

# UGRA

## Display Analysis & Certification Tool

### Report

#### Basics

Date: 2008-3-11 8:43:32  
Report-Version: v1.2.2  
Monitor-Name: \\.\DISPLAY1  
Profile: C:/Windows/system32/spool/DRIVERS/COLOR/sx2761w-ugra.icc  
Created: 2008-3-11 8:36  
Measurement device: DTP94-LCD mode

#### Summary

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

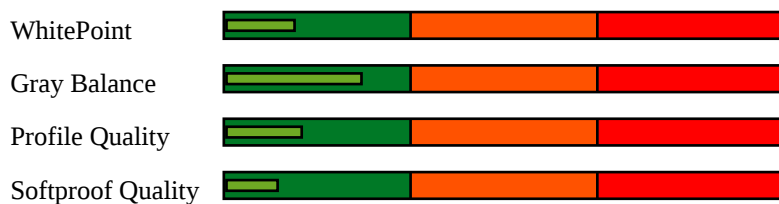
##### Calibration

|                 |     |
|-----------------|-----|
| 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 |

##### 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:                                   | 114.76 120.75 117.05 |
| XYZ (normalized):                      | 95.04 100.00 96.93   |
| Luminance:                             | 120.8 Cd/m2          |
| Next Temperature:                      | 5809 Kelvin          |
| Assumed Target Whitepoint:             | 5800 Kelvin          |
| Distance to assumed Target Whitepoint: | 0.7 deltaE           |

## Blackpoint

|               |                  |
|---------------|------------------|
| Luminance:    | 0.2 Cd/m2        |
| Chromaticity: | 0.8 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       | 7966   | 0.16   | 1.20   | 0.80   |       |
| 5       | 5726   | 0.65   | 4.86   | 0.58   | 1.84  |
| 10      | 5892   | 2.01   | 13.62  | 0.34   | 1.82  |
| 15      | 5734   | 4.03   | 21.35  | 1.15   | 1.81  |
| 20      | 5816   | 6.83   | 28.53  | 0.28   | 1.80  |
| 25      | 5739   | 9.89   | 34.38  | 0.68   | 1.81  |
| 30      | 5824   | 13.67  | 40.12  | 1.01   | 1.81  |
| 35      | 5834   | 18.36  | 45.91  | 0.29   | 1.80  |
| 40      | 5791   | 23.31  | 51.04  | 1.18   | 1.79  |
| 45      | 5824   | 28.61  | 55.78  | 0.31   | 1.81  |
| 50      | 5825   | 34.74  | 60.58  | 0.41   | 1.80  |
| 55      | 5868   | 41.19  | 65.05  | 0.46   | 1.80  |
| 60      | 5813   | 48.17  | 69.39  | 0.97   | 1.79  |
| 65      | 5823   | 55.43  | 73.48  | 0.17   | 1.81  |
| 70      | 5903   | 62.84  | 77.31  | 1.32   | 1.81  |
| 75      | 5865   | 71.60  | 81.45  | 0.52   | 1.81  |
| 80      | 5806   | 80.85  | 85.48  | 0.41   | 1.79  |
| 85      | 5788   | 89.16  | 88.85  | 0.72   | 1.85  |
| 90      | 5779   | 99.22  | 92.65  | 0.88   | 1.84  |
| 95      | 5849   | 109.76 | 96.37  | 0.96   | 1.76  |
| 100     | 5809   | 120.75 | 100.00 | 0.00   |       |
|         |        |        |        |        |       |
| Average | 5820   |        |        | 0.64   | 1.81  |
| Range   |        |        |        | 1.46   |       |

Tone values = 91.1%

# 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       | 1.2 0.2 -0.8     | -1.2 -0.2 0.8  | 1.4    |
| 0 0 128     | 15.1 42.4 -73.4  | 0.2 -1.7 0.5   | 1.8    |
| 0 0 255     | 31.4 61.6 -110.4 | -0.1 -0.0 0.2  | 0.2    |
| 0 128 0     | 50.2 -78.2 51.5  | 0.0 1.5 0.7    | 1.6    |
| 0 128 128   | 52.3 -51.5 -14.7 | 0.2 0.3 1.1    | 1.2    |
| 0 170 255   | 67.7 -38.0 -51.9 | 0.2 0.1 1.1    | 1.1    |
| 0 255 0     | 84.0 -116.3 79.7 | 0.2 0.3 -0.8   | 0.9    |
| 0 255 170   | 85.6 -95.6 12.8  | 0.2 0.1 1.1    | 1.1    |
| 0 255 255   | 87.3 -77.0 -21.4 | 0.3 -0.5 0.9   | 1.1    |
| 85 85 85    | 44.3 0.8 0.1     | -0.3 -0.8 -0.1 | 0.9    |
| 128 0 0     | 34.6 60.4 51.1   | 0.1 -0.2 2.2   | 2.2    |
| 128 0 128   | 38.3 67.1 -34.0  | 0.1 -1.3 0.3   | 1.4    |
| 128 128 0   | 59.1 -11.0 64.0  | -0.1 1.2 0.4   | 1.3    |
| 128 128 128 | 60.8 0.0 -0.7    | -0.1 -0.0 0.7  | 0.7    |
| 128 128 255 | 65.0 18.9 -55.3  | -0.2 0.1 0.2   | 0.3    |
| 128 255 128 | 89.3 -65.8 38.4  | -0.1 0.4 0.4   | 0.6    |
| 170 0 255   | 52.6 85.3 -74.5  | 0.0 -1.3 0.4   | 1.3    |
| 170 170 170 | 74.8 0.2 -1.2    | 0.1 -0.2 1.2   | 1.2    |
| 170 255 0   | 90.8 -54.5 89.7  | 0.1 1.0 -1.3   | 1.6    |
| 170 255 255 | 93.8 -31.9 -10.3 | 0.1 -0.0 0.2   | 0.3    |
| 255 0 0     | 60.3 92.3 84.4   | 0.4 -1.3 -0.7  | 1.5    |
| 255 0 170   | 63.0 97.5 -16.0  | 0.4 -2.2 0.9   | 2.4    |
| 255 0 255   | 66.0 100.1 -51.5 | 0.3 -0.6 0.4   | 0.8    |
| 255 128 128 | 75.7 51.8 23.8   | 0.0 -0.0 0.6   | 0.6    |
| 255 170 0   | 81.7 25.0 89.4   | 0.1 1.7 -0.9   | 1.9    |
| 255 170 255 | 85.2 40.7 -22.0  | 0.1 -0.3 0.3   | 0.4    |
| 255 255 0   | 97.3 -15.6 99.3  | -0.0 0.9 -1.9  | 2.1    |
| 255 255 170 | 98.3 -7.5 33.3   | 0.3 0.2 1.2    | 1.2    |
| 255 255 255 | 100.0 0.0 0.0    | -0.0 0.0 -0.0  | 0.0    |
| 170 85 85   | 55.9 40.7 18.9   | -0.0 0.1 0.3   | 0.3    |
| 85 170 85   | 66.6 -51.1 30.3  | -0.1 -0.4 0.3  | 0.5    |
| 85 85 170   | 47.5 16.2 -43.8  | -0.3 -1.2 0.5  | 1.4    |
| 85 170 170  | 68.4 -36.6 -11.8 | -0.2 -0.8 0.8  | 1.1    |
| 170 85 170  | 58.1 47.9 -26.1  | 0.0 -0.4 1.0   | 1.1    |
| 170 170 85  | 73.4 -8.4 41.1   | 0.1 0.3 0.5    | 0.6    |
|             |                  |                |        |
| Average     |                  |                | 1.1    |
| Maximum     |                  |                | 2.4    |

# 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 -28.5 -49.1 | 8.6      |
| 66.9 -24.7 -37.1 | 66.9 -24.6 -37.7 | 0.6      |
| 79.7 -12.5 -21.8 | 79.5 -11.7 -22.0 | 0.9      |
| 48.0 74.0 -3.0   | 47.7 74.7 -3.8   | 1.1      |
| 60.8 50.6 -6.7   | 60.8 50.5 -6.9   | 0.2      |
| 76.4 25.8 -6.9   | 76.4 26.7 -7.4   | 1.0      |
| 89.0 -5.0 93.0   | 89.0 -5.3 92.2   | 0.8      |
| 90.3 -4.7 62.6   | 90.4 -4.8 62.6   | 0.1      |
| 92.2 -3.5 31.1   | 91.8 -3.0 30.3   | 1.1      |
| 53.1 37.7 28.9   | 53.4 37.7 28.8   | 0.3      |
| 41.5 22.7 16.8   | 41.9 23.3 16.3   | 0.8      |
| 31.9 40.0 24.0   | 32.6 39.7 24.1   | 0.7      |
| 32.5 44.5 -1.8   | 32.9 45.1 -1.5   | 0.8      |
| 51.3 1.3 44.5    | 51.5 1.2 43.8    | 0.7      |
| 34.6 -36.4 13.9  | 34.7 -36.7 12.9  | 1.0      |
| 36.0 -26.2 -20.9 | 35.7 -25.7 -21.7 | 1.0      |
| 20.9 9.6 -23.6   | 21.1 9.4 -23.5   | 0.4      |
| 89.0 0.0 -1.9    | 88.7 0.5 -2.2    | 0.7      |
| 82.8 0.0 -1.7    | 82.4 0.3 -2.7    | 1.1      |
| 69.3 0.0 -1.4    | 69.5 0.3 -1.7    | 0.5      |
| 54.1 0.0 -1.0    | 54.2 0.5 -1.4    | 0.7      |
| 36.6 0.0 -0.5    | 36.8 1.0 -1.2    | 1.2      |
| 16.0 0.0 0.0     | 16.9 -0.3 -0.3   | 1.0      |
| 24.0 22.0 -46.0  | 24.4 22.6 -46.6  | 0.9      |
| 40.9 17.9 -36.6  | 41.2 19.5 -36.6  | 1.7      |
| 63.7 10.3 -23.8  | 63.6 11.4 -24.4  | 1.3      |
| 47.0 68.0 48.0   | 47.2 68.5 47.7   | 0.6      |
| 58.5 47.1 37.9   | 58.6 46.7 38.1   | 0.5      |
| 74.2 22.9 21.4   | 74.2 23.5 20.7   | 0.9      |
| 50.0 -65.0 27.0  | 49.9 -65.8 25.5  | 1.7      |
| 62.1 -39.8 21.0  | 62.2 -40.0 20.6  | 0.5      |
| 77.0 -19.1 11.0  | 76.7 -18.1 9.7   | 1.7      |
| 71.2 18.9 17.3   | 71.3 19.0 16.9   | 0.4      |
| 71.2 22.1 73.1   | 71.3 21.3 73.4   | 0.9      |
| 47.7 71.2 16.2   | 47.7 71.7 16.1   | 0.6      |
| 38.0 55.4 -20.9  | 38.2 56.0 -20.9  | 0.7      |
| 73.7 -22.8 67.6  | 73.8 -23.8 67.3  | 1.0      |
| 52.3 -52.3 -20.1 | 52.7 -48.0 -20.2 | 4.3      |
| 43.3 -17.0 -48.6 | 43.1 -15.8 -49.4 | 1.5      |
| 95.0 0.0 -2.0    | 94.9 0.4 -3.0    | 1.1      |
| 88.5 -0.4 -3.1   | 88.4 0.3 -3.1    | 0.6      |
| 82.0 -0.9 -4.1   | 81.7 0.3 -4.7    | 1.4      |
| 67.7 -2.0 -4.4   | 67.8 -1.9 -4.8   | 0.5      |
| 52.2 -2.5 -3.5   | 52.5 -1.8 -4.1   | 0.9      |
| 37.5 -3.9 -3.1   | 37.7 -2.7 -3.8   | 1.4      |
| 26.3 -6.8 -3.4   | 26.7 -7.1 -3.3   | 0.5      |
|                  |                  |          |
| Average          |                  | 1.1      |
| Gamut-Volume     |                  | 98 %     |

# 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 | 114.76 120.75 117.05 | 85 85 170   | 23.34 20.09 52.93    |
| 0 0 0       | 0.16 0.16 0.21       | 85 170 170  | 32.73 46.93 57.00    |
| 12 12 12    | 0.63 0.65 0.65       | 170 85 170  | 45.98 31.41 53.49    |
| 25 25 25    | 1.91 2.01 1.99       | 170 170 85  | 48.19 54.95 20.93    |
| 38 38 38    | 3.90 4.03 4.00       | 0 131 208   | 21.91 29.27 75.86    |
| 51 51 51    | 6.51 6.83 6.67       | 77 160 221  | 35.23 44.67 86.35    |
| 63 63 63    | 9.49 9.89 9.63       | 151 194 232 | 59.73 67.82 95.25    |
| 76 76 76    | 13.11 13.67 13.53    | 177 16 103  | 38.92 19.64 21.60    |
| 89 89 89    | 17.47 18.36 17.93    | 191 88 143  | 50.83 34.69 39.62    |
| 102 102 102 | 22.38 23.31 22.97    | 209 155 191 | 70.59 60.94 67.94    |
| 114 114 114 | 27.24 28.61 27.91    | 238 219 0   | 79.79 88.74 9.85     |
| 127 127 127 | 33.09 34.74 33.93    | 238 223 87  | 83.89 92.58 25.53    |
| 140 140 140 | 39.01 41.19 40.13    | 237 229 158 | 89.22 96.61 54.98    |
| 153 153 153 | 46.06 48.17 47.28    | 160 81 64   | 34.45 25.47 10.97    |
| 165 165 165 | 52.69 55.43 53.91    | 108 66 56   | 18.37 14.83 8.50     |
| 178 178 178 | 59.90 62.84 62.36    | 100 33 31   | 13.95 8.71 3.13      |
| 191 191 191 | 67.97 71.60 70.03    | 101 29 64   | 15.33 8.94 9.32      |
| 204 204 204 | 77.02 80.85 78.67    | 116 102 33  | 22.34 23.58 5.50     |
| 216 216 216 | 85.11 89.16 86.81    | 30 77 44    | 5.48 10.14 6.01      |
| 229 229 229 | 94.80 99.22 96.60    | 20 77 97    | 7.39 10.87 19.99     |
| 242 242 242 | 104.61 109.76 107.79 | 36 34 67    | 4.64 4.01 9.83       |
| 0 0 128     | 5.85 2.56 30.15      | 215 216 220 | 84.78 88.83 89.28    |
| 0 0 255     | 20.01 9.03 104.35    | 194 195 199 | 70.33 73.77 75.00    |
| 0 128 0     | 7.80 22.51 3.43      | 152 153 155 | 46.03 48.29 48.46    |
| 0 128 128   | 13.63 24.98 33.99    | 110 110 112 | 25.57 26.75 26.84    |
| 0 170 255   | 33.07 46.30 110.69   | 68 68 69    | 10.95 11.36 11.44    |
| 0 255 0     | 27.31 77.49 11.03    | 30 30 30    | 2.60 2.75 2.71       |
| 0 255 170   | 36.99 81.86 62.38    | 39 34 108   | 7.51 5.25 23.10      |
| 0 255 255   | 47.31 86.19 115.89   | 79 69 138   | 17.92 14.64 36.30    |
| 85 85 85    | 16.31 17.00 16.46    | 137 130 183 | 41.58 39.18 61.92    |
| 128 0 0     | 19.41 9.73 0.67      | 176 27 30   | 35.64 19.02 3.42     |
| 128 0 128   | 25.41 12.29 30.58    | 190 85 62   | 45.03 31.62 10.87    |
| 128 128 0   | 27.25 32.50 3.94     | 209 151 127 | 63.55 56.31 35.78    |
| 128 128 128 | 33.39 35.11 34.55    | 20 124 54   | 9.39 22.29 9.92      |
| 128 128 255 | 47.72 41.68 108.70   | 87 152 92   | 23.82 37.09 21.68    |
| 128 255 128 | 52.84 90.60 42.56    | 153 188 153 | 50.70 61.59 49.32    |
| 170 0 255   | 52.79 25.25 105.33   | 192 145 126 | 56.14 51.16 34.89    |
| 170 170 170 | 55.18 57.96 57.43    | 208 142 23  | 56.24 50.83 6.57     |
| 170 255 0   | 59.47 94.12 11.79    | 178 23 73   | 37.64 19.55 12.14    |
| 170 255 255 | 79.64 102.84 116.13  | 121 28 105  | 22.43 12.19 21.97    |
| 255 0 0     | 67.01 33.27 1.62     | 156 179 33  | 42.76 55.70 9.52     |
| 255 0 170   | 77.10 37.54 51.99    | 0 128 140   | 14.58 25.38 38.93    |
| 255 0 255   | 86.83 42.37 105.54   | 0 92 167    | 13.66 16.41 50.89    |
| 255 128 128 | 80.97 58.93 35.54    | 236 237 242 | 100.82 105.68 107.37 |
| 255 170 0   | 79.33 71.14 6.99     | 212 215 221 | 83.96 88.10 89.91    |
| 255 170 255 | 100.33 80.11 111.30  | 189 193 201 | 68.87 72.17 76.01    |
| 255 255 0   | 94.32 111.81 12.46   | 143 149 156 | 42.74 45.60 48.72    |
| 255 255 170 | 103.46 115.13 64.01  | 101 107 111 | 23.33 24.94 26.74    |
| 170 85 85   | 39.01 28.37 16.98    | 65 72 75    | 11.05 12.00 13.11    |
| 85 170 85   | 25.63 43.72 20.42    | 40 50 51    | 5.13 6.05 6.66       |