DESIGN Tutorial

Half Cut:

The great functionality of Signlab's Contour cut tools has made producing sheets of labels and stickers a simple process, but what about complete decals?
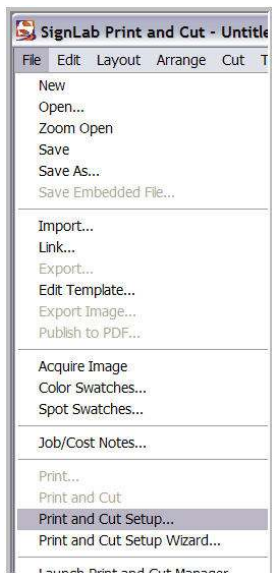
Signlab's latest release has its own built in half cut tool which enables the production of complete decals on practically any vinyl cutter or print and cut machine. During cutting the knife pressure will alternate between its regular force for cutting the vinyl and a higher force for cutting the vinyl and backing. Using the "variable pressure method" Signlab can send commands to a suitable device, instructing it when and where to cut at high force and low force, resulting in the creation of a complete decal where both the vinyl and backing can be contoured to any shape! In this tutorial we will be showing how to set up Signlab's Half Cut function for use with a Roland Versacamm.

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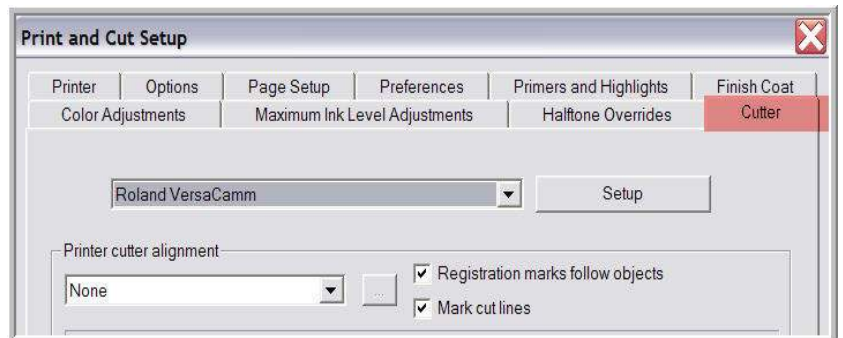
01

Get Started:
We can use half cut with any cutter or printer/cutter that can accept pressure change commands during a job. This is necessary to allow for the increase in knife pressure that is required to cut the vinyl and the backing paper when the outer cut is performed. First we are going to look at setting up the device. To do this I need to launch the "Half Cut options" window. Go to the "File" menu and select "Print & Cut Setup".
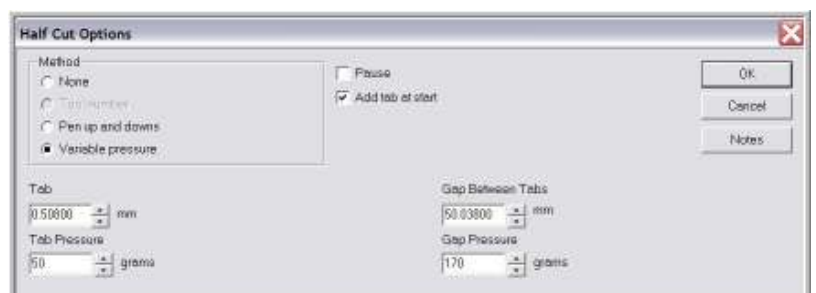
02

Choose Device:
With the Print and cut setup window open, select the "Cutter" tab at the top. If you have more than one device installed, make sure you have the one you are going to use with Half Cut selected from the device list. Now you can click the button marked "Setup".

03

Half Cut Options:
With the Setup window open you will see another button marked "Half Cut Options" click on this to reveal the "Half Cut Options" setup window. All the Half Cut properties are adjusted here. Were going to use the "Variable Pressure" Method.
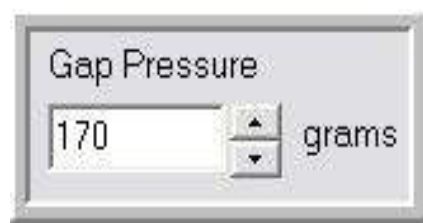
Tab

0.50800 mm

04
Tab:
To prevent the decals from falling from the media during cutting, it's necessary to leave tabs or bridges. This box let's you set the length of those tabs. The default setting is around half a millimetre and this should work just fine.

Tab Pressure

50 grams

05
Tab Pressure:
The tab pressure should be set about the same as that used on regular jobs, during this portion of the cut, the knife only needs to cut the vinyl and not the backing paper.

Gap Between Tabs

50.03800 mm

06
Gap Between Tabs:
This setting determines the length of the gaps between each tab and bridge; this is the part of the cut that penetrates the vinyl and the backing paper. I find the default of around 50mm works well although you may want to reduce this if your decals are small in size.
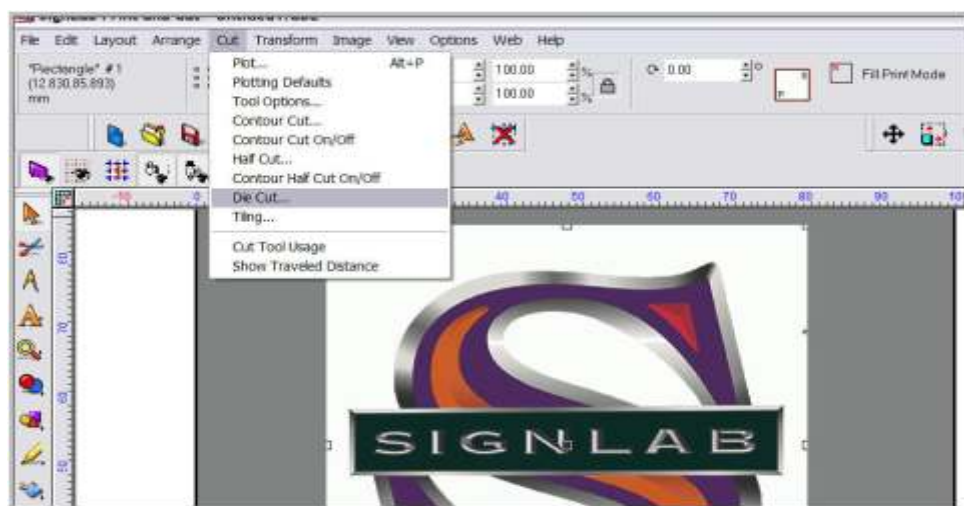
Gap Pressure

170 grams

07
Gap Pressure:
The pressure will need to be quite high. But this could vary from one machine to another. Mine is set to 170 grams, however my advice is that you start lower, at around 100 grams and then test it out by sending a small half cut job first. If the knife is not cutting deep enough, it's simply a case of increasing the pressure. The important part here is not to cut too deep, the blade needs to barely breakthrough the backing paper. With the pressure set correctly, the settings here are complete and can be left unchanged unless you need to make adjustments for different thicknesses of media and normal blade wear and tear. Click "OK" and exit back to Signlab.

08
Contour Cut:
So now we can take a look at applying the half cut paths in Signlab which is a very simple task. I'll be using the Signlab logo as my example, it's a bitmap object and it has a white background, the first task is to apply a contour cut line that will come inside this area and follow the shape of the "S". with the object selected, I can access the contour cut tool form the "cut" menu.

09
Setting Up:
The Smart bar now contains the functions for applying a contour path, I have a choice here of applying a line on just the outside, or the outside and inside of my object, for this example I am not cutting out the centres of the S so I will set this to outside only. I want my contour line to fit nice and snug around the S so I will use a very slight negative offset here and this should eliminate any snippets of white from the edge of the decal and ultimately give me a cleaner result. The last setting to check here is the "Cut Inside Bitmaps" option, this ensures the path will be applied inside the outer white box. When I now click "apply" the "Monochrome Threshold" filter appears.

10
Threshold:
The filter will define the white boundaries within my image, there is no right or wrong place to set this as it will depend on the individual file. What I am looking for here is the point where the white of my background stops and the colour of the Signlab S starts, the nice part about this tool is that if you don't get it right first time, its simple to re adjust the filter to get the best result. As a guide, I would start by lowering the threshold to just off white. Once happy, I can now exit the contour cut tool and apply the half cut path.

11
Half Cut:
The half cut path can now be added. To do this, I will select the contour path I just created.
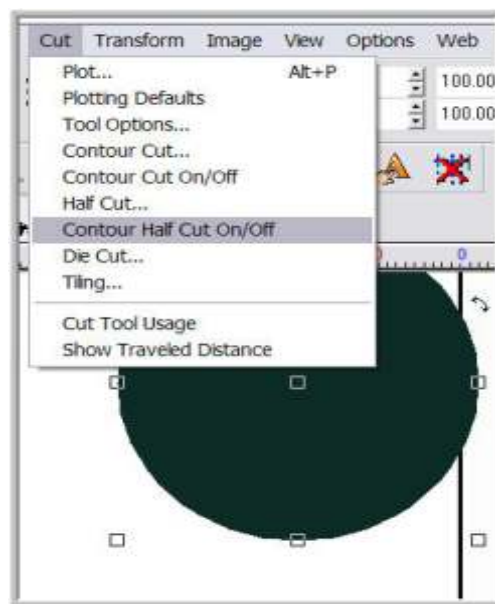
12

Open Half Cut:
Applying a Half Cut path is almost identical to applying a contour. With the contour path selected, return to the "Cut" menu and this time select "Half Cut" you will see the option for this tool in the Smart bar at the top of the screen.
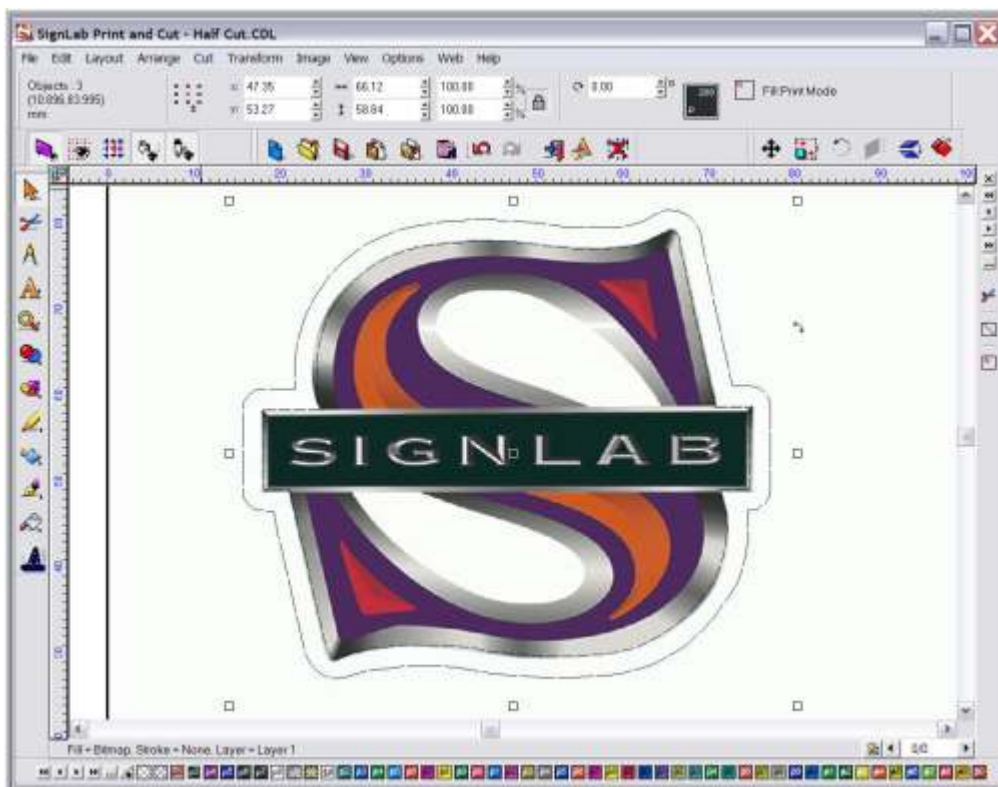
13

Final Settings:
For the corner styles I'll use "round" the knife will cut quite deep on this pass and I have generally found that selecting round corner styles rather than sharp will give a cleaner finish to the half cut path. The offset can be set to whatever size you like but any bigger than necessary is just a waste of media; I find 2.5 - 3mm to be more than enough. Lastly is the option to add "Peel Tab" to make releasing individual stickers from their backing easier. With the settings complete, the job is ready to output to my chosen device which in this case is the Versacamm.

14

Alternative Path:
In the main example I created a Half Cut path that followed the same shape as the image but it's possible to use any shape you like. This can easily be done by selecting any path in Signlab and going to the "Cut" menu and selecting "Half Cut On Off". This will turn any regular path in to a Half Cut path and vice versa. using this method it's simple to create an endless variety of different shaped and sized decals. Once the printing stage is complete the contour cut will be preformed at regular pressure and then the Half Cut at increased pressure. When the production is complete, the finished decals can be effortlessly removed from the vinyl roll ready for the customer.

Half Cut is a great tool that's simple to Use. Half Cut will work with and Cut or Print and Cut device that can accept pressure change commands during a job. To find out if Half Cut will work with your device, Contact CADlink Technology Corporation Today!

For a full video tutorial on using Half Cut with a range of devices, go to www.cadlink.com and click on Info Source.