Advanced
Compliance Laboratory

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ELECTROMAGNETIC EMISSION COMPLIANCE REPORT

of

RADIO CONTROL AIR BUGGY
MODEL: KR-81003
FCC ID: Q5KKR-81003

October 16, 2003

This report concerns (check one): Original grant __x__ Class II change _____
Equipment type: LOW POWER TRANSMITTER

Deferred grant requested per 47 CF 0.457(d)(1)(ii)? yes _____ no __x__
If yes, defer until: _____ (date)
Company agrees to notify the Commission by _____ (date)
of the intended date of announcement of the product so that the grant can be issued on that date.

Transition Rules Request per 15.37? yes _____ no __x__
If no, assumed Part 15, Subpart B for unintentional radiators - the new 47 CFR [10-1-90 Edition] provision.

Report prepared for:	K&B INTERNATIONAL LTD.
Report prepared by:	Advanced Compliance Lab
Report number:	0048-030926-01

NVLAP®

The test result in this report IS supported and covered by the NVLAP accreditation

Table of Contents

Figures

1. GENERAL INFORMATION

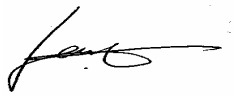
1.1 Verification of Compliance

EUT:	RADIO CONTROL AIR BUGGY
Model:	KR-81003
Applicant:	K&B INTERNATIONAL LTD. RM 407, 4/F., EMPIRE CENTRE NO. 68 MODY ROAD, TST EAST KOWLOON, HONGKONG
Test Type:	FCC Part 15C CERTIFICATION
Result:	PASS
Tested by:	ADVANCED COMPLIANCE LAB
Test Date:	October 16, 2003
Report Number:	0048-030926-01

The above equipment was tested by Advanced Compliance Laboratory for compliance with the requirement set forth in the FCC rules and regulations Part 15, subpart C. This said equipment in the configuration described in the report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

The estimated uncertainty of the test result is given as following. The method of uncertainty calculation is provided in Advanced Compliance Lab. Doc. No. 0048-01-01.

	Prob. Dist.	Uncertainty(dB)	Uncertainty(dB)	Uncertainty(dB)
		30-1000MHz	1-6.5GHz	Conducted
Combined Std. Uncertainty u_c	norm.	±2.36	±2.99	±1.83



Wei Li
Lab Manager
Advanced Compliance Lab

Date: October 16, 2003

1.2 Equipment Modifications

N/A

1.3 Product Information

System Configuration

ITEM	DESCRIPTION	FCC ID	CABLE
Product	TRANSMITTER	Q5KKR-81003	
Housing	PLASTICS		
Power Supply	9VDC BATTERY		
Clock/OSC Freq.	27 MHz		
Device Type	Periodic Operation		
Receiver	FCC DoC		

(1) EUT submitted for grant.

1.4 Test Methodology

Radiated tests were performed according to the procedures in ANSI C63.4-1992 at an antenna to EUT distance of 3 meters.

1.5 Test Facility

The open area test site and conducted measurement facility used to collect the radiated and conducted data are located at Somerset, New Jersey. This site has been accepted by FCC to perform measurements under Part 15 or 18 in a letter dated May 19, 1997 (Refer to: 31040/PRV 1300F2). The NVLAP Lab code for accreditation of FCC EMC Test Method is: 200101-0.

1.6 Test Equipment

Manufacture	Model	Serial No.	Description	Last Cal dd/mm/yy	CalDue dd/mm/yy
Hewlett-Packard	HP8546A	3625A00341	EMI Receiver	23/10/02	23/10/03
EMCO	3115	4945	Double Ridge Guide Horn Antenna	11/08/03	11/08/04
EMCO	94455-1	933	20-300MHz Biconical Antenna	09/11/02	09/11/03
EMCO	3146	9008-3672	200-1000MHz Log-Periodic Antenna	11/02/03	11/02/04
Fischer Custom	LISN-2	900-4-0008	Line Impedance Stabilization Networks	25/08/03	25/08/04
Fischer Custom	LISN-2	900-4-0009	Line Impedance Stabilization Networks	11/08/03	11/08/04
EMCO	6502	2665	10KHz-30MHz Active Loop Antenna	15/02/03	15/02/04

All Test Equipment Used are Calibrated Traceable to NIST Standards.

1.7 Statement for the Document Use

This report shall not be reproduced except in full, without the written approval of the laboratory. And this report must not be used by the cQ5Knt to claim product endorsement by NVLAP or any agency of the U.S. Government.

2. PRODUCT LABELING

See attachment: fcclabel.pdf

Fig 2.1 FCC ID Label

Fig. 2.2 Location of the Label

3. SYSTEM TEST CONFIGURATION

3.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it). And its antenna was permanently attached to the EUT with max. length, 16in.

This manually operated transmitter will deactivate immediately after any control switch was released.

Testing was performed as EUT was operated at frequency channel 27MHz continuously.

3.2 Special Accessories

N/A

3.3 Configuration of Tested System

Figure 3.1 and Figure 3.3 illustrate this system, which is tested standing along.

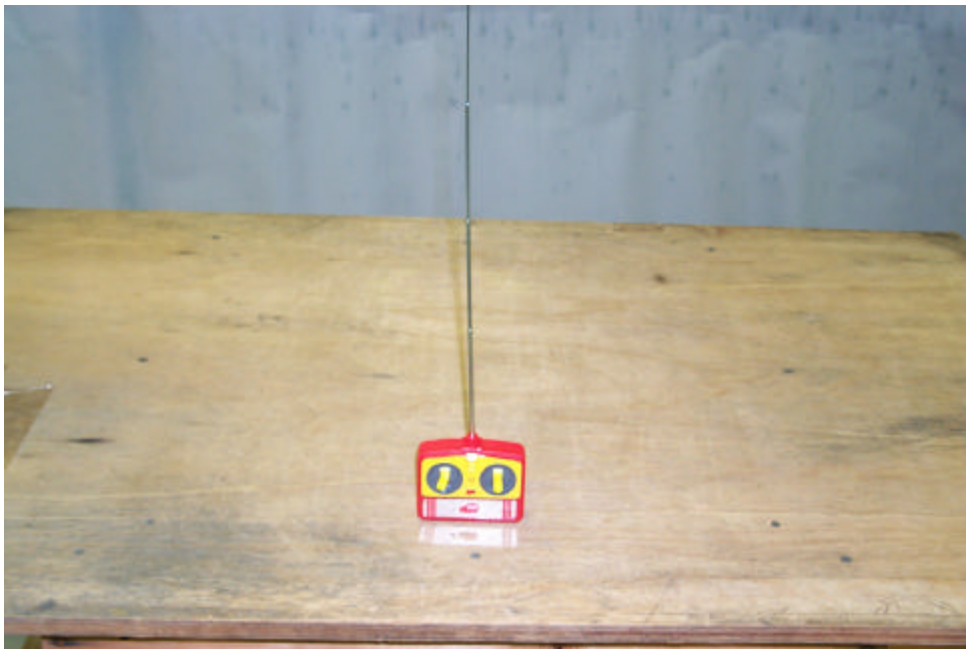


Figure 3.1 Radiated Test Setup, Position 1

Figure 3.2 Radiated Test Setup, Position 2

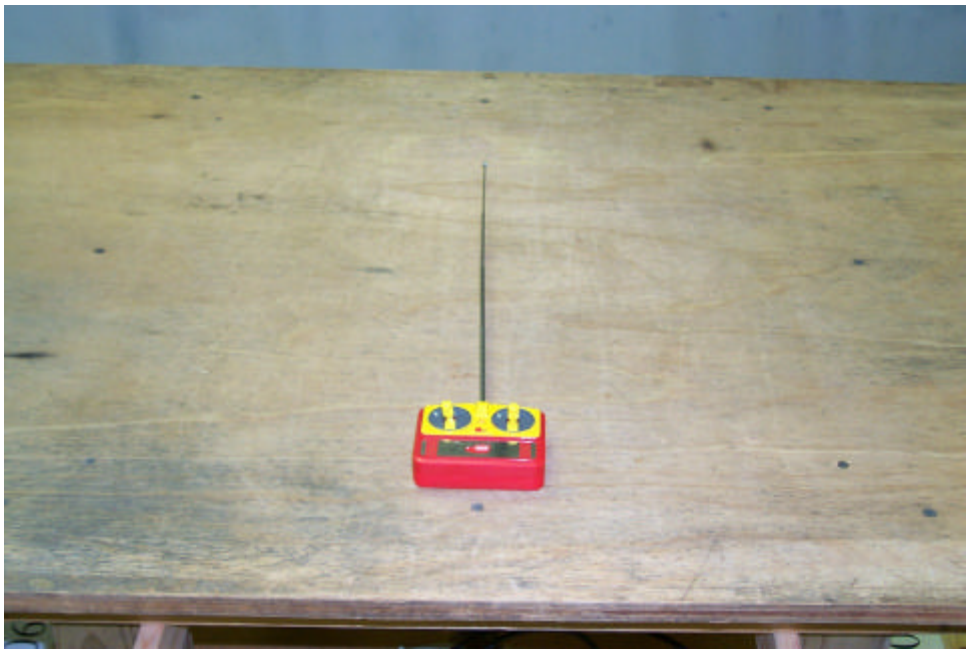


Figure 3.3 Radiated Test Setup, Position 3

4. SYSTEM SCHEMATICS

See attachment: schematic.pdf

Figure 4.1 System Schematics

5. RADIATED EMISSION DATA

5.1 Field Strength Calculation

The corrected field strength is automatically calculated by EMI Receiver using following:

$$FS = RA + AF + CF + AG$$

where FS: Corrected Field Strength in dBμV/m
RA: Amplitude of EMI Receiver before correction in dBμV
AF: Antenna Factor in dB/m
CF: Cable Attenuation Factor in dB
AG: Built-in Preamplifier Gain in dB (Stored in receiver as part of the calibration data)

5.2 Test Methods and Conditions

The initial step in collecting radiated data is a EMI Receiver scan of the measurement range below 30MHz using peak detector and 9KHz IF bandwidth / 30KHz video bandwidth. For the range 30MHz - 5GHz, IF bandwidth / 30KHz video bandwidth are used. Both bandwidths are 1MHz for above 1GHz measurement.

5.3 Test Data

The following data lists the significant emission frequencies, polarity and position, peak reading of the EMI Receiver, the FCC limit, and the difference between the peak reading and the limit. Explanation of the correction and calculation are given in section 5.1.

Test Personnel:

Tester Signature: 

Typed/Printed Name: Edward Lee Date: October 16, 2003

Radiated Test Data (CH--27MHz)

Frequency (MHz)	Polarity [H, V] Position	Height (m)	Azimuth (Degree)	Peak(2) Reading (dBmV/m)	3m Limit(1) (dBmV/m)	Difference from limit (dB)
27.1	X,H	1.7	30	70	80	-10
54.3	X,H	1.5	40	36.5	40	-3.5
81.4	X,H	1.4	70	36.1	40	-3.9
27.1	X,V	1.1	150	64.3	80	-15.7
54.3	X,V	1.1	10	38	40	-2
81.4	X,V	1.1	10	32.8	40	-7.2
27.1	Y,H	1.5	90	60.8	80	-19.2
54.3	Y,H	1.3	270	36.7	40	-3.3
81.4	Y,H	1.3	60	35.6	40	-4.4
27.1	Y,V	1.1	150	59.7	80	-20.3
54.3	Y,V	1.1	150	37.7	40	-2.3
81.4	Y,V	1.1	270	37.5	40	-2.5
27.1	Z,H	1.4	180	61.6	80	-18.4
54.3	Z,H	1.3	90	37.4	40	-2.6
27.1	Z,V	1.0	90	72.6	80	-7.4
54.3	Z,V	1.1	90	31.5	40	-8.5

(1) The limit for emissions within the 26.96-27.28MHz band is 10,000uV(80dB). Sec. 15.227. The limit for other emissions is defined in Sec. 15.209.
(2) Because each peak reading is less than the FCC average limit, it is not necessary to show the calculated average reading based on the pulse train characteristics.

6. PHOTOS OF TESTED EUT

The following photos show the inside details of the EUT.

See Attachments: external.pdf, internal.pdf