

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2007-7-6 8:23:44
Report-Version: v1.2.1
Monitor-Name: \\.\DISPLAY1
Profile: C:/WINDOWS/System32/spool/DRIVERS/COLOR/Dell 06.07.07-5800K-18-120c
Created: 2007-7-6 8:14
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
Layout	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:	112.51 118.40 115.28
XYZ (normalized):	95.03 100.00 97.37
Luminance:	118.4 Cd/m2
Next Temperature:	5833 Kelvin
Assumed Target Whitepoint:	5800 Kelvin
Distance to assumed Target Whitepoint:	0.6 deltaE

Blackpoint

Luminance:	0.2 Cd/m2
Chromaticity:	1.9 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	8268	0.20	1.53	1.92	
5	6103	0.70	5.34	1.90	1.83
10	5652	2.00	13.76	0.66	1.83
15	5743	4.00	21.50	0.49	1.82
20	5698	6.60	28.31	0.78	1.81
25	5741	9.70	34.38	0.42	1.82
30	5741	13.50	40.25	0.47	1.82
35	5839	17.70	45.56	1.00	1.81
40	5739	22.90	51.08	0.69	1.81
45	5835	27.80	55.56	0.39	1.82
50	5837	33.50	60.15	0.83	1.82
55	5881	40.00	64.79	0.41	1.82
60	5787	47.30	69.43	0.41	1.80
65	5833	54.10	73.35	0.00	1.82
70	5835	61.80	77.40	0.51	1.82
75	5835	70.10	81.40	0.53	1.82
80	5789	78.80	85.28	0.89	1.82
85	5790	87.00	88.68	1.45	1.86
90	5837	96.70	92.43	1.18	1.87
95	5789	106.80	96.08	0.99	1.96
100	5833	118.40	100.00	0.00	
Average	5791			0.64	1.83
Range				1.80	

Tone values = 87.8%

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	1.5 1.0 -1.6	-1.5 -1.0 1.6	2.4
0 0 128	14.2 40.7 -71.5	-0.1 0.1 -0.4	0.5
0 0 255	29.5 62.2 -110.3	0.1 -0.5 1.5	1.6
0 128 0	51.1 -57.9 45.3	0.5 0.5 1.0	1.3
0 128 128	52.8 -39.0 -12.2	0.6 0.3 1.0	1.3
0 170 255	68.3 -28.0 -48.4	0.4 0.5 1.9	1.9
0 255 0	85.9 -88.6 72.1	0.3 1.8 -2.0	2.7
0 255 170	87.1 -73.4 15.0	0.4 1.3 0.2	1.3
0 255 255	88.6 -59.6 -18.2	0.5 1.1 1.3	1.8
85 85 85	44.4 0.2 -0.5	-0.4 -0.2 0.5	0.7
128 0 0	33.2 54.3 41.5	-0.5 -0.4 2.0	2.1
128 0 128	36.6 61.3 -33.7	-0.3 -0.9 -1.4	1.7
128 128 0	59.2 -9.5 55.2	-0.0 0.4 -0.1	0.4
128 128 128	60.6 0.3 0.1	0.1 -0.3 -0.1	0.4
128 128 255	64.3 18.3 -53.7	0.1 -0.3 1.0	1.0
128 255 128	90.4 -52.6 37.7	0.1 0.7 -0.8	1.1
170 0 255	50.2 79.4 -74.6	-0.1 -0.8 0.0	0.9
170 170 170	75.0 -0.4 0.3	-0.1 0.4 -0.3	0.5
170 255 0	91.9 -45.3 79.4	0.1 1.3 -2.5	2.8
170 255 255	94.5 -25.7 -8.7	0.1 0.4 0.4	0.6
255 0 0	57.9 82.4 69.6	-0.2 -1.0 -3.8	3.9
255 0 170	60.5 87.7 -17.0	-0.1 -1.3 -1.7	2.1
255 0 255	63.3 92.8 -53.0	-0.2 -1.4 -0.1	1.5
255 128 128	74.4 44.4 21.7	-0.1 -0.3 -1.3	1.3
255 170 0	81.4 20.7 77.7	-0.3 0.5 -3.4	3.5
255 170 255	84.5 34.9 -21.5	-0.2 0.2 -0.3	0.4
255 255 0	97.6 -14.1 87.1	-0.0 0.3 -3.7	3.7
255 255 170	98.7 -6.6 32.8	0.0 -0.2 -1.1	1.1
255 255 255	100.0 0.0 0.0	0.0 0.0 -0.0	0.0
170 85 85	55.0 35.0 16.2	-0.3 -0.3 -0.1	0.4
85 170 85	67.6 -41.3 28.9	-0.1 0.4 0.1	0.5
85 85 170	47.0 14.8 -41.6	-0.1 -0.5 0.1	0.5
85 170 170	69.1 -29.4 -9.3	-0.0 0.2 0.2	0.3
170 85 170	57.0 42.4 -25.2	-0.2 -0.4 -0.3	0.6
170 170 85	73.8 -8.0 37.9	-0.1 0.5 -0.2	0.5
Average			1.4
Maximum			3.9

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	56.8 -20.2 -47.7	17.1
66.9 -24.7 -37.1	66.8 -25.5 -37.9	1.1
79.7 -12.5 -21.8	79.2 -11.9 -23.3	1.8
48.0 74.0 -3.0	48.9 73.5 -0.0	3.2
60.8 50.6 -6.7	61.4 51.3 -5.6	1.5
76.4 25.8 -6.9	76.4 26.9 -6.7	1.1
89.0 -5.0 93.0	89.0 -4.5 81.1	11.9
90.3 -4.7 62.6	89.8 -4.3 63.9	1.5
92.2 -3.5 31.1	91.9 -3.4 31.9	0.8
53.1 37.7 28.9	53.4 37.7 29.3	0.5
41.5 22.7 16.8	41.9 23.1 17.5	0.9
31.9 40.0 24.0	32.5 40.5 23.3	1.1
32.5 44.5 -1.8	33.0 44.8 -1.2	0.8
51.3 1.3 44.5	51.5 0.9 44.7	0.4
34.6 -36.4 13.9	34.5 -37.1 12.4	1.6
36.0 -26.2 -20.9	36.0 -22.4 -21.2	3.8
20.9 9.6 -23.6	21.4 10.2 -23.5	0.7
89.0 0.0 -1.9	88.6 0.7 -1.8	0.8
82.8 0.0 -1.7	82.4 1.5 -2.4	1.7
69.3 0.0 -1.4	69.3 0.2 -1.6	0.3
54.1 0.0 -1.0	54.1 1.1 -1.3	1.2
36.6 0.0 -0.5	36.7 0.6 -1.1	0.8
16.0 0.0 0.0	17.3 -0.2 0.4	1.4
24.0 22.0 -46.0	24.3 21.5 -45.4	0.8
40.9 17.9 -36.6	41.1 18.2 -36.5	0.4
63.7 10.3 -23.8	63.1 11.0 -24.8	1.4
47.0 68.0 48.0	47.6 69.0 49.9	2.3
58.5 47.1 37.9	59.1 48.2 39.5	2.1
74.2 22.9 21.4	74.2 23.7 21.6	0.8
50.0 -65.0 27.0	50.7 -53.8 27.6	11.3
62.1 -39.8 21.0	62.0 -40.2 20.9	0.4
77.0 -19.1 11.0	76.6 -18.5 10.5	0.8
71.2 18.9 17.3	71.0 20.0 17.2	1.2
71.2 22.1 73.1	71.4 22.2 69.1	4.0
47.7 71.2 16.2	48.2 71.8 18.5	2.4
38.0 55.4 -20.9	38.3 56.3 -20.4	1.1
73.7 -22.8 67.6	73.5 -23.6 66.3	1.5
52.3 -52.3 -20.1	53.4 -35.7 -18.8	16.7
43.3 -17.0 -48.6	44.1 -10.1 -48.1	7.0
95.0 0.0 -2.0	94.6 0.3 -2.1	0.5
88.5 -0.4 -3.1	88.2 0.2 -3.0	0.6
82.0 -0.9 -4.1	81.7 -0.4 -4.5	0.7
67.7 -2.0 -4.4	67.2 -1.6 -4.7	0.7
52.2 -2.5 -3.5	52.3 -2.5 -4.0	0.5
37.5 -3.9 -3.1	37.7 -3.8 -3.5	0.5
26.3 -6.8 -3.4	26.6 -6.1 -3.9	0.9
Average		2.5
Gamut-Volume		91 %

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	112.51 118.40 115.28	85 85 170	21.99 19.20 48.95
0 0 0	0.22 0.20 0.31	85 170 170	34.98 47.00 54.65
12 12 12	0.70 0.70 0.79	170 85 170	41.47 29.50 49.93
25 25 25	1.93 2.00 1.94	170 170 85	48.07 54.60 22.84
38 38 38	3.84 4.00 3.89	0 133 214	24.25 29.80 74.95
51 51 51	6.35 6.60 6.41	50 162 226	34.24 43.70 85.12
63 63 63	9.25 9.70 9.33	141 195 236	58.02 65.90 95.02
76 76 76	12.87 13.50 12.99	196 0 104	39.32 20.30 20.30
89 89 89	16.97 17.70 17.54	206 85 145	51.14 34.80 38.79
102 102 102	21.77 22.90 21.90	219 154 192	69.26 59.70 66.14
114 114 114	26.50 27.80 27.23	241 218 0	78.82 87.10 14.04
127 127 127	32.02 33.50 33.01	240 222 69	81.15 89.30 23.68
140 140 140	38.01 40.00 39.30	238 229 151	87.48 95.00 52.67
153 153 153	45.09 47.30 45.92	172 78 60	33.82 25.00 10.63
165 165 165	51.41 54.10 52.68	115 65 54	18.02 14.60 8.05
178 178 178	58.90 61.80 60.53	109 29 29	13.77 8.50 3.18
191 191 191	66.81 70.10 68.66	111 26 65	15.03 8.80 9.13
204 204 204	75.33 78.80 76.95	119 101 22	21.80 23.10 5.21
216 216 216	83.42 87.00 85.46	7 77 42	5.25 9.80 5.94
229 229 229	92.43 96.70 95.28	0 78 99	7.71 10.80 19.65
242 242 242	102.10 106.80 104.29	37 34 69	4.69 4.00 9.83
0 0 128	5.23 2.30 27.32	215 216 220	82.95 86.80 87.06
0 0 255	18.15 7.90 97.39	194 195 199	69.50 72.30 73.38
0 128 0	10.74 22.90 4.85	152 153 156	44.87 47.10 47.38
0 128 128	15.79 25.00 32.31	110 110 112	25.09 26.10 26.25
0 170 255	35.99 46.30 105.16	68 68 69	10.64 11.10 11.20
0 255 0	37.42 80.30 15.45	30 30 30	2.65 2.80 2.67
0 255 170	45.97 83.70 61.87	40 34 111	7.19 5.10 21.94
0 255 255	55.23 87.70 112.76	81 69 142	17.25 14.30 35.58
85 85 85	15.91 16.70 16.50	139 130 187	39.91 37.70 60.49
128 0 0	16.67 8.80 1.20	194 13 22	35.63 19.00 3.12
128 0 128	21.88 11.00 27.90	206 81 56	45.43 31.60 10.50
128 128 0	27.25 32.00 5.79	219 149 124	62.46 55.30 34.58
128 128 128	32.50 34.10 33.10	0 126 48	11.28 22.60 9.50
128 128 255	45.43 39.80 102.50	69 153 88	23.10 36.10 21.02
128 255 128	59.31 91.50 44.29	146 189 151	49.44 60.30 47.70
170 0 255	45.59 22.30 97.29	200 143 124	54.85 49.60 33.71
170 170 170	54.20 57.20 55.37	219 140 0	55.78 50.10 7.73
170 255 0	64.63 95.00 16.95	196 0 72	37.56 19.60 11.38
170 255 255	82.94 102.70 113.78	133 22 108	22.11 12.00 21.44
255 0 0	56.83 29.80 2.86	151 179 0	41.65 54.20 9.60
255 0 170	65.53 33.50 47.90	0 130 142	17.03 25.70 38.35
255 0 255	75.19 37.70 98.91	0 94 172	15.00 16.90 50.54
255 128 128	72.67 55.40 34.87	235 237 242	97.74 102.60 103.21
255 170 0	74.92 69.20 10.35	211 215 222	81.81 85.90 87.95
255 170 255	92.94 76.90 106.77	188 193 202	67.09 70.70 74.52
255 255 0	94.24 110.50 18.05	142 149 157	41.16 43.80 46.97
255 255 170	103.20 114.20 64.57	99 107 112	22.46 24.20 26.02
170 85 85	35.34 26.90 17.35	63 72 75	10.70 11.80 12.82
85 170 85	28.81 44.40 21.87	38 50 52	5.09 5.90 6.68

Uniformity

This informative-only test shows the luminance (in %) and color deviations (in DeltaC) on the entire screen area based on 9 measurements.

Region	Cd/m2	%	Chroma
1	112.80	100%	2.27
2	114.80	101%	2.19
3	117.90	104%	2.21
4	110.30	97%	1.01
5	113.20	100%	0.00
6	117.30	104%	0.63
7	106.50	94%	1.08
8	111.20	98%	0.59
9	114.10	101%	0.60

	Av	Max
Luminance Deviation	2%	6%
Chroma Deviation	1	2