



## **Vetric Cut2D PRO Notes**

### **Cut 2D PRO Shortcuts**

F zooms to fit workpiece to window

F4 opens snapping options dialog box

F2 & F3 switches between the 2D and 3D design windows / tabs

F11 & F12 switches between the drawing and toolpath windows

F9 centers selected object to the middle of the workpiece

Holding Alt key draws object from the middle

Pressing T while drawing polyline next to a circle draws a tangent line

Text must be converted to curves in order to edit nodes.

'Fit Curves to Vectors' command changes polylines or bezier curves into arcs

Press 'N' to open node editing mode after an object is selected

If the bezier curve handles are joined across a node, and you want to make the handles independent of each other, right click on the node and select 'Smooth Point'

If the bezier curve handles are independent across a node, and you want to make the handles conjoined to each other, right click on the node and select 'Smooth Point'

### **Cut 2D PRO Notes - Part 1**

Vetric (.crv) can import adobe illustrator (.ai), corel draw (.eps), autocad (.dxf or .dwg), inkscape (.svg), pdf and Google Sketchup (.skp) drawing files

Can import bmp, jpg, png, tif, and gif images

Right clicking guide opens up guide properties menu

Hovering over a guide and pressing Ctrl adds another guideline

Ctrl+Shift + arrow keys nudges objects

Holding Shift key down temporarily disables snapping

Hovering cursor over intersections 'wakes up' smart snapping

Click on 'Guide Intersection Box' to turn guideline visibility on/off (top left box)

Trim will not trim grouped objects

Text spacing - Click between letters = more spacing / shift + click = less spacing

right click on text, choose 'break text block into lines'

text green node = add curve

text red node = allows movement along curve

text blue node = change radius

### **Cut 2D Notes - Part 2**

Alt + Dragging = Draws part from middle point

While drawing PolyLine - Pressing 'ESC' closes PolyLine. 'Spacebar' keeps shape open

Press 'T' to create a point tangent to an arc

'Single Line' radio button in Font menu creates engravable text

Kerning = space between text, either letters or lines

Hover cursor between letters = Left mouse click moves text closer together

Hover cursor between letters = Shift + left mouse click moves text farther apart  
Hover cursor between lines of text = Left mouse click moves lines closer together  
Hover cursor between lines of text = Shift + left mouse click moves lines farther apart  
Click on text, then drag green box arcs the text  
Click on text, then drag red box rotates the text around centerpoint of arc  
Holding CTRL key while rotating constrains movement to 15 degree increments  
Must convert text to curves (right click) to manipulate / edit the nodes  
Dimension tool can only dimension vectors  
How dimension text? Convert to curves, then use 'Fit Curves to Vectors' button  
How edit dimensions? Shift + click on dimension  
ALT + Drag on object constrains movement to X or Y axis only  
F9 centers object on material  
Click on object then SHIFT + drag white boxes scales object from centerpoint  
Keyboard shortcut 'R' opens full Rotate menu

### **Cut 2D Notes - Part 3**

Press F9 to align selected object to center of material  
'G' Group 'U' Ungroup  
Measure tool - measures distance or properties  
Merge tools - weld, subtract, keep overlap  
Trim objects tools  
Fit curves to vectors tool - changes vectors to arcs, lines or bezier curves  
Tolerance setting - determines how 'tight' to the original drawing the points must be  
Join open vectors tool - Open vectors are automatically identified and closed

### **Cut 2D Notes - Part 4**

Pressing 'P' in node editing mode inserts a start point (alternatively, right click)  
Lead in / lead outs - can be added to the cut path  
Can also specify 'Overcut Distance'  
Vector Selection Order - Allows sequential selection of cut paths. In 'Order' tab, select 'Vector Selection Order'. While holding Shift key down, select (click) vectors in order  
'Run to Retract' is a toolpath preview tool. Useful for checking cut order.

### **Cut 2D Notes - Part 5**

'Estimate Machining Times' button  
'Toolpath Tiling' button - allows cutting objects larger than table  
    Can use 'Feed-through in X' or 'Feed-through in Y' options  
    Tiling feature allows graphic to be broken down into smaller tiles  
Export - Can export selected vectors as eps, dxf, ai, svg or pdf formats  
Bitmap properties - Right clicking an object in 2D view opens Bitmap properties window, which allows you to fade the graphic  
F = zoom to fit material  
F2 opens the 2D drawing window  
F4 opens the Snapping Options dialog  
F6 = zoom to fit material  
F9 = center selected object in view  
F10 = opens alignment tools  
F11 = opens drawing tab

F12 = opens toolpath tab  
arrow keys nudge object  
Ctrl + F = zoom to fit job  
Ctrl + L = opens layers tab  
Ctrl + arrow keys reduces nudge distance  
Shift + arrow keys increases nudge distance  
Alt + drag = moves object horizontally or vertically to original position  
Pressing T when drawing places a line tangent to a circular object

### **Cut 2D Objectives**

Recognize the difference between solid and dashed lines when drawing  
Recognize the difference between editing cutting tools permanently vs for the job  
Change view between wireframe and solid toolpath  
Explain the "Run to retract" button and why it's helpful  
Show how to switch between drawing and toolpath window  
Show how to simulate, reset and delete a toolpath  
Explain what leads are and how to add them  
Explain and demonstrate toolpath tiling  
Explain differences between guide lines, rulers, and grid.  
Demonstrate how to move/nudge objects  
Demonstrate how to zoom in/out  
Demonstrate knowledge of various zoom controls  
Demonstrate advanced toolpath options  
Demonstrate how to edit text (left click, then click text tool)  
How change text to curves and why  
Demo the vector validator  
Demo how to turn bitmap layers off  
Demo how to edit a shape after its already drawn