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.

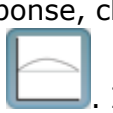
This latter use case is not addressed by this article. Instead, see Creating a print transfer curve by Tint In/Out Points.

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**.