SGS-CSTC Standards Technical Services Ltd.

1/F., Building No. 1 Building, Agriculture Machinery Materials Co. Wushan Road, Shipai, Tianhe District,Guangzhou, China
Telephone: +86 (0) 20 3848 1001 Fax: +86 (0) 20 3848 1006
kent_hsu@sgs.com

FEDERAL COMMUNICATIONS COMMISSION
Registration number: 282399

FCC TEST REPORT

Application No. : 04.05.0995E

Applicant : STL INTERNATIONAL LTD

FCC ID : RF7WT-2

Fundamental Frequency : 915 MHz

Equipment under Test (EUT):

Name : WIRELESS TRANSMITTER

Model : WT-2

Standards : FCC PART 15, SUBPART C : 2003 (Section 15.249)

Date of Receipt : 10 May 2004

Date of Test : 26 to 27 May 2004

Date of Issue : 03 June 2004

Test Result :	**PASS ***

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

Authorized Signature:

Kent Hsu
Laboratory Manager

2 Contents

3 General Information

3.1 Client Information

Applicant:	STL INTERNATIONAL LTD
Address of Applicant:	TUNG KONG INDUSTRIAL ZONE.LIU MEI VILLAGE,YUEN ZHOU,BOLOU,PRC

3.2 Details of E.U.T.

Product Name:	WIRELESS TRANSMITTER
Model:	WT-2
Power Supply:	3.6V DC Ni-Cd Rechargerable Batteries
Power Cord:	N/A-

3.3 Description of Support Units

The EUT was tested as an independent unit: a 915MHz radio transmitter.

3.4 Test Location

All tests were performed at:-

SGS-CSTC Standards Technical Services Ltd., Guangzhou Safety & EMC Laboratory, 1/F, Building No. 1, Agriculture Machinery Materials Company Warehouse Ltd., Wushan Road Shipai, Tianhe District, Guangzhou, China. P.C. 510630.

Tel: +86 20 3848 1001

Fax: +86 20 3848 1006

3.5 Other Information Requested by the Customer

None.

3.6 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: 2000611-0. Effective through December 31, 2004.
- **ACA**
  SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.
- **VCCI**
  The 3m Semi-anechoic chamber and Shielded Room (11.5m x 4m x 4m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-1599 and C-1706 respectively.
  Date of Registration: February 28, 2003. Valid until May 30, 2005
- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FINKO**
  Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.
- **CNAL – LAB Code: L0141**
  SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of Testing Laboratories.
- **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, SGS-CSTC is an authorized test laboratory for the DoC process.

4 Test Results

4.1 Test Instruments

Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
3mSemi-Anechoic Chamber	Frankonia	N/A	N/A	16-02-2004	15-02-2005
EMI Test Receiver	Rohde & Schwarz	ESCS30	100085	05-11-2003	04-11-2004
EMI Test Software	Rohde & Schwarz	ES-K1	N/A	N/A	N/A
Coaxial cable	SGS	N/A	N/A	05-12-2003	04-12-2004
Bilog Type Antenna	Schaffner -Chase	CBL6143	5070	18-01-2004	17-01-2005
Horn Antenna	Rohde & Schwarz	HF906	100095	02-04-2004	01-04-2005
Spectrum Analyzer	Rohde & Schwarz	FSP30	100324	23-12-2003	22-12-2004
0.1-1300 MHz Pre-Amplifier	HP	8447D OPT 010	2944A06252	31-05-2004	30-05-2005

4.2 E.U.T. Operation

Input voltage: 3.6V DC Ni-Cd Rechargerable Batteries

Operating Environment:

Temperature: 24.0 °C
Humidity: 52 % RH
Atmospheric Pressure: 1012 mbar

EUT Operation:

Test the EUT in transmitting mode.

4.3 Test Procedure & Measurement Data

4.3.1 Radiated Emissions

Test Requirement: FCC Part15 C
Test Method: Based on FCC Part15 C Section 15.249
Test Date: 26 May 2004
Measurement Distance: 3m (Semi-Anechoic Chamber)
Frequency range 30 MHz - 10,000 MHz
Test instrumentation resolution bandwidth 120 kHz (30 MHz - 1,000 MHz)
1 MHz (1000 MHz - 10,000 MHz)
Receive antenna scan height 1 m - 4 m
Receive antenna 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 915MHz

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 uesd was ANSI Standard C63.4-2000. The receive was scanned from 30MHz to 10GHz.When an emission was found,the table was roated 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 worst case emissions were reported.

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 – Peramlifer Factor

The following test results were performed on the EUT:
1. Fundamental emission

Test Frequency (MHz)	Peak (dBuV/m)		Limits (dBuV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
915.000	92.8	88.3	114.0	21.2	25.7

Test Frequency (MHz)	Average (dBuV/m)		Limits (dBuV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
915.000	78.2	69.1	94.0	15.8	24.9

2. Spurious Emissions

Test Frequency (MHz)	Vertical (dBuV/m)		Horizontal (dBuV/m)		Limits (dBuV/m)		Margin (dB)			
							Vertical		Horizontal	
	Peak	AV	Peak	AV	Peak	AV	Peak	AV	Peak	AV
1830.000	52.9	50.2	44.6	38.7	74.0	54.0	21.1	3.8	29.4	15.3
2745.000	47.3	38.1	44.1	37.2	74.0	54.0	52.9	15.9	29.9	16.8
3660.000	32.4	33.8	34.5	34.0	74.0	54.0	41.6	20.2	39.5	20.0
4575. 000	34.8	34.5	35.4	35.2	74.0	54.0	39.2	19.5	38.6	18.8
5490. 000	35.7	35.7	36.5	36.2	74.0	54.0	38.3	18.3	37.5	17.8
6405. 000	35.9	37.3	35.3	36.8	74.0	54.0	38.1	16.7	38.7	17.2
7320. 000	38.0	37.0	37.2	36.5	74.0	54.0	36.0	17.0	36.8	17.5
8235. 000	37.4	38.2	36.6	38.0	74.0	54.0	36.6	15.8	37.4	16.0
9150.000	38.2	37.6	37.8	37.5	74.0	54.0	35.8	16.4	36.2	16.5

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 requirements.

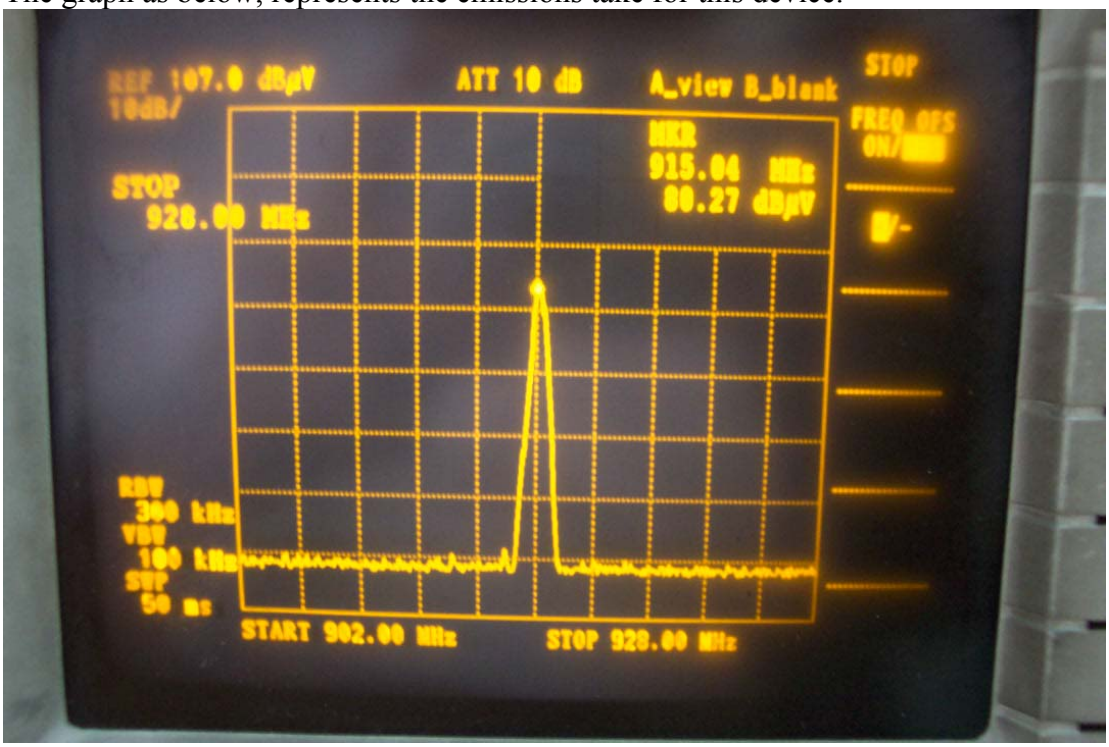
4.3.2 Band Edges

Test Requirement: FCC Part15 C
Test Method: Based on FCC Part15 C Section 15.249:
Test Date: 27 May 2004

Requirements: 15.249 (c) 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 100KHz per division.

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

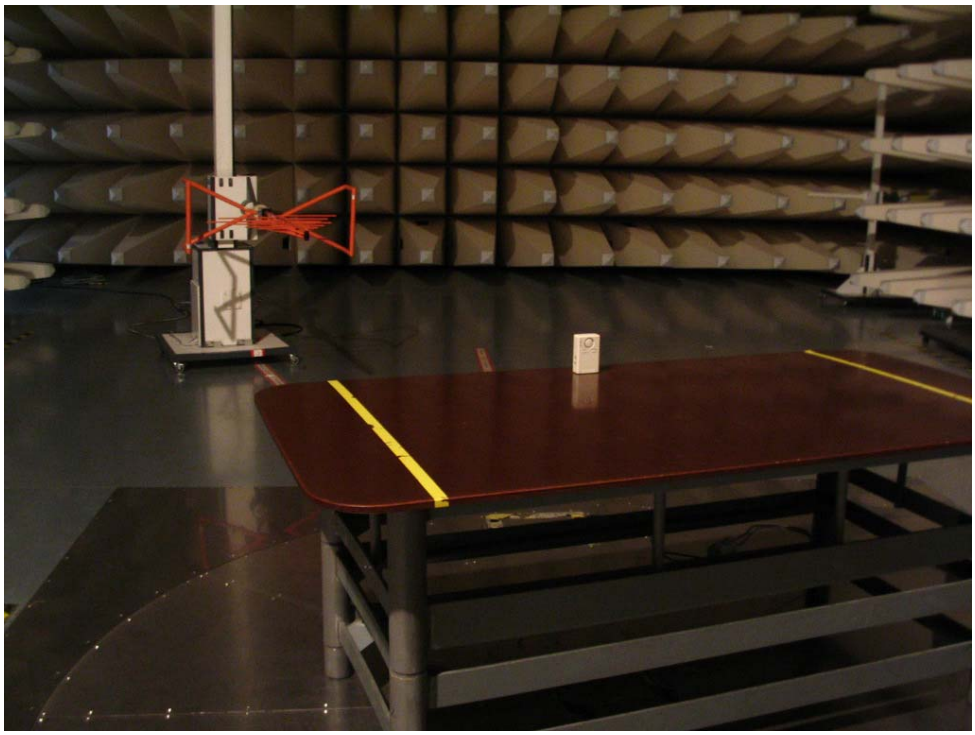


The fundamental frequency is 915MHz.

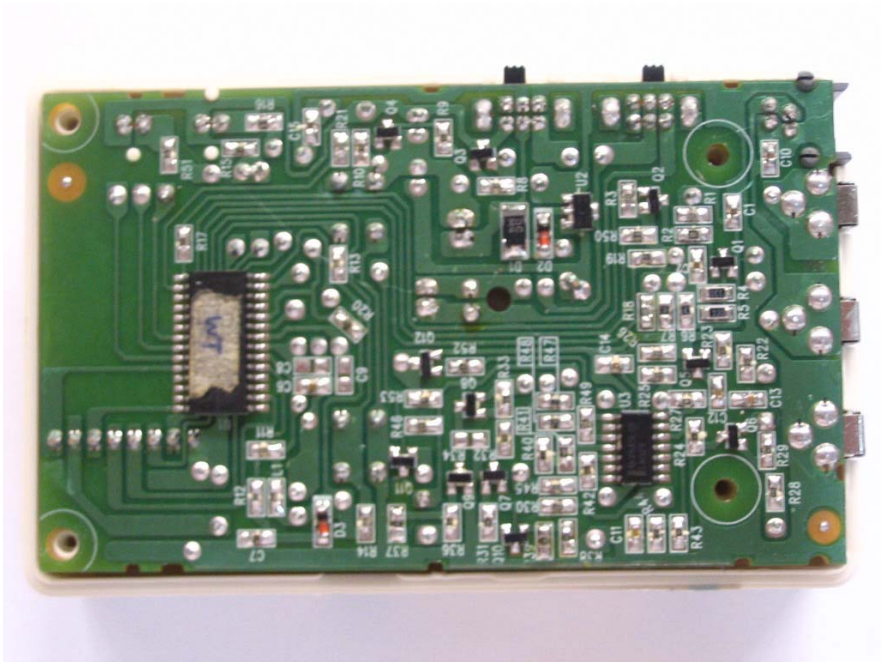
The level of band edges frequency: 902MHz and 928MHz are very below the level of the fundamental or the limits of section 15.209.

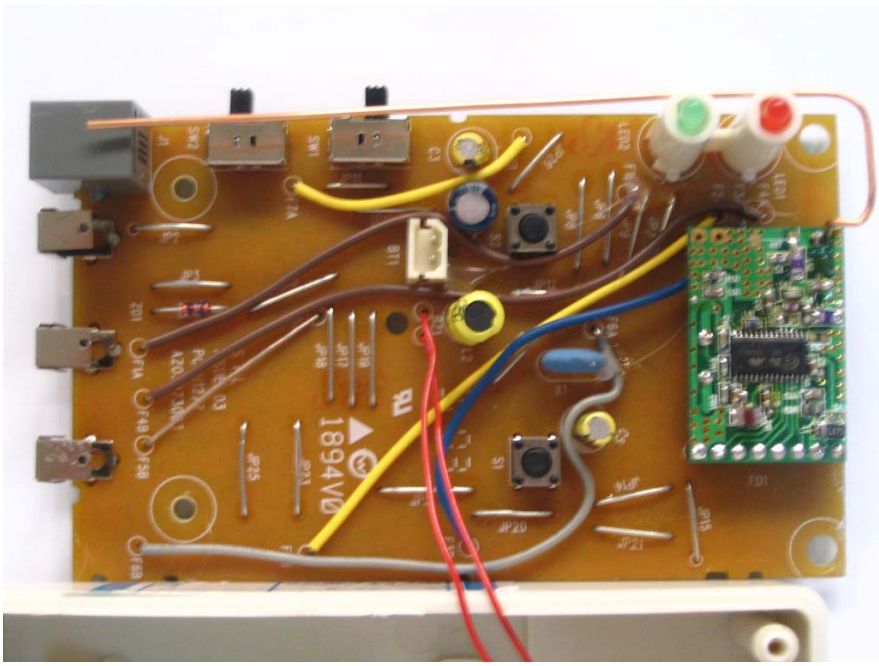
The results: The unit does meet the FCC requirements.

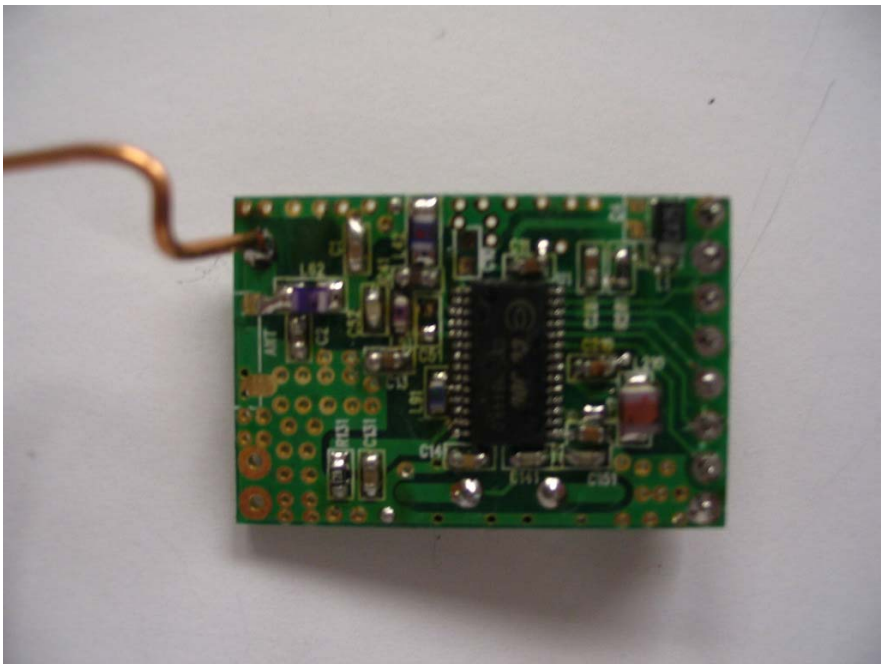
5 Photographs - Radiated Emission Test Setup



6 Photographs - EUT Constructional Details





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