

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2010-4-12 1:24:44
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name: PA241W
EDID-Serial: 02000084UB
Profile: C:/WINDOWS/System32/spool/.../COLOR/nec-pa241w-ugra.icc
Created: 2010-4-12 1:22
Measurement device: eye-one pro

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	yes
Offset/Gravure Paper Type 1/2	yes
Offset on uncoated paper	yes
Newspaper Printing	yes
sRGB	yes
AdobeRGB	yes
ECI-RGB	yes

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:	132.72 139.57 137.38
XYZ (normalized):	95.09 100.00 98.43
Luminance:	139.6 Cd/m2
Next Temperature:	5883 Kelvin
Assumed Target Whitepoint:	5900 Kelvin
Distance to assumed Target Whitepoint:	0.7 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:	1.5 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	12448	0.20	1.30	1.45	
5	6708	0.88	5.71	1.43	1.80
10	5954	2.40	13.93	0.50	1.81
15	5809	4.73	21.55	0.67	1.81
20	5668	7.90	28.54	0.87	1.81
25	5821	11.55	34.55	0.32	1.81
30	5870	15.98	40.33	0.58	1.82
35	5880	21.22	45.91	0.56	1.81
40	5804	26.76	50.89	0.55	1.82
45	5783	32.90	55.65	0.67	1.82
50	5825	40.06	60.52	0.39	1.81
55	5854	47.49	64.98	0.20	1.81
60	5811	55.72	69.42	0.75	1.80
65	5856	63.66	73.29	0.31	1.83
70	5878	73.01	77.47	0.06	1.82
75	5816	83.17	81.62	0.57	1.81
80	5841	93.22	85.40	1.00	1.80
85	5830	103.72	89.07	0.49	1.84
90	5827	115.21	92.82	0.63	1.82
95	5833	127.11	96.44	0.52	1.84
100	5883	139.57	100.00	0.00	
Average	5834			0.51	1.81
Range				1.54	
Max				1.00	

Tone values = 97.9%

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	1.3 -0.0 -1.5	-1.3 0.0 1.5	1.9
0 0 128	13.9 46.6 -74.3	-0.4 1.6 -1.7	2.4
0 0 255	28.7 72.7 -114.8	-0.1 0.1 -0.2	0.2
0 128 0	50.8 -86.6 51.4	0.2 -1.5 1.5	2.1
0 128 128	52.8 -58.9 -12.6	0.1 0.1 -0.5	0.5
0 170 255	67.9 -43.7 -51.0	-0.0 0.0 0.1	0.1
0 255 0	85.5 -133.2 80.0	-0.1 0.0 -0.1	0.1
0 255 170	86.8 -110.2 16.0	-0.1 0.6 -0.9	1.1
0 255 255	88.3 -89.2 -19.8	-0.1 0.1 0.1	0.2
85 85 85	44.3 -0.4 0.3	-0.3 0.4 -0.3	0.6
128 0 0	34.1 67.1 51.9	-0.2 0.7 2.5	2.6
128 0 128	37.2 74.5 -35.3	-0.0 0.3 -0.4	0.5
128 128 0	59.1 -9.9 64.6	0.1 -1.1 0.6	1.2
128 128 128	60.8 0.5 0.2	-0.1 -0.5 -0.2	0.6
128 128 255	64.4 21.6 -56.0	-0.2 -0.1 -0.2	0.3
128 255 128	90.2 -73.8 40.3	-0.2 -0.5 -0.4	0.7
170 0 255	50.4 96.2 -77.9	0.2 -0.0 0.6	0.6
170 170 170	74.9 0.0 0.3	0.0 -0.0 -0.3	0.3
170 255 0	91.7 -60.5 89.8	-0.0 -0.1 -0.2	0.3
170 255 255	94.3 -36.1 -9.9	-0.1 -0.2 0.2	0.3
255 0 0	59.4 102.3 88.4	0.1 0.3 0.1	0.3
255 0 170	61.7 107.9 -17.1	0.2 -0.1 -0.2	0.3
255 0 255	64.1 113.3 -54.7	0.3 -0.2 0.6	0.7
255 128 128	75.1 58.2 23.8	0.0 0.1 0.1	0.1
255 170 0	81.4 30.8 90.3	0.2 -0.6 -0.4	0.8
255 170 255	84.7 45.8 -23.0	0.0 0.0 0.4	0.4
255 255 0	97.7 -16.4 99.4	0.0 -0.2 -0.7	0.7
255 255 170	98.8 -8.4 35.3	0.0 0.1 -0.3	0.3
255 255 255	100.0 0.0 0.0	0.0 0.0 0.0	0.0
170 85 85	55.4 45.4 18.8	-0.1 0.5 0.1	0.5
85 170 85	67.1 -58.2 31.3	-0.0 -0.3 0.1	0.3
85 85 170	46.9 16.4 -43.5	-0.2 0.6 -0.8	1.0
85 170 170	68.5 -42.5 -10.3	-0.0 -0.1 -0.3	0.4
170 85 170	57.4 53.1 -25.7	-0.1 0.7 -0.6	0.9
170 170 85	73.6 -8.8 41.9	0.0 -0.2 0.3	0.4
Average			0.7
Maximum			2.6

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	100 %
AdobeRGB	99 %
ECI-RGB v1.0	93 %

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	55.6 -32.3 -48.9	4.9
66.9 -24.7 -37.1	67.0 -25.1 -36.7	0.5
79.7 -12.5 -21.8	79.9 -12.5 -21.3	0.4
48.0 74.0 -3.0	47.9 73.3 -2.5	0.9
60.8 50.6 -6.7	61.1 50.5 -5.8	1.0
76.4 25.8 -6.9	76.5 26.1 -6.4	0.6
89.0 -5.0 93.0	89.0 -4.2 92.5	1.0
90.3 -4.7 62.6	90.4 -4.3 62.5	0.4
92.2 -3.5 31.1	92.1 -2.8 30.8	0.7
53.1 37.7 28.9	53.2 37.8 28.8	0.2
41.5 22.7 16.8	41.8 22.6 17.3	0.6
31.9 40.0 24.0	31.9 40.0 23.0	0.9
32.5 44.4 -1.8	32.6 44.0 -2.3	0.7
51.3 1.3 44.5	51.5 2.1 43.9	1.1
34.6 -36.4 13.9	35.1 -36.0 14.4	0.8
36.0 -26.2 -20.9	36.3 -26.1 -20.1	0.9
20.9 9.6 -23.6	21.3 10.1 -23.5	0.7
89.0 0.0 -1.8	89.0 0.4 -1.6	0.5
82.8 0.0 -1.7	82.8 0.6 -2.1	0.7
69.3 0.0 -1.4	69.3 0.6 -1.2	0.6
54.1 0.0 -1.0	54.2 1.1 -0.7	1.1
36.6 -0.0 -0.5	36.8 0.3 -0.0	0.6
16.0 0.0 0.0	17.2 -0.2 0.1	1.3
24.0 22.0 -46.0	24.2 21.9 -44.8	1.2
40.9 17.9 -36.6	41.1 17.2 -36.0	0.9
63.7 10.3 -23.8	63.8 10.2 -23.1	0.7
47.0 68.0 48.0	47.1 67.4 47.5	0.8
58.5 47.1 37.9	58.8 46.7 37.7	0.6
74.2 22.9 21.4	74.2 23.7 21.4	0.8
50.0 -65.0 27.0	50.3 -64.3 27.4	0.8
62.1 -39.8 21.0	61.9 -39.5 20.7	0.6
77.0 -19.1 11.0	77.0 -18.4 10.9	0.7
71.2 18.8 17.3	71.1 19.5 17.2	0.6
71.2 22.2 73.1	71.3 22.8 73.1	0.7
47.7 71.2 16.2	47.7 71.0 15.9	0.4
38.0 55.4 -20.9	38.1 55.3 -20.2	0.8
73.7 -22.8 67.6	73.5 -21.8 67.3	1.0
52.3 -52.3 -20.2	52.5 -52.0 -19.9	0.4
43.3 -17.0 -48.6	43.7 -18.1 -47.4	1.7
95.0 0.0 -2.0	95.0 0.5 -1.9	0.6
88.5 -0.4 -3.1	88.6 -0.3 -2.7	0.4
82.0 -0.9 -4.1	82.0 -0.4 -4.3	0.5
67.7 -2.0 -4.4	67.5 -1.7 -4.7	0.5
52.2 -2.5 -3.5	52.3 -2.8 -3.1	0.5
37.5 -3.9 -3.1	37.9 -4.0 -2.8	0.6
26.3 -6.8 -3.4	27.0 -5.7 -2.9	1.4
Average		0.8
Gamut-Volume		100 %

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	132.72 139.57 137.38	85 85 170	26.40 22.58 60.47
0 0 0	0.19 0.20 0.33	85 170 170	36.09 54.50 65.29
12 12 12	0.79 0.88 0.91	170 85 170	54.05 35.21 60.82
25 25 25	2.25 2.40 2.34	170 170 85	55.96 64.07 24.34
38 38 38	4.56 4.73 4.70	0 129 207	24.33 33.57 88.03
51 51 51	7.56 7.90 7.54	83 159 221	40.83 51.82 99.98
63 63 63	11.03 11.55 11.32	153 193 232	69.57 79.30 111.75
76 76 76	15.12 15.98 15.54	171 39 103	44.69 22.86 24.70
89 89 89	20.08 21.22 20.68	186 96 143	59.40 40.62 46.06
102 102 102	25.45 26.76 25.96	206 159 190	81.41 70.54 78.46
114 114 114	31.46 32.90 32.10	237 217 0	92.74 102.45 11.39
127 127 127	38.18 40.06 39.17	237 222 88	97.25 107.06 30.01
140 140 140	45.21 47.49 46.59	236 228 158	104.11 112.62 64.45
153 153 153	53.31 55.72 54.73	156 85 64	39.64 29.26 12.79
165 165 165	60.51 63.66 62.28	106 68 56	20.98 17.07 9.59
178 178 178	69.46 73.01 71.86	97 37 31	15.64 9.66 3.66
191 191 191	79.32 83.17 81.29	98 36 64	17.22 10.14 11.04
204 204 204	89.23 93.22 92.17	116 102 34	26.06 27.27 6.45
216 216 216	98.85 103.72 101.50	34 75 44	6.55 11.96 6.81
229 229 229	109.98 115.21 113.02	26 76 97	8.80 12.97 23.02
242 242 242	121.20 127.11 124.56	36 35 67	5.53 4.71 11.68
0 0 128	6.71 2.66 34.41	215 216 220	98.78 103.54 104.70
0 0 255	23.34 8.98 122.03	194 195 199	82.51 86.33 88.08
0 128 0	8.22 26.74 4.22	152 153 155	53.08 55.53 56.06
0 128 128	14.82 29.54 38.79	110 110 112	29.74 30.93 31.02
0 170 255	36.92 54.03 128.99	68 68 69	12.57 13.17 12.97
0 255 0	28.36 93.81 13.86	30 30 30	3.11 3.28 3.21
0 255 170	39.34 98.04 71.57	38 36 107	8.52 6.00 25.71
0 255 255	51.65 102.76 136.42	78 71 138	20.18 16.87 41.87
85 85 85	18.51 19.57 19.09	137 132 183	47.98 45.68 71.50
128 0 0	23.48 10.83 0.65	170 43 30	40.60 21.86 4.02
128 0 128	30.17 13.34 35.42	185 92 63	52.38 36.85 13.09
128 128 0	31.84 37.61 4.50	206 153 127	73.60 65.15 41.41
128 128 128	38.73 40.54 39.70	35 121 54	11.27 26.15 11.08
128 128 255	55.40 47.10 127.00	92 148 92	27.23 42.27 24.97
128 255 128	59.00 107.32 49.43	156 186 153	59.20 72.05 57.24
170 0 255	61.99 26.56 123.16	189 147 126	64.70 58.74 40.42
170 170 170	63.86 67.16 65.75	205 144 25	65.70 58.75 7.80
170 255 0	67.48 111.53 14.41	172 41 74	43.23 22.61 14.40
170 255 255	90.97 120.56 137.31	117 38 105	25.58 14.00 25.16
255 0 0	80.81 36.96 1.40	158 176 34	49.68 63.75 10.99
255 0 170	91.82 41.03 59.60	8 125 140	16.02 29.15 45.14
255 0 255	103.90 45.59 123.83	15 92 167	15.90 19.54 58.51
255 128 128	95.95 66.67 40.74	236 237 242	116.88 122.41 124.05
255 170 0	94.56 81.56 7.82	212 215 221	97.37 102.48 105.44
255 170 255	117.98 91.00 130.81	189 193 201	80.10 84.33 89.42
255 255 0	109.41 130.48 14.86	143 149 156	48.97 52.09 56.44
255 255 170	120.46 134.83 73.59	101 107 111	26.48 28.59 30.40
170 85 85	46.16 32.14 19.59	65 72 75	12.71 14.06 15.09
85 170 85	28.14 51.44 23.83	41 50 52	6.18 7.12 7.84