ENGINEERING STATEMENT

In Regard to Measurements on

HOBBICO – Hobby Corporation of America

MODEL: GPML0050

FCC ID: IYFR5FM-72

A. INTRODUCTION

Hyak Laboratories, Inc. has been authorized by Hobbico to determine compliance with FCC rules, Part 15, Subpart B.

The device operates in the 72 MHz band and is intended for use as a model aircraft R/C receiver.

B. DESCRIPTION OF DEVICE

The device incorporates a super-heterodyne design.

The following information is supplied as requested in FCC Bulletin OCE 24:

1. Service in which the device will be used: Part 15. (95)

2. Function of device: R/C Receiver

3. Tuning range: 72.01 – 72.99 MHz.

4. IF used: 455 kHz.

5. Fundamental frequency of principal oscillators in the device.

   First local oscillator: (F_o+0.455) MHz.

C. DESCRIPTION OF MEASUREMENT FACILITIES

A description of the Hyak Laboratories' radiation test facility is a matter of record with the FCC. The facility was

accepted for radiation measurements from 30 to 1000 MHz on October 1, 1976, and is currently listed as an accepted site.

D. DESCRIPTION OF MEASUREMENT PROCEDURE: RADIATED EMISSIONS

Measurements of radiated field strength were made using ANSI C63.4 (1992) as the basic procedure. Measurements were made with 3-meter spacing between the device under test and the test equipment antenna. The antenna(s) connected to the device under test consisted of the integral 60 cm antenna supplied with the receiver.

The device under test was placed on a rotatable table 80 cm in height.

Measurement of field strength was made through use of Tektronix 494P spectrum analyzer in conjunction with Singer DM-105A series or EMCO 3221 calibrated dipoles or EMCO 3115 DRG horn.

For each spurious emission identified between 30 to 2000 MHz (per Para 15.33(b)(1)), the test sample was rotated for maximum pickup, the test antenna varied in elevation, and the test antenna polarization shifted between horizontal to vertical in order to maximize observed signals.

E. REPORT OF RADIATED EMISSIONS

1. Table 1 lists the frequency and amplitude of all signals observed from 30 to 2000 MHz. All other emissions were more than 20 dB below the limits of paragraph 15.109 of the FCC Rules.

TABLE 1

RADIATED SPURIOUS EMISSIONS
Measured at 3 meters
PART 15(B) PARA. 15.109

Frequency To Which	Frequency of	Meter	Antenna	Field[1]

Tuned (MHz)	Emission (MHz)	Reading (dBm)	Factor (dB)	Intensity uV/m @ 3m	FCC Limit uV/m @ 3m	dB to Limit
72.270	72.725	-87.0	8.2	26	100	-12
72.270	145.450	-101.0	16.9	14*	150	-21
72.270	218.175	-105.0	11.6	5*	200	-32
72.710	73.166	-82.2	8.4	46	100	- 6.8
72.710	146.332	-97.8	16.9	20	150	-17
72.710	219.494	-101.0	11.4	7*	200	-29

Note 1: $uV/m = \text{Log}^{-1\frac{dBu/m}{20}}$

dBu = dBm + antenna factor + 107

*Reference data, 20 dB or more below FCC limit.

RADIATED SPURIOUS EMISSIONS
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TABLE 1

F. PROCEDURE - AC LINE CONDUCTED SPURIOUS

The GPML0050 receiver operates from model toy control power; there is no connection to ac power lines.

G. STATEMENT

Technical test data are from tests performed by me or under my supervision. My qualifications are a matter of record with the Federal Communications Commission. I personally attest to the accuracy of the test data submitted as a part of this engineering statement.

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Rowland S. Johnson

Dated: August 6, 2001