



PLANET TOYS (HK) LTD
Technical Report: **Supplement to (5205)070-0135**
14 April 2005
Page 1 of 5

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Date Received: 14 March 2005

14 April 2005
Page 1 of 5

PLANET TOYS (HK) LTD.
1107 Chinachem Golden Plaza, 77 Mody Road,
Tsimshatsui East, Kowloon, Hong Kong

Attn: Mr. WONG, T.K. – PLANET TOYS (HK) LTD.

Sample Description:	HERBIE	Sample Size:	1 set(s)
Vendor:	N.A.	Style No(s):	(3411)
Manufacturer:	N.A.	PO No.:	N.A.
Buyer:	N.A.	Client Item/Part No.:	N.A.
Labeled Age Grade:	Not Present	Assortment No.:	N.A.
Appropriate Age Grade:	N.A.	UPC Code:	N.A.
Country of Origin:	CHINA		
Test Starting Date:	14 March, 2005		
Test Finished Date:	14 April 2005		
Terminal voltage:	9 V d.c. ("AA" battery x 6)		

FCC ID (if applicable): SZ23411T27

EXECUTIVE SUMMARY:

The Equipment-under-test (EUT) is a RF remote control transmitter.

This is a supplement to the original test report. It compares test results of radiated signal level of intended fundamental frequency by means of applying both Loop and Biconical Antennas for frequency range below 30 MHz. The test results demonstrate a very good agreement among the so obtained measurement results.

BUREAU VERITAS HONG KONG LIMITED

L. WAI

EMC Engineer, Electrical Department
Consumer Products Division



Test Results:

Measurement of Radiated Emissions:

Requirements: FCC PART 15, SECTION 15.227

Limit: Section 15.227

Port under test: Enclosure

Operational mode under test: TX Mode (Unmodulated)

EUT operating condition:

(a) System Configuration

The EUT system is regarded as a *portable apparatus* and tested as a *desktop device*.

The EUT is configured and tested as a *stand-alone* unit.

(b) Antenna (if applicable):

The dedicated or integral antenna of the intentional radiator is fully extended.

For handheld / portable intentional radiator:

Vertical Polarization: The EUT antenna should be initially erected and held perpendicular to the horizontal ground plane of the test site for measurement.

Horizontal Polarization: The EUT antenna should initially be held in parallel to both the horizontal ground plane and the measurement antenna.

(c) Special means of activating, maintaining or repeating the desired functioning state of EUT:

None



Radiated Emissions of the Peak Fundamental Frequency Component of Intentional Radiator within the Operation Band:

- Pursuant to SECTION 15.227
- Modulation of signal generated by EUT = un-modulated
- Resolution Bandwidth (RBW) = 9 kHz

Part 1: Measurement Results obtained on the BVHK's Open Site

Measurements were carried out on the open area test site (OATS) located on the roof of the BVHK's EMC laboratory at a measurement range of 3 meters. The EMC laboratory is located at the following address:

No. 911, 9/F., Po Hing Centre, 18 Wang Chiu Road, Kowloon Bay, Kowloon, Hong Kong

The test facility has been found in compliance with the requirement of Section 2.948 of the FCC rules. The information has been placed on file and listed by FCC.

The following test equipment are used:

Description	BVHK Equipment No.	Brand Name	Model No.
EMI Test Receiver	M 054 001 L	Rohde & Schwarz	ESCS 30
Biconical Antenna	T 025 001 L	Rohde & Schwarz	HK 116
Open Area Test Site (range = 3m)	T 027 001 L	None	None
Automatic Antenna Mast	T 025 003 L	Rainer Schäfer	RSM 010
Automatic Turntable	T 028 001 L	Rainer Schäfer	RST 020
Antenna Mast / Turntable Controller	T 026 001 L	Rainer Schäfer	RSC
Coaxial Cable No. 3	T 029 003 L	Suhner	None
Coaxial Cable No. 4	T 029 004 L	Suhner	None

The test site has, by verification measurements, satisfied the normalized site attenuation (NSA) requirements specified in the standard CISPR 22. For measurement at each test frequency, the antenna-to-EUT azimuth is varied through 360°. The antenna is also scanned between 1 m to 4 m in height above the ground plane to maximize the level of radiated disturbances. The reading on the measuring receiver is observed for about 15 s for each final measurement; the highest readings shall be recorded with the exception of any isolated spike which shall be ignored.

Frequency	Antenna Polarization	Detector	Measurement Result @ 3m	Limit @ 3m	Comment
MHz	Vertical / Horizontal	Peak / Quasi-Peak / Average	dB μ V/m	dB μ V/m	Meets / Does not Meet
27.14527	Vertical	Average	66.2	80.0	Meets
		Peak	66.9	100.0	Meets
27.14527	Horizontal	Average	53.0	80.0	Meets
		Peak	53.8	100.0	Meets



Part 2: Measurement Results obtained in HKPC's 10m ranged Semi-Anechoic Chamber

Measurements were carried out inside the HKPC's 10m Semi-Anechoic Chamber(OATS) located at the following address:

LG1, HKPC Building., 78 Tat Chee Av., Kowloon Tong, Kowloon, Hong Kong

The test facility has been found in compliance with the requirement of Section 2.948 of the FCC rules. The information has been placed on file and listed by FCC.

The following test equipment are used:

Description	HKPC Equipment No.	Brand Name	Model No.
EMI Test Receiver	EMC017	Rohde & Schwarz	ESVS 30
Semi-anechoic Chamber	EMC 209	Frankonia	None
Loop Antenna	EMC107	EMCO	6502
<i>Biconical Antenna</i>	EMC 042	ARCS	BBR
Coaxial Cable	EMC 542	Unknown	None

The test site has, by verification measurements, satisfied the normalized site attenuation (NSA) requirements specified in the standard CISPR 22.

1) The following test results are measured with the HKPC's Loop Antenna:

The antenna is set to be 1 m above the ground plane. To maximize the level of radiated disturbances, the antenna-to-EUT azimuth is varied through 360°, the loop antenna itself is also rotated about its own axis. The reading on the measuring receiver is observed for about 15 s for each final measurement; the highest readings shall be recorded with the exception of any isolated spike which shall be ignored.

Frequency	Antenna Polarization	Detector	Measurement Result @ 3m	Limit @ 3m	Comment
<i>MHz</i>	<i>Vertical / Horizontal</i>	<i>Peak / Quasi-Peak / Average</i>	<i>dBμV/m</i>	<i>dBμV/m</i>	<i>Meets / Does not Meet</i>
27.1452	Vertical	Average	65.9	80.0	Meets
		Peak	65.8	100.0	Meets
27.1452	Horizontal	Average	56.3	80.0	Meets
		Peak	56.4	100.0	Meets



2) The following test results are measured with the HKPC's *Biconical Antenna*:

The antenna-to-EUT azimuth is varied through 360°. The antenna is also scanned between 1 m to 4 m in height above the ground plane to maximize the level of radiated disturbances. The reading on the measuring receiver is observed for about 15 s for each final measurement; the highest readings shall be recorded with the exception of any isolated spike which shall be ignored.

Frequency	Antenna Polarization	Detector	Measurement Result @ 3m	Limit @ 3m	Comment
MHz	Vertical / Horizontal	Peak / Quasi-Peak / Average	dB μ V/m	dB μ V/m	Meets / Does not Meet
27.1452	Vertical	Average	65.5	80.0	Meets
		Peak	65.6	100.0	Meets
27.1452	Horizontal	Average	52.6	80.0	Meets
		Peak	52.8	100.0	Meets

Conclusion:

The measurement results obtained with biconical antenna and loop antenna on different measurement sites do well agree to each other. The so obtained maximum difference between the maximum signal level measured by using BVHK's biconical antenna on BVHK's open site and that obtained by using HKPC's Loop Antenna in HKPC's Semi-Anechoic Chamber is 1.1 dB only; and the maximum difference between the maximum signal levels measured using HKPC's biconical and loop antennas in its Semi-Anechoic Chamber is 0.4 dB only.

END