

# SureColor S50600

## Technote

RIP SOFTWARE - VERSION 13 - CALDERA 2020



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## Driver History

Supported since **Version 9.00**

### Version 13 History

Release	Date	Comments
A (13.1)	03/2020	<i>Fix to use the proper settings for job data when only one layer used, it may have used some defaults settings instead of the selected one resulting in a lower quality output/print.</i> <i>Fix to apply the desired output (colors, spot, ...) for one layer print instead of always printing all the channels independently of user choice.</i>
A (13.0)	03/2020	<i>Fix to use the proper settings for job data when only one layer used, it may have used some defaults settings instead of the selected one resulting in a lower quality output/print.</i> <i>Fix to apply the desired output (colors, spot, ...) for one layer print instead of always printing all the channels independently of user choice.</i>

### Version 12 History

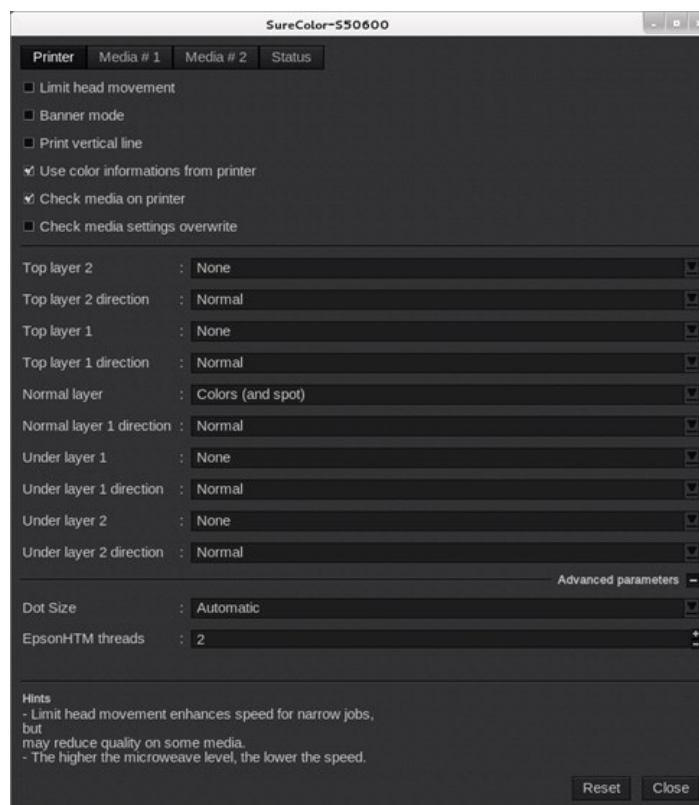
Release	Date	Comments
B (12.1)	03/2020	<i>Fix to use the proper settings for job data when only one layer used, it may have used some defaults settings instead of the selected one resulting in a lower quality output/print.</i> <i>Fix to apply the desired output (colors, spot, ...) for one layer print instead of always printing all the channels independently of user choice.</i>
A (12.1)	07/2019	<i>Fix to bring back compatibility for macOS 10.11 (El Capitan), driver was not launching on v12.1.</i> <i>Fix "Unknown error" when using mode "EpsonHTM" (#9525).</i>

### Version 10 History

Release	Date	Comments
C (V10.0)	01/2015	<i>Correction of the firmware detection for HQ2 modes selection.</i>
B (V10.0)	12/2014	<i>Supports firmware released after September 2014. Limited compatibility with older firmwares and Epson HTM mode.</i>
A (V10.0)	11/2014	<i>New checks before printing and HTM2 support (faster and addition of HQ1 and HQ2 qualities to fix banding).</i>

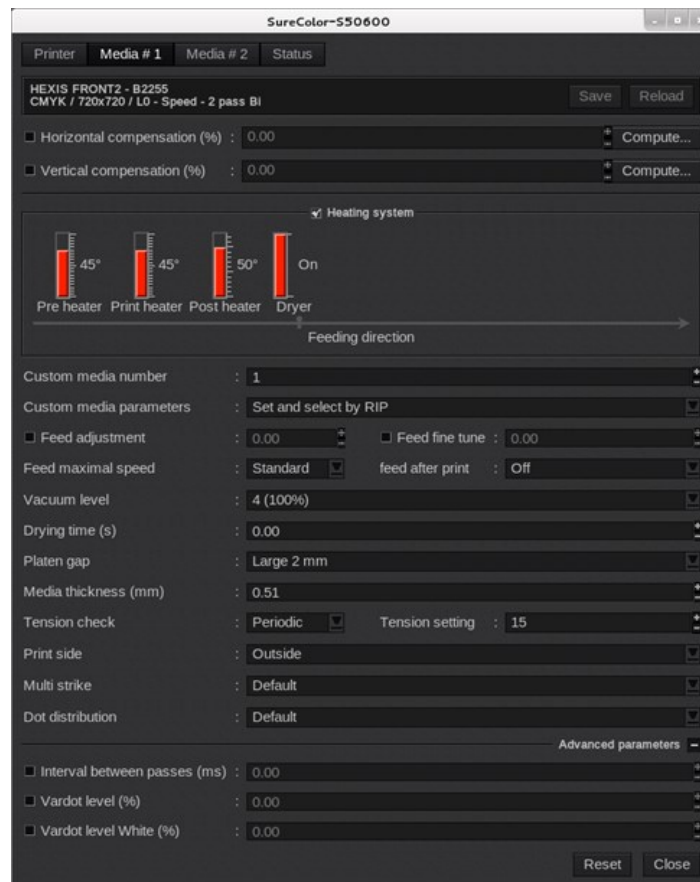
## Printer settings

### Printer

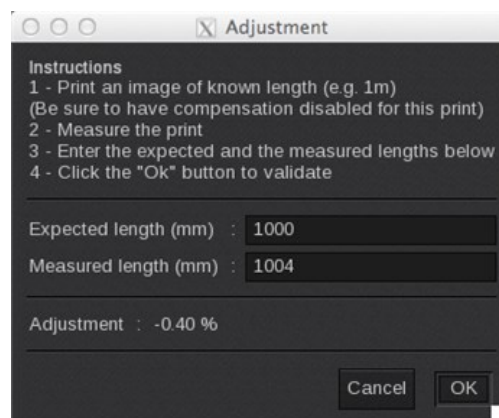


- **Limit head movement:** the print time is shortened. Image quality may be worse by drying time, since pass interval differs depending on data width.
- **Banner mode:** this option is not used by Caldera.
- **Print vertical line:** it prints a vertical line alongside the job.
- **Use color information from printer:** only works for Epson HTM mode (with a network connection), it modifies the data sent to the printer by calculating differences from a reference in order to minimize deltaE between printers from the same range.
- **Check media on printer:** check if the media loaded matches with the job that is about to be printed
- **Check media settings overwrite:** warn the user if the media settings from the Media tab (slot not set at 0) would overwrite settings on the printer
- **Top/Normal/Under layers:** see the multilayer printing section
- **Dot Size:** if not Automatic, the drop size is forced to use only Small, Medium or Large drops.
- **EpsonHTM threads:** used to do parallel calculation when EpsonHTM mode is chosen. If you set too many threads, the printing process may slow down.

## Media #1



- **Information:** at the top of the window, you are able to see information about your media. There you have access to two actions:
  - **Save:** when you click on this button, the current media settings are saved with the selected media profile (printer, media, resolution, mode) so there will apply for any new job using the same print configuration. If you don't save, the changes you made are only applied to the current job.
  - **Reload:** will revert back to default as set during profiling or to the last saved changes.
- **Horizontal compensation (%)**: we recommend not to modify this. Any deviation is likely to be mechanical on the printer's side.
- **Vertical compensation (%)**: this can be useful if you detect an increase or decrease in the length due to heating or media tension which is common when printing on vinyl or textiles for example. To calculate the compensation, click **Compute** and follow the software's instructions.



# PRINTER SETTINGS

- **Heating system:** Set the heating system temperature in Celsius Degrees:
  - **Pre heater:** The range is from 31° to .50°. You can turn it off by taking the temperature below 31° to Off.
  - **Print heater:** The range is from 31° to .50°. You can turn it off by taking the temperature below 31° to Off.
  - **Post heater:** The range is from 31° to .55°. You can turn it off by taking the temperature below 31° to Off.
  - **Dryer:** You can turn it On or Off.
  - **Feeding direction:** it shows you the feeding direction of the printer and the chronology of the heaters.
- **Custom media number:** choose the slot number that contains the adjustments for your media.
- **Custom media parameters:** choose if the selected slot will be:
  - **Select by RIP:** the media settings used are those contained in the selected slot
  - **Set and select by RIP:** the RIP save its driver settings in the selected slot
  - **Panel only:** uses only the printer panel settings
- **Feed adjustment (%):** this setting can be used in case of banding issues (horizontal striped lines or uneven colors) because of media stretch. You can enter values from -1 to 1.53%

We strongly advise you to set this directly on the printer using the dedicated wizard.

- **Feed fine tune:** this setting is complementary to **Feed adjustment**.

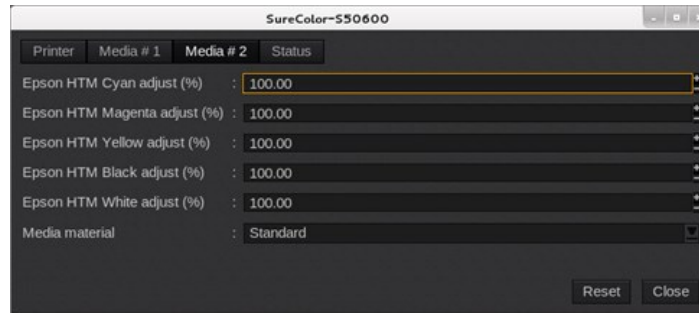
We strongly advise you to set this directly on the printer using the dedicated wizard.

- **Feed maximal speed:** choose the maximal speed between: Default (uses the custom media parameter), Standard and Low.
- **Feed after print:** move the media forward to be dry by the Post-heater. If On with backfeed is selected, after the dry, the printer will rewind the media to reduce the space between the jobs.
- **Vacuum level:** you can choose the power of the vacuum in percentage.
- **Drying time (s):** indicate the time in seconds allowed for the page to dry (max 3600 seconds)
- **Platen gap:** set the gap between the head and the media
- **Media thickness:** enter the media thickness.
- **Tension check:** by default, the printer checks the media tension: every 5 meters (Periodic) or at the end of the job (Every Page). It slows the print a little bit but maintain a good media feed.
- **Tension setting:** select the media tension
- **Print side:** set the roll-out side of the media. Outside is the default setting.
- **Multi-strike:** apply multiple strike on the print: the job will be printed between 2 and 9 times on the same spot accordingly to your setup
- **Dot distribution:** this option allows you to choose the drop limitation. Default uses the general limitation whereas Optimized reduces the use of the small and medium drops.

Be careful to select the same parameter that has been use when creating the profile to avoid artifacts.

- **Interval between passes (ms):** select the time the print head pauses to allow drying after each pass. Depending on the paper type, the ink may take a while to dry. If the ink blurs on the paper, set a longer time for drying the ink. Increasing the drying time increases the time needed to print.
- **Vardot level (%):** set the vardot level in percentage
- **Vardot level White (%):** set the White vardot level in percentage

## Media #2



- **Media material:** Select it between Standard or Banner.
- **Epson HTM:** these modes allow you to adjust the ink use made by the HTM2 module by changing their density  
For example: if you change the first value, Cyan, to 110%, there will be more Cyan in the print with a density increased by 10%.

### Note:

- When using these modes, the ink consumption is not available any more.
- Some combinations are not available for these modes (especially very high and very low resolutions).  
You will be warned when the combination is not available so you can make some changes before launching the print.

### Recommended use

Globally it is recommended not to touch these percentages. **Epson** have determined and calculated the best use of inks according to the quality and resolution wanted.

This tool is useful if you want to increase your GAMUT size. In this case, follow the steps below to create your profile:

- Create your project in **EasyMedia**<sup>\*</sup> as usual

<sup>\*</sup>EasyMedia is named ProfileExpert in the TextilePro interface.

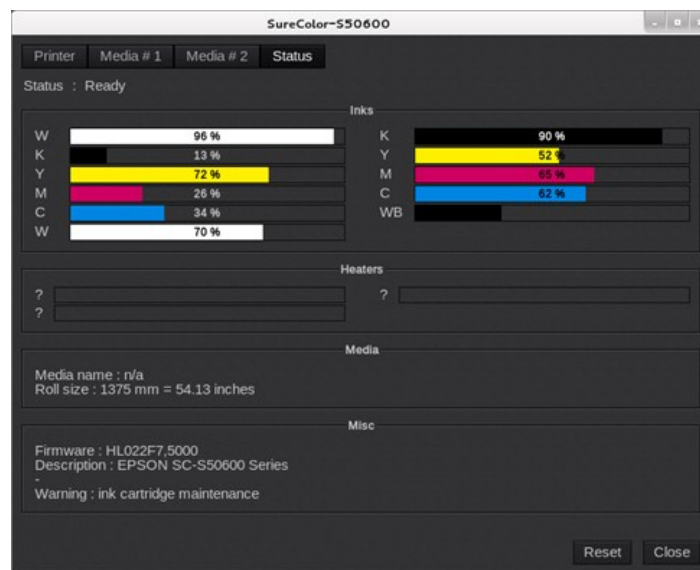
- Do your linearization keeping the ink adjustment to 100%
- During the ink limit stage, increase the ink max values by steps of 5% until you get the most variation possible.

Be careful of over inking that can appear with the increase of ink density.

- Finish your profile as usual.

Be careful, we recommend you to be cautious and to choose the lowest value that offers you a satisfying result.

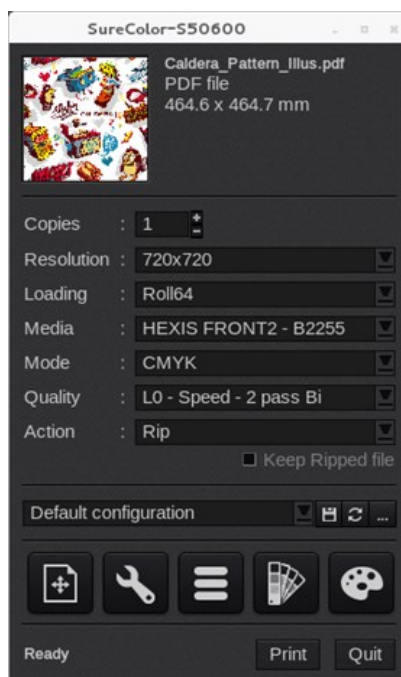
## Status



- **Status:** Global state of the printer: Ready, Not available. All data are coming from the printer, if it is not available, nothing can be displayed.
- **Inks:** Inks and Waste Boxes levels
- **Heaters:** temperature level of the Heaters
- **Media:** Info about the media loaded on the printer
- **Misc:** complementary info about the printer (model, serial number, firmware version, warnings)
- **Refresh:** button to refresh the tab.



## Printer specifications



### Resolution

Available resolutions:

360x720 - 720x720 - 720x1440 - 1440x1440

In addition to the standard resolutions, composed resolutions also exist.

### Mode

#### **Print modes available:**

CMYK

EpsonHTM CMYK

### Quality

The qualities are divided into two categories: unidirectional and bidirectional. Bidirectional means that the head prints in both pass. In Unidirectional quality, the head prints a stripe then move to its original position before printing the next stripe.

Qualities are distinguished by their print level. The level number represents the number of passes done by the head on one printed stripe. The higher the pass number, the higher the quality.

Depending on the quality chosen, the number and the characteristics of the levels vary.

## Changing a profile generated with CMYK8 mode

Previous profiles created with the CMYK8 mode have to be changed. Indeed, CMYK8 is the former name of the mode that used the Epson raster. It has to be replaced by EpsonHTM CMYK modes to be still available. Please follow this procedure to modify the profiles without any extra calculation or target measurement.

1. Open **EasyMedia**\* and select your **SureColor S50600** device.

The following steps will have to be repeated for every media that has profiles using the CMYK8 mode.


\*EasyMedia is named **ProfileExpert** in the **TextilePro** interface.

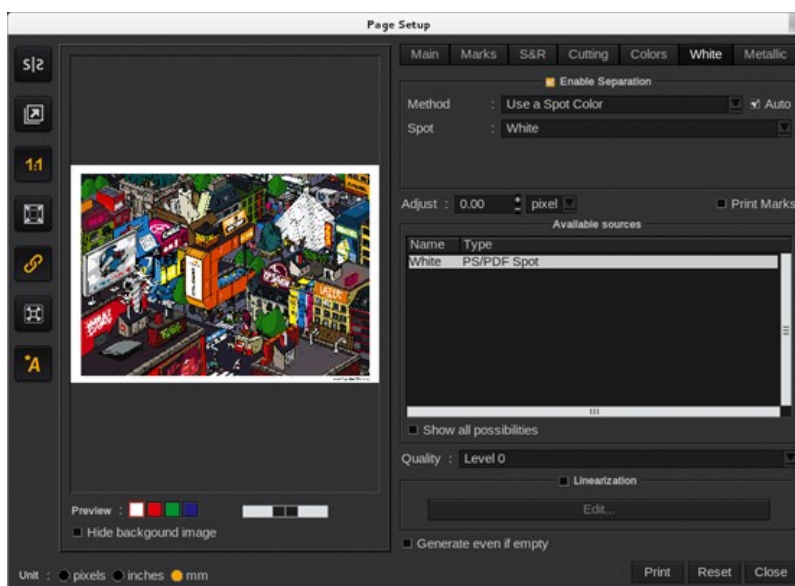
2. Double-click on your media to open its profile list.
3. Select your profile then click on the **Edit...** button.
4. Change the profile mode according to the following rule: use EpsonHTM CMYK mode
5. Click then on **OK** to save the change. The following message will appear to inform you that it is not recommended to change a profile printing mode. Click on **Yes** to confirm the change and end the procedure.

Repeat this operation to all profiles that use the CMYK8 mode.

## “White” activation

The SureColor S50600 printer is able to use the specific **White** ink. This ink is printed either as an under layer or as a top layer of the “Colored” layer. **Caldera RIP** does not allow mixing this ink with the basic ones; it needs a particular separation and activation.

To activate the “white” ink, open the page setup (first button at the bottom of the print setup window: ). It is activated in a separate tab named: **White**. Here, check the **Enable Separation** box and adjust the parameters accordingly. The print can then be directly launched from this window or you can close it to carry on with the print configuration.



If this step is not completed and even if white parameters are chosen further, the printer will not print with white ink.

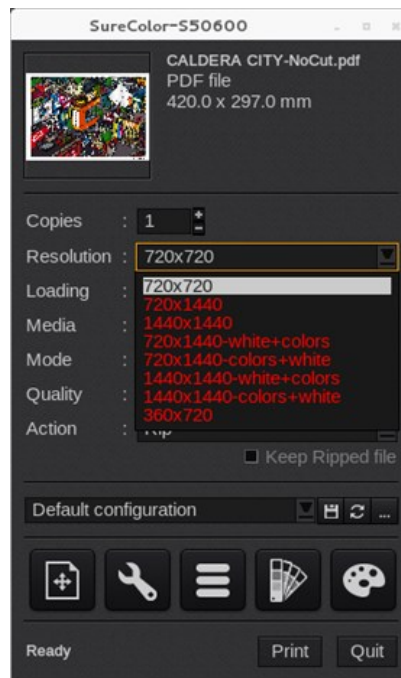
## Multi-layer printing

### Bilayer without media rewind

The **SureColor S50600** has the ability to print in a single pass, two layers one above the other. The two layers can be made of « Colors » or white ink. The print headers divide themselves into two sections, keeping some space between them for the dry, so the first section prints the first layer while the second section prints the second layer.

This printing mode saves the media rewind process and the under layer is not rolled-up before the next print. However the ink dry time between the two layers is reduced as well as the printing speed, which is divided by two.

**Caldera RIP** makes this ability to do bilayer printing available only if one of the layers is made of “Colors” inks and the second layer is made of “white”. The available combinations are chosen in the resolution field so the following resolutions represent bilayer printings:



720x1440-white+colors  
1440x1440-colors+white

720x1440-colors+white

1440x1440-white+colors

“Colors” represents the mode that has been chosen (CMYK, CMYKcm, CMYKO, etc.).

The order in which white and colors are written shows the layer order so if white is written first it will be printed first with a colored layer upon it. With the same principle: 1440\*1440-colors+white shows a 1440 by 1440 resolution with two layers: first a colored layer then a top layer of white ink.

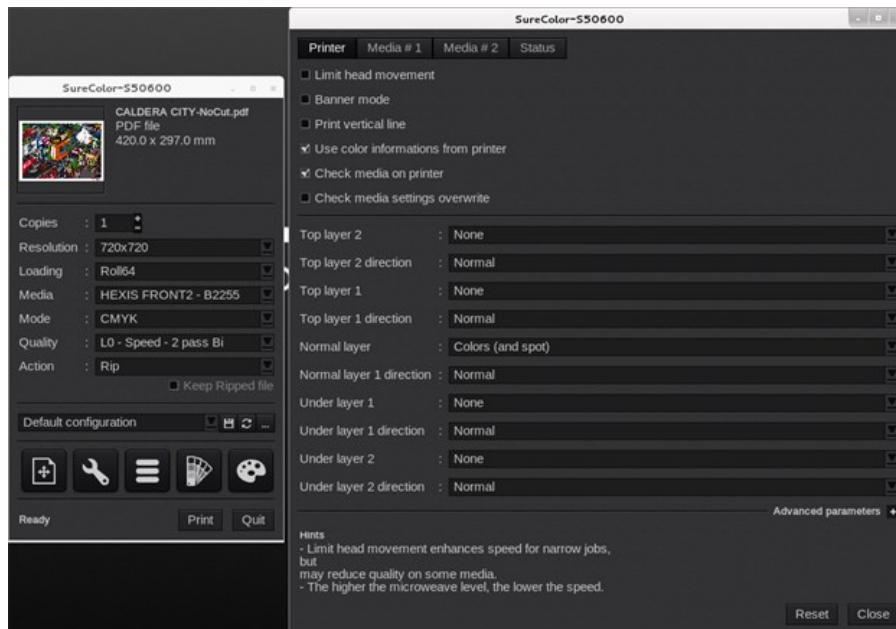
Resolutions with only white ink print the white layer under the silver one in one passage (no rewind).

Be careful, to use this functionality, you must use Color (and Spot) in the printer settings.

# PRINTER SPECIFICATIONS

## Multilayer with automatic media rewind

The **SureColor S50600** has an automatic media rewind function that allows to print several layers on the same area. **Caldera RIP** has implemented its print settings so that you can rewind the media four times in a row. The number of rewinds and the inks used are set up in the printer configuration window.



Multilayer is managed in the second part from “Top layer 2” to “Under layer 2”.

Between each layer the printer rewinds automatically the media to be ready for the next layer.

Concretely, the layers names are not important, only their order is decisive: the first one is Under Layer 2 then the others are stacked up. Besides, when a layer is deactivated, the algorithm will take no account of it so that there will be no time loose between two active layers.

Be careful, multilayer will only be taken in consideration if there are two or more active layers. Under that only the settings from the main print configuration window will be used to RIP and print.

Each layer can have one of the following statuses:

- **None:** the layer is deactivated.
- **Colors (and spot):** for this print, a bilayer print will be done depending on the chosen resolution.
- **Colors (and spot) reversed:** for this print, a bilayer print will be done depending on the chosen resolution and with its layers reversed.

For Color (and spot) and Color (and spot) reversed use, see the following subsection.

- **Colors only:** color layer only.
- **White:** white layer.

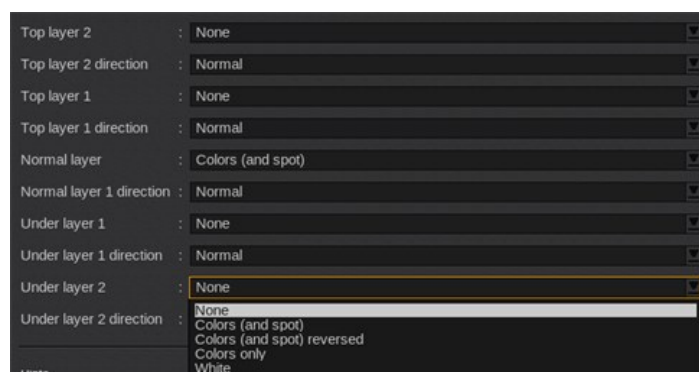
To use the multilayer with automatic rewind printing option, set up the parameters for each layer then close the settings window before launching the print.

Be careful, the layer calculation is done only once so if two layers have the same status, they will be printed the same way and overlapped perfectly.

Be careful, while using this mode you have to use the device green pinch rolls and place them under the marks (black rectangle) at one centimeter from the media's edge. They will press the media harder to avoid slides during the rewind process. White pinch rolls must be put away from the black marks.

## Colors (and spot) use in multilayer

This section explains the use of **Colors (and spot)** and **Colors (and spot) reversed**.



These two statuses allow to do bilayer print.

“And spot” refers to the White ink chosen in the resolution: white+colors or colors+white for example.

The option **Colors (and spot) reversed** changes the order of the two layers. If the chosen resolution is white+colors, a layer with Colors (and spot) reversed will first print the colored part then the white layer above it.

These statuses use multilayer and bilayer without rewind prints at the same time.

Be careful, if the resolution has not white or silver specified, only colors will be printed.

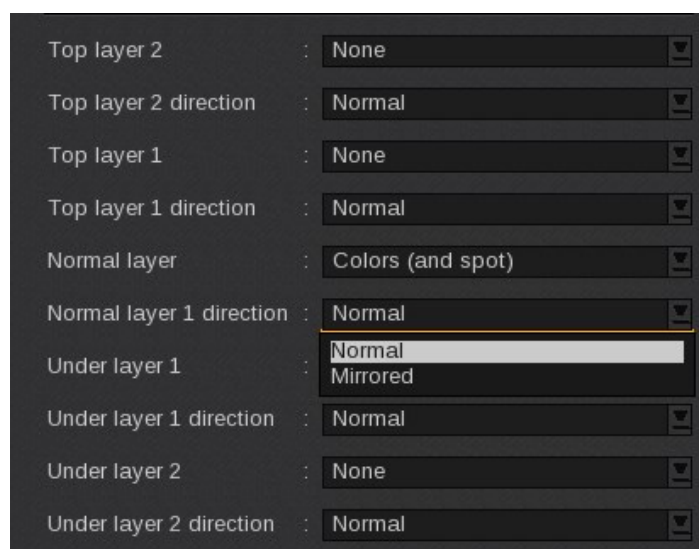
## Mirror mode

For each layer, you can choose to print it in the normal way or mirrored. The mirror mode is an horizontal symmetry of the image.

Be careful, the mirror feature is only available in the head scan direction, so 90- and 270-degree rotated images will have a wrong mirror direction.

By default, all layers are in **Normal** mode; each layer mode can be independently changed to the **Mirrored** mode.

The mirror feature is typically used on transparent media where you want to be able to read some text on both sides. (The print will be CMYK-white-CMYK with one CMYK layer been mirrored.)



# PRINTER SPECIFICATIONS

## Examples

Please see below often used examples.

The configuration 2 allows more rewinds. It may give better drying, allowing more ink per layer but due to multiple rewinds, you may have misalignments, so these configurations are generally not advised.

Layers	Configuration 1 (recommended)	Configuration 2
CMYK(Ocmk) Media	Resolution: all <div>             Top layer 2 : None              Top layer 2 direction : Normal              Top layer 1 : None              Top layer 1 direction : Normal  <b>Normal layer : Colors (and spot)</b>              Normal layer 1 direction : Normal              Under layer 1 : None              Under layer 1 direction : Normal              Under layer 2 : None              Under layer 2 direction : Normal           </div>	
CMYK(Ocmk) White Media	Resolution: XXXX x 1440- white + colors <div>             Top layer 2 : None              Top layer 2 direction : Normal              Top layer 1 : None              Top layer 1 direction : Normal  <b>Normal layer : Colors (and spot)</b>              Normal layer 1 direction : Normal              Under layer 1 : None              Under layer 1 direction : Normal              Under layer 2 : None              Under layer 2 direction : Normal           </div>	Resolution: XXXX x 1440 <div>             Top layer 2 : None              Top layer 2 direction : Normal              Top layer 1 : None              Top layer 1 direction : Normal  <b>Normal layer : Colors (and spot)</b>              Normal layer 1 direction : Normal  <b>Under layer 1 : White</b>              Under layer 1 direction : Normal              Under layer 2 : None              Under layer 2 direction : Normal           </div>
White CMYK(Ocmk) Media	Resolution: XXXX x 1440- colors + white <div>             Top layer 2 : None              Top layer 2 direction : Normal              Top layer 1 : None              Top layer 1 direction : Normal  <b>Normal layer : Colors (and spot)</b>              Normal layer 1 direction : Normal              Under layer 1 : None              Under layer 1 direction : Normal              Under layer 2 : None              Under layer 2 direction : Normal           </div>	Resolution: XXXX x 1440 <div>             Top layer 2 : None              Top layer 2 direction : Normal  <b>Top layer 1 : White</b>              Top layer 1 direction : Normal  <b>Normal layer : Colors (and spot)</b>              Normal layer 1 direction : Normal              Under layer 1 : None              Under layer 1 direction : Normal              Under layer 2 : None              Under layer 2 direction : Normal           </div>

Layers	Configuration 1 (recommended)	Configuration 2
CMYK(Ocmk) White CMYK(Ocmk) Media	Resolution: XXXX x 1440- white + colors 	Resolution: XXXX x 1440 
CMYK(Ocmk) White CMYK(Ocmk) mirrored Media	Resolution: XXXX x 1440- white + colors 	Resolution: XXXX x 1440 
CMYK(Ocmk) White White White mirrored CMYK(Ocmk) mirrored Media	Resolution: XXXX x 1440- white + colors 	Resolution: XXXX x 1440 



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CALDERA - 1 rue des Frères Lumière - P.A. d'Eckbolsheim  
BP 78002 - 67038 Strasbourg Cedex 2 - France

www.caldera.com - Tel. +33 388 210 000 - Fax +33 388 756 242 - [contact@caldera.com](mailto:contact@caldera.com)