Playmates Toys International Limited/
Playmates Asia Services Limited

Application
For
Certification
(FCC ID: O3U-98161R)

Transmitter

Sample Description : Amazing Amanda (98161)
Amazing Amanda – Ethnic Doll (98166)
Amazing Amanda – Birthday Party (98171)
Amazing Amanda – Tea Party (98172)

Model : 98161, 98171, 98172
Additional Model : 98166
Asst. No. : 98170

We hereby certify that the sample of the above item is considered to comply with the requirements of FCC Part 15, Subpart C for Intentional Radiator, mention 47 CFR [10-1-2004]

0521651
TL/at
March 2, 2006

FCC ID : O3U-98161R

LIST OF EXHIBITS

MEASUREMENT/TECHNICAL REPORT

Playmates Toys International Limited/Playmates Asia Services Limited - MODEL: 98161, 98171, 98172 FCC ID: O3U-98161R

March 2, 2006

This report concerns (check one:) Original Grant X Class II Change _____

Equipment Type: Low Power Transmitter (example: computer, printer, modem, etc.)

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes ___ No X

If yes, defer until: _____ date

Company Name 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 C for intentional radiator - the new 47 CFR [10-1-2004 Edition] provision.

Report prepared by:

Tommy Leung
Intertek Testing Services
2/F., Garment Center,
576, Castle Peak Road,
HONG KONG
Phone: 852-2173-8502
Fax: 852-2742-9149

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Exhibit type	File Description	filename
Test Report	Test Report	report.pdf
Operation Description	Technical Description	descri.pdf
Test Setup Photo	Radiated Emission	radiated photos.doc
Test Report	Bandwidth Plot	bw.pdf
External Photo	External Photo	external photos.doc
Internal Photo	Internal Photo	internal photos.doc
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

EXHIBIT 1

GENERAL DESCRIPTION

1.0 General Description

1.1 Product Description

The equipment under test (EUT) is a transmitter for an Inductive Toy Doll operating at 13.560 MHz which is controlled by crystal. The EUT consists of a main unit (doll) and seventeen RF powered tags (a potty, a toothbrush, a cookie, a pizza, a pancake, a juice box, a birthday cake, a tea cup, a brownie, a noise maker, three spoons with food and four sets of clothes). The doll is powered by four 1.5V C size batteries. The doll has an on/off switch and a reset button on it back, a button on the left and right hands respectively, a button on the tummy, a microphone on the chest, a relay on the head for sensing the hairbrush with a magnet inside, and three RF tag sensors. They are located on the mouth, the right shoulder and the hip of the doll. After switched on the doll, the user can wake up the doll when squeezes the right hand and follows the instruction to set the date and time. After that, the doll will instruct and interact with the user. Such as , the doll may request the user to talk with it and the doll can recognize some special words or phrases and gives respond to the user. The doll may also request the user to feed it food, helping it to go to the potty, brushing it hair, dressing clothes for it and hugging it while playing with the doll.

The Model: 98166 is the same as the tested Model: 98161 in hardware and software aspect. They are difference in product colour and packing only.

The brief circuit description is saved with filename : descri.pdf

1.2 Related Submittal(s) Grants

The receiver for this transmitter is exempted form the Part 15 technical rules per 15.101(b).

1.3 Test Methodology

The radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003). 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.

EXHIBIT 2

SYSTEM TEST CONFIGURATION

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 (2003).

The EUT consists of a main unit (3 x RFID Reader) and seventeen RF powered tags.
The main unit is powered by a four new 1.5V C size batteries.
The tags are powered by the electromagnetic field generated from the main unit during test.

During test, the main unit with and without the tags placed on it were tested to determine the highest emission. The measurement results indicated that the main unit without any tags placed on it generated the highest emission.

For maximizing emission below 30 MHz, the EUT was rotated through 360°, the centre of the loop antenna was placed 1 meter above the ground plane, and the antenna polarization was changed. For maximizing emission above 30 MHz, 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). The EUT was placed on the turntanle and rotate through 360°, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

For simplicity of testing, the unit was wired to transmit continuously.

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.

2.4 Equipment Modification

Any modifications installed previous to testing by Playmates Toys International Limited/Playmates Asia Services Limited will be incorporated in each production model sold/leased in the United States.

Modifications were installed by Intertek Testing Services.

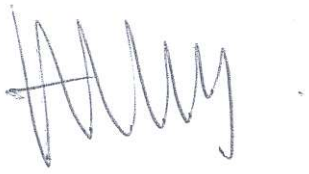
2.5 Support Equipment List and Description

This product was tested in a standalone configuration.

All the items listed under section 2.0 of this report are

Confirmed by:

Tommy Leung
Assistant Manager
Intertek Testing Services
Agent for Playmates Toys International Limited/
Playmates Asia Services Limited



_____Signature

March 2, 2006 _____Date

EXHIBIT 3

EMISSION RESULTS

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.

3.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD + AV

where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB
PD = Pulse Desensitization in dB
AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

FS = RA + AF + CF - AG + PD + AV

3.1 Field Strength Calculation (cont'd)

Example

Assume a receiver reading of 62.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 62.0 dBμV
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
PD = 0 dB

AV = -10 dB

FS = 62 + 7.4 + 1.6 - 29 + 0 + (-10) = 32 dBμV/m

Level in μV/m = Common Antilogarithm [(32 dBμV/m)/20] = 39.8 μV/m

3.2 Radiated Emission Configuration Photograph

Worst Case Radiated Emission

40.702 MHz

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photos.doc

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 1.5 dB

TEST PERSONNEL:

Signature

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

March 2, 2006
Date

Company: Playmates Toys International Limited/
Playmates Asia Services Limited
Model: 98161
Mode: TX
Sample: 1/1

Date of Test: November 9, 2005

Table 1

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBµV)	Antenna Factor (dB)	Pre-Amp Gain (dB)	Distance Factor (-dB)	Net at 3m (dBµV/m)	Calculated at 30m (dBµV/m)	Limit at 30m (dBµV/m)	Margin (dB)
V	13.564	59.8	9.3	16.0	40.0	53.1	13.1	84.0	-70.9
V	27.122	35.6	14.0	16.0	40.0	33.6	-6.4	29.5	-35.9

Notes: 1. Peak Detector Data unless otherwise stated.

2. 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.

3. Negative value in the margin column shows emission below limit.

4. Loop antenna are used for emissions below 30 MHz.

5. Worst case emissions were measured.

*Emission within the restricted band meets the requirement of part 15.205. The corresponding limit as per 15.209 is based on Quasi peak detector data for frequencies below 1000 MHz and peak detector data with average factor for frequencies over 1000 MHz.

Test Engineer: Anthony K. M. Chan

Company: Playmates Toys International Limited/ Playmates Asia Services Limited
Date of Test: November 9, 2005
Model: 98161
Mode: TX
Sample: 1/1

Table 2

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBµV)	Antenna Factor (dB)	Pre-Amp Gain (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
V	40.702	44.5	10	16.0	38.5	40.0	-1.5
V	54.254	39.6	11	16.0	34.6	40.0	-5.4
V	67.811	41.8	8	16.0	33.8	40.0	-6.2
V	81.365	42.4	7	16.0	33.4	40.0	-6.6
H	94.689	38.6	10	16.0	32.6	43.5	-10.9
H	108.488	35.5	13	16.0	32.5	43.5	-11.0
H	122.049	35.1	13	16.0	32.1	43.5	-11.4
H	135.610	32.9	13	16.0	29.9	43.5	-13.6
H	149.171	31.4	13	16.0	28.4	43.5	-15.1

Notes: 1. Peak Detector Data unless otherwise stated.

2. 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.

3. Negative value in the margin column shows emission below limit.

4. Loop antenna are used for emissions below 30 MHz.

5. Worst case emissions were measured.

*Emission within the restricted band meets the requirement of part 15.205. The corresponding limit as per 15.209 is based on Quasi peak detector data for frequencies below 1000 MHz and peak detector data with average factor for frequencies over 1000 MHz.

Test Engineer: Anthony K. M. Chan

Company: Playmates Toys International Limited/ Playmates Asia Services Limited
Date of Test: November 9, 2005
Model: 98161
Mode: Operation (Sound & Voice Recognition)
Sample: 1/1

Table 3

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBµV)	Antenna Factor (dB)	Pre-Amp Gain (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
V	37.684	36.6	10	16.0	30.6	40.0	-9.4
V	45.694	38.5	10	16.0	32.5	40.0	-7.5
H	150.386	42.9	13	16.0	39.9	43.5	-3.6
H	197.372	35.2	16	16.0	35.2	43.5	-8.3
H	246.384	36.9	20	16.0	40.9	46.0	-5.1
H	354.274	26.9	24	16.0	34.9	46.0	-11.1
H	453.692	25.5	26	16.0	35.5	46.0	-10.5
H	626.306	22.8	29	16.0	35.8	46.0	-10.2

Notes: 1. Peak Detector Data unless otherwise stated.

2. 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.

3. Negative value in the margin column shows emission below limit.

4. Worst case emissions were measured.

Test Engineer: Anthony K. M. Chan

3.4 Frequency Tolerance

FCC Part 15 Section 15.225(e)

Data Table
Frequency tolerance of Transmitter
(Temperature Variation : -20°C to +50°C)

Potty Sensor

Operating frequency			13.564527 MHz	
Test Voltage (V)	Temperature (°C)	Measured frequency (MHz)	Frequency shift (%)	Limit (%)
6	+50	13.564424	-0.00076	±0.01
6	+40	13.564465	-0.00046	±0.01
6	+30	13.564505	-0.00016	±0.01
6	+20	13.564527	0	±0.01
6	+10	13.564538	+0.00008	±0.01
6	0	13.564545	+0.00013	±0.01
6	-10	13.564548	+0.00015	±0.01
6	-20	13.564543	+0.00012	±0.01

We found that the EUT met the requirement of FCC Part 15 Section 15.225(e).

Test Engineer: Anthony K. M. Chan

3.4 Frequency Tolerance

FCC Part 15 Section 15.225(e)

Data Table
Frequency tolerance of Transmitter
(Temperature Variation : -20°C to +50°C)

Mouth Sensor

Operating frequency			13.565071 MHz	
Test Voltage (V)	Temperature (°C)	Measured frequency (MHz)	Frequency shift (%)	Limit (%)
6	+50	13.565081	+0.00007	±0.01
6	+40	13.565080	+0.00007	±0.01
6	+30	13.565078	+0.00005	±0.01
6	+20	13.565071	0	±0.01
6	+10	13.565059	-0.00009	±0.01
6	0	13.565039	-0.00024	±0.01
6	-10	13.565027	-0.00032	±0.01
6	-20	13.565040	-0.00023	±0.01

We found that the EUT met the requirement of FCC Part 15 Section 15.225(e).

Test Engineer: Anthony K. M. Chan

3.4 Frequency Tolerance

FCC Part 15 Section 15.225(e)

Data Table
Frequency tolerance of Transmitter
(Temperature Variation : -20°C to +50°C)

Clothes Sensor

Operating frequency			13.564484 MHz	
Test Voltage (V)	Temperature (°C)	Measured frequency (MHz)	Frequency shift (%)	Limit (%)
6	+50	13.564305	-0.00132	±0.01
6	+40	13.564420	-0.00047	±0.01
6	+30	13.564496	+0.00009	±0.01
6	+20	13.564484	0	±0.01
6	+10	13.564484	0	±0.01
6	0	13.564493	+0.00007	±0.01
6	-10	13.564488	+0.00003	±0.01
6	-20	13.564487	+0.00002	±0.01

We found that the EUT met the requirement of FCC Part 15 Section 15.225(e).

Test Engineer: Anthony K. M. Chan

EXHIBIT 4

EQUIPMENT PHOTOGRAPHS

4.0 **Equipment Photographs**

For electronic filing, the photographs are saved with filename:
external photos.doc and internal photos.doc

EXHIBIT 5

PRODUCT LABELLING

5.0 **Product Labelling**

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

EXHIBIT 6

TECHNICAL SPECIFICATIONS

6.0 **Technical Specifications**

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

EXHIBIT 7

INSTRUCTION MANUAL

7.0 Instruction Manual

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

EXHIBIT 8

MISCELLANEOUS INFORMATION

8.0 Miscellaneous Information

This miscellaneous information includes details of the measured bandwidth and the test procedure.

8.1 Measured Bandwidth

The plot saved in bw.pdf which shows the fundamental emission is confined in the specified band. The fundamental emission is 13.1 dBµV/m at 30 m. It meets the requirement of Section 15.225(a), (b), (c), & (d).

Figure 8.1 Bandwidth

8.2 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services in the measurements of transmitters operating under Part 15, Subpart C rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.4 - 2003.

The transmitting equipment under test (EUT) is placed on a wooden turntable which is four feet in diameter and approximately one meter in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The antenna height and polarization are varied during the testing to search for maximum signal levels.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings.

The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower. For line conducted emissions, the range scanned is 150 kHz to 30 MHz.

8.2 Emissions Test Procedures (cont'd)

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements are made as described in ANSI C63.4 - 2003.

The IF bandwidth used for measurement of radiated signal strength was 10 kHz for emission below 30 MHz and 120 kHz for emission from 30 MHz to 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. A discussion of whether pulse desensitivity is applicable to this unit is included in this report (See Exhibit 8.2). Above 1000 MHz, a resolution bandwidth of 1 MHz is used.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the restricted bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, but those measurements taken at a closer distance are so marked.

1. When determining the test result, the Measurement Uncertainty of the test has been considered.

2. This test report is issued to the Company indicated based on the request of the Applicant of the product mentioned in this report.