

**Maison Joseph Battat Limited**

Application  
For  
Certification  
**(FCC ID: PN6BB3266)**

Superregenerative Receiver

WO# 0105885  
WN/at  
September 13, 2001

- The test results reported in this report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.
- This report shall not be reproduced except in full without prior authorization from Intertek Testing Services Hong Kong Limited

**FCC ID : PN6BB3266**

# INTERTEK TESTING SERVICES

---

## LIST OF EXHIBITS

*INTRODUCTION*

<i>EXHIBIT 1:</i>	General Description
<i>EXHIBIT 2:</i>	System Test Configuration
<i>EXHIBIT 3:</i>	Emission Results
<i>EXHIBIT 4:</i>	Equipment Photographs
<i>EXHIBIT 5:</i>	Product Labelling
<i>EXHIBIT 6:</i>	Technical Specifications
<i>EXHIBIT 7:</i>	Instruction Manual



---

# INTERTEK TESTING SERVICES

---

## Table of Contents

1.0 <b>General Description</b> .....	2
1.1 Product Description .....	2
1.2 Related Submittal(s) Grants .....	2
1.3 Test Methodology .....	3
1.4 Test Facility .....	3
2.0 <b>System Test Configuration</b> .....	5
2.1 Justification .....	5
2.2 EUT Exercising Software .....	5
2.3 Support Equipment List and Description .....	5
2.4 Equipment Modification .....	6
2.5 specialk Accessories .....	6
3.0 <b>Emission Results</b> .....	8
3.1 Field Strength Calculation .....	9
3.2 Radiated Emission Configuration Photograph .....	10
3.3 Radiated Emission Data .....	11
4.0 <b>Equipment Photographs</b> .....	14
5.0 <b>Product Labelling</b> .....	16
6.0 <b>Technical Specifications</b> .....	18
7.0 <b>Instruction Manual</b> .....	20

## INTERTEK TESTING SERVICES

---

### List of attached file

Exhibit type	File Description	filename
Test Report	Test Report	report.pdf
Test Setup Photo	Radiated Emission	radiated1.jpg to radiated2.jpg
External Photo	External Photo	ophoto1.jpg, ophoto2.jpg
Internal Photo	Internal Photo	iphoto1.jpg to iphoto4.jpg
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
ID Label/Location	Label Artwork and Location	label.pdf
User Manual	User Manual	manual.pdf

**INTERTEK TESTING SERVICES**

---

**EXHIBIT 1**

**GENERAL DESCRIPTION**

## **INTERTEK TESTING SERVICES**

---

### **1.0 General Description**

#### **1.1 Product Description**

The equipment under test (EUT) is a receiver for a Remote Control Toy Car operating at 49.860 MHz. The EUT is powered by four 1.5V AA batteries. There is a ON/OFF switch on the EUT. Once turn on the EUT, it receive the RF signal and then move continuously.

The brief circuit description is listed as follows :

- Q2 and associated circuit act as RF Amplifier
- Q1 and associated circuit act as RF Amplifier
- SW01043 and associated circuit act as Encoder.

#### **1.2 Related Submittal(s) Grants**

This is a single application for certification of a receiver. The transmitter for this receiver is authorized by Certification procedure.

## INTERTEK TESTING SERVICES

---

### 1.3 Test Methodology

The radiated emission measurements were performed according to the procedures in ANSI C63.4 (1992). All measurements were performed in Open Area Test Sites. Preliminary scans were performed in the Open Area Test Sites only to determine worst case modes. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

### 1.4 Test Facility

The open area test site and conducted measurement facility used to collect the emission data is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC.



**INTERTEK TESTING SERVICES**

---

**EXHIBIT 2**

**SYSTEM TEST CONFIGURATION**

## **INTERTEK TESTING SERVICES**

---

### **2.0 System Test Configuration**

#### **2.1 Justification**

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (1992.)

The EUT was powered by four 1.5V AA batteries.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

The unit was operated standalone and placed in the center of the turntable.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it).

#### **2.2 EUT Exercising Software**

There was no special software to exercise the device.

#### **2.3 Special Accessories**

There are no special accessories necessary for compliance of this product.

## INTERTEK TESTING SERVICES

---

### 2.4 Equipment Modification

Any modifications installed previous to testing by Maison Joseph Battat Limited will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Intertek Testing Services.

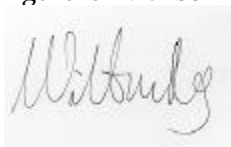
### 2.5 Support Equipment List and Description

This product was tested in a standalone configuration.

All the items listed under section 2.0 of this report are

*Confirmed by:*

Wilbur Ng  
Manager  
Intertek Testing Services  
Agent for **Maison Joseph Battat Limited**



\_\_\_\_\_ Signature

September 13, 2001 \_\_\_\_\_ Date

**INTERTEK TESTING SERVICES**

---

**EXHIBIT 3**  
**EMISSION RESULTS**

## INTERTEK TESTING SERVICES

---

### 3.0 **Emission Results**

Data is included worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

## INTERTEK TESTING SERVICES

---

### 3.1 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

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

where FS = Field Strength in dB $\mu$ V/m

RA = Receiver Amplitude (including preamplifier) in dB $\mu$ V

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB

AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows:

$$FS = RR + LF$$

where FS = Field Strength in dB $\mu$ V/m

RR = RA - AG in dB $\mu$ V

LF = CF + AF in dB

Assume a receiver reading of 52.0 dB $\mu$ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB are added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB $\mu$ V/m. This value in dB $\mu$ V/m was converted to its corresponding level in  $\mu$ V/m.

$$RA = 52.0 \text{ dB}\mu\text{V/m}$$

$$AF = 7.4 \text{ dB}$$

$$CF = 1.6 \text{ dB}$$

$$AG = 29.0 \text{ dB}$$

$$FS = RR + LF$$

$$FS = 23 + 9 = 32 \text{ dB}\mu\text{V/m}$$

$$RR = 23.0 \text{ dB}\mu\text{V}$$

$$LF = 9.0 \text{ dB}$$

$$\text{Level in mV/m} = \text{Common Antilogarithm} [(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$$

## **INTERTEK TESTING SERVICES**

---

### 3.2 Radiated Emission Configuration Photograph

Worst Case Radiated Emission

49.731 MHz

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated1.jpg to radiated2.jpg

## INTERTEK TESTING SERVICES

---

### 3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 7.6 dB

#### **TEST PERSONNEL:**



---

*Signature*

Anthony K. M. Chan, Compliance Engineer  
*Typed/Printed Name*

September 13, 2001  
*Date*



---

**INTERTEK TESTING SERVICES**

---

Company: Maison Joseph Battat Limited  
Model: BB3266

Date of Test: June 8, 2001

Table 1

**Radiated Emissions**

Polarity	Frequency (MHz)	Reading (dB $\mu$ V)	Antenna Factor (dB)	Pre-Amp Gain (dB)	Net at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	45.381	34.3	10	16	28.3	40.0	-11.7
V	46.201	33.5	11	16	28.5	40.0	-11.5
V	47.155	34.7	11	16	29.7	40.0	-10.3
V	47.930	35.7	11	16	30.7	40.0	-9.3
V	48.800	36.4	11	16	31.4	40.0	-8.6
V	49.257	37.0	11	16	32.0	40.0	-8.0
V	49.731	37.4	11	16	32.4	40.0	-7.6
V	50.002	36.4	11	16	31.4	40.0	-8.6
V	50.756	34.7	11	16	29.7	40.0	-10.3
V	51.304	33.6	11	16	28.6	40.0	-11.4
V	52.854	31.6	11	16	26.6	40.0	-13.4
H	93.864	29.6	10	16	23.6	43.5	-19.9
H	95.331	28.0	11	16	23.0	43.5	-20.5

- Notes:
1. Negative sign in the column shows value below limit.
  2. Peak Detector Data unless otherwise stated.
  3. All measurements were made at 3 meter. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.

Test Engineer: Anthony K. M. Chan

**INTERTEK TESTING SERVICES**

---

**EXHIBIT 4**

**EQUIPMENT PHOTOGRAPHS**

## INTERTEK TESTING SERVICES

---

### 4.0 **Equipment Photographs**

For electronic filing, the photographs are saved with filename: ophoto1.jpg to ophoto2.jpg and iphoto1.jpg to iphoto4.jpg

**INTERTEK TESTING SERVICES**

---

**EXHIBIT 5**

**PRODUCT LABELLING**

## INTERTEK TESTING SERVICES

---

### 5.0 **Product Labelling**

For electronic filing, the FCC ID label artwork and the label location are saved with filename: label.pdf

**INTERTEK TESTING SERVICES**

---

**EXHIBIT 6**

**TECHNICAL SPECIFICATIONS**

## INTERTEK TESTING SERVICES

---

### 6.0 **Technical Specifications**

For electronic filing, the block diagram and schematics are saved with filename: block.pdf and circuit.pdf respectively.

**INTERTEK TESTING SERVICES**

---

**EXHIBIT 7**

**INSTRUCTION MANUAL**



## INTERTEK TESTING SERVICES

---

### 7.0 **Instruction Manual**

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf

This manual will be provided to the end-user with each unit sold/leased in the United States.