

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2008-4-9 21:12:17
Report-Version: v1.2.2
Monitor-Name: \\.\DISPLAY1
Profile: C:/WINDOWS/System32/.../BenQ_X2200W_UGRA_kalibriert2.icc
Created: 2008-4-9 21:01
Measurement device: eye-one display

Summary

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

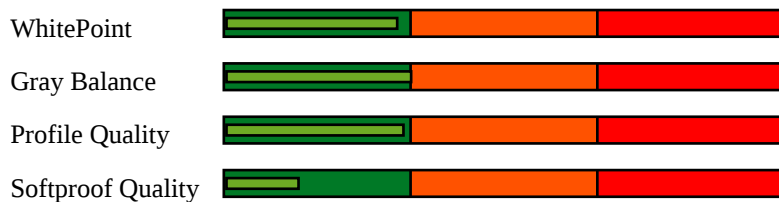
Calibration

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

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 .

XYZ:	119.57 124.12 120.83
XYZ (normalized):	96.33 100.00 97.35
Luminance:	124.1 Cd/m2
Next Temperature:	5698 Kelvin
Assumed Target Whitepoint:	5700 Kelvin
Distance to assumed Target Whitepoint:	1.8 deltaE

Blackpoint

Luminance:	0.2 Cd/m2
Chromaticity:	1.3 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	10513	0.20	1.46	1.30	
5	5075	0.70	5.12	1.78	1.84
10	5750	2.02	13.37	0.96	1.83
15	5811	4.04	21.03	1.15	1.83
20	5807	6.93	28.33	1.00	1.82
25	5929	10.01	34.12	1.12	1.83
30	5758	13.62	39.53	0.56	1.84
35	5708	18.19	45.15	0.36	1.84
40	5759	23.21	50.33	0.56	1.83
45	5682	28.62	55.13	0.10	1.85
50	5752	34.94	60.02	0.46	1.84
55	5760	41.80	64.70	0.47	1.83
60	5730	49.01	69.10	0.46	1.83
65	5719	55.88	72.91	0.23	1.85
70	5735	63.99	77.01	0.50	1.85
75	5685	72.73	81.07	0.92	1.85
80	5740	82.00	85.03	0.75	1.84
85	5772	90.88	88.55	0.71	1.90
90	5746	101.17	92.36	0.46	1.93
95	5751	112.08	96.12	0.55	1.98
100	5698	124.12	100.00	0.00	
Average	5752			0.60	1.85
Range				2.00	

Tone values = 94.9%

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	1.5 -0.3 -1.3	-1.5 0.3 1.3	2.0
0 0 128	15.2 46.0 -72.7	1.3 -5.5 1.0	5.7
0 0 255	32.1 66.7 -110.2	1.0 -5.4 1.8	5.7
0 128 0	48.9 -87.7 53.1	0.5 4.2 1.1	4.4
0 128 128	51.1 -54.5 -15.7	0.9 0.7 1.2	1.6
0 170 255	66.6 -36.9 -54.4	1.0 -1.7 2.5	3.2
0 255 0	82.6 -130.9 84.9	0.2 4.6 -2.8	5.4
0 255 170	84.3 -104.3 13.1	0.4 2.3 -0.2	2.4
0 255 255	86.3 -82.1 -23.0	0.4 0.8 1.1	1.4
85 85 85	43.5 -0.0 -0.3	0.5 0.0 0.3	0.6
128 0 0	35.3 59.3 50.6	0.4 0.2 4.2	4.2
128 0 128	39.0 67.7 -32.2	0.6 -2.5 -0.2	2.6
128 128 0	58.6 -13.4 66.2	0.1 3.0 1.0	3.2
128 128 128	60.5 -0.4 -0.2	0.2 0.4 0.2	0.5
128 128 255	65.0 21.1 -56.4	0.2 -1.3 1.3	1.9
128 255 128	88.5 -71.6 40.3	-0.1 2.5 -1.3	2.8
170 0 255	53.9 87.0 -73.2	0.5 -3.7 1.0	3.8
170 170 170	74.6 0.3 -0.3	0.4 -0.3 0.3	0.6
170 255 0	90.3 -60.4 95.2	-0.1 3.8 -2.9	4.8
170 255 255	93.6 -33.4 -11.0	-0.1 0.5 0.3	0.6
255 0 0	62.1 91.9 88.9	0.1 -1.9 -3.4	3.9
255 0 170	64.6 97.8 -12.0	0.5 -3.5 -1.1	3.7
255 0 255	67.7 102.3 -49.6	0.4 -3.7 0.6	3.8
255 128 128	76.4 53.0 26.4	0.1 -1.1 -0.8	1.3
255 170 0	82.1 26.6 95.0	-0.0 0.2 -2.6	2.6
255 170 255	85.9 42.6 -22.0	0.1 -1.5 0.9	1.7
255 255 0	97.3 -17.2 106.3	-0.3 1.5 -4.6	4.9
255 255 170	98.6 -8.2 36.6	-0.1 0.4 -1.6	1.6
255 255 255	100.0 0.0 0.0	0.0 0.0 -0.0	0.0
170 85 85	56.1 42.0 20.2	0.3 -1.1 -0.1	1.2
85 170 85	65.6 -56.8 31.1	0.2 2.4 -0.3	2.4
85 85 170	46.7 18.1 -44.5	0.8 -2.5 1.1	2.8
85 170 170	67.3 -39.5 -12.3	0.5 0.7 0.5	1.0
170 85 170	58.3 50.5 -25.1	0.6 -2.6 0.7	2.8
170 170 85	73.1 -9.6 43.0	0.2 1.0 -0.5	1.2
Average			2.6
Maximum			5.7

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	55.0 -27.6 -50.7	9.4
66.9 -24.7 -37.1	66.5 -24.8 -38.0	0.9
79.7 -12.5 -21.8	79.3 -11.8 -22.7	1.2
48.0 74.0 -3.0	47.5 76.1 -2.2	2.3
60.8 50.6 -6.7	60.4 52.3 -7.6	2.0
76.4 25.8 -6.9	76.0 26.6 -7.6	1.1
89.0 -5.0 93.0	88.8 -6.8 95.3	2.9
90.3 -4.7 62.6	90.0 -5.4 64.2	1.8
92.2 -3.5 31.1	91.9 -4.4 31.9	1.2
53.1 37.7 28.9	52.7 38.1 28.3	0.8
41.5 22.7 16.8	41.4 22.4 17.1	0.5
31.9 40.0 24.0	31.7 39.5 23.5	0.7
32.5 44.5 -1.8	32.2 45.1 -2.8	1.2
51.3 1.3 44.5	51.0 0.4 43.4	1.4
34.6 -36.4 13.9	34.2 -36.6 13.4	0.6
36.0 -26.2 -20.9	35.3 -26.3 -20.5	0.7
20.9 9.6 -23.6	20.8 11.4 -23.5	1.8
89.0 0.0 -1.9	88.6 -0.2 -2.4	0.6
82.8 0.0 -1.7	82.2 0.5 -2.7	1.3
69.3 0.0 -1.4	69.1 -0.7 -0.8	0.9
54.1 0.0 -1.0	53.7 0.5 -0.7	0.7
36.6 0.0 -0.5	36.3 -0.4 -0.5	0.5
16.0 0.0 0.0	16.7 -0.4 0.2	0.8
24.0 22.0 -46.0	23.3 24.6 -45.9	2.7
40.9 17.9 -36.6	40.2 19.3 -36.9	1.6
63.7 10.3 -23.8	63.4 11.2 -24.6	1.3
47.0 68.0 48.0	46.7 68.7 47.6	0.9
58.5 47.1 37.9	58.1 48.1 37.2	1.3
74.2 22.9 21.4	74.0 22.5 21.1	0.6
50.0 -65.0 27.0	49.6 -67.5 27.4	2.6
62.1 -39.8 21.0	62.2 -42.6 22.4	3.1
77.0 -19.1 11.0	76.8 -20.5 11.4	1.5
71.2 18.9 17.3	70.9 19.9 17.1	1.1
71.2 22.1 73.1	71.0 21.0 73.7	1.4
47.7 71.2 16.2	47.6 72.8 16.9	1.8
38.0 55.4 -20.9	37.7 57.3 -20.3	2.0
73.7 -22.8 67.6	73.6 -25.2 67.8	2.4
52.3 -52.3 -20.1	51.8 -50.9 -20.6	1.5
43.3 -17.0 -48.6	41.8 -13.3 -50.6	4.5
95.0 0.0 -2.0	95.1 -0.8 -2.2	0.8
88.5 -0.4 -3.1	88.4 -0.6 -3.5	0.4
82.0 -0.9 -4.1	81.6 0.1 -5.0	1.4
67.7 -2.0 -4.4	67.3 -1.9 -4.3	0.4
52.2 -2.5 -3.5	51.7 -2.4 -3.4	0.5
37.5 -3.9 -3.1	36.9 -3.1 -4.3	1.5
26.3 -6.8 -3.4	26.4 -7.7 -2.8	1.0
Average		1.6
Gamut-Volume		99 %

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	119.57 124.12 120.83	85 85 170	22.98 19.64 53.75
0 0 0	0.19 0.20 0.29	85 170 170	31.27 46.03 57.36
12 12 12	0.73 0.70 0.71	170 85 170	48.78 32.65 54.34
25 25 25	1.97 2.02 2.04	170 170 85	50.26 56.30 20.47
38 38 38	3.94 4.04 4.11	0 131 207	20.63 28.44 78.35
51 51 51	6.57 6.93 6.69	79 161 220	34.64 44.68 88.43
63 63 63	9.51 10.01 9.92	152 194 232	60.75 68.85 98.74
76 76 76	13.15 13.62 13.48	173 2 103	40.91 20.35 21.00
89 89 89	17.57 18.19 17.84	187 87 143	53.12 35.42 40.78
102 102 102	22.38 23.21 22.92	207 155 190	72.40 61.86 69.24
114 114 114	27.59 28.62 27.81	239 219 17	84.31 91.57 9.42
127 127 127	33.52 34.94 34.11	239 223 90	87.98 94.64 25.15
140 140 140	40.13 41.80 40.92	237 229 159	93.44 99.80 55.29
153 153 153	47.03 49.01 47.66	158 80 64	35.75 25.82 11.09
165 165 165	53.84 55.88 54.64	107 65 56	18.78 15.03 8.30
178 178 178	61.70 63.99 62.86	98 31 31	14.11 8.65 3.07
191 191 191	70.45 72.73 71.40	99 28 64	15.47 8.91 9.58
204 204 204	79.15 82.00 80.79	116 102 35	23.13 23.92 5.66
216 216 216	87.39 90.88 89.45	33 77 45	5.56 10.06 5.92
229 229 229	97.30 101.17 99.09	23 78 97	7.09 10.76 19.59
242 242 242	107.67 112.08 109.66	36 34 67	4.70 3.96 9.92
0 0 128	5.61 2.40 30.52	215 216 220	87.70 91.13 92.28
0 0 255	19.67 8.84 108.81	194 195 199	72.87 75.38 76.96
0 128 0	6.75 21.69 3.05	152 153 155	46.94 49.02 48.46
0 128 128	12.34 23.99 34.18	110 110 112	26.07 26.92 26.65
0 170 255	31.04 44.75 114.99	68 68 69	10.92 11.39 11.28
0 255 0	24.36 76.32 9.34	30 30 30	2.65 2.77 2.67
0 255 170	33.77 80.23 61.63	37 33 107	6.99 4.84 22.22
0 255 255	44.26 85.24 119.81	77 68 137	17.08 14.09 36.11
85 85 85	16.16 16.78 16.50	136 130 183	42.31 39.86 63.69
128 0 0	21.12 10.75 0.80	172 22 30	37.30 19.63 3.36
128 0 128	27.11 13.26 31.03	187 84 63	47.47 32.35 11.23
128 128 0	27.98 33.00 3.67	207 150 128	66.02 57.88 36.31
128 128 128	34.15 35.58 34.82	31 125 55	9.56 22.50 9.52
128 128 255	48.53 42.24 113.85	91 153 93	24.40 38.00 21.47
128 255 128	52.01 90.72 41.36	155 189 153	52.31 63.61 49.57
170 0 255	55.94 27.11 109.75	191 144 127	58.74 52.20 35.33
170 170 170	57.11 59.13 57.86	207 141 29	59.47 52.45 6.73
170 255 0	60.13 95.40 10.29	174 16 73	39.94 20.45 12.04
170 255 255	81.04 104.83 120.84	118 25 105	23.01 12.31 21.72
255 0 0	75.24 37.85 1.44	159 180 39	45.06 57.26 9.86
255 0 170	84.51 41.70 52.08	0 129 139	13.42 24.75 39.18
255 0 255	95.01 46.66 110.20	0 92 166	12.56 15.37 51.24
255 128 128	87.91 62.74 35.50	236 237 242	104.54 109.06 109.88
255 170 0	86.83 75.06 6.16	212 215 221	86.75 90.39 93.21
255 170 255	106.89 84.06 116.58	189 193 201	71.19 73.87 78.56
255 255 0	100.09 115.71 10.68	143 149 156	43.57 45.97 48.91
255 255 170	109.66 119.72 63.03	101 107 111	23.21 24.69 26.20
170 85 85	42.03 29.82 17.04	65 72 75	10.90 11.79 13.18
85 170 85	24.54 43.19 19.89	40 50 51	5.15 6.08 6.63