849 NW State Road 45 Newberry, Florida 32669 http://www.timcoengr.com

888.472.2424 F 352.472.2030 email: tei@timcoengr.com

### Test Report

Product Name: WIRELESS R/C TOY-TX

FCC ID: SZ23371T27

### Applicant:

PLANET TOYS (HK) LTD.
1107 CHINACHEM GOLDEN PLAZA
77 MODY ROAD, TSIMSHATSUI EAST
KOWLOON
HONG KONG

Date Receipt: 4/24/2006

Date Tested: 4/27/2006

APPLICANT: PLANET TOYS (HK) LTD.

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#### TABLE OF CONTENTS LIST

APPLICANT: PLANET TOYS (HK) LTD.

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### TEST REPORT CONTAINING:

PAGE 1.....TEST EQUIPMENT LIST

PAGE 2....TEST PROCEDURE

PAGE 3....RADIATION INTERFERENCE TEST DATA

PAGE 4....OCCUPIED BANDWIDTH

PAGE 5....OCCUPIED BANDWIDTH PLOT

### EXHIBITS INCLUDING:

BLOCK DIAGRAM
SCHEMATIC
INSTRUCTION MANUAL
LABEL SAMPLE
LABEL LOCATION
EXTERNAL PHOTOGRAPHS
INERNAL PHOTOGRAPHS
OPERATIONAL DESCRIPTION
TEST SET UP PHOTOGRAPHS

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FCC ID: SZ23371T27

REPORT #: P\PLANET\_SZ2\819HT6\819HT6TestReport.doc

TABLE OF CONTENTS

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# **EMC Equipment List**

Device	Manufacturer	Model	Serial Number	Cal/Char Date	<b>Due Date</b>
<b>3/10-Meter</b>	TEI	N/A	N/A	Listed 3/27/04	3/26/07
OATS					
3-Meter OATS	TEI	N/A	N/A	Listed 1/11/06	1/10/09
Antenna:	Eaton	94455-1	1057	CAL 12/12/05	12/12/07
Biconnical					
Antenna:	Eaton	94455-1	1096	CAL 8/17/04	8/17/06
Biconnical					
Antenna:	Electro-Metrics	<b>BIA-25</b>	1171	CAL 4/29/05	4/29/07
Biconnical					
Analyzer Blue	HP	85650A	2811A01279	CAL 4/13/05	4/13/07
Tower Quasi-					
Peak Adapter					
Analyzer Blue	HP	85685A	2926A00983	CAL 9/5/05	9/5/07
Tower RF					
Preselector					
Analyzer Blue	HP	8568B	2928A04729	CAL 4/13/05	4/13/07
Tower			2848A18049		
Spectrum					
Analyzer					
LISN	Electro-Metrics	ANS-25/2	2604	CAL 8/27/04	8/27/06
LISN	Electro-Metrics	EM-7820	2682	CAL 4/28/05	4/28/07
Antenna: Log-	Eaton	96005	1243	CAL 12/14/05	12/14/07
Periodic					
Loop Antenna	EMC Test Systems	EMCO6512	9706-1211	CAL 4/29/05	4/29/07

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#### TEST PROCEDURE

**GENERAL:** This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-2003 using a HEWLETT PACKARD spectrum analyzer with a pre-selector. 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 80°C with a humidity of 76%.

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 Pre-selector was accounted for in the Spectrum Analyzer Meter Reading.

#### Example:

ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES: The unit under test was placed on a table 80 cm high and with dimensions of 1m by 1.5m. 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.

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NAME OF TEST: RADIATION INTERFERENCE

**RULES PART NO.:** 15.227

REQUIREMENTS: CARRIER FREQUENCY WILL NOT EXCEEDS 80 dBuV/m AT 3M.

OUT-OF-BAND EMISSIONS SHALL NOT EXCEED:

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 DATA:

Emission	Meter	Ant.	Coax	Correction	Field	Margin
Frequency	Reading	Pol	Loss	Factor	Strength	dВ
MHz	dBuV		đВ	dВ	dBuV/m	
27.14	22.2	H	0.40	34.16	56.76	23.24
27.14	41.7	v	0.40	34.16	76.26	3.74
54.27	7.7	H	0.51	11.20	19.41	20.59
54.27	20.6	v	0.51	11.70	32.81	7.19
81.42	13.2	v	0.60	7.01	20.81	19.19
81.44	5.0	H	0.60	6.77	12.37	27.63
108.57	3.9	H	0.66	12.31	16.87	26.63
108.57	6.3	v	0.66	12.51	19.47	24.03
135.71	3.6	H	0.69	13.10	17.39	26.11
135.71	4.4	v	0.69	12.97	18.06	25.44
162.82	3.1	H	0.75	14.28	18.13	25.37
162.82	4.3	V	0.75	15.41	20.46	23.04
190.01	4.5	H	0.86	17.40	22.76	20.74
190.01	6.4	v	0.86	17.40	24.66	18.84
217.14	5.7	H	0.93	11.61	18.24	27.76
217.14	13.3	V	0.93	11.34	25.57	20.43
244.29	5.3	H	0.99	12.21	18.50	27.50
244.29	10.3	v	0.99	12.16	23.45	22.55
271.45	3.9	H	1.04	13.54	18.48	27.52
271.45	6.5	V	1.04	13.34	20.88	25.12

SAMPLE CALCULATION: FSdBuV/m = MR (dBuV) + ACFdB.

All measurements below 30 MHz were taken using an EMC Test Systems Passive Loop Antenna.

**TEST PROCEDURE:** The procedure used was ANSI STANDARD C63.4-2003. The spectrum was scanned from 30 MHz to 1000 MHz. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The UUT was tested in 3 orthogonal planes.

PERFORMED BY: JOSEPH SCOGLIO DATE: 4/27/2006

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**FCC ID:** SZ23371T27

NAME OF TEST: Occupied Bandwidth

**RULES PART NO.:** 15.227

**REQUIREMENTS:** The field strength of any emissions appearing between the

band edges and up to 10 kHz above and below the band edges

shall be attenuated to the general limits of 15.209.

TEST DATA:

THE GRAPH ON THE NEXT PAGE REPRESENTS THE EMISSIONS TAKEN FOR THE DEVICE.

**METHOD OF MEASUREMENT:** A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was taken. The vertical scale is set to 10 dB per division.

PERFORMED BY: JOSEPH SGOGLIO DATE: 04/27/2006

APPLICANT: PLANET TOYS (HK) LTD.

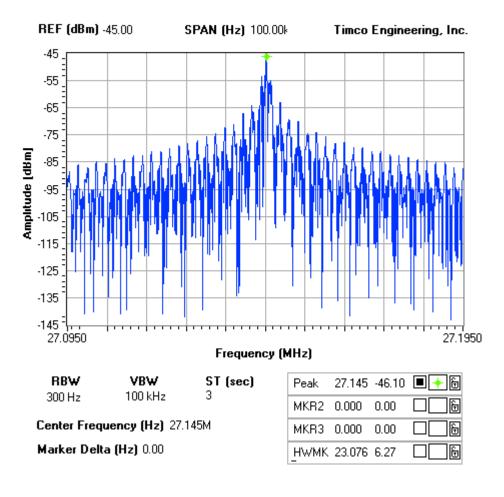
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NOTES:

PLANET TOYS (HK) LTD. - FCC ID: SZ23371T27 OCCUPIED BANDWIDTH PLOT



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