TEXT ON TEXT & TEMPLATES

SECTION 1. STACKED TEXT - VCARVE PRO 10.22

This is a written set of instructions to create signs using stacked text or text on text however you want to call it. It is detailed instructions based on a tutorial by Vectric trainers. I researched many Youtube videos and only found 1 that worked for me the first time. I also researched for written instructions and only found 1. Again it didn't work for me. I used Vcarve Pro Version 10.022. It will also work with Aspire and Vcarve Desktop and may work with older versions. I followed their 48 minute video and produced the following set of written instructions. It uses simple text (different fonts) using vbits and end mills. It uses only 2d/2.5d carving, no 3d. You must follow these instructions to the letter or it won't work as presented. Please try it and let me know if it works for you or you found a problem or error. It seems complicated but it's just detailed. There are 2 parts to these instructions. The first section is for just creating a single sign. The second section is for creating a project template if you desire to make more than one sign without going through the complete list. Use section 2 for the template method. I have set it up so you can print either one or both sections. Please feel free to adjust or alter to fit your needs.

To eliminate repetitive text please use the following guide to meanings:

*** Switch/Turn on/off layer x = click on light bulb to turn on/off.**
*** Select layer x = click on layer name to highlight.**
*** Select vector layer = click on note icon to right of layer name and choose select vector layer.**
*** When you add a new layer the layer is automatically selected. Do not select any other layer unless indicated.**
*** Select layer manager means open layers tab or layers drop down box.**

Create One Sign

1. **Create a new file. Size 24”x11” or size of your choice.**
2. **Create rectangle with .5” rounded corners 23"x10".**
3. **Using either the layers tab or the layers drop down box rename Layer 1 to “Outer Border”. Use any name you want but make it descriptive.**
4. **Using the layers tab or the drop down box add another layer and name “Inner Border”.**
5. **Create a rectangle with .5” internal radiused corners 22”x9”.**
6. **Add a new layer named “Drill Holes”.**
7. **Draw a 1/4” circle and snap to all radiused corners.**
8. **Add a new layer named “Last Name Text”.**
9. **Draw a rectangle the size and location where last name will be placed. (approximately upper 2/3 of inner area)**
10. **Select box from step 9.**

11. **Select text in a box icon on drawing tab.**
12. **Select font desired for last name. Select stretch characters for both verticle and horizontal options. Select "None" for margin size. Use plain text and bold. Type in and text will fill box.**
13. **After typing name select rectangle and delete.**
14. **Add a new layer and name "First Name Text".**
15. **Deselect all (click anywhere off of material).**
16. **Select regular text icon on drawing tab.**
17. **Type first names with a size slightly smaller than last name size. A script font usually looks better and stands out more from the last name. Adjust size to your satisfaction.**
18. **Deselect all (click anywhere off of material).**
19. **Add a new layer and name "Vcarve Text".**
20. **Select regular text icon and type in "Est. day month year" or other text you desire.**
21. **At this point you might want to save your work to this point.**
22. **Select "First Name Text" layer vector. This should highlight first names (as though selected with the mouse).**
23. **Right mouse click highlighted first name text and select "Copy to a new layer". Name new layer "Top Name Text". Uncheck visible and active boxes. Hit OK.**
24. **Select "Last Name Text" layer vector. This should highlight last name (as though selected with the mouse).**
25. **Right mouse click highlighted last name text and select "Copy to a new layer". Name new layer "Bottom Name Text". Uncheck visible and active boxes. Hit OK.**
26. **At this point you are through with "First Name Text" and "Last Name Text" layers. Do NOT delete but turn off so they are invisible. You will need these layers if any editing is needed.**
27. **Turn on "Top Name Text" layer and select layer. Make sure "Bottom Name Text" layer is turned off.**
28. **Check letter fonts for overlays. If found the layer text should be highlighted already. If not highlight text.**
29. **Select text convert to curves icon in drawing tab. This will prepare the text to remove overlaps. Text should remain highlighted.**
30. **At this point the text needs welding to remove the overlaps. Deselect the inner islands (stand alone circles within letters). Press and hold shift key and click on each island. Remainder of text should still be highlighted. Then press the weld selected vectors button in the drawing tab. This will remove the overlaps.**
31. **Drag a box around the complete top name text and click the group icon to group all the vectors.**
32. **With the top names selected right click and select copy layer to "Bottom Text" layer. Turn on "Bottom Text" layer and select layer. Turn off "Top Text".**
33. **Mouse select bottom text and click on convert to curves in the drawing tab.**
34. **While bottom text still highlighted hit group selected objects in drawing tab.**
35. **Select both top and bottom text with the mouse and select weld selected vectors in drawing tab.**
36. **While text still selected tap group selected vectors in drawing tab.**
37. **Turn "Top Name Text" on and we have all the vectors needed for setting up toolpaths. All layers should be turned on except "Last Name Text" and "First Name Text" layers.**

This completes the sign definition. The following is the toolpath definition.

38. Save your file and switch to the toolpaths tab.
39. Press page down key to tile windows. This shows both 2d and 3d windows.
40. Check “Material Setup” settings - change datum to lower left or your choice location.
41. If you will be using these instructions to set up a template for multiple signs then to assist in changing cut depths depending on project you need to define some variables for depth selection. If you are only carving a single special sign you may skip to step 43 and you will have to manually select numeric cut depths. If you do not use variables substitute numerical values in place of TD and BD.
42. Select Edit tab and set up document variables for future use - TD for top depth – BD for bottom depth. Both variables are set for .02 cut depth in this example. Choose depth you desire.
43. Choose vcarve toolpath for top text carving.
44. Set start depth to 0 - set flat depth as “{TD}”. Do not type double quotes.
45. Select a 90 degree engraving vbit with flat point ½" wide – 45 degree side angle - flat diameter .03. If you don't have this bit just use a 90 degree vbit. Not much difference except for flat areas covered with this bit.
46. Set tool bit parameters to pass depth .15 - stepover .015 - clearance pass stepover .15.
47. Check and use larger clearance tool. Select a 1/4” end mill and an offset/climb method.
48. In order to select the proper vectors for carving the top name text use the select vector selection button. Use the following settings.
49. Check the boxes for set closed vectors and selected layers only.
50. Check “Inner Border” and the “Top Text” boxes.
51. Click the associate with toolpath box.
52. Name toolpath Vcarve Top Text and hit calculate. Two toolpaths are created. One for clearance and on for vcarving. Preview the toolpath.
53. Choose Vcarve for bottom text carving.
54. Leave start depth at 0. Check flat depth and set to {TD}+{BD}.
55. Leave all other parameters same as 45-47.
56. Select vector selection button
57. Set closed vectors and selected layers only.
58. Check “Inner Border” and “bottom Text” boxes only and associate with toolpath box.
59. Name toolpath “Vcarve Bottom Text” and hit calculate. Two toolpaths are created. One for clearance and one for vcarving.
60. Preview clearance toolpath.
61. Preview vcarve toolpath.
62. Choose vcarve toolpath for vcarve text.
63. Set start depth to “{TD}+{BD}”. No flat depth needed.
64. Select 60 degree vbit.
65. Select vector selection button.

66. **Set closed vectors and selected layers only.**
67. **Select "Vcarve Text" box only and associate with toolpath box.**
68. **Name toolpath Vcarve Text and hit calculate.**
69. **Preview vcarve toolpath.**
70. **Select drill toolpath. Set start depth to 0 and set flat depth to .25.**
71. **Select vector selection button.**
72. **Check just "Drill Holes" box and associate with toolpath box.**
73. **Name toolpath "Drill Holes" and hit calculate.**
74. **Preview drill toolpath.**
75. **Select profile toolpath.**
76. **Set start depth to 0 and cut depth to Z= (calculate) or just Z (actual material depth).**
77. **Select ¼" end mill.**
78. **Set cut for outside profile.**
79. **Select vector selection buton and select only "Outer Border" box and associate with toolpath box.**
80. **Name toolpath "Cutout" and hit calculate.**
81. **Preview cutout toolpath.**
82. **Save file.**

If you wish to continue to use these instructions as a template then continue to steps 83-91. Otherwise <u>save your toolpaths</u> and proceed to your CNC. To eliminate tool changes you may want to combine toolpaths that use the same bit to run at the same time (i.e. - clearance toolpaths, vbit toolpaths, drill and cutout toolpaths).

83. **Save file with a different name and this will be your template.**
84. **Switch back to drawing tab.**
85. **Select layers tab on bottom left of drawing tab.**
86. **Switch all layers off except "Bottom Text" layer.**
87. **Keep layer but highlight and delete text.**
88. **Switch off "Bottom Text" layer and switch on "Top Text" layer.**
89. **Keey layer but highlight and delete text.**
90. **Save file once more as template file. (.crv but named template)**
91. **Close Vcarve Pro (or Desktop or Aspire) program.**
92. **Open windows explorer and right click on your template file. Select properties and check the "Read Only" box. This will prevent you from accidently overwriting your template file.**

<u>End of sign build and template setup.</u>

SECTION 2. BEGIN TEMPLATE SETUP AND HOW TO USE

After establishing template file use following instructions to build new signs.

1. Start Vcarve Pro (or Desktop or Aspire).
2. Open your template file and save as your new name file.
3. Open layers tab and select layer vectors on “Last Name Text” layer. This will highlight last name text.
4. Click on the text in a box icon. The software will remember it size and location from original setup.
5. Type in a new last name. All parameters and font is still set up.
6. Select layer vectors on “First Name Text”. This should highlight the first names text.
7. Click on regular text icon.
8. Type in new first names. All parameters are remembered from initial setup.
9. Turn on “Vcarve text” layer.
10. Mouse click on vcarve text.
11. Click on regular text icon.
12. Type in new text for vcarve text.
13. Mouse click to highlight first names text. Right click on text and copy to “Top Text” layer.
14. Mouse click to highlight last name text. Right click on text and copy to “Bottom Text” layer.
15. Switch off “First Name Text” and “Last Name Text” and “Bottom Text” layers.
16. Select “Top Text” layer. Select vector layer. Should highlight first name text.
17. Make sure first name text is highlighted and click on convert to curves icon.
18. Press and hold shift key and deselect inner islands on all letters.
19. Click on weld vectors icon.
20. Reselect all text (including islands) and click group vectors icon.
21. Right click on first name text and copy to “Bottom Text” layer.
22. Switch off “Top Text” layer and switch on “Bottom Text” layer.
23. Mouse select bottom text and hit convert to curves then while text still selected hit group vectors icon.
24. Mouse select both first and last name text. Hit weld vectors icon and while text still highlighted hit group vectors icon.
25. Switch on all layers except “Last Name Text” and “First Name Text” so required layers are available for toolpath calculations.
26. Double check document variables and adjust as you choose.
27. Tile windows (PgDn) and switch to toolpath tab.
28. Hit recalculate all toolpaths icon.

29. **Preview all toolpaths for accuracy.**
30. **Save final file.**
31. **Proceed to CNC to carve project.**

End of Instructions