

Creating a derived print calibration curve

This article compares creation of a derived print calibration curve in Harmony to the equivalent operation in ColorFlow.

It applies only to derived print calibration curves where:

- the current curve represents the *measured* tonality of the print condition, without calibration curves (except perhaps a plate linearization curve)
- the target curve represents measured or published tonality of a print condition that you wish to match, such as ISO TVI curves, SWOP target tonality, etc.

Another common usage for derived calibration curves where:




- the current curve is linear
- the target curve input and output values are the nodes of a desired calibration curve, produced by human expertise or third-party software.


This latter use case is not addressed by this article. Instead, see [Creating a print transfer curve by Tint In/Out Points](#).


The following table provides a side-by-side comparison of creating a derived print calibration curve from measurement data in Harmony and ColorFlow. The left column lists the tasks you would perform in Harmony; the right column lists the equivalent tasks in ColorFlow.

Harmony	ColorFlow
---------	-----------

Create a print current curve


- In the **Print Curves** tab, under **Calibration Curves**, click the **Add** button .
- In the **Devices** window, create a named press and drag it to the viewer window. Close **Devices**.
- Click the **Properties** icon  and define the device condition.
- Click the **Measurement** icon .
- You can either measure a chart or import an existing Harmony current curve with real measurement data.

1. In the **Chart** tab, click the **Add** button .
2. In the **Chart Type** dropdown list, select **Tint Ramp**.
3. Click **Save**.
4. Print the tint ramp chart with the device condition that you want to calibrate.
5. Click **Measure**.
6. In the **Characterization Print Curve** dialog box, choose the print curve used to output the tint ramp chart in Prinergy.
7. Click **OK**.
8. Follow the measurement wizard to measure or enter your measurements.
 1. Click the **Measurements** tab.
 2. Click **Import**.
 3. Locate and select the Harmony file, **Open**.
 4. In the **Import Harmony Print Measurements** windows, select the current curve of the press, **OK**.
 5. To check the press response, click **View** and select **Tone Value**

Increase View . If the CMYK midtone gain values are not between 15% and 45%, the current curve is likely not real measurement data. Measure a printed chart for meaningful press measurement data.

6. Click **Close** to close the **Device Measurements** window.

Create print target curve

1. Click the **Calibration** icon .
2. If you want the curve to be visible for selection in Prinergy, select the **Show curves in Prinergy** check box.
3. Click the **Process Inks** tab and select the desired target device condition from the **Target** dropdown list.

ColorFlow provides a list of built-in industry CMYK specifications that you can use as your target response. If you can't find the desired target from the list, you can create a custom CMYK Reference device condition as your target.
4. In the **Curves Method** list, select **Tonal Match**.
5. Click **OK**.

- a. Click the **Device Conditions** tab and then click the **Add** icon



The **Device** window appears.

- b. Drag the **CMYK Reference** to the viewer window.
- c. In the device condition, click the **Properties** icon
- d. In the **Name** list, type a name.
- e. Leave the default value for **Separate Same As** and click select a device type that best represents the black generation strategy of the reference device condition. For the **US Web Coated SWOP** reference, select **Offset Press - Heatset Web**.
- f. Click **OK**.
- g. Click the **Measurement** icon
- h. In the **Device Measurement** dialog box, click the **Add** button



- i. From the **Chart Type** list, select **Tint Ramp**.
- j. Click **Save**.
- k. Click **Measure**.
- l. Click **Enter manually**.
- m. Click a color channel (**C**, **M**, **Y**, or **K**), or in the **Channel Binding** section, select **C, M, Y Same** or **C, M, Y, K Same**.
- n. In the **Tonal Response** section, double-click the EDA area of a desired tint in, and then enter your EDA value.
- o. Click **OK** and close the **Device Measurement** dialog box.

- p. In the **Device Conditions** list table, find the device condition that you just created and select the **Show in Target List** check box.

To import a Harmony target curve:

- i. Click the **Measurements** tab.
- ii. Click **Import**.
- iii. Locate and select the Harmony file, **Open**.
- iv. In the **Import Harmony Print Measurements** windows, select the target curve, **OK**.
- v. To check the press response, click **View** and select **Tone**



Value Increase View. If the CMYK midtone gain values are not between 15% and 45%, the target curve is likely not real measurement data. Use another method described above.

- vi. Click **Close** to close the **Device Measurements** window.

Click the **Process Inks** tab and select the desired target device condition from the **Target** dropdown list.

ColorFlow provides a list of built-in industry CMYK specifications that you can use as your target response. If you can't find the desired target from the list, you can create a custom CMYK Reference device condition as your target.

Create a derived calibration curve based on the print current and target curve

The print calibration curve is generated for you

Edit the print calibration curve:

1. Edit the print current curve.
2. Edit the print target curve.
3. Re-create the print calibration curve based on the modified current and target curves.

1. See [Adjusting a print calibration curve](#).
2. You can click **Calibration Curves** to display the curve graph and see the result of your adjustments.
3. To [preview the effect of your adjustments](#), click **Preview** and select an image file.
4. Click **Apply**.

