

# FCC 47 CFR PART 15 SUBPART C TEST REPORT

For

Applicant: Dongguan Yuanfeng Technology Co., Ltd.

No.62, South Fumin Road, Fumin Industrial Park, Dalang Town, Address:

Dongguan City, Guangdong, P.R. China

**Product Name: GPS Portable Navigation Device** 

Model Name: PA05-5002HD

Brand Name: N/A

FCC ID: YNG-GPA05001

Report No.: MOST100716F2A

Date of Issue: July. 28, 2010

Issued by: Most Technology Service Co., Ltd.

No.5, 2nd Langshan Road, North District, Hi-tech Industrial

Park, Nanshan, Shenzhen, Guangdong, China

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#### 1. VERIFICATION OF CONFORMITY

**Equipment Under Test:** GPS Portable Navigation Device

Brand Name: N/A

Model Number: PA05-5002HD

FCC ID: YNG-GPA05001

Applicant: Dongguan Yuanfeng Technology Co., Ltd.

No.62, South Fumin Road, Fumin Industrial Park, Dalang Town, Dongguan

City, Guangdong, P.R. China

**Manufacturer:** Dongguan Yuanfeng Technology Co., Ltd.

No.62, South Fumin Road, Fumin Industrial Park, Dalang Town, Dongguan

City, Guangdong, P.R. China

Technical Standards: 47 CFR Part 15 Subpart C

File Number: MOST100716F1A

**Date of test:** July. 24, 2010 – July. 28, 2010

Deviation: None
Condition of Test Sample: Normal
Test Result: PASS

The above equipment was tested by *Most Technology Service Co., Ltd* for compliance with the requirements set forth in FCC rules and the Technical Standards mentioned above. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment and the level of the immunity endurance of the equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

Tested by (+ signature):

Petter Ping July. 28, 2010

Review by (+ signature):

July Wen July. 28, 2010

Approved by (+ signature):

Terry Yang July. 28, 2010

Petter Ping

#### 2. GENERAL INFORMATION

#### 2.1 Product Information

EUT- Bluetooth headset	
Description:	GPS Portable Navigation Device
Model Name:	PA05-5002HD
Series Number:	PAPAGO!H5600, PA05-5002, PA05-5003, PA05-5003HD, PA05-5004, PA05-5004HD, PA05-5005, PA05-5005HD, PA05-5006, PA05-5006HD, PA05-5007, PA05-5007HD, PA05-5008, PA05-5008HD, PA05-5009, PA05-5009HD, PA05-5010, PA05-5010HD, PA05-50011, PA05-50012, PA05-50012HD
Model Difference description:	The series models are different in appearance and color with the same functions.
Power Supply:	AC 120V/60Hz/ DC 12/24V/ DC 3.7V by Lithium-ion Battery
Frequency Range:	88.1MHz – 107.9MHz
Channel Number:	99
Channel Spacing:	200 KHz
Antenna Gain:	0.1 dB
Modulation Technique:	FM
Temperature Range:	-10°C ~ +55°C

#### NOTE:

1. Please refer to Appendix 2 for the photographs of the EUT. For a more detailed features description about the EUT, please refer to User's Manual.

#### 2.2 Objective

The objective of the report is to perform tests according to 47 CFR Part 15 Subpart C for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-05 Edition)	Radio Frequency Devices

#### 2.3 Test Standards and Results

Test items and the results are as bellow:

No.	Section	Description	Result	Date of Test
1	15.239	20dB Bandwidth	PASS	2010-07-27
2	15.239	Frequency Range	PASS	2010-07-27
3	15.239 15.209 15.205	Radiated Emission	PASS	2010-07-27
4	15.207	Conducted Emission	PASS	2010-07-24
5	15.203	Antenna Requirement	PASS	2010-07-27

Note: 1. The test result judgment is decided by the limit of measurement standard

2. The information of measurement uncertainty is available upon the customer's request.

#### 2.4 Environmental Conditions

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

- Temperature: 15-35°C - Humidity: 30-60 %

- Atmospheric pressure: 86-106 kPa

#### 2.5 Support Equipment

Device Type	Brand	Model	FCC ID	Series No.	Data Cable	Power Cord
MP4 Player	ipod	A1137		5K7250CCSZC		
SD Card	Transcend	1.0G				

Remark:

All the equipment/cables were placed in the worst-case [-configuration to maximize the emission during the test.

Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

#### 3. TEST FACILITY

Test Site: Most Technology Service Co., Itd

Location: Add: No.5, Nangshan 2nd Rd., North Hi-Tech Industrial park, Nanshan, Shenzhen,

Guangdong, China

Description: There is one 3m semi-anechoic an area test sites and two line conducted labs for final

test. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4 and CISPR 16

requirements.

The FCC Registration Number is 490827.

Site Filing: The site description is on file with the Federal Communications

Commission, 7435 Oakland Mills Road, Columbia, MD 21046.

Instrument Tolerance: All measuring equipment is in accord with ANSI C63.4 and CISPR 16 requirements

that meet industry regulatory agency and accreditation agency requirement.

Ground Plane: Two conductive reference ground planes were used during the Line Conducted

Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire

area between the EUT and the antenna.

#### 3.2 GENERAL TEST PROCEDURES

#### **Conducted Emissions**

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4:2003, Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

#### **Radiated Emissions**

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4:2003.

#### 4. TEST EQUIPMENT LIST

**Instrumentation:** The following list contains equipment used at MOST for testing. The equipment conforms to the CISPR 16-1 / ANSI C63.2 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 10 kHz to 1.0 GHz or above.

No.	Equipment	Manufacturer	Model No.	S/N	Calculator due date
1	Test Receiver	Rohde & Schwarz	ESCI	100492	2011/03/14
2	Spectrum Analyzer	Agilent	E7405A	US44210471	2011/03/14
3	L.I.S.N.	Rohde & Schwarz	ENV216	100093	2011/03/14
4	Coaxial Switch	Anritsu Corp	MP59B	6200283933	2011/03/14
5	Terminator	Hubersuhner	50Ω	No.1	2011/03/14
6	RF Cable	SchwarzBeck	N/A	No.1	2011/03/14
7	Test Receiver	Rohde & Schwarz	ESPI	101202	2011/03/14
8	Bilog Antenna	Sunol	JB3	A121206	2011/03/14
9	Horn Antenna	TRC	N/A	N/A	2011/03/14
10	Cable	Resenberger	N/A	NO.1	2011/03/14
11	Cable	SchwarzBeck	N/A	NO.2	2011/03/14
12	Cable	SchwarzBeck	N/A	NO.3	2011/03/14
13	DC Power Filter	DuoJi	DL2×30B	N/A	2011/03/14
14	Single Phase Power Line Filter	DuoJi	FNF 202B30	N/A	2011/03/14
15	3 Phase Power Line Filter	DuoJi	FNF 402B30	N/A	2011/03/14
16	Test Receiver	Rohde & Schwarz	ESCI	100492	2011/03/14
17	Absorbing Clamp Luthi		MDS21	3635	2011/03/14
18	Coaxial Switch	Anritsu Corp	MP59B	6200283933	2011/03/14
19	AC Power Source	Kikusui	AC40MA	LM003232	2011/03/14
20	Test Analyzer	Kikusui	KHA1000	LM003720	2011/03/14
21	Line Impendence Network	Kikusui	LIN40MA- PCR-L	LM002352	2011/03/14
22	ESD Tester	Kikusui	KES4021	LM003537	2011/03/14
23	EMCPRO System	EM Test	UCS-500-M4	V0648102026	2011/03/14
24	Signal Generator	IFR	2032	203002/100	2011/03/14
25	Amplifier	A&R	150W1000	301584	2011/03/14
26	CDN	FCC	FCC-801-M2-25	47	2011/03/14
27	CDN	FCC	FCC-801-M3-25	107	2011/03/14
28	EM Injection Clamp	FCC	F-203I-23mm	403	2011/03/14
29	RF Cable	MIYAZAKI	N/A	No.1/No.2	2011/03/14
30	Universal Radio Communication Tester	ROHDE&SCHWARZ	CMU200	0304789	2011/03/14
31	Telecommunication Antenna	European Antennas	PSA 75301R/170	0304213	2011/03/14
	1	II.	1	1	<u> </u>

NOTE: Equipments listed above have been calibrated and are in the period of validation.

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### 5. 47 CFR Part 15 C Requirements

#### 5.1 20dB Bandwidth

#### 5.1.1 Definition

Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88-108 MHz.

#### **5.1.2 Test Description**

The EUT was placed on a non-conductive table 0.8 meters above the floor. The table was rotated to an angle which presented the highest signal level. The occupied bandwidth was based on a 20 dB criteria (20 dB down either side of the emission from the peak emission). A drawing showing the test setup is given as Figure 1.

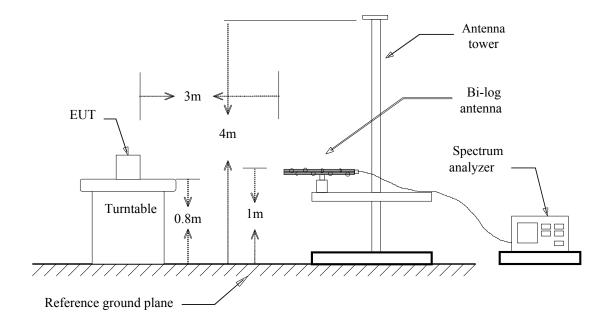
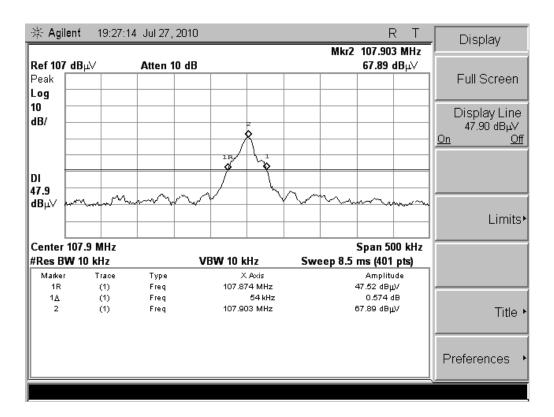


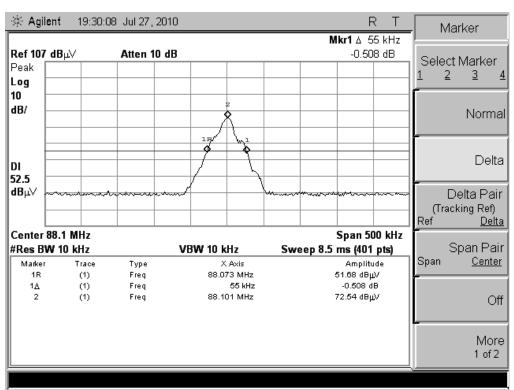
Figure 1: Radiated Emission Test Setup

#### 5.1.3 Test Result

The maximum occupied bandwidth for the fundamental frequency 88.1 MHz is 187.9 kHz. This occupied bandwidth complies with the FCC requirement.

#### **Test Plot A:**





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5.2 Frequency Range

## 5.2.1 Definition

Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88-108 MHz.

#### **5.2.2 Test Description**

The EUT was placed on a non-conductive table 0.8 meters above the floor. The table was rotated to an angle which presented the highest signal level. The occupied bandwidth was based on a 20 dB criteria (20 dB down either side of the emission from the peak emission). A drawing showing the test setup is given as Figure 1.

#### 5.2.3 Test Result

The operation frequency band is form 88.1 MHz to 107.9 MHz. This frequency range complies with the FCC requirement.

Refer to the occupied bandwidth test Plot A.

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#### 5.3 Radiated Emission

#### 5.3.1 Definition

The field strength of any emission within this band (section 15.239, frequency between 88 MHz –108 MHz) shall not exceed 250 micro volts /meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in section 15.35 for limiting peak emissions apply.

1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in section 15.209(Intentional Radiators general limit), as below.

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

**Remark:** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

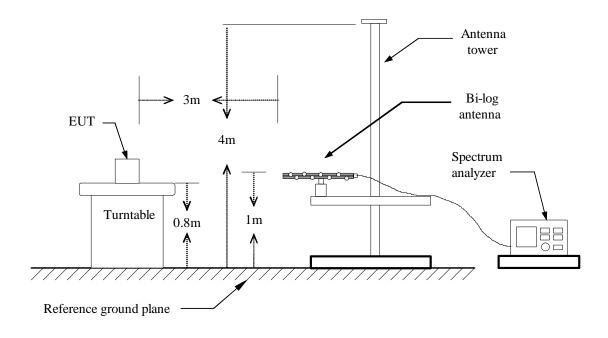
2. In the above emission table, the tighter limit applies at the band edges.

Frequency (Hz)	Field Strength (µV/m at 3-meter)	Test Distance (m)	Field Strength (dBµV/m at 3-meter)
1.705-30	30	3	69.54
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54
Fundamental	250	3	48

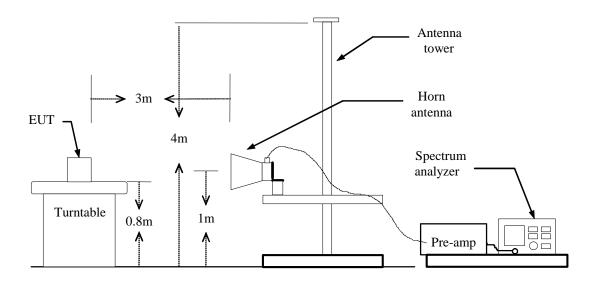
# **5.3.2 Test Configuration**

**Test Setup:** 

#### **Blow 1GHz:**



#### **Above 1GHz:**



#### 5.3.3 Test Description

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- 1. The EUT is placed on a turntable, which is 0.8m above ground plane.
- 2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 6. Set the spectrum analyzer in the following setting as:

Below 1GHz: RBW=100 kHz / VBW=300 kHz / Sweep=AUTO

Above 1GHz:(a) PEAK: RBW=VBW=1MHz / Sweep=AUTO

(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

7. Repeat above procedures until the measurements for all frequencies are complete.

#### 5.3.4 Test Result

Operation Mode:CH LowTest Date:July. 27, 2010Temperature:20°CTested by:Petter PingHumidity:70 % RHPolarity:Ver. / Hor.

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)
88.10	V	Peak	33.46	11.36	44.82	48.00	-3.18
179.38	V	Peak	23.78	16.73	40.51	43.50	-2.99
384.05	V	Peak	15.69	18.18	33.87	46.00	-12.13
408.30	V	Peak	14.18	19.00	33.18	46.00	-12.82
431.58	V	Peak	12.95	20.32	33.27	46.00	-12.73
88.10	Н	Peak	31.74	11.36	43.10	48.00	-4.90
				1			
203.63	Н	Peak	16.13	17.22	33.35	43.50	-10.15
264.74	Н	Peak	15.37	18.22	33.59	46.00	-12.41
288.02	Н	Peak	16.83	19.42	36.25	46.00	-9.75
415.09	Н	Peak	19.27	19.46	38.73	46.00	-7.27

#### Notes:

- 1. Measuring frequencies from 30 MHz to the 1GHz.
- 2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak detector mode.
- 3. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4. The IF bandwidth of SPA between 30MHz to 1GHz was 100 kHz.

FCC ID: YNG-GPA05001

Operation Mode: CH Middle Test Date: July. 27, 2010

**Temperature:** 20°C **Tested by:** Petter Ping

**Humidity:** 70 % RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)
97.90	V	Peak	30.67	12.72	43.39	48.00	-4.61
86.26	V	Peak	24.65	11.33	35.98	40.00	-4.02
384.05	V	Peak	13.59	18.18	31.77	46.00	-14.23
408.30	V	Peak	14.67	19.00	33.67	46.00	-12.33
432.55	V	Peak	12.95	20.33	33.28	46.00	-12.72
97.90	Н	Peak	29.83	12.72	42.55	48.00	-5.45
86.26	Н	Peak	23.67	11.33	35.00	40.00	-5.00
288.02	Н	Peak	15.68	19.42	35.10	46.00	-10.90
384.05	Н	Peak	16.27	18.18	34.45	46.00	-11.55
431.58	Н	Peak	14.87	20.32	35.19	46.00	-10.81

#### Notes:

- 1. Measuring frequencies from 30 MHz to the 1GHz.
- 2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak detector mode.
- 3. Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4. The IF bandwidth of SPA between 30MHz to 1GHz was 100 kHz.

Operation Mode: CH High Test Date: July. 27, 2010

**Temperature:** 20°C **Tested by:** Petter Ping

**Humidity:** 70 % RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)
107.90	V	Peak	27.69	15.41	43.10	48.00	-4.90
179.38	V	Peak	15.98	16.73	32.71	43.50	-10.79
384.05	V	Peak	16.43	18.18	34.61	46.00	-11.39
408.30	V	Peak	13.87	19.00	32.87	46.00	-13.13
432.55	V	Peak	14.29	20.33	34.62	46.00	-11.38
107.90	Н	Peak	25.37	15.41	40.78	48.00	-7.22
203.63	Н	Peak	16.69	17.22	33.91	43.50	-9.59
288.02	Н	Peak	14.89	19.42	34.31	46.00	-11.69
335.55	Н	Peak	18.49	17.06	35.55	46.00	-10.45
407.99	Н	Peak	20.32	18.98	39.30	46.00	-6.70

#### Notes:

- 1. Measuring frequencies from 30 MHz to the 1GHz.
- 2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument

using Peak detector mode.

- 3. Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4. The IF bandwidth of SPA between 30MHz to 1GHz was 100 kHz.

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**5.4 Conducted Emission** 

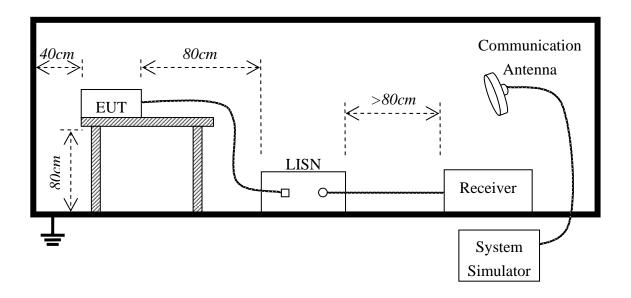
#### 5.4. 1 Definition

Fraguenov	Maximum RF Line Voltage				
Frequency	Q.P.( dBuV)	Average( dBuV)			
150kHz-500kHz	66-56	56-46			
500kHz-5MHz	56	46			
5MHz-30MHz	60	50			

<sup>\*\*</sup>Note: 1. the lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

#### 5.4. 1 Block Diagram of Test Setup



#### 5.4. 2 Preliminary Procedure of Line Conducted Emission Test

1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per FCC Part 15 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.

- 2) Support equipment, if needed, was placed as per FCC Part 15.
- 3) All I/O cables were positioned to simulate typical actual usage as per FCC Part 15.
- 4) The EUT received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5) All support equipments received power from a second LISN supplying power of AC 120V/60Hz, if any.
- 6) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7) Analyzer / Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.
- 8) During the above scans, the emissions were maximized by cable manipulation.
- 9) The following test mode(s) were scanned during the preliminary test:

Preliminary Conducted Emission Test							
Frequency Rang	ge Investigated	150KHz TO 30 MHz					
Mode of operation	Date	Report No.	Data#	Worst Mode			
FM Mode	2010-04-15	MOST100403F2	1_ (L,N)	0			

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

#### 5.4.3 Final Procedure of Line Conducted Emission Test

EUT and support equipment was set up on the test bench as per step 9 of the preliminary test.

A scan was taken on both power lines, Line 1 and Line 2, 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. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.

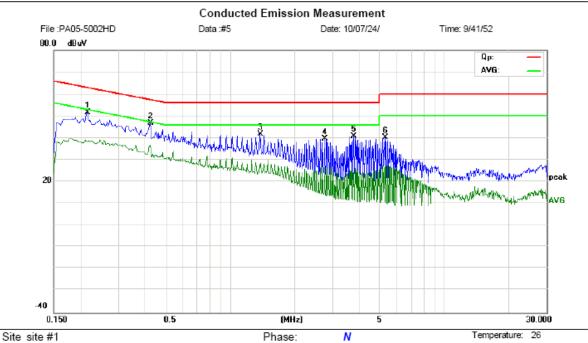
The test data of the worst case condition(s) was reported on the Summary Data page.

#### 5.4.4 Test Result of Line Conducted Emission Test



Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park Guangdong ,China

Tel: 0755-86170306 Fax: 0755-86170310



Power: AC 120V/60Hz

Limit: FCC Part15 B Class B QP

EUT: GPS Portable Navigation Device

M/N: PA05-5002HD Mode: FM Mode

Note:

No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBu∀	dB	dBu∀	dBu∀	dB	Detector	Comment
1	0.2140	39.80	11.91	51.71	63.05	-11.34	peak	
2 *	0.4220	36.35	10.52	46.87	57.41	-10.54	peak	
3	1.3780	32.12	9.62	41.74	56.00	-14.26	peak	
4	2.7620	29.77	9.76	39.53	56.00	-16.47	peak	
5	3.7780	30.06	10.78	40.84	56.00	-15.16	peak	
6	5.2820	28.39	11.83	40.22	60.00	-19.78	peak	

Humidity: 60 %

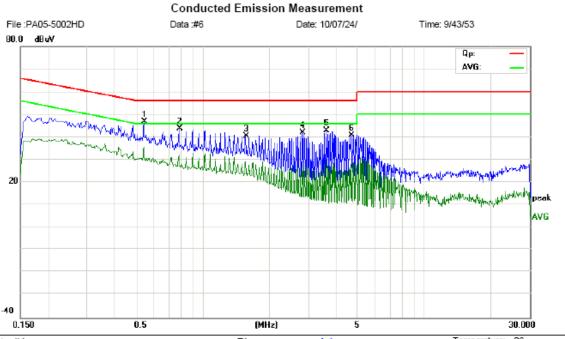
<sup>\*:</sup>Maximum data x:Over limit !:over margin

#### FCC ID: YNG-GPA05001



Address:No.5,Langshan 2nd Rd., North Hi-Tech Industrial park Guangdong ,China

Tel: 0755-86170306 Fax: 0755-86170310



Site site #1 Phase: L1 Temperature: 26 Limit: FCC Part15 B Class B QP Power: AC 120V/60Hz Humidity: 60 %

EUT: GPS Portable Navigation Device

M/N: PA05-5002HD Mode: FM Mode

Note:

No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBu∀	dB	dBu∀	dBu∀	dB	Detector	Comment
1 *	0.5420	36.73	10.00	46.73	56.00	-9.27	peak	
2	0.7820	33.93	10.00	43.93	56.00	-12.07	peak	
3	1.5620	31.09	9.44	40.53	56.00	-15.47	peak	
4	2.8220	32.17	9.82	41.99	56.00	-14.01	peak	
5	3.6020	32.34	10.60	42.94	56.00	-13.06	peak	
6	4.6820	29.30	11.68	40.98	56.00	-15.02	peak	

<sup>\*:</sup>Maximum data x:Over limit !:over margin

#### 5.5 Antenna Requirement

#### 5.5.1 Definition

An analysis of the *PA05-5002HD* was performed to determine compliance with FCC Section 15.203. This section requires specific handling and control of antennas used for devices subject to regulations.

#### 5.5.2 Evaluation Procedure

The structure and application of the *PA05-5002HD* was analyzed with respect to the rules. The antenna is an internal antenna, and is not accessible to the user. An auxiliary antenna port is not present.

#### 5.5.3 Evaluation Criteria

Section 15.203 of the rules states that the subject device must meet at least one of the following criteria:

- (a) Antenna must be permanently attached to the unit.
- (b) Antenna must use a unique type of connector to attach to the EUT.
- (c) Unit must be professionally installed. Installer shall be responsible for verifying that the correct antenna is employed with the unit.

#### 5.5.4 Evaluation Results

The *PA05-5002HD* meets the criteria of this rule by virtue of having an internal antenna inaccessible to the user.

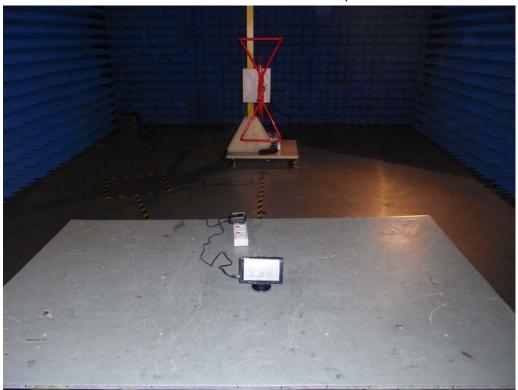
The EUT is therefore compliant.

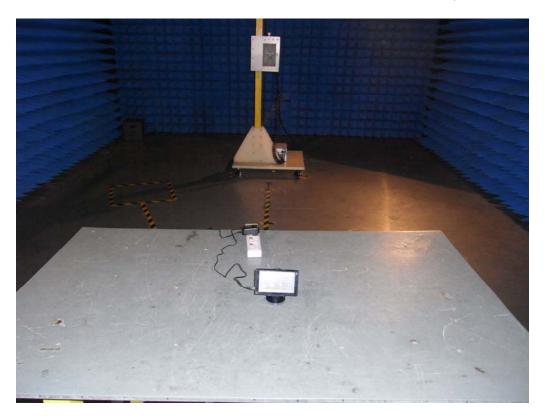
# APPENDIX 1 PHOTOGRAPHS OF TEST SETUP

CE TEST SETUP



Radiated Emission Test Setup





# APPENDIX 2 PHOTOGRAPHS OF EUT

#### FRONT VIEW OF SAMPLE



BACK VIEW OF SAMPLE



LEFT VIEW OF SAMPLE



RIGHT VIEW OF SAMPLE



TOP VIEW OF SAMPLE



BOTTOM VIEW OF SAMPLE



#### PHOTO OF POWER SUPPLY



PHOTO OF USB LINE



#### PHOTO OF CAR ADAPTOR



PHOTO OF TRESTLE TABLE



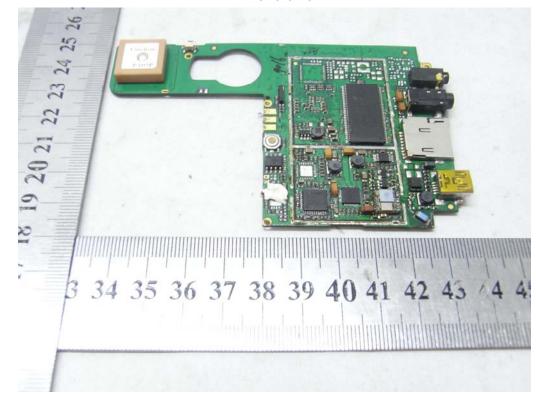
#### PHOTO OF THE ENTIRE SAMPLE



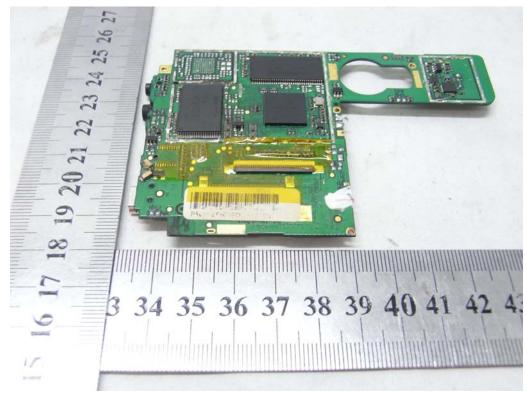
PHOTO OF THE BATTERY



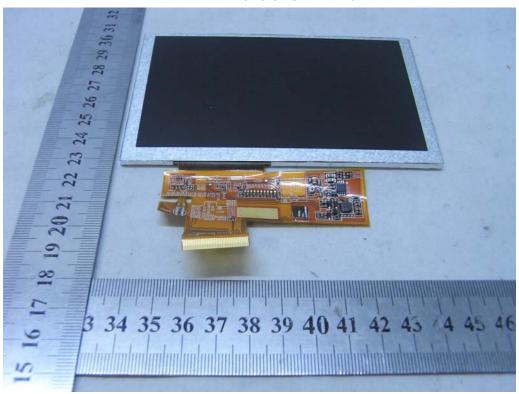
INTERNAL PHOTO OF SAMPLE - 1



INTERNAL PHOTO OF SAMPLE -2



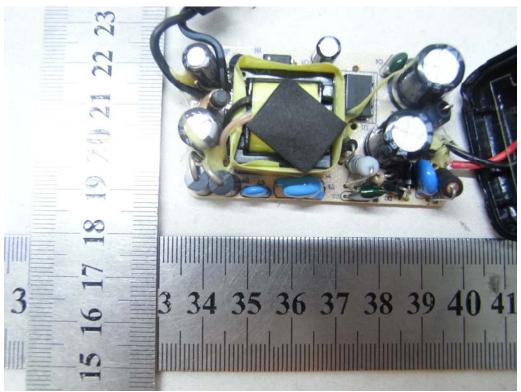
INTERNAL PHOTO OF SAMPLE - 3

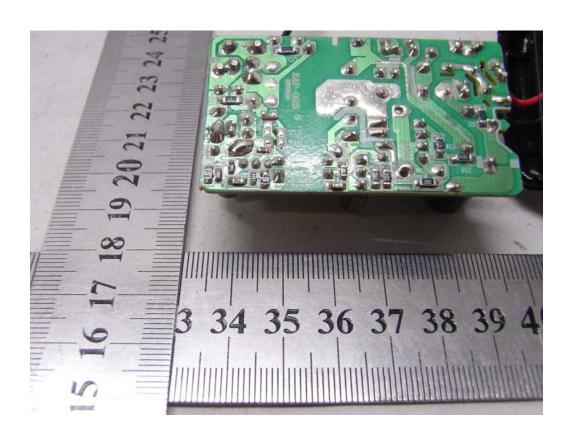


INTERNAL PHOTO OF SAMPLE - 4

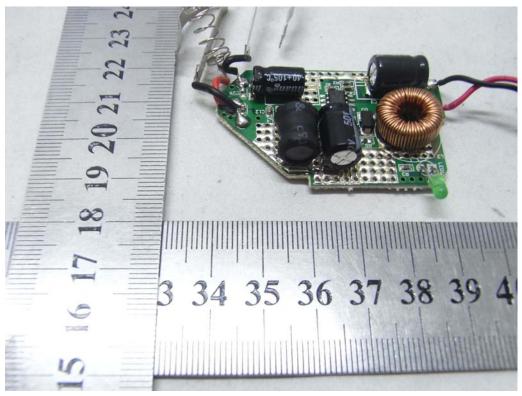


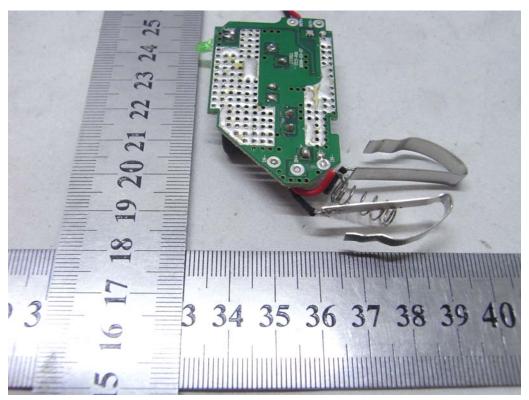
INTERNAL PHOTO OF POWER SUPPLY





#### INTERNAL PHOTO OF CAR SUPPLY





-----END OF REPORT-----