONG Lap-Pong, Andrew Senior Technical Officer Electrical Division

Page 1 of 11



Report No. : AK036297-001 Date : 2008-10-03

Table of Contents

1	General Information				
	1.1	General Description			
	1.2	Location of the test site			
	1.3	List of measuring equipment	5		
2	Desc	cription of the radiated emission test			
	2.1	Test Procedure	6		
	2.2	Test Result	6		
	2.3	Radiated Emission Measurement Data	7		
3	Desc	cription of the Line-conducted Test	8		
	3.1	Test Procedure	8		
	3.2	Test Result	8		
	3.3	Graph and Table of Conducted Emission Measurement Data	8		
4	Phot	tograph	9		
	4.1	Photographs of the Test Setup for Radiated Emission and Conducted Emission	9		
	4.2	Photographs of the External and Internal Configurations of the EUT	9		
5	Sup	plementary document			
	5.1	Bandwidth	10		
	5.2	Duty cycle	10		
	5.3	Transmission time	10		
6	App	endices	11		



Report No. : AK036297-001 Date : 2008-10-03

1 General Information

1.1 General Description

The equipment under test (EUT) is a receiver for Sportsman's Wireless Doorbell. It operates at 315MHz and the oscillation of radio control is generated by a LRC circuit. The EUT is powered by 3 x 1.5V AA size batteries. There are an ON/OFF switch with volume control and a 4-way DIP switch on the EUT. The 4-way DIP switch is used to change coding to prevent interference. When the EUT received the signal, it will release sound.

The antenna is permanently attached in EUT and the radio output power is unable to adjust.

The brief circuit description is listed as follows:

- IC1, IC2 and associated circuit act as a decoder.
- IC3, IC4 and associated circuit act as a sound driver.
- IC5 and associated circuit act as a voltage regulator.



Report No. : AK036297-001 Date : 2008-10-03

1.2 Location of the test site

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at:

Ground Floor, Yan Hing Centre, 9 – 13 Wong Chuk Yeung Street, Fo Tan, Shatin, New Territories, Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 - 2003. A shielded room is located at:

Ground Floor, Yan Hing Centre, 9 – 13 Wong Chuk Yeung Street, Fo Tan, Shatin, New Territories, Hong Kong.



Report No. : AK036297-001 Date : 2008-10-03

1.3 List of measuring equipment

Equipment	Manufacturer	Model No.	Serial No.	Calibration Due Date
EMI Test Receiver	R&S	ESCI	100152	2008 October 14
Broadband Antenna	Schaffner	CBL6112B	2692	2009 January 21
Signal generator	IFR	2023B	202302/938	2009 January 24



Report No. : AK036297-001 Date : 2008-10-03

2 Description of the radiated emission test

2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 - 2003.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1 m above the ground.

A signal generator was used to radiate an unmodulated continuous wave (CW) signal to the EUT (super-regenerative receiver) at its operating frequency in order to "cohere" the characteristic broadband emissions from the receiver.

2.2 Test Result

The emissions from 30MHz to 1000MHz were investigated. The highest emissions were presented in next page.

Emissions with more than 20dB below the limit were not reported in next page.

The emissions meeting the requirement of section 15.109 are based on measurements employing the CISPR quasi-peak detector below 1000MHz and average detector for frequencies above 1000MHz.

It was found that the EUT meet the FCC requirement.



Report No. : AK036297-001 Date : 2008-10-03

2.3 Radiated Emission Measurement Data

Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Frequency	Polarity	Reading at	Antenna and	Field	Limit at 3m	Margin
(MHz)	(H/V)	3m	Cable factor	Strength	$(dB\mu V/m)$	(dB)
		$(dB\mu V/m)$	(dB)	$(dB\mu V/m)$		
312.308	Н	24.0	14.7	38.7	46.0	-7.3
313.192	Н	25.0	14.7	39.7	46.0	-6.3
314.099	Н	25.6	14.7	40.3	46.0	-5.7
315.900	Н	25.3	14.7	40.0	46.0	-6.0
316.808	Н	24.8	14.7	39.5	46.0	-6.5
633.669	Н	15.6	21.6	37.2	46.0	-8.8
634.587	Н	15.8	21.6	37.4	46.0	-8.6
635.474	Н	15.6	21.6	37.2	46.0	-8.8
949.584	V	9.7	24.3	34.0	46.0	-12.0
950.498	V	9.7	24.3	34.0	46.0	-12.0



Report No. : AK036297-001 Date : 2008-10-03

3 Description of the Line-conducted Test

3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 - 2003. The EUT was setup as described in the procedures, and both lines were measured.

3.2 Test Result

No measurement is required as the EUT is a battery-operated product.

3.3 Graph and Table of Conducted Emission Measurement Data

Not Applicable



Report No. : AK036297-001 Date : 2008-10-03

- 4 Photograph
- 4.1 Photographs of the Test Setup for Radiated Emission and Conducted Emission

For electronic filing, the photos are saved with filename Tsup1.jpg to Tsup2.jpg.

4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename ExPho1.jpg to ExPho2.jpg and InPho1.jpg to InPho2.jpg.



Report No. : AK036297-001 Date : 2008-10-03

5 Supplementary document

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

Document	Filename
ID Label/Location	LabelSmp.jpg
Block Diagram	BlkDia.pdf
Schematic Diagram	Schem.pdf
Users Manual	UserMan.pdf
Operational Description	OpDes.pdf

5.1 Bandwidth

Not Applicable

5.2 Duty cycle

Not Applicable

5.3 Transmission time

Not Applicable



Report No. : AK036297-001 Date : 2008-10-03

6 Appendices

A1.	Photos of the set-up of Radiated Emissions	1	page
A2.	Photos of External Configurations	1	page
A3.	Photos of Internal Configurations	1	page
A4.	ID Label/Location	1	page
A5.	Block Diagram	1	page
A6.	Schematics Diagram	1	page
A7.	User Manual	2	pages
A8.	Operation Description	1	page

***** End of Report *****