



國際電器認證中心有限公司 International Electrical Certification Centre Ltd.

提供電器產品測試國際認證及諮詢服務 Technical Services in Electrical Product Testing, International Certification & Information

Agent of  
  
Accredited Laboratory

  
Network Partner

 Nemko  
Qualified Independent Laboratory

# F C C - TEST REPORT

REPORT NO.: 50808-1

Address 地址: Units 602-605, 6/F., 31 Lok Yip Rd., On Lok Tsuen, Fanling, N.T., Hong Kong.  
香港新界粉嶺安樂村樂業路31號6樓602-605室  
China 中國: IECC (Guangzhou) Services Co., Ltd. 廣州時並進技術服務有限公司  
Address 地址: Flat A, 2/F, Block 3, 56 Shuiyin Road, Guangzhou, P.R. of China.  
廣州市水滸路56號3棟2A室 Postcode 郵政編號: 510075

Tel 電話: (852) 2305 2570  
Fax 傳真: (852) 2756 4480

E-mail 電子郵件: [info@iecc.com.hk](mailto:info@iecc.com.hk)  
Home Page 網頁: <http://www.iecc.com.hk>

Tel 電話: (86-20) 8768 4838  
Fax 傳真: (86-20) 8768 3918

E-mail 電子郵件: [info@iecc.net.cn](mailto:info@iecc.net.cn)  
Home Page 網頁: <http://www.iecc.net.cn>

## FCC – Test Report

No. 50808-1

Date: 2008-09-23

Page 2 of 13

FCC listed testlab  
acc. to Section 2.948 of the FCC - Rules  
in compliance with the requirements of  
ANSI C63.4 - 2003

**Product** : Music Box DVD with Radio & Cassette Player  
**Product Class** : Low Power Communication Device Transmitter  
**Brand Name** : -  
**Model** : 2312B  
**Applicant** : BRILLIANT RICH ELECTRONICS LTD  
**FCC ID No.** : T4G2312B

# FCC – Test Report

No. 50808-1

Date: 2008-09-23

Page 3 of 13

## TABLE OF CONTENTS

1. Cover sheet
2. Introduction
3. Table of Contents
4. Laboratory Report
5. Test Location and Summary of Test Results
6. Test Equipment List
7. Radiated Emission Test Setup
8. Conducted Emission Test Setup
9. Test Procedure
10. Test Results
- 11-12. Measurement Data
13. Photo of sample

**FCC – Test Report**

Date: 2008-09-23

No. 50808-1

Page 4 of 13

**LABORATORY - REPORT**

**APPLICANT:** BRILLIANT RICH ELECTRONICS LTD  
**ADDRESS:** Flat I, 2/F, Universal Industrial Centre  
19-21 Shan Mei Street  
Fo Tan, Shatin, N.T.  
Hong Kong

**DATE OF SAMPLE RECEIVED:** 2008-07-28  
**DATE OF TESTING:** 2008-09-16 to 2008-09-23

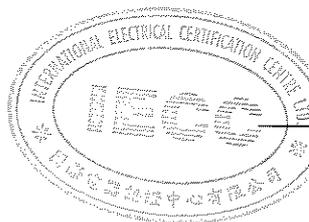
**DESCRIPTION OF SAMPLE:**  
Product: Music Box DVD with Radio & Cassette Player  
(With wireless microphone - frequency setting : 94.8 MHz)  
Product class: Low Power Communication Device Transmitter  
(for wireless microphone)  
Model number: 2312B  
FCC ID number: T4G2312B  
Rating: DC 9V (6F22 size battery x 1) for wireless microphone

**CONDITION OF TEST SAMPLE:** The received sample was under good condition.

**INVESTIGATIONS REQUESTED:** For wireless microphone only :  
Measurements to the relevant clauses of F.C.C. Rules and Regulations  
Part 15 Subpart C – Intentional Radiators

**RESULTS:** See the attached sheets.

**CONCLUSIONS:** From the measurement data obtained, the tested sample (wireless microphone only) was considered to have COMPLIED with the requirements for the relevant clauses of Federal Communications Commission Rules as specified above.

Stephen C.N. Wong  
Technical Manager

# FCC – Test Report

No. 50808-1

Date: 2008-09-23

Page 5 of 13

## Test Location

International Electrical Certification Centre Ltd.  
Unit 602-605, 31 Lok Yip Road, On Lok Tsuen, Fanling, N.T., Hong Kong  
Tel : +852 23052570  
Fax : +852 27564480  
Email : info@iecc.com.hk

## Summary of Test Results

### Radiated Emission:

**Test result:** O.K.  
**Test data:** See attached data sheet

### Conducted Emission:

**Test result:** Not Applicable  
**Test data:** Not Applicable

### Measurement of Emissions within Band Edges

**Test result:** O.K.  
**Test data:** See attached data sheet

**FCC – Test Report**Date: 2008-09-23

No. 50808-1

Page 6 of 13

**TEST EQUIPMENT LIST**

| Equipment                 | Manufacturer    | Model    | Serial No. | Last Calibration Date | Next Calibration Date |
|---------------------------|-----------------|----------|------------|-----------------------|-----------------------|
| Test Receiver             | Rohde & Schwarz | ESCS 30  | 100388     | 26/8/2008             | 25/8/2009             |
| Antenna                   | Schaffner       | CBL6111C | 2791       | 22/07/2008            | 21/07/2010            |
| Antenna Mast System       | Schwarzbeck     | AM9104   | --         | --                    | --                    |
| Turntable with Controller | Drehtisch       | DT312    | --         | --                    | --                    |

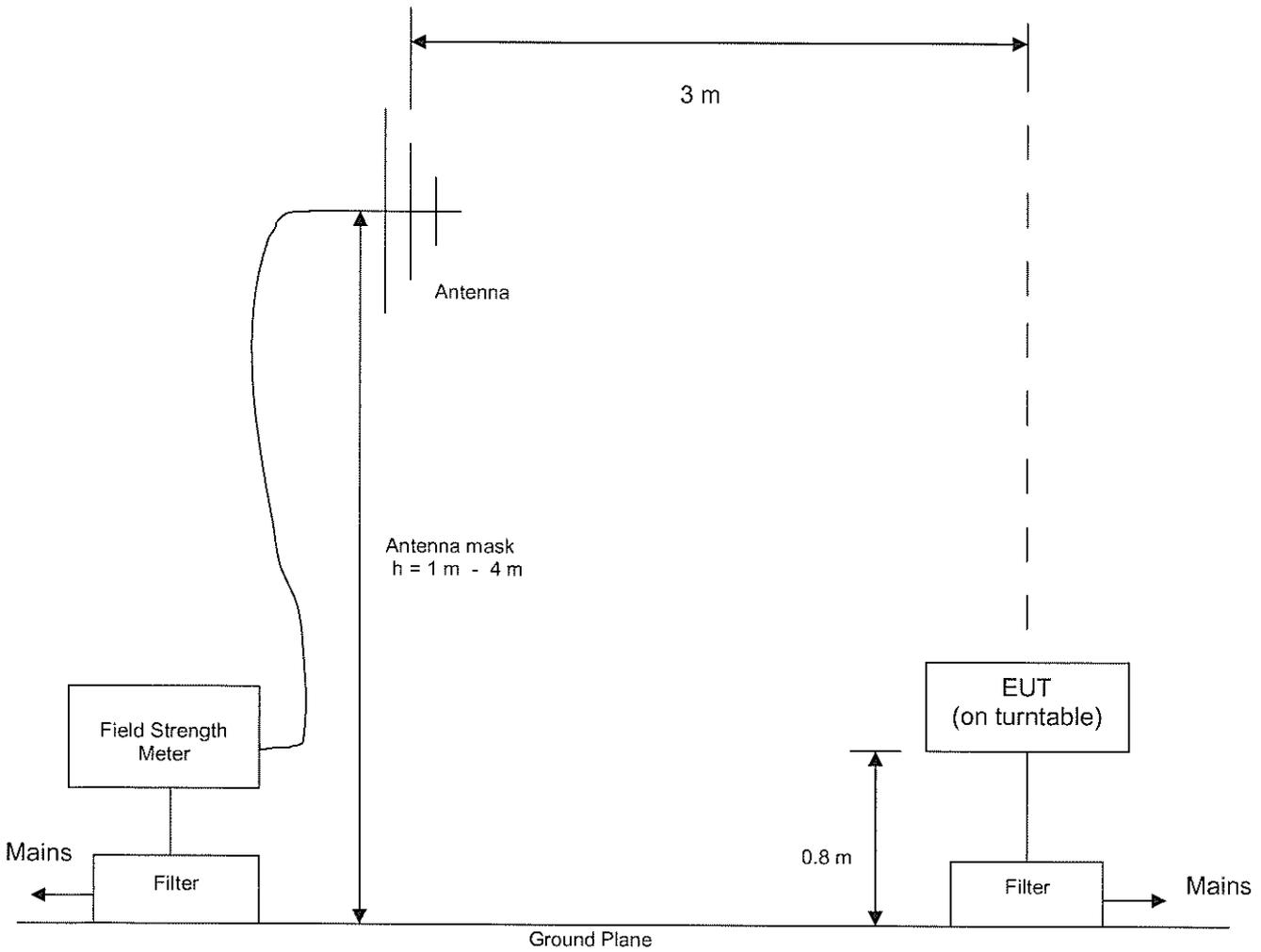
# FCC – Test Report

No. 50808-1

Date: 2008-09-23

Page 7 of 13

## Radiated Emission Test Setup (3 m distance) (> 30MHz)



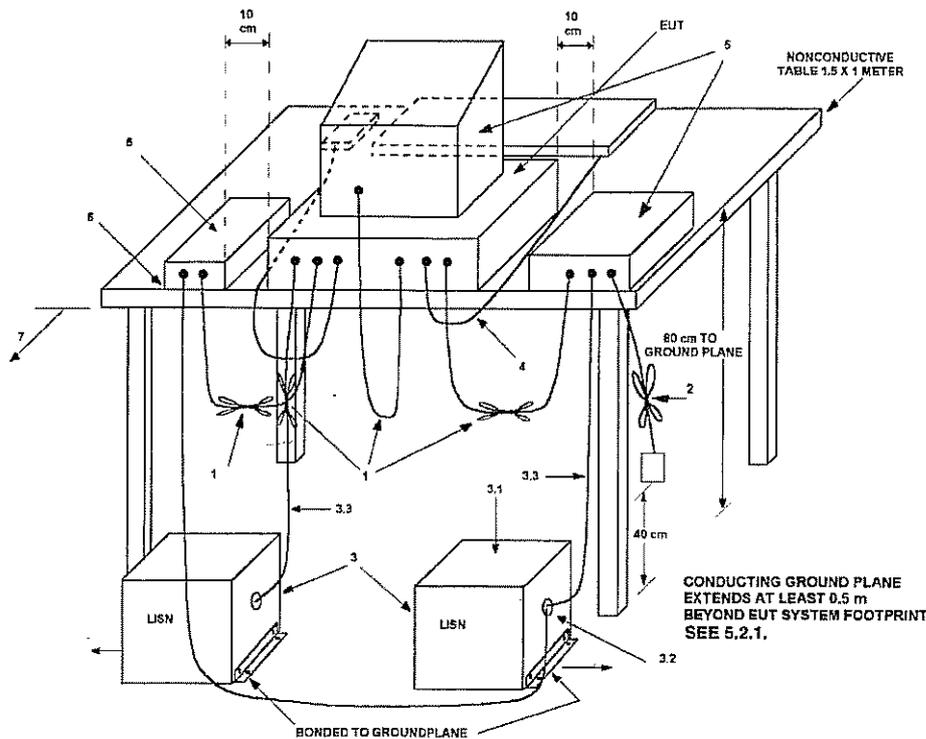
# FCC – Test Report

No. 50808-1

Date: 2008-09-23

Page 8 of 13

## Conducted Emission Test Setup



### LEGEND:

- 1) Interconnecting cables that hang closer than 40 cm to the groundplane shall be folded back and forth in the center forming a bundle 30 to 40 cm long (see 6.1.4 and 11.2.4).
- 2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m (see 6.1.4).
- 3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50  $\Omega$ . LISN can be placed on top of, or immediately beneath, reference groundplane (see 5.2.3 and 7.2.1).
  - 3.1) All other equipment powered from additional LISN(s).
  - 3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
  - 3.3) LISN at least 80 cm from nearest part of EUT chassis.
- 4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use (See 6.2.1.3 and 11.2.4).
- 5) Non-EUT components of EUT system being tested (see also Figure 13).
- 6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop (see 6.2.1.1 and 6.2.1.2).
- 7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the groundplane (see 5.2.2 for options).

# FCC – Test Report

No. 50808-1

Date: 2008-09-23

Page 9 of 13

## Test Procedure

### Radiated Emission :

The EUT (wireless microphone) was tested according to ANSI 63.4-2003 for the requirements of FCC Part 15 Subpart C Section 15.209 and 15.239.

During the test, the sample was placed on a turn table and operated with new battery. The table is 0.8 meter above the reference ground plane on the Open Area Test Site and can rotate 360 degrees to determine the position of the maximum emission level. A broad-band antenna for the frequency range 30 - 1000 MHz, connected with 10 meters coaxial cable to the test receiver was used for measurement. The antenna is capable of measuring both horizontal and vertical polarizations. The antenna was raised from 1 to 4 meters to find out the maximum emission level from the EUT.

An initial pre-scan was performed to find out the maximum emission level of the sample placed at 3 orthogonal planes. Final measurement (30 MHz –1000 MHz) was then performed to record the data for the emissions under worst-case condition for combination of the antenna orientation / height and turn table position.

Note : The Open Area Test Site located at IECC was placed on file with the FCC Pursuant to Section 2.948 of the FCC Rules (FCC Registration No. : 97774).

### Conducted Emission :

Not applicable

# FCC – Test Report

No. 50808-1

Date: 2008-09-23

Page 10 of 13

## Test Results

### Radiated Emission :

(1) For FM Transmission mode :

|                                       |   |
|---------------------------------------|---|
| Test Requirement:                     | FCC Part 15 Subpart C Section 15.209 and 15.239   |
| Test Method:                          | ANSI C63.4 : 2003   |
| Deviations from Standard Test Method: | Nil   |
| Frequency Range:                      | 30MHz – 1000MHz   |
| Measurement Distance:                 | 3 m   |
| Detector:                             | Peak / Average (for fundamental frequency)<br>Quasi-Peak (for frequencies outside the operation band) |

Refer to page 11 for measurement data.

### Band Edges Plot :

Refer to page 12

# Interference Radiation

Date : 2008-09-23

Measurement of Radiated Emissions  
 Acc: FCC Part 15 Subpart C (15.239 & 15.209)

Page 11 of 13

**IECC Ref:** 50808-1  
**Model:** 2312B  
**Applicant:** BRILLIANT RICH ELECTRONICS LTD  
**Ser.Nr.:** --  
**Set under test:** Music Box DVD with Radio & Cassette Player  
**Connected sets:** -  
**Operating mode:** Operate (wireless microphone)

**Test Equipment**  
 Receiver: Rohde & Schwarz ESCS 30  
 Antenna: Schaffner CBL6111C

Transmission frequency : 94.8 MHz

Peak  
 Av.

| Frequency (MHz) | Horz. Reading<br>dB(μV) | Vert. Reading<br>dB(μV) | Corr.<br>Factor<br>(dB) | Horiz. Test<br>Result<br>dB(μV/m) | Vert. Test<br>Result<br>dB(μV/m) | Limit<br>dB(μV/m) |
|-----------------|-------------------------|-------------------------|-------------------------|-----------------------------------|----------------------------------|-------------------|
| 94.8            | 39                      | 36                      | 9.1                     | 48.1                              | 45.1                             | 68.0              |
| 94.8            | 36                      | 34                      | 9.1                     | 45.1                              | 43.1                             | 48.0              |
| 30              | < 16                    | < 16                    | 19.1                    | < 35.1                            | < 35.1                           | 40.0              |
| 100             | < 16                    | < 16                    | 9.5                     | < 25.5                            | < 25.5                           | 43.5              |
| 189.6           | 17                      | < 16                    | 9.2                     | 26.2                              | < 25.2                           | 43.5              |
| 284.5           | 22                      | < 16                    | 14.5                    | 36.5                              | < 30.5                           | 46.0              |
| 379.4           | 25                      | < 16                    | 15.7                    | 40.7                              | < 31.7                           | 46.0              |
| 400             | < 16                    | < 16                    | 16.7                    | < 32.7                            | < 32.7                           | 46.0              |
| 500             | < 16                    | < 16                    | 18.9                    | < 34.9                            | < 34.9                           | 46.0              |
| 700             | < 16                    | < 16                    | 22.3                    | < 38.3                            | < 38.3                           | 46.0              |
| 1000            | < 16                    | < 16                    | 26.2                    | < 42.2                            | < 42.2                           | 54.0              |

- Note : 1. Unless otherwise indicated, the recorded readings are in quasi-peak values.  
 2. The above results were the worst case results with the sample placed vertically on the table during vertical antenna measurement and placed horizontally on the table during horizontal antenna measurement.  
 3. Due to the transmitted signal is not in pulse waveform, the average value of the radiation at the fundamental frequency is recorded by direct measurement. Calculation from time domain plots is not applicable.

Operator : KT

# FCC – Test Report

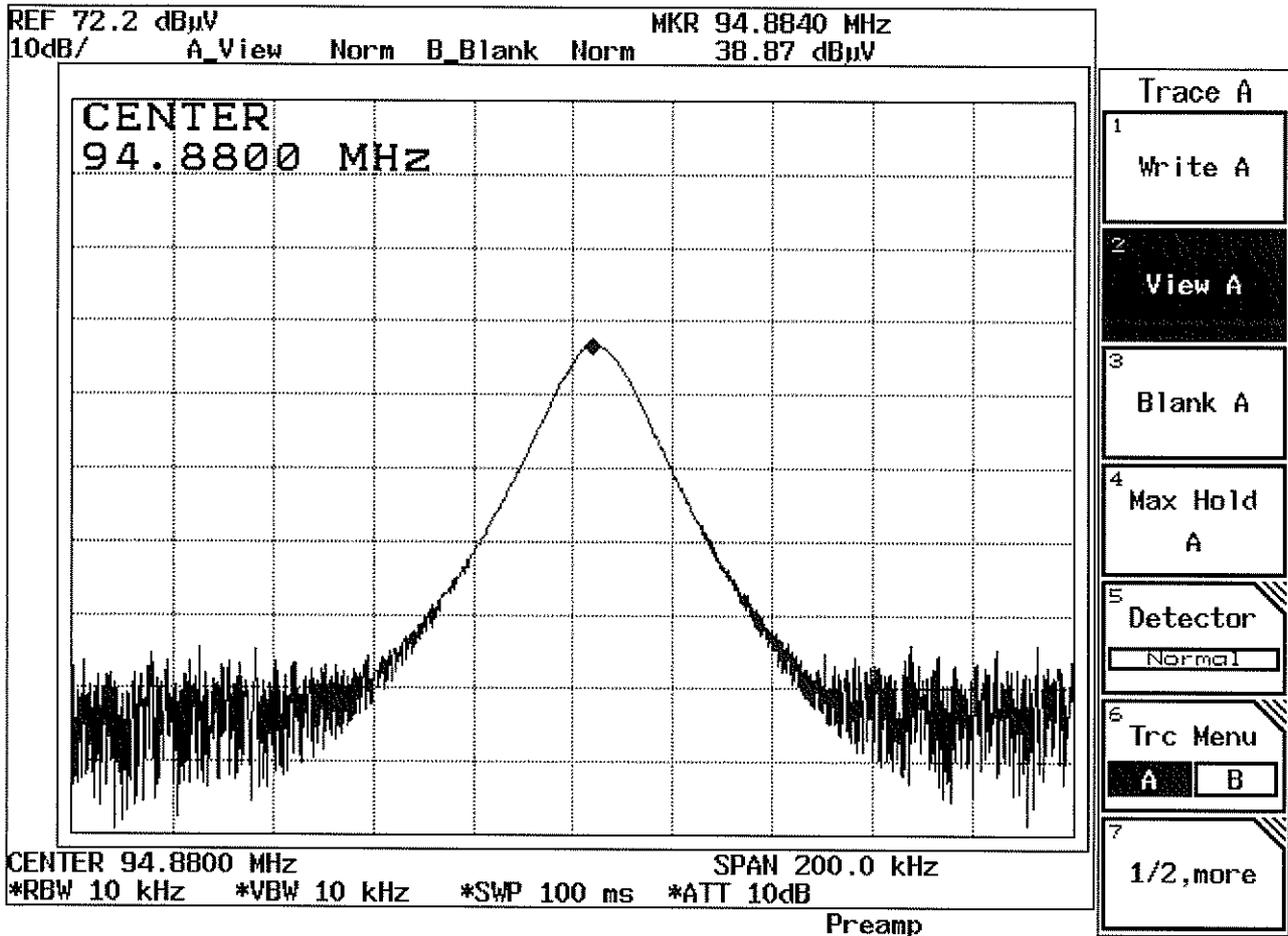
No. 50808-1

Date: 2008-09-23

Page 12 of 13

## Measurement Data of Emissions within Band Edges

Operation Frequency : 94.8 MHz



Result : The field strength of any emission within the operation band did not exceed 68 dB(µV/m) for average value or 48 dB(µV/m) for peak value. Refer to page 11 for the recorded value for the emission at the fundamental frequency.

# FCC – Test Report

No. 50808-1

Date: 2008-09-23

Page 13 of 13

## Photo of Sample

