

SWOP® Application Data Sheet

Remote Director™

Collaborative Soft Proofing using the

Apple 23” LCD Display



The SWOP® Review Committee has approved the use of off-press proofs as input material to publications. SWOP Specifications recommend that: “The appearance of an off-press proof used in this application must closely simulate a SWOP Certified Press Proof.” See other explanations and recommendations as outlined on pages 21 and 47 of the 2001 edition of the SWOP specifications.

I. MANUFACTURER

Integrated Color Solutions, Inc.
60 Madison Avenue, Suite 1105
New York, NY 10010 USA



II. PRODUCT

Remote Director Version 2.6



Certified – February, 2004

III. INTRODUCTION

Remote Director is the first collaborative video-based “soft proofing” system that works in a fully color-managed environment. Using custom monitor calibration and profiling techniques along with industry- standard ICC output profiles and the Apple Computer 23”Cinema HD Display, Remote Director can accurately soft proof all SWOP based printing environments.

Color matching is based on an ICC profile built from the data contained in ANSI CGATS TR 001 as suggested by SWOP Incorporated.

IV. CONTROL GUIDE

SWOP specifies that a control guide such as the GATF Proofing Bar be supplied on every off-press proof. As a minimum, this guide should contain solids of the primary process colors and two-color overprints, as well as a 25%, 50% and 75% tints in 133-line screen ruling of each of the process colors. Additional areas such as 1%, 2%, 3%, 5% and 95%, 97%, 98%, 99% may be particularly useful in digital proofing. Any proofing bar that contains the above values can be used. A virtual proofing bar satisfying these criteria is included in the Remote Director application.

V. SYSTEM COMPONENTS

CPU:

Apple Power Mac G4 with 500 MB SDRAM.

Monitor:

Apple Computer 23" Cinema HD Display (hereafter "Apple 23 LCD")

Spectrophotometer:

GretagMacbeth Eye-One Monitor, Eye-One Photo or Eye-One Pro (without UV filter.)

Software:

Mac OS X 10.2.6 or later

ICS Remote Director 2.6 or later

Viewing booth:

A variable-intensity monitor-side viewing station with D50 reflective lighting.

Best: GTI SOFV-1Ex

Good: GTI SOFV-1E or 2E

Acceptable: GTI PDV-3D

Environment:

The room where Remote Director is installed must have controlled lighting. Room lighting incident at the monitor and viewing booth plane **MUST** not exceed 30% and **SHOULD** not exceed 10% of the dimmed booth brightness. The room walls should be neutral gray and the room lighting should be D50 color with no direct entry of daylight.

Viewing:

Viewing angle is an important consideration when using Remote Director. The user should only judge color when sitting directly in front of, and perpendicular to, the display. The viewing station should be angled so that the viewer can make comparisons without changing their viewing angle relative to the display.

The section 'VIEWING INSTRUCTIONS' explains how to compare a soft proof to a hard copy proof.

VI. System Set-up:

1. Power up the G4, Apple 23 LCD and viewing booth and allow at least 30 minutes for all components to warm up.
2. Set your display brightness as high as possible on the hardware and the system control panel.
3. Install the Remote Director application on the Apple G4 computer.
4. Connect the Eye-One spectrophotometer via an available powered USB port.
NOTE: The Eye-One may need to be connected directly to the CPU to receive enough power.
5. Select *Prepare Proof...* from the *File* menu, name the job something like “SWOP Test”, and click *OK*.
6. In the palette that follows set *Color Temperature* to D50 and *Luminance* to Maximum, then click *Add Files...*
7. Navigate to the file(s) you wish to proof. Highlight the file or files and click *Add* then *Done*. Your files will be displayed in Remote Director’s main window.
NOTE: PDF’s should be rasterized at minimum of 150 DPI (Remote Director default) for proper color viewing.
8. Select *Display – Calibrate* from the menu bar and the *Remote Director Display Calibrator* palette will appear.
9. Follow the instructions as Remote Director builds the monitor profile. NOTE: This will take several minutes, during which time room lighting must remain absolutely constant. If the ambient room lighting changes for any reason, re-start the calibration process.
10. When calibration is finished, the file will be displayed with the default CMYK source profile. Open the *Color Management* palette from the *Tools* menu and select the profile named “ICS SWOP 2004” in the *Source Profile – Custom* pop-up list. Be sure to activate the radio button alongside the list to make the selection active. If ICS SWOP 2004 is not in the list, download it from www.icscolor.com.
11. Hide all the tools palettes, unless you have two displays where you can move them to the second display. Click on *Tools* and select *Close All*.
12. Click on the “Maximize Window” button, green in the upper left hand corner of the active image window. Make sure that the image window covers the full display area, and that no background is showing. You are now ready to evaluate the proof.
13. From the *Tools* menu, select the *Navigation* palette when you need to navigate around in the image, or change image. Hide the palette for evaluation.

VII. VIEWING INSTRUCTIONS

This section is included to ensure the best possible comparison between the soft proofing screen and an actual hard-copy proof.

Because today's monitor technologies cannot achieve the illumination intensity of a standard pre-press viewing booth, a soft proof will appear too dark when compared to a hard copy proof illuminated in a standard graphic arts viewing booth. A dimmable D50 viewing booth located alongside the monitor mitigates this problem.

1. Adjust the light intensity of the viewing booth so that the base material (paper) of the hard-copy proof is the same apparent brightness as the simulated paper on the soft proof. To display a large area of simulated proofing paper, slide the *Matte* control in the *Navigation* tool to the right. NOTE: The brightness level to which the viewing booth must be dimmed depends on the age and calibration settings of the monitor, as well as the evenness of light distribution within the viewing booth itself. Owing to the wide range of variables, the dimming process is best governed by subjective judgment rather than instrumentation.
2. Note that all viewing booths exhibit some lighting unevenness, usually appearing brighter nearer the light source. This unevenness is typically worse in smaller booths and can significantly affect the apparent match between a soft proof and a hard-copy proof. Viewing booths that illuminate from two or more directions, such as the GTI SOFV-1EX, largely eliminate this problem.
3. Check the viewing booth for evenness and decide the best position in which to place the hard copy proof. When viewing very large hard-copy proofs it may be necessary to adjust the booth intensity so that the area of interest is illuminated to the same brightness as the monitor.
4. Image size can affect apparent matching quality. For the most critical match, adjust the soft proof to the same magnification as the hard copy proof.

VIII. FINISHED PROOF CHARACTERISTICS

To verify that the displayed proof meets this application data sheet you can measure your display's rendition of a Virtual Proofing Bar using Remote Director's *Verify SWOP – Apple Cinema Display 23"* selection from the *Display* option in the menu bar and follow the wizard based instructions.

Standard measured values for each 'patch' in the proofing bar (listed below) are stored as a data set within Remote Director. During the *Verify SWOP* function these stored values are compared to the measured values and an average delta-e (color difference) is displayed, along with a peak value for the patch with most difference. If your average delta-E and peak value delta-E are less than 3.0, your display is within the ADS specification of color matching.

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If it is the delta-E is greater then 3 you should re-check that the settings match the ADS and re-profile. If the delta-E is still greater then 3, it is likely the age of your display compared to the display used for certification.

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Standard Proofing Bar Values for SWOP Verification

Absolute				
Color	Density	L*	a*	b*
Cyan	100	58.30	-25.29	-38.37
Magenta	100	46.49	68.66	-3.11
Yellow	100	83.38	-4.27	72.33
Black	100	36.60	0.45	1.06
Red	100 M 100 Y	43.88	63.76	41.92
Green	100 C 100 Y	51.74	-51.55	29.21
Blue	100 C 100 M	25.31	18.34	-42.03
Cyan	75	63.79	-29.24	-31.02
Magenta	75	56.66	47.77	-3.13
Yellow	75	84.36	-4.92	60.39
Black	75	40.29	0.10	0.95
Red	75 M 75 Y	55.57	44.06	37.62
Green	75 C 75 Y	58.91	-41.34	20.57
Blue	75 C 75 M	38.42	12.93	-32.69
Cyan	50	72.32	-18.65	-19.84
Magenta	50	66.37	32.45	-2.17
Yellow	50	85.41	-4.44	39.01
Black	50	56.52	0.44	-0.21
Red	50 M 50 Y	64.29	28.66	26.48
Green	50 C 50 Y	69.08	-25.94	16.41
Blue	50 C 50 M	52.79	12.03	-21.95
Cyan	25	80.05	-10.32	-8.62
Magenta	25	76.44	15.56	-1.25
Yellow	25	86.94	-2.67	20.22
Black	25	73.68	-0.56	1.06
Red	25 M 25 Y	75.19	14.33	15.86
Green	25 C 25 Y	78.94	-12.54	10.19
Blue	25 C 25 M	68.94	6.56	-11.84
Paper	0	88.37	-1.12	1.74

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