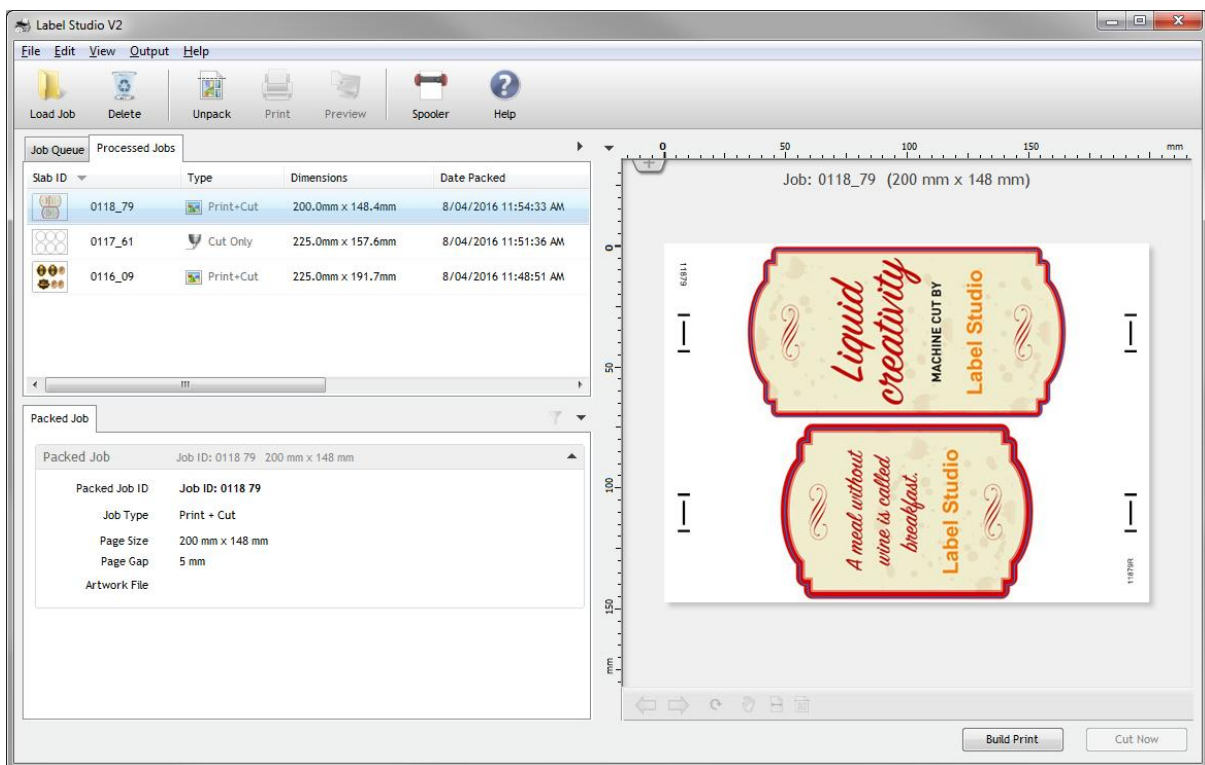# Label Studio Version 2

Welcome to Label Studio Version 2. This program is dedicated to creating precise cut layouts for batch label production.

This version of the software offers state of the art accuracy and scanning speed to boost your production capabilities.
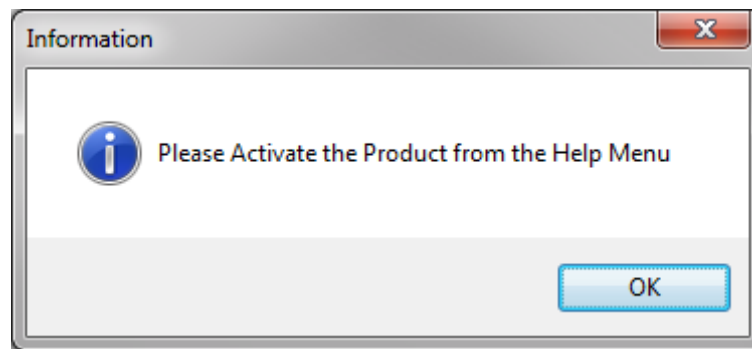
Also, the mark size has been reduced to only 5mm to allow maximum use of the printed media.

(Label Studio GUI)

Activating the Program:

After you have installed the program you will need to activate it, before you are able to load in any jobs. If you have not yet activated, you will see the following message when you try to load in a job:

To Activate the program, click on the "**Help**" menu, and select "**Licence Manager (Activate)**" to open the license manager screen. Click on "**Activate**" and follow the prompts.
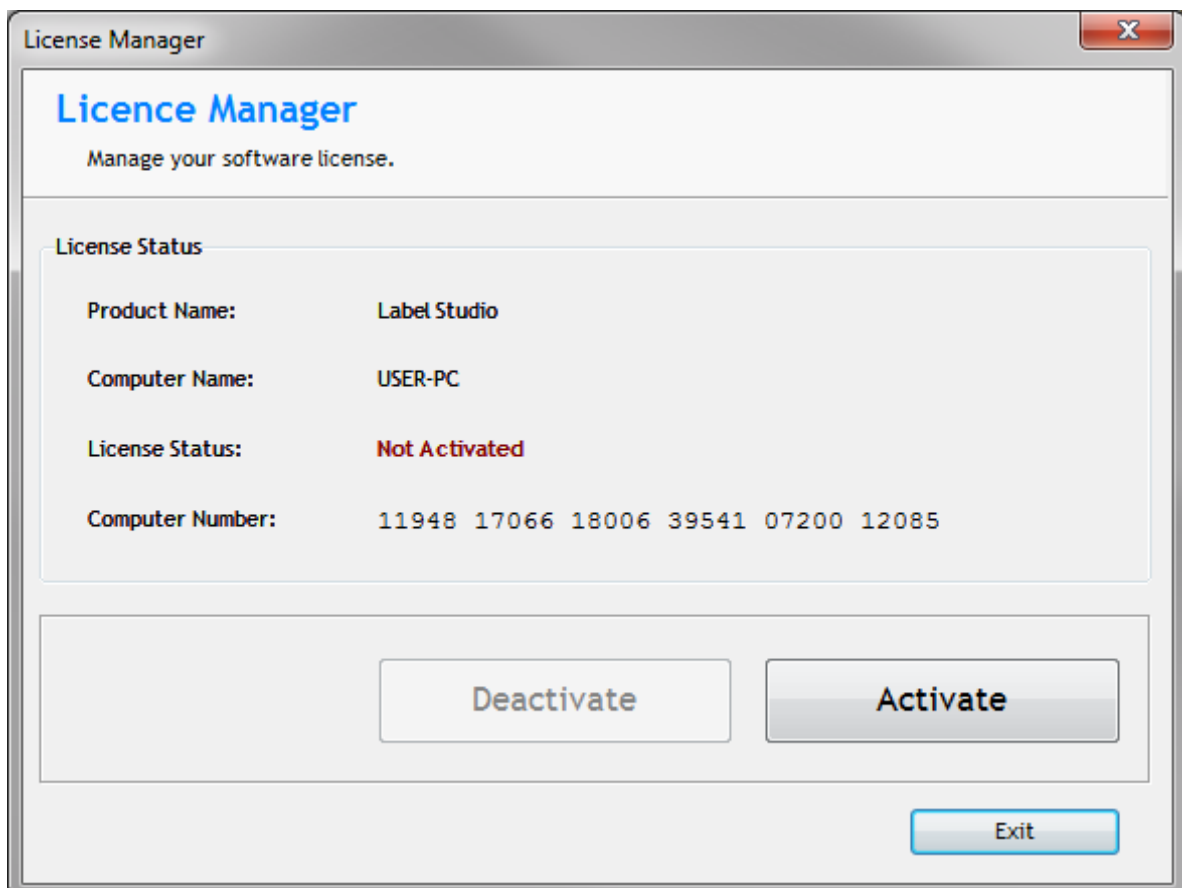
Loading Artwork into Label Studio:

Currently, Label Studio will load either PDF files, or Adobe Illustrator CS files.

The artwork should include the design elements to be printed, along with a special path used to specify the cutting contours. The color of the cutting contours should be different to any other colors used in the job, so that it can be uniquely selected.
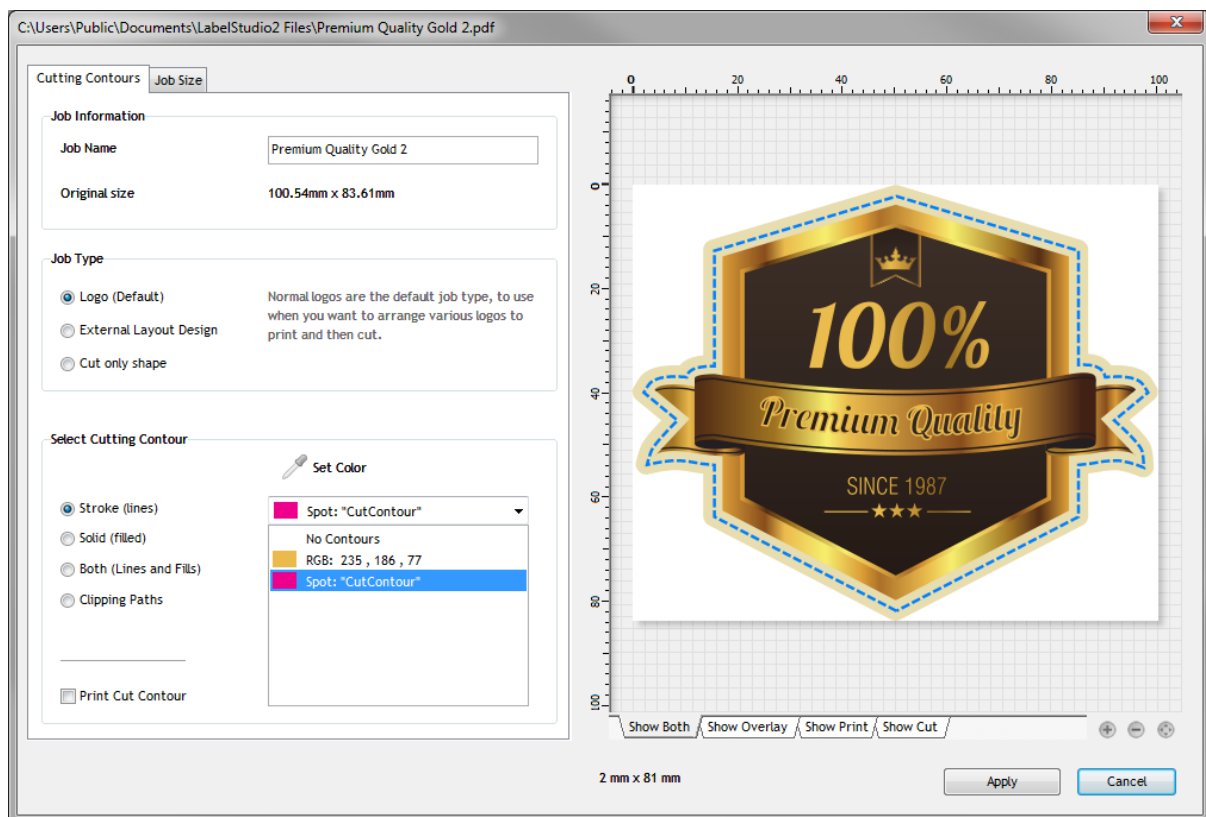

Click on the "**Load Job**" icon and select the desired logo file you want to load.
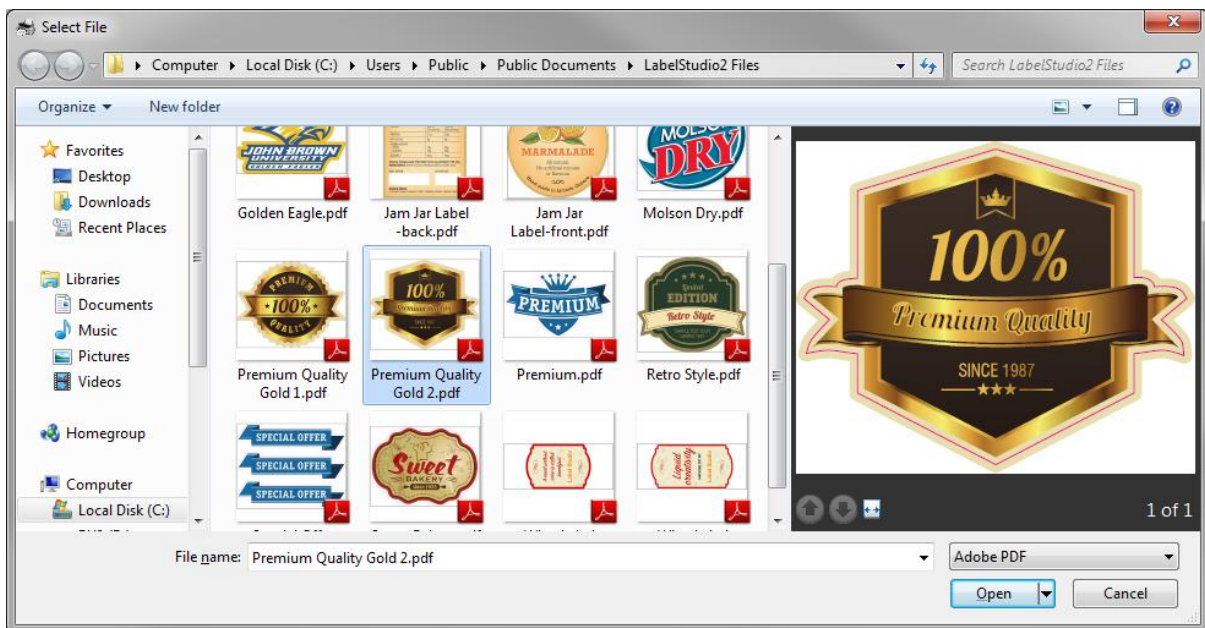
After selecting the artwork, you will be presented with a series of options, allowing you to change the physical size of the logo, apply cropping, and most importantly select the cutting contours.

Selecting the Cutting Contours:

In this example, you can see that there is a spot color in the artwork, called "**CutContour**". It does not need to be called this, and could be any color, as long as no other elements in the design also use this color.

When you select the cutting color, you have the option to also allow this color to print, or by default, the selected cutting color will not be printed. You can visually inspect the selected cutting contours by changing the view mode to either "**Show Overlay**", "**Show Print**" or "**Show Cut**".

Creating a job layout:

After you have loaded the required artwork jobs, you can now build a job layout to be print and cut.

The first thing you should do is specify the page options to match the size you wish to print.
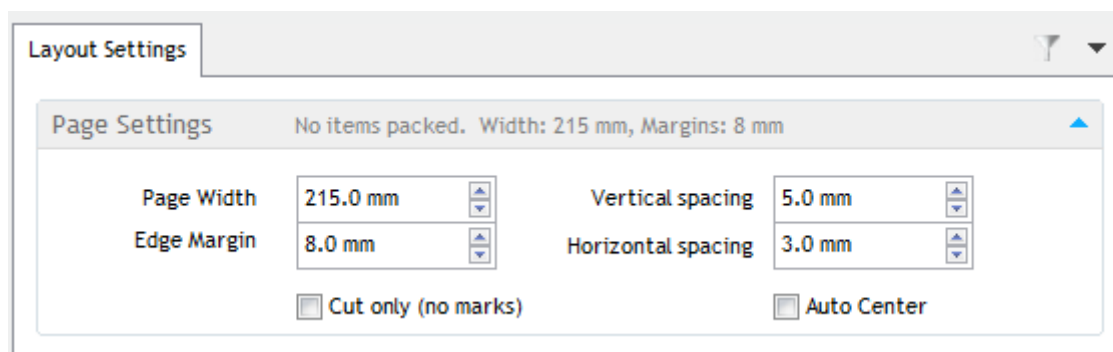
Paper Width:	Total size of printed artwork. This should be slightly less than the maximum printing size of your printer.
Edge Margin:	How much gap to allow from the left and right edge of the paper, before placing the alignment marks.
Vertical spacing:	This setting is the amount of gap to add between each row of logos. The page layout is designed so that when you print multiple copies of the layout, they should be printed with no gaps between them (on the printer), as the exact gap spacing required is already built into the page layout, using the vertical spacing setting. This allows you to create a single layout that can be repeated as many times as you wish, joining together seamlessly to fill your roll with the final print.
Horizontal spacing:	The amount of gap to allow when positioning logos adjacently in the horizontal direction.
Auto Center:	When this setting is selected, the page is treated as a series of columns, so if you had 2 logos on the same row, each would be cantered on either the left or right half of the available layout. This setting is useful for multi row printing, where you want top and bottom logos to be cantered to each other.

Adding Jobs to the Layout:

With the selected jobs selected, click on "**Add**" to place the selected jobs into the current layout.

The buttons at the bottom of the screen will change, depending upon the selection, allowing you to duplicate the current job, add new ones, remove the selected jobs, or clear the entire layout.
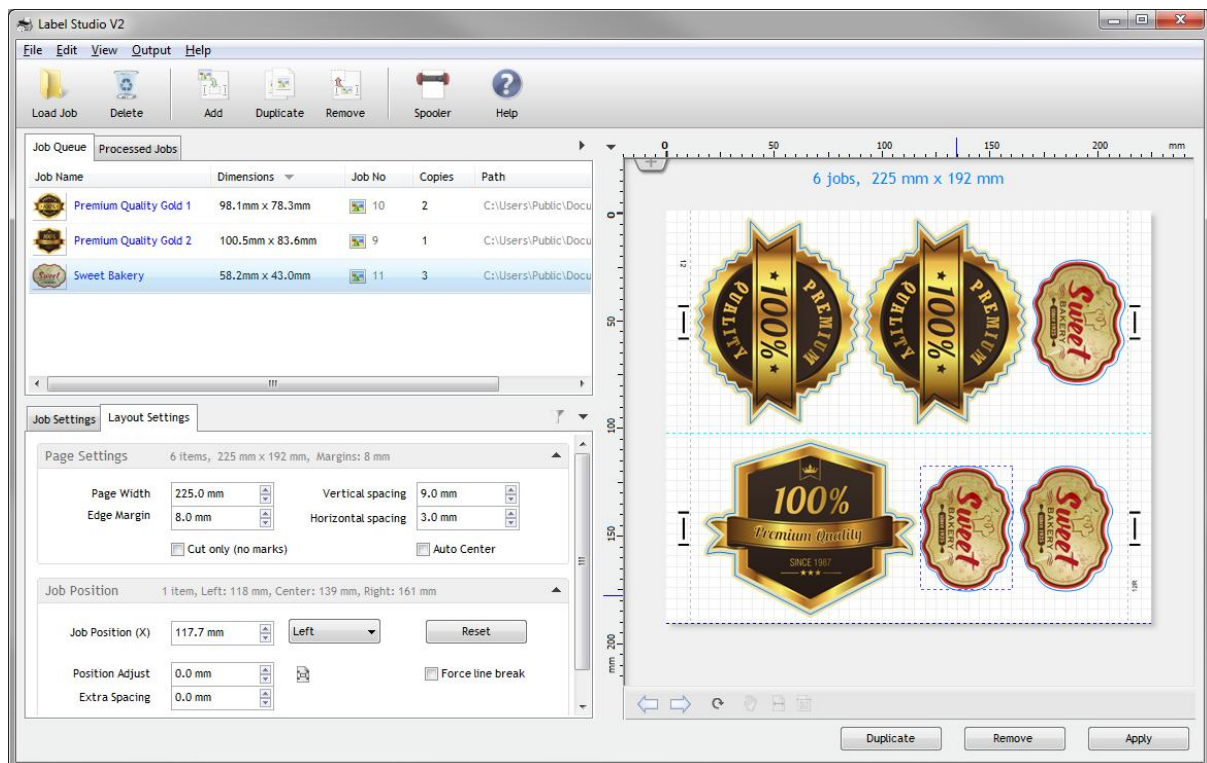
You can quickly add and remove jobs by simply double clicking on the item, either in the list, or in the preview area.

To select all of the currently packed logos in the layout, click on the preview window, away from any of the logos to unselect them all, and then double click to select them all.

To select multiple items in the current packed layout, hold down the **Shift** key when you click on them.

Applying the current layout:

Once you are satisfied with the current layout, and wish to proceed, click on "**Apply**".

This will remove the packed logos from the Job Queue, and create a new packed job in the "**Processed Jobs**" list.
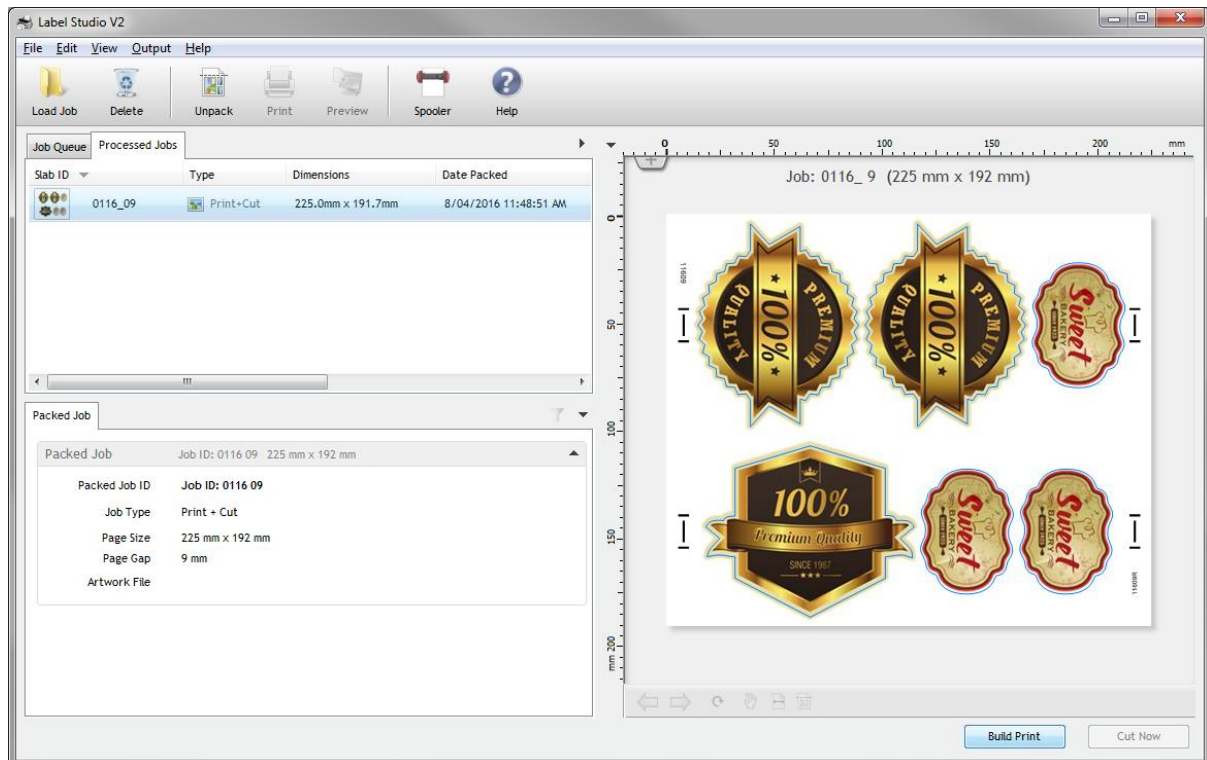
From here, you are able to generate the final artwork (PDF), print it, and also send the job to be cut.

You cannot cut the packed job, until you have created the final Artwork file.

You can control the quality of the final output, from the Output menu. By default the final artwork is built using High quality mode (600dpi), but you can change it to 300dpi if you wish.

There are also options to include the cut-lines, and exclude the image, but these options are only for testing purposes, and should not normally be used when creating final artwork.
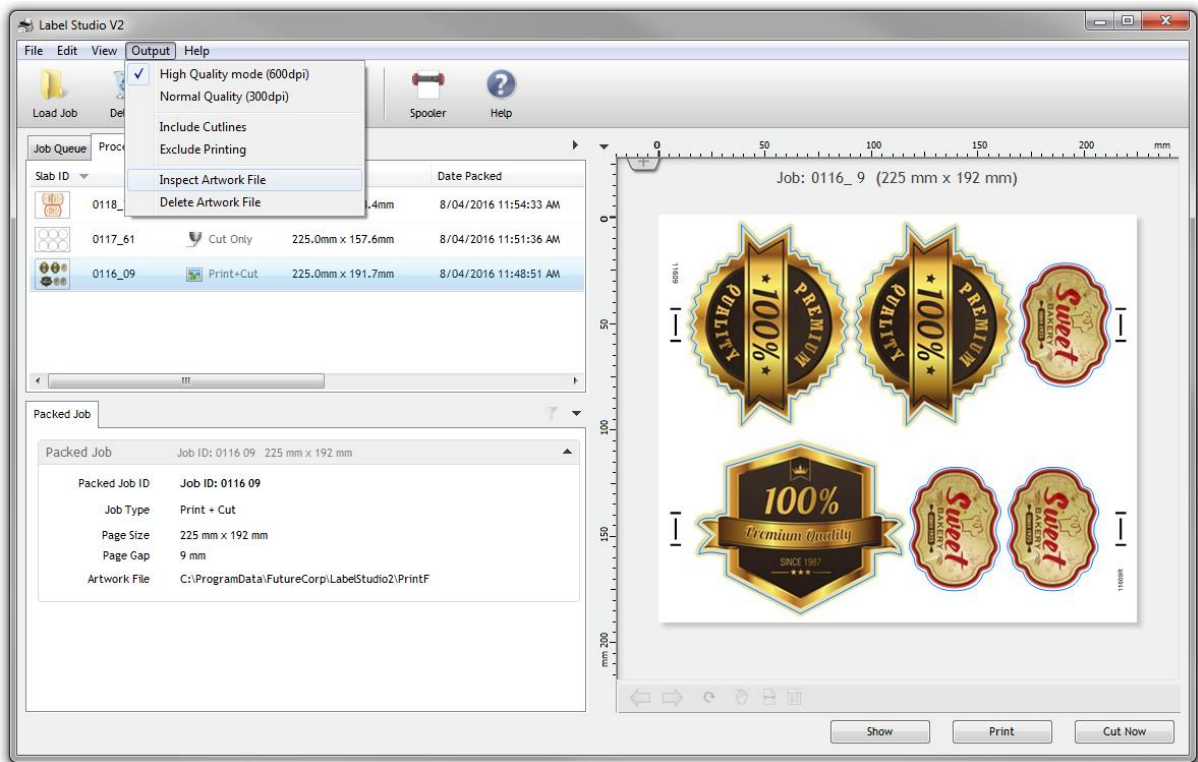
Printing the artwork:

After the final artwork has been built, clicking on the "**Print**" button will launch adobe reader, displaying the printing dialog.
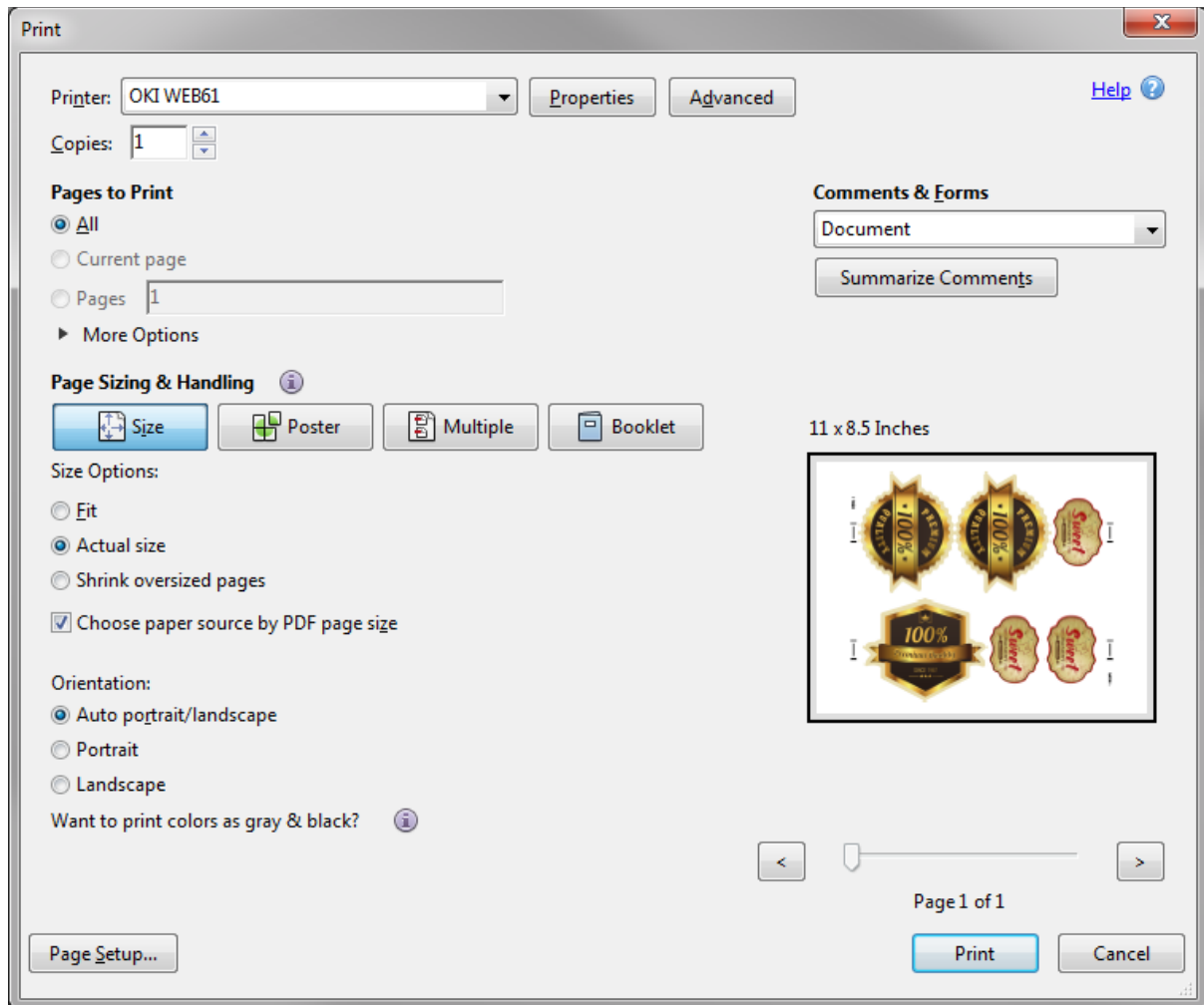
Here you should select the correct page size settings, and desired number of copies to print. It is important that you print at 100% actual size, to ensure the cutting data matches the size of the printed artwork.

Copying the Final Artwork to another folder/computer:

If you wish to load the final artwork into a 3rd party program to handle the printing, or copy it to another computer, you can quickly locate this file by selecting the "**Inspect Artwork file**" from the "**Output**" menu.
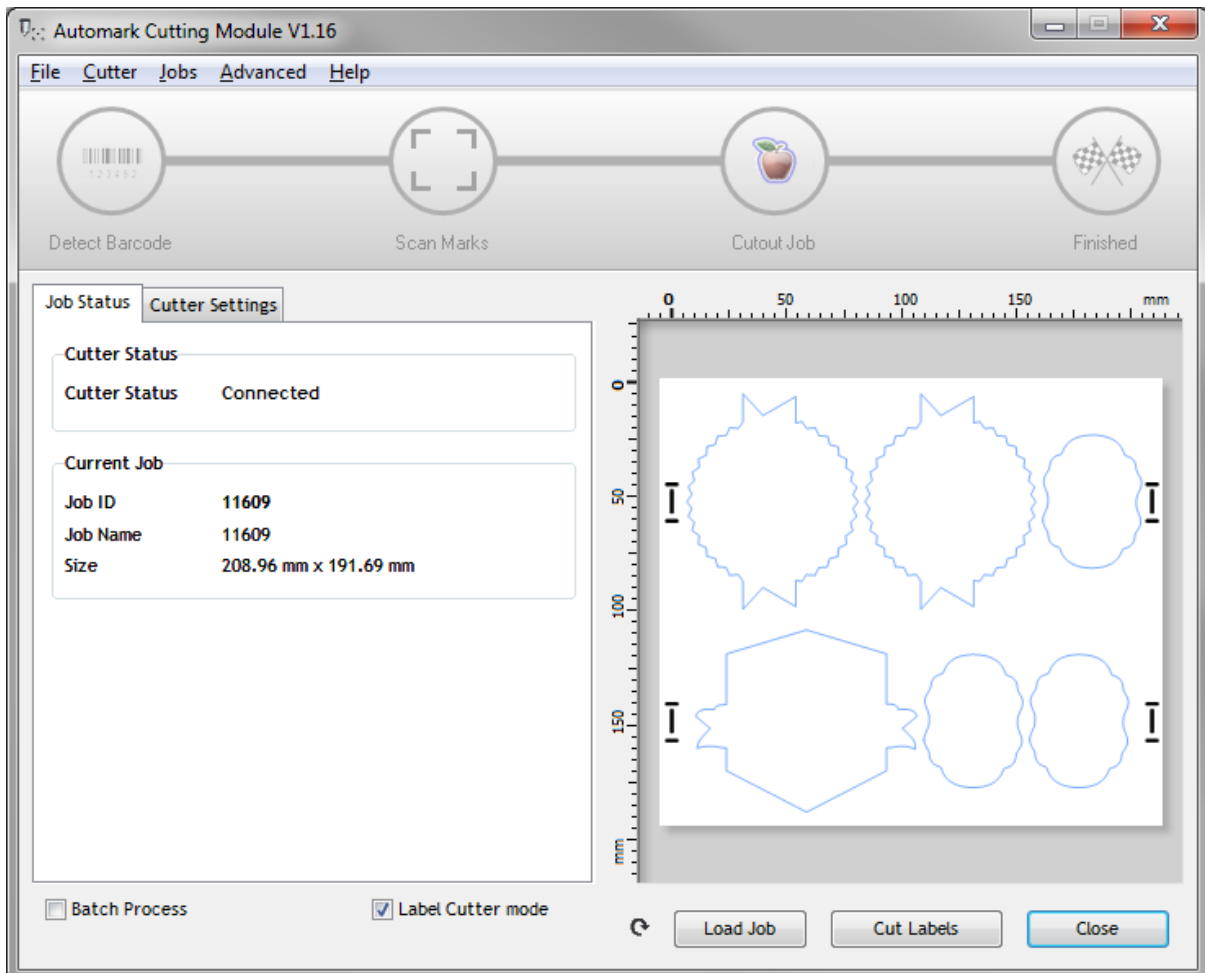

The folder will be opened, with the artwork file selected.

Cutting the Packed Layout:

After you have built the final artwork, you are now able to cut it out.

Select the file you wish to cut, and click on the "**Cut**" button to open the cutting spooler, with that job selected.

IMPORTANT:

If you have loaded the artwork, so that the job number on the right side of the cutter has the letter "**R**" at the end, it means you need to rotate the artwork, as it has been loaded upside down.

Click on the rotate button next to the "Load Job" button.

Loading artwork into the cutter:

You should position the laser in the middle of the right hand side mark, before you begin cutting, and reset the cutter origin to 0,0.


Before you begin cutting any of your jobs, you will need to calibrate your cutter, and set the tool options, such as blade offset, etc. These are covered later in this document.

The most important thing that you will need to do is calibrate the laser offset distance, so the software knows the exact distance between the scanning laser, and the cutting blade, so it can correct for this. If this setting is not calibrated correctly, the cutting paths will appear shifted in a particular direction, and not match up with the printed artwork.

How to create a "Cut Only" Job.

There may be situations where you do not need to print the artwork or perform any scanning to line it up, and simply want to cut out a group of shapes onto blank stock.

This is very easy to do, all you need is to select the "**Cut Only (no marks)**" in the Layout settings when creating your layout.
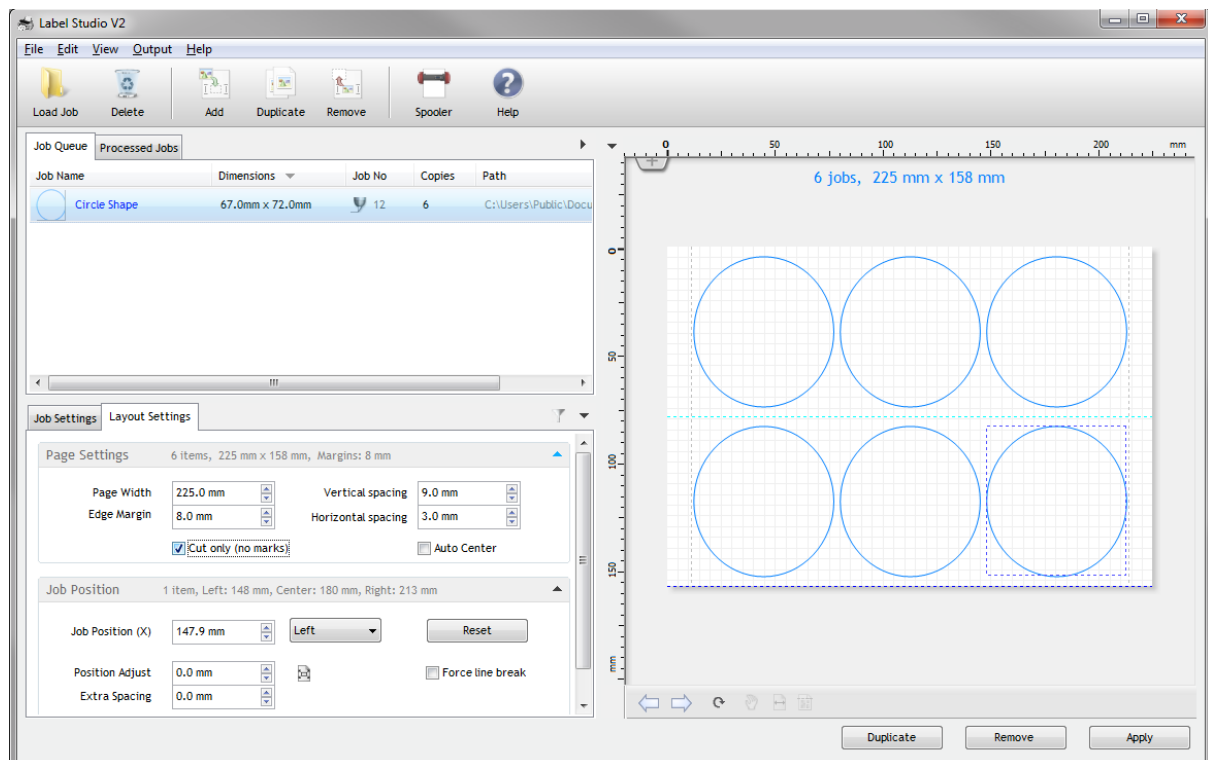

When this setting is selected, you will notice that no scanning marks are drawn, and you are not prompted to Build or Print the final artwork, and proceed directly to the cutting stage.

Specifying the number of times to cut the Job:

When cutting a job that involves scanning the marks, you do not need to worry about setting the number of copies to cut, as soon as the last printed logo has been cut, the software will not be able to detect any more marks, and will end the cutting process.

If you are cutting a "**Cut Only**" job however, this setting becomes quite important, so the software knows when to stop cutting.
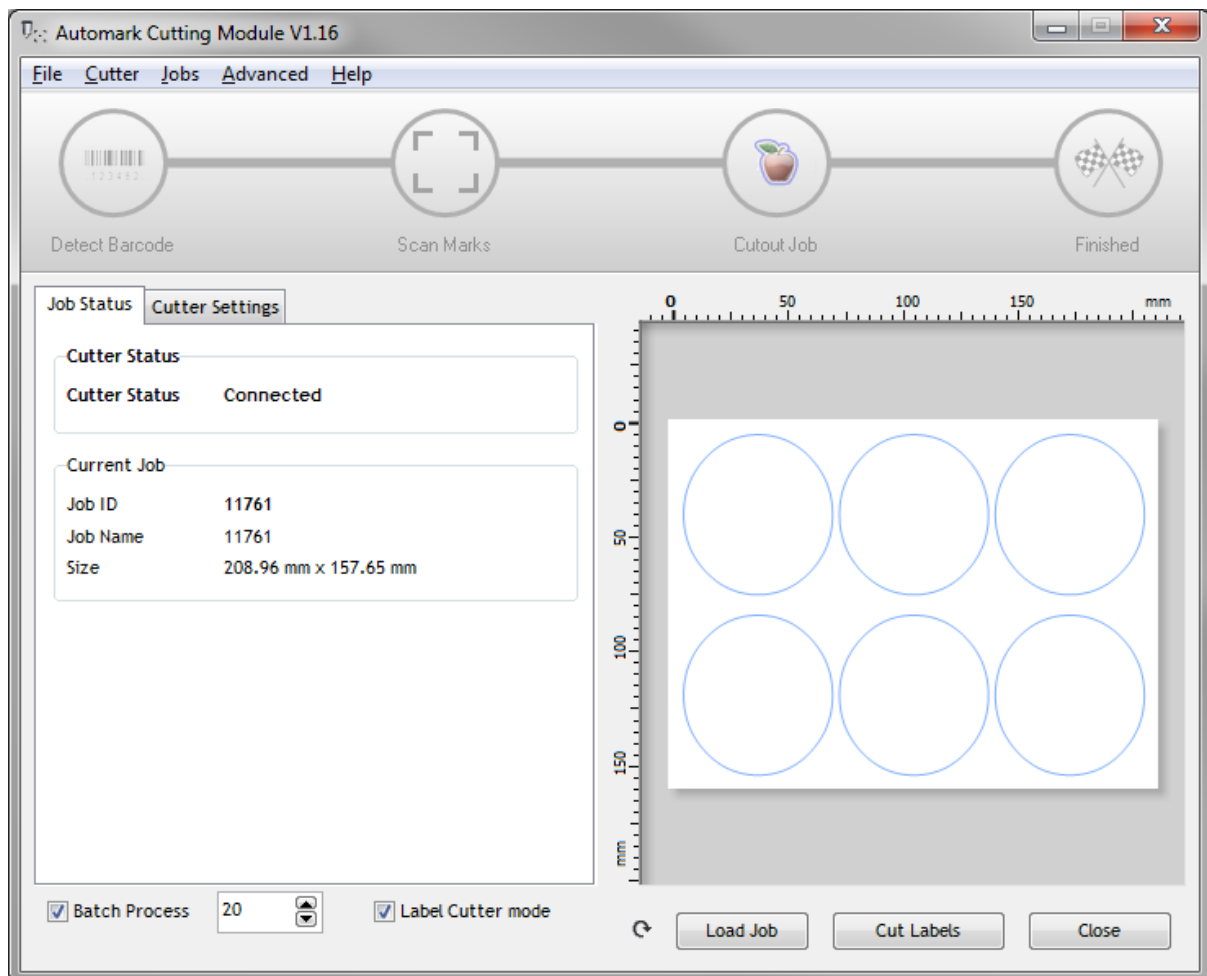

Click on the "**Batch Process**" option, and specify the number of copies you want to cut. In the example above, 20 copies have been selected, and when you click "**Cut Labels**", it will only cut 20 copies, and then stop.

Cutting Wine Labels:

One of the key features of Label Studio is the ability to create continuous wine label jobs, where the spacing between each label is controlled precisely, to allow for automatic application of the final cut-out result.

Firstly, load in the artwork:
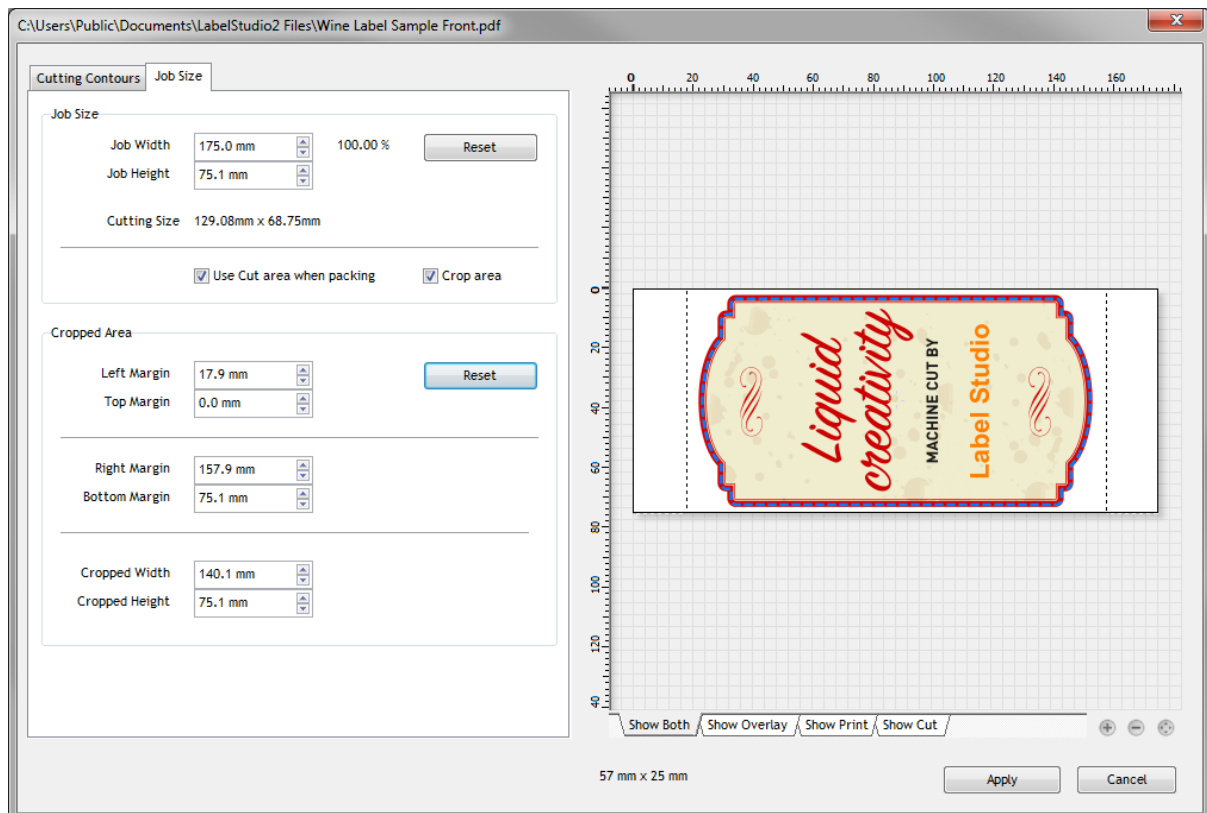
If the artwork has been designed with a lot of unwanted white space, you can trim this by selecting the "**Crop area**" option when loading the artwork. You should be careful not to accidentally crop any of the cutting paths.

By default, the "**Use Cut area when packing**" option is selected, which means the size of the final cut-out label is what is used when calculating the spacing.

If you are printing both front and back labels, you can create a duel layout by adding both jobs.

In addition, you can control the left/right positioning of both labels to ensure they are in the position you need, relative to each other.
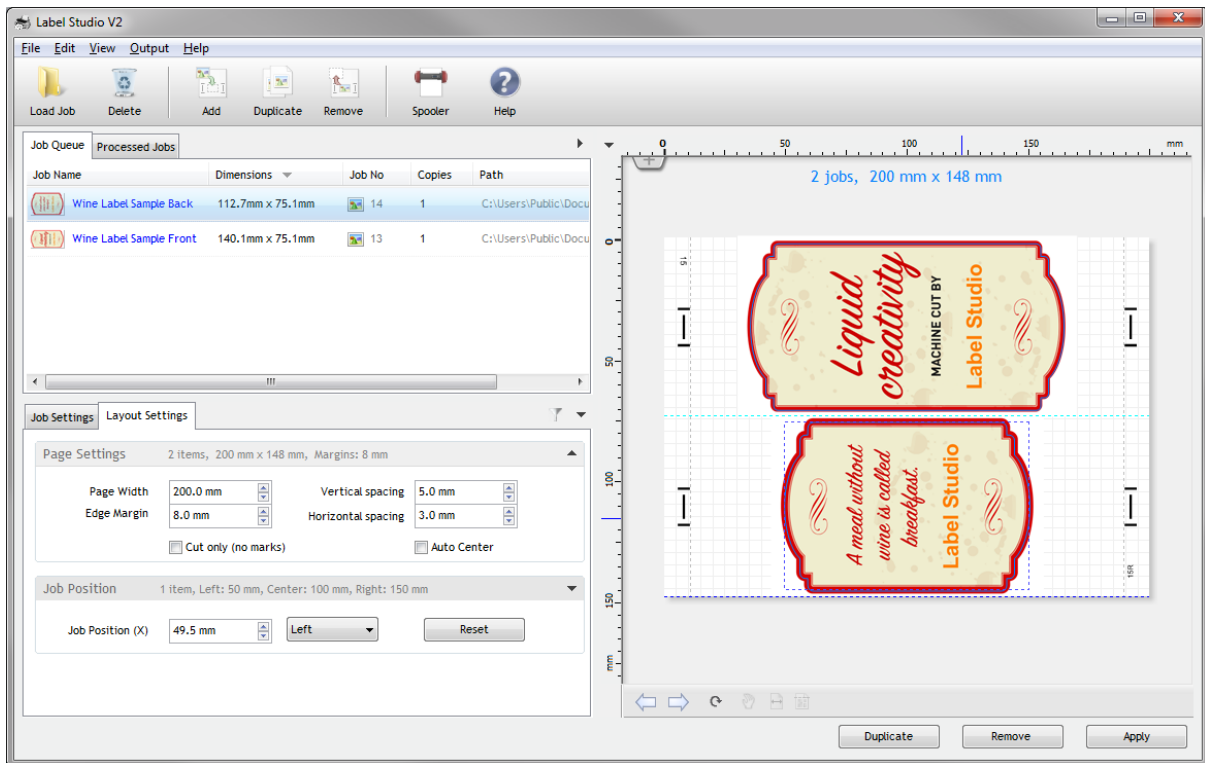
To control the position of each logo, you can use the "**Job Position (x)**" property.

If for example, you wanted both labels to be aligned to the right, you would select both of them (using the shift key to multiple select), and then select "**Right**" as the positioning option, and enter the desired value that both of the logos right edge ends up as.

Hint:

You can use the up and down cursor keys on the keyboard in any of the measurement boxes in the program to increment / decrement the current value by 1mm, making quick adjustments very easy.

How to handle small nested artwork:

Because Label Studio is focussed on repeat batch processing of simple row(s) of logos, you will find that on each row, the logos are positioned one after the other.

If you have very small artwork and would like to create several vertical copies on the same row, you should design a single logo in your design program, with several copies one on top of the other, then load that logo in as a single logo.
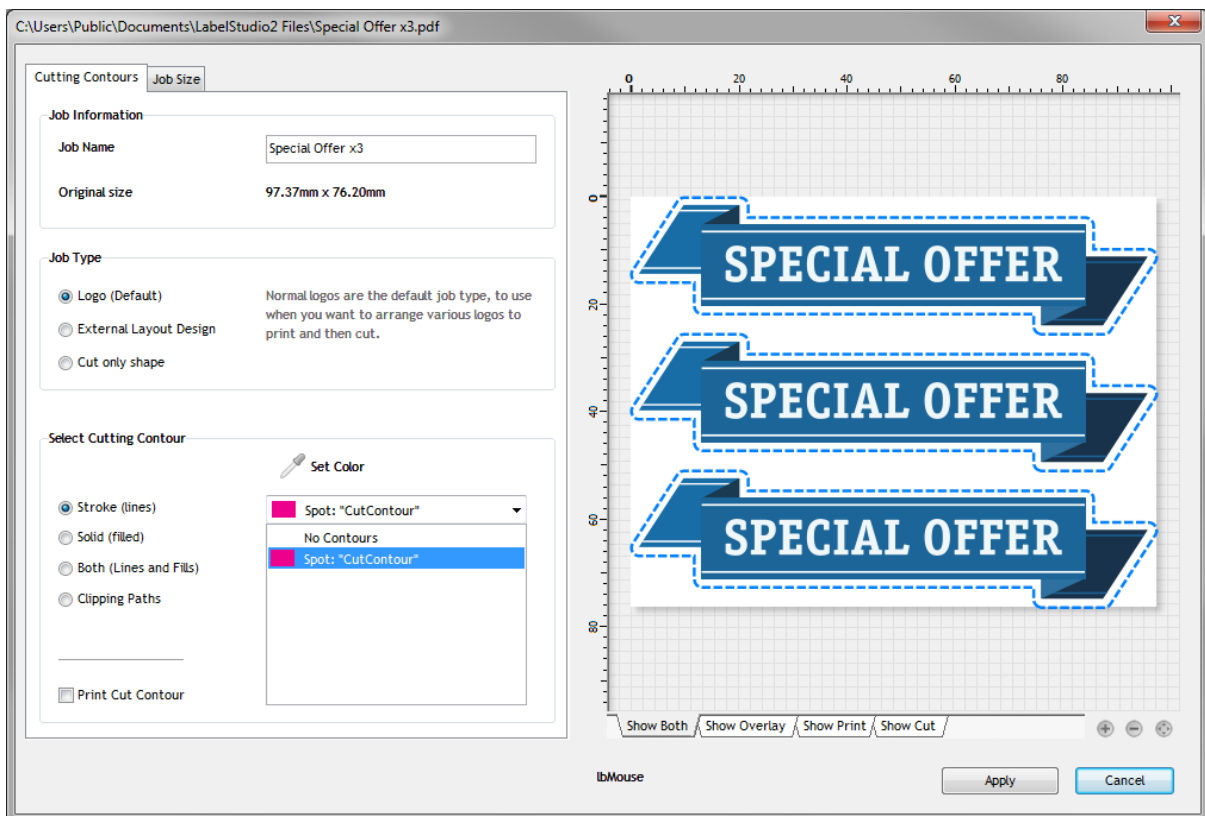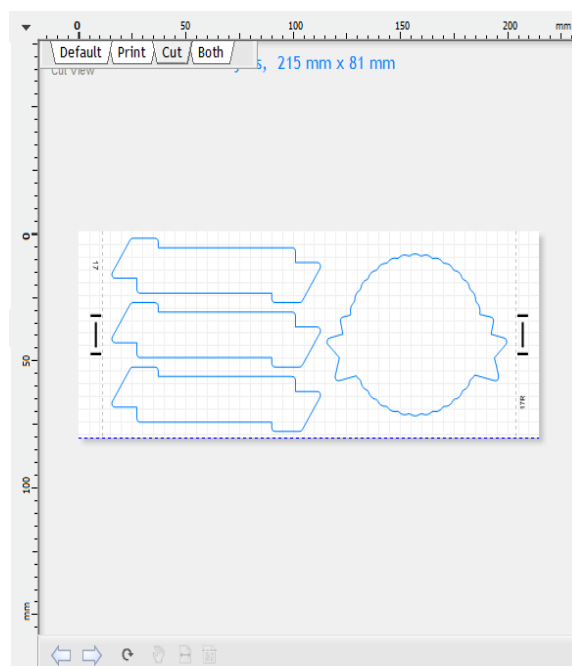

(Example of a single logo used for vertical copies)

Once this logo is packed with other logos, you can see the result.
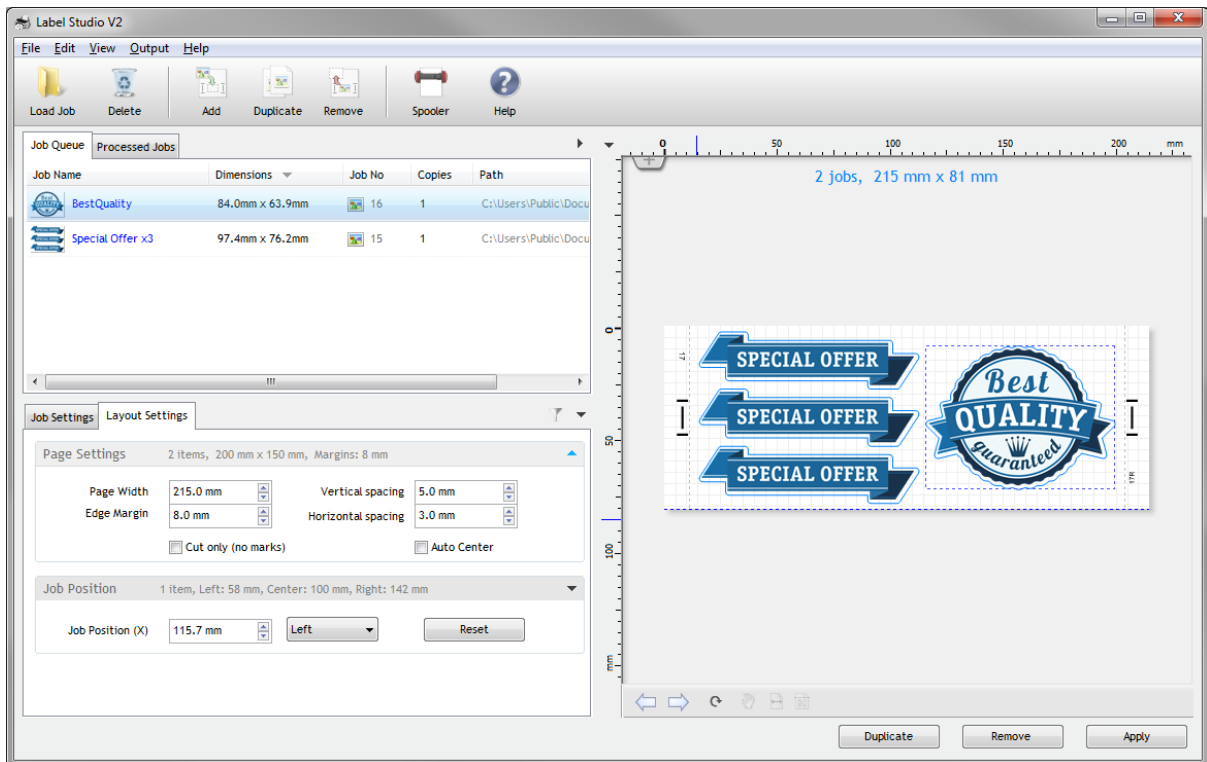
You can also inspect the printing or cutting elements on the preview window of the program using the view mode dropdown.

How to design the cutting layout in a different program:

If you have a very specific workflow, and need to handle the stepping up in another program, you are can achieve this using the Template feature.

Firstly, design your artwork in another program, with the page size set to the printing width of the artwork, and total height of the page (with any spacing between the logos included in this size).

Make sure you allow about 15mm from each edge to provide enough space to fit the marks.

After you have built your cutting color, you should save this page, with the cutting shapes (all set to same cutting color), as a PDF.

Load this PDF into Label Studio, and select "**External Template**".

The job will go straight to the Processed Jobs list.

When you build the final artwork file, a blank PDF will be created, containing a white box, and the marks.

You should load this PDF file into your designing program, and align it to the bottom left corner of your design and send it to the back.

This will provide the marks to your existing print layout that are synchronized with the position of the cutting and printing components.

Calibrating the Cutter:

Put a blank sheet of paper in the cutter, and use the PEN. Move the pen to the middle of the paper, and set the origin to 0,0 (and then put cutter to ONLINE)
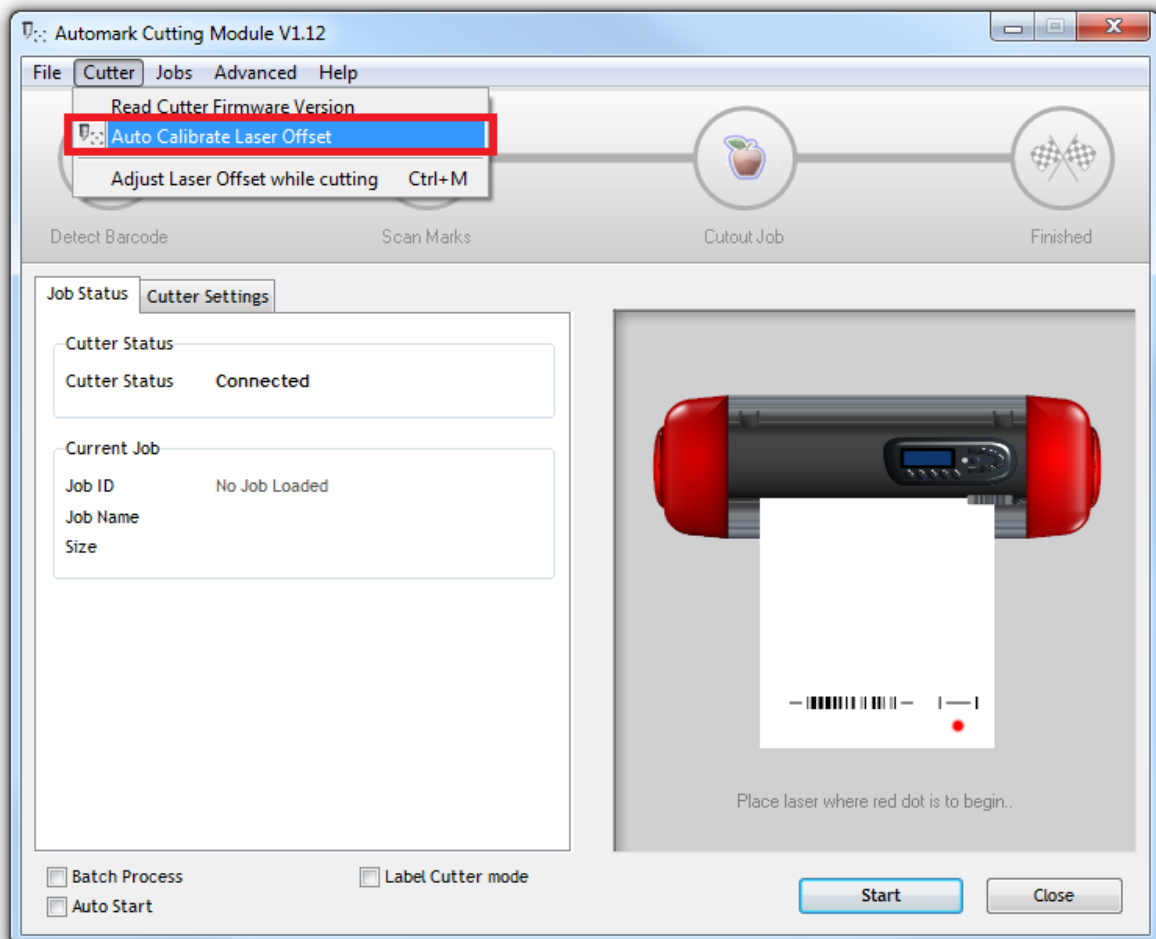

Do the Laser Calibration to measure the laser offset, and store the result in the cutter memory.

If the cutter does not have the correct firmware (V1.02), this test will not work, and the cutter will need to have the new firmware loaded.

Cutting Settings:

The software allows you to specify the settings you would like to use when cutting. The most important of these is the blade offset (as well as Laser Offset).
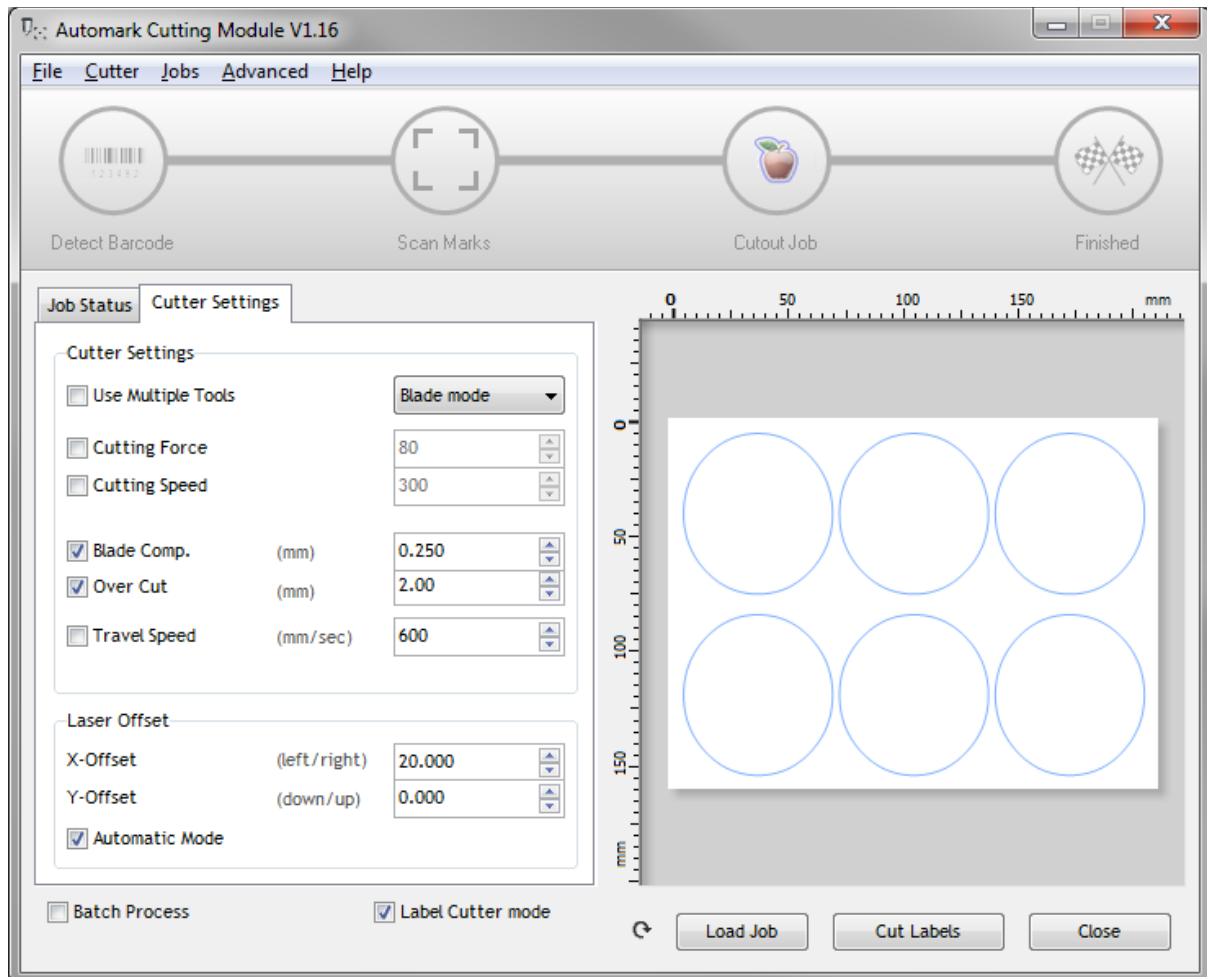
In this screen, you can select the settings you wish to use. For items such as force and speed, if you leave these settings unchecked, the current settings on the machine will be used.

Loading the sample files:

If you would like to practice with some of the included sample files, you will find them located in the Public Documents\Label Studio2 files folder.

Size Restrictions:

Because of the automated media takeup system, the machine is only physically able to cut within a small area. It is recommended that you do not cut logos any higher than 120 – 130mm, to ensure you get the maximum accuracy that the machine is capable of.

Also, if you are cutting a very small logo, you will need to make multiple copies until the layout is at least 60mm high, to allow enough space to include the marks.