VisualCut

User Manual

RIP SOFTWARE - VERSION 11 - CALDERA 2018

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Author: Diane Hoehlinger

Introduction

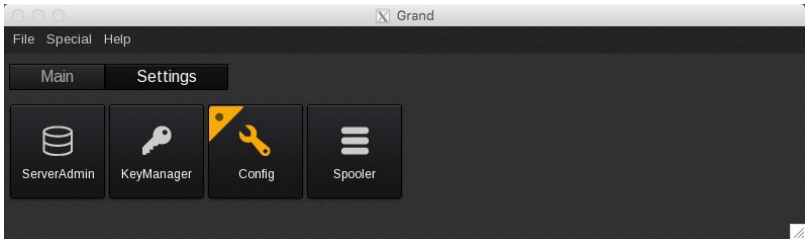
This document is the **Caldera**'s **VisualCut** user manual.

VisualCut allows cut workflow management from files import into the RIP to print cut.
VisualCut has been designed for Graphtec, Summa, Mimaki, Mutoh and Roland... roll cutters. **VisualCut** will automatically set up cut marks for the specific device it is driving and guide the machine along the documents embedded contours.
VisualCut even makes complex cutting easy thanks to the software's ability to manage multiple contours in one file.

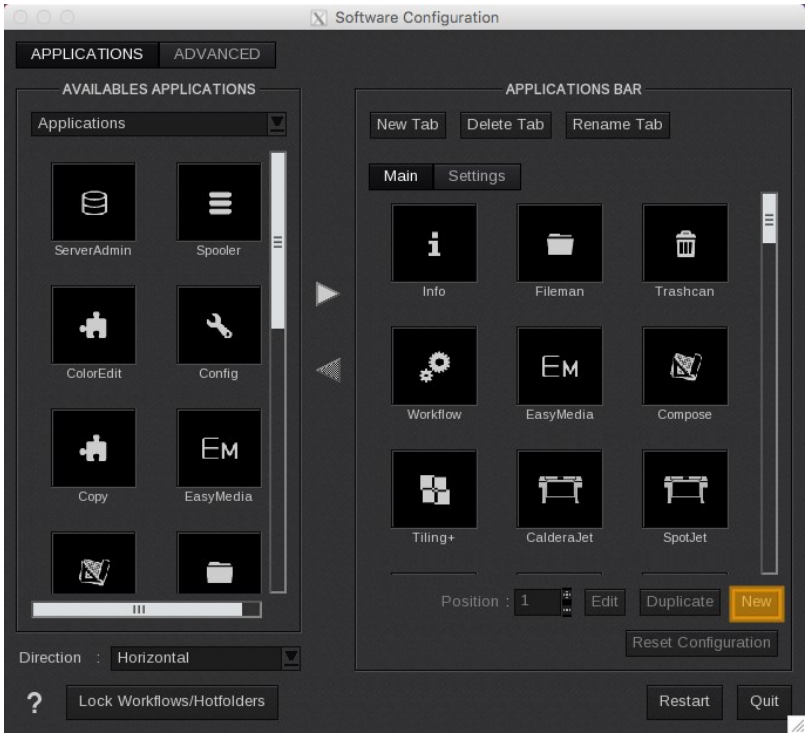
Cutter installation

Cutters driven by VisualCut need to be installed through the configuration. If you do not use the following process, you won't be able to launch it from the ApplicationBar.

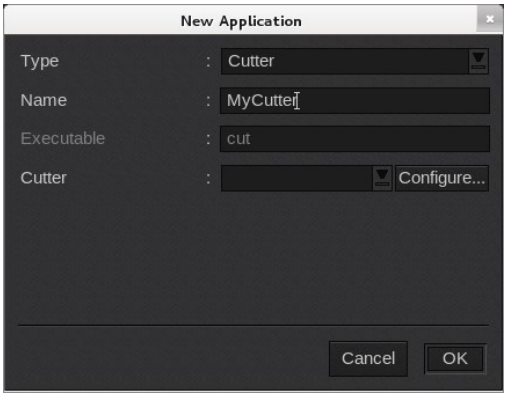
1. In the ApplicationBar, click on the Settings tab. Then click on ***Config***.



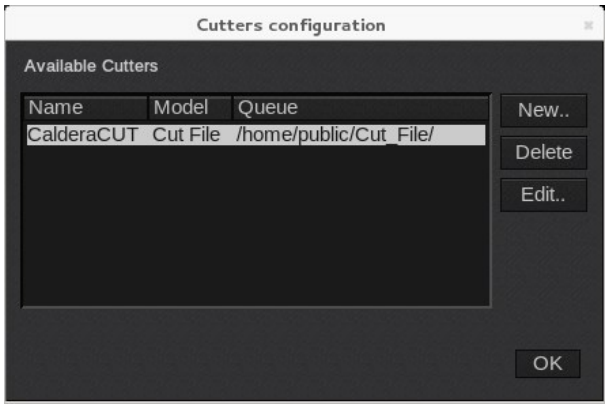
2. On the right side of the *Software Configuration* window, click on ***New***.



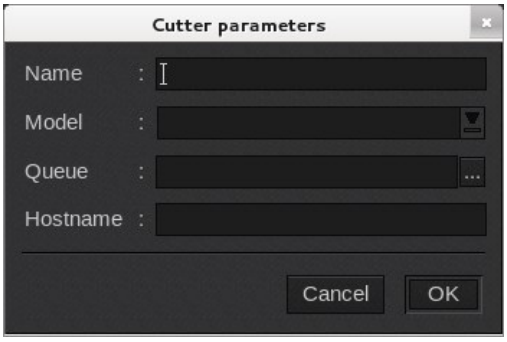
3. In the *New Application* window enter the following fields and then click on ***Configure...***.
   - **Type**: Select *Cutter* from the dropdown.
   - **Name**: Name your cutter. No spaces or special characters are allowed. Example: MyCutter.
   - **Executable**: This field will autofill.



4. Then click on ***New...***.



5. The *Cutter parameters* window opens.



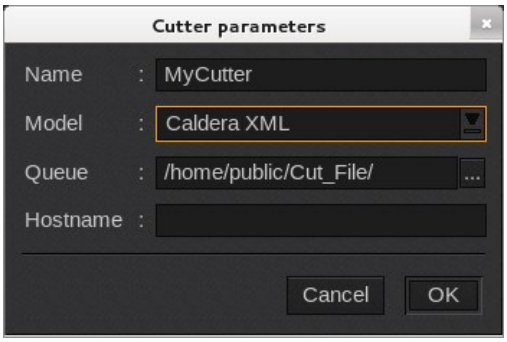
Fill in the following fields.

- **Name**: assign a name to the cutter. This is the name that will appear in the cutter list.
- **Model**: select the corresponding cutter.
- **Queue**: browse to the directory where the cut files will be created.

  When a document is processed through the **VisualCut** workflow, a cut job is generated at the end of the print process and sent to a local cutter queue. Each installed cutter has its own cut job queue available in the corresponding **Cut** module.

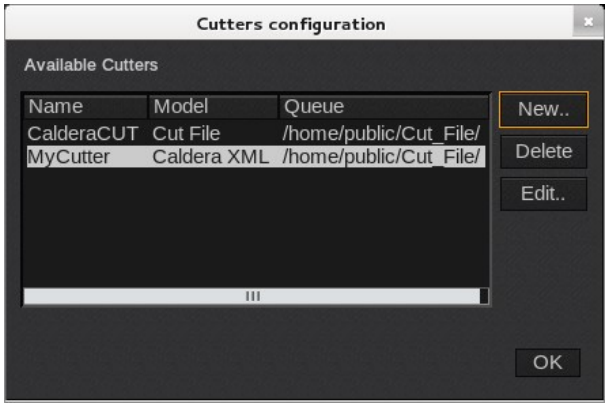
- **Hostname**: used for Zünd Cut Center only.

6. Click ***OK*** to save.

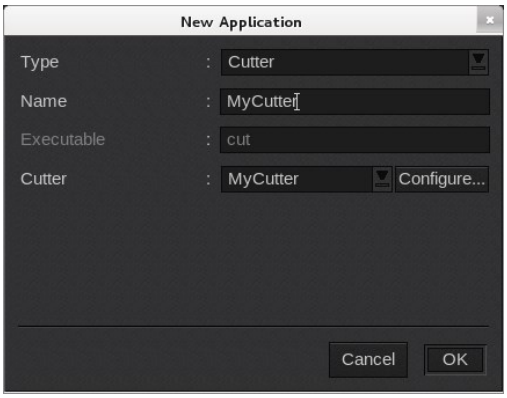


7. The new cutter you created should appear in the *Cutters configuration* window. Click ***OK***.

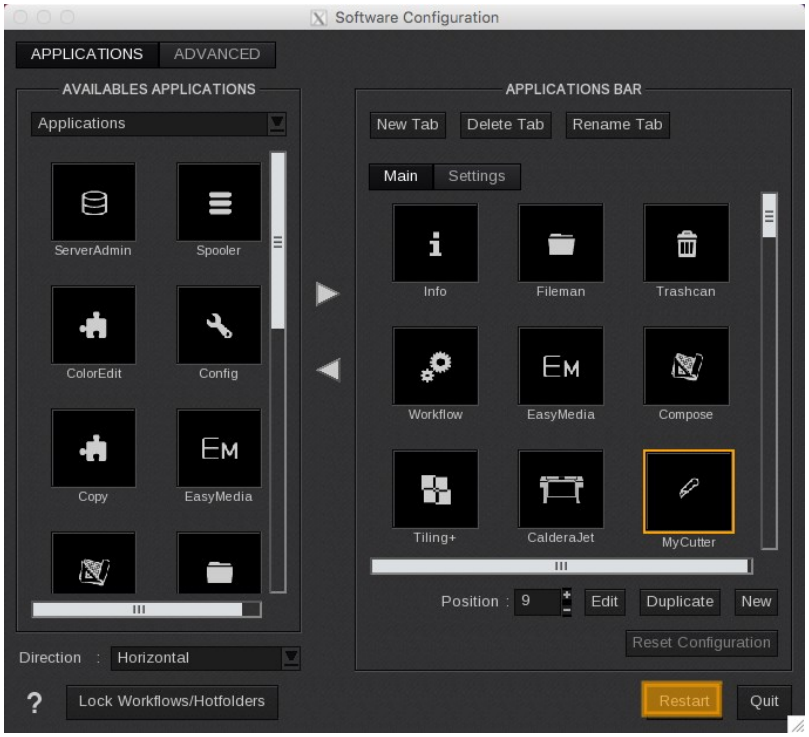
   The ***New*** and ***Edit...*** buttons open the ***Cutter parameters*** window while the ***Delete*** button removes the cutter from the list.



8. Click ***OK*** to create the new cutter application.



9. The new cutter application is added at the end of the ApplicationBar. You can use the **Position** tool to move the new cutter application within the ApplicationBar.



10. Complete the installation by clicking ***Restart***.

11. After your Caldera RIP station restarts, you will see your cutter in the ApplicationBar ribbon where you placed it.

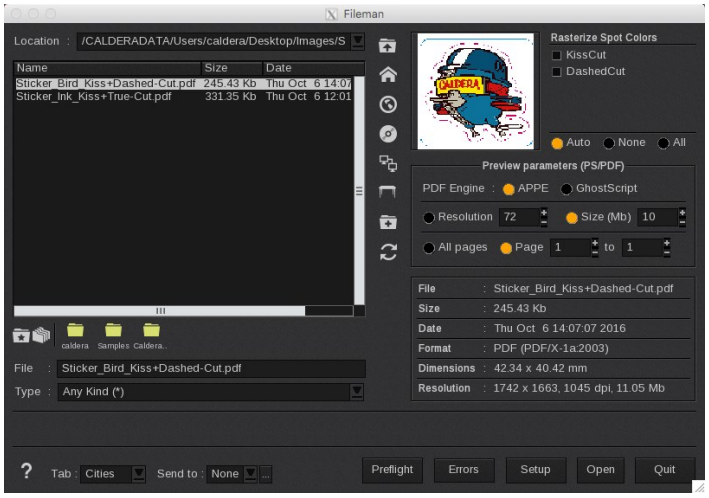
The Cut workflow

Contours

Vector files with embedded contours

When loading a PS, EPS or PDF file, **Fileman** loads automatically all its vector paths during the preview process.
Fileman displays, before the import, the embedded spot colors and vector files (see below).
Each contour is linked to a spot color and has a particular name that is recognized by **Fileman**.

Be careful: do not check the box placed in front of your contours. There will be included into the image so you won't be able to use them for cutting anymore.

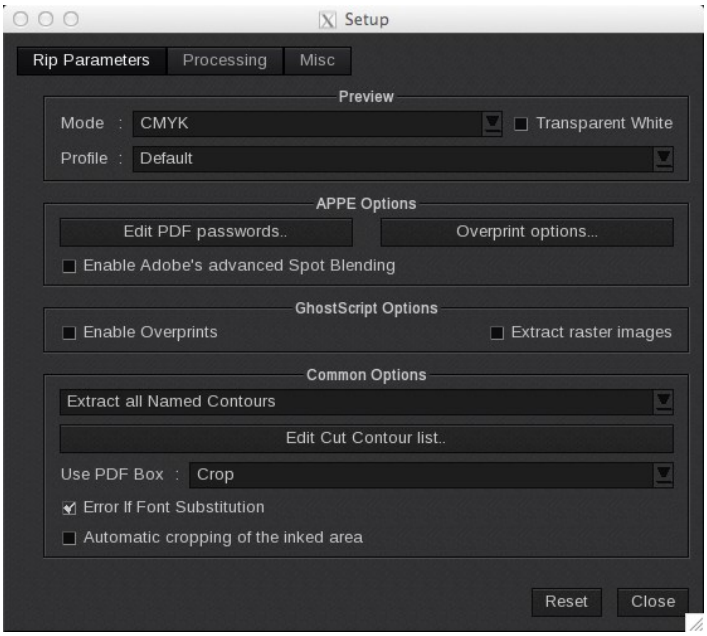


By default, only contours beginning with "CutContour" are recognized as contours but others names can be set up to be recognized as well.

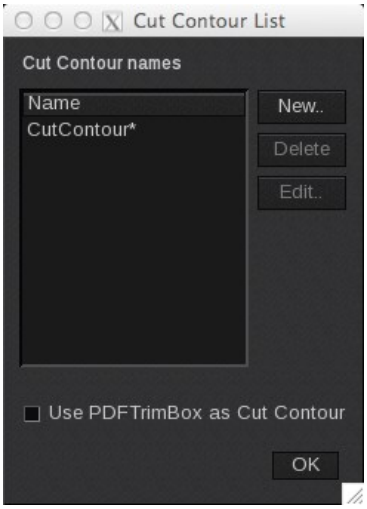
Fileman: recognize others contour names

Follow the steps below to add a new contour name to **Fileman**.

1. In **Fileman**'s main window, click on the ***Setup...*** button to open the setup window.

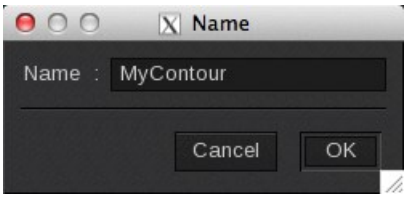


2. Then click on the ***Edit Cut Contour list...*** button. The *cut contour list* appears.



3. There, use the button on side to manage your contour list:
   - ***New...***: this button adds a contour to the list.
   - ***Delete***: this button removes a contour from the list.
   - ***Edit***: this button changes the contour name.

   If you type a name followed by a star "*", every contour which begins with this name will be recognized by **Fileman**.

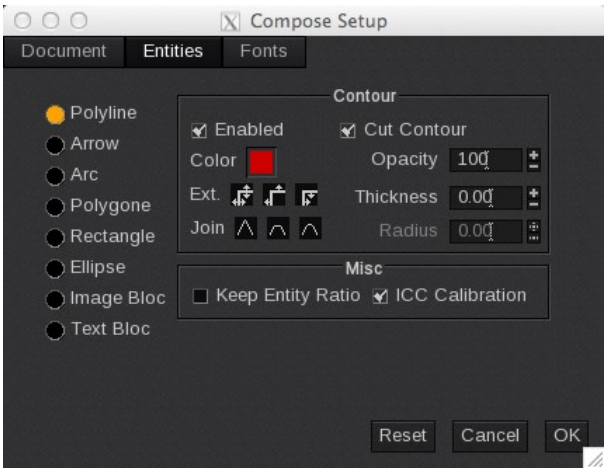


Contour creation and edition window.

Contours created in Compose

The **Compose** module allows the user to create lines and objects for which cut contours can be created. Contours are defined in the *Compose Setup*: button ***Setup*** in the main window then tab Entities.

Cut contours cannot be created on fonts, only on text blocs.



Contours created in the **Compose** module can be defined as cutting paths. When different images are placed in a composition, their edges can also become cutting paths.

Non-embedded vector contours

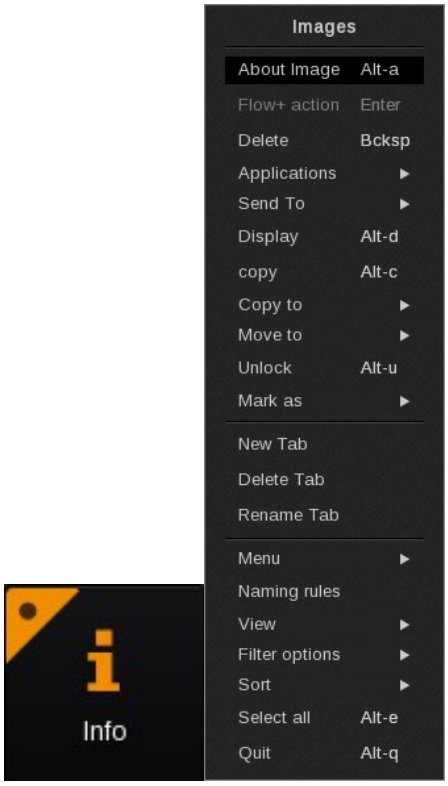
When a contour is located in another file than the image itself, you can use **Compose** in order to make the contour to correspond to the image again.

Check contours contained in a file

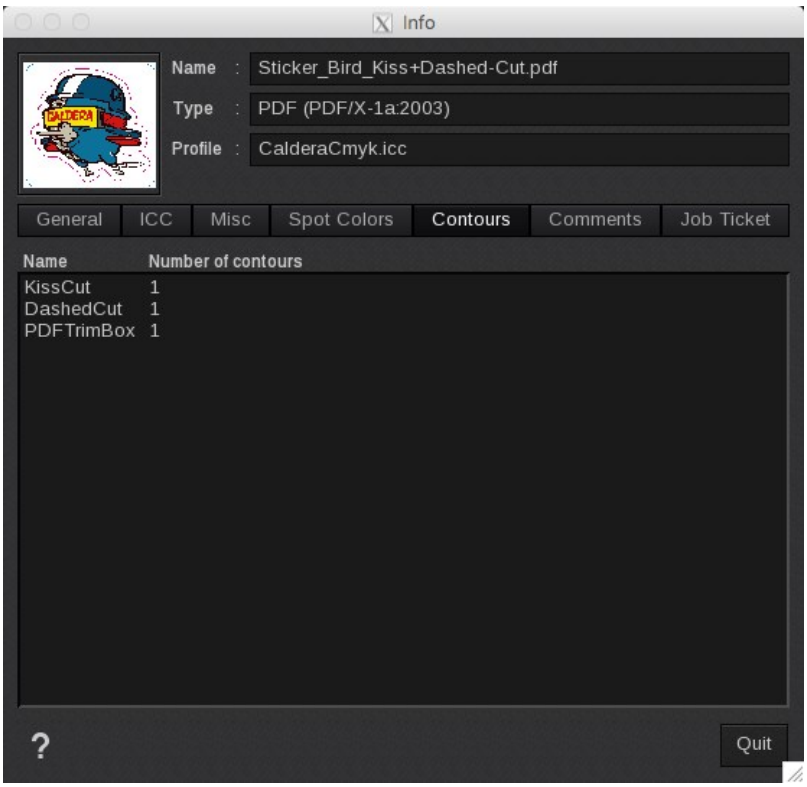
You can check at any time if one of your images from your **ImageBar** contains cut files.

- If your image is marked with a cutter it means that a cut contour has been recognized by **Fileman** during the import process.

- Open the **Info** module:
  - Double-click on the **Info** icon on the **ApplicationBar** then drag and drop the image in it.
  - Drag and drop the image in the **ApplicationBar Info** icon.
  - Select the image then make a right-click and click on **About image**.
  - Select the image then use the shortcut “Alt+a”.



Then select the Contours Tab. There you can see the list of the contours included in your image. If no line is written, no contour is linked to the image.

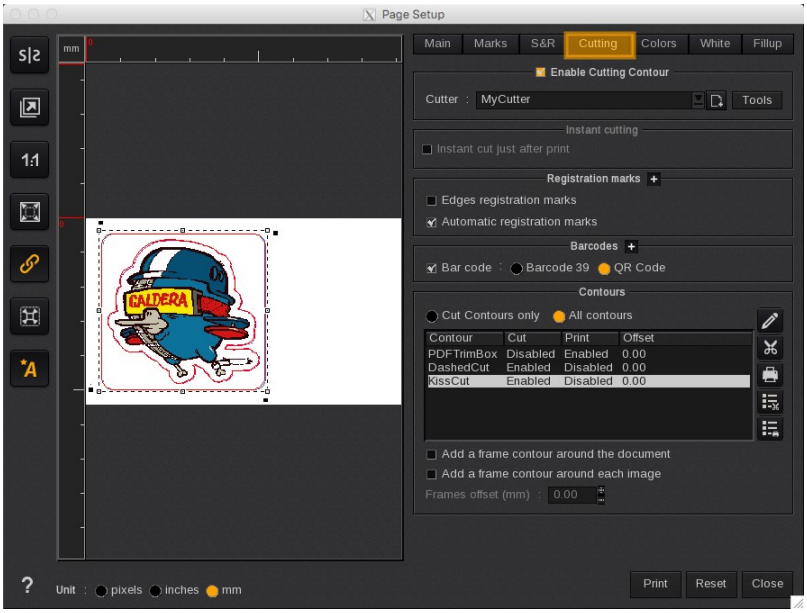


The print

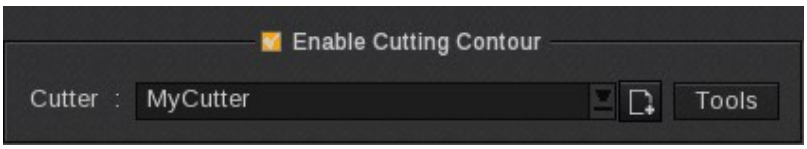
Some cut information have to be prepared in the **Print** module.

Please refer to the complete user manual for the use of the **Print** module.

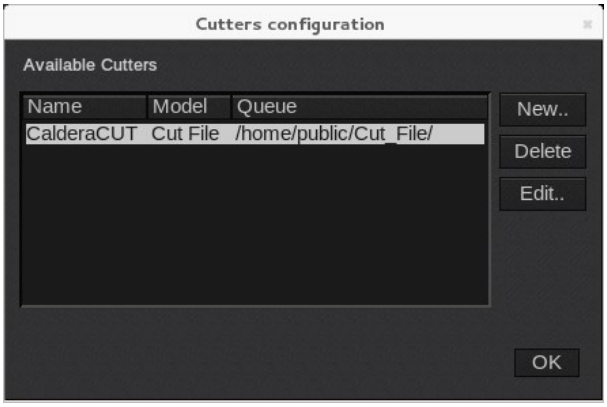
All parameters are set up on the Cutting tab of the *Page Setup* window.



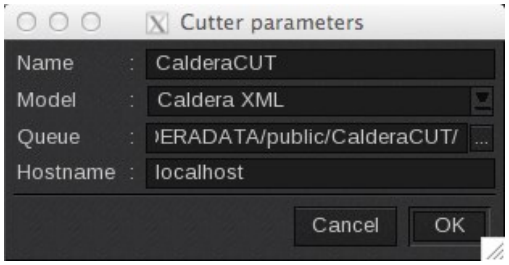
The **Enable Cutting Contour** area is where you enable the cutting features and where you select your cutter driver. Check the box next to **Enable Cutting Contour** to activate the cut features.



- **Cutter**: selects your desired cutter driver. Use the arrow to display the list of available cutter drivers.
-  : opens the *Cutters configuration* window.



The ***New*** and ***Edit...*** buttons open the cutter parameters window and the ***Delete*** button removes the cutter from the list.



These fields have to be filled to add a cutter:

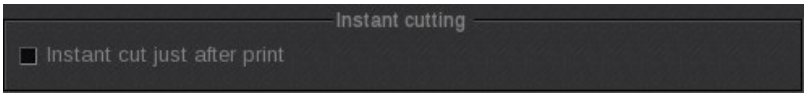
- **Name**: as it will appear in the cutter list.
- Choice of the **Model** among those supported by Caldera RIP. (The arrow displays the list.)
- **Queue**: display of the path to the directory where the cut files will be created.

When a document is processed through the **VisualCut** workflow, a cut job is generated at the end of the print process and sent to a local cutter queue. Each installed cutter has its own cut job queue, available in the corresponding CUT module.

- **Hostname**: the cutter address or network name used on the network to recognize the machine (IP address or localhost for example).

- ***Tools***: opens the *Cutter tools configuration* window that can vary by cutter model.

The **Instant cutting** area is where you select the action to print and instantly cut.



- ***Instant cut just after print***: when enabled prints the file and then immediately cuts the file.
- ***Use printer's registration marks***: when enabled generates printer registration marks to improve cutting accuracy. Best practice is to enable this feature for instant cut print jobs. Note: the registration marks will not appear in the preview window. This option is not available for every printer.

The **Registration marks** area has cutting features specific to Cut Marks. Click the "plus cross" to display all settings.

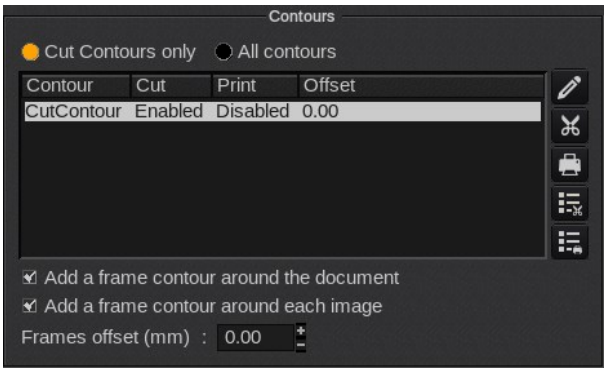
- **Edges registration marks**: when enabled generates RIP registration marks to allow for Print/Lam/Cut workflow. Note: the registration marks will appear in the preview window.
- **Automatic registration marks**: With this option, you can add cutting marks in the document between the image repetitions or between nested images. This feature is called **ExtraMarks**. You can choose the **Allocated Space** for each mark and the minimal space between them called the **Step**.
- **Background**: this option designed for backlit, let you define the color of the currently white (paper) space around registration marks (**GrandCut** cutters only). Be careful, this color is applied to: **Edges registration marks**, **ExtraMarks** (**Automatic registration marks**), **Barcodes, QR Codes** from the Cutting tab and **Identification numbers**.

Note: If a feature is enabled but is grayed out, then that feature is not activated. This is caused by having two features enabled that are conflicting one another. Example: when enabling **Edges registration marks** and then enabling **Instant cut just after print**, the **Edges registration marks** grays out and the feature applied to the graphic is **Instant cut just after print**.

The **Barcodes** area has cutting features specific to Barcodes and QR Codes. Click the "plus cross" to display all settings.

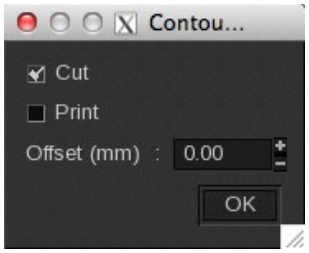
- **Bar code**: when enabled prints a *Barcode 39* or a *QR Code* on each edge of the document so the operator can feed the media regardless of the orientation of the printed graphic. Then the operator can scan the barcode and the barcode scanner will automatically send the orientation of the graphic to **VisualCut**.
- **Add a frame contour around barcodes**: this setting adds a cuttable frame around barcodes/QR Codes.
- **Identification number**: when enabled prints an identification number on each edge of the graphic so the operator can feed the media regardless of the orientation of the graphic. Then the operator can enter the identification number into **VisualCut** to automatically send the cut file with the correct orientation.

The **Contours** area is where you manage the actions for each cutting contour that appears in the graphic.

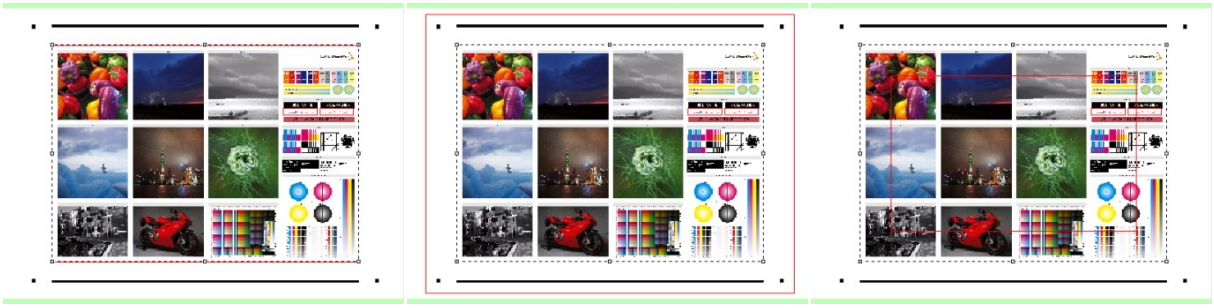


- **Use**: displays the cutting contours recognized in the graphic.
  - **Cut Contours only**: displays only cut contours.
  - **All contours**: displays all available cut contours including PerfCut.
-  ***Edit***: opens the ***Contour parameters*** window for the contour selected in the window.
  - **Cut**: enables or disables the cutting action for the selected contour.
  - **Print**: enables or disables the printing action for the selected contour. When enabled this action prints a line where the cutline appears in the file in the printed output.

- **Offset**: changes the cut path by moving it inside (negative offset) or outside (positive offset) from the current cut path. The value ranges from -10.00 mm to +10.00 mm. This option is not used to compensate for the blade being used but rather to move the actual cutline in the graphic. Note: this feature is best used with oblong contours.



Offset examples:



Original: 0.00 mm offset. Maximum offset: +10.00 mm. Minimum offset: -10.00 mm.

- ***Cut***: enables or disables the cutting action for the selected contour. The ***Edit...*** window is another location where you can manage this feature.
- ***Print***: enables or disables the printing action for the selected contour. When enabled this action prints a line where the cutline appears in the file in the printed output. The *Contour* window is another location where you can manage this feature.
- ***Cut all***: enables or disables the cutting action for all contours that appear in the graphic.
- ***Print all***: enables or disables the printing action for all contours that appear in the graphic.

By default, if the name of the contour begins with CutContour, the software will automatically enable cutting and disable printing for the contour.

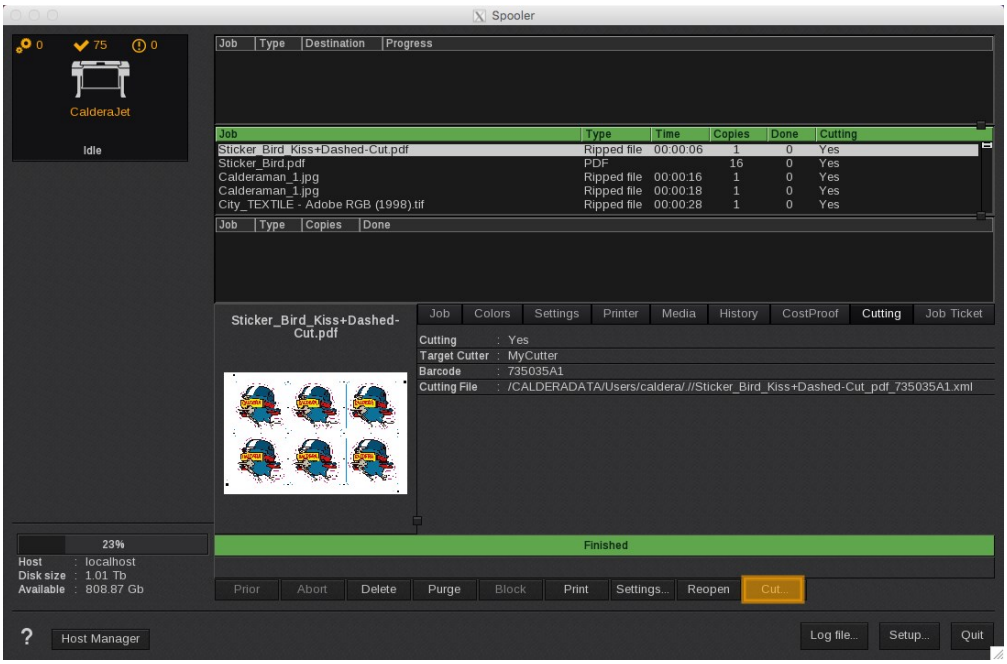
- **Add a frame around the document**: when enabled prints a frame around the graphic.
- **Add a frame around each image**: when enabled prints a frame around each image in the graphic.
- **Frames offset**: when a frame is enabled, you can set its offset here.

The Spooler

Once all print and cut parameters are correctly set up, the print can be launched. You can see its progression in the **Spooler**. You can also see, in the Cutting tab all the information about the cut:

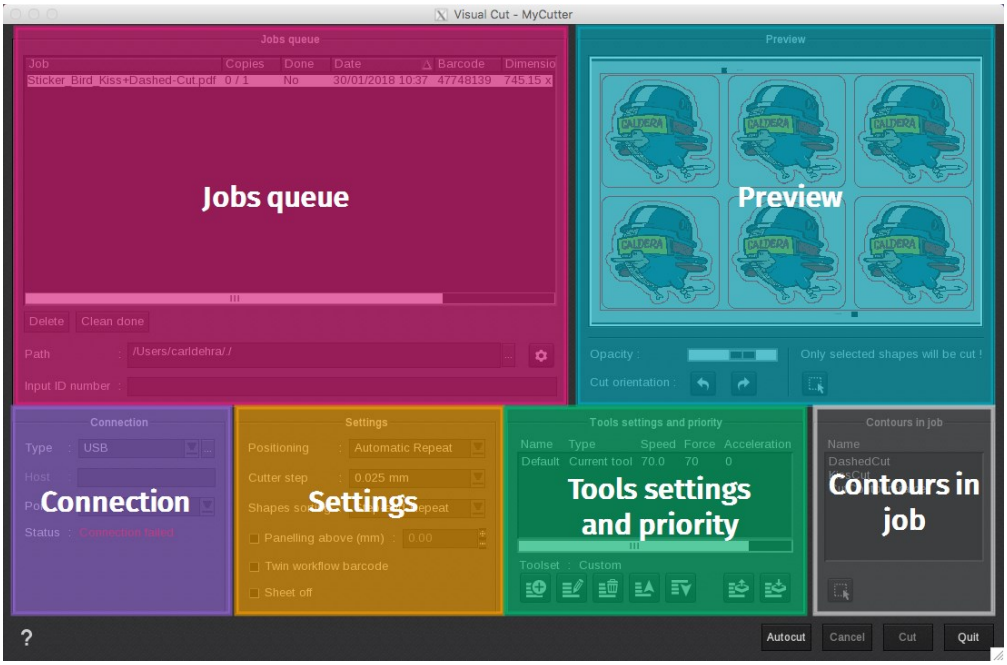
- **Cutting**: indicates if the cut is activated or not.
- **Target cutter**: name of the cutter chosen to do the cut.
- **Barcode**: barcode number printed on the document and linked to the job.
- **Cutting file**: path of the cutting file that is automatically created and sent to **VisualCut**.

You can then launch the **VisualCut** module from the **Spooler** by clicking on the ***Cut...*** button or by double-clicking on the cutter in the **ApplicationBar**.



VisualCut

Overview



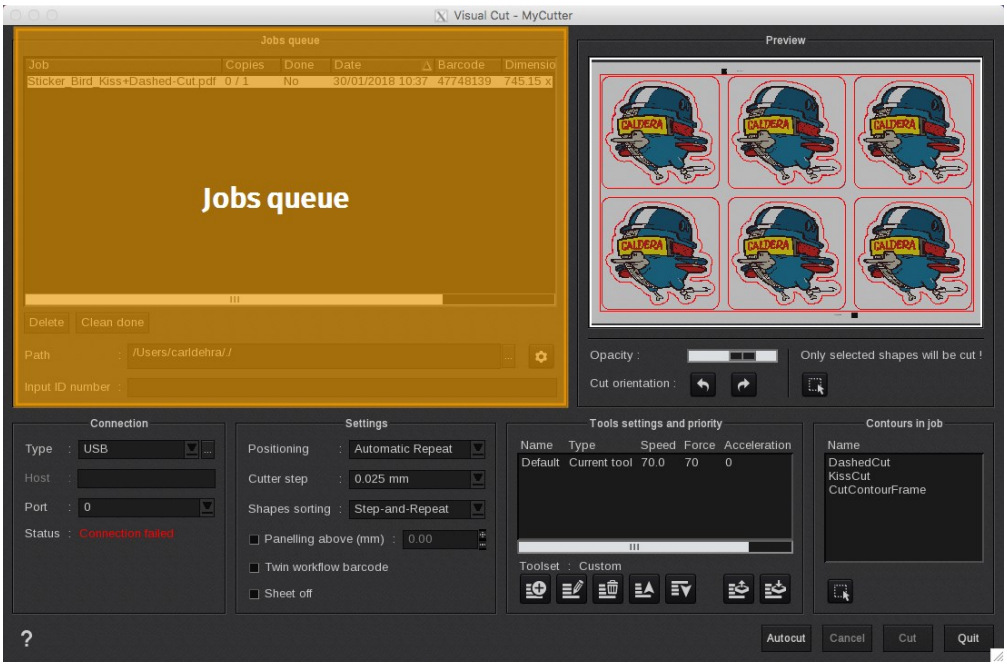
The VisualCut window is divided into six parts.

Jobs queue	Go to Page 16
Preview	Go to Page 18
Connection	Go to Page 20
Settings	Go to Page 21
Tools settings and priority	Go to Page 23
Contours in job	Go to Page 26

Three actions are also available on the windows bottom:

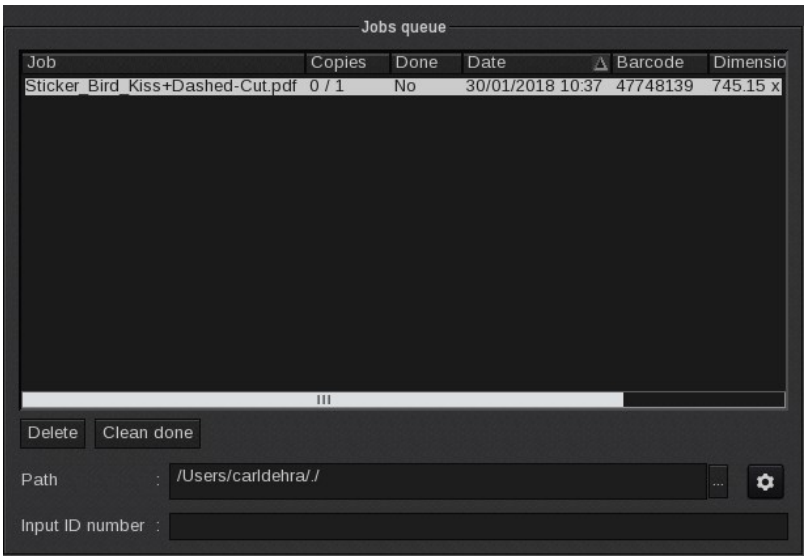
- ***Cancel***: cancels the action. This action does not work if the cut data has already been sent to the cutter and the cutter is performing the cut.
- ***Cut***: sends the cut file to the cutter.
- ***Quit***: closes the window.

Jobs Queue



The **Jobs queue** displays the available cut files for the cutter module you have launched.

Cut queue information



Click the header of the column you want to sort by. Sorts by ascending or descending order.

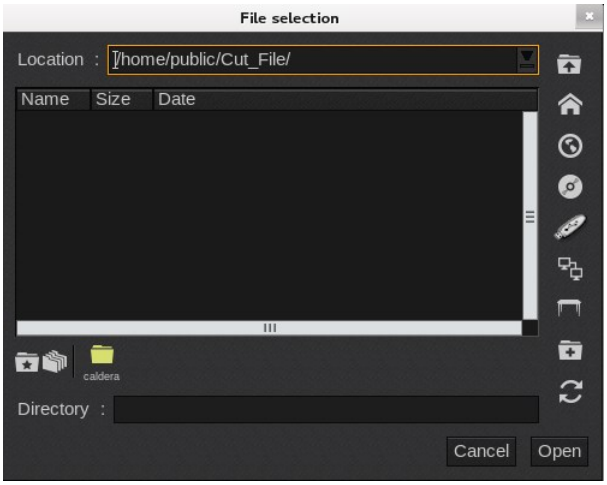
- **Job**: displays the name of the job. Sort defaults to this column.
- **Copies**: displays number of copies. The first number indicates the number of copies completed. The second number is the number of available copies. When the first number is equal to the second, the job status changes from *no* to *yes*.
- **Done**: displays the status of the cut file.
- **Date**: displays the date.
- **Barcode**: displays the barcode identification ID.
- **Dimensions**: displays the surface area (multiplication of the dimensions displayed in the column).
- **Printer**: displays the printer's name.

Two buttons are also available to manage the list:

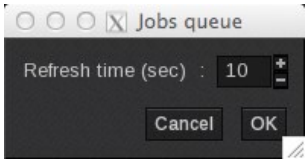
- ***Delete***: removes the selected job from the list.
- ***Clean done***: removes all jobs with the status set to *yes* from the list.

Cut path

The **Path** field is also located in the **Jobs queue** section. The **Path** is the location on the computer where the **RIP** creates the cut file after the job is printed. The **Path** location is assigned during the cutter installation.
You can change the path where **VisualCut** checks for new jobs. Click the ***[...]*** button to open the *File selection* window. Browse to the location and click on ***Open***.



Advanced parameters button:  opens a window where you can define how frequently the **RIP** will refresh the **Job queue**. In the example below **VisualCut** checks the cut path every 10 seconds to see if new files have been created. When there are new files, they are added to the **Jobs queue**.



Search by Input ID Number

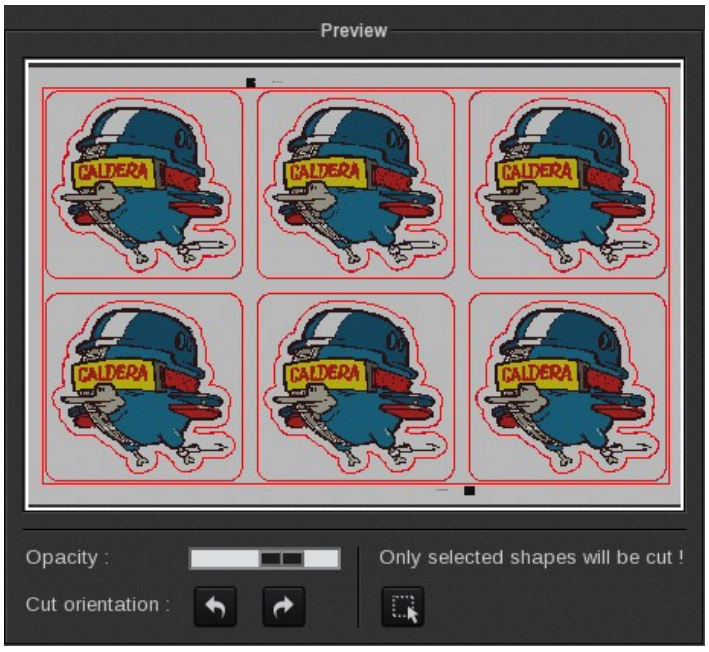
The **Input ID Number** field is also located in the **Jobs queue** section. Simply enter the identification number of the job and click on ***Enter***. The job will become highlighted in the **Jobs queue** and the job will load in **VisualCut**. Please refer to the **Cutting tab** section to review how to generate an identification number for print jobs.

Note: when **VisualCut** is launched from the **Spooler**, the corresponding job is automatically selected in the **Jobs queue** and loaded in the window.

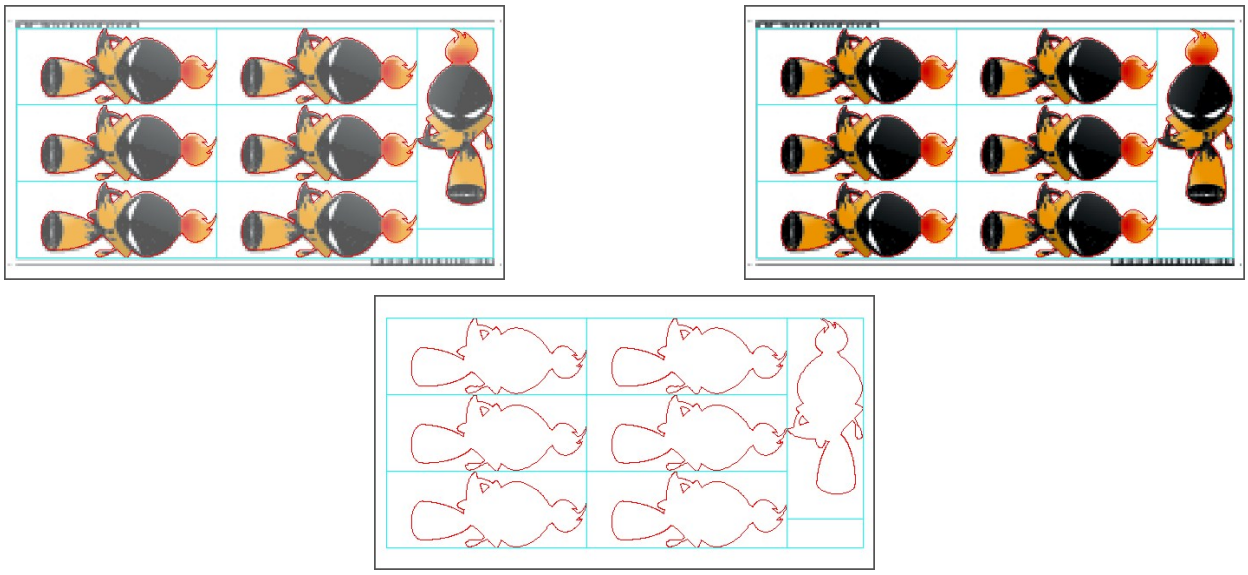
Preview

The **Preview** displays the cut contours in the job. The color of the cut contour is the same as the color assigned to the cutting tool that will be used to make the cut. The following actions are available in the **Preview**.

- **Opacity**: changes the opacity of the image.
- **Cut orientation**: rotates the cut file.
- **Removes selection frame**: resets the cut file to cut all images in the file. See Cut selection section.

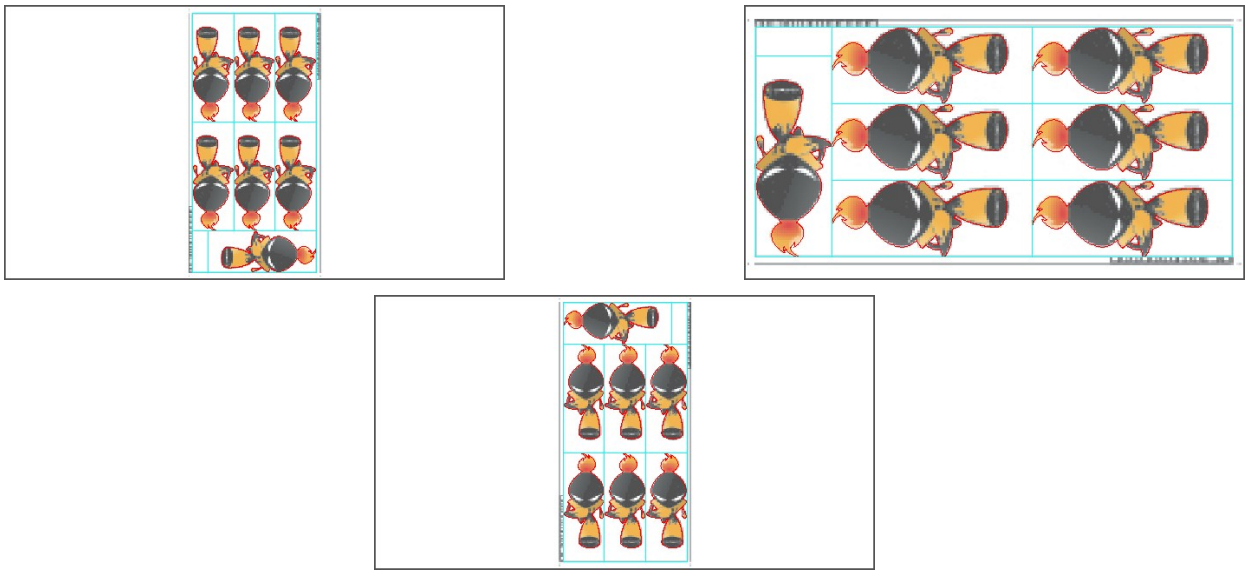


The **Opacity** scroll bar changes the opacity of the image in the **Preview** to better identify where the cut contours appear.



The screenshots above show examples of different opacity levels.

To change the orientation of the cut file, use the ***Cut orientation*** buttons:



The screenshots above show examples of different rotations.

The following actions are available in every **Caldera RIP** preview module:

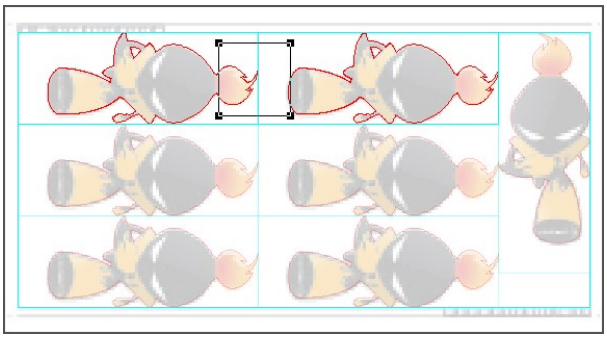
- **Zoom in**: press the Ctrl key and the right button on the mouse to zoom in. Alternatively you can press the Ctrl key and scroll up using the mouse.
- **Zoom out**: press the Ctrl key and the left button on the mouse to zoom out. Alternatively you can press the Ctrl key and scroll down using the mouse.
- **Scroll the image**: press the Ctrl key while pressing the mouse scroll to move the image in the preview.

These actions can also be used in the **ColorBook**, in the **Display** and the **Print** module under *Page Setup*.

Note: Unlike other modules, you cannot use Alt+R keys to reset the preview. To return to the default preview, exit the job and select another cut file. Then exit that cut file and return to the original job. The image will return to the default preview.

Cut selection

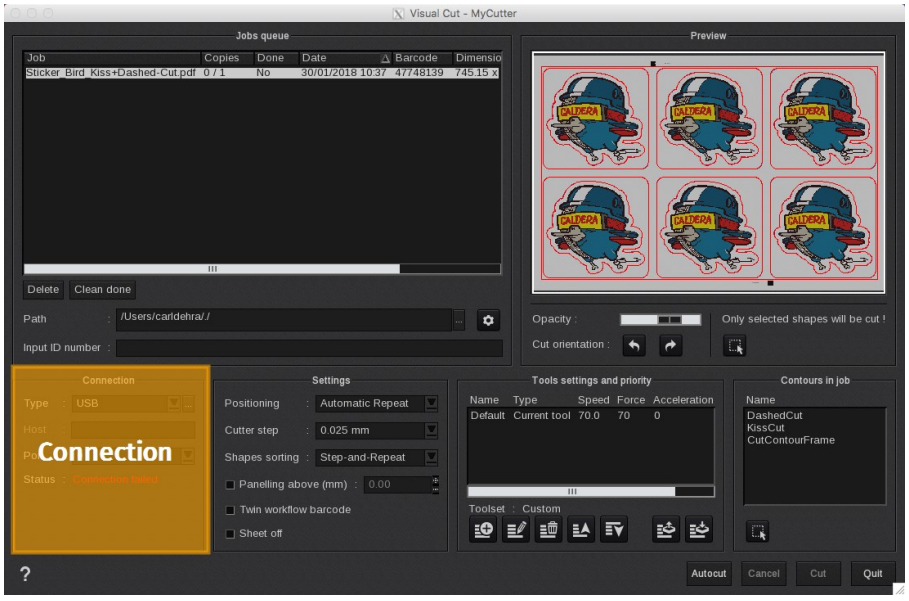
The cut selection tool is useful for when you don't want to contour cut all the copies that appear in the job. Use your mouse to select which copies you want to contour cut in the **Preview**. If the selection frame touches any part of a copy, all of its contours will be cut regardless of where the selection tool touches the copy.



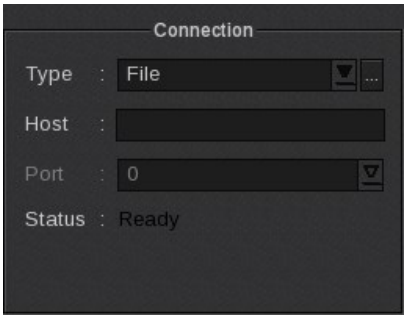
In this example, four copies are selected and the contour cut will be applied only to these copies. The copies with the pale frames will not be cut. The global frame is also activated because it is linked to each copy.

Remove selection frame button:  removes the cut selection frame and applies the cut contour to all copies in the job.

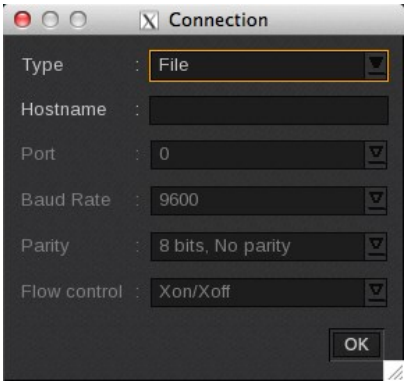
Connection



The **Connection** section is where you configure the software to communicate to the cutter.



- **Type**:
  - **USB**.
  - **Serial**
  - **RawIP**
  - **File**
- The ***[...]*** button opens the advanced setup *Connection* window.

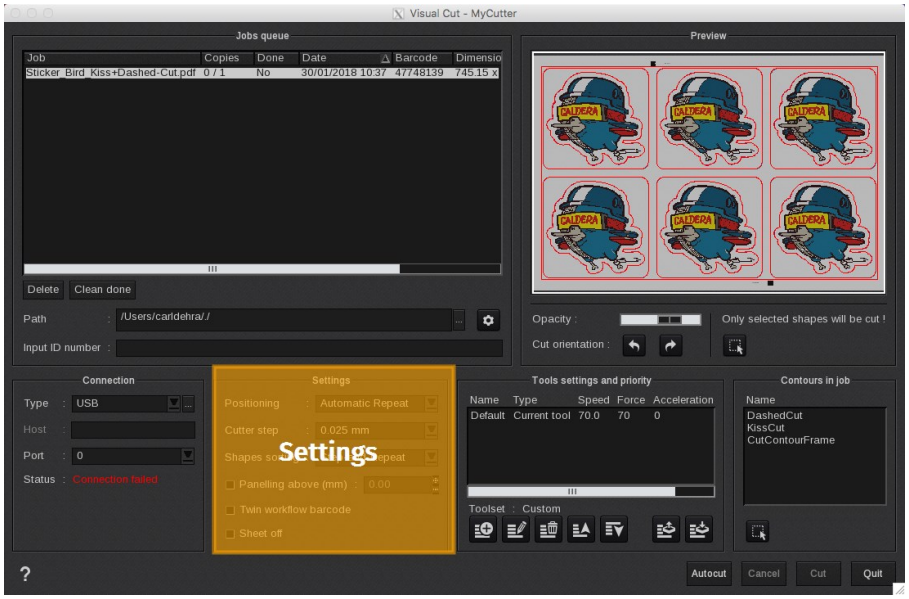


  - **Type**: lists type of connection selected.
  - **Hostname**: enter the IP address of the cutter.
  - **Port**: choice of the port used for the connection.

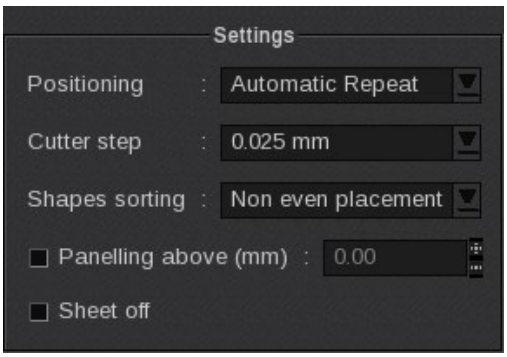
The fields below are necessary only for Serial cutters.

  - **Baud Rate**: indication of the connection speed in baud.
  - **Parity**: number of bits and type of parity (*odd* or *even* parity).
  - **Flow control**: flow control type between: *Xon/Xoff* or *Hardware*.
- **Host**:enter the IP address here when **RawIP** connection is selected.
- **Port**: enter the port here, if applicable.
- **Status**: displays the status of the cutter. When *Ready*, the cutter is available to accept cut files.

Settings



The *Settings* section is where you define certain parameters of the cutter. Depending on the cutter model, some options may not be available or others may be displayed.

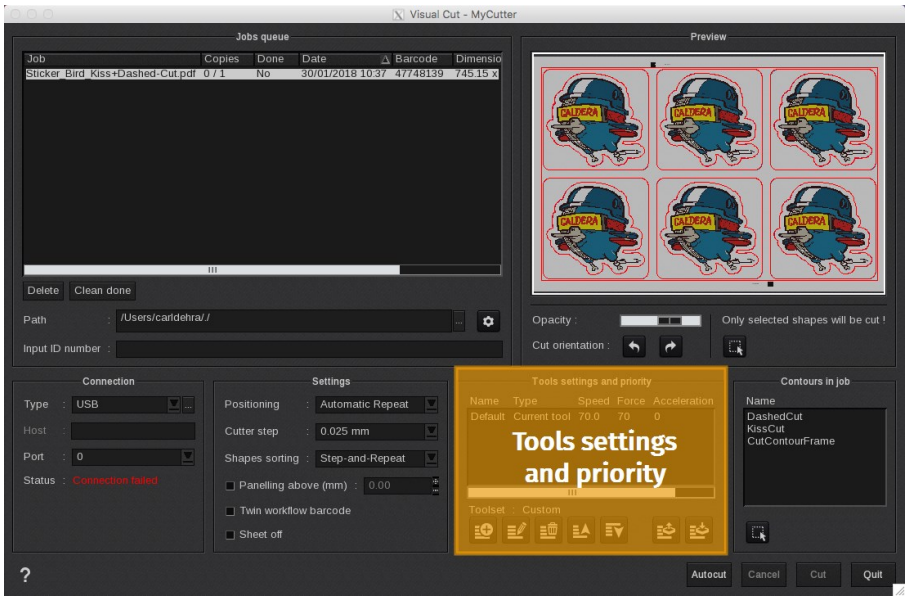


- **Positioning**:
  - *Single with marks*: (formerly blind cut). The user places the blade on the first mark then launches the cut in **VisualCut**. When the cutter detects the marks, the cutting begins.
  - *User points marks*: (formerly semi-automatic). The user launches the cut then **VisualCut** prompts the user to place the blade on the media. When the cutter detects the marks, the cutting begins.
  - *Automatic repeat/single*: The user launches the cut and the cutter detects the marks and the barcode. Then the cutter searches for the barcode in the *Jobs queue*. When found, the cutter automatically begins cutting.

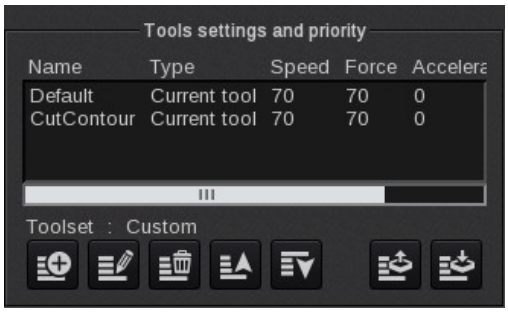
    The ***single*** mode performs the cut action for one job. The ***repeat*** mode tries to find a new job to cut on the media after the first job is done. The cutter stops searching for a new job when a barcode cannot be found on the media and/or in the **Jobs queue**.

  - *Manual*: The user places the blade precisely on the first mark before launching the cut action.
  - *None*: Used for colored vinyl when no printed marks appear on the media. The user loads the media in the cutter and then launches the cut.
- **Cutter step**: adjusts the position of the contour when the cutting is slightly off. This is not to be confused with blade offset. Blade offset is located under **Tools settings and priority**.
- **Shapes sorting**: specifies how contours are read by the cutter.
  - *Non even placement*: recommended for most cases.
  - *Step-and-Repeat*: reads the contours line by line. Recommended for **Paneling** and when **Step&Repeat** is enabled.
- **Paneling**: divides the cutting action into several panels in order to ensure cutting accuracy for long jobs. Set the panel length according to the cutter driver or by using the marks placed on the job's margins.
- **Sheet off**: when enabled performs a sheet cut once the cutting action is complete. This is useful to separate jobs for **automatic** repeat positioning on a roll.

Tools Settings and Priority

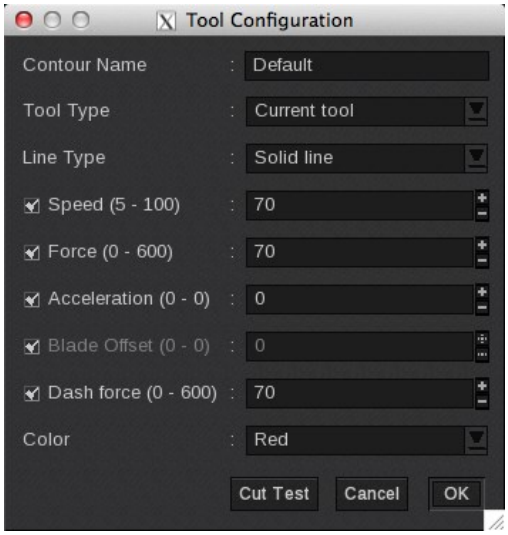


The **Tools settings and priority** section is where you create your cutting tools. You can create multiple tools to perform different cut actions within the same job. The section is divided into two parts: **Tools list** and **Action** icons.



Action icons

 Create a tool icon: adds a new cutting tool to the list.



In the *Tool Configuration* window assign the following fields.

Note: many options are dependent on the cutter model. Please refer to the cutter's user manual to choose the best values for the following parameters. The fields below may also change according to the cutter model.

- **Contour name**: name the new cutting tool. The name should correspond to the name of the cut contour you want it to cut in the design file. If the name does not begin with "CutContour" you must declare it in the software so it will be recognized. Go to "*File Manager - Setup - Edit Cut Contour list*" and create a new contour name.

When an asterisk "*" is added at the beginning or at the end of the cutting tool's name, the cutting tool is used to cut all contours that begin or end with that name. Example: A tool named "CutContour*" is used to cut all contours that begin with the name "CutContour". This means the tool "CutContour*" will be used when cutting contours that are named as the following: "CutContour", "CutContourFrame", "CutContourImage", etc.

When an asterisk is added at the beginning of the tool's name such as "*Contour" the tool is used to cut all contours that end with the word "Contour". Example: A tool named "*Contour" is used to cut contours that are named as the following: "Contour" and "CutContour," but not for "CutContourFrame".

Note: you are unable to name a cutting tool "Cut*Contour" and obtain the same results because the asterisk appears in the middle of the cutting tool's name. The asterisk can only be placed at the beginning or at the end of the cutting tool's name.

- **Tool type**: tool types vary by cutter model. Examples include:
  - **Kiss cutting**: cuts only the first layer of the media (E.g. adhesive-backed vinyl.)
  - **Dotted cutting** cuts using a **Laser** to simulate the cut path.
- **Speed**: head speed of the cutter.
- **Force**:pressure applied to the tool when cutting, its range is device dependent.
- **Acceleration**: pressure applied to the tool when cutting.
- **Blade Offset**: enter the blade's offset value. If unknown, use the default value that appears in this field.
- **Dash force**: pressure applied to the tool when cutting dashed lines.
- **Color**: select a color to identify the cut contour in the **Preview**.
- ***Cut Test***: performs a cut test to review the cutting tool's settings. Media must be loaded before performing this action.

 Edit tool icon: opens the *Tool Configuration* window to make edits to the tool's settings.

 Remove a tool icon: deletes the cutting tool from the list.

 Move tool up icon: moves the cutting tool closer to the top of the tool list.

 Move tool down icon: moves the cutting tools closer to the bottom of the tool list.

 Load a tool set icon: loads a previously saved cutting tool set.

 Save a tool set icon: saves a cutting tool set as an .xml file.

Saving cutting tool sets is useful in production to quickly switch from one configuration to another. It saves time when the media is different and requires other settings for speed, force, etc.

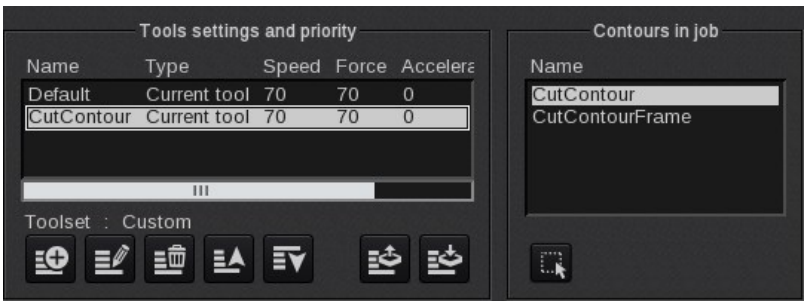
Tools list

The order in which the tools appear in the list is important. The order determines which cut contour is performed first, as well as which tool is used when two tools are eligible for a contour.

Contours allocation

For each contour, VisualCut reviews the tools from the top of the list to the bottom and selects the first tool that is a match for the contour. When a generic tool appears before a specific tool in the list, the contour will be cut using the generic tool instead of the specific tool based on its location in the list.
When a tool is selected in the **Tools settings and priority** list, the corresponding contour will highlight in the **Contours in job** list. This is helpful so you can verify that the correct tool will be used to cut the contour. Note: if you leave a

contour highlighted in the **Contours in job** list then only that contour will be performed during the cut action. See the **Contours in job** section for further information.



The Default tool

The **Default** tool is used when no other tool can be linked to a contour. Even if the **Default** tool is at the bottom of the list, it will be used to cut the contour. The **Default** tool cannot be deleted from the list. The **Default** tool is treated like all other tools so its order in the list is also important.

In the example below, the contour "MyContour" was unable to link to a specific tool so the "Default" tool is used to perform the cut contour. Additionally, the contour "CutContour_Kissed" is linked to "CutContour*"instead of the tool named "CutContour_Kissed" because the tool "CutContour*" is listed before the other tool and is eligible to cut the contour.

Tools list	Contours
CutContourFrame	CutContour
Default	CutContourDashed
CutContourDashed	CutContour_Kissed
CutContour*	CutContourFrame
CutContour_Kissed	MyContour

See below which tools are used to cut each contour that appears in this example:

Tools	Contours linked
CutContourFrame	CutContourFrame
Default	MyContour
CutContourDashed	CutContourDashed
CutContour*	CutContour and CutContour_Kissed
CutContour_Kissed	None

Contours in Job

The **Contours in job** section lists the recognized contours in the file.

By default, all available contours will be cut. To enable a specific contour only, select that contour from the list. To select more than one contour use the ***Ctrl*** key.

Select all contours button:  removes selected contours in the **Contour in job** list and enables all available contours.

Note: when all available contours are selected, they do not appear highlighted.

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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