

Technical Bulletin

Optimizing Color Calibration results for CXP6000 Color Server

General

The Spire color calibration is a necessary tool to provide color accuracy for print jobs that are performed on the DocuColor 6060 Digital Printer.

This document provides basic guidelines about when color calibration should be performed, how to calibrate properly, and how to use the new calibration to print a job.

When is calibration needed?

Color calibration should be performed for any of the following cases:

- When a new paper stock is used*
- When a different screening method is used*
- At least once every 8 hour shift for every combination of paper stock and screening method used
- When Prints show “color casts”
- After machine maintenance or hardware changes (i.e. replacing a “charge corona”)
- On drastic ambient changes (temperature / humidity)

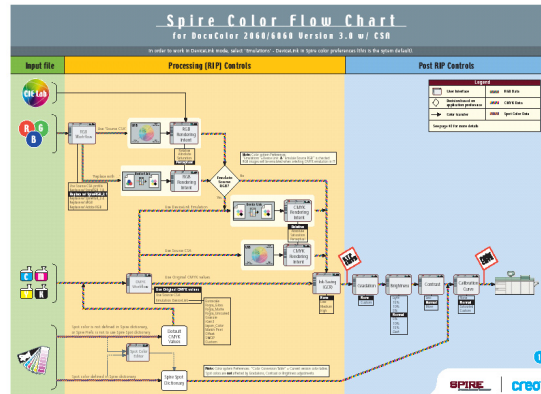
* **Important:** Perform a different calibration for every combination of media and screen type used for printing. When calibrating, always use the same media that you intend to use for printing.

Guidelines for successful calibration

To ensure your calibration is as accurate as possible, check the following prior to calibration:

- Ensure that the X-Rite DTP34 is connected properly.
- Ensure that the X-Rite DTP34 is calibrated: the device calibration should be performed whenever the power to the device has been interrupted, and at least once a week. Use the manufacturer supplied calibration strip with the device. Make sure the strip is stored safely in the designated envelope after calibration of the DTP34 is completed.
- Print at least 25 duplex sheets of any 4 color test job on any media (to “warm up” the printer)
- Print a reference job using the same media and screen type that the final customer job will be printed on.
- Prepare a flat clean surface on which to measure the calibration charts. Set a few sheets of clean white paper (at least 200 gsm, or 2 sheets of lighter paper) on the surface. The calibration chart reading should be done on this surface.

- Set the Spire emulation method to the method that will be used to print the customer job (CSA/Device Link). Choose the method that best fits the company's type of jobs. The emulation method is found in Tools\Administration\Preferences\Color\Emulation.
- Review the "Spire color flow chart" located on the DFE (at: D:\Sample Files\General Postscript and PDF* (Europe or US), Color Flowchart_*.pdf) for a convenient way to learn about all Spire color options.



The calibration process

Perform a calibration for every combination of media and screen type used for printing.

1. Load the media to be used for printing on to the DocuColor 6060 printer.
IMPORTANT: Calibrate on the "media" that will be used to run the job.
2. To start the calibration process, in the Spire application, select the **Tools** menu, and then select **Calibration**. The Calibration window appears.
3. Confirm that the screen type and paper weight/type is set to the one that will be used later to print the customer job (i.e. 200 dot, 75 – 105 gsm).
4. Click the **Calibrate** button to run the Calibration Wizard. Follow the calibration wizard steps.
5. To measure the Creo calibration chart(s), place them on the prepared calibration surface, on top of the white paper.
6. It is highly recommended that the calibration table be saved with a specific name that includes the specific paper name and screen method. This helps selecting the proper calibration table in the job parameter setup.

Printing the job with the calibration table

Now that the paper to be used for printing has been calibrated, the calibration table can be selected to print any job on the same paper stock using the same screen type.

The reference job can be re-printed with the new calibration table to evaluate the calibration results.

1. In the Spire workspace, suspend the **In Process** queue.
2. Import the job.
3. Double click the job to open the job parameters window.
4. In the **Paper Stock** tab, select the desired paper stock.
5. In the **Color tab**, select the calibration created for the particular stock being used for printing.
6. In the **Color tab**, select the screening method used for the selected calibration.
Set all other desired parameters, and then click **OK** to close the job parameters window.
7. Release the **In Process** and **In Print** queues, and inspect the printed job. If the job has already been printed at least once, make sure that it is re-ripped with the new calibration settings.

If any color imperfections are visible, please review the job parameters settings, and make changes if necessary to obtain the desired results, (i.e. use of the Gradation Tool). If there are still color imperfections, perform machine maintenance and repeat the calibration process.