

**GLOBAL TESTING & CERTIFICATION CENTRE LTD.**

# **FCC TEST REPORT**

**Application No.: 08062468**

Rm09, 5/F Wah Wai Ind Ctr, 38-40 Au Pui Wan Street, Fotan Shatin, N.T., Hong Kong  
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REPORT NO.: 08062468

DATE: 17 July 2008

**APPLICANT:** The MindPlace Company  
**ADDRESS:** 374 North Beach Road, Suite 2-B  
PO Box 833  
Eastsound, WA 98245  
USA

**DATE OF RECEIVED:** 30 June 2008

**DATE OF TESTING:** 30 June 2008 to 17 July 2008

**DESCRIPTION OF SAMPLE:**  
Product name: Audio Visual Synthesizer  
Model No.: Procyon AVS  
Add't Model No.: Proteus  
Input Voltage: DC 4.5V (Size AA x3)

**FCC ID:** WOKPROCYON0001

**INVESTIGATION REQUESTED:** Measurements to the relevant clauses of F.C.C. Rules and Regulations Part 15 Subpart B - Unintentional Radiators. The results obtained are to compare with the Class B Digital Device limit

**TEST RESULTS:** See attached sheets

**CONCLUSIONS:** The submitted product COMPLIED with the requirements of Federal Communications Commission [FCC] Rules and Regulations Part 15. The tests were performed in accordance with the standards described above and on page 5 in this Test report.

**REMARKS:** Photographs of the sample indicated on page 12 & 13

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CS Lin, EMC  
for Chief Executive

REPORT NO.: 08062468

DATE: 17 July 2008

### **General Details**

#### **Test Laboratory**

GLOBAL TESTING & CERTIFICATION CENTRE LTD.  
EMC Laboratory  
Rm09,5/F Wah Wai Ind. Ctr.,  
38-40 Au Pui Wan Street,  
Fotan Shatin, N.T., Hong Kong

Telephone: 2320 0326  
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#### **Applicant Details**

**Applicant** The MindPlace Company  
374 North Beach Road, Suite 2-B  
PO Box 833  
Eastsound, WA 98245  
USA

#### **Manufacturer**

### **Technical Details**

REPORT NO.: 08062468

DATE: 17 July 2008

### Investigations Requested

Perform Electromagnetic Interference measurement in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15 and ANSI C63.4:2003 for FCC verification.

### Test Standards and Results Summary Tables

EMISSION Results Summary					
Test Condition	Test Requirement	Test Method	Test Result		
			Pass	Failed	N/A
Radiated Emissions, 30MHz to 1GHz	FCC 47CFR 15.109 (Class B)	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conducted Emissions on AC, 0.15MHz to 30MHz	FCC 47CFR 15.107 (Class B)	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

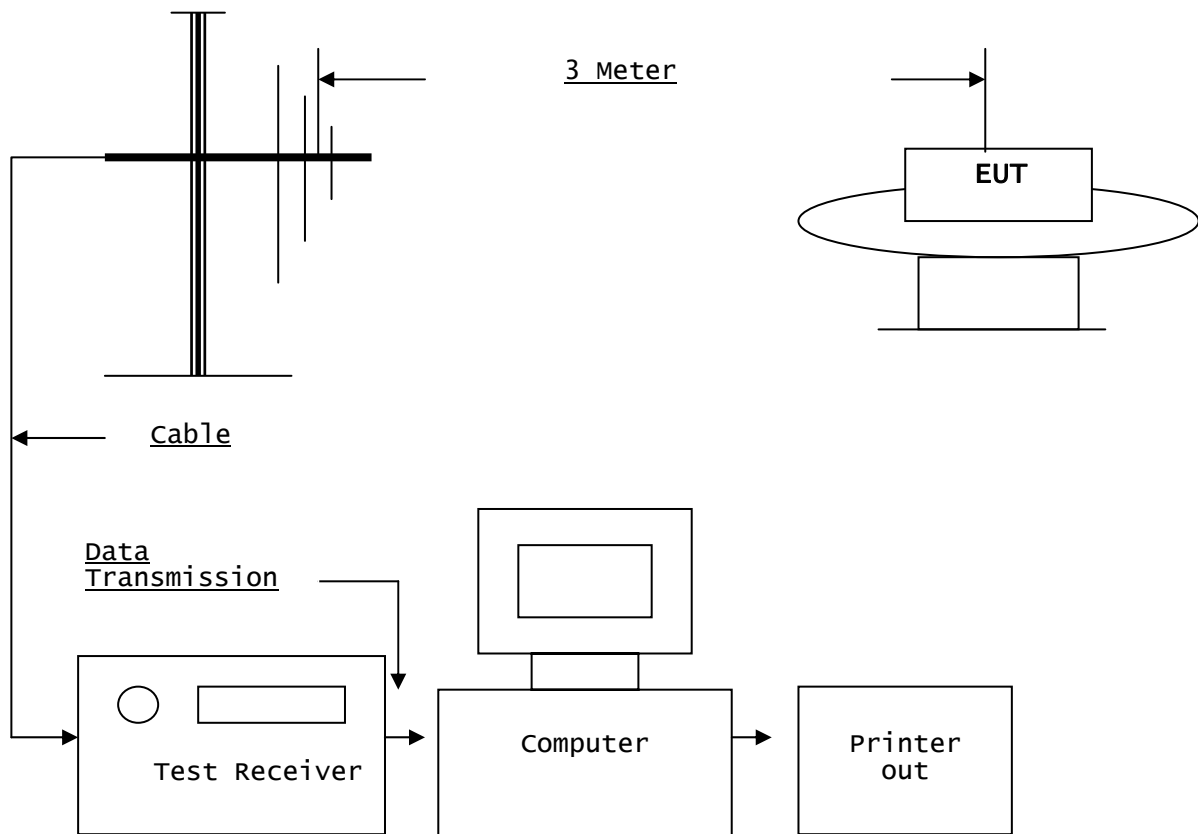
Note: N/A - Not Applicable

Equipment Class: Class B

## Test Results

### Radiation Emission

#### Radiation Emission Measurement (30MHz to 1GHz) Setup diagram:



#### Test Method:

The sample was placed 0.8m above the ground plane on the OATS\*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X,Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

\*. OATS [Open Area Test Site] located at GTC with a metal ground plane filed with the FCC pursuant to section 2.948 of the FCC rules. With Registration Number:493655

## Radiation Emissions Measurement

App'l. : The MindPlace Company  
 Model: Procyon AVS  
 Operation: On mode

Result: OK

Test Requirement: FCC 47CFR 15.109  
 Test Method: ANSI C63.4:2003  
 Test Date: 2008-07-10

Level: Class B

### Limits for Radiated Emissions [FCC 47 CFR 15.109 Class B]:

Frequency Range [MHz]	Quasi-Peak Limits [ $\mu\text{V}/\text{m}$ ]
30-88	100
88-216	150
216-960	200
Above 960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

### Radiated Emissions Quasi-Peak

<u>Emission Freq</u> (MHz)	<u>Level@3m</u> dB $\mu\text{V}/\text{m}$	<u>Limit@3m</u> dB $\mu\text{V}/\text{m}$	<u>E-Field Polarity</u>	<u>Level@3m</u> $\mu\text{V}/\text{m}$	<u>Limit@3m</u> $\mu\text{V}/\text{m}$
40.0	32.7	40.0	Horizontal	43.1	100
50.0	32.7	40.0	Horizontal	43.1	100
55.0	33.0	40.0	Horizontal	44.6	100
60.0	32.4	40.0	Horizontal	41.6	100
150.0	39.1	43.5	Horizontal	90.1	150
189.8	38.3	43.5	Horizontal	82.2	150
209.8	36.7	43.5	Horizontal	68.4	150
270.0	37.3	46.0	Horizontal	73.3	200
350.9	36.0	46.0	Horizontal	63.1	200

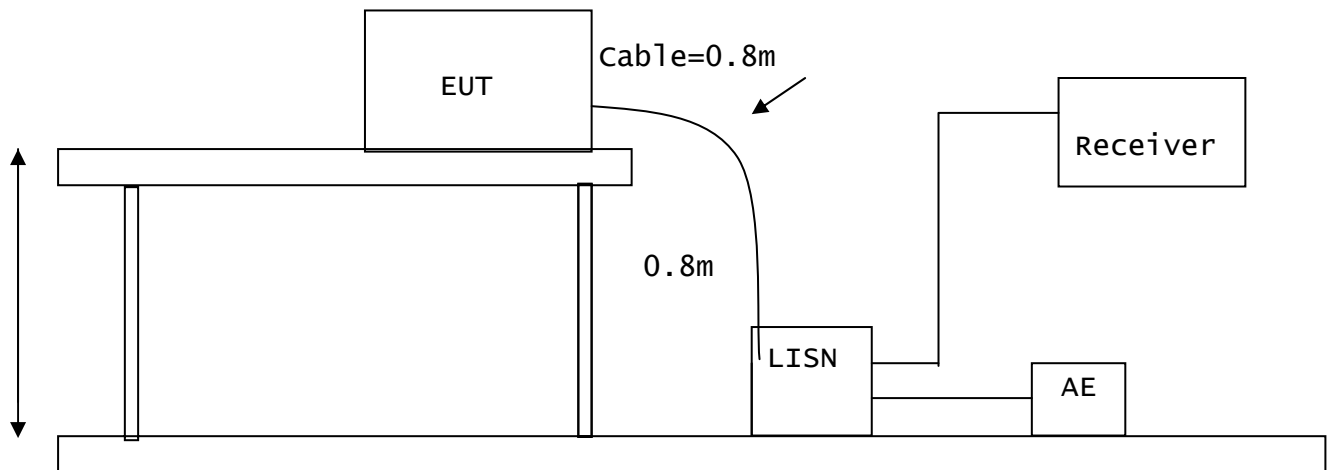
Remarks:

Calculated measurement uncertainty:  $\pm 4.1\text{dB}$

## Test Results

### Conducted Emission

#### Conducted Emission Measurement on AC (0.15MHz to 30MHz) Setup diagram:



#### Test Method:

The test was performed in accordance with ANSI C63.4:2003, with the following: initial measurements were performed in peak and average detection modes on the live line. Any emissions recorded within 25dB of the relevant limit lines were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.



## Conducted Emission Measurement

Appl. : The MindPlace Company  
 Model: Procyon AVS  
 Operation: On mode

Result: OK

Test Requirement: FCC 47CFR 15.107  
 Test Method: ANSI C63.4:2003  
 Test Date: 2008-07-10

Level: Class B

### Limits for Conducted Emissions:

Frequency Range [MHz]	Quasi-Peak Limits [dB $\mu$ V]	Average [dB $\mu$ V]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

\*Decreases with the logarithm of the frequency.

Please refer to the following table for individual results.

### Final Measurement Results:

Frequency (MHz)	Quasi-Peak		Average		Conductor (Live / Neutral)
	Level (dB $\mu$ V)	Limit (dB $\mu$ V)	Level (dB $\mu$ V)	Limit (dB $\mu$ V)	
0.15	43.0	66.0	40.0	56.0	Live
0.23	34.0	62.45	31.0	52.45	
1.34	30.0	56.0	27.0	46.0	
3.36	33.0	56.0	30.0	46.0	
6.4	33.0	56.0	30.0	46.0	
17.32	30.0	60.0	27.0	50.0	
30.00	28.0	60.0	25.0	50.0	
0.15	43.0	66.0	40.0	56.0	Neutral
0.23	35.0	62.45	32.0	42.45	
1.34	32.0	56.0	29.0	46.0	
3.36	31.0	56.0	28.0	46.0	
6.4	33.0	56.0	30.0	46.0	
17.32	30.0	60.0	27.0	50.0	
30.00	28.0	60.0	25.0	50.0	

Remarks:

Calculated measurement uncertainty:  $\pm 3.2$ dB

**APPENDIX A****LIST OF MEASUREMENT EQUIPMENT**

<b>Equi. No.</b>	<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Calibration Date</b>	<b>Due Date</b>
E005	EMI Test Receiver	Rohde & Schwarz	ESVP	893417/019	21 Sep 2007	20 Sep 2008
E003	Spectrum Analyzer with Q/P	Tektronix	2712	B034039	21 Sep 2007	20 Sep 2008
E004	RF Preselector	Tektronix	2706	B010649	21 Sep 2007	20 Sep 2008
E057	EMI Test Receiver	Rohde & Schwarz	ESVP	863112/007	17 Aug 2008	16 Aug 2009
E084	Spectrum Analyzer	Hewlett Packard	HP 8568B	3001A04930	07 Jul 2008	06 Jul 2009
E085	Displayer of Spectrum Analyzer	Hewlett Packard	HP 85662A	2033A01841	07 Sep 2006	06 Sep 2008
E086	Quasi-Peak Adaptor	Hewlett Packard	HP 85650A	2527A00785	07 Sep 2006	06 Sep 2008
E090	RF Signal Generator	Rohde & Schwarz	SMX	832566/005	04 Mar 2008	03 Mar 2009
E001	Antenna System	Schwarzbeck	D-6917	UHALP9107	04 Mar 2008	03 Mar 2009
E002	Antenna System	Schwarzbeck	VHA9103	VHA91031253	04 Mar 2008	03 Mar 2009
E008	LISN	EMCO	3825/2	1115	20 Sep 2005	19 Sep 2008
E115	Limiter 50 Ohm DC~1800MHZ	Hewlett Packard	11867A	-----	04 Mar 2008	03 Mar 2009
E100	Turntable	Chioce way	TB1200	51112	-----	-----
E006	RF Signal Generator	Fluke	6060A	3880007	04 Mar 2008	03 Mar 2009
E092	Antenna Tripole	IT&T	UH800100	A05011	04 Mar 2008	03 Mar 2009
E098	Pre-Amplifier	Hewlett Packard	8447D	2944A09089	04 Mar 2008	03 Mar 2009
E099	Antenna Mast	Schwarzbeck	AM9014	-----	-----	-----
E116	Digital TV Signal Generator	Shibasoku	DS13C3	3000031116	01 Jan 2008	01 Jan 2009

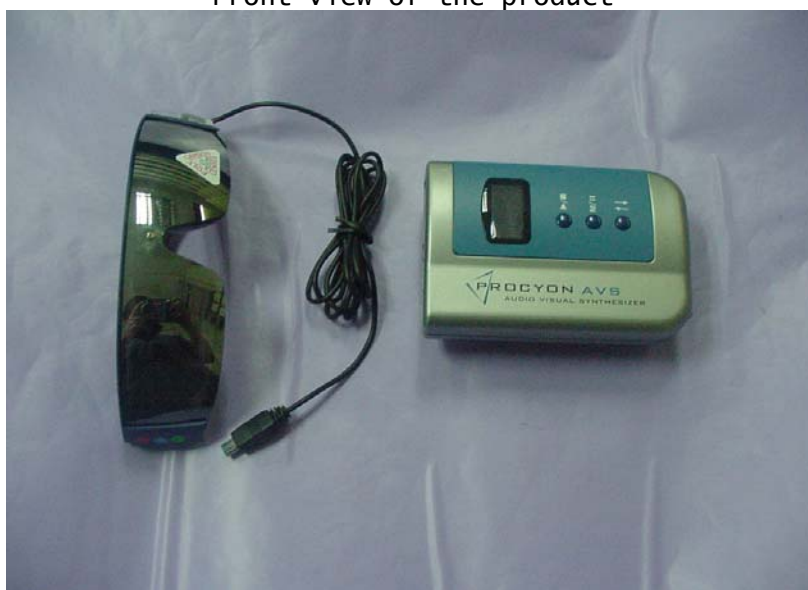
**APPENDIX B****LIST OF ANCILLARY EQUIPMENT**

<b>Item No.</b>	<b>Description</b>	<b>Model No.</b>	<b>Remark</b>
1	IBM Computer	2173-43C	N/A
2	SONY Monitor	15SF	RESOLUTION: 1024x768 1.4M UNSHIELDED POWER CORD CONNECTED TO THE COMPUTER 3M SHIELDED CABLE CONNECTED TO THE COMPUTER
3	IBM Keyboard	PSKB2173	1.8M SHIELDED COILED CABLE CONNECTED TO THE COMPUTER
4	Mouse	M31USB	2M UNSHIELDED CABLE CONNECTED TO THE COMPUTER
5	PARALLEL PRINTER	LASER JET 4 PLUS	1.4M UNSHIELDED POWER CORD 2M SHIELDED CABLE CONNECT TO THE COMPUTER
6	Notebook Computer	3220	N/A

Test Sample (Photo)

Photos of EUT

Front view of the product



Rear view of the product



Test Sample (Photo)

Photos of EUT

Inner Circuit Top Side View



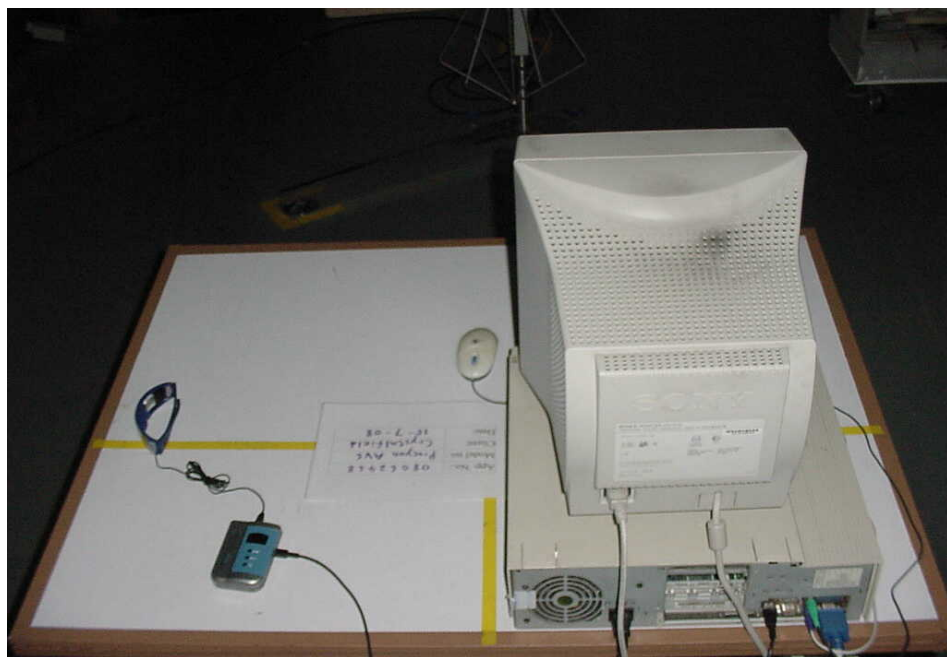
Inner Circuit Bottom Side View



**Measurement of Conducted Emission Test Set up**



**Measurement of Radiated Emission Test Set up**



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