



TEST REPORT

Report No. : AL027800-001 Date : 2009-08-13

Application No. : LL223014(1)

Client : Activision Publishing, Inc.
3100 Ocean Park Blvd.,
Santa Monica, CA 90405,
United States

Sample Description : One (1) submitted sample(s) stated to be PS3 "Tony Hawk: Ride" Skateboard
Controller of Model No. 83783.505
Radio Frequency : 2404.4MHz ~ 2479.2MHz Transceiver
Rating : USB DC 5V
No. of submitted sample : Three (3) piece(s)

Date Received : 2009-07-10.

Test Period : 2009-07-15 to 2009-07-17.

Test Requested : FCC Part 15 Certification.

Test Method : 47 CFR Part 15 (10-1-08 Edition)
ANSI C63.4 – 2003

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.

Remark : The receiver within the transceiver is subject to verification procedure.

For and on behalf of
CMA Industrial Development Foundation Limited

Authorized Signature : _____


Mr. Wong Lap-Pong, Andrew
Assistant Manager
Electrical Division

FCC ID: XLU83783505

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1 General Information

1.1 General Description

The equipment under test (EUT) is a transceiver for PS3 "Tony Hawk: Ride" Skateboard Controller. It operates at 2404.4MHz ~ 2479.2MHz and the oscillation of MCU is generated by a crystal. The EUT is powered USB DC 5V. There is a synchronization button on the dongle unit. When the dongle unit is synchronized with the skateboard, the player can play the TV games.

The antenna is permanently attached in EUT and the radio output power is unable to adjust.

The brief circuit description is listed as follows:

- MTF0234_RX and associated circuit act as a main processor.
- 24LC01/02 and associated circuit act as an user data storage.
- MAR105P and associated circuit act as a RF module.



**CMA Testing
and Certification
Laboratories**
廠商會檢定中心

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1.2 Location of the test site

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at :

Ground Floor, 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 – 2003. A shielded room is located at :

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
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1.3 List of measuring equipment

| Equipment | Manufacturer | Model No. | Serial No. | Calibration Due Date |
|-------------------------|--------------|-----------|------------|----------------------|
| Spectrum Analyzer | R&S | FSP30 | 100628 | 2009-09-23 |
| Horn Antenna | Schwarzbeck | BBHA9120D | 9120D-531 | 2010-05-19 |
| Broadband Pre-Amplifier | Schwarzbeck | BBV9718 | 9718-119 | 2010-05-08 |
| EMI Test Receiver | R&S | ESCS30 | 100001 | 2010-01-16 |
| LISN | R&S | ESH3-Z5 | 100010 | 2009-08-24 |

1.4 List of supporting equipment

Playstation 3

Model No.: CECHH12

Serial No.: 02-27435091-8712901-CECHH12



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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 – 2003.

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.

For below 30MHz, a loop antenna with its vertical plane is placed 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 1 m above the ground.

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

2.2 Test Result

Both Average and Peak Detector data were measured unless otherwise stated.

“#” means emissions appearing within the restricted bands shall follow the requirement of section 15.205.

The frequencies from fundamental up to the tenth harmonics were investigated. The emissions which lower than the radiated ambience were not reported. Thus, those highest emissions were presented in next pages.

It was found that the EUT meet 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

Dongle: Transmitter Mode with Peak Detector

| | Frequency (MHz) | Polarity (H/V) | Reading at 3m (dBμV) | Transducer Factor (dB/m) | Field Strength (dBμV/m) | Limit at 3m (dBμV/m) | Margin (dB) |
|------------------|--------------------|-------------------|----------------------------|--------------------------------|-------------------------------|-------------------------|----------------|
| First Channel | 2404.920 | H | 96.1 | -6.8 | 89.3 | 114.0 | -24.7 |
| | #4810.000 | H | 51.3 | 1.0 | 52.3 | 74.0 | -21.7 |
| | 7214.990 | V | 37.7 | 9.9 | 47.6 | 74.0 | -26.4 |

| | | | | | | | |
|-------------------|-----------|---|------|------|------|-------|-------|
| Middle Channel | 2411.430 | H | 95.3 | -6.8 | 88.5 | 114.0 | -25.5 |
| | #4882.930 | H | 50.9 | 1.0 | 51.9 | 74.0 | -22.4 |
| | #7324.390 | H | 41.2 | 9.9 | 51.1 | 74.0 | -22.9 |

| | | | | | | | |
|-----------------|-----------|---|------|------|------|-------|-------|
| Last Channel | 2478.760 | H | 93.7 | -6.8 | 86.9 | 114.0 | -27.1 |
| | #4957.539 | H | 51.3 | 1.0 | 52.3 | 74.0 | -21.7 |
| | #7436.300 | V | 39.8 | 9.9 | 49.7 | 74.0 | -24.3 |

Remark: Transducer Factor = Antenna Factor + Cable Loss - Gain of Pre-Amplifier



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2.3 Radiated Emission Measurement Data (Con't)

Radiated emission

pursuant to

the requirement of FCC Part 15 subpart C

Dongle: Transmitter Mode with Average Detector

| | Frequency (MHz) | Polarity (H/V) | Reading at 3m (dBμV) | Transducer Factor (dB/m) | Field Strength (dBμV/m) | Limit at 3m (dBμV/m) | Margin (dB) |
|------------------|--------------------|-------------------|----------------------------|--------------------------------|-------------------------------|-------------------------|----------------|
| First Channel | 2404.920 | H | 95.7 | -6.8 | 88.9 | 94.0 | -5.1 |
| | #4810.000 | H | 50.4 | 1.0 | 51.4 | 54.0 | -2.6 |
| | 7214.990 | V | 34.8 | 9.9 | 44.7 | 54.0 | -9.3 |

| | | | | | | | |
|-------------------|-----------|---|------|------|------|------|------|
| Middle Channel | 2411.430 | H | 95.0 | -6.8 | 88.2 | 94.0 | -5.8 |
| | #4882.930 | H | 49.7 | 1.0 | 50.7 | 54.0 | -3.3 |
| | #7324.390 | H | 37.4 | 9.9 | 47.3 | 54.0 | -6.7 |

| | | | | | | | |
|-----------------|-----------|---|------|------|------|------|------|
| Last Channel | 2478.760 | H | 93.1 | -6.8 | 86.3 | 94.0 | -7.7 |
| | #4957.539 | H | 49.2 | 1.0 | 50.2 | 54.0 | -3.8 |
| | #7436.300 | V | 34.4 | 9.9 | 44.3 | 54.0 | -9.7 |

Remark: Transducer Factor = Antenna Factor + Cable Loss - Gain of Pre-Amplifier



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3 Description of the Line-conducted Test

3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. The EUT was setup as described in the procedures, and both lines were measured.

3.2 Test Result

The EUT was connected to a Playstation 3 to produce the conducted emissions.

It was found that the EUT met the FCC requirement.

3.3 Graph and Table of Conducted Emission Measurement Data

For electronic filing, the documents are saved with filename TestRpt2.pdf.



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4 Photograph

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

For electronic filing, the photos are saved with filename Tsup1.jpg to Tsup5.jpg.

4.2 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 InPho2.jpg.



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5 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.jpg |
| Block Diagram | BlkDia.pdf |
| Schematic Diagram | Schem.pdf |
| Users Manual | UserMan.pdf |
| Operational Description | OpDes.pdf |

5.1 Band Edges

The plots saved in TestRpt3.pdf show the first and last channels are confined in the specific band. It also shows that the band edges met 15.249(d) requirements at 2.4GHz and 2.4835GHz.

5.2 Duty Cycle

Not Applicable

5.3 Transmission Time

Not Applicable



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6 Appendices

| | | | |
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| A2. | Photos of the set-up of Conducted Emissions | 2 | pages |
| A3. | Photos of External Configurations | 1 | page |
| A4. | Photos of Internal Configurations | 1 | page |
| A5. | ID Label/Location | 1 | page |
| A6. | Band Edges Plot | 2 | pages |
| A7. | Conducted Emission Measurement Data | 2 | pages |
| A8. | Block Diagram | 1 | page |
| A9. | Schematics Diagram | 1 | page |
| A10. | User Manual | 1 | page |
| A11. | Operation Description | 1 | page |

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