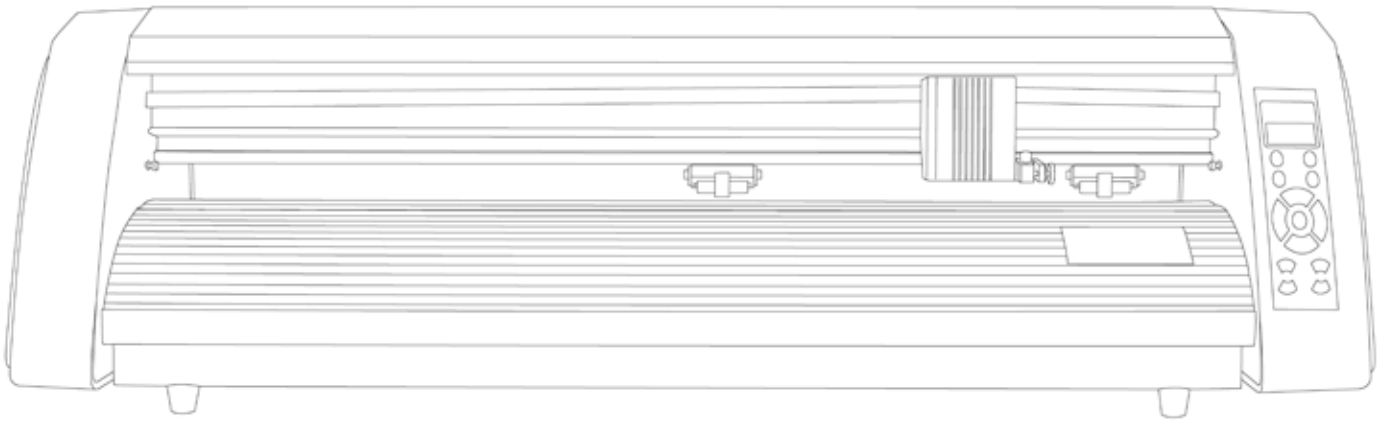
USCutter

LaserPoint



Contents

Welcome **3**

LaserPoint Parts **4**

Front View 4

Right Side View 4

Left Side View 5

Back View 5

Control Panel **6**

Control Panel Overview 6

Jog Mode 8

Pressure Setting Mode 9

Test Mode 10

Repeat Mode 11

Cutting Speed Mode 12

X/Y Axis Scale Compensation Modes 13

Setting up **14**

Selecting a Location for Your Cutter 14

Unpacking 14

Installing the Pen Carriage 15

Installing a New Blade 17

Replacing a Worn Blade 18

Connecting the LaserPoint to a Computer 19

Install SignBlazer Software 20

Preparing the LaserPoint for Cutting 20

Step By Step Instructions 24

Starting SignBlazer 24

Making a Simple Cut in SignBlazer 26

Importing 29

Cutting From an Imported File 31

Converting a Raster Image to Vector Image 31

Contour Cutting 34
Specifications **46**
Troubleshooting **47**

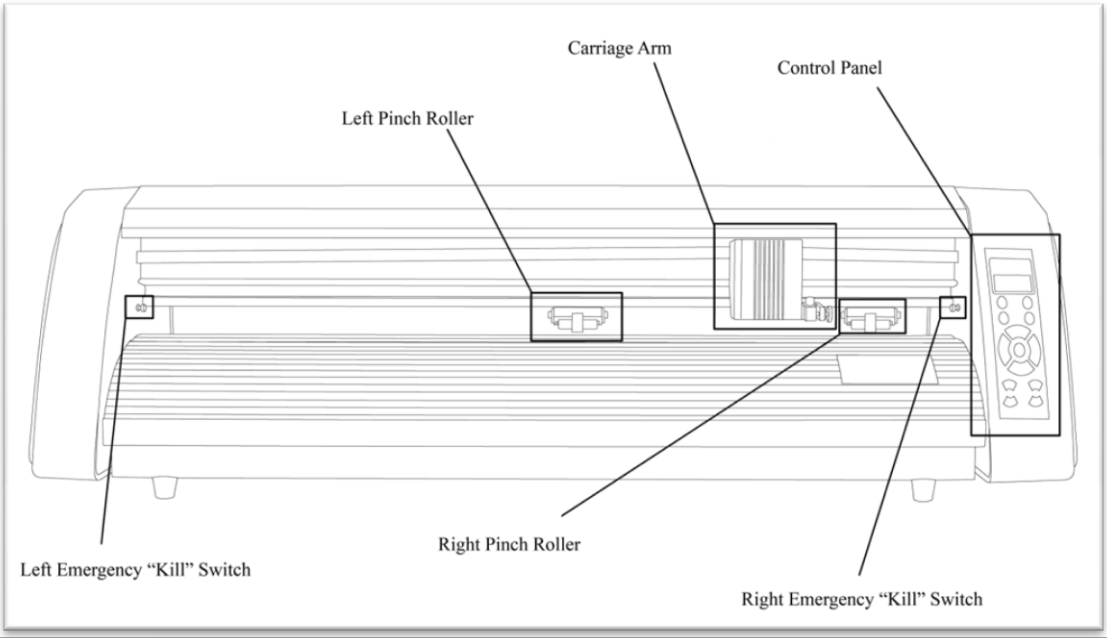
Welcome

Thank you for choosing the LaserPoint cutter from USCutter. The LaserPoint is an exciting advancement in the world of vinyl cutting. It allows the user to perform contour cutting and other advanced cutting functions that were previously unavailable to entry level machines. This manual is here to help provide a starting point in the learning process of the LaserPoint cutter or to vinyl cutting in general. Please read it thoroughly and follow the steps carefully to help insure a trouble free experience with your new machine. If you have any questions along the way, we have provided a few locations to go to get those questions answered. You can post on the USCutter forums at forum.uscutter.com, submit a request for support on the support site at support.uscutter.com or call customer service at 425-481-3555. We hope you enjoy your experience with the LaserPoint and the USCutter family.

LaserPoint Parts

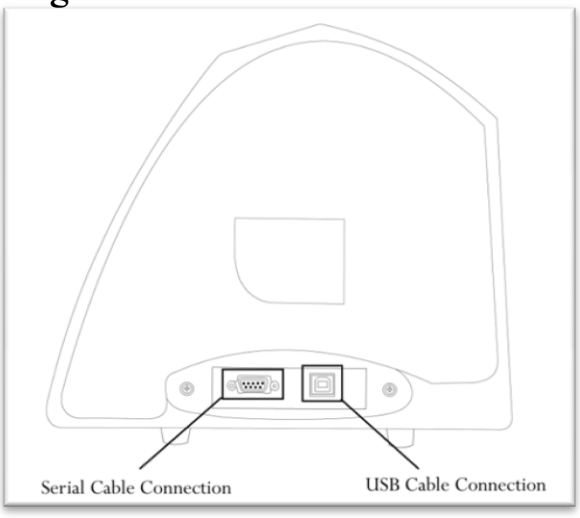
Before you start cutting, you should familiarize yourself with the cutter and its basic parts and functions:

Front View



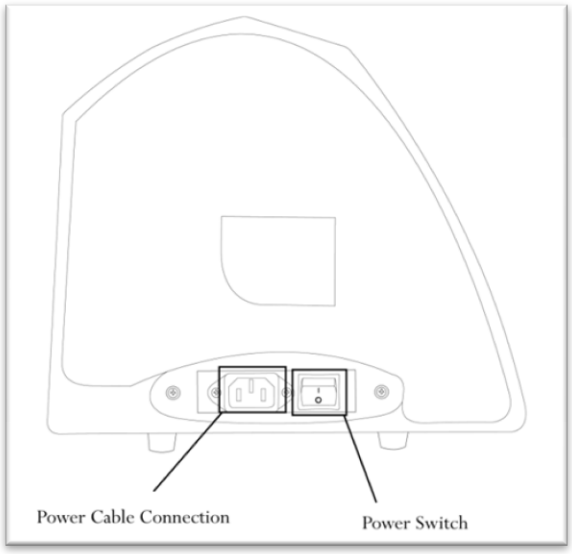
Control Panel	Used to provide input directly to the cutter. Covered in detail in the "Control Panel" (*page 6*)section of this manual.
Carriage Arm	Holds the Blade *(or Pen)* Carriage. Also houses the laser used for contour cutting.
Left/Right Pinch Roller(s)	Holds the vinyl *(or other cuttable media)* tightly to the feed roller below.
Left/Right Emergency "Kill" Switch(es)	Used to automatically stop the machine from cutting (to avoid damage) when improper cutting parameters are set, or in the event of software errors.

Right Side View



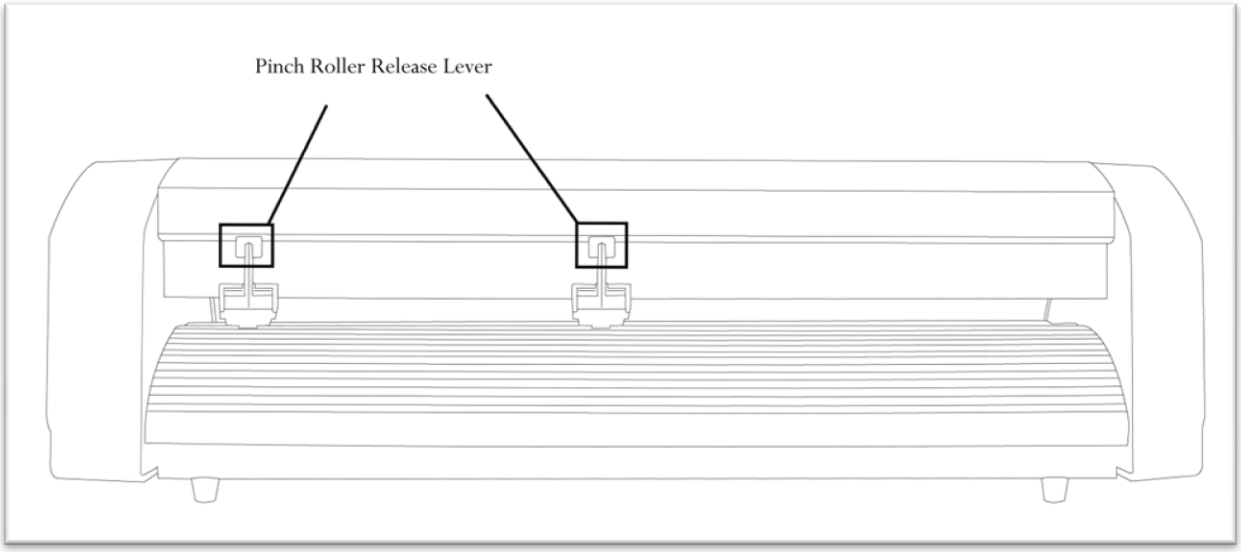
Serial Cable Connection	Used to connect a serial cable from the cutter to a computer.
USB Cable Connection	Used to connect a USB cable from the cutter to a computer.
Only either the Serial cable or USB cable should be used to connect the cutter to a computer. Not Both.	

Left Side View



Power Cable Connection	Used to connect the cutter to a wall outlet or surge protector.
Power Switch	Turns the power of the cutter on(*1*) or off(*0*).

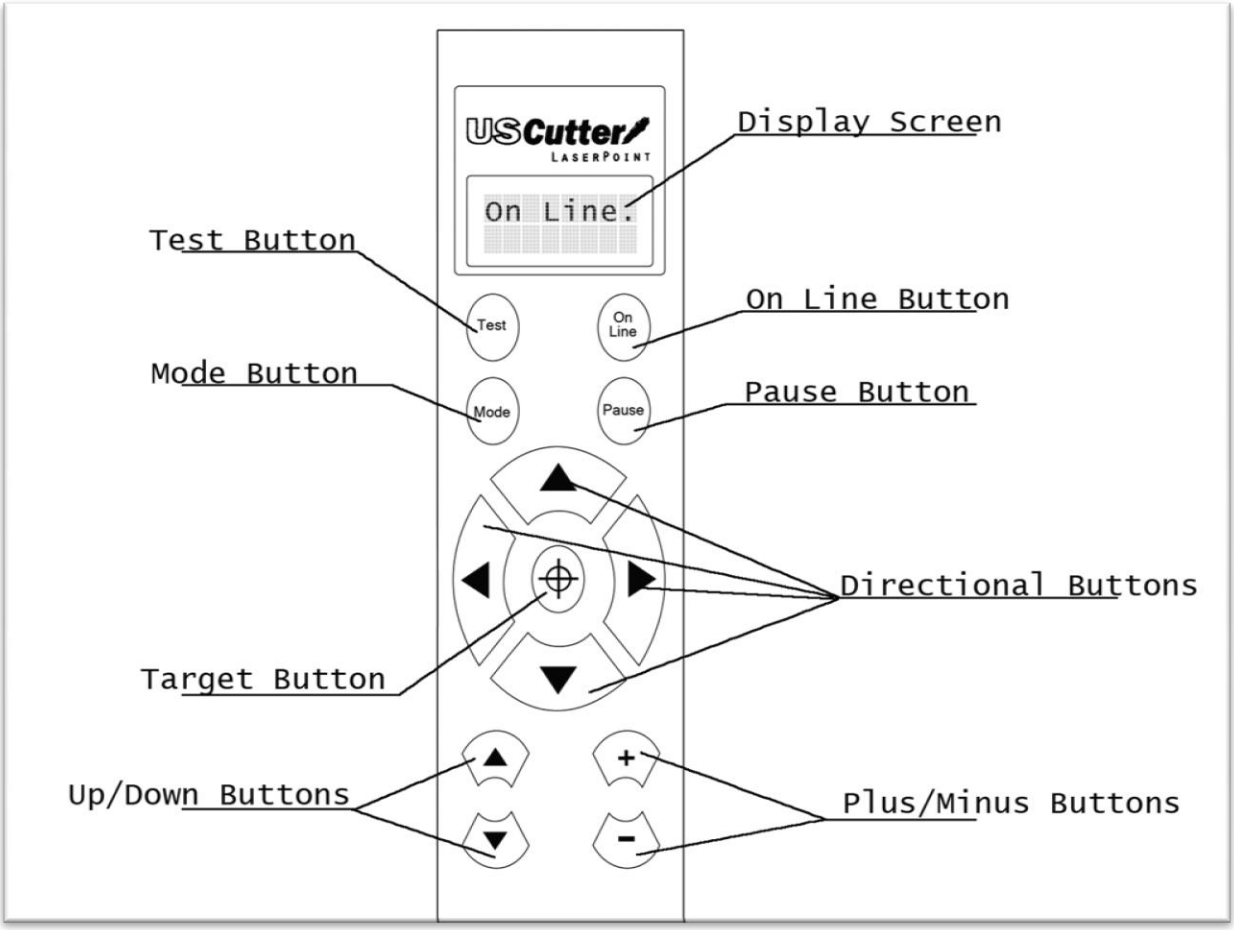
Back View



Pinch Roller Release Lever(s)	Pinch Rollers can be released (*either to be moved from side to side or to allow vinyl to be easily fed below them*) by pressing down on the Release Levers. Pinch rollers should be adjusted so that one is positioned on each side of the vinyl *(or other media)* to be cut and should only be lowered onto an area of the feed roller below that has traction *(the rough area)*.

Control Panel

Control Panel Overview



Display Screen	Shows the current Mode/Status of the Cutter.
Test Button	Cuts a test square.
On Line Button	Toggles between On Line/Off Line modes
Mode Button	Cycles through the different adjustment modes of the cutter; Jog, Pressure setting, Test mode, Repeat mode, Cut Speed setting, X Axis scale compensation, Y Axis Scale compensation.
Pause Button	Pauses cutting.
Directional Buttons	*(Only In Jog Mode)* Moves Blade Position/Rollers.
Target Button	*(Only In Jog Mode)* Resets origination point of Blade/Rollers to the current settings.
Up/Down Buttons	*(Only In Jog Mode)* Moves the Blade in and out of the fully Down Cutting Position.
Plus/Minus Buttons	Adjusts the settings throughout the different Modes.

First, to be able to use/adjust any of the functions from the cutter, it must be “Off Line”.

When you first turn on the cutter you will see a short startup process followed by this display…	

Press the On Line Button to enter Off Line Mode to access the Off Line functions.

You will now see…	

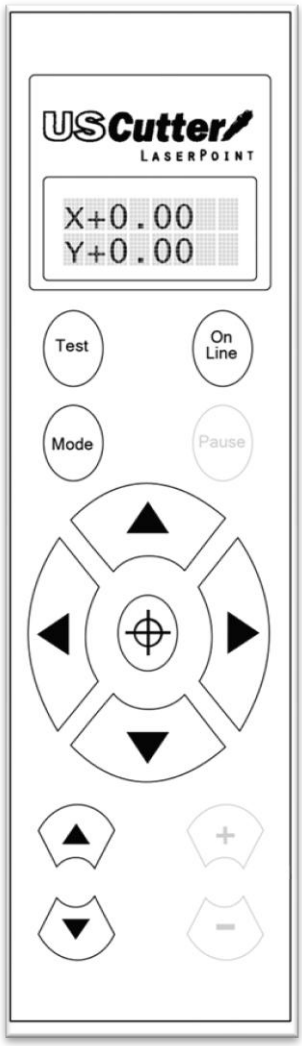
This is Jog mode, the first in the 7 available Off Line modes.

Jog mode, as well as the other modes will be described in detail on the following pages.

From here, you can now press the Mode Button to cycle through modes.

Jog Mode

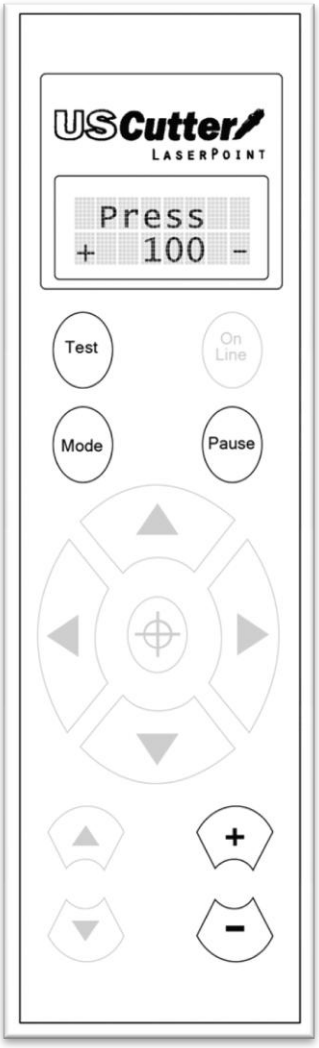
Jog Mode is used to position the vinyl and cutting blade. You can use the target button to reset the origin of the next cut to be made. You can also make a test cut to witness the current speed and pressure settings or check the blade depth while in the down cutting position. Make sure that when setting the blade position it is clear of the red emergency "kill" switches on either side of the cutter.



Test Button	Cuts a small rectangle with the current speed and pressure settings. *Useful in determining the proper pressure/speed settings to be used.*
On Line Button	Returns the cutter to its origin location and returns to "On Line" status.
Mode Button	Cycles through the 7 Off Line modes.
Pause Button	*(has no function in this mode).*
Directional Buttons	Changes the vinyl/cutting blade locations.
Target Button	Sets the current vinyl/cutting blade location as the new origin. The origin will be the starting position of the vinyl/cutting blade on the next cutting job that is sent to the cutter.
Up/Down Buttons	The Down Button will lower the cutting blade into the down cutting position. This can help you determine if the pressure setting needs to be adjusted before cutting. *If the blade is left in the down cutting position then the progress of the pressure setting can be seen while adjusting the pressure setting in the Pressure Setting Mode.* The Up Button will return the cutting blade to its regular position.
Plus/Minus Buttons	*(has no function in this mode).*

Pressure Setting Mode

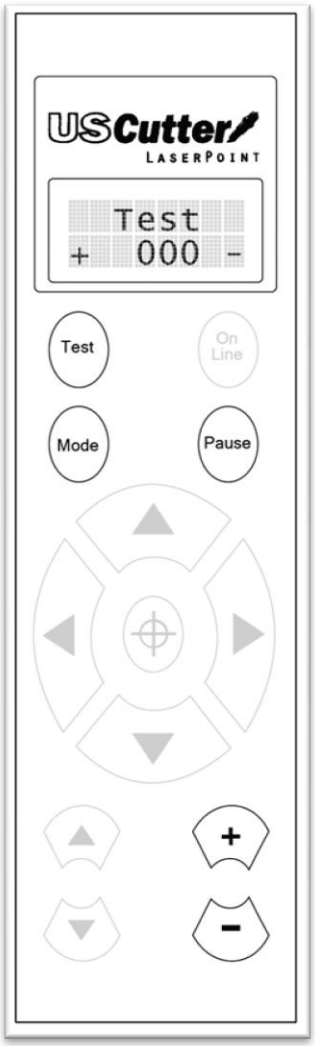
The Pressure Setting Mode is used to adjust the pressure of the cutting blade. Thicker materials can require more pressure. The pressure should be strong enough to fully cut the top vinyl but not strong enough to cut through the backing attached to your vinyl. If you are unsure of the cutting pressure that you should use, it is advised to make a test cut. This can be done by holding the Test Button in this mode or by returning to Jog Mode and pressing the Test Button. You can see how the pressure effects the down cutting position of the blade by returning to Jog Mode and using the Up/Down Buttons.



Test Button	Returns the cutter to Jog Mode *(If held down, a test cut will be made).*
On Line Button	*(has no function in this mode).*
Mode Button	Cycles through the 7 Off Line modes.
Pause Button	Returns the cutter to Jog Mode.
Directional Buttons	*(has no function in this mode).*
Target Button	*(has no function in this mode).*
Up/Down Buttons	*(has no function in this mode).*
Plus/Minus Buttons	Increases/Decreases the amount of pressure used when cutting (*ranges from 0 to 200*). Thicker materials may require more pressure. The amount of pressure used can be seen by going to the Jog Mode and using the Up/Down buttons to switch the blade from the original position to the Down cutting position.

Test Mode

Test Mode is used to create a test pattern that shows various cuts in a number of directions. Most simple tests (*those to check the pressure and speed settings*) can be done more efficiently by pressing and holding the Test Button from any of the other modes. If you would like the test to be performed multiple times, you can set the number shown on the display screen to the amount of times you would like to test (*from 1 to 255*). For most situations, 1 test will be sufficient.

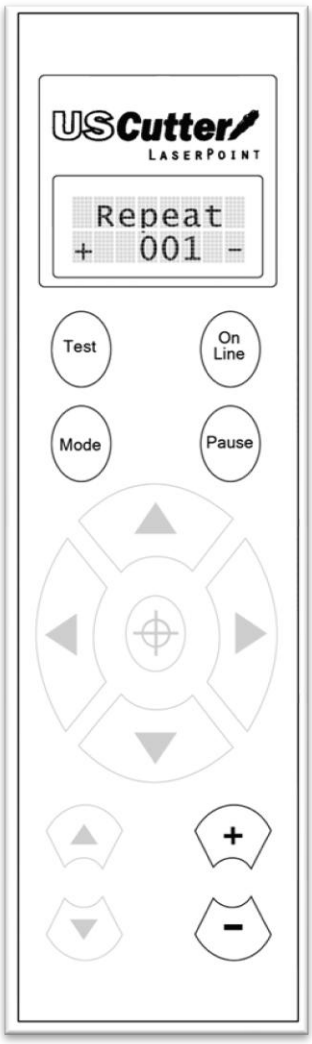


Test Button	Cuts a test pattern the number of times shown on the display screen, using the current speed and pressure settings.
On Line Button	*(has no function in this mode).*
Mode Button	Cycles through the 7 Off Line modes.
Pause Button	Returns the cutter to Jog Mode.
Directional Buttons	*(has no function in this mode).*
Target Button	*(has no function in this mode).*
Up/Down Buttons	*(has no function in this mode).*
Plus/Minus Buttons	Increases/Decreases the number of test patterns to be cut (*ranges from 0 to 255*). *This should not be set to 0 (zero), as this will allow the cutter to continue to cut test patterns until it is turned off.*

Repeat Mode

Repeat Mode allows you to cut an exact duplicate of the last cut that was sent to your cutter. The number of repeats made can be selected with the Plus/Minus Buttons. When you are ready for the repeat cuts to be made, press the On Line Button. Although some software allows you to jog (*move*) the cutter before cuts are made, since you are bypassing the software by making a cut directly from the cutter, no software adjustments will be accounted for. If the blade or vinyl needs to be moved, please use the Jog Mode.

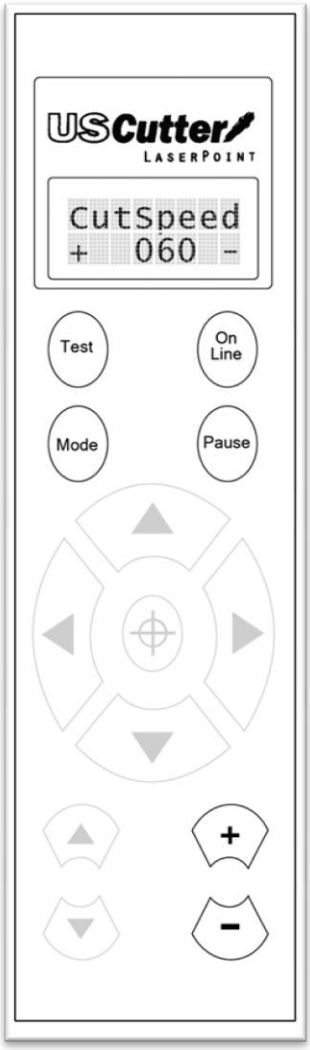
Test Button	Returns the cutter to Jog Mode (*If held down, a test cut will be made).*
On Line Button	Starts the Repeat function.
Mode Button	Cycles through the 7 Off Line modes.
Pause Button	Returns the cutter to Jog Mode.
Directional Buttons	*(has no function in this mode).*
Target Button	*(has no function in this mode).*
Up/Down Buttons	*(has no function in this mode).*
Plus/Minus Buttons	Plus/Minus Buttons Increases/Decreases the number of repeat cuts to be made. These will be a repeat of the last cut that was sent to the cutter. *Once the On Line button is pressed, all of the cuts will be made in succession.*



Cutting Speed Mode

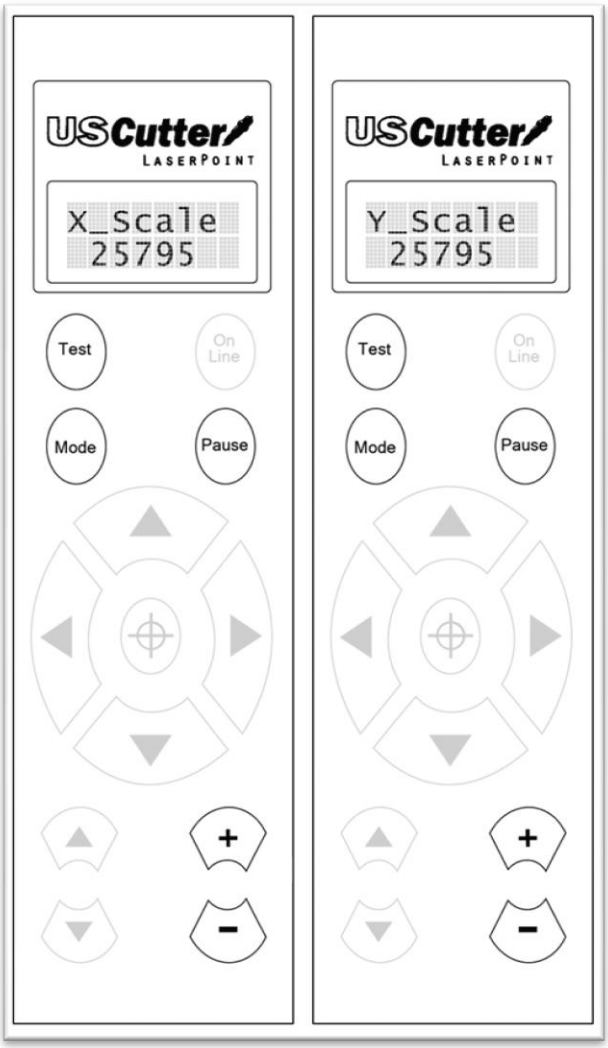
Cutting Speed Mode is used to adjust the speed of the cutter. Most cuts can be made at high speeds but if a problem is occurring where accuracy or detail is being lost in the cut, a slower cutting speed may solve the problem.

Test Button	Returns the cutter to Jog Mode *(If held down, a test cut will be made).*
On Line Button	Returns the cutter to Jog Mode *(If held down, the cutters status will return to On Line).*
Mode Button	Cycles through the 7 Off Line modes.
Pause Button	Returns the cutter to Jog Mode.
Directional Buttons	*(has no function in this mode).*
Target Button	*(has no function in this mode).*
Up/Down Buttons	*(has no function in this mode).*
Plus/Minus Buttons	Increases/Decreases the speed of the cutter *(from 0 to 80 in increments of 10).*



X/Y Axis Scale Compensation Modes

The X and Y Axis Scale Compensation Modes are used to correct problems when the cuts being made are not the same scale as they are intended. The X axis effects the size of cuts across the width of the vinyl while the Y axis effects the size of cuts along the length of the vinyl. If the cuts being made are not the correct size, increase or decrease the number that coincides with the problem axis until the cuts are correct.



Test Button	Returns the cutter to Jog Mode *(If held down, a test cut will be made).*
On Line Button	*(has no function in this mode).*
Mode Button	Cycles through the 7 Off Line modes.
Pause Button	Returns the cutter to Jog Mode.
Directional Buttons	*(has no function in this mode).*
Target Button	*(has no function in this mode).*
Up/Down Buttons	*(has no function in this mode).*
Plus/Minus Buttons	Increases/Decreases the amount of X/Y scale compensation. The larger the number is, the larger the cut made will be. This compensation can be used to remedy problems where the cut being made is smaller or larger than it was intended.

Setting up

Selecting a Location for Your Cutter

The first step to setting up a LaserPoint is finding a good location for the machine. Consider these factors when you are selecting a suitable place:

The stand has a footprint of approximately 25" x 35". If you intend on using the LaserPoint without the stand, you will need a desktop space of approximately 35" x 18" with the included media rollers attached, or 35" x 11" without.

You will need to have access to both the front and rear of the machine for operations as well as for loading and unloading new vinyl rolls. Try to find a space with adequate access to both the front and back of the machine.

Since the LaserPoint is a precision cutting device, you will want to find a location that will be stable to insure cutting accuracy. Whether placing the unit on the floor or a table top, the accuracy of the machine will be directly related to the stability of the platform it is placed on. Find a sturdy floor space or table top for the machine and consider a location that will be out of the way of people and other machines with moving parts while the cutter will be operating. Excessive moving of the machine can not only disrupt accuracy of cutting but may also cause electrical components inside the machine to dislodge and require otherwise unnecessary repairs and maintenance.

Fans, located inside of the LaserPoint cutter, can draw in outside dust from the area surrounding the cutter. Excessive buildup of dust can cause either mechanical or electronic malfunctions. Keeping the LaserPoint cutter as dust free as possible will help ensure trouble free operation. Try to find an area for the LaserPoint cutter that will be free of any excessive dust.

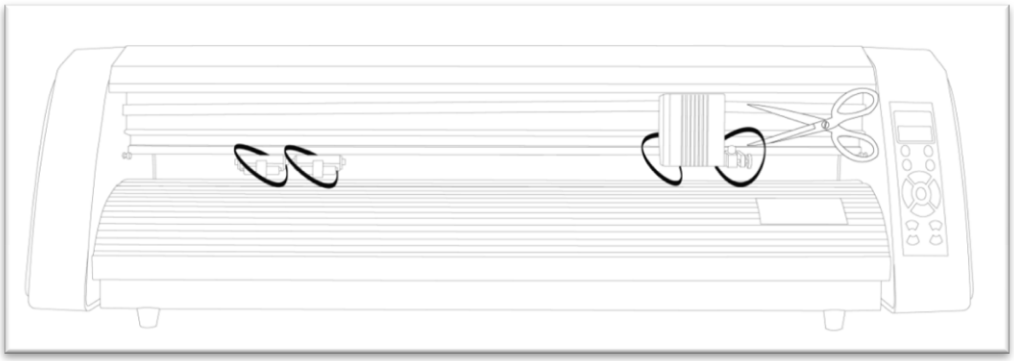
All cutters will produce a small amount of noise while operating. Please take this into consideration when selecting a location for your cutting purposes.

Do not remove the grounding plug from the power cord or attempt to use the cutter when it has not been properly grounded.

Unpacking

Remove all contents from your shipping box. If you have not already done so, please refer to the Unpacking Guide to take account of all of the included components.

Cut or clip the restraining plastic straps from the cutter. Be careful to not cut anything other than the restraints.



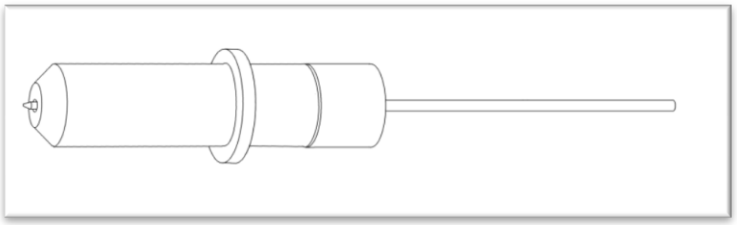
If you purchased your LaserPoint cutter with a stand, please refer to the included LaserPoint stand assembly guide at this time and complete assembly of the stand.

If you will be using your LaserPoint as a table top unit without a stand and would like to use the included table top rollers, please refer to the table top roller instructions.

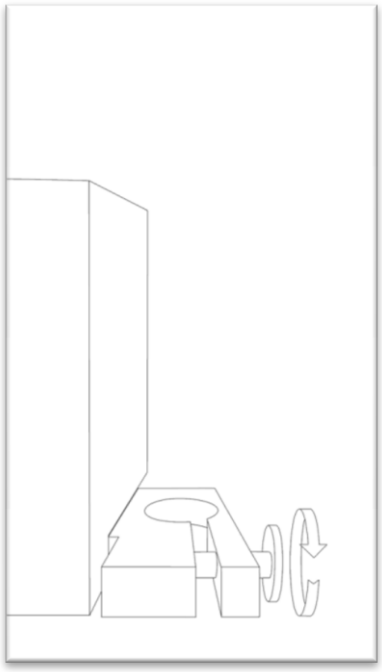
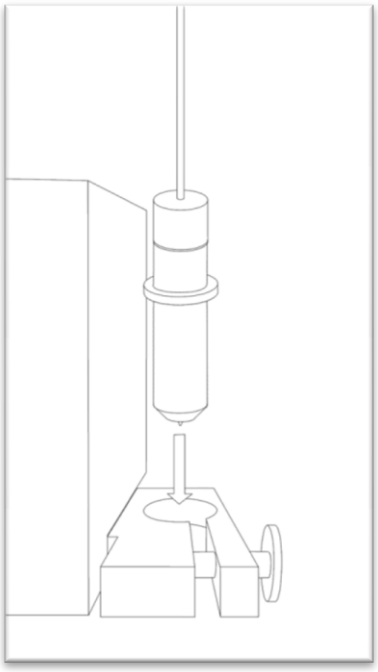
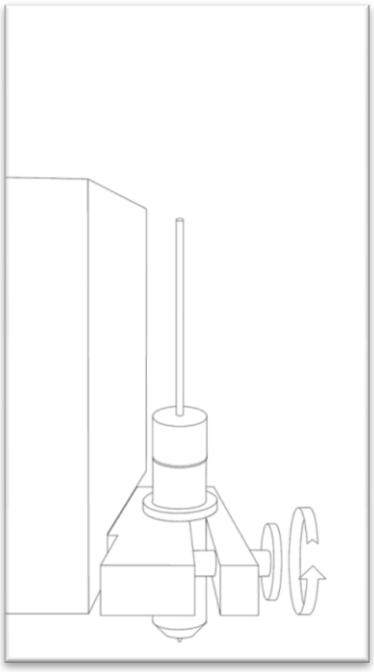
Installing the Pen Carriage

Most new users will benefit from practice "cutting" with the supplied pen carriage until they are comfortable with normal operations of the LaserPoint and cutting software.

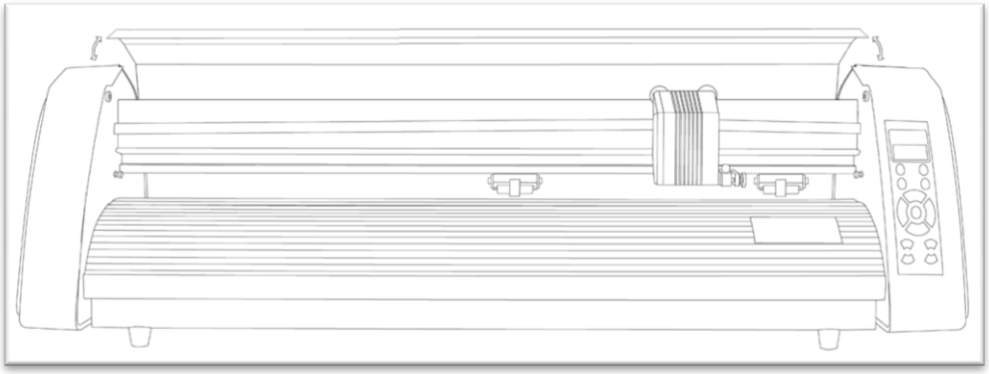
To install the pen carriage:



Your Pen Carriage should come assembled and appear as it does in this image. If it does not, please refer to the pen replacement section below.

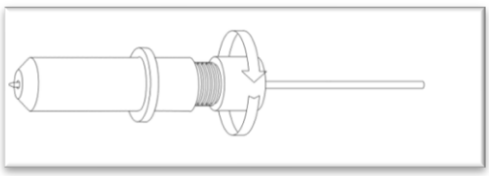
Loosen the locking knob on the carriage arm.	Drop the pen attachment into place.	Tighten the locking knob on the carriage arm.
		

It may be easier to install the pen (or blade) carriage after the lid on the LaserPoint has been raised allowing more working room.

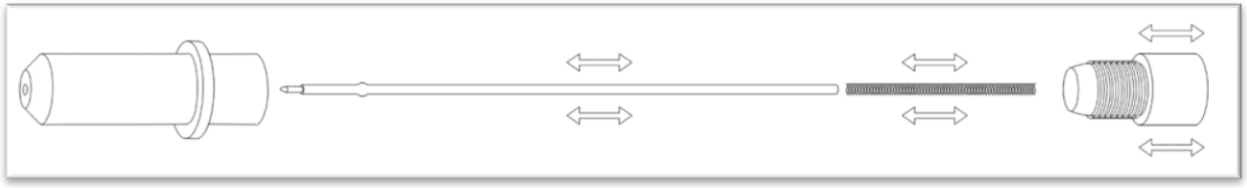


To Replace the pen or spring inside of the Pen Carriage:

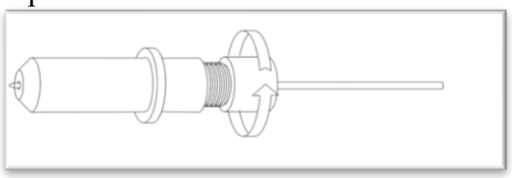
Unscrew the top cap from the Pen carriage.



Remove the top cap, the pen and the spring. Replace the pen and/or spring as necessary. Slide the spring onto the pen from the top and insert it back into the pen carriage.

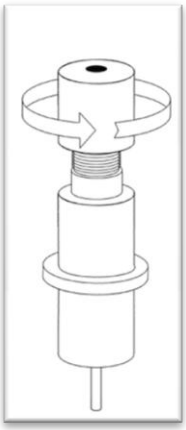
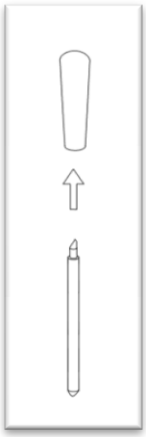
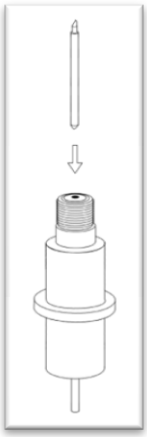
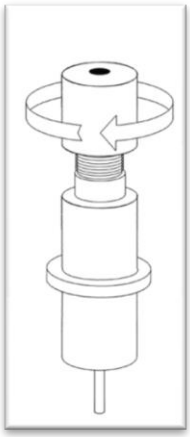
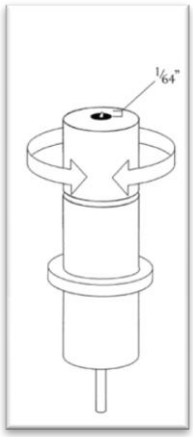


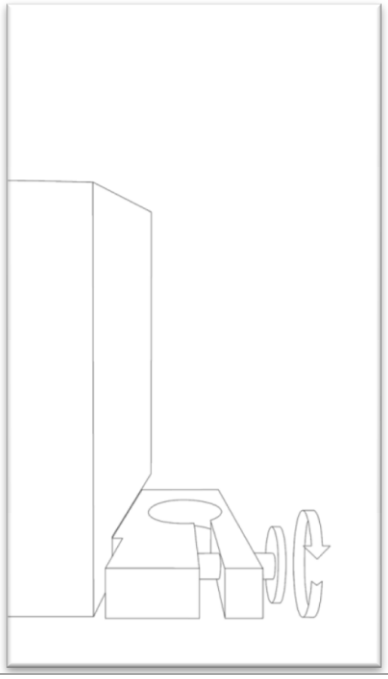
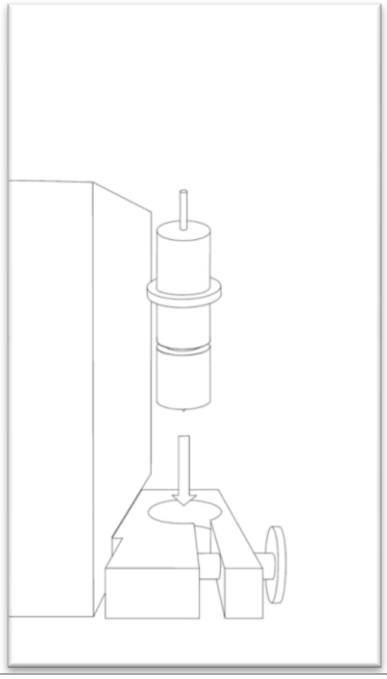
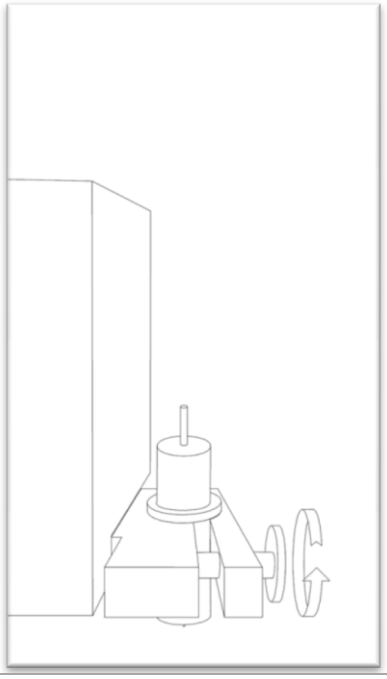
Replace the carriage cap and screw into place.



Once you are ready to make cuts with the LaserPoint you can attach the blade carriage.

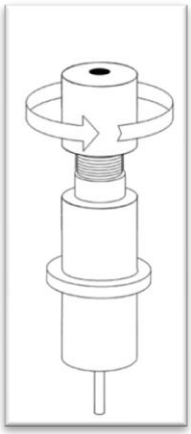
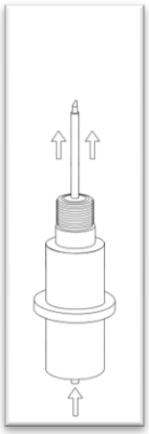
Installing a New Blade

Unscrew the cap from the Blade carriage.	Remove the protective cover from a new blade.	Insert the blade into the top of the Blade carriage.	Screw the cap back onto the blade carriage.	Adjust the carriage cap until the blade is protruding approximately 1/64th of an inch.
				

Loosen the locking knob on the carriage arm.	Place Blade carriage (blade side down) into the carriage arm.	Tighten the locking knob on the carriage arm.
		

Replacing a Worn Blade

First remove the blade carriage from the carriage arm,

Unscrew the cap of the blade carriage	Press up on the release button located on the bottom of the blade carriage to raise the blade and remove it.
	

Follow the remaining steps from “Installing a New Blade” above.

Connecting the LaserPoint to a Computer

Attach the power cord first to the LaserPoint unit.

Plug in the unit and turn on the power.

If Using the Serial Cable to connect the LaserPoint to a Computer:

Connect Serial Cable (first to the LaserPoint, then to the computer).
Your LaserPoint setup is now complete and you are ready to move to the software installation section.

If Using the USB Cable to connect the LaserPoint to a Computer:

Connect the USB cable (first to the LaserPoint, then to the computer)
If Windows automatically installs the needed drivers, your installation is complete proceed to "Finding your COM port".
If Windows does not install the needed drivers, but the found new hardware wizard appears, follow the instructions on screen, using the supplied drivers from the banana digital driver disk.
If the found new hardware wizard does not appear, navigate to Control Panel>Add Hardware, to initiate it. Then follow the on screen instructions using the supplied drivers from the banana digital driver disk.

-Finding Your COM Port

First navigate to the Device Manager by following the below instructions for your operating system:

Windows95/98/Me: Click Start, then select Settings -> Control Panel. Select Device Manager.
Windows2000/XP: Click Start, Then Right-click "My Computer" then select Properties. Select the Hardware tab. Click the Device Manager button.
Windows Vista/7 Click Start, Then in the "Start Search" box, Type "Dev" (without pressing enter); wait for a list to show up. Click Device Manager.

Expand the section labeled “Ports (COM & LPT)”.

Make a note of which number COM Port is associated with “USB Serial Port”.

You will need this information to properly install your software.

Install SignBlazer Software

Insert the SignBlazer Elements CD into your computer.

Select “Run Setup” .

Follow the on screen instructions.

When asked what cutter you want to use, select the USCutter LaserPoint.

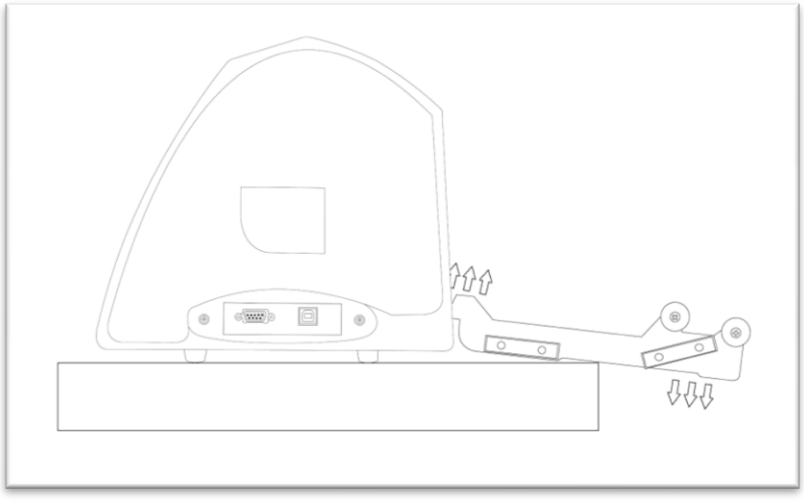
When asked what port your cutter uses select the COM Port that corresponds with your setup (*Noted above from the “Finding Your COM Port” section of the manual*).

Do not change the Baud Rate, Data Bits, Stop Bits, or Parity options.

Make sure the Flow Control option is set to Hardware.

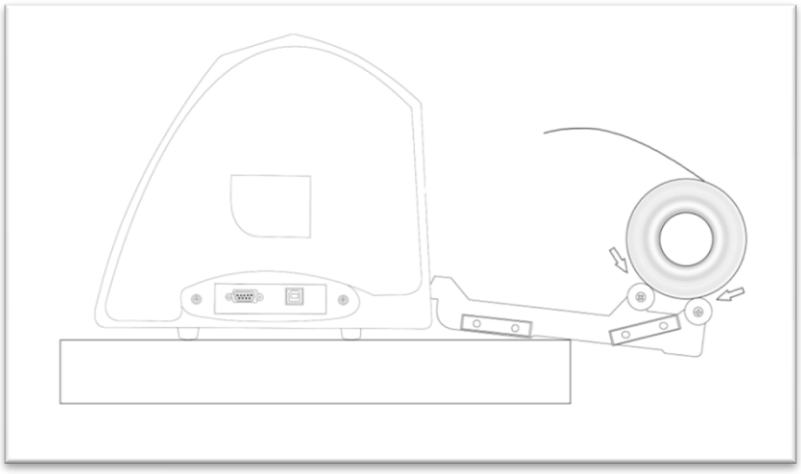
Preparing the LaserPoint for Cutting

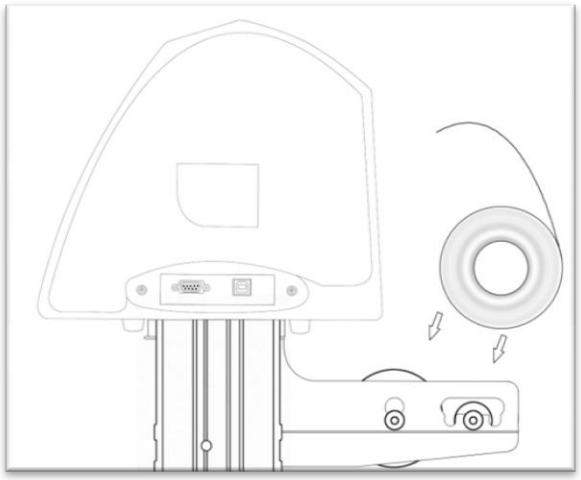
If you are going to be cutting from a roll of vinyl *(or other material*), and did not purchase a stand with your LaserPoint cutter, then you may want to use the included table top rollers to hold the roll. The table top rollers will work best if they are allowed to hang slightly over the edge of a table so that the hooks on the cutter side are allowed to fully connect with the cutter, increasing stability.



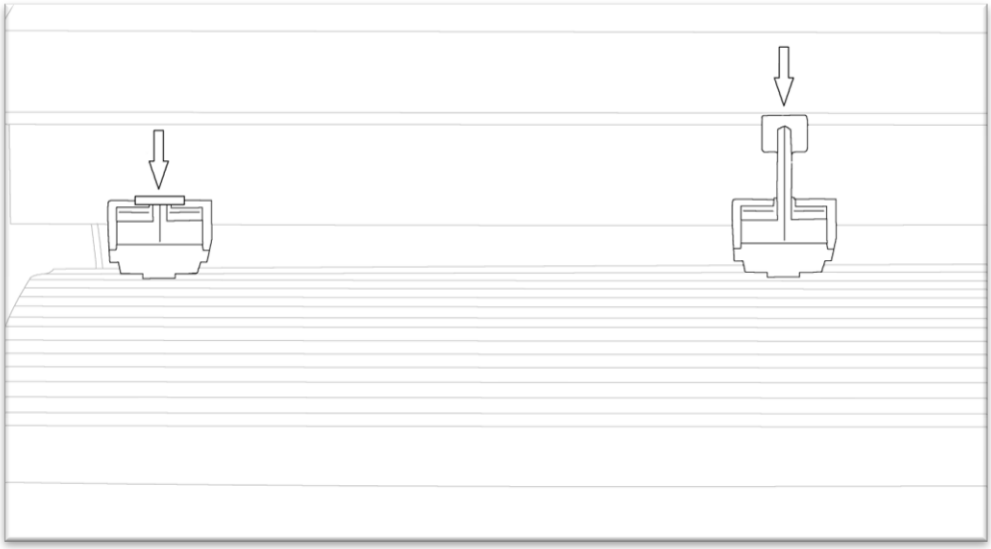
If you are going to cut from a single sheet instead of a roll, then skip the next step on placing a vinyl roll. All other steps will be the same.

Place the roll on top of the rollers (*either the table top rollers: left image, or the stand rollers: right image*) If using the stand, you can move the roller caps up against either side of the vinyl roll to keep the roll from shifting right or left during cutting.

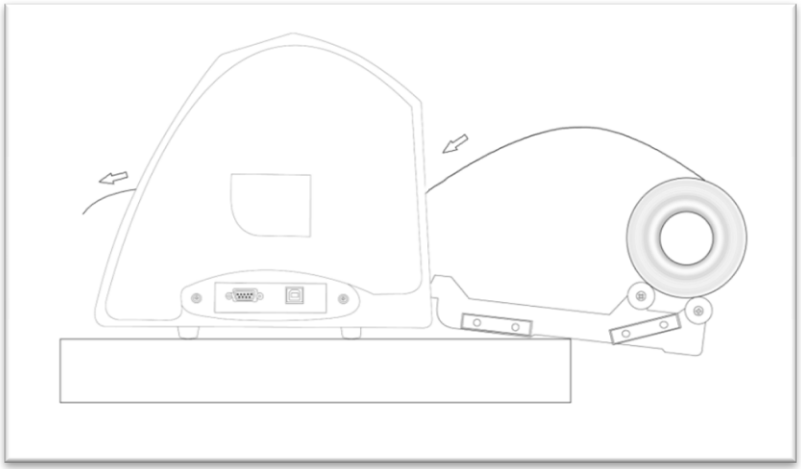


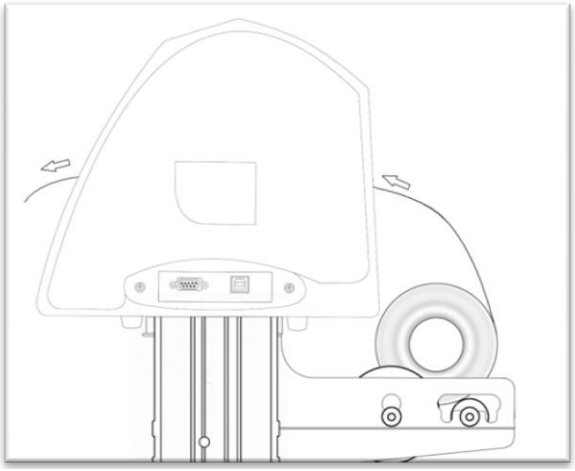


Release the Pinch Rollers by pressing down on the Pinch Roller Release Levers.

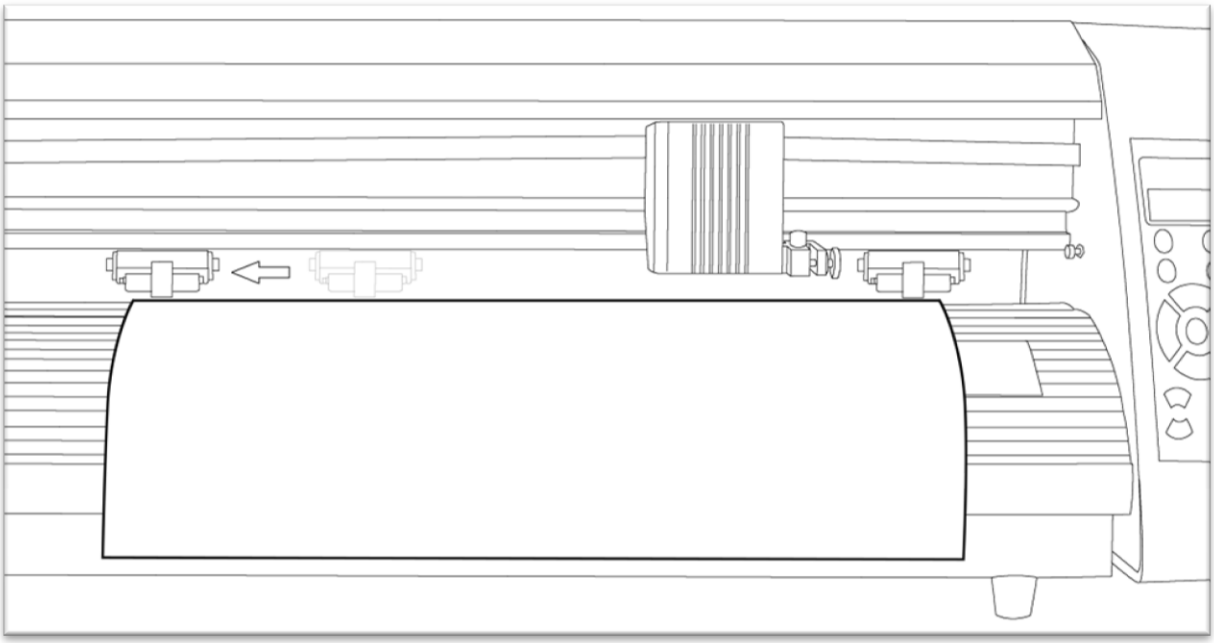


Feed the vinyl underneath the pinch rollers (*if working from a single sheet instead of a roll the vinyl can also be feed from the front).*

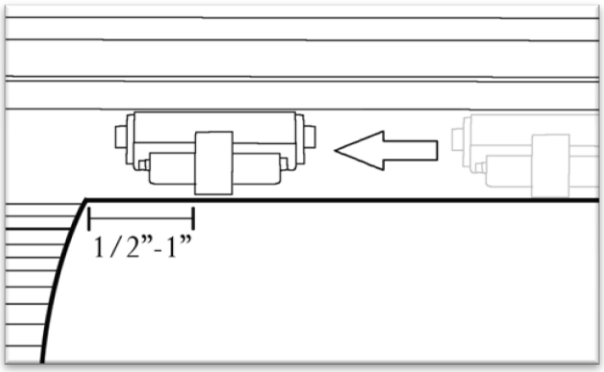




Adjust the pinch rollers from side to side so there is one roller on each side of the vinyl.



Leave a gap of between ½-1 inch from the edge of the roller and the edge of the vinyl on both sides.

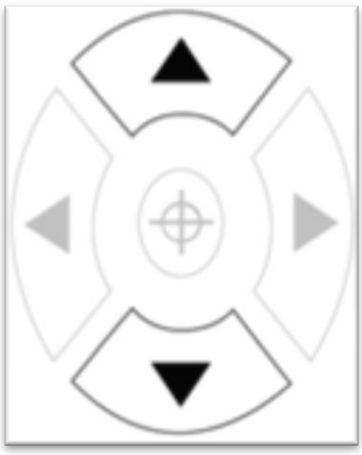


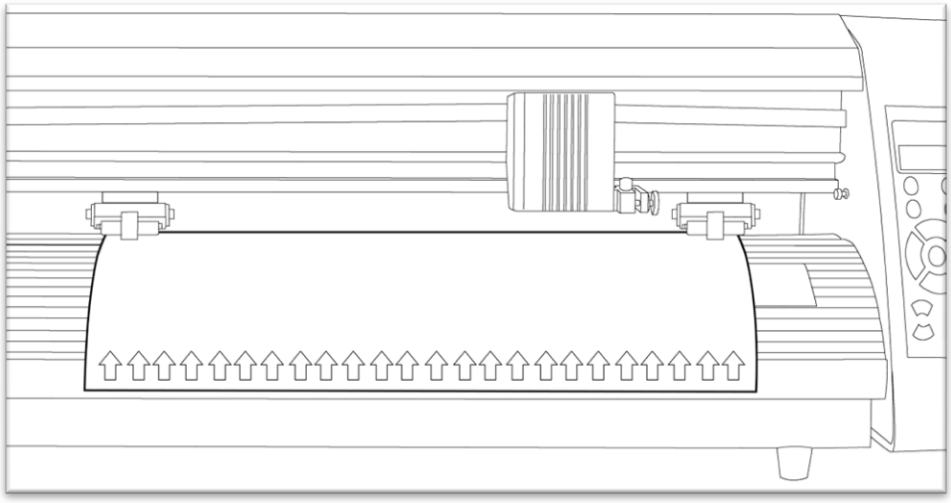
Engage the Pinch Rollers by pulling up on the Pinch Roller Release Levers.

If the LaserPoint is not already on, turn it on now

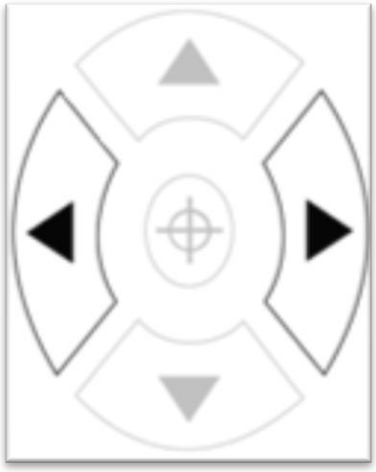
Take the cutter Off Line and make sure it is in Jog Mode *(If you are unsure of how to do this, please refer back to the Control Panel section of this manual).*

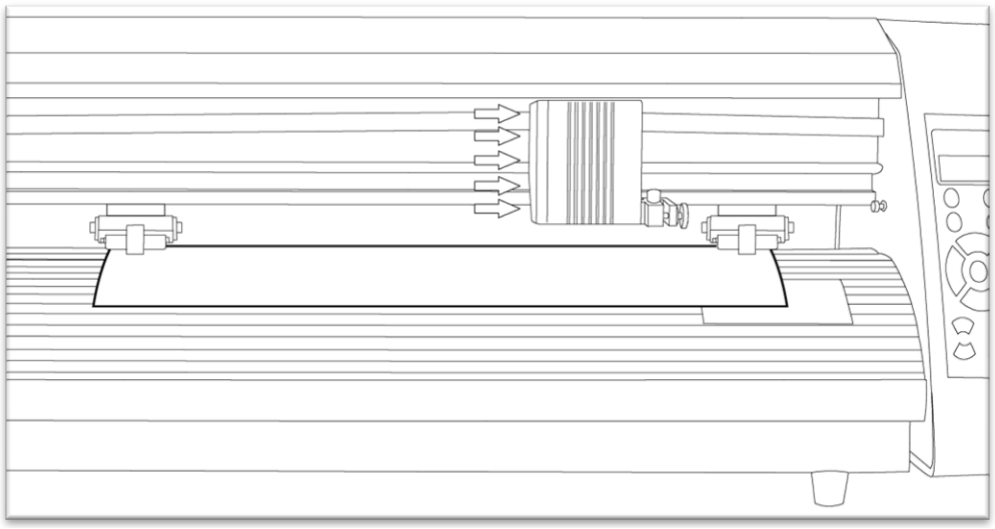
Adjust the vinyl to where you want to make your cut by using the Up and Down Arrow Keys on the Control Panel.



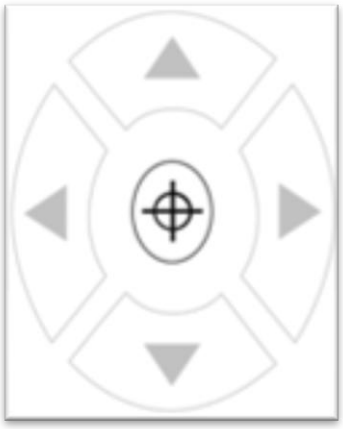


Now, adjust the Blade to where you want your cut to be made by using the Left and Right Arrow Keys.





Now press the target key to tell the cutter that this is the location where you would like the cut to begin.



If you would like to make other adjustments to the pressure, speed, or other settings you can do so now. If you are setting up for your first cut with the machine then the default values should be a good starting point.

You can now return to Online Mode. Your cutter is now ready.

Step By Step Instructions

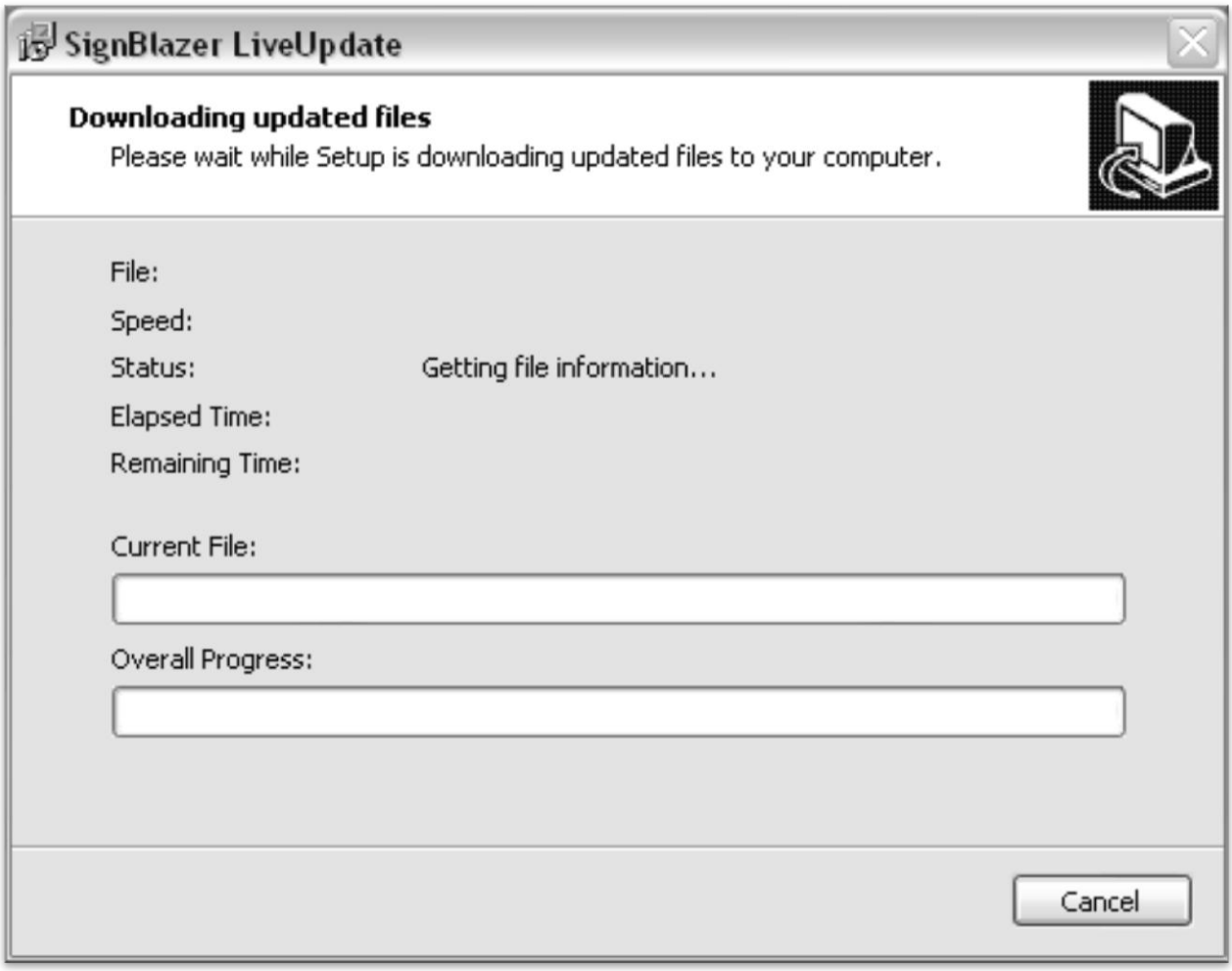
Starting SignBlazer

Making sure that the USCutter LaserPoint is turned on and in On Line mode before starting the SignBlazer software will help avoid communication problems between the cutter and software.

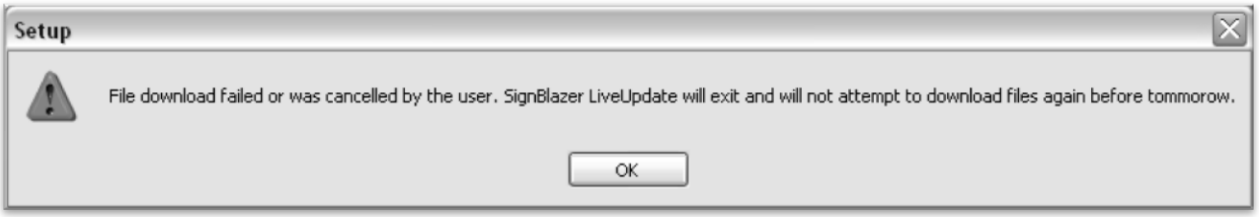
Open the SignBlazer Software (*The Default location will be in the Programs Folders under "SignBlazer Elements for USCutter").*

Navigate to this folder and select "SignBlazer Elements for USCutter".

SignBlazer will attempt to download update files.

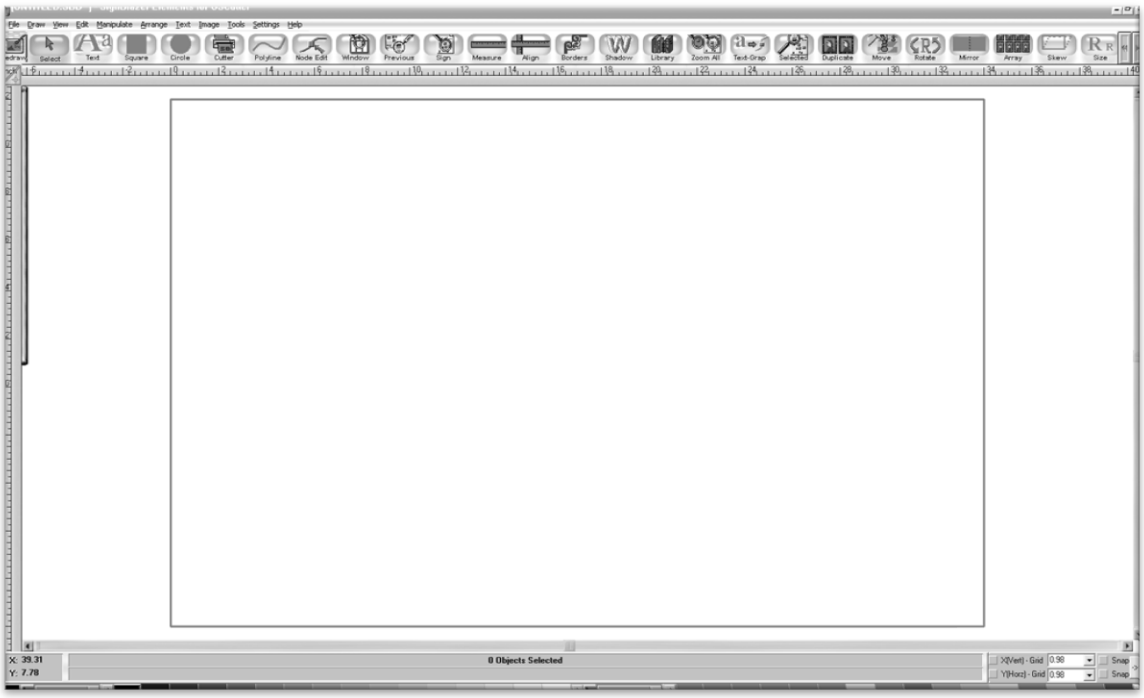


If it fails, cancel the update process *(By Pressing the Cancel button on the error window and then the OK on the confirmation window)* and the program will start regularly.



We will be working in Trial Mode. Select “Trial Mode” from the following screen, then select “Yes” from the confirmation window.

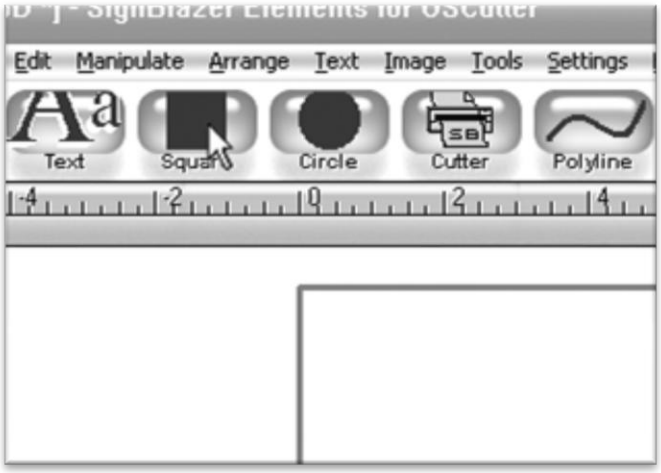
Now SignBlazer is open and you are looking at the main SignBlazer screen.

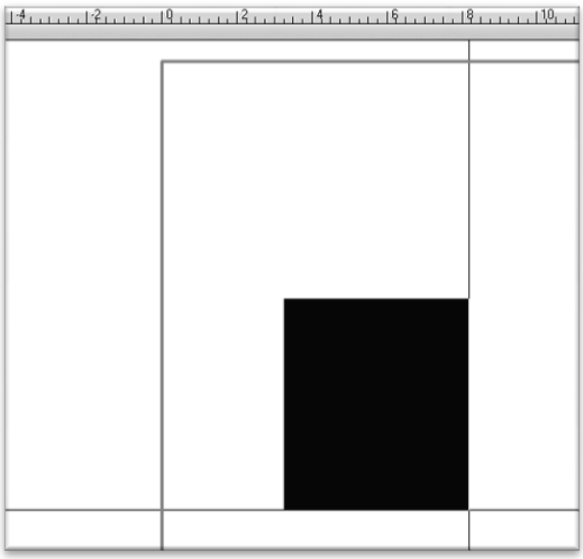


Making a Simple Cut in SignBlazer

You can create images from scratch using the various tools in SignBlazer. For this tutorial, we will be drawing a simple square just to show the steps of making a cut from SignBlazer.

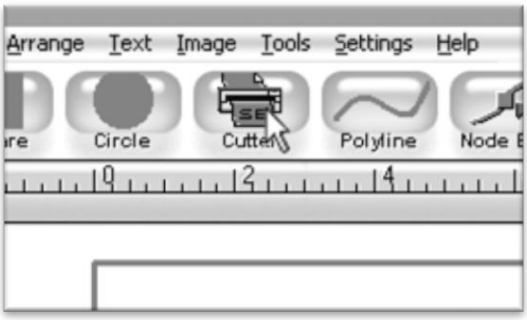
Select the Square tool at the top of the window.



Now draw a square by clicking first in the main window…	And then moving the mouse to determine the size of the square desired, and clicking a second time.
	

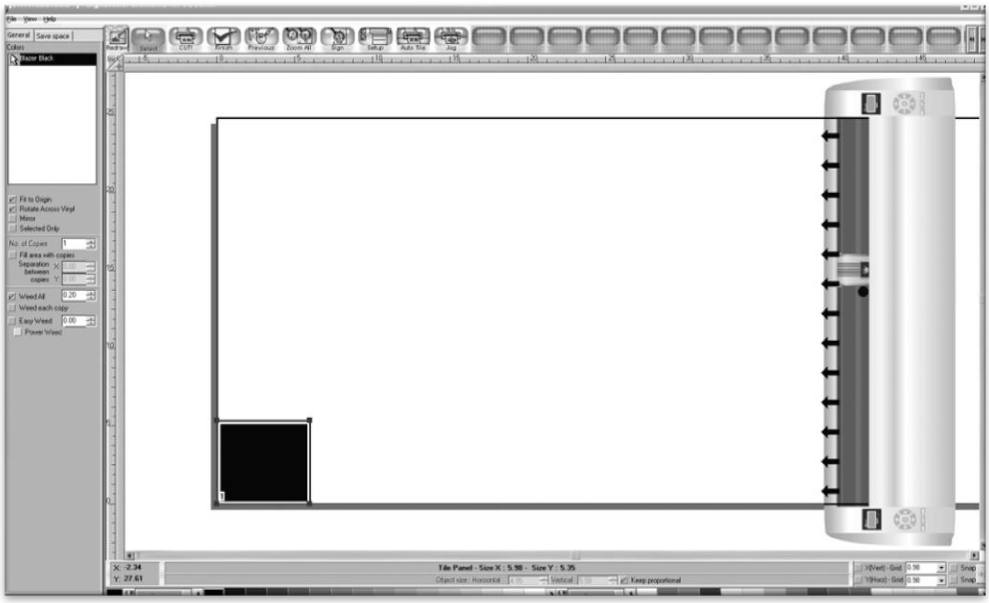
Now to cut this simple shape from the cutter:

Select Cutter from the top selection menu.



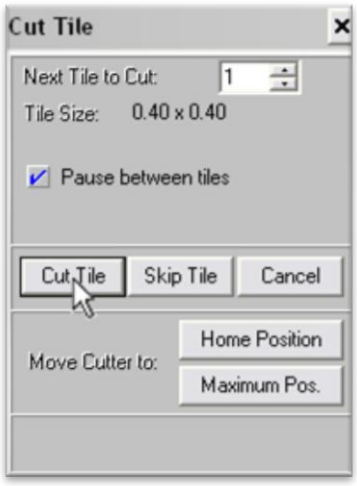
Please make sure that your cutter is turned on and in On Line mode before proceeding. Also make sure that you have vinyl (or another cuttable material) in the cutter and ready to go by following the steps in the "Preparing the LaserPoint for Cutting" (page 20) section of this manual. It is always best to start the SignBlazer software with the cutter turned on and in On Line mode. If this step is missed you may experience communication issues between the cutter and the software. If this occurs, please turn off the cutter, go back to the main SignBlazer screen by pressing the Finish button from the top selection menu of any of the sub-screens, and then turn the cutter back on and ensure that it is in On Line mode.

This will take you to the cutter screen of SignBlazer Elements where you can see a representation of how your cut will be made when sent to the cutter and other various cutter options.



Since this is a simple cut, no adjustments need to be made here. We can tell the software we are ready to cut by pressing the cut button in the top selection menu.

And then pressing “Cut Tile” in the Cut Tile window:



When you are finished, you can go back to the main SignBlazer screen by pressing the Finish button in the top selection menu.

Importing

Drawing images from scratch in SignBlazer may prove to be somewhat different than imaging software that you are more familiar with. If you would rather create the images to be cut in another software or you already have designs finished that need to be cut, then you can just import the finished artwork into SignBlazer and cut from there.

Most major raster and vector image files are supported in SignBlazer Elements including dxf, eps, ai, bmp, tif, gif, pcx, tga, jpg, pcd, pct, psd, cmx, ps,and wmf.

You can import to SignBlazer one of two ways:

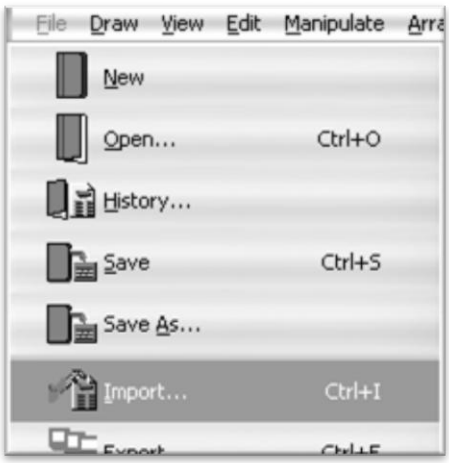
Using the Clipboard

You can import from the clipboard by first copying or cutting an image opened from another software program, and then placing it into SignBlazer by selecting Clipboard Paste from the Edit drop down menu.

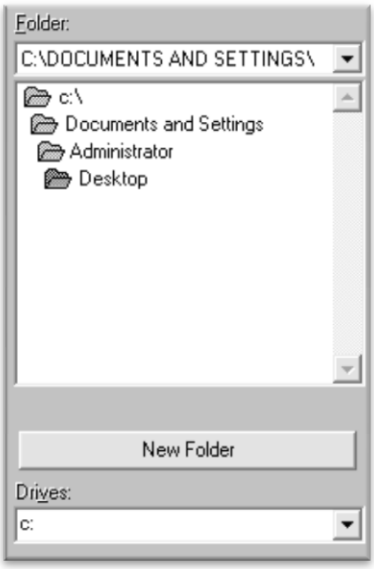
Images imported via Clipboard Paste may not retain the same dimensions that they held in another software program.

Using the Import Function

You can import an image that has been saved from another program by first selecting Import from the File drop down menu:



Then navigate to the saved file by using the Folder and Drives menus:



Then Select the image to import,

And select the OK button.

If you are having trouble locating your file, make sure that the file type is selected from the "List Files of Type", or "All Graphic Files" is selected.

Cutting From an Imported File

If the file imported is already a vector image then it is now ready to cut or be further edited within SignBlazer. If you are ready to cut, you can follow the steps in the previous section "Making a Simple Cut in SignBlazer"*(page 26).*

If the image imported is a raster image then a few more steps will need to be taken to get the file ready for cutting.

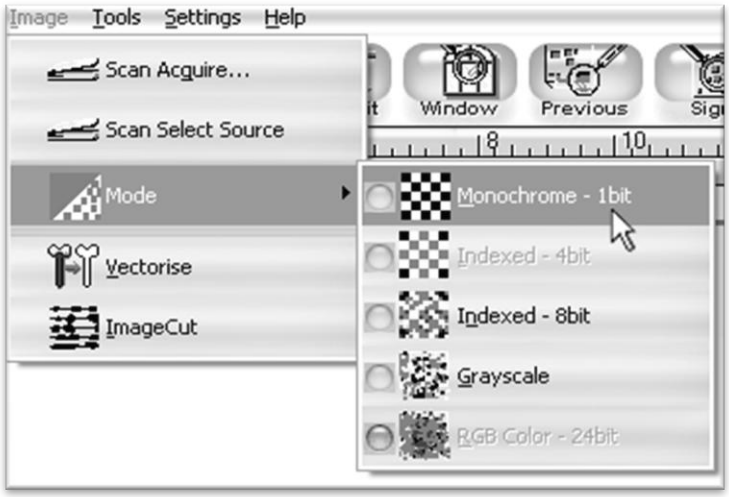
Converting a Raster Image to Vector Image

The difficulty of converting a raster image to a vector image will vary greatly depending on the amount of contrast in the image. The image to be cut should be darker than the background and should have a significant amount of contrast and separation from the rest of the image. If possible, the image should be completely separated from the background and be black in color (though the image we chose for this demonstration has a background and is not completely darkened to demonstrate that the process is possible with a variety of images).

First make sure that the image has been properly imported into SignBlazer and that the image is selected.

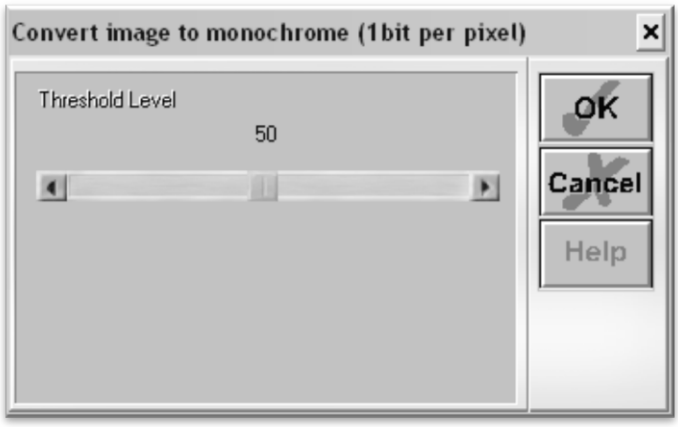
You can tell an image is selected when it shows a Border and Square Bounding Boxes in its parameter.

With the image selected, select “Monochrome – 1 bit” from the Mode section of the Image drop down menu.



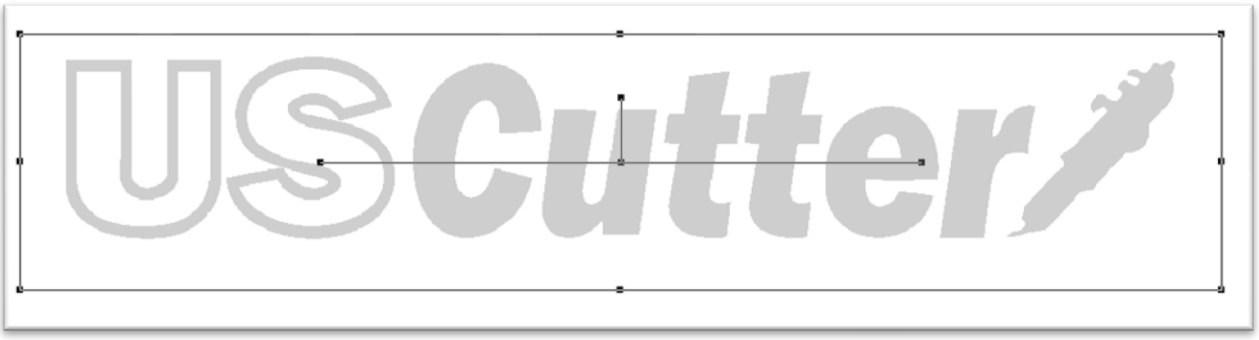
Sometimes an imported image will already be in monochrome but will still need to be vectorized before being cut. If the image imported is monochrome than you can skip ahead to the "vectorise" section.

The “Convert Image to monochrome” window will appear.



Now you can adjust the Threshold Level slider. Where you place the slider will determine how much of the image will be included in the monochrome conversion (*which is to become the image that will be cut*). Anything darker than the level set on the Threshold slider will be included in the cut and anything lighter will not.

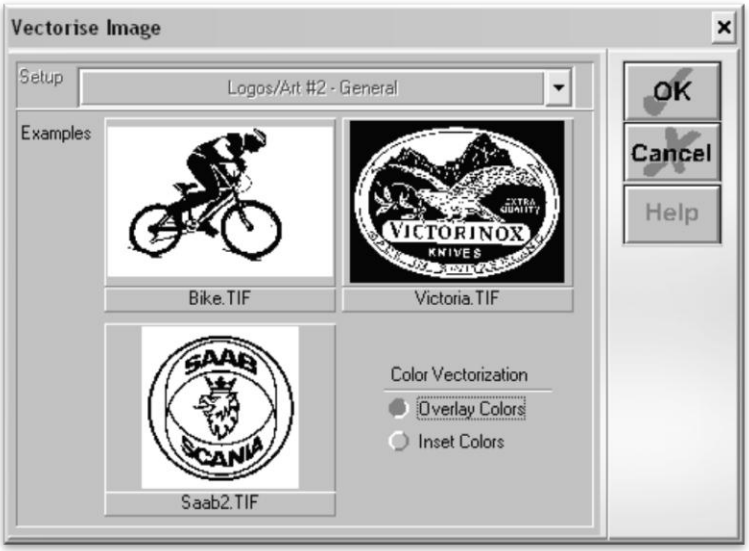
Since we chose an image with good contrast and separation for our example this process will be easy. We simply check that our image to be cut shows up in light grey or black and that there is no areas of the background or other parts of the image that are unnecessarily included.



Now press the OK button on the "Convert Image to monochrome" window.

Now to convert a monochrome image to a vector, select "Vectorise" from the Image drop down menu.

And press the OK button on the Vectorise Image window.



You are now left with 1 monochrome image and 1 vectorized image. This may be difficult to see as they are probably layered directly on top of one another. If you grab one image and drag it you will see the other image left behind. You can now delete the monochrome image that has been left behind as it is no longer needed.

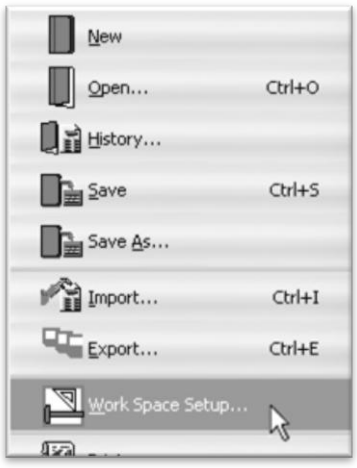
The cutting process for a vectorized image is the same as it is for cutting a simple image. You can now follow the steps from the "Making a Simple cut in SignBlazer" *(page 26)* section of this manual to make your cut.

Contour Cutting

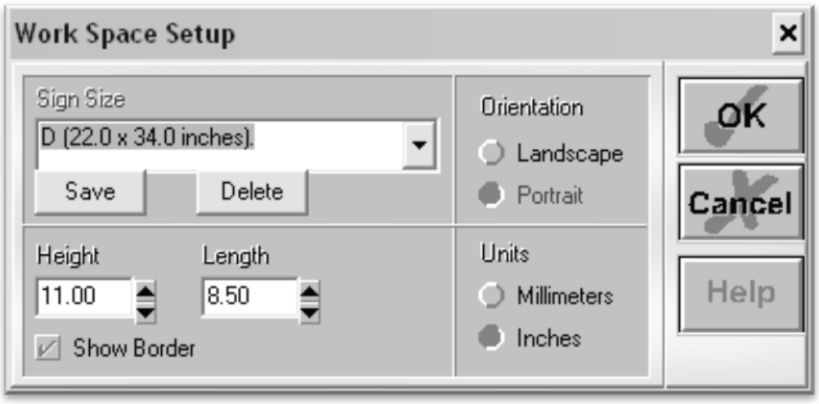
Contour cutting consists of two parts; First printing a graphic and then cutting around that graphic. Contour cutting is much more complicated than simple cutting and should only be attempted once you are familiar with the steps of making basic cuts.

When simply cutting from SignBlazer, it is not as necessary to make sure that your work space is set up to a specific size, only that the image to be cut is of the desired size. When contour cutting, you will want your work space to be comparable to the size of the material you will be printing to and cutting from.

To change your work space size in SignBlazer, select Work Space Setup from the File drop down menu.



Now you can either select a preregistered work space size, or you can enter your own dimensions into the Height and Length fields. In this demo we are planning on cutting a single sheet of 8½"x11" paper so we entered 11.00 into the height field and 8.50 into the length field.



After making your changes, you can confirm them by pressing the OK button.

Import an Image

First import an image using the same steps as the "Importing" section of this manual.

Preparing the Image

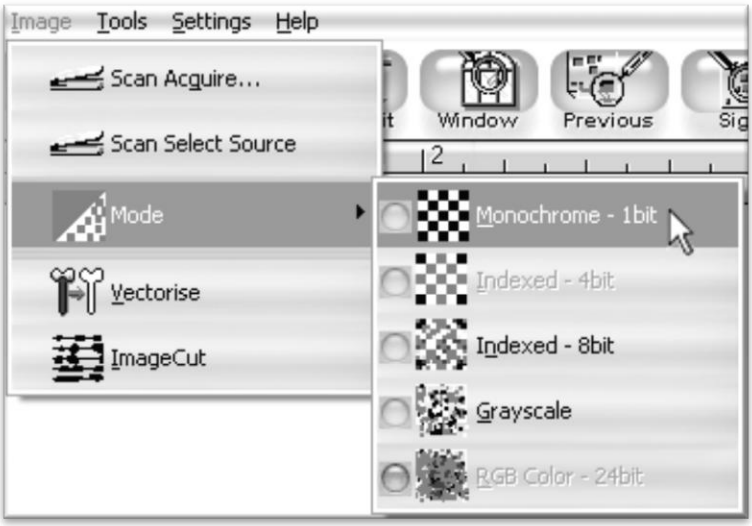
Once we have an image imported we will need to use it to create a cutting mask that will be the same size and dimensions of our printed image. The easiest way to do this is to create a cutting mask from the same image that is going to be printed. To do this without altering the printed image, we will create two versions of the graphic, one to be printed and one to be converted to a vector image for cutting.

To duplicate the image, first make sure that you have the image selected…

Then select Duplicate from the Edit drop down menu.

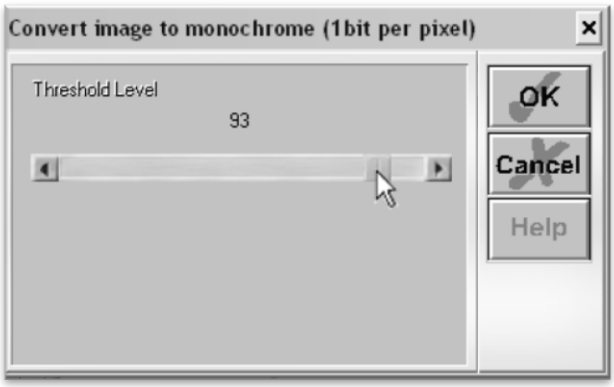
We can now convert one of the images to a vector graphic while leaving the original image, with fine detail, unedited.

Making sure that you have one of the duplicate images selected, choose "Monochrome – 1bit" from the Mode section of the Image drop down menu.

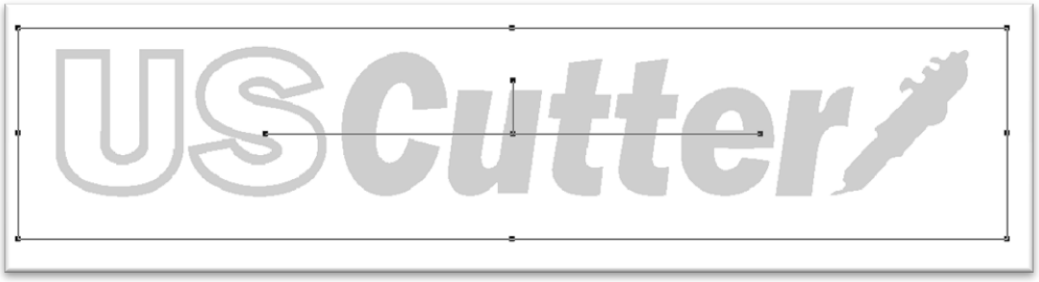


Since there are many light areas in this image that we want to be included in the vector image…

We will need to adjust the Threshold slider…



Until our entire image shows up filled in. *(Anything that shows filled in here will be included in the cut. Since we want a cut to go around the entire logo, we want to make sure that the entire logo shows up here filled in).*



Now we will vectorize the monochrome image by selecting Vectorise from the Image drop down menu.

Since converting from a monochrome image to a vector ends with two images *(the original monochrome does not go away)*, you will be left with three images total *(though it may be hard to tell as they are all sitting directly on top of one another)*. There will be one image that still retains all of the detail to be printed, 1 monochrome image and 1 vector image. Since this can be difficult to keep track of so many images we suggest deleting the monochrome image since it will not be needed again in the contour cutting process.

You can click and drag the images around until you have them separated. The monochrome image will be either light gray or black while the vector image will be blue.

Once you have the images separated and you can tell them apart, you can select the monochrome image…

And press the Delete key on your keyboard to delete it.

The next goal is to get the vector image and the raster image exactly on top of one another. The cut is going to be made around the vector image no matter where it lies so we want it to be placed directly on top of the image to be printed. Then when the image is printed and later cut, the cut will fall exactly around the border of the printed image.

Drag either the vector image or raster image until they are directly on top of one another.

You will know that the images are lined up exactly when one completely obstructs the other. *(it does not matter which is on the top and which is on the bottom, but if you are following the steps exactly, the vector image would be on the top at this point*).

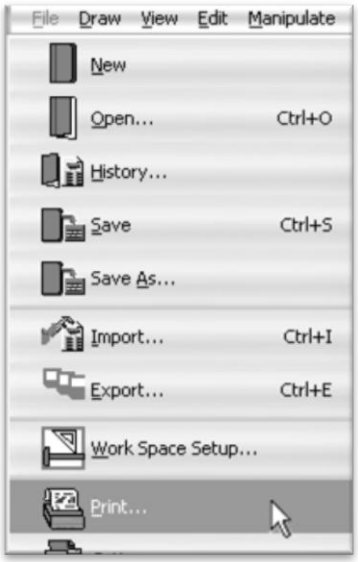
You may find it easier to align the two images after turning on the cut mask for the vector image. This is already a necessary step so that the vector image isn't printed while it is on top of our more detailed raster image. This will show only the line to be cut instead of the image that will result from the cut.

To turn on the vector image's cut mask, make sure that the vector image is selected, then choose the "Cut Mask On/Off" option from the Manipulate drop down menu.

This will allow you to see the cut mask that borders the printed image and also help you align them more precisely.

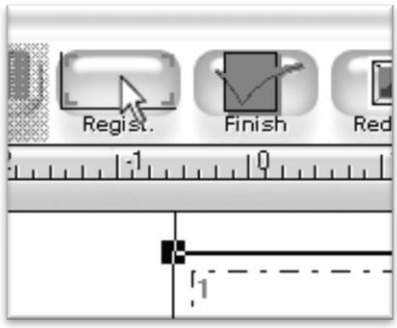
Now all of the images are ready. We will print the image with registration marks that will allow us to get the printed image lined up in the cutter so that the cut line falls around the printed image, just as it does on the screen display in SignBlazer.

To go to the print screen, select Print from the File drop down menu.



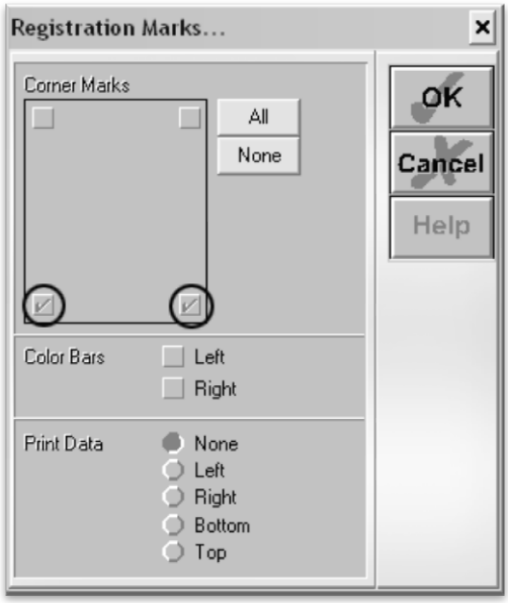
You will now see the print screen which looks similar to the main screen, with a few different options in the top selection boxes.

We need to add registration marks to the printed image. To do so, select “Regist.” from the top menu boxes.



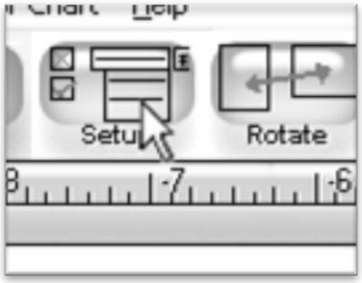
You will need to add registration marks on both the left and right sides of the bottom edge of the printed image.

Select the two boxes towards the bottom in the Corner Marks selection.

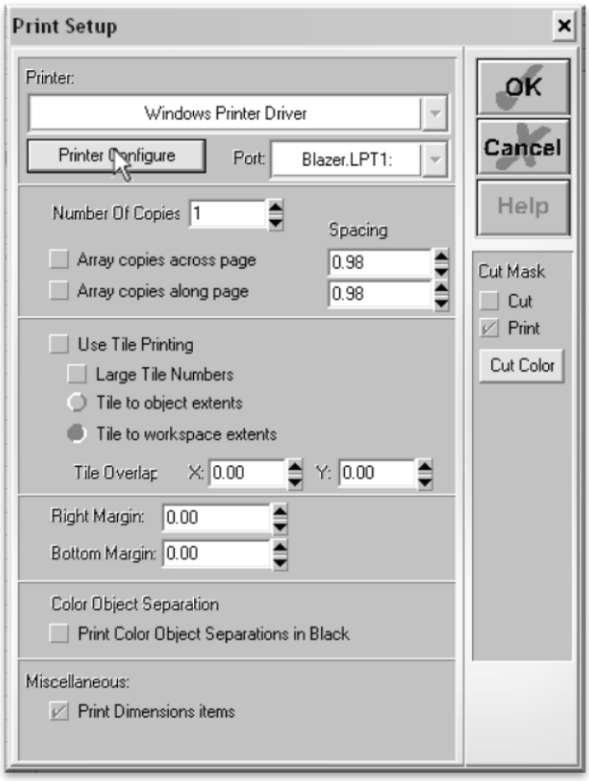


Accept these options by pressing the OK button in the Registration Marks window.

To adjust your printer settings, select the Setup button from the top menu boxes.

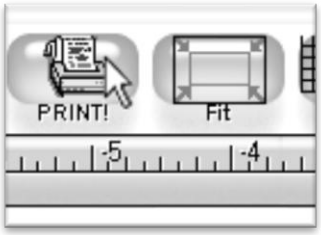


This will bring you to the Print Setup window. The default options should be sufficient for this demonstration, but you can make changes here if you need to on future projects. You can access your common print setup window by pressing the Printer Configure button *(to select a printer from your network, or to adjust print quality)*.



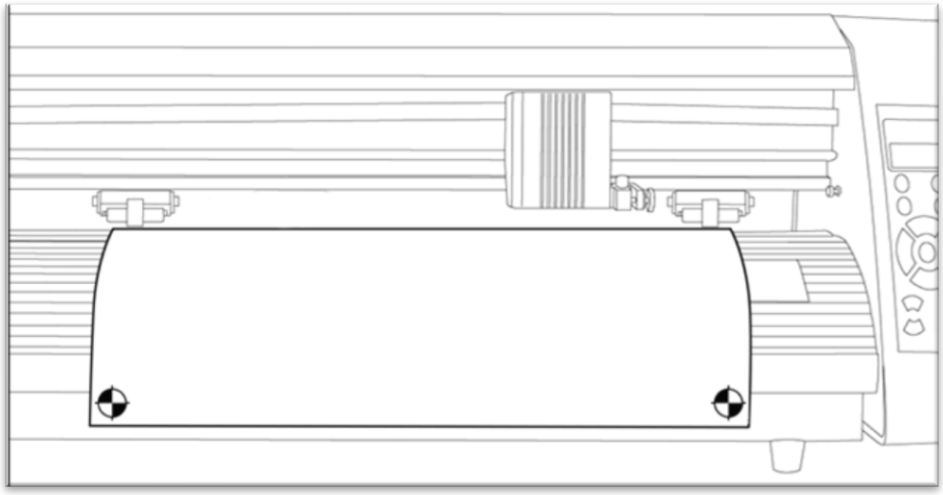
Make any necessary changes for your specific print setup and then confirm the changes by pressing the OK button.

You are now ready to print. Press the Print Button from the top menu boxes to print the image with your selected printer options.



We are now done in the Printer screen so you can press the Finish button from the top menu boxes to return to the main SignBlazer screen.

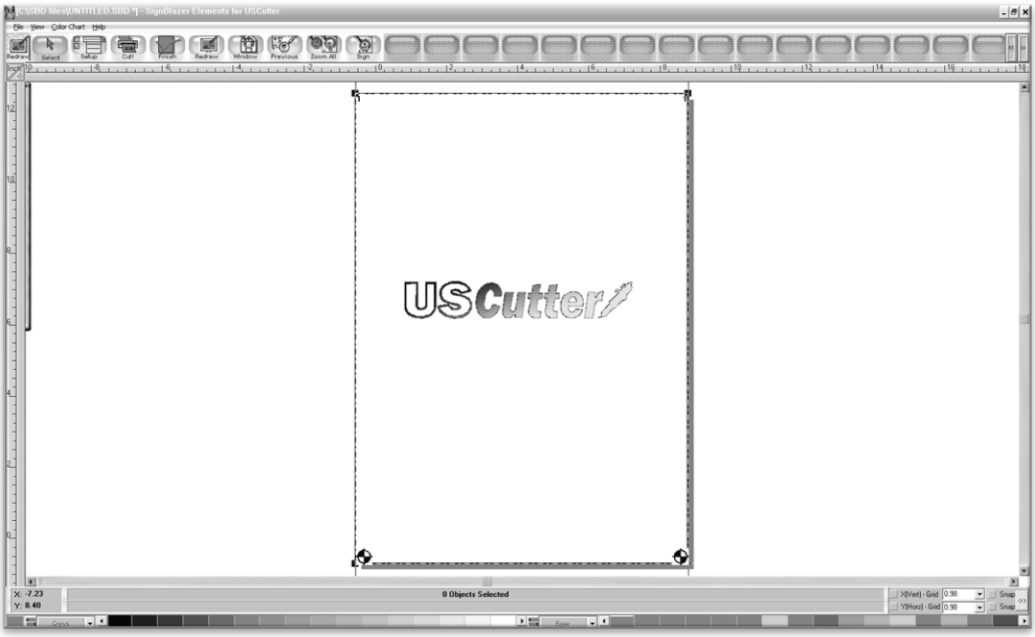
Follow the steps from the "Preparing the LaserPoint for Cutting" (*page 20*) section of this manual to get your media loaded into your cutter and ready to cut. Make sure that the registration marks are aligned at the left and right sides of the bottom edge of the print just as they were on the print screen of the SignBlazer software.



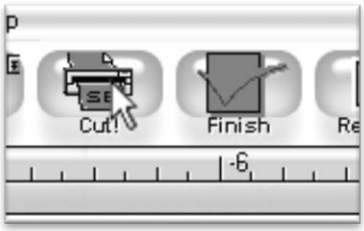
Make sure that your cutter is on and in On Line mode before proceeding.

Now, back at the main screen of the SignBlazer software, select Cut A Print from the File drop down menu to go to the Cut A Print screen.

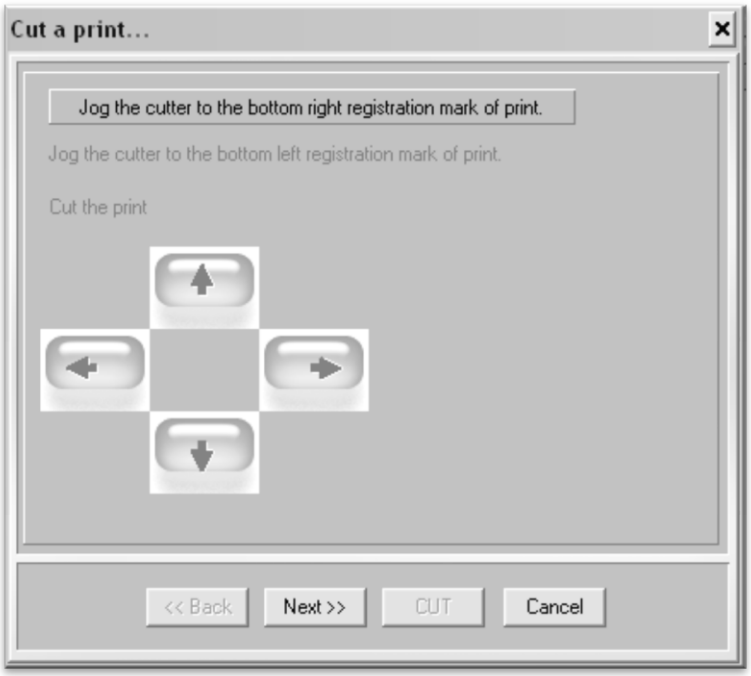
The Cut A Print screen will look very similar to the main screen of the SignBlazer software, but will have a few different menus and options.



No changes need to be made here, so we will go directly to the Cut window by pressing the Cut button from the top menu boxes.

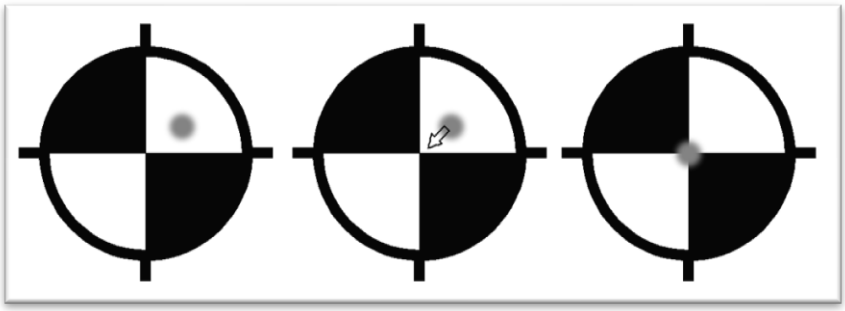


Now, you will follow the on screen instructions to get your image properly aligned so that the cutter can make a precise cut in relation to where the printed image is.

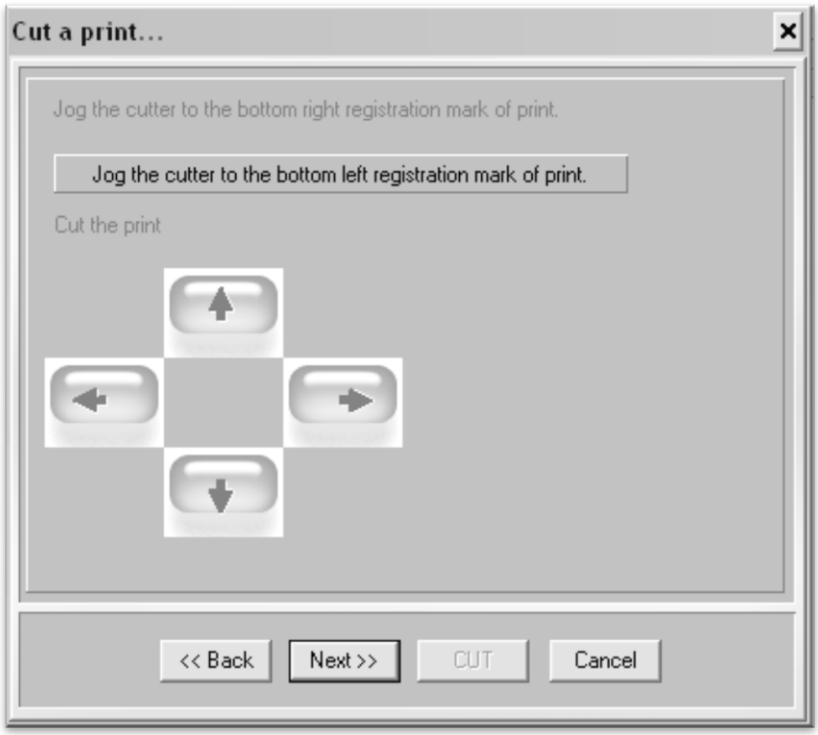


You are telling the cutter where exactly the image falls by letting it "see" where the registration marks lay. You will move the laser until it falls in the center of the registration marks, first on the right registration mark, then the left.

You can either click the on screen arrows or use the numeric key pad on your keyboard to move the cutting blade, laser, and rollers to adjust where your print will start. Make sure your Number Lock is engaged on your keyboard if you decide to use it. If using the numeric key pad on your keyboard, you can switch between a more precise*(but slower)* movement of the laser and a faster (*but less precise*) movement by pressing the 5 key. Try to make the laser fall as close to the center of the registration mark as possible.



Now, click the next button, and you will need to do the same for the left registration mark.

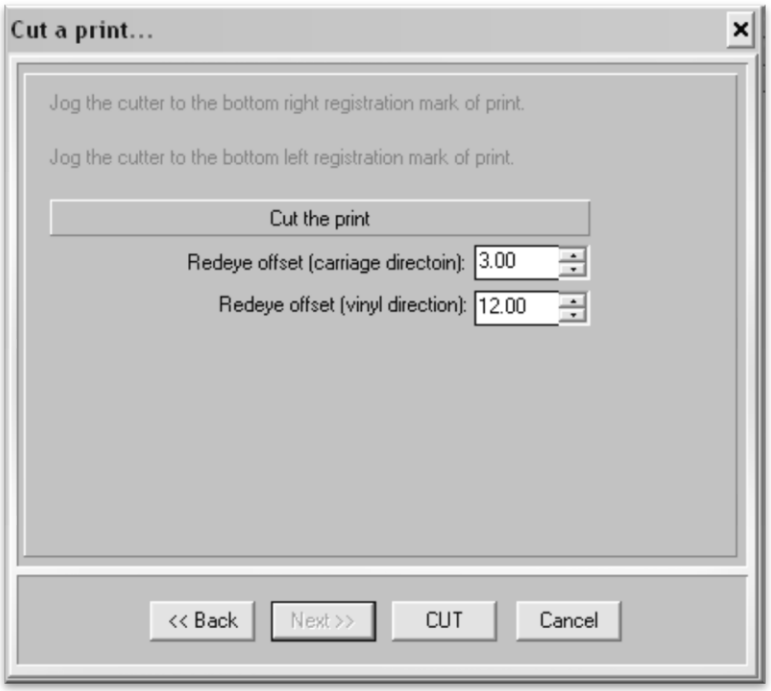


After you have registered the left mark, click next and the cutter will prepare for the cut.

The last Cut A Print window will appear.

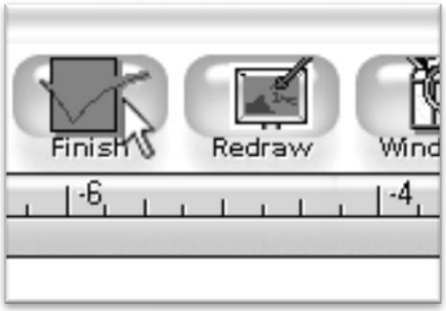
Since all cutters vary slightly, you can make adjustments if you find that the cut is slightly off of where it is intended. Since we are assuming that this is your first contour cut with this software and machine, we will leave the options to their default settings, but you can change them on subsequent cuts, if you find that the cutter is consistently off of its intended mark.

Press Cut to make the cut.



To exit the Cut window, click cancel.

Then to return to the main SignBlazer screen, press the Finish button from the top menu boxes.



Specifications

LaserPoint Release Date	October, 2007
Controller	16 bit CPU
Control Panel	2x8 LCD 13 button thin-film keyboard
Driver:	High stepping motor, micro-step driver
Maximum Paper Feed Width	28.74 inches (730mm) - 24 inch model 39.37 inches (1000mm) - 36 inch model 51.18 inches (1300mm) - 48 inch model
Maximum Cutting Width	25.20 inches (640mm) - 24 inch model 35.63 inches (905mm) - 36 inch model 47.64 inches (1210mm) - 48 inch model
Maximum Cutting Speed	15.75 inches (400mm) per second
Maximum Cutting Thickness	.039 inches (1mm)
Pressure Range	0 - 400g
Precision	.1mm
Plotting Pen	All 11.4mm diameter plotting pens
Communications Protocol	DM-PL HP/GL; automatic identification
Communications Interface	USB (Universal Serial Bus) and RS-232 Serial (9 pin
Input Power	110 VAC/ 220 VAC 50 Hz / 60 Hz (auto-switching) Standard power cord included with unit is US-standard 110 VAC grounded plug.
Power Consumption	Less than 100VA
Customer Service Line	425-481-3555; option #3. Available 8am - 5pm, Mon-Fri
Technical Support Line	425-481-3555; option #2 Available 9am - 4pm, Mon-Fri
Technical Support Website	support.uscutter.com
Customer Forums	forum.uscutter.com
Manufactured For and Sold Directly By	USCutter 19510 114th Avenue NE, Suite C-1 Woodinville, WA 98072 425-481-3555 phone 888-640-0720 fax www.USCutter.com

Troubleshooting

Problem	Solution
The cutter is unresponsive to communications from the computer and software.	Communication issues can arise if the cutter was powered on while the software is trying to send data to or from the cutter. Exiting the cutter screen of SignBlazer and returning to the main SignBlazer screen may resolve this issue. If not, save all work and try exiting SignBlazer and restarting with the cutter powered on. It is good practice to start SignBlazer with the cutter powered on to avoid communication problems. Make sure that your output device in SignBlazer (*Found by selecting File>Cutter from the menu on the main SignBlazer screen, and then selecting Setup from the top menu buttons*) is set to the correct COM port. (*Your COM port can be found by following the instructions in the "Finding Your COM Port" section of this manual on page 19*). You can change your COM Port by right-clicking on the COM Port in the device manager and going to the advanced section of the Port Settings tab. Adjust your Flow Control settings to Hardware by first locating your COM Port in the device manager (*By following the instructions on page 19*), then right-click the COM Port and select Properties. On the Port Settings tab, change to Flow Control option to Hardware.
Black boxes show up on the Display Screen of the Control Panel when cutter is turned on.	One of the Emergency Kill Switches may be pressed or otherwise engaged. Make sure that nothing is pressing on either of the Kill Switches or that they have not become stuck in the pressed position. If a problem persists, w**ith power off and the power cord removed**, check for crossed wires from one of the kill switches to the motherboard.
The Display Screen on the Control Panel of the cutter is not outputting a display.	The cable transmitting data to the Display Screen may have become disconnected. **With power off and the power cord removed**, remove the Right side panel from the LaserPoint cutter and verify that the cable is connected. If the cable appears to be connected but there are still display problems, you can disconnect the cable and reconnect it to make sure that a proper connection has been established.
The Laser is not emitting light.	If the laser is not lit while the power of the LaserPoint is on, then there may be a defect with the laser. Contact USCutter for laser replacement options.
The LaserPoint is not powering on when the Power Button is placed in the on position.	Try another outlet or surge protector or verify that the outlet being used is sufficiently powered.

The LaserPoint is not powering on when the Power Button is placed in the on position.(continued)	Power issues can be a result of a faulty or damaged power cord. Try another cord on the LaserPoint or test the power cord with another device to verify that the power cord is working properly. If the problem is not a result of either the outlet or power cord, there may be a connection problem inside of the machine. **With the power switch in the off position and the power cord removed**, remove the left side panel of the LaserPoint cutter and check all of the connections from the power cord and power switch. Repair or replace as necessary.
While attempting to cut, the Blade of the LaserPoint will not lower.	The Locking Knob of the Carriage Arm may have become over tightened and is protruding through the back of the Carriage Arm, blocking the arm from lowering. Loosen this until there is no longer a blockage.
When starting the SignBlazer Software it fails to find updates.	This is a regular occurrence of the SignBlazer software and should not be considered a problem. All features of the software will continue to work in trial mode without updates. To deactivate the update process, redirect the shortcut (*of either the desktop icon or start menu selection that you use to open the SignBlazer software*) to SignBlazer. Right-click it and select Properties. From the Properties menu, change last section of the Target option from "sb.exe" to "sbnt.exe". Press the Apply button, then the OK button. This will bypass the update process.
Cuts are jagged or inconsistent.	The Blade may be dulled or damaged. Replace with a new blade and try again. Make sure that the blade can turn freely (*by attempting to turn it with your fingers while the release button of the Blade Carriage is pressed*). Adjust the blade depth of the Blade Carriage(*page 17*) and Pressure Setting on the cutter(*Page 9*) until you are getting solid, uniform cuts. Start with a blade depth of around 1/64th of an inch and a pressure setting of 120 and try an increased pressure setting before attempting to increase the blade depth.

Other solutions may be found by visiting the Customer Forums or Technical Support Website, or by calling the Technical Support Line (Web page addresses and Phone number on the specifications page, 46).