

F C C - TEST REPORT

REPORT NO.: 23993B/0/400F

FCC – Test Report

Date: 2000-09-28

No. 23993B/0/400F

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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 : Ski Tiger II -- 49 MHz Receiver

Model : 91217(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: 2000-08-28

DATE OF TESTING: 2000-09-28

DESCRIPTION OF SAMPLE:

Product: Ski Tiger II -- 49 MHz Receiver
Manufacturer: ECHO TOYS LTD
Model number: 91217(49MHz)
Rating: DC 9V ('AA' Size Battery x 6)
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.

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.

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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 |

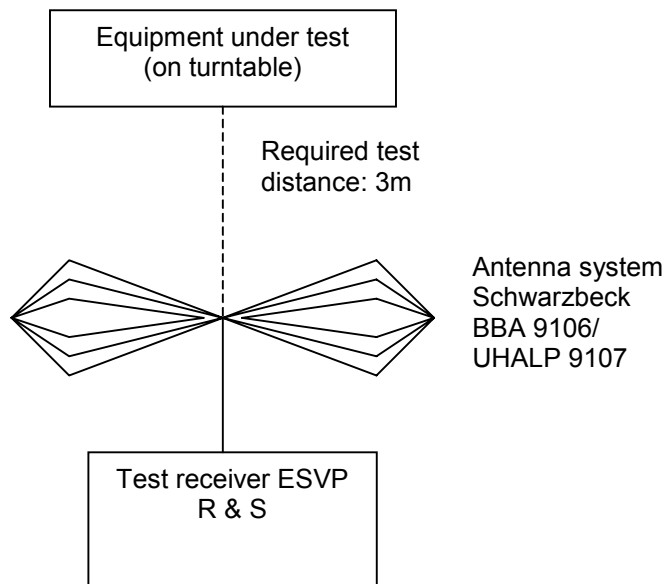
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Radiated Emission Testprocedure



Unintentional Radiators

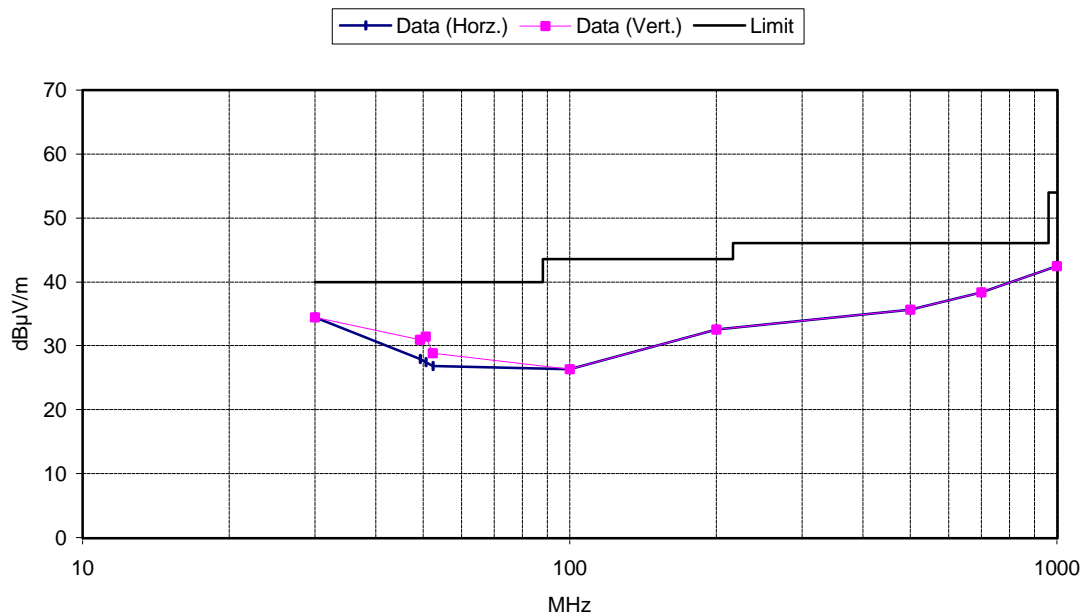
Measurement of Radiated Emissions (30MHz-1000MHz)

Acc: FCC Part 15 Subpart B

IECC Ref: 23993B/0/400F
 Model: 91217(49MHz)
 Applicant: ECHO TOYS LTD
 Ser.Nr.: 1
 Set under test: Ski Tiger II
 Connected sets: -
 Operating mode: Power "On" (Standby mode)

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

| 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 |
| 49.24 | < 16 | < 19 | 11.9 | < 24.8 | < 35.1 | 100.0 |
| 50.68 | < 16 | < 20 | 11.5 | < 23.6 | < 37.4 | 100.0 |
| 52.36 | < 16 | < 18 | 10.9 | < 22.0 | < 27.7 | 100.0 |
| 100 | < 16 | < 16 | 10.3 | < 20.7 | < 20.7 | 150.0 |
| 200 | < 16 | < 16 | 16.5 | < 42.2 | < 42.2 | 150.0 |
| 500 | < 16 | < 16 | 19.7 | < 61.0 | < 61.0 | 200.0 |
| 700 | < 16 | < 16 | 22.4 | < 83.2 | < 83.2 | 200.0 |
| 1000 | < 16 | < 16 | 26.5 | < 133.4 | < 133.4 | 500.0 |



Test result:

☒ O.K.

Date: _____

Operator: _____

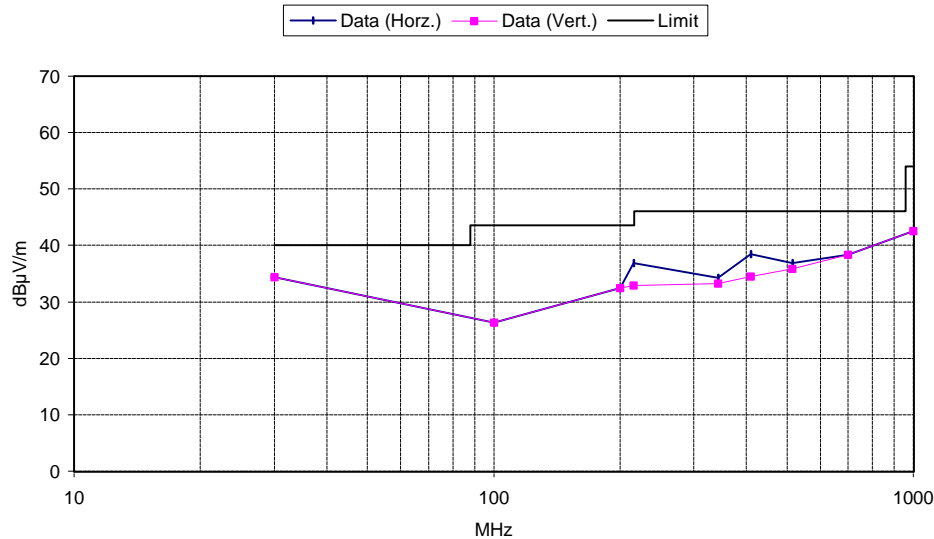
Unintentional Radiators

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

IECC Ref: 23993B/0/400F
Model: 91217(49MHz)
Applicant: ECHO TOYS LTD
Ser.Nr.: 1
Set under test: Ski Tiger II
Connected sets: -
Operating mode: Power "On" (Tested with motor running backward)

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

| 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 |
| 100 | < 16 | < 16 | 10.3 | < 20.7 | < 20.7 | 150.0 |
| 200 | < 16 | < 16 | 16.5 | < 42.2 | < 42.2 | 150.0 |
| 215.3 | 20 | 16 | 16.9 | 69.9 | 44.1 | 150.0 |
| 343 | 17 | < 16 | 17.2 | 51.5 | < 45.9 | 200.0 |
| 410 | 20 | 16 | 18.4 | 83.6 | 52.8 | 200.0 |
| 514 | 17 | < 16 | 19.8 | 69.5 | < 62.0 | 200.0 |
| 700 | < 16 | < 16 | 22.4 | < 83.2 | < 83.2 | 200.0 |
| 1000 | < 16 | < 16 | 26.5 | < 133.4 | < 133.4 | 500.0 |



Note : A retest was performed with the signal generator set at -60dBm 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.

Test result:

☒ O.K.

Date: _____

Operator: _____

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'.