



## Embroidery Essentials Webinar 17 Part II

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Welcome to our Embroidery Essentials Webinar *Part II*. Today's webinar will use a combination of written instructions as well as visual demonstrations. This document contains all the information that will be covered in detail.

*This chapter's lessons will focus on how to edit existing designs – both outline and stitch. We will cover the following:*



*O*utline File Editing



*S*titch File Editing



# Outline File Editing

## Selecting Outline Segments

In an outline file, each segment is separated by the stitch type, trim or color change. For this reason, you have the ability to edit all segments at once or select on an individual and edit the segment.

There are many different ways that you can select segments.

The **Select Tool** allows you to click on the segment. You can also left click and drag a marquee box around many segments to select them at once.

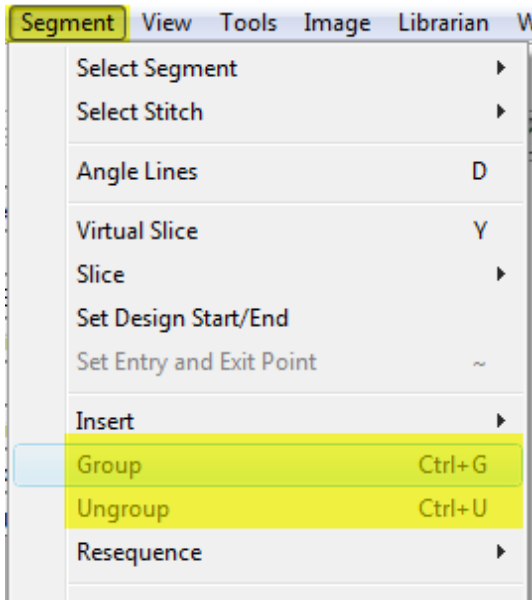
**Sequence View (SHIFT + T):** This is mainly used for viewing the sewing sequence of the design, because it lists the segments in the color layer that they will sew. However, you can also select a segment by left clicking on it in the Sequence View Panel.

- **(SHIFT) + Left Click Method:** The (SHIFT) – click method will select everything sewing between the first and the last segment selected. For example, if you were to left click on segment #1, hold the (SHIFT) key and left click on segment #3. Now, all segments between #1 - #3 will be selected on your screen.
- **(CTRL) + Left Click Method:** Assuming the segments you wish to select are not in the same area, but instead spread across your screen; you can select the first segment, hold the (CTRL) key and left click on the any other segment. Only the segments that you left clicked on will be selected.

# Grouping/Ungrouping Segments

You can combine several outline segments together so that they are treated as a single unit. You must select the segments before you can group them. You can then edit the “grouped” segments without affecting their individual attributes. However, if you wish to make changes to individual segments, you must ungroup them first.

Grouping is especially important when you are aligning objects on your screen.



## Fabric Compensation

As discussed earlier, the Embroiderer must always be aware of the fabric characteristics of the garment that is to be sewn. While such things as backing, needles and toppings can be used to compensate for negative characteristics, there are also several software factors that can be used as well.

Density, Pull Compensation and Underlay are the primary stitch control factors provided by the software. Whenever a design is created, these factors must be applied based on the fabric it is to be sewn on. Recipes contain preprogrammed values for a number of different fabrics, but you must understand how to apply the correct compensation factors manually.

### Density

Density is a setting that refers to the number of stitches covering a given area or **Stitches Per Inch** otherwise known as SPI.

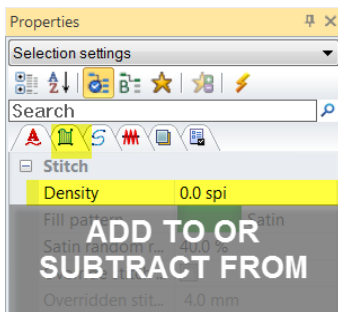
Density greatly affects the outcome of each design. The more stitches in your design, the closer the stitches; thus not allowing the fabric to show through. The less stitches in your design, the further apart the stitches; thus the fabric will start showing through. Thicker fabrics or textured fabrics will require more density for adequate coverage. The same design sewn on different materials may require density adjustments.

There are two settings for adjusting the density: Master Density and Relative Density.

#### Master Density:

63.5spi is the default setting for the Tajima DG/ML by Pulse software. This number does not change unless the default setting is adjusted.

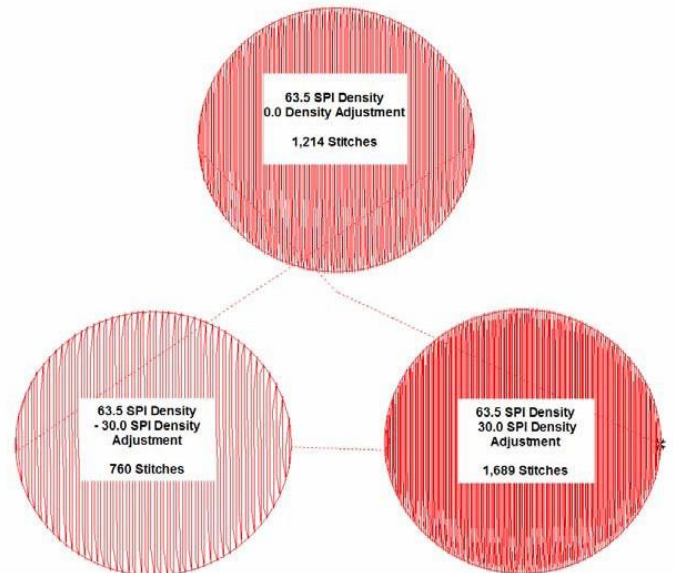
Every outline file opened or created on your workspace will start at this number. We learned earlier that outline files contain segments by stitch types. For this reason, we are able to adjust the density for one segment without affecting the rest of the design. This is achieved by changing the Relative Density.



#### Relative Density:

Relative Density is a setting that allows you to add to or subtract from the master density for one or more segments in an outline file.

You can adjust the Relative Density value for text, satin path, steil and complex fill segments.



## Density Guidelines

### When to Increase

- Heavy-weight Knits: Sweatshirts, Pique Polo Shirts
- Surface Texture: Fleece, Towels
- Contrasting Colors between threads and garment

### When to Decrease

- Non-woven Materials: Leather, Suede
- Thin Garments: Silk, Satin, Linen
- Small Segments/Thin Columns

## Pull Compensation

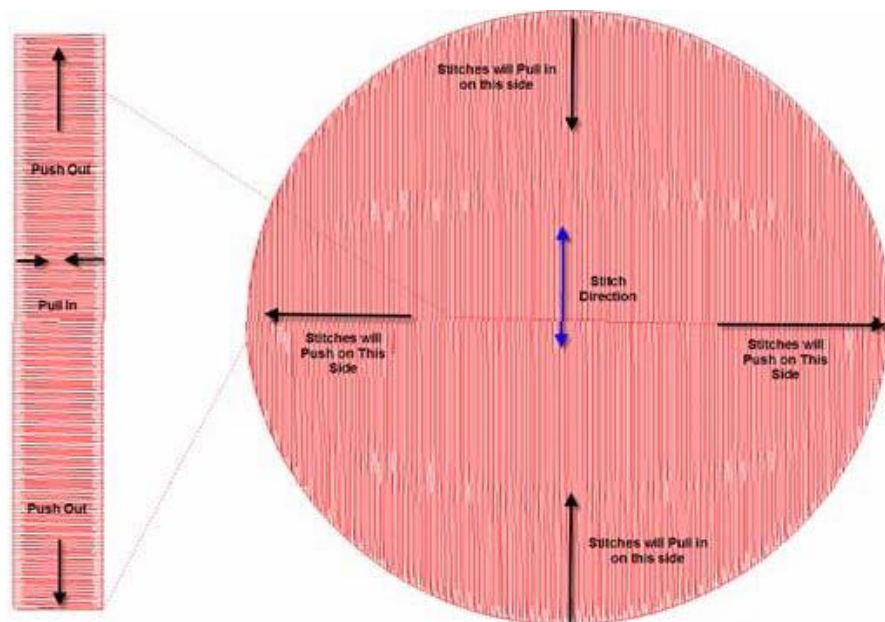
Pull Compensation is a software setting that allows you to adjust for the pulling/sinking – in of the stitches on different fabrics by increasing the stitch length. Pull Compensation is the variable (push and pull) that is factored into design creation. What does this mean? This means that *what you see on your screen is not what you get on your finished product*.

In other words, let's think about the way the stitches sew on different material. If the design is sewing on fabrics that are plush or that stretch and give, the stitches will sink into the material thus creating thinner columns or distorting our shape.

Now, let's sew that same design on a tightly woven fabric. The stitches will not sink into the fabric but instead stay on top of it, therefore keeping the overall full column shape.

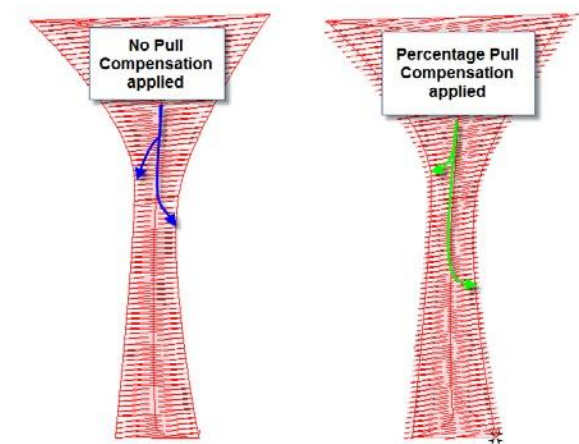
Two things are certain when it comes to Pull Compensation:

1. Stitches pull in the direction they are sewing.
2. Stitches push in the direction they are filling the shape.



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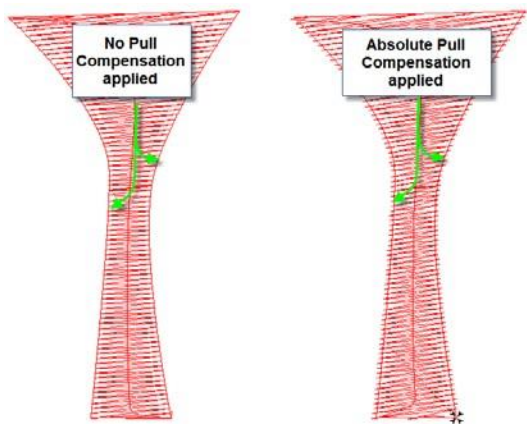
There are two different ways to apply Pull Compensation: Percentage or Absolute.



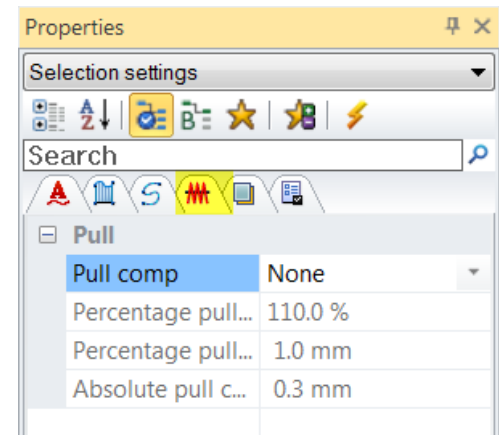
**Percentage** will increase based off the stitch length. For example, if you add 110%, every stitch will increase 10% of its actual length. Therefore, every stitch will not be increased proportionally. For example, if you apply Percentage Pull Compensation to a varying column width (refer to the picture below), 10% will not be the same on the narrower part of the column than at the wider part of the column.

Pulse has a setting that ensures that the shape will not be over extended called Max. Range. Once the increased pull compensation reaches this value, it will not increase anymore.

**Absolute** is applied to every stitch by a specific value. For example, if you add .02 inches as the value, every stitch in the column will be increased .02 inches. This is perfect if you are sewing small lettering and you need a nice wide column because you can ensure that all stitches are increased the minimum width of a satin stitch.



The setting to change pull compensation is located under the Properties Panel.

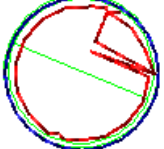

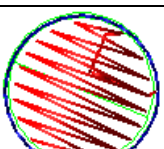
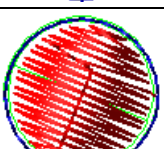
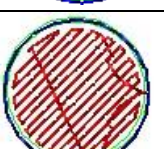
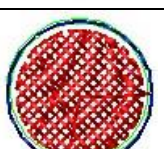


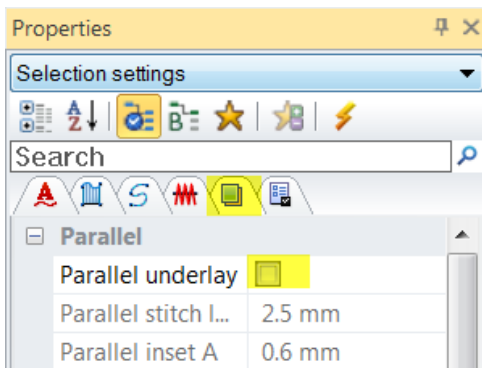
Click on the Compensation tab, then choose Percentage or Absolute from the drop down arrow next to Pull Comp. The properties will become active after your selection.

## Underlay

Underlay is the preliminary stitches that sew prior to and underneath the design. In essence, it's the foundation that your design is built upon. There are 6 different types of underlay and each serve a specific purpose to the quality of your design.

*Let's explore each type of underlay.*

|   |   |
|---|---|
|    | <b>Contour</b> – AKA Edge Walk is a single line of stitching that travels close to the perimeter of the shape.<br>When to use: tacks garment to the backing preventing shifting; acts like a perimeter wall for the top stitching, minimizing columns sinking in the fabric.  |
|    | <b>Perpendicular</b> – Travels the center of a column. You can control the number of lines to use.<br>When to use: Small lettering – eliminates the little loops that appear on the edge of the columns; ellipse shape complex fill segment – minimizes the pull characteristic of the stitches – especially on caps.   |
|    | <b>Parallel</b> – Placed at an angle to help lift the top stitching off of the fabric.<br>When to use: Smoothes fabric surface texture i.e., pique polo shirts; offers color coverage for non-woven materials and on contrasting thread on fabric.  |
|   | <b>Zig-Zag</b> – Heavy stitching that forms a double parallel effect.<br>When to use: Flattens any fabric pile giving your top stitch a smooth surface and eliminates fabric nap through the embroidery i.e. towels, fleece; can be used to create a raised surface – very nice to use on a sturdy canvas tote bag.   |
|  | <b>Lattice</b> – Fill Stitch Underlay that places a single layer of stitching at an angle.<br>When to use: Smoothes fabric surface texture i.e., pique polo shirts; offers color coverage for non-woven materials and on contrasting thread on fabric. <i>Only available on a complex fill segment.</i>   |
|  | <b>Full Lattice</b> – Fill Stitch Underlay that places a double layer of angled stitching.<br>When to use: Flattens any fabric pile giving your top stitch a smooth surface and eliminates fabric nap through the embroidery i.e. towels, fleece; can be used to create a raised surface – very nice to use on a sturdy canvas tote bag. <i>Only available on a complex fill segment.</i> |



To change the Underlay Settings, select the segment and choose the Underlay tab from the Properties Panel.

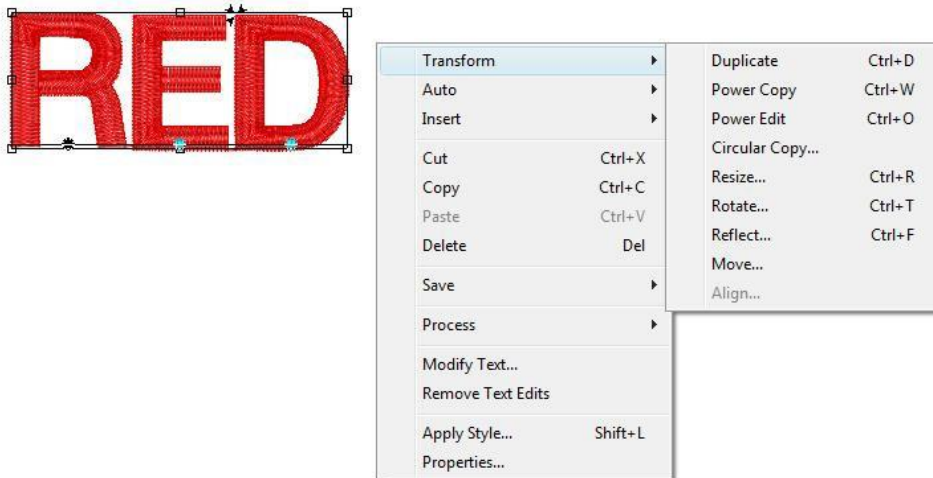
You may need to choose more than one type of underlay for your application. For example, you may choose Contour and Zigzag for towels or fleece.

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## Transformation Tools

The transformation tools are the essential editing tools.

To access the transformation tools, you can right click and choose Transform or you can choose them from the Transformation Toolbar.



### Duplicate

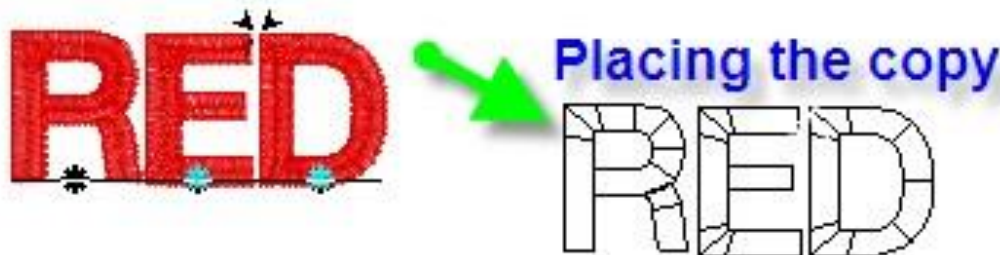
This tool allows you to make an exact copy of the segment(s) that you have selected.

*To use the duplicate tool:*

1. *Select the segment(s)*
2. *Choose the Duplicate tool from the Transformation on the right click menu.*
3. *Left click to place your copies.*
4. *Hit (enter) to end the Duplicate Tool.*

*\*(BACKSPACE) will delete the previous copy.*

### Original Segment





## Power Copy

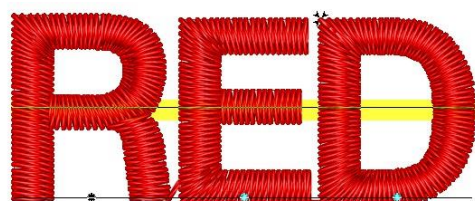
This tool allows you to make a copy, resize the copy and rotate the copy all in one step.

You have to first create a reference line for the software to calculate the size and angle of the copy.



*To use the power copy tool:*

1. *Select the garment(s).*
2. *Choose the Power Copy tool from the Transformation on the right click menu.*
3. *Left click and drag to create the reference line – you want to make sure that it is the same length or height of the original segment.*



Reference Line

4. *Now, you can left click and drag anywhere on the workspace to create the copy. While you are dragging the mouse, you can move the mouse around to change the angle and make it larger or smaller than the original*

*segment.*

5. *When you let go of the mouse, that copy is completed. You can continue creating copies or*
6. *Hit (enter) to end the Power Copy tool.*

*In addition, if you hold the following keys, you can enhance the copy creation.*

*(CTRL) will allow you to make a copy and rotate but not resize*

*(ALT) will allow you to make a copy and resize but not rotate*

*(SHIFT) will allow you to make a copy and resize and rotate but the rotation will be constrained to 15 degree increments*

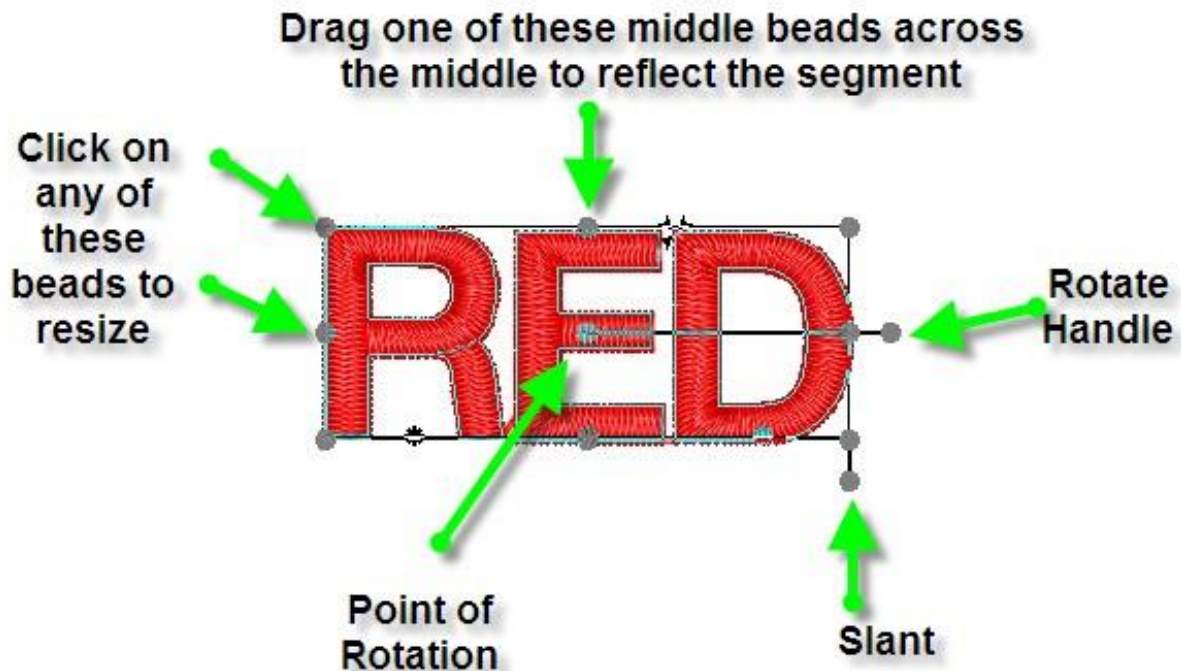
*(R) while you are dragging the mouse, hit the (R)key once to reflect the copy to mirror the segment off the reference line*

*(Backspace) will delete the previous copy*

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## Power Edit

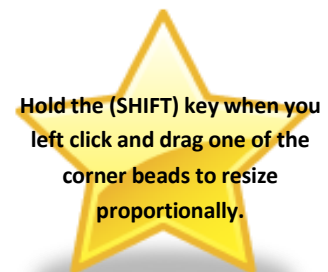
This tool will allow you to resize, rotate, reflect and skew the segment that you are selected on.



*To use the Power Edit tool:*

1. *Select the segment(s)*
2. *Choose the Power Edit tool from the Transformation Tooldrawer or the right click menu, or left click once in the center of the selected segment.*
3. *Left click and drag on the appropriate bead to edit.*
4. *Hit (S) to end the Power Edit Tool.*

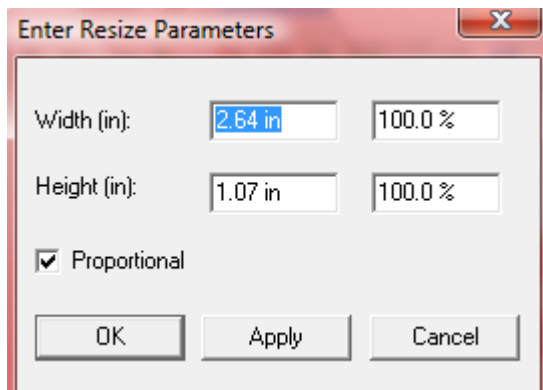
*\*(CTRL +Z) will undo the last operation.*



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## Resize

This is a one step process to resize your selected segment(s) by a percentage or a specific value.

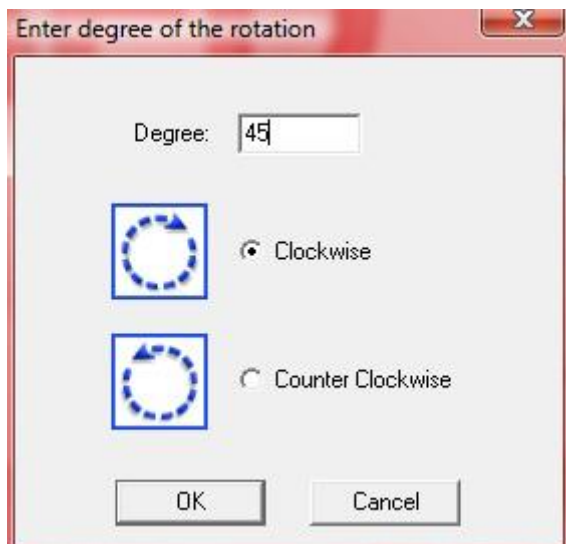


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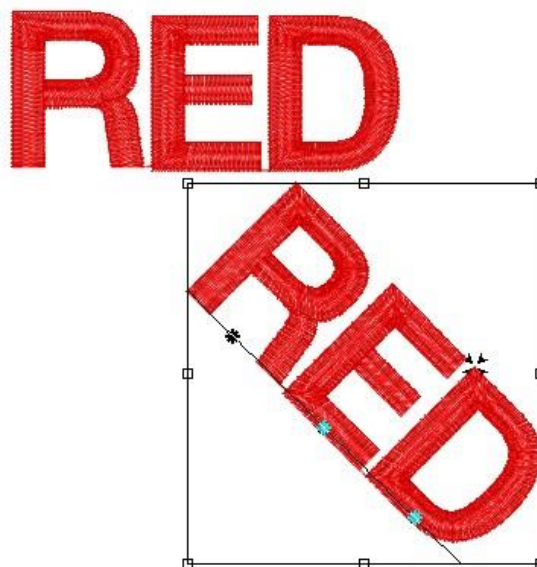


## Rotate

This is a one step process to rotate your selected segment(s) by a specific degree – clockwise or counter – clockwise.



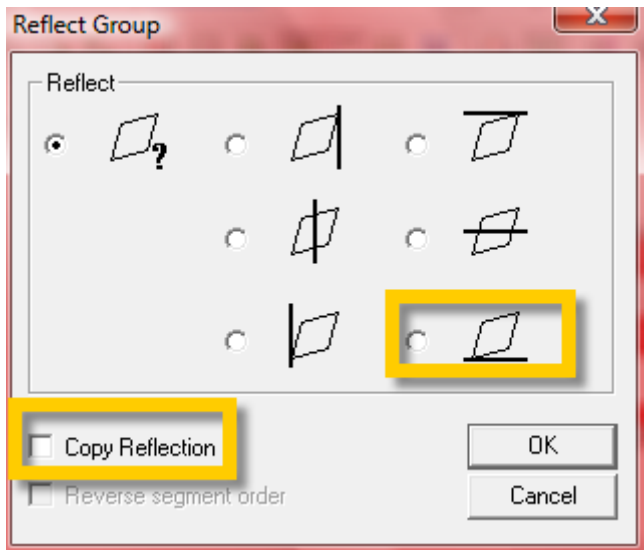
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## Reflect

This is a one step process to reflect your selected segment(s). You also have the option to copy the reflection. This will leave the original segment(s) and create the reflection as another segment(s).



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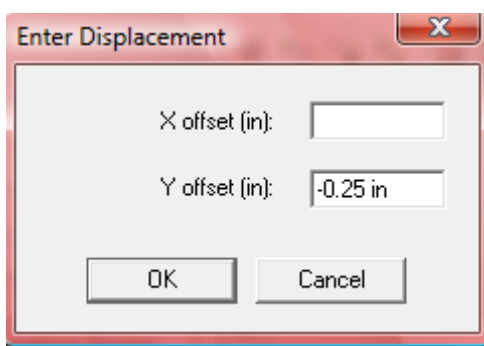


## Move

This is the process to move your segment by specific dimension.

(X) Positive number will move to the right  
Negative number will move to the left

(Y) Positive number will move up  
Negative number will move down



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## Alternative Move

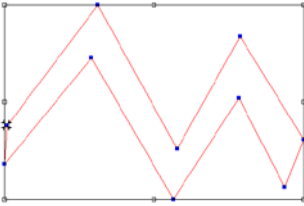
You can also move the selected segment(s) by holding the (ALT) key and using the keyboard arrows.

## Working with Anchor Points

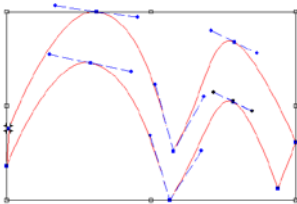
Anchor points are connected dots that represent the area for the stitches. A digitizer will use the anchor points to create the segments for the design.

There are 4 different anchor points: Straight, Smooth, Symmetric and Cusp.

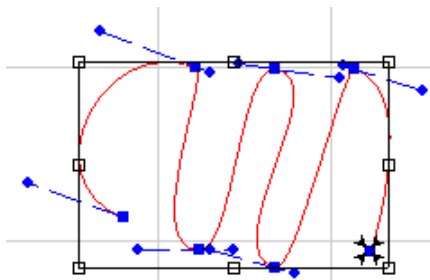
A **straight anchor point** connected to another straight anchor point will result in a straight line.



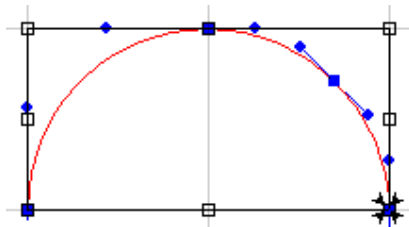
A **straight anchor point** connected to a smooth, symmetric or a cusp will result in a curved line.



A **smooth anchor point** has tangents or handles that come out the sides. You can drag one side up or down and the other will move as well. However, you can drag one side out away from the anchor point longer than the other side, resulting in an oblong curve.

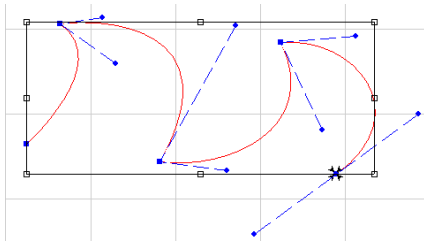


A **symmetric anchor point** has tangents or handles just like the smooth anchor point. If you drag one side up or down, the other will move as well. In addition, if you drag one side out away from the anchor point longer, the other side will extend as well. This character differentiates the symmetric anchor point from the smooth anchor point.



A **cusp anchor point** defaults to have two tangents or handles but can also have just one handle. The handles on a cusp anchor point move independently from each other. In other words, you will have to left click and drag on the handle for it to move.

[Type here]



**To View Anchor Points:** To show or hide the anchor points, click on Show Dots.

**To Edit Anchor Points:** To edit the anchor points, you will need to be in the Vertex Select tool from the Segment Edit Toolbar.



Your cursor will take a different tip shape.

#### **Tips for Editing Anchor Points:**

- Turn Show Stitches off. Since you are editing the actual outline segment, you don't need to see the stitches. They will just be in the way.
- Turn Show Beads off. The beads are often in the same place on the outline segment as the anchor points; therefore they may hide the anchor points from your view.
- To select more than one anchor point, you can left click and drag a box around them; or, left click on the first anchor point to select, hold the (CTRL) key down and left click on the next desired anchor point to select.
- The anchor points will change color when you are selected on them.

You must right click on the actual anchor point in order to access the **Path Vertex Menu**. (Some of the actual choices may not be available in your particular level.)

Delte Point  
Add Anchor  
Split Anchor  
Join Anchors  
Average Anchors...  
Convert to Cusp  
Convert to Smooth  
Convert to Symmetric  
Convert to Straight

**Delete Point:** This will delete the anchor point selected. You can also press the (DELETE) key on your keyboard.

**Average Anchors:** Aligns 2 or more anchors vertically or horizontally.

**Convert to...:** You can convert an anchor point to another type anchor at any time.



After any editing, press the (G) key on your keyboard to generate your stitches.



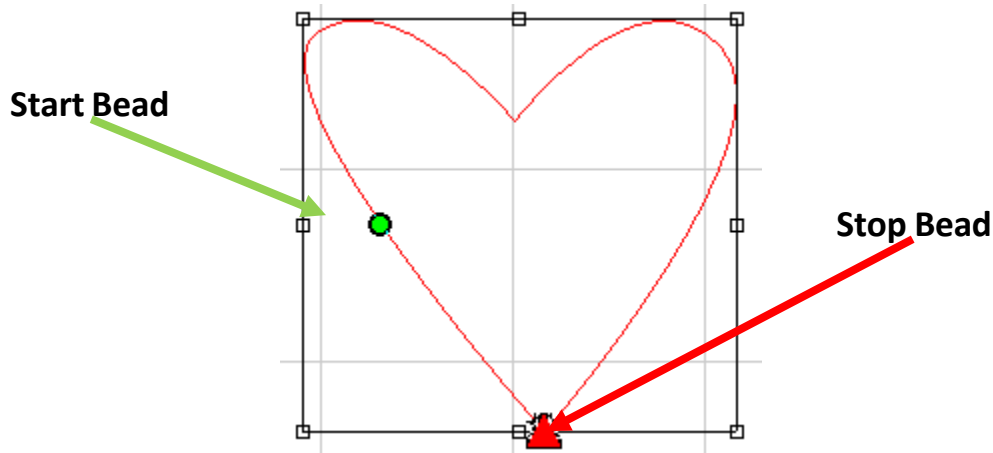
## Working with Beads

After the creation of the segment in the design, each segment must have stitch information applied to it.

Stitch information includes, the entry point, exit point and the angle of the stitches.

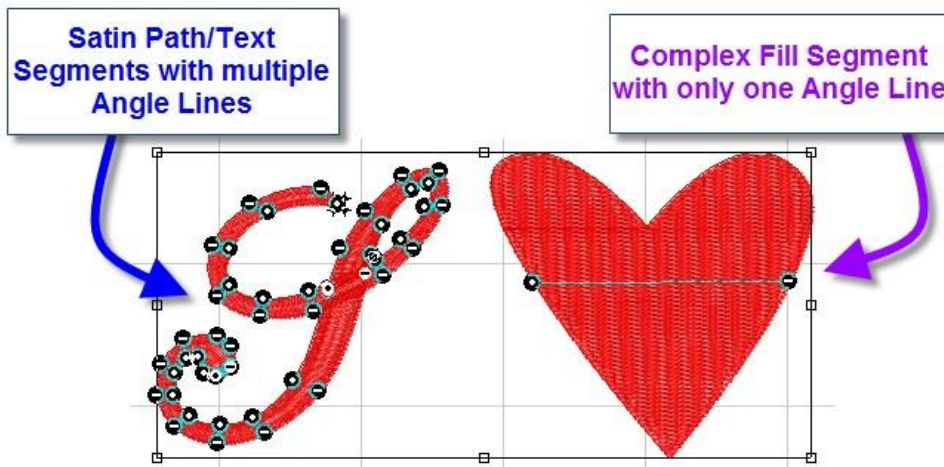
These are called beads. You have a Start Bead, Stop Bead and Angle Lines.

**Start Bead:** Indicates the first stitch on the outline segment. The digitizer will place this to the closest point of the previous segment in the design.



**Stop Bead:** Indicated the last stitch on the outline segment. The digitizer will place this to the closest point of the next segment in the design. This is also where the lock stitch, trim or color change is programmed.

**Angle Beads/Angle Lines:** The angle beads are connected by an angle line that determines the direction of the stitches. Angles Lines can be found in text, satin path or complex fill segments. Text and satin path segments will have multiple angles. The software will average the distance between the angle lines and auto turn the stitches accordingly. A complex fill segment will have just one angle line.



After any editing, press  
the (G) key on your  
keyboard to generate

# Converting Lettering to Segments

You can convert lettering to segments so that you can edit individual letters or segments of letters. The most common use of “converting lettering to segments” is the ability to use any of the symbol fonts as a stock design. Once the segment has been converted, they will be treated like a regular segment of an outline file. You can make color, pattern, etc. changes to any of the individual segments within that design.

There are 3 different ways to convert lettering to segments:

- 1. Right click on the selected segment and choose process
- 2. Press the hot key (+=)
- 3. Left click on the Convert button.



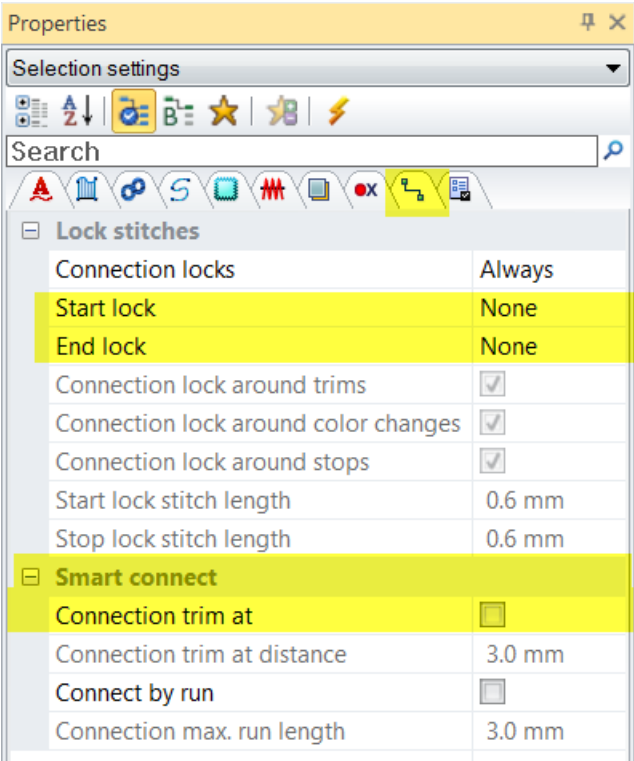
\*\*\***TRAINING EXERCISE: TRUCKING**\*\*\*

(REFER TO APPENDIX A, PAGE 30)

# Adding Lock Stitches and Trims to an Outline File

It is very easy to insert a lock stitch and a trim in an outline file. Tajima DG/ML by Pulse has a segment setting named Smart Connect that when selected, will automatically insert a trim if the distance is greater than the set value between the segments. From this same window you can also choose the type of lock stitch at the lock stitch.

To add the lock stitches and trims, select the segment(s) and click on the Connections tab in the Properties Panel. Check the box for Connection Trim at... and make sure to add an End Lock as well.





## Segment Filter Tool

The Segment Filter tool will hide /show segments in a design. It allows you to show, hide, sort and edit segments in your design by stitch types and/or by thread colors so that you can isolate specific segments for editing.

To access your segment filter tool, left click on the Segment Filter Button.

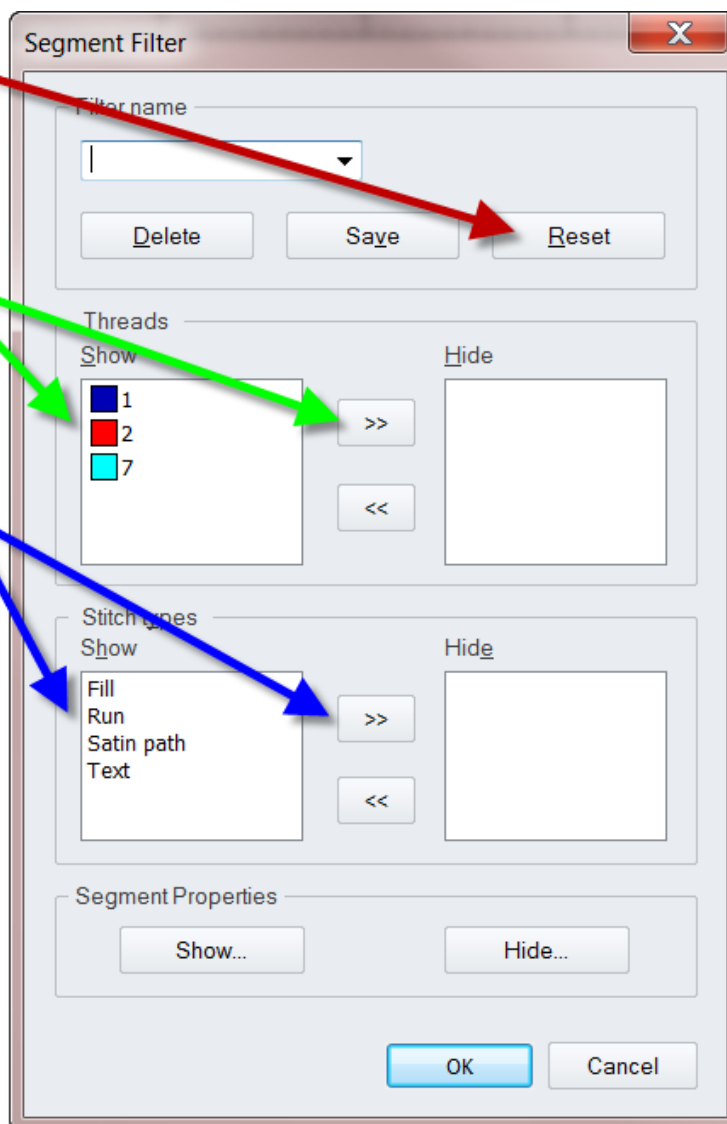


Segment Filter Properties:

To return everything back to the original view, click on RESET.

To Hide Segments by color: left click on the color(s) to hide then left click on the double arrows pointing to the Hide Column.

To Hide Segments by stitch type: left click on the stitch type/type(s) to hide then left click on the double arrows pointing to the Hide Column.



\*\*\*TRAINING EXERCISE: TEDDY BEAR\*\*\*

(REFER TO APPENDIX B, PAGE 33)

\*\*\*TRAINING EXERCISE: SAILBOAT 5\*\*\*

(REFER TO APPENDIX C, PAGE 39)

## Re-Sequencing

By default, everything sews in the order of which it is placed on your screen. In any file – outline or stitch – you can alter the sequence of segments in your design. However, in an outline file, you have more flexibility in selecting individual segments and re-sequencing them than in a stitch file where you are working with the individual stitches or a group of stitches.

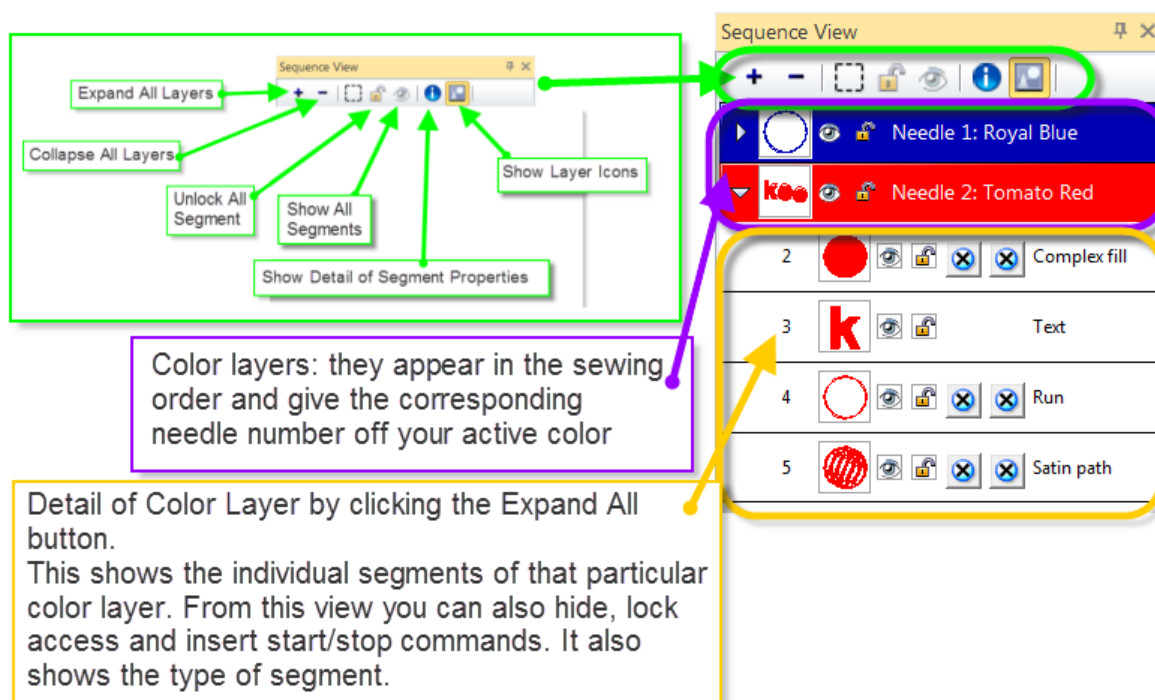
There are many occasions where you will need to re-sequence. Two of the most common:

- for sewing on caps
- adding / deleting colors

The Sequence View allows you to see the sequence of segments by color and then by number. It is a hierarchical, tree-view that allows you to textually view and change your design's sequence in an expanding list format, similar to Windows Explorer.


**There are two ways to open the Sequence View:**

1. **Left click on View, Toolbars and Docking Windows, choose Sequence View.**
2. **The Hot Keys for Sequence View is (SHIFT) + (T).**



### Sequence View—Select Same Color Tool

To simultaneously select all segments of the same color, you can use the Select Same Needle tool. This allows you to select all segments in the design having the same thread color, provided they are all on the same needle.

To use this tool, open the sequence view and select one segment of the color you want to select all instances of. Then, click the Select Same Needle  icon

## 1.5 Resequencing options on Right-click

The set of tools that allow you to change the sequence of the selected segment (or segments) can now be applied using the right-click menu. To apply them, select one or more segments, right-click and select "Resequence" and the option you want to apply. The resequence options are the following: Bring to the Start/End of Design, Move later/Earlier by 1, Resequence by Color, Resequence by Selection Order, and Resequence by segment number.

### 3.1.2 Add Trim at End tool update

This tool has been improved so that it is now easier to remove a trim from an embroidery segment. This tool now includes a "remove trim" function; when you select a segment that includes a trim at the end, you can right-click to remove it.

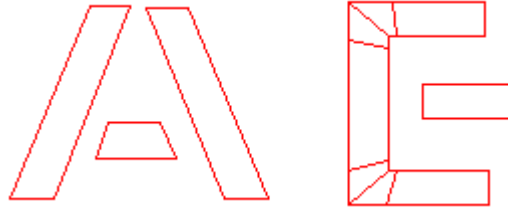
Left-clicking will add an end trim to a segment without one, just as in the previous behavior.

**\*\*\*TRAINING EXERCISE: SOCCER\*\*\***

**(REFER TO APPENDIX D, PAGE 44)**

## Virtual Slice Tool

The Virtual Slice tool allows you to change the direction of stitches along a satin path segment without actually dividing into multiple segments. It is most commonly used for true type fonts and satin path segments converted through the DrawFusion.



Typically, when a letter is created, it is created in multiple satin path segments. For example, look at the letters A, E below. Notice that the letter A is 3 separate segments. The letter E is 2 separate segments.

With the virtual slice tool, you are able to treat the segment as if it were two separate satin path segments without actually creating the breakup. This is very useful when editing true type fonts for it leaves the lettering as a text segment with all the text properties that can be adjusted.

### \*\*\*TRAINING EXERCISE: FIXING TRUETYPE FONTS\*\*\*

(REFER TO APPENDIX E, PAGE 49)

# Stitch File Editing

## Opening / Merging Stitch Files

Tajima DG/ML by Pulse software allows you to open or merge design files using a variety of file formats including 5 different outline format files and over 20 embroidery machine format files. These machine format files, we learned earlier are considered stitch files because they only hold the commands for the machine to read.

Let's explore stitch files.

When you open or merge a stitch file, you have the option to leave it as stitch segments or convert it from stitches to outlines.

### *Open as Stitch Segments*

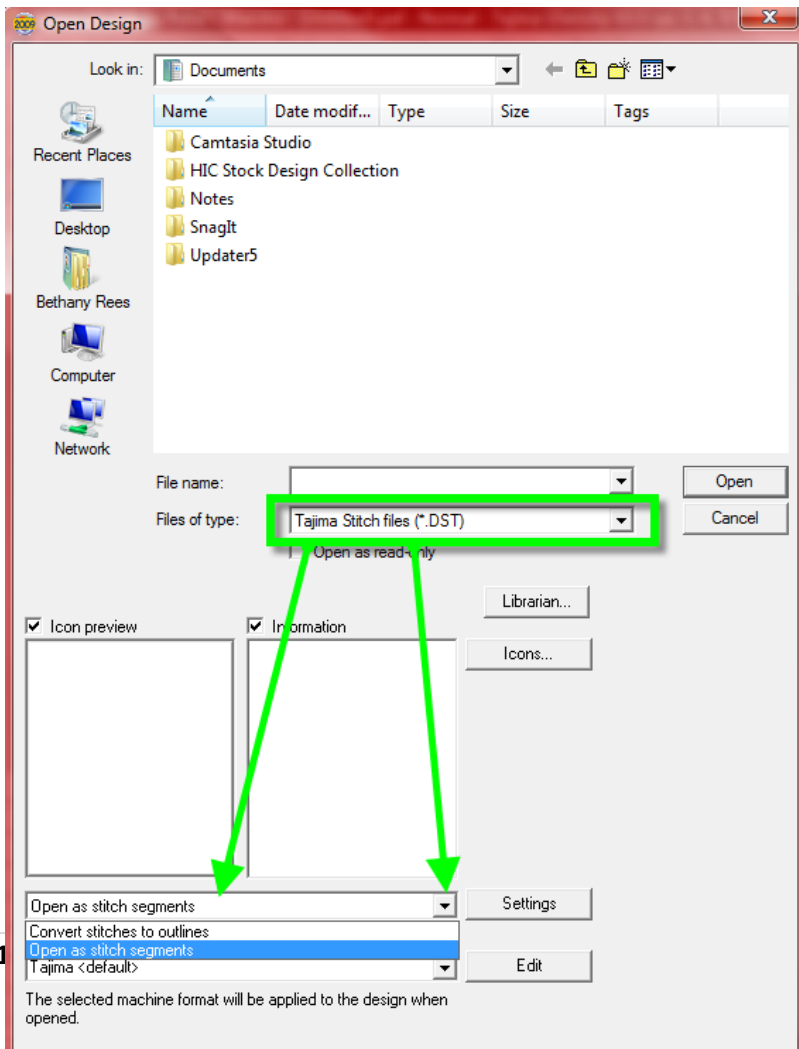
When you choose to leave the file as stitch segments it maintains the original integrity of the design and creates the stitch segments based off the commands –color changes or trims. You will choose this option if all you need to do is add/delete a trim, color change or text.

### *Convert Stitches to Outlines*

When you choose to convert stitches to outlines, Tajima DG/ML by Pulse will convert the stitch segments into the most likeable type of outline stitch based upon preprogrammed control settings. You will choose this option if you need to resize more than 10% or change the properties of any segment in the design.

### *To open/merge a stitch file:*

1. Go to File and choose Open or Merge Design.
2. Choose the location of the design file in the Lock In: ...
3. Change the Files of Type to the correct stitch file, or you can choose All Files if you are not sure the type of file.
4. At the bottom of the screen you will see the options for opening the stitch file.
5. Choose the appropriate option and left click on Open.



## Stitch File Editing

Stitch file editing allows you to edit stitches in the stitch mode. You can edit individual stitch penetrations or select a group of stitches.

The most common uses of stitch file editing are to add or delete commands such as trims or color changes. However, as we've learned earlier, you cannot change things such as density, pull compensation, underlay, or size as these properties can only be edited in an outline format file.

There are a couple of things you need to know about the design when you are editing it:

- Stitch count
- Sewing sequence

### Stitch Editing Tools

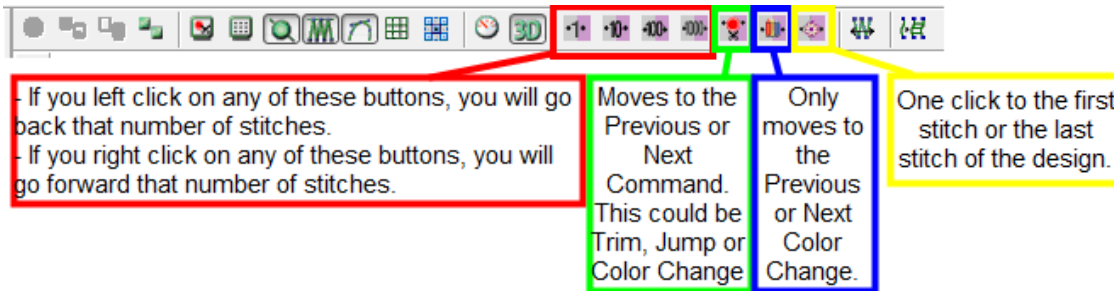
You have 3 different tools for editing stitches in the stitch mode: Stitch Select, Lasso Stitch Select or Delete Stitch Tool. Upon choosing any of these tools, you automatically enter the stitch mode and all outline editing features are temporarily disabled. To get back to the outline editing tools, simply go to the Select Tool.



- Choose Stitch Select if you are editing a specific command
- Choose Lasso Stitch Select if you wish to edit a group of stitches
- The Delete Selection tool will delete each stitch that you click on

### Navigating through a stitch file and selecting a particular stitch

The Navigation Toolbar will quickly move you through a design stitch by stitch.



You will either left click to move backward by stitch number in the design or you will right click to move forward by stitch number in the design.

You can also move the mouse over a needle insert and left click on it to select that particular stitch.

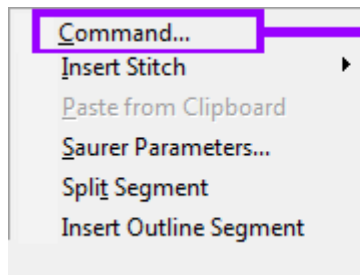
### Stitch Edit Menu- Single Stitch Selection

Once you have the stitch selected, you will (CTRL) + (E) or Edit > Shortcut Menu to access your stitch edit menu.

From this menu you can: add a command or change an existing command.

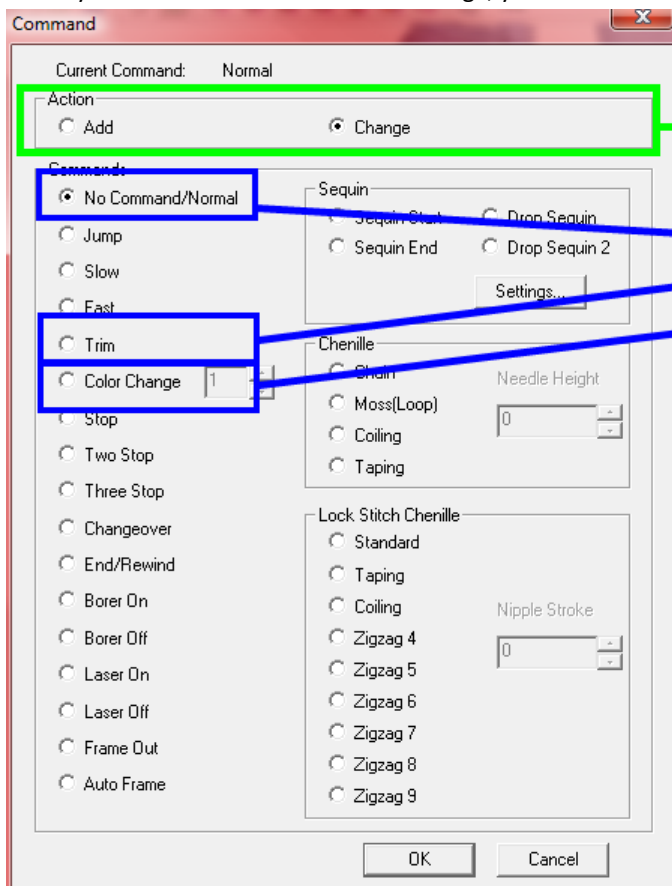
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### Single Stitch Selection Menu



Choose Command to add a command or change an existing command.

When you wish to add a trim or color change, you will use the Command function.



Choose Add or Change

Choose:  
- No Command/Normal to get rid of a trim, jump or color change  
- Trim to insert a trim command after the selected stitch  
- Color Change to insert a color change command after the selected stitch; then scroll to the desired needle number

## Adding Lock Stitches in a Stitch File

It is necessary to have a lock stitch at every trim and color change. Because of the nature of the stitch file, you may have to manually add the lock stitches yourself.

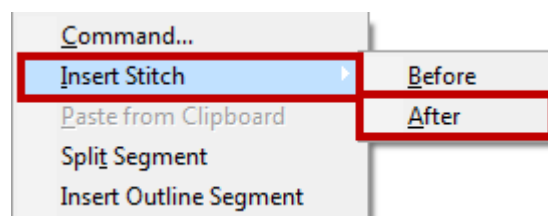
If the design was created for production, very commonly the digitizer will leave a jump stitch but go ahead and add a lock stitch. Typically, the stitch length of a lock stitch is .01 to .02 inches and it will be programmed right before the jump stitch. A jump stitch is where the machine moves from one segment in the design to another segment without stopping and trimming or changing color. Therefore, the thread is carried over the top of the fabric to begin the next segment.

However, with the increase popularity of scan and stitch software programs, a lot of designs created nowadays do not have lock stitches programmed where there is a jump stitch. If the machine trims or color changes, or the operator trims after the design is completed and there is no lock stitch programmed, the thread will start unraveling.

Because of the importance of the lock stitch in your design, it is not necessary to have a digitizing level of software to add a lock stitch in a stitch file.

### To manually add a lock stitch:

- go to the Stitch Edit Menu
- choose the Insert Stitch
- If you are on the stitch right before it jumps, then you will choose after. If you have already moved through the jump stitch, then you will choose before.
- There will be a line attached to the cursor from the design. This is the actual stitch and you will left click to place it in the design. You will want to left click it in the shape of a bowtie or in a straight line following the actual stitch.
- \*Refer to the bottom of the screen for the stitch length. You want to try to keep it around .01 – .02 inches.
- Press (Enter) to complete the insert stitch tool.

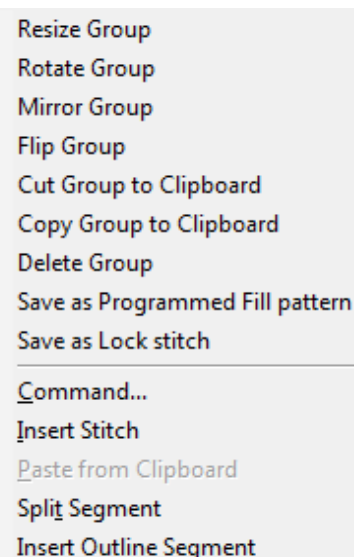


## Stitch Edit Menu- Group of Stitches Selection

You can also choose a group of stitches and edit them together. The most common editing is rotating or mirroring.

### To edit a group of stitches:

- Use the Lasso Stitch Select tool and left click around the group
- Press (Enter) – you will see a lot of dots highlighting the stitches
- Right click on any of those dots and you will see this menu
- Left click on the desired action





## Convert Stitches to Outlines

As mentioned earlier, you can also choose to convert the stitch segments into outline segments. This will enable you to make changes to the properties of the outline segments within the file.

Tajima DG/ML by Pulse has programmed settings that determine the type of stitch to apply to the segment that are based off of machine commands as well as stitch lengths. For example, it will convert to a satin path or complex fill if the stitch lengths between machine commands remain consistent in length. If it cannot determine the type of stitch, it will leave the segment a stitch segment. Very often the segments that are left as stitch segments, are lock stitches or pantograph movements that do not register a needle penetration.


Ask yourself, "What do I need to do to this design to make it work for my customer?"

### Open as stitch segments

- add/delete trims
- color changes
- text

### convert stitches to outlines

- resize more than 10%
- adjust properties , such as density, pull comp, underlay or patterns



Remember any editing that you do to the file you will want to resave the file for later use.

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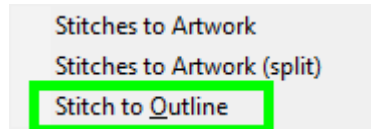
## Selective Stitch to Outline

There are times when you need to make outline file specific editing to a portion of the stitch file and do not want to convert the entire design from stitches to outlines. This is called selective stitch to outline or STO.

Once the segment is converted, you can edit the segment as you would any other outline segment.

**There are 3 different ways to STO:**

1. Right click on the selected segment and choose process > Stitch to outline
2. Press the hot key (+=)
3. Or click on the convert button.



**\*\*\*TRAINING EXERCISE: NEW YEAR 2000\*\*\***

**(REFER TO APPENDIX F, PAGE 52)**

# DrawFusion

DrawFusion combines the extensive graphics drawing with the superior stitch generation of Tajima DG/ML by Pulse software. The DrawFusion feature converts partial or entire vector artwork designs from CorelDraw to stitches in DG/ML in one step by assigning stitch types and stitch directions automatically. DrawFusion tools allow you to edit artwork and embroidery segments within DG/ML. All changes made in DG/ML can be refreshed in the vector file in CorelDraw and vice versa.


## Tips for Artwork in DrawFusion

- When you open a design through the DrawFusion, the vector file is automatically grouped. If you wish to make any adjustments prior to switching over the design to DG/ML, you will need to ungroup first.
- Typically, vector files are layered and therefore are not cut out underneath. You will want to change that for the embroidery design so that you do not have stitches sewing on top of stitches as this creates a couple of issues:
  - o 1) your stitch count is unnecessarily higher;
  - o 2) this will create a unappealing design because it will pucker and create wrinkles in the fabric
  - o You can cut out the overlap in CorelDraw using the Simplify Tool or if you have the capability in DG/ML you can remove overlapped stitches after the switch
- It is recommended to use the Embroidery Fonts in Tajima DG/ML by Pulse if the vector file has lettering with it and you have the font as an embroidery font

## Using DrawFusion- DrawFusion to Tajima DG/ML by Pulse

You do not need the CorelDraw software running when you wish to use the DrawFusion. As a matter of fact I would recommend that you don't have it running for the simple reason both the CorelDraw and the DG/ML use a lot of Ram.

### *Using DrawFusion – DrawFusion to Tajima DG/ML by Pulse:*

- In DG/ML create a new file.
- Click on the DrawFusion button. 
- You will now have two windows opened. The one on the left side will be the DrawFusion window with all the functionality of CorelDraw. The one on the right side will be the DG/ML window with all the functionality of Tajima DG/ML by Pulse.
- In the DrawFusion window, left click on File > Import.
- Find the file that you wish to use.
- Left click and place it on the DrawFusion workspace.
- Edit the artwork file as needed in DrawFusion.
- Then, when you are ready, left click on File > Switch.
- You will need to choose how to convert your fill shapes and how to convert your outlines.
- Then click OK and wait a couple of seconds for the file to generate in the Pulse software.

# DrawFusion Settings

Settings

... [! Draw Fusion

Choose how you wish for the fill shapes to be converted\_ Fill Shapes are all the objects in the Core Draw file that are fill with color\_

-Choose Complex Fill for large areas and or background shapes\_

-Choose Satin Path for thin columns, small areas or lettering\_

-Choose Satin Path or Complex Fill when you wish for the software to choose the stitch type\_

Draw Fusion

When adding artwork from Draw Fusion,

☐ Convert everything to artwork

Convert fill shapes to: 

Artwork  
Mwork  
Complex Fill  
Satin Path  
Satin Path or Complex Fill  
Apply

Convert outline shapes to

Convert thick outline shapes to

Treat outlines as thick when thickness is more than: 

Disabled

P Auto start/stop

Transaction options-----,

From Draw Fusion-----

P Selection only

r Re-synchronize

To Draw Fusion-----

P Refresh Draw Fusion

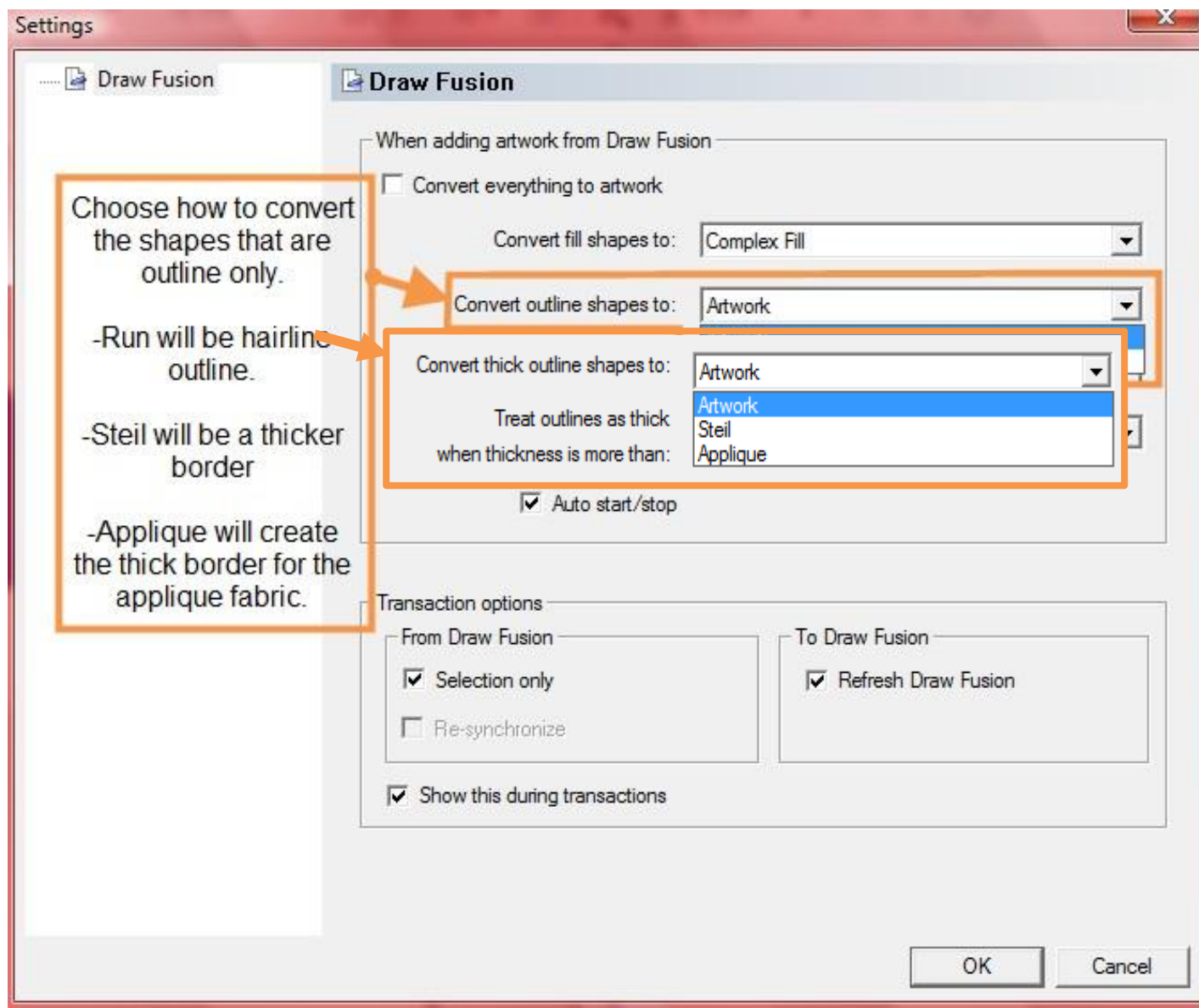
P Show this during transactions

OK

Cancel

28 | Page

[Type here]



The Auto Start/Stop to automatically set the start bead and stop at the best points for each segment. It is selected by default.

☒ Auto start/stop

Sometimes it is necessary to switch individual segments into Tajima DG/ML by Pulse software. For example, you have a design that you wish to have all the background segments converted as Complex Fills and the detail and lettering of the design converted as Satin Path segments. In this case, you will select all of the complex fill segments only and switch them over and then go back and switch over the Satin Path segments.

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Transaction options

From Draw Fusion

☒ Selection only

☐ Re-synchronize

To Draw Fusion


☒ Refresh Draw Fusion

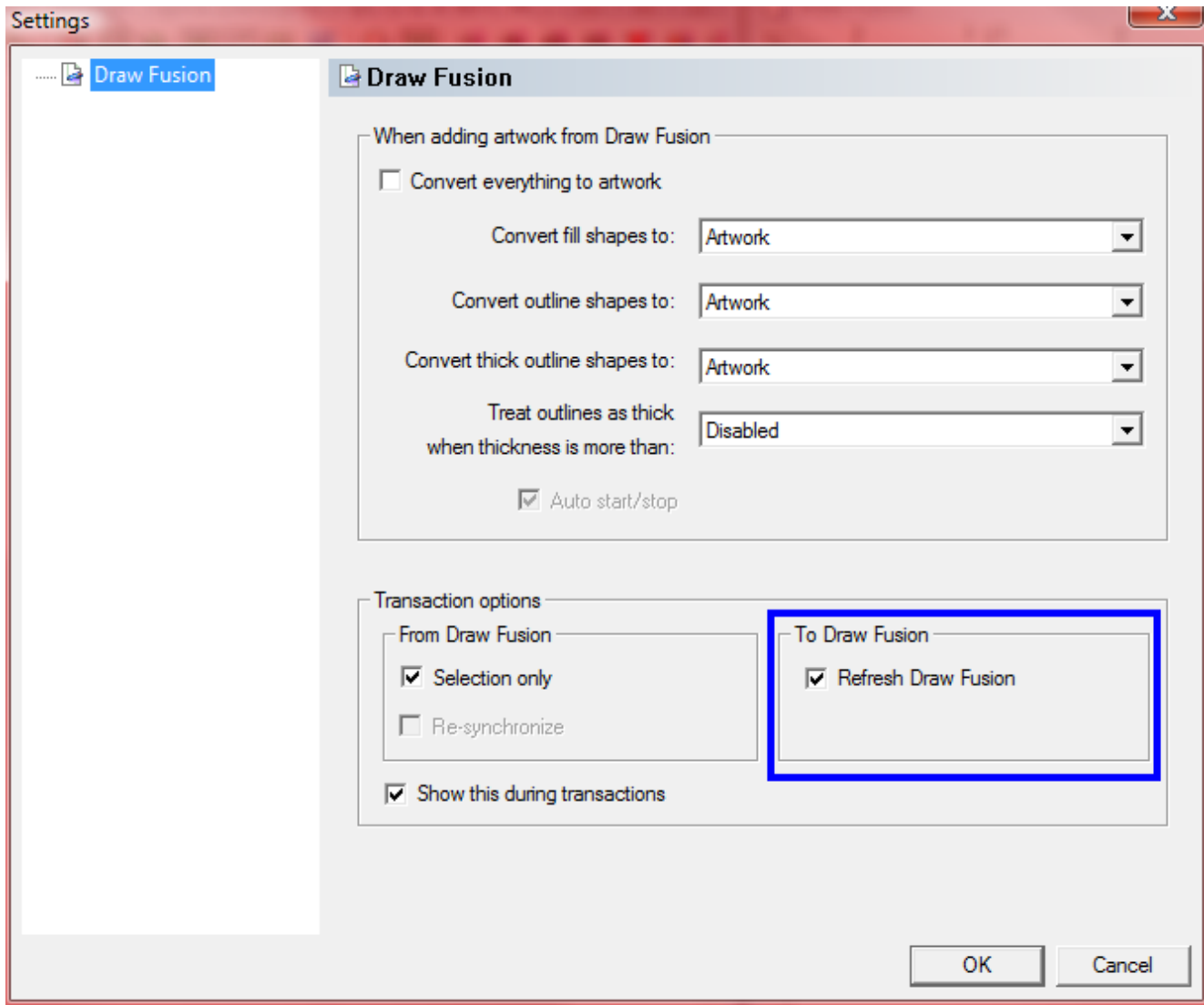
☒ Show this during transactions

## Using DrawFusion- Tajima DG15 by Pulse to DrawFusion

It is also possible to create a vector file from an outline file using the DrawFusion switch.

### Using DrawFusion -Tajima DG15 by Pulse to DrawFusion:

- In DG/ML create a new file and merge the design, or open the design directly into DG/ML.
- Make any necessary changes to the file, i.e., resize add lettering.
- Click on the DrawFusion button. 
- The only setting for the vector file is 'Refresh DrawFusion'.
- It will open the DrawFusion window on the left and start generating the vector file.



# APPENDIX A – Training Exercise: Trucking

In this exercise, you will be:

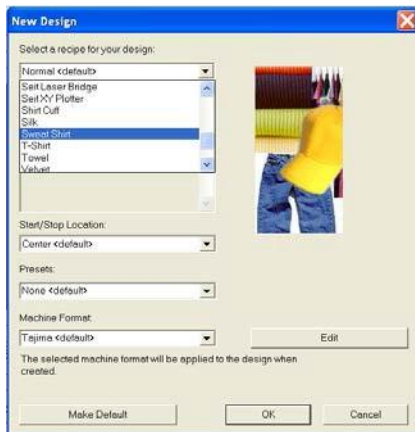
- Making the T in trucking tall but not wider
- Extending the T so it is the same length as the word Trucking
- Changing the Stop point of the T
- Making the bottom right leg of the K curved

Objectives:

- Convert Text to Segments
- Use Vertex Select Tool
- Change and Edit Anchor Points
- Change Start and Stop Beads on a Segments
- Use Guidelines

Steps:

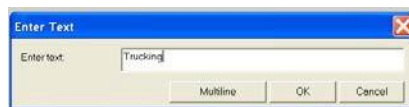
1. Select File/New



2. Select the Sweatshirt Recipe

3. From the Lettering Tools, Select Line Angle

4. Place your cursor in the middle of your workspace, Left Click and then Right Click

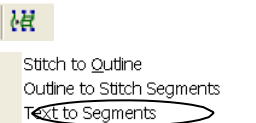


5. When the Enter Text box comes up, type in Trucking

6. Click OK

7. We are using Block New at 1 inch

8. Select the Convert Button



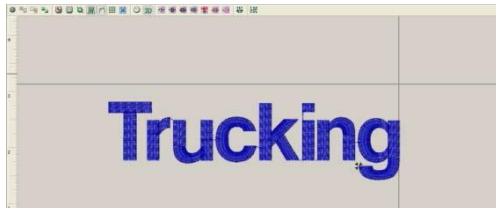
9. Choose Text to Segments

10. Left Click outside of the box to deselect the design.

11. In order to easily line up points, we are going to place guidelines on the screen next to the g in Trucking and above the Entire word leaving space so when you extend the letter T it does not hit K or I. To bring a guideline out on to the screen, left click and drag from the center of the ruler on the side or bottom of the screen. If you drop a guideline in the wrong place, hold the SHIFT+CTRL keys and left click and move an existing guideline.



[Type here]






12. Left Click on the edge of the letter T to select it.

13. Left Click and Drag the dot of the center top of the box around the T to make it taller but not wider.






14. Tap G to generate your stitches.

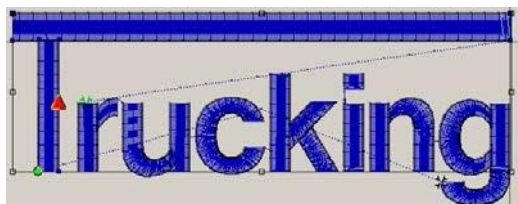
15. Make sure that your 3D view  is turn off and the Show Dots  is turned on.


16. Choose the Vertex Select Tool . Click and drag a box around the two blue end points. They will turn yellow when selected.

17. Click and Drag one of the yellow points ,which will move both points at the same time, and extend the top of the T making it the same length as the word Trucking. Make sure to tap the G key to generate your stitches.



18. Turn on Show Beads  so that you can see the Green Start Bead  and the Red Stop Bead  on the T. Your machine sews faster than it travels so we are going to move the stop bead from the end of the T so it is next to the r. Make sure you see the small arrow, then Left Click and drag the red Triangle.



19. To See The Changes, Click the Sew Clock 

20. Choose Play Forward from the Draw Ribbon to watch it sew out on the screen.



21. Left click the edge of the letter k to select it.

22. Tap the K on the keyboard to fit the k to the window.

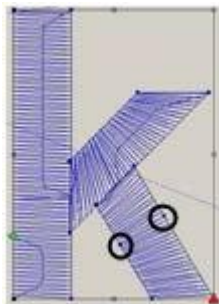
23. Choose the Vertex Select Tool .

24. To add anchor points to the letter k, right click with the vertex select tool and chose Add Anchor from the drop down menu




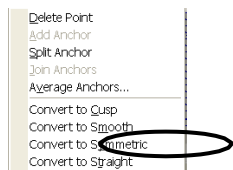
25. Add an anchor on both sides of the lower right leg of the k.

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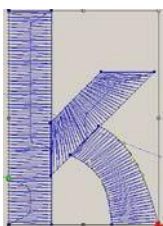


26. To make the leg of the K curve, we need to change these from straight points to curved points. (See Section of Working with Anchor Points for more Detail)

27. With the vertex select tool,  right click and choose Convert to Symmetric from the drop down menu.



28. Left Click and Drag on the point to adjust the curve of the leg of the k. Don't forget to tap G to generate your stitches.



Congratulations!!! You are now finished with the Exercise. Here is what the finished product should look like:



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## APPENDIX B – Training Exercise: Teddy Bear

In this exercise, you will be:

- Changing the body of the bear to a fill pattern
- Fixing the Ears, Bow and Footpad fills with Quality Control
- Changing the Color of the Mouth
- Adding a Trim between the eyes
- Adding a Trim between the Nose and Eyes

Objectives:


- Convert Text to Segments
- Use Segment Filter
- Change Satin to Fills
- Use Quality Control
- Add a Color Change
- Add Trims and Lock Stitches
- Add Underlay

Steps:

1. Select File/New



2. Select the Sweatshirt Recipe
3. From the Lettering Tools, Select Line Angle
4. From the text ribbon bar, change the font from Block New to Animals and Change the height from 1.00 in to 4.00 in.

Text:  Font:  Animals Height: 4.00 in

5. Place your cursor in the middle of your workspace, Left Click and then Right Click

6. When the Enter Text box comes up, type an upper case E and click OK.

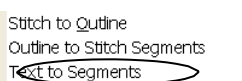


Note: You can look up the

7. Select the Convert Button



8. Choose Text to Segments

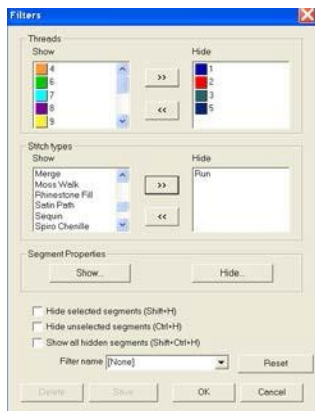


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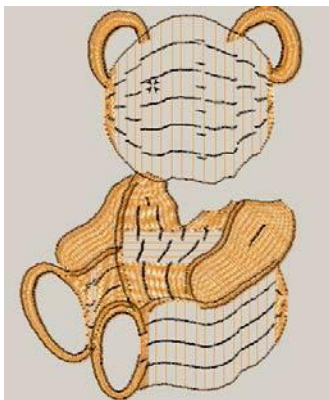
9. Left Click outside of the box to deselect the design.

10. Select the Segment Filter 


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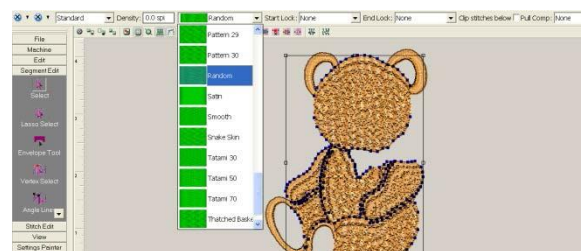
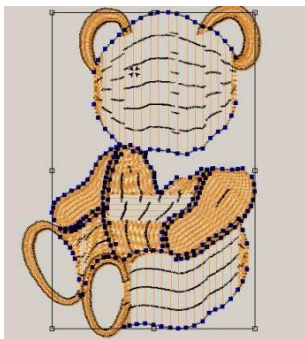


11. Hide Colors 1, 2, 3 and 5. Also hide the run stitches.



12. Click OK, you should see just the body of the teddy bear.

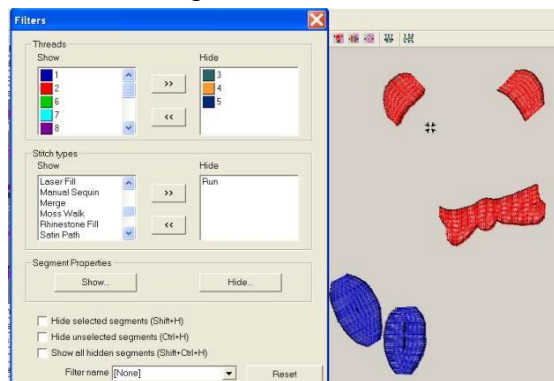
13. Using your Select Arrow , make a box around all of the segments except the tops of his ears and the bottoms of his feet.



14. On the Ribbon Bar, Change the Pattern from Satin to Random.

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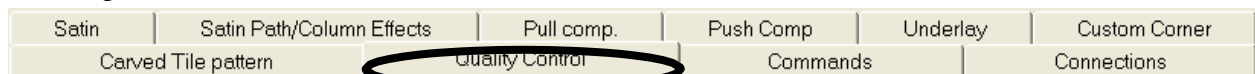
15. Go back to the Segment Filter . Hide Color 4 and unhide colors 1 and 2.



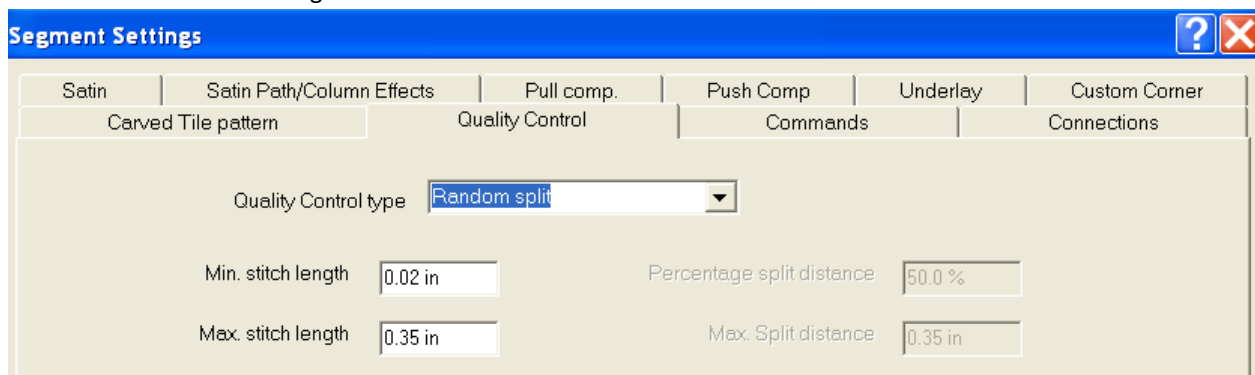
16. Select everything on your screen by clicking and dragging a box around it or Clicking ALT+A on your keyboard.  
17. Go into your Segment Settings



18. Go to the Quality Control Tab. Quality Control allows you to control where it will change a stitch based on a maximum stitch length.

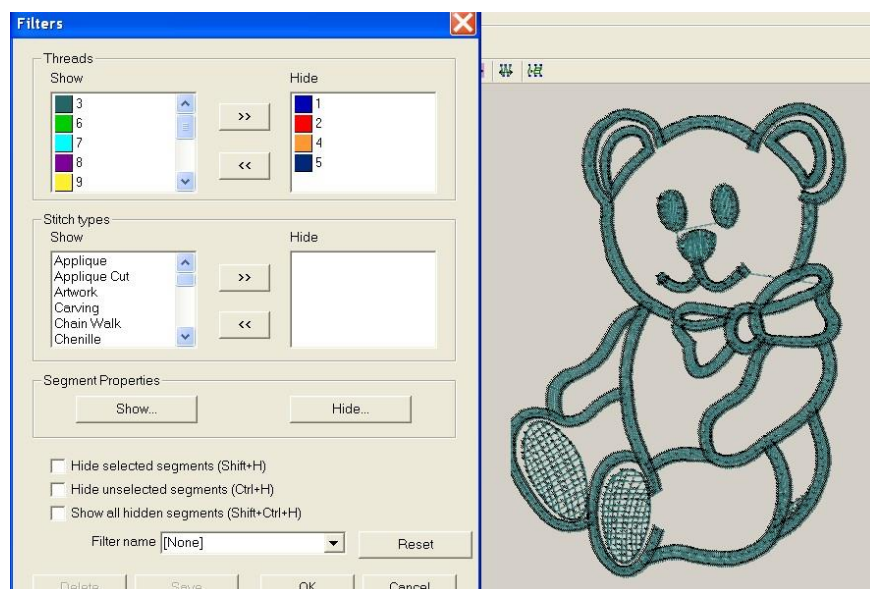


19. Select Random Split from the Quality Control Type and change you maximum stitch length to .35 in. This will take all of the stitches that are .35 in or longer and convert them to a Random Fill and leave the rest as Satin Stitches.



20. Go back to the Segment Filter .  
21. Hide Colors 1 and 2 and unhide Color 3 and the Running Stitches.

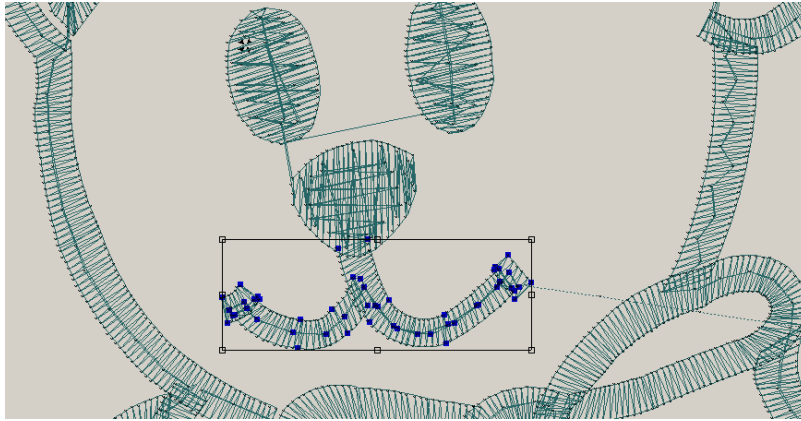
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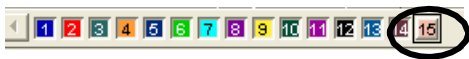
22. Zoom into the face of the bear so you can easily see the mouth. It helps if you do not have you 3D view turned on.

[Type here]

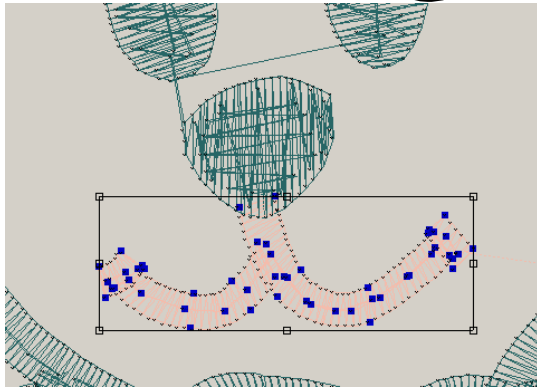
23. Using your Select Arrow , draw a box around the mouth.




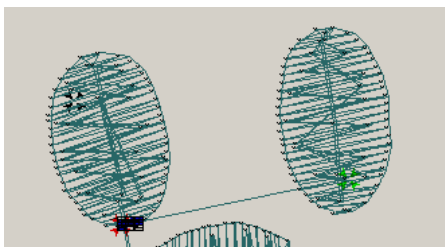
24. From your Active Color Palette on the bottom left hand side of your screen, select color 15.



This will change the color of the teddy bears mouth.



25. Left Click on the edge of the eye on the left hand side to select it. We will need to find the segment that is before the eye on the right hand side to add a trim command. Use the move forward by one arrow  to find this spot. Left Clicking on your mouse moves you to the previous segment, Right Clicking on your mouse moves you to the next segment.



Segment No. 92


Manual

at End Icon.



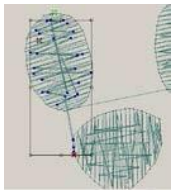
Insert Trim at End

26. To add a Trim between the eyes, Left Click on the F4 key or choose the Insert Trim

27. Left Click on the edge of the Nose to select it. Use the move forward by one arrow  to find the running stitches that sew from the nose into the eye.



[Type here]



[Type here]

28. To delete it, tap the Delete Key on your keyboard.

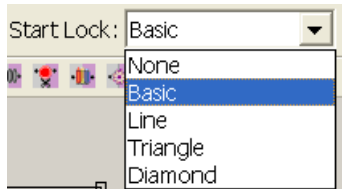
29. To add an end lock stitch and trim to the nose, Left Click on the edge of the Nose to select it. Click of the End Lock Icon



and then Click on the Insert Trim at End Icon



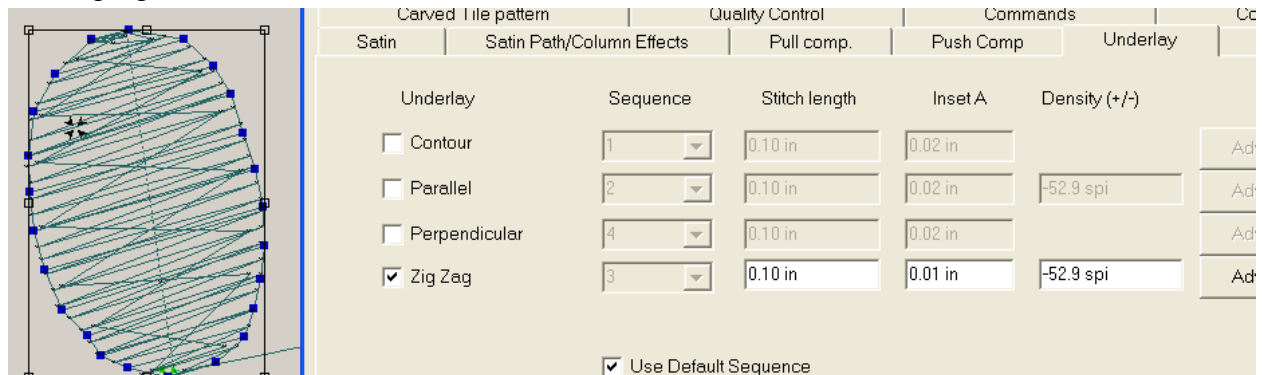
30. To add a Trim at the Beginning of the Eye on the left hand side, Left Click on the Edge of the Eye, from the ribbon bar, select Basic Lock from the Start Lock Drop Down.




31. To add the underlay back into the eye, with it selected, go to the Underlay Tab in Segment Settings.



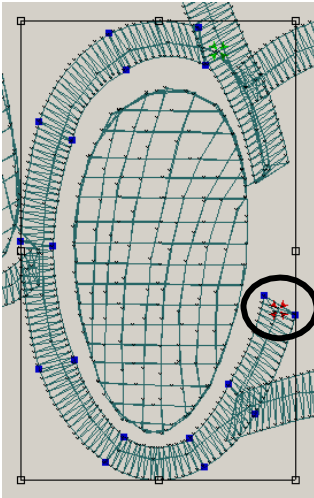
32. Select Zig Zag.



33. To fix the break in the outline of his leg, Left Click to select the edge of that segment.

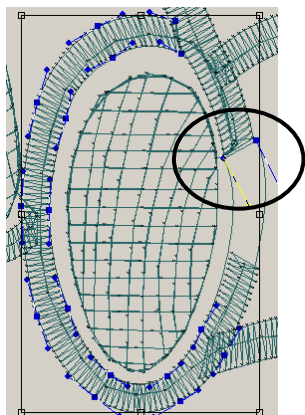
34. Choose the Vertex Select Tool . Click and drag a box around the two blue end points. They will turn yellow when selected.

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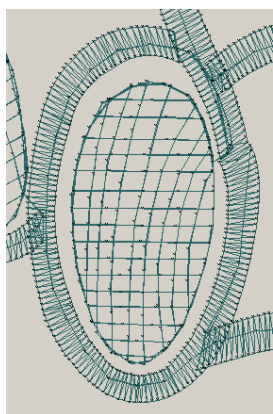


35. Pull the blue points to connect to the other side of the oval around the foot pad. You can adjust the curves by pulling on the handles attached to a point. (See the section on editing and working with anchor points)

[Type here]



36. Tap G to process the stitches.



Congratulations!!! You are now finished with the Exercise. Here is what the finished product should look like:



[Type here]

## APPENDIX C – Training Exercise: Sailboat 5

In this exercise, you will be:

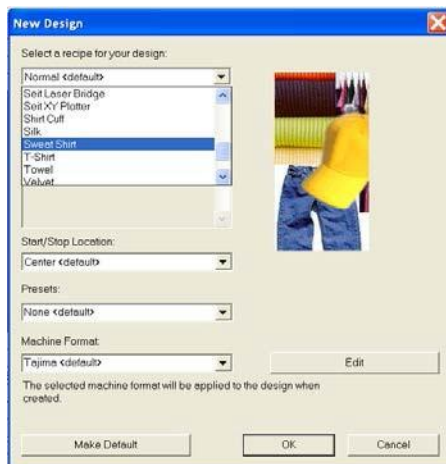
- Deleting the ships wheel
- Repairing the waves
- Adding Text to the banner
- Making each bird a different color
- Resizing the bird on the right hand side
- Re-sequencing the bird so it sews on top of the outline

Objectives:

- Use Segment Filter
- Use Vertex Select
- Use Fill Box Alignment
- Add Color Changes
- Resize Object
- Re-sequencing using the Segment List

Steps:

1. Select File/New

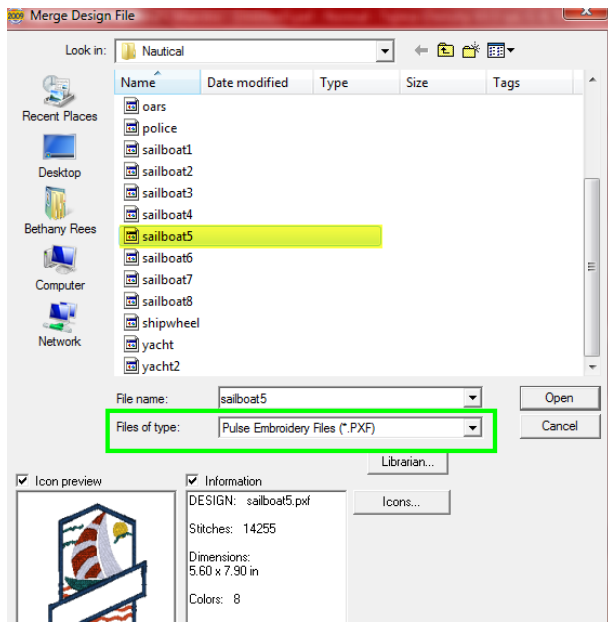



2. Select the Sweatshirt Recipe

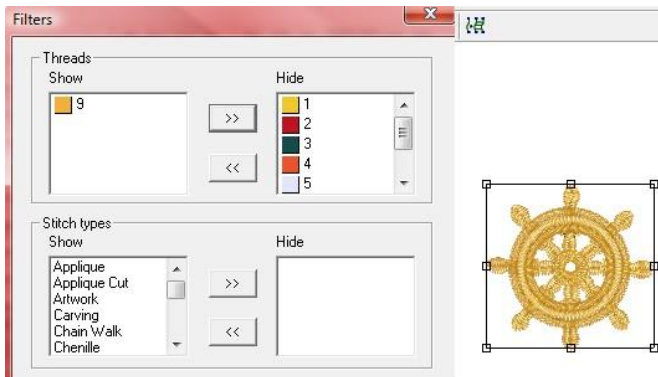
3. Choose Merge Design




[Type here]

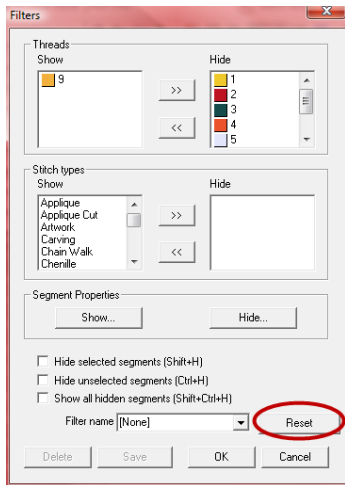



4. Change the “Files of Type” to Pulse Embroidery Files (PXF)
5. Choose the design called Sailboat5
6. Tap Open, then Left Click to place design on the screen.
7. Note: Designs come in Ungrouped or in segments so you are ready to edit
8. Tap the W key to fit the design to your workspace window
9. Select the Segment Filter 
10. Hide Colors 1-8 leaving just the ships wheel on the window



11. Left Click and Drag to draw a box around the ships wheel or click CTRL+A to select the ships wheel then tap the Delete key of your keyboard to get rid of the ships wheel
12. Select the Segment Filter 
13. Click the reset button to bring back all the colors you had hidden

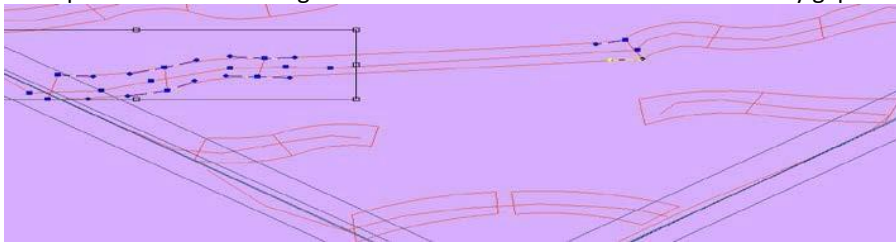
[Type here]



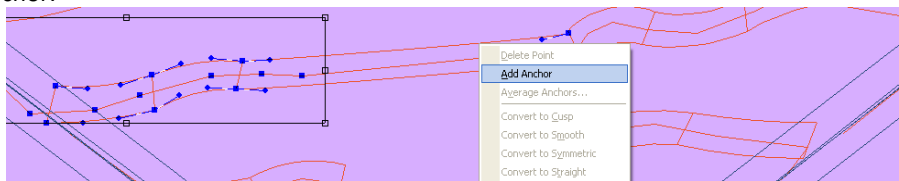
14. Click OK. Notice that your waves now have a break in them. We are going to connect those waves together by editing our anchor points.
15. Tap the “Z” key to activate the zoom mode.
16. Click and drag a box around the hole and then tap the “S” key to get out of the zoom mode.
17. Turn your stitches off (X on the keyboard lets you turn stitches on and off) and make sure that your Show Dots  are on.
18. Click and drag a box around the edge of the top left wave.

19. Choose the Vertex Select .

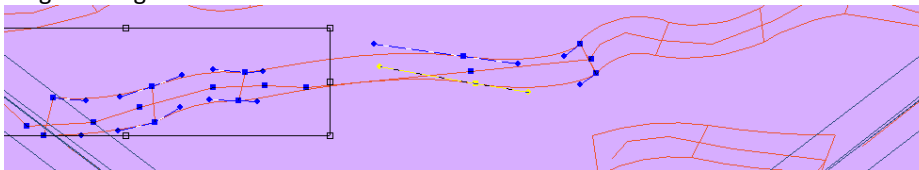
20. Now click and drag and drop the anchor points onto the opposite wave connecting all three lines. Make sure to overlap a little inside the right wave. This will ensure that there aren't any gaps.



21. Now, move your cursor over to the middle of the section that you just created, and right click on the top line and choose add anchor.



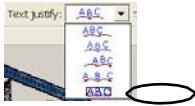
22. Do the same for the other two lines.
23. Now, click and drag the tangents to curve the outline.



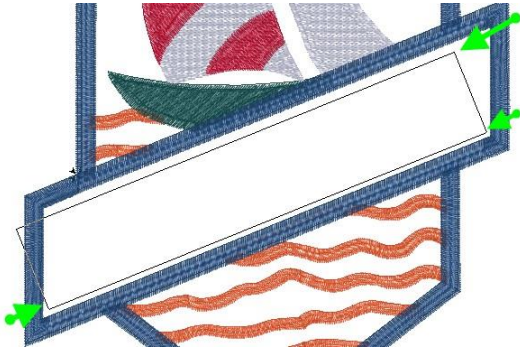
24. Once finished, tap the “G” and then turn on your stitches and take a look at what you did.
25. Go ahead and do the next two waves the same way.


26. From the Lettering Tools, Select Line Angle .

[Type here]



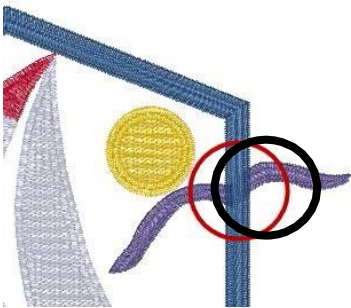
27. On the Ribbon Bar, select the Fill Box Icon from Text Justify
28. Left Click 3 points to create a box for your text



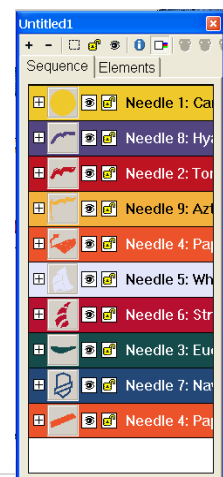
29. Type your text in the Enter Text box.
30. Select the Segment Filter  and hide everything except Color 3
31. Left Click and Drag a Box around one of the birds
32. To change the color of the bird, select a different color from the active color palette at the bottom left of the screen.



33. Repeat for each bird so they are each a separate color.
34. Go back to the Segment Filter and hid all the colors except for the bird on the right side.
35. Select the bird on the right side and click and drag a corner to resize the bird. You will notice that the bird is underneath the outline.

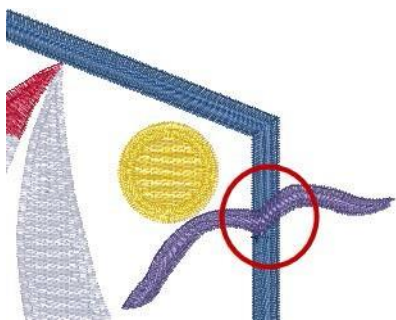


36. To re-sequence the design so the bird is on top of the outline, go to Window and select the Segment List.
37. Click and drag the Purple bird (Needle 8 above) below the Outline (Needle 7 Above). That will put the bird on top of the outline.





[Type here]



Congratulations!!! You are now finished with the Exercise. Here is what the finished product should look like:



## APPENDIX D – Training Exercise: Soccer

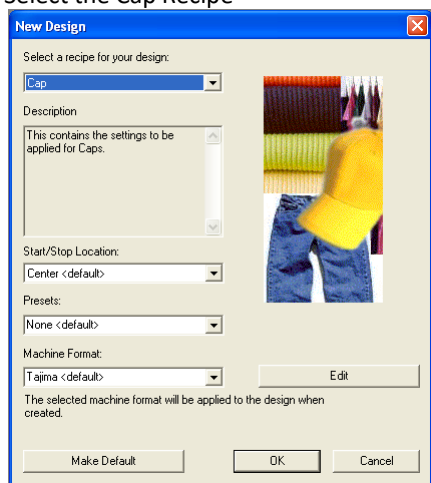
In this exercise, you will be:

- Setting up for a front and side logo of a cap.

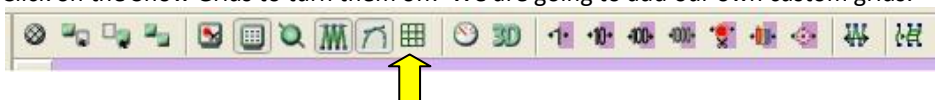
Objectives:

- Merge Design
- Group Outline File
- Text to Segments
- Re-sequence for sewing order for center out for a cap.
- Setting up for a Side logo on a cap.
- Changing the origin point.

1. Select file/New
2. Select the Cap Recipe



3. Go to Menu View – Hoop – Load.
4. Select the Cap folder.
5. Select Front Wide Cap.dxf.
6. Click OK.
7. Click on the Show Grids to turn them off. We are going to add our own custom grids.




8. Click and drag from the bottom ruler – you will see a line attached to your cursor – and drop it on the left “0”.
9. Click and drag from the left ruler and drop it on the bottom “0”. This, we will use as our origin point for the entire design and the center point of the front design.

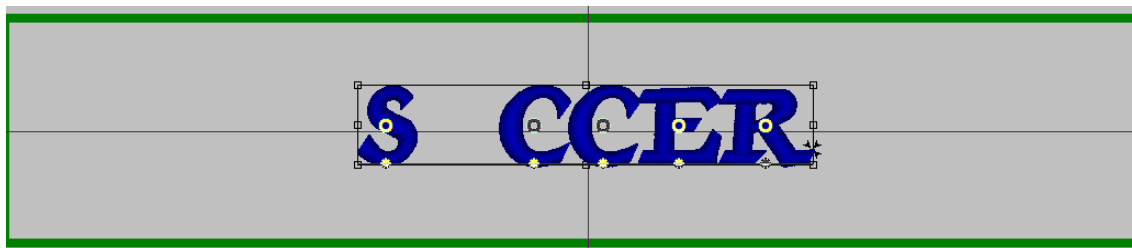
[Type here]



10. From the Lettering Tool drawer, select the Text tool
11. From the text ribbon bar, change the font from Block New to Zap New and change the height from 1.00in to .75in and in the Text box type in Capital S hit three spaces on the key board and then type in capital CCCER

Text:  Font:   Height:

12. Left click once in the intersection of your two grid lines and then tap the “Enter” key.

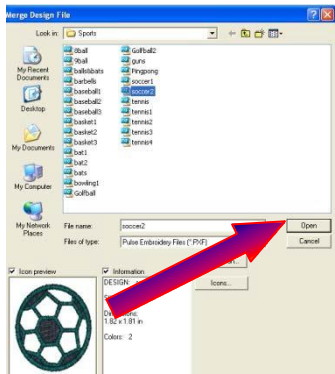


13. Put your designs disk into your (D ;) drive

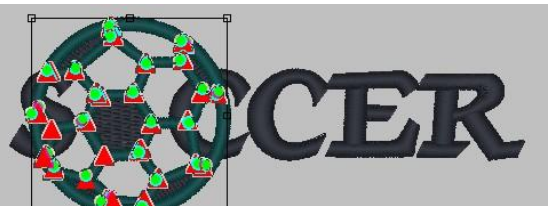


14. Go to your File Tool drawer and choose Merge Design
15. Make sure your “Files of Type” are on PXF.
16. Go to your designs folder and choose the Sports folder select Soccer2.
17. Click “Open”.

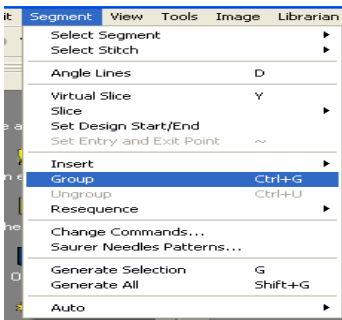
[Type here]




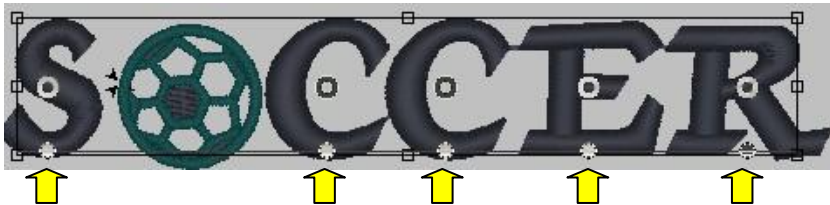
18. Move your mouse in-between the S and C on your work space you will see the outer boundaries of the design left click to place your design. When you merge a design you will be selected on all segments.




19. Let's Group the soccer ball to be recognized as a single unit. Go to Segment on the menu ribbon and select Group.



20. Resize the soccer ball to .82in.  and make necessary adjustments to the kerning beads between the letters.



21. Click on the clock  this will open the Draw ribbon

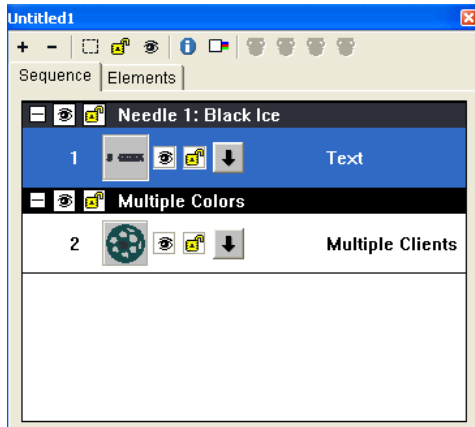


select play

forward watch how it sews out. Notice that it sews the SCCER first and then the soccer ball let's say we are going to sew this on a cap. We need to re-sequence it to sew from center out.

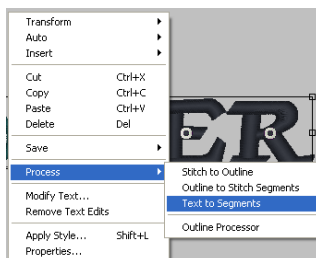
[Type here]

22. Go to Window on the menu ribbon and select your Segment List.

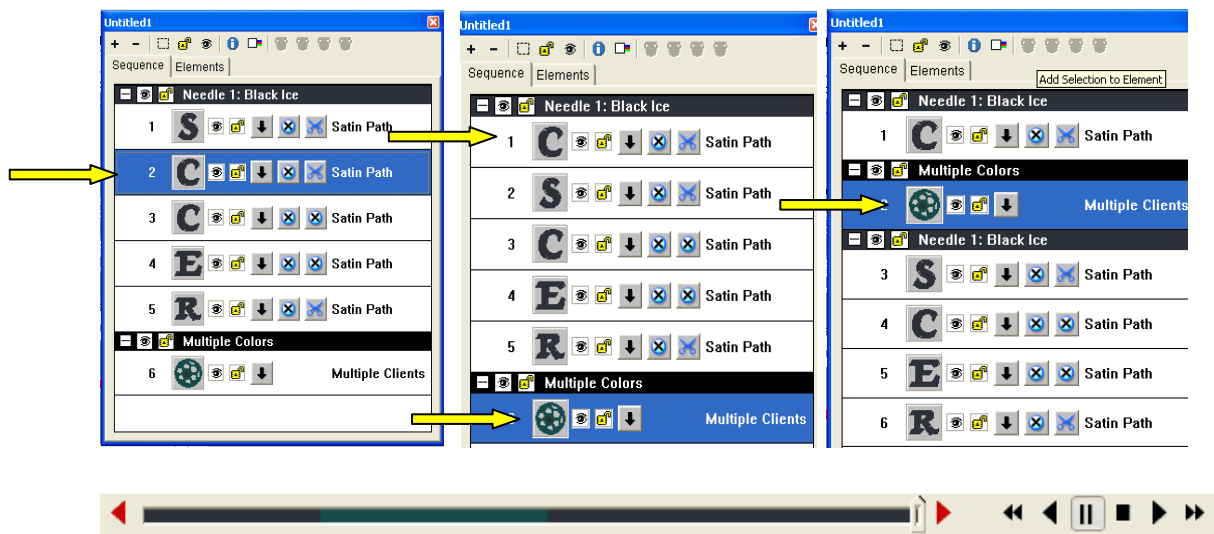


23. Select the + to expand all segments you will see segment 1 says Text and segment 2 says multiple Clients.

24. When selected on Text right click and select process Text to segments.



25. You will now see instead of two segments you have six segments in your segment list. Select the C which is segment number buy left clicking on the picture in your segment list and drag to the top of segment 1 and release. Notice how we just made the letter C which was segment number 2 become segment 1. We also want the soccer ball design which is now segment 6 to sew after segment 1 left click on segment 6 and drag up and drop below segment 1 making the soccer design become segment 2.



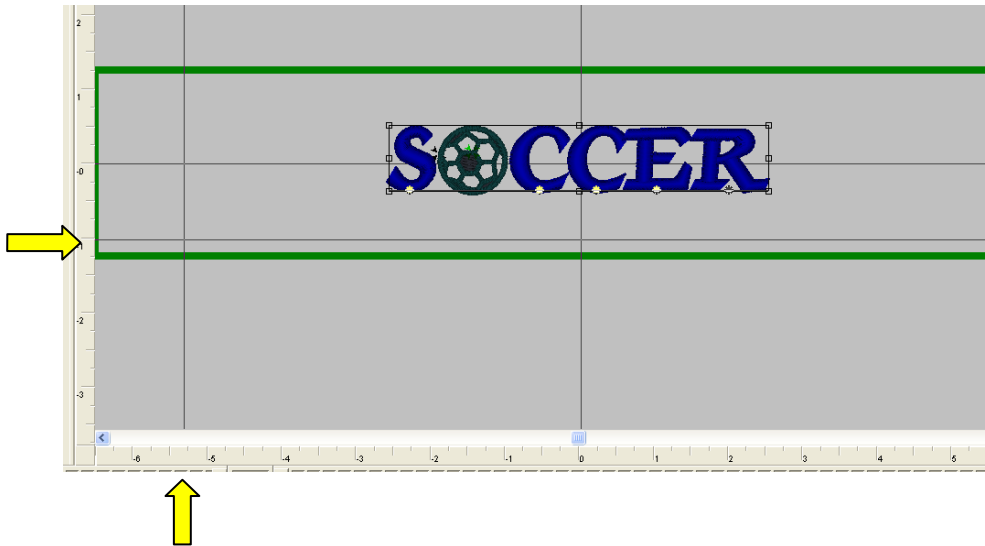
Play forward on your Draw Ribbon and you will see that it sews in the order of your segment list. We have know just re-sequenced for the front of a cap to sew from center out.

26. We will now draw in more grid lines to place our side logo. To determine where to place your side logo you will need to

[Type here]

measure from the front center seam of your cap to the center side of your cap. It should be around 5.25 to 5.50 inches. We will draw them in at 5.25 for this design. Click and drag another grid line from the side ruler and measure over 5.25 from the center of your design and drop gridline.

27. Left click and draw another grid line from the bottom ruler and drop just a little above the bottom of the hoop.

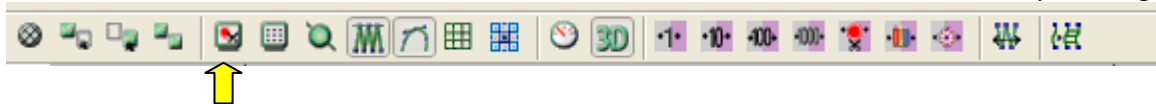


19. From the lettering Tooldrawer choose the Text tool



Left click once on the new intersection and tap the Enter key. Type in the number 11 in the text box select ok.

20. Click on Show Commands on your Navigation Toolbar.



21. Notice how the center point is between your front logo and side logo we will need to reset the center point for the middle of your front logo.

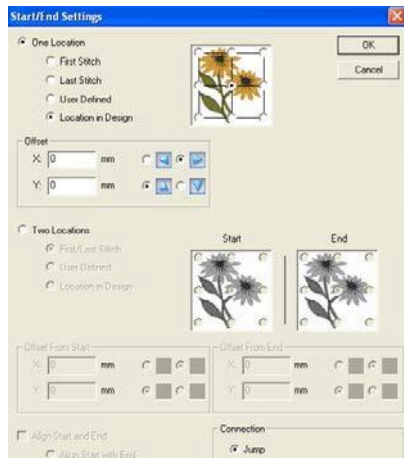


22. Go to your Segment Edit Tooldrawer and choose the Set Start / Stop.



23. Choose One Location- User Defined.

[Type here]



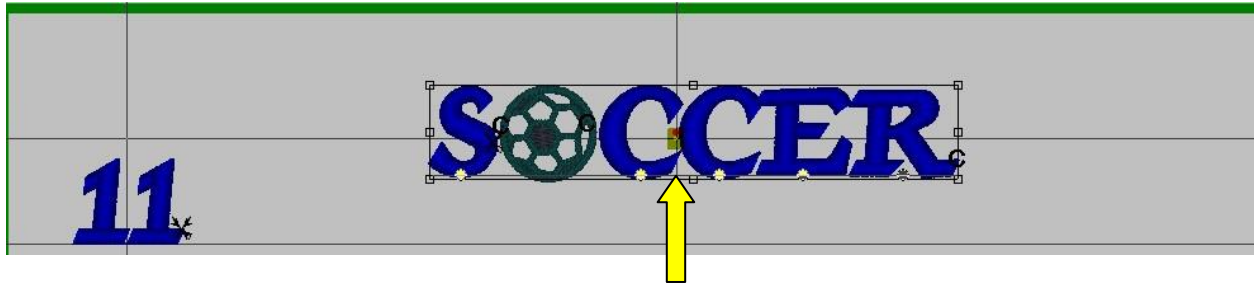
24. Click OK.

[Type here]



[Type here]

25. Now click just once in the middle of your Soccer design in the intersection of the grid lines .You will see that we moved are origin to the center of are Soccer design .



Now we can line up our needle at the machine with the center seam of the cap and placement will be right. To move an existing Grid Line hold Shift and Ctrl at the same time and left click and drag.

You also have the following abilities for single segments:

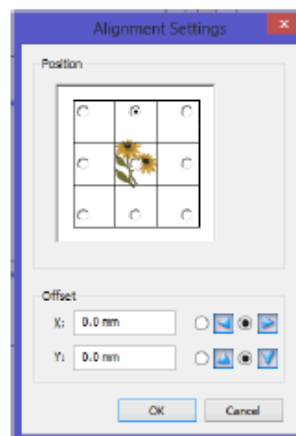
## ALIGNMENT – ALIGN TO SEGMENT

Three new menu items have been added to the context menu for a single segment selection.

### Align to Segment

This item activates a tool which allows you to select a segment to align to.

- Click on a segment to select it
- Click multiple times in the same spot to switch between segments that are on top of each other.
- Hit enter or right click to finish selection.
- Alignment settings dialog will appear:



- Set the location for the selected segment, as well as the offset from that segment.
- The selected segment is now aligned to the other segment and they will move in unison.

### Alignment Settings

This menu item should only be active if the segment has previously been aligned to another segment. This brings up the alignment settings dialog to change the settings.

### Clear Alignment

Clear Alignment removes the alignment selection for the segment.

# APPENDIX E – Training Exercise: Fixing True Tpye Fonts

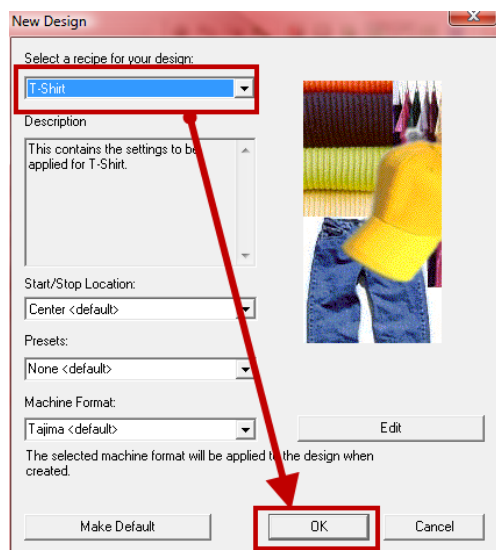
In this exercise, you will:

- Fix two true type letters for optimum sewing

Objectives:

- Create lettering using Line Angle Baseline Tool
- Change to True Type font
- Change fill type from Complex Fill to Satin Path
- Virtual Slice Tool to fix corner of columns
- Angle Lines Tool to clean stitch direction

1. Start a new file.
2. Choose T-Shirt as the recipe.
3. Left Click OK.

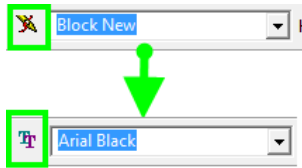


4. Choose the Line Angle Tool from the Lettering Tooldrawer.
5. Left click / right click on the workspace.
6. Type in 'TEAM' in the text box.
7. Left click OK.



8. Left click on the Needle to switch from the Embroidery fontlist to the True Type fontlist.
9. Choose Arial Black.

[Type here]

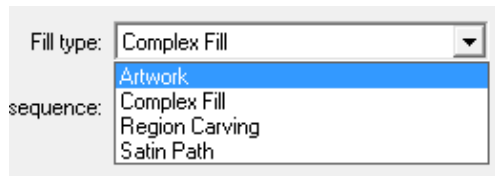


[Type here]

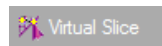
10. Left click on Properties.



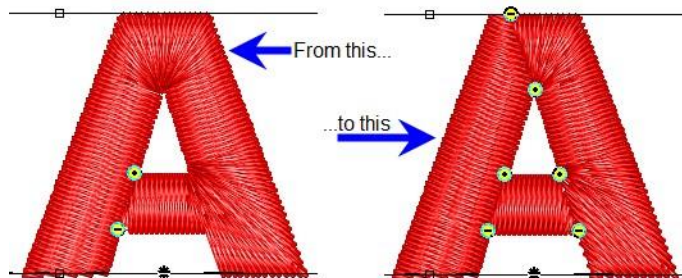
11. Change Fill type from Complex Fill to Satin Path.



12. Choose Virtual Slice Tool from Segment Edit Tooldrawer.



13. Left click and drag virtual slice at the top of the column of 'A'.

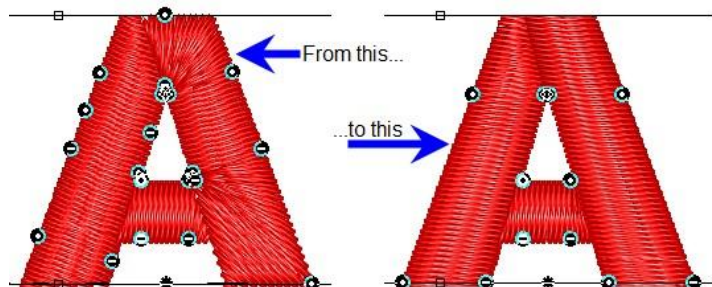


14. Choose the Angle Lines Tool from the Segment Edit Tooldrawer.

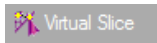


15. Left click and drag the angle beads to clean up the stitch directions, or left click and drag to create new angle lines.

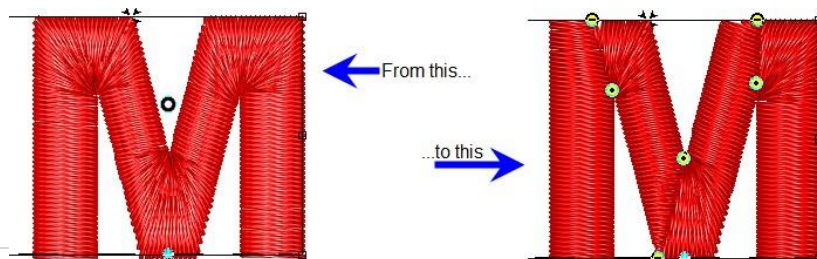
16. Press the (G) key to re-generate stitches.



17. Choose the Virtual Slice Tool from Segment Edit Tooldrawer.



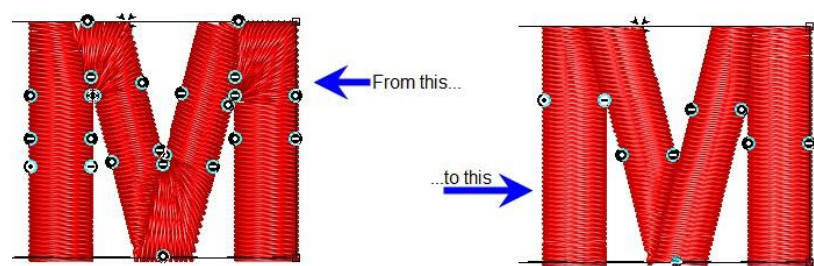
18. Left click and drag virtual slice at the tops and bottom of the columns of 'M'.



[Type here]

19. Choose the Angle Lines Tool from the Segment Edit Tooldrawer.
20. Left click and drag the angle beads to clean up the stitch directions, or left click and drag to create new angle lines.
21. Press the (G) key to re – generate stitches.

[Type here]



Congratulations, you’ve just fixed the True type lettering to sew as an Embroidery Font.



# Appendix F – Training Exercise: NewYear2000

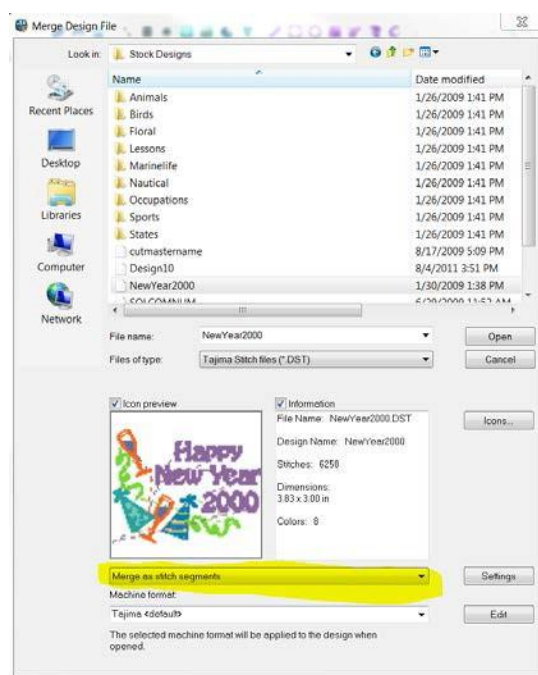
In this exercise, you will:

- Delete stitch segments
- Replace text
- Add trim
- Add manual lock
- Selective Stitch to Outline

Objectives:

- Delete a group of stitches
- Delete an individual group of stitches
- Replace a stitch file's text with new text
- Add a trim to a stitch file
- Add a lock stitch at the trim
- Convert one portion of the stitch file to a outline segments

- 1) New File
- 2) Merge in DST file NewYear2000
- 3) Make sure to Merge as Stitch Segments



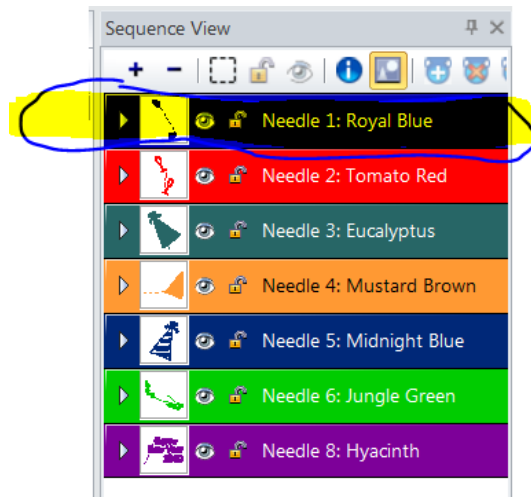
- 4) In the Sequence View, select the blue dots on the party hat and then click the delete key

- 5) In order to delete the contents of only one of the glasses we will need to use stitch editing tools






[Type here]

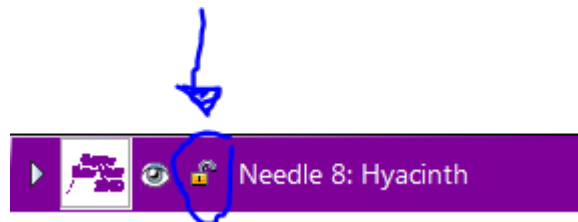


6) Click on the Royal Blue in the Sequence view

7) Click on Hide Unselected

8) Using the Stitch Select Tool , click and drag a box around the one piece of blue, you will see it turn yellow. Then click the delete key.

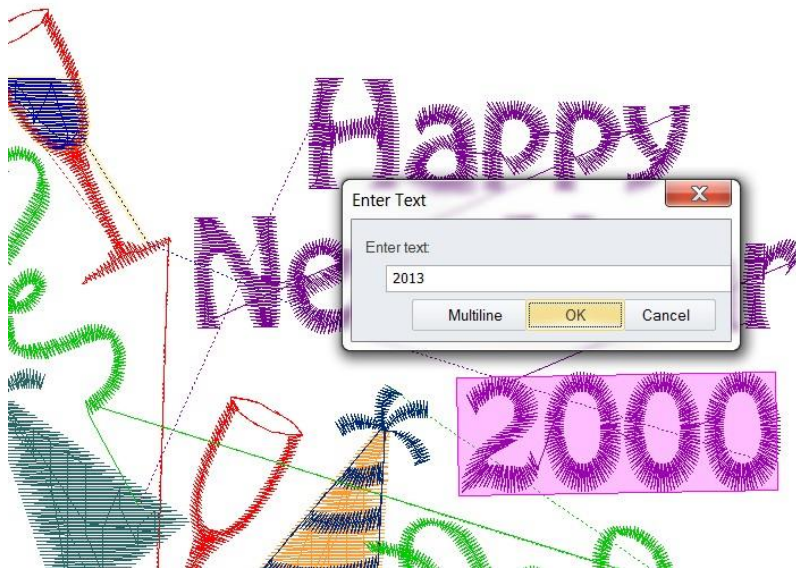
9) Click on Show All Hidden Segments  to bring back the rest of the design








10) Now we need to “lock”  the lettering to our screen so we can lay new lettering on top of it to match it.

[Type here]

- 11) With the Line Angle Tool  create a box then type in the new year



|                  |  |
|------------------|--|
| Font type        | Embroidery fonts   |
| Font             |  <b>Hobo ne</b> ... |
| Height           | 0.53 in  |
| Envelope         |                     |
| Text justify     |                     |
| Max width bas... |                   |
| Spacing          | 0  |
| Text width       | 100.0 %  |
| Slant            | 0  |
| Applique fram... | 0.16 in  |
| TTF border       |  |
| Border           |  None             |
| Fill type        | Complex fill   |
| Connections      |  |
| Trim type        | Trim   |
| Connection type  | Closest point  |
| Trim threshold   | 0.12 in  |
| Locks            | Around trim  |

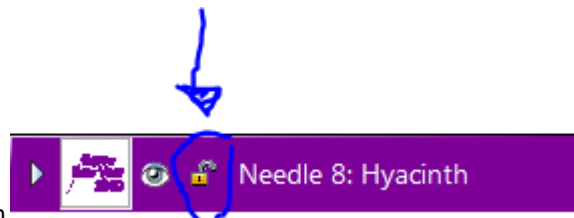
- 12) Find a font that is similar


- 13) Now hide the new lettering by clicking on Hide in the sequence view so you can delete the old.



in the sequence view so you can

- 14) Unlock the old text by clicking on the lock button again





- 15) Using the Stitch Select  tool, click and drag a box around the 2000 and click delete

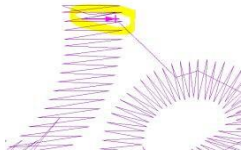
[Type here]

16) Now click on the hide button again next to the new lettering to bring it back on your screen



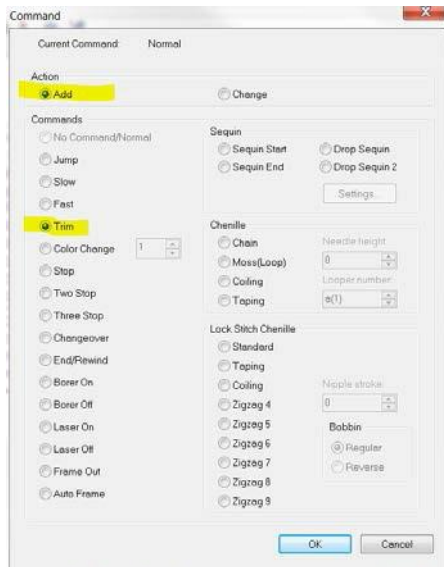
17) Now we want to add a trim between the Y and e in the word Year.

18) Using Stitch select  and move forward/back by one  find the spot on the Y before it jumps over to the e



19) Right click and select Command from the window.

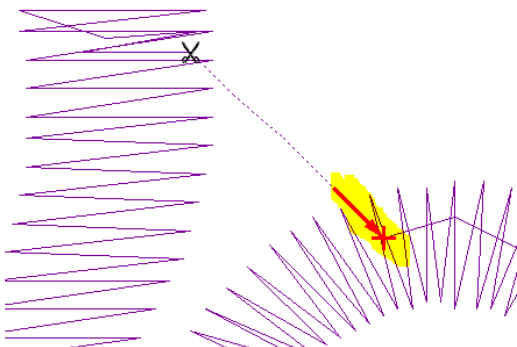
20) Click on Add under Action and Trim under Commands



21) Then Click OK

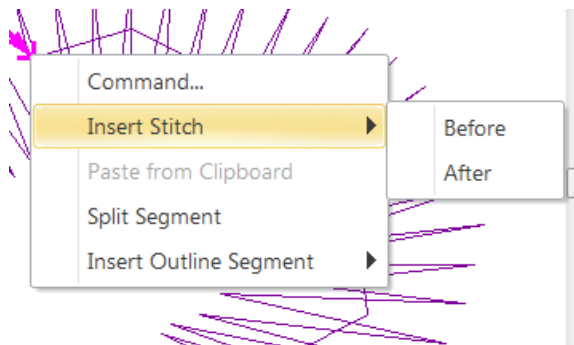
22) Now we need to add a manual lock stitch onto the e

23) Go forward to the e, then right click

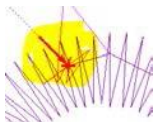


24) Select Insert Stitch then select After

[Type here]



25) Now you will need to click points to create your lock stitch. Use stitches that are there to judge how far apart to place the points.

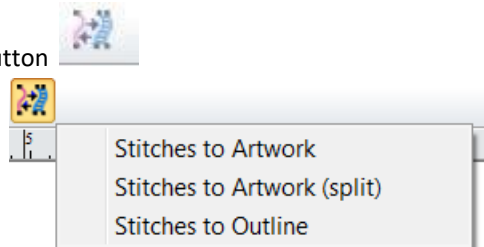


26) Click enter to finish adding your points

27) Now we want to add width to the green ribbons, but in order to do so we need to convert that section from stitches to outlines

28) Select the Green Ribbons from the Sequence View

29) Click on the Convert button

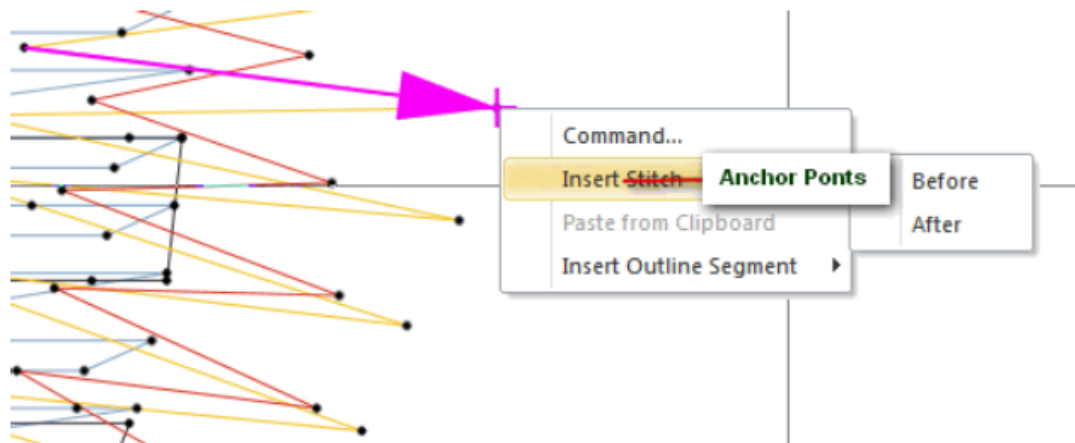


30) Select Stitches to Outline

31) Now that the ribbons are Satin Stitches, you can go to the Pull Comp Tab in Properties and increase the width

## ANCHOR POINTS – ADDING MULTIPLE ANCHOR POINTS

Users are easily able to add multiple anchor points.



## ANCHOR POINTS – CONVERTING ANCHOR POINTS

Anchor points can be quickly converted by pressing control and right clicking.

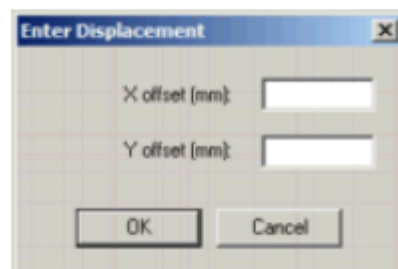
- Cusp to Smooth
- Smooth to Straight (results in Cusp)
- Symmetric to Smooth

## ANCHOR POINTS – MOVING ANCHORS

This new function helps users doing designs for carbon layer.

Select one or more nodes with the Vertex Select Tool and right click on one of the selected nodes to open a function list for nodes.

The Move Anchors option in this list allows users to enter values for selected nodes to be moved.



## ANCHOR POINTS – IMPROVE AVERAGE ANCHORS DIALOG

Alignment features have been added for the following:

- Vertical alignment to top, bottom and center/none
- Horizontal alignment to left, right and center/none

