TEST REPORT

FCC RULES Part 95 : Radio Control(R/C) Radio Service

FCC ID : SU4-CYBIRD

Report File No.	: STROR-05-001
Date of Issue	: January 10, 2005
Kind of Product	: Radio Control(R/C) Transmitter
Model Name	: Cybird
Manufacturer	: Skytech International Co., Ltd.
Serial No.	: -
Test Result	: Complied

SGS Testing Korea Co., Ltd.
18 - 34, Sanbon - dong, Gunpo - si, Gyeonggi - do, Korea, 435 - 041
Tel. +82 31 428 5700 / Fax. +82 31 427 2371
http://www.sgstesting.co.kr

VERIFICATION OF COMPLIANCE

Applicant :	Skytech International Co., Ltd.
Kind of Product :	Radio Control(R/C) Transmitter
Brand Name :	-
Model Name :	Cybird
Model Difference :	-
Report File No. :	STROR-05-001
Date of test :	December 27, 2004 ~ January 7, 2005
Receiver EUT :	Cybird(Receiver)

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
FCC Part 95:Radio Control(R/C) Radio Service	Complied

The above equipment was tested by SGS Testing Korea Co., Ltd. for compliance with the requirements set forth in the FCC RULES Part 95. The results of testing in this report apply to the product system that was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By: *Leo Kim* *Date* January 7, 2005

Approved By *James kwon* *Date* January 10, 2005

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1. General Description of EUT

This equipment is a model controller that controls a flapping mechanism Cybird.

2. General Information of EUT

Transmitter

Power Supply	DC 9 V
Operating Frequency	72.01 ~ 72.99 MHz
Modulation	ASK
Operating Temperature	-30 ℃~+50 ℃
Frequency Generation	X-tal
Emission	2K85A1D
Output Power	1.19mW
Communication method	One-way
Antenna Type	Rod Antenna

3. Test Procedure and Configuration

3.1 RF Output Power and RADIATED SPURIOUS EMISSIONS

3.1.1 Test Procedure

(1) The measurement was applied in an anechoic chamber. Place the transmitter to be tested (EUT) on the turntable.

(2) Measurements shall be made from the lowest radio frequency generated in the equipment to the tenth harmonic of the carrier.

(3) For each spurious frequency, put the test antenna to horizontal polarity. Then the turntable should be rotated 360o to determine the maximum reading. Repeat this procedure to obtain the highest possible reading. Record this maximum reading.

(4) Repeat step (3) for each spurious frequency with the test antenna polarized vertically.

(5) Remove the transmitter and replace it with a substitution antenna (the antenna should be approximately at the same location as the center of the transmitter.). At the lower frequencies, where the substitution antenna is very long, this will be impossible to achieve when the antenna is polarized vertically. In such case the lower end of the antenna should be 0.3 m above the ground. (6) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a non-reading cable. With the antennas at both ends horizontally polarized and with the signal generator tuned to a particular spurious frequency. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the generator output.

(7) Repeat step (6) with both antennas vertically polarized for each spurious frequency.

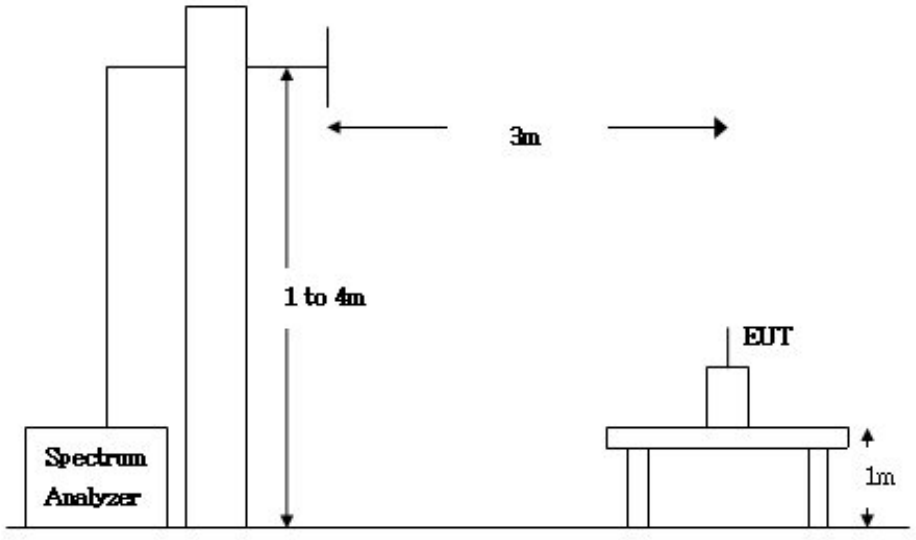
(8) Calculate power in dBm into a reference ideal half–wave dipole antenna by reducing the readings obtained in steps (6) and (7) by the power loss in the cable between the generator and the antenna and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna.

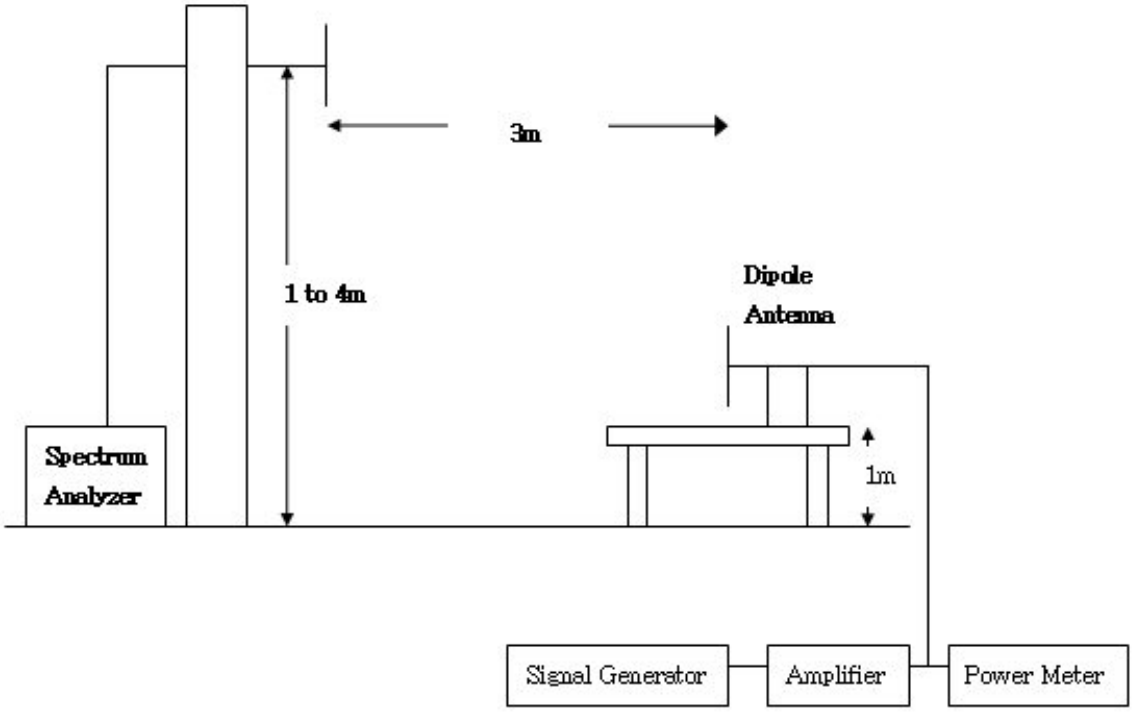
(9) The level records in step (8) are the absolute levels of radiated spurious emissions in dBm. The radiated spurious emissions in dB can be calculated by the following:

Radiated spurious emissions (dB) = 10log10 [TX power in watts/0.001]–the levels in step (8)

Note : It is permissible to use other antennas provided they can be referenced to a dipole.

3.1.2 Configuration



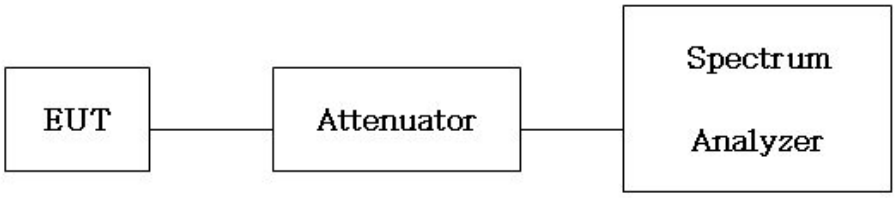


3.2 Emission Bandwidth

3.2.1 Test Procedure

The Occupied bandwidth is measured with a spectrum analyzer connected to the transmitter output while EUT is operating in transmit mode with modulation at the appropriate frequency.

3.2.2 Configuration

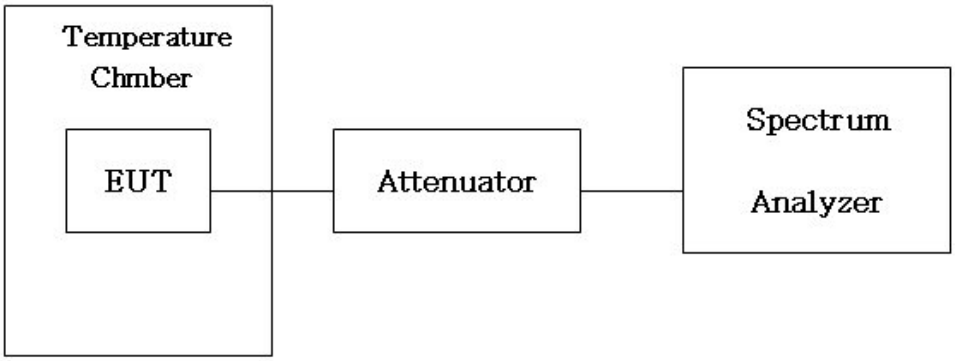


3.3 Frequency Stability Measurement

3.3.1 Test Procedure

The carrier power was measured with a spectrum analyzer connected to the output of the transmitter power amplifier while EUT was operating in transmit mode at the frequency.

3.3.2 Configuration



4. Peripherals / Support Equipment Used

Following peripheral devices and interface cables were connected during the measurement.

Type of Peripheral Equipment Used:

Description	Model Name	Serial NO	Manufacturer	FCC ID

5. RF Output Power and RADIATED SPURIOUS EMISSIONS

FCC Rule Part 95(Section 95.635) and Part 2 Subpart J (Section 2.1053)

Humidity Level : 42% Temperature: 24℃

Frequency (MHz)	Power meter Reading (dBm)	Antenna Polarization (H/V)	Correction Factor (dB)	ERP (dBm)	RF Output Power (mW)	Limit (mW)
72.99	10.54	V	-9.79	0.75	1.19	750

Spurious Emission Frequency (MHz)	Power meter Reading (dBm)	Antenna Polarization (H/V)	Correction Factor (dB)	ERP (dBm)	Separation From Carrier (dBc)	Limit of ERP (dBc)	Margin For Limits (dB)
145.98	-37.04	V	-10.46	-47.50	48.25	26.46	21.79
218.97	-61.74	V	-9.91	-71.65	72.40	26.46	45.94
Above 218.97 to 1000	Not found						

* Remark:

(1) Limit of ERP in dB -56 – 10Log(0.00119) = -26.46 dB.

(2) Correction factor is included cable loss, coupling factor and attenuator loss.

(3) Three axes were tested, and the maximum values were recorded.

Test Equipment Used

EQUIPMENT	MANUFACTURER	MODEL	CAL DUE.
Spectrum analyzer	H/P	8593E	Aug. 2005
Signal Generator	Agilent	8648D	May. 2005
Dipole Antenna	Schwarzbeck Mess	UHAP	May. 2005
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Biconical Antenna	EMCO	3104C	Feb. 2005
Log-periodic Antenna	Rohde & Schwarz	UHALP9107	Jan. 2005
Power Meter	Agilent	E4416A	May. 2005
Anechoic Chamber	Seo Young EMC	-	-

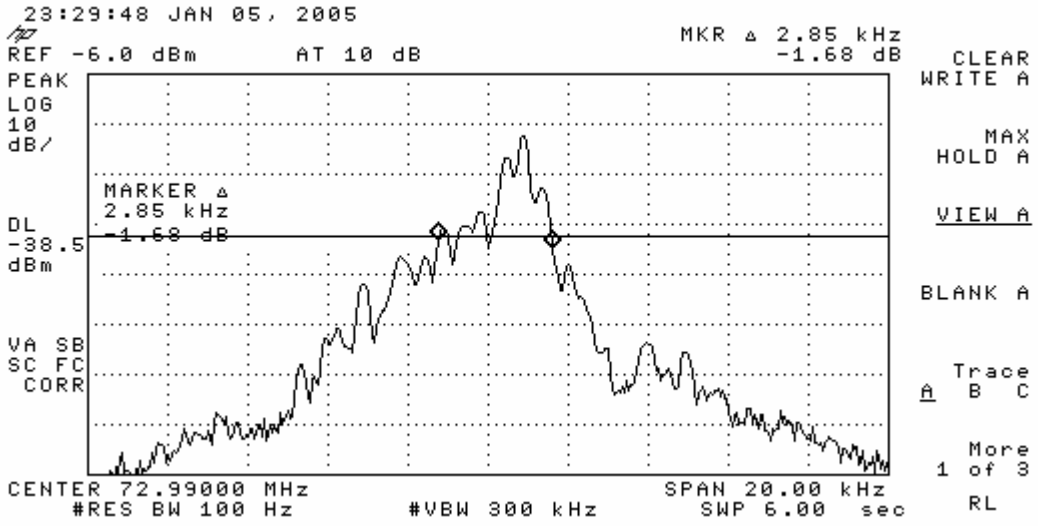
6. Emission Bandwidth

FCC Rule Part 95 (Section 95.633), (Section 95.635) and Part 2 Subpart J (Section 2.1049)

Humidity Level : 42% Temperature: 24℃

Frequency(MHz)	Bandwidth(kHz)	Limit(kHz)
72.99	2.85	8

<Plot>



Test Equipment Used

EQUIPMENT	MANUFACTURER	MODEL	CAL DUE.
Spectrum analyzer	H/P	8593E	Aug. 2005

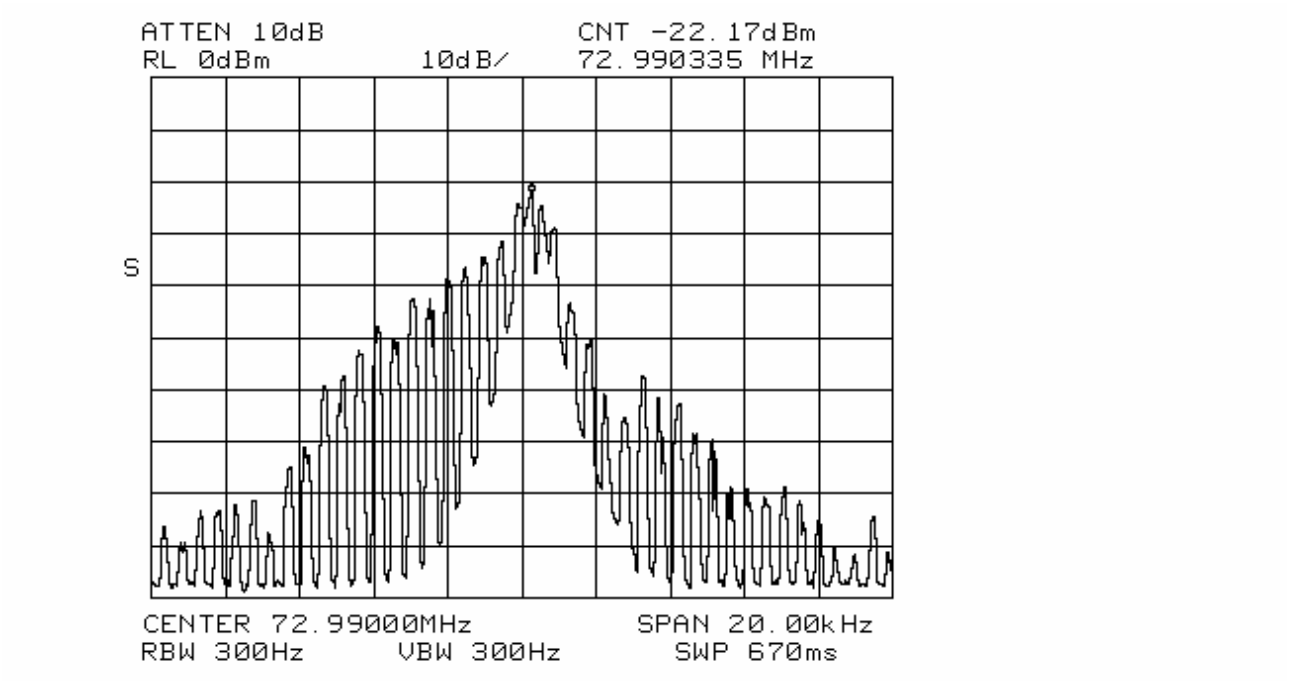
7. Frequency Tolerance

FCC Rule Part 95 (Section 95.623) and Part 2 Subpart J(Section 2.1055)

Humidity Level : 42% Temperature: 24℃

Frequency(MHz)	Measured Frequency(MHz)	Tolerance(%)	Limit(%)
72.990	72.990335	0.000459	0.002

<Plot>



Test Equipment Used

EQUIPMENT	MANUFACTURER	MODEL	CAL DUE.
Spectrum analyzer	H/P	8593E	Aug. 2005

8. FREQUENCY STABILITY

FCC Rule Part 95 (Section 95.623) and Part 2 Subpart J(Section 2.1055)

8.1 For Temperature

Temperature(℃)	Tuned Frequency(MHz)	Frequency Deviations(Hz)	Frequency Deviations(%)	Limit(%)
-30	72.990335	-25	-0.000034	0.002
-20		-101	-0.000138	
-10		-80	-0.000109	
0		-45	-0.000062	
10		341	0.000467	
20		335	0.000459	
30		498	0.000682	
40		661	0.000905	
50		657	0.000900	

8.2 For Power Supply

Voltage(V)	Tuned Frequency	Frequency Deviations(Hz)	Frequency Deviations(%)	Limit(%)
8.1	72.990335	431	0.000590	0.002

Test Equipment Used

EQUIPMENT	MANUFACTURER	MODEL	CAL DUE.
Spectrum analyzer	H/P	8593E	Aug. 2005
DC Power Supply	Agilent	6674A	May. 2005
Temperature Chamber	Hangil Technics	HGTP-4050	Nov. 2005

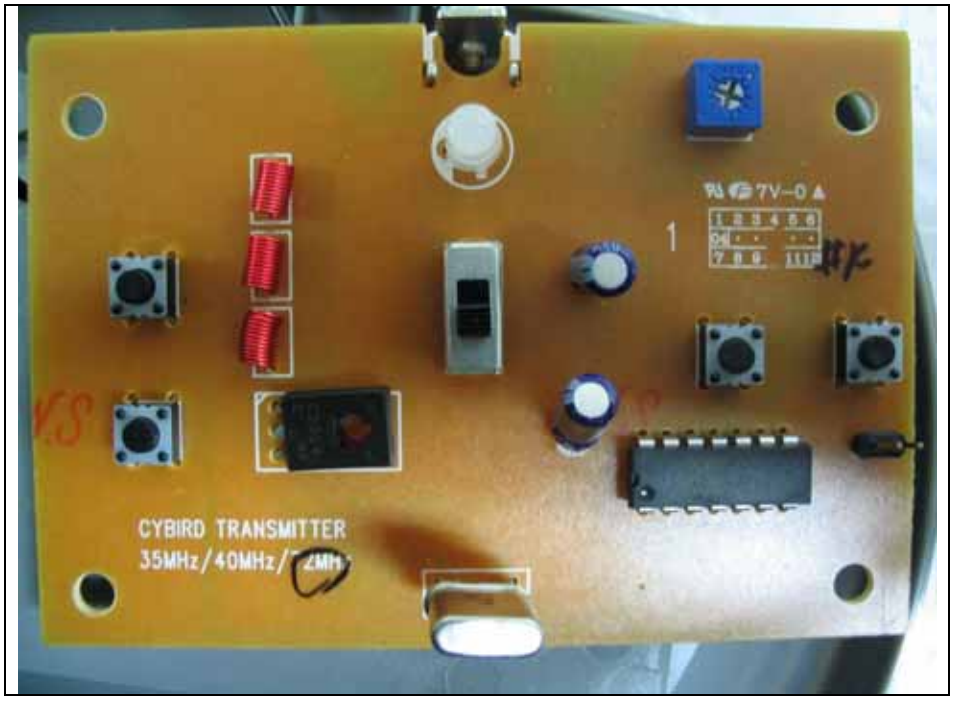
9. Attachment A – Photos of the test set up

Extenal Photos of the EUT

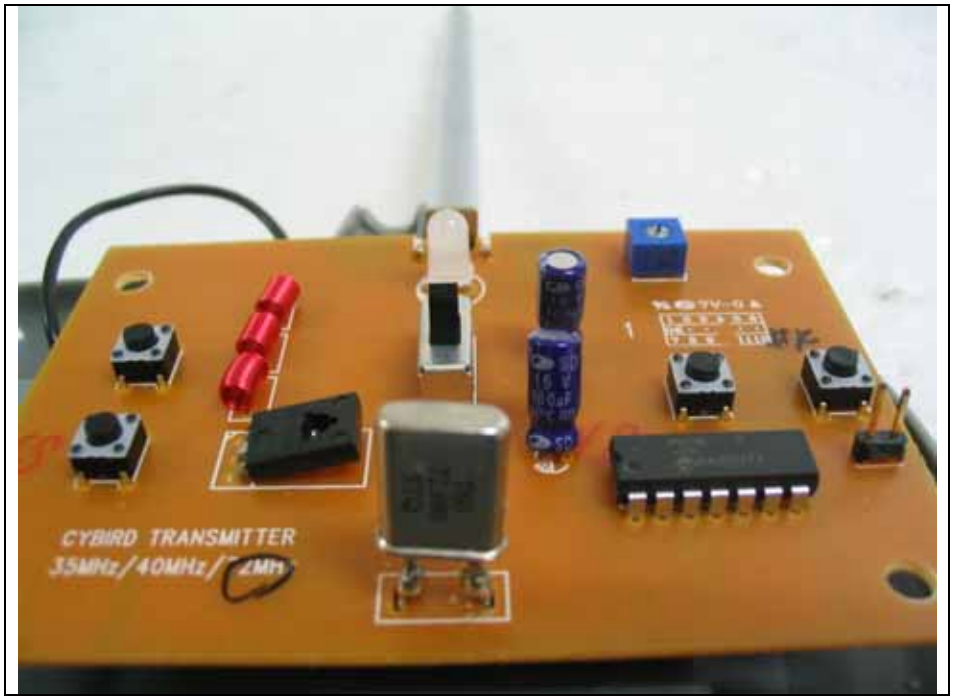
View of EUT

Rear View of Product

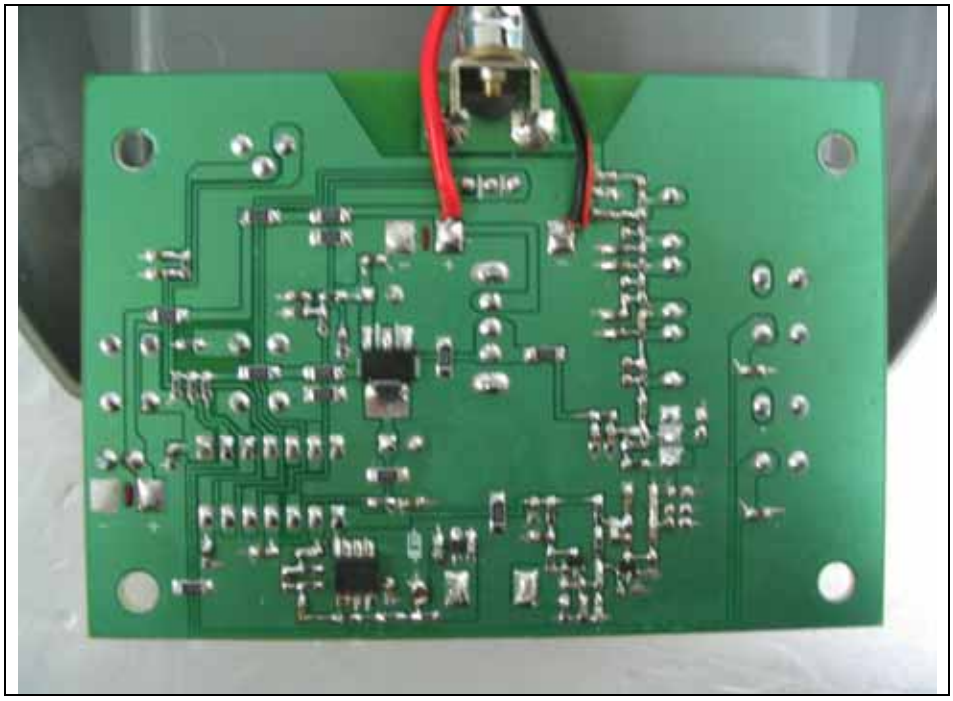
Inner View of Product



Inner View of Product(X-Tal Fixed)



Inner View of Product



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