

# GrandWhite – User Guide

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## How to print white with Caldera



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## Overview

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This guide describes the different Workflows available in the Caldera RIP to print with White ink (or other “special“ inks, like Varnish, Pantone inks, etc.). It explains how to prepare the file (either a raster or vector file), and then how to import it and print it in Caldera.

There are four workflows available:

- A) Extra-channel rasterization takes an extra-channel (or an alpha-channel) in a raster image (usually in TIFF format) and rasterizes it in the white separation. This method requires preparing the image in an image processing application (e.g. *Photoshop*). It is quite simple, but the quality is limited since it does not allow the use of vector elements or text.
- B) Contour filling consists in taking vector contours in a PS/PDF file and filling them to produce the white separation. The contours must be especially prepared for this task in a vector application (e.g. *Illustrator*), like in a Contour Cutting workflow. It is relatively limited, because the white density inside the contours cannot vary; however, it is less complicated than the next method.
- C) Spot Color processing is the most powerful, but also more complex method. It requires the PS/PDF interpreter to produce an additional separation (besides C, M, Y, K separations) that contains only the White data, for all objects affected to a chosen (Spot) Color (usually named “White”). White objects must be carefully prepared in the design application, which is not easy because it involves overprinting.
- D) In-RIP processing allows generating white percentages based on the underlying CMYK density. Unlike the three other methods, this does not require any special preparation regarding the image, but it is limited to very special cases. It’s more useful for an experiment or a demonstration.

Which method to choose, between a, b, and c (the last one being rather anecdotal), depends on many factors. First of all, if the print workflow is a vector one, the choice lies between Contours and Spot Colors only. If it is a raster one, all the paths are possible, since raster images can be embedded in PDF/PS files—but if you are familiar with *Photoshop*, then you should probably go with Extra-channels. If it is not raster (or if you absolutely need high-quality texts), then it depends. If you have enough experience with the contour cutting workflows, choose Contour Filling; if you already know how additional separations are produced for classical printing, then go with Spot Colors. If you are hesitating, begin with Contour filling, and skip to Spot Colors when needed.

The rest of this document will detail all these workflows, focusing on the example of the White ink. For each method (except In-RIP, which is a little bit different), we will describe first how to prepare the file, then how to import it in the Caldera software using *Filemanager*, and finally how to print it.

The files we are going to use as samples can be found in

*/opt/caldera/lib/IMAGES/WHITE-SAMPLES.*

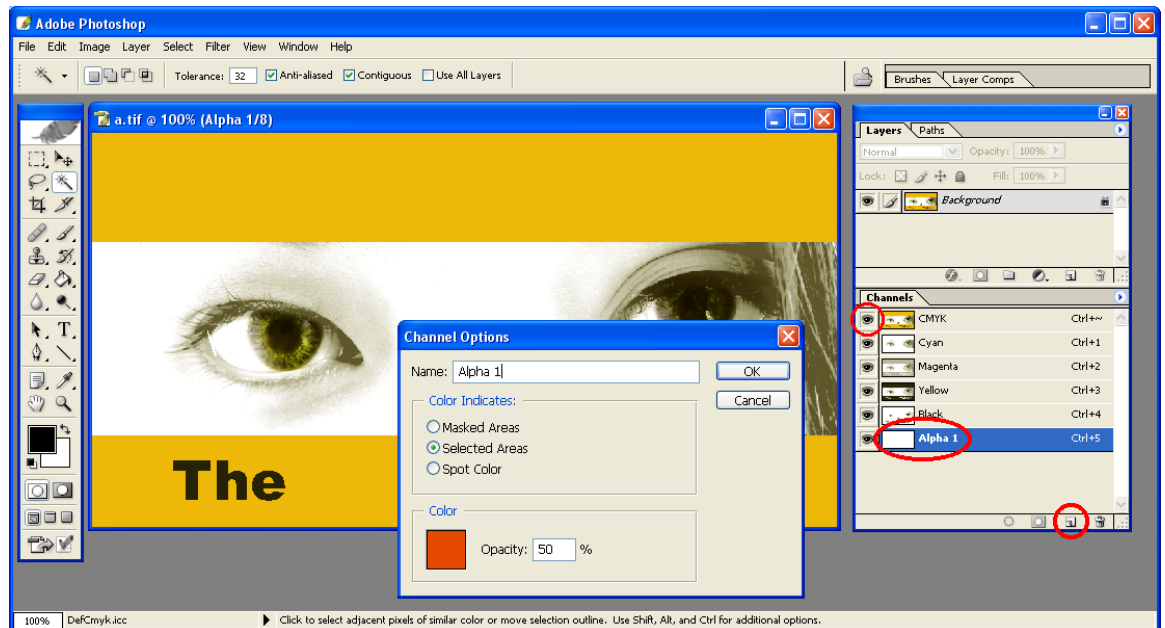
## Extra or alpha channels

### Preparing the image

First, open your image in *Photoshop* (which we will take as an example here); it can be either a CMYK or a RGB file. All you have to do is create an additional channel (this is not to be confused with an additional Layer), either an Alpha-channel or a “Spot channel”, as it is called in *Photoshop*, and save in TIFF. To do that, there are basically two methods: either create the channel from scratch, or use the selection. We will review both methods here.

#### a) Creating the channel from Scratch

First, open the *Channels* tab (Window>Channels), then click the New Channel button (on the bottom right corner of the tab). This will create a new channel called *Alpha 1*. Now re-enable the CMYK (or RGB) channel display (otherwise, you will not see your image in the background), and finally, double-click the Alpha 1 icon, left of the name, to review the channel properties.

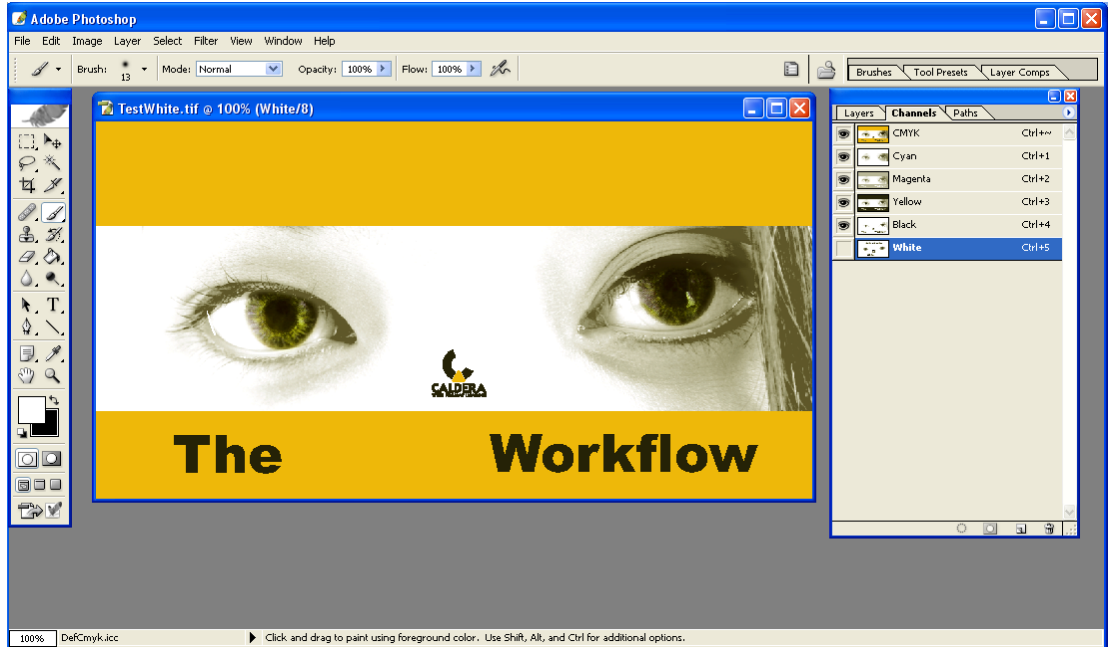


The only thing you should check here is that the type is either “Selected Areas” or “Spot Channel”, but not “Masked Areas”. Other than that, you can, if you want, change the color (the default is *Red*), change the opacity, or change the name to “*White*”. However, all of this will only affect the preview in *Photoshop*, not the content of the TIFF file that you will finally generate. Even the name is not important: indeed, in a TIFF file, neither the channel name nor the color values can be saved. Therefore, whatever you decide to do, you will have to re-associate the channel to the White ink in your Caldera software.

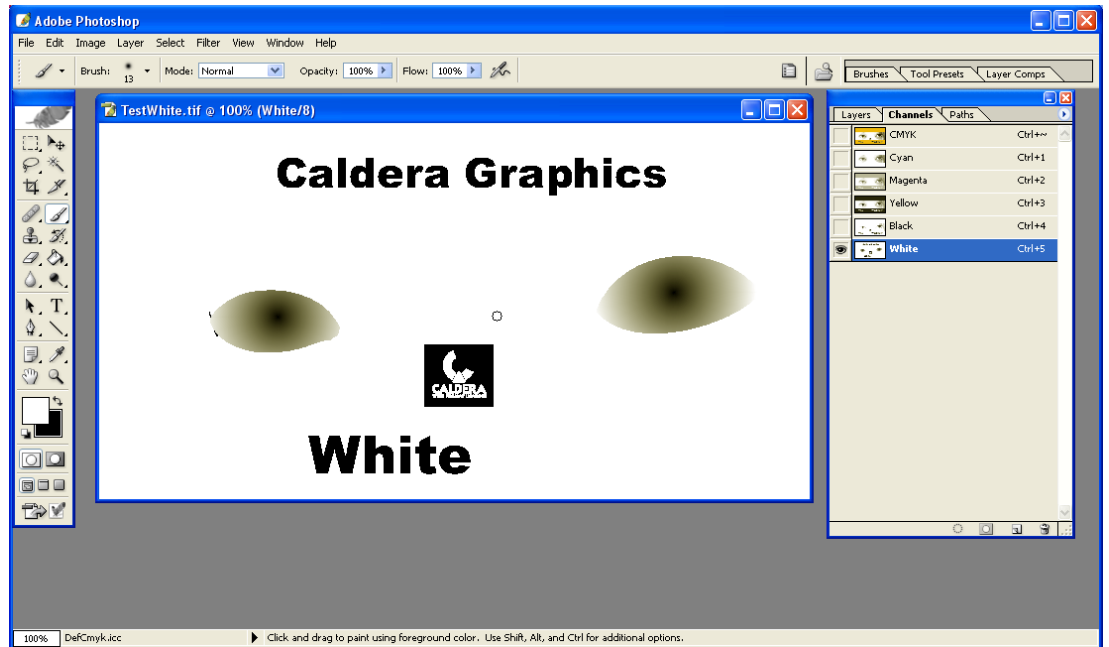
Once you have set up the properties, close this window. Now paint anything you want in this channel—copy and paste a selection into it, add some text, etc. In this channel, the 0% value represents no white, and 100% represents 100% of white. Please note that if you disable the view of the background image (i.e. if you view the spot channel alone),

then, visually, 0% will appear as white, and 100% as black—that would be exactly the opposite of what you want. However, this is not a problem: only the densities matter here.

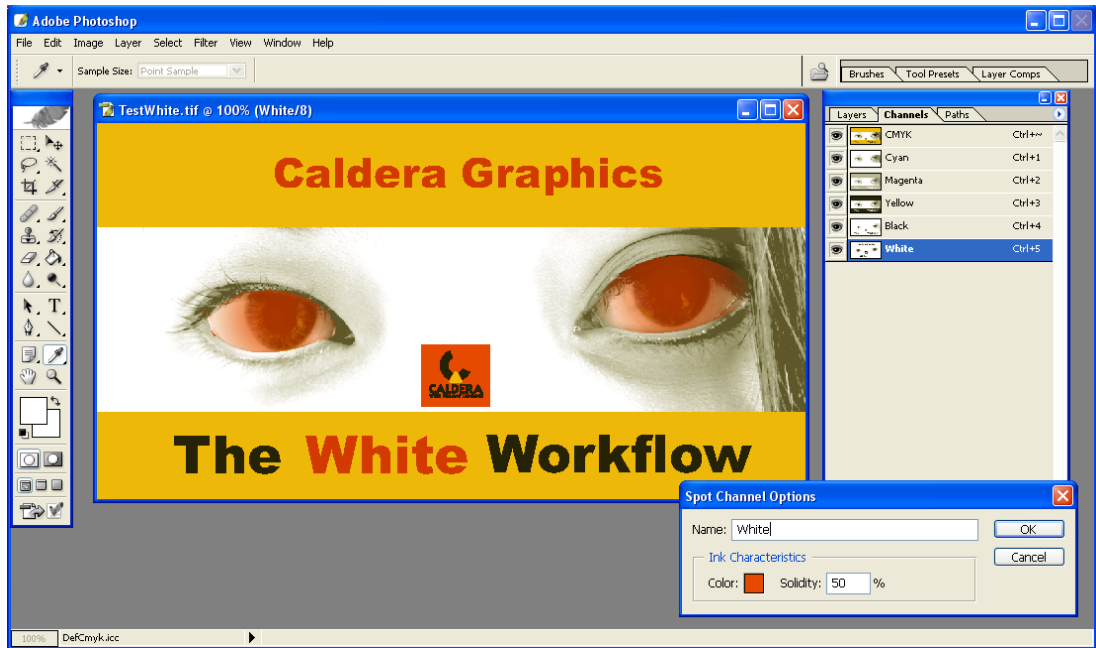
Here is a first snapshot of our sample file, with the “White” channel disabled:



The same snapshot, showing the “White” channel only (CMYK disabled):

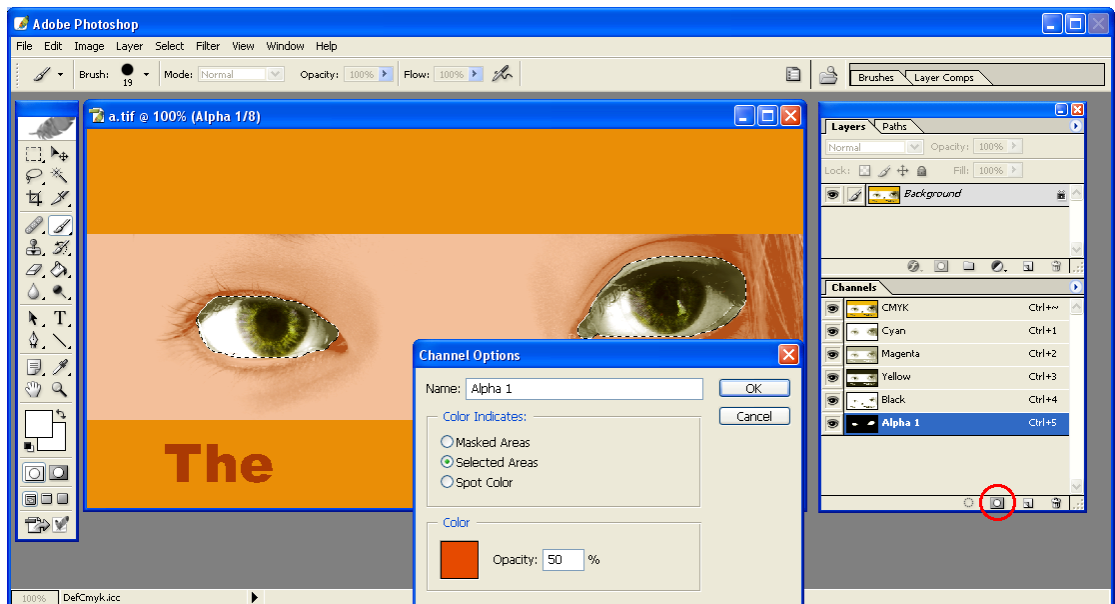


And finally, a snapshot showing the composition of all channels (with the “White” color set as red for clarity purposes):



b) *Creating the White channel from a selection.*

The second method consists in selecting some areas in your image with the magic wand or with the Quick Mask (these areas must be, of course, the ones you want to fill with white), then copy the selection into a new channel. To do that, first draw your selection, then just click the button Save selection as channel in the *Channel* tab. Again, this will create a new channel called “Alpha 1”, and here as well, you should immediately double-click the channel to check its properties.



If the type is “Masked Areas”, change it to “Selected Areas”. Do not immediately change it to “Spot Color”, or the selection will be inverted (i.e. the non-selected areas will be filled with white). If you absolutely want to have a spot channel, pick Selected Areas and validate, close the window, then open it again, and finally change to “Spot Color”.



Please note that after the conversion, you can still edit the channel (you can add text to it, for instance).

### c) *Saving the file*

When you are done filling this channel with the appropriate data, save the file in TIFF format. Leave all the options enabled (*Spot Colors* and/or *Alpha channels*), and do not forget to disable LZW compression<sup>1</sup>.

Alternatively, you can save the file in Photoshop PDF format. In this case, you *must* define the type of your channel as “Spot channel”, otherwise it will be ignored when you RIP it in your Caldera software. Also, in this case as well, you may want to directly associate the channel to the correct Spot color (“White”, all components at 0%): this will save you some time, because you will not have to remap the Spot at ripping time. If you choose this option, skip to the *Spot Color* section, because your file is not a raster file anymore. However, exporting in PDF format at that time is an unnecessary complication, and is not recommended.

Finally, please note that you cannot export in Photoshop EPS format—it will not work, because the extra channels are not exported.

### Importing the image in your Caldera software

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Once the image is saved, open the *FileManager* module in the Caldera RIP, and select the file (do not open it yet). *FileManager* should detect the extra channel, and display the “*Extra 1*” label in the top right part of the window.

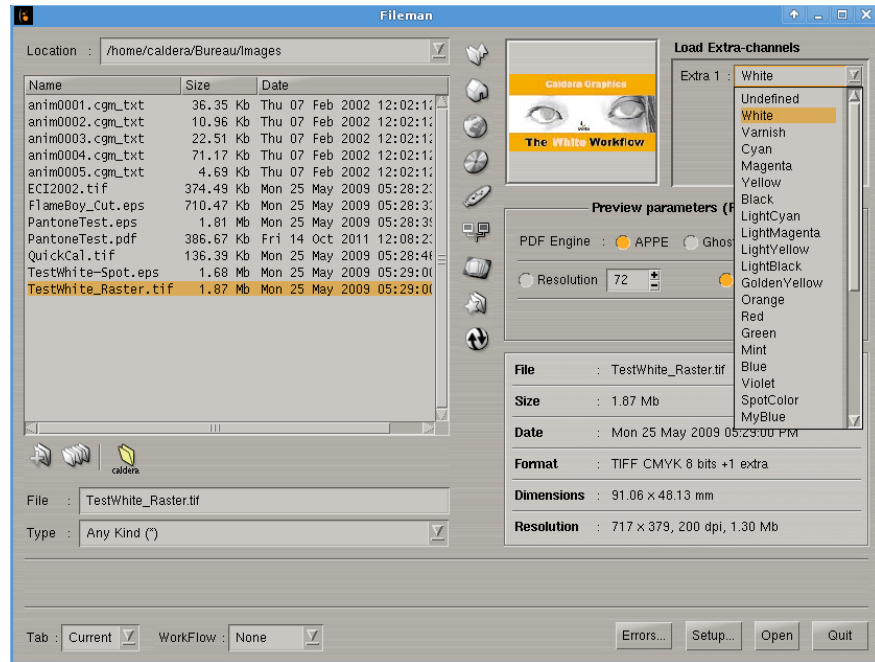
Next to this label, you will find a drop-down list that allows you to indicate to which color you want to associate this extra channel. By default, it is “undefined”, which means that the extra-channel will be loaded but not previewed (you will not see it in the thumbnail or display of the image).

You should now associate it to one of the available colors in the drop-down list<sup>2</sup>—normally, this would be “White”. Once this is done, load the image.

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<sup>1</sup> Caldera cannot load LZW-compressed files with five or more channels. However, four channels (RGB+White) are alright.

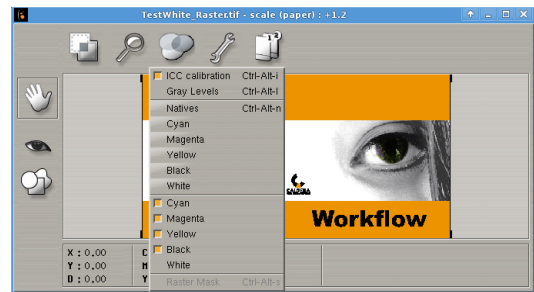
<sup>2</sup> This list includes all the possible special inks available on your installed printers.



Associating the extra-channel to a color has two effects. First, as you can verify now, the extra-channel is previewed with a kind of semi-transparent white overlaying the image colors. You can also open a *Display* of the image (double-click it) to check more closely. Moreover, in the *Display*, you can enable/disable the white channel display using the *Plane* menu in order to check that the White is really overlaying the image, and has not just been flattened in the CMYK data.



*White Channel enabled*



*White Channel disabled*

The second effect is that when you drop the image into the *Print* module, the latter will automatically associate your “White” extra channel to the White ink—provided your printer has such a White ink. If you leave the extra-channel as “undefined”, or associate it to another color, then you will have to perform the association manually.

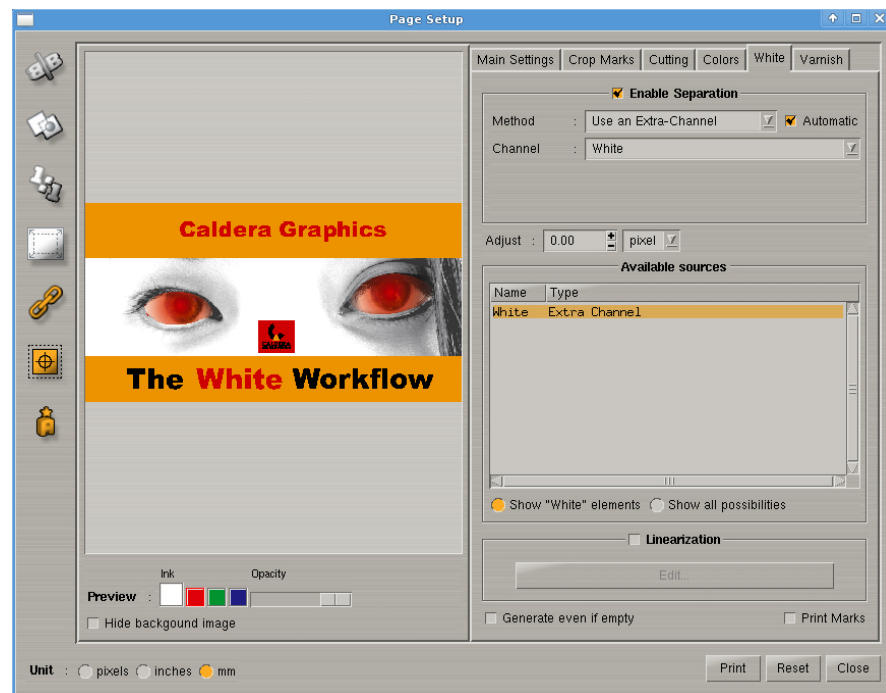
Note: If your image has an alpha-channel instead of an “unspecified” extra-channel (this is not possible in *Photoshop*<sup>3</sup>, but it certainly is in other software), then the alpha-channel will also appear in the list in *FileManager*, and you need to explicitly convert it to an extra-channel (undefined or colored) before loading it. If you do not do that, you will have to convert it later in the *Print* module, right before printing (see next paragraph).

<sup>3</sup> For some reason, *Photoshop* saves the “Alpha channels” as normal extra channels in TIFF files.

## Printing

Now open the *Print* module and drag and drop the image into it. Open the *Page Setup* window (the one where you can specify all the geometrical settings). There should be a tab labelled *White* at the right of the window. Open this tab, and click *Enable Separation*. If you have correctly named the channel “*White*”, you do not have to do anything else. Otherwise, select the extra-channel in the list labelled *Available sources*, after having checked *Show all possibilities* (see the snapshot on the next page).

You can click the magenta patch in the *Preview* options (just below the image) to enforce the appearance of the *White*.



You can now print the image. Your extra channel will be rasterized in the *White* ink.

### Special considerations regarding Alpha-Channels:

As said above, if your image contains a true alpha channel (that is, a transparency channel) instead of an extra channel, you will explicitly need to convert it before printing. This is because the alpha-channel is interpreted by the Caldera software in a specific way that cannot be overridden at RIP time. You can convert the file either when loading it in *FileManager*, as described above, or in the *Print* module. The alpha-channel will appear in the *Available sources* list. Please note, however, that it will not be automatically selected. You will have to select it directly in the list, and the *Print* module will ask you to confirm before converting it (the conversion cannot be undone).

## Contour Filling

### Preparing the image

First, open your file in your drawing program (we are going to take *Illustrator* as an example here). If you do not have one, create the document the same way as for a normal print. Then create a vector object (a square, a Bezier curve, etc.) and give it the following attributes.

- Fill: disabled.
- Stroke: a spot color named “*WhiteContour*”<sup>4</sup> (or at least beginning with “*WhiteContour*”) with a weight (thickness) of 0.1 pt, a density of 100%, and an opacity of 100%.

In other words, this means a very thin contour, without anything specific. Please note that all the specified attributes are the default ones of *Illustrator*, save for the thickness which is normally of 1 pt. Do not forget to lower it to 0.1 pt, because *Illustrator* tends to transform the thick contours into very complex (filled) objects. Normally, you would not see the difference when it comes to printing, but in the cases of contour filling or cutting, this can cause the Caldera RIP to fail to detect the stroke.



To create the spot color, all you have to do is select one of the predefined color swatches, double-click it, and change its name to *WhiteContour*, and its type to *Spot Color*. As for the CMYK values, they are of little importance (the contour/stroke will just be used for filling

<sup>4</sup> It is better than “White”, because it avoids confusing it with a normal *Spot Color*. More specifically, if you want to experiment with both methods (*Spot Color* and *Contour Filling*) with the same file, use different names. Also, using “Contour” in the name will make the Caldera software automatically select a “Contour” filling workflow for the file.

anyway, and will not be printed). However, you *must* select CMYK values that are not used by any other vector element anywhere else in the file. This is because in order to eliminate the contours at the moment of printing, the Caldera software relies on the exact CMYK color values, and therefore eliminates *all* the vector objects drawn with these values.

For example, a pure red with a little bit of cyan is a good choice: first, you will easily locate the contour, and second, there is little chance that it is already in use.

Please note that setting “*WhiteContour*” as the spot color name is, in fact, not mandatory, since you can use any contour for filling purposes in your Caldera software. Even using a Spot Color is not mandatory. However, using a process color will force you to enable a specific option in *FileManager* (detecting all the contours, not only the “named” contours), and using “*WhiteContour*” as the name of the color makes the task even easier.<sup>5</sup>

#### A few specific considerations:

- You can, of course, create more than one White contour. But please note that you will not be able to select *individually* which contour to fill: it will be either the whole set of “*WhiteContour*” contours or nothing. Neither can you select two sets (e.g. “*WhiteContour1*” and “*WhiteContour2*”).
- If you want to perform the filling using a hole (e.g. a thick ring), you have to create a vector object composed of two paths, group them together, and give the group the correct filling option. For example, in *Illustrator*, select the two paths, and click the Exclude overlapping shape areas option in the *Pathfinder* palette. You can temporarily enable the filling of objects, in order to check the result, but do not forget to disable it again before generating the final document.
- If your document contains text, you must convert this text to vectors (the Caldera software will not detect the stroke of normal text). To do that, select the text block, click the right button and select Create Outlines. Then do as explained above for all the created paths: disable filling, enable stroke, select your White spot color, and set the thickness to 0.1 pt.
- You do not need to apply the Overprint attribute to the contours.

Finally, save your file. You can either (more or less in this order of preference) print in a PostScript printer, save in Illustrator EPS format, print in a PDF printer, or save in Illustrator PDF format. If you use a PostScript printer, always print in *Composite*, not in *Separations* (and not in *In-Rip separations* either). And, of course, never select *Convert Spot colors to Process colors*, if this option is available.

#### Importing the image in your Caldera software

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When you select the file in *FileManager*, you will notice a new option box appearing in the top right of the window. This box lists all the Spot colors detected in the file. There is a check box for each of them, so that you can specify which one you want to preview as an additional separation—in other

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<sup>5</sup> And could be necessary in some contexts, e.g. automatic printing through a Hotfolder/workflow.

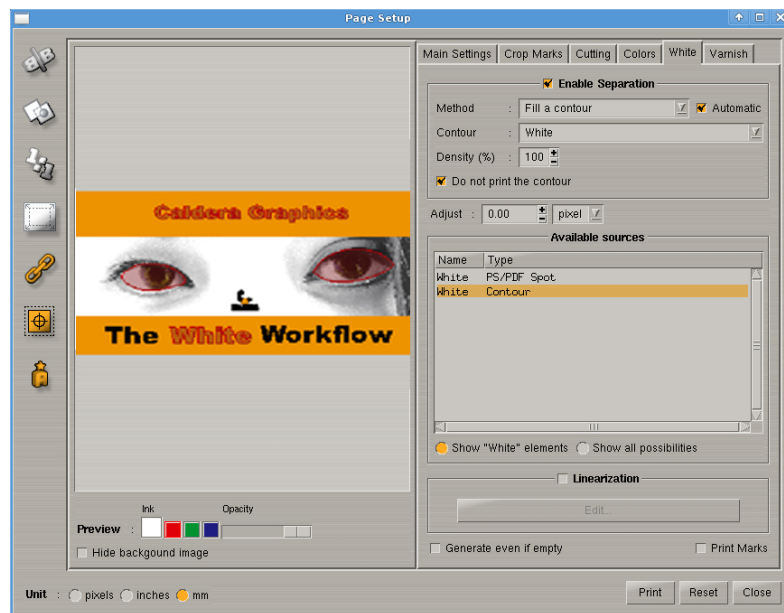
words, as an extra-channel in the preview image. This is explained in more detail in the section about *Spot Colors*, but in the case of *Contour Filling*, it is not really important.

Anyway, your “WhiteContour” Spot color is normally listed here<sup>6</sup>, and unchecked. Do not check it: this is unnecessary, and may even cause problems<sup>7</sup>. Now open the file. *FileManager* should preview it and detect all the contours you created. At that time (in the preview), the contours will be rasterized exactly like normal vector contours; however, they will disappear at printing time, so do not worry about that. With the *Info* module, you can check quickly if some contours have been detected: in the *Spot color* tab, you should see the “WhiteContour” Spot color, and in the *Contours* tab, the number of contours found.

## Printing

Now drop the image in the *Print* module, open the *Page Setup* window, then the *White* tab, and enable the separation. If the Automatic toggle is checked, right of the *Method* field, *Print* should automatically select and preview your contour(s). Else select the contour manually in the list of *Available sources* (you may want to click Show all possibilities if your contour does not have the correct name).

Once this is done, select at which density you want to fill the contours (between 0% and 100%), and print the file. Normally, you should leave the Do not print the contour option activated, save perhaps for testing purposes.



Please note that you can only specify a global density for all the contours. If this does not fit your needs, you will have to skip to the *Spot Colors* workflow.

If no contour at all is available in the list, this means that something went wrong. Go back to *FileManager*, open the *Setup* window, and make sure that the Detect all named

<sup>6</sup> If it is a compressed PDF file, it may not be displayed here—see the Spot Color section—but this is not very important.

<sup>7</sup> At printing time, the contours may be printed instead of discarded.

contours option, at least, is checked. If it still does not work with this option, try the following solutions:

- Enable Detect all contours, reload the file and drop it in the *Print* module again. If your contours are now listed (usually with cryptic names such as *C000M100Y100K000*), this means that your White color was a Process color, and not a Spot color. You can continue with this set of contours, or go back to the design application to correct the problem.
- If it still does not work, select Detect all shapes, and reload the file. If your contours are found now, this means that you had not given the correct attribute to the stroke in *Illustrator*. Try correcting the problem, or contact the Caldera support team.

## Spot Colors

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### Preparing the image

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Basically, the job consists in adding all the objects you want to print in White ink the normal way (create curves, text, gradients, etc.), but filling (or stroking) them with a special color named “White”, which must be defined as a Spot Color (unlike contour filling, it cannot work if it is a process color). Moreover, for most of these objects, you will probably want to set the *Overprint* attribute. Overprinting an object (whether it is a filled shape, a text or even an image) means that this object will stack on what is already drawn underneath, instead of erasing it (the opposite is called *knockout*). This is usually what you want to do with White ink. For example, if you want to “highlight” an eye in a portrait with a touch of white ink, you will probably draw an ellipse or a Bezier curve over the eye, and fill it with white, but you certainly do not want the eye to disappear. However, this is what will happen if you do not explicitly activate an Overprint on your filled curve (knockout is the default and normal mode for probably all drawing software)<sup>8</sup>.

So you need to overprint; moreover, you need to put the white objects on top of all the others. This is because the stacking order is important when overprinting: if you put another object (for instance a green square) over a white square, then this green square will create a hole in the white—unless you also overprint it, but this will lead to other complications, since the green square will not only overprint the white square, but the rest of the image as well (which could lead to very unexpected results at the time of the RIP).

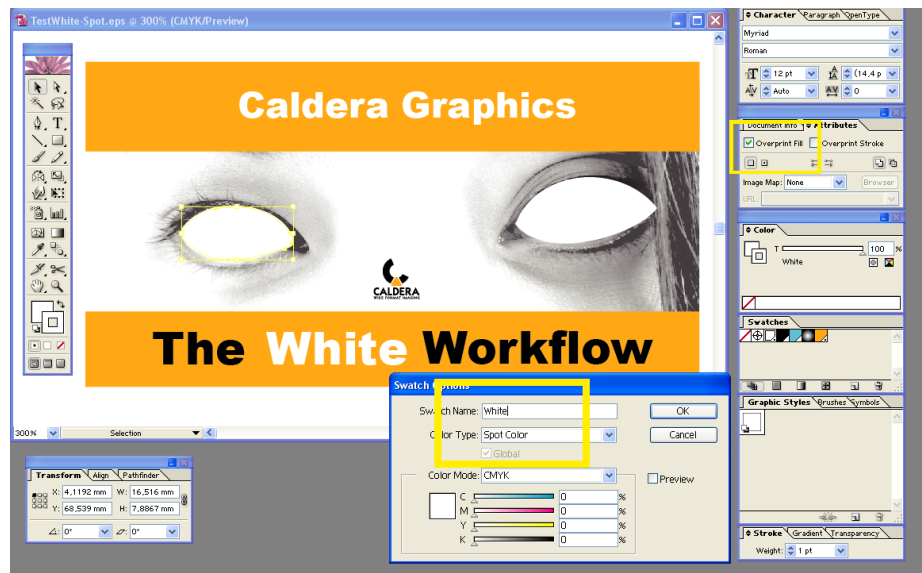
Since you need to put all the white objects on the top, you may have problems to see the rest of the image beneath. Here, depending on the software, you may or may not be able to activate something like an “Overprint preview”—but if the components of your Spot Color are all at 0%, you will probably see nothing at all (see also the discussion in the next paragraph). This is the case in *Illustrator*, for example.

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<sup>8</sup> But you do not have, and probably do not want, to overprint everything. For example, white text should normally knock the image out.

Please note that you do not have, and probably do not want, to overprint everything. For instance, white text can knockout the image (although it is not the case in the example below).

As for the color components of the White, you absolutely do not have to set them all at 0%. Exactly as in the case of contour filling, it will be of no importance when it comes to the final print, since these values are normally only used for previewing purposes. However, setting them all at 0% has a little advantage: if you do something else with this document (print it on a desktop printer, view it with a PDF reader, etc.), then the result has a fair chance of being correct, because if the rasterizer tries to flatten all the white objects, and if all of them overprint, then the background image will be unchanged. From a certain point of view, a true White spot color tends to be “transparent” for rasterization processes that do not have a white ink<sup>9</sup>. This is not the case if you assign an artificial color to the White (e.g. a Red).



#### A few notes about the creation of objects:

1. Both *Stroke* and *Fill* colors must be set as “White”, and both must have the overprint attribute (if needed).
2. It is possible to adjust the white density individually for all objects. Besides, this is the main advantage of the method, compared to contour filling.
3. You can create gradients containing white, but these gradients must not contain any other color save for the white, otherwise the RIP will not rasterize the gradient at all. In our example, we have created a radial gradient between White and “No color” (which *Illustrator* cannot preview).

<sup>9</sup> Unfortunately, this is not the case in the Caldera software: if you print the document on a printer which does not have a white ink, the white will “knock out” the image data. This is currently a bug involving the Spot+Overprints combination.



4. You can import duotone (*Photoshop*) raster images in your document (at least in *Illustrator*) or maybe greyscale images, and set them as “White”. This is the way to mix raster and vector white objects.
5. Do NOT use transparency, especially for White objects (this is a nonsense anyway); preferably, do not use transparency at all in the whole document, especially if the output is PDF<sup>10</sup>.

As for the output file, follow the rules given in the *Contour filling* section (in this order of preference: PS, Illustrator EPS, PDF, and Illustrator PDF). Of course, always activate the Preserve Overprints option.

Note: One may wonder why the Caldera software has no In-RIP method to overprint all the white data by itself (whether the white object has the overprint attribute or not), while it has a method to eliminate the contours (in *Contour filling* mode). The answer is that though it is theoretically possible, it would be very difficult to implement such a method in the facts, and probably not very reliable either. Moreover, when a filled white shape “knocks” other objects, certain drawing software may choose to completely discard these objects in the output EPS/PS/PDF file. After all, knocked objects are not supposed to be printed, and in that case, In-RIP overprinting would obviously be impossible.

#### Importing the image in your Caldera software

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As explained in the previous section, the list of Spot Colors detected in the selected file is displayed in *FileManager* (in the top right part of the window). However, you must be aware that sometimes, this list will be empty, even if your file does contain Spot Colors. This is because the “detection” is based on a quick parsing of the header of the file, which does not always work, especially with PDF files<sup>11</sup>. If this is the case with your file, first open it normally, then drag and drop it back into *FileManager*. Now all the Spot Colors should be displayed, because the file has been completely parsed during the preview.<sup>12</sup>

Thus, for each Spot color, there is a check box that you can activate or deactivate. Activating it means that the Spot color will be previewed as an additional separation (in an extra layer of the image). If it is not the case, then the Spot color objects will be “flattened” in the CMJN layer, and you will not be able to preview the white ink data. You will still be able to select it to produce the White separation, but you will not see anything until the actual printing.

Normally, your “White” spot color should be checked, because by default, *FileManager* automatically selects all the colors named like your additional inks. The options just

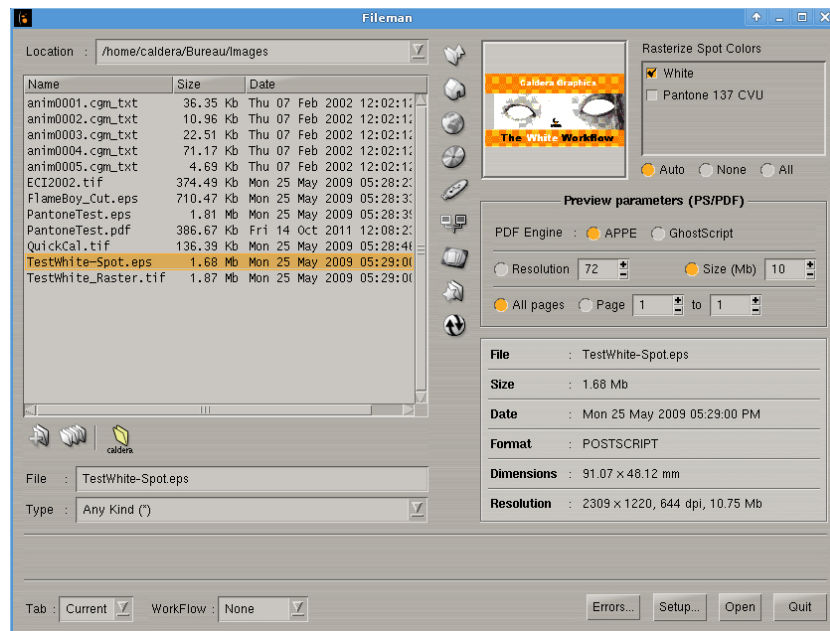
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<sup>10</sup> If *FileManager* cannot detect the Spot Color(s), it probably means that the file contains a transparency.

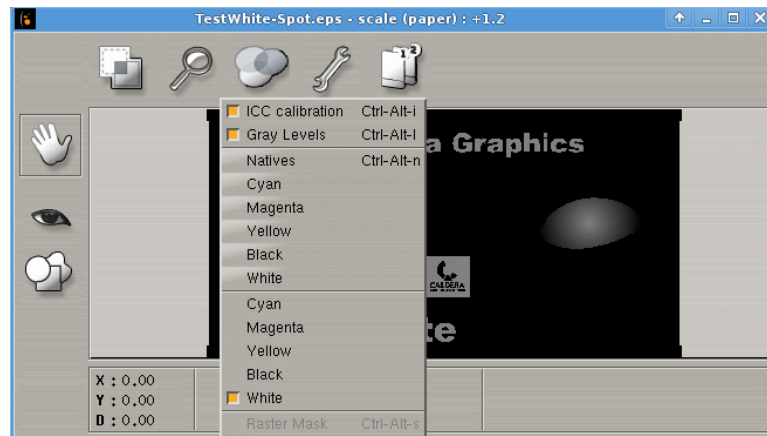
<sup>11</sup> With Illustrator/Adobe PDF, it only works if you enable **Preserve Illustrator Editing Capabilities** (in which case the PDF is not compressed).

<sup>12</sup> This ability to detect “hidden” Spot Colors is new in version 7.12. Previously, they were definitively lost.

below the Spot Color list allow you to modify this behaviour, and you can also check/uncheck them manually if needed.<sup>13</sup>



For the time being, load the file, and make sure that your White color is checked. Then, open a *Display* of the image, and note how the white objects are displayed with a kind of transparency effect, on the top of the image (the default transparency value is 50%). If you want to see the white data in grey levels, select the first White channel toggle in the *Plane* menu of the *Display*, then select Gray levels in the same menu.



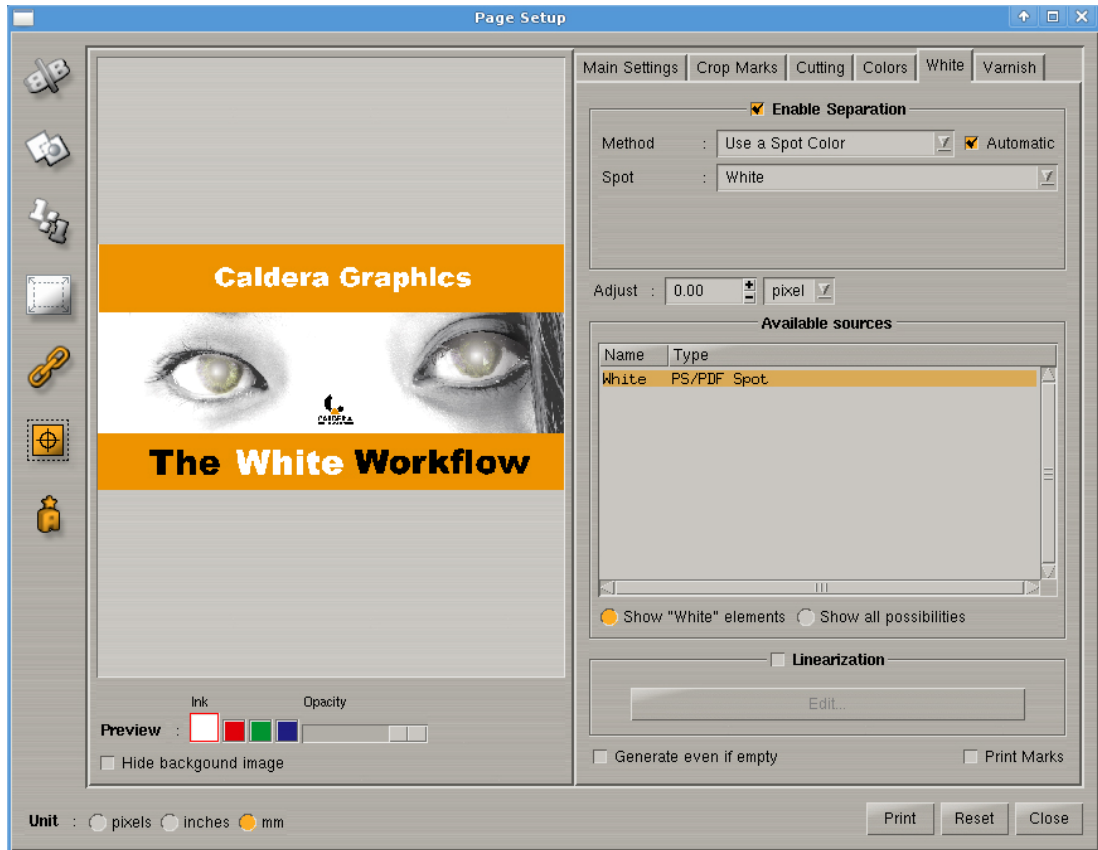
On the other hand, if you want to view the image data without the white layer, select Native planes first, then deselect the second White toggle in the *Plane* menu.

You can check here whether the image data is completely unaffected. If this is not the case (e.g. if you have a white hole somewhere behind an object filled with white), this means that you have forgotten to set the *Overprint* attribute for this object.

<sup>13</sup> The maximum number of Spot Colors you can preview simultaneously is four. If you check more than four spot colors, the remaining ones will be ignored.

## Printing

Again, open the *Page Setup* in the *Print* module, then the *White* tab, and enable the separation. *Print* will automatically select your Spot Color if it is named “*White*”, or if its name begins with “*White*”. You have nothing else to do but to print the image.



## In-RIP methods

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There are a few methods available, which do not require any special preparation in the file, and will work for any type of file, whether it is raster or vector. They will never be activated automatically, so you must specifically select them in the *White* tab of the *Print* module, in the *Method* field, at the top of the tab.

### Full Page Coverage

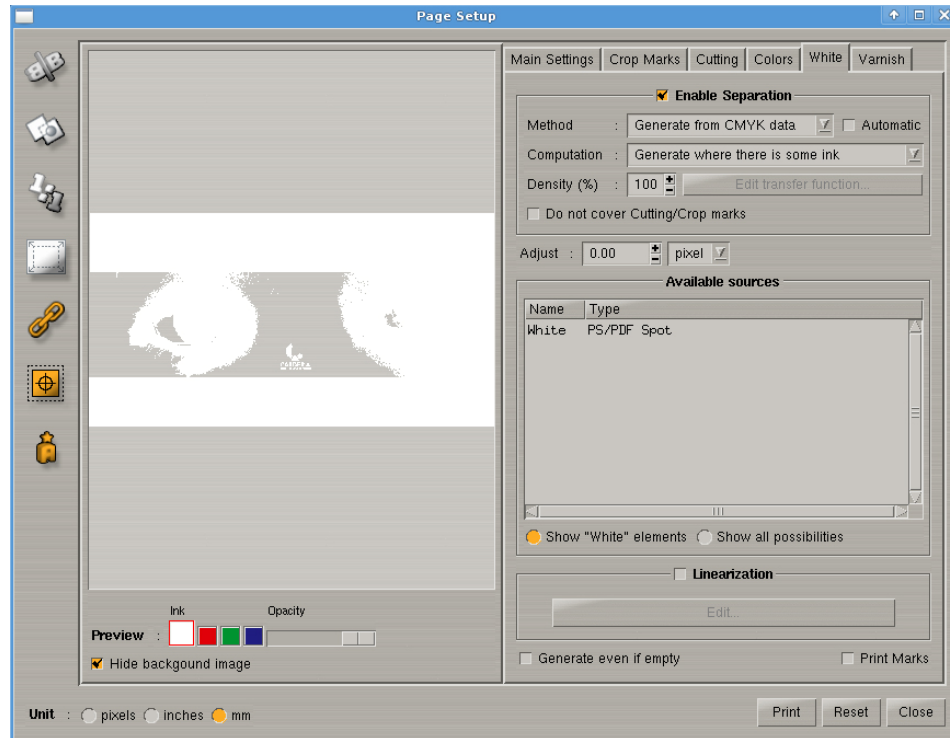
---

This one does not need a long explanation: the white will be uniformly filled with a background of the specified density.

### Generate where there is some ink

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Here, the white channel will be filled for all pixels whose underlying CMYK data is not zero.



Please note that the algorithm is applied before screening; in other words, if you have, say, a shape filled with 1% of yellow, this shape will contain the same quantity of White ink as if it was filled with 100% black. This is not at all equivalent to firing a dot of white wherever there is already a dot of any other ink (this option is sometimes available directly on the printer controller).

### Generate where there is no ink

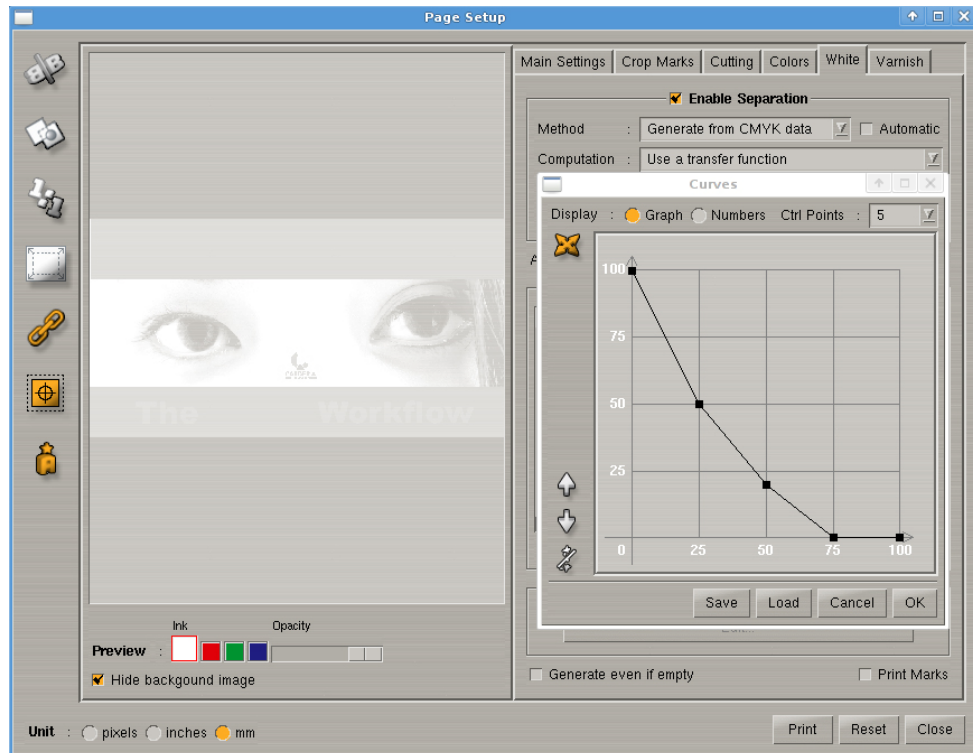
---

This method is just the opposite of the previous one. It consists, so to speak, in filling the white parts of the print (or what should have been white) with the white ink.

## Use a transfer function

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This is a more elaborate version of the second and third methods. It allows you to adjust the quantity of white in function of the quantity of ink. More precisely, you have to set up a “transfer function” that will be used as a look-up table: for each pixel, the density will be computed as the total quantity of ink at this pixel, and the transfer function used to determine the percentage of white.



Please note that this transfer function is applied before linearizing the CMYK data. Thus you can use and reuse the same transfer functions at different resolutions, and with different printers, with quite a consistent result.

## GrandWhite in more detail

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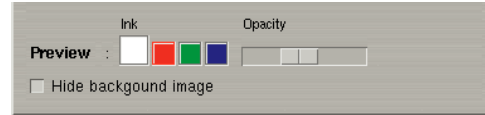
This section provides information on various topics involving the White Workflow, which have not been yet covered in the first five chapters.

### The White Preview

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First of all, as you have probably noticed, the White preview is not displayed in the normal page preview—for the sake of clarity, it is in a separate display.

The preview options (located right below the image) allow you to localize very precisely where the White ink will appear in the final print. There are very useful on certain occasions, the White being sometimes difficult to localize, because most of the background is usually white.



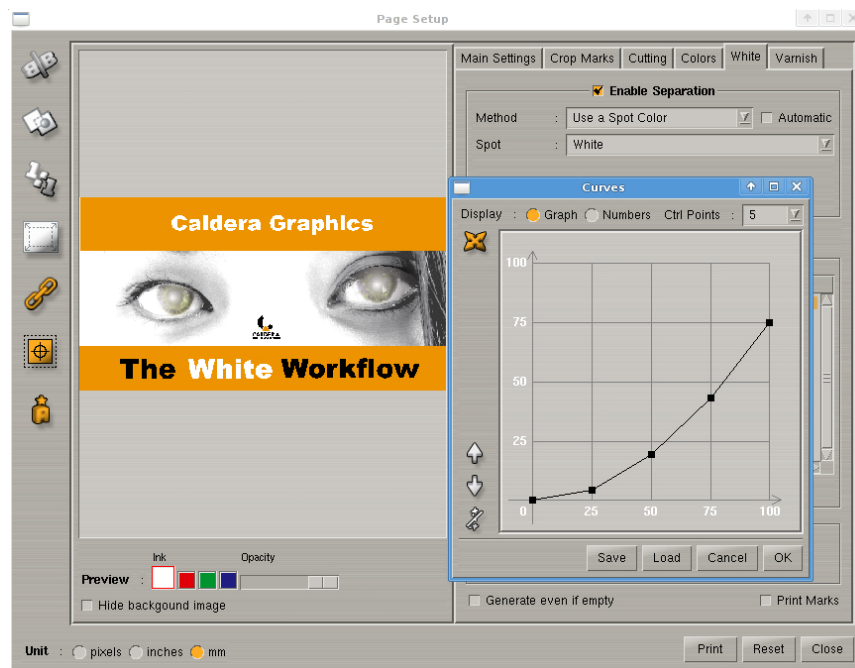
The first option is the preview color. By default, it is the color of the ink, as defined in CMYK in the printer's colorants setup (see the notes at the end of this document). Instead, you can force a more "solid" color by clicking one of the other color patches.

Next to the color parameter is the opacity. This defines the transparency/opacity with which the white is displayed.

Finally, Hide background image allows you to view the Ink data alone, with a transparent background.

## Linearization

Whatever the workflow you choose, you will always have the option to enable a linearization curve for the White ink. This is done simply by checking the corresponding option in the *White* tab, and by editing the curve.



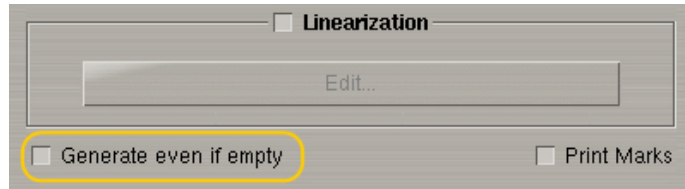
In the editor window, you can also save/load a curve. There is no mechanism for automatic selection based on the current media, the resolution, etc.

Please note that the linearization process has no effect on the preview; this is absolutely normal.

Finally, if you use a transfer function, you should know that the linearization is applied after this transfer function. As a general rule, whatever the method you choose (extra-channel, spot color, etc.), the linearization is always applied at the last stage, after the white data has been generated according to the selected method.

## Avoiding empty separations

On the very bottom of the White window, there is an option named *Generate even if empty*. When it is disabled (this is the default setting), the print will not produce any empty separation, even if the Enable Separation toggle is activated. This is very useful, because otherwise you would have to check, for all of your input images, whether they have some White data inside or not, and enable/disable the separation accordingly.



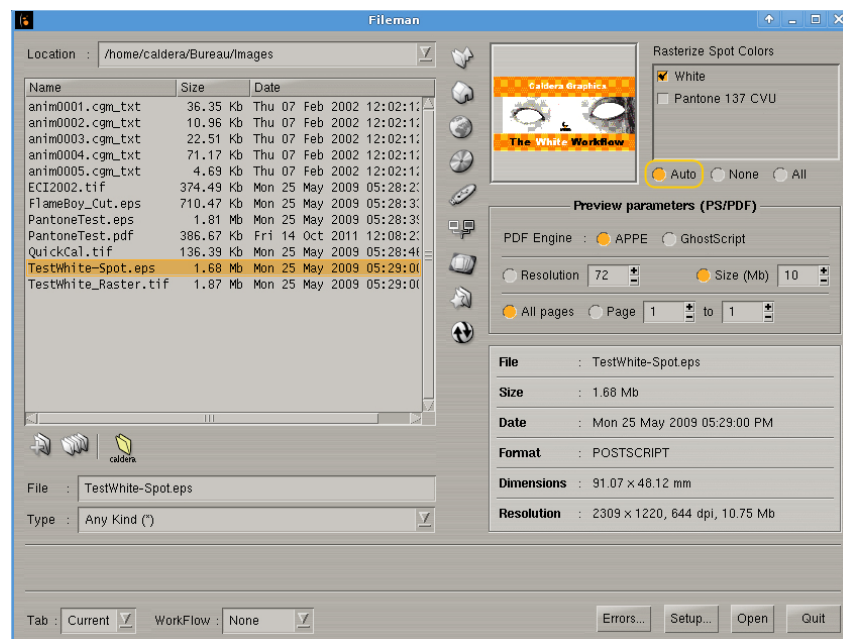
## Workflows and Hotfolders

This section explains how to configure your Caldera software to print with White in an automatic process (Hotfolders and/or Workflows). It assumes you are already familiar with the basic steps involved in configuring such a process.

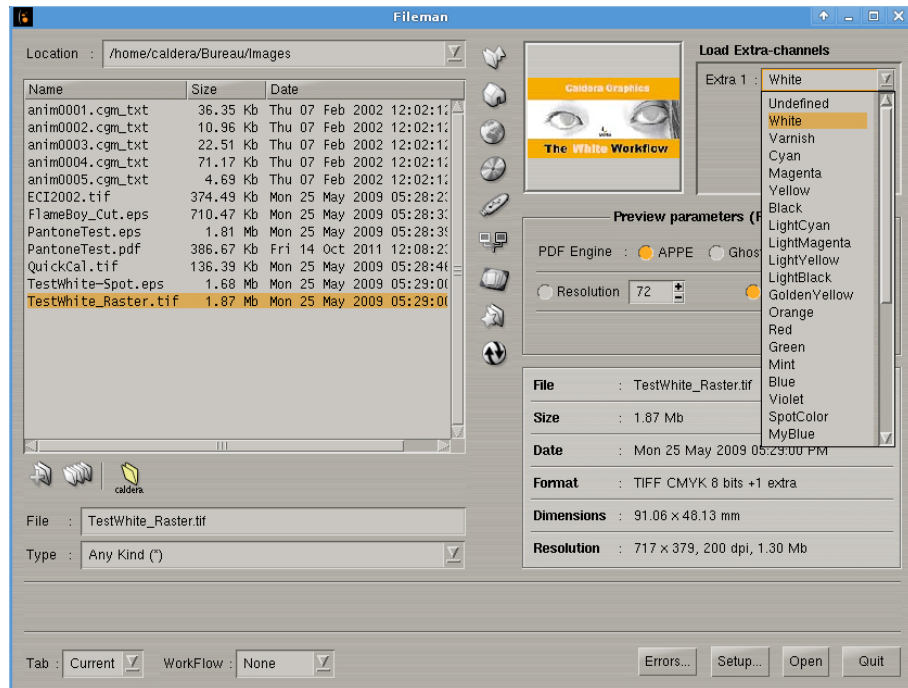
### a) Configuring a Hotfolder

The only difference with a classical Hotfolder is that, when you configure *Filemanager*, you need to make sure to activate the correct options:

- If your Hotfolder is going to process files with White Spot Colors: select a file with spot colors inside, and make sure that Auto is selected, right below the list of Spot colors (see the *Importing the image in your Caldera software* part, in the *Spot Colors* chapter). This is the default value, so normally you do not have anything else to do.

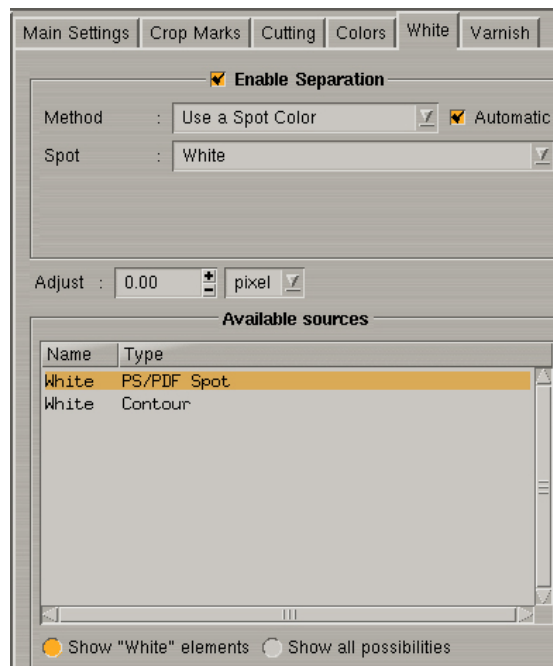


- If your Hotfolder is going to process raster files: select a file with an extra-channel, and map *Extra 1* into *White*. This is not the default option, so you must do it manually.



*b) Configuring the Print module in Workflow mode.*

The *White* tab, when opened in Workflow mode, will display the normal “sources” that can be used for your ink (i.e. a Spot color named “White”, a contour named “WhiteContour”, and an extra-channel named “White”).





Normally, you should let the *Print* module automatically select which method to use, based on the file contents, by checking the Automatic option. This will ensure that the file is correctly processed, whether it is a raster file with an extra-channel, or a vector one with a White Spot color (named “White”<sup>14</sup>) or a White contour (named “WhiteContour”<sup>15</sup>).

In a certain amount of cases, however, you may want to force a particular method (or source). For example:

- If you want to use one of the “In-RIP” methods (which will never be selected automatically).
- If you always use the same method (e.g. Spot Colors) and do not want to have white accidentally generated with another source.
- If some of your files with Spot Colors are incorrectly named (e.g. “MyWhite” instead of White).

In all these cases, you should uncheck the Automatic toggle, and select the correct method. Additionally, if you want to force the Spot color (or contour) name, you must drop an image containing a Spot color (or contour) of that name in the *Print* module.

Finally, please note that you should most often leave the Generate even if empty toggle unselected. Otherwise your workflow will generate an empty White plane even for files that do not need one.

#### Dealing with more than 1 special ink

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If your printer has more than one special ink (e.g. White and Varnish), then additional tabs will appear in the *Page Setup* (one per ink). There is no special interaction between the different inks; one may be disabled and another one enabled, and you can select different methods (e.g. Contour filling for White and Spot for Varnish). The only restriction is that you can not use the same spot for two different inks.

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<sup>14</sup> Or at least beginning with “White”, e.g. “White1”, “White2”, etc...

<sup>15</sup> Or at least beginning with “WhiteContour”, e.g. “WhiteContour1”, “WhiteContour2”, etc...

## Appendices

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### Printer configuration

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For all supported printers, you can set up the Ink parameters. There is no user interface for that, but a simple text file, which can be edited. The file is:

*/opt/caldera/lib/DRIVERS/RES/<printer-name>.colorants.txt*

For each additional ink, the following parameters can be applied:

<b>COLORANT</b>	The name of the ink, as it appears in the <i>Print</i> tab
<b>COLORNAME</b>	If present, it specifies the color name which will be automatically associated to this ink. If absent, it is assumed to be the same than the colorant's name
<b>PREVIEW_OVERPRINT</b> <b>PREVIEW_OPACITY</b> <b>PREVIEW_CMYK</b>	Used for the print preview only
<b>INFO</b>	Used internally by some printer drivers (for instance, on a RHO-350R, it is the suffix of the output TIFF filename).

The maximum number of colorants per printer is four (although all drivers may not support that number).

After modifying the file, one must kill the server manually and restart it (in *Servers admin*).