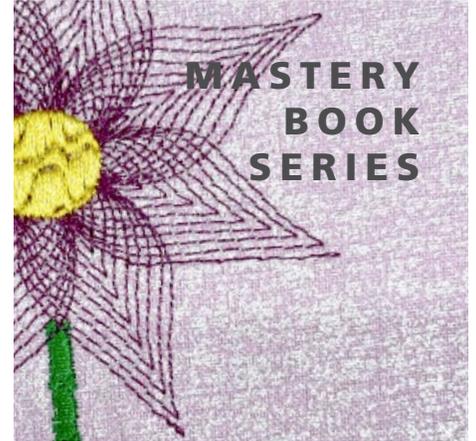
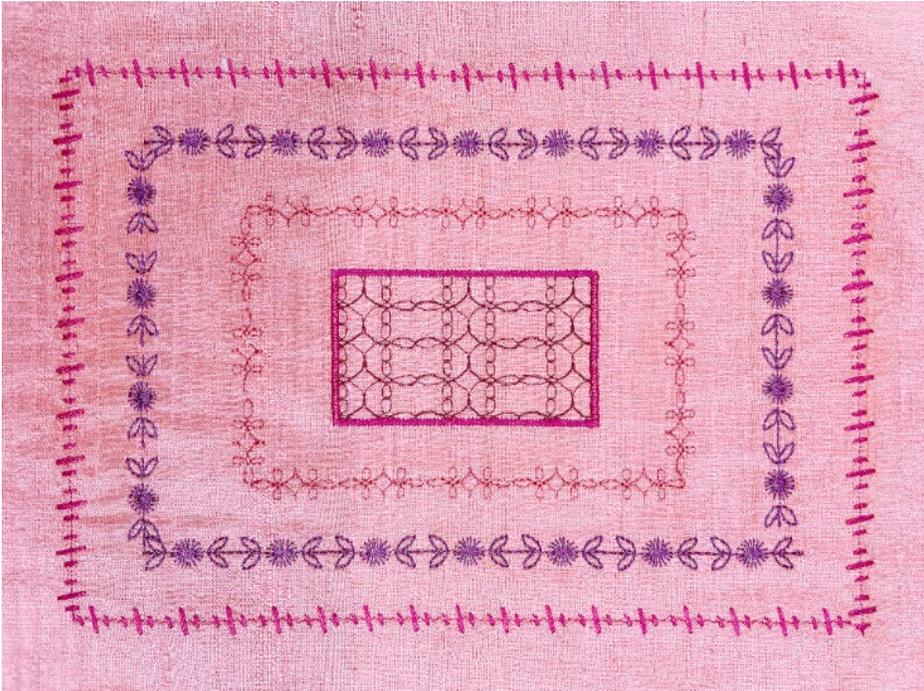
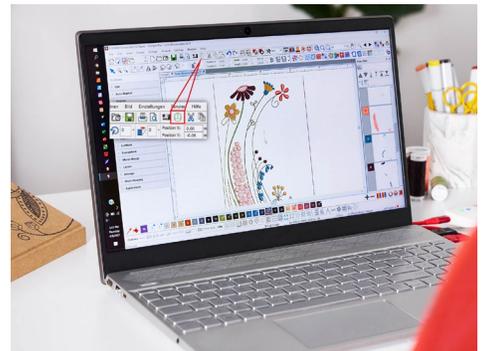


MY BERNINA



BERNINA EMBROIDERY SOFTWARE 9
DesignerPlus Workbook



made to create

BERNINA

DesignerPlus Mastery TABLE OF CONTENTS

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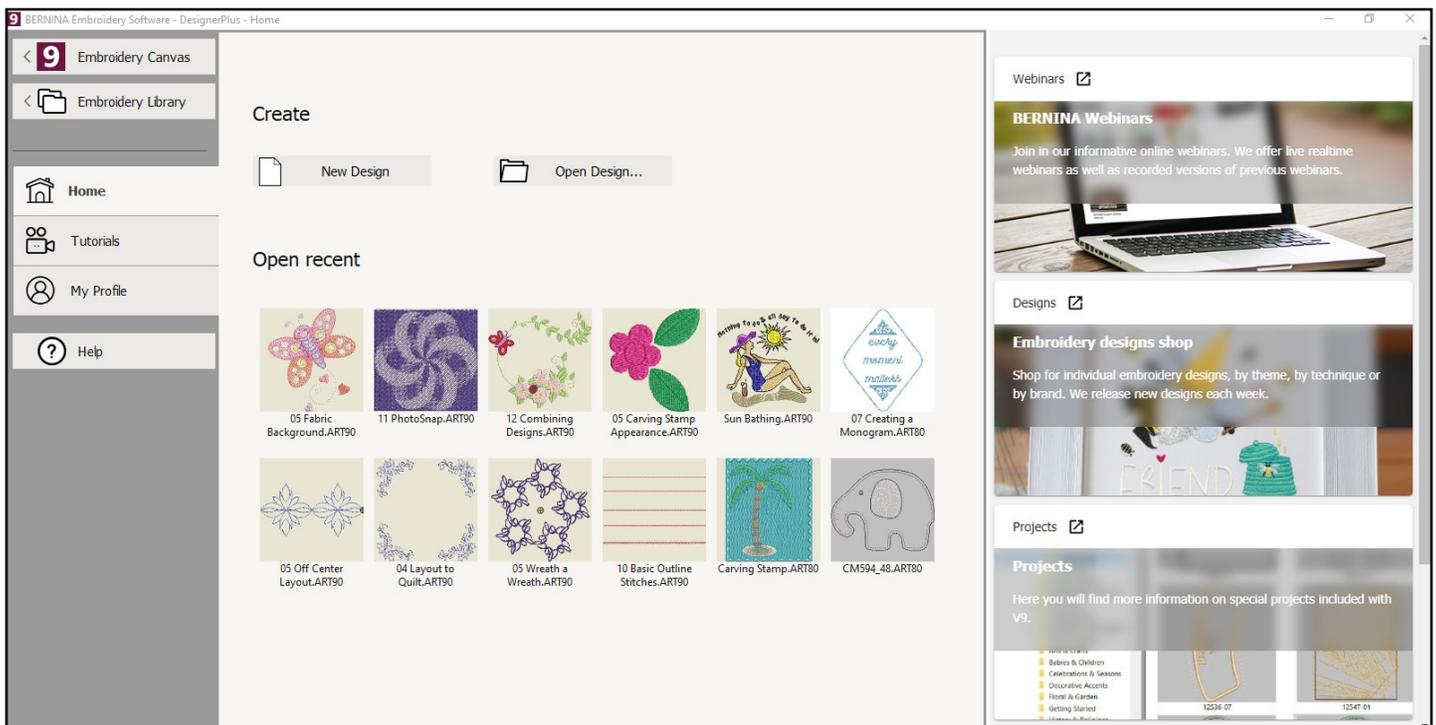
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Introduction to Software Screens

HOME SCREEN:

The software opens to a Home Screen and you can choose where you wish to navigate from this screen.

- **EMBROIDERY CANVAS** takes you to the Embroidery Canvas where you can choose to open a design, insert a design, add lettering, or begin digitizing.
- **EMBROIDERY LIBRARY** takes you to BERNINA's file management system where you can select a design from the library, search for a design, convert a design and much more.
- **TUTORIALS** will show a listing of tutorials that link to YouTube instructional videos. Select Tutorials; then click on Featured Tutorials to view the software videos.
- **HELP** will open the BERNINA Embroidery Software 9 Help Menu. You must be online to view this.
- On the right, you will find links to projects, Embroidery Online, and BERNINA webinars. Scroll to find a link to the BERNINA Blog.



LEVELS OF SOFTWARE

BERNINA Embroidery Software 9 has two levels: Creator and Designer. Creator is an all-in-one creative package for creating lettering and monogramming. In addition, Creator has automatic methods of converting artwork into stitches. This level also has some manual digitizing tools and basic application.

BERNINA Embroidery Software Designer level has all the tools and features of the Creator level plus more fonts, more stitches, creative effects, and all the manual digitizing tools.

Tour of Screen

GENERAL INFORMATION

The next few pages contain information about the Embroidery Canvas screen and the icons you will find on the screen. These pages can help you learn about the icons and what they do.

- Resting your cursor on an icon will display the name of the icon.
- After resting your cursor on an icon, pressing F1 (or FN + F1 on some computers) will open an appropriate page of the Help Menu.
- If you wish show tool names all the time, click on Options> General Tab. Place a check mark by Show Tool Names and click OK.
- The name of the icon will be placed under each of the icons on the Embroidery Screen.
- When you add icon names, some of the icons will be hidden.
- To show the hidden icons, click on the drop-down arrow at the end of the toolbar. All icons that are hidden in that row will be shown in a drop-down bar.



SCREEN DISPLAY

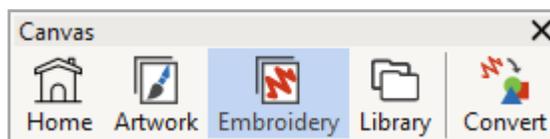
Title Bar:

This bar will display the name of the design and level of the software.

Menu Bar:

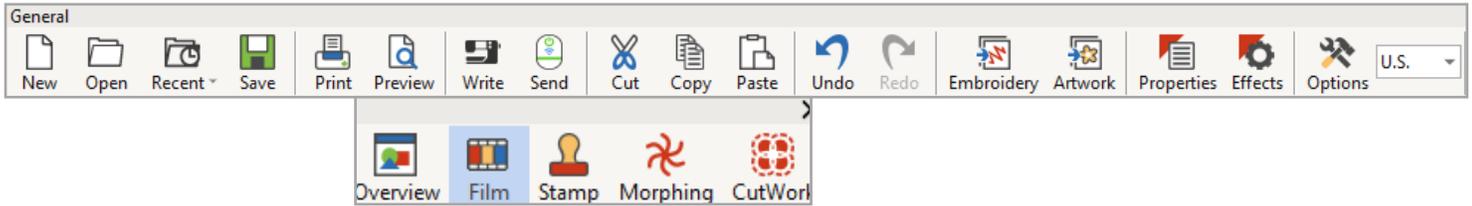
This has pull-down menus to access various software features. Many of the features also have corresponding short-cut icons.

Canvas Toolbar:



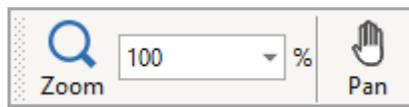
This toolbar toggles between Artwork Canvas, Embroidery Canvas, and Embroidery Library. You can convert a selected embroidery design to vector artwork by clicking on the Convert Embroidery to Artwork icon.

General Toolbar



The General Toolbar contains basic Windows tools, such as Cut, Copy, Paste, as well as icons that launch special dialog boxes and docker dialog boxes within the software.

Zoom Toolbar:



The Zoom Toolbar will change the zoom level on screen and the Pan icon can be used to move the design on the screen without changing the zoom level. You can select the Zoom icon and left click on the design screen to zoom in, right click on the design screen to zoom out, or click and drag a box around an object to zoom in on that object.

Additionally, you can zoom to the selected object, zoom to article, zoom to fit the screen, or zoom to the hoop. In order to zoom to an article or hoop, those must be visible on the screen. To zoom to a selected object, an object must be selected.

A quick way to zoom to selected is to right click on an object and select Zoom to Selected.

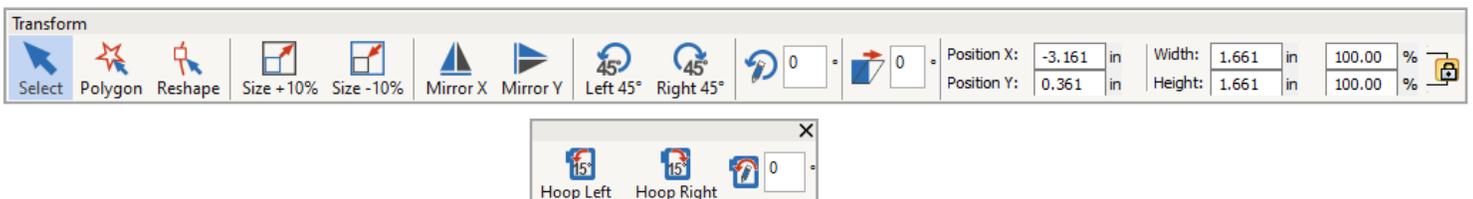
Travel Toolbar:



The Travel Toolbar lets you travel through a design object by object, color by color, or to the start or end.

Transform Toolbar

This toolbar is used in editing your design. There are icons to resize, mirror, rotate, skew designs and change their positions. The last section of this toolbar lets you rotate the hoop by 15 degrees or by a specified amount.



Tour of Screen

View Tool Bar:



The View Toolbar contains icons to change your view on the design screen. Blue highlighted objects are active icons.

Toolboxes:

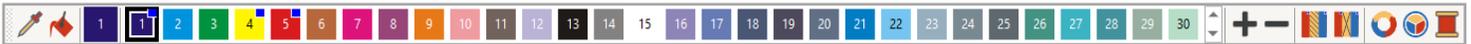
On the left of the screen, there are toolboxes. By clicking on the title bar of the toolbox, the icons grouped in that toolbox will appear.

When a toolbox is opened, a scroll bar on the right side of the toolbox area lets you scroll to other toolboxes.

Icons that are grayed out are not activated until something is selected, or this may mean that particular tool cannot be used on the item that was selected.



Color Toolbar:



The Color Palette Toolbar is below the design screen.

Available colors from your default palette are shown when you open a new blank design. If you open a design, rather than insert a design, only colors used in the design are shown. The colors used in the design are designated by a blue box in the upper right-hand corner of the color chip.



With the Pick Color icon, you can select a color by clicking on a color that is part of an object. The symbol changes into a paint bucket icon and you can change another object to the selected color by clicking on the new object.



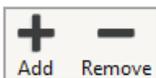
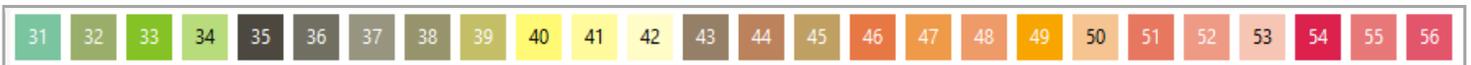
The Apply Current Color icon allows you to change a color in the design to the color currently selected in the palette. The Current Color is shown in the color chip just to the right of Apply Current Color icon.



The Current Color is shown after Apply Current Color. This shows the color that will be applied to a digitized object. It is also highlighted by a black outline in the Color Toolbar.



The scroll arrows at the end of the toolbar will show additional colors. There are 56 default colors in the BERNINA color palette, which is the default color palette.



Add colors to the palette by clicking on the plus sign; delete the last color in the palette by clicking on the minus sign.



Hide the unused colors by clicking on Hide Unused Colors. Bring colors back by clicking on the icon again. Remove Unused Colors removes color chips from the palette. Bring the colors back by clicking Undo.



Cycle Used Colors, at the end of the Palette, assigns the colors used in the design to different objects in the design.

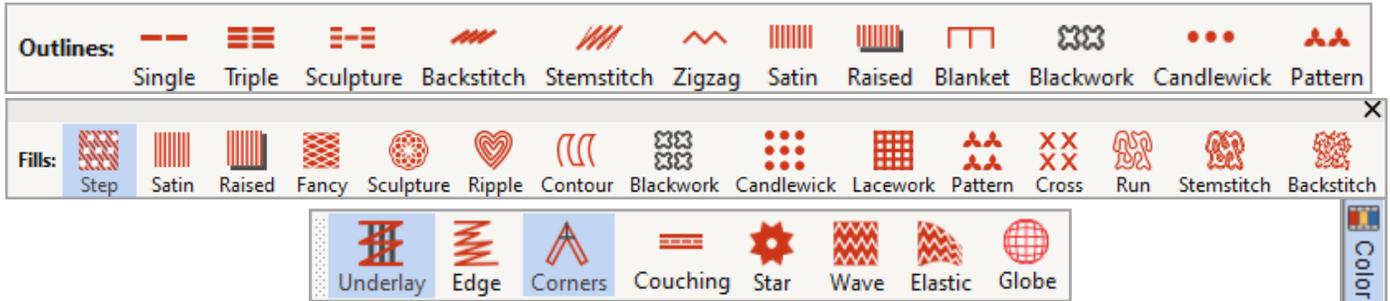


Color Wheel will change the color of individual parts of a design or the design in total to new colors.



A left click on My Threads/Thread Colors will open the Threads Docker while a right click will open the Design Properties dialog box, Thread Colors tab.

Stitch Bar: At the bottom of the screen, you will find a selection of stitch types. There are outlines, fills, and effects.

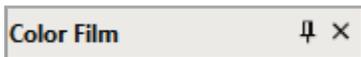


Docker Tabs & Icons:



There are Docker tabs on the right side of the screen. The number of tabs will be determined by which dockers you have activated and by the level of software. Many of the dockers are opened by icons in the General Toolbar; some are activated by icons in the Toolboxes.

Rest your mouse on one of the tabs to display the docker dialog box.



Dockers will be hidden and shown as tabs if the Auto Hide (thumbtack icon) is turned on its side. The Dockers will remain open if the Auto Hide icon is in an upright position.

To close the docker, click on the X in the upper right-hand corner of the title bar. To reopen, click on the corresponding icon in the General Toolbar.

Docker dialog boxes can be moved to any position on the screen by clicking on the title bar of the dialog box and dragging it to another position. This can only be done if the Auto Hide icon is in an upright position. To re-dock the dialog box, double click on the title bar.

Status Bar:

The Status bar is located at the bottom of your screen. The left side of the status bar will give you information about the next step in the process for your selected icon, if appropriate.

On the right side of the status bar, you will see information about the design; including size, location, number of stitches, type of fabric (if one has been selected) and design grade (indicating the editing capabilities of the design).

Toolbox Icons

Edit	
	Add Holes
	Remove Holes
	Add Stitch Angles
	Remove Stitch Angles
	Double Run
	Blackwork Run
	Branching
	Apply Closest Join
	Color Blending
	Fill Holes
	Outlines and Offsets
	Quilting Background
	Create Trapunto Outlines
	Break Apart
	Remove Overlaps
	Weld
	Knife
	Stitch Edit

Lettering / Monogramming	
	Lettering
	Monogramming
	Keyboard Design Collection

Auto-Digitize	
	Insert Artwork
	Crop Background
	Adjust Bitmap
	Touch Up Bitmap
	Color PhotoStitch
	PhotoSnap
	Prepare Bitmap
	Auto-Digitize
	Instant Auto-Digitize
	Magic Wand
	Magic Wand Block Digitizing
	Magic Wand Fill without Holes
	Magic Wand Centerline
	Color Matching Method

Appliqué	
	Digitize Appliqué
	Digitize Appliqué with Holes
	Convert to Appliqué
	Advanced Appliqué
	Remove Overlaps
	Remove Appliqué Overlaps
	Combine Appliqué
	Break Apart
	Export Cutting File...

Digitize	
	Open Object
	Closed Object
	Open Freehand
	Closed Freehand
	Block
	Ellipse
	Rectangle
	PunchWork
	Buttonhole
	Buttonholes
	Pattern Stamp
	Basting Stitch Marker
	Insert Graphic Marker

CutWork / StumpWork	
	Add CutWork Border
	Digitize Open Cut
	Digitize Closed Cut
	Digitize Piece
	Digitize Hole
	Digitize Wireline
	Convert to CutWork Border
	Cut Closed Border
	Cut Buttonhole Slit
	Combine Selected
	Un-combine
	Create Stumpwork Sub-design
	Open Stumpwork Sub-design
	Save Stumpwork Sub-design As

Toolbox Icons

Mirror-Merge	Layout	Arrange
Mirror Copy Horizontal Mirror Copy Vertical Mirror Copy Horizontal & Vertical	Layout to Rectangular Work Area Corners Layout Around Circular Work Area Auto Center to Work Area Define Work Area Mirror-Copy to Quilt Block Corners Auto Center to Quilt Block Auto Fit to Quilt Block Define Quilt Block	Group Ungroup Lock Unlock All Align Left Align Centers Vertically Align Right Align Top Align Centers Horizontally Align Bottom Align Centers Space Evenly Across Space Evenly Down
Multi-Hooping	Applications	
Select a Hoop Automatically Add Hoops Add Splitting Line Preview Hoopings >> Calculate Hoopings Multi-Hooping Options Add Hoop Delete Hoop Add Hoop Right Add Hoop Left Add Hoop Down Add Hoop Up Add 4 Hoops Around Add 8 Hoops Around	Cross Stitch Quilter	

Additional Tools in DesignerPlus vs Creator

Additional Dockers & Features

- Carving Stamp
- StumpWork
- CoreIDRAW SE
- 49 more fonts
- Articles

Additional Editing Tools

- Add/Remove/Fill Holes
- Double Run
- Blackwork Run
- Color Blending
- Quilting Backgrounds
- Create Trapunto Outlines

Additional Digitizing Tools

- Open Freehand
- Closed Freehand
- Block
- PunchWork
- Pattern Stamp
- Basting Stitch Marker
- Insert Graphic Marker

Additional Lettering Tool

- Keyboard Design Collection

Additional Applique Tools

- Advanced Applique
- Remove Applique Overlaps
- Combine Applique

Additional CutWork Tools

- Cut Buttonhole Slit

Additional Toolboxes

- Layout
- Multi-Hooping
- Applications
 - ◆ Quilter
 - ◆ Cross Stitch

Additional Outlines

- Blackwork Outline
- Candlewicking
- Pattern Run

Additional Fills

- Sculptured Fancy
- Ripple
- Contour
- Blackwork
- Candlewicking
- Lacework
- Pattern Fill (more types in DesignerPlus)
- Cross Stitch
- Stipple
- Stipple Stemstitch
- Stipple Backstitch

Additional Effects

- Automatic Corners
- Calligraphy
- Couching
- Elastic Fancy Fill Effect
- Gradient Fill Effect
- Star Fill
- Three-Dimensional Globe Effect
- Wave Fill

Mapping Keyboard Lettering

Create a Custom Keyboard Design Collection

- You must first create a custom Keyboard Design Collection to store your characters. This can be done in the Embroidery Canvas or through the Embroidery Library.
- The basic steps of the process include:
 - ◆ Create the collection.
 - ◆ Name the collection; set Reference Height.
 - ◆ Select the Filter Type.
 - ◆ Select the characters to map.
 - ◆ Map the characters.
 - ◆ Test the font.

Batch Mapping

- Open Embroidery Library.
- Locate the folder containing the designs you wish to map in the navigation pane in the Navigation tree. Open Public Embroidery > BERNINA 9 Embroidery > Alphabets & Monograms > Damask Alphabet.
- Open the Keyboard Design Collection docker by clicking on the icon at the top of the Embroidery Library.
- Select the letter M in the Design Display.
- Click on New in the docker to add the collection to the drop-down list. A dialog box opens. The collection is named according to the file name in the library.
- Click on Use Selection and click OK.



New...

New Keyboard Design Collection

Name:

Reference height: in

 Height of the embroidery file/objects for character 'M' or a capital letter is preferred. Reference height defines the cell height of mapped characters.

Character spacing: % of height

Recommended height range: - in



- Select the first character to map (A) in the Design Display screen; hold the Shift key; and select the last character to map (Z).
- Select the corresponding batch mapping button (A-Z).
- The slots populate with the characters.
- This maps all the selected letters.
- Switch to Embroidery Canvas.



Map selected to:

Notes:

Lesson covers:

- ◆ Mapping Keyboard Design Collections
- ◆ Editing the letters of the collections

The Keyboard Design Collection feature allows you to map existing embroidery character designs to the keyboard.

Use this method to quickly map characters that don't need to be edited.

Original design colors and properties will be maintained while mapping unless edited.

Mapping a Letter in the Design Workspace



Map

- See the information in the Notes for when to use this method.
- Open the character in the collection you want to add by selecting Insert Embroidery. For this exercise, navigate to Libraries> BERNINA 9 Embroidery> Alphabets & Monograms> 12488 Charming Numbers. Select 12488-09. Click on Open.
- Edit the number as desired. Change the colors of the design. Resize using the Size –10%.
- Make sure the number is selected.
- Click on Keyboard Design Collections in the Lettering/Monogramming Toolbox.
- Click on New. Name the Collection, Charming Numbers Edited.
- Click on Use Selection to use the height of the selected character. Click OK.
- Click on the Filter By list in the Keyboard Design Collection docker to select how you want to filter the available characters.
- Select Numbers and the dialog box will show only those characters.
- Select the corresponding slot, number 9.
- Click on Map. The character is added to that design collection.
- Delete the design on the screen and repeat the process for other characters in the collection you wish to edit.

Editing the Keyboard Design Collections

- If you make a mistake while mapping, select the character you wish to remove from the mapping and click on the Remove Mapping button at the bottom of the docker. A dialog box appears so that you can confirm the deletion. This will clear the slot and you can correct the mistake.
- If you accidentally have the same slot selected when mapping, a warning will appear to ask if you are sure you want to overwrite the existing mapped design.
- If you wish to rename a collection, click on Rename at the top of the docker.
- If you wish to delete a collection, click on Delete at the top of the docker.
- Copy can be used if you want to base a new collection on an old collection.

Testing Your Collections



- Right click on Lettering in the Lettering/Monogramming Toolbox.
- Place a dot in front of Keyboard Design Collection in Object Properties to restrict the list to keyboard fonts.
- Select the Keyboard Design Collection you wish to use from the Font list.
- Enter the characters in the Lettering box using keyboard strokes.
- Edit the letters as desired—the spacing, the slant, the size, the baseline.
- Click OK; click on the screen to generate the lettering.

Notes:

- ♦ Use this method to quickly map only certain characters in the collection.
- ♦ Use this method when you want to edit the characters first before mapping.
- ♦ Use this method to add a character to a collection that has already been mapped.

Remove Mapping...

Rename...

Delete...

Copy...

Once the collections are created, you can experiment with editing. The success of editing depends on how the collection was digitized.

Resize non-ART collections with caution.



To Fine-Tune Baseline & Spacing Settings

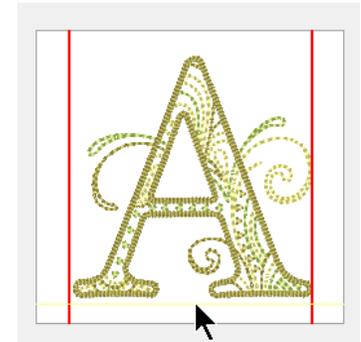
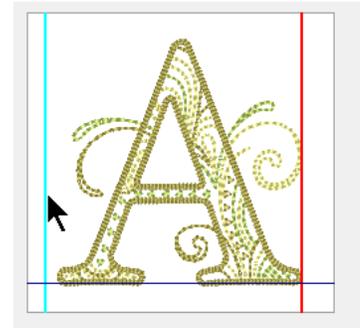
- Open the Keyboard Design Collection Docker.
- Select the collection you wish to adjust from the drop-down choices under Collection.
- Change the selection in the Filter By drop-down if necessary.
- Select the character you want to adjust in the Keyboard Design Collection docker.
- Click the Adjust Baseline & Spacing button at the bottom of the docker.
- A dialog box opens.
- You can view the letter in either Artistic View or Design View by clicking on the icon at the top.
- You can also Zoom in.
- Click and drag the vertical guidelines to adjust the spacing on either side. The line turns blue when the guideline is changed.
- Click OK. Note that Undo does not work with this change, you must click and drag on the slider again to adjust.
- Click and drag the baseline to adjust the baseline. The line turns yellow as the guideline is being changed.
- You may click Cancel if you don't wish to make the change.



Notes:

The spacing and baselines of the individual letters can also be adjusted.

Adjust Baseline & Spacing...



Multi-colored fonts can be broken apart to re-sequence.

Scalability depends on quality of the original characters. Grade A designs can be rescaled +/- 20%. Grade B, C, and D designs can be rescaled +/- 10%.

Editing Stitch Types



Open a Blank Design File

- Click on the New Blank Design icon or select File> New.
- Select File/Save As.
- Name the file, Editing Stitch Types.
- Select Insert Embroidery.
- Navigate to Libraries> Embroidery> BERNINA 9 Embroidery> Getting Started.
- Select Sample—Artistic Stitch Effects. Select it; click Open.



Changing the Hoop Size

- Right click on Show Hoop.
- Select BERNINA Midi Hoop, 165 x 265.
- Place a check mark by Show Hoop. Click OK.



Changing the Background

- Select Design> Background and Display Colors.
- Place a dot by Factory Article.
- Click on the drop-down arrow by Name and choose, Ladies> Sweatshirt> Hooded Back.
- Choose a color for the sweatshirt from the Color 1 choices. Click OK.
- In the Zoom Toolbar, select To Article.
- Click and drag on the design to place it where you would like it to be. Use the ruler at the top of the screen to center the design.
- Resize the design by selecting it and changing the Width to 6.25". Press Enter to activate the change.

Editing a Fancy Fills & Pattern Fills

- Deselect the design by clicking outside the black boxes, hold the Alt key, and double click on the large Fancy Fill heart.
- Object Properties will open.
- To select a new fill, click on the drop-down arrow by Pattern and select, 173 Tile 1.
- Change the Size X, Size Y, Column Spacing, and Row Spacing to 5 mm. Press Apply.
- Deselect this fill by clicking outside the hoop.
- Hold the Alt key and select the small heart fill in the neighboring heart.
- Press the T on the keyboard to switch to Design View.
- Notice that the Fill type is a Pattern Fill.
- Click on Select in the Object Properties dialog box.
- For Pattern Set, choose Decoration from the drop-down menu.
- Select pattern # 522. Click OK; then Apply.
- Make these changes to the size:
 - ◆ Pattern X: 0.58
 - ◆ Size Y: 0.41
 - ◆ Column Spacing: 0.58
 - ◆ Row Spacing: 0.41
- Press Apply.

Notes:

Lesson covers:

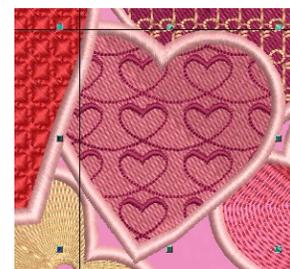
- ◆ Working with articles
- ◆ Changing the fill type
- ◆ Editing fills and outlines
- ◆ Working with Object Properties
- ◆ Outlines & Offsets
- ◆ Blackwork Run



Holding the Alt key lets you select a part of a grouped object.

By changing all these values to the same amount, the pattern will maintain its proper proportions since all these were the same value in the original fill. The pattern will just be smaller.

Always pay attention to the relationship of the original values if you wish to keep the look of the original pattern.



Editing Ripple Fills

- Deselect the heart.
- Hold the Alt key and select the Ripple Fill (the heart on the far right).
- Change the Stitch Spacing to 3.5 mm. This will add space between the rows of the ripple fill. Press Apply.

Editing Lacework Fills

- Deselect the heart.
- Hold the Alt key and select the Lacework Fill (to the left of the yellow heart).
- Click on Select.
- Select L0003a.
- Click OK. This closes the dialog box.

Editing Satin Outlines

- Deselect; then hold the Alt key and click on the pink outlines in Color Film.
- Notice that these are Satin Fills and not outlines. The Satin Fill icon turns blue; not the Satin Outline in the Stitch Toolbar.
- While they are selected, press the Delete key.
- Click on one of the hearts. Since the hearts are still grouped, all hearts are selected.
- In the Edit Toolbox, select Outlines & Offsets.
 - ◆ Check Object Outlines.
 - ◆ Select Stemstitch from the Types.
 - ◆ Select the color you wish to use for the outline.
 - ◆ Select Trimmed Outlines for overlapping choice.
 - ◆ Check Offset Outlines.
 - ◆ Change the Offset to 0.15".
 - ◆ Change the count to 1.
 - ◆ Choose a Triple stitch and select another color.
 - ◆ Choose Common Offsets.
 - ◆ Uncheck Include Holes.
 - ◆ Click OK.
 - ◆ This will take a short time to generate.

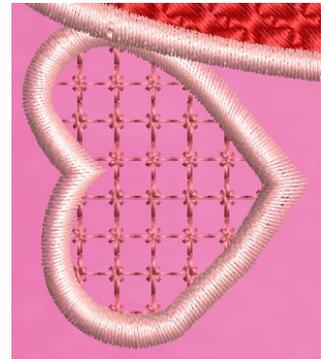
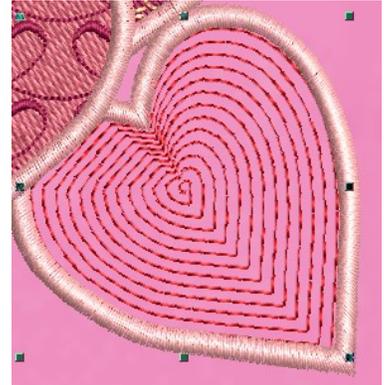


Applying Blackwork Run

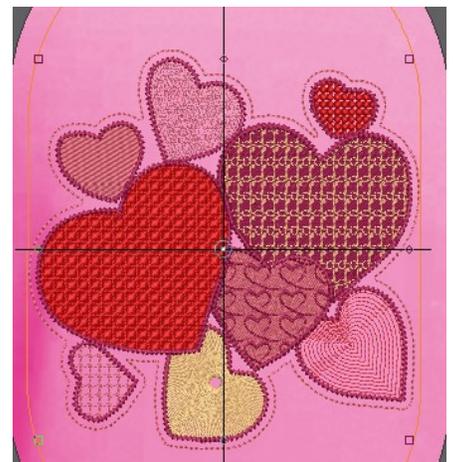
- With the change of outline, there are a lot of jump stitches in the outline.
- Switch to Design View by turning off Show Artistic View to see the jump stitches.
- Select the Stemstitch outlines in Color Film.
- Click on Blackwork Run in the Edit Toolbox and press Enter.
- The software adds travel stitches and eliminates the jump stitches in the outline.
- Save the file as Editing Stitches.



Notes:



Icons turn blue when activated.



Introduction to Manual Digitizing

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 Software 9 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. Only closed objects can be filled.

Manual Digitizing Tools

There are seven basic types of manual digitizing tools in Software 9. These are accessed in the Digitize Toolbox. Practice drawing each of the shapes before completing the Digitizing exercise.



- ◆ **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. Press Enter to finish. A left click forms a point or changes direction; a right click forms a curve. It takes three clicks to form the shape of the line.



- ◆ **Closed Object Tool:** Used for drawing filled or outlined objects that enclose a shape. The closed shape is drawn with right + left clicks. After clicking to form a shape, when you are close to the point where you started, press Enter to enclose the shape.



- ◆ **Open Freehand Tool:** The open outlined shape is drawn by clicking and dragging on the screen vs. using right/left clicks. When the mouse is released, the line is drawn.



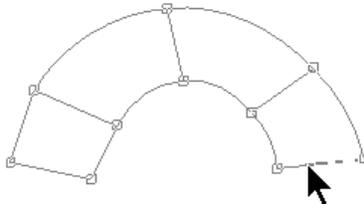
Introduction to Manual Digitizing



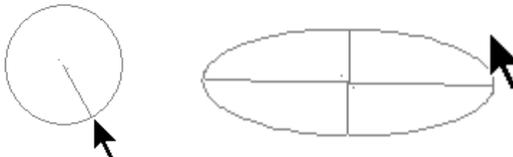
- ◆ **Closed Freehand Tool:** Used for drawing filled or outlined objects that enclose a shape by clicking and dragging on the screen vs. using right/ left clicks. An anchor point is set; then the mouse is moved around the perimeter of the shape.



- ◆ **Block Tool:** Used for drawing filled or outlined objects that set multiple angles within the object as it is digitized (for filled objects), using right/ left clicks that alternate sides. The lines that you see across the object show the changing stitch angle for filled object.



- ◆ **Ellipse:** Used for drawing circles or ovals. Click in the center of the circle, drag to the circumference desired, click again and press Enter. An oval is drawn with three left clicks and an Enter. Click one is in the center and clicks two and three define the outside edges of the oval.



- ◆ **Rectangle:** Used for drawing rectangles or squares. Holding the Ctrl key with the Rectangle tool creates a square. Click, drag to the lower right, click again to generate the shape.



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.

After choosing the tool to use for digitizing, select the type of stitch and the color of stitch desired and start clicking!

Introduction to Manual Digitizing

Fill Stitches:

There are fifteen types of fill stitches in DesignerPlus 9. 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*
- ◆ *Sculptured Fancy Fill*
- ◆ *Ripple Fill*
- ◆ *Contour Fill (doesn't work with Closed Freehand tool)*
- ◆ *Blackwork Fill*
- ◆ *Candlewicking Fill*
- ◆ *Lacework Fill*
- ◆ *Pattern Fill*
- ◆ *Cross Stitch Fill*
- ◆ *Stipple Run*
- ◆ *Stipple Stemstitch*
- ◆ *Stipple Backstitch*



Outline Stitches:

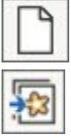
There are twelve types of outline stitches in DesignerPlus 9. These are accessed by shortcut icons at the bottom of the design screen or through Object Properties, Outline Tab.

Types of Outline Stitches:

- ◆ *Single Outline*
- ◆ *Triple Outline*
- ◆ *Sculptured Run Outline*
- ◆ *Backstitch Outline*
- ◆ *Stemstitch Outline*
- ◆ *Zigzag Outline*
- ◆ *Satin Outline*
- ◆ *Raised Satin Outline*
- ◆ *Blanket Outline*
- ◆ *Blackwork Outline*
- ◆ *Candlewicking Outline*
- ◆ *Pattern Run Outline*



Digitizing



Open a Design File

- Click on New Blank Design.
- Select File> Save as and name the file Digitizing Tools.
- Select Insert Artwork.
- Navigate to the BERNINA 9 Picture folder (C: Users> Public> Public Pictures> BERNINA 9 Pictures> Artwork> 03_BERNINA heart).
- Select Multicolored Heart with straight edges.png. Click on Open.

Decisions for Digitizing

- Decide on the stitch order. Objects in the background should be digitized first.
 - ◆ With the heart design, if you are going to fill in the solid areas of the heart with fill stitches; these need to be done before the outlines through the heart are digitized.
 - ◆ The border around the heart will be the last item digitized.
- Decide on the colors you wish to use. You don't have to use the colors in the image.
- Decide on the stitches you wish to use.
- Decide on the tools you will use to complete the design.
- For each design segment, you will choose a tool, a color, and a stitch.
- You can preselect the color and the stitch, or you can edit the object after creating it.
- Resize the image prior to digitizing. With the image selected, increase the % in the Transform Toolbar to 150%. Press Enter.
- It is always a good idea to lock the image in the background so you don't accidentally move it.
- Right click on the image and select Lock.

Using the Closed Object Tool

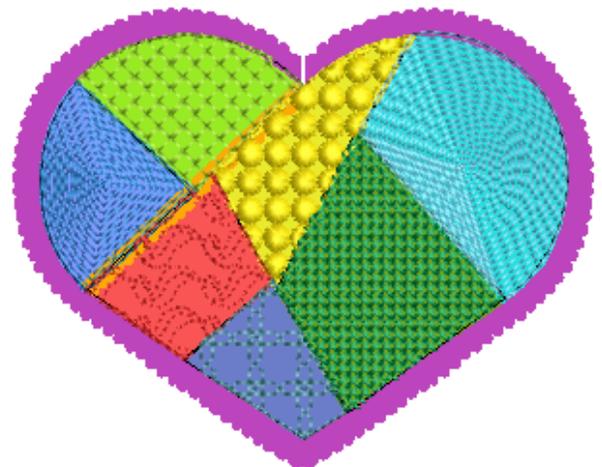
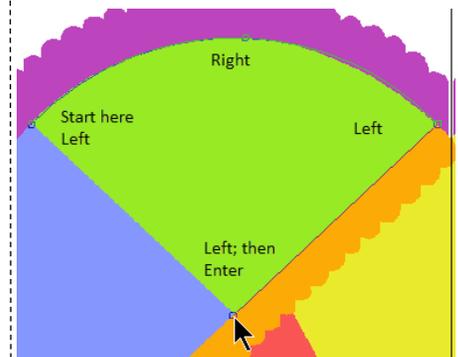
- Select the Closed Object Tool in the Digitize Toolbox.
- Select the color you wish to use.
- Select the Lacework Fill in the Stitch Toolbar. This will apply the default Lacework Fill to the object.
- Zoom into the lime green area.
- Digitizing tips include:
 - ◆ Left clicks create corners and change directions; right clicks create curves.
 - ◆ A line doesn't take shape until three clicks are set.
 - ◆ Use as few clicks as possible to form the shape.
 - ◆ Backspace will erase a click; Esc lets you start over.
 - ◆ Always press Enter and let the software close the shape when you get close to the original point.
- Digitize around the shape. (See first illustration).
- Notice when you finish, the Closed Object tool is still selected and the object is not selected.
- You can choose your next type of fill and your next color and digitize the next object.

Notes:

Lesson covers:

- ◆ Learning the digitizing tools
- ◆ Digitizing guidelines
- ◆ Reshaping

If you hold your mouse on the area you wish to zoom; then use the mouse wheel, you will zoom in on that area of the artwork.



- Complete all the filled-in areas, experimenting with different colors and fills.
- Ignore the orange border design of the artwork and digitize the yellow shape and the red shape to meet the green and blue shape.
- Don't worry about editing the fills; this will be done later.

Reshaping



- Click on Show Bitmap Artwork to hide the image. This makes it easier to see what needs to be reshaped.
- You can also choose to hide the stitches by clicking on Show Stitches. This leaves only outlines around the objects.
- Reactivate Show Stitches.
- To fine-tune the digitized objects, you can use Reshape.
- Select the item you wish to reshape.
- You will notice that symbols appear around the selected shape. These symbols represent the following:
 - ◆ Green Square: Start point of object
 - ◆ Red Cross: End point of object
 - ◆ Yellow Square: Left click
 - ◆ Turquoise Circle: Right click
- When you use Reshape, you can:
 - ◆ Move a digitized point by clicking and dragging on the point.
 - ◆ Add another point by right or left clicking on the outline defining the shape. A left click adds a yellow square reshape point; a right click adds a turquoise circle reshape point.
 - ◆ Delete a point by clicking on the point and pressing Delete.
 - ◆ Change a point by selecting it; then pressing the space bar.
 - ◆ Move the starts and stops.
- Usually when filled shapes are digitized next to one another, a slight overlap is preferred because the fabric pulls when embroidered. Since these shapes are covered up with outline stitches and they are open fills, this is not necessary.
- Reshape any objects that need to be reshaped.
- After reshaping, press Esc.
- Click on Show Bitmap Artwork to bring back the picture.



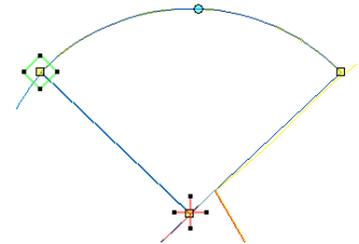
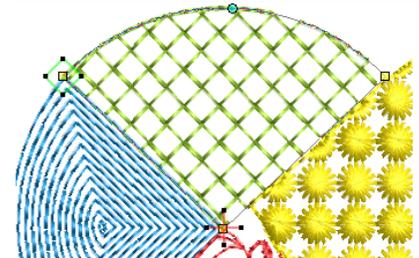
Digitizing with the Open Object Tool



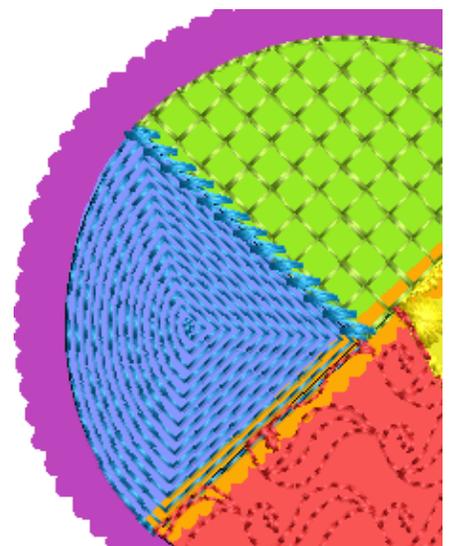
- Straight lines are created with two left clicks, while curved lines are created with right clicks.
- All the lines in the center of the heart will be created with two left clicks.
- Begin with the line in between the lime green and blue section. In the Digitize Toolbox, select the Open Object tool.
- Select a color.
- Select the Stemstitch in the Stitch Toolbar.
- Click along the line with two left clicks and then press Enter to generate the line.
- Remember you can click on Show Stitches to hide the stitches if it makes it easier to digitize the outline.

Notes:

Color	Fill used in sample on previous page
Periwinkle	Ripple
Red	Pattern Fill
Yellow	Candlewicking Fill
Aqua	Ripple
Purple	Blackwork Fill
Green	Cross Stitch Fill



In Reshape mode, pressing the Tab key will take you to the next object that was digitized. Shift + Tab will take you to the previous object.



Using a Pattern Stitch



- To preselect a pattern stitch, right click on the Pattern Run to open Object Properties.
- Click on Select.
- Activate True View by clicking on the red leaf shape in the upper right corner.
- Click on the drop-down Pattern Set arrow and choose Home Dec. Select stitch # 414. Click OK.
- Change the Size and the Spacing to .45"; then Apply.
- Digitize the line between the aqua and green section.
- The colors of the pattern stitches will be changed after they are digitized.
- Choose patterns that are satin stitches or are dense enough to hide the seams between the fills.
- Some suggestions to try include: (see illustration)
 - ◆ Pattern Set: Home Dec: # 405
 - ◆ Pattern Set: BERNINA V5: # NP005-04
 - ◆ Pattern Set: Heirloom: # 711
 - ◆ Remember to select OK; then Apply before you digitize the outline for the pattern stitches.
- For the wide orange line, choose a satin outline from the drop-down choices for the Outline Type. Click OK.
- Click on Show Bitmap Artwork.
- Change the colors as desired and reshape and move the outlines if needed through Reshape. Press Esc when finished.

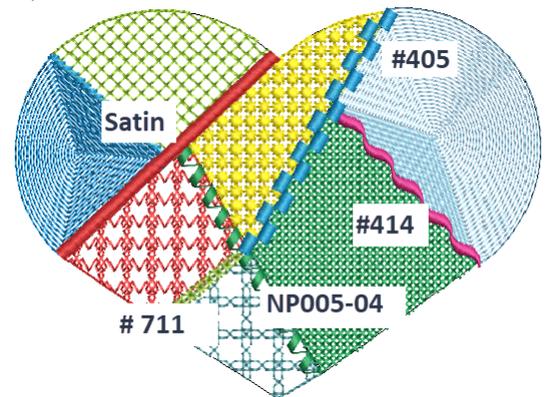


Adding an Outline Around the Heart

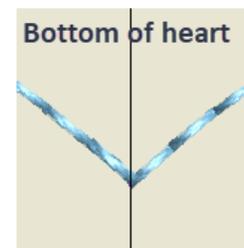
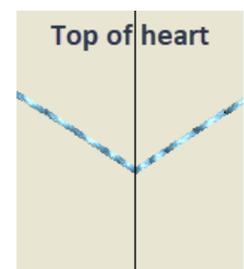
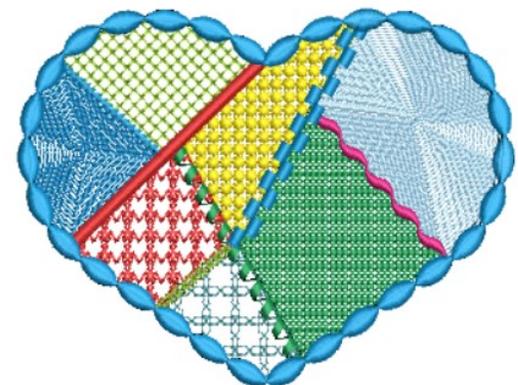


- Select the Single Outline in the Stitch Toolbar.
- Select a contrast color.
- Select the Open Object tool.
- Digitize around one half of the heart along the straight edge and not the scalloped edge border. Press Enter.
- Press Esc. Select the object and Reshape if needed.
- Press Esc.
- Select the outline; select Copy; then Paste.
- Select Mirror X.
- Right click on the outline heart in Color Film and select Hide Others.
- Deselect and select the mirrored copy of the heart.
- Move the copy using the left arrow key on your keyboard to meet the other side of the heart.
- Zoom in to make sure the nodes at the top and bottom meet.
- Reshape if needed; press Esc.
- Select Ctrl + A.
- Click Weld in the Edit Toolbox.
- Right click on the Pattern Run in the Stitch Toolbar.
- Click on Select.
- Click on the drop-down Pattern Set arrow and choose Home Dec.
- Select stitch # 407. Click OK; then OK again.
- Right click on one of the objects in Color Film and select Unhide All.
- Select Design> Optimize Color Changes. Click OK.
- Select Save.

Notes:



Apply keeps the Object Properties dialog box open while OK will close the dialog box.



Optimize Color Changes will combine thread colors that can be combined, creating a more efficient stitch-out.

Quilting Effects



Creating a Quilt Block

- Select New Blank Design.
- Open the Layout Toolbox.
- Click on Define Quilt Block. A dialog box will open.
- Change the Width to 11" with Proportional Scaling in the locked position.
- There should be a check mark by Show Quilt Block. This will give you a visual of the total area of the quilt block.
- Click OK.



Adding Embroidery

- Select Insert Embroidery.
- Navigate to Libraries> Embroidery> BERNINA 9 Embroidery> Decorative Accents.
- Open HT102.
- In the Transform Toolbar, change the % of the Width to 90%. Press Enter.
- While the design is selected, select Rotate Left three times to rotate the design so it is oriented to the left corner.
- The Quilt Block layout uses the lower left corner as a reference to place designs around the layout.
- Right click on Show Hoop.
- Select BERNINA 8 Series> BERNINA Jumbo Hoop, 256 x 400. Click OK.



Creating the Corner Layout

- With the design selected, click on Layout to Rectangular Quilt Block Corners to set the corner designs.
- You can set the distance the corner designs are set from the quilt block edges by changing the distance in the Work Area Margin box.
- Click on the drop-down arrow and select the distance.
- Choose 35 mm.
- There is an outlined preview of the positioning of the design.
- Click on the design screen to set the design around the corners or press Enter.



Adding a Center Design & Resizing

- Select Insert Embroidery. Open HT105.
- Click on Open.
- The design is centered in the quilt block.
- Zoom into a corner.
- While the center design is selected, hold the Shift key down and resize using a corner control handle by dragging toward the center of the hoop.
- Zoom in on one of the corners of the inserted design for accuracy.
- Release the mouse when the tip of the second design intersects with the base of the corner design.

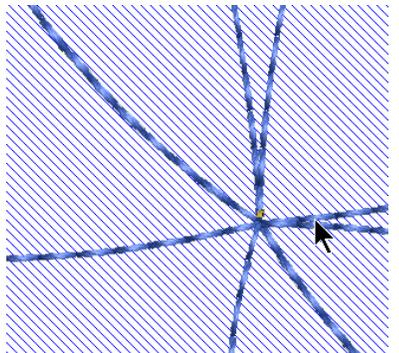
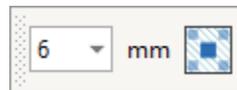


Notes:

Lesson covers:

- ◆ Defining Quilt Blocks
- ◆ Quilting Backgrounds
- ◆ Blackwork Run

If the desired number is not listed in the Work Area Margin Box, type the desired amount in the dialog box; press Enter to activate the number; then click on the design screen to set the designs.

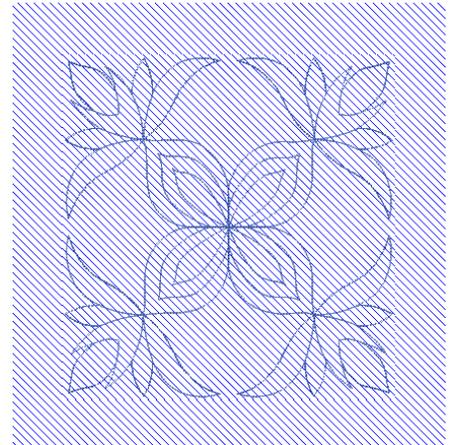


Holding the Shift key resizes a design from the center of the design.

Blackwork Run



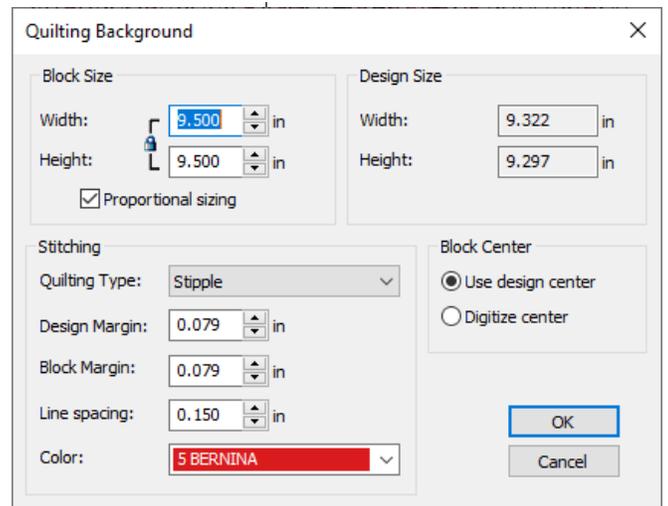
- Select Ctrl + A.
- In the Edit Toolbox, select Blackwork Run.
- Click in the center of the design to apply Blackwork Run. The design will start and stop from this point.
- Blackwork Run eliminated the jump stitches in the design and the design will stitch a double run outline.



Adding a Quilting Background



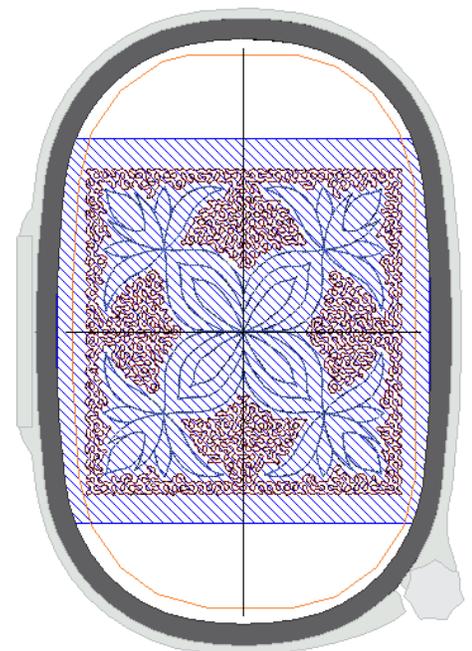
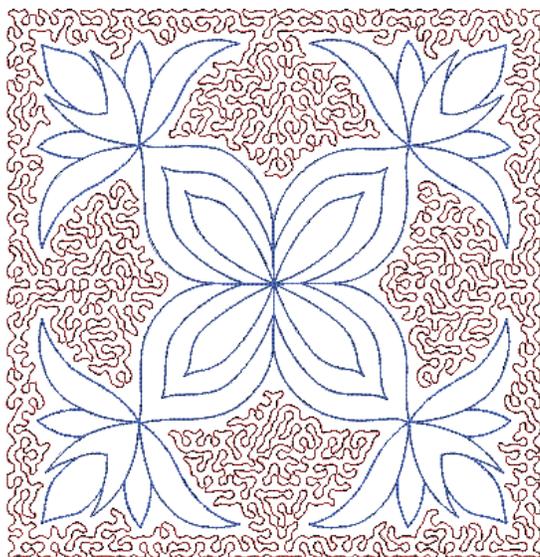
- Select Quilting Background in the Edit Toolbox.
- Change the block size to 9.5". This will keep the stippling within the boundaries of the Jumbo Hoop.
- Proportional Scaling is locked by default.
- Select Stipple for the Quilting Type.
- Change the Design Margin to .079".
- Change the Block Margin to .079".
- Change the Line Spacing to .15".
- Select a Color.
- Click OK.



Deactivating Show Quilt Block



- Click on Show Quilt Block to deactivate the quilt block visual.
- Save the design as Quilting Effects.



Advanced Appliqué

Setting Up the Background for Digitizing



- Click on New Blank Design.
- Select Insert Artwork.
- Navigate to Libraries> Pictures> BERNINA 9 Pictures> Artwork.
- Select the WMF folder. Locate Elephant.wmf. Open the picture. Deselect.

Open Object Digitizing



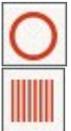
- Objects must be digitized from background to foreground.
- Select the Open Object Tool from the Digitize Toolbox.
- Right click on the Stemstitch Outline in the Stitch Toolbar.
- - ◆ Change the Spacing to 1 mm.
 - ◆ Change the Angle to 65 degrees. Click OK.
- Select Color 14 in the Color Palette Toolbar.
- Zoom in for accuracy.
- Using right and left clicks, digitize around the elephant's ears, beginning and ending at the edges that connect with the face.
- Press Enter to activate the shape. Repeat for the opposite ear.
- Using right and left clicks, digitize around the elephant's face, beginning and ending at the edge of trunk.
- Press Enter to activate.
- Press Esc.

Closed Object Digitizing



- Select the Closed Object tool.
- Select the Stemstitch Outline.
- Using right and left clicks, digitize around the elephant's trunk.
- Press Enter to enclose the object. Press Esc.
- Double click on the trunk to open Object Properties.
- Change the Angle to 90 degrees. Click OK.
- Press Esc.

Add the Eyes



- Select the Ellipse icon in the Digitize Toolbox.
- Select the Satin Fill from the Stitch Toolbar.
- Select Color 13.
- Digitize one eye using two left clicks and press Enter to activate. Place your first click in the center of the eye and drag to the desired circumference of the circle, click again, and press Enter.
- Press Esc; then right click on the eye and drag a quick clone and place over the other eye.



- Click on Show Bitmap Artwork to hide the picture.
- If you need to reshape any of your lines, now is the time to reshape because Advanced Appliqué objects cannot be reshaped.

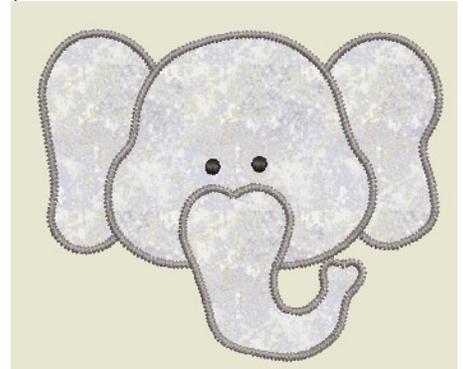


- Select the object you wish to reshape; select Reshape; move, add, delete, change control points as needed; then press Esc.

Notes:

Lesson covers:

- ◆ **Advanced Appliqué**
- ◆ **Open Object digitizing**



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 single, zigzag, satin + blanket.

Backspace will erase one click at a time.

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 parts that will be on top of it.

You must create all your edits before applying Advanced Applique because you cannot reshape Advanced Applique.

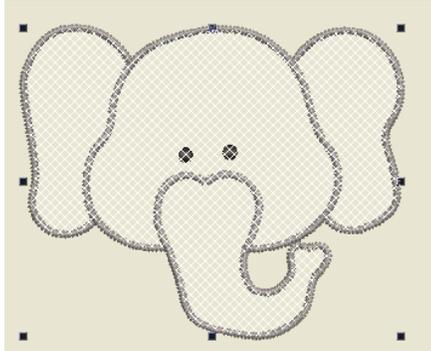
Reshape:

- ◆ *To move, select the node; click and drag the node.*
- ◆ *To change to the opposite node type, select the node; press the space bar.*
- ◆ *To add, right or left click on the object's outline.*
- ◆ *To delete, select the node; press the Delete key.*

Applying Advanced Appliqué



- Select the gray color chip in Color Film.
- In the Applique Toolbox, click on Advanced Appliqué.
- The Applique Properties dialog box will open.
- White hatch marks should appear inside all parts of the elephant.
- See Notes at the right if they do not.



Adding Fabrics to Advanced Appliqué

- Once your elephant is covered with the white hatch marks, click on Place Fabric and Color in Patches in Applique Properties.
 - ◆ Click on the + sign in front of Benartex to open up the folder options.
 - ◆ Click on the + sign in front of Apple Butter.
 - ◆ If you rest your mouse on a fabric chip, the number will be displayed.
 - ◆ Select 568-4 (second color chip, sixth row).
 - ◆ Click on each part of the elephant to add the fabric.

Merging Fabrics

- Select Back at the bottom of the dialog box.
- Select Merge Patches Together.
- Click on the left ear and then the face to merge them; then click on the face and the right ear to merge those pieces; then click on the face and the trunk to merge the entire elephant.
- Click on Back.
- Select Close at the bottom of the dialog box.
- Click on Show Appliqué Fabrics to show the fabric.



Printing Appliqué Patterns



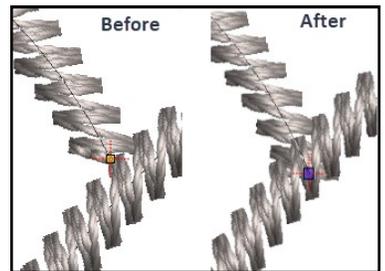
- Select Print Preview.
- Click on Options.
- Make sure there is a check mark in front of Applique patterns.
- Click OK in Print Options.
- Click on Next Page if needed to find the Applique Pattern.
- This page can be used to print a pattern that can be used if you wish to “scissor cut” your appliqué.
- Click Close to close the Print Preview.
- Select File> Save As and name the file Advanced Appliqué.
- Close the file.

Notes:

If the white hatch marks do not appear in each part of the elephant, you must Reshape so that all lines overlap sufficiently.

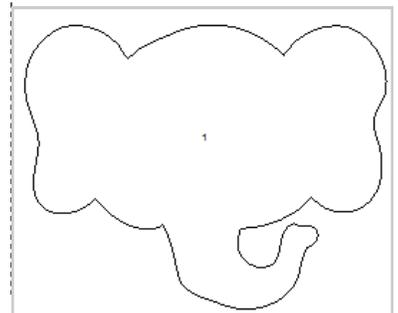
First select “Recover your original embroidery objects” from the Appliqué Properties dialog box. This will remove the advanced appliqué and you can reshape the individual objects of the design.

Select the object to reshape; then click on Reshape to create more overlap of stitches. Check all overlaps. See below.



Press Esc, and re-apply Advanced Applique by selecting the grey color chip in Color Film and then clicking on the Advanced Appliqué icon. Repeat reshape if needed.

Merging fabrics lets you cut out larger pieces for the appliqué. You can only merge adjoining fabric patches that have the same color of fabric.



Combine Applique



Open the Design

- Click on Open.
- Navigate to the location of the saved file from the Creator class called Applique.
- Select it; click on Open.



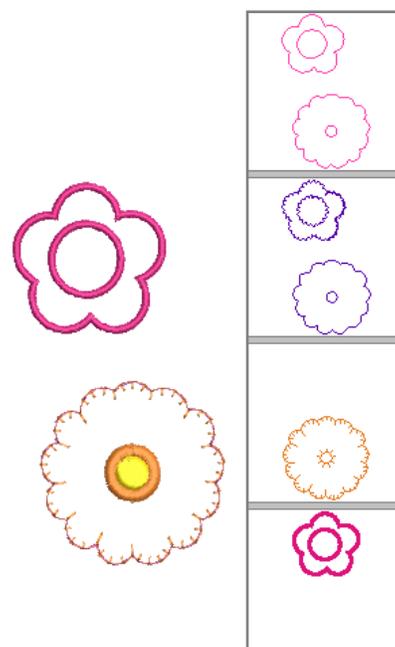
Combining Applique

- Make sure Show Objects in Color Film is deactivated.
- Hold the Ctrl key and select the blanket stitch applique and the scalloped petal and flower center in Color Film.
- Click on Combine Applique.
- Click OK in the dialog box that opens since you have already saved the design.
- Placement lines for all applique objects are stitched in a single pass; then tackdown stitches will stitch and finally the cover.
- The fabric is no longer visible because the software does not see this as an applique.
- Save the file as Combined Applique.
- If you open Object Properties, you can no longer access the Applique properties. This is why it is best to save the file before combining.



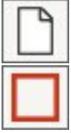
Combine Applique is enabled when two or more appliques are selected. The selected objects are broken apart and the different components are combined for an efficient stitch out. It is recommended to save the applique first before combining. Then it can be saved again as a Combined Applique.

Non-applique items cannot be included in the selection.



Special Effects

Open a New File



- Select New Blank Design.
- In the Digitize Toolbox, select the Rectangle Tool.
- Click and drag from upper left to lower right. Click again to form a rectangle.
- Press Esc.
- Select the rectangle.
- In the Transform Toolbar, unlock Proportional Scaling.
- Change the Width to 2.75" and the Height to 5". Press Enter.
- Select the rectangle.
- Select Array in the Mirror-Merge Toolbox.
- Change the Columns to 5 and the Rows to 2.
- Drag on screen and click to set the rectangles when there is no overlap of rectangles.
- Click on Show Hoop to hide the hoop.



3D Globe Effect



- Select the first rectangle.
- Right click on Pattern Fill in the Stitch Toolbar.
- Click on Select.
- In the Heirloom Pattern Set, select 738. Click OK; then OK again.
- Click on 3D Globe.
- Click on Reshape.
- Click and drag on the control points around the circle to reshape the globe as desired.
- Press Esc.



Textured Edge



- Select the second rectangle.
- Click on Satin Outline.
- Right click on the Textured Edge icon.
- Place a check mark in the box by Textured Edge.
- Click the Both Sides icon (the Side icon in the middle).
- Drag the sliders to set the Texture and Span as desired.
- Click OK.

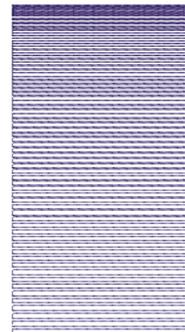
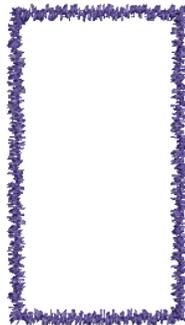
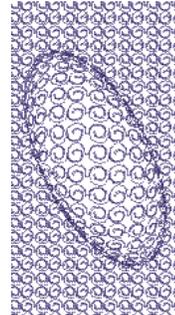
Gradient Fill

- Select the third rectangle.
- Double click to open Object Properties.
- In the Stitch Angle tab, change the Stitch angle to 0 degrees. Press Apply.
- Click on Effects in the lower left corner of Object Properties.
- Choose the Gradient Fill tab.
- Place a check mark by Gradient Fill.
- Choose one of the four profiles.
- Change the Maximum Spacing to 3 mm.
- Click OK.

Notes:

Lesson covers:

- ◆ 3D Globe Effect
- ◆ Textured Edge
- ◆ Gradient Fill
- ◆ Star Effect
- ◆ Wave Effect
- ◆ Carving Stamps
- ◆ Alternating Patterns
- ◆ Elastic Fancy Fill
- ◆ Morphing

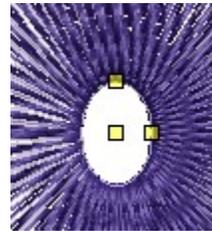


The profiles determine how the gradient generates in the object.

Star Fill Effect



- Select the fourth rectangle.
- Right click on the Star Fill effect.
- Place a check mark in front of Star Fill.
- Change the Hole Width to 5 mm and the Hole Height to 7 mm.
- Click Apply.
- Click on the Properties bar at the left corner of the Effects dialog box.
- In the Fill Stitch tab, change the Stitch Spacing to 1.5 mm.
- Click Apply.
- Click on the Effects bar at the left corner of the Object Properties dialog box.
- Select the Underlay tab. Uncheck Underlay 1. Click Apply.
- Select the Others tab. Check Travel on Edges. Click OK.
- While the rectangle is still selected, select Reshape.
- Zoom into the hole.
- Select the center yellow square.
- Click and drag it to a new location.
- Press Esc.



Wave Fill Effect

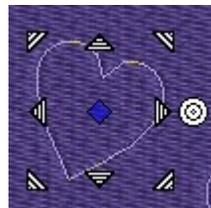


- Select the fifth rectangle.
- Right click on Wave Fill.
- Place a check mark by Wave Fill. Click OK.
- Click on the Lacework Fill icon.
- Select Reshape.
- Move the control points by clicking and dragging on the control points. You may also add a control point by clicking on the reshape line.
- Press Esc.

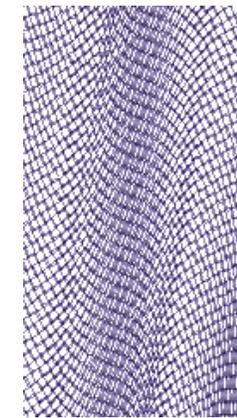
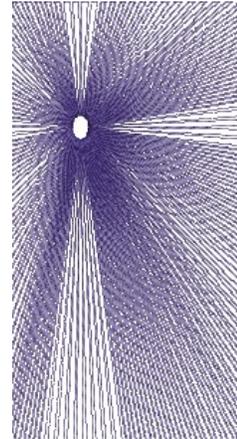
Carving Stamp



- Select the sixth rectangle.
- Make sure you are in Artistic View. Select T on the keyboard if you are not in Artistic View.
- If the Carving Stamp docker is not open, click on Carving Stamp.
- Select the Use Pattern tab.
- In the Pattern Set drop-down, select Carving Stamps category.
- Scroll to find the heart; select it.
- Click on Use Stamp under the preview screen.
- Set the stamp on the rectangle using two left clicks. The stamp can be rotated by moving your mouse before clicking for the second time.
- The stamp can be resized by holding the Shift key as you set the two clicks. Press Esc.
- Select the rectangle. Click on Reshape.
- Change the angle of the rectangle to 0 degrees by clicking and dragging on a peach square until the angle reads 0 degrees.
- You can also reshape the stamps by moving, resizing, or rotating.
- Select the stamp to access the reshape options.
- Experiment with each of these controls.
- Press Esc.



Notes:



If the software cannot adjust to the way the fill was reshaped, it will revert back to the default wave pattern.



Alternating Patterns



- Select the seventh rectangle.
- Right click on the Pattern Fill icon.
- Click on Select.
- In the Heirloom Pattern Set, select # 717.
- Click OK; then Apply.
- Place a check mark by Alternate Pattern in Object Properties.
- Click on Select by Alternate Pattern.
- From the Pattern Set, select Bernina V5.
- Select NP005-01.
- Click OK.
- Change the Row Spacing to .250”.
- Click OK.

Color Blending



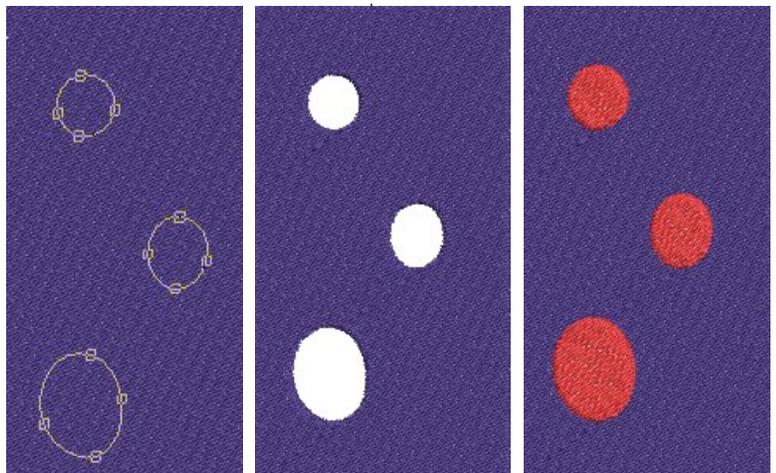
- Select the eighth rectangle.
- In the Edit Toolbox, select Color Blending.
- Choose a Profile.
- Choose a color for the Bottom layer and a contrast color for the Top layer. You may also change the spacing for each layer.
- Click OK to activate.
- If you want to change anything, click Undo.
- Repeat the steps to create another color-blended object.



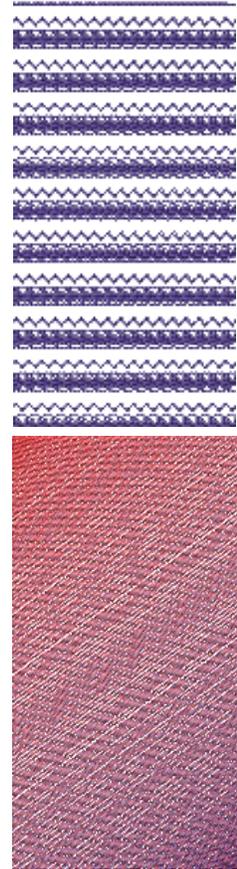
Add Holes



- Select the ninth rectangle.
- In the Edit Toolbox, click on Add Holes.
- Create holes by clicking within the object. Draw circles by right clicking at 12:00, 3:00, 6:00, and 9:00. Press Enter to close each circle.
- When you are done creating the holes, press Enter again to cut the holes.
- To fill the holes, select the object.
- Click on Fill Holes in the Edit Toolbox.
- A dialog box opens if you wish to change the default underlap for the objects. The default value is 0.039”.
- Click OK.
- The holes are filled with the same color.
- Select one of the holes; then using the Ctrl key, select the remaining holes. Change the color to a contrast color.
- They can be moved in Color Film to stitch before the object with the holes, if desired.
- Press Esc.



Notes:



Holes can be added on the edge of shapes as well by digitizing a shape off the edge.

Knife

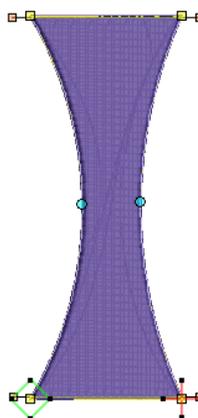


- Select the Knife tool in the Edit Toolbox.
- Click above the tenth rectangle so that you will be cutting it roughly into 1/3 + 2/3 sections.
- Hold the Ctrl key and move the mouse to the lower part of the rectangle. Click again.
- Press Enter to cut the rectangle. Press Esc.
- Select the right rectangle and use the arrow key to move the rectangle to the right, separating the two.

Elastic Fancy Fill



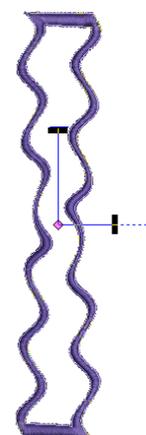
- Change the larger shape to a Satin Fill.
- Click on Reshape.
- The angle should be 0 degrees.
- Add a right click in the middle of each long side of the rectangle.
- Move the control points to form a shape as shown on the right.
- Press Esc.
- Reselect the object.
- Right click on the Elastic Fancy Fill icon.
- Place a check mark by Elastic Fancy Fill.
- Place a dot in front of Single Row, with scaling, located under the preview window. Click OK.



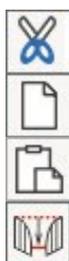
Morphing



- Select the remaining narrow rectangle.
- Select the Satin Outline icon.
- If the Morphing Docker is not open, select the Morphing icon in the General Toolbar.
- Select the Ripple icon.
- Click and drag on the Amplitude and the Frequency sliders to distort the line.
- Press Esc to deactivate.
- Save the file as Special Effects.
- The designs will need to be split for stitching.



Note: If you wish to stitch this file, separate it into three separate files for stitching.



- ◆ Hold the Ctrl key and select the first two rectangles in the top row and the two rectangles below these. Select Cut.
- ◆ Open a New Blank Design and select Paste.
- ◆ Select Ctrl + A.
- ◆ Click on Apply Closest Join in the Edit Toolbox.
- ◆ Save the file as Special Effects 1.
- ◆ Repeat the steps for the next four rectangles. Save as Special Effects 2.
- ◆ Save the last file as Special Effects 3 after selecting the objects and clicking on Apply Closest Join.

Notes:



Apply Closest Join will rearrange the jump stitches in a design so that the jump stitches are shorter in between objects. It does not change the starts and stops of the first object; the starts and stops will change with subsequent objects.