FCC-TEST REPORT

REPORT NO.: 25835/1/400F

No. 25835/1/400F

Date: 2001-05-02

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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 : Shadow Runner

Model : 60-4279

Applicant : RADIOSHACK CORPORATION

Manufacturer: ECHO TOYS LTD

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LABORATORY - REPORT

APPLICANT: RADIOSHACK CORPORATION

ADDRESS: 100 Throckmorton St.,

Ste 1300

Fort Worth, TX, 76102-2802

USA

DATE OF SAMPLE RECEIVED: 2001-03-23

DATE OF TESTING: 2001-05-02

DESCRIPTION OF SAMPLE:

Product: Shadow Runner Manufacturer: ECHO TOYS LTD

Model number: 60-4279

DC 9V ('6F22' Size Battery x 1) Rating:

Country of Origin: P.R. CHINA

Measurements to the relevant clauses of F.C.C. Rules and Regulations **INVESTIGATIONS**

Part 15 Subpart C - Intentional Radiators **REQUESTED:**

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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Summary of Test Results

Interference Radiation:

Test result: O.K.

Test data: See attached data sheet

Interference Voltage:

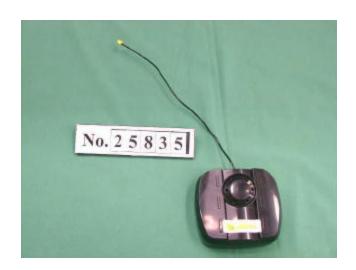
Test result: N.A.
Test data: N.A.

Measurement of Emissions within Band Edges

Test result: O.K.

Test data: See attached data sheet

PHOTOGRAPH OF THE SAMPLE



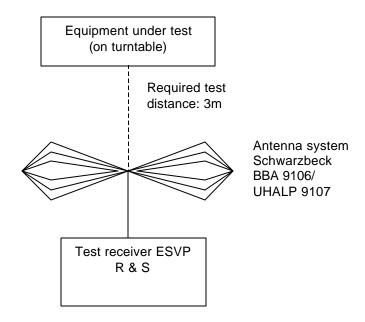
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TEST EQUIPMENT LIST

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			
Antenna Mast System	Schwarzbeck	AM9104	Max. 4 meters heig		
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		ф120 cm	

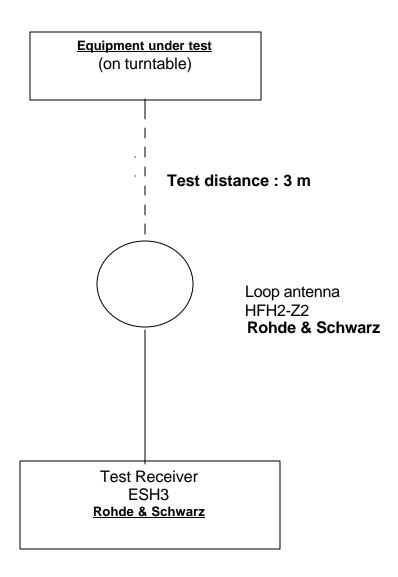
Radiated Emission Test Procedure



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Radiated Emission Test Procedure (< 30 MHz)



Interference Radiation

Measurement of Radiated Emissions (27MHz-1000MHz) Acc: FCC Part 15 Subpart C

IECC Ref:	25835/1/400F	Test Equipment

 Model:
 60-4279
 Receiver: ESVP Rohde & Schwarz

 Applicant:
 RADIOSHACK CORPORATION
 Antenna: Schwarzbeck BBA 9106 and UHALP 9107

Ser.Nr.: 1

Set under test: Shadow Runner

Connected sets:

Operating mode: Power "On"

		Frequency (MHz)	Re	łorz. eading Β(μV)	Re	/ert. eading Β(μV)	Antenna Factor (dB)	н	oriz. Test Result (µV/m)	Vert. Test Result (μV/m)	Limit (μV/m)
Harm.	2	54.28	<	16	<	16	10.2	<	20	< 20	100
Harm.	3	81.42	<	16	<	16	7.1	<	14	< 14	100
Harm.	4	108.56	<	16	<	16	11.6	<	24	< 24	150
Harm.	5	135.7	<	16	<	16	14.3	<	33	< 33	150
Harm.	6	162.84	<	16	<	16	15.6	<	38	< 38	150
Harm.	7	189.98	<	16	<	16	16.3	<	41	< 41	150
Harm.	8	217.12	<	16	<	16	16.9	<	44	< 44	200
Harm.	9	244.26	<	16	<	16	17.6	<	48	< 48	200
Harm.	10	271.4	<	16	<	16	18.5	<	53	< 53	200
Harm.	11	298.54	<	16	<	16	19.9	<	62	< 62	200
Harm.	12	325.68	<	16	<	16	16.8	<	44	< 44	200
Harm.	13	352.82	<	16	<	16	17.5	<	47	< 47	200
Harm.	14	379.96	<	16	<	16	18.0	<	50	< 50	200
Harm.	15	407.1	<	16	<	16	18.4	<	53	< 53	200
Harm.	16	434.24	<	16	<	16	18.8	<	55	< 55	200
Harm.	17	461.38	<	16	<	16	19.2	<	57	< 57	200
Harm.	18	488.52	<	16	<	16	19.5	<	60	< 60	200
Harm.	19	515.66	<	16	<	16	19.9	<	62	< 62	200
Harm.	20	542.8	<	16	<	16	20.1	<	64	< 64	200
Harm.	21	569.94	<	16	<	16	20.5	<	67	< 67	200
Harm.	22	597.08	<	16	<	16	20.9	<	70	< 70	200
Harm.	23	624.22	<	16	<	16	21.2	<	73	< 73	200
Harm.	24	651.36	<	16	<	16	21.6	<	76	< 76	200
Harm.	25	678.5	<	16	<	16	22.1	<	80	< 80	200
Harm.	26	705.64	<	16	<	16	22.5	<	84	< 84	200
Harm.	27	732.78	<	16	<	16	22.8	<	88	< 88	200
Harm.	28	759.92	<	16	<	16	23.2	<	91	< 91	200
Harm.	29	787.06	<	16	<	16	23.5	<	95	< 95	200
Harm.	30	814.2	<	16	<	16	23.9	<	99	< 99	200
Harm.	31	841.34	<	16	<	16	24.3	<	103	< 103	200
Harm.	32	868.48	<	16	<	16	24.6	<	107	< 107	200
Harm.	33	895.62	<	16	<	16	24.9	<	112	< 112	200
Harm.	34	922.76	<	16	<	16	25.4	<	117	< 117	200
Harm.	35	949.9	<	16	<	16	25.8	<	123	< 123	200
Harm.	36	977.04	<	16	<	16	26.2	<	128	< 128	500

Radiation Measurement below 30MHz (using loop antenna)

27.14 794.3 562.3 100000 10000

Note: The measured radiation outside the operation band and below 30MHz were negligible.

Date:	
Operator:	

☑ O.K.

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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.

In the frequency range above 1000 MHz Spectrum Analyzer FMSM26 and Analyzer Display Unit FSA-D are used, bandwidth set at 100 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.

In the frequnecy range above 1 GHz horn-antenna RGA 50/60 is used.

5. Frequency range scanned:

The frequency range 30 - 5000 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. To find the maximum emission, the antenna was raised from 1 to 4 meters and was stopped at the maximum emission point.

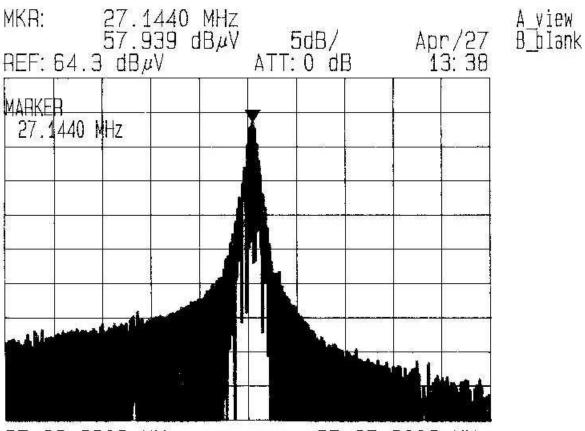
7. Measuring Procedure:

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'.

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Measurement Data of Emissions within Band Edges



ST: 26.9808 MHz SP: 27.3008 MHz RBW: 9 kHz VBW: 100 kHz SWP: 200 ms

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Notes for Measurement of Emissions within Band Edges

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. Measuring instrumentations:

Spectrum Analyzer: Tektronix 2712

3. Frequency range scanned:

The frequency range acc. to FCC rules and regulations part 15 subpart C - Intentional Radiators.

4. Arrangement of EUT:

During the test, the sample was operated.

5. Measuring Procedure:

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