

SHENZHEN MOST ELECTRONICS CO., LTD. Tel:(86) 755-26825180 Fax:(86) 755-86170310

Http://www.szmost.com Email: szmost@szmost.com

Test Report

Product Name: 2.4GHz Digital Wireless Guitar System

FCC ID: VSE372147287963 MODEL NO. : D-1218

Applicant:

ASIA ELECTRONIC TECHNOLOGY LTD. 5F.Block 9. 33 Jihua si Rd. Foshan, Guang Dong Province

Date Received: 02/26/2008-02/27/2008

Date Tested: 02/27/2008

APPLICANT: ASIA ELECTRONIC TECHNOLOGY LTD.



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TABLE OF CONTENTS

APPLICANT: ASIA ELECTRONIC TECHNOLOGY LTD.

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FCC ID:

TEST REPORT CONTAINING:

PAGE	1	TEST E	QUIPMENT	LIST		
PAGE	2	TEST P	ROCEDURE			
PAGE	3-4	RADIAT:	ION INTE	RFERENCE	TEST	DATA
PAGE	5-8	OCCUPII	ED BANDW	IDTH AND	PLOTS	3

EXHIBIT INCLUDED:

PAGE 1BLOCK DIAGRAM
PAGE 2SCHEMATIC
PAGE 3USERS MANUAL
PAGE 4LABEL SAMPLE
PAGE 5LABEL LOCATION
PAGE 6EXTERNAL PHOTOGRAPHS
PAGE 7INTERNAL PHOTOGRAPHS
PAGE 8OPERATIONAL DESCRIPTION
PAGE 9TEST SET UP PHOTOGRAPHS

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EMC Equipment List

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.
					Interval
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	100492	Apr 06,2007	1 Year
LISN	ROHDE&SCHWARZ	ENV216	100093	Apr 06,2007	1Year
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	101202	Apr 06,2007	1 Year
Spectrum Analyzer	ANRITSU	MS2651B	6200238316	Apr 06,2007	1 Year
50 Ω Coaxial Switch	ANRITSU CORP	MP59B	6200283933	Apr 06,2007	1 Year
Bilog Antenna	Sunol	JB3	A121206	Apr 06,2007	1 Year
50 Ω Coaxial Switch	ANRITSU CORP	MP59B	6200283933	Apr 06,2007	1 Year
Cable	Resenberger	N/A	NO.1	Apr 06,2007	1 Year
Cable	SCHWARZBECK	N/A	NO.2	Apr 06,2007	1 Year
Cable	SCHWARZBECK	N/A	NO.3	Apr 06,2007	1 Year
Single Phase Power	Kikusui	LIN40MA-PC	LM002352	Apr 06,2007	1Year
Line Filter		R-L			
AC Power Source	Kikusui	AC40MA	LM003232	Apr 06,2007	1Year
Test analyzer	Kikusui	KHA1000	LM003720	Apr 06,2007	1Year
ESD Tester	Kikusui	KES4021	LM003537	Apr 08,2007	1 Year
Signal Generator	IFR	2032	203002/100	Apr 08,2007	1 Year
Amplifier	A&R	150W1000	301584	NCR	NCR
Dual Directional	A&R	DC6080	301508	Apr 06,2007	1 Year
Coupler					
Power Head	A&R	PH2000	301193	Apr 06,2007	1 Year
Power Meter	A&R	PM2002	302799	Apr 06,2007	1 Year
Field Monitor	A&R	FM5004	300329	Apr 06,2007	1 Year
Field Probe	A&R	FP5000	300221	Apr 06,2007	1 Year
EMCPRO System	EM Test	UCS-500-M4	V064810202 6	Apr 06,2007	1 Year
EMCPRO System	EM Test	UCS-500-M4	V064810202 6	Apr 06,2007	1 Year

Remark:

Test Firm Name: Most Technology Service Co., Ltd.

Test Firm Address:

No. 5, 2nd Langshan Road, North District, Hi-tech Industrial

Park, Nanshan, Shenzhen, Guangdong, China

FCC Registered Test Site Number: 490827

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TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of MOST TECHNOLOGY SERVICE CO., LTD. The EUT was transmitting a test signal during the testing.

POWER LINE CONDUCTED INTERFERENCE: The test procedure used was ANSI Standard C63.4-2003 using a $50\,\mathrm{u\,H}$ LISN. Both Lines were observed. The bandwidth of the receiver was $10\,\mathrm{kHz}$ with an appropriate sweep speed. The ambient temperature of the EUT was $25\,\mathrm{°C}$ with a humidity of $58\,\mathrm{°k}$.

RADIATION INTERFERENCE: The test procedure used was ANSI Standard C63.4-2003 using a ANRITSU spectrum analyzer with a pre-selector. The analyzer was calibrated in dB above a micro volt at the output of the antenna. The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz up to 1 GHz and 1 MHz with a video BW of 3 MHz above 1 GHz. The ambient temperature of the EUT was 25° C with a humidity of 58° 8.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer and cable loss. The antenna correction factors and cable loss are stated in terms of dB. The gain of the Pre-selector was accounted for in the Spectrum Analyzer Meter Reading.

ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES: The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The EUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to 10th harmonic of the fundamental.

Peak readings were taken in three (3) orthogonal planes and the highest readings were converted to average readings based on the duration of "ON" time.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

The situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSI Standard C63.4-2003 10.1.7 with the EUT 40 cm from the vertical ground wall.

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FCC ID: VSE372147287963

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NUMBER: 15.249, 15.209

REQUIREMENTS:

FIELD STRENGTH of FIELD STRENGTH S15.209

Fundamental: of Harmonics

902-928 MHZ 30 -88 MHz 40 dBuV/m @3M

2.4-2.4835 GHz 88 - 216 MHz 43.5 216 - 960 MHz 46

54 dBuV/m @3m ABOVE 960 MHz 54dBuV/m 94 dBuV/m @3m

EMISSIONS RADIATED OUTSIDE OF THE SPECIFIED FREQUENCY BANDS, EXCEPT FOR HARMONICS, SHALL BE ATTENUATED BY AT LEAST 50 dB BELOW THE LEVEL OF THE FUNDAMENTAL OR TO THE GENERAL RADIATED EMISSION LIMITS IN 15.209, WHICHEVER IS THE LESSER ATTENUATION.

REMARK: Emissions attenuated more than 20 dB below the permissible value are not reported.

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)			FCC 15 Subpart			
		Avg	QP	Peak	C Limit (dBuV/m)			
Low frequency(2410.00 MHz)								
135.50	Vertical		33.30	36.50	43.5			
156.00	Vertical		34.10	37.15	46.0			
2410.00	Vertical			84.00	94.0			
4820.00	Vertical			36.05	54.0			
7230.10	Vertical			33.10	54.0			
12050.20	Vertical			34.10	54.0			
133.05	Horizontal		32.50	35.00	43.5			
237.50	Horizontal		33.20	35.60	46.0			
2410.00	Horizontal			83.50	94.0			
4820.00	Horizontal			33.30	54.0			
7230.10	Horizontal			32.50	54.0			
12050.20	Horizontal			33.10	54.0			
	Middle frequency(2440.00 MHz)							
133.30	Vertical		35.10	38.50	43.5			
2440.00	Vertical			84.55	94.0			
4880.10	Vertical			32.65	54.0			
7320.20	Vertical			32.20	54.0			
12200.30	Vertical			31.50	54.0			
131.06	Horizontal		33.50	37.10	43.5			
2440.00	Horizontal			83.80	94.0			
4880.10	Horizontal			33.30	54.0			
7320.20	Horizontal			32.40	54.0			
12200.30	Horizontal			32.30	54.0			

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NAME OF TEST: RADIATION INTERFERENCE

RULES PART NUMBER: 15.249, 15.209

REQUIREMENTS:

FIELD STRENGTH of FIELD STRENGTH S15.209

Fundamental: of Harmonics

902-928 MHZ 30 -88 MHz 40 dBuV/m @3M

2.4-2.4835 GHz 88 - 216 MHz 43.5 216 - 960 MHz 46

EMISSIONS RADIATED OUTSIDE OF THE SPECIFIED FREQUENCY BANDS, EXCEPT FOR HARMONICS, SHALL BE ATTENUATED BY AT LEAST 50 dB BELOW THE LEVEL OF THE FUNDAMENTAL OR TO THE GENERAL RADIATED EMISSION LIMITS IN 15.209, WHICHEVER IS THE LESSER ATTENUATION.

REMARK: Emissions attenuated more than 20 dB below the permissible value are not reported.

Continued:

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)			FCC 15 Subpart		
		Avg	QP	Peak	C Limit (dBuV/m)		
High frequency(2470.0 MHz)							
132.50	Vertical		33.25	37.30	43.5		
2470.00	Vertical			85.75	94.0		
4940.10	Vertical			33.10	54.0		
7410.20	Vertical			32.30	54.0		
12350.20	Vertical			32.35	54.0		
133.90	Horizontal		32.15	35.50	43.5		
2470.00	Horizontal			83.70	94.0		
4940.10	Horizontal			32.50	54.0		
7410.20	Horizontal			32.20	54.0		
12350.20	Horizontal			31.60	54.0		

Emissions attenuated more than 20 dB below the permissible value are not reported.

TEST PROCEDURE: ANSI Standard C63.4-2003 using a ANRITSU spectrum analyzer with a pre-selector and an appropriate antenna. The resolution bandwidth of spectrum analyzer was 100 kHz below 1 GHz and 1 MHz above 1 GHz. An appropriate sweep speed was used. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The spectrum was searched to at least the tenth (10) harmonic of the fundamental.

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FCC ID: VSE372147287963

NAME OF TEST: Occupied Bandwidth and Band Edge Compliance

RULES PART NUMBER: 15.249

REQUIREMENTS: The field strength of any emissions appearing outside the band

edges and up to $10\ \text{kHz}$ above and below the band edges shall be attenuated at least $50\ \text{dB}$ below the level of the carrier or to

the general limits of 15.249.

Band edge emissions plots are included on the following pages

METHOD OF MEASUREMENT: A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was printed. The vertical scale is set to -10 dB per division.

TEST RESULTS: The unit DOES meet the FCC requirements.

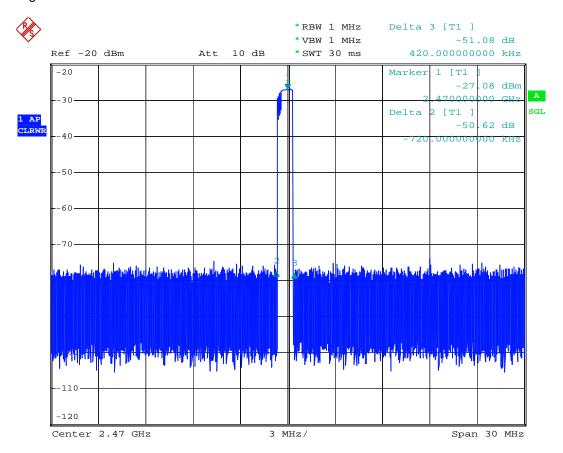
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High



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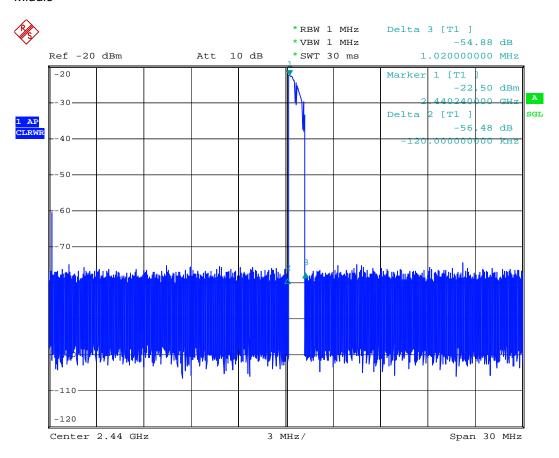
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Middle



Date: 26.FEB.2008 15:17:20

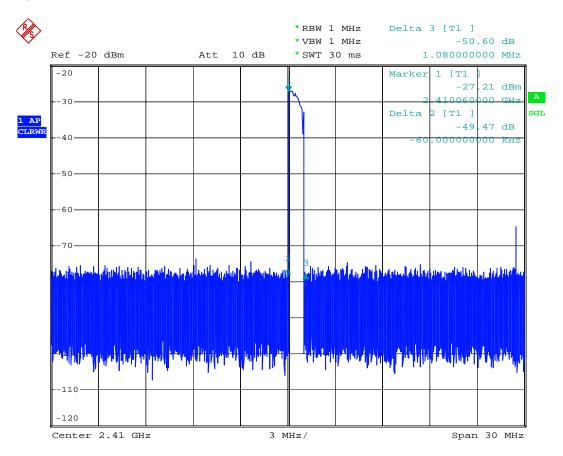
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