

ONYX®

Using Swatch Books in ONYX

In some situations the printed color fails to match what is expected. The color may not be bright enough or the hue is off from the desired color. A new ink recipe is needed to achieve the closest printed color to the desired color. Swatch Books is a tool that helps find that new ink recipe. Once the ink recipe is chosen a color replacement can be used.

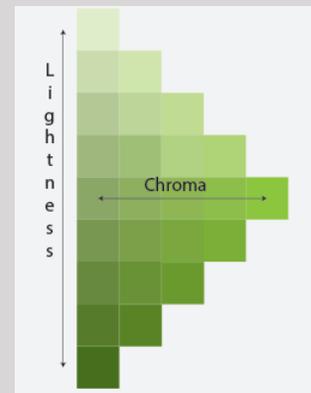
This document will explain how to use Swatch Books.

Terms and Definitions

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Lightness: Varies patches in Swatch Books from dark to light.

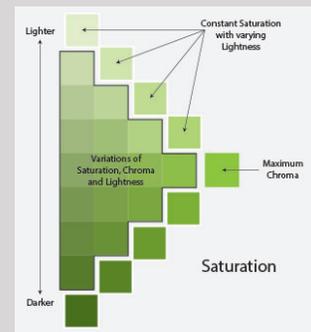
Chroma: Varying degree of colorfulness, or distance of the color from a gray.



Lightness and Chroma

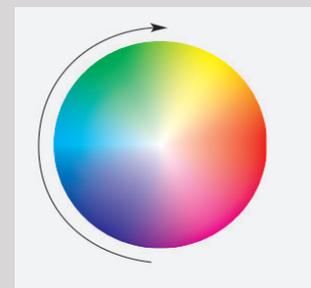
Saturation: A change in chroma relative to lightness.

In the image to the right the outer patches highlighted in white, show a constant saturation with varying lightness. The inner patches highlighted in black show variations in saturation relative to chroma and lightness.



Saturation relationship to chroma and lightness

Hue: A change from one color to another. Can be thought of as moving around a color wheel.



Change in Hue

Swatch Books Interface

There are two methods to open Swatch Books. The first is by launching Swatch Books from the toolbar in RIP-Queue or Job Editor. An intermediate window appears requiring the user to specify printer, media, mode, Quick Set and Source Color. Once they are set the Swatch Books window will open.

The second method opens Swatch Books within the Color Replacement and Named Color Replacement windows. This bypasses the intermediate as the media, mode, Quick Set, and Source Color are linked to the settings for the job and its color replacement.

The Swatch Books interface is divided into five sections: Swatch Generation, Source Color, Auto Patches, Manual Patches and Preview.

Swatch Generation provides options to customize the swatches generated. This includes how many types of variations Swatch Books will use, the number of patches, patch size and spacing between patches. Changes made to this section will control what is available in Auto Patches and Manual Patches sections.

Source Color shows what color the variations will be based on. The values listed below the swatch indicate the printer's device values used to print the Source Color.

Auto Patches provides the ability to customize the variation types and magnitude of each variation. The options listed are dependent on the settings in Swatch Generation.

Manual Patches allows customization of corner patches. These corner patches can be changed to any color desired. The patches in between vary based on the colors defined in the corner patches. The number of corner patches varies based on the Swatch Type setting under Swatch Generation.

Preview shows what will be printed. The patches previewed automatically update based on settings from the other four sections.

Starting Swatch Books



Launching Swatch Books from the toolbar in RIP-Queue or Job Editor, is job independent. An intermediate window appears requiring printer, media, mode, Quick Set and Source Color. After the settings are chosen Swatch Books window will open.

The Source Color displayed in the intermediate window is color managed based on the initial numbers entered. Using a Color Type is set to RGB, Lab, Measured, or CMYK will go through color management and list new device values. The Device Values to the right will show the ink recipe that is used to make the Source Color.

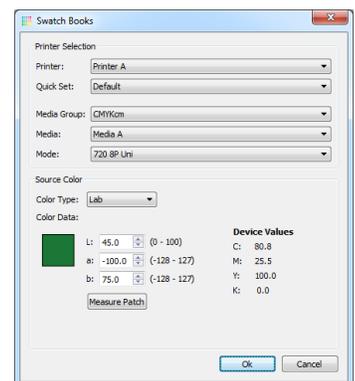


Figure 2: Intermediate Swatch Books Window

If the Color Type is set to CMYK or RGB the option **Use Color Management From Quick Set** appears. It is enabled by default. When this is selected the values entered by the user are color managed and new device values will be shown on the right. Deselecting this option will simply take the user values and map them to the printer's color space. If using CMYK and the printer is a CMYK printer, the values will not change. If it is CMYKRGB the values will change when they are converted to the printer's color space.

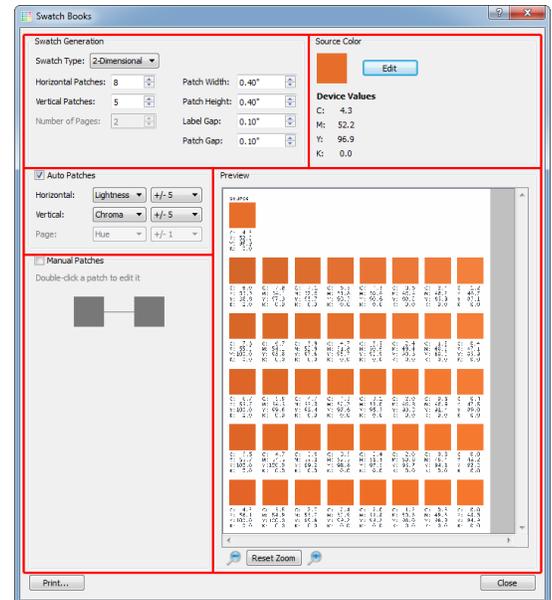


Figure 1: Swatch Books Interface

Select the Color Type of Device Values to specify an ink recipe. This option will display all channels used based on the printer and media.

Opening Swatch Books from the Color Replacement or Named Color Replacement dialogs do not use the intermediate window. The required settings are inherited from the job and the active color replacement. Swatch Books is found in the Color Corrections tab, in Color Replacement and in Named Color Replacement. The button under the Color Corrections tab will remain unavailable until the color replacement above is selected.

Using Swatch Books

The first step to find the desired ink recipe is configuring the number of Swatch Types. By default Swatch Books will have the Swatch Type set at 2-Dimensional. The Swatch Type can be set to 1, 2 or 3-Dimensional. Swatch Type controls the options listed below. Each dimension adds a degree of freedom to generate the patches. If 3-Dimensional is selected 3 dimensions are available, Horizontal, Vertical and Number of Pages. By default 2-Dimensional is selected showing Horizontal and Vertical Patches. Number of Pages will be unavailable.

After the Swatch Type has been chosen the number of patches for each dimension can be configured. The patch size, distance and gap between labels can be modified.

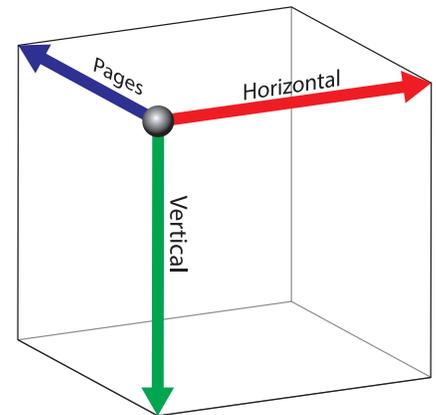


Figure 3: Dimensions in Swatch Books



Figure 4: Swatch Generation options

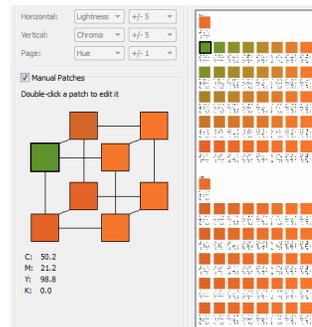


Figure 6: Change Corner Patch Color in 3-Dimensions

Below the Swatch Generations are Auto Patches and Manual Patches. By default Auto Patches is enabled.

In Auto Patches there is variation types and variation magnitudes. The variation types can be changed to Saturation, Lightness, Chroma or Hue. Saturation is only available when the Swatch Type is set to 1-Dimensional. This is due to the relationship Saturation has with both Chroma and Lightness.

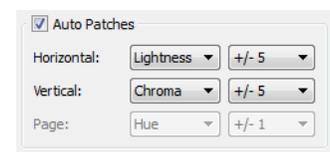


Figure 5: Auto Patches

Next to the variation type is the variation magnitude. This is based on a +/- number system. The higher the number is chosen the bigger the difference for the first and last patch in that axis.

Manual Patches takes the initial settings from Auto Patches, but allows the user to change colors at each corner. Double-click the corner patch to edit the corner patch color. As the corner patches are changed, the colors in-between are updated. The number of corner patches will vary based on the

value in Swatch Type.

In 1-Dimensional there are only two corner patches available.



Figure 7: 1-Dimensional Manual Patches

In 2-Dimensional four corner patches can be modified. Changing one corner patch color will have an impact on nearly all patches generated.

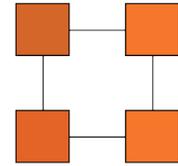


Figure 8: 2-Dimensional Manual Patches

In 3-Dimensional there are eight corner patches. This behaves like a 3 dimensional cube. As one corner is changed it will have an impact in all three directions, horizontal, vertical and pages.

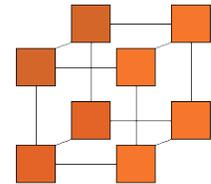


Figure 9: 3-Dimensional Manual Patches

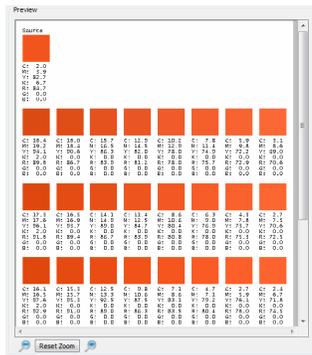


Figure 10: Preview window

As changes are made to how the patches are generated the preview will reflect the changes automatically. This includes the color of each patch and the ink recipes listed below.

In the Preview section there are basic view controls such as zoom in, zoom out and Reset Zoom.

After the patches have been configured they can be printed. The print window will appear indicating the total size the patches will use when printed. The patches are sent to RIP-Queue with the job name of Swatch Books.

After printing review the patches and determine the best ink recipe for the color replacement. Enter the selected values into Color Replacement.

Swatch Books is a tool that can be used for a quick color replacement, to convey colors that are achieved with any material and more.