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FEDERAL COMMUNICATIONS COMMISSION

Registration number: 282399

Report No.: GLEMR070902845RFT

Page: 1 of 12

FCC ID: VTEUTUNE00777

TEST REPORT

Application No. : GLEMR070902845RF

Applicant: UTUNE IT.LLC

FCC ID: VTEUTUNE00777

Fundamental Frequency : 433.92MHz

Equipment Under Test (EUT):

Name: u Tune It Door Bell

Model No.: UTUNE00777

Serial No.: Not supplied by client

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

Standards: FCC PART 15, SUBPART C : 2007
Section 15.231

Date of Receipt: 18 September 2007

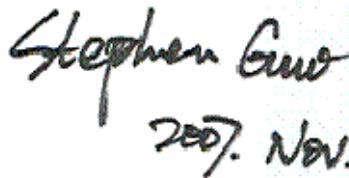
Date of Test: 18 September to 09 November 2007

Date of Issue: 12 November 2007

| | |
|----------------------|---------------|
| Test Result : | PASS * |
|----------------------|---------------|

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Stephen Guo
2007. Nov.

Stephen Guo
Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. 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.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

This Test Report is issued by the Company subject to its General Conditions of Service printed overleaf. Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full, without prior written permission of the Company.

2 Test Summary

| The customer requested FCC tests for a 433.92MHz transmitter. | | | |
|---|-------------------|---------------------|--------|
| Test | Test Requirement | Stanadard Paragraph | Result |
| Radiated Emission (30MHz to 1000MHz) | FCC PART 15 :2007 | Section 15.231 | PASS |
| Occupied Bandwidth | FCC PART 15 :2007 | Section 15.231 | PASS |
| Dwell Time | FCC PART 15 :2007 | Section 15.231 | PASS |

Remark:

♣Item No.: UTUNE00777

The EUT passed Radiated Emission after modification carried out by client.

3 Contents

| | Page |
|---|----------|
| 1 COVER PAGE | 1 |
| 2 TEST SUMMARY | 2 |
| 3 CONTENTS | 3 |
| 4 GENERAL INFORMATION | 4 |
| 4.1 CLIENT INFORMATION | 4 |
| 4.2 DETAILS OF E.U.T. | 4 |
| 4.3 DESCRIPTION OF SUPPORT UNITS | 4 |
| 4.4 TEST LOCATION | 4 |
| 4.5 OTHER INFORMATION REQUESTED BY THE CUSTOMER | 4 |
| 4.6 TEST FACILITY | 5 |
| 5 TEST RESULTS | 6 |
| 5.1 TEST INSTRUMENTS | 6 |
| 5.2 E.U.T. OPERATION | 7 |
| 5.3 TEST PROCEDURE & MEASUREMENT DATA | 7 |
| 5.3.1 Radiated Emissions | 7 |
| 5.3.2 Occupied Bandwidth | 10 |
| 5.3.3 Dwell Time: | 11-12 |

4 General Information

4.1 Client Information

Applicant Name: UTUNE IT.LLC
Applicant Address: 18010 PINE CANYON CT CHESTERFIELD, MO 63005

4.2 Details of E.U.T.

Name: u Tune It Door Bell
Model No.: UTUNE00777
Power Supply: 23A 12V DC Alkaline Battery
Power Cord: N/A-
Modulation type: ASK

4.3 Description of Support Units

The EUT was tested as an independent unit: a 433.92MHz radio transmitter with 2 channels for transferring two control information.

4.4 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 82155555 Fax: +86 20 82075059

No tests were sub-contracted.

4.5 Other Information Requested by the Customer

None.



4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

- **FCC (Registration No.: 282399)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 282399, May 31, 2002. With the above and NVLAP's accreditation, SGS-CSTC is an authorized test laboratory for the DoC process.

- **Industry Canada (Registration No.: 4620B-1)**

The 3m/10m Alternate Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620B-1.

Date of Registration: Jan 15, 2007. Valid until Jan 15, 2009

5 Test Results

5.1 Test Instruments

| RE in Chamber/OATS | | | | | | |
|--------------------|-------------------------------|-------------------|---------------|------------|----------------------|-------------------------|
| No: | Test Equipment | Manufacturer | Model No. | Serial No. | Cal. Date (dd-mm-yy) | Cal.Due date (dd-mm-yy) |
| EMC0525 | Compact Semi-Anechoic Chamber | ChangZhou ZhongYu | N/A | N/A | 06-03-2007 | 06-03-2008 |
| EMC0522 | EMI Test Receiver | Rohde & Schwarz | ESIB26 | 100249 | 05-12-2006 | 05-12-2007 |
| N/A | EMI Test Software | Audix | E3 | N/A | N/A | N/A |
| EMC0514 | Coaxial cable | SGS | N/A | N/A | 04-12-2006 | 04-12-2007 |
| EMC0524 | Bi-log Type Antenna | Schaffner -Chase | CBL6112B | 2966 | 12-08-2007 | 12-08-2008 |
| EMC0519 | Bilog Type Antenna | Schaffner -Chase | CBL6143 | 5070 | 12-08-2007 | 12-08-2008 |
| EMC0517 | Horn Antenna | Rohde & Schwarz | HF906 | 100095 | 12-08-2007 | 12-08-2008 |
| EMC0040 | Spectrum Analyzer | Rohde & Schwarz | FSP30 | 100324 | 05-12-2006 | 05-12-2007 |
| EMC0520 | 0.1-1300 MHz Pre-Amplifier | HP | 8447D OPT 010 | 2944A06252 | 28-03-2007 | 28-03-2008 |
| EMC0521 | 1-26.5 GHz Pre-Amplifier | Agilent | 8449B | 3008A01649 | 28-03-2007 | 28-03-2008 |
| EMC0523 | Active Loop Antenna | EMCO | 6502 | 00042963 | 09-08-2006 | 09-08-2008 |
| EMC0530 | 10m Semi- Anechoic Chamber | ETS | N/A | N/A | 10-08-2007 | 10-08-2008 |

| General used equipment | | | | | | |
|------------------------|-------------------------|-------------------|-----------|------------|----------------------|-------------------------|
| No: | Test Equipment | Manufacturer | Model No. | Serial No. | Cal. Date (dd-mm-yy) | Cal.Due date (dd-mm-yy) |
| EMC0050- EMC0053 | Temperature, & Humidity | ZHENGZHOU BO YANG | WSB | N/A | 05-12-2006 | 05-12-2007 |
| EMC0054 | Temperature, & Humidity | Shenzhen Tai Kong | THG-1 | N/A | 04-01-2007 | 04-01-2008 |
| EMC0006 | DMM | Fluke | 73 | 70681569 | 27-09-2007 | 27-09-2008 |
| EMC0007 | DMM | Fluke | 73 | 70671122 | 27-09-2007 | 27-09-2008 |

5.2 E.U.T. Operation

| | |
|------------------------|------------------------------------|
| Input voltage: | 23A 12V DC Alkaline Battery |
| Operating Environment: | |
| Temperature: | 25.0 °C |
| Humidity: | 56 % RH |
| Atmospheric Pressure: | 1011 mbar |
| EUT Operation: | Test the EUT in transmitting mode. |

5.3 Test Procedure & Measurement Data

5.3.1 Radiated Emissions

| Test Requirement: | FCC Part15 C 15.231(b) | | |
|------------------------------|--|--|--|
| Test Method: | ANSI C63.4 section 8 & 13 | | |
| Test Date: | 21 September 2007(Initial test) 08 November 2007(Final test) | | |
| Measurement Distance: | 3m (Semi-Anechoic Chamber) | | |
| Requirements: | the field strength of emissions from intentional radiators operated under this Section shall not exceed the following: | | |
| Fundamental Frequency MHz | Field Strength of Fundamental (dB μ V/m @ 3m) | Field Strength of Harmonics and Spurious Emissions (dB μ V/m @ 3m) | |
| 40.66 to 40.70 | 67.04 | 47.04 | |
| 70 to 130 | 61.94 | 41.94 | |
| 130 to 174 | 61.94 to 71.48 | 41.94 to 51.48 | |
| 174 to 260 | 71.48 | 51.48 | |
| 260 to 470 | 71.48 to 81.94 | 51.48 to 61.94 | |
| Above 470 | 81.94 | 61.94 | |
| Detector: | Peak for pre-scan Peak and Average: 30-1000MHz:120kHz resolution bandwidth 1GHz-5GHz: 1MHz resolution bandwidth | | |

** linear interpolations

[Where F is the frequency in MHz, the formulas for calculating the maximum permitted fundamental field strengths are as follows: for the band 130-174 MHz, μ V/m at 3 meters = $56.81818(F) - 6136.3636$; for the band 260-470 MHz, μ V/m at 3 meters = $41.6667(F) - 7083.3333$. The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level.]

The fundamental frequency of the EUT is 433.92MHz

The limit for average field strength dB μ V/m for the fundamental emission= 80.8 dB μ V/m

No fundamental is allowed in the restricted bands.

The limit for average field strength dB μ V/m for the spurious emission=60.8 dB μ V/m. Spurious in the restricted bands must be less than 60.8 dB μ V/m or 15.209



Test Procedure: The procedure used was ANSI Standard C63.4-2003. The receiver was scanned from 30MHz to 5.0GHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for 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.

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

An initial pre-scan was performed in the 3m chamber using the spectrum analyser in peak detection mode. Peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bilog antenna with 2 orthogonal polarities and Horn antenna.

The following test results were performed on the EUT on 08 November 2007

1. Fundamental emission& Spurious Emissions**(a) Antenna polarization: Horizontal**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Pream p Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Remark |
|-----------------|-------------------|-----------------------|-----------------|---------------------|-----------------|----------------------|-----------------|--------|
| 433.929 | 66.6 | 16.5 | 2.5 | 25.3 | 60.3 | 100.8 | -40.5 | PEAK |
| 433.929 | 63.5 | 16.5 | 2.5 | 25.3 | 57.2 | 80.8 | -23.6 | AVERAG |
| 867.858 | 57.2 | 20.5 | 3.8 | 25.2 | 56.3 | 80.8 | -24.5 | PEAK |
| 867.858 | 53.2 | 20.5 | 3.8 | 25.2 | 52.3 | 60.8 | -8.5 | AVERAG |
| 1580.000 | 45.4 | 25.9 | 3.8 | 35.3 | 39.7 | 74.0 | -34.3 | PEAK |
| 1580.000 | 41.4 | 25.9 | 3.8 | 35.3 | 35.7 | 54.0 | -18.3 | AVERAG |
| 2376.000 | 45.4 | 28.5 | 4.6 | 34.8 | 43.7 | 74.0 | -30.3 | PEAK |
| 2376.000 | 39.4 | 28.5 | 4.6 | 34.8 | 37.7 | 54.0 | -16.3 | AVERAG |
| 3488.000 | 44.9 | 31.2 | 5.8 | 34.0 | 48.0 | 80.8 | -32.8 | PEAK |
| 3488.000 | 38.9 | 31.2 | 5.8 | 34.0 | 42.0 | 60.8 | -18.8 | AVERAG |

(b) Antenna polarization: Vertical

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Pream p Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Remark |
|-----------------|-------------------|-----------------------|-----------------|---------------------|-----------------|----------------------|-----------------|--------|
| 433.929 | 58.5 | 16.4 | 2.5 | 25.3 | 52.1 | 100.8 | -48.7 | PEAK |
| 433.929 | 55.3 | 16.4 | 2.5 | 25.3 | 48.9 | 80.8 | -31.9 | AVERAG |
| 867.858 | 44.5 | 21.0 | 3.8 | 25.2 | 44.0 | 80.8 | -36.8 | PEAK |
| 867.858 | 41.5 | 21.0 | 3.8 | 25.2 | 41.0 | 60.8 | -19.8 | AVERAG |
| 1496.000 | 46.39 | 25.52 | 3.6 | 35.41 | 40.1 | 80.8 | -40.7 | PEAK |
| 1496.000 | 40.39 | 25.52 | 3.6 | 35.41 | 34.1 | 60.8 | -26.7 | AVERAG |
| 2092.000 | 45.79 | 27.73 | 4.37 | 34.95 | 42.9 | 80.8 | -37.86 | PEAK |
| 2092.000 | 39.79 | 27.73 | 4.37 | 34.95 | 36.9 | 60.8 | -23.86 | AVERAG |
| 3872.000 | 43.86 | 32.05 | 6.23 | 33.61 | 48.5 | 74.0 | -25.5 | PEAK |
| 3872.000 | 36.86 | 32.05 | 6.23 | 33.61 | 41.5 | 54.0 | -12.5 | AVERAG |

Remark:

According to 15.35 (b) When average radiated emission measurements are specified in the regulations, including emission measurements below 1000 MHz, there is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules, e.g., see Section 15.255.

TEST RESULTS: The unit does meet the FCC Part 15 C Section 15.231 requirements.

5.3.2 Occupied Bandwidth

Test Requirement: FCC Part 15 C Section 15.231(c)

Test Method: ANSI C63.4 section 13 & FCC Part 2.1049

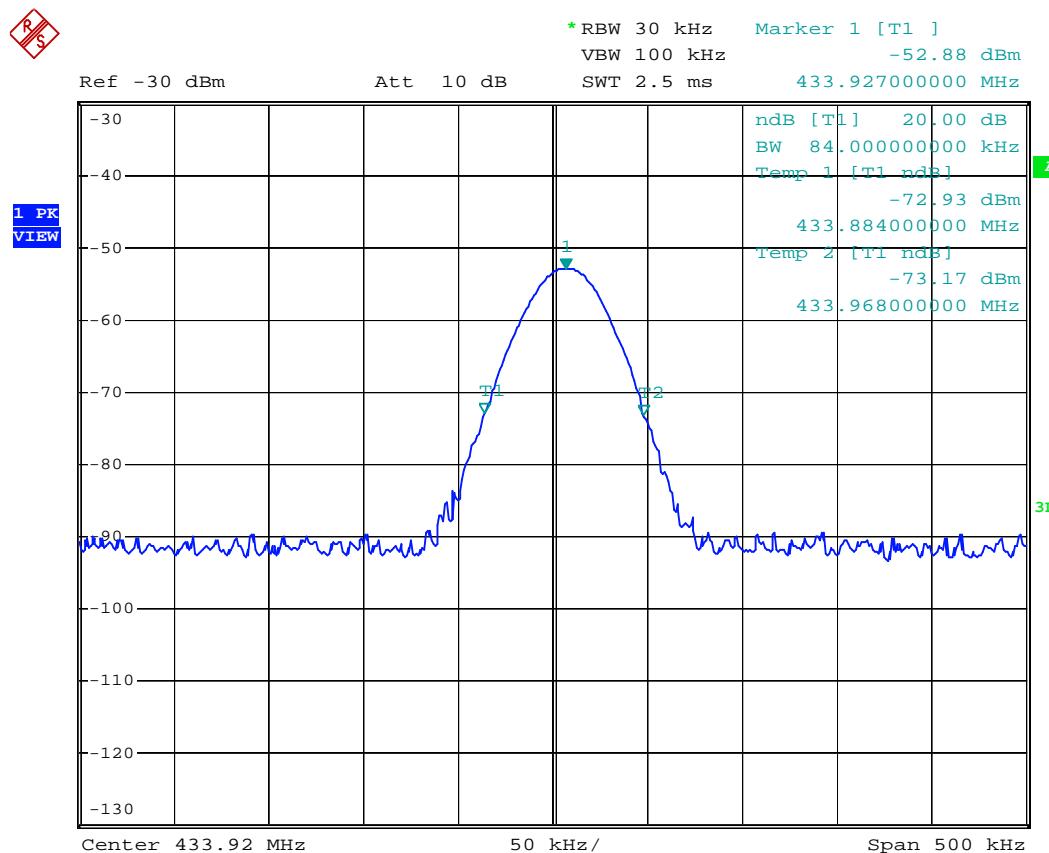
Test Date: 08 November 2007

Requirements: 15.231 (c) The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

Method of measurement: The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector. The vertical Scale is set to 10dB per division. The horizontal scale is set to 50KHz per division.

20dB Bandwidth: 84.0KHz

The graph as below, represents the emissions take for this device.



The results: The unit does meet the FCC Part 15 C Section 15.231 requirements.

5.3.3 Dwell Time:

Test Requirement: FCC Part 15 C Section 15.231(a)

Test Method: FCC Part 15 C Section 15.231(a)

Test Date: 08 November 2007

Requirements:

1. Regulation 15.231 (a) The provisions of this Section are restricted to periodic operation within the band 40.66-40.70 MHz and above 70 MHz. Except as shown in paragraph (e) of this Section, the intentional radiator is restricted to the transmission of a control signal such as those used with alarm systems, door openers, remote switches, etc. Radio control of toys is not permitted. Continuous transmissions, such as voice or video, and data transmissions are not permitted. The prohibition against data transmissions does not preclude the use of recognition codes. Those codes are used to identify the sensor that is activated or to identify the particular component as being part of the system.

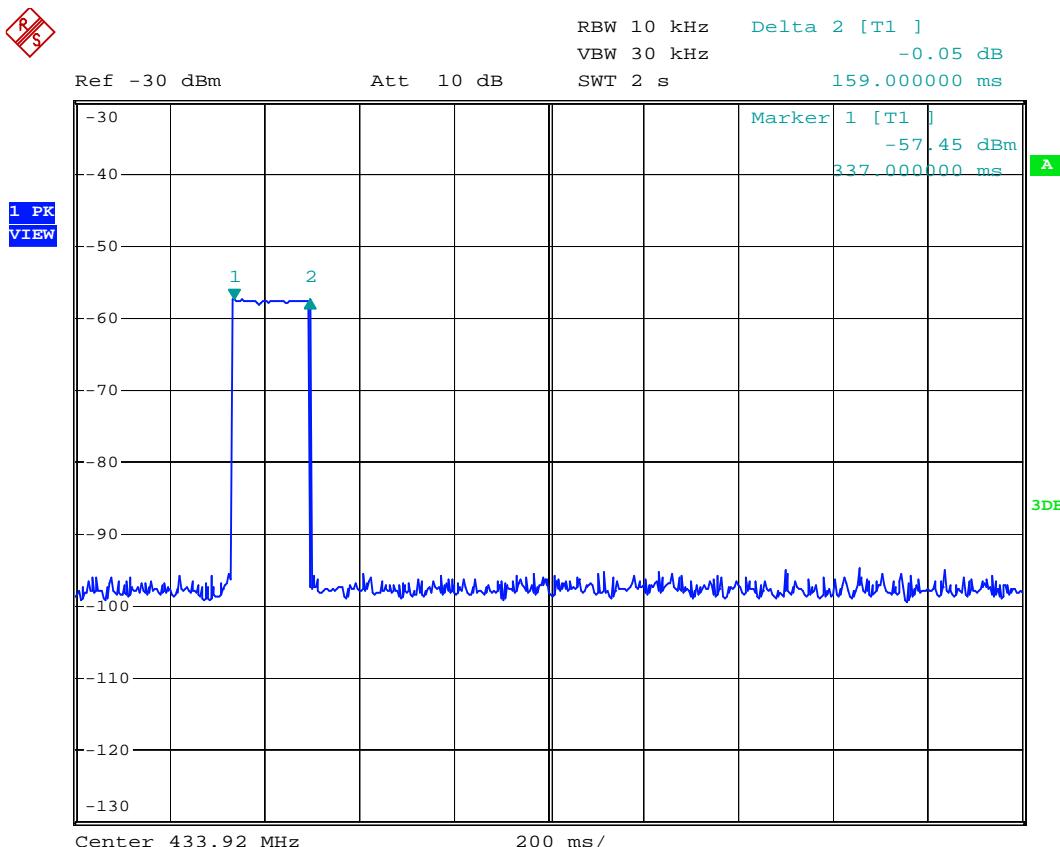
Result:

The EUT is a remote switch without audio or video transmitted.

The EUT meets the requirements of this section.

2. Regulation 15.231 (a1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

Result:



The EUT meets the requirements of this section.

3. Regulation 15.231 (a2) A transmitter activated automatically shall cease transmission within 5 seconds after activation.

Result:

The EUT does not have automatic transmission.

4. Regulation 15.231 (a3) Periodic transmissions at regular predetermined intervals are not permitted. However, polling or supervision transmissions to determine system integrity of transmitters used in security or safety applications are allowed if the periodic rate of transmission does not exceed one transmission of not more than one second duration per hour for each transmitter.

Result:

The EUT does not employ periodic transmission.

5. Regulation 15.231 (a4) Intentional radiators which are employed for radio control purposes during emergencies involving fire, security, and safety of life, when activated to signal an alarm, may operate during the pendency of the alarm condition.

Result:

This section is not applicable to the EUT.

The results: The unit does meet the FCC Part 15 C Section 15.231 requirements.