



**INTERNATIONAL ELECTRICAL CERTIFICATION CENTRE LTD.**

**F C C -  
TEST REPORT**

REPORT NO.: 19834/9/400F

Units 602-605, 6/F., 31 Lok Yip Road, On Lok Tsuen, Fanling, N.T., Hong Kong  
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ELECTRICAL  
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CENTRE LTD.

## FCC – Test Report

No. 19834/9/400F

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FCC listed testlab  
acc. to Section 2.948 of the FCC - Rules

in compliance with the requirements of  
ANSI C63.4 - 1992

**Product** : Remote Control Car -- 49 MHz  
Receiver

**Model** : 90277 (49MHz)

**Importer** : ECHO TOYS LTD

**Manufacturer** : ECHO ELECTRONIC TOYS  
FACTORY



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## LABORATORY - REPORT

**APPLICANT:** ECHO TOYS LTD  
**ADDRESS:** 8 A&B, Block 1, Tai Ping Industrial Centre  
57 Ting Kok Road  
Taipo, NT  
HONG KONG  
**DATE OF SAMPLE RECEIVED:** 1999-06-15  
**DATE OF TESTING:** 1999-07-29

### DESCRIPTION OF SAMPLE:

Product: Remote Control Car -- 49 MHz Receiver  
Manufacturer: ECHO ELECTRONIC TOYS FACTORY  
Model number: 90277 (49MHz)  
Additional model number: --  
Rating: DC 3V ('AA' Size Battery x 2)  
Country of Origin: P.R. CHINA

**INVESTIGATIONS REQUESTED:** Measurements to the relevant clauses of F.C.C. Rules and Regulations  
Part 15 Subpart B – 'Unintentional Radiators'

**RESULTS:** See the attached test sheets

**CONCLUSIONS** From the measurement data obtained, the tested sample was considered to have COMPLIED with the requirements for the relevant clauses of Federal Communications Commission Rules as specified above.

\_\_\_\_\_**Signed in the original copy**\_\_\_\_\_  
Authorized Signature

**Remark:** Purpose of those tests in this report is to provide the applicant with the necessary test data of their device for the submission to FCC with application for Equipment Authorization under the FCC Equipment Authorization Program. The tests themselves are not Approval Tests



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# Summary of Test Results

### Interference Radiation:

Test result: O.K.  
Test data: See attached data sheet

### Interference Voltage:

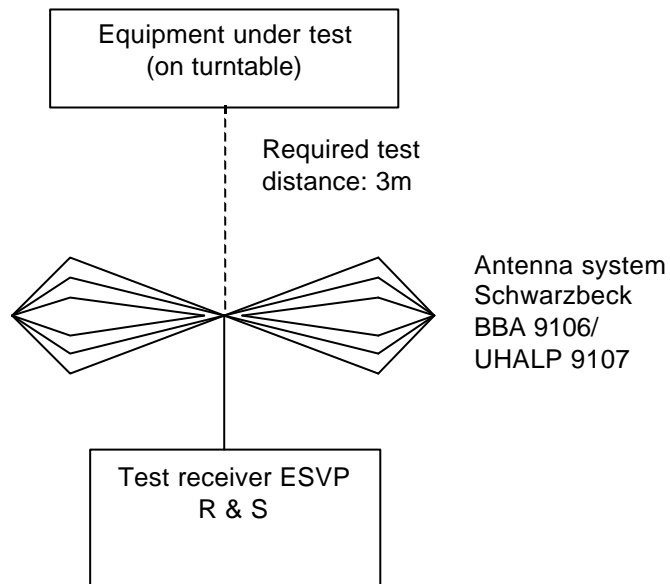
Test result: N.A.  
Test data: N.A.



## TEST EQUIPMENT LIST

Equipment	Manufacturer	Model	Serial No.	Remark
Test Receiver	Rohde & Schwarz	ESH 3	863497/015	10KHz – 30MHz
Test Receiver	Rohde & Schwarz	ESVP	860688/022	25MHz – 1,300 MHz
Artificial Mains Network (LISN)	Schwarzbeck	NSLK 8127	--	2 x 10A, 50Ω, 50μH 10KHz-30MHz
Antenna System	Schwarzbeck	BBA 9106 / UHALP 9107	--	30MHz – 1000MHz
Antenna Mast System	Schwarzbeck	AM9104	--	Max. 4 meters height
Spectrum Analyzer with Q. Peak	Tektronix	2712	B023006	9KHz – 1.8GHz
Interface for Spectrum 2712	Tektronix	TD3F14A	--	
Test Receiver	Rohde & Schwarz	ESH 3	892580/006	10KHz – 30MHz
Test Receiver	Rohde & Schwarz	ESVP	863512/012	25MHz – 1,300 MHz
Impulse Limiter	Rohde & Schwarz	ESH-3-Z2	--	
Artificial Mains Network (LISN)	Schwarzbeck	NSLK 8127	--	2 x 10A, 50Ω, 50μH 10KHz-30MHz
Antenna System	Schwarzbeck	BBA 9106 / UHALP 9107	--	30MHz – 1000MHz
Signal Generator	Rohde & Schwarz	SWS 2	879113/42	100KHz – 1040 MHz
Digital Multimeter	Tektronix	DM2510G	DM- 2510GTW105 55	10KHz – 30MHz
Turntable with Controller	Drehtisch	DT312	--	φ120 cm

## Radiated Emission Testprocedure

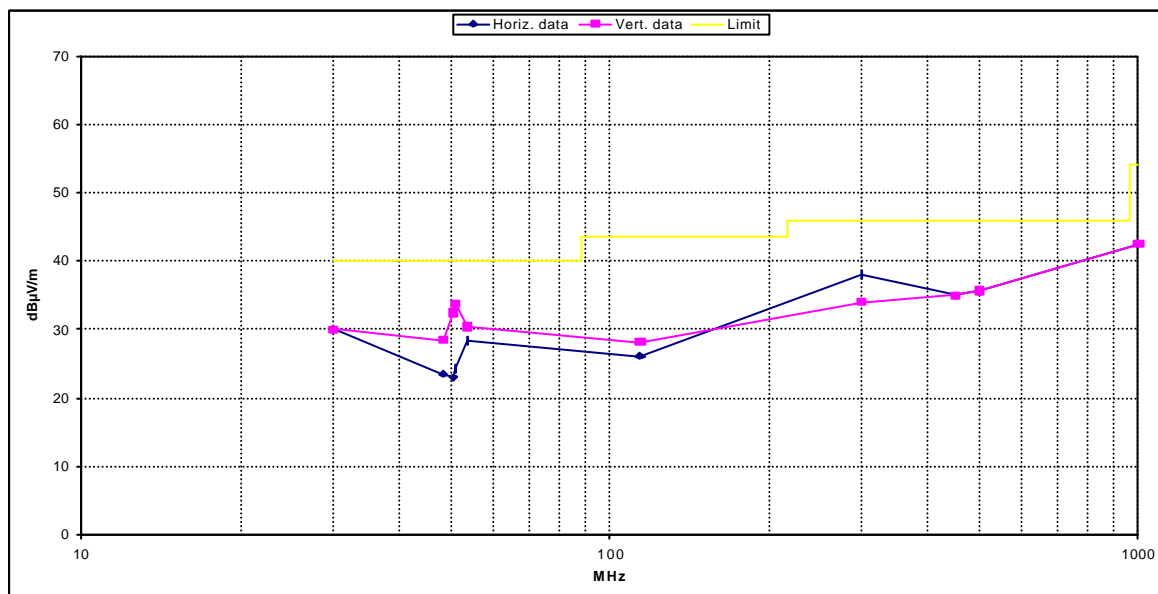


## Radiation Measurement Data


Ref: '19834' Power On

Freq	Horiz.	Vert.	Factor	H. Result	V. Result	Limit
MHz	dB(μV)	dB(μV)	dB	μV/m	μV/m	μV/m
30.0	<16	<16	14.0	<32	<32	100
48.5	16	21	7.5	15	27	100
50.3	16	25.5	7.0	14	42	100
51.06	17.5	27	6.8	16	49	100
53.86	22	24	6.4	26	33	100
114.0	16	18	10.2	20	26	150
299.16	20	<16	18.0	79	<50	200
449.0	16	<16	19.0	56	<56	200
500.0	<16	<16	19.7	<61	<61	200
1000.0	<16	<16	26.5	<133	<133	500

Conclusion: All data were within limits





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## Notes for Radiation Measurement

**1. Measurement facility:**

Measurement facility located at Fanling (Hong Kong), placed on file with the FCC Pursuant to Section 2.948 of the FCC Rules.

**2. Distance between the EUT and measuring antenna:**

3 meters.

**3. Measuring instrumentations:**

Rohde & Schwarz ESVP Test Receiver ( 20 - 1300 MHz ) with a CISPR weighting QP detector, 6 dB bandwidth set at 120 KHz.

**4. Measuring antenna:**

Broad-band antenna for the frequency range 30 - 300 MHz and frequency range 300 - 1000 MHz, connected with 10 meters coaxial cable. Cable loss of the coaxial cable included in the Antenna Factor for measurement data. The antennas are capable of measuring both horizontal and vertical polarizations.

**5. Frequency range scanned:**

The frequency range 30 - 1000 MHz has been scanned. Readings of the highest emissions relating to the limit were reported as above.

**6. Arrangement of EUT:**

During the test, the sample was operated at rated supply voltage and arranged for maximum emissions.

**7. Measuring Procedure:**

In **accordance** with the relevant sections of the American National Standards Institute (ANSI) C63.4-1992 'Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9KHz to 40GHz'.