

My **BERNINA**

Embroidery Software 7

DesignerPlus Features



Owner's Workbook

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Manual Digitizing Tools

Digitizing is the conversion of a graphic or drawn image into a data format that embroidery machines understand. Data is entered into the computer; then the data is defined to represent stitch types, stitch directions, stitching sequence, density settings, and other types of information for the design.

- *The digitizing tools are used to set stitches for all the outlines and shapes in a design.*
- *In manual digitizing, every object must be defined by one of the tools.*

You can create designs in DesignerPlus software using the manual digitizing tools while using artwork as a backdrop. Outlines of objects are created using right and left clicks around the objects. You have the choice to fill these areas with filled stitches or leave them as outlines around the objects.

Manual Digitizing Tools

There are seven basic types of manual digitizing tools in DesignerPlus 7. These are accessed in the Digitize Toolbox.

- ◇ **Open Object Tool:** *used for drawing outlines that don't enclose a shape, but are left open. The outline of the object is drawn with right + left clicks.*
- ◇ **Closed Object Tool:** *used for drawing filled or outlined objects that enclose a shape. The closed shape is drawn with right + left clicks.*
- ◇ **Open Freehand Tool:** *the open outlined shape is drawn by clicking and dragging on the screen vs. using right/left clicks.*
- ◇ **Closed Freehand Tool:** *used for drawing filled or outlined objects that enclose a shape by clicking and dragging on the screen vs. using right/left clicks.*
- ◇ **Block Digitizing Tool:** *used for drawing filled or outlined objects that set multiple angles within the object as it is digitized, using right/left clicks that alternate sides.*
- ◇ **Ellipse:** *used for drawing circles or ovals. You may also digitize a circle using the Open Object Tool and set three right clicks; then press Enter to set the shape.*
- ◇ **Rectangle:** *used for drawing rectangles or squares. Holding the Ctrl key with the Rectangle tool creates a square.*

With manual digitizing, you want to start with objects in the background and work toward objects in the foreground. It helps to develop a plan—it will save you time in the long run.

Continued practice and experience will help you learn the basics of manual digitizing.

Manual Digitizing

Fill Stitches:

There are fifteen types of fill stitches in DesignerPlus 7. These are accessed by shortcut icons at the bottom of the design screen or through Object Properties, Fill Tab. When you manually digitize designs, you choose the type and properties of the fill or outline, the color of the object, and the angle of the stitch for fill stitches. These decisions can be made prior to digitizing an object or they can be changed after the object is digitized.

Types of Fill Stitches:



- ◇ Step Fill
- ◇ Satin Fill
- ◇ Raised Satin Fill
- ◇ Fancy Fill
- ◇ Ripple Fill
- ◇ Contour Fill (only with Block Digitizing tool or Circle tool)
- ◇ Blackwork Fill
- ◇ Candlewicking Fill
- ◇ Lacework Fill
- ◇ Cross Stitch Fill
- ◇ Stipple Run
- ◇ Stipple Stemstitch
- ◇ Stipple Backstitch

Outline Stitches:

There are ten types of outline stitches in DesignerPlus 7. These are accessed by shortcut icons at the bottom of the design screen or through Object Properties, Outline Tab.

Types of Fill Stitches:



- ◇ Single Outline
- ◇ Triple Outline
- ◇ Backstitch Outline
- ◇ Stemstitch Outline
- ◇ Satin Outline
- ◇ Raised Satin Outline
- ◇ Blanket Outline
- ◇ Blackwork Outline
- ◇ Candlewicking Outline
- ◇ Pattern Run Outline

Manual Digitizing

Open a New File/Blank File



- Click on the *New* icon or select *File> New*.

Loading the Artwork



- Select *Insert Artwork*.
- Navigate to the Artwork Folder (C:> My Designs> Artwork).
- Select the floral pattern4.bmp.
- Click on *Open*.
- Select *File> Save As* and name the file, *Manual Digitizing*.

Notes:



Preselecting Thread Colors



- Click on the *Thread Colors* icon.
- The first default color in the top section of the dialog box should be selected.
- Choose *Isacord 40 numerical* from the drop down box of the *Thread Chart*.
- Click in the *Search* box.
- Enter the first thread color number from the chart on the right.
- Press *Enter*.
- Enter the second thread color, press *Enter*.
- Continue to complete entering the thread colors.
- When finished with all of the colors, click *OK*.

Default color	New Color
1	5411
2	5415
3	4421
4	2011
5	0608
6	0020

Lesson covers:

- ◆ *Rotating a hoop*
- ◆ *Manual Digitizing tools*
- ◆ *Morphing*
- ◆ *Applying + editing craft fills*
- ◆ *Changing Thread Colors*
- ◆ *Color Blending*
- ◆ *Changing density*
- ◆ *Calligraphy*
- ◆ *Outline Design*

Changing the Size of the Design



- Right click on the *Show Hoop* icon.
 - ◇ Make sure that *Show Hoop* is checked.
 - ◇ Select *artista 400 x 150 MEGA– Auto Split Machine*.
 - ◇ Click *OK*.



- Click on the *Hoop Canvas* icon. Select the hoop.
- Click on *Rotate Right* twice to rotate the hoop 90°.
- Return to *Embroidery Canvas* by clicking on the icon.
- Select the artwork.



- Hold the *Shift* key and click and drag a corner resizing handle until the flag shows about 242 mm for the *Width measurement* (about 9.5”).

Analyze the design before you start digitizing. You must digitize the objects in the background first, the objects in the foreground last, then any details that overlay the objects in the foreground.

In *Options, Scrolling Tab*, make sure that a check mark is placed by *Auto Scroll*.

Digitizing with the Closed Object Tool



- Click on the *Zoom* icon and drag a box around the top leaf.
- Select the *Closed Object Tool* in the *Digitize Toolbox*.
- The *Current Color* is 5411, the first assigned color.
- The default fill stitch is *Step Fill*.
- Using a series of right and left clicks, trace around the leaf shape.
- When you are close to the beginning click, press *Enter* to enclose the shape.



See digitizing tips on the next page.

Digitizing Tips:

- ◇ It takes three clicks before the direction of the line takes shape.
- ◇ A left click followed by a left click makes a straight line segment.
- ◇ A left click followed by a right click begins to make a curve.
- ◇ A right click followed by a left begins to make a curve.
- ◇ A right click followed by a right click begins to make a curve.
- ◇ Left clicks are used to change directions and turn corners.
- ◇ Use as few clicks as possible while still defining the shape.
- ◇ When you get close to finishing the shape, let the software enclose the shape when using the *Closed Object Tool* by pressing *Enter* on the keyboard.

If you make a mistake:

- ◇ Use the *Backspace* key to erase one click at a time. Continue to use the *Backspace* as many times as you need.
- ◇ If you wish to start over, press the *Esc* key.
- ◇ You can always digitize the shape; then use *Reshape* to change the digitized points (see information below).

Changing Stitch Angles



- Press *Esc* to deselect the digitizing tool.
- The default stitch angle for step fills is 45°.
- Select the object; then select *Reshape Object*.
- Rest your cursor on the peach-colored square at the end of the line segment.
- Click and drag the square so that it extends through the tip of the leaf. This changes the stitch angle.

Editing Reference Points

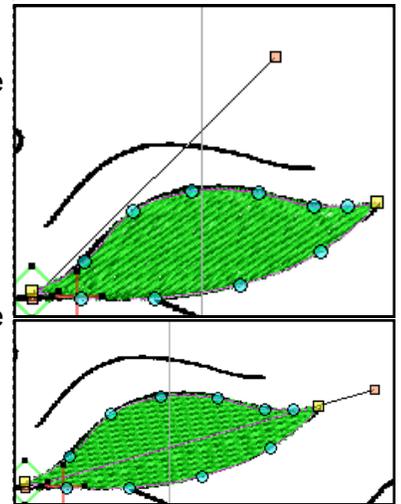
- If you wish to reshape the object, this is also done through *Reshape*. To reshape objects:
 - ◇ To change a reference point—select the digitized point; press the space bar. This changes a left to a right click and vice versa.
 - ◇ To add a reference point—click on the line surrounding the object, right or left click on the line.
 - ◇ To move a reference point—click and drag it to a new location.
 - ◇ To delete a reference point—select the point and press *Delete*.
- Press *Esc* when finished.

Adding Dimension by Splitting Objects

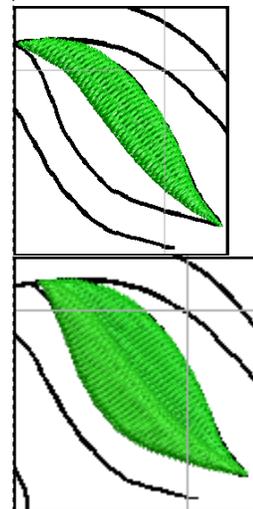


- Another method of digitizing leaves is to split the leaf in the middle and then digitize the leaf in two parts.
- Use *Pan* to move to the other leaf.
- Select the *Closed Object Tool*.
- Digitize the top part of the lower leaf in the design using Color #1, creating an imaginary line across the center of the leaf.
- Press *Enter* to activate the stitches.
- Select Color # 2; then digitize the bottom part of the leaf. Make sure you slightly overlap the objects in the middle of the leaf so a gap does not occur when stitching.

Zooming in on the picture helps when you are digitizing. Use the Scroll bars to the right and below the design screen to move to another part of the picture or use *Pan* to move the design.



You can always add imaginary lines to the image in your design to create dimension.



- Press *Esc*; then select the top part of the leaf.
- Right click to display *Object Properties*.
- Select the *Stitch Angle* tab, then change the value to 160.
- Click *Apply*.
- Select the lower part of the leaf. Change the stitch angle to 105°.
- Click *OK*; then *Esc*.

Remove Overlap



- Use *Pan* to locate the flower on the far right.
- Select Color # 4; then select the *Closed Object Tool*.
- Digitize around the petals of the far right flower by beginning at an intersecting point (see the red arrow in the illustration to the right).
- Begin with a left click, then digitize around the petals. Remember to use a left click to change direction at the intersection of each of the petals.
- Press *Enter* to activate the stitches for the petals.
- Select *Esc*.
- Select Color # 5, then select the *Ellipse e* tool.
- Click in the center of the flower petals and drag to the desired size of the circle and click again.
- Press *Enter*, then press *Esc*.
- Next, select the flower center. Move if desired.
- Select *Remove Overlaps* from the *Edit Toolbox*.
- The stitching under the yellow center is removed.



Morphing



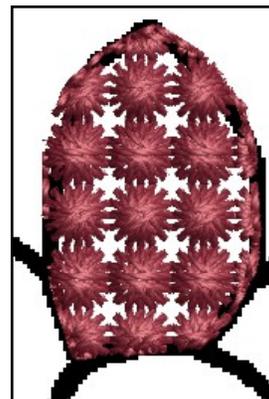
- Select the petals of the flower.
- Click on the *Morphing Effect* tab in the *Docker Panels*. If the tab is not visible, click on the *Morphing Effect* icon in the *General Toolbar*.
- Click on the *Ripple Morphing Effect*.
- Drag the *Ripple Amplitude* (vertical bar) to 55.
- Drag the *Ripple Frequency* (horizontal bar) to 75.
- Click on the *Twirl Morphing Effect*.
- Select *Esc*.



Digitizing Candlewicking

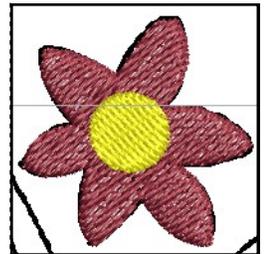
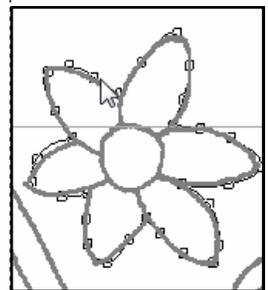
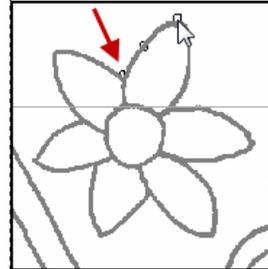


- *Pan* to another flower.
- Select Color # 4.
- Select the *Closed Object Tool* in the *Digitize Toolbox*.
- Digitize around only one petal of the second flower, beginning at the base of the flower center.
- Press *Enter* to activate the stitches; then *Esc*.
- Select the petal; then right click on the *Candlewicking Fill* icon to open the *Object Properties* dialog box.



Notes:

You can change the angle of an object mathematically as well as visually.



You may also use the **Add holes** icon to create a hole for the flower center. First, digitize the background shape, select the shape, then click on the **Add Holes** icon in the *Edit Toolbox*. Using right and left clicks, click around the shape you wish to remove. Press *Enter* to close the shape and *Enter* again to cut the hole.



Fill the center by selecting the object and clicking on the **Fill Holes** icon. The hole is filled with the same color of fill. Select the center and change the color by clicking on a color chip.

- Click on the *Select* button.
- There are different types of Candlewicking fills.
- Select the 3 mm knot.
- Click *OK*; then *Esc*.

Blackwork Fill



- Right click on the *Blackwork Fill* icon to open *Object Properties*.
- Click on the *Select* button.
- Click on *Show True View* to see how the stitches will actually look.
- Use the scroll arrows to select *Blackwork Fill # B0017a*.
- Click *OK*.
- Select the *Closed Object Tool*.
- Digitize around another petal and press *Enter*.
- Click on *Show Bitmap Artwork* to hide the picture.
- Press *Esc*.
- Select the Blackwork petal and click on *Object Properties*.

Editing Craft Fills

- Click on the *Layout* button in *Object Properties*.
- Notice there are three blue repeats of the design surrounded by several yellow repeats.
- Each blue repeat has a different function for making alterations in the craft fills.
 - ◊ With the middle repeat, you can resize the fill by clicking and dragging on one of the black boxes. Clicking on a corner box will resize the fill proportionally. The center squares will resize disproportionately.
 - ◊ Click in the middle of this repeat.
 - ◊ The black squares change to outlined squares and you can now rotate the craft fill by clicking and dragging the outlined squares.
 - ◊ If you click and drag on a diamond outlined shape in the middle, this will skew the fill.
 - ◊ The top repeat will stagger the repeats—click and move this repeat to see the effect on the columns.
 - ◊ The repeat on the right will bring the rows closer together or further apart as you move this blue repeat.
 - ◊ Change these as you wish and press *Enter* to activate.

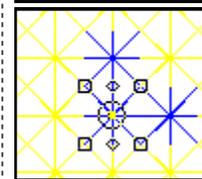
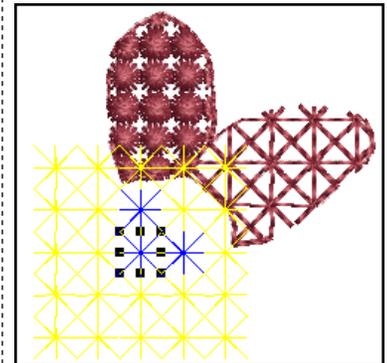
Lacework Fills



- Bring the picture back by clicking on the *Show Bitmap Artwork* icon.
- Color # 4 should still be selected. Select the *Closed Object Tool*.
- Digitize another petal. Press *Esc*.
- Select the petal. If you closed *Object Properties*; reopen.
- From the *Fill Type* in *Object Properties*, select *Lacework*.
- Click on *Select* and select *Pattern #L0003a*.
- Select *Layout* and edit the fill and rearrange as you wish.
- When completed, press *Enter*.

Notes:

You may also pre-select the type of fill before digitizing.



Any of the craft fills can be edited visually in this way.

*You can also change the craft stitches mathematically by altering the numbers in *Object Properties*. These values are updated when you change the properties visually.*

*Fills may be selected through the *Object Properties* dialog box or you may click on the corresponding icon to activate the default fill of that fill type. If you right click on the fill icon, *Object Properties* will open to that particular type of fill.*

Pattern Fill



- Digitize another petal using the *Closed Object Tool*.
- Press *Enter* to complete the shape; then press *Esc*.
- Select the petal.
- In *Object Properties*, select *Pattern* from the drop down box or right click on the *Pattern* icon.
- Click on the *Select* button.
- Select the *Cross* folder from the drop down menu.
- Select # 302. Click *OK*.
- Change the *Size of the X and Y* to .15".
- Change the *Column and Row Spacing* to .15".
- Click *OK*. Select *Esc*.



Notes:

Ripple Fill



- Select the *Ripple Fill* icon.
- Digitize another petal after selecting the *Closed Object Tool*.
- Press *Esc*.



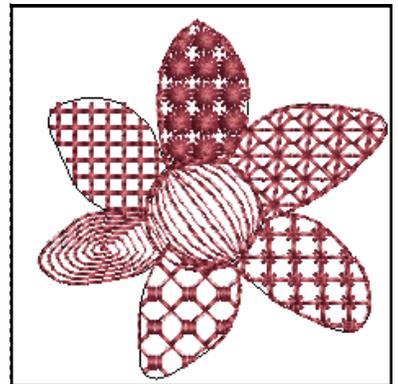
Cross Stitch Fill



- Right click on the *Cross Stitch Fill* icon.
- Under *Stitch Style*, select *Upright Cross*.
- Click on *OK*.



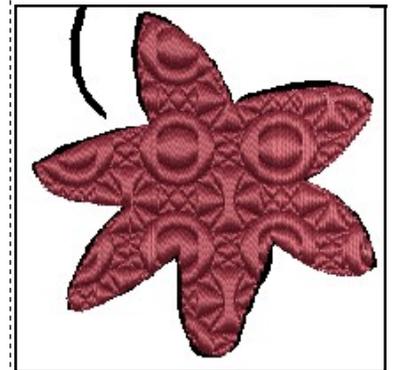
- Select the *Closed Object Tool*.
- Digitize another petal. Press *Esc*.



Contour Fill



- Select the *Ellipse Tool*. Click on *Contour Fill*.
- Digitize the flower center using the *Ellipse tool*, clicking in the center of the flower and dragging to the edge of the center. Click again and press *Enter*.



Fancy Fills



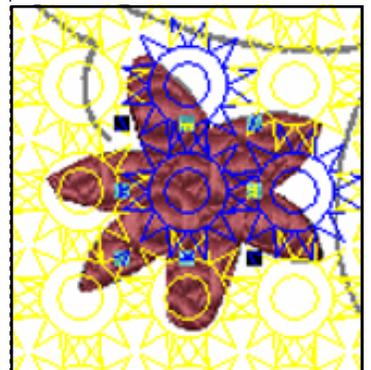
- Use *Pan* to move to the last flower.
- Right click on the *Fancy Fill* icon to open *Object Properties*.
- From the drop down *Pattern* choices, select *034 Sunny*.
- Click *Apply*.
- Select the *Closed Object Tool*. Digitize around the remaining flower, using *Color #4*. Place the digitized points as you did for the first flower petal.
- Select *Esc*. Select the flower.



Fussy Cutting Fancy Fills



- You must be in *Artistic View* to see the *Fancy Fill*. If necessary, select the *T* on your keyboard or click on *Show Artistic View*.
- Click on *Layout* in *Object Properties*.
- Move the blue sun to the flower center by clicking and dragging the middle blue sun.
- Press *Enter*. The sun becomes the flower center. Deselect.
- Close *Object Properties*.

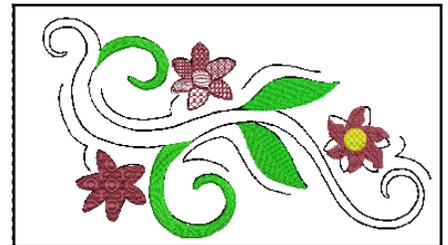
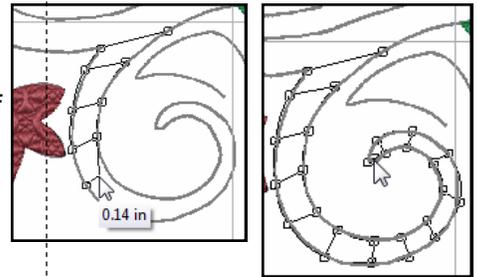




Block Digitizing

- Pan to one of the spirals.
- Select Color # 2 from the *Color Palette*. Select the *Step Fill*.
- Select the *Block Tool* in the *Digitize Toolbox*.
- Begin block digitizing with two left clicks at the intersection of the spiral with the main stem. (see illustration)
- Follow the spiral with right clicks; end with two left clicks.
- You must alternate from one side to the other as you work your way around the spiral.
 - ◊ Remember you can use the back space key to go back one stitch, or more if you need to!
 - ◊ *Esc* will take you out of the function.
- When you finish the block digitizing, press *Enter*.
- Repeat for the other spiral that intersects with the stem.

Notes:



Color Blending adds shading and color effects to embroidery designs.

Objects that have been Color Blended cannot be sequenced because the colors in the blended object are grouped.



Color Blending

- Select the *Closed Object Tool*.
- Digitize the main part of the “stem”, using right and left clicks, clicking around the shape of the stem.
- Press *Enter* to activate the step fill.
- Press *Esc*.
- Select the stem.
- Click on the *Color Blending* tool in the *Edit Toolbox*.
- In the dialog box that opens, select Isacord 4421 for the bottom layer and Isacord 5415 for the top layer.
- Leave the *Spacing* at 2 mm for each layer.
- Select *Profile 2* for the blend. The profiles determine the point from which the color variation occurs.
- Click *OK*.



Changing Density

- Deselect the main spiral; then select each of the block digitized spirals while holding the *Ctrl* key.
- Right click to open *Object Properties*.
- Change the *Stitch Spacing* to 1.0. Click *OK*.



Digitizing Candlewicking Outlines

- Select the *Open Object* tool in the *Digitize Toolbox*.
- Select the *Candlewicking Outline*.
- Select Color #1.
- Using left and right clicks, digitize the single line to the left of the design.
- Press *Enter* to activate.



DesignerPlus Software 7 provides several Craft Stitches to design and create with. These stitches are designed to mimic hand-worked embroidery.

Digitizing Backstitch Outlines

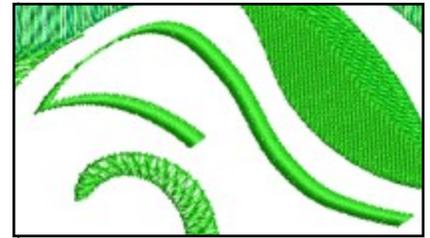
- Select the *Open Freehand* tool in the *Digitize Toolbox*.
- Select the *Backstitch Outline*.
- Select Color #2.
- Click and drag following the line above the top leaf.
- Release the mouse to activate the stitches. Press *Esc*.



Calligraphy



- Select the *Open Object* tool in the *Digitize Toolbox*.
- Select the *Satin Outline*. Color #2 should still be selected.
- Using left and right clicks, digitize the line under the main stem.
- Press *Enter* to activate. Press *Esc*.
- Right click on the satin line.
- Change the *Satin Width* to .12 inches.
- Change the *Calligraphy Angle* to 35°. Click *OK*.



Digitizing Stemstitch Outlines



- Select the *Open Object* tool in the *Digitize Toolbox*.
- Select the *Stemstitch Outline*. Color #2 should still be selected.
- Using left and right clicks, digitize the two remaining lines.
- Press *Enter* to activate each line.
- Press *Esc*.

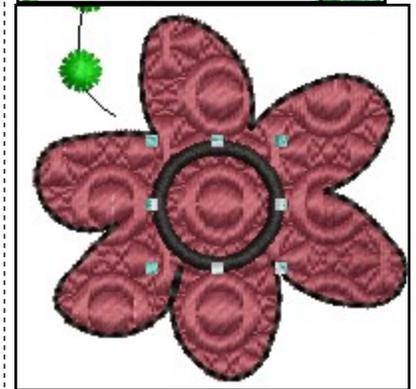
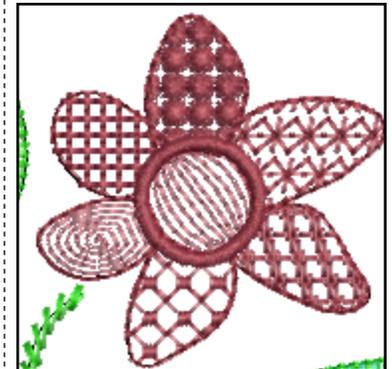
Deleting the Graphic

- Select the white background of the picture.
- Press the *Delete* key.

Outlining Objects



- Select the morphed flower, its center, and the Fancy Fill flower while holding the *Ctrl* key.
- Select *Outline Design* in the *Edit Toolbox*.
- In the dialog box that opens, select:
 - ◊ Color 0020
 - ◊ Offset: 0
 - ◊ Outline Count: 1
 - ◊ Outline Holes: Uncheck
 - ◊ Outline Type: Triple
 - ◊ Click *OK*
- Select each of the craft petals while holding the *Ctrl* key.
- Click on the *Outline Design* icon and select:
 - ◊ Color 2011
 - ◊ Offset: 0
 - ◊ Outline Count: 1
 - ◊ Outline Holes: Uncheck
 - ◊ Outline Type: Single
 - ◊ Click *OK*
- For the flower center of the craft stitches, repeat the steps, but select *Satin* for the Outline Type. Click *OK*.
- Select the satin outline, open *Object Properties* and change the width to .05". Click *OK*.
- While the outline is selected, select *Copy and Paste*.
- Move the copy to the Fancy Fill Flower.
- While it is still selected, click on the black color chip in the *Color Palette*.
- Select *Design> Stitch Sequence*. Click *OK*.
- Select *Save*.



Stitch Sequence will rearrange the color sequence of the design to make the embroidery more efficient. Color Blended objects will not be combined because they are grouped.



You may ungroup the color blended object; then select Color #2 stem in Color Film. Select Back One Color and click until the stem combines with the other Color #2 color box.

Adding Holes



Open a New File/Blank File

- Click on the *New* icon or select *File> New*.
- Select *Insert Embroidery*.
- Navigate to *C> My Designs> ART Design> FP117*. Select *Open*.
- Make sure *Proportional Scaling* is locked.
- Change the % to 200%. Press *Enter*.
- Right click on *Show Hoop*.
 - ◊ Place a check mark in front of *Show Hoop*.
 - ◊ Select *BERNINA Maxi Hoop 210 x 400 #26* from the drop down menu.
 - ◊ Click *OK*.



Adding Rectangle

- Select the *Rectangle tool* in the *Digitize Toolbox*.
- Choose a contrast color from the *Color Palette*.
- Draw a box surrounding the design; click in the upper left; then drag to the lower right hand corner of the hoop; and click.
- Press *Esc*; then select the rectangle.
- Change the *X and Y axis* in the *Transform Tool bar* to zero.
- Press *Enter*. This will place the rectangle in the center of the hoop.
- Make sure that *Proportional Scaling* is in the *Unlock position*.
- Change the *Height and Width* to 7.5". Press *Enter*.



Decreasing Density



- While the rectangle is selected, open *Object Properties*.
- Change the *Stitch Spacing* to 5.0 mm.
- By changing the *Stitch Spacing*, you can see the design underneath.
- Click *OK*.
- Click on the *Auto Underlay* icon to remove the underlay.



Adding Holes



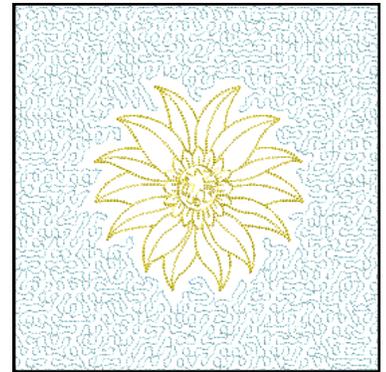
- In the *Zoom Toolbar*, select *To Selected* from the drop down choices.
- Click on the *Add Holes* icon in the *Edit Toolbox*.
- Digitize an outline around the design.
- Press *Enter* to close the cut-out.
- Press *Enter* again to activate the hole. Select *Esc*.

Convert to Stippling



- Select the background.
- Click on the *Stipple Run Fill icon*.
- Right click while selected to open *Object Properties*.
- Change the *Loop Spacing* to .15".
- Change the *Inset Step* to 0. Press *OK*.
- Save the file as *Add Holes-Stippling*.
- Close the file.

Notes:



Lesson covers:

- ◆ *Rectangle Tool*
- ◆ *Adjusting Density*
- ◆ *Adding Holes*
- ◆ *Adding Stippling*
- ◆ *Editing Stippling*

Show *Artistic View* toggles between *Artistic View & Design View*.

Use left and right clicks to digitize around the shape to add a hole. You can use the *Backspace* key to erase one click at a time or you can press *Esc* to start over.

Stitching the design:

- *Stitch the design on fabric backed with batting using no stabilizer.*
- *Remove the hoop from the machine.*
- *Lightly spray the wrong side of the backing fabric with 505 Temporary Spray Adhesive.*
- *Place the backing fabric on the back side of the hoop, behind the stabilizer, smoothing it to the edges.*
- *Return the hoop to the machine, being careful that the backing is flat and no corners are turned down.*
- *Stipple the layers together.*

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Echo Quilting with Halo Outline



Open the File

- Select *File/New* or click on the *New* icon.
- Select *Insert Embroidery*.
- Navigate to *C> My Designs Embroidery Software 7> Florals*.
- Select *FM 538*. Select *Open*.
- Select *File/Save As* and navigate to destination folder and name the file *Echo Quilting with Halo Outline*. Save the file.



Show Hoop

- Right click on the *Show Hoop icon*.
- From the drop down menu, select *BERNINA B830 Jumbo Hoop 256 x 400 # 26*.
- Make sure *Show Hoop* is checked and click on *OK*.



Adding a Border

- In the *Zoom Toolbar*, select *To Hoop*.
- Select the *Rectangle tool* in the *Digitize Toolbox*.
- Click on the *Satin Outline* icon.
- Draw a rectangle around the design by left clicking in the upper left hand corner and dragging to the lower right hand corner.
- Click again on the screen to set the stitches.
- Press *Esc* to deselect the *Rectangle tool*.
- Select the rectangle; then unlock *Proportional Scaling*.
- Change the *Width to 7" and the Height to 10"*.
- Press *Enter* to activate the changes.
- Select *Edit/Select All*.
- Select the *Arrange Toolbox*.
- Click on *Align Centers* to align the design within the border.

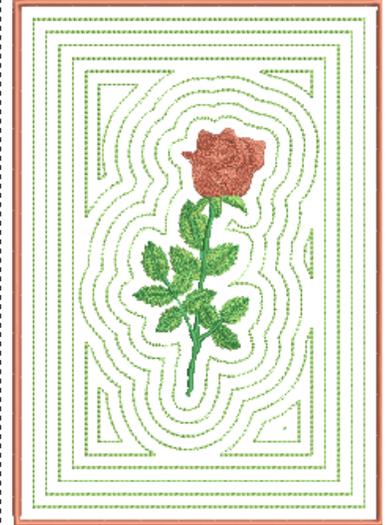


Adding the Halo Outline

- Select the *Edit Toolbox*.
- While everything is selected, select the *Outline Design* icon in the *Edit Toolbox*.
- In the dialog box:
 - ◊ Click on the drop down arrow next to color and change the color to 5531.
 - ◊ Change the *Offset* to .25 inches.
 - ◊ Change the *Outline count* to 8.
 - ◊ Make sure that *Outline Holes* is checked.
 - ◊ Select triple for the type of *Outline stitch*.
 - ◊ Click on *OK*.
- Select the outline furthest out from the frame.
- While holding the *Shift* key, select the outline just beyond the satin frame.
- Press *Delete*.
- Save the file by clicking on the *Save icon*.
- Close the design file.



Notes:



Lesson covers:

- ◆ **Zoom to Hoop**
- ◆ **Rectangle tool**
- ◆ **Align Centers**
- ◆ **Adding halo outlines**

The Outline Design tool must be used with solid filled objects and satin outlines; it will not work with open fills or with outlines other than satin.

If the outlines do not generate correctly, select the outlines in Color Film and press Delete. Save the file and close the software. Go to Start> Programs> BERNINA Embroidery Software 7> BERNINA Embroidery Software 7 Tools. Select Revert. Place a check mark in front of Defaults + Templates. Click OK.

Reopen the design and repeat the steps to add the outlines.

Appliqué



Open a New File/Blank File

- Click on the *New* icon or select *File> New*.



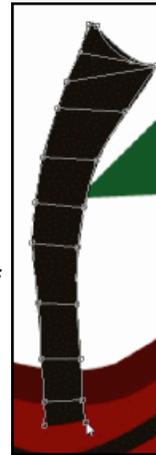
Loading the Artwork

- Select *Insert Artwork*.
- Navigate to the Artwork Folder (C> My Designs> Artwork).
- Select *A_apple_003.jpeg*. Select *Open*.

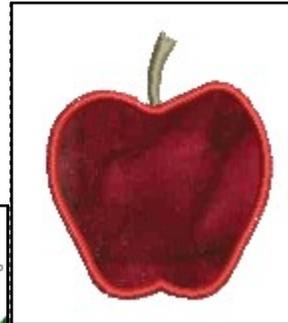


Block Digitizing

- Select the *Zoom* tool and click and drag a bounding box around the stem of the apple on the far right.
- If the hoop is over the apple, click on *Show Hoop* to hide the hoop boundary.
- Select the *Block* tool in the *Digitize Toolbox* and Color 43, Brown.
- Select the *Satin Fill* icon.
- Digitize the stem of the apple. Remember to alternate from side to side with the *Block* tool. Begin at the top of the stem with two left clicks.
- Press *Enter* to activate stitches. Press *Esc*.
- Select the stem and select *Reshape* if necessary; make the changes needed; then press *Esc* to deactivate the tool.



Notes:



Lesson covers:

- ◆ *Block Digitizing*
- ◆ *Auto Appliqué*
- ◆ *Copy/Paste*
- ◆ *Lock*
- ◆ *Clones*
- ◆ *Sequence by Selects*
- ◆ *Remove Appliqué Overlaps*
- ◆ *Advanced Appliqué*
- ◆ *Open Object digitizing*

Auto Appliqué



- Select the *Appliqué* tool from the *Digitize Toolbox*.
- From the *Color Palette*, select Color 5, red.
- Using left and right clicks, digitize around the outside of the apple that has the block digitized stem.
- Remember to let the software close the object by pressing *Enter*.
- Form the appliqué stitches by pressing *Enter* again.
- Press *Esc*.
- You may select the appliqué; then select *Reshape* to change any of the digitized points.
- After reshaping, select *Esc*.



In Options, select the Appliqué & PunchWork tab. Make sure single is selected for the type of Boundary.

Refer to the digitizing and reshaping tips in the Manual Digitizing lesson, beginning on page 5.

Editing the Appliqué



- Open *Color Film*.
- Notice there are three lines of stitching in the appliqué design:
 - ◆ The pink line is the placement line.
 - ◆ The blue line is the tackdown.
 - ◆ The dark red is the cover stitch.
- Select the appliqué.
- Click on *Object Properties* icon. The *Appliqué* tab should be selected.
 - ◆ Change the *Cover Stitch Width* to 2.5 mm.
 - ◆ Click on *Apply*.
 - ◆ The tackdown width automatically changes.



To pre-select the settings for appliqué, select Object Properties> Appliqué tab and select your settings prior to digitizing.

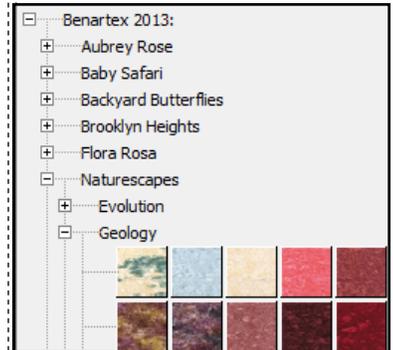
If you want to place the fabric on a placement line; then cut the shape, you may add a cutting line in Object Properties.

Adding Fabrics

- Make sure you still have the appliqué object selected.
- To add fabric, select *Choose* under the *Fabric* section.
- A dialog box opens and the fabric can be selected from the options available.
- Click on the + sign in front of Benartex 2013 to open up the folder options.
- Click on the + sign in front of Naturescapes.
- Click on the + sign in front of Geology.
- Select 4718-29 (row 2, color chip 5).
- Click on *OK*; then *OK* again. The fabric will be added to the appliqué.
- Make sure that the *Show Appliqué Fabric* icon is on or the fabric will not show on screen.
- Select *File > Save As* and save the file as *Appliqué Basics*.



Notes:



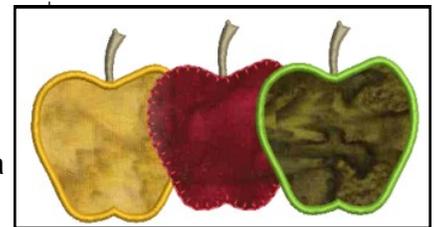
Remove Appliqué Overlaps

Creating a New File

- While the *Appliqué Basics* file is open, select the white background of the picture and click on the *Lock* icon in the *Arrange Toolbox* or right click on the appliqué in *Color Film* and select *Lock*.
- Select the satin-stitch apple and stem by clicking and dragging a bounding box around the apple and stem.
- Select *Edit > Copy* or click on the *Copy* icon.
- Click on *New*.
- Select *Edit > Paste* or click on the *Paste* icon.



Locking the picture will keep it from being selected in the bounding box.



Creating Clones

- Make two quick clones of the stem and apple by right clicking and dragging one copy to the right of the original and one copy to the left of the original. Make sure the copies overlap one another.
- Select the apple on the left and click on *Ungroup* in the *Arrange Toolbox*.
- Select just the apple.
- In the *Color Palette*, click on C49, deep yellow.
- Hold down the *Alt* key and select just the apple on the right.
- Change the color to C33, Chartreuse.



An alternative to Ungrouping is to hold the *Alt* key and click on the object you wish to select. You can make changes to the object without ungrouping.

Adding Fabrics

- Open *Object Properties*.
- The *Appliqué* tab should be selected.
- While the right apple is still selected:
 - ◊ Select *Choose*.
 - ◊ *Naturescapes > Geology* should still be open.
 - ◊ Select 4718-44 (third row, third color chip).
 - ◊ Click on *OK* in the dialog box; then click *Apply*.



- Select the left apple:
 - ◊ Select *Choose*.
 - ◊ Select 4718-33 (third row, color chip 1).
 - ◊ Click on *OK* in the dialog box.
 - ◊ Click *OK*.

Sequence By Selects



- Select the red apple, then select *Ungroup* in the *Arrange Toolbox*.
- Repeat for the green apple.
- Select the yellow apple, then the red apple, then the green apple while holding the *Ctrl* key.
- Open *Color Film* if it is not opened.
- Select *Sequence By Selects*.

Changing the Cover Stitch

- Deselect by clicking outside the black boxes.
- Right click on the red apple to open *Object Properties*.
- From the drop down box for *Cover Stitch*, select *Blanket*.
- Click *OK*.

Remove Appliqué Overlaps



- Select *Edit> Select All*.
- Click on *Remove Appliqué Overlaps* in the *Edit Toolbox*.
- Select *File> Save As* and name the file, *Remove Appliqué Overlaps*. Click *Save*.

Advanced Appliqué (Open Object Appliqué)



Setting Up the Background for Digitizing



- While this file is open, select *Edit> Select All*.
- Select *Copy*.
- Click on *New*.
- Select *Paste*.
- Click on *Lock* in the *Arrange Toolbox*.
- If you try to select the locked design, you will not be able to do so.
- Locking this design will let you use this as a background for digitizing *Advanced Appliqué*.

Open Object Digitizing



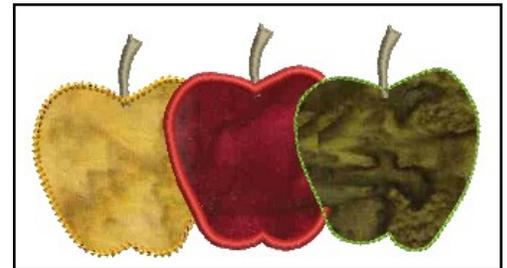
- Select the *Stemstitch Outline*.
- Select the *Open Object Tool* from the *Digitize Toolbox*.
- Select *Color 49, deep yellow*.
- Using right and left clicks, digitize around the yellow apple, beginning and ending at the edges that connect with the red apple.
- Press *Enter* to activate the shape.
- Press *Esc*.

Notes:

*Sequencing needs to be determined prior to applying **Remove Appliqué Overlaps**.*

*Blanket stitch properties may be altered through **Object Properties**.*

*Look in **Color Film** to see that the cover stitch is removed from the yellow and red apples.*



Use this method whenever you need to digitize objects that have open objects within the design, for example, designs that are split into parts. Also use this method for designs that have dimensional accents within the appliqué. Finally, use this method when you want to use other types of outlines besides satin + blanket.

Objects must be digitized from background to foreground.

Make sure that you create an underlap when you digitize the objects underneath. It is important that the first and last digitized points are underneath the apple that will be on top of it.



- Select the *Satin Outline* from the *Stitch Toolbar*.
- Select *Color 5, red* from the *Color Palette*.



- Select the *Open Object* tool.
- Using right and left clicks, digitize around the red apple, beginning and ending at the edge of the green apple.
- Press *Enter* to activate.
- Press *Esc*.



- Select the *Backstitch Outline* from the *Stitch Toolbar*.
- Select *Color 33, Chartreuse* from the *Color Palette*.



- Select the *Closed Object* tool.
- Using right and left clicks, digitize around the red apple.
- Press *Enter* to activate.
- Press *Esc*.

Unlocking and Deleting



- Open *Color Film* if it is not opened.
- Click on one of the color chips of the first group of apples.



- Right click and select *Unlock All* or click on the *Unlock All* icon in the *Arrange Toolbox*.
- Right click and select *Ungroup* or click on the *Ungroup* icon in the *Arrange Toolbox*.



- In *Color Film*, select each apple from the original pasted copy and select *Delete*.
- This will leave three stems and the newly digitized outline stitches. The fabric from the first three apples will also be deleted.

Applying Advanced Appliqué

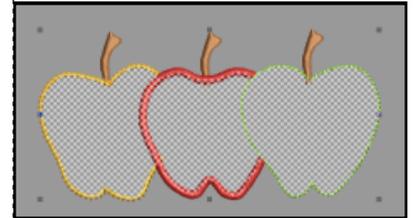


- Select *Edit> Select All* or *Ctrl A* on your keyboard.
- In the *Digitize Toolbox*, click on *Advanced Appliqué*.
- The *Appliqué Properties* dialog box will open.
- White hatch marks will appear inside the apples.

Adding Fabrics to Advanced Appliqué

- Click on *Place Fabric and Color in Patches*.
 - ◊ Click on the + sign in front of *Benartex 2013* to open up the folder options.
 - ◊ Click on the + sign in front of *Naturescapes*.
 - ◊ Click on the + sign in front of *Geology*.
 - ◊ Select *4718-29* (last color chip, second row).
 - ◊ Click on the red apple to add the fabric.
 - ◊ Repeat these steps to apply *4718-33* (first color chip, third row) to the yellow apple
 - ◊ Apply *4718-44* (third color chip, third row) to the green apple.
- Select *Back* at the bottom of the dialog box.
- Select *Close at the bottom of the dialog box*.
- *Select File> Save As and name the file Advanced Appliqué*.
- Close the file.

Notes:



If you need to reshape for any reason, first select "Recover your original embroidery objects" from the Appliqué Properties dialog box. This will remove the advanced appliqué and you can reshape the elements and then re-apply advanced appliqué by selecting everything and then clicking on the Advanced Appliqué icon.

If you rest your cursor on a color chip, the color number will be displayed.

Multi-Hooping

Editing the Design



- Select *New*.
- Select *Insert Embroidery*.
- Navigate to *C> My Designs—Embroidery Software 7*.
- Open the *Red Blackwork* folder and open *FP900*.
- Right click on the *Show Hoop* icon.
 - ◊ Select *artista 255 x 145 Oval hoop* from the drop down menu.
 - ◊ Make sure that *Show Hoop* is checked. Click *OK*.
- Select the design.
- In the *Transform Toolbar*, lock *Proportional Scaling*.
- Change the size of the *Width* to *275 mm*. Press *Enter* to activate the changes.
- Click on the *Object Properties* icon while the design is selected.
- Change the *Stitch Length* to *3 mm*. Press *OK*.

Multi-Hooping



- Select the *Hoop Canvas* icon.
- Click on *Add Hoop*.
- Move the hoops so that they overlap on each side of the butterfly's head. All stitches should be green.
- Select *Calculate Hoopings*.
 - ◊ The dialog box should state that all objects are covered by hoops and that you will have two hoopings. If it does not, then you will need to move the hoops prior to saving.
 - ◊ Click *OK* to close the dialog box.

Embroidery Canvas

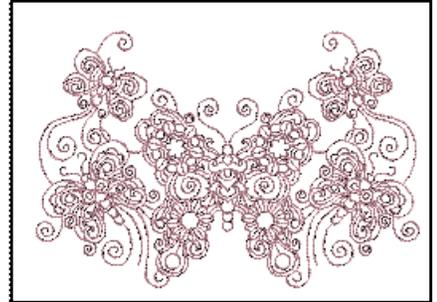


- Select the *Embroidery Canvas* icon.
- Click on the *Options* icon and select the *Multi-Hooping* tab or select *Settings> Options> Multi-Hooping*.
- There should be a check mark in front of *Add registration marks on output*.
- Click on the *Margin* drop down and select *Medium* from the choices. Click *OK*.
- Select *File> Save As* and navigate to the location to save the file.
- Name the file *Multi-Hooping*. Select *Save*.
- Select *No* in the dialog box that opens to save everything in one file; this makes it easier to edit later if needed.
- Select *File> Save As* again, but name the file, *Multi-Hooping Split*.
- Select *Save*. Select *Yes* to export one file for every hooping.
- The *Hooping Sequence* screen will open.

Saving the Files

- Click on *Save All* to save the split files.
- The files will be numbered in the order they are to be stitched; *Multi-Hooping Split-01* will be stitched first.
- Click on *Close* to return to *Embroidery Canvas*.

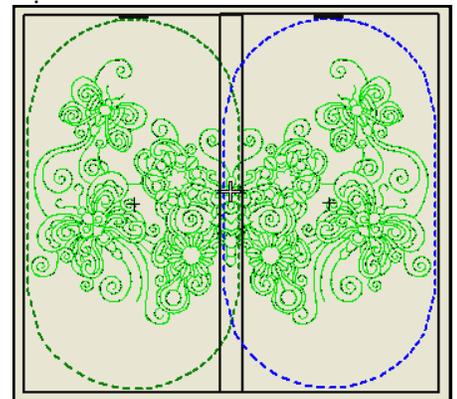
Notes:



Lesson covers:

- ◆ **Multi-Hooping**
- ◆ **Adjusting Margins**
- ◆ **Digitizing registration marks**

The measurement system automatically updates the size of the design if you enter the corresponding unit of measurement in the measurement box.



If you select *Large* for a margin, there will be more distance between the mark and the hoop boundaries, making it easier for the design to fit in the hoop, but there may be less precision in aligning.

Adjusting the Margins

- Select *Help > Reference Manual*.
- Highlight the #1 in the current page box and enter 60.
- Press *Enter* to go to the page that explains the margins of multi-hooping.
- Close the *Reference Manual* by clicking on the X.
- Close the design file.

Notes:

Multi-Hooping: Digitizing Registration Marks

Editing the Design

- Click on the *New* icon.
- Select *Insert Embroidery*.
- Navigate to *C: My Designs—Embroidery Software 7*.
- Open the *Animals* folder and open *NA860*.
- Right click on the *Show Hoop* icon.
 - ◊ Select *artista 255 x 145 Oval hoop* from the drop down menu.
 - ◊ Make sure that *Show Hoop* is checked. Click *OK*.
- Select the design.
- In the *Transform Toolbar*, make sure *Proportional Scaling* is locked.
- Increase the *Percentage* to 175%. Press *Enter*.



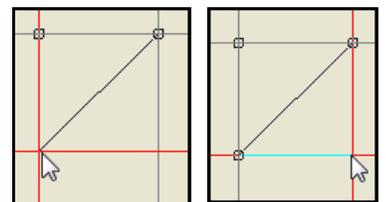
Switch to Hoop Canvas

- Select the *Hoop Canvas* icon.
- Click on *Add Hoop*.
- Move the hoops so that they overlap as much as possible, but the entire design is green.
- Select *Calculate Hoopings*.
 - ◊ The dialog box should state that all objects are covered by hoops and that you will have two hoopings.
 - ◊ Click *OK* to close the dialog box.
- Switch back to *Embroidery Canvas*.

Digitizing Registration Marks

- Click on the *Options* icon. Select the *Grid* tab.
- Make sure that *Snap to Grid* and *Show Grid* are checked.
- Select the *Multi-Hooping* tab.
- Make sure that *Add registration marks on output* is unchecked.
- Click *OK*.
- Right click on *Single Outline* to open *Object Properties*.
- Change the *Stitch Length* to 4 mm.
- Click *OK*.
- Select the *Open Object Tool*.
- Select a color from the *Color Palette* that hasn't been used in the design.

Snap to Grid makes the grid turn red when the mouse is directly on the grid intersection. Both the vertical and horizontal grid line will be red when the mouse is placed at the intersection of the grid. When it is directly on a line, the line turns turquoise.



Increasing the stitch length will make the reference marks easier to remove.



- Zoom in on the upper left area of the hoop by selecting the *Zoom* icon and clicking and dragging a bounding box in the grid.
- In the upper left area of the hoop, digitize two side-by-side Z's using the grid as a guideline. Make sure that these marks are inside both hoop boundaries.
 - ◊ Use left clicks to form each Z.
 - ◊ Place a vertical line of stitching in between the Z's so the machine won't have to jump in between the Z's.
 - ◊ Press *Enter* to set the stitches; then press *Esc*.
- Select the Z's; then select *Copy*.
- Select *Paste*.
- In the *Zoom Toolbar*, select *Zoom to Hoop*.
- Click and drag on the copy to place it in the lower right of the hoop.
- Make sure you are inside the hoop boundaries of the both hoops.

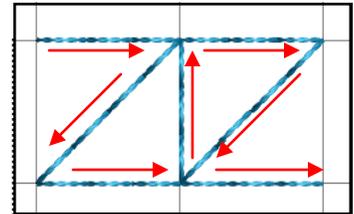


Saving the Files

- Select *File > Save As* and navigate to the location to save the file.
- Name the file, *Multi-Hooping Digitized Registration*.
- Select *Save*.
- Select *No* in the dialog box that opens to save everything in one file; this makes it easier to edit later if needed.
- Select *File > Save As* again and name the file, *Multi-Hooping Digitized Registration Split*.
- Select *Save*.
- Select *Yes* to export one file for every hooping.
- Click on *Save All* to save the split files.
- Click on *Close* to return to *Embroidery Canvas*.
- Close the file.

Final Editing of the Split Files

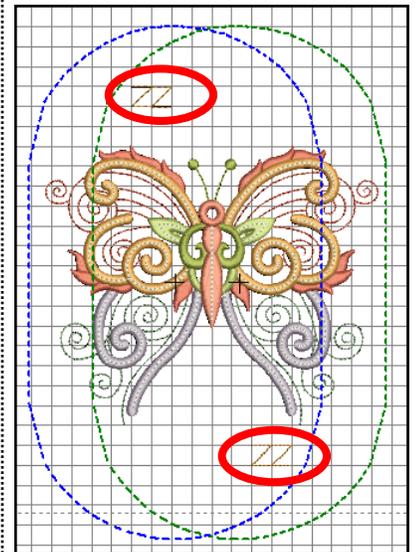
- Click on *Open*.
- Open the first split file. This is the split file with 01 in the name of the file.
- Open *Color Film*. Click on *Auto Hide* to keep the docker open.
- Hold the *Alt* key and click on the last color box in *Color Film*.
- Right click on the color box and select *Copy*.
- Click on *Open*.
- Open the second split file. This file will have 02 in the file name.
- Select *Paste*.
- In *Color Film*, click on *Move to Start*.
- Click on *Save*. Close the file



It is important that the registration marks are inside both hoop boundaries.



The Overview Window docker can also be used to zoom in on the lower right of the design. Open the docker, click on the Zoom icon in the docker and drag a bounding box in the area you wish to zoom.



Trapunto & Raised Satin

Open a New File/Blank File



- Click on the *New* icon or select *File> New*.
- Select *Insert Artwork*.
- Navigate to *C> My Designs> Artwork*.
- Select *Hungarian Quilt*.
- Select *Open*.

Auto Digitize



- Select the *Auto-Digitize Toolbox*.
- Click on *Auto Digitizer*.
- Click on the image.
- In the *Bitmap Artwork Preparation* dialog box, the value of *Reduce To* should be 3.
- Click *OK*.
- In the *Auto Digitizer* dialog box, click on *Omitted Colors* to show the colors in the design.
- Select the white color chip to omit the background color.
- Click *OK*.
- Select the white area.
- Press *Delete* to delete the picture.
- Open *Color Film* if it is not open.
- Select the black outlines in *Color Film*.
- Select *Delete*.



Adding Raised Satin



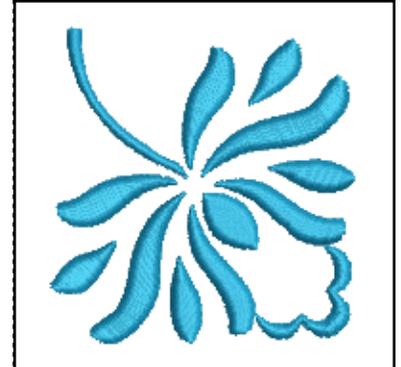
- Select *Edit> Select All*.
- Click on the *Raised Satin Fill* icon in the *Stitch Toolbar*.
- Right click to open *Object Properties*.
- Change the *Layers* to 4.
- Click *OK*.
- Select *File> Save As* and name the file *Raised Satin*.

Adding Trapunto



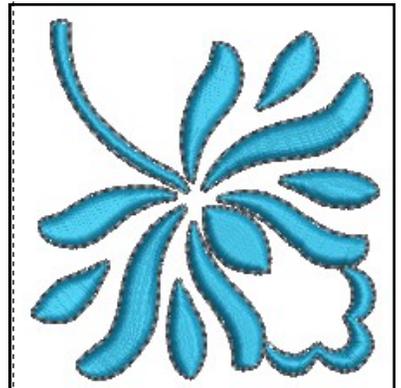
- Select *Edit> Select All*.
- Click on *Create Trapunto Outlines* in the *Edit Toolbox*.
- In the dialog box that opens:
 - ◊ Choose your desired color from the drop down box.
 - ◊ Leave the offset at .02 inches.
 - ◊ Select *Triple* for *Outline type*.
 - ◊ Click *OK*.
- Select *File> Save As*.
- Name the file *Trapunto*.
- Close the file.

Notes:



Lesson covers:

- ◆ *Auto Digitizing*
- ◆ *Converting to Raised Satin*
- ◆ *Editing Raised Satin*
- ◆ *Adding Trapunto*



PunchWork



Open a New File/Blank File

- Click on the *New* icon or select *File> New*.
- Select *Insert Embroidery*.
- Navigate to *C> My Designs> Florals> NZ651*. Select *Open*.



Adding PunchWork



- Open *Color Film*. Deselect the flower.
- Hold the *Alt* key and click on the flower center to select.
- Right click and select *Delete*.
- In the *Digitize Toolbox*, select *PunchWork*.
- Digitize the center of the flower with three right clicks around the opening. Place one at 12:00, one at 3, and one at 6.
- Press *Enter* to close the shape;
- Press *Enter* again to create the *PunchWork*. Press *Esc*.



Editing PunchWork

- Right click on the flower center.
- Change the density to a 2 in the *Object Properties* dialog box.
- Place a check mark in front of *Border Stitching*.
- Select *Satin* from the drop down menu.
- Change the width to 2 mm. Select *OK*.

Sequencing



- Select the *PunchWork* design.
- In the *Edit Toolbox*, select *Break Apart*.
- Now each of the components can be moved.
- In *Color Film*, select the placement line and the stippling while holding the *Ctrl* key.
- Click on *Back 1 Color*.
- Select *Edit> Select All* and group by selecting *Ctrl + G*.



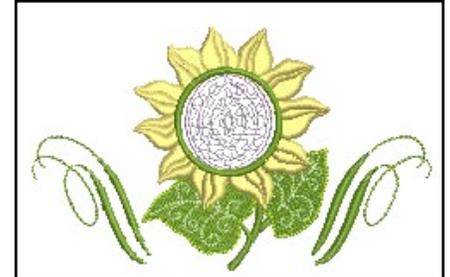
Adding Pattern Stamps



- In the *Digitize Toolbox*, select *Pattern Stamp*.
- In the *Patterns* menu, select *01 Monogram Ornaments*.
- Select *M004b*. Click *OK*.
- Click to the right of the flower close to the lower edge of the flower.
- Hold the *Shift* key and rotate upward and drag the mouse to increase the size of the flourish. Click again to set the stamp.
- Select *Esc* to deactivate the stamp.
- Select the stamp.
- In the *Mirror Merge Toolbox*, select *Mirror Merge Horizontal*, drag on screen, and click to set the second stamp.
- Select *Edit> Select All* and click on the *Space Evenly Across* in the *Arrange Toolbox*.
- Switch to *Hoop Canvas*, select the hoop, click on *Rotate Left* two times. Return to *Embroidery Canvas*.
- Select *File> Save As* and name the file *PunchWork*. Close the file.



Notes:

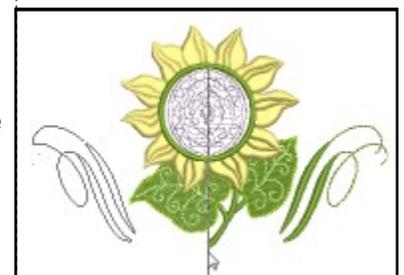


Lesson covers:

- ◆ *Auto Digitizing*
- ◆ *Converting to Raised Satin*
- ◆ *Editing Raised Satin*
- ◆ *Adding PunchWork*
- ◆ *Break Apart for PunchWork*
- ◆ *Pattern Stamp*
- ◆ *Space Evenly Across*
- ◆ *Rotating the hoop*

The PunchWork area does not completely fill the circle to allow for the span of the needles in the Needle Punch accessory.

Analyze the design for correct stitching order. The leaves must stitch first; next the PunchWork stippling; next the flower petals; and then the satin stitching of the PunchWork. In order for the sequence of the PunchWork to occur in the proper order, the PunchWork design must be broken apart.



StumpWork



Creating the Base Design

- Select *New*. Click on *Show Hoop* if a hoop is not visible.
- Select a color from the *Color Palette* by clicking on a color chip.
- Select the *Ellipse tool* in the *Digitize Toolbox* and draw a small circle. Click; then drag and click again to set the radius of the circle.
- Press *Enter* to activate.
- Press *Esc*; then click on the circle to select.
- Make sure *Proportional Scaling* is locked in the *Transform Toolbar*. Change the value to *1 inch in the Width or Height box*.
- Change the *X and Y* values to zero.
- Press *Enter* to activate.
- Select *Zoom to Selected* in the *Zoom Toolbar*.



Carving Stamp

- Open the *Carving Stamp Docker*. Select *Use Pattern*.
- In *Set*, select *BerninaV5*. Select *NP005-15*.
- Click on the outer left edge of the circle at the hoop center line.
- Drag while holding the *Shift* key and click again on the opposite side of the circle.
- You must be in *Artistic View* to see the effect of the stamp.
- Press *Esc*.

Loading the Picture



- Click on the *Artwork Canvas* icon.
- Click on the *Load Artwork* icon.
- Navigate to *C> My Designs—Embroidery Software 7* and open the *Artwork* folder.
- Select *Petal.wmf*.
- Select *Import* and click to the left of the circle.
- Click again to place the vector on the screen. Move if necessary.
- With the vector selected, click on the *Convert Artwork to Embroidery*.
- While the converted embroidery is still selected, move the petal so that it falls just over the edge of the circle. (see picture)



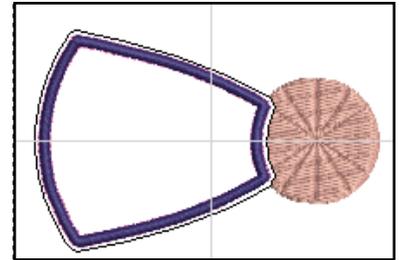
Creating StumpWork



- Open the *Color Film* docker. Click on *Auto Hide*.
- Select the outline around the petal in *Color Film*.
- Press *Delete*.
- In the *StumpWork Border Docker Panel*, preselect the properties of the border:
 - ◊ For *Embroidery*: Wireline
 - ◊ For *Stabilizing Run 2*: 2 Passes, keep default distance
 - ◊ For *Cutting Line*: CutWork Tool
- Open the *StumpWork Toolbox*.
- Select the filled petal.
- Click on *Create StumpWork Border*.

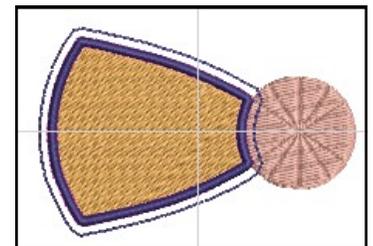
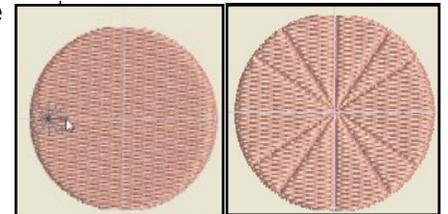


Notes:



Lesson covers:

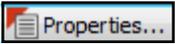
- ◆ *Ellipse Tool*
- ◆ *Carving Stamp*
- ◆ *Creating StumpWork from embroidery*
- ◆ *Digitizing StumpWork*
- ◆ *Digitizing a Wireline*



Creating a StumpWork Border from an existing design creates a Wireline Embroidery unless you change the default docker values prior to clicking on the Create StumpWork Border icon.

The Stabilizing Run 1 is not needed for Wireline objects, but may be used for other types of StumpWork.

- A dialog box opens.
 - ◊ If you wish to change the properties of the wireline border you are creating, you may click on the *Object Properties* bar within the dialog box.
 - ◊ You have options to change the gauge of the wire in this dialog box and the *Offset and Smoothing* of the border in the first dialog box. Click on the *X* to close *Object Properties*.
- For this design, leave the properties at the default settings.
- Click OK.
- A cursor with a flag instructs you to place the cursor over the wireline and click to cut. This will cut the border for the protruding wire ends.
- Click to cut; then click *Undo*.



Saving & Sending the Design

- In *Color Film*, notice that all StumpWork components are grouped.
- In *Color Film*, select the StumpWork design and the filled petal while holding the *Ctrl* key.
- Click on *Create StumpWork Sub-Design*.
 - ◊ This will combine all StumpWork components into a separate layer.
 - ◊ Notice that the StumpWork design no longer shows in *Color Film*.
- Click on *Open StumpWork Sub-Design*.
 - ◊ This will open the StumpWork object in a separate layer from the base design and it will make it easier to edit the StumpWork layer if needed.
 - ◊ The StumpWork object is stitched out separately from the base design and must be sent to the machine via the *Sub-Design* screen.
 - ◊ There is no need to save the design separately from the base design, but it must be sent to the machine separately.
 - ◊ To send the *StumpWork Sub-Design* to the machine, click on the *Write to Machine* icon in this design screen.
 - ◊ To send the design, select the appropriate box in the *ADX* dialog box. Click OK after the design is sent.
- To return to the base design, click on *File> Close*.
- To send the StumpWork base design, click on *Write to Machine* from this screen. Only the base design will be sent.
- Click OK in the *Write to Machine/Card* dialog box. Follow instructions above for sending the design.
- Select *File> Save As* and save the design as *StumpWork From Embroidery*. Close the file.



Notes:

If you want the embroidered area to be completely enclosed, select *Undo* and the StumpWork will change to an enclosed object. You can attach the StumpWork to the base with a zigzag tack stitch if you don't use the wire to attach to the base fabric.



Although it is not necessary to save the StumpWork design separately from the base design, you can save it by clicking on *Save StumpWork Sub-Design*. This must be done when the StumpWork design is opened in the *Open StumpWork Sub-Design* screen.

After creating the StumpWork Sub-Design, when you click on *Write to Machine* to send a design that includes both StumpWork and the base design, a warning dialog box appears to remind you that only the base design will be sent from this screen.

If a design has more than one StumpWork component within the design, each must be sent separately to the machine for stitching.

Digitizing StumpWork:



Creating Stumpwork from Scratch



- Open a *New* file.
- Click on the *Insert Artwork* icon.

- Navigate to *C> My Designs—Embroidery Software 7* and open the *Artwork* folder.
- In the *File Name* box, begin to type in *Petal*.
- From the list that appears, select *Petal.wmf*.
- Select *Open*.

Notes:

Digitizing StumpWork



- Open the *StumpWork Toolbox*.
- Click on the *Digitize Closed StumpWork Border* icon.
- The *Stumpwork Border docker* will open.
- Click on *Auto Hide* icon so that the thumb tack is vertical to keep the dialog box open.
- Click on the *Object Properties* icon next to *Wireline* and change the *Wire Gauge* to 28. The *Tack Width* is automatically updated.
- Click *OK*.
- If you wish to use the *CutWork Tool* to cut the finished *StumpWork*, make sure there is a radio dot in front of *Use CutWork Tool*.
- Digitize around the petal as you would digitize any object, with a combination of left and right clicks, using left clicks to turn corners and right clicks to form curves.
- Let the software close the object by pressing *Enter* to enclose the shape.
- Press *Esc*.
- Click on the *Show Bitmap Artwork* icon to hide the artwork.



Press the *Backspace* key to delete one digitized point at a time; select *Esc* to start over.



You can digitize with the *Open StumpWork* icon as well if you wish to have an opening in the border for leaving a wire tail to bring to the wrong side of the base fabric.



If you wish to cut the closed *StumpWork* border, you can select the *Cut Closed StumpWork Border* to add an opening to the closed border.

Slow Redraw StumpWork



- Select the *Slow Redraw* icon to watch the *StumpWork* design stitch out. Press *Go* to begin.
- A double line stitches first (the pink line in the picture). This is the placement line for the wire.
- The next segment of stitching is the takedown. This is a zigzag that will attach the wire to the object. See *Help> Reference Manual* for tips.
- The next segment to stitch out is the cover stitch. The machine's speed can be changed back to a higher speed after the wire is tacked down.
- The final stitching is another *Stabilizing Run* that will secure the object before being cut.
- The machine will stop after this stitching and prompt you to place the *CutWork Tool* on the machine and will stop for each twist of the blade position.
- If *Use Scissors* is selected for the *Cutting Line*, then you may remove the fabric from the hoop when the design is finished and cut around the object between the satin stitch and the stabilizing stitch with a sharp pair of scissors.
- Select *File> Save As* and name the file *StumpWork Petal Digitized*.
- Close *Slow Redraw*; then close the file.

You will find instructions for stitching out *StumpWork* in the *Help> Reference Manual*. Enter 228 in the *Current Page* box.

Machine Recommendations for Takedown Stitching:

- Use 44C foot, 24, or 26 foot.
- Use the foot control for ease in stopping and starting.
- Use the slider to reduce the speed.

Digitizing Additional Wirelines:



Opening the Design

- Select the *New* icon.
- Click on the *Insert Artwork*.
- Navigate to *C> My Designs—Embroidery Software 7> Artwork folder*.
- Select *Petal2.wmf*.
- Click on *Open*.
- Click on *Zoom to Selected* in the *Zoom Toolbar*.



Digitizing a Wireline

- Open the *StumpWork Toolbox*.
- Select *Digitize Wireline*.
- Digitize a line down the center of the leaf as you would any open object, using right and left clicks and pressing *Enter* to activate the line.
- Click on *Esc*.
- Select the wireline and select a color in the *Color Palette*.
- You may click on *Reshape* to edit the line.
- Press *Esc* when you are finished reshaping.

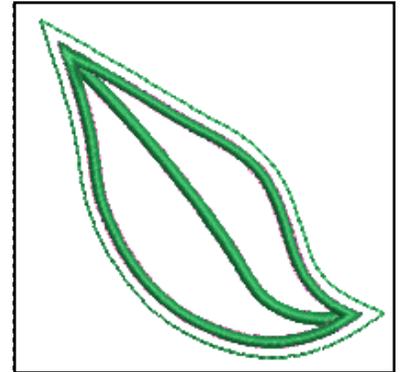


Adding StumpWork

- Select *Digitize Closed StumpWork Border*.
- Preselect the StumpWork options in the *StumpWork Docker* panel.
- Click on a color in the *Color Palette*.
- Using the picture in the background, digitize around the petal shape using right and left clicks to form the shape.
- Press *Enter* to activate the StumpWork design.
- Press *Esc*.
- Select the white picture in the background and select *Delete*.
- Select *Edit> Select All*.
- Click on *Create StumpWork Sub-Design* to open the design on the separate layer.
- Click on *Open StumpWork Sub-Design*.
- Click on *Write to Machine* to send the design to the machine for stitching.
- Select your option in the *ADX* dialog box. Click *OK* in the dialog box that opens.
- Click on *Save StumpWork Sub Design As*.
- Save the design as *StumpWork Digitized Wireline*.
- Close the file.



Notes:



Tips for Digitizing Wireline:

- *Make sure that the Wireline tackdown of this internal line ends before the tackdown around the object so that the wire doesn't get caught when the external wireline border is stitched.*
- *You may cut the wire slightly shorter than the length of the wireline to avoid this as well. This allows you to have the stitching right up to the border to avoid unwanted gaps.*

If you print a template of a StumpWork design, the preview will show the entire StumpWork design including the StumpWork but only the base design will be shown in Color Film. You will need to open the StumpWork Sub-Design to view the components of the StumpWork design.

Bonus: Blackwork Run

The software offers the *Blackwork Run* feature to assist in creating outlines. Blackwork Run is designed to join selected outlines to form a single grouped, reinforced outline, correctly sequenced for efficient stitch-out.

Important notes regarding Blackwork Run - - -

- ◇ It always follows the color of the first object in the sequence.
- ◇ It works with *Open and Closed Object tools and Ellipse and Rectangle Tools*.
- ◇ It works with the following outline types: *Single, Triple, Backstitch, Stemstitch, Raised Satin, Satin, and Blanket*.

Opening the File



- Click on *New*.
- Select *Insert Artwork*.
- Navigate to *C> My Designs> Artwork*.
- Open the *BERNINA Heart* folder.
- Select *Multicolored Heart with straight edges.wmf*. Click on *Open*.

Digitize the Heart



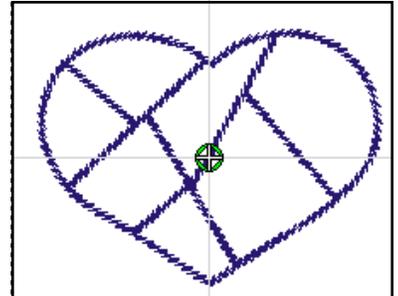
- Select *To Fit* from the *Zoom Toolbar*.
- Select the *Closed Object* tool in the *Digitize Toolbox*.
- Click on the *Single Outline* icon in the *Stitch Toolbar*.
- Digitize the outline of the heart at the intersection of the purple border and the multi-colored heart.
- Select the *Open Object* tool.
- Digitize the straight lines within the heart with two left clicks, pressing *Enter* after each straight line. Be sure the lines are touching either the heart outline or another interior line.
- Click on *Show Bitmap Artwork* to hide the picture.
- Check that all the lines touch either the heart outline or another interior line.
- If they don't, use *Reshape* to edit.
- Select *Esc* if reshaping was necessary.

Applying Blackwork Run



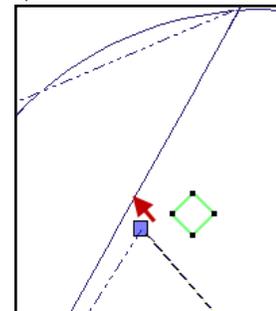
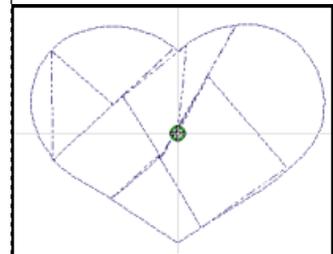
- Switch to *Design View* by selecting *T* on the keyboard.
- If jump stitches do not show, click on *Show Connectors*.
- Notice all the jump stitches that occur in the design.
- Select *Edit > Select All*.
- Click on the *Stemstitch Outline* icon.
- Select *Blackwork Run* in the *Edit Toolbox*.
- You may enter the *Entry point* by clicking on the outline of the design or let the software decide by pressing *Enter*. The software automatically re-sequences the stitching to eliminate jump stitches.
- Select *File> Save As*; name the file *Blackwork Run*.
- Close the file.

Notes:



Lesson covers:

- ◆ *Open Object tool*
- ◆ *Closed Object tool*
- ◆ *Blackwork Run*



If the lines do not connect, Blackwork Run doesn't eliminate all jump stitches. Select a line that does not intersect, click on Reshape, then move the point that doesn't intersect to meet the other line.

You may eliminate the jump at the beginning and end by selecting Design> Auto Start & End. Change the Start needle position to the First stitch of the design and the End needle position to the last stitch. Click OK.

Bonus: True Type Fonts

The DesignerPlus level incorporates the ability to create embroidered lettering from fonts that are installed on your computer. These are known as TrueType or Open Type fonts.

IMPORTANT TIP: Remember that some TrueType & Open Type fonts may not be suitable for embroidery. Experiment with the fonts and settings to find one that works for your creation.

Notes:

Lesson covers:

- ◆ Using Open & True Type fonts



Creating Lettering from True Type or Open Type Fonts

- Select the *New* icon.
- Press *A* on your keyboard to open *Lettering Object Properties*. box.
- Type *BERNINA* in the text box.
- Scroll beyond the digitized alphabets to find *True Type & Open Type fonts*.
- Select *Comic Sans*.
- Change *Height* to 20 mm.
- Click *OK*; click on the screen to generate the lettering.
- While the lettering is selected, click on *Color 5, Red* in the *Color Palette*.
- Experiment with additional fonts, adding them as outlined above.
- Select *File> Save As* and name the file *True Type Font*.
- Close the file.

Look for fonts that don't have thick and thin areas for successful stitching.



Bonus: Create a Pattern

Open a New File



- Select *New*.
- Switch to *Artwork Canvas*.
- Select *Text> Insert Symbol Character*.
- In the font drop down box, choose *Wingdings*.
- Select the 6-pointed star, or some other geometric shape.
- Select *Insert* at the bottom of the *Insert Character* dialog box or click and drag the shape onto the screen.
- Add a fill color by clicking on a color chip.
- Delete the outline by right clicking on the *None Color Chip* at the top of the color chips.
- Close the *Lock Ratio* icon.
- Enter 40% in the % box in the *Property Bar*.
- Press *Enter* to activate the change.
- Click on *Convert Artwork to Embroidery*.

Editing the Object



- Make sure the hoop is displayed by clicking on *Show Hoop*.
- Select the stitched star.
- Select *Zoom to Selected* in the *Zoom Toolbar*.
- Click on the star to switch to outlined square handles.
- Click and drag on a corner outlined square to rotate the star so that one of the points is on the horizontal guide.
- With the object selected, select *Reshape*.
- Move the green square (start point) to the far left, the red cross (stop point) to the far right of the star. (see picture)
- Select *Slow Redraw* to view how the pattern will stitch.
- Notice that the small pattern has underlay.
- Select the star.
- Click on the *Auto Underlay* icon in the *Effects Toolbar* to eliminate the underlay.

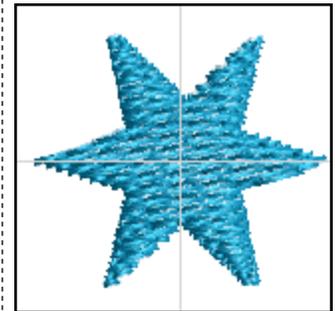
Creating the Pattern

- While the star is still selected, select *Settings> Create Pattern*.
- In the dialog box that opens, click on *New Set*.
- Name the set, *Created Patterns*.
- Click *OK*.
- In *Pattern Name*, enter *Star*.
- Click *OK*.
- Follow the status bar prompts to digitize the reference line for the pattern from the left tip to the right tip.
- You will receive a message that the pattern has been created.
- Click *OK*.
- You can save this file as *Created Pattern Stamp* or choose not to save it because it can be accessed as a Pattern Outline, a Pattern Fill, or a Pattern Stamp within the software.
- Close the file.

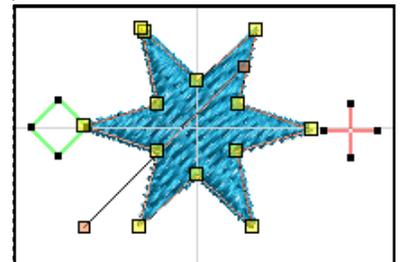
Notes:

Lesson covers:

- ◆ *Insert Symbol Character*
- ◆ *Creating patterns*
- ◆ *Rotating*
- ◆ *Changing Start & End points*
- ◆ *Removing Underlay*
- ◆ *Using created pattern stamps to create fills, outlines, pattern stamps, and carving stamps*
- ◆ *Creating star effects*



Moving the start and stop points will eliminate jump stitches in the pattern outlines generated from the created pattern.





Using the Pattern: For Outlines

- Select *New*.
- Right click on the *Pattern Run Outline* icon.
- In *Object Properties*, click on the *Select* button.
- In *Patterns*, click on the drop down arrow and choose, *Created Patterns*.
- Select the *Star*.
- Click *OK*; then *OK* again.
- Select the *Open Object* tool and digitize a line with two left clicks.
- Press *Enter* to activate.
- Press *Esc*.



Using the Pattern: For Fills

- Right click on the *Pattern Fill* icon.
- In *Object Properties*, click on the *Select* button.
- In *Patterns*, click on the drop down arrow and choose, *Created Patterns*.
- Select the *Star*.
- Click *OK*; then *OK* again.
- Select the *Rectangle* tool and digitize a rectangle with two clicks, clicking in the upper left corner, then dragging to the lower right corner.
- Press *Esc*.
- Select the rectangle and click on *Outline Design* in the *Edit Toolbox*. In the dialog box, select the *Color*, set *Offset* at 0, *Outline Count* to 1, and select the *Triple stitch*. Click *OK*.



Using the Pattern: For Pattern Stamps

- Select *Pattern Stamp* from the *Digitize Toolbox*.
- In *Patterns*, click on the drop down arrow and choose, *Created Patterns*.
- Select the *Star*.
- Click *OK*.
- Click and drag and click again to set the stamp.
- You may hold the *Shift* key down after the first click to increase the size. Press *Esc*.

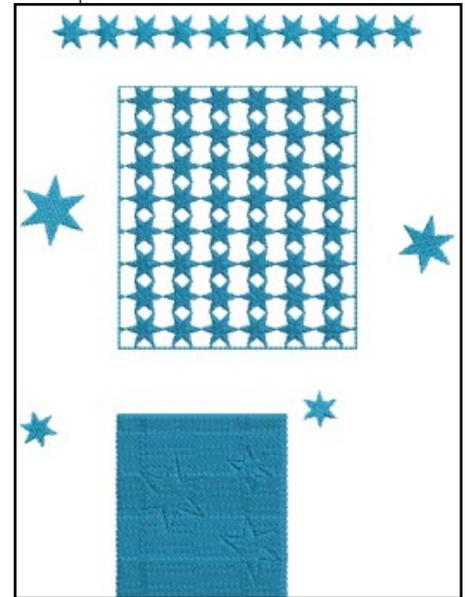


Using the Pattern for a Carving Stamp

- Select the *Rectangle tool* in the *Digitize Toolbox* and the *Step fill* from the *Stitch Toolbar*.
- Draw a rectangle with two left clicks.
- Press *Esc*.
- Open the *Carving Stamp* docker.
- Click on the *Use Pattern* tab.
- Navigate to *Set > Created Patterns > Star*.
- Select the *Star*. Set stamps on the step fill rectangle using two left clicks. Press *Esc*.
- Save the file as *Created Patterns*.
- Close the file.



Notes:



Pattern fills and craft fills often need outlines around the pattern to give a finished look.

Bonus: Effects

Star Effect

Digitizing a Circle



- Select *New*.
- Select the *Ellipse Tool* in the *Digitize Toolbox*.
- Draw a circle, clicking in the center and dragging to the size of circle you want, click again, and press *Enter*.
- Press *Esc*.
- Right click on the circle to open *Object Properties*.

Changing the Density & Travel on Edge



- Change the *Stitch Spacing* to .90 mm.
- Select *Apply*.
- Click on the *Effects* icon.
- The *Underlay* tab should be selected.
- Uncheck *Underlay 1* to eliminate the underlay from the fill.
- Select the *Others* tab.
- Place a check mark in front of *Travel on Edge*.
- Click *OK*.

Adding an Outline



- The circle should still be selected.
- Click on *Outline Design* in the *Edit Toolbox*.
- Choose these options: Select a *Color*, *Offset at 0*, *Outline Count at 1*, *Select Triple*.
- Click *OK*.

Star Fill



- Select the circle.
- Click on *Star Fill* in the *Effects Toolbar*.
- If you right click on the *Star Fill* icon, you can change the *Hole Width* and the *Hole Height*.

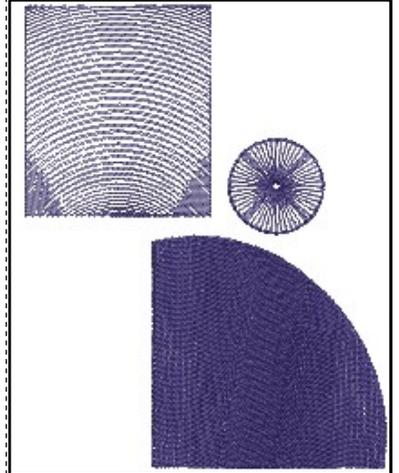
Wave Effect

Digitizing with the Closed Freehand Tool



- Select the *Closed Freehand Tool* in the *Digitize Toolbox*.
- Click on the arrow on the *Smoothing bar* (under the *Transform Toolbar*) and drag the arrow to 100%.
- Click on the screen and drag upward; then drag to the right to create a pie shape.
- Release the mouse to set the stitches.
- Press *Esc*.
- Select the object.

Notes:

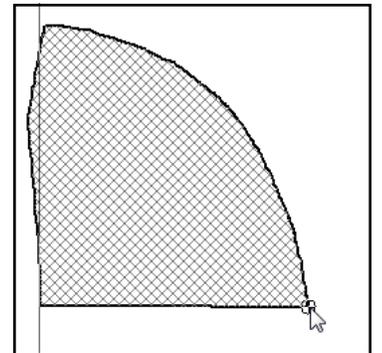


Lesson covers:

- ◆ *Star Effect*
- ◆ *Changing density*
- ◆ *Travel on Edge*
- ◆ *Adding an outline*
- ◆ *Wave Effect*
- ◆ *Gradient Fill*

Travel on Edge will keep the traveling stitches from stitching through an object that has decreased density.

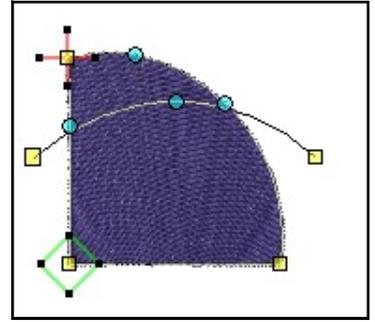
Pattern fills and *craft fills* often need outlines around the pattern to give a finished look.



The *Closed Freehand Tool* creates an object with multiple stitch angles.



- Click on *Wave Effect* in the *Effects Toolbar*.
- Click on *Reshape Object*.
- You can reshape the object as desired by moving, deleting, changing, or adding control points around the object.
- You can also change the wave of the fill by changing the arc of the wave fill.
- Points can be added, moved, deleted, or changed in the same way you change the shape of the object.
- Press *Esc*.



Gradient Fill Effect

Gradient Fill



- Select the *Rectangle Tool* in the *Digitize Toolbox*.
- Click in the upper left hand corner and drag to the lower right hand corner. Click again to set the rectangle.
- Press *Esc*.
- Select the rectangle.
- Select the *Effects* icon.
- Select the *Gradient Fill* tab.
- Place a check mark in front of *Gradient Fill*.
- Select *Profile # 3*.
- Select the *Underlay* tab.
- Uncheck the *Underlay #1* option to eliminate the underlay.
- Click *OK*.
- Select *File> Save As* and navigate to the location to save the file.
- Name the file, *Effects* and save.
- Close the file.

Gradient Fills adds perspective or shading to embroidery designs. Gradient fills vary the stitch spacing between dense and open fills. The software offers four different profiles for Gradient Fills. In addition, the spacing can be changed

Bonus: Create a Monogram Border



Open a New File

- Select *New*.
- Switch to *Artwork Canvas*.
- Select the *Basic Vector Shape icon*.
- Click on the black triangle of the *Perfect Shapes* icon in the *Property Bar*.
- Select the heart.
- Click on the screen; then click and drag to form the heart.
- While it is selected, click on *Convert Artwork to Embroidery*.



Creating the Border

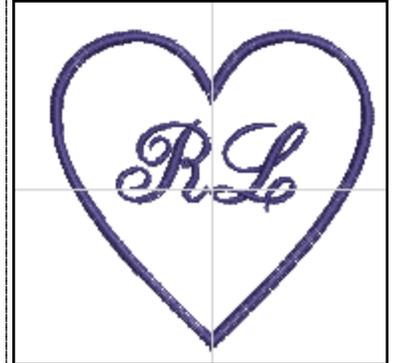
- The heart should still be selected.
- Select *Settings > Create Border*.
- In the dialog box that opens, click on *New*.
- Name the set, *Created Borders*.
- Click *OK*.
- In *New Border Name*, enter *Heart*.
- Click *OK*.
- Follow the status bar prompts to set the start point and the end point for the border. Click on the border to set these points
- You will receive a message that the pattern has been created.
- Click *OK*.
- You may delete the object as it is now stored in your program files for BERNINA Embroidery Software 7.

Using the Border



- Open the *Monogramming* program from the *Digitize Toolbox*.
- Input Initials and Ornaments as desired.
- Click on the *Border* tab.
- Select *Add*.
- In the *Border Set*, click on the drop down box and select *Created Borders*.
- Select the heart.
- Click *OK*.
- You may now edit and add to the monogram as desired.
- Save the file as *Created Monogram Border*.
- Close the file.

Notes:



Lesson covers:

- ◆ *Converting artwork to embroidery*
- ◆ *Creating monogram borders*