

Creating Backcut Decals with the GERBER EDGE®, Gerber Dragknife Plotter and OMEGA™ 3.0

This bulletin describes a process where (1.) a decal is printed and cut as usual on the front of the vinyl, then (2.) the material is flipped over and the liner is cut through. The knife blade depth and weight are adjusted so the liner is cut, but not the vinyl. This process uses a GERBER EDGE, a GSP dragknife plotter and OMEGA 3.0

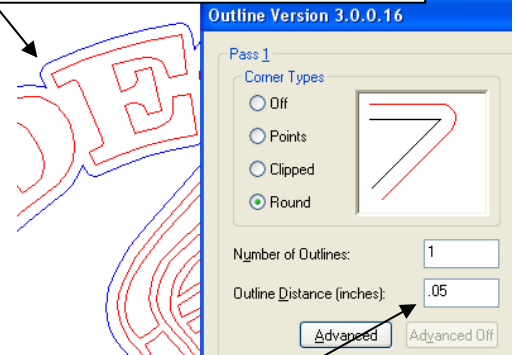
The decals are held in place when backcut because the front and back cuts are slightly offset from each other. This difference between the front cut and backcut serves as a bridge or shoulder to hold the decals in place. When the excess vinyl is weeded away from the decals, the decals fall out of the web.

Design a decal in Composer with prints and cuts as usual



Select Outermost cutline of original decal

- Select the outermost cutline of the original decal and create an additional outline. This additional outline will be used as the back-cut.
- Use an outline value of *about* .05 inches. Larger decals may need a larger value.

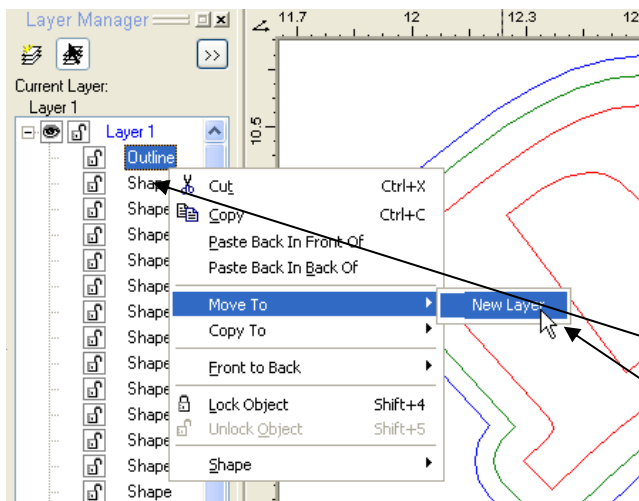
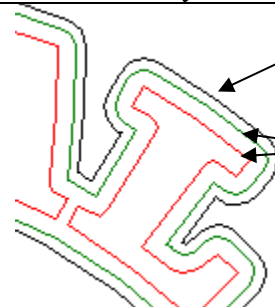


Turn off all fills and strokes for this extra cut-only outline.

- Select the new outline>Press CTRL+1 (Remove Fills) > then Press CTRL+2 (Remove Strokes). Shape is now CUT ONLY

New Outline, Cut Only

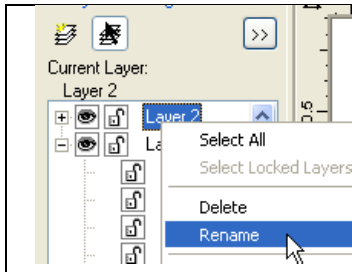
Original decal with print and print/cut



Put this cut-only back-cut outline on a new 2nd Layer.

- Composer>View>Show Layer Manager
- Double click on the layer name (the default layer name is Layer 1, so double click on this)
- In the Composer work area, using the shape pointer, click on the back-cut outline object to select it.
- In the Layer Manager, you will see that the outline objects are highlighted. RIGHT CLICK on the highlighted outline objects
- Click MOVE To, then NEW LAYER.
- A message will appear about Removing Smart Edits. Click OK.

A new layer called Layer 2 will now include the back-cut outlines.



Optionally rename the new layer to be called Backcut (or whatever).

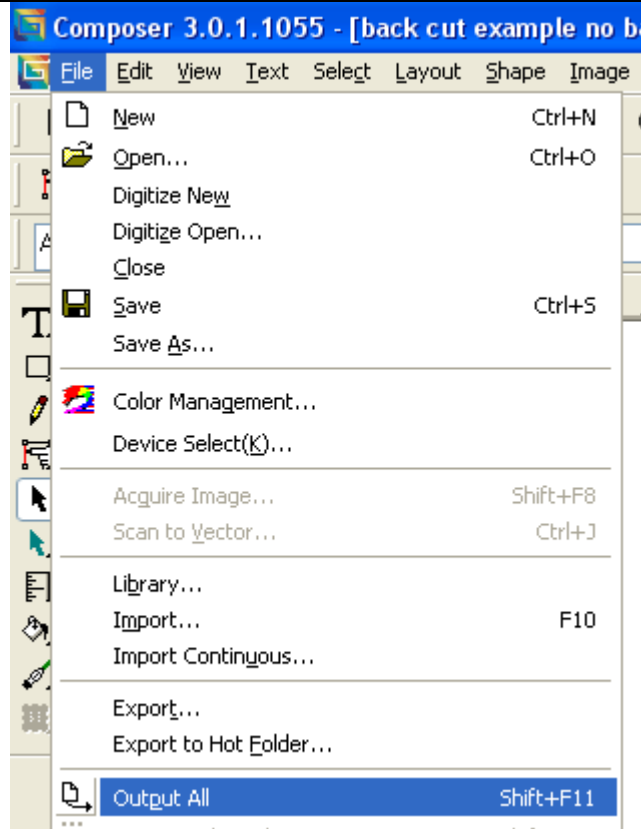
- Right click on the Layer 2 Layer Name>click on Rename>Type in the new Layer Name for Layer 2.

OPTIONAL: To add a crack and peel line (or backslit line),

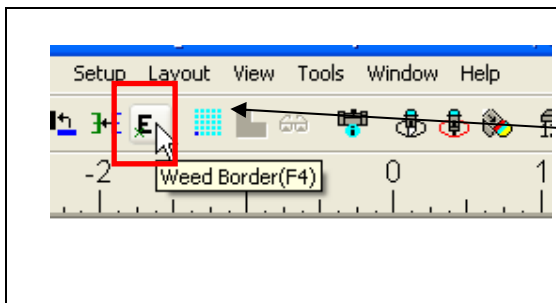
- Be sure that the Backcut layer is highlighted in the layer manager, then use the line tool to digitize an open shape from one side of the backcut to the other.

Output the entire job to GSPPlot

- Composer>File>Output All

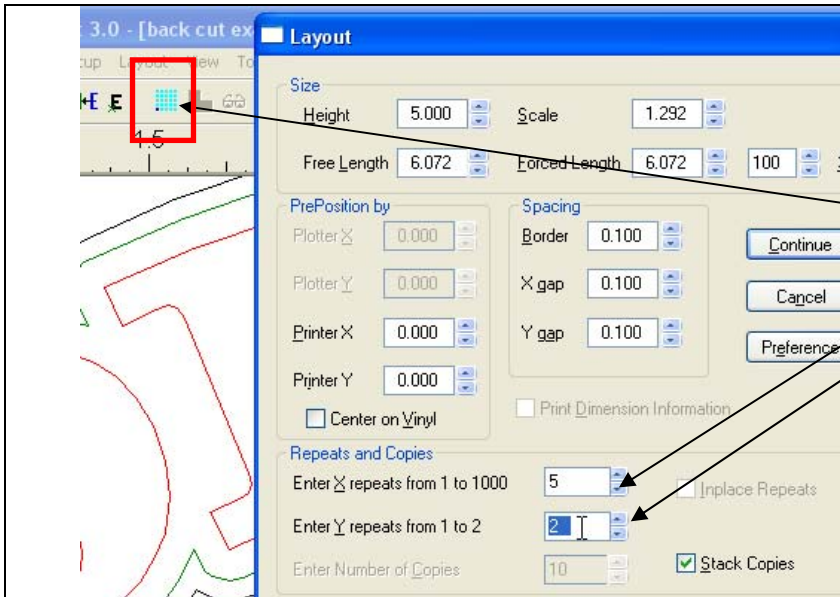


NOW the job is in GSPPlot...



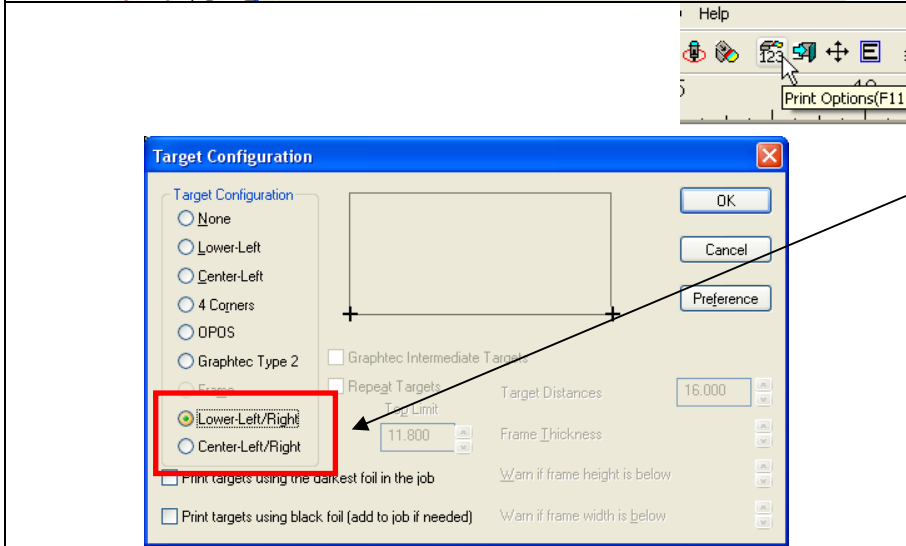
In GSPPlot, turn Weed Border OFF. Be sure it is all the way off.

- Click Weed Border until the X is next to the letter E in the Weed Border Icon.



In GSPPlot, Set Repeats as needed

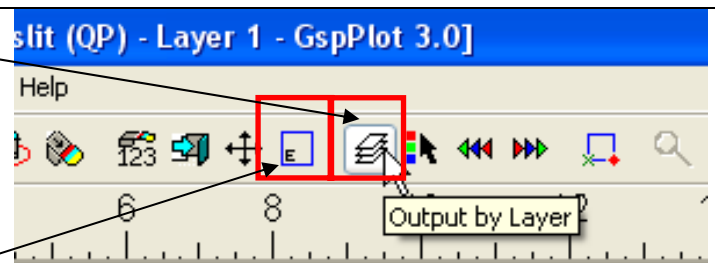
- Press F5 or click on the repeat icon
- Set X and Y repeats



Turn on End of Job Target

- GSPPlot>F11 (Print Options)
- Click on Targets>Lower Left/Right OR Center-Left/Center-Right.

- **Click on Output by Layer.** Only Layer 1 (the base decal) will be displayed. The back-cut Layer will no longer be displayed as each layer now becomes a separate output layer.
- Be sure **Reduce Frame is OFF** where the Reduce Frame Border is LARGE compared to the E



- Print and Cut the base decal (Layer 1) as usual.
- Note that the job has a target at the beginning and at the end



Regular Target at the beginning of the job



New Target at the end of the job

Remove the job from the plotter and poke a hole in end target using a ballpoint pen or small blade. The hole should be as uniform as possible and should be visible on the liner side of the job (Be careful not to cut yourself!).

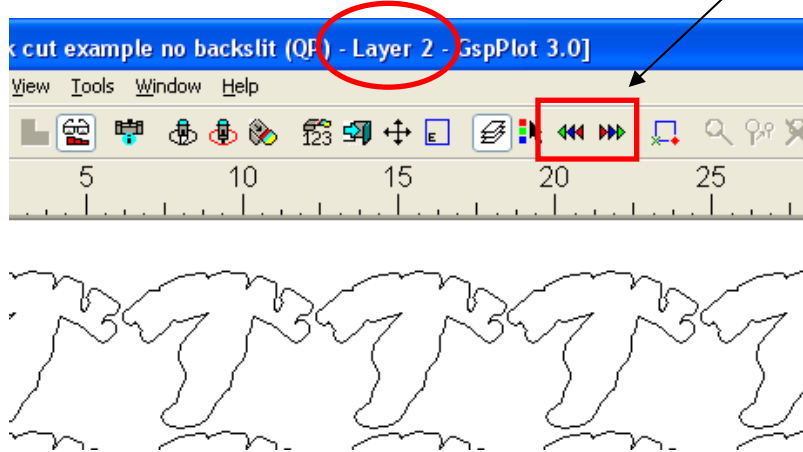


Reload the material into the vinyl cutter with liner up. Use the bombsight to align to the poked hole.



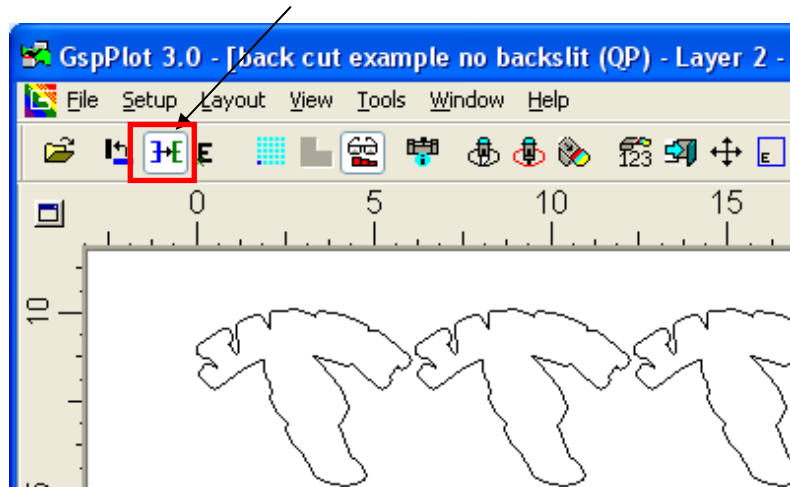
Once the base decal has been sent to the printer and the cutter, GSPPlot will automatically display the second layer. Be sure that GSPPlot is displaying the backcut layer or Layer 2.

Press the **PAGE UP** or **PAGE DOWN** keyboard keys (or click on the triple colored arrows) to manually cycle through the different layers of the job.



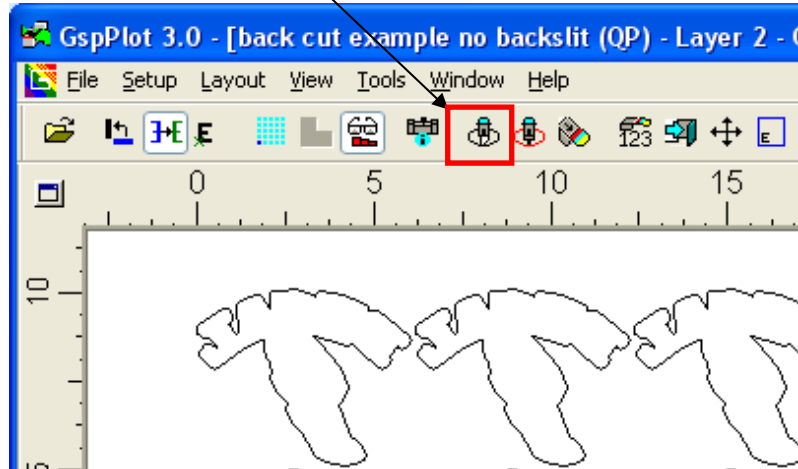
If the optional backslit was added in Composer, this will also appear on this layer.

- Reverse Layer 2 (the backcut layer) in PLOT (Press F3 or click on the reverse button to reverse the job).



- To cut the back liner, you will use the swivel knife mode of the envision, GS15 Plus or GSx Plus plotter
- Remove the swivel knife and twist the swivel knife plastic shoe/housing so only a very small amount of the tip of the blade is exposed. Enough blade should be exposed to cut through the liner. Also, add a small amount of force to the weight as compared to the front cut portion of the job. Perform test cuts before sending the full job. Note that adjusting the blade-tip exposure does NOT change the tool force but helps to prevent full cut through of the liner.

- Output Layer 2 (or the Backcut layer) to the cutter
- Start the back cut and cut one or two repeats, then pause the job, and adjust to blade exposure and weight. Make a note of the weight and blade exposure so it is easier for the next job.
- This will take a small amount of experimentation to get the blade tip exposure and cut weight just right, but it is quite predictable once a couple jobs have been done.



- Once the back cut has been done, weed the front decals and the pieces should fall out of the web. If some of the decals need some tearing or cutting, you need to adjust the blade depth to be slightly more exposed or add more weight to the tool force.

