

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2010-8-10 19:33:59
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name: DELL U2311H
EDID-Serial: N0WV703O0CVL
Profile: C:/Windows/system32/spool/drivers/color/dell_u2311h_u-dact.icc
Created: 2010-8-10 19:24
Measurement device: DTP94-LCD mode

Summary

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

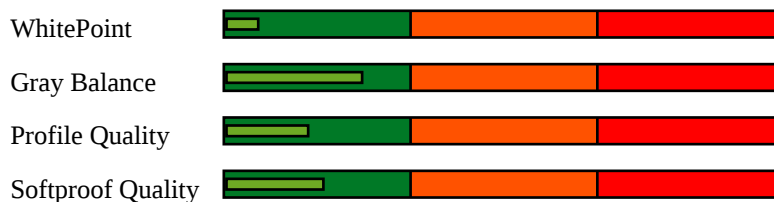
Calibration

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:	114.50 119.96 117.53
XYZ (normalized):	95.45 100.00 97.98
Luminance:	120.0 Cd/m2
Next Temperature:	5821 Kelvin
Assumed Target Whitepoint:	5800 Kelvin
Distance to assumed Target Whitepoint:	0.3 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:	0.6 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	5882	0.29	2.18	0.56	
5	5242	0.89	6.70	1.22	1.78
10	5972	2.04	13.83	0.43	1.83
15	5817	4.07	21.55	0.47	1.82
20	5881	6.75	28.45	0.38	1.81
25	5762	9.96	34.61	0.67	1.82
30	5816	13.71	40.29	0.11	1.82
35	5852	18.19	45.86	0.38	1.81
40	5856	23.07	50.96	0.35	1.81
45	5795	28.36	55.73	0.34	1.81
50	5833	34.48	60.55	0.40	1.81
55	5811	41.04	65.13	0.28	1.81
60	5780	47.80	69.36	0.32	1.81
65	5808	54.68	73.27	0.24	1.83
70	5807	62.74	77.46	0.18	1.83
75	5807	71.68	81.70	0.15	1.80
80	5803	80.29	85.47	0.22	1.80
85	5801	89.31	89.13	0.66	1.84
90	5829	98.93	92.78	0.53	1.86
95	5801	109.27	96.45	0.42	1.87
100	5821	119.96	100.00	0.00	
Average	5824			0.34	1.82
Range				1.04	
Max				0.67	

Tone values = 95.7%

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	2.2 -0.5 0.3	-2.2 0.5 -0.3	2.3
0 0 128	16.3 34.8 -70.1	-0.4 1.2 -1.5	1.9
0 0 255	32.2 54.5 -108.3	-0.0 -0.1 0.1	0.1
0 128 0	50.8 -55.6 51.8	0.1 -0.7 1.2	1.4
0 128 128	53.4 -38.0 -11.3	-0.1 0.2 -0.7	0.8
0 170 255	68.9 -27.1 -48.7	-0.0 0.0 0.0	0.0
0 255 0	85.3 -85.0 80.4	-0.1 -0.1 -0.2	0.2
0 255 170	87.0 -70.7 16.8	-0.1 0.2 -0.9	0.9
0 255 255	88.8 -57.2 -17.9	-0.1 0.1 -0.3	0.3
85 85 85	44.2 0.1 0.1	-0.2 -0.1 -0.1	0.3
128 0 0	33.3 51.0 46.1	-0.1 0.9 2.5	2.6
128 0 128	37.3 56.8 -35.4	0.1 0.2 -0.1	0.2
128 128 0	58.8 -8.4 62.1	0.1 -0.2 0.9	1.0
128 128 128	60.9 -0.3 0.2	-0.2 0.2 -0.2	0.4
128 128 255	65.2 16.3 -54.1	-0.3 0.5 -0.3	0.6
128 255 128	90.0 -50.3 40.0	-0.1 -0.2 -0.1	0.3
170 0 255	51.5 73.4 -75.8	0.2 -0.2 0.5	0.6
170 170 170	74.9 -0.1 0.1	0.0 0.1 -0.1	0.1
170 255 0	91.3 -42.5 88.1	-0.0 -0.2 -0.1	0.2
170 255 255	94.4 -24.4 -8.8	0.0 -0.2 -0.1	0.2
255 0 0	58.6 78.6 74.9	-0.2 -0.2 -0.2	0.3
255 0 170	61.6 82.8 -18.5	0.0 -0.4 -0.1	0.4
255 0 255	64.6 86.8 -54.0	0.1 -0.5 0.3	0.6
255 128 128	74.9 42.6 21.8	-0.2 0.1 0.2	0.3
255 170 0	80.9 21.6 85.0	0.1 -0.7 -0.1	0.7
255 170 255	84.8 33.7 -22.6	-0.1 -0.0 0.0	0.1
255 255 0	97.2 -12.9 96.0	-0.0 -0.2 -0.6	0.6
255 255 170	98.5 -6.2 34.0	0.0 -0.3 -0.0	0.3
255 255 255	100.0 0.0 0.0	0.0 -0.0 0.0	0.0
170 85 85	55.1 33.4 17.0	-0.1 0.2 0.4	0.4
85 170 85	67.0 -39.4 31.1	-0.0 -0.4 0.3	0.5
85 85 170	47.5 13.1 -42.2	-0.1 0.1 -0.6	0.7
85 170 170	68.8 -28.2 -9.5	0.0 -0.2 -0.4	0.4
170 85 170	57.5 39.7 -25.9	-0.0 0.3 -0.3	0.4
170 170 85	73.3 -7.0 40.4	0.0 -0.1 0.5	0.6
Average			0.6
Maximum			2.6

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	94 %
sRGB	96 %
AdobeRGB	80 %
ECI-RGB v1.0	76 %

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 -21.9 -45.0	16.2
66.9 -24.7 -37.1	66.9 -24.7 -37.1	0.0
79.7 -12.5 -21.8	79.9 -12.9 -21.1	0.8
48.0 74.0 -3.0	49.7 69.6 -0.8	5.2
60.8 50.6 -6.7	60.7 50.2 -6.9	0.4
76.4 25.8 -6.9	76.3 25.7 -7.4	0.5
89.0 -5.0 93.0	88.8 -4.2 89.0	4.1
90.3 -4.7 62.6	90.3 -4.4 61.9	0.8
92.2 -3.5 31.1	92.3 -3.9 31.2	0.5
53.1 37.7 28.9	53.1 37.5 28.3	0.6
41.5 22.7 16.8	42.0 22.5 17.1	0.7
31.9 40.0 24.0	32.3 39.3 22.4	1.8
32.5 44.4 -1.8	32.9 43.6 -1.4	1.1
51.3 1.3 44.5	51.3 1.4 43.9	0.7
34.6 -36.4 13.9	35.1 -35.5 14.0	1.1
36.0 -26.2 -20.9	36.8 -22.9 -19.2	3.8
20.9 9.6 -23.6	21.6 8.8 -22.4	1.6
89.0 0.0 -1.8	89.1 -0.4 -1.2	0.8
82.8 0.0 -1.7	82.9 0.0 -1.6	0.2
69.3 0.0 -1.4	69.3 -0.0 -0.9	0.5
54.1 0.0 -1.0	54.3 0.5 -1.0	0.5
36.6 -0.0 -0.5	37.0 -0.1 -0.0	0.7
16.0 0.0 0.0	17.2 -0.1 0.1	1.2
24.0 22.0 -46.0	24.4 21.3 -45.2	1.1
40.9 17.9 -36.6	41.2 17.3 -35.7	1.2
63.7 10.3 -23.8	63.9 10.1 -23.6	0.3
47.0 68.0 48.0	47.6 66.8 47.0	1.7
58.5 47.1 37.9	58.4 46.9 37.5	0.4
74.2 22.9 21.4	74.2 22.6 21.2	0.4
50.0 -65.0 27.0	51.6 -51.6 29.1	13.7
62.1 -39.8 21.0	62.2 -39.1 20.8	0.8
77.0 -19.1 11.0	77.1 -18.9 11.6	0.6
71.2 18.8 17.3	71.2 18.9 16.8	0.5
71.2 22.2 73.1	71.3 22.1 72.4	0.7
47.7 71.2 16.2	48.9 68.5 17.4	3.1
38.0 55.4 -20.9	38.2 54.7 -21.1	0.7
73.7 -22.8 67.6	73.6 -22.2 66.6	1.1
52.3 -52.3 -20.2	54.7 -36.7 -15.6	16.5
43.3 -17.0 -48.6	44.7 -11.8 -45.7	6.2
95.0 0.0 -2.0	95.1 -0.6 -1.7	0.7
88.5 -0.4 -3.1	88.8 -0.6 -3.0	0.3
82.0 -0.9 -4.1	82.1 -0.9 -3.7	0.4
67.7 -2.0 -4.4	67.6 -1.5 -4.6	0.6
52.2 -2.5 -3.5	52.3 -2.7 -3.6	0.3
37.5 -3.9 -3.1	37.6 -3.5 -3.5	0.5
26.3 -6.8 -3.4	26.5 -6.0 -4.1	1.0
Average		2.1
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	114.50 119.96 117.53	85 85 170	22.56 19.96 51.41
0 0 0	0.26 0.29 0.26	85 170 170	35.64 47.17 55.44
12 12 12	0.86 0.89 0.78	170 85 170	41.99 30.51 52.39
25 25 25	1.94 2.04 2.05	170 170 85	48.57 54.53 21.37
38 38 38	3.86 4.07 3.93	0 133 209	25.37 31.52 75.32
51 51 51	6.45 6.75 6.71	51 162 222	35.16 44.33 85.80
63 63 63	9.46 9.96 9.56	141 195 233	59.76 68.10 95.20
76 76 76	13.08 13.71 13.40	197 0 103	39.85 21.42 21.94
89 89 89	17.29 18.19 17.79	207 80 143	50.53 34.47 39.76
102 102 102	22.04 23.07 22.80	219 152 191	69.74 60.38 68.11
114 114 114	27.16 28.36 27.82	239 219 0	79.81 87.73 10.92
127 127 127	32.80 34.48 33.65	239 224 85	83.75 91.79 25.98
140 140 140	39.12 41.04 40.02	237 230 157	89.61 97.23 55.09
153 153 153	45.71 47.80 46.62	172 76 63	33.95 25.06 11.02
165 165 165	52.29 54.68 53.62	115 64 56	18.31 14.89 8.38
178 178 178	59.87 62.74 61.27	109 27 31	13.63 8.51 3.34
191 191 191	68.42 71.68 70.04	111 22 64	15.01 8.90 9.33
204 204 204	76.76 80.29 78.62	118 102 32	22.15 23.26 5.45
216 216 216	85.03 89.31 86.73	4 79 44	5.71 10.26 5.92
229 229 229	94.15 98.93 96.53	0 79 98	8.19 11.47 19.73
242 242 242	104.18 109.27 106.42	38 34 67	4.74 4.13 9.77
0 0 128	5.61 2.82 29.37	215 216 220	85.08 89.35 89.22
0 0 255	19.37 9.46 103.66	194 195 199	71.08 74.41 74.98
0 128 0	11.09 22.91 3.57	152 153 155	45.60 47.76 47.60
0 128 128	16.68 25.88 32.91	110 110 112	25.64 26.71 26.84
0 170 255	37.74 47.81 109.19	68 68 69	10.91 11.45 11.22
0 255 0	38.43 79.90 11.73	30 30 30	2.67 2.80 2.73
0 255 170	47.54 84.31 60.69	42 31 108	7.34 5.21 22.37
0 255 255	57.61 89.23 114.91	82 67 139	17.47 14.58 35.77
85 85 85	16.02 16.77 16.39	140 129 184	41.49 39.38 61.81
128 0 0	16.39 9.00 0.87	194 0 28	35.45 19.27 3.65
128 0 128	21.94 11.63 30.47	206 78 61	44.65 31.21 11.01
128 128 0	27.50 31.87 4.22	219 148 126	62.96 56.01 35.54
128 128 128	33.26 34.93 34.09	0 128 53	12.36 23.74 9.67
128 128 255	47.07 41.78 107.85	67 155 92	24.01 36.85 21.69
128 255 128	60.54 91.51 42.36	145 190 152	50.93 61.99 48.35
170 0 255	46.54 24.14 104.88	200 143 126	55.73 50.64 34.97
170 170 170	55.09 57.75 56.46	219 139 19	56.42 50.54 6.86
170 255 0	65.83 94.60 12.80	197 0 73	38.12 20.60 12.51
170 255 255	85.06 103.89 116.16	134 13 106	22.13 12.18 22.24
255 0 0	57.33 31.12 2.33	149 181 30	42.89 54.91 9.66
255 0 170	66.45 35.45 52.10	0 131 140	18.17 27.45 38.24
255 0 255	76.45 40.30 106.14	0 93 168	15.34 17.55 50.01
255 128 128	74.09 57.12 36.11	236 237 242	100.34 105.45 106.01
255 170 0	75.47 69.00 7.88	212 215 222	84.17 88.41 90.94
255 170 255	94.86 78.85 111.67	188 193 201	69.08 72.72 75.99
255 255 0	95.36 110.61 13.80	142 149 157	42.47 44.94 48.36
255 255 170	104.62 115.03 63.88	99 107 111	22.86 24.57 26.31
170 85 85	35.48 27.33 17.31	63 72 75	10.83 11.85 12.94
85 170 85	29.09 43.96 20.44	38 50 52	5.13 5.91 6.79