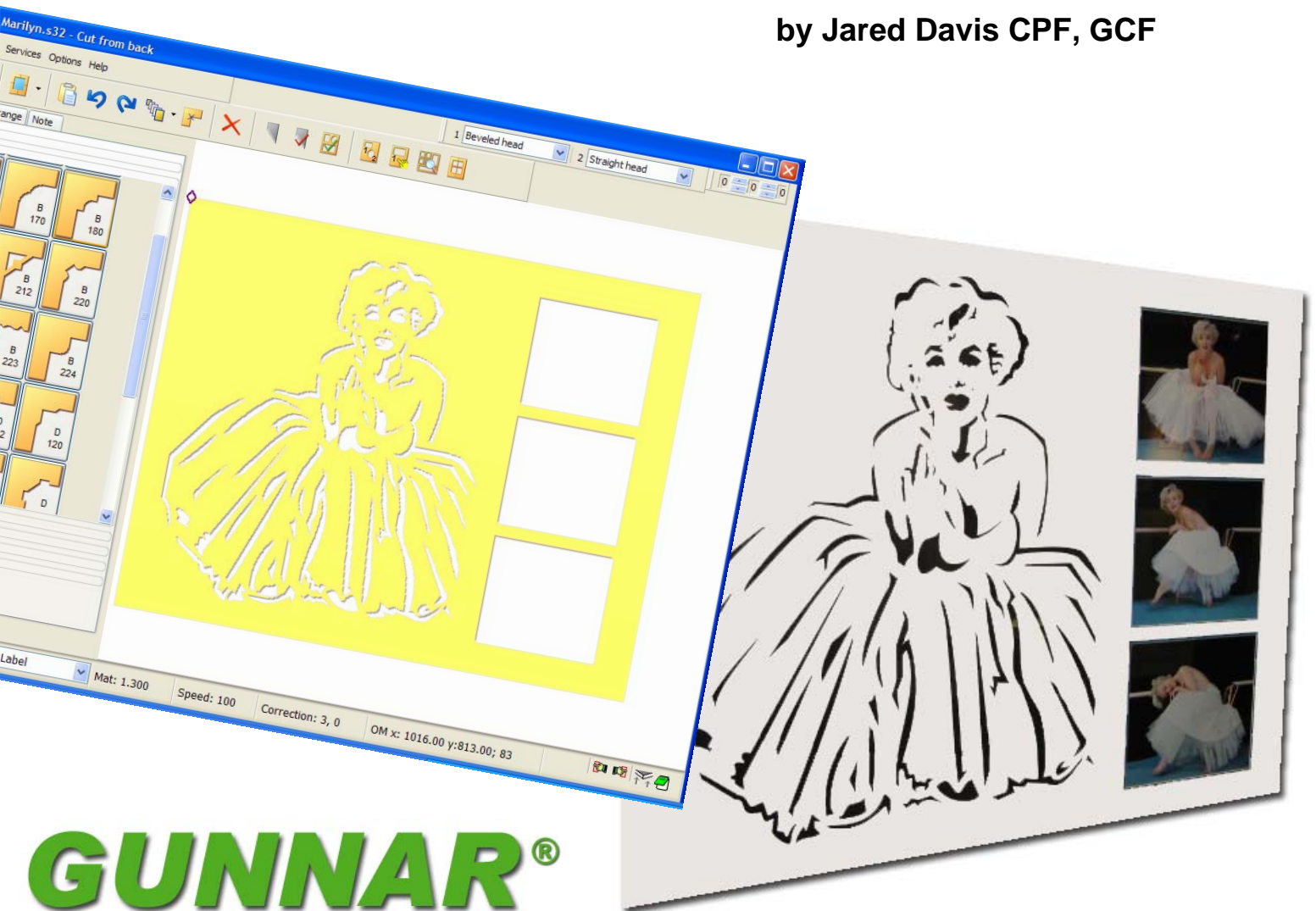


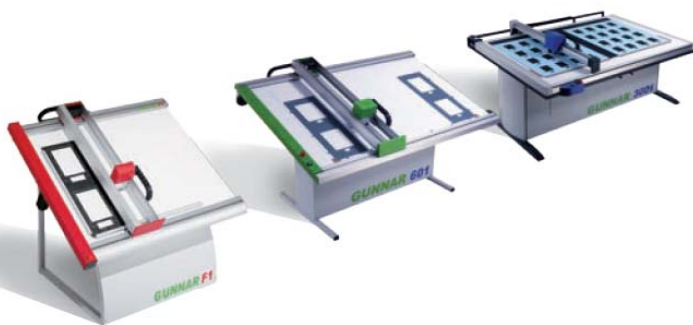
GUNNAR SPT32

Solutions for Importing from Corel DRAW[®]

by Jared Davis CPF, GCF



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Introduction

This tutorial guide was specifically created to help explain the methods and techniques of importing shapes & designs from Corel DRAW® into Gunnar SPT32, in a “step by step” format.

Corel DRAW 12, and Gunnar SPT32 V6.1 were used as reference for this document was written.... And then subsequently updated with changes in Corel DRAW 13 (X3).

This guide has been written in a style that assumes that the reader already has a basic knowledge and understanding of the Gunnar SPT32 software, and an existing level of confidence and experience with PC's.

Patience & practice are the keys to achieving success, so don't be disappointed if you cannot achieve what you want in the first circumstance. Try to attempt simple tasks first, before diving into any advanced, elaborate designs.

Good luck, and happy matcutting!

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Step 1 – Obtaining an Image

Image Sources

You can obtain an image from many sources – the most popular being as follows:

- ▶ Website Images (*jpeg / gifs - right click on image in website and select "save as"*)
- ▶ Scanned Image (*bitmap / jpeg*)
- ▶ Digital Photo (*jpeg*)
- ▶ Clip Art (*from graphics programs like Corel DRAW®*)
- ▶ Freehand DRAW (*in Corel DRAW®*)

Once you have the image you wish to convert, if possible, it is best to have it in a "bitmap or jpeg" format. These files tend to vectorize (Trace) better in Corel DRAW. You may need to open the desired image file in a simple graphic editing program like Microsoft Paint or Adobe Photoshop®, and then "save as" the file into the preferred bitmap format.

Locating suitable images - Important Tips

- When finding an image to convert, to reduce the complexity required, it is going to be much easier to find an image that is simplified, rather than elaborate.
- It is always easier to use monochrome (black & white) images, where possible.
- Try to avoid "full colour" images and photographs where possible. You can literally "play for hours" with detailed, full-coloured images, and have no guarantee that realistic result will be achieved.
- Unless you are skilled with photo editing in Adobe Photoshop® or similar, it is probably going to be quicker to get some tracing paper and a thick felt tip pen and just manually trace the outline of the shape or image required. Then this result can be scanned.
- If you choose to use the "Photoshop®" method for simplifying coloured images, it may be better to fill in the areas all the same colour (ie: Black)

Scanning images – Important Tips

Because there are so many different brands & types of scanners available, it is impossible to provide a specific "step by step" procedure for scanning an image. However it is advised that you configure your scanning software to the following settings –

- ▶ Monochrome (black & white).
- ▶ No greater than 200 DPI. Higher resolution creates too much detail in the shapes and this creates more work to clean up the image later.
- ▶ Save the file as bitmap or jpeg.

Step 2 – Tracing the Image in Corel Trace

(for Corel Draw® Version 12 or earlier)

Why do we need to “trace” the image?

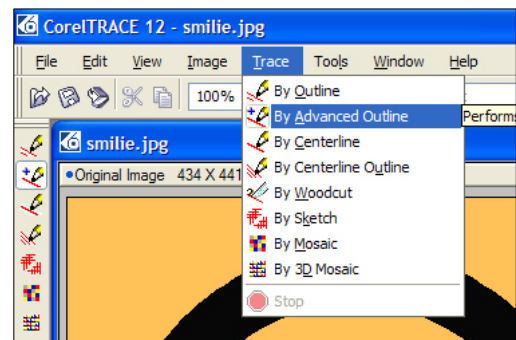
Standard Images (bitmaps / jpegs) need to be “traced” into vectors and points, so that the Corel DRAW® software (and SPT32) can recognise these shapes as joined co-ordinates and lines, rather than separate, individual pixels. This procedure is done by running a separate software program called “Corel Trace” which usually comes with the Corel DRAW® Graphics Suite package (for Corel DRAW® Version 12 or earlier), and is automatically installed with a default installation. * ... or for later versions of Corel DRAW (13 or later), you can use PowerTRACE which is a standard feature built into the Corel DRAW program itself.

Opening your file in Corel Trace (for Corel DRAW® Version 12 or earlier)

- You can open Corel Trace from the windows desktop by following these directions: *Start → All Programs → Corel DRAW → Utilities → Corel Trace.*
- Open the desired Image File in Corel Trace, which should preferably be in a “Bitmap” or “Jpeg” format: *File → Open → “select your file”* (ie: *Fancy_Design.bmp* or *Fancy_Design.jpg*)

Tracing the file in Corel Trace (for Corel DRAW® Version 12 or earlier)

- To perform a trace of your image, go to: *Trace → by Advance Outline.*
- In the “Default Settings” window, activate the drop down menu and make sure you have this set on “Clip Art” trace preset to reduce the complexity.
- You may need to perform the trace again so that it uses the new “Clip Art” preset: *Trace → by Advance Outline*
- In the top left hand corner of the “trace result” window, it should indicate the “number of objects” in the result. Each “object” is potentially an “opening” to cut in SPT32. So the lower this value is, the less “clean-up work” will be required in Corel DRAW® later. If this value is too high, then you will need to revise the image, or revise the tracing preset.
- Now go to “File” and save this trace result. The file should be saved as a “*.cmx” file.



Step 2 – Tracing the Image in PowerTRACE

(for Corel Draw® Version 13 (X3) or later)

Why do we need to “trace” the image?

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Opening your file in Corel DRAW (for Corel DRAW® Version 13 (X3) or later)

- Start a New file in Corel DRAW (*CTRL N*) and open your desired image using the “Import” function: *File → Import (CTRL I)*
- Using “click, stretch & drag” position the image on the screen.
- You are now ready to trace the image.

Tracing the file in PowerTRACE (for Corel DRAW® Version 13 (X3) or later)

- To perform a trace of your image, go to: *Bitmaps → Outline Trace → Clipart*. (See Figure 1)
- In the PowerTRACE window, you may adjust the smoothness and detail as you see fit, and then hit “OK” to confirm. (See Figure 2)
- This will create a new traced object, over the top of your original, imported image. Use click and drag to move the traced object aside on the screen, so you can select and delete the imported image, which we no longer require.

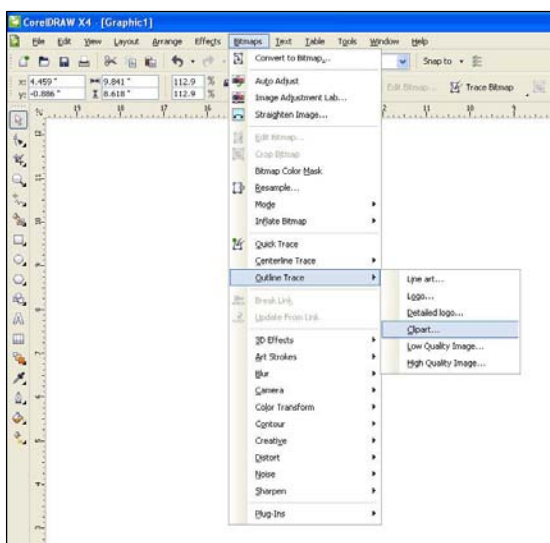


Figure 1

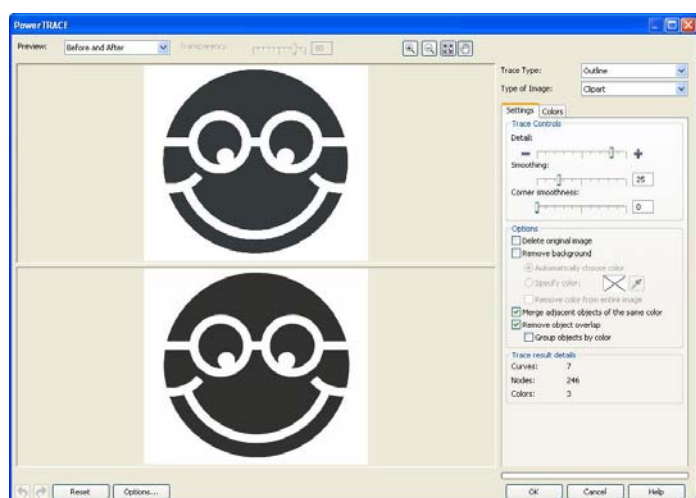


Figure 2

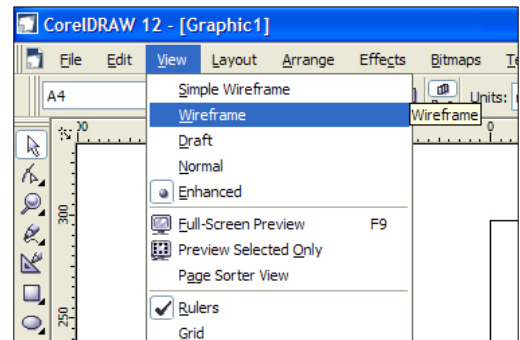
Step 3 – Editing with Corel Draw®

Opening the File (for Corel DRAW® Version 12 or earlier)

- You can open Corel DRAW® from the Windows desktop by following these directions: *Start → All Programs → Corel DRAW → Corel DRAW*.
- Open the previously saved traced file: *File → Open → "select your file"* (ie: *Fancy_Design.cmx*)

Changing the view

- In the Menu Bar at the top of the screen, go to *View → Wireframe*. This removes any fill and colour from the image, which makes it easier to clearly see the vector lines and control points which make up the image.

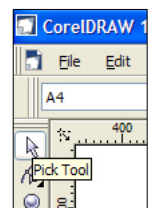


Convert to curves

- Sometimes, the lines (vectors) in the shapes need to be modified so that they can be adjusted later with the "shaping tool" if required. This is called "converting to curves". With the image selected, you can go to *Arrange → Convert to Curves* to perform this procedure in one step. Alternatively you can also use the keyboard shortcut "*CTRL Q*". This step may not be required for all images.

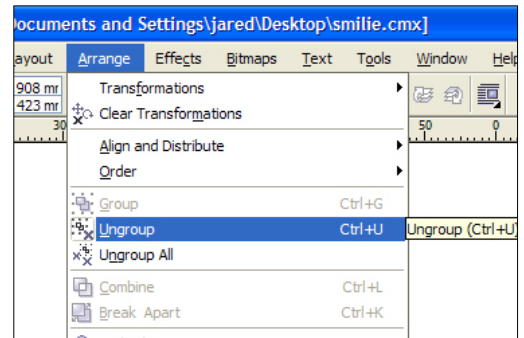
Super-Size it! - Make it bigger

- It's always best to make your word bigger before importing it into SPT32. The larger your design is in Corel Draw, the more accurate and smoother the imported design will cut in SPT32.
- To "super-size" your shape or design, use the default "*pick tool*" to select the object, and then select a corner with the mouse and "click and drag" the image to a larger size. The larger you go, the better the result. Aim for about 1000mm (or 40") wide.
- The "*pick tool*" is the default mouse pointer tool, which can be found on the top of the tool menu on the left hand side of the screen.
- Don't worry about making the design too big, because you can always reduce the size of it to a desired level, when you paste it into SPT32 later.



Ungrouping the shapes

- If you have an image design which is made of more than one shape, you will need to “ungroup” these shapes, so that the software can recognise them as separated, individual shapes, rather than one complete object.
- To “ungroup” the shapes, with the image selected you can go to *Arrange* → *Ungroup* to perform this procedure in one step. Alternatively you can also use the keyboard shortcut “*CTRL U*”.

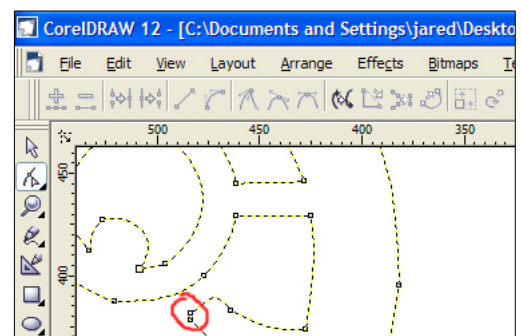
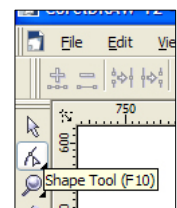


Deleting unnecessary shapes

- Once you have ungrouped the shapes you can now “click and delete” any vectorized shapes that you do not want or need to be cut, using the “*pick tool*” and the “*delete*” button on your keyboard.
- Sometimes an unnecessary shape can be very small (or even slightly hidden next to other shapes), so you may need to use the “*zoom*” tool (keyboard shortcut “*Z*”) to be able to select shapes in more detailed images.
- Make sure you do not have any shapes touching or overlapping each other. This will result in openings cutting across each other, and thus damaging the mat.

Cleaning up excess control points

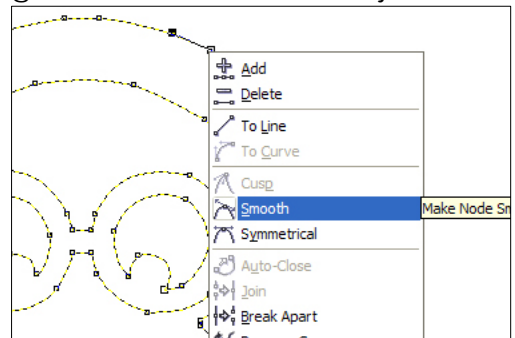
- This is where you can potentially spend the most time.
- With the remaining sections, you made need to clean up any excess control points to smooth out your final result. You can use the “*shape tool*” for this function on the tool bar menu on the left hand side of the screen (or the keyboard shortcut “*F10*”).
- Control points are what ultimately determine “hard stop & start” marks in your final imported SPT32 design.
- When you select a shape to edit with the “*shape tool*”, you will see the properties of that shape highlight clearly into control points joined together with lines.
- If you have too many control points, your design will suffer from lots of “stop, starts” and will also contribute to results that are not smooth.
- Try to reduce the number of control points in a shape as much as possible, by selecting them with the “*shape tool*” and deleting them.



- It is also important to avoid having control points too close to each other. For example when you have two control points very close to each other, you will not get a smooth result when it is imported into SPT32, so you will need to delete one of them.
- If you find that you accidentally delete a control point that compromises the integrity of the shape too much, you can use the “undo” feature (*CTRL Z*) and put it back again, or you can try recreating the curve using the adjustment lines on the remaining control points for an even smoother result.

Editing control points and curves

- When you select a control point with the “*shape tool*”, you will notice that you can move it using “click and drag”.
- If the control point is part of a curve, you will find that you can adjust the flex and angle of the curve to the point by playing with the extended adjustment tangents.
- When you have a control point selected, you can see some extra options in the “right click” menu which allow you to change the properties of this control point between “*smooth*”, “*cusp*” and “*symmetrical*”. Changing these will help you create different effects.

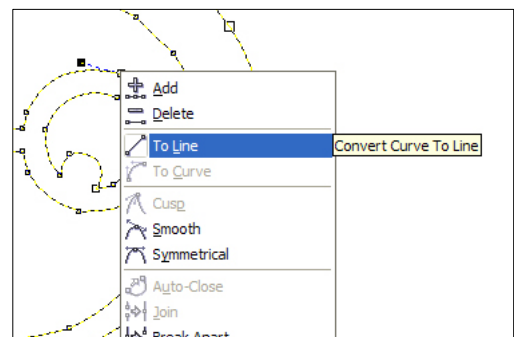


Adding extra control points

- You can add extra control points by just double-clicking on the shape, in the line where you wish to locate it.

Editing lines

- When you select a line with the shaping tool, you will notice that you can move it using “click and drag”.
- You can also edit the properties of the lines between control points by selecting them with the “shape tool” and using the “right click” menu to change between “*to line*” and “*to curve*”.
- Keep in mind that any line that has had its properties set “*to line*” by this method will always cut perfectly smooth and straight in the SPT32 software.

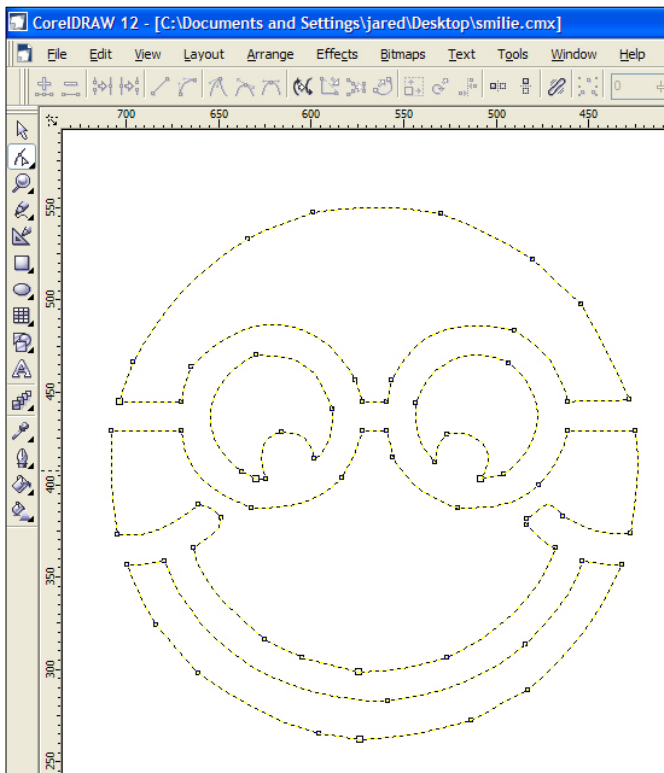


Other tips

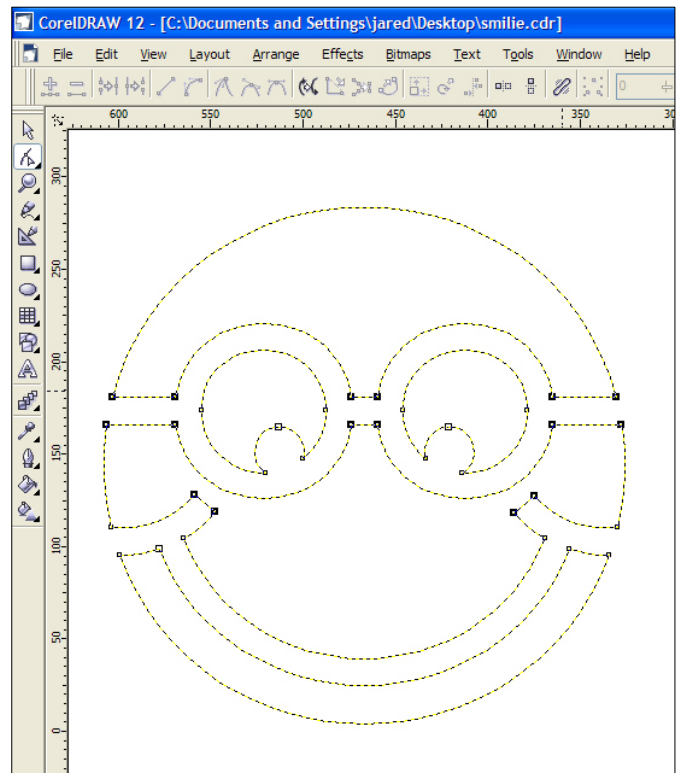
- If you have any shapes in the image that happen to be “perfect” rectangles, circles or ovals, then you will probably find that you achieve better results for these shapes if you re-create them directly in SPT32, rather than spending time trying to make them “perfect” in Corel DRAW® . ie: a circle generated by SPT32 will always cut better than one imported from Corel DRAW® .

Copy & Paste

- When you have completed your shape editing, type in “*CTRL A*” to select all the shapes as a group, and then type in “*CTRL C*” to copy final image to “*Windows Clipboard*”.



Before Control Point Clean Up



After Control Point Clean Up

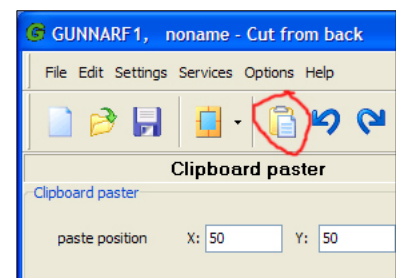
Step 4 – Pasting into Gunnar SPT32

Opening Gunnar SPT32

- One of the features of Microsoft Windows is that it allows you to “multi-task” and have more than one program running at the same time. We can utilize this feature to allow us to “copy & paste” a design from one program to another.
- Make sure SPT32 is now running simultaneously with Corel DRAW®, if it is not already.

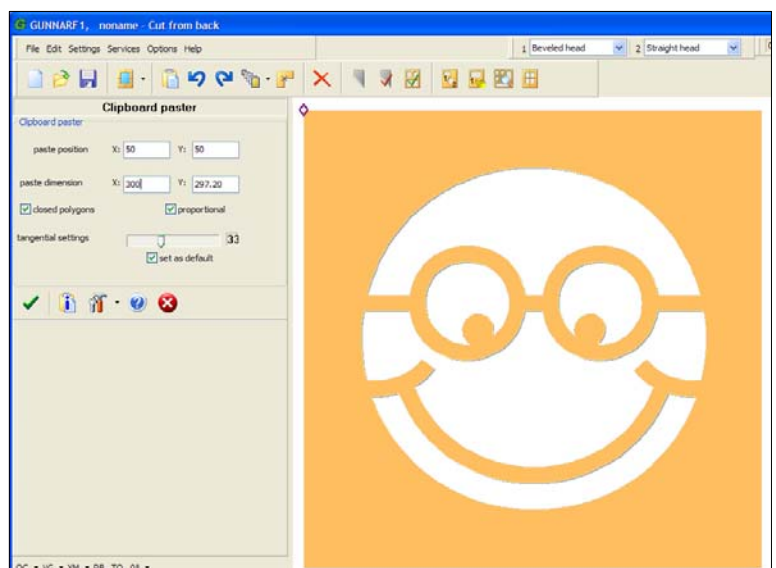
Pasting into Gunnar SPT32

- Click on the “[Paste from Clipboard](#)” button in SPT32 to paste the shapes you have been working with in Corel DRAW®. Alternatively you can just use the common keyboard shortcut for paste- “[CTRL V](#)”. If nothing happens, then you need to copy the shapes in Corel DRAW® to the “Windows Clipboard” again.

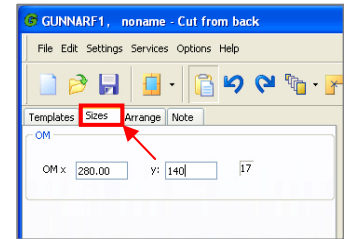


Paste dialogue settings

- Firstly, make sure the “[Closed polygons](#)” & “[proportional](#)” options are both checked.
- If you have “supersized” the design in Corel DRAW, then by default it will also be pasted into SPT32 “supersized” as well, at a ratio of 1:1. This means that you will need to reduce the size of the image using “[paste dimension](#)” x & y values. For example, you may wish to make the height of the lettering 40mm, which means you would make the “[paste dimension y](#)” value equal to 40mm.
- Make sure your “[paste position](#)” x & y values are at least 50mm each, to keep a safe distance from the clamps.
- Make sure that the “[tangential settings](#)” scale is set for a value of [36](#).
- Once all the settings have been configured in the dialogue box to your requirements, hit the “[Enter](#)” key to place your design on the screen.



- When pasting, sometimes the outside dimensions of your mat may need to be increased if the words has run off the screen. This can be adjusted in the "*sizes*" tab, above the templates on the left hand side of the screen.



Test cutting

- ALWAYS perform a test cut of an imported design on a scrap piece of matboard, before cutting into your final "good" piece of matboard.
- Just because a design looks OK on the screen, doesn't always mean that it will cut well. You always need to perform test cuts first.
- Use a new blade and a new slip mat. New blades do not break as easily as used blades.
- Expect that you make break a blade if you are cutting tight curves & circles, which may require modification and adjustment.
- Sometimes further modifications and adjustments may be required in order to achieve a perfect result. For example - sometimes if openings are placed too close together, then the matboard result may fall apart.
- Cut from the back! Small shapes will cut better from the back of the matboard, than they will from the front, because cutting from the back helps keep the fallouts in place and stop them from moving while cutting.
- You may find that reducing the cutting speed can also give you better results (and less broken blades!). Cutting unrealistic tight curves at high speeds can easily snap blades.
- With very detailed designs with lots of curves and flexes, you will probably need to change the blade more frequently than usual. You can use the "*spacebar*" pause function to interrupt a cut and change the blade part way through.

Saving the file

- Once a design has been tested and proven to cut fine, you can save it for later, know that it will confidentially cut well again, without having to test it again.
- Saving the file in SPT32 should be straightforward, however don't forget to add some notes to the file, if you performed any extra adjustments or modifications that you will need to remember next time.
- It is also advisable to save your original Corel DRAW® "*.cmx" file as well, in case you need it again for future use.

Frequently Asked Questions

Why can't we import designs into Gunnar SPT32 from Adobe Photoshop?

Adobe Photoshop is a specialized graphic editing package that doesn't work with vectors, so it cannot import into SPT32 like Corel DRAW®, which can work with vectorized images. Also, Adobe Photoshop cannot "trace" a bitmap into vectors like Corel Trace. Adobe Illustrator works with vectors, so theoretically it should work similar to Corel DRAW®, however this has not been tested or confirmed.

How can I create something in Corel DRAW® that has to be exactly sized and proportional to the finished shape in Gunnar SPT32?

By default, any design pasted into SPT32 will be automatically created according to the dimensions indicated on the measuring scales in Corel DRAW®. This means that you can accurately use these measuring scales in Corel DRAW® for exact dimensions and distance calculations.

Why does the blade not cut all the way through the mat on the tight curves?

The blades can flex when they cut around a tight corner or curve, thus reducing their effective depth of penetration. This can be fixed by manually increasing the blade depth by adjusting the grub screw on the blade holder (half a turn anticlockwise is usually enough)

Why do I seem to be getting undercuts in the corners of some of my cut shapes?

By default, the overcut settings in SPT32 are optimized specifically for right angled corners (ie: rectangles). This means that some acute angles may undercut slightly, and not cut all the way thru. This can be adjusted by temporarily increasing your overcut settings, and/or your blade depth.

Can I export a file from Gunnar SPT32 back into Corel DRAW®?

No, unfortunately, this feature is not available. For this reason it is advisable that you always save your original Corel DRAW® "*.cmx" files for future use again, if required.

How can I change the size of a previously saved imported design?

If it is a group of shapes, then the easy way to do this is to use the “Scaling” feature in the “transform menu”, which is on the main tool bar on the top of the screen in SPT32. You can adjust the size of the image by applying a scale factor to the dimensions. You can also change the size of an individual shape just by “double-clicking” on it, and redefining the dimensions in the paste dialogue box. Always perform a test cut of any imported design whenever you change the size of it, to be sure it will cut out ok.

Which version of Corel DRAW® do you recommend that I use?

This depends on the version of SPT32 that you are using. If you are using the most recent version of SPT32 (V6.X), then you will find that it has been optimized for use with Corel DRAW® Version 14 (X4). However you could use an older version as such as Corel DRAW® Version 9, but you may find you have some minor issues?

What does “tangential settings” mean?

This value controls where the matcutter chooses to make a “hard stop” (ie: retract blade, rotate, insert blade) along a cut on a line. If this value is set too low, the machine will recognize more control points, and make more “hard stops”, thus creating a more jagged cut along a curve, where it really should be smooth. If the value is set around 36, it will ignore most hard stops along a curve, and keep the cut continual and smooth, but still stop where it is supposed to. If you set the tangential settings value really high, the machine may not recognize obvious “corners” where it should really be stopping and keep cutting, thus possibly snapping a blade.

