

# UGRA

## Display Analysis & Certification Tool

### Report

#### Basics

Date: 2011-5-10 21:32:45  
Report-Version: v1.3.1  
Monitor-Name: \\.\DISPLAY1  
Profile: C:/Windows/system32/spool/drivers/color/10.rc.icc  
Created: 2011-5-10 21:22  
Measurement device: DTP94-LCD mode (Wide Gamut S-PVA (generic))

#### 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:	113.52 119.50 130.27
XYZ (normalized):	95.00 100.00 109.00
Luminance:	119.5 Cd/m2
Next Temperature:	6516 Kelvin
Assumed Target Whitepoint:	6500 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:	0.3 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	8879	0.11	0.81	0.32	
5	7208	0.47	3.54	1.69	1.97
10	7115	1.04	7.88	2.15	2.12
15	6562	1.93	13.30	1.20	2.22
20	6659	3.59	20.05	0.83	2.20
25	6389	5.71	26.10	0.83	2.22
30	6551	8.48	32.03	0.78	2.21
35	6371	11.76	37.55	0.63	2.22
40	6516	16.01	43.36	0.03	2.20
45	6369	20.53	48.49	0.67	2.22
50	6427	25.99	53.76	0.44	2.21
55	6466	32.19	58.91	0.51	2.20
60	6504	39.30	64.07	0.39	2.19
65	6498	46.28	68.55	0.10	2.21
70	6505	54.87	73.49	0.71	2.20
75	6490	63.86	78.13	0.26	2.18
80	6537	73.99	82.87	0.19	2.15
85	6513	83.48	86.93	0.18	2.22
90	6507	95.04	91.47	0.20	2.17
95	6475	107.12	95.85	0.51	2.12
100	6516	119.50	100.00	0.00	
Average	6492			0.47	2.18
Range				1.67	
Max				1.20	

Tone values = 94.6%

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	0.8 -0.1 -0.3	-0.8 0.1 0.3	0.9
0 0 128	14.2 30.9 -63.6	0.5 -2.8 0.7	3.0
0 0 255	35.9 43.6 -103.3	-1.0 3.0 -1.0	3.3
0 128 0	43.5 -75.1 45.8	-0.0 1.3 0.4	1.4
0 128 128	45.9 -50.5 -13.8	0.3 -0.1 0.7	0.8
0 170 255	65.1 -38.1 -55.7	-0.4 1.8 -0.2	1.8
0 255 0	82.4 -122.1 77.8	0.2 -0.2 -1.1	1.2
0 255 170	84.2 -103.5 18.0	0.3 -0.8 0.3	0.9
0 255 255	86.9 -84.1 -21.7	0.0 0.2 0.1	0.2
85 85 85	35.6 0.8 0.2	0.3 -0.8 -0.2	0.8
128 0 0	31.0 56.4 47.0	-0.1 -0.3 1.9	1.9
128 0 128	34.9 59.8 -28.4	0.1 -1.8 -0.2	1.8
128 128 0	52.2 -8.2 58.0	-0.2 0.9 0.5	1.1
128 128 128	54.2 0.4 -0.1	-0.2 -0.4 0.1	0.4
128 128 255	61.2 17.8 -61.3	-0.8 0.9 -0.8	1.5
128 255 128	86.9 -76.2 43.5	0.1 -1.4 0.3	1.4
170 0 255	53.4 73.9 -73.3	-0.7 0.7 -0.7	1.2
170 170 170	70.4 -0.0 0.3	-0.2 0.0 -0.3	0.3
170 255 0	88.8 -60.3 86.8	0.1 -0.3 -1.0	1.1
170 255 255	92.9 -39.1 -12.0	-0.2 -0.7 -0.1	0.8
255 0 0	61.6 93.9 87.3	0.1 -0.9 -0.1	0.9
255 0 170	64.3 95.7 -5.3	0.2 -1.5 -0.1	1.5
255 0 255	68.7 95.8 -47.5	-0.3 0.2 0.0	0.4
255 128 128	73.4 61.2 31.2	-0.2 0.3 0.1	0.4
255 170 0	79.6 36.4 89.0	-0.4 1.1 -0.7	1.3
255 170 255	84.4 45.4 -23.4	-0.6 1.5 -0.4	1.6
255 255 0	96.6 -11.6 98.5	0.1 -0.4 -1.5	1.6
255 255 170	97.8 -6.0 40.2	0.2 -0.9 0.1	0.9
255 255 255	100.0 0.0 0.0	0.0 0.0 0.0	0.0
170 85 85	50.2 46.5 23.8	0.0 -0.7 -0.4	0.8
85 170 85	60.7 -58.8 33.2	-0.2 0.9 -0.6	1.1
85 85 170	40.4 15.8 -46.8	0.3 -1.8 0.5	1.8
85 170 170	63.0 -43.1 -12.0	-0.2 0.1 -0.2	0.2
170 85 170	53.2 51.3 -25.2	0.1 -1.3 0.1	1.3
170 170 85	68.5 -7.4 45.4	-0.3 0.6 -0.5	0.8
Average			1.2
Maximum			3.3

# Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	96 %
AdobeRGB	94 %
ECI-RGB v1.0	91 %

# 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	55.5 -32.6 -49.6	4.4
66.9 -24.7 -37.1	67.2 -25.0 -36.9	0.5
79.7 -12.5 -21.8	80.0 -12.7 -21.8	0.3
48.0 74.0 -3.0	48.3 74.9 -2.5	1.1
60.8 50.6 -6.7	61.2 50.7 -6.5	0.4
76.4 25.8 -6.9	76.6 25.4 -7.3	0.5
89.0 -5.0 93.0	89.2 -5.3 92.0	1.1
90.3 -4.7 62.6	90.5 -4.7 63.0	0.4
92.2 -3.5 31.1	92.2 -2.9 31.4	0.7
53.1 37.7 28.9	53.2 37.9 28.8	0.3
41.5 22.7 16.8	41.4 22.9 16.4	0.4
31.9 40.0 24.0	32.3 39.9 24.1	0.4
32.5 44.4 -1.8	32.6 45.0 -1.5	0.7
51.3 1.3 44.5	51.5 0.9 44.2	0.5
34.6 -36.4 13.9	34.7 -37.3 13.9	0.9
36.0 -26.2 -20.9	35.9 -25.5 -21.1	0.7
20.9 9.6 -23.6	20.9 9.6 -23.3	0.3
89.0 0.0 -1.8	89.2 0.3 -1.7	0.4
82.8 0.0 -1.7	83.2 -0.5 -1.6	0.7
69.3 0.0 -1.4	69.6 -0.4 -1.0	0.7
54.1 0.0 -1.0	54.2 0.6 -1.1	0.6
36.6 -0.0 -0.5	36.6 0.7 -0.4	0.7
16.0 0.0 0.0	16.4 -0.3 -0.0	0.5
24.0 22.0 -46.0	23.9 23.6 -46.0	1.6
40.9 17.9 -36.6	40.8 19.6 -37.0	1.8
63.7 10.3 -23.8	63.7 10.9 -24.1	0.7
47.0 68.0 48.0	47.0 68.1 47.8	0.3
58.5 47.1 37.9	58.9 46.4 38.1	0.8
74.2 22.9 21.4	74.2 22.7 21.6	0.3
50.0 -65.0 27.0	50.0 -65.4 26.0	1.0
62.1 -39.8 21.0	62.4 -40.0 21.2	0.4
77.0 -19.1 11.0	77.3 -19.7 11.4	0.7
71.2 18.8 17.3	71.3 18.6 17.2	0.3
71.2 22.2 73.1	71.5 21.1 72.8	1.2
47.7 71.2 16.2	48.0 71.9 16.8	0.9
38.0 55.4 -20.9	38.0 56.3 -20.9	0.9
73.7 -22.8 67.6	73.8 -23.0 67.5	0.2
52.3 -52.3 -20.2	52.0 -51.4 -21.0	1.3
43.3 -17.0 -48.6	43.3 -16.2 -49.0	0.9
95.0 0.0 -2.0	95.3 0.1 -2.0	0.3
88.5 -0.4 -3.1	88.7 -0.2 -2.9	0.3
82.0 -0.9 -4.1	82.4 -1.1 -3.8	0.6
67.7 -2.0 -4.4	67.9 -1.8 -4.3	0.3
52.2 -2.5 -3.5	52.3 -2.8 -3.5	0.4
37.5 -3.9 -3.1	37.3 -2.9 -2.8	1.0
26.3 -6.8 -3.4	26.2 -5.1 -4.4	1.9
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	113.52 119.50 130.27	85 85 170	17.26 14.17 48.89
0 0 0	0.10 0.11 0.14	85 170 170	24.80 38.24 52.93
12 12 12	0.40 0.47 0.48	170 85 170	39.35 25.26 49.46
25 25 25	0.93 1.04 1.12	170 170 85	39.67 45.70 16.09
38 38 38	1.78 1.93 2.03	0 145 216	21.79 29.04 84.38
51 51 51	3.35 3.59 3.89	102 172 227	36.29 45.14 95.83
63 63 63	5.39 5.71 6.04	168 202 236	60.41 68.45 107.27
76 76 76	7.98 8.48 9.15	186 17 122	39.06 19.77 23.95
89 89 89	11.25 11.76 12.69	198 105 159	50.90 34.77 44.52
102 102 102	15.21 16.01 17.46	215 169 201	69.67 60.66 76.03
114 114 114	19.57 20.53 22.02	239 228 0	77.60 87.74 10.89
127 127 127	24.77 25.99 28.11	239 231 105	81.66 91.28 27.92
140 140 140	30.72 32.19 35.10	239 235 172	88.40 96.38 60.50
153 153 153	37.24 39.30 42.60	171 100 82	33.43 24.82 12.10
165 165 165	43.98 46.28 50.35	124 85 74	17.53 14.29 9.18
178 178 178	51.89 54.87 59.31	116 48 46	13.39 8.35 3.40
191 191 191	60.78 63.86 69.56	117 42 82	14.82 8.62 10.21
204 204 204	70.20 73.99 80.74	133 122 48	21.61 23.22 5.96
216 216 216	79.23 83.48 90.84	47 96 60	5.32 10.02 6.37
229 229 229	90.39 95.04 103.66	39 95 116	7.65 10.95 22.06
242 242 242	102.08 107.12 116.65	52 48 86	4.67 3.95 10.79
0 0 128	4.84 2.42 25.40	222 222 226	84.98 89.19 99.97
0 0 255	22.16 12.16 117.48	204 205 208	70.93 74.87 83.81
0 128 0	5.03 16.21 2.75	167 168 170	45.58 48.12 53.50
0 128 128	9.84 18.51 28.41	128 128 130	25.40 26.55 29.71
0 170 255	31.48 42.36 122.02	87 87 88	10.72 11.17 12.33
0 255 0	23.20 73.25 11.58	44 44 44	2.47 2.61 2.86
0 255 170	32.23 77.75 59.62	56 43 126	7.66 5.11 24.79
0 255 255	45.19 85.21 128.61	98 84 155	17.85 14.30 40.20
85 85 85	10.08 10.51 11.39	154 145 195	41.59 39.06 68.86
128 0 0	15.13 7.57 0.58	184 42 45	34.20 18.34 3.75
128 0 128	20.12 10.01 25.72	197 105 81	44.09 31.31 12.27
128 128 0	20.14 23.96 3.24	214 166 144	61.87 55.52 39.05
128 128 128	25.26 26.49 28.96	44 143 71	9.29 22.16 10.77
128 128 255	42.95 36.43 120.56	109 168 111	23.61 37.00 23.89
128 255 128	43.60 83.62 38.32	169 200 167	50.38 62.14 54.13
170 0 255	50.69 26.33 117.84	200 161 144	54.93 50.48 38.59
170 170 170	46.81 49.29 53.42	213 160 37	54.76 50.27 7.46
170 255 0	51.32 87.55 12.44	186 33 93	37.23 19.40 13.51
170 255 255	74.07 99.87 129.74	136 35 124	22.11 11.91 24.32
255 0 0	68.49 34.11 1.81	171 194 47	41.70 54.88 10.32
255 0 170	77.43 38.60 48.95	0 144 156	13.91 24.59 42.93
255 0 255	90.67 46.23 118.94	29 107 181	14.38 16.63 56.51
255 128 128	78.53 53.36 30.37	239 240 244	100.40 105.48 118.53
255 170 0	78.07 65.20 6.80	219 221 227	83.62 87.98 100.54
255 170 255	100.30 77.31 124.05	200 203 210	69.05 73.07 85.05
255 255 0	91.63 107.70 13.29	159 164 171	42.53 45.29 53.80
255 255 170	100.49 111.96 61.26	119 125 129	22.69 24.50 29.09
170 85 85	32.17 21.62 12.03	84 90 93	10.68 11.63 13.86
85 170 85	17.63 34.60 15.45	57 67 69	5.10 5.81 7.50