

®

SGS

**SGS-CSTC Standards
Technical Services Ltd.**

1/F., Building No. 1 Building, Agriculture Machinery Materials Co.

Wushan Road, Shipai, Tianhe District, Guangzhou, China

Telephone: +86 (0) 20 3848 1001 Fax: +86 (0) 20 3848 1006

cn_guangzhou_emc_section@sgs.com

FEDERAL COMMUNICATIONS COMMISSION Laboratory
Division

7435 Oakland Mills Road Columbia, MD 21046

May 31, 2002



Report No.: **02.06.608E-2**

Page: 1 of 8

FCC TEST REPORT

Application No. : 02.06.0608E-2

Applicant : PLANET TOYS WORLDWIDE LTD

FCC ID : QG3100

Equipment under Test (EUT):

Name : Mini RC – Car Asst

Standards : FCC PART 15, SUBPART C : 2000

Date of Receipt : 14 June 2002

Date of Test : 25 June 2002

Date of Issue : 26 June 2002

Test Result :	PASS *
----------------------	---------------

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Jerry Chen
EMC Laboratory
SGS-CSTC Ltd.



This device can be expected to comply with Part 15 of the FCC Rules
Operation is subject to the following conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the SGS PRODUCT CERTIFICATION MARK.. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.



2 Contents

	Page
1 COVER PAGE.....	1
2 CONTENTS	2
3 GENERAL INFORMATION	3
3.1 CLIENT INFORMATION.....	3
3.2 DETAILS OF E.U.T.....	3
3.3 DESCRIPTION OF SUPPORT UNITS.....	3
3.4 TEST LOCATION	3
3.5 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	3
4 TEST RESULTS.....	4
4.1 TEST INSTRUMENTS.....	4
4.2 E.U.T. OPERATION	4
4.3 TEST PROCEDURE & MEASUREMENT DATA.....	5
4.3.1 <i>Radiated Emissions</i>	5
4.3.2 <i>Occupied Bandwidth</i>	6
4.4 PHOTOGRAPHS - RADIATED EMISSION TEST SETUP IN CHAMBER.....	7
5 PHOTOGRAPHS - EUT CONSTRUCTIONAL DETAILS	8



3 General Information

3.1 Client Information

Applicant: PLANET TOYS WORLDWIDE LTD
Address of Applicant: 1107 Chinachem Golden Plaza, 77 Mody Road, TST East,
Kowloon, HK.
Name: Mini RC – Car Asst

3.2 Details of E.U.T.

Power Supply: 4.5V DC (3 x 'AA' Batteries)
Power Cord: N/A-

3.3 Description of Support Units

The EUT was tested as an independent unit.

3.4 Test Location

All tests were performed at:-

SGS-CSTC Standards Technical Services Ltd., Guangzhou Safety & EMC Laboratory, 1/F,
Building No. 1, Agriculture Machinery Materials Company Warehouse Ltd., Wushan Road Shipai,
Tianhe District, Guangzhou, China. P.C. 510630.

Tel: +86 20 3848 1001

Fax: +86 20 3848 1006

SGS UK Certificate No.: L32

Federal Communications Commission laboratory division

Registration number: 282399

3.5 Other Information Requested by the Customer

None.



4 Test Results

4.1 Test Instruments

Description	Manufacturer	Model No.	Asset No.	Date of Cal.
Temperature, Humidity & Barometer	Oregon Scientific	BA-888	EMC023	26-07-2001
Radiated Emissions CNE	LAPLACE	ERS-A	EMC025	27-04-1998
Bioconic Antenna	R & S	HK116	EMC047	14-12-2001
3M Semi-Anechoic Chamber	Frankonia	11.5 x 7.5 x 6 m ³	EMC1001	21-01-2002
0.8m Test Table	SGS-CSTC	N/A	EMC1003	N/A
EMI Receiver	R & S	ESCS30	EMC2001	13-11-2001
Spectrum Analyser	SCHAFFNER	R3261C+99	EMC071	26-07-2001
Log-Periodic Dipole Antenna	R & S	HL233	EMC2005	17-12-2001
Monitor System	HD-GmbH	N/A	EMC2008	N/A
Antenna Mask	HD-GmbH	AS620M	EMC2010	N/A
Turn-Table	HD-GmbH	DT430	EMC2014	N/A
Turn_Table & Mask Controller	ADVANTEST	HD-GmbH HD100	EMC2015	N/A
Coaxial Cable (12m)	R & S	HFU2-Z4	EMC3001	08-03-2002
EMI Test Software	R & S	ES-K1	EMC5001	N/A

4.2 E.U.T. Operation

Input voltage: 4.5 V DC (3 x 'AA' Batteries)

Operating Environment:

Temperature: 24.0 °C

Humidity: 52 % RH

Atmospheric Pressure: 1006 mbar

EUT Operation:

Test the EUT in On Mode.



4.3 Test Procedure & Measurement Data

4.3.1 Radiated Emissions

Test Requirement: FCC Part15 C
 Test Method: Based on FCC Part15 C Section 15.227
 Test Date: 25 June 2002
 Measurement Distance: 3m (Semi- Anechoic Chamber)
 Requirements: Carrier frequency will not exceed 80dBuV/m AT 3m.
 Out of band emissions shall not exceed:
 40.0 dB μ V/m between 30MHz & 88MHz
 43.5 dB μ V/m between 88MHz & 216MHz
 46.0 dB μ V/m between 216MHz & 960MHz
 54.0 dB μ V/m above 960MHz
 Detector: Peak Scan (120kHz resolution bandwidth)

Test Procedure: The procedure used was ANSI Standard C63.4-1992. The receiver was scanned from 30MHz to 1000MHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the horizontal and vertical polarities and the worst case emissions were reported.

The following Peak measurements were performed on the EUT on 25th June 2002:
 Test the EUT in On Mode.

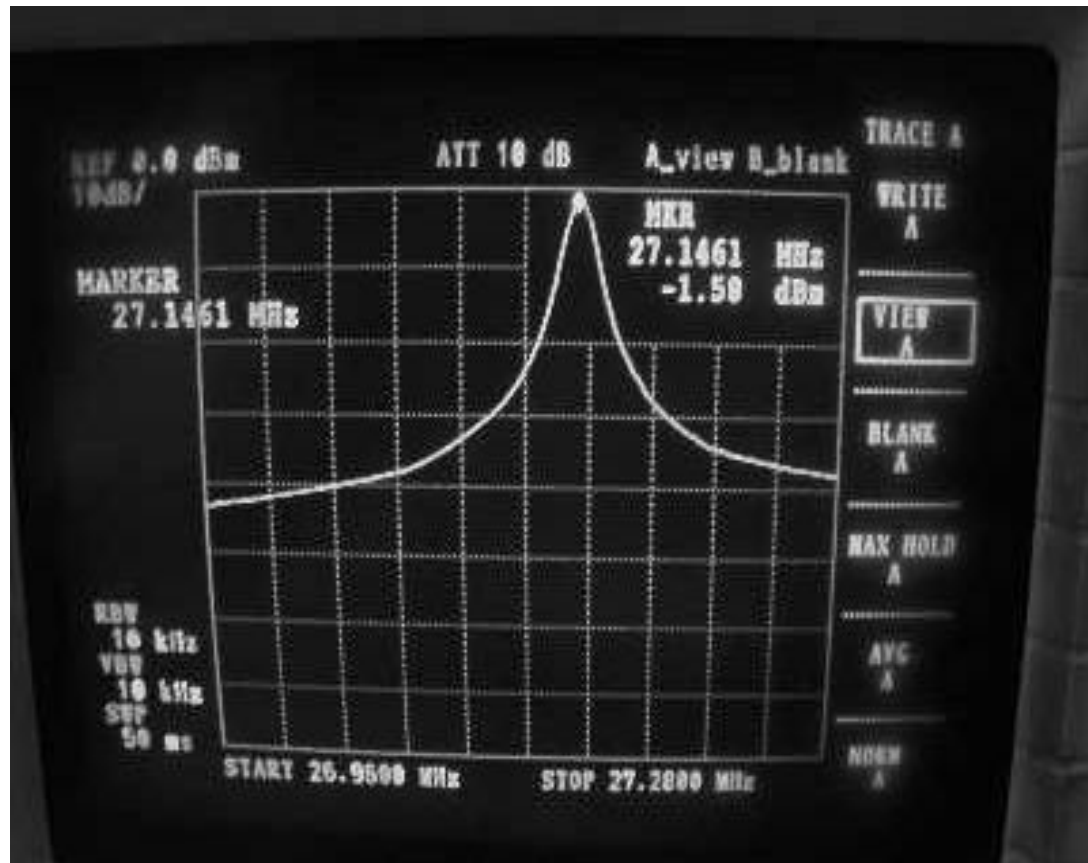
Test Frequency (MHz)	Test Level (dBuV/m)		Limits (dBuV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
27.145	69.5	52.8	80.0	10.5	27.2
54.290	38.0	22.9	40.0	2.0	17.1
81.435	26.1	21.5	40.0	13.9	18.5
108.580	26.4	23.5	43.5	17.1	20.0
135.725	25.5	25.5	43.5	18.0	18.0
162.870	25.0	24.8	43.5	18.5	18.7
190.015	27.9	26.4	43.5	15.6	17.1
217.160	29.3	22.4	46.0	16.7	23.6
244.305	33.1	24.6	46.0	12.9	21.4
271.450	34.7	26.8	46.0	11.3	19.2

Test Results: The unit does meet the FCC requirements.

4.3.2 Occupied Bandwidth

Test Requirement: FCC Part15 C
 Test Method: Based on FCC Part15 C Section 15.227:
 Operation within the band 26.96 - 27.28 MHz
 Test Date: 25 June 2002
 Requirements: The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209.
 Method of measurement: A small sample of the transmitter output was fed into the Spectrum Analyzer and the attached plot was taken. The vertical is set to -10dB per division. The horizontal scale is set to 5KHz per division.

The graph as below, represents the emissions take for this device.



The results: The unit does meet the FCC requirements.



4.4 Photographs - Radiated Emission Test Setup in Chamber

Remark: in detailed, see the test setup form



5 Photographs - EUT Constructional Details

Remark: in detailed, see the external photos & internal photos.