

COLOUR SETUP FOR KOMORI

KOMORI colour setup for printing and proofing

MITCHELL

COLOUR PRESS PROFILE

The Colour Press Profile can be used with Adobe Photoshop, Adobe Acrobat and other programs to give a better colour preview – on a properly calibrated monitor – of how images will print on the press.

About Soft Proofing

Soft proofing allows you to simulate how your image will appear when printed by displaying a simulation on your monitor, based on the chosen profile.

The workflow typically follows these steps:

1. Open a file and select a profile.
2. Once you have chosen a profile and adjusted the settings, optimize the image to achieve the best result with that profile.
3. Use the **Save As** command to save a profiled version of the image while retaining a copy of the original file.
4. Convert the image to that profile before sending it for print.

By employing soft proofing, you can preview how your image will look when printed, aiding in making adjustments and minimizing discrepancies between the on-screen and printed versions.

Colour Press Profile

For coated jobs, the KOMORI used the **SWOP2006_Coated3v2.icc** press profile supplied by the idealliance. This profile is based on the GRACoL G7 methodology for a #3 coated stock on web presses and is identical to the one that controls the overall colour on the Mitchell Contract Colour Proofers. The profile can be downloaded [here](#).

For uncoated jobs, download the the colour profile **CGATS21_CRPC3 V2.icc** profile [here](#).

If your project is printing on a #2 grade, premium grade, or matte coated stock, please contact your Mitchell coordinator about using **GRACoL 2006_Coated1v2.icc** or other profiles that may yield superior results. The profile can be downloaded [here](#).

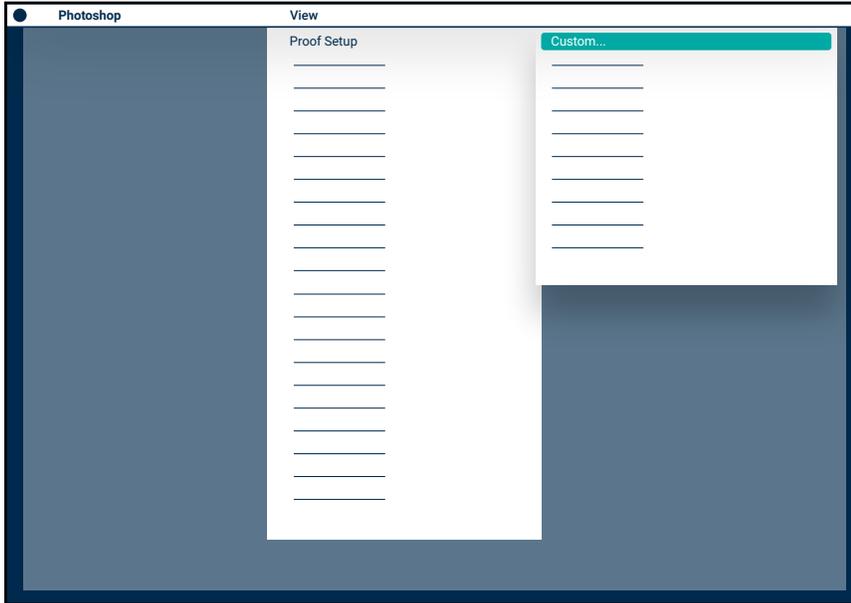
Colour Press Profile Locations

5. For accurate viewing of your files, first place the Colour Press Profile into the appropriate folder.
6. For **macOS** -
Macintosh HD > Library > ColorSync > Profiles > Recommended
For **Windows** -
(C:) > Windows > System32 > Spool > Drivers > Color

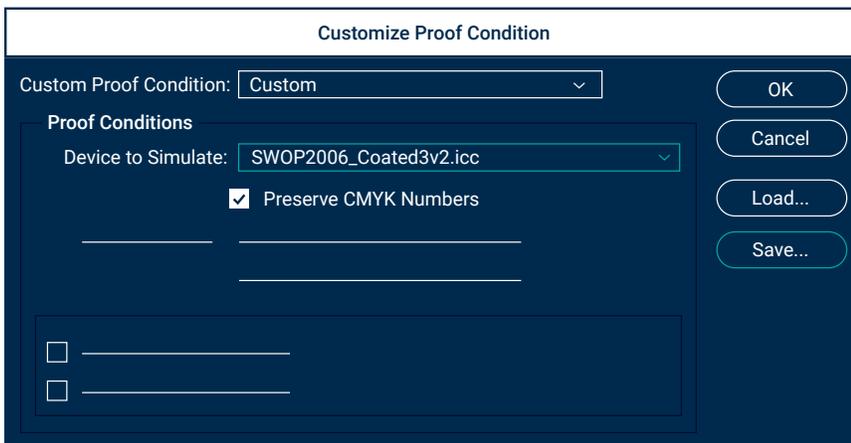
PROOFING ARTWORK IN PHOTOSHOP

Open the image in Adobe Photoshop

1. Select View > Proof Setup > Custom from the top menu bar



2. Select the Profile drop down tab and select the appropriate profile which is currently SWOP2006_Coated3v2.ICC.

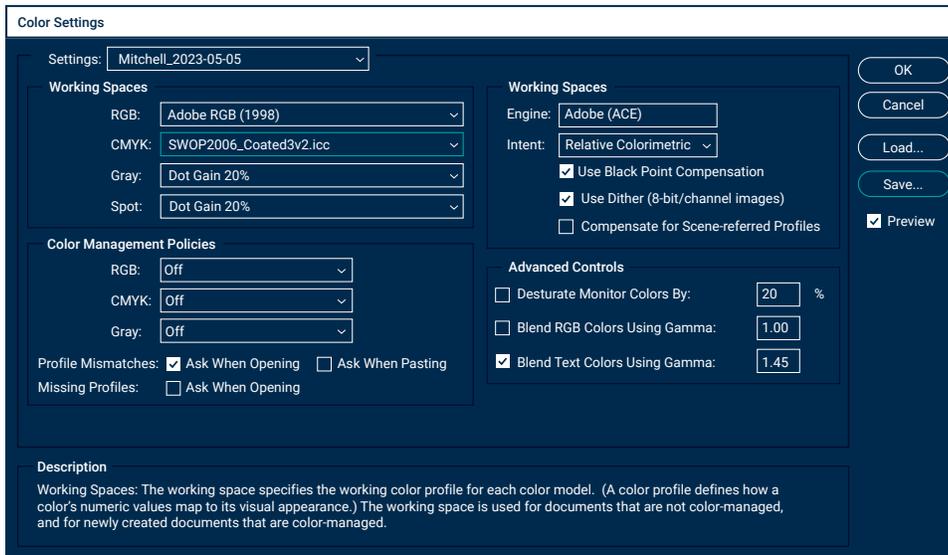


3. Click Save to use the profile for the future.
4. Now, view the image simulated as printed on the KOMORI.

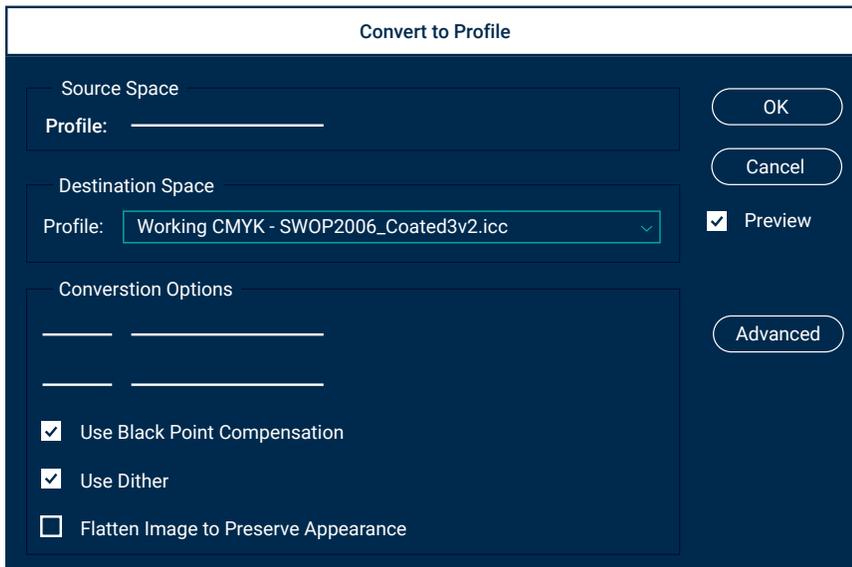
CONVERTING PROFILES IN PHOTOSHOP

Mitchell Photoshop Settings

1. To create a Mitchell colour setting in Adobe Photoshop, go to **Edit > Color Settings**. Under **Settings**, select **Custom** and follow the settings below. Once completed, click **Save**, and name the .csf file **Mitchell_YYYY-MM-DD** (e.g. Mitchell_2023-05-05).



2. Open the image in Adobe Photoshop. Click on **Edit > Convert to profile**. Select the appropriate profile and click **OK**.

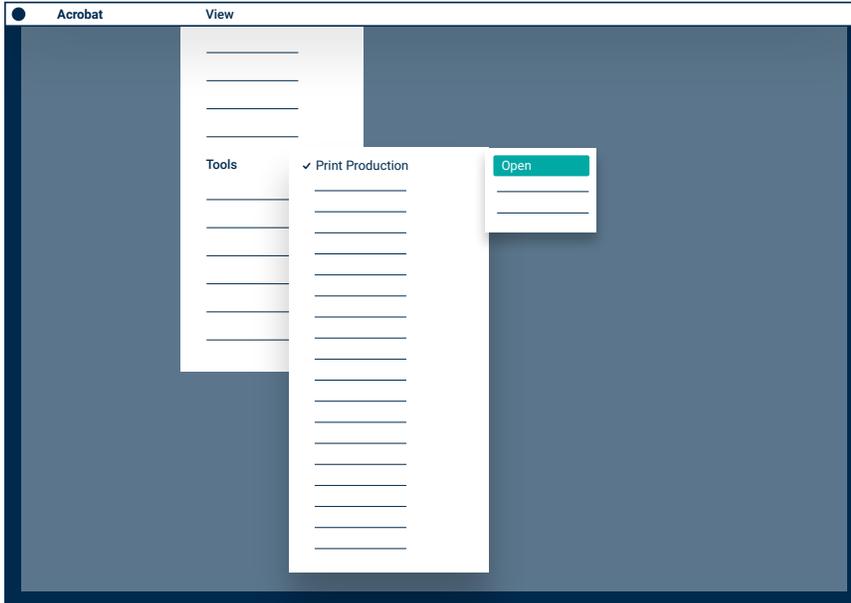


3. Make any adjustments to the image to look best with the selected profile.
4. Go to **File > Save As** to save a copy of the image with the preferred file types, .tiff or .eps.

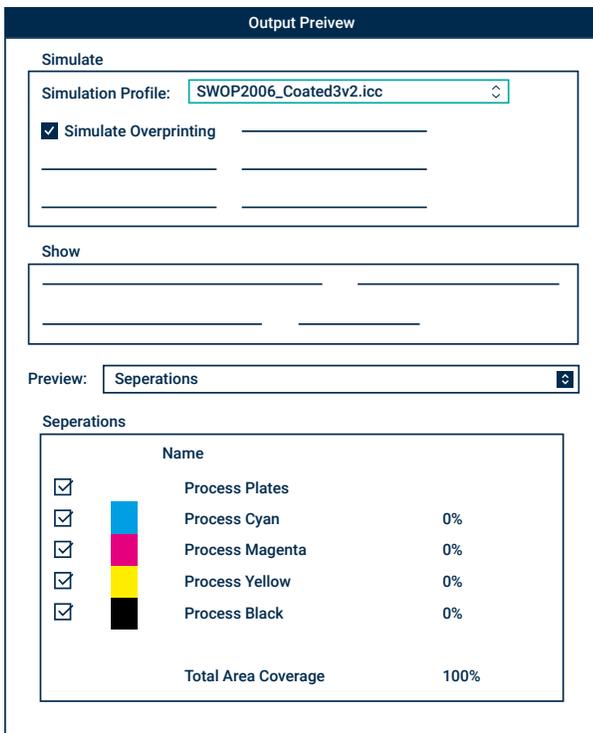
PROOFING ARTWORK IN ACROBAT

Adobe Acrobat Setup

1. Open a PDF in Acrobat, select **View > Tools > Print Production** from the top menu bar.



2. The **Output Preview** window will open, select the **Simulation Profile** drop down menu.
3. Select the **SWOP2006_Coated3v2.icc** profile. This will now give a simulation of how the job will look on both the Contract Proofs and presses.
4. **Simulate Overprinting** box should also be checked to correctly show overprinting.



COLOUR MANAGEMENT

Colour Management is the process of calibrating (standardization), defining (characterization) and communicating colour for each device in the print process.

The purpose is to communicate & reproduce colour on each device to match the final printed product.

To understand the process, we must know a little about colour and colour spaces. Colours, as our eyes see it, are made up of red, green & blue (RGB) light in different combinations, making up all the colours we see. Digital cameras and scanners record light using light-sensitive elements such as CCD sensors or, in the case of high-end drum scanners, Photomultiplier sensors. The data is then used to display colour on a monitor, either CRT or LCD using red, green & blue pixels using transmitted or projected light.

In the printing process, we don't use transmitted light so the colour we see is created by reflected light. We print pigments on paper that allow different amounts of red, green & blue light to be absorbed and the colour we see is the colour reflected. To do this, we use cyan, magenta & yellow ink to act like filters. In a perfect world, these inks would reflect the corresponding amounts of red, green & blue light but due to the limitations of the ink manufacturing process and the purity of available pigments, the reflected light is not a perfect match. Therefore the RGB colour space doesn't match the CMY colour space perfectly. In the printing process black is added to the CMY to produce better blacks and add more detail in images, creating the CMYK colour space.

So, how do we communicate these light recordings? Well, a body called the International Colour Consortium has created a system using profiles (ICC Profiles) based on the spectral measurement of light, using the CIE (Commission Internationale d'Eclairage) Lab colour space, a device independent standard. CIE Lab represents the visible spectrum. Each device, scanner, monitor, inkjet printer, etc, has a device-dependent colour space, RGB or CMYK depending on how the colour is recorded or created. Using the ICC profile system, each device is calibrated and then characterized, referred to as profiling.

Hardware such as monitors or inkjet printers cannot print or display as much colour as we can see. Attempts have been made at creating standard colour spaces such as sRGB IEC1966-2.1 or Adobe RGB (1998) for RGB.

Just as there is more than one RGB colour space there is also more than one CMYK colour space. For web printing in North America, the standard is SWOP2006_Coated3v2 for a coated #3 paper and GRACoL2006_Coated1v2 for a coated #1 paper.

Then using a Colour Management System the device-dependent colour for each device is converted to the device-independent Lab colour space and then to the device-dependent colour space of the device that the image is being displayed or printed on. Colours that are outside of the destination profile are mapped to the nearest colour while preserving the relationship between colours. When proofing an image to an inkjet printer, the CMS then compares the device profile of the inkjet printer to the press profile and maps the image colours to match the colours of the press profile.

At **Mitchell**, we use colour management to control the colour on each device as your job moves through the prepress process. Each piece of hardware, monitor, inkjet proofer, press, etc., is calibrated and profiled using our colour management software. Then our prepress workflow software, Kodak Prinergy, communicates with our monitors and inkjet proofers, adjusting the colour, using **ICC** profiles, to simulate the colour produced on the press.

We recommend that our customers use **SWOP2006_Coated3v2** with a total ink coverage of **no more than 300%** as the working space in **Photoshop**, **InDesign**, etc, unless doing a high-end publication in which case we recommend using the **GRACoL2006_Coated1v2** **ICC** profile.

We ask that our customers supply their documents in **CMYK**, with no attached profiles. Our software is set to remove profiles automatically as we have found that improperly created profiles can cause many problems with the printed colour. As noted earlier, **CMYK** colour space will not match the **RGB** colour spaces exactly. For certain colours, especially very vibrant colours, there is no equivalent colour in **CMYK**. Depending on the program converting the **RGB** to **CMYK** and how their settings are set will determine how the colour will convert. For this reason, **Mitchell** would prefer for the customer to convert their images to **CMYK** before supplying their PDF files to us, ensuring that there are no surprises when their job is printed.

At **Mitchell**, we work hard at maintaining our colour. We calibrate our monitors regularly. Our Colour Contract proofing system uses an onboard Spectrophotometer, which reads each proof and gives it a pass or fail, to maintain our high standards.

FOR MORE
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