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FEDERAL COMMUNICATIONS COMMISSION
Registration number: 556682

Report No.: SZEMO061002297RFI
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FCC ID: PZK-02320

FCC TEST REPORT

Application No. : SZEMO061002297RF

Applicant: Summer Infant, Inc.

FCC ID: PZK-02320

Fundamental Carrier Frequency : 2.4GHz

Equipment Under Test (EUT):

Name: 02170-Secure Sounds 2.4GHz Digital Monitor and 02320-2 Receiver
Digital Audio Monitor

Item No.: 02170 and 02320♣

Country of Origin: China

Country of Destination: US

♣ Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical.

Standards: FCC PART 15: 2006

Date of Receipt: 30 October 2006

Date of Test: 02 to 17 November 2006

Date of Issue: 22 November 2006

Test Result :	PASS *
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* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Robinson Lo
Laboratory Manager

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf
This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

2 Test Summary

Test	Test Requirement	Standard Paragraph	Result
Flied Strength of Fundamental	FCC PART 15 :2006	Section 15.249 (a)	PASS
Flied Strength of Harmonics or other Frequency	FCC PART 15 :2006	Section 15.249 (a) Section 15.209	PASS *
Occupied Bandwidth	FCC PART 15 :2006	Section 15.249	PASS
Band Edges Measurement	FCC PART 15 :2006	Section 15.249 (d)	PASS

* Remark:

The EUT passed the Spurious Emission from Tx test after Modification as below:

Add 27pF capacitance between L15 and F1 to earth.



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4 General Information

4.1 Client Information

Applicant Name: Summer Infant, Inc.
Applicant Address: 582 Great Road, North Smithfield, RI 02896, USA

4.2 General Description of E.U.T.

Product Name: 02170-Secure Sounds 2.4GHz Digital Monitor and 02320-2 Receiver Digital Audio Monitor
Item No.: 02170 and 02320♣
Power Supply: Transmitter Part : 4.5V DC(3*1.5 "AAA" Size Batteries)
Power Cord: N/A-

4.3 Description of Support Units

The EUT was tested as an independent unit.

4.4 Standards Applicable for Testing

The customer requested FCC tests for 02170-Secure Sounds 2.4GHz Digital Monitor and 02320-2 Receiver Digital Audio Monitor.
The standard used was FCC PART 15, SUBPART C (2006) section 15.249.

4.5 Test Location

All tests were performed at:-

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory, No.198 Kezhu Road, Science Town Economic& Technology Development District Guangzhou, China 510663

Tel: +86 20 8215 5555 Fax: +86 20 8207 5059

4.6 Other Information Requested by the Customer

None.

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5 Test Results

5.1 Test Instruments

Item	Test Equipment	Manufacturer	Serial No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	SEL0017	28-04-2005	27-04-2007
2	EMI Test Receiver	Rohde & Schwarz	100249	22-09-2006	21-09-2007
3	EMI Test software	AUDIX	E3	N/A	N/A
4	Coaxial cable	SGS	SEL0028	20-05-2006	19-05-2007
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	00042673	03-03-2006	02-03-2007
6	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	2944A10861	26-08-2006	25-08-2007
7	Double-ridged horn (1-18GHz)	ETS-LINDGREN	00035926	30-12-2004	29-12-2006
8	Pre-amplifier (1-18GHz)	Rohde & Schwarz	1091457	29-07-2005	28-07-2007
9	Cable (0-18GHz)	MCE Mobile Communications	249439	20-05-2006	19-05-2007
9	Shielding Room	ZhongYu Electron	SEL0042	N/A	N/A
10	LISN	ETS-LINDGREN	00033512	19-09-2006	18-09-2007
11	EMI Test Receiver	Rohde & Schwarz	100119	03-03-2006	02-03-2007
12	Coaxial Cable	SGS	SEL0024	20-05-2006	19-05-2007

5.2 E.U.T. Operation

Input voltage: Transmitter Part : 4.5V DC(3*1.5 "AAA" Size Batteries)
Operating Environment:
Temperature: 24.0 °C
Humidity: 52 % RH
Atmospheric Pressure: 1015 mbar
EUT Operation: Test in transmitting mode:

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5.3 Test Procedure & Measurement Data

5.3.1 Spurious Radiated Emissions

5.3.1.1 Test in transmitting mode

Test Requirement: FCC Part15 C
Test Method: Based on FCC Part15 C Section 15.249
Test Date: 02 November 2006(Initial Test)
17 November 2006(Test after Modification)
Measurement Distance: 3m (Semi-Anechoic Chamber)
Frequency range: 30 MHz – 10GHz for transmitting mode.
Test instrumentation resolution bandwidth
120 kHz (30 MHz - 1000 MHz), 1 MHz (1000 M – 25GHz)
Operation: Receive antenna scan height 1 - 4 m, polarization Vertical/
Horizontal

Requirements:

Fundamental Frequency (MHz)	Field Strength of Fundamental (dBuV/m @ 3m)	Field Strength of Harmonics and Spurious Emissions (dBuV/m @ 3m)
902 to 928	94.0	54.0
2400 to 2483.5	94.0	54.0
5725 to 5875	94.0	54.0
24000 to 24250	108.0	68.0

The fundamental frequency of the EUT is 2455MHz

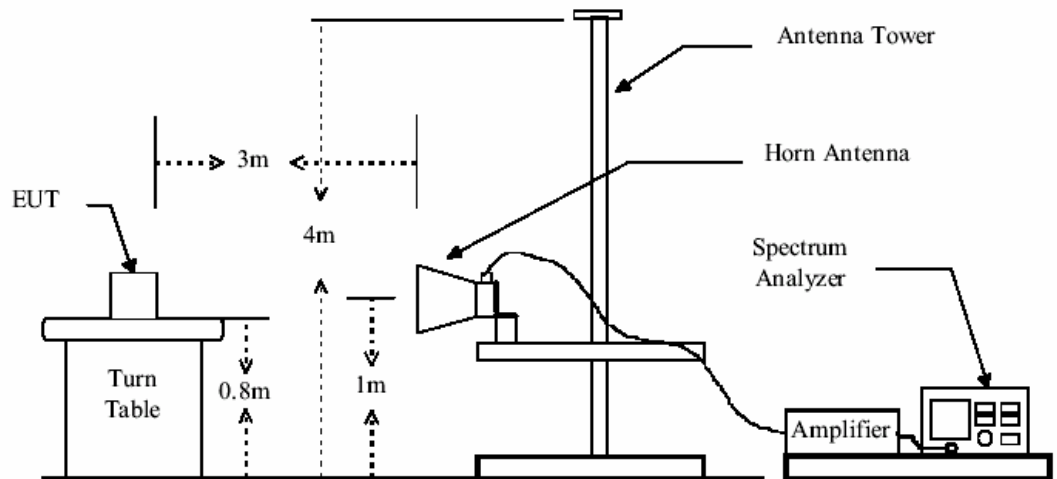
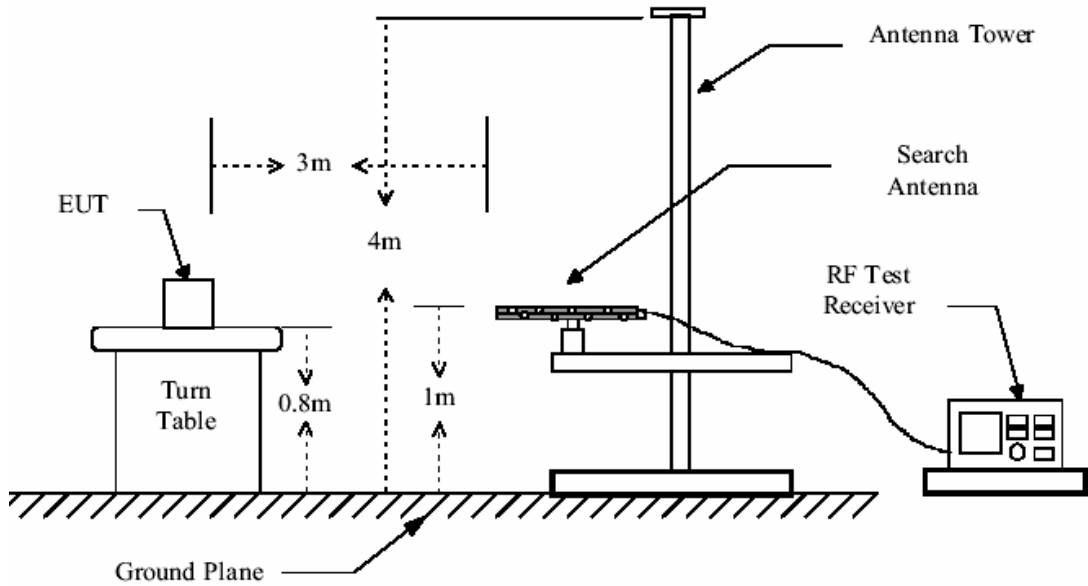
The limit for average field strength dBuV/m for the fundamental frequency = 94.0 dBuV/m.

No fundamental is allowed in the restricted bands.

The limit for average field strength dBuV/m for the harmonics and spurious frequencies = 54.0 dBuV/m. Spurious in the restricted bands must be less than 54.0 dBuV/m or 15.209.

Test Procedure: The procedure used was ANSI Standard C63.4-2003. The receiver was scanned from 30MHz to 25GHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. The worst case emissions were reported.

Test Configuration:



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The field strength is calculated by adding the Antenna Factor, Cable Factor & Peramplifier . The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Peramplifier Factor

The following test results were performed on the EUT:

For Radiated Emission(30M—1GHz)

Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
76.260	1.10	8.36	27.97	46.2	27.69	40.0	-12.31
95.950	1.16	8.95	27.91	46.74	28.94	43.5	-14.56
104.540	1.21	8.87	27.83	49.28	31.53	43.5	-11.97
159.230	1.34	9.56	27.39	43.26	26.77	43.5	-16.73
211.100	1.47	10.81	27.09	40.12	25.31	43.5	-18.19
334.910	2.08	15.53	27.12	39.89	30.38	46.0	-15.62

Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
55.225	0.80	7.87	28.08	34.52	15.11	40.0	-24.89
81.550	1.10	7.87	27.99	34.25	15.23	40.0	-24.77
117.625	1.25	8.07	27.71	35.10	16.71	43.5	-26.79
186.850	1.38	10.04	27.22	35.15	19.35	43.5	-24.15
285.325	1.84	13.27	26.77	32.81	21.15	46.0	-24.85
431.575	2.34	16.54	27.51	33.01	24.38	46.0	-21.62

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Above 1GHz

Peak Measurement					
Test Frequency (GHz)	Measuring Level (dBuV/m)		Limits (dBuV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
2.4554	87.8	77.6	114.0	26.20	36.40
Average Measurement					
2.4554	73.4	63.2	94.0	20.60	30.80

(2). Harmonics & Spurious Emissions

Peak Measurement					
Test Frequency (GHz)	Measuring Level (dBuV/m)		Limits (dBuV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
2) 4910.72	68.53	58.12	74.0	5.47	15.88
3) 7366.08	65.67	55.41	74.0	8.33	18.59
4) 9821.44	39.60	39.61	74.0	34.40	34.39
5) 12276.80	N/A	N/A	74.0	N/A	N/A
6) 14732.16	N/A	N/A	74.0	N/A	N/A
7) 17187.52	N/A	N/A	74.0	N/A	N/A
8) 19642.88	N/A	N/A	74.0	N/A	N/A
9) 22098.24	N/A	N/A	74.0	N/A	N/A
10) 24553.60	N/A	N/A	74.0	N/A	N/A
Average Measurement					
2) 4910.72	48.84	39.85	54.0	5.16	15.15
3) 7366.08	42.20	34.60	54.0	11.80	19.40
4) 9821.44	36.00	30.90	54.0	18.00	23.10
5) 12276.80	N/A	N/A	54.0	N/A	N/A
6) 14732.16	N/A	N/A	54.0	N/A	N/A
7) 17187.52	N/A	N/A	54.0	N/A	N/A
8) 19642.88	N/A	N/A	54.0	N/A	N/A
9) 22098.24	N/A	N/A	54.0	N/A	N/A
10) 24553.60	N/A	N/A	54.0	N/A	N/A

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N/A: refer to remark 1).

Remark:

- 1). For this intentional radiator operates below 10 GHz, the spectrum shall be investigated to the tenth harmonic of the highest fundamental frequency. And above the fifth harmonic of this intentional radiator, the disturbance is very low. So the test result only displays to 4th harmonic.
- 2). According to 15.249 (e) As shown in Section 15.35(b), for frequencies above 1000 MHz, the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

TEST RESULTS: The unit does meet the FCC requirements.

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5.3.2 Occupied Bandwidth & Band Edge

Test Requirement: FCC Part 15 C

Test Method: Based on FCC Part15 C Section 15.249:

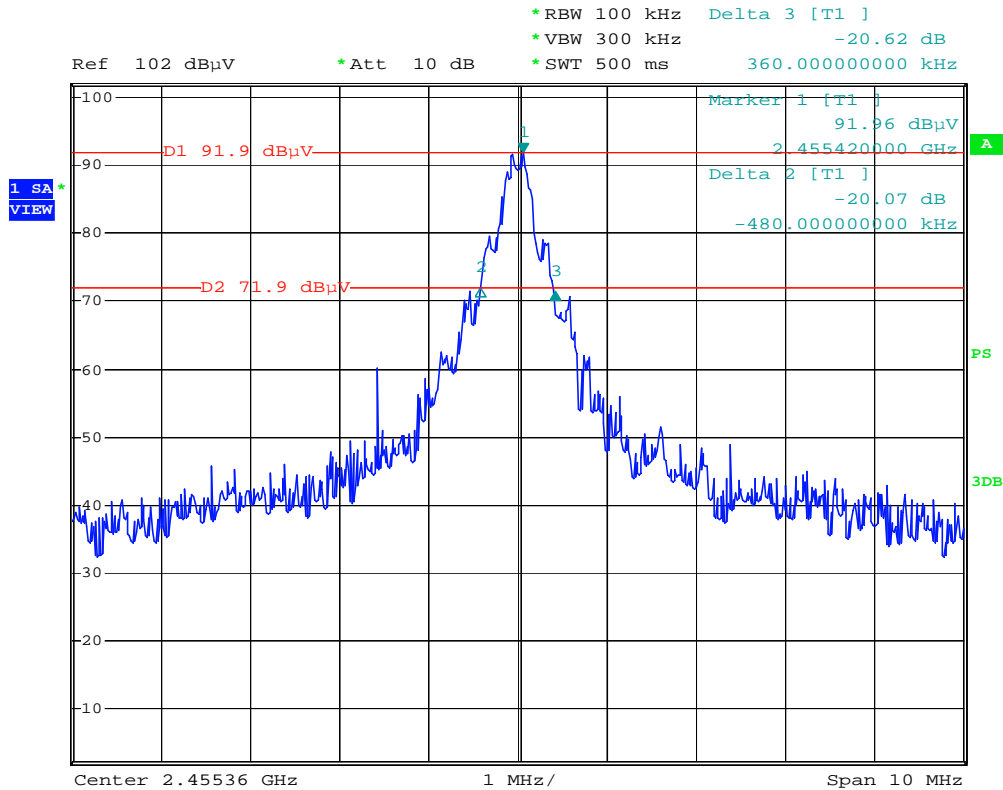
Operation within the band 2.4000 – 2.4835GHz

Test Date: 03 November 2006

Requirements: 15.249 (d) 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 Section 15.209, whichever is the lesser attenuation.

Method of measurement: A small sample of the transmitter output was fed into the Spectrum Analyzer and the attached plot was taken. The vertical is set to 10dB per division. The horizontal scale is set to 1MHz per division.

The occupied bandwidth and band edge as below:



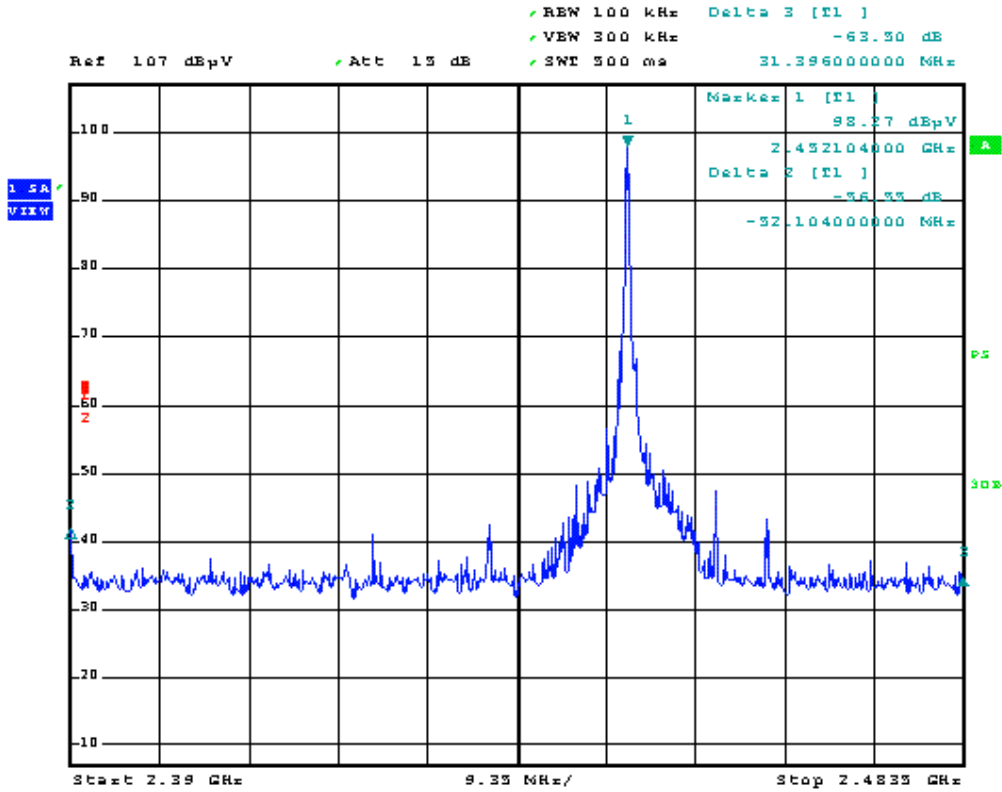
N

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N

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The test result for the Emissions radiated outside of the specified frequency bands , please refer the section 5.3.1 of this report.

The worst case is 43.8dBuV/m at frequency 4.96440GHz, it's below the limits in Section 15.209.

For the field strength of Lower Edges:2.4000GHz is 23.6dBuV/m.

For the field strength of Upper Edges:2.4835GHz is 29.7dBuV/m.

The results: The unit does meet the FCC requirements.