



TEST REPORT No.: (5217)145-1041(D)

TEST REPORT

| | | | |
|---|---|-----------------|------------------------------------|
| To: | NEW BRIGHT INDUSTRIAL CO., LTD | To: | - |
| Attn: | Eric Kwok | Attn: | - |
| Address: | 9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD, KOWLOON BAY, KOWLOON, HONG KONG. | Address: | - |
| Fax: | 852 27953665 | Fax: | - |
| E-mail: | ypeng01@newbright.com / chkwok01@newbright.com | E-mail: | - |
| Folder No.: | NBT-17MY433MTHS-B-B | | |
| Factory Name: | NEW BRIGHT INDUSTRIAL CO., LTD | | |
| Location: | 9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD, KOWLOON BAY, KOWLOON, HONG KONG. | | |
| Product: | TOY Receiver | | |
| Model No.: | GF1448RR | | |
| Additional Model No.: | -- | | |
|  | | Sample No: | HK170524/017 |
| | | Date of Receipt | May 26, 2017 |
| | | Test Date(s): | May 29, 2017 to May 31, 2017 |
| | | Test Requested: | FCC Part 15 – 2015 |
| | | Test Method: | ANSI C63.4 – 2014 |
| <p>The results given in this report are related to the tested specimen of the described electrical apparatus.</p> <p>CONCLUSION: The submitted sample was found to <u>COMPLY</u> with requirement of FCC Part 15 Subpart B.</p> | | | |

Assistant Manager,
EMC Department

Name: Law Man Kit
Date: June 26, 2017



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Equipment Under Test:

Product : TOY Receiver
Model No. : GF1448RR
Power Supply : 120Va.c., 60Hz
Data Cable : --
Power Line Cable : 0.46m non-shielded USB cable
Accessory Device : --

Description of Adaptor

Adaptor : SUPER
Model : S-1200R
Input : 120Va.c., 60Hz, 31.8W
Input power line cable : 1.83m non-shielded cable
Output : 3.0-15Vd.c., 1200mA
Output power line cable : 1.01m non-shielded cable

Additional Product Name:

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Additional Model No.:

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Additional Model Information:

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Description of Test modes:

Charge mode: with indicator light

Report Revision & Sample Re-submit History:

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Remark: -

For the test results, the EUT had been tested with all conditions. The worst case was showed in test report.



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Test Result Summary

| EMISSION TEST | | | |
|--|-------------|-------------------------------------|--------------------------|
| Test requirement: FCC Part 15 - 2015 | | | |
| Test Condition | Test Method | Test Result | |
| | | Pass | Failed |
| Conducted Emission Test, 0.15MHz to 30MHz | ANSI C63.4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Radiated Emission Test, 30MHz to 1GHz | ANSI C63.4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |



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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 – 2014. An Open Area Test Site and Full Anechoic Chamber 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. | CAL. DATE | CAL. DUE DATE |
|--------------------------------------|--------------|-----------|--------------|-------------|---------------|
| EMI TEST RECEIVER | R&S | ESCI | 100379 | 22-FEB-2017 | 21-FEB-2018 |
| SIGNAL ANALYZER 40GHZ | R&S | FSV 40 | 100977 | 16-AUG-2016 | 15-AUG-2017 |
| BILOG ANTENNA | SCHAFFNER | CBL6112D | 25229 | 27-FEB-2016 | 26-FEB-2018 |
| OPEN AREA TEST SITE | BVCPS | N/A | N/A | 18-JUN-2016 | 17-JUN-2017 |
| ANECHOIC CHAMBER | ALBATROSS | M-CDC | 80374004499B | 10-MAY-2017 | 09-MAY-2018 |
| BICONICAL ANTENNA | R&S | HK116 | 100179 | 14-APR-2016 | 13-APR-2018 |
| LOG-PERIODIC DIPOLE ARRAY ANTENNA | R&S | HL223 | 832369/001 | 07-APR-2016 | 06-APR-2018 |

Conducted Emission

| EQUIPMENT | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DATE | CAL. DUE DATE |
|-------------------|--------------|-----------|------------|-------------|---------------|
| EMI TEST RECEIVER | R&S | ESCI | 100379 | 22-FEB-2017 | 21-FEB-2018 |
| LISN | R&S | ENV216 | 100024 | 19-OCT-2016 | 18-OCT-2017 |
| | | | | | |
| SOFTWARE | MANUFACTURER | VERSION | SERIAL NO. | | |
| EMC32-E | R&S | 8.4 | N/A | | |

Measurement Uncertainty

| MEASUREMENT | FREQUENCY | UNCERTAINTY |
|---------------------|-----------------|-------------|
| Conducted emissions | 9kHz to 30MHz | 2.9dB |
| Radiated emissions | 9kHz to 30MHz | 4.2dB |
| | 30MHz to 200MHz | 4.5dB |
| | 200MHz to 1GHz | 5.6dB |
| | 1GHz to 18GHz | 4.7dB |

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 Results

Conducted Emissions (150kHz to 30MHz)

| | |
|-----------------------|----------------------------|
| Test Requirement: | FCC Part 15 Section 15.107 |
| Test Method: | ANSI C63.4 |
| Test Limits: | Class B |
| Test Date(s): | 2017-05-29 |
| Temperature: | 27.0 °C |
| Humidity: | 60.0 % |
| Atmospheric Pressure: | 99.5 kPa |
| Mode of Operation: | Charge mode |
| Tested Voltage: | 120Va.c., 60Hz |

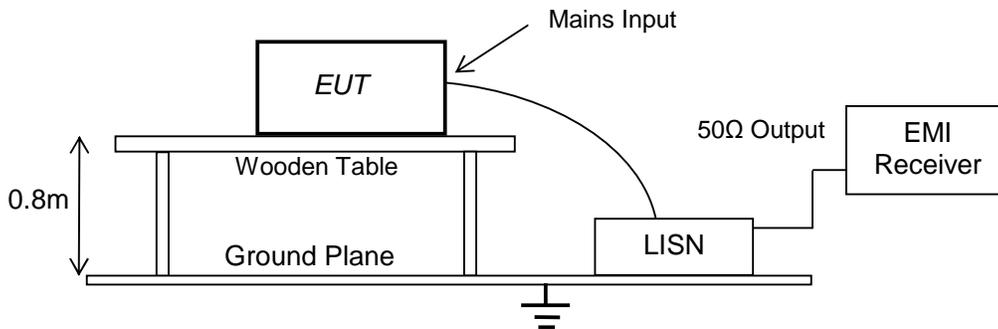
Test Method:

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2014. The EUT was setup as described in the procedures, and both lines were measured.

Initial measurements were performed in peak and average detection modes on the live and neutral line, any emissions recorded within 30dB of the relevant limit lines were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

Location: No. 603, 6/F., Westin Centre, 26 Hung To Road, Kwun Tong, Kowloon, Hong Kong

Test Setup: Shielding Room





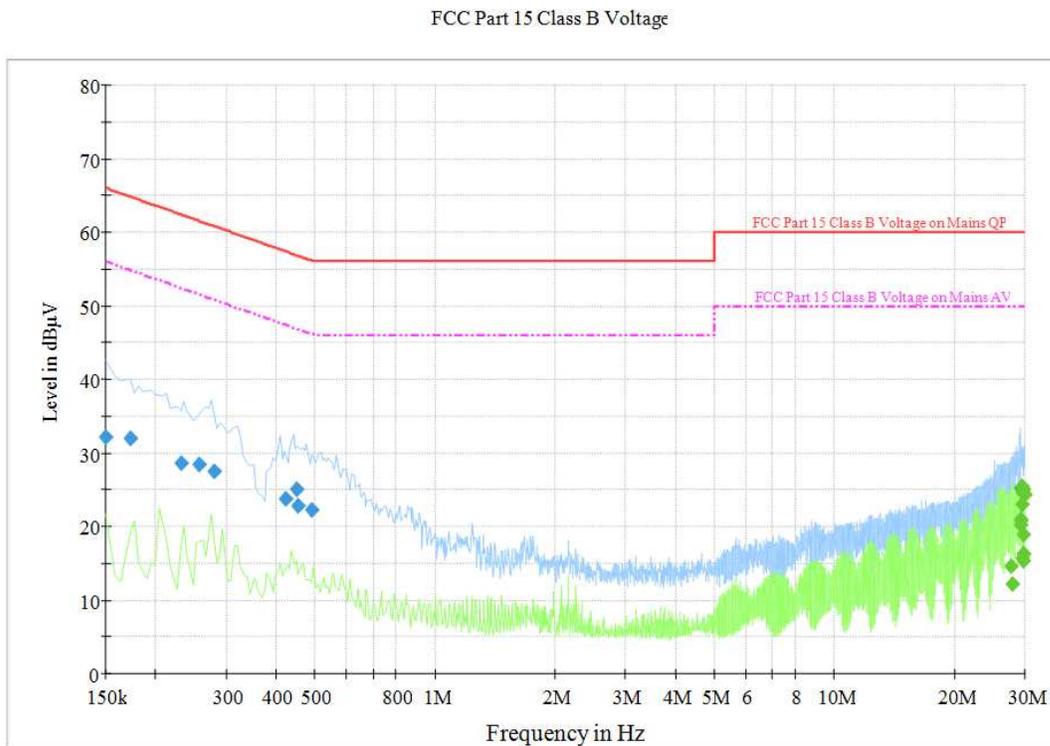
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Measurement Data

Test Result of (Charge mode): PASS

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.



Receiver setting: RBW = 120 kHz
VBW = 120 kHz

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Radiated Emissions (30MHz to 1GHz)

Test Requirement: FCC Part 15 Section 15.109
 Test Method: ANSI C63.4
 Test Limits: Class B
 Test Date(s): 2017-05-31
 Temperature: 30.0 °C
 Humidity: 70.0 %
 Atmospheric Pressure: 99.5 kPa
 Mode of Operation: Charge mode
 Tested Voltage: 120Va.c., 60Hz

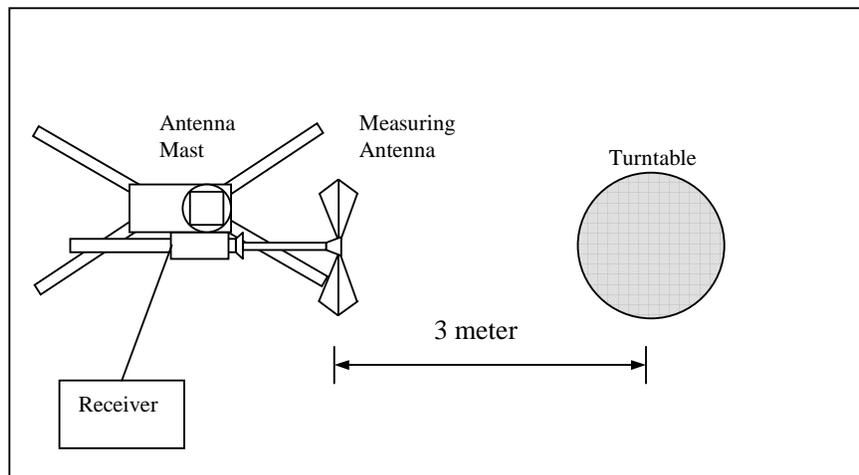
Test Method:

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2014.

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.

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

Test Setup: Open Area Test Site





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Limits for Radiated Emission: FCC Part 15.109

| Frequency Range [MHz] | Limits [dB μ V/m @ 3m] |
|--------------------------|-------------------------------|
| 30-88 | 40.0 |
| 88-216 | 43.5 |
| 216-960 | 46.0 |
| Above 960 | 54.0 |

Measurement Data

Test Result of (Charge mode): PASS

Detection mode: Quasi-Peak

| Frequency (MHz) | Polarity (H/V) | Field Strength at 3m (dB μ V/m) | Limit at 3m (dB μ V/m) | Margin (dB) |
|-----------------|----------------|-------------------------------------|----------------------------|-------------|
| 120.62 | H | 27.4 | 43.5 | -16.1 |
| 167.90 | H | 23.6 | 43.5 | -19.9 |
| 38.72 | V | 36.1 | 40.0 | -3.9 |
| 129.12 | V | 27.9 | 43.5 | -15.6 |

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 120 kHz
VBW = 120 kHz



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**Appendix I
Regulatory Statement and Label Marking Advice for the FCC Verification (Class B)**

1. Marking suggested for the Label:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

2. Regulatory Statement suggested for the User Manual:

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notes: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If shielded cables or special accessories are required for compliance, a statement must be included which instructs the user to employ them, for example, Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.

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