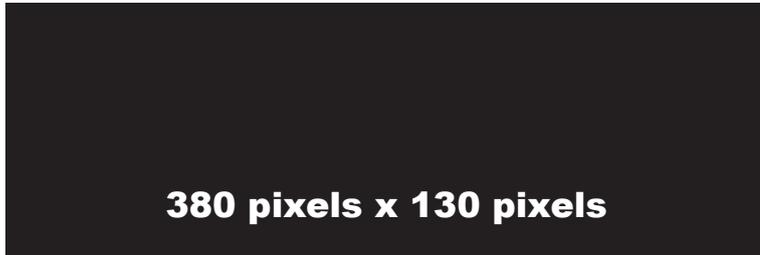


# Laser Cut Flash Animation Tutorial

In the Xtreme Pro Flash forum Dave Merchen asked if it would be possible to simulate a laser cutting text into a piece of metal. The animation I created was fairly good, and a request for a tutorial followed. After several attempts, this is the tutorial that I hope will show how to recreate a similar animation.

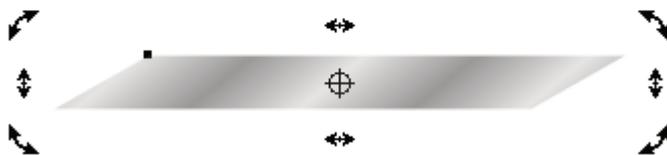
When drawing I do not take notes or measurements. I simply let my imagination run free. Everything that follows is the result of taking the .xar file apart and examining the objects and settings in each frame. Others may be able to make a better tutorial by examining the .xar file themselves.



Start a new animation. Create a rectangle 380 pixels by 130 pixels to use as the background and clipview 'frame' for the animation. In each frame the black rectangle will be used to apply clipview to all the other objects. The 'stage' for the animation will show the objects within the clipview.

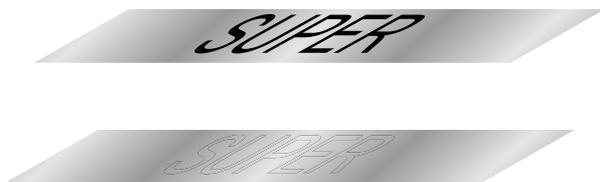


Create another rectangle 238 pixels by 27 pixels with no outline. Give this rectangle a linear repeating fill using 10% black and 40% black.



Use the skew handles to modify the rectangle into a parallelogram. This is a subjective change and may be different according to your own interpretation of how the scene should look.

SUPER



For this tutorial we will be using the Arial font because it should be available on all Windows computers. Create your text a 20pts. Then skew it to appear as though it is flat on the 238 by 27 pixel rectangle. Select both the text and the rectangle and Ctrl-K to clone them. Then Arrange > Combine Shapes > Intersect Shapes (Ctrl+3). This gives you a new shape above the text that has the same fill as the 238 by 27 pixel rectangle. Zoom in on this shape. Arrange > Break Shapes. You will notice that the centers of the P and R are no longer outlined as the other shapes. The centers are behind the P and R shapes. Bring them to the front and subtract them from the P and R.

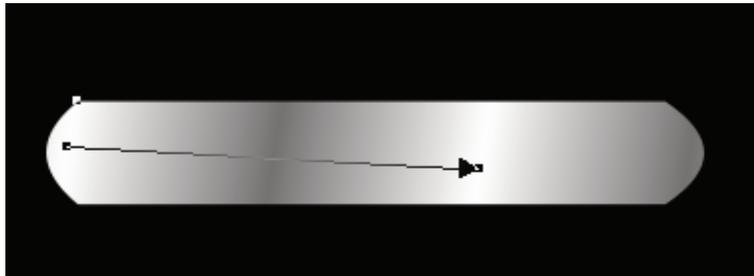
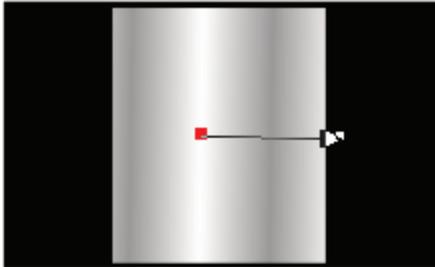


Select all the text, shapes, and rectangle and place them approximately 1/3 up from the bottom of the 280 by 130 pixel black rectangle. Save your work at this point before we begin to make the 'LASER'.

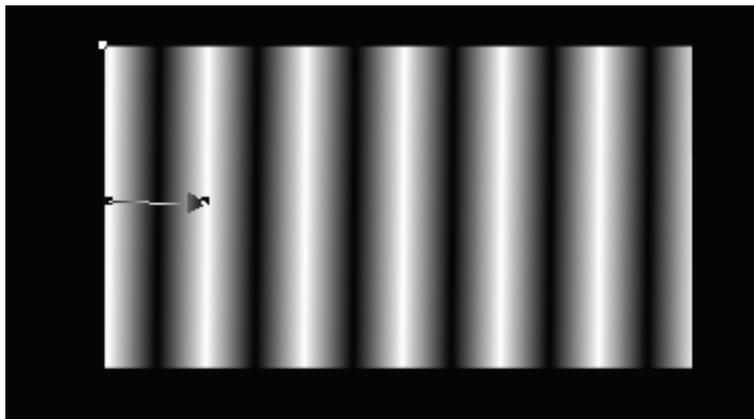


Create a rectangle 22 pixels by 126 pixels as the basis for our 'LASER'. Give it a Linear Repeating fill using White and 40% Black. Zoom in to the shape to position the fill handles.

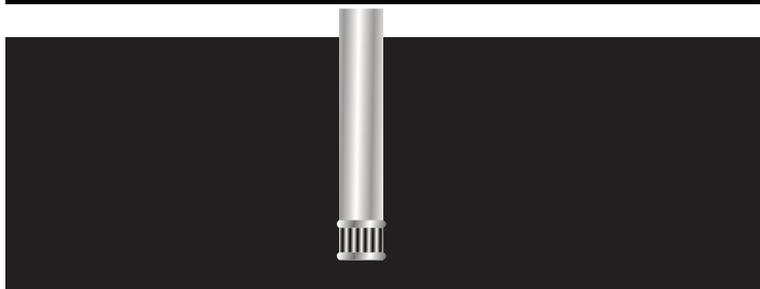
Convert the rectangle to Editable Shape.



Clone the rectangle, select the top resizing handle and drag down to make the clone 4 pixels in height. Use the Shape Editor Tool to make the short sides of the clone rounded. Zoom in and adjust the fill handles to change the light and dark areas so they stand out from the original rectangle.



Clone the 22 by 126 pixel rectangle again. Use the top resizing handle and drag down so the clone is 12 pixels in height. Zoom in and change the fill handles and colours. The fill should use White and Black. Move the new clone up so that its bottom edge meets the top edge of the first clone with the rounded sides.

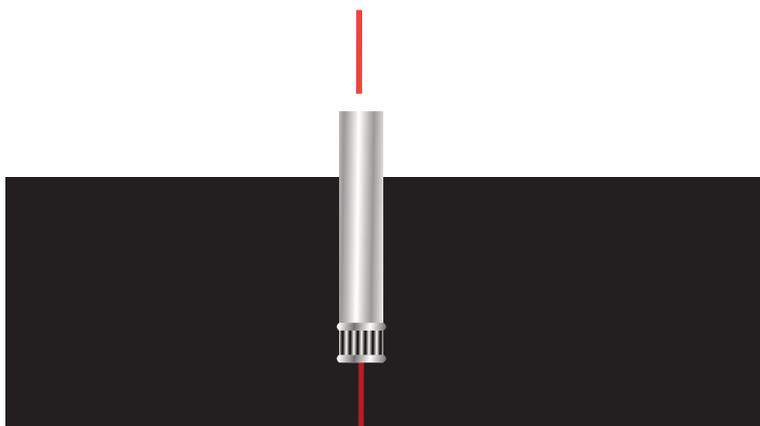


Select the first clone and create a clone from it. Move this clone up so that its bottom edge meets to top of the clone with the White and Black fill. Zoom out to 100% and you should have the shapes arrange to look similar to the image to the left.

Select the four shapes and group them.

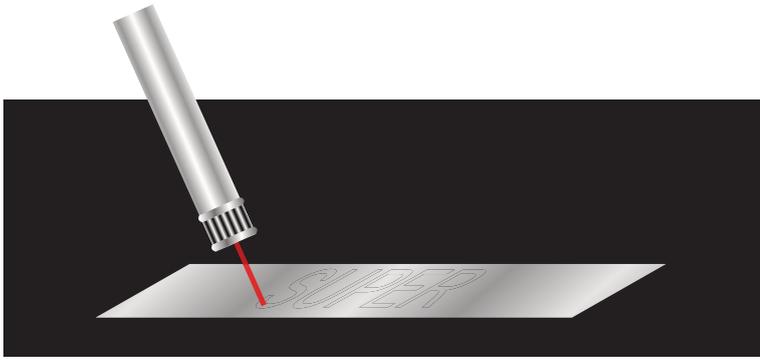
We now have a LASER tube with a focusing ferrule. All we need to add is the LASER beam.

Create a 3 pixel by 42 pixel rectangle and remove the outline. Give it a flat red fill and a 25% flat transparency.

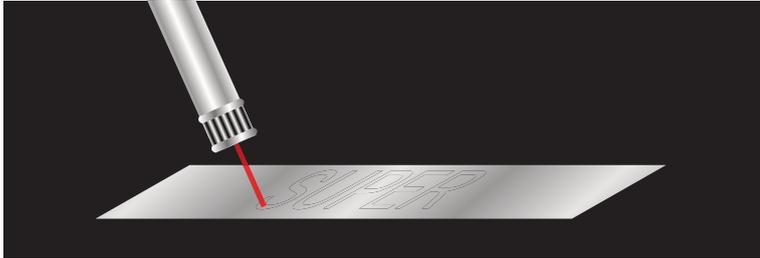


Center the red rectangle with the group we create above. Position the red rectangle so that approximately 35 pixels extend beyond the bottom edge of the LASER tube.

Our laser assembly is now finished. Save your work and take a short break.



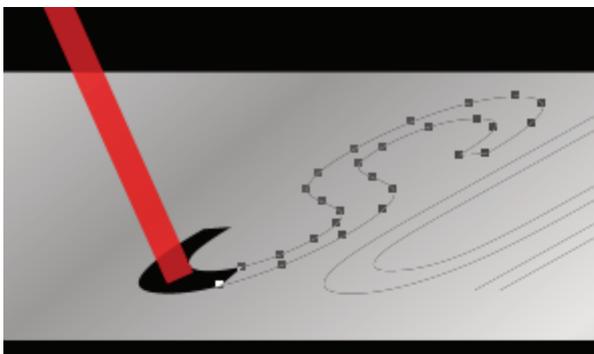
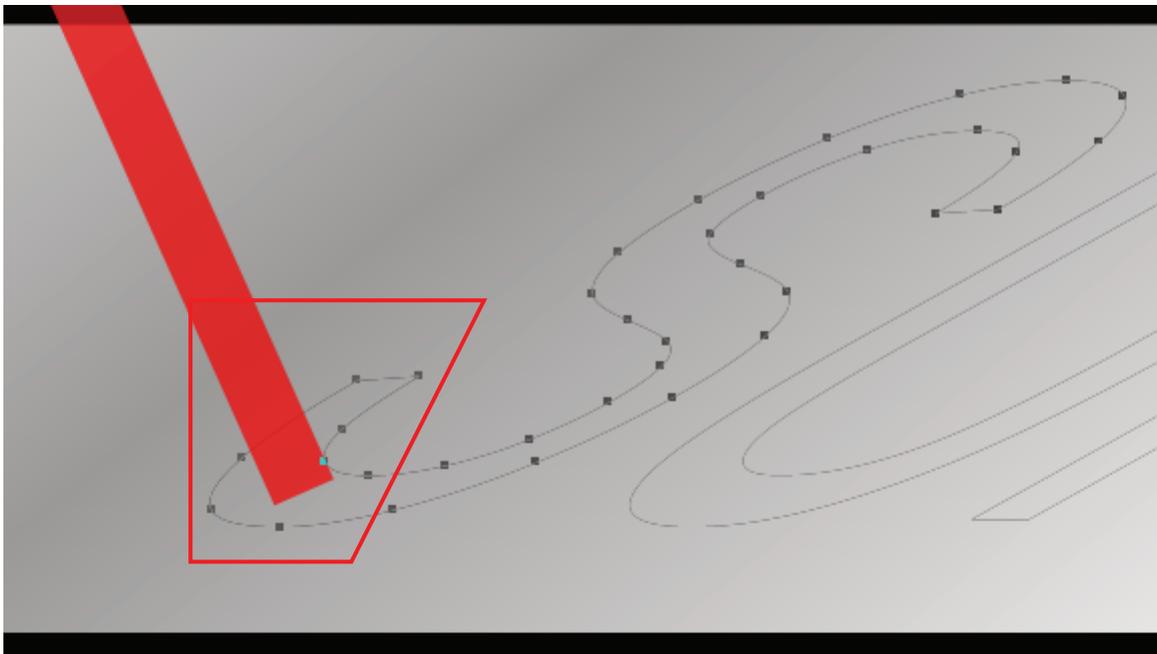
Apply a 24 degree rotation to the laser assembly. Move the laser assembly so that the laser beam touches the lower left part of the letter S.



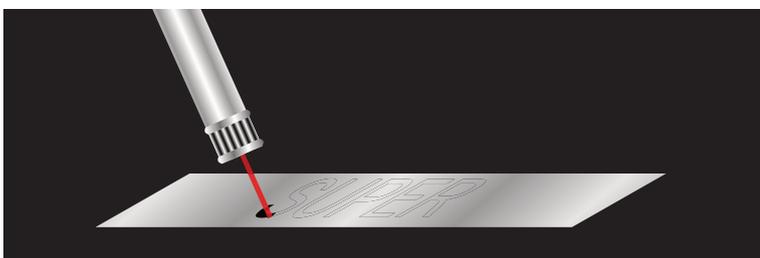
Select the all the objects and Arrange > Apply ClipView. Give the frame a time duration of 0.1 second.

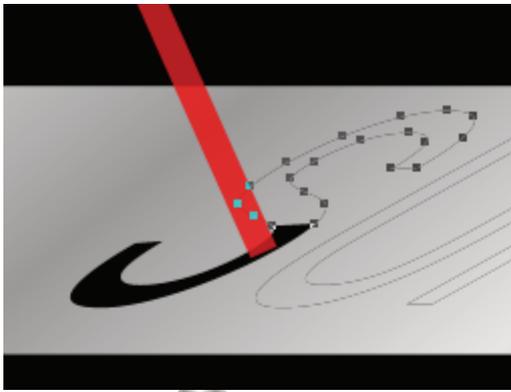
This is the first frame of the Animation. Copy the frame. If you do not have the Frame Gallery open, do so now.

Select Frame 2 and then remove the ClipView. Select the S shape. Select the Shape Editor Tool. Select the nodes shown inside the red trapazoid and delete them.



This is our first laser cut. Select all objects and Arrange > Apply ClipView. Copy the Frame.





Our animation consists of removing clipview. Editing a shape by removing nodes then apply clipview and copy frame.

We do this until all the letters are 'cut' from the sheet of metal.

By moving the Laser Assembly along the shapes it appears to be following the letters during the animation.

When the end of a letter is reached we simulate the laser beam being turned off by Control+Click to select only the Laser Beam (red rectangle) within the Laser Assembly Group. Change the transparency to 100%.

Copy the frame, then copy again. In the second copy we select the Laser Beam again by Control+Click and change the transparency back to 25%. We also move the assembly so it is over the next letter. We begin cutting on that letter as we did before.

The most difficult thing is remembering to Apply and Remove ClipView for each frame.

I will leave the assembly line animation done after all the letters are cut, to your imagination.

