CMA Testing and Certification Laboratories
廠商會檢定中心

TEST REPORT

Report No. : AE008617-1 Date : 2004 June 10

Client : Little Tikes Company
2180 Barlow Road
Hudson, OHIO 44236
United States

Sample Description : One(1) submitted sample stated to be Little Tikes MagiCook Kitchen Grail of Model No. 440Y00070.
Rating : 3 x 1.5 V AA size batteries
No. of sample(s) : Two(2) pieces ***

Date Received : 2004 May 25.

Test Period : 2004 May 25 – 2004 May 28.

Test Requested : FCC Part 15 Certification

Test Method : FCC Rules and Regulations Part 15 – Dec 2003
ANSI C63.4 – 2001

Test Result : See attached sheet(s) from page 2 to 12.

Conclusion : The submitted sample was found to comply with requirement of FCC Part 15 Subpart C.

For and on behalf of
CMA Testing and Certification Laboratories

Authorized Signature : _____

Danny Chui
EMC Engineer - EL. Division

FCC ID : NVP-04440Y13LT1

Room 1401-3, Yan Hing Centre, 9-13 Wong Chuk Yeung St., Fo Tan, Shatin, Hong Kong.
Tel: (852) 2698 8198 Fax: (852) 2695 4177 E-mail: info@cmatcl.com **Web Site:** http://www.cmatcl.com

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1 General Information

1.1 General Description

The equipment under test (EUT) is a transmitter for Little Tikes MagiCook Kitchen Grail operating at 13.560 MHz which is controlled by a crystal. The EUT is powered by 3 x 1.5 V AA size batteries. There is a built-in antenna on the PCB board. When the knob on the unit is switched and different types of "food" are placed on the grail, it will transmit a radio frequency signal for the internal voice IC to output different voices.

The brief circuit description is saved with filename OpDes.pdf and is listed as follows :
- U1 and associated circuit act as transmitter IC circuit
- U2 and associated circuit act as voice data memory
- U3 and associated circuit act as voice decoder and speaker

1.2 Related Submittal Grants

This is a single application for certification of a transmitter.

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1.3 Location of the test site

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2001. An Open Area Testing Site is set up for investigation and located at :

Top of the Roof, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2001. A double shielded room is located at :

Roof Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
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1.4 List of measuring equipment

Equipment	Manufacturer	Model No.	Serial No.	Calibration Certification No.
EMI Test Receiver	R&S	ESCS30	100001	S21141
Broadband Antenna	Schaffner	CBL6113B	2718	AC1753
Signal Generator	IFR	2023B	202302/938	Nil
LISN	R&S	ESH3-Z5	100038	S21142
Pulse Limiter	R&S	ESH3-Z2	100001	20-73194
Biconical Antenna	R&S	HK116	837414/004	4000.7752.02
Humidity Chamber	Terchy	MHU-408L	880925	Nil
Loop Antenna	ETS	6502	2651	2651

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2 Description of the radiated emission test

2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2001.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

The device was rotated through three orthogonal axes to determine which attitude and configuration produce the highest emission during measurement.

2.2 Test Result

Peak Detector data was measured unless otherwise stated.

* Emissions appearing within the restricted bands shall follow the requirement of section 15.205.

It was found that the EUT met the FCC requirement.

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2.3 Radiated Emission Measurement Data

Radiated emission

pursuant to

the requirement of FCC Part 15 subpart C

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBμV/m)	Antenna and Cable factor (dB)	Field Strength (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
13.560	V	28.2	20.0	48.2	104.0	-55.8
27.120	H	4.2	16.4	20.6	49.5	-28.9
40.680	H	8.0	13.2	21.2	40.0	-18.8
54.240	H	12.7	8.7	21.4	40.0	-18.6
67.800	H	16.3	6.2	22.5	40.0	-17.5
81.360	H	15.4	8.0	23.4	40.0	-16.6
94.920	H	15.5	10.0	25.5	43.5	-18.0
*108.480	H	12.0	11.8	23.8	43.5	-19.7
122.040	H	11.0	13.0	24.0	43.5	-19.5
135.600	H	21.3	13.1	34.4	43.5	-9.1

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3 Description of the Frequency Tolerance Test

3.1 Test Procedure

Frequency tolerance measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2001.

The EUT was placed in a humidity chamber set at 20 °C and supplied with a new battery. The EUT was turned on and the operating frequency was measured. The EUT was then turned off and placed inside the humidity chamber and allowed to stabilize at 20 °C. The temperature of the humidity chamber was then set to 50 °C and allowed for half hour to stabilize. The operating frequency of the EUT was measured. The temperature of the humidity chamber was then set to –20 °C and allowed for half hour to stabilize. The operating frequency of the EUT was measured.

No variation of the supply voltage is required as the EUT is battery-operated.

3.2 Test Result

The operating frequency of the EUT remained within ±0.01 % of the operating frequency over a temperature variation of –20 °C to 50 °C at normal supply voltage and for a variation in the primary supply voltage from 85 % to 115 % of the rated supply voltage at a temperature of 20 °C.

It was found that the EUT met the FCC requirements.

3.3 Frequency tolerance test data

(a) Variation of temperature

Temperature	Reading (MHz)	Deviation (Hz)	Limit (Hz)
-20 °C	13.560290	-18	±1356
20 °C	13.560308	--	--
50 °C	13.560320	+12	±1356

(b) Variation of primary supply voltage

No measurement is required as the EUT is a battery-operated product

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4 Description of the Line-conducted Test

4.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2001. The EUT was setup as described in the procedures, and both lines were measured.

4.2 Test Result

No measurement is required as the EUT is a battery-operated product.

4.3 Graph and Table of Conducted Emission Measurement Data

Not Applicable

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5 Photograph

5.1 Photographs of the Test Setup for Radiated Emission and Conduction Emission

For electronic filing, the photos are saved with filename TSup1.jpg to TSup2.jpg

5.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename ExPho1.jpg to ExPho2.jpg and InPho1.jpg to InPho4.jpg.

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6 Supplementary document

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

Document	Filename
ID Label/Location	LabelSmp.pdf
Block Diagram	BlkDia.pdf
Schematic Diagram	Schem.pdf
Users Manual	UserMan.pdf
Operational Description	OpDes.pdf

6.1 Bandwidth

The plot on saved in TestRpt2.pdf shows the fundamental emission is confined in the specified band. It also shows that the band edge met the 15.209 requirement at 13.110 and 14.010 MHz.

The plot on saved in TestRpt3.pdf shows that the frequency of the carrier signal at 20 °C, 50 °C and -20 °C, is in compliant with the specified limit.

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7 Appendices

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A3.	Photos of Internal Configurations	2 pages
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A5.	Frequency Plots	2 pages
A6.	ID Label/Location	1 page
A7.	Block Diagram	1 page
A8.	Schematics	1 page
A9.	User Manual	2 pages
A10.	Operation Description	1 page

***** End of Report *****

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