

INK PERFORMER

/ Overview

InkPerformer is a new CALDERA option dedicated to Ink Jet printers, which enables ink saving during printing.

This feature, developed in partnership with Alwan Color Expertise, calculates a new color combination which decreases the quantity of ink used while maintaining a visual accuracy of colors.

InkPerformer is an option available only with Version 9 of the Caldera RIP Software, it requires purchase and a specific activation key.

// How does it work ?

InkPerformer can be activated or deactivated in the job submission interface. It is therefore a printing option and not a profiling option.

The GUI is easy to use, and consists of 2 settings:

- ◉ The first for adjusting *BlackStart* (the percentage at which the introduction of black ink is initiated)
- ◉ The second for the ink saving level

It is possible to preserve the original *BlackStart* (the one defined in the output profile), to force it at 0% (authorize the replacement of the CMY inks by black immediately) or to use an intermediate value automatically calculated by InkPerformer.

The lower the *BlackStart* value (close to 0%), the more the black ink will be used in the mid and light tones of the image, and the higher the ink saving. However, this use of black in the light tones will make the print grainier (black dots will be visible in the colored areas), which can be an issue when a print is viewed from close-up.

The level of ink saving can be set to 4 different values:

- ◉ Low (small savings, very important color preservation)
- ◉ Mid (moderate savings, important color preservation)
- ◉ High (high savings, good color preservation)
- ◉ Maximum (very high savings, less important color preservation that can lead to a loss in color gamut in shadows in order to save more ink)

The **InkPerformer** option requires the usage of an ICC profile as well as the activation of color management in order to be used.

InkPerformer also includes an additional option, called dual mode. This option enables ripping (or printing) of a job twice:

- ◉ Once without ink saving
- ◉ Once with ink saving

This work mode enables faster comparison by using, for example, sample images that you want to print with **InkPerformer**. Once the two examples are ripped (or printed), the Caldera Spooler displays the percentage of ink saved (which is not the case during a simple mode use of **InkPerformer**)

Warning: **InkPerformer** will not work in RGB print mode. In this mode, the CMYK separation is done by the printer which defines the CMYK for printing. The control of the black by the RIP is essential for the use of **InkPerformer**. The presence in the machine of ink types « light black » or « superlight black » will cause a decrease in ink saving.

/// For what results?

The percentage of ink saved essentially depends on the image to be printed, but also on the characteristics of the output profiles and the inks. It is therefore difficult to give a guaranteed percentage of ink savings in every case. Nevertheless, our tests have shown that in “high” level, we can generally observe an ink saving of about 20%.

In terms of precision of rendering, the first 3 levels maximize preservation of the original colorimetry without any notable effect.

With **InkPerformer**, the greys are often more neutral. Printed with color components, the greys can seem more “colored” (bluish, yellowish,...). The metamerism of the chromatic inks, which change the perception of the color according to the lighting, create this impression of gray coloration. **InkPerformer** uses the black appropriately and reduces this effect, making the greys more neutral. This neutrality is an additional benefit of **InkPerformer**.

Compared to other ink saving technologies already available on the market, **InkPerformer** has the following advantages:

- ⦿ It is included within the RIP, there is no need for separate software to create a specific profiles for ink saving and import them into the RIP.
- ⦿ It uses existing profiles to which it applies an algorithm; that do not require a specific reproffiling for ink saving.
- ⦿ It is easy to use, **InkPerformer** contains only 2 options which make it easy to understand and to use.
- ⦿ It guarantees that ink will be saved in any case.

/// Technical details

A few additional points concerning the keys:

- ⦿ **InkPerformer** works with the **VisualRIP** and **GrandRIP** suites
- ⦿ The **InkPerformer** key is scalable, meaning that you will need an equal quantity to the number of drivers you have – or want to be able to use. **InkPerformer** is sold in 3 levels: “1-3 Printers”, “1-5 Printers”, and “6+ printers”.
Once a printer uses for the first time **InkPerformer**, it takes one of the keys. The key is then linked to the printer and will not be usable with another printer even if the proprietary printer of the key is not using the option.