



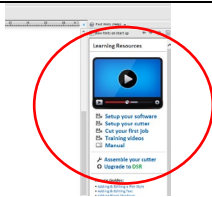
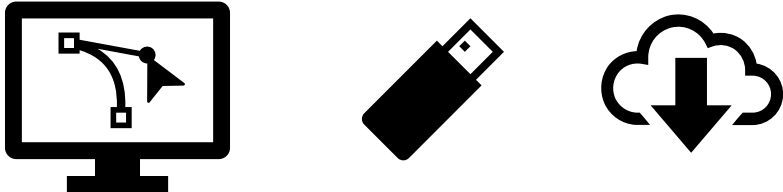
VINYL CUTTER OPERATIONS: TITAN 3

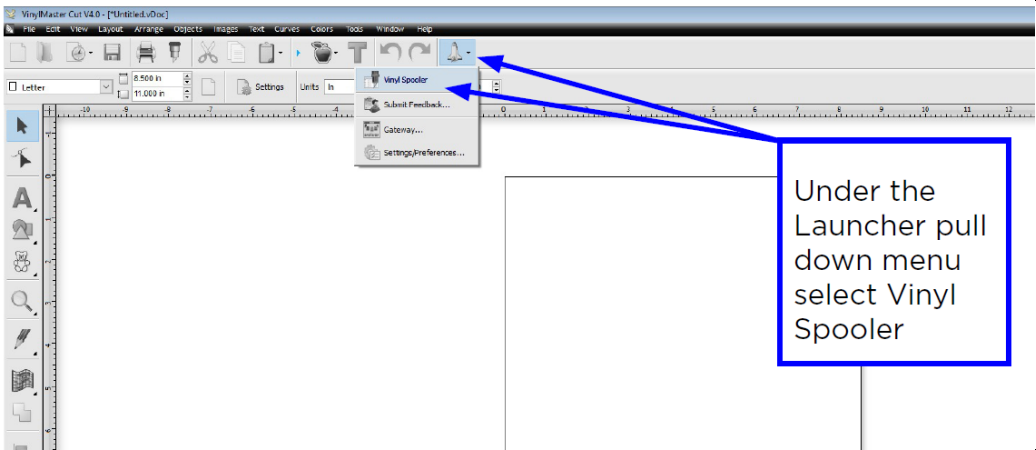
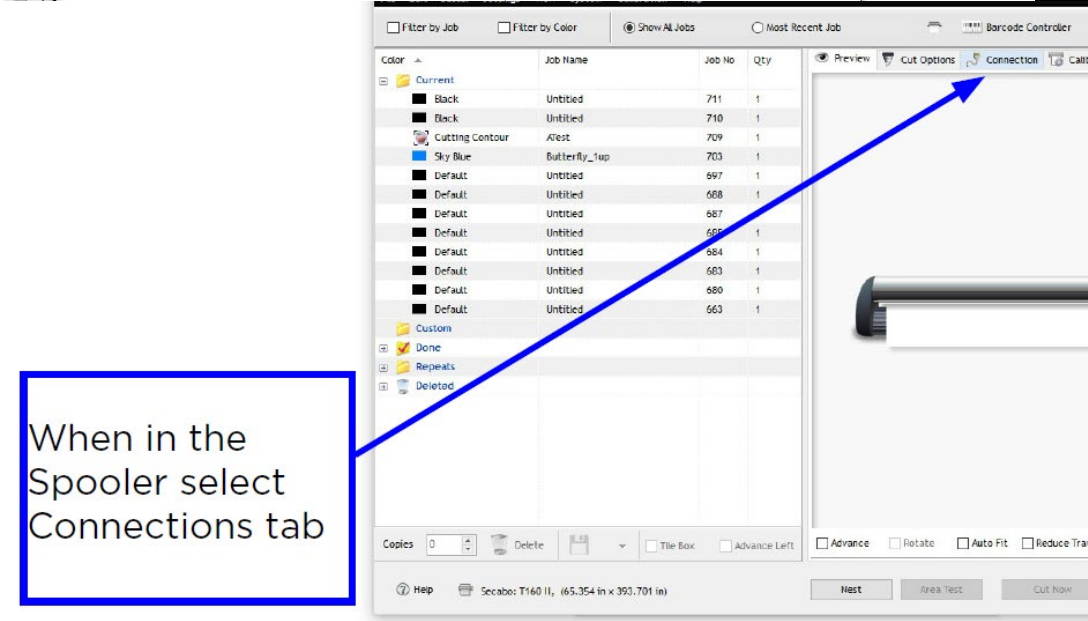


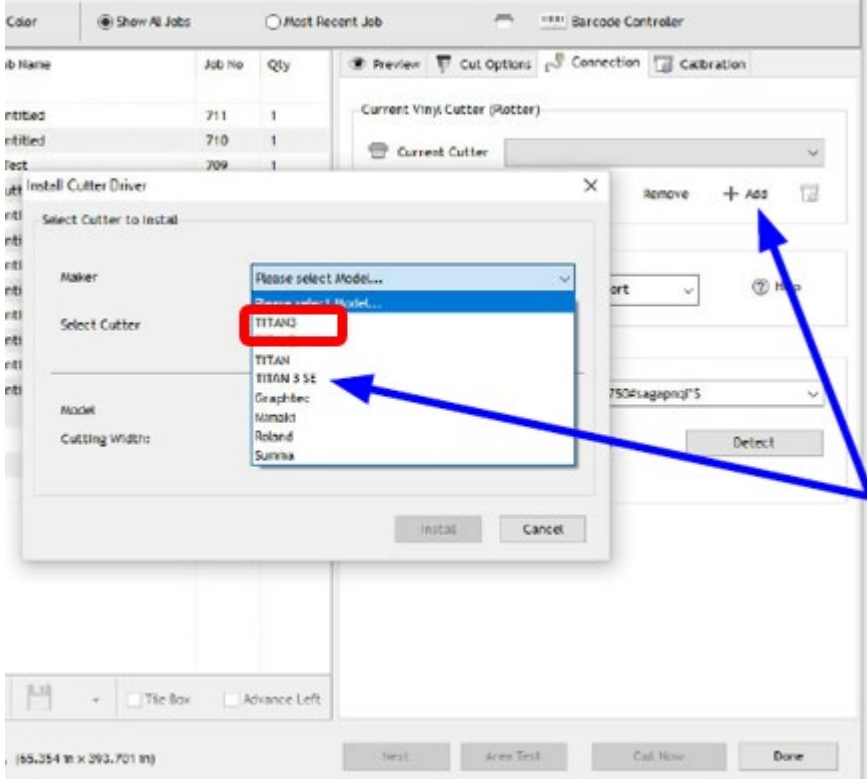
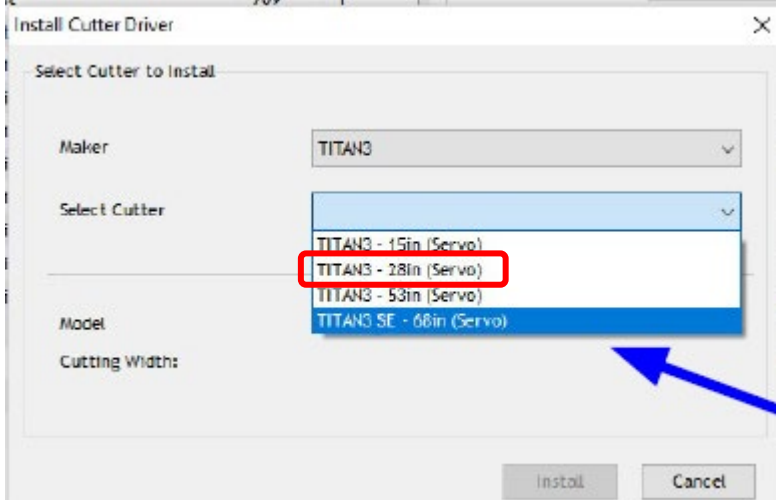
FRISCO PUBLIC LIBRARY

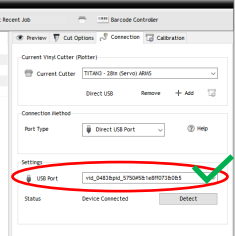
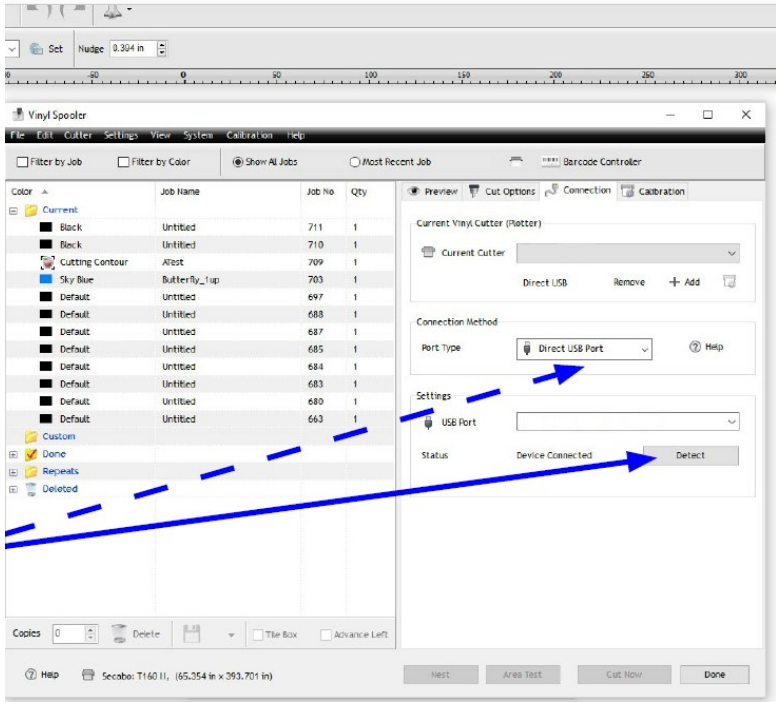
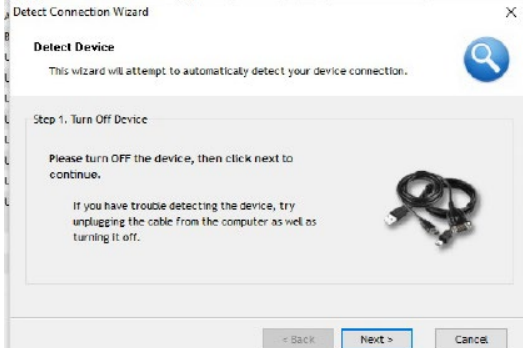

3/1/2023

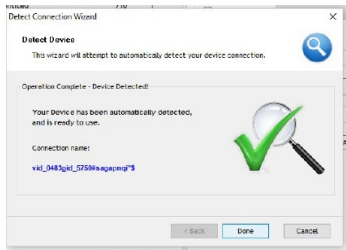
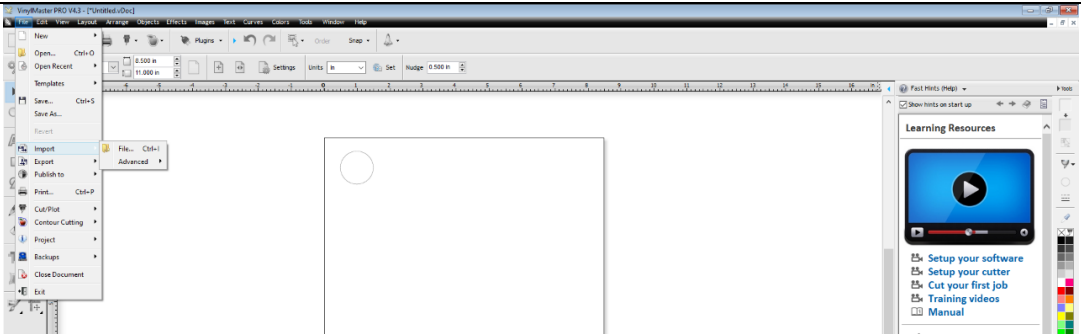
Vinyl Cutter – Titan3

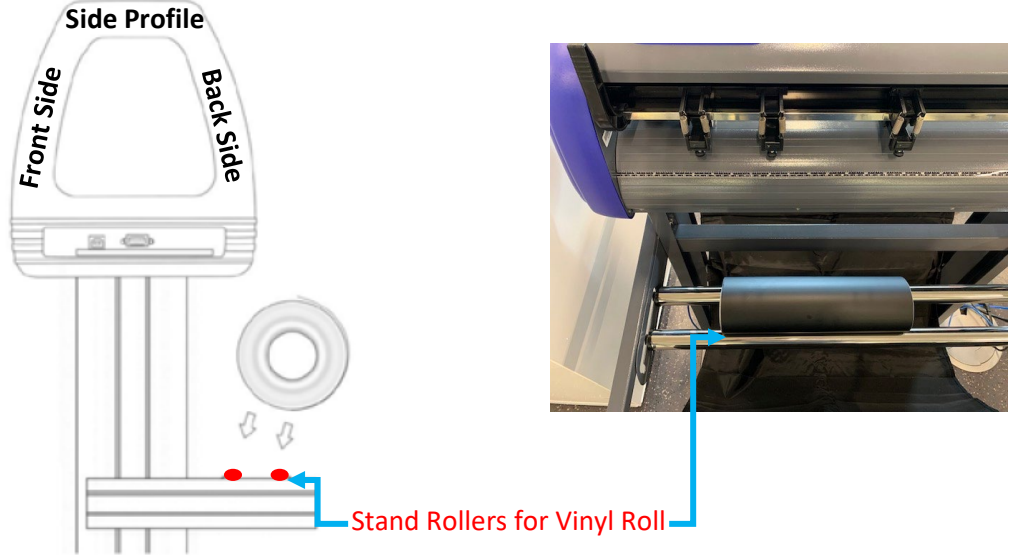
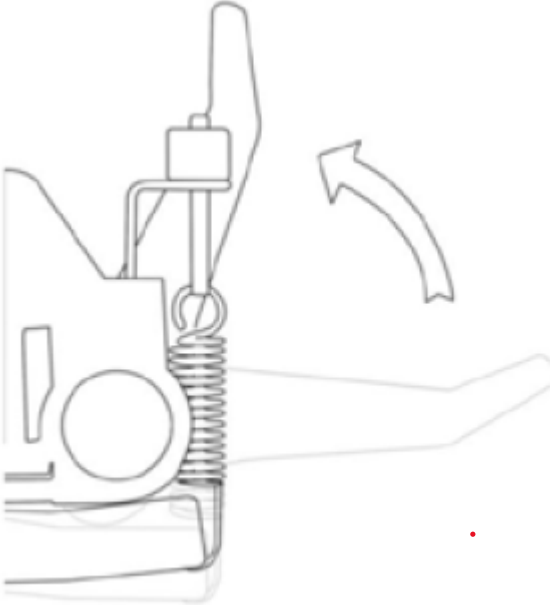
#	Steps	Key Points	Details	Pictures
1	<p>Use keys to:</p> <p>1. Unlock toolbox</p> <p>2. Power on cutter with key.</p>	<p>Vinyl Cutter switch should remain on.</p>		
2	<p>Open VinylMaster software</p>	<p>Double click the desktop icon to open program.</p> <p>Click New Document</p>	<p>You will use this application to send your design to the Titan3 Vinyl Cutter.</p>	
3	<p>VinylMaster Tutorials</p>	<p>Help Menu or F1:</p> <p>Use to access:</p> <ul style="list-style-type: none"> • Video tutorials • Manual 	<p>Tutorials, lessons, and manual organized by topics in the help menu.</p>	
4	<p>Your Design File</p>	<p>You need a vector graphic (.svg file) for the vinyl cutter to be able to cut the outline.</p> <p>You will open your SVG file in a later step.</p> <p>Now is a good time to download your design or plug in your USB drive.</p>	<p>JPEG and PNG files are made up of pixels and not actual lines, thus cannot be cut out.</p> <p>Try using Inkscape (free) or Adobe Illustrator to create a vector design.</p>	

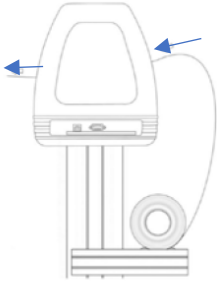
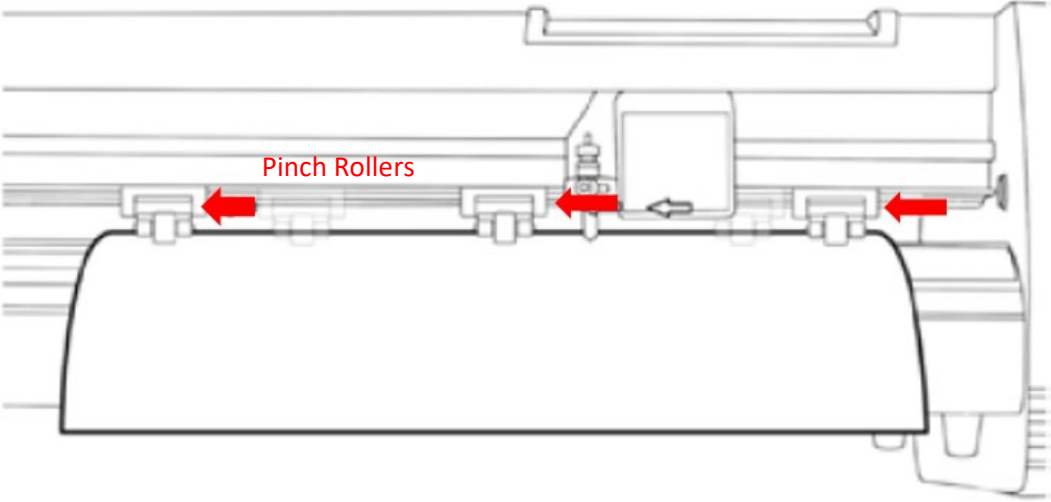
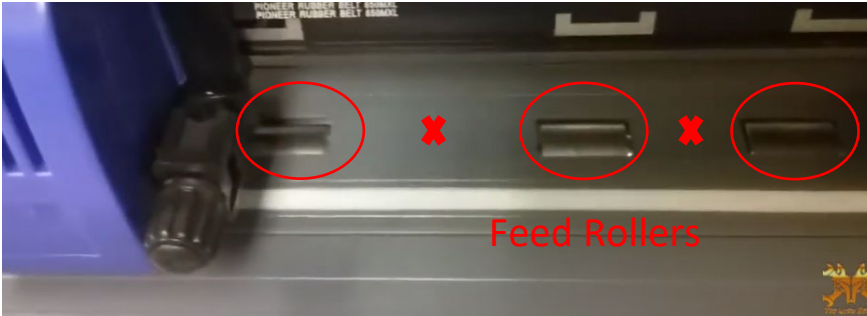
5	Connect to Titan3 Vinyl Cutter:	<ol style="list-style-type: none"> 1. Click the space shuttle icon 2. Click Vinyl Spooler 	Occasionally the software is not immediately connected to the Titan3 vinyl cutter machine.	
6	Connect to Titan3 Vinyl Cutter: Click Connections tab.	<p>Check to see if you are connected to the Titan3 machine.</p> <p>Sometimes a previous user may have changed the default.</p>	<p>The software should already be configured for the Titan3 cutter.</p> <p>Sometimes a previous user may have changed the default.</p>	

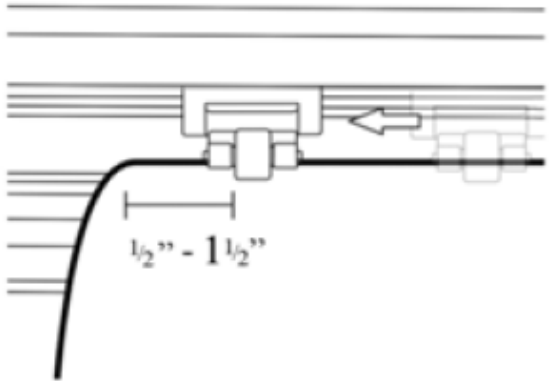
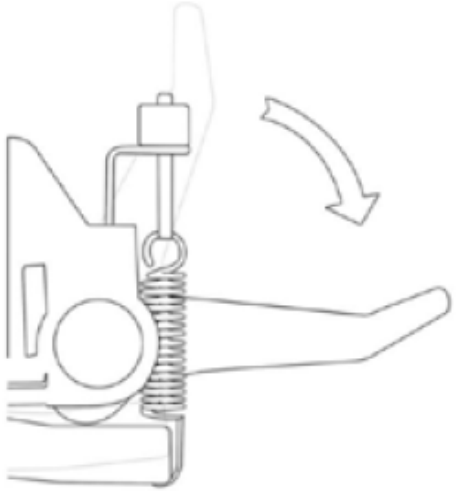
7	<p>If Titan3 is not listed:</p> <p>Connect to Titan3 vinyl cutter:</p> <p>1. click Add</p> <p>2. Select Titan3</p> <p>If Titan3 is listed, skip to step 9.</p>	<p>Add the Titan3 machine if it is not already listed.</p> <p>Viny Cutter: Titan3 – 28 in (Servo) ARMS</p>	<p>The Titan3 is the model of vinyl cutter you will be using.</p> <p>The Titan3 must be installed in VinylMaster in order to send the job to the cutter.</p>	
8	<p>Connect to Titan3 vinyl cutter:</p>	<p>Select: Titan3 28in Servo ARMS</p>	<p>This is the specific model of vinyl cutter you will be using in the library.</p>	

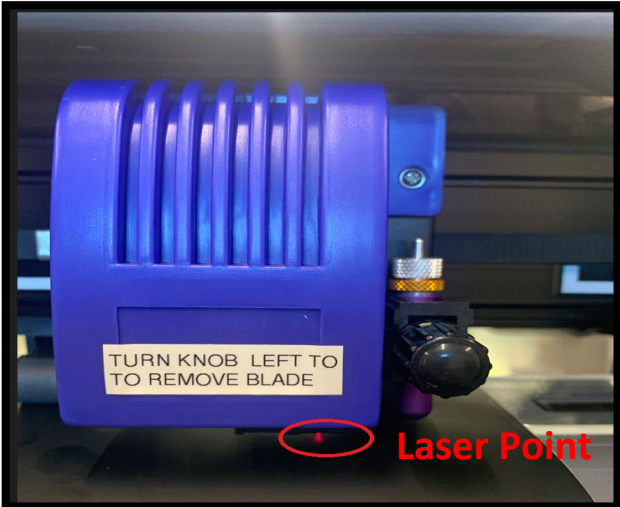
9	<p>Confirm Port Type and Connection</p> <p>If connected skip to Step 12.</p>	<p>Port Type: Direct USB Port</p> <p>USB Port: This field should show a string of letters and numbers like below:</p>  <p>If USB Port field is good:</p> <ul style="list-style-type: none"> Click Done Skip to step 9 <p>If there is not information filled in on the USB Port field:</p> <p>Click Detect</p>	<p>This shows that the computer can send communications to the vinyl cutter.</p>	
10	<p>Turn Titan3 off and then on as prompted.</p> <p>Click NEXT</p>	<p>You may not be prompted to turn the vinyl cutter machine off and back on.</p> <p>Use the power switch located to left of the Titan3 vinyl cutter to turn it off and on.</p>	<p>Turning the Titan3 vinyl cutter off and on will help the software identify the connection.</p>	 

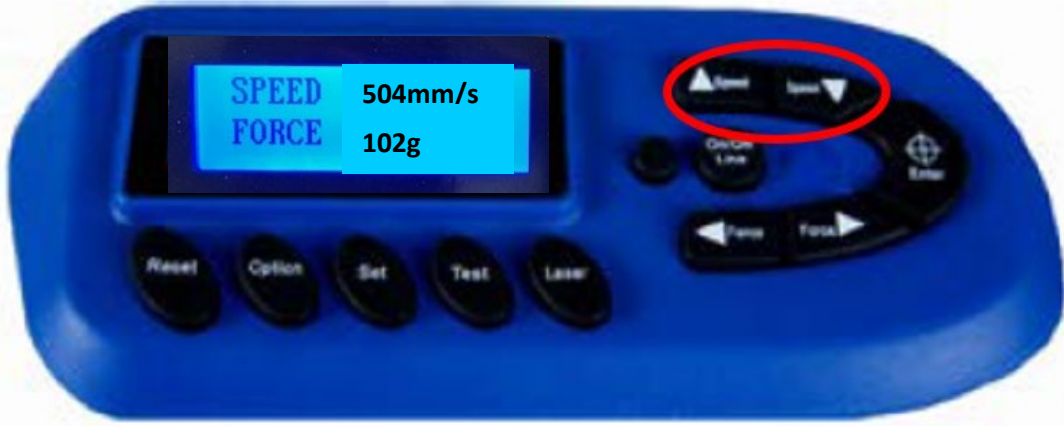
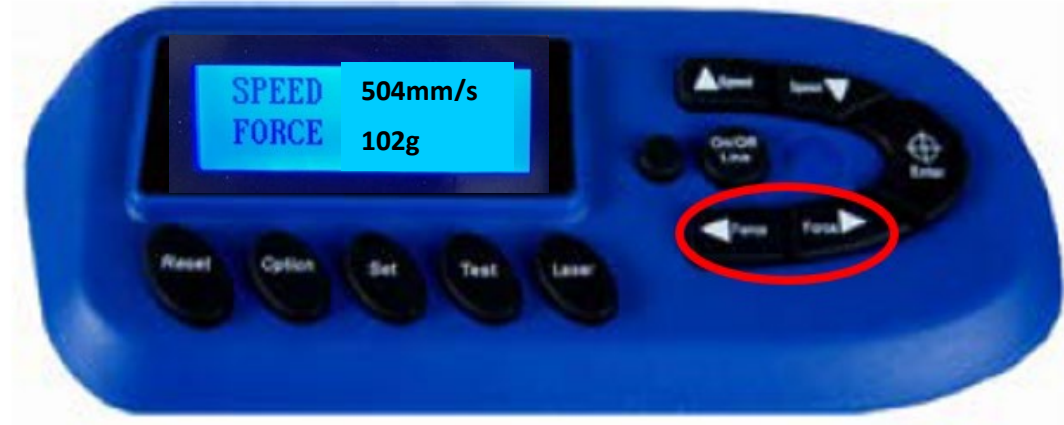
11	Click DONE	If successfully connected you can click DONE.	The computer and vinyl cutter have successfully connected and can communicate.	
12	Import Design File Menu → Import	<p>Select File menu</p> <p>Mouse Over Import</p> <p>Select File</p> <p>Position your image by moving the mouse over the blank page area and left click.</p> <p>Then navigate to your .SVG file.</p> <p>You can make edits using the VinylMaster software.</p>	<p>Placement of the image is not important. The software will eliminate any extra blank white space around your design.</p> <p>If you see that edits are necessary, you can either edit using VinylCut or the software of your choice.</p> <p>We also have computers with Inkscape and/or Illustrator available in the computer lab for additional design editing.</p>	


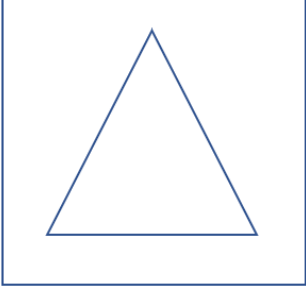
13	Inserting Material	<p>If you are using a roll of vinyl, place the vinyl roll on top of the stand rollers, at back of machine.</p> <p>If you are using a sheet, this step does not apply to you.</p>	The library does not provide vinyl.	
14	Lever Position	Make sure the lever on the back of the vinyl cutter is in the UP position .	This will open the feed mechanism and allow you to insert your vinyl material.	


15	<p>Insert the vinyl into the back of the machine.</p>	<p>Feed the vinyl underneath the pinch rollers until you can see it coming through the front.</p> <p>A sheet of vinyl can also be inserted from the front if necessary.</p>		
16	<p>Adjust pinch rollers.</p> <p>Pinch rollers should align on top of the feed rollers.</p> <p>Avoid lowering a pinch roller in the gap between the two feed rollers.</p>	<p>You want one roller on each side of the vinyl.</p> <p>Position one pinch roller in the center of the material.</p> <p>Pinch rollers slide. Place two fingers on the side of the pinch roller and slide it in the direction you want it to move.</p>	<p>Pinch rollers do not slide easily.</p> <p>Use caution and care when positioning.</p> <p>Your material size may not allow for the ideal placement of pinch rollers.</p> <p>Your material can be aligned anywhere inside the cutter. It does not have to be flush left or right.</p>	 


17	<p>Leave a ½ inch to 1 ½ inch gap from roller to edge of material on BOTH SIDES.</p>	<p>You may need to finely reposition your pinch rollers.</p> <p>Your material may not be wide enough for this ideal setting.</p>	<p>Rollers to close to the edge can cause the material to not feed correctly.</p>	 <p>The diagram illustrates the pinch roller assembly. A horizontal line represents the material edge. The pinch roller is positioned above it. A dimension line indicates the gap between the roller and the material edge, labeled as $\frac{1}{2}'' - 1\frac{1}{2}''$. An arrow points to the right, indicating the direction of material feed.</p>
18	<p>Lever Position - Engage the pinch rollers</p>	<p>Push down on lever on the back of the machine.</p>	<p>This will engage the pinch rollers so they can grip and feed your material.</p>	 <p>The diagram shows a lever mechanism. A hand is shown pushing down on the lever. An arrow indicates the lever's movement from an up position to a down position. The lever is connected to a spring and a pin, which is used to engage the pinch rollers.</p>







19	Set the Origin Point	<ol style="list-style-type: none"> 1. Press On/Off Line button on vinyl cutter. Vinyl cutter should be OFFLINE and displaying: MOVE XO on the screen. 2. Press arrow buttons on vinyl cutter to move carriage and material. 3. Stop moving carriage and material once you have it in your preferred start point. 4. Press Enter 	<p>This sets the point from which the vinyl cutter will begin cutting the design.</p> <p>Press the LASER button for a laser pointer to show where the origin point falls on your material.</p>	  
----	----------------------	--	---	---



20	Set Speed	<p>Use the Speed buttons on the vinyl cutter to set speed.</p> <p>500 mm/s (approx.) is a recommended starting point.</p> <p>You likely will not be able to set it exactly at 500 mm/s.</p>	<p>Use slower speeds for more intricate designs.</p> <p>Use faster speeds for simpler designs.</p> <p>You may need to test a cut and then adjust based on results.</p>	 <p>The image shows a blue vinyl cutter control panel. The LCD screen displays 'SPEED 504mm/s' and 'FORCE 102g'. A red circle highlights the 'Speed' buttons, which are labeled with up and down arrows and the word 'Speed'.</p>
21	Set Force	<p>Use the Force buttons on the vinyl cutter to adjust the force.</p> <p>100g (approx.) is typically adequate.</p> <p>You likely will not be able to set it exactly at 100g.</p>	<p>This adjust how hard the blade will be pushed into the material.</p> <p>Thicker and stiffer materials require more force than lighter more flexible material.</p> <p>Next you will run a test pattern to see if the pressure and speed selected work for your vinyl.</p>	 <p>The image shows the same blue vinyl cutter control panel. The LCD screen displays 'SPEED 504mm/s' and 'FORCE 102g'. A red circle highlights the 'Force' buttons, which are labeled with left and right arrows and the word 'Force'.</p>

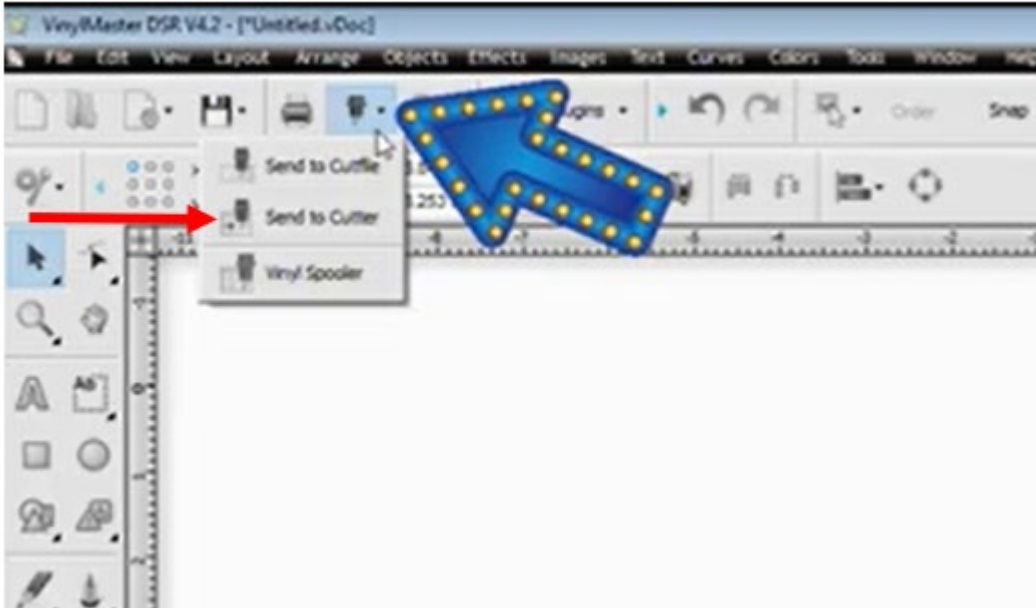

22	<p>TEST CUT</p> <p>Run the preloaded test pattern to tests the SPEED and FORCE settings for your material.</p>	<p>Press the Test button on the vinyl cutter.</p> <p>The vinyl cutter will cut the test pattern on your material.</p> <p><u>AFTER TEST CUT:</u> Feed the vinyl forward by:</p> <ul style="list-style-type: none"> Pressing On/Off Line button on vinyl cutter. Vinyl cutter should be displaying: MOVE XO on the screen Press speed arrow buttons on vinyl cutter to move the material forward to review test cut. 	<p>Performing a test cut will allow you to review the outcome for the speed and force settings.</p>	  <p>Test Cut Pattern</p>
----	---	--	---	--

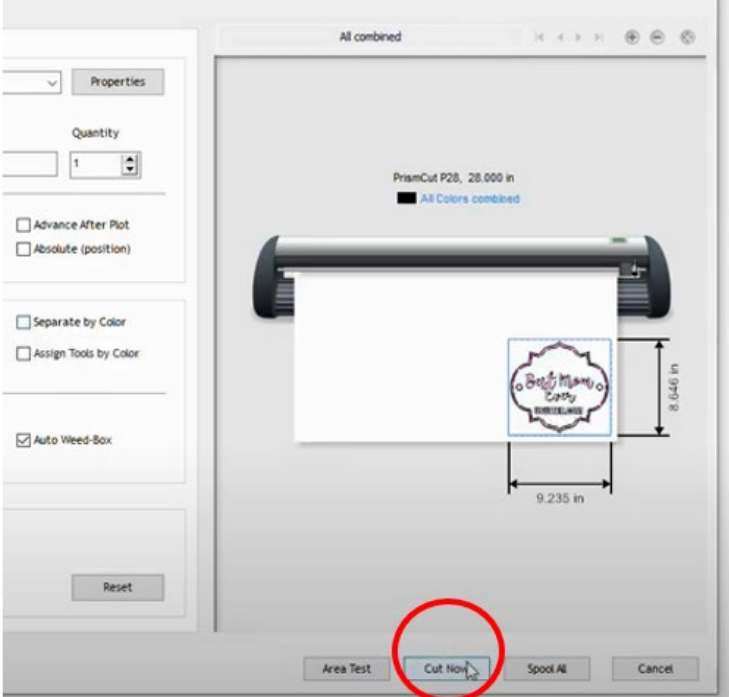
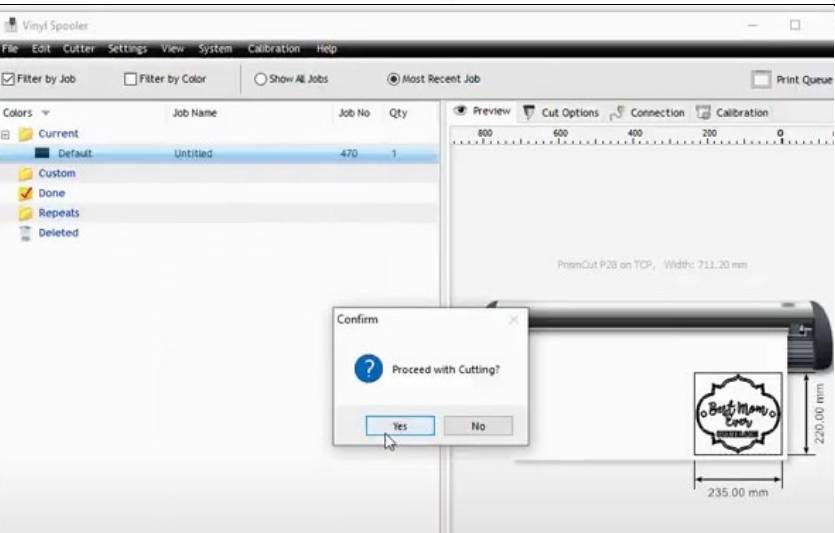
23	<p>REVIEW TEST CUT</p> <p>Peel away the square border leaving the center triangle.</p>	<p>Blade cutting too deep and through the backing (carrier)?</p> <p>Decrease Force</p> <p>Outer square doesn't feed properly?</p> <p>Increase Force</p>	<p>The backing (sometimes referred to as the carrier) should only be lightly scored. You should be able to easily pull-out shapes.</p> <p>This process of removing the vinyl element/shape to keep is called weeding.</p>	
----	--	---	---	---

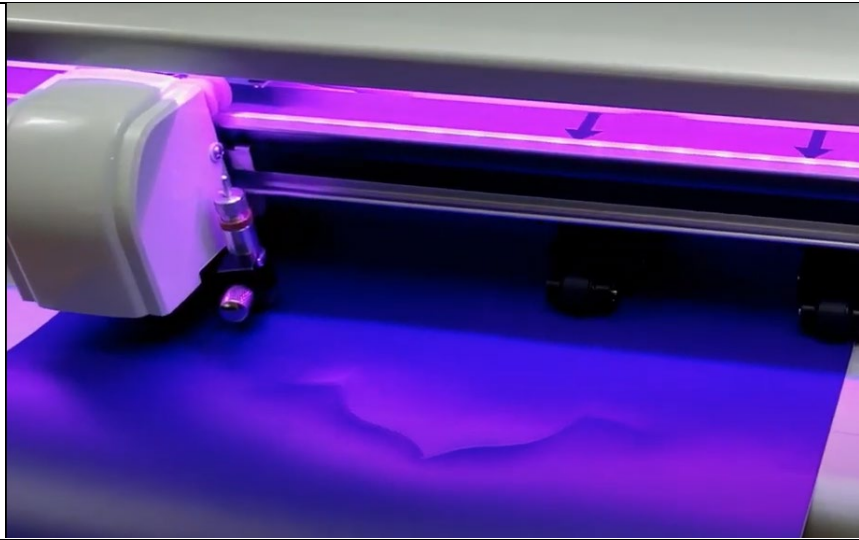
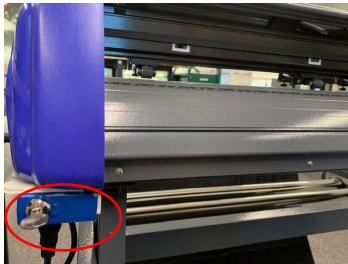
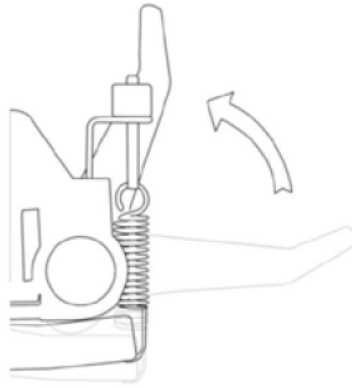
24	<p>REVIEW TEST CUT:</p> <p>Check cut lines.</p>	<p>Examine cut lines for any issues such as:</p> <p>Cut line looks perforated or dashed.</p> <p>Decrease blade depth.</p> <p>Cut line not cutting towards the end.</p> <p>Blade not secured properly.</p>	<p>You may need a different blade.</p> <p>45° blades: Good for most vinyl</p> <p>30° blades: Better for heat press vinyl.</p> <p>60° blades: Best for thicker materials.</p> <p>There is a video on how to change the blade saved to the computer desktop and linked on the vinyl cutter page of the website.</p>	
----	---	---	---	--


25	<p>REVIEW TEST CUT:</p> <p>Check corners.</p>	<p>Corners not cutting correctly.</p> <p>Adjust offset setting.</p> <p>Rounding corners indicates you should raise the offset.</p> <p>Flagging corners indicates you should lower the offset.</p> <p>Blade skipping corners.</p> <p>Clean the inside of the blade holder:</p> <ol style="list-style-type: none"> 1- Spray WD-40 onto the blade. 2- Move the blade in and out of the blade holder. 3-Clean off any debris that comes out of holder. 4- Repeat until clean. 	<p>Offset setting can be found by pressing the SET button <u>3 times</u>.</p> <p>Speed buttons adjust the Tool setting and the Force buttons adjust the Offset setting.</p> <p>See video tutorials in VinylMaster for details and help.</p>	<div data-bbox="953 118 1499 857"> <p>ISSUE</p> <p>Corners are not cutting correctly.</p> <p>EXAMPLE</p> <div> <p>ROUNDED CORNERS</p>  </div> <div> <p>CORNERS WITH FLAGS</p>  </div> <p>CAUSE</p> <p>Offset setting is incorrect.</p> <p>SOLUTION</p> <p>Change the offset setting.</p> <div>  <p>RAISE OFFSET</p> </div> <div>  <p>LOWER OFFSET</p> </div> </div> <div data-bbox="995 883 1491 1255"> <p>ISSUE</p> <p>Blade is skipping turns and corners.</p> <p>EXAMPLE</p>  </div> <div data-bbox="1566 159 2003 651">  </div>
----	---	---	---	---




26	Set origin point	<p>Make sure the vinyl and carriage head are set to the point where you want to begin cutting your design.</p> <p>Press On/Off Line so the screen displays:</p>  <p>Use Arrow Keys to move blade carriage to start point.</p> <p>Press Enter</p>	See step 16 to review this process.	
27	Set vinyl cutter status: ONLINE	<p>When online it will display SPEED and FORCE settings.</p> <p>Press the On/Off Line button as needed to make sure the vinyl cutter is online.</p> <p>Press Enter</p>	This will allow the vinyl cutter to receive instructions from the computer.	




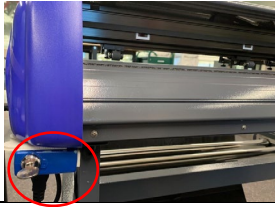
28	Send design to vinyl cutter	<p>Click on Blade icon in the upper tool bar.</p> <p>Select: Send to Cutter.</p>		
29	Test Area Check	<p>When you click the Area Test button the vinyl cutter will outline where it will be cutting on the vinyl.</p> <p>We recommend you do an area test.</p> <p>Need to change the start position?</p> <p>Go back to step 23.</p>		


30	Cut Now	<p>Review settings selected.</p> <p>If cutting everything in a single color, be sure the Separate by Color box is <u>unchecked</u>.</p> <p>Click Cut Now</p>	<p>There are lots of advanced settings available for you to use.</p> <p>Check out the videos and explanations in VinylMaster to learn more about each of the options on this screen.</p>	 <p>The screenshot shows the VinylMaster software window titled 'All combined'. On the left, there are settings for 'Properties', 'Quantity' (set to 1), and checkboxes for 'Advance After Plot', 'Absolute (position)', 'Separate by Color', 'Assign Tools by Color', and 'Auto Weed-Box' (checked). A 'Reset' button is at the bottom left. The main area shows a preview of a vinyl cutter with a 'Baby Mamas' logo on a white sheet. Dimensions are shown: 9.235 in wide and 8.644 in high. At the bottom, there are buttons for 'Area Test', 'Cut Now' (circled in red), 'Spool All', and 'Cancel'.</p>
31	<p>Vinyl Spooler</p> <p>Confirm</p>	<p>The vinyl spooler will load.</p> <p>Click YES</p> <p>Cutting will begin quickly.</p>	<p>Be ready to observe the blade carriage and vinyl in the vinyl cutter after clicking YES.</p>	 <p>The screenshot shows the 'Vinyl Spooler' software window. It has a menu bar (File, Edit, Cutter, Settings, View, System, Calibration, Help) and tabs for 'Filter by Job', 'Filter by Color', 'Show All Jobs', 'Most Recent Job', and 'Print Queue'. A list of jobs is shown with columns for 'Colors', 'Job Name', 'Job No', and 'Qty'. The 'Current' job is 'Untitled' with job number 470 and quantity 1. A 'Confirm' dialog box is open in the foreground, asking 'Proceed with Cutting?' with 'Yes' and 'No' buttons. The background shows a preview of the vinyl cutter with the 'Baby Mamas' logo, dimensions of 235.00 mm wide and 220.00 mm high, and text 'PrismCut P28 on TCP, Width: 711.20 mm'.</p>

32	Observe Vinyl Cutter	<p>Vinyl Cutter will begin to cut the design.</p> <p>Watch for issues.</p>		
33	Turn Off Vinyl Cutter	<p>Finished cutting?</p> <p>Use the key to turn off power to the vinyl cutter.</p>	<p>If you are finished cutting, turn off power to the vinyl cutter before moving on to weeding your design or removing your material from the vinyl cutter.</p>	
34	Remove material from vinyl cutter	<p>Release pinch rollers by raising lever.</p> <p>Slide your material out of the vinyl cutter.</p>		

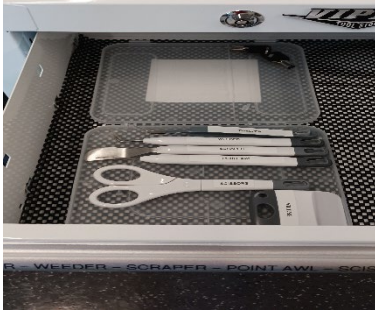
35	Weed Design: Optional	<p>Use the weeding tools to remove the unwanted elements to leave just the intended design.</p> <p>See toolbox for weeding tools:</p> <ul style="list-style-type: none"> • Tweezers • Weeder • Scraper • Point Awl • Scissors • Spatula <p>Please note: Be sure to replace plastic caps on tools before putting away.</p>	<p>Weeding can be done at home.</p> <p>It is a slow and careful process. You do not want to move any elements that are part of your design.</p>	

36	Prepare Transfer Tape: Optional	Peel transfer tape away from the transfer tape backing. You will apply the transfer tape to the vinyl design in the next step.	This step can always be done later at home. The library does not provide transfer tape.	
37	Apply Transfer Tape: Optional	Start at one end and slowly apply the transfer tape across the design. Squeegee the back of the transfer tape with a spatula down onto the design. Flip design over and squeegee the carrier backing of the design with a spatula.	The goal is for the vinyl design to be secured on the transfer tape so the carrier backing can be peeled away. This can be done at home if you prefer.	
38	Prepare to Apply: Optional	When you are ready to apply the vinyl design you will peel away the carrier backing so that the vinyl design is only on the transfer tape.	You can apply the vinyl project to your object at home.	

		<p>You will then apply the design to object of your choice.</p> <p>Squeegee the surface of the transfer tape to press the vinyl onto the object.</p> <p>The goal should be to remove any air bubbles or wrinkles.</p> <p>Remove the transfer tape. Pull from a corner down at a 45-degree angle.</p>		 
39	Clean up	Return all tools back to their proper place in the toolbox.	There is a picture inventory at the end of this guide and drawers are labeled.	
40	Turn Off Equipment	Make sure all equipment is powered off using main power access key.	Once powered off, remove key.	

41	Check Out	<p>Call for staff.</p> <p>Staff will:</p> <ul style="list-style-type: none"> • confirm all tools are returned and in proper place • area is clear and clean • pickup any access keys and check-in the keys 	<p>Access keys are checked out to your account. Not returning access keys can result in additional fees.</p>	
----	-----------	---	--	---

Drawer 1 – 6 items



- Tweezers
- Weeder
- Scraper
- Point Awl
- Scissors
- Spatula

Drawer 4 – 4 items



- Blade change instructions
- 30 degree blade
- 45 degree blade
- 60 degree blade

Drawer 2 – 1 item



- Operating Instructions

Drawer 5- 1 item



- WD 40

Drawer 3 – 2 items



- Measuring Tape
- Ruler