

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2010-12-15 10:45:25
Report-Version: v1.3.1
Monitor-Name: PA231W
EDID-Name: PA231W
EDID-Serial: 09100437UB
Profile: /Users/Dick/Library/ColorSync/Profiles/PA231W_2.icc
Created: 2010-12-15 10:39
Measurement device: eye-one pro

Summary

WARNING: You are using a LookUpTable-Profile. Some applications do not support LUT-Profiles correctly. 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:	153.07 158.56 131.68
XYZ (normalized):	96.53 100.00 83.04
Luminance:	158.6 Cd/m2
Next Temperature:	5013 Kelvin
Assumed Target Whitepoint:	5000 Kelvin
Distance to assumed Target Whitepoint:	0.5 deltaE

Blackpoint

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

Luminance:	0.3 Cd/m2
Chromaticity:	3.5 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	13448	0.31	1.77	3.54	
5	7481	0.65	3.71	3.05	2.08
10	5355	1.31	7.44	1.67	2.23
15	4939	2.78	14.15	1.10	2.21
20	5026	4.92	20.46	0.70	2.20
25	4980	7.67	26.26	0.32	2.22
30	4998	11.40	32.23	0.22	2.21
35	5013	15.97	37.97	0.26	2.21
40	5008	21.43	43.53	0.05	2.20
45	5011	27.31	48.54	0.09	2.22
50	5005	34.49	53.76	0.07	2.21
55	5004	42.68	58.90	0.13	2.21
60	5015	51.81	63.90	0.09	2.20
65	5003	61.09	68.41	0.11	2.22
70	5003	72.13	73.21	0.13	2.22
75	5011	84.03	77.87	0.09	2.21
80	5005	97.26	82.56	0.10	2.20
85	5014	110.29	86.78	0.04	2.24
90	5011	125.29	91.24	0.04	2.24
95	5014	141.36	95.64	0.01	2.24
100	5013	158.56	100.00	0.00	
Average	5004			0.20	2.21
Range				1.16	
Max				1.10	

Tone values = 100.0%

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.

RGB	Lab	deltaLab	deltaE
0 0 0	1.8 0.7 -3.5	-0.1 -0.6 1.2	1.3
0 0 128	13.4 30.7 -63.7	-0.2 -1.0 1.5	1.8
0 0 255	31.3 53.6 -108.2	0.1 0.2 -0.7	0.7
0 128 0	45.0 -51.0 45.2	-0.3 0.5 0.5	0.8
0 128 128	47.4 -35.7 -9.9	0.7 0.1 -0.7	1.0
0 170 255	65.1 -23.2 -53.2	0.3 -0.8 0.7	1.1
0 255 0	85.4 -86.0 78.9	0.3 -0.2 0.4	0.6
0 255 170	87.0 -74.4 23.5	-0.1 0.2 -0.2	0.3
0 255 255	88.9 -59.6 -16.6	0.1 0.1 -0.7	0.7
85 85 85	36.3 0.1 -0.1	0.3 0.2 -0.1	0.4
128 0 0	28.8 48.4 35.2	-0.4 -0.8 1.2	1.5
128 0 128	32.4 53.1 -32.9	0.8 0.4 -0.3	0.9
128 128 0	52.3 -6.8 53.9	0.7 0.3 0.7	1.0
128 128 128	54.2 0.1 -0.1	-0.0 -0.0 0.1	0.1
128 128 255	59.5 19.8 -62.4	0.2 -0.7 0.7	1.0
128 255 128	89.2 -58.1 46.4	0.0 0.9 -0.1	0.9
170 0 255	48.7 72.3 -79.6	-0.0 0.1 0.4	0.4
170 170 170	70.2 0.3 -0.1	0.2 -0.2 0.1	0.3
170 255 0	90.6 -47.7 85.0	0.0 0.4 0.1	0.4
170 255 255	93.8 -29.7 -9.5	-0.0 -0.2 -0.1	0.2
255 0 0	58.0 81.4 67.2	0.1 0.3 0.6	0.7
255 0 170	60.5 84.7 -13.2	-0.1 0.0 -0.0	0.1
255 0 255	63.8 88.9 -54.8	0.1 0.2 0.1	0.3
255 128 128	71.2 51.1 25.3	0.1 -0.4 -0.4	0.6
255 170 0	77.9 29.4 79.3	0.2 -0.6 0.0	0.6
255 170 255	82.0 40.5 -26.6	0.0 0.0 0.2	0.2
255 255 0	97.1 -12.1 92.7	0.3 -0.3 -0.0	0.4
255 255 170	98.4 -7.0 39.3	-0.0 -0.1 0.1	0.2
255 255 255	100.0 0.0 0.0	0.0 -0.0 0.0	0.0
170 85 85	48.8 38.0 18.7	0.8 -0.2 -1.2	1.4
85 170 85	62.0 -42.9 34.2	0.8 1.0 -1.0	1.6
85 85 170	40.1 14.8 -46.2	1.0 -0.1 0.6	1.2
85 170 170	63.9 -30.9 -9.8	0.7 0.2 0.1	0.7
170 85 170	51.4 44.0 -28.1	0.6 -0.2 0.1	0.7
170 170 85	68.5 -6.7 43.2	0.7 0.2 -0.7	1.0
Average			0.7
Maximum			1.8

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	94 %
sRGB	97 %
AdobeRGB	80 %
ECI-RGB v1.0	74 %

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	57.0 -21.5 -46.7	15.9
66.9 -24.7 -37.1	66.2 -24.5 -37.5	0.8
79.7 -12.5 -21.8	79.7 -12.7 -21.4	0.3
48.0 74.0 -3.0	48.8 71.4 0.1	4.2
60.8 50.6 -6.7	60.4 50.7 -6.2	0.7
76.4 25.8 -6.9	76.2 26.2 -6.9	0.5
89.0 -5.0 93.0	88.9 -4.5 86.1	6.9
90.3 -4.7 62.6	90.1 -4.7 62.4	0.3
92.2 -3.5 31.1	92.1 -3.6 30.9	0.3
53.1 37.7 28.9	52.3 37.8 31.3	2.5
41.5 22.7 16.8	41.0 22.3 18.5	1.9
31.9 40.0 24.0	31.4 40.5 27.7	3.8
32.5 44.4 -1.8	31.7 44.7 -0.1	1.9
51.3 1.3 44.5	50.6 0.8 46.7	2.3
34.6 -36.4 13.9	34.0 -36.3 16.3	2.5
36.0 -26.2 -20.9	35.6 -23.0 -19.2	3.7
20.9 9.6 -23.6	20.6 9.7 -23.2	0.6
89.0 0.0 -1.8	88.8 0.0 -2.0	0.2
82.8 0.0 -1.7	82.9 0.0 -1.5	0.2
69.3 0.0 -1.4	69.2 0.5 -1.5	0.6
54.1 0.0 -1.0	54.3 0.2 -0.5	0.5
36.6 -0.0 -0.5	36.7 0.2 -0.1	0.5
16.0 0.0 0.0	16.2 0.7 1.1	1.3
24.0 22.0 -46.0	22.8 22.6 -46.7	1.6
40.9 17.9 -36.6	39.9 18.1 -37.2	1.2
63.7 10.3 -23.8	63.4 10.3 -23.9	0.3
47.0 68.0 48.0	47.2 68.1 51.4	3.4
58.5 47.1 37.9	57.9 47.8 40.0	2.3
74.2 22.9 21.4	74.0 23.3 21.4	0.4
50.0 -65.0 27.0	50.8 -52.6 32.1	13.4
62.1 -39.8 21.0	61.6 -41.0 21.8	1.6
77.0 -19.1 11.0	77.0 -19.2 11.1	0.1
71.2 18.8 17.3	71.1 18.7 17.8	0.6
71.2 22.2 73.1	71.2 22.6 72.5	0.7
47.7 71.2 16.2	48.0 70.4 19.7	3.6
38.0 55.4 -20.9	37.1 55.2 -20.3	1.1
73.7 -22.8 67.6	73.1 -23.7 68.9	1.6
52.3 -52.3 -20.2	53.7 -36.8 -16.1	16.0
43.3 -17.0 -48.6	43.5 -10.5 -47.8	6.5
95.0 0.0 -2.0	94.9 0.1 -2.0	0.1
88.5 -0.4 -3.1	88.5 -0.2 -3.0	0.3
82.0 -0.9 -4.1	82.0 -0.7 -3.9	0.2
67.7 -2.0 -4.4	67.6 -2.0 -4.5	0.2
52.2 -2.5 -3.5	52.0 -2.4 -3.4	0.3
37.5 -3.9 -3.1	37.6 -3.7 -2.7	0.5
26.3 -6.8 -3.4	26.3 -6.3 -3.1	0.6
Average		2.4
Gamut-Volume		94 %

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	153.07 158.56 131.68	85 85 170	20.71 17.96 48.13
0 0 0	0.33 0.31 0.55	85 170 170	37.66 51.74 52.76
12 12 12	0.62 0.65 0.80	170 85 170	45.88 31.14 49.52
25 25 25	1.28 1.31 1.22	170 170 85	56.04 61.35 17.76
38 38 38	2.75 2.78 2.39	0 147 219	30.81 39.49 84.49
51 51 51	4.79 4.92 4.19	70 173 228	43.89 56.38 94.72
63 63 63	7.44 7.67 6.39	158 204 237	78.36 89.13 106.75
76 76 76	11.03 11.40 9.49	206 0 117	52.85 27.67 22.91
89 89 89	15.45 15.97 13.34	213 100 156	67.10 45.23 43.13
102 102 102	20.70 21.43 17.80	225 167 200	93.23 79.73 75.17
114 114 114	26.38 27.31 22.71	241 226 0	110.02 117.41 14.02
127 127 127	33.31 34.49 28.62	240 229 99	113.58 121.39 28.84
140 140 140	41.25 42.68 35.45	239 234 170	121.04 128.37 61.86
153 153 153	50.03 51.81 43.09	182 94 72	44.96 32.42 10.66
165 165 165	59.02 61.09 50.68	130 81 67	23.60 18.84 8.36
178 178 178	69.64 72.13 59.75	126 39 33	17.99 10.84 2.60
191 191 191	81.17 84.03 69.85	127 32 76	19.20 11.02 9.18
204 204 204	93.93 97.26 80.68	133 119 34	29.21 30.00 5.21
216 216 216	106.44 110.29 91.55	6 95 54	7.07 12.73 5.64
229 229 229	120.94 125.29 103.97	0 94 114	9.70 13.94 20.81
242 242 242	136.45 141.36 117.41	51 46 84	5.77 5.00 10.60
0 0 128	4.76 2.57 24.56	221 222 226	113.03 117.06 100.39
0 0 255	20.91 10.76 112.48	204 205 208	94.88 98.28 83.85
0 128 0	11.69 23.10 3.57	167 167 170	60.90 62.82 53.83
0 128 128	16.39 25.85 27.85	128 128 129	34.09 35.25 29.66
0 170 255	42.57 54.19 118.43	86 86 86	14.38 14.87 12.38
0 255 0	53.06 106.04 14.55	43 42 40	3.34 3.41 2.67
0 255 170	61.76 110.93 60.17	55 41 125	8.36 5.92 24.10
0 255 255	74.15 117.39 126.94	98 82 154	21.30 17.75 39.26
85 85 85	14.00 14.49 12.07	155 145 195	53.74 50.91 68.45
128 0 0	17.26 9.14 1.22	204 17 25	48.42 25.70 3.15
128 0 128	21.94 11.50 25.87	212 97 70	60.11 40.94 10.97
128 128 0	29.10 32.34 4.28	224 163 141	85.02 73.95 39.31
128 128 128	34.00 35.20 29.29	0 143 63	15.93 30.23 9.41
128 128 255	50.46 43.77 117.58	81 168 107	30.91 47.42 23.07
128 255 128	75.56 118.13 40.42	160 200 167	68.07 81.68 54.70
170 0 255	53.11 27.57 115.02	208 159 140	74.98 67.14 38.16
170 170 170	62.88 64.99 54.12	224 157 2	77.46 67.36 7.78
170 255 0	85.47 122.98 15.87	206 0 84	50.90 26.68 12.29
170 255 255	106.97 134.54 129.44	148 23 120	28.10 15.22 23.03
255 0 0	78.57 41.14 3.61	161 192 28	57.37 71.93 10.04
255 0 170	87.14 45.47 50.23	0 145 155	22.41 34.38 41.63
255 0 255	99.45 51.70 117.27	0 108 183	18.22 21.41 55.99
255 128 128	95.25 67.28 32.14	239 240 244	133.96 138.72 118.87
255 170 0	100.20 84.13 9.29	219 221 227	111.66 115.81 101.03
255 170 255	121.62 95.74 123.32	199 203 210	91.81 95.60 85.09
255 255 0	131.69 147.08 17.65	157 164 171	56.34 59.33 54.05
255 255 170	140.67 152.13 64.83	117 124 128	30.05 31.90 28.86
170 85 85	39.14 27.66 13.26	81 90 92	14.40 15.65 14.16
85 170 85	30.85 48.14 16.59	52 66 67	6.67 7.67 7.23