

# ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

**Test Report No.** : OT-185-RWD-064  
**AGR No.** : A184A-402  
**Applicant** : JOYBALANCE  
**Address** : 74, Baengnyong-ro 5beon-gil, Dong-gu, Daejeon, South Korea  
**Manufacturer** : JOYBALANCE  
**Address** : 74, Baengnyong-ro 5beon-gil, Dong-gu, Daejeon, South Korea  
**Type of Equipment** : IOT Balance Trainer  
**FCC ID.** : 2APVS-BR  
**Model Name** : br  
**Multiple Model Name** : N/A  
**Serial number** : N/A  
**Total page of Report** : 6 pages (including this page)  
**Date of Incoming** : May 08, 2018  
**Date of issue** : May 28, 2018

## SUMMARY

The equipment complies with the regulation; *FCC PART 15 SUBPART C Section 15.247*

This test report only contains the result of a single test of the sample supplied for the examination.

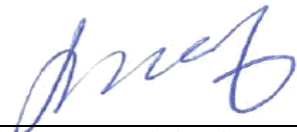
It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by:



Jae-Ho Lee / Chief Engineer  
ONETECH Corp.

Approved by:



Keun-Young, Choi / Vice President  
ONETECH Corp.

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### Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-185-RWD-064	May 28, 2018	Initial Issue	All

**1. VERIFICATION OF COMPLIANCE**

Applicant : JOYBALANCE  
 Address : 74, Baengnyong-ro 5beon-gil, Dong-gu, Daejeon, South Korea  
 Contact Person : Yeom Seoung Ho / CEO  
 Telephone No. : +82-70-7747-9001  
 FCC ID : 2APVS-BR  
 Model Name : br  
 Serial Number : N/A  
 Date : May 28, 2018

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
E.U.T. DESCRIPTION	IOT Balance Trainer
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

## 2. GENERAL INFORMATION

### 2.1 Product Description

The JOYBALANCE, Model br (referred to as the EUT in this report) is a IOT Balance Trainer. Product specification information described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	IOT Balance Trainer
OPERATING FREQUENCY	2 402 MHz ~ 2 480 MHz
RF OUTPUT POWER	0.9 dBm
NUMBER OF CHANNEL	40 Channels
MODULATION TYPE	GFSK(Bluetooth LE)
ANTENNA TYPE	Chip Antenna
ANTENNA GAIN	2.3 dBi
LIST OF EACH OSC. OR CRYSTAL. FREQ.(FREQ.>=1 MHz)	24 MHz
RATED SUPPLY VOLTAGE	DC 3.7 V

### 2.2 Alternative type(s)/model(s); also covered by this test report.

-. None

## 3. EUT MODIFICATIONS

-. None

## 4. MAXIMUM PERMISSIBLE EXPOSURE

### 4.1 EUT Description

Kind of EUT	IOT Balance Trainer
Operating Frequency Band	<input type="checkbox"/> Wireless Microphone: 494.000 MHz ~ 501.000 MHz and 498.200 MHz ~ 505.200 MHz <input type="checkbox"/> WLAN: 2 412 MHz ~ 2 462 MHz <input type="checkbox"/> WLAN: 5 180 MHz ~ 5 240 MHz <input type="checkbox"/> WLAN: 5 745 MHz ~ 5 825 MHz <input type="checkbox"/> Bluetooth: 2 402 MHz ~ 2 480 MHz <input checked="" type="checkbox"/> Bluetooth BLE: 2 402 MHz ~ 2 480 MHz
MAX. RF OUTPUT POWER	0.9 dBm
Antenna Gain	2.3 dBi
Exposure Evaluation Applied	<input type="checkbox"/> MPE <input type="checkbox"/> SAR <input checked="" type="checkbox"/> N/A

### 4.2 Calculated MPE Safe Distance


According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW}) / (\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3$$

$$= (2.39/5) \times \sqrt{2.441} = 0.75$$

Conclusion: The SAR test exclusion threshold is less than 3, so the device meets the RF Exposure Requirement and excluded SAR Test.

	Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
BLE (GFSK)	2 402	0.40 ± 0.5	0.9	1.23	5	0.38



Tested by: **Ju Yun Park** / Assistant Manager