

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2009-1-8 10:31:15
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
Profile: C:/Windows/system32/spool/.../08.01.09-6500K-sRGB-130cd-trc.icc
Created: 2009-1-8 10:24
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	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:	123.76 130.50 142.40
XYZ (normalized):	94.83 100.00 109.12
Luminance:	130.5 Cd/m2
Next Temperature:	6542 Kelvin
Assumed Target Whitepoint:	6500 Kelvin
Distance to assumed Target Whitepoint:	0.4 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:	0.4 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	7302	0.20	1.38	0.37	
5	6462	0.70	4.85	0.42	1.86
10	6510	1.40	9.58	0.50	2.04
15	6480	2.80	16.23	0.16	2.07
20	6550	4.50	21.76	0.21	2.12
25	6542	6.70	27.11	0.00	2.16
30	6542	9.60	32.60	0.00	2.18
35	6534	13.20	38.05	0.30	2.20
40	6534	17.40	43.26	0.33	2.21
45	6534	21.90	47.98	0.35	2.25
50	6542	27.50	53.03	0.00	2.26
55	6542	34.20	58.23	0.00	2.25
60	6542	41.80	63.37	0.00	2.24
65	6487	49.20	67.80	0.41	2.27
70	6542	58.10	72.58	0.00	2.27
75	6534	68.00	77.34	0.51	2.28
80	6542	78.60	81.96	0.00	2.28
85	6487	89.40	86.26	0.50	2.33
90	6487	101.70	90.75	0.52	2.37
95	6542	115.10	95.24	0.00	2.45
100	6542	130.50	100.00	0.00	
Average	6527			0.20	2.22
Range				1.01	
Max				0.52	

Tone values = 95.3%

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	1.4 0.1 -0.3	-1.4 -0.1 0.3	1.4
0 0 128	14.0 33.4 -63.7	0.3 -1.2 0.4	1.3
0 0 255	34.9 51.0 -104.9	-0.4 2.6 -0.5	2.7
0 128 0	43.2 -71.9 46.4	0.1 0.3 1.1	1.2
0 128 128	45.5 -47.4 -13.7	0.3 0.2 0.8	0.9
0 170 255	64.3 -31.4 -57.2	-0.1 1.5 0.4	1.5
0 255 0	82.9 -119.4 79.8	-0.1 -0.0 -0.6	0.6
0 255 170	84.4 -100.2 19.4	0.1 -0.6 0.4	0.7
0 255 255	87.0 -79.4 -22.1	0.0 0.6 0.6	0.9
85 85 85	36.5 -0.4 0.3	-0.4 0.4 -0.3	0.7
128 0 0	30.5 53.9 45.8	0.1 -0.2 2.2	2.2
128 0 128	34.3 58.5 -28.4	0.1 -1.3 -0.6	1.4
128 128 0	51.7 -9.5 58.1	-0.1 1.1 1.2	1.6
128 128 128	53.4 0.0 0.0	0.1 0.0 -0.0	0.1
128 128 255	60.2 21.1 -62.9	-0.3 0.9 -0.3	1.0
128 255 128	87.0 -76.2 45.2	-0.0 -0.6 0.0	0.6
170 0 255	52.5 75.7 -75.0	-0.3 0.4 -0.4	0.7
170 170 170	69.6 -0.3 0.3	-0.0 0.3 -0.3	0.4
170 255 0	88.9 -61.9 88.2	-0.0 0.2 -0.4	0.5
170 255 255	92.7 -38.4 -12.2	-0.1 0.0 0.1	0.1
255 0 0	61.4 90.7 85.6	0.2 -1.2 -0.1	1.2
255 0 170	64.0 93.5 -4.8	0.4 -1.5 -0.5	1.6
255 0 255	68.1 95.5 -48.2	0.1 -0.1 -0.2	0.2
255 128 128	72.8 59.5 31.3	0.1 -0.1 0.0	0.2
255 170 0	79.0 34.7 89.3	-0.1 0.7 -0.4	0.8
255 170 255	83.7 46.4 -24.7	-0.2 0.7 0.1	0.8
255 255 0	96.7 -14.2 99.7	-0.0 0.2 -0.8	0.8
255 255 170	98.0 -7.6 41.5	0.1 -0.5 0.0	0.5
255 255 255	100.0 -0.0 0.0	-0.0 0.0 -0.0	0.0
170 85 85	50.3 42.7 22.6	-0.3 0.2 -0.2	0.4
85 170 85	60.4 -55.7 32.5	-0.3 0.2 0.1	0.4
85 85 170	40.8 15.6 -45.1	-0.1 0.1 -0.6	0.6
85 170 170	62.5 -39.6 -11.8	-0.1 -0.2 -0.1	0.2
170 85 170	53.0 48.7 -24.7	-0.1 -0.1 -0.4	0.4
170 170 85	68.0 -8.3 44.3	-0.2 0.4 0.2	0.5
Average			0.8
Maximum			2.7

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	99 %
sRGB	97 %
AdobeRGB	96 %
ECI-RGB v1.0	90 %

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	55.8 -30.3 -48.4	7.0
66.9 -24.7 -37.1	66.8 -24.9 -37.0	0.2
79.7 -12.5 -21.8	79.9 -13.3 -21.5	0.9
48.0 74.0 -3.0	47.8 74.6 -2.7	0.7
60.8 50.6 -6.7	60.7 50.8 -7.3	0.6
76.4 25.8 -6.9	76.5 25.7 -6.6	0.3
89.0 -5.0 93.0	88.8 -4.8 93.1	0.3
90.3 -4.7 62.6	90.2 -4.1 62.8	0.7
92.2 -3.5 31.1	91.8 -3.2 31.1	0.5
53.1 37.7 28.9	53.5 37.5 29.4	0.7
41.5 22.7 16.8	41.7 22.2 16.2	0.8
31.9 40.0 24.0	32.2 39.0 23.1	1.4
32.5 44.5 -1.8	32.8 44.0 -1.4	0.6
51.3 1.3 44.5	51.4 0.7 43.4	1.2
34.6 -36.4 13.9	34.9 -36.5 13.5	0.5
36.0 -26.2 -20.9	36.2 -26.3 -20.7	0.3
20.9 9.6 -23.6	21.5 9.5 -23.0	0.9
89.0 0.0 -1.9	88.7 0.7 -1.7	0.8
82.8 0.0 -1.7	82.7 -0.2 -1.5	0.3
69.3 0.0 -1.4	69.2 -0.5 -1.0	0.6
54.1 0.0 -1.0	54.0 0.5 -1.2	0.5
36.6 0.0 -0.5	36.9 0.2 -0.4	0.4
16.0 0.0 0.0	17.0 -0.1 0.1	1.0
24.0 22.0 -46.0	24.2 22.1 -45.3	0.7
40.9 17.9 -36.6	41.1 18.6 -36.9	0.8
63.7 10.3 -23.8	63.7 10.7 -23.8	0.4
47.0 68.0 48.0	47.0 68.7 47.0	1.2
58.5 47.1 37.9	58.6 46.7 38.2	0.6
74.2 22.9 21.4	74.3 23.1 21.3	0.2
50.0 -65.0 27.0	50.2 -65.5 26.9	0.5
62.1 -39.8 21.0	62.4 -40.3 21.0	0.6
77.0 -19.1 11.0	76.8 -19.1 11.1	0.2
71.2 18.9 17.3	71.3 18.5 17.3	0.3
71.2 22.1 73.1	71.5 22.1 72.6	0.6
47.7 71.2 16.2	47.7 72.0 16.2	0.8
38.0 55.4 -20.9	38.1 55.9 -20.3	0.9
73.7 -22.8 67.6	73.7 -23.4 67.1	0.8
52.3 -52.3 -20.1	52.4 -49.3 -20.1	3.0
43.3 -17.0 -48.6	43.2 -16.5 -49.4	1.0
95.0 0.0 -2.0	95.0 -0.2 -1.7	0.4
88.5 -0.4 -3.1	88.3 0.1 -3.0	0.5
82.0 -0.9 -4.1	81.9 -0.6 -3.9	0.4
67.7 -2.0 -4.4	67.7 -2.1 -3.9	0.5
52.2 -2.5 -3.5	52.1 -2.4 -3.4	0.2
37.5 -3.9 -3.1	37.6 -4.3 -3.2	0.4
26.3 -6.8 -3.4	26.4 -6.3 -3.6	0.6
Average		0.8
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	123.76 130.50 142.40	85 85 170	19.12 15.80 52.38
0 0 0	0.19 0.20 0.25	85 170 170	27.37 41.00 56.63
12 12 12	0.68 0.70 0.78	170 85 170	41.71 27.40 53.21
25 25 25	1.34 1.40 1.55	170 170 85	42.14 49.00 17.75
38 38 38	2.66 2.80 3.03	0 148 216	24.56 32.10 91.27
51 51 51	4.28 4.50 4.94	96 175 227	39.03 48.60 103.71
63 63 63	6.35 6.70 7.31	168 205 237	65.28 74.50 116.23
76 76 76	9.10 9.60 10.48	189 0 123	41.76 21.10 25.80
89 89 89	12.48 13.20 14.32	201 104 161	54.75 37.30 48.70
102 102 102	16.45 17.40 18.88	217 170 202	75.73 65.90 81.76
114 114 114	20.71 21.90 23.76	242 227 0	84.06 94.90 11.22
127 127 127	26.08 27.50 30.01	242 231 107	88.66 98.90 30.28
140 140 140	32.43 34.20 37.32	240 235 174	95.09 104.10 65.69
153 153 153	39.64 41.80 45.61	175 99 81	36.66 27.40 13.12
165 165 165	46.81 49.20 53.54	126 83 73	19.20 15.80 10.28
178 178 178	55.10 58.10 63.40	118 42 42	14.42 9.10 3.89
191 191 191	64.29 68.00 73.77	119 36 81	16.09 9.50 11.23
204 204 204	74.54 78.60 85.77	135 122 46	23.47 25.30 6.71
216 216 216	85.05 89.40 97.28	42 96 58	5.98 11.10 7.21
229 229 229	96.75 101.70 110.66	28 96 117	8.43 12.20 24.22
242 242 242	109.15 115.10 125.60	48 45 85	5.29 4.50 12.06
0 0 128	5.41 2.60 27.60	223 223 227	91.57 96.00 107.82
0 0 255	24.87 12.60 128.32	205 206 209	76.21 80.40 90.02
0 128 0	5.64 17.40 2.82	168 169 171	48.85 51.70 57.55
0 128 128	10.88 19.80 30.43	129 129 131	27.38 28.70 32.23
0 170 255	35.36 45.00 133.93	86 86 87	11.79 12.40 13.73
0 255 0	26.47 81.20 12.10	40 40 40	2.84 3.00 3.25
0 255 170	36.47 85.60 64.01	51 41 126	8.32 5.70 26.98
0 255 255	51.17 93.20 141.52	97 84 156	19.58 15.90 44.42
85 85 85	11.41 12.10 13.05	155 147 196	45.20 42.60 74.79
128 0 0	15.59 8.00 0.65	188 29 41	37.47 20.00 4.26
128 0 128	21.14 10.60 27.48	201 103 80	47.72 33.80 13.16
128 128 0	21.14 25.60 3.36	217 167 146	67.84 60.80 43.11
128 128 128	26.55 28.00 30.55	34 145 70	10.19 24.40 11.53
128 128 255	46.52 38.30 131.56	108 170 112	25.64 40.40 26.20
128 255 128	47.60 91.60 40.41	170 201 169	54.23 66.80 58.54
170 0 255	54.55 27.70 129.20	203 162 145	59.70 55.00 41.99
170 170 170	49.64 52.50 56.95	217 160 35	60.20 54.90 8.27
170 255 0	55.34 95.90 12.97	190 17 92	40.09 20.80 14.75
170 255 255	80.79 108.60 141.71	139 29 124	24.17 13.10 26.33
255 0 0	72.46 36.90 2.12	173 194 47	45.07 59.70 11.38
255 0 170	82.32 41.60 52.35	0 147 157	15.86 27.40 46.87
255 0 255	97.14 49.40 129.43	0 110 182	15.61 18.10 62.06
255 128 128	83.29 57.20 32.32	240 241 244	108.34 114.30 127.97
255 170 0	82.79 70.00 7.03	220 222 228	90.20 94.90 108.71
255 170 255	108.20 82.70 135.98	201 204 211	74.34 78.50 91.71
255 255 0	98.58 118.20 14.08	160 166 172	45.98 49.20 58.09
255 255 170	108.91 122.90 65.76	120 126 130	24.60 26.50 31.45
170 85 85	34.12 23.80 13.76	82 90 93	11.62 12.90 15.54
85 170 85	19.63 37.40 17.03	53 65 67	5.50 6.40 8.03