

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2009-5-18 15:01:14
Report-Version: v1.3.1
Monitor-Name: LaCie 724
EDID-Name: LaCie 724
EDID-Serial: H1AK500000
Profile: /Library/ColorSync/Profiles/18.05.09-6500K-22-100%.icc
Created: 2009-5-18 14:57
Measurement device: eye-one display 2

Summary

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

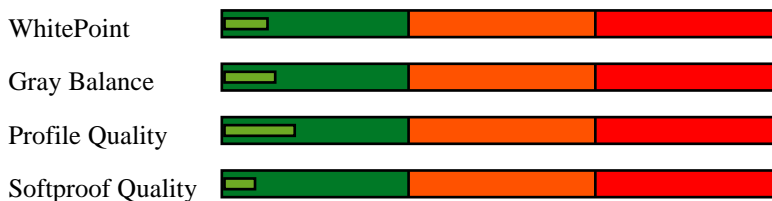
Calibration

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:	206.08 217.19 235.13
XYZ (normalized):	94.88 100.00 108.26
Luminance:	217.2 Cd/m2
Next Temperature:	6481 Kelvin
Assumed Target Whitepoint:	6500 Kelvin
Distance to assumed Target Whitepoint:	0.5 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:	0.2 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	7374	0.19	0.78	0.17	
5	6650	0.45	1.88	0.07	2.23
10	6475	1.55	6.43	0.02	2.20
15	6486	3.62	13.64	0.11	2.18
20	6490	6.70	20.37	0.04	2.18
25	6488	10.32	26.01	0.49	2.21
30	6468	15.64	32.26	0.20	2.19
35	6518	21.95	38.04	0.15	2.19
40	6503	29.42	43.57	0.10	2.19
45	6517	37.51	48.60	0.18	2.20
50	6472	47.37	53.82	0.27	2.20
55	6483	58.61	58.96	0.03	2.19
60	6493	71.32	64.03	0.07	2.18
65	6486	84.03	68.53	0.23	2.20
70	6491	99.25	73.35	0.21	2.19
75	6479	115.74	78.05	0.30	2.18
80	6483	133.51	82.63	0.10	2.18
85	6492	151.26	86.82	0.27	2.22
90	6516	171.55	91.23	0.26	2.23
95	6482	193.79	95.67	0.44	2.18
100	6481	217.19	100.00	0.00	
Average	6490			0.19	2.20
Range				0.55	
Max				0.49	

Tone values = 100.0%

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 -0.2 -0.1	-0.8 0.2 0.1	0.8
0 0 128	12.3 36.5 -69.2	0.3 -1.5 0.5	1.6
0 0 255	31.8 55.8 -113.2	-0.4 2.1 -0.7	2.3
0 128 0	45.7 -83.8 59.8	-0.1 0.9 0.9	1.3
0 128 128	47.5 -58.4 -11.4	0.1 0.2 0.8	0.8
0 170 255	65.5 -43.9 -56.7	0.0 1.1 0.2	1.1
0 255 0	86.0 -137.1 101.2	0.1 -0.2 -0.7	0.7
0 255 170	87.3 -117.8 25.5	0.2 -0.6 1.0	1.2
0 255 255	89.3 -96.7 -17.8	0.1 0.3 0.2	0.3
85 85 85	36.3 -0.0 -0.2	-0.5 0.0 0.2	0.5
128 0 0	28.5 68.9 43.5	-0.4 0.0 1.4	1.4
128 0 128	32.1 72.8 -35.4	-0.2 -1.4 -0.6	1.6
128 128 0	52.8 -9.3 68.7	-0.5 1.0 0.8	1.4
128 128 128	54.4 0.2 0.1	-0.5 -0.2 -0.1	0.5
128 128 255	59.9 21.4 -65.8	-0.7 0.6 -1.1	1.4
128 255 128	89.4 -86.8 52.7	0.0 -1.6 1.2	2.0
170 0 255	48.9 92.0 -84.0	-0.5 0.2 -0.9	1.0
170 170 170	70.4 0.3 -0.4	-0.2 -0.3 0.4	0.5
170 255 0	90.9 -68.9 107.5	0.0 -0.2 -0.5	0.6
170 255 255	94.1 -45.6 -9.7	-0.1 -0.7 -0.2	0.7
255 0 0	56.9 115.1 82.7	0.2 -0.8 -0.6	1.0
255 0 170	59.4 117.2 -16.0	0.3 -1.3 -0.0	1.3
255 0 255	63.2 118.5 -59.5	0.0 -0.2 -0.2	0.3
255 128 128	70.8 73.1 26.9	-0.3 0.9 0.1	0.9
255 170 0	78.1 43.3 98.7	-0.3 1.2 -0.8	1.5
255 170 255	82.0 54.7 -28.7	-0.3 1.2 -0.7	1.4
255 255 0	97.2 -13.6 116.4	0.1 -0.1 -1.2	1.2
255 255 170	98.3 -7.3 43.6	0.1 -0.5 0.6	0.8
255 255 255	100.0 0.0 0.0	0.0 0.0 0.0	0.0
170 85 85	48.7 54.7 20.0	-0.5 0.5 0.2	0.7
85 170 85	62.5 -65.7 39.4	-0.2 -0.2 0.9	0.9
85 85 170	40.2 16.8 -49.7	-0.4 -0.3 -0.2	0.5
85 170 170	64.3 -49.3 -10.5	-0.2 -0.5 0.5	0.7
170 85 170	51.2 60.3 -31.0	-0.4 0.1 -0.2	0.4
170 170 85	68.9 -8.0 49.2	-0.3 0.1 0.8	0.9
Average			1.0
Maximum			2.3

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	99 %
AdobeRGB	99 %
ECI-RGB v1.0	96 %

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	55.0 -37.4 -50.2	0.5
66.9 -24.7 -37.1	67.1 -24.5 -36.9	0.4
79.7 -12.5 -21.8	80.0 -12.8 -21.9	0.5
48.0 74.0 -3.0	48.4 74.2 -3.1	0.5
60.8 50.6 -6.7	61.2 50.5 -6.6	0.4
76.4 25.8 -6.9	76.7 25.4 -6.4	0.7
89.0 -5.0 93.0	89.2 -5.3 92.6	0.6
90.3 -4.7 62.6	90.4 -4.3 61.8	0.8
92.2 -3.5 31.1	92.1 -3.0 30.8	0.6
53.1 37.7 28.9	53.7 37.0 28.7	0.9
41.5 22.7 16.8	42.2 22.6 16.3	0.8
31.9 40.0 24.0	32.5 39.5 23.1	1.1
32.5 44.5 -1.8	33.3 44.3 -1.8	0.8
51.3 1.3 44.5	51.9 0.5 44.3	1.0
34.6 -36.4 13.9	35.0 -36.1 13.5	0.7
36.0 -26.2 -20.9	36.2 -25.7 -21.0	0.6
20.9 9.6 -23.6	21.5 10.4 -23.5	1.1
89.0 0.0 -1.9	89.1 0.4 -2.0	0.5
82.8 0.0 -1.7	83.0 -0.1 -1.8	0.3
69.3 0.0 -1.4	69.7 -0.3 -1.5	0.5
54.1 0.0 -1.0	54.6 0.6 -1.3	0.8
36.6 0.0 -0.5	37.3 0.0 -0.1	0.8
16.0 0.0 0.0	16.7 0.1 -0.2	0.8
24.0 22.0 -46.0	24.5 21.9 -45.7	0.6
40.9 17.9 -36.6	41.4 18.1 -36.2	0.7
63.7 10.3 -23.8	64.1 9.6 -23.2	1.0
47.0 68.0 48.0	47.6 67.9 47.2	1.0
58.5 47.1 37.9	59.0 46.2 37.6	1.1
74.2 22.9 21.4	74.4 22.5 21.4	0.5
50.0 -65.0 27.0	50.2 -64.5 26.3	0.8
62.1 -39.8 21.0	62.5 -39.9 20.6	0.5
77.0 -19.1 11.0	77.0 -18.7 10.7	0.5
71.2 18.9 17.2	71.6 18.8 17.5	0.4
71.2 22.1 73.1	71.6 22.1 72.2	0.9
47.7 71.2 16.2	48.2 71.3 16.1	0.5
38.0 55.4 -20.9	38.4 55.7 -21.0	0.5
73.7 -22.8 67.6	74.1 -23.0 67.0	0.7
52.3 -52.3 -20.1	52.5 -52.7 -20.2	0.4
43.3 -17.0 -48.6	43.6 -17.1 -48.9	0.4
95.0 0.0 -2.0	95.0 0.2 -2.3	0.4
88.5 -0.4 -3.1	88.7 -0.0 -3.2	0.4
82.0 -0.9 -4.1	82.3 -0.7 -4.2	0.4
67.7 -2.0 -4.4	68.0 -1.9 -4.8	0.5
52.2 -2.5 -3.5	52.6 -1.7 -3.9	0.9
37.5 -3.9 -3.1	38.1 -3.7 -3.1	0.6
26.3 -6.8 -3.4	26.8 -6.3 -3.9	0.9
Average		0.7
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	206.08 217.19 235.13	85 85 170	31.56 25.53 93.03
0 0 0	0.17 0.19 0.21	85 170 170	44.72 73.04 96.82
12 12 12	0.43 0.45 0.50	170 85 170	72.13 42.17 94.05
25 25 25	1.47 1.55 1.67	170 170 85	72.68 84.26 26.36
38 38 38	3.44 3.62 3.94	0 141 212	36.97 51.75 151.57
51 51 51	6.35 6.70 7.25	108 169 224	65.79 81.74 172.49
63 63 63	9.85 10.32 11.30	170 201 235	109.52 124.48 193.89
76 76 76	14.88 15.64 16.97	183 66 119	70.96 36.21 44.26
89 89 89	20.80 21.95 23.84	196 119 157	92.52 63.37 80.82
102 102 102	27.90 29.42 31.93	214 175 199	126.81 110.59 135.64
114 114 114	35.58 37.51 40.80	237 227 57	141.09 159.61 19.30
127 127 127	45.06 47.37 51.42	238 230 117	148.69 165.75 51.85
140 140 140	55.62 58.61 63.48	238 234 176	160.13 174.81 110.10
153 153 153	67.65 71.32 77.30	169 109 83	61.42 46.08 22.44
165 165 165	79.85 84.03 91.25	123 89 75	32.92 27.02 17.44
178 178 178	94.27 99.25 107.79	114 58 46	24.51 15.41 6.55
191 191 191	110.04 115.74 125.65	116 56 81	27.59 16.32 19.38
204 204 204	126.75 133.51 144.71	132 122 55	39.80 42.93 11.02
216 216 216	143.69 151.26 164.32	50 92 63	10.10 18.59 12.00
229 229 229	162.64 171.55 186.43	44 92 115	14.14 20.30 40.39
242 242 242	184.30 193.79 210.59	53 49 84	8.95 7.50 20.28
0 0 128	8.59 3.76 48.68	222 222 226	153.86 161.48 180.76
0 0 255	38.83 17.99 221.84	204 205 208	128.25 135.10 151.01
0 128 0	9.02 32.72 2.45	167 168 170	82.93 87.51 97.68
0 128 128	17.58 36.32 51.80	128 128 130	46.74 48.91 54.67
0 170 255	55.43 78.34 226.36	87 87 87	19.97 21.03 22.81
0 255 0	41.36 147.89 9.89	44 44 44	4.65 4.89 5.34
0 255 170	57.50 154.88 102.77	57 49 123	14.09 9.70 45.66
0 255 255	80.12 165.66 232.28	99 88 152	32.84 26.89 73.03
85 85 85	18.93 19.96 21.73	154 148 192	75.69 72.06 123.83
128 0 0	28.11 11.54 0.97	181 71 44	63.39 34.28 7.27
128 0 128	37.05 15.31 49.12	194 117 82	80.35 57.22 22.64
128 128 0	37.09 44.76 3.26	212 171 145	112.97 101.63 71.34
128 128 128	46.24 48.63 52.57	51 136 77	17.24 40.61 19.47
128 128 255	76.98 63.03 225.00	111 163 115	43.07 67.44 43.92
128 255 128	78.69 163.39 61.47	170 196 169	91.34 111.95 98.20
170 0 255	91.65 39.39 222.77	199 165 144	100.78 92.60 69.92
170 170 170	85.24 89.63 97.83	211 164 54	100.67 91.70 13.92
170 255 0	92.97 169.18 11.24	183 69 90	67.89 35.63 25.25
170 255 255	132.83 187.38 233.00	134 58 121	40.63 22.13 44.84
255 0 0	125.63 50.76 2.87	171 190 67	76.59 100.75 19.36
255 0 170	141.48 57.62 92.87	33 139 155	25.51 45.79 77.81
255 0 255	164.57 68.68 223.91	41 106 178	26.28 30.80 103.08
255 128 128	143.53 88.49 54.78	239 240 244	180.99 190.30 213.63
255 170 0	142.51 113.00 7.11	220 221 227	152.04 159.92 182.54
255 170 255	181.47 130.67 228.26	200 203 210	125.17 132.20 153.79
255 255 0	166.70 199.04 12.59	159 164 171	77.39 82.56 98.45
255 255 170	183.06 206.07 105.06	120 124 129	42.10 44.98 53.64
170 85 85	59.62 36.69 22.77	84 90 93	20.02 22.06 26.29
85 170 85	32.16 67.56 25.32	57 66 69	9.43 10.95 13.76