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TEST REPORT

REPORT NO.: 24584B/0/400F

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

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

Product	:	Test Track -- 49 MHz Receiver
Model	:	8835 (49MHz)
Importer	:	ECHO TOYS LTD
Manufacturer	:	ECHO TOYS LTD

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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:	2000-11-02
DATE OF TESTING:	2000-11-24

DESCRIPTION OF SAMPLE:

Product:	Test Track -- 49 MHz Receiver
Manufacturer:	ECHO TOYS LTD
Model number:	8835 (49MHz)
Additional model number:	--
Rating:	DC 6V ('AA' Size Battery x 4) for RX
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.

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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

Summary of Test Results

Interference Radiation:

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

Interference Voltage:

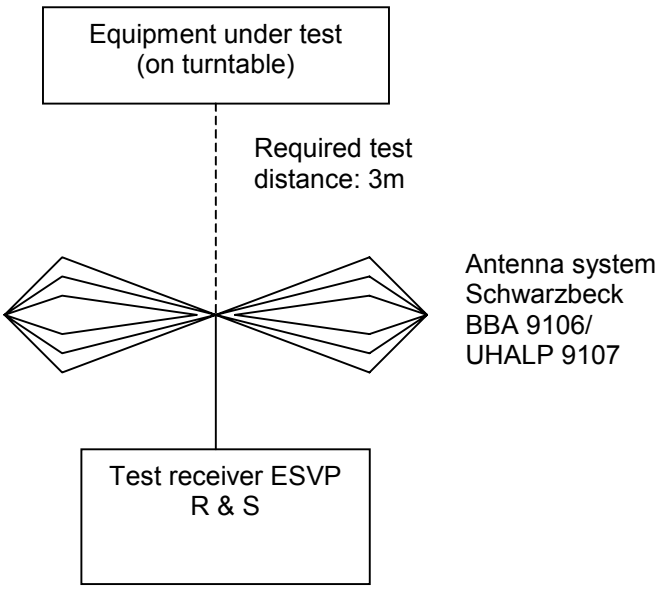
Test result: N.A.
Test data: N.A.

PHOTOGRAPH OF THE SAMPLE

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-2510GTW10555	10KHz – 30MHz
Turntable with Controller	Drehtisch	DT312	--	ϕ120 cm

Radiated Emission Testprocedure



Unintentional Radiators

Measurement of Radiated Emissions (30MHz-1000MHz)
Acc: FCC Part 15 Subpart B

IECC Ref: 24584B/0/400F
Model: 8835 (49MHz)
Applicant: ECHO TOYS LTD

Ser.Nr.: 1

Set under test: Test Track
Connected sets: -
Operating mode: Power "On"

Test Equipment
Receiver: ESVP Rohde & Schwarz
Antenna: Schwarzbeck BBA 9106 and UHALP 9107

1. Standby mode

Frequency (MHz)	Horz. Reading dB(µV)	Vert. Reading dB(µV)	Antenna Factor (dB)	Horiz. Test Result (µV/m)	Vert. Test Result (µV/m)	Limit (µV/m)
30	< 16	< 16	18.4	< 52.5	< 52.5	100.0
47	< 16	17	12.5	< 26.7	30.0	100.0
49	< 16	18	12.0	< 25.0	31.5	100.0
51.4	< 16	20	11.2	< 22.9	36.3	100.0
56.6	< 16	19	9.5	< 18.7	26.5	100.0
60.4	< 16	17	8.3	< 16.4	18.4	100.0
200	< 16	< 16	16.5	< 42.2	< 42.2	150.0
400	< 16	< 16	18.3	< 51.9	< 51.9	200.0
1000	< 16	< 16	26.5	< 133.4	< 133.4	500.0

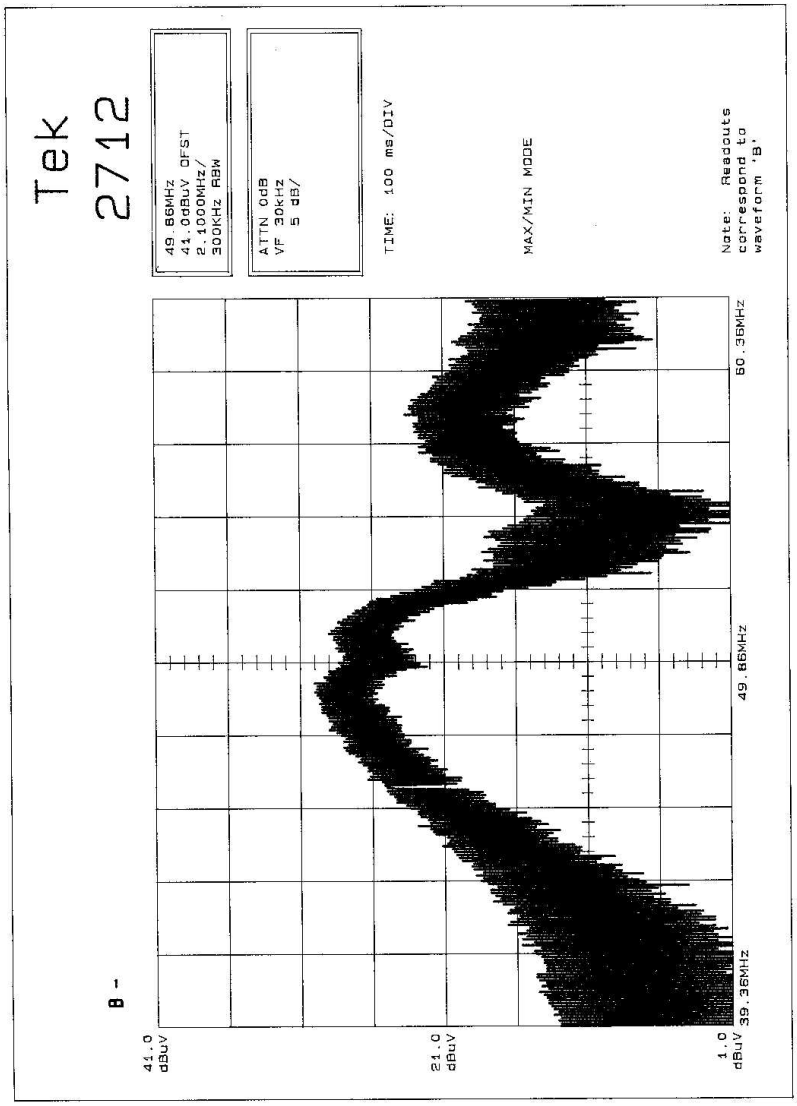
2. Motor running backward mode (motor noise measurement)

Frequency (MHz)	Horz. Reading dB(µV)	Vert. Reading dB(µV)	Antenna Factor (dB)	Horiz. Test Result (µV/m)	Vert. Test Result (µV/m)	Limit (µV/m)
30	< 16	< 16	18.4	< 52.5	< 52.5	100.0
245	19	< 16	17.6	67.8	< 48.0	200.0
329	16	< 16	16.9	44.2	< 44.2	200.0
410	< 16	< 16	18.4	< 52.8	< 52.8	200.0
1000	< 16	< 16	26.5	< 133.4	< 133.4	500.0

Note: A further test was performed with the signal generator set at -60 dBm at the fundamental frequency to cohere the emissions as specified in section 12.1.1.1 of ANSI C63.4-1992. All emissions observed complies with the FCC limits (refer to the cohere plot on page 9).

Cohere Plot at Fundamental frequency

Sample location : 1 m from the measuring antenna
Applied signal : -60dBm (non-modulated, 49.86 MHz)
Remark : Self-cohere



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'.