FCC PART 95

EMI MEASUREMENT AND TEST REPORT

For

Seasoul (Changzhou) Co., Ltd.

A604,Construction Mansion,Hanjiang RD,Changzhou,Jiangsu 213022,China

FCC ID: VEFSSBB-1

June 22,2007

This Report Concerns: Original Report	Equipment Type： FISHING TACKLE (R/C Fishing Bait Boat,Fishing Bait Releaser)
Test Engineer:	Eric Li
Report No.:	F07062212A
Receive EUT Date/Test Date:	June 14,2007/ June 15-21,2007
Reviewed By:	Christina
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1. GENERAL INFORMATION

1.1. Report information

1.1.1.This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that BEST approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that BEST in any way guarantees the later performance of the product/equipment.

1.1.2.The sample/s mentioned in this report is/are supplied by Applicant, BEST therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through BEST, unless the applicant has authorized BEST in writing to do so.

Test Facility -
The open area test site used to collect the radiated data is located on the address of Shenzhen Academy of Metrology & Quality Inspection (FCC Registered Test Site Number: 97379) on Longzhu Road, Nanshan, Shenzhen, Guangdong, China.
The Open Area Test Site is constructed and calibrated to meet the FCC requirements.

1.2. Measurement Uncertainty

Available upon request.

2. PRODUCT DESCRIPTION

2.1. EUT Description

Description	:	**FISHING TACKLE (R/C Fishing Bait Boat,Fishing Bait Releaser)**
Applicant	:	**Seasoul (Changzhou) Co., Ltd.** A604,Construction Mansion,Hanjiang RD,Changzhou,Jiangsu 213022,China
Model Number	:	SSBB-1

Additonal Information

Frequency	:	75.69MHz
Number of Channels	:	N/A
Power Supply	:	DC 12V（Powered by battery）
Maximum Range	:	N/A
Transmitter Antenna	:	The transmitter has a built in antenna and solder on the PCB
Current Consumption		N/A

2.2. Block Diagram of EUT Configuration

2.3. Support Equipment List

N/A

2.4. Test Conditions

Temperature: 23~25℃
Relative Humidity: 55~63 %

3. FCC ID LABEL

FCC ID: VEFSSBB-1

This device complies with Part 95 of the FCC Rules.

Label Location on EUT

EUT Bottom View/ FCC ID Label Location

4. TEST RESULTS SUMMARY

FCC 95 Subpart C,

Test Standards	Test Items	Test Results
FCC Part 95.639	Transmitter Power	Pass
FCC Part 95.633	Emission Bandwidth	Pass
FCC Part 95.635	Field Strength of Spurious Radiation	Pass
FCC Part 95.623	Frequency Stability	Pass
2.1047	Modulation Characteristics	Pass

Remark: “N/A” means “Not applicable.”

Modifications

No modification was made.

5. TEST EQUIPMENT USED

Equipment/Facilities	Manufacturer	Model #	Serial no.	Date of Cal.	Cal. Interval
Cable	Resenberger	N/A	NO.1	Mar 10，2007	1 Year
Cable	SCHWARZBECK	N/A	NO.2	Mar 10，2007	1 Year
Cable	SCHWARZBECK	N/A	NO.3	Mar 10，2007	1 Year
LISN	Rohde＆Schwarz	ESH3-Z5	100305	Mar 10，2007	1 Year
50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200283933	Mar 10, 2007	1 Year
EMI Test Receiver	Rohde＆Schwarz	ESP13	100180	Oct.18,2006	1 Year
Spectrum Analyzer	Rohde＆Schwarz	FSP40	100273	Sep.10,2007	1 Year
3m Semi-Anechoic Chamber	Albatross Projects	9m×6m×6m	N/A	Feb.20,2007	1 Year
Signal Generator	FLUKE	PM5418 + Y/C	LO747012	Feb.20,2007	1 Year
Signal Generator	FLUKE	PM5418TX	LO738007	Feb.20,2007	1 Year
Loop Antenna	SCHWARZBECK	FMZB1516	113	Jan.30,2007	1 Year
Trilog-Super Broadband Antenna	SCHWARZBECK	VULB9161	9161-4079	Sep.22,2006	1 Year
Broad-Band Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-564	Sep.22,2006	1 Year
Ultra Broadband Antenna	Rohde＆Schwarz	HL-562	100110	June.15,2006	1 Year
AMN	Rohde＆Schwarz	ESH3-Z5	100196	Oct.11,2006	1 Year
AMN	Rohde＆Schwarz	ESH3-Z5	100197	Oct.11,2006	1 Year
Pulse Limiter	Rohde＆Schwarz	ESH3-Z2	N/A	N/A	N/A
Power Meter	Rohde＆Schwarz	NRVD	100041	Feb.20,2007	1 Year
EMI Test Receiver	Rohde＆Schwarz	ESCS30	100003	Feb.20,2007	1 Year
Coaxial Cable with N-connectors	SCHWARZBECK	AK9515H	95549	Sep.22,2006	1 Year
Radio Communication Test Set	Rohde＆Schwarz	CMS 54	846621/024	Feb.20,2007	1 Year
Modulation Analyzer	Hewlett-Packard	8901B	2303A00362	Feb.20,2007	1 Year
Absorbing clamp	Rohde＆Schwarz	MDS-21	N/A	Oct.29,2006	1 Year

6. TRANSMITTER POWER

6.1. Test Equipment

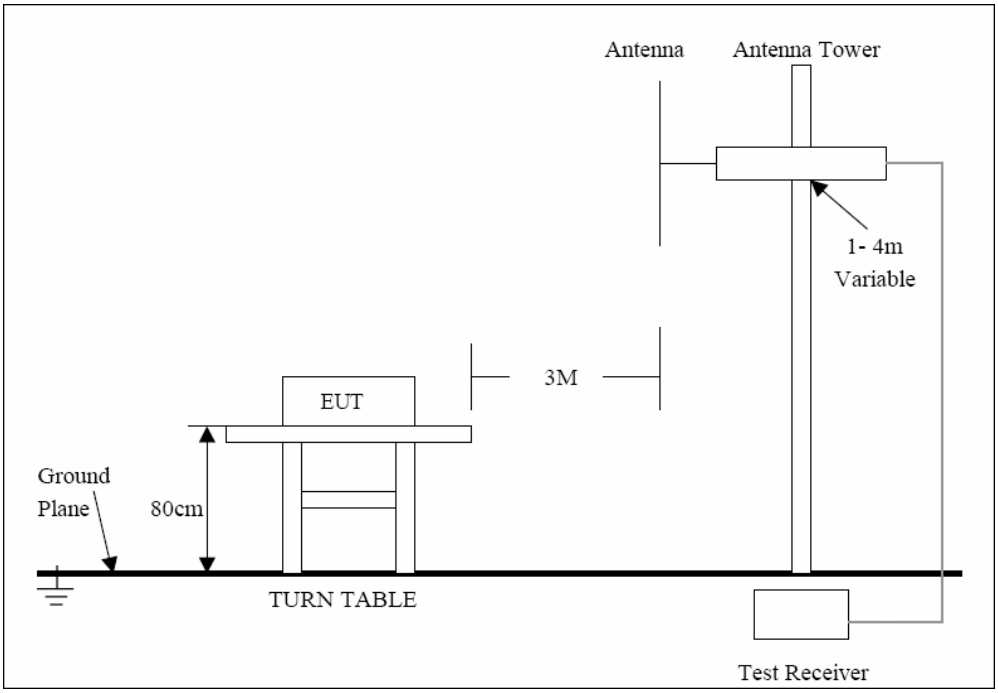
Please refer to section 4 this report.

6.2. Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load, which was also placed on the turntable.The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT .The test was performed by placing the EUT on 3-orthogonal axis.

The maximum signal level detected by measureing receiver shal be noted.Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of transmitter power were measured by the substitution.

6.3. Test Setup



For the actual test configuration,Please refer to the related items-Photos of testing

6.4. Limits

Per §95.639, No R/C transmitter, under any condition of modulation, shall exceed a carrier power or peak envelope TP (single-sideband only) of: 0.75 W in the 72-76 MHz frequency band.

6.5. Test Result

PASS

The measured field strength at 75.690 MHz was 115.9 dBμV/m at a distance of 3 meters. The transmitter output power (EIRP) in watts was calculated to be 117mW.

7. EMISSION BANDWIDTH

7.1. Test Equipment

Please refer to Section 4 this report.

7.2. Test Procedure

The antenna was disconnected from the transmitter and the short cable was connected to the transmitter RF output.
The RF output was connected to the input of the spectrum analyzer through sufficient attenuation. Set SPA Center Frequency to fundamental frequency, RBW, VBW=1 kHz, SPAN=50 kHz, Set SPA Max hold, Mark peak, -26 dB

7.3. Configuration of The EUT

Same as section 5.4 of this report

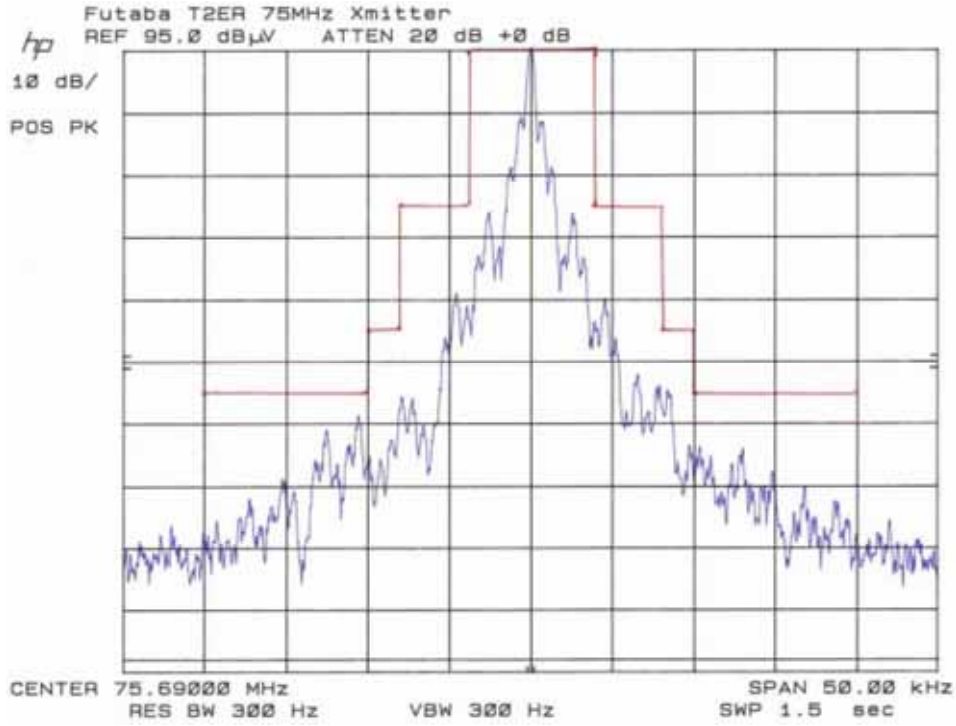
7.4. Bandwidth Limit

Per FCC §95.633, the authorized bandwidth for any emission type transmitted by an R/C transmitter is 8 kHz.

7.5. Test Result

PASS

The occupied bandwidth of the EUT complied with the emission bandwidth requirement. During testing, all control switches and buttons were investigated for the worst case modulated signal. The occupied bandwidth plot submitted was the worst case condition. Test result as below:



8. UNWANTED RADIATION

8.1. Test Equipment

Please refer to Section 4 this report.

8.2. Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load, which was also placed on the turntable.
The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT .The test was performed by placing the EUT on 3-orthogonal axis.
The frequency range up to teeth harmonic of the fundamental frequency was invstigated.
Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emission were measured

by the substitution.
Spurious attenuation limits in dB = 56 + 10Log10(power out in Watts)

8.3. Configuration of The EUT

Same as section 5.4 of this report

8.4. Unwanted radiation Limit

According to §95.635

8.5. Test Result

Frequency (MHZ)	Meter Reading (dBm)	Cable loss (dB)	ERP (dBm)	ERP (dBc)	Limit of ERP (dBc)	Margin (dB)
151.380	-37.2	0.4	-37.6	-58.2	-46.6	11.6
227.070	-36.7	0.5	-37.2	-57.8	-46.6	11.2
605.520	-40.0	0.9	-40.9	-61.5	-46.6	14.9
832.59	-43.6	1.0	-44.6	-65.2	-46.6	18.6

• Emissions that are attenuated more than 20dB below the FCC limit are not required.
• Measurements were performed with both vertical and horizontal antenna polarization. Vertical antenna polarization measurements were worst case.
• All readings are peak.

9. FREQUENCY STABILITY

9.1. Test Equipment

Please refer to Section 4 this report.

9.2. Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to a f Spectrum Analyzer via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the Frequency Counter.

Frequency Stability vs. Voltage: An external variable DC power supply Source. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the end point. The output frequency was recorded for each voltage.

9.3. Configuration of The EUT

Same as section 5.4 of this report

9.4. Limit

According to FCC §2.1055(a)(1), the frequency stability shall be measure with variation of ambient temperature from –30ºC to +50ºC, and according to FCC 2.1055(d)(2), the frequency stability shall be measured with reducing primary supply voltage to the battery operating end point which is specified by the manufacturer.

According to FCC §95.623(c), All R/C transmitters capable of operation in the 72-76 MHz band that are manufactured in or imported into the United States, on or after March 1, 1992, or are marketed on or after March 1, 1993, must be maintained within a frequency tolerance of 0.002%. R/C transmitters operating in the 72–76 MHz band and marketed before March 1, 1993, may continue to be operated with a frequency tolerance of 0.005% until March 1, 1998.

9.5. Test Result

Frequency Stability vs. Temperature
Frequency tuned: 75.690 MHz
Frequency Accuracy Required: 0.002%

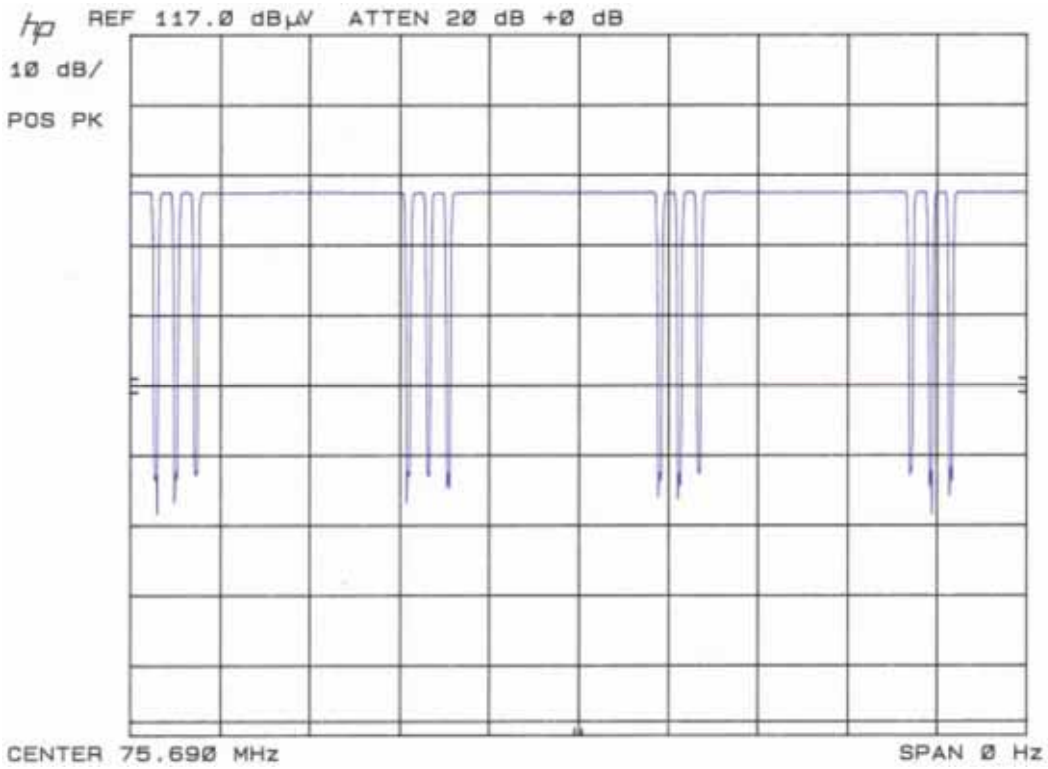
Operating Temperature (℃)	*Frequency Measured (MHz)*	*Frequency Deviation (Hz)*	*Frequency Deviation (%)*
-30	75.689499	-501	-0.000662
-20	75.689682	-318	-0.000420
-10	75.689805	-195	-0.000258
0	75.689998	-2	-0.000003
+10	75.690083	83	0.000110
+20	75.690086	86	0.000114
+30	75.690055	55	0.000073
+40	75.690039	39	0.000052
+50	75.690087	87	0.000115

Frequency Stability vs. Supply Voltage
Frequency stability was measured with variation of primary supply voltage. For battery powered equipment, the primary supply voltage was reduced to the battery operating end point. The following table contains the results:
Frequency Tuned: 75.690 MHz Frequency Accuracy Required: 0.002%
Normal Input Voltage: 12VDC Temperature: 20°C

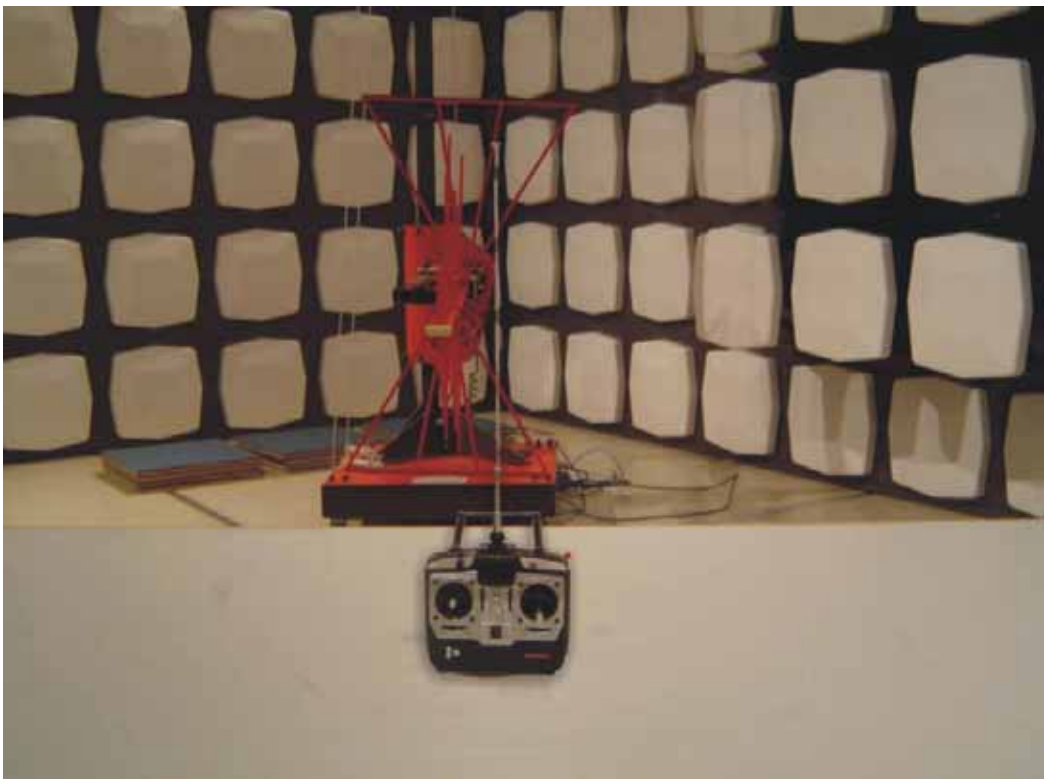
Input Voltage (V)	*Frequency Measured (MHz)*	*Frequency Deviation (Hz)*	*Frequency Deviation (%)*
10.20	75.690075	75	0.000099
11.00	75.690074	74	0.000098
11.50	75.690073	73	0.000096
12.00	75.690071	71	0.000094
12.50	75.690069	69	0.000091
13.00	75.690065	65	0.000086
13.80	75.690062	62	0.000082

10. MODULATION CHARACTERISTICS

Please refer to the plot.



APPENDIX I TEST SETUP



APPENDIX II TEST PICTURE

Photo 1 General Appearance of the EUT

Photo 2 General Appearance of the EUT

Photo 3 Inside of EUT

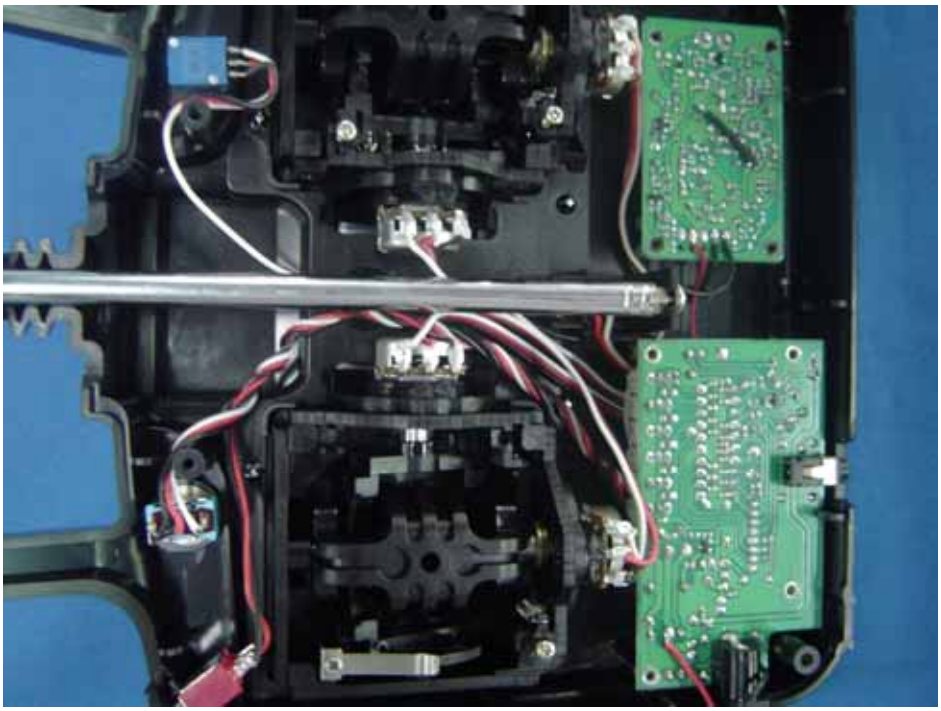


Photo 4 Inside of the EUT

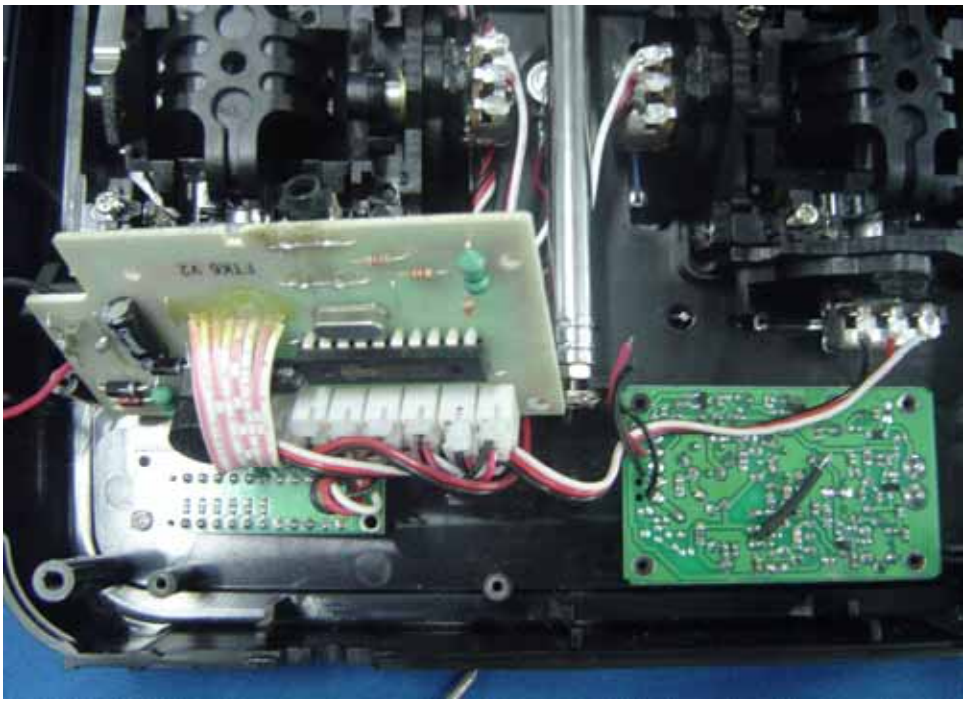


Photo 5 Inside of EUT

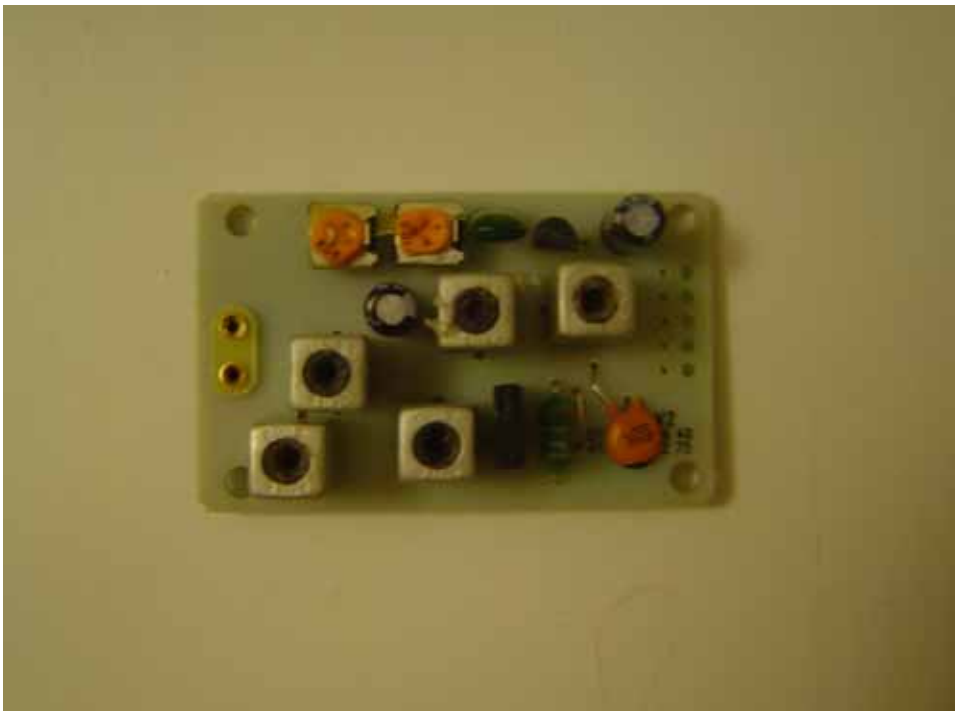


Photo 6 Inside of the EUT

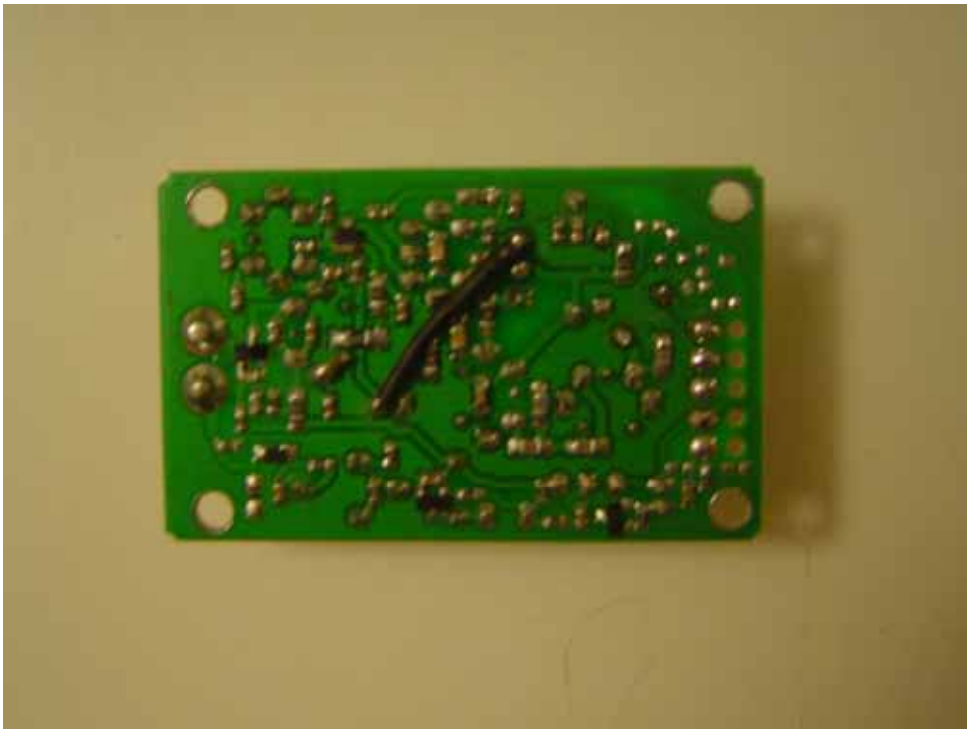


Photo 7 Inside of EUT

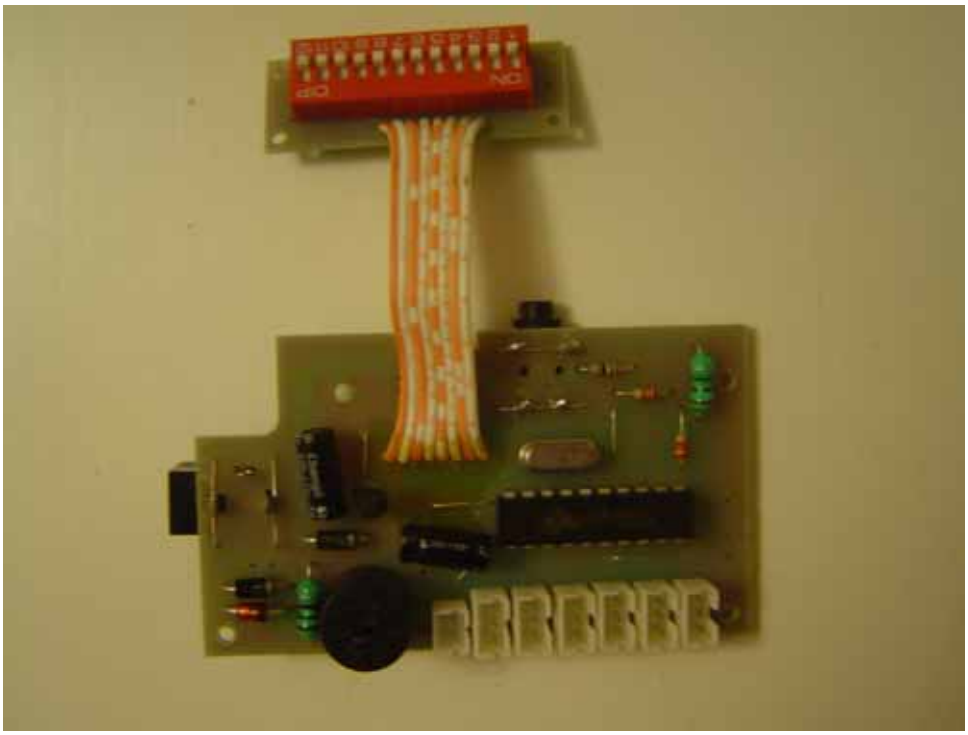


Photo 8 Inside of the EUT