MPE TEST REPORT

of

FCC CFR 47 part 1, 1.1307(b), 1.1310

FCC ID : 2AB58-AMR01

Equipment Under Test	:	AIRTRY MUSIC RECEIVER
Model Name	:	AMR01
Applicant	:	Airtry Inc.
Manufacturer	:	Airtry Inc.
Date of Test(s)	:	2014. 02. 24 ~ 2014. 04.06
Date of Issue	:	2014. 04. 07

In the configuration tested, the EUT complied with the standards specified above.

Tested By:  **Date:** **2014. 04. 07**

Youngmin Park

Approved By:  **Date:** **2014. 04. 07**

Feel Jeong

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1. . General Information

1.4. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)
- Wireless Div. 3FL, 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 435-040

All SGS services are rendered in accordance with the applicable SGS conditions of service available on request and accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx.
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1.2. Details of Applicant

Applicant : Airtry Inc.
Address : H404, HiTech-guan, 56, Munemi-ro 448beon-gil, Bupyeong-gu, Incheon, Korea
Contact Person : Kim, Jeong-Wan
Phone No. : +82 10 9529 1393

1.3. Description of EUT

Kind of Product	AIRTRY MUSIC RECIEVER
Model Name	AMR01
Power Supply	DC 5 V
Frequency Range	2 412 ㎒ ~ 2 462 ㎒ (11g/n_HT20), 2 422 ㎒ ~ 2 452 ㎒ (11n_HT40)
Modulation Technique	OFDM
Number of Channels	11 channels (11g/n_HT20), 7 channels (11n_HT40)
Antenna Type	Chip type (SISO)
Antenna Gain	2 412 ㎒ ~ 2 462 ㎒, 2 422 ㎒ ~ 2 452 ㎒: 2.5 ㏈i

1.4. Test report revision

Revision	Report number	Description
0	F690501/RF-RTL007508	Initial
1	F690501/RF-RTL007508-1	Modified FCC ID

2. RF Exposure Evaluation

2.1. Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b), 1.1310

According to FCC 1.1310 : The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in §1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (㎒)	Electric Field Strength(V/m)	Magnetic Field Strength (A/m)	Power Density (㎽/㎠)	Average Time
(A) Limits for Occupational /Control Exposures				
300 – 1 500	--	--	F/300	6
1 500 – 100 000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300 – 1 500	--	--	F/1500	6
1 500 – 100 000	**--**	**--**	**1**	**30**

2.1.1. Friis transmission formula: Pd = (Pout*G)/(4*pi*R^2)

Where Pd = power density in ㎽/㎠

Pout = output power to antenna in ㎽

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in ㎝

Pd the limit of MPE, 1 ㎽/㎠. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

2.2. Test Result of RF Exposure Evaluation

Test Item : RF Exposure Evaluation Data

Test Mode : Normal Operation

2.2.1. Output Power into Antenna & RF Exposure Evaluation Distance

OFDM : 11g

Channel	Channel Frequency (㎒)	Output Average Power to Antenna (dB m)	Antenna Gain (dB i)	Power Density at 20 ㎝ (㎽/㎠)	FCC Limits (㎽/㎠)
Low	2 412	5.04	2.5	0.001 129	1
Middle	2 437	4.51	2.5	0.000 999	1
High	2 462	4.49	2.5	0.000 995	1

OFDM: 11n_HT20

Channel	Channel Frequency (㎒)	Output Average Power to Antenna (dB m)	Antenna Gain (dB i)	Power Density at 20 ㎝ (㎽/㎠)	FCC Limits (㎽/㎠)
Low	2 412	4.58	2.5	0.001 016	1
Middle	2 437	4.67	2.5	0.001 037	1
High	2 462	4.54	2.5	0.001 006	1

OFDM : 11n_HT40

Channel	Channel Frequency (㎒)	Output Average Power to Antenna (dB m)	Antenna Gain (dB i)	Power Density at 20 ㎝ (㎽/㎠)	FCC Limits (㎽/㎠)
Low	2 422	4.71	2.5	0.001 046	1
Middle	2 437	4.67	2.5	0.001 037	1
High	2 452	4.63	2.5	0.001 027	1

OFDM : Maximum average power

Mode	Output Average Power to Antenna (dB m)	Antenna Gain (dB i)	Power Density at 20 ㎝ (㎽/㎠)	FCC Limits (㎽/㎠)
Max. tolerance	6.04	2.5	0.001 421	1

Note :
1. The power density Pd (5th column) at a distance of 20 ㎝ calculated from the friis transmission formula is far below the limit of 1 ㎽/㎠ and 10 W/m^2.