



TEST REPORT No.: (5212)082-1517

## TEST REPORT

To:	GUANGDONG SHIFENG TOYS INDUSTRIAL CO., LTD.	
Attn:	Silvia Zeng	
Address:	Chenghua Industrial Zone, Wenguan Road, Chenghai District, Shantou City, Guangdong, China	
Fax:	86-754-85739222	
E-mail:	<a href="mailto:business12@yifengtrading.com">business12@yifengtrading.com</a>	
Folder No.:	--	
Factory Name:	--	
Location:	--	
Product:	Spider Man Walkie Talkie Model No.: 77760	
Sample No:	(5212)082-1517	
Test Date(s):	March 27, 2012	
Test Requested:	FCC Part 15 – 2011	
Test Method:	ANSI C63.4 – 2009	
FCC ID:	FQO77760	

The results given in this report are related to the tested specimen of the described electrical apparatus.

**CONCLUSION:** The submitted sample was found to COMPLY with requirement of FCC Part 15 Subpart C.

Authorized Signature:

Reviewed by: Keith Yeung  
Date: March 30, 2012

Approved by: Steven Tsang  
Date: March 30, 2012

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Kowloon Bay Office  
1/F Pacific Trade Centre,  
2 Kai Hing Road, Kowloon Bay,  
Kowloon, HONG KONG  
Tel: +852 2331 0888  
Fax: +852 2331 0889  
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## **Test Result Summary**

<b>EMISSION TEST</b>			
<b>Test requirement: FCC Part 15 – 2011</b>			
Test Condition	Test Method	Test Result	
		Pass	Failed
Radiated Emission Test, 9kHz to 1GHz	ANSI C63.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## **Report Revision & Sample Re-submit History:**

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## **Test Laboratory & Test Instruments List**

Radiated and Conducted emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2009. An Open Area Test Site and Full Anechoic Chamber (FCC Listed Site, Registration No. 642151) are set up for investigation and located at:

### **BUREAU VERITAS HONG KONG LIMITED, EMC CENTRE**

No. 2106-2107, 21/F., Westin Centre,  
26 Hung To Road,  
Kwun Tong, Kowloon,  
Hong Kong

## **Test Instrument List**

### **Radiated Emission**

EQUIPMENT	MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATION DUE
EMI TEST RECEIVER	R&S	ESCI	100379	18-OCT-2012
BILOG ANTENNA	SCHAFFNER	CBL6112D	25229	16-SEP-2012
OPEN AREA TEST SITE	BVCPS	N/A	N/A	07-JUL-2012
ANECHOIC CHAMBER	ALBATROSS	M-CDC	80374004499B	1-DEC-2012
COAXIAL CABLE	SUHNER	N/A	N/A	10-NOV-2012

**Remarks: -**

N/A: Not Applicable or Not Available

The measurement instrumentation uncertainty would be taking into consideration on each of the test result

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**TEST REPORT No.: (5212)082-1517**

## **Equipment Under Test [EUT]**

### **Description of Sample:**

Product: Spider Man Walkie Talkie  
Model No.: 77760  
Power Supply: 6Vd.c. ("AAA" size battery x 4)  
Additional Product Name: Avengers Walkie Talkie / Avengers Communicator Set / Spiderman Communicator Set  
Additional Model: 77762 / 77849 / 77851  
Additional Model Information: Declare the Circuit, PCB layout, Electrical parts and Outlook of the products are identical to the basic model, except the product colour.

### **Description of EUT Operation:**

The Equipment Under Test (EUT) is a GUANGDONG SHIFENG TOYS INDUSTRIAL CO., LTD. of Walkie Talkie. It is a 1 button and 1 switch transceiver and operating at 49.86MHz. The EUT continues to transmit while button is being pressed and become a receiver while button is being released; Modulation by IC, and type is amplitude modulation.

The transmitter has different control:

1. ON/OFF knob switch – power on or off control and volume control
2. "PRESS-TO-Talk" button – transmit or receive control

### **Antenna Requirement (Section 15.203)**

The EUT is use of a permanently antenna. The antenna consists of 13cm long metal spring covered with rubber. The antenna is not replaceable or user serviceable. The requirements of S15.203 are met. There are no deviations or exceptions to the specifications.

### **Photo of Antenna**



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**Kowloon Bay Office**  
**1/F Pacific Trade Centre,**  
**2 Kai Hing Road, Kowloon Bay,**  
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## TEST REPORT No.: (5212)082-1517

### Test Results

#### Radiated Emissions (Fundamental)

Test Requirement: FCC Part 15 Section 15.235  
Test Method: ANSI C63.4  
Test Date(s): 2012-03-27  
Temperature: 22.0 °C  
Humidity: 65.0 %  
Atmospheric Pressure: 100.3 kPa  
Mode of Operation: Transmission mode  
Tested Voltage: 6Vd.c. ("AAA" size battery x 4)

#### Test Method:

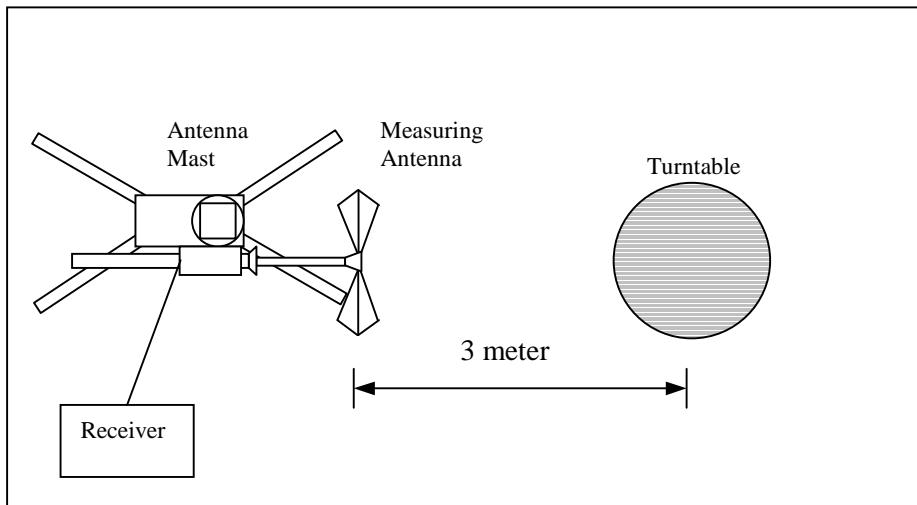
Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2009.

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. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using new battery. 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.

For below 30MHz, a loop antenna with its vertical plane is place 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1m above the ground.

Location: The Roof, Westin Centre, 26 Hung To Road, Kwun Tong, Kowloon, Hong Kong

#### Test Setup: Open Area Test Site





## TEST REPORT No.: (5212)082-1517

### Limits for Field Strength of Fundamental Emissions [FCC 47CFR 15.235]:

Frequency Range of Fundamental [MHz]	Field Strength of Fundamental Emission [Peak] [ $\mu$ V/m]	Field Strength of Fundamental Emission [Average] [ $\mu$ V/m]
49.82 – 49.90	100,000 (100 dB $\mu$ V/m)	10,000 (80 dB $\mu$ V/m)

### Measurement Data

#### Test Result of (Transmission mode): PASS

#### Detection mode: Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
49.8606	H	6.6	76.2	100	-23.8

#### Detection mode: Average

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
49.8606	H	6.6	75.9	80.0	-4.1

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 100KHz  
VBW = 300KHz



## TEST REPORT No.: (5212)082-1517

### Radiated Emissions (9kHz – 1GHz)

Test Requirement: FCC Part 15 Section 15.209  
Test Method: ANSI C63.4  
Test Date(s): 2012-03-27  
Temperature: 22.0 °C  
Humidity: 65.0 %  
Atmospheric Pressure: 100.3 kPa  
Mode of Operation: Transmission mode / Receiver mode  
Tested Voltage: 6Vd.c. ("AAA" size battery x 4)

#### Limits for Radiated Emissions [FCC 47 CFR 15.209]:

Frequency Range [MHz]	Quasi-Peak Limits [μV/m]
1.705-30	300
30-88	100
88-216	150
216-960	200
Above 960	500

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### Measurement Data

**Test Result of (Transmission mode): PASS**

#### Detection mode: Quasi-Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
99.7212	H	11.1	32.3	43.5	-11.2
149.5818	H	10.2	42.1	43.5	-1.4
199.4424	H	7.7	22.4	43.5	-21.1
249.3030	H	12.5	24.6	46.0	-21.4
299.1636	H	14.3	27.8	46.0	-18.2
349.0242	H	15.6	29.8	46.0	-16.2
398.8848	H	16.4	27.6	46.0	-18.4
448.7454	H	17.0	28.3	46.0	-17.7
498.6060	H	17.2	29.6	46.0	-16.4
548.4606	H	19.0	30.7	46.0	-15.3

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
99.7212	V	11.1	31.7	43.5	-11.8
149.5818	V	10.2	40.5	43.5	-3.0
199.4424	V	7.7	30.1	43.5	-13.4
249.3030	V	12.5	28.3	46.0	-17.7
299.1636	V	14.3	24.5	46.0	-21.5
349.0242	V	15.6	27.8	46.0	-18.2
398.8848	V	16.4	28.5	46.0	-17.5
448.7454	V	17.0	31.2	46.0	-14.8
498.6060	V	17.2	33.6	46.0	-12.4
548.4606	V	19.0	30.3	46.0	-15.7

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 100KHz  
VBW = 300KHz



## TEST REPORT No.: (5212)082-1517

### Measurement Data

**Test Result of (Receiver mode): PASS**

#### Detection mode: Quasi-Peak

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
49.20	H	7.0	35.8	40.0	-4.2
98.40	H	11.0	23.4	43.5	-20.1
147.60	H	10.5	22.6	43.5	-20.9
196.80	H	7.8	21.7	43.5	-21.8
246.00	H	12.2	22.3	46.0	-23.7
295.20	H	14.3	23.5	46.0	-22.5

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
49.20	V	7.0	32.6	40.0	-7.4
98.40	V	11.0	22.8	43.5	-20.7
147.60	V	10.5	20.5	43.5	-23.0
196.80	V	7.8	21.6	43.5	-21.9
246.00	V	12.2	24.2	46.0	-21.8
295.20	V	14.3	25.1	46.0	-20.9

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 100KHz  
VBW = 300KHz



## TEST REPORT No.: (5212)082-1517

### 26dB Bandwidth of Fundamental Emission

Test Requirement: FCC 47 CFR 15.235  
Test Method: ANSI C63.4  
Test Date(s): 2012-03-27  
Temperature: 22.0 °C  
Humidity: 65.0 %  
Atmospheric Pressure: 100.3 kPa  
Mode of Operation: Transmission mode  
Tested Voltage: 6Vd.c. ("AAA" size battery x 4)

#### Test Method:

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

#### Limits for 26dB Bandwidth of Fundamental Emission:

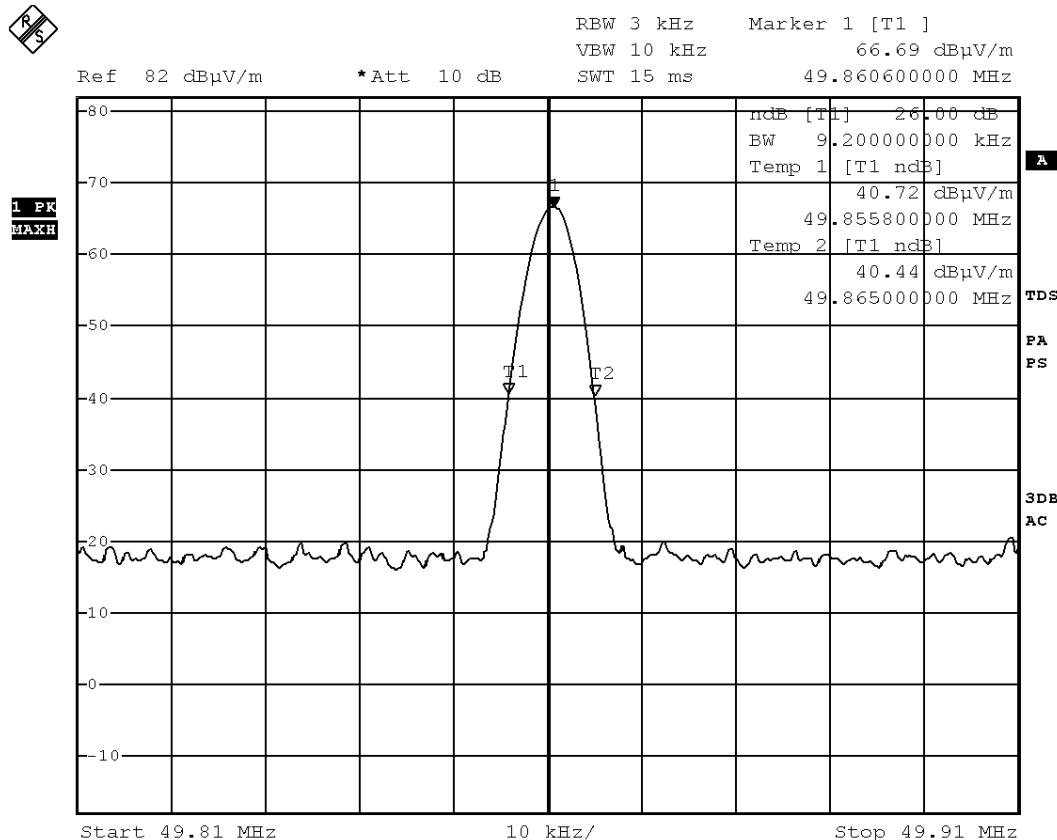
Frequency [MHz]	26dB Bandwidth [KHz]	Limits [MHz]
49.8606	9.2	within 49.82-49.90



## TEST REPORT No.: (5212)082-1517

### Measurement Data

#### Test Result of 26dB Bandwidth of Fundamental Emission: PASS



Date: 27.MAR.2012 10:11:56

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**Kowloon Bay Office**  
**1/F Pacific Trade Centre,**  
**2 Kai Hing Road, Kowloon Bay,**  
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### Photographs of EUT

Front View of the product



Rear View of the product



Side View of product



Side View of product



Battery compartment



Battery Cover

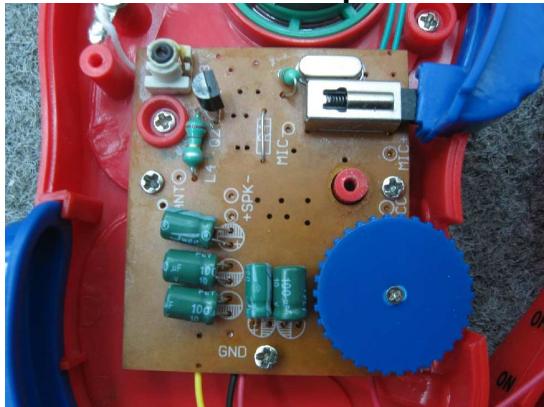




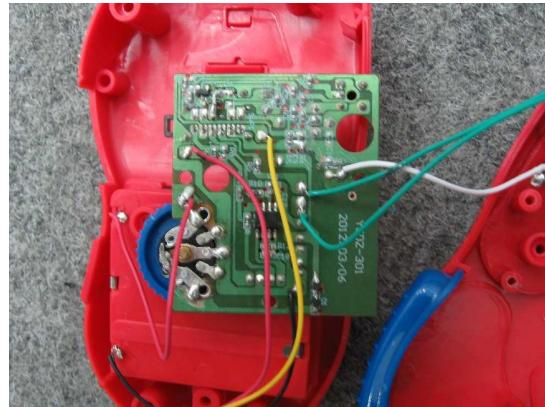
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### Photographs of EUT

Inner Circuit Top View



Inner Circuit Bottom View



Front View of the product (Internal)



Rear View of the product (Internal)





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**Measurement of Radiated Emission Test Set Up**



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

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