

Activity 8: Add a spot ink channel to a print calibration curve

Background

Most of ColorFlow's color control elements control the color reproduction of process inks. Process inks, typically CMYK, are translucent inks overprinted in various combinations on the output device to achieve a desired color appearance. Specially mixed spot inks with a set color appearance can be printed in addition to process inks. You can control the tonality of spot inks separately from process inks.

In ColorFlow, by default, the process color (Black) calibration curve is used for an undefined spot ink, but you can also choose to use C, M or Y as the default calibration curve for undefined spots.

If you wish to apply a unique curve to control the tonality of a spot, you create a new spot ink channel and define a unique curve for the spot channel.

Tasks

Goal

Create and add an additional custom spot ink channel to a CMYK print calibration curve you created in [a previous activity](#).

Task 1: Add a spot ink to a print calibration curve

1. In ColorFlow, click the **Print Curves** tab.
2. In the **Print Calibration Curves** list table, find and click the print calibration curve **XX new print calibration curve for tonal match**.
3. In the curve object in the Viewer window, click the **Property** icon .
4. In the **Device Condition Properties** dialog box, in the **Spot Inks** section, click the **Add** button .
5. A spot ink item is added to the **Spot Inks** list with the default name **Spot 1**.
6. Define the spot ink:
 - a. Double-click the **Spot 1** column and enter Pantone 123 as the name of your spot ink.
 - b. Double-click the Color column, click the **Swatches** tab and choose any color you like for the spot appearance.
 - c. Click **OK**.
 - d. Click on the default Black curve in the **Curve** column and choose **Custom** from the drop-down list.

- e. Click **OK**.
7. Create a Tint Ramp chart:
- Click the **Measurement** icon  in the Offset Press panel. (**Note:** The Measurement icon will appear as  if you have already created an offset press Device Condition with the same properties in a previous exercise.)
 - In the **Charts** section, click the **Add** button .
 - A chart appears in the **Charts** list with a default name.
 - From the **Chart Type** list, choose **Tint Ramp**.
 - In the **Tint Set** section, click the **Edit** button .
 - Click the **Add** button  and enter the values 10 25 50 75 90 if a Tint Set with those values doesn't already exist.
 - Click **OK**.
 - From the **Process Ink Set** list, choose **None (spot inks only)**.
 - Click **Save**.
8. Manually enter the measurement values. In a real-life situation, you would print a tint ramp chart with the designated spot ink and measure it with a measurement device. For the purpose of this training, you will enter manually **SCTV (Spot Color Tone Values)**. Spot Color Tone Value is a newer ISO method for controlling the tonal values of spot inks, and requires a spectrophotometer that has the SCTV method implemented.
- Note:** If the spot ink is added when you first define curve properties, you can measure the CMYK and any spot colors directly in the **Charts** tab by clicking on **Measure...** But if you add additional spot inks after the original chart measurements, you enter the spot ink values by clicking on the **View** button in the **Measurements** tab.

Enter Measurement values:

- Click the **Measurements** tab.
- Click **View** to open the **Tint Ramp Measurement** dialog.
- The Pantone 123 spot ink created in the previous step is automatically selected in the **Spot Ink** list at top left.
- In the **Tint In Values** section at the bottom left, select the 10 25 50 75 90 Tint Set created in the previous step.
- In the **Tonal Response** section, enter the following **SCTV** values: (The SCTV metric is selected by default, but you can switch to Murray-Davies EDA if your spectrophotometer doesn't support SCTV.)

Tint in	SCTV
0	0
10	12
25	29
50	57
75	84
90	96
100	100

- f. Click **OK**.
- g. In the **Device Condition Response Update** dialog, click **Yes** to update the spot ink curve in the device condition.
- h. Click **Close** to close the Device Measurements dialog. (Click **Yes** to save the chart, if you are prompted.)

Task 2: Define the spot ink target to align to an industry specification (SCTV)

1. Click the **Calibration** icon  in the link connector between the **CMYK Reference** and the **Offset Press** panels.
2. Click the **Redefine...** button at the bottom left of the **Calibration Edit** dialog
3. Click the **Spot Inks** tab and **Target: Linear** will be selected. Leave this value as is.
4. The ISO definition specifies that **Curves Method** must use **Linear SCTV**, so all other method choices are disabled.)
5. Click **View Curves...** to open the **Calibration Curves** dialog box and verify your curve.
6. Click the **Spot** button at the top left of the panel.
7. From the **Spot** ink list choose **Pantone 123**.
8. View the **Pantone 123** spot ink channel in the graph.
9. Click **Close**
10. Click **OK** to update the print calibration curve and add the spot color curve channel.

For this exercise, we will not output the Tint Ramp chart to VPS and measure to confirm the calibration values were correctly applied, as VPS is unable to measure raster files using SCTV. You can only measure SCTV from a printed spot ink using an SCTV-enabled spectrophotometer.

Outcome

You have added a custom spot ink channel to a print calibration curve and aligned the printed appearance of the spot to Linear SCTV.