

**Advanced
Compliance Laboratory**

6 Randolph Way
Hillsborough, NJ 08844
Tel: (908) 927 9288
Fax: (908) 927 0728

ELECTROMAGNETIC EMISSION COMPLIANCE REPORT

of

RADIO CONTROL 1:6 RACING CAR RECEIVER
MODEL: KR-798(RX)
FCC ID: Q5KKR-798R

June 14, 2005

This report concerns (check one): Original grant ☒ Class II change ☐
Equipment type: Superregenerative Receiver

Deferred grant requested per 47 CF 0.457(d)(1)(ii)? yes ☐ no ☒
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 ☒
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: | 0048-050614-01R |



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

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1. GENERAL INFORMATION

1.1 Verification of Compliance

EUT: RADIO CONTROL 1:6 RACING CAR RECEIVER

Model: KR-798(RX)

Applicant: K&B INTERNATIONAL LTD..
RM406, 4/F., EMPIRE CENTRE, NO. 68 MODY RD.,
TST EAST, KOWLOON, HONGKONG

Test Type: FCC Part 15C CERTIFICATION

Result: PASS

Tested by: ADVANCED COMPLIANCE LABORATORY

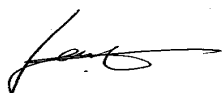
Test Date: Oct. 20, 2004

Report Number: 0048-050614-01R

The above equipment was tested by Compliance Laboratory, Advanced Technologies, Inc. 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: June 14, 2005

1.2 Equipment Modifications

N/A

1.3 Product Information

System Configuration

| ITEM | DESCRIPTION | FCC ID | CABLE |
|-----------------|---|------------|-------|
| Product | RADIO CONTROL 1:6 RACING CAR RECEIVER KR-798(RX) ⁽¹⁾ | Q5KKR-798R | |
| Housing | PLASTICS | | |
| Power Supply | 12V DC Battery | | |
| Clock/OSC Freq. | 49.86 MHz | | |
| Transmitter | FCC Part15C Certification | Q5KKR-798 | |

(1) EUT submitted for Approval.

1.4 Test Methodology

Radiated tests were performed according to the procedures in ANSI C63.4-2003 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/y | Cal Due dd/mm/y |
|-----------------|---------|------------|---------------------------------------|---------------------|--------------------|
| Hewlett-Packard | HP8546A | 3625A00341 | EMI Receiver | 23/10/03 | 23/10/04 |
| EMCO | 3104C | 9307-4396 | 20-300MHz Biconical Antenna | 12/02/04 | 12/02/05 |
| EMCO | 3146 | 9008-2860 | 200-1000MHz Log-Periodic Antenna | 09/02/04 | 09/02/05 |
| Fischer Custom | LISN-2 | 900-4-0008 | Line Impedance Stabilization Networks | 23/08/04 | 23/08/05 |
| Fischer Custom | LISN-2 | 900-4-0009 | Line Impedance Stabilization Networks | 23/08/04 | 23/08/05 |
| EMCO | 6502 | 2665 | 10KHz-30MHz Active Loop Antenna | 27/02/04 | 27/02/05 |
| EMCO | 3115 | 4945 | Double Ridge Guide Horn Antenna | 15/09/04 | 15/09/05 |
| Rohde&Schwarz | SMS | 833366 | Signal Generator | | |

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 client to claim product endorsement by NVLAP or any agency of the U.S. Government.

2. PRODUCT LABELING

FCC ID: Q5KKR-798R

This device complies with part 15 of the FCC Rules. Operating is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Figure 2.1 FCC Label



Figure 2.2 Location of Label at the bottom of EU1

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, 19in.

Testing was performed as EUT was operated with external 49.85MHz CW signal, which was provided by R&S Signal Generator. This setup follows ANSI C63.4's related testing procedure.

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3.2 Special Accessories

N/A

3.3 Configuration of Tested System

Figure 3.1 illustrates this system, which is tested standing along.



Figure 3.1 Radiated Test Setup

4. SYSTEM BLOCK DIAGRAM

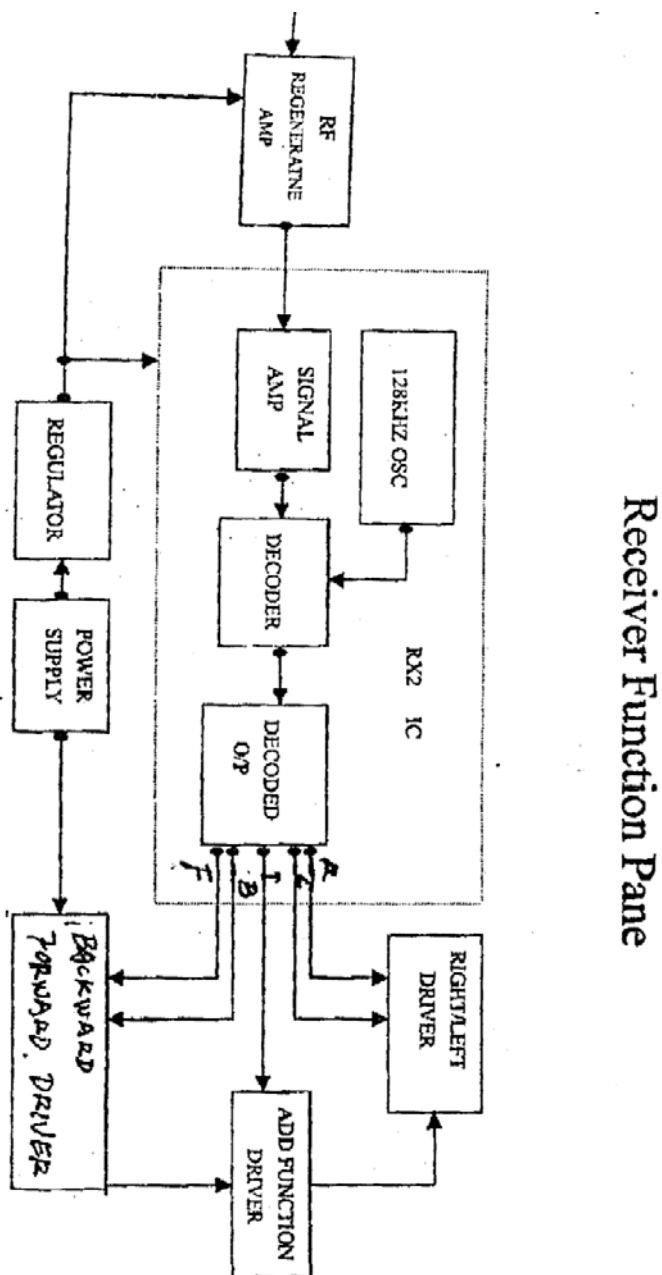


Figure 4.1 System Block Diagram

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 - 1GHz, 120KHz IF bandwidth / 120KHz video bandwidth are used. Both bandwidths are 1MHz for above 1GHz measurement. Up to 10th harmonics were investigated.

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: June 14, 2005

Radiated Test Data

| Frequency (MHz) | Polarity [H, V] Position | Height (m) | Azimuth (Degree) | Peak(2) Reading (dB μ V/m) | Class B(1) 3m Limit (dB μ V/m) | Difference from limit (dB) |
|--------------------|--------------------------------|---------------|---------------------|--------------------------------------|--|----------------------------------|
| 48.7 | H | 1.4 | 190 | 36.4 | 40 | -3.6 |
| 50.7 | H | 1.3 | 190 | 38.6 | 40 | -1.4 |
| 52.9 | H | 1.4 | 190 | 36.7 | 40 | -3.3 |
| 55.0 | H | 1.4 | 190 | 35.3 | 40 | -4.7 |
| 57.3 | H | 1.4 | 190 | 34.0 | 40 | -6 |
| 59.1 | H | 1.3 | 190 | 32.3 | 40 | -7.7 |
| 62.0 | H | 1.3 | 190 | 32.4 | 40 | -7.6 |
| 48.7 | V | 1.2 | 140 | 34.8 | 40 | -5.2 |
| 50.7 | V | 1.2 | 140 | 37.6 | 40 | -2.4 |
| 52.9 | V | 1.2 | 140 | 35.0 | 40 | -5 |
| 55.0 | V | 1.2 | 140 | 33.1 | 40 | -6.9 |
| 57.3 | V | 1.2 | 140 | 32.0 | 40 | -8 |

6. PHOTOS OF TESTED EUT

The following photos show the inside details of the EUT.