

THRU Lab & Engineering.

RM302,Bokjo,29-15 , Chongpa3-Dong

Yongsan-Gu, Seoul, Korea

81221095059F81221095056 email thrukang@kornet.net



Test Report

**Product Name: MP3 PLAYER inside 27MHz
Wireless R/C Toy RX**

FCC ID: BY34264-27MP

Applicant:

**Scientific Toys, Ltd.
13/F., Chai Wan Industrial Centre,
20 Lee Chung Street, Chai Wan
Hong Kong.**

Date Receipt: 06/07/2005

Date Tested: 06/14/2005

**APPLICANT: Scientific Toys, Ltd.
FCCID: BY34264-27MP
REPORT #: THRU-506006**

COVER SHEET

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TABLE OF CONTENTS

PAGE 1.....	TEST EQUIPMENT LIST AND TEST PROCEDUR
PAGE 2.....	TEST PROCEDURE
PAGE 3-4....	RADIATED EMISSIONS TEST DATA
PAGE 5.....	POWERLINE CONDUCTED EMISSIONS TEST DATA
PAGE 6-7....	POWERLINE CONDUCTED EMISSIONS TEST PLOT

EXHIBIT 1.....	BLOCK DIAGRAM
EXHIBIT 2.....	SCHEMATIC
EXHIBIT 3.....	TEST SETUP PHOTO
EXHIBIT 4.....	Users MANUAL
EXHIBIT 5.....	SAMPLE OF FCC ID LABEL
EXHIBIT 6.....	LOCATION OF FCC ID LABEL
EXHIBIT 7.....	EXTERNAL PHOTO - FRONT SIDE
EXHIBIT 8.....	EXTERNAL PHOTO - BACK SIDE
EXHIBIT 9.....	INTERNAL PHOTO - COMPONENT SIDE
EXHIBIT 10.....	INTERNAL PHOTO - COPPER SIDE

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TEST EQUIPMENT LIST

DEVICE	MODEL	MFGR	SERNO	DUE .CAL
EMI Test Receiver	ESVS 10	Rohde & Schwarz	830489/001	2006.04.23.
Spectrum Analyzer	8566B	Hewlett Packard	2311A02394	2006.04.23
Spectrum Display	85662A	Hewlett Packard	2542A12429	2006.04.23.
Quasi-Peak Adapter	85650A	Hewlett Packard	2521A00887	2006.04.23.
RF Preselector	85685A	Hewlett Packard	2648A00504	2006.04.23
Pre-Amplifier	8449B	Hewlett Packard	3008A00375	2006.04.23.
Pre-Amplifier	8447F	Hewlett Packard	3113A05367	2006.04.23.
Spectrum Monitor	EZM	Rohde & Schwarz	862304/007	2006.04.23.
Bico-Antenna	94455-1	Eaton	977	2007.04.01.
Log-Periodic Antenna	3146	EMCO	2051	2007.04.01.
Dipole Antenna	TDA25/1/2	Electro Metrics	176/200/200	2007.04.01.
Horn Antenna	SAS-571	A.H Systems	414	2007.04.01.
Spectrum Analyzer	R3261C	Advantest	71720189	2006.04.23
LISN	KNW-242	Kyoritsu	8-923-2	2007.04.25.
LISN	8012-50-R-24	Solar	8379121	2007.04.25..
Loop Ant	6507	EMCO	1435	2005.10.06.
Signal Generator	SMS	Rohde & Schwarz	872165/100	2006.04.23.
Modulation Analyzer	8901B	Hewlett Packard	3438A05094	2006.04.23.
Frequency Counter	CMC251	Tektronic	CMC-251TW52489	2006.04.23.

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TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of Thrulab & Engineering. Shielded interface cables were used in all cases except for cables connecting to the telephone line and the power cords. A test program was run which filled the screen with H's and also with the modem dialing out. Peripherals were turned on and operating.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-1992 using a HEWLETT PACKARD spectrum analyzer with a preselector. The bandwidth of the spectrum analyzer was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz. The ambient temperature of the UUT was 23°C with a humidity of 50%.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the Preselector was accounted for in the Spectrum Analyzer Meter Reading.

Example:

Freq (MHz) METER READING + ACF = FS
33 20 dBuV + 10.36 dB = 30.36 dBuV/m @ 3m

ANSI STANDARD C63.4-1992 10.1.7 MEASUREMENT PROCEDURES: The UUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The UUT was placed in a manner that was representative of the way the EUT would be used. If the EUT had any peripherals, they were attached and placed in a similar manner. The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes. In addition, in the event of the test being for a computer set up, the modem and printer positions were swapped and cables were manipulated as much as possible. The monitor was not moved, as that would not represent a typical situation configuration.

The situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSIC63.4-1992 with the EUT 40 cm from the vertical ground wall.

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NAME OF TEST: RADIATED SPURIOUS EMISSIONS

RULES PART NO.: 15.109(a) - Class B Computing Device

REQUIREMENTS:	30-88 MHz	40.0 dBuV/m measured at 3 meters
	88-216 MHz	43.5 dbuV/m
	216-960 MHz	46.0 dbuV/m
	ABOVE 960 MHz	54.0 dbuV/m

TEST

CONFIGURATION:	Toshiba Notebook	MODEL: Statellite Pro 4280
	MOUSE	Model: JPC2057
	HP PRINTER	Model: C2605
	Modem	Model: SM1200A1
	Speaker	Model: RP-SP10
	Monitor	Model: SyncMastor500P

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TEST DATA:

No	Emission Frequency (MHz)	Meter Reading dBuV/m	Ant. Polarity	Correction Factor dB	Cable Loss dB	Field Strength (dBuV/m)	Margin (dBuV)	Limit (dBuV/m)
1	47.57	16.7	V	11.4	1.0	29.0	-11.0	40.0
2	79.91	11.2	V	8.0	1.3	20.5	-19.5	40.0
3	90.06	15.8	H	10.4	1.5	27.8	-15.7	43.5
4	96.08	15.9	H	10.9	1.6	28.4	-15.1	43.5
5	110.42	23.5	V	11.0	1.7	36.2	-7.3	43.5
6	125.82	17.0	H	11.9	1.9	30.8	-12.7	43.5
7	147.62	23.2	V	16.3	2.1	41.6	-1.9	43.5
8	162.11	14.0	H	16.9	2.2	33.1	-10.4	43.5
9	177.62	21.1	V	15.0	2.3	38.4	-5.1	43.5
10	191.52	19.8	H	13.9	2.5	36.2	-7.3	43.5
11	223.52	20.2	V	10.8	2.8	33.8	-12.2	46.0
12	239.62	21.8	H	11.4	3.0	36.1	-9.9	46.0
13	276.63	19.3	V	16.2	3.3	38.8	-7.2	46.0
14	288.21	13.4	V	17.7	3.3	34.4	-11.6	46.0
15	300.71	9.3	H	16.2	3.4	28.9	-17.1	46.0
16	466.92	2.9	V	19.5	4.7	27.1	-18.9	46.0
17	672.21	9.5	V	21.0	6.0	36.5	-9.5	46.0

TEST PROCEDURE: ANSI STANDARD C63.4-1992. The spectrum was scanned from 30 to 1000 MHz. The unit was measured at ThruLab & Engineering 389 Jeam-Rhi HyangNam-Myum HwaSung Kyoungki-do Korea

TEST RESULTS: THE UNIT DOES MEET THE FCC REQUIREMENTS.

PERFORMED BY: S.W.Ahn

DATE: 06/14/2005

APPLICANT:Scientific Toys, Ltd.

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APPLICANT: Scientific Toys, Ltd.

FCC ID :BY34264-27MP

NAME OF TEST: POWER LINE CONDUCTED INTERFERENCE

RULES PART NO.: 15.107

REQUIREMENTS:		QUASI-PEAK	AVERAGE
	.15 - 0.5 MHz	66-56 dBuV	56-46 dBuV
	0.5 - 5.0	56	46
	5.0 - 30.	60	50

TEST PROCEDURE: ANSI STANDARD C63.4-1992. The spectrum was scanned from .15 to 30 MHz.

THE HIGHEST EMISSION READ FOR LINE 1 WAS 35.2 dBuV @ 1.426 MHz.

THE HIGHEST EMISSION READ FOR LINE 2 WAS 34.5 dBuV @ 7.213 MHz.

THE ATTACHED GRAPHS REPRESENT THE EMISSIONS READ FOR POWERLINE CONDUCTED FOR THIS DEVICE.

TEST RESULTS: Both lines were observed. The measurements indicate that the unit DOES appear to meet the FCC requirements for this class of equipment.

TEST RESULTS: THE UNIT DOES MEET THE FCC REQUIREMENTS.

PERFORMED BY: S.W.Ahn

DATE: 06/14/2005

APPLICANT:Scientific Toys, Ltd.

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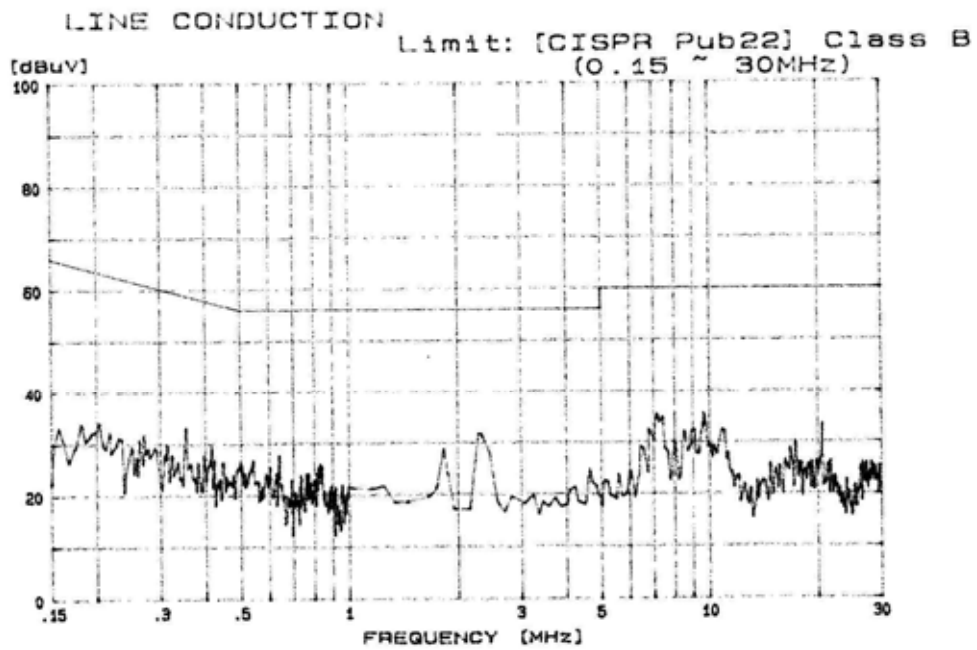
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Line 1(H)



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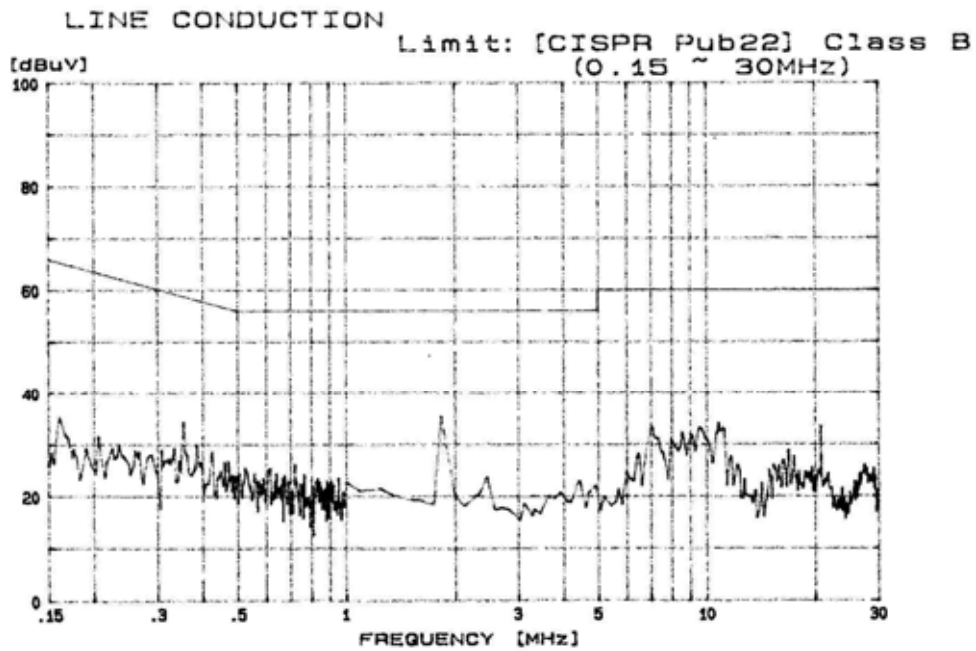
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Line2(N)



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