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FCC ID: SOVAN9G2

Report No.: FCC11-ITE112401

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# FCC REPORT

Application No.: FCC11-RTE110301ITE

Applicant: ARCHOS S.A.

Address of Applicant: 12 Rue Ampere 91430 Igny, France

FCC ID: SOVAN9G2

**Equipment Under Test (EUT):** 

EUT Name: Home Tablet

Item No.: AN9G2

Serial No.: Not supplied by client

Standards: FCC PART 15 Subpart B: 2010

Date of Receipt: 03 November. 2011

Date of Test: 04 November. 2011 to 12 November. 2011

Date of Issue: 24 November, 2011

Test Result : PASS\*

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

Authorized Signature:

Kavin Yu Manager

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# 1 Test Summary

Test Requirement		Standard Paragraph	Result
Conducted Emissions	FCC PART 15:2010	Section 15.107	PASS
Radiated Emission	FCC PART 15:2010	Section 15.109	PASS



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## 3 General Information

#### 3.1 Client Information

Applicant: ARCHOS S.A.

Address of Applicant: 12 Rue Ampere 91430 Igny, France

Manufacturer: ARCHOS S.A.

Address of Manufacturer: 12 Rue Ampere 91430 Igny, France Factory: Shenzhen Chao Ming Industrial.Co.,Ltd

Address of Factory: Block 3,Yu Jing Tai Industrial Area,Huaxing Road,Da Lang,Long

hua, Bao'an District, Shenzhen, China

#### 3.2 General Description of E.U.T.

Equipment Under Test: Digital Device

Trade Name: ARNOVA

Type Designation: Home tablet

Model Number: AN9G2

AC Adaptor

Model: HNO090200X Power Supply:

Input:AC 100-240V 50/60Hz 0.6A

Output:DC 9.0V 2.0A

Date of Test: November 04, 2011 to November 12, 2011

#### 3.3 Test Location

All tests were sub-contracted to:

Global United Technology Services Co., Ltd.

Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen,

China

Tel: 0755-27798480 Fax: 0755-27798960

## 3.4 Test Supporting System Details

11 5	•		
Equipment Name	Modle No.	Manufacturer	FCC Status
Notebook Computer	nc4000	HP	DOC
Monitor	TFT1780PS	AOV	DOC
Keyboard	JME7053	Lenovo	DOC
Mouse	N/A	Lenovo	DOC



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#### 3.5 Test Facility

FCC-Registration No.:600491

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 600491, July 20, 2010.

## 3.6 Measurement Uncertainty

of +/- 4.5 dB for Radiated Emissions of +/- 2.3 dB for Conducted Emissions

#### 3.7 Other Information Requested by the Customer

None



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# 4 Equipment Used during Test

Radi	Radiated Emission:								
ltem	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)			
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Mar. 30 2011	Mar. 29 2012			
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A			
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Sept. 10 2010	Sept. 09 2012			
4 BiConiLog Antenna		SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 26 2011	Feb. 25 2012			
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	Aug. 03 2011	Aug. 02 2012			
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	Aug. 03 2011	Aug. 02 2012			
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A			
8	Coaxial Cable	GTS	N/A	GTS213	Apr. 01 2011	Mar. 31 2012			
9	Coaxial Cable	GTS	N/A	GTS211	Apr. 01 2011	Mar. 31 2012			
9	Coaxial cable	GTS	N/A	GTS210	Apr. 01 2011	Mar. 31 2012			
11	Coaxial Cable	GTS	N/A	GTS212	Apr. 01 2011	Mar. 31 2012			
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Aug. 03 2011	Aug. 02 2012			
13	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Aug. 03 2011	Aug. 02 2012			
14	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	Aug. 03 2011	Aug. 02 2012			
15	Band filter	Amindeon	82346	GTS219	Aug. 03 2011	Aug. 02 2012			

Cond	Conducted Emission:							
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)		
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS252	Apr. 10 2011	Apr. 09 2012		
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	Sept. 14 2010	Sept. 13 2012		
3	10dB Pulse Limit	Rohde & Schwarz	N/A	GTS224	Sept. 14 2010	Sept. 13 2012		
4	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	Apr. 14 2011	Apr. 13 2012		
5	Coaxial Cable	GTS	N/A	GTS227	Apr. 01 2011	Mar. 31 2012		
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A		



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## 5 Test Results

#### 5.1 Conducted Emissions

Test Requirement: FCC Part15 B Section 15.107

Test Method: ANSI C63.4:2003 Frequency Range: 150KHz to 30MHz

Class/Severity: Class B

**Detector:** Peak for pre-scan (9 kHz resolution bandwidth)

Test Mode: USB mode (Connect the EUT with Notebook computer ,and exchange

data between them)

Test Voltage: 120Vac, 60Hz

Test Date: 04 November. 2011

Temperature:  $24^{\circ}$ C Humidity: 50%

Limit: (a) Except for Class A digital devices, for equipment that is designed to

be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power lineon any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in thefollowing table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The

lower limit applies atthe band edges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)				
	Quasi-peak	Average			
0.15-0.5	66 to 56 *	56 to 46 *			
0.5-5	56	46			
5-30	60	50			

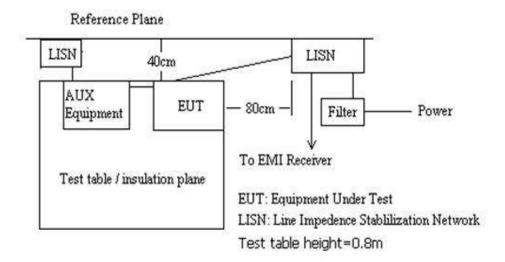
<sup>\*</sup> Decreases with the logarithm of the frequency.



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## 5.1.1 Test Setup



#### 5.1.2Test Procesure

The Device was conneted to the artifical main network via PC( refer to section 3.4 for details), And test the EUT with actived in USB mode.

#### 5.1.3Measurement Data

Measure the maximised peak emissions from the EUT for both the Live and Neutral Lines. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Frequency (MHz)	Line	Measured QP (dBuV)	QP Limit (dBuV)	Measured AV (dBuV)	AV Limit (dBuV)	Over Limit QP	Over Limit AV
0.2050	L	33.30	63.80	12.80	53.80	-30.50	-41.00
0.3300	L	36.80	59.42	17.40	49.42	-22.62	-32.02
0.4300	L	39.50	57.24	20.20	47.24	-17.74	-27.04
0.4450	L	45.60	56.96	27.40	46.96	-11.36	-19.56
0.7850	L	36.60	56.00	20.30	46.00	-19.40	-25.70
1.6400	L	34.30	56.00	21.40	46.00	-21.70	-24.60
0.1500	N	34.70	65.92	17.40	55.92	-31.22	-38.52
0.3250	N	36.10	59.55	17.10	49.55	-23.45	-32.45
0.4050	N	37.40	57.74	17.70	47.74	-20.34	-30.04
0.4550	Ν	43.70	56.78	24.60	46.78	-13.08	-22.18
0.8650	N	38.30	56.00	21.00	46.00	-17.70	-25.00
1.2050	Ν	36.50	56.00	20.70	46.00	-19.50	-25.30

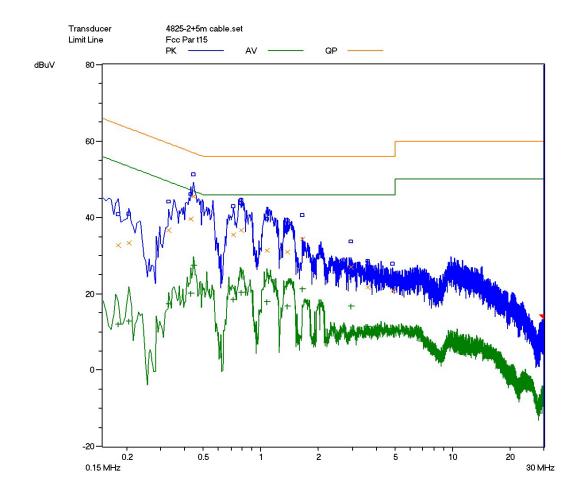


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#### Live Line Scan Graph

Title		CE	L	
Condition		120V	ac,60Hz	:
Frequency Range	e(s)			Range 1
Start Frequency				150 kHz
Stop Frequency				30 MHz
Step Frequency				5 kHz
Attenuator				Auto
Detector	(Pre)		-	AV CISPR
IF Bandwidth	(Pre)			9 kHz
Measure Time	(Pre)			10 ms
Detector	(Final)			QP
IF Bandwidth	(Final)			9 kHz
Measure Time	(Final)			1 s
Sub Ranges	(Final)			20



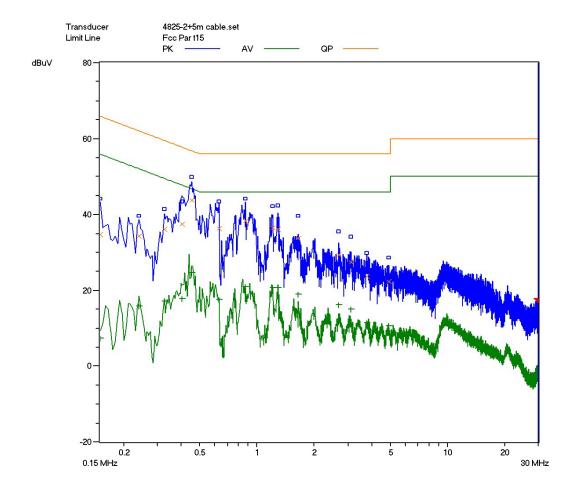


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#### **Nuetral Line Scan Graph**

Title		CE	N	
Condition		120V	ac,60Hz	:
Frequency Range	e(s)			Range 1
Start Frequency				150 kHz
Stop Frequency				30 MHz
Step Frequency				5 kHz
Attenuator				Auto
Detector	(Pre)		- /	AV CISPR
IF Bandwidth	(Pre)			9 kHz
Measure Time	(Pre)			10 ms
Detector	(Final)			QP
IF Bandwidth	(Final)			9 kHz
Measure Time	(Final)			1 s
Sub Ranges	(Final)			20





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#### 5.2 Radiated Emissions

Test Requirement: FCC Part15 B Section 15.109

Test Method: ANSI C63.4:2003

Frequency Range: 30MHz to 5GHz(without modules operating more than 500MHz)

Class/Severity: Class B

**Detector:** QP Detector(RBW=120kHz,VBW=300kHz)for 30 to 1000 MHz RE testing

Peak Detector(RBW=1MHz,VBW=3MHz) for 1 to 25 GHz RE Peak value test Peak Detector(RBW=1MHz, VBW=10Hz) for 1 to 25 GHz RE AV value test

**Test Mode:** USB mode (Connect the EUT with PC ,and exchange data between them)

**Test Voltage:** 120Vac, 60Hz

Test Date: 11-12 November. 2011

Temperature:  $22\sim24^{\circ}\text{C}$ Humidity:  $45\sim52\%$ 

Limit: Except for Class A digital devices, the field strength of radiated emissions

from unintentional radiators at a distance of 3 meters shall not exceed the

following values:

Frequency of Emission	Field Strength		
(MHz)	(microvolts/meter)	dB (μV/m)	
30 - 88	100	40(QP)	
88 - 216	150	43.5(QP)	
216 - 960	200	46(QP)	
960-1000	500	54(QP)	
Above 1000	500	54(AV)	
		74(PK)	



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## 5.2.1 Test Setup

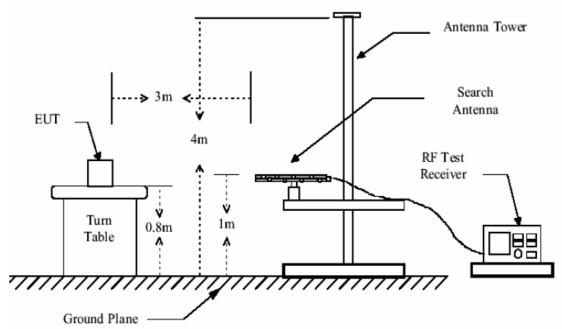


Figure1: 30MHz to 1GHz radiated emissions test setup

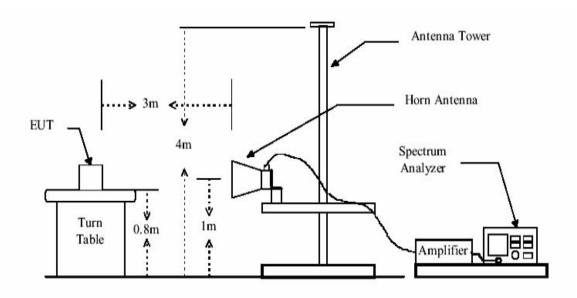


Figure 2: Above 1GHz radiated emissions test setup

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#### 5.2.2Test Prosesure

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna which 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. Repeat above procedures until all frequency measured were complete.

#### FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain

#### 5.2.3Measurement Data

An initial pre-scan was performed in peak detection mode. Peak measurement was performed at the frequencies with maximized peak emission were detected.

#### Radiated Emission below 1GHz

Frequency	Antenna	Detector	Reading	Ant./CL/	Measured	QP Limit	Over
(MHz)	Polarity	Mode	(dBuV)	Amp.CF	Level	(dBuV/m)	Limit(dB)
				(dB)	(dBuV/m)		
33.200	Н	QP	8.90	18.30	27.20	40.00	-12.80
96.000	Η	QP	25.70	8.20	33.90	43.50	-9.60
192.000	Н	QP	26.70	7.10	33.80	43.50	-9.70
288.000	Н	QP	19.80	14.30	34.10	46.00	-11.90
672.000	Η	QP	16.20	22.30	38.50	46.00	-7.50
864.000	Н	QP	17.50	23.70	41.20	46.00	-4.80
41.040	V	QP	11.50	15.80	27.30	40.00	-12.70
96.000	V	QP	20.40	8.20	28.60	43.50	-14.90
140.000	V	QP	20.56	8.54	29.10	43.50	-14.40
192.000	V	QP	30.40	7.10	37.50	43.50	-6.00
576.000	V	QP	17.30	20.50	37.80	46.00	-8.20
624.000	V	QP	18.90	22.40	41.30	46.00	-4.70



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#### **Radiated Emission Above 1GHz**

Frequency	Antenna	Detector	Reading	Ant./CL/	Measured	PK Limit	Over
(MHz)	Polarity	Mode	(dBuV)	Amp.CF	Level	(dBuV/m)	Limit(dB)
				(dB)	(dBuV/m)		
1064.000	Н	PK	56.47	-3.00	53.47	74.00	-20.53
1150.000	Н	PK	59.82	-3.00	56.82	74.00	-17.18
1306.320	Н	PK	52.74	-2.50	50.24	74.00	-23.76
1395.000	Н	PK	52.86	-2.50	50.36	74.00	-23.64
1526.440	Н	PK	52.30	-2.50	49.80	74.00	-24.20
2845.000	Н	PK	41.88	2.88	44.76	74.00	-29.24
1073.000	V	PK	61.77	-3.00	58.77	74.00	-15.23
1162.000	V	PK	59.24	-3.00	56.24	74.00	-17.76
1346.420	V	PK	54.62	-2.50	52.12	74.00	-21.88
1426.000	V	PK	53.70	-2.50	51.20	74.00	-22.80
1726.000	V	PK	50.50	-0.50	50.00	74.00	-24.00
3008.600	V	PK	46.62	2.88	49.50	74.00	-24.50

Frequency	Antenna	Detector	Reading	Ant./CL/	Measured	AV Limit	Over
(MHz)	Polarity	Mode	(dBuV)	Amp.CF	Level	(dBuV/m)	Limit(dB)
				(dB)	(dBuV/m)		
1064.000	Н	AV	35.64	-3.00	32.64	54.00	-21.36
1150.000	Н	AV	36.50	-3.00	33.50	54.00	-20.50
1306.320	Н	AV	32.38	-2.50	29.88	54.00	-24.12
1395.000	Н	AV	32.92	-2.50	30.42	54.00	-23.58
1526.440	Н	AV	31.86	-2.50	29.36	54.00	-24.64
2845.000	Н	AV	29.58	2.88	32.46	54.00	-21.54
1073.000	V	AV	37.30	-3.00	34.30	54.00	-19.70
1162.000	V	AV	35.40	-3.00	32.40	54.00	-21.60
1346.420	V	AV	33.96	-2.50	31.46	54.00	-22.54
1426.000	V	AV	32.78	-2.50	30.28	54.00	-23.72
1726.000	V	AV	29.83	-0.50	29.33	54.00	-24.67
3008.600	V	AV	27.48	2.88	30.36	54.00	-23.64