FCC PART 15B CERTIFICATION TEST REPORT

FOR

Applicant	:	ION AUDIO,LLC
Address	:	200 SCENIC VIEW DRIVE, SUITE 201, RI02864, U.S.A.
Equipment under Test	:	Karaoke Pro
Model No	:	iPA46
Trade Mark	:	ION
FCC ID	:	Y4O-IPA46RX
Manufacturer	:	Integrity Electronic Co.,Ltd
Address	:	NO. 68, Huanghe Rd., Fenghuanggang, Tangxia Township, Dongguan City, Guangdong Province, China

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808

Tel: +86-0769-22891499 http://www.dgddt.com

Report No: DDT-RE120032

Issued Date: May.23, 2012

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TEST REPORT DECLARE

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Manufacturer	:	Integrity Electronic Co.,Ltd
Address	:	NO. 68, Huanghe Rd., Fenghuanggang, Tangxia Township, Dongguan City, Guangdong Province, China

Test Standard Used: FCC Rules and Regulations Part 15 Subpart B: 2011;

Test Procedure Used: ANSI C63.4:2009

We Declare:

The equipment described above is tested by Dongguan Dongdian Testing Service Co., Ltd and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC standards.

Report No: DDT-RE120032

Date of Test: May 16 to May 17,2012 **Date of Report**: May.23,2012

Approved By:

DONGGUAN DONGDIAN TESTING SERVICE CO., LTD
DONG DIAN TESTING
DDT
APPROVED

Jamy Yu / EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

1. Summary of test results

Description of Test Item	Standard	Limits	Results
Power Line Conducted Emission Test	FCC Part 15B: 2011 ANSI C63.4: 2009	Class B	PASS
Radiated Emission Test	FCC Part 15B: 2011 ANSI C63.4: 2009	Class B	PASS

2. General test information

2.1. Description of EUT

EUT* Name	:	Karaoke Pro
Model Number	:	iPA46
EUT function description	:	Please reference user manual of this device
Power supply	:	DC 9V from adapter input AC120V/60Hz
FCC ID	:	Y4O-IPA46RX
RX frequency	:	174.8MHz
Date of Receipt	:	2012/05/06
Sample Type	:	Series production

Note: EUT is the ab. of equipment under test.

2.2. Accessories of EUT

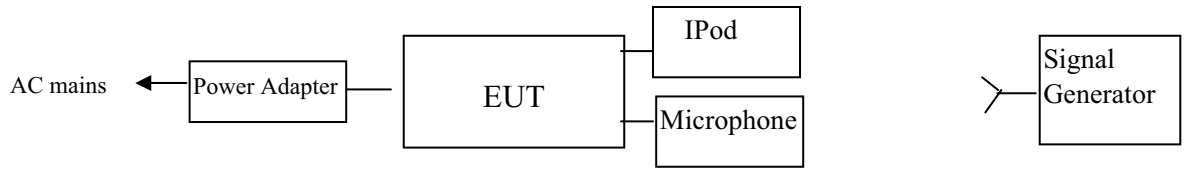
Description of Accessories	Manufacturer	Model number or Type	Other
Power adapter	Dongguan YInll Electronics	YLS0151-T090150	/

2.3. Assistant equipment used for test

Description of Assistant equipment	Manufacturer	Model number or Type	Other
IPod	Apple	A1367	/
Microphone	FENGPAI	MIC003	/

2.4. Block diagram EUT configuration for test

Rx Mode:



Test mode description: Ipod playing 1 KHz sine audio signal and input to EUT by line in line, signal generator transmit 174.8MHz CW signal to EUT by an antenna in close proximity to the EUT, and the signal level was set sufficient to stabilize the local oscillator of the EUT.

2.5. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25℃
Humidity range:	40-75%
Pressure range:	86-106kPa

2.6. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd

Add: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808 Tel: +86-0769-22891499 http://www.dgddt.com

FCC Registration Number: 270092

2.7. Measurement uncertainty

Test Item	Uncertainty
Uncertainty for Conduction emission test	2.40dB
Uncertainty for Radiation Emission test	2.78 dB (Polarize: V)
	3.20 dB (Polarize: H)

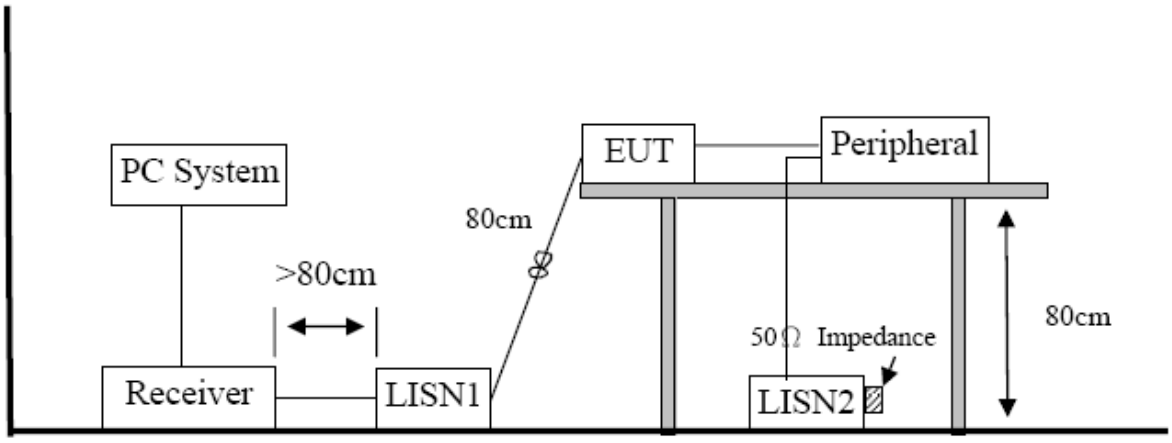
Note：This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3. Power Line Conducted Emission Test

3.1. Test equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Test Receiver	R&S	ESU8	100316	2011/11/23	1 Year
2	LISN 1	R&S	ENV216	101109	2011/11/23	1 Year
3	LISN 2	R&S	ESH2-Z5	100309	2011/11/23	1 Year
4	Pulse Limiter	R&S	ESH3-Z2	101242	2011/11/23	1 Year
5	Signal Generator	R&S	SMBV100A	1407.6004K02	2011/11/23	1 Year

3.2. Block diagram of test setup



3.3. Power Line Conducted Emission Limits(Class B)

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

3.4. Test Procedure

The EUT and Support equipment, were put placed on a non-metallic table, 80cm above the ground plane.

Configuration EUT to simulate typical usage as described in clause 2.4 and test equipment as described in clause 3.2 of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 KHz.

3.5. Test Result

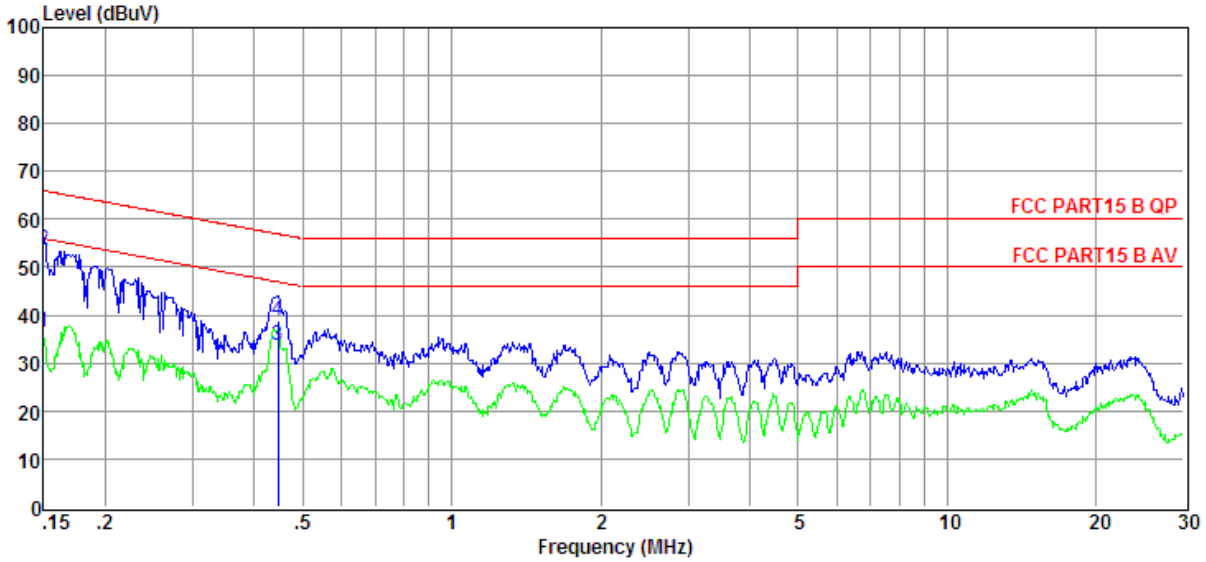
PASS. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.
Note2: "-----" means Peak detection; "-----" mans Average detection

Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	E:\2012 report data\I\ION\12QE0018.EM6	
Test Date	: 2012-05-16	**Tested By**	: Damon_Hu
EUT	: Karaoke Pro	**Model Number**	: iPA46
Power Supply	: AC 120V/60Hz	**Test Mode**	: Rx Mode
Condition	: Temp:24.5'C,Humi:55%	**LISN**	: ENV216/LINE
Memo	:		

Data : 2



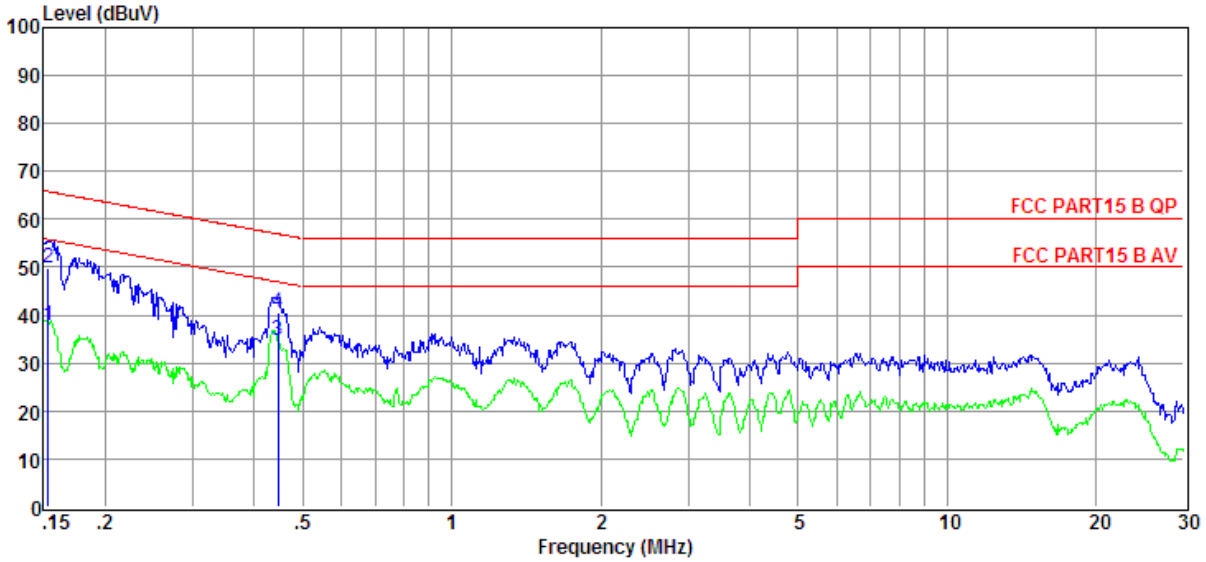
Item (Mark)	Freq (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.15	26.68	9.68	0.10	36.46	56.00	-19.54	Average	LINE
2	0.15	43.82	9.68	0.10	53.60	66.00	-12.40	QP	LINE
3	0.45	23.94	9.63	0.10	33.67	46.93	-13.26	Average	LINE
4	0.45	29.23	9.63	0.10	38.96	56.93	-17.97	QP	LINE

Note: 1. Result Level = Read Level +LISN Factor + Cable loss
2. If QP Result comply with AV limit, AV Result is deemed to comply with AV limit

Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	E:\2012 report data\I\ION\12QE0018.EM6	
Test Date	: 2012-05-16	**Tested By**	: Damon_Hu
EUT	: Karaoke Pro	**Model Number**	: iPA46
Power Supply	: AC 120V/60Hz	**Test Mode**	: Rx Mode
Condition	: Temp:24.5'C,Humi:55%	**LISN**	: ENV216/NEUTRAL
Memo	:		

Data : 4



Item (Mark)	Freq (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.15	28.14	9.50	0.10	37.74	55.82	-18.08	Average	NEUTRAL
2	0.15	40.39	9.50	0.10	49.99	65.82	-15.83	QP	NEUTRAL
3	0.45	25.13	9.64	0.10	34.87	46.93	-12.06	Average	NEUTRAL
4	0.45	30.78	9.64	0.10	40.52	56.93	-16.41	QP	NEUTRAL

Note: 1. Result Level = Read Level +LISN Factor + Cable loss
2. If QP Result comply with AV limit, AV Result is deemed to comply with AV limit

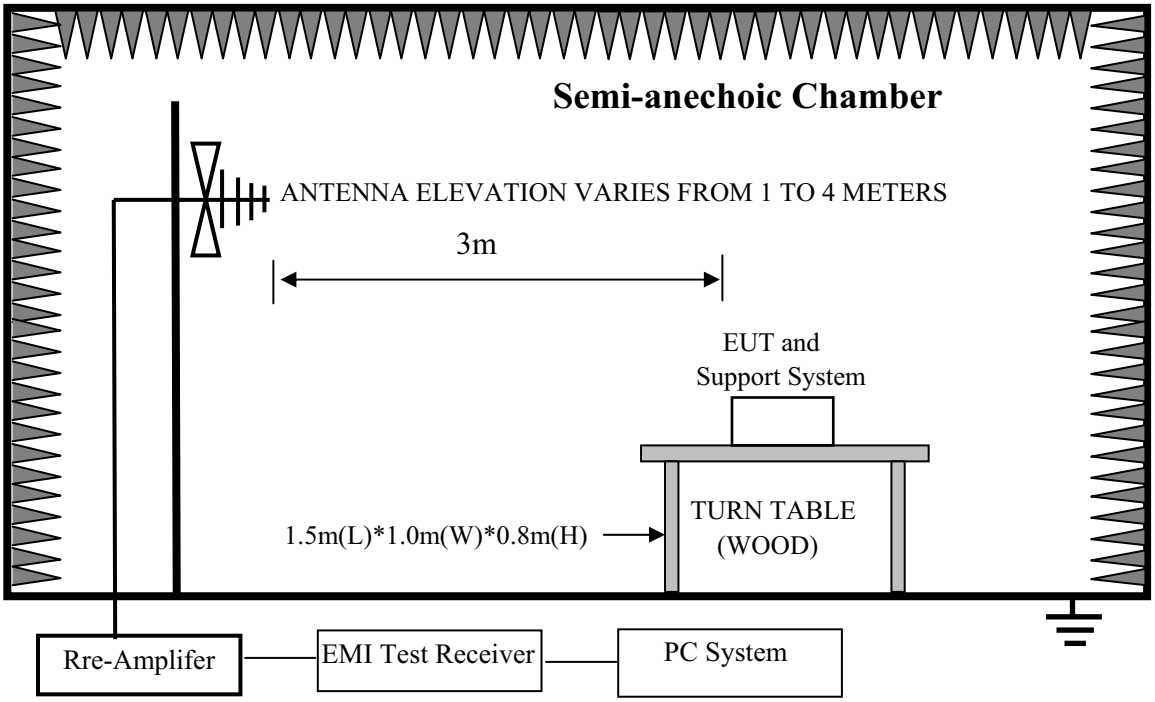
4. Radiated emission test

4.1. Test equipment

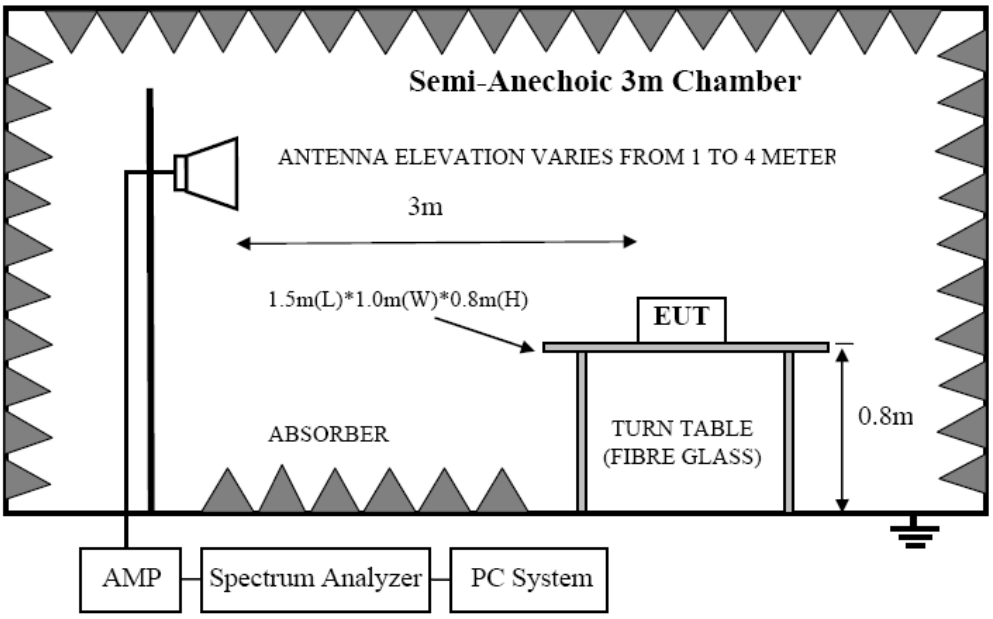
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	EMI Test Receiver	R&S	ESU8	100316	2011/11/23	1Year
2	Trilog Broadband Antenna	Schwarzbeck	VULB9163	9163-462	2010/11/09	2 Year
3	Pre-Amplifer	R&S	SCU-01	10049	2011/11/23	1Year
4	RF Cable	R&S	R01	10403	2011/11/23	1Year
5	Signal Generator	R&S	SMBV100A	1407.6004K02	2011/11/23	1 Year

4.2. Block diagram of test setup

In 3m Anechoic Chamber Test Setup Diagram for below 1GHz



In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



4.3. Radiated emission limit(Class B)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Note: (1) The smaller limit shall apply at the cross point between two frequency bands.

(2)Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4. Test Procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber.

(2) Setup EUT and assistant system according clause 2.4 and 4.2

(3) Test antenna was located 3m from the EUT on an adjustable mast. Below pre-scan procedure was first performed in order to find prominent radiated emissions.

(4) Spectrum frequency from 30MHz to 5GHz was investigated,

(5) For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to

ANSI C63.4 2009 on Radiated Emission test.

(6) For emissions from 30MHz to 1GHz, Quasi-Peak values were measured with EMI Receiver and the bandwidth of Receiver is 120 KHz.

(7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, VBW is set at 3MHz for Peak measure; RBW is set at 1MHz, VBW is set at 10Hz for Average measure.

4.5. Test result

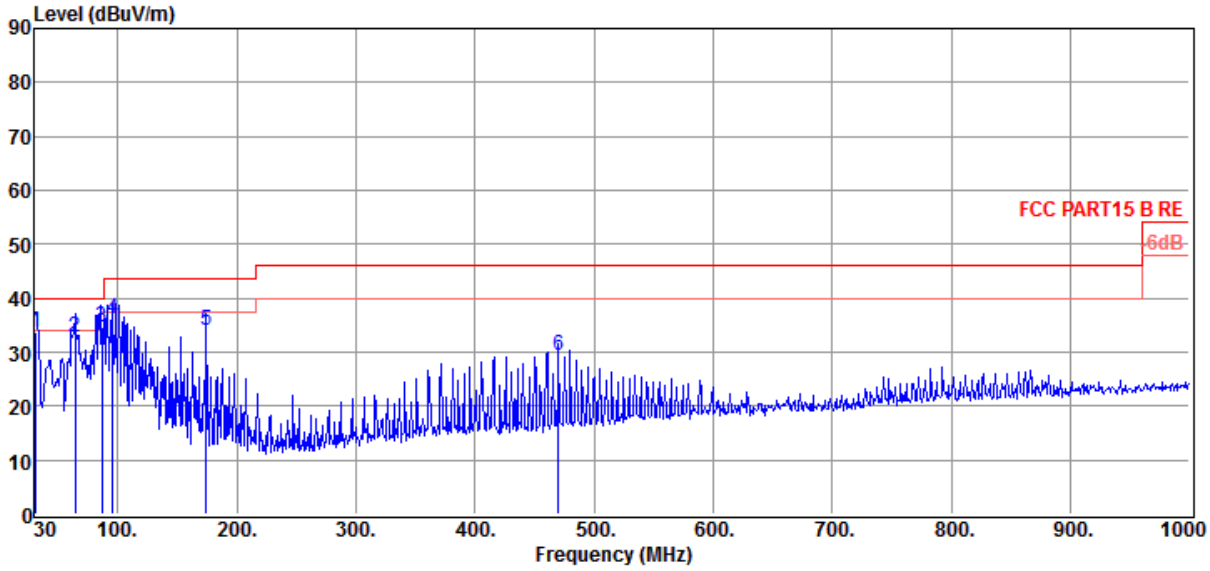
PASS. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

Radiated Emission Test Result

Test Site	: DDT 3m Chamber	E:\2012 Report Data\I\ION\12QE0018.EM6	
Test Date	: 05-17-2012	**Tested By**	: Damon_Hu
EUT	: Karaoke Pro	**Model Number**	: iPA46
Power Supply	: AC 120V/60Hz	**Test Mode**	: Rx Mode
Condition	: Temp:24.5'C,Humi:55%	**Antenna/Distance**	: VULB 9163/3m/VERTICAL
Memo	:		

Data : 3



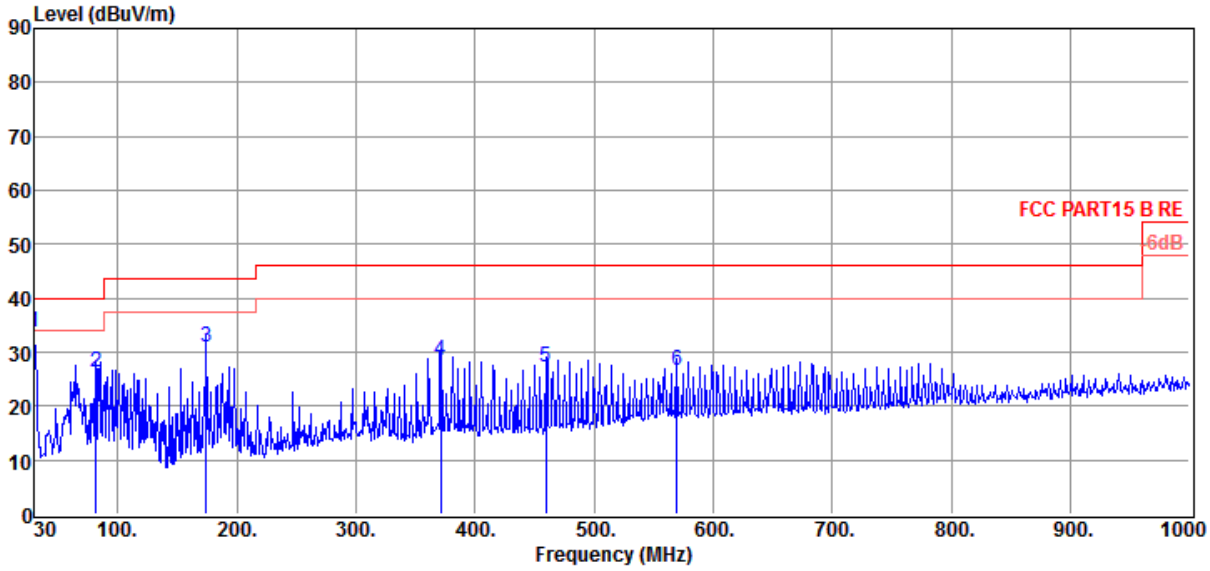
Item (Mark)	Freq (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	30.97	64.68	12.32	43.96	0.64	33.68	40.00	-6.32	QP	VERTICAL
2	63.95	64.96	10.71	43.83	0.93	32.77	40.00	-7.23	QP	VERTICAL
3	86.59	66.86	10.31	43.77	1.11	34.51	40.00	-5.49	QP	VERTICAL
4	95.96	66.05	12.84	43.76	1.17	36.30	43.50	-7.20	QP	VERTICAL
5	174.53	66.73	9.44	43.73	1.67	34.11	43.50	-9.39	QP	VERTICAL
6	470.38	53.87	15.88	43.23	2.89	29.41	46.00	-16.59	QP	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor
2. If Peak Result comply with QP limit,QP Result is deemed to comply with QP limit

Radiated Emission Test Result

Test Site	: DDT 3m Chamber	E:\2012 Report Data\I\ION\12QE0018.EM6	
Test Date	: 05-17-2012	**Tested By**	: Damon_Hu
EUT	: Karaoke Pro	**Model Number**	: iPA46
Power Supply	: AC 120V/60Hz	**Test Mode**	: Rx Mode
Condition	: Temp:24.5'C,Humi:55%	**Antenna/Distance**	: VULB 9163/3m/HORIZONTAL
Memo	:		

Data : 4



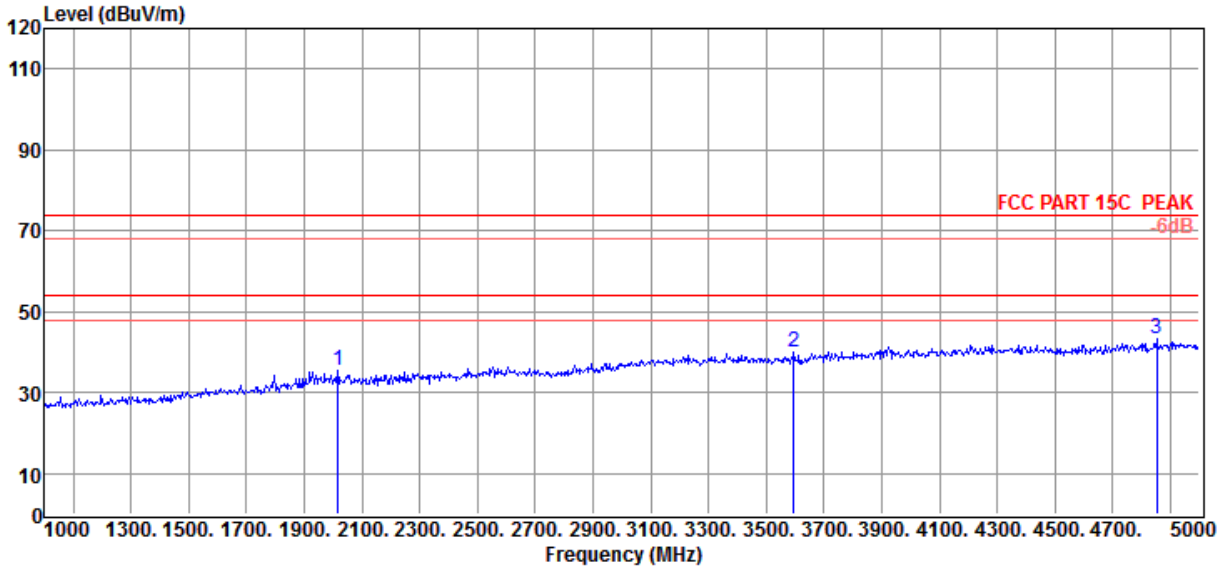
Item (Mark)	Freq (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	30.00	64.63	12.33	43.97	0.63	33.62	40.00	-6.38	QP	HORIZONTAL
2	81.41	60.36	8.54	43.78	1.07	26.19	40.00	-13.81	QP	HORIZONTAL
3	174.53	63.66	9.44	43.73	1.67	31.04	43.50	-12.46	QP	HORIZONTAL
4	371.44	55.06	14.53	43.61	2.52	28.50	46.00	-17.50	QP	HORIZONTAL
5	459.71	52.01	15.59	43.28	2.85	27.17	46.00	-18.83	QP	HORIZONTAL
6	569.32	48.63	17.87	43.06	3.22	26.66	46.00	-19.34	QP	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor
2. If Peak Result comply with QP limit,QP Result is deemed to comply with QP limit

Radiated Emission Test Result

Test Site	: DDT 3m Chamber	E:\2012 Report Data\I\ION\12QE0018.EM6	
Test Date	: 05-17-2012	**Tested By**	: Damon_Hu
EUT	: Karaoke Pro	**Model Number**	: iPA46
Power Supply	: AC 120V/60Hz	**Test Mode**	: Rx Mode
Condition	: Temp:24.5'C,Humi:55%	**Antenna/Distance**	: HF907 SN100276/3m/VERTICAL
Memo	:		

Data : 5



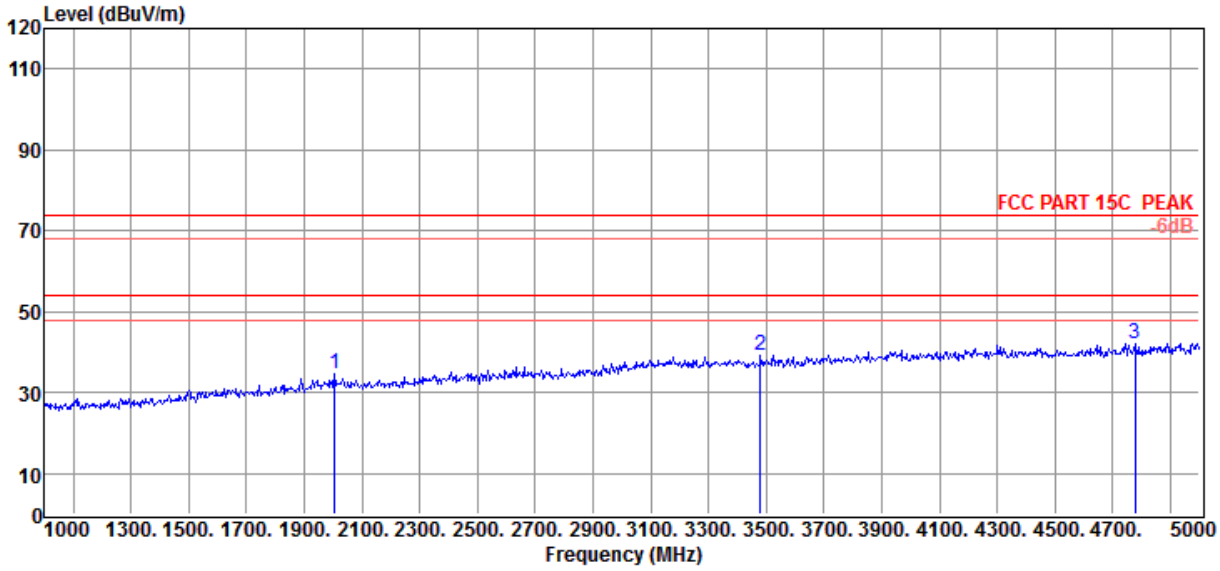
Item (Mark)	Freq (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2016.00	44.43	28.53	43.40	5.88	35.44	74.00	-38.56	Peak	VERTICAL
2	3596.00	44.02	32.04	44.00	7.97	40.03	74.00	-33.97	Peak	VERTICAL
3	4852.00	43.82	34.22	44.04	9.39	43.39	74.00	-30.61	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor
2. If Peak Result complies with average limit, average Result is deemed to comply with average limit

Radiated Emission Test Result

Test Site	: DDT 3m Chamber	E:\2012 Report Data\I\ION\12QE0018.EM6	
Test Date	: 05-17-2012	**Tested By**	: Damon_Hu
EUT	: Karaoke Pro	**Model Number**	: iPA46
Power Supply	: AC 120V/60Hz	**Test Mode**	: Rx Mode
Condition	: Temp:24.5'C,Humi:55%	**Antenna/Distance**	: HF907 SN100276/3m/HORIZONTAL
Memo	:		

Data : 6



Item (Mark)	Freq (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2004.00	43.57	28.50	43.40	5.86	34.53	74.00	-39.47	Peak	HORIZONTAL
2	3480.00	43.42	31.98	44.00	7.85	39.25	74.00	-34.75	Peak	HORIZONTAL
3	4776.00	43.08	33.90	44.07	9.27	42.18	74.00	-31.82	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor
2. If Peak Result complies with average limit, average Result is deemed to comply with average limit