

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2011-1-5 19:45:08
Report-Version: v1.3.1
Monitor-Name: PA241W
EDID-Name: PA241W
EDID-Serial: 06101400UB
Profile: /Library/ColorSync/Profiles/NEC-05.01.11-6500K-sRGB-130cd-trc.icc
Created: 2011-1-5 19:37
Measurement device: DTP94-LCD mode (Wide Gamut S-IPS (generic))

Summary

The monitor has passed the certification according to the UGRA DACT specifications.

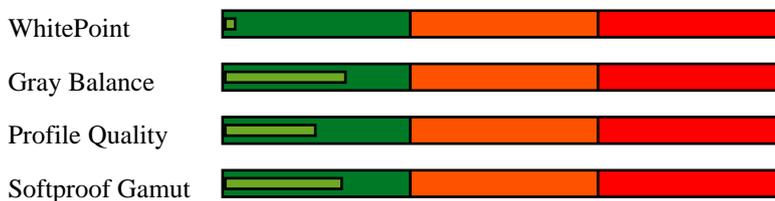
Calibration

White Point	yes
Gray balance	yes
Profile quality	yes

Softproofing

MultiColor, HighBody	no
Offset/Gravure Paper Type 1/2	yes
Offset on uncoated paper	yes
Newspaper Printing	yes
sRGB	yes
AdobeRGB	no
ECI-RGB	no

Diagram



Whitepoint

The whitepoint should be as close as possible to the black body curve and the calibration target. The maximum allowed distance to the target whitepoint is DeltaE 2.0.

XYZ:	121.88 128.26 139.86
XYZ (normalized):	95.02 100.00 109.04
Luminance:	128.3 Cd/m2
Next Temperature:	6516 Kelvin
Assumed Target Whitepoint:	6500 Kelvin
Distance to assumed Target Whitepoint:	0.1 deltaE

Blackpoint

The blackpoint is not defined in ISO 12646. Therefore UDACT does only measure but not assess it.

Luminance:	0.2 Cd/m2
Chromaticity:	2.2 Chroma (Lab)

Gray balance

Average and maximum calculation will respect measurements with 1% minimum luminance only. The maximum allowed deviations to comply with this test are an average of DeltaC 1.0 and a range of DeltaC 2.0.

%	Kelvin	Cd/m2	L	Chroma	Gamma
0	24564	0.24	1.66	2.19	
5	8189	0.71	5.01	1.73	1.88
10	6827	1.52	10.46	0.76	2.01
15	6484	2.80	16.42	0.11	2.08
20	6537	4.53	22.05	0.22	2.12
25	6570	6.62	27.19	0.48	2.17
30	6495	9.57	32.84	0.60	2.19
35	6505	13.11	38.24	0.21	2.19
40	6525	17.19	43.36	0.19	2.21
45	6521	21.65	48.11	0.26	2.24
50	6503	27.29	53.25	0.23	2.24
55	6469	33.75	58.33	0.25	2.25
60	6538	40.97	63.30	0.37	2.25
65	6515	48.34	67.79	0.05	2.27
70	6528	57.32	72.69	0.13	2.26
75	6526	66.88	77.37	0.09	2.27
80	6498	77.25	81.96	0.12	2.28
85	6522	87.90	86.27	0.05	2.33
90	6491	99.99	90.76	0.34	2.36
95	6480	113.90	95.50	0.33	2.36
100	6516	128.26	100.00	0.00	
Average	6529			0.25	2.21
Range				1.29	
Max				0.76	

Tone values = 97.8%

Through the calibration of a display tone values can be lost. A display for the printing industry should show at least 95% of the incoming tone values.

Profile Quality

This test displays and measures RGB values and compares them with the transformation of the profile. The maximum allowed deviations to comply with this test are an average of DeltaE 3.0 and a maximum of DeltaE 6.0.

The assumed chromatic adaptation is: Bradford

RGB	Lab	deltaLab	deltaE
0 0 0	1.6 -0.1 -2.2	-1.6 0.1 2.2	2.8
0 0 128	12.7 36.7 -64.4	-0.6 1.8 -1.4	2.4
0 0 255	30.8 64.1 -109.7	-0.0 0.1 0.0	0.1
0 128 0	45.9 -46.8 46.5	0.1 -0.4 1.6	1.7
0 128 128	47.9 -30.8 -9.2	-0.0 0.6 0.1	0.6
0 170 255	65.8 -15.2 -53.0	-0.0 1.0 0.2	1.0
0 255 0	87.4 -78.6 80.3	-0.1 -0.1 -0.1	0.1
0 255 170	88.6 -66.4 25.5	-0.0 0.1 0.1	0.1
0 255 255	90.5 -50.8 -15.1	-0.1 0.5 0.1	0.5
85 85 85	36.6 -0.4 0.2	-0.5 0.4 -0.2	0.7
128 0 0	26.8 47.4 35.6	-0.4 0.1 2.9	2.9
128 0 128	30.5 54.0 -35.1	-0.3 0.4 -0.3	0.6
128 128 0	52.0 -8.6 54.3	0.1 -0.6 0.9	1.1
128 128 128	53.6 0.2 0.0	-0.1 -0.2 -0.0	0.2
128 128 255	58.9 24.5 -63.7	-0.1 0.3 0.1	0.3
128 255 128	90.4 -55.0 48.3	-0.1 0.1 -0.0	0.2
170 0 255	46.6 76.7 -83.3	0.0 0.1 0.3	0.3
170 170 170	69.5 0.4 -0.4	0.1 -0.4 0.4	0.6
170 255 0	91.5 -47.3 85.5	0.1 -0.2 -0.2	0.3
170 255 255	94.5 -26.8 -8.7	-0.1 0.4 -0.0	0.4
255 0 0	55.1 79.7 66.9	-0.3 -0.5 -0.2	0.6
255 0 170	57.8 84.7 -16.7	-0.3 -0.5 0.1	0.6
255 0 255	61.3 90.7 -59.0	-0.2 0.0 -0.0	0.2
255 128 128	69.2 49.1 23.9	-0.2 -0.5 -0.3	0.6
255 170 0	76.9 26.0 78.7	-0.1 -1.1 -0.6	1.2
255 170 255	80.8 40.7 -28.6	-0.2 0.0 -0.1	0.2
255 255 0	97.4 -15.1 92.6	-0.0 -0.1 -0.6	0.6
255 255 170	98.5 -8.9 40.1	-0.0 0.0 0.1	0.1
255 255 255	100.0 0.0 0.0	-0.0 0.0 -0.0	0.0
170 85 85	47.6 34.6 17.1	-0.4 0.5 -0.1	0.6
85 170 85	62.7 -39.1 34.7	-0.1 -0.7 0.2	0.7
85 85 170	40.3 17.2 -45.6	-0.5 0.5 -0.3	0.8
85 170 170	64.4 -26.3 -8.5	-0.2 -0.3 0.1	0.4
170 85 170	50.1 42.9 -29.5	-0.4 0.5 -0.1	0.6
170 170 85	68.2 -8.0 42.4	-0.0 -0.6 0.3	0.7
Average			0.7
Maximum			2.9

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	91 %
sRGB	100 %
AdobeRGB	76 %
ECI-RGB v1.0	69 %

ISO-Gamut

This test displays and measures Lab values and compares them with the reference. The maximum allowed deviations to comply with this test are an average of DeltaE 4.0 and a minimum Gamut volume of 90% for ISOcoated.

Reference	Lab	deltaLab
55.0 -37.0 -50.0	58.6 -16.4 -44.6	21.6
66.9 -24.7 -37.1	66.8 -25.3 -37.0	0.6
79.7 -12.5 -21.8	79.8 -12.6 -21.6	0.2
48.0 74.0 -3.0	48.5 73.4 -2.3	1.0
60.8 50.6 -6.7	61.1 50.4 -6.8	0.4
76.4 25.8 -6.9	76.4 26.2 -6.9	0.5
89.0 -5.0 93.0	89.1 -3.8 86.5	6.7
90.3 -4.7 62.6	90.4 -3.4 62.4	1.3
92.2 -3.5 31.1	92.3 -2.9 30.9	0.7
53.1 37.7 28.9	53.3 37.9 29.2	0.4
41.5 22.7 16.8	42.1 22.6 17.2	0.7
31.9 40.0 24.0	32.6 39.2 23.6	1.1
32.5 44.4 -1.8	33.1 43.9 -1.3	1.0
51.3 1.3 44.5	51.3 2.1 43.9	1.0
34.6 -36.4 13.9	35.4 -33.1 14.5	3.5
36.0 -26.2 -20.9	37.4 -19.7 -19.1	6.9
20.9 9.6 -23.6	21.9 9.0 -22.8	1.4
89.0 0.0 -1.8	88.7 0.6 -2.1	0.7
82.8 0.0 -1.7	82.6 0.2 -1.6	0.2
69.3 0.0 -1.4	69.2 0.4 -2.0	0.7
54.1 0.0 -1.0	54.1 0.5 -1.1	0.6
36.6 -0.0 -0.5	37.1 -0.2 -0.3	0.5
16.0 0.0 0.0	17.3 0.0 0.2	1.3
24.0 22.0 -46.0	24.9 20.5 -44.6	2.3
40.9 17.9 -36.6	41.3 17.2 -35.9	1.0
63.7 10.3 -23.8	63.9 10.0 -23.5	0.5
47.0 68.0 48.0	47.4 67.8 47.9	0.5
58.5 47.1 37.9	58.8 47.5 38.2	0.6
74.2 22.9 21.4	74.3 23.6 21.8	0.8
50.0 -65.0 27.0	51.9 -47.1 29.4	18.2
62.1 -39.8 21.0	62.2 -39.5 20.7	0.4
77.0 -19.1 11.0	77.1 -19.3 10.9	0.3
71.2 18.8 17.3	71.3 18.9 17.2	0.1
71.2 22.2 73.1	71.2 23.3 73.1	1.2
47.7 71.2 16.2	48.0 71.3 16.2	0.3
38.0 55.4 -20.9	38.4 55.1 -20.4	0.7
73.7 -22.8 67.6	73.6 -22.5 67.3	0.4
52.3 -52.3 -20.2	55.3 -31.7 -15.3	21.4
43.3 -17.0 -48.6	45.4 -7.4 -45.5	10.3
95.0 0.0 -2.0	95.1 -0.2 -1.4	0.6
88.5 -0.4 -3.1	88.5 -0.7 -3.0	0.3
82.0 -0.9 -4.1	81.7 -0.9 -4.2	0.3
67.7 -2.0 -4.4	67.7 -1.8 -5.0	0.7
52.2 -2.5 -3.5	52.3 -2.2 -3.7	0.3
37.5 -3.9 -3.1	37.7 -4.0 -3.3	0.3
26.3 -6.8 -3.4	26.9 -7.0 -2.8	0.9
Average		2.5
Gamut-Volume		91 %

Measurement Data

This table lists all RGB measurements. The XYZ values represent the values from the measurement device.

RGB	XYZ	RGB	XYZ
255 255 255	121.88 128.26 139.86	85 85 170	18.66 15.10 51.03
0 0 0	0.23 0.24 0.45	85 170 170	32.73 43.11 55.69
12 12 12	0.68 0.71 0.93	170 85 170	35.28 23.84 52.09
25 25 25	1.45 1.52 1.74	170 170 85	42.00 48.54 18.61
38 38 38	2.66 2.80 3.04	0 151 219	30.41 35.09 91.16
51 51 51	4.28 4.53 4.92	10 177 229	38.31 47.77 101.89
63 63 63	6.24 6.62 7.19	151 206 238	64.43 72.97 114.12
76 76 76	9.03 9.57 10.30	217 0 122	41.71 21.44 25.87
89 89 89	12.43 13.11 14.23	223 105 161	54.42 37.25 48.01
102 102 102	16.36 17.19 18.82	230 170 202	74.56 64.51 80.34
114 114 114	20.62 21.65 23.71	247 225 0	84.29 94.15 14.17
127 127 127	25.99 27.29 29.81	246 229 100	88.32 97.81 30.37
140 140 140	32.08 33.75 36.59	243 234 172	95.06 103.60 65.73
153 153 153	38.81 40.97 44.60	193 97 78	36.03 26.77 12.88
165 165 165	45.92 48.34 52.68	138 82 71	19.31 15.83 9.95
178 178 178	54.49 57.32 62.65	134 40 39	14.51 9.17 3.84
191 191 191	63.51 66.88 72.97	136 35 81	16.08 9.53 11.20
204 204 204	73.42 77.25 84.07	140 120 39	23.26 24.65 6.39
216 216 216	83.52 87.90 95.93	0 96 57	6.39 11.17 7.01
229 229 229	95.22 99.99 109.02	0 97 118	9.69 12.77 24.10
242 242 242	108.22 113.90 123.55	49 46 86	5.33 4.58 12.08
0 0 128	5.08 2.25 25.98	222 223 227	90.11 94.36 106.46
0 0 255	23.39 9.92 121.67	205 206 209	75.13 78.89 88.46
0 128 0	9.79 19.43 3.57	168 169 172	48.57 50.88 57.74
0 128 128	14.74 21.67 29.61	129 129 131	27.02 28.26 31.66
0 170 255	41.34 46.33 128.10	86 86 87	11.65 12.29 13.55
0 255 0	45.44 90.63 15.29	40 40 40	2.88 3.03 3.27
0 255 170	54.69 94.47 64.24	52 46 128	8.35 5.89 26.83
0 255 255	68.60 100.53 137.17	99 87 157	19.13 15.78 43.01
85 85 85	11.33 11.99 12.97	157 149 197	44.58 42.23 73.48
128 0 0	11.71 6.19 0.98	215 20 32	37.22 20.11 4.14
128 0 128	16.66 8.30 26.98	224 101 76	47.73 33.56 13.11
128 128 0	21.35 25.49 4.14	232 166 144	67.18 59.85 41.99
128 128 128	26.44 27.76 30.27	0 144 69	13.98 25.77 11.55
128 128 255	44.75 35.63 126.04	71 169 111	25.26 39.40 25.72
128 255 128	61.96 98.87 42.28	158 201 169	53.95 66.35 58.34
170 0 255	44.75 21.14 123.31	215 161 144	59.02 54.10 41.31
170 170 170	49.07 51.44 56.50	233 157 3	59.29 53.41 7.78
170 255 0	66.59 101.44 16.32	217 7 90	39.74 20.80 14.75
170 255 255	89.98 111.75 138.22	158 31 125	23.89 13.08 26.26
255 0 0	53.96 28.30 3.15	166 192 32	44.69 58.60 11.05
255 0 170	63.46 32.31 52.65	0 148 158	21.33 30.25 46.19
255 0 255	77.13 38.20 125.38	0 113 184	18.58 19.71 60.98
255 128 128	68.63 49.87 32.64	239 241 244	107.04 112.70 125.65
255 170 0	72.12 64.43 9.08	219 223 228	88.91 93.80 107.33
255 170 255	95.28 74.62 131.21	199 204 211	72.71 76.76 90.02
255 255 0	98.56 118.36 18.02	158 166 173	45.33 48.22 58.16
255 255 170	108.01 122.48 67.42	118 126 131	24.50 26.28 31.42
170 85 85	27.95 20.72 13.90	79 90 93	11.55 12.76 15.41
85 170 85	25.48 39.98 17.66	48 66 67	5.55 6.52 7.91