

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2009-3-16 19:39:30
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name: DELL 2209WA
EDID-Serial: H731H91R0HEL
Profile: C:/Windows/system32/spool/DRIVERS/COLOR/ugra.icc
Created: 2009-3-16 19:10
Measurement device: eye-one display 2

Summary

The monitor has not passed the certification according to the UGRA DACT specifications.

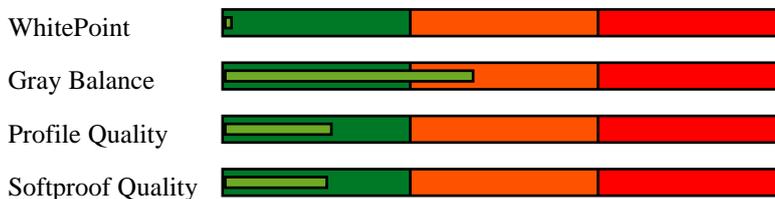
Calibration

White Point	yes
Gray balance	no
Profile quality	yes

Softproofing

MultiColor, HighBody	no
Offset/Gravure Paper Type 1/2	no
Offset on uncoated paper	no
Newspaper Printing	no
sRGB	no
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:	114.17 119.73 116.77
XYZ (normalized):	95.36 100.00 97.53
Luminance:	119.7 Cd/m2
Next Temperature:	5807 Kelvin
Assumed Target Whitepoint:	5800 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:	0.1 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	13862	0.13	0.98	1.29	
5	6653	0.59	4.47	1.36	1.85
10	5912	1.95	13.41	0.57	1.82
15	5752	4.05	21.52	0.26	1.81
20	5728	6.87	28.74	0.37	1.79
25	5768	9.89	34.52	0.19	1.81
30	5833	13.73	40.36	0.24	1.81
35	5817	18.05	45.74	0.37	1.81
40	5821	22.96	50.90	0.26	1.81
45	5812	28.26	55.69	0.05	1.81
50	5845	34.22	60.41	0.29	1.81
55	5797	40.71	64.96	0.26	1.81
60	5821	47.73	69.37	0.21	1.80
65	5818	54.71	73.34	0.13	1.82
70	5805	62.55	77.42	0.17	1.82
75	5786	70.63	81.28	0.18	1.84
80	5792	80.21	85.50	0.14	1.80
85	5877	88.61	88.92	0.86	1.83
90	5817	98.71	92.77	0.11	1.83
95	5817	109.08	96.45	0.17	1.80
100	5807	119.73	100.00	0.00	
Average	5812			0.25	1.81
Range				1.22	
Max				0.86	

Tone values = 92.2%

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: CAT02

RGB	Lab	deltaLab	deltaE
0 0 0	1.0 0.1 -1.3	-1.0 -0.1 1.3	1.6
0 0 128	12.5 45.4 -76.8	0.4 -0.7 0.1	0.8
0 0 255	26.8 70.3 -117.9	1.0 -2.6 2.0	3.4
0 128 0	53.0 -53.8 54.9	-0.1 0.1 1.2	1.2
0 128 128	54.7 -36.8 -9.0	-0.1 0.8 -0.8	1.1
0 170 255	69.9 -26.0 -46.9	-0.2 1.1 -0.4	1.1
0 255 0	89.2 -81.9 85.7	-1.0 0.8 -0.9	1.5
0 255 170	90.1 -68.8 22.9	-0.6 1.4 -2.8	3.2
0 255 255	91.2 -55.7 -13.3	-0.4 1.2 -1.5	2.0
85 85 85	44.2 0.2 -0.2	-0.2 -0.2 0.2	0.3
128 0 0	31.3 54.2 43.4	-0.9 2.4 1.4	2.9
128 0 128	34.4 62.8 -40.9	-0.6 1.4 -0.5	1.6
128 128 0	59.2 -9.3 63.0	0.1 -0.2 1.0	1.0
128 128 128	60.6 0.1 -0.3	0.1 -0.1 0.3	0.4
128 128 255	63.7 19.5 -57.0	0.2 -0.4 0.8	0.9
128 255 128	92.2 -50.4 43.9	-0.3 0.6 -0.8	1.0
170 0 255	47.4 83.7 -83.6	-0.4 0.4 0.2	0.6
170 170 170	75.0 0.1 -0.2	-0.0 -0.1 0.2	0.2
170 255 0	93.6 -43.6 91.4	-0.5 0.5 -0.5	0.8
170 255 255	95.4 -24.3 -7.2	-0.0 0.2 -0.1	0.2
255 0 0	55.7 83.0 71.2	-1.6 2.6 -1.5	3.4
255 0 170	58.1 89.7 -26.0	-1.4 1.7 -0.7	2.3
255 0 255	60.4 95.8 -62.4	-1.0 1.3 -0.3	1.7
255 128 128	72.9 44.9 18.2	-0.3 -0.4 0.6	0.8
255 170 0	80.3 20.7 84.5	-0.2 -0.4 -0.4	0.6
255 170 255	83.1 36.2 -25.8	0.0 -0.6 0.4	0.7
255 255 0	98.2 -14.9 97.6	-0.3 0.5 -0.8	1.0
255 255 170	99.0 -7.2 34.7	-0.1 -0.0 0.0	0.1
255 255 255	100.0 0.0 0.0	-0.0 0.0 -0.0	0.0
170 85 85	53.8 34.9 14.6	-0.4 0.1 0.2	0.4
85 170 85	68.8 -39.5 34.0	-0.2 0.3 0.0	0.3
85 85 170	46.5 15.4 -44.2	0.1 -0.3 -0.0	0.3
85 170 170	70.0 -28.1 -7.6	-0.1 0.4 -0.5	0.7
170 85 170	55.5 43.2 -29.6	-0.2 -0.1 -0.1	0.2
170 170 85	73.9 -7.9 41.2	-0.1 -0.0 0.5	0.5
Average			1.1
Maximum			3.4

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	93 %
sRGB	100 %
AdobeRGB	79 %
ECI-RGB v1.0	73 %

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	57.8 -19.2 -45.2	18.7
66.9 -24.7 -37.1	66.9 -24.8 -37.5	0.4
79.7 -12.5 -21.8	79.4 -12.0 -22.3	0.8
48.0 74.0 -3.0	48.9 72.7 -2.6	1.6
60.8 50.6 -6.7	61.1 50.5 -7.3	0.6
76.4 25.8 -6.9	76.3 26.0 -6.8	0.3
89.0 -5.0 93.0	89.1 -4.5 89.9	3.1
90.3 -4.7 62.6	90.5 -4.6 62.2	0.4
92.2 -3.5 31.1	92.2 -3.2 30.8	0.4
53.1 37.7 28.9	53.4 37.2 28.6	0.7
41.5 22.7 16.8	41.9 22.6 16.3	0.6
31.9 40.0 24.0	32.5 38.8 23.6	1.3
32.5 44.5 -1.8	33.1 44.1 -2.4	0.9
51.3 1.3 44.5	51.2 1.6 43.8	0.8
34.6 -36.4 13.9	35.4 -34.5 15.2	2.5
36.0 -26.2 -20.9	36.9 -21.8 -18.3	5.2
20.9 9.6 -23.6	21.3 9.7 -23.3	0.5
89.0 0.0 -1.9	89.0 0.1 -2.5	0.7
82.8 0.0 -1.7	82.5 0.4 -2.0	0.6
69.3 0.0 -1.4	69.4 -0.0 -1.4	0.1
54.1 0.0 -1.0	54.1 0.4 -1.2	0.5
36.6 0.0 -0.5	36.9 0.3 -0.6	0.4
16.0 0.0 0.0	16.7 0.2 0.1	0.7
24.0 22.0 -46.0	24.0 22.9 -46.1	0.9
40.9 17.9 -36.6	41.1 17.7 -36.2	0.4
63.7 10.3 -23.8	63.5 10.8 -24.0	0.6
47.0 68.0 48.0	47.9 66.5 47.7	1.8
58.5 47.1 37.9	58.9 46.3 37.0	1.3
74.2 22.9 21.4	74.3 23.2 20.9	0.6
50.0 -65.0 27.0	52.1 -48.7 30.3	16.8
62.1 -39.8 21.0	62.5 -40.3 21.8	1.1
77.0 -19.1 11.0	76.7 -18.5 10.6	0.7
71.2 18.9 17.3	71.3 19.2 16.6	0.7
71.2 22.1 73.1	71.5 22.0 73.0	0.3
47.7 71.2 16.2	48.6 69.8 15.7	1.8
38.0 55.4 -20.9	38.4 54.8 -20.6	0.8
73.7 -22.8 67.6	73.8 -23.2 67.0	0.7
52.3 -52.3 -20.1	54.7 -34.0 -15.2	19.2
43.3 -17.0 -48.6	44.5 -9.9 -45.8	7.7
95.0 0.0 -2.0	95.0 0.1 -2.4	0.4
88.5 -0.4 -3.1	88.5 -0.5 -4.0	0.9
82.0 -0.9 -4.1	81.7 -0.4 -4.1	0.5
67.7 -2.0 -4.4	67.7 -1.8 -4.8	0.4
52.2 -2.5 -3.5	52.3 -2.6 -3.4	0.2
37.5 -3.9 -3.1	37.9 -3.6 -3.4	0.5
26.3 -6.8 -3.4	26.9 -6.8 -3.3	0.6
Average		2.2
Gamut-Volume		93 %

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	114.17 119.73 116.77	85 85 170	22.10 19.09 51.07
0 0 0	0.13 0.13 0.22	85 170 170	37.12 49.02 55.21
12 12 12	0.57 0.59 0.68	170 85 170	40.27 28.19 52.12
25 25 25	1.87 1.95 1.96	170 170 85	48.97 55.36 21.62
38 38 38	3.86 4.05 3.90	0 131 209	25.88 31.45 74.69
51 51 51	6.56 6.87 6.61	39 160 222	35.01 44.30 85.44
63 63 63	9.44 9.89 9.58	138 194 233	59.25 67.15 95.13
76 76 76	13.11 13.73 13.49	204 24 102	39.74 20.70 21.87
89 89 89	17.26 18.05 17.74	213 91 143	51.25 35.04 40.27
102 102 102	21.93 22.96 22.52	223 156 190	69.72 60.30 66.73
114 114 114	26.95 28.26 27.59	241 217 0	80.12 88.21 11.37
127 127 127	32.61 34.22 33.58	240 222 85	83.75 91.92 26.33
140 140 140	38.90 40.71 39.78	237 228 157	89.48 96.67 55.28
153 153 153	45.54 47.73 46.73	176 82 62	34.23 25.37 11.12
165 165 165	52.18 54.71 53.49	117 66 56	18.14 14.72 8.52
178 178 178	59.71 62.55 61.10	112 34 30	13.66 8.60 3.18
191 191 191	67.41 70.63 68.72	115 31 64	15.23 9.02 9.65
204 204 204	76.53 80.21 78.07	119 101 32	22.01 23.05 5.51
216 216 216	84.53 88.61 87.65	0 76 44	5.88 10.39 5.77
229 229 229	94.13 98.71 96.44	0 77 98	8.33 11.51 19.18
242 242 242	104.05 109.08 106.65	38 35 67	4.70 4.04 9.78
0 0 128	5.20 2.09 29.06	215 216 220	84.75 88.75 90.14
0 0 255	18.10 7.13 102.53	194 195 199	70.16 73.34 74.09
0 128 0	12.72 25.12 3.91	152 153 155	45.51 47.71 47.85
0 128 128	17.86 27.28 32.70	110 110 112	25.33 26.44 26.55
0 170 255	39.31 49.48 107.94	68 68 69	10.86 11.34 11.27
0 255 0	45.01 88.96 13.02	30 30 30	2.57 2.68 2.61
0 255 170	53.07 91.71 59.94	43 35 108	7.35 5.12 22.22
0 255 255	62.36 95.17 113.48	83 70 139	17.42 14.50 35.58
85 85 85	15.95 16.69 16.39	140 131 184	41.01 38.76 60.85
128 0 0	15.34 7.90 0.82	200 31 26	35.78 19.57 3.63
128 0 128	20.61 9.96 30.44	211 87 61	45.06 31.74 11.49
128 128 0	27.64 32.29 4.41	223 151 126	63.28 56.07 35.82
128 128 128	32.95 34.50 33.89	0 123 54	13.07 24.14 9.66
128 128 255	45.88 39.67 107.07	59 151 92	23.88 37.10 21.40
128 255 128	64.49 96.94 42.59	142 187 153	50.34 61.15 48.57
170 0 255	43.96 20.32 104.56	203 145 126	55.94 50.77 35.10
170 170 170	55.07 57.71 56.52	223 142 18	56.56 50.68 7.03
170 255 0	69.56 100.12 13.81	203 28 72	38.09 20.33 12.83
170 255 255	87.20 106.52 115.61	138 31 105	22.32 12.36 21.86
255 0 0	53.76 27.52 2.20	147 178 32	42.71 55.10 10.03
255 0 170	62.82 31.05 52.97	0 127 140	18.60 27.36 37.59
255 0 255	71.92 34.58 106.36	0 93 168	15.52 17.46 49.37
255 128 128	70.89 53.45 36.11	235 237 242	100.20 104.95 106.17
255 170 0	73.69 67.71 8.13	211 215 222	83.41 87.65 91.19
255 170 255	91.79 74.86 110.89	188 193 201	68.19 71.63 75.05
255 255 0	96.41 113.19 14.63	141 149 157	42.38 45.03 48.35
255 255 170	104.97 116.14 64.12	99 107 111	22.73 24.44 25.93
170 85 85	34.14 25.81 17.25	63 72 75	10.96 12.00 12.99
85 170 85	30.99 46.58 20.68	37 50 52	5.19 6.07 6.71