RDWorks Beginning Laser Tutorial

**Shapes and Text**

This tutorial will describe the basic steps to create a 3” by 4” “Ellipse” or oval with custom text inside.

Let’s begin by double clicking on the RDWorks V8 icon on your desktop. You should see the screen shown below;

Start by clicking on the “Ellipse” button in the left panel. Move your cursor into the work area and click and hold down the left mouse button and drag it across the work area to create an ellipse.
You should see an ellipse similar to the one below. Now we need to set the actual size of the ellipse. Make sure that the little “Lock” icon is set to “Unlocked as shown here.

You need to make sure that your drawing is “Active” before we can set its length and width. Click on the edge of the ellipse and you should see an “X” in the center and a series of small boxes surrounding the shape.
Once the lock icon is in the open position you will enter a value of 101.6 in the x-axis (the left to right arrow) box and 76.2 in the y-axis (the up and down arrow) box as shown here. Click enter on the keyboard.

We need to get rid of the color fill in your shape so double click the left mouse button on the “Scan” line in the right panel. The window shown here should appear.
Click the left mouse button on the down arrow where it says “Processing Mode / Scan”. A small drop down menu should appear. Click on “Cut” then click on “Ok” at the bottom of the window.
Your drawing should now look like this. You can play with this a little bit to make it easier to see what is going on in the next few steps. If you click on the ellipse a red “X” will show up in the center. If you left click and hold the mouse mutton down on the “X” you can move the shape around the work area. If you scroll using the mouse wheel you can enlarge or reduce the shape within the work area.
Now we are going to enter some text in your shape. Click on the “Text” icon in the left panel and then click anywhere in the work area. You should see a “Text Box” now where you can enter your text.
One thing that you should be aware of is that you can only use the font styles that have the little “TT” in front of them. These are called “True Type” fonts and are the only ones supported by this software right now.

Once you have entered your text and clicked on the “Ok” button, it should appear on your workspace. If you cannot see it, scroll the mouse wheel to reduce the size of your work area until you see your text. Once you find it, use the left mouse button to click and hold the little red “X” at the center of your text and move it into your ellipse.
If you want to try different fonts for your text, just double click the left mouse button on your text and the text window will re-appear. You can choose a different “True Type” font then click on “Ok” to see what it will look like.

One of the things you want to be able to do is to move your text around within the ellipse to make it look how you want. There are two icons in the upper panel that you should know about. These are the “Group” and “Ungroup” buttons. These will allow you to choose letters or words to be grouped together and moved as one.
Let's try grouping and ungrouping some text. Make sure your text is “Active” by clicking on it (if it is active, it will be red and have an “X” in the center). Now, click on the “Ungroup” icon at the right of your top panel.
What you have done is to make every piece of your text its own piece of a puzzle. You can move each and every piece of the text simply by choosing it (click and hold the left mouse button and draw a square around what you want to choose) then grabbing the red “X” at the center and pulling it around.
Let's try it. Click and hold the left mouse button and drag a square around one of your words. It should look like what you see here. Click on the “Group” icon. Now when you click anywhere on that word you can move just that word around wherever you want.
Now the word is grouped together and you can move it anywhere you like. Let’s do the same thing for the other words you have created. Draw a box around each word to highlight it then click on the “Group” icon to lock the letters together for each word.
Move the words wherever you like, change the fonts to make it look like you want. You can even change the sizes of individual words, stretch them or make them taller just by clicking on the word and grabbing one of the little grey boxes surrounding the work and pulling or pushing in any direction.
Before we go any further we need to save your drawing. Click the left mouse button on “File” in the upper left corner, then click on “Save As”. Click the down arrow in the upper left of the window that pops up. Choose “Desktop” and name your file with your own name. Click on the “Save” button in the bottom right.
Now we are going to set the “Cut Properties” of your project. This is how we are going to tell the laser how we want to cut the part out. First, hold the “Shift” key down on the keyboard and click on each of your words. This will turn all of your text red with a red “X” in the center of the group of words.
Once all of your text is highlighted, choose a color from the bottom row of colored boxes. Here, I have chosen a blue color.
Whatever color you chose, your text will now be that color. You should notice that in the panel at the right a new line has appeared that has a little blue box next to it. This tells the laser that your text can now be set to cut however you like. Basically, we can now “Etch” your text and “Cut” the ellipse shape if we want to.

We need to set the “Speed” and “Power” values for the laser to cut your shape out. Double click the left mouse button in the first line in the right panel. Set the “Speed” to 400 and the “Min Power” and “Max Power” to 25. Everything else should look like it does in the window.
Now we need to set the scan values for your text. Double click the left mouse button in the blue line in the panel to the right. The box to the left should appear.
We want your text to be a "Scan" process, so click the down arrow to the right of the "Processing Mode" option. Click on "Scan", check to make sure that the values entered are the same that you see here. Once you have everything matching what you see here, click "Ok".
The right side of your screen should look exactly like what you see here. We need to do one more thing though. We need to set the order that the laser cuts your part out.
Select the line that says “Cut” until it is highlighted then click the “Down” button to move it below the “Scan” line.

Your window should look just like this one does.
Now we need to save your work. Click on the “Save To UFile” button at the bottom of the right window.

A new window will come up. Click on the down arrow at the top of the window and choose “Desktop”. Give your file your name then click on the “Save” button at the bottom right.