Mastering Your BERNINA

CutWork Software V.1

Owner's Workbook

CutWork Table of Contents

Introduction

Congratulations on your purchase of BERNINA® CutWork Software V.1!

This workbook is designed to be used in conjunction with the Owners classes you will take at your BERNINA® dealership, and contains a series of exercises intended to familiarize you with the features of your new BERNINA® CutWork Software, V.1.

Once you have completed the exercises designated for your BERNINA® CutWork software V.1, print or stitch them as homework. Attach the printed or sewn samples to the indicated workbook pages and insert the pages into plastic page protectors and store them in a 3-ring binder. Your Mastering Your BERNINA® CutWork Software Workbook can then be used as a reference tool in the future.

BERNINA® of America, Inc. strives to provide its customers with quality sewing machines and software, and informative publications and classes as well. Along with providing Owners Classes, your local BERNINA® dealer stocks BERNINA® books / magazines, such as *Through The Needle* and *Feet-ures*. Plus, BERNINA® of America, Inc. has a website www.berninausa.com - offering free projects, basic sewing information, a glossary of sewing terms, inspirational stories, interviews with creative stitchers, and a variety of articles and posting that appeal to all types of stitchers, no matter which machines are their favorites!

Be sure to register your
BERNINA® CutWork Software.

My BERNINA® CutWork Software, V.1

My dongle serial number is:_____

I purchased my software on:_____(date)

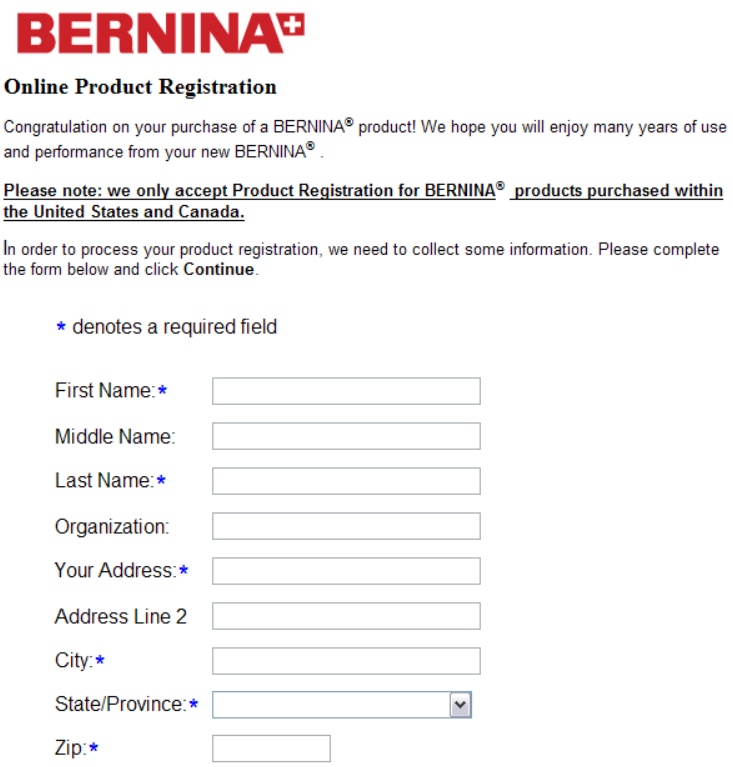
At_____

_____

Product Registration

To register your BERNINA® Embroidery Software - - -

- Go to www.berninausa.com)
- Click on Product Registration
- Fill out registration form



Online Product Registration

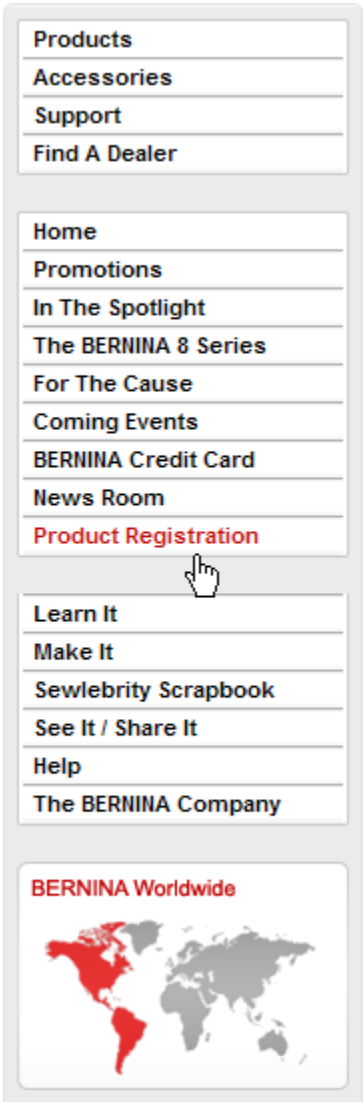
Congratulation on your purchase of a BERNINA® product! We hope you will enjoy many years of use and performance from your new BERNINA® .

Please note: we only accept Product Registration for BERNINA® products purchased within the United States and Canada.

In order to process your product registration, we need to collect some information. Please complete the form below and click **Continue**.

* denotes a required field

First Name:*
Middle Name:
Last Name:*
Organization:
Your Address:*
Address Line 2
City:*
State/Province:*
Zip:*



Getting Started

Class Overview

Setting up the Computer
- Review of Computer Requirements for proper software operation
- Setting Your Options
- Setting Your Monitor
- Setting the Measurement System
- Changing the Icon Size

Things to Know
- Overview of Features
- Workspace Tour
- Icon Cheat Sheet
- Selection Methods
- Screen View

Software Exercises:
These exercises will teach use of the tools and features of the CutWork software. Special information and notes are included with the exercises.

The Help Menu provides an easy way to read additional information about the tools and features of the software. Click on the Help icon; then click on the screen to access information about any icon on the screen.

In addition, you can go to Help > Help Topics and find a table of contents, an index, and a search function. Click on the Search tab and type in the topic. All information related to that topic will be displayed.

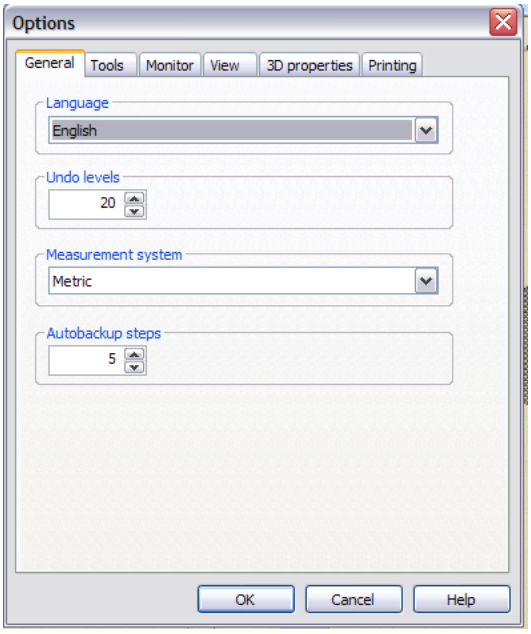
To find out what version of software you have, click on Help > About Bernina CutWork.

Review of System Requirements

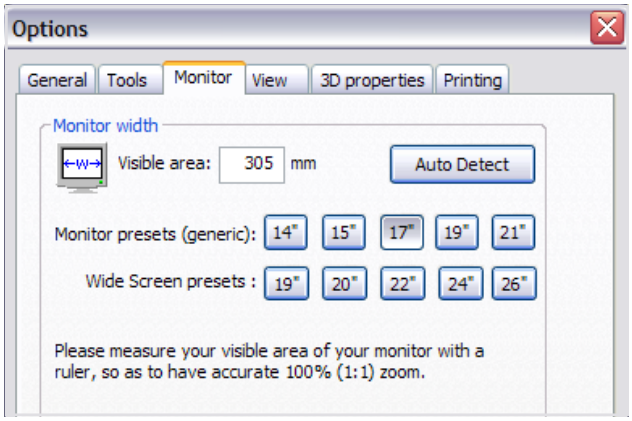
- CPU: Minimum 1.5 GHz Intel or AMD 32-bit (x 86) processor
- RAM 512 MB (for Windows XP) or 1 GB (for Windows Vista)
- Hard Disk: 800 MB of free uncompressed space
- DVD/CD-ROM
- Graphics card: Minimum 3D AGP accelerator with Direct X9 0c, 32 bit color, and at least 64 MB of RAM
- Monitor Resolution: 1024 x 768
- Ports: Available 2 USB ports for USB security key and data transfer
- Mouse

Setting Your Options

Setting your Options
Go to *Tools* > *Options*.
You will find different tabs available to customize the software.

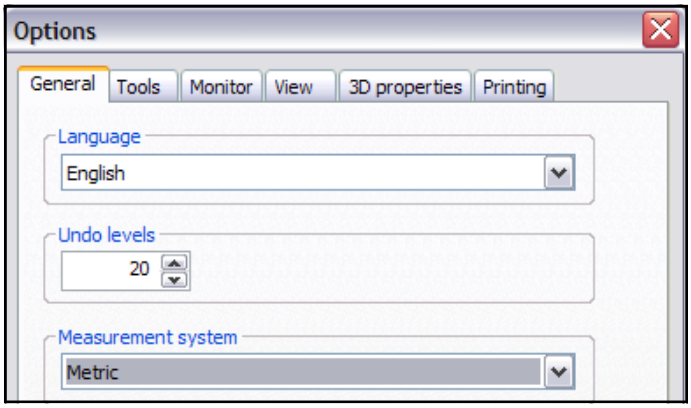


Setting Monitor Size
Select the Monitor tab. Set the exact size of your monitor so that you can view the design in actual size with the 100% zoom preset.

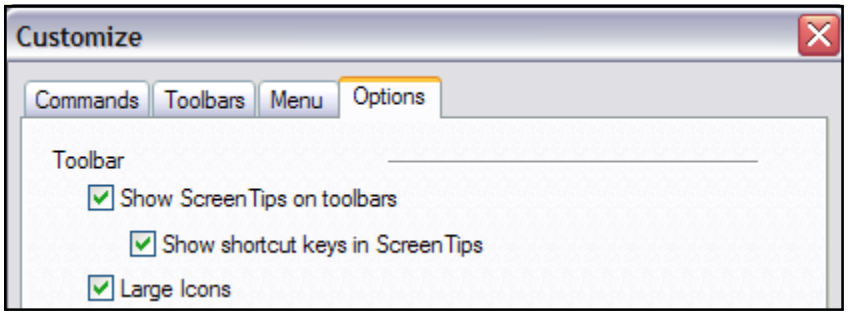


Setting the Measurement System
To change the measurement system in the software, go to *Tools* > *Options* > *General.* Click on the drop down arrow and select either Metric or United States. Click on OK.

The rulers will not update until you hide them and then unhide them.



Changing the Size of the Icons
To change the size of the icons on the screen, go to *View* > *Toolbars* > *Customize*. Click on the *Options* tab and place a check mark in front of *Large icons*.



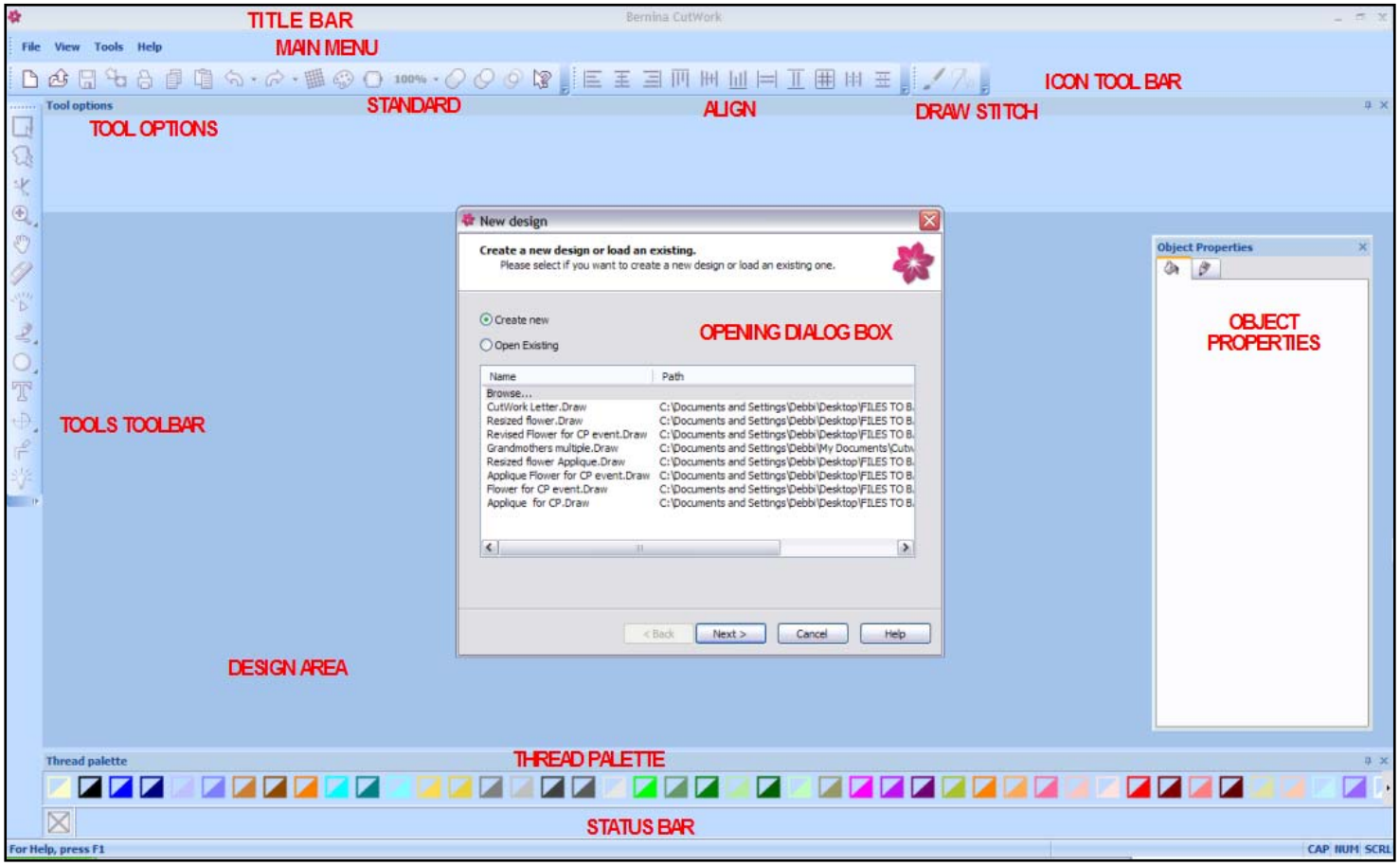
For more option set-up information
There are many other options that you can set up in the software.
In the Help Manual, go to Chapter 12 to find out more about the options.
Go to *Help* > *Help Topics*.
Click on *Contents* tab.
Open Settings.
Select Options.
Use the Next Page icon to read through this section.

Things to Know

Overview of Features
Bernina CutWork is an embroidery software that converts vector and bitmap images to outline embroidery and/or cutwork designs. It allows you to create outline stitches from images, add cutwork to existing embroidery designs, scan your own images or use a webcam to create outline designs and cutwork, create appliqué designs, or create your own designs with built-in drawing tools. You can use the CutWork tool with your BERNINA Embroidery system to create beautiful cutwork designs or to quickly cut intricate appliqué and quilt block shapes.

Open your BERNINA® CutWork Software, V.1.

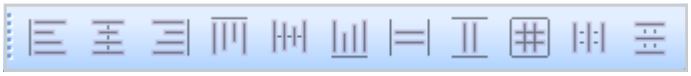
Workspace Tour
Below the CutWork screen is pictured.
The **Title bar** is located at the top of the window. The **Main Menu bar** consists of several menus and menu commands. The **Icon tool bar** consists of several shortcuts to dialog boxes or actions. By pausing your mouse on the icon, a popup appears to provide information about the icon.



Workspace Tour

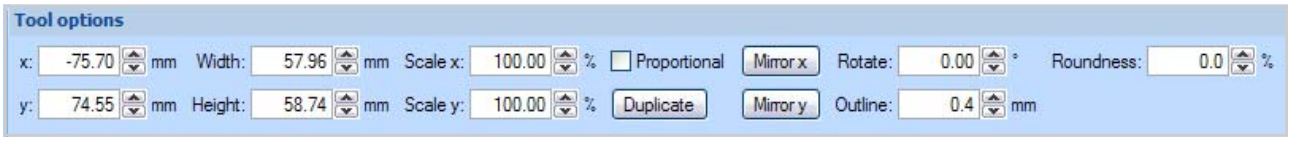
The **Standard Toolbar** is comprised of familiar functions—new design, open design, save design, copy, and paste. There are also zoom presets, shaping tools, fabric, hoop, color, and help icons in this toolbar.

The **Align Toolbar** contains aligning, distributing, and auto-sizing tools.



The **Draw-Stitch bar** can be used to select the working mode. The Draw mode is for creating and editing artwork and the Stitch mode is used to convert the artwork to stitches and make color adjustments. The software opens in the Draw mode.

The **Tool options** will change according to what tool is selected. You can change the properties of the selected object using options in this toolbar.



The **Tools toolbar** has shortcuts for viewing and designing and is located along the left side of the screen. Some of the tools have hidden tools. You can rest your cursor on the lower right hand triangle and the hidden tools will appear. Drag your mouse to select a hidden tool.

The **Design area** is the large area for creating and editing designs. You can have multiple designs open in the software; each will have its own design areas. Along the top of the design area, tabs will appear for each design. By pressing the appropriate tab, you can select the design you want to be visible. The active design is indicated by an asterisk next to the title.

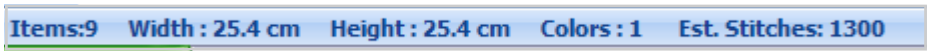
Context menus are pop up menus that appear when right clicking an area within the design area. The available options on this menu vary depending upon the item selected and which is the active tool.

At the bottom of the screen, you will find the **Thread Palette bar.** Here, you can select and set the colors of the design. The top palette shows the available colors and the bottom palette shows the colors used in the design.

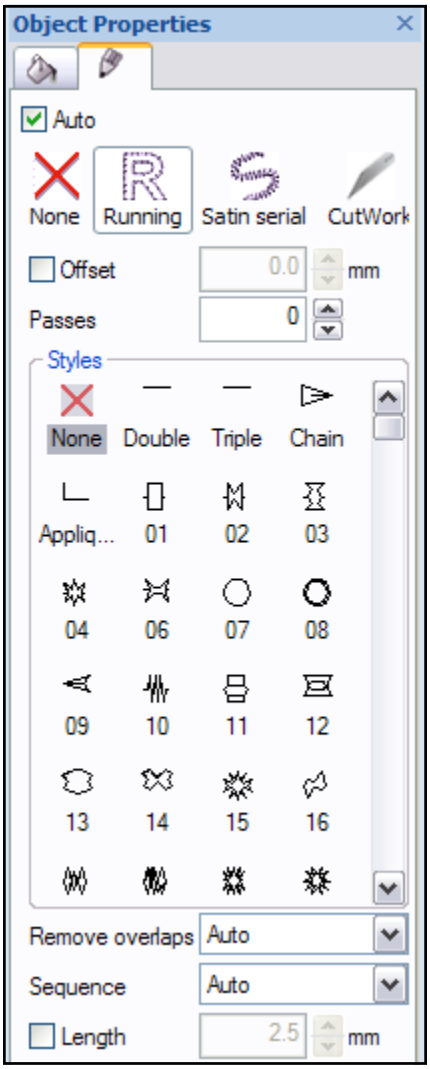
If any of these options or toolbars are not visible, go to *View* > *Toolbars* and make sure there is a check mark in front of any bar that is missing.

Workspace Tour

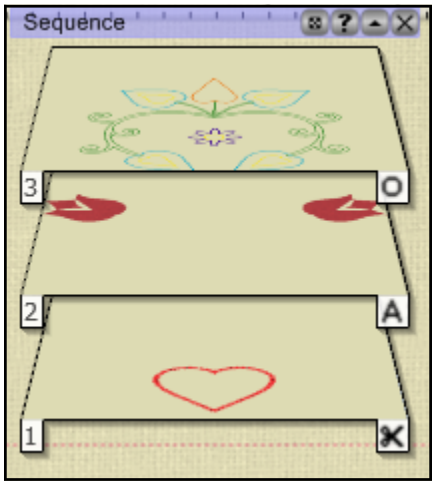
The **Status bar** displays information about selected objects—width, height, number of stitches and colors.



The **Object Properties** dialog box consists of two tabs—fill and outline. You can change the stitch type of the design through Object Properties. Each stitch type has a different set of parameters that can be changed as well. Parts of the design must be selected before changes can be made to that part of the design.



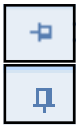
The **Sequence Manager** illustrates the embroidery sequence. Each layer of the sequence manager shows the type of objects along the right hand side of the layer. An “O” indicates embroidery outlines, an “A” indicates an appliqué, and a scissor symbol indicates a cutwork. Numbers on the left side indicate the sequence. The sequence manager provides a quick way to select objects. By clicking on a layer, the objects appearing in that layer are selected. You can quickly re-sequence a design by clicking on a layer and dragging it to a new location.



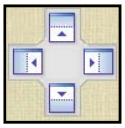
Customizing the Workspace
The dialog boxes are docked by default, but can also be floated to customize your screen. You can move, resize, dock, and auto hide most of the components of the screen.

To **undock** a dialog box, click and drag on the title bar to its new location. To **re-dock** the title bar, double click on the title bar and it will dock to its last position. To **move** a dialog box, click on the title bar and move it to its new position. To **resize** the dialog boxes, rest the cursor on the border of the dialog box until the double pointed arrow shows and drag to its new size.

To **close** the dialog box, click on the “x” in the upper right corner. To **re-open** the dialog box, go to the *View > Toolbar* menu. Set the dialog box to **auto hide** by clicking on the push pin symbol so that it is on its side. This will allow the dialog box to disappear when not in use. By clicking on the push pin symbol, it changes to an upright position and the dialog box will remain open.



You can dock windows by using **docking guides**. These become visible when a dialog box is moved. Simply click on the title bar and drag it to one of the arrow positions. A shaded area appears to show you how where the dialog box will be located. When you release the mouse, the dialog box will appear in the new location.



Icon Cheat Sheet


New: Create a new document


Open: Open an existing document


Save: Save the active document


Export: Send to BERNINA CutWork


Print: Send current design to printer


Copy: Copy the selection & send to clipboard


Paste: Paste the contents of the clipboard

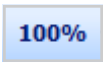

Undo: Undo the last action


Redo: Redo the previously undone action


Select Fabric: Change the fabric options


Edit Palette: Manage color options


Manage Hoop Options: Change the hoop



Zoom Presets


Weld: Weld Shapes


Trim: Trim Shapes


Intersect: Intersect Shapes


Help


Align Left


Align Centers Vertically


Align Right


Align Top


Align Centers Horizontally


Align Bottom


Make Same Width


Make Same Height


Make Same Size


Equal Horizontal Spacing


Equal Vertical Spacing


Draw Mode


Stitch Mode


Rectangle Selection


Lasso Selection


Edit Shape Nodes: Edit nodes


Zoom In: Magnifies the design view


Zoom Previous: Zooms to previous zoom state


Zoom All: Magnifies the view to fit the window


Pan: Moves the view area of the design


Measures: Measures a line


Slow Redraw:


Create Freehand Shapes


Create Bezier Shapes


Create Outline Shapes

Icon Cheat Sheet


Create Rectangle


Create Ellipse


Create Pie


Create Star Shape


Create Trapezoid/Parallelogram


Create Polygon

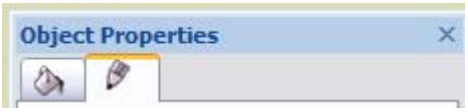

Edit Text


Create Rectangular Array


Create Circular Array


Auto Border & Cut

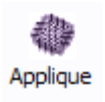

Enable Auto Sequencing



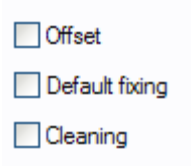
Object Properties


Fill Tab


Outline Tab

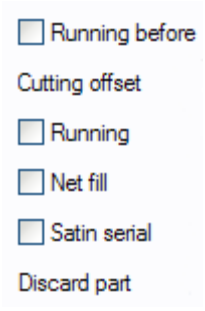


Appliqué Fill



Appliqué Fill Properties

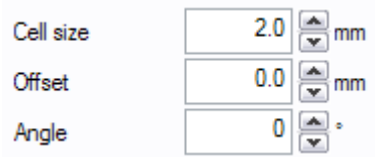
CutWork



CutWork Properties

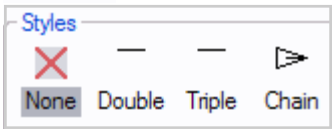
Cutting Offset

Net Fill

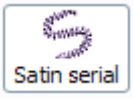


Net Fill Properties

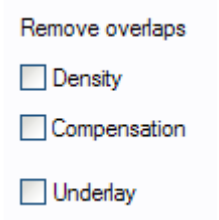
Running Outline



Running Styles



Satin Serial

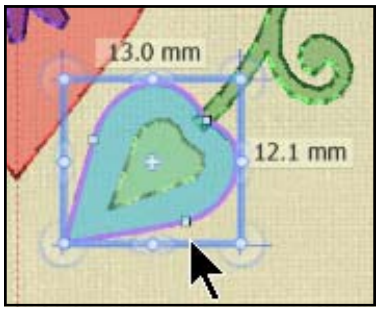


Satin Serial Properties

Selection Methods

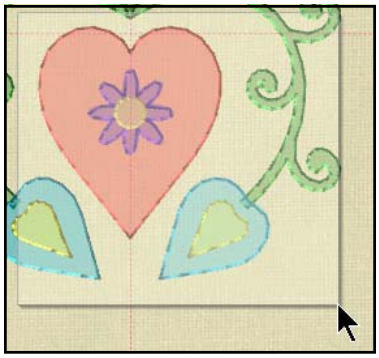
To make changes in a design or to part of a design, it must be selected. There are many ways to select objects in BERNINA CutWork software.

Selection with a Mouse
By selecting the *Rectangle Selection* icon and then clicking on the outline of the object with your mouse, you can select that object. A selection rectangle shows the current selected object. The dimensions of the selection rectangle will also appear on each side of the rectangle.



Selecting Multiple Objects
Select the *Rectangle Selection* icon and hold down the *Shift* key and click on the outline of each object you wish to select.

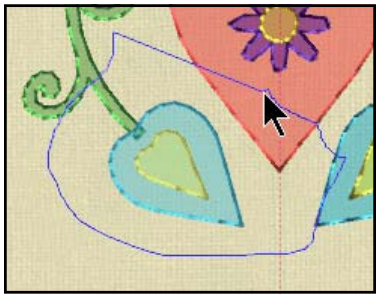
Click and Drag
By selecting the *Rectangle Selection* icon and clicking and dragging an area of the design, objects will be selected within the drawn box. Objects outside the drawn area will not be selected; all objects completely within the drawn rectangle will be selected.



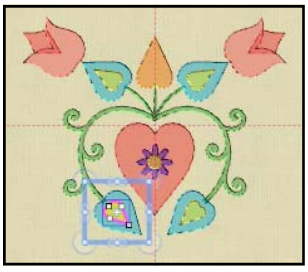
Large and Irregular Shapes
To select large and irregular shapes, hold down the *Alt* key and drag the *Selection Rectangle* over just a small portion of the design.

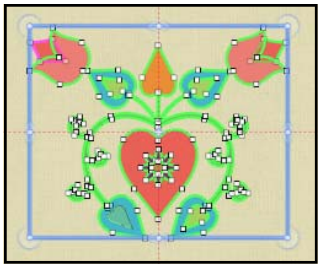
Note: If the Rectangle Selection tool is your default selection tool, you can select it by pressing the space bar on your keyboard. To change the default selection tool, go to *Tools* > *Options* and select the *Tools* tab.

Lasso Selection Tool
You can select the *Lasso Selection* Tool and click on an object to select it or you can draw a freehand selection line around the object. All of the objects completely within this area will be selected.



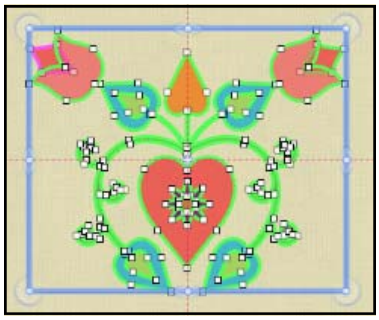
Edit > Invert Selection
This option will select all unselected objects. It is activated within the *Edit* menu. Sometimes it is easier to select just a small portion of the design and use this option to select the larger portion of the design.



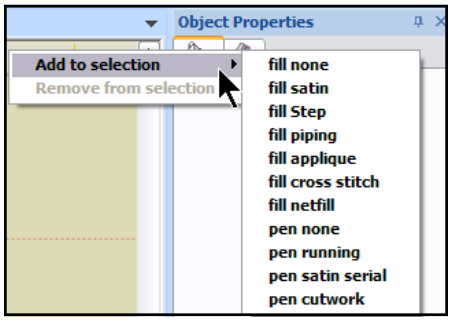


Selection Methods

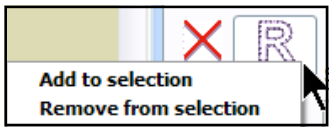
Select All
Go to *Edit > Select All* or use the *Shortcut key Ctrl + A*. This will select all objects in the design.



Select by Stitch Type
You can make selections by stitch type by right clicking on the *Fill tab or Outline* tab. Add to your selection all embroidery objects of a specific type. Any adjustments will be made to all objects of that particular stitch type.



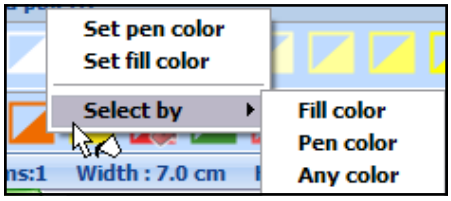
You can also remove a type from your selection following this same procedure, but select *Remove from Selection*.



By right clicking on the stitch type within Object Properties, you can also choose to add or remove from the selection.

Select by Stitching Order
Ctrl + Home: Selects the first object of the design.
Ctrl + End: Selects the last object of the design.
Tab: Selects the next object of the design. Each time the tab key is pressed, the next object will be selected.
Shift + Tab: The previous object is selected. Each time the Shift + Tab key is selected, the previous object will be selected.

Select by Color
You can select objects by color through the *Thread Palette* Toolbar. You can select object by Fill color, by Outline color, or by Any color. Right click on the color you want from those that are used in your design. Expand the Select By menu and select one of the three available options. *Fill color* will select all the objects that have the fill color you selected; *Pen color* will select all the objects that have the outline color you selected; and *Any color* selects objects that have the fill or pen color you selected. Any change you make affects all of these objects.



Sequence Manager
By clicking on the layer of the *Sequence Manager*, all objects in that layer will be selected.

Deselect
Click outside the design area on the blank fabric background.

Screen View

There are many ways to view designs in BERNINA CutWork software. In the *View* menu, you have choices to activate Outline Design, 3D view, Stitches, Stitch points, or combinations. If you are not seeing something that you think you should see, remember to check to see what is activated in the View menu.

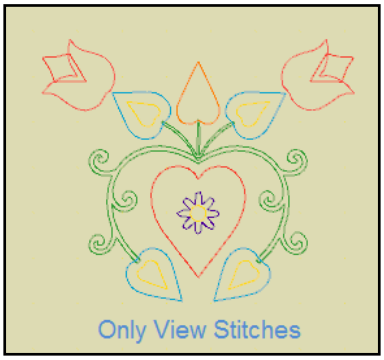
When the **Outline Design** is the only item checked in the View menu, you will only see blocks of color in the design. This view is useful when you wish to change the vector artwork of the design.

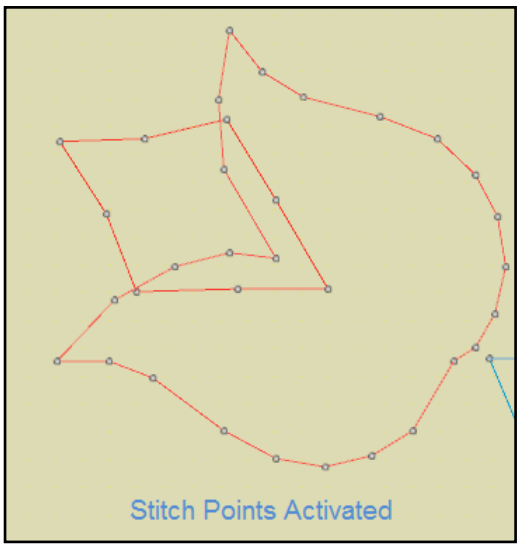
When the **Stitches** is the only thing selected, you will see the stitches of the design without the filled areas of color in the background. The stitches don't have as much depth in this view as in 3-D view.

When the **3D View and Stitches** are activated, the design is pictured as a real embroidered design. The threads are thicker and you can see the actual stitch type.

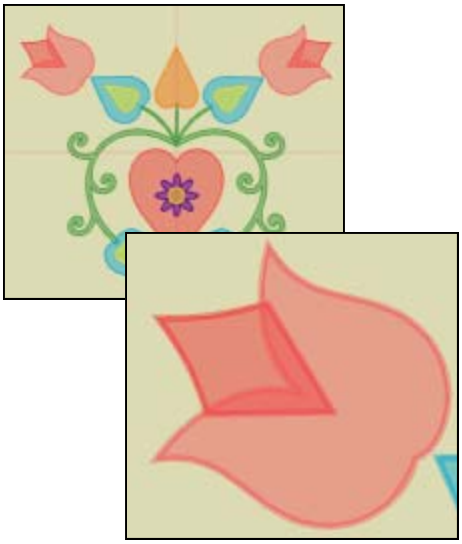
When you have the **Outline, 3D view, and Stitches** activated, you will be able to see the blocks of color in the background with the 3D stitches around these blocks of color.

To see the stitch points of the design, 3D must be deactivated and **Stitch Points** activated. Zoom in close to the design elements to view the stitch points.





Zoom Tools



Zoom In
Click on *Zoom In* icon; then click and drag on the area to zoom in. The area you mark will be the area that is shown after releasing the mouse. The cursor changes to a magnifying glass when this tool is activated.

Your mouse wheel also zooms in when the wheel is rotated backward.

Zoom Out
Rotate the mouse wheel forward to zoom out.

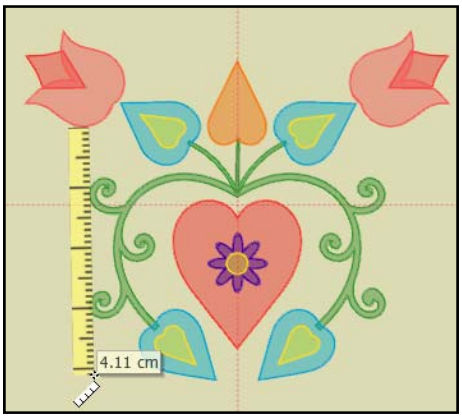
Zoom Previous
This icon is found by resting your cursor on the lower right black triangle of the *Zoom In* icon. Drag your mouse to the *Zoom Previous* icon. The *Zoom Previous* then becomes the current zoom tool on the toolbar.

When you click this icon, the zoom factor returns to the previous view of the design.

Zoom All
This will place the entire design into the visible screen. This tool is activated by clicking on the black triangle of the current zoom tool and dragging to select *Zoom All*.

Actual Size
You can view the design in actual size by clicking on the *100%* in the Standard Tool bar. Other zoom presets are available by selecting from the drop down menu choices. See page 6 of this workbook for instructions to set your monitor size so the actual size will be accurate.

Pan
This tool lets you move a design on your screen. Select the icon, then click on the design to move it on the screen. You can also pan by pressing the mouse wheel until the cursor changes to a four directional arrow. Move the mouse slowly in the direction you want. To deactivate, click the mouse wheel again.

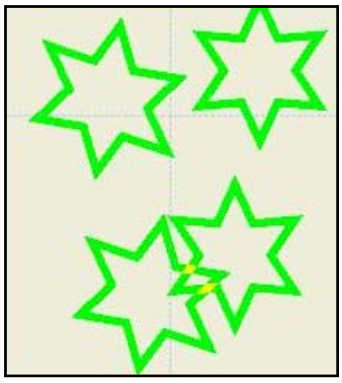


Measure Tool
The *Measure tool* calculates the distance between two points in the design area. Click on the first point and drag the ruler. The fly-out will show the distance. You may measure in inches or metric. See page 7 of this workbook for instructions to change the measurement system.

View Menu

View Ruler
Rulers appear at the top and the left side of the design screen. The ruler shows the X and Y axes based on centimeters or inches. (See page 7 of this workbook for instructions on how to alter the measurement system.) The values on the ruler will change based on the zoom you are using. If the ruler is not visible, go to *View* > *Ruler* and place a check mark in front of the option.

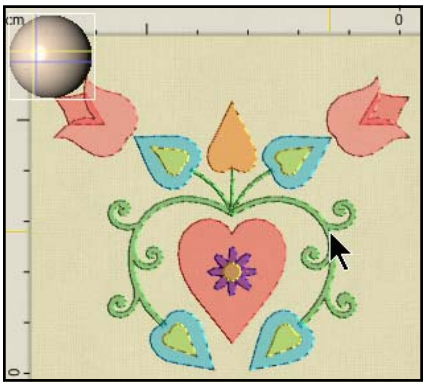
View Grid
The grid will appear as small dots across the design area in vertical and horizontal lines. You must be zoomed in close to view these dots.



View Hoop
You can choose to hide or view the hoop in the View menu. To hide the hoop, make sure that there is no check mark in front of Hoop.

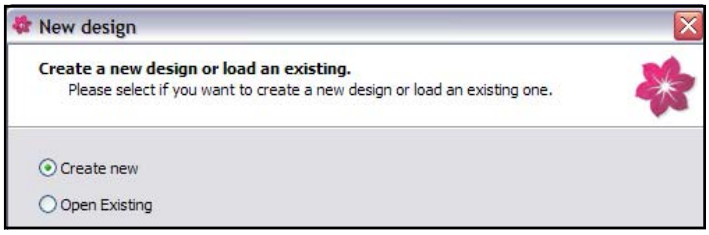
Thickness View
The thickness view shows areas of a design that will be embroidered more than once. See the yellow area in the design.

View Light Source
When 3D view is enabled, you can select *View* > *Set Light source*. By moving the mouse, you will get different effects on the design as it illuminates the design from different angles.



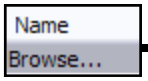
Working with the Wizard

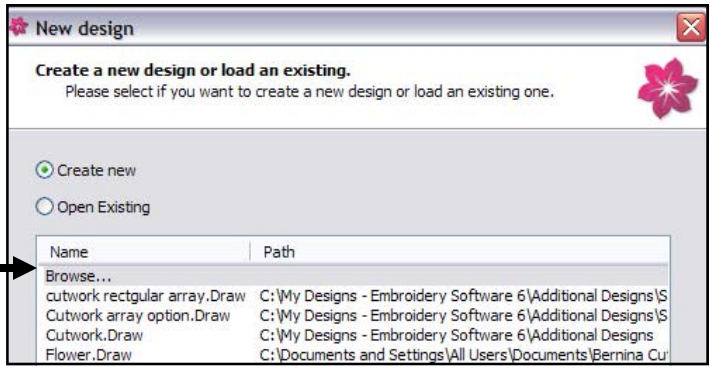
BERNINA CutWork software starts with a wizard and always prompts you to choose between loading an existing design or creating a new design. After making the selection, click *Next* at the bottom of the dialog box.



OPEN EXISTING

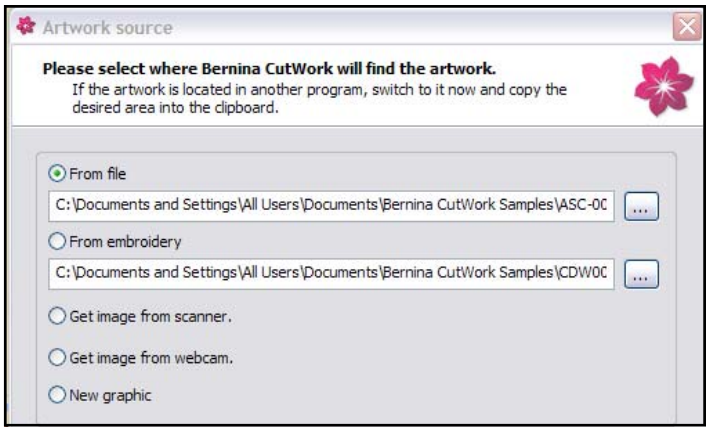
If you are opening an existing design, you can click on *Browse* to select or choose from a listing of recently opened designs.





CREATE NEW

If you are creating a new design, you will be given five choices for the artwork source. Make your choice and if needed, click on the *Browse* icon to find your selection.

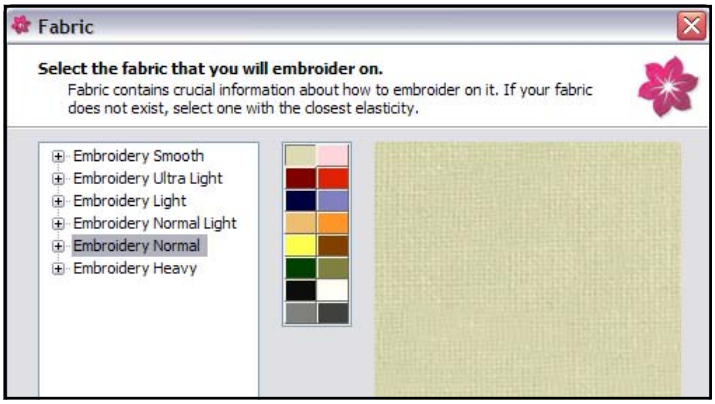


SELECT HOOP

You can also select a hoop size for the new design. You are able to choose between Embroidery Foot #26, Free Motion Couching Foot #43, or Echo Quilting & CutWork Foot #44. Base your foot choice upon the type of design you will be creating. Foot 43 and 44 will allow a slightly smaller design area within the hoop, but will protect the foot from hitting the rim of the hoop. Click on *Next* at the bottom of the dialog box to go to the next screen.

Working with the Wizard

FABRIC TYPE + COLOR



Fabric Type

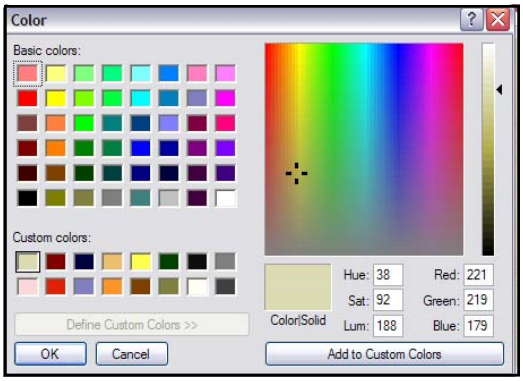
The Fabric dialog box opens next. You may choose among six fabric types. The fabric choice is important for the embroidery part of the design and is based upon the desired density of the embroidery design.

These are the embroidery parameters set for the six categories:

- Embroidery Smooth should be chosen for 40 wt. thread with a desired density of 55. This choice will keep the fabric soft and the embroidery light and smooth.
- Embroidery Ultra Light should be chosen for thick threads like wool and will provide a density of 85. The embroidery will appear to be low density.
- Embroidery Light is for 30 wt. thread with a density of 55. The embroidery will appear to be low density.
- Embroidery Normal Light is for 40 wt. thread with a density of 40 and with lighter underlay. The embroidery will appear on screen to be a normal density.
- Embroidery Normal is for 40 wt. thread with a density of 40 and the embroidery will appear to have a normal density on screen.
- Embroidery Heavy is for thin thread like metallic or heavy textured fabrics with a density of 35. The on-screen embroidery will appear to be high density.

Choose your embroidery category by clicking on the + sign and choose the fabric name that closely resembles your fabric. There is a Standard category within each embroidery type if your particular fabric is not listed.

Fabric Color



Next, choose the color of the fabric background you wish to work with from the 16 colors in the dialog box.

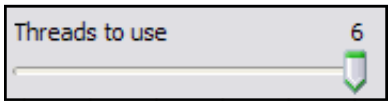
By double clicking on a color chip, more color choices are made available. You can choose an RGB value or select a color in the spectrum. Select *Add to Custom Colors* and *OK* and the new color will replace the selected color chip in the wizard. Click *Next* at the bottom of the dialog box.

If you change your mind about the type or color of fabric you are using, you may reopen the *Fabric dialog box* by clicking on the *Select Fabric* icon. Simply select the new fabric type and click on *OK*.

Working with the Wizard

COLOR REDUCTION

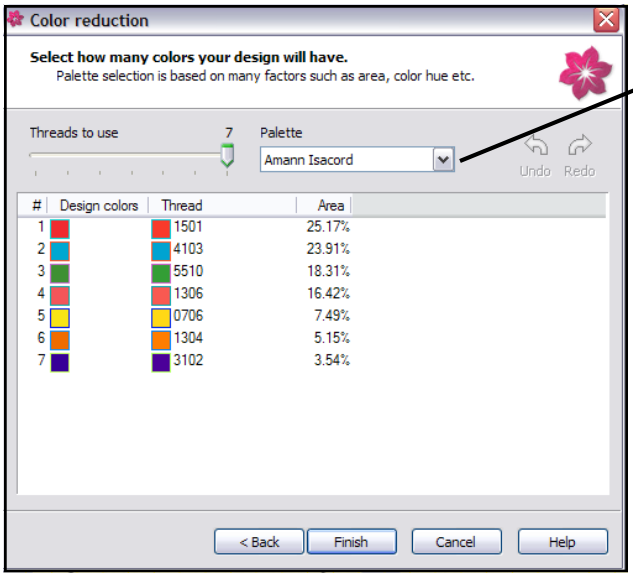
The Color Reduction dialog box opens next and you can choose to decrease the number of colors in your design by clicking on the slider and moving it to the left. You can also choose to wait and change the thread colors later within the software.



The software automatically will reduce the number of colors in a vector design to 20 thread colors and will combine colors that cover the smallest area on the design with other similar ones. You may choose to reduce the number of colors even more.

You can also choose the brand of thread you wish to use from the *Palette* drop down menu. The *Thread Palette* at the bottom of the screen is automatically updated with the new colors.

The closest match of your selected brand will be listed in the thread column.



Click *Finish* and the design +/or artwork will appear on screen depending on the view you have selected. Outline stitches are automatically added around the artwork.

You are now ready to edit the file.
Navigate to the desired location to save the file.
Name and Save the file.

When finished, send the outline design or cutwork to your embroidery machine through the *Export* tool. Instructions are on page 26 of this workbook.

Note: These basic steps for the wizard will appear with any type of design you create in the software.

More on Colors

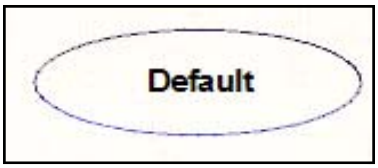
Draw Mode vs. Stitch Mode; Changing Colors

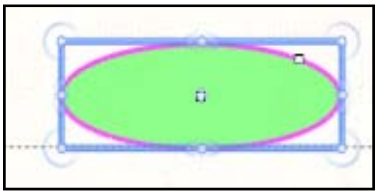
1. In the *Draw* mode, you can set the colors of the vector artwork. A vector design can have hundreds of colors.
2. You can either create with the default colors; then change the colors or you can preselect the colors. The default color is dark blue for the outline and none for the fill.
3. By right clicking on a selected color chip, you can choose to edit the pen (outline) color or the fill color. The colors you have selected for the vector will be shown in the bottom row of the *Thread Palette*—the bucket will show the fill color; the pen will show the outline.

4. When you switch to the *Stitch* mode, there will be a limit of twenty colors. If you create cutwork, this limit will be 16 as four colors are assigned to the cuts.

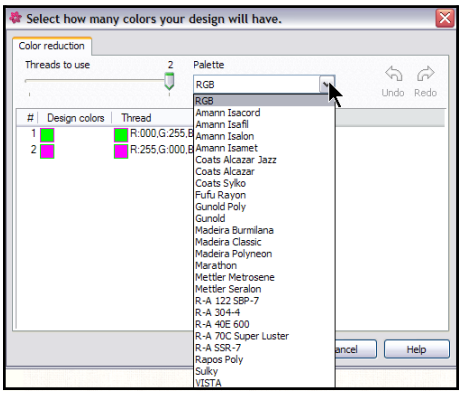
5. You can remove color from an object by selecting the object; then select the "*no color square*" in the *Thread Palette*, right clicking, and selecting *Set Fill Color or Set Pen Color* to remove color from the filled object or to remove the outline around an object.

6. You must return to the *Draw* mode to create additional objects.
7. Available thread colors can be changed through *Edit Palette*.
8. By clicking on this icon, a dialog box opens to give you access to many thread brands. Simply choose your thread brand and the thread that is the closest match to the vector color will be listed in the thread column of the dialog box.



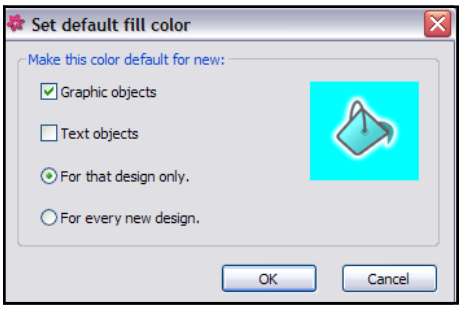


You may change a color also by selecting the object; then clicking on the upper corner to change the pen color; the lower corner to change the fill color.



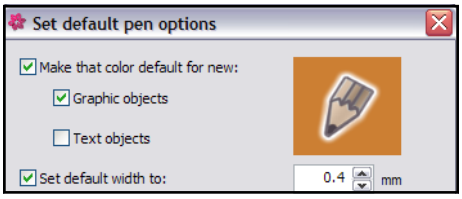
To Preset Colors or Change Default Colors

1. To set a color before drawing an object, make sure nothing is selected; then click on the bottom right corner for changing the fill (upper left corner for the outline) of the color you want to use. A dialog box opens up.
2. You may choose to apply that color for that specific design or for every new design, thereby changing the default color for the fill or outline.
3. You can choose to make it the color for graphic or text objects.
4. Click *OK* to confirm the changes.



To Change the Outline Width

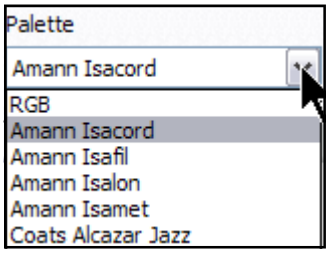
1. In the pen options dialog box, you can also change the default pen width by placing a check mark in front of the option and altering the value in the selection box.
2. Changing this value will also change the default width of the Satin Serial stitch.
3. See more information in *Help* > *Help Topics* on Editing default color palette.



More on Colors

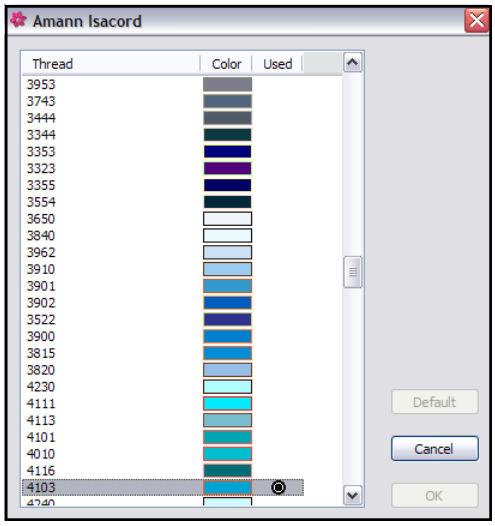
To View all the Thread Colors of a Palette

1. Click on *Edit Palette* in the toolbar.



2. Choose the thread brand you wish from the drop down list.

3. Double click on any of the colored chips in the dialog box.



4. Another dialog box will open showing all of the colors as sampled on the right.

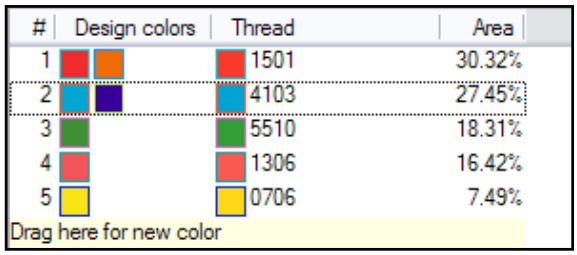
5. Colors used in the design will be marked with a symbol.

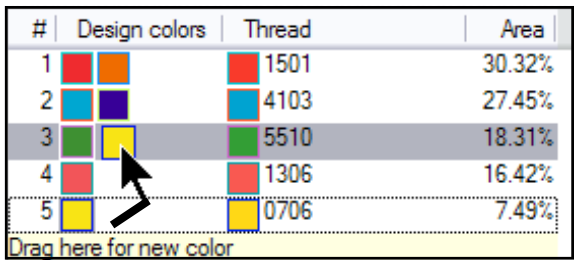
Color Reduction Information

1. If the number of thread colors are reduced, the combined colors will be indicated by comparing the design (vector) colors with the thread colors.

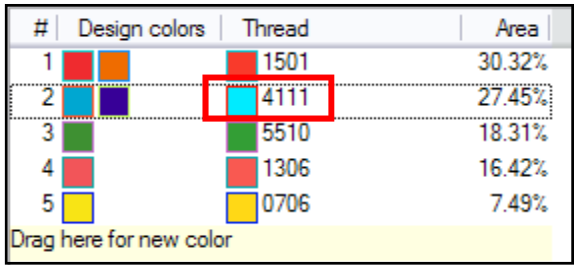
2. The percentage of area that each thread color covers is also indicated.

3. You can click and drag one of the color chips manually and the design on screen will be updated to give you a preview of the change. You can then click on *Cancel* if you don't want to make the change.

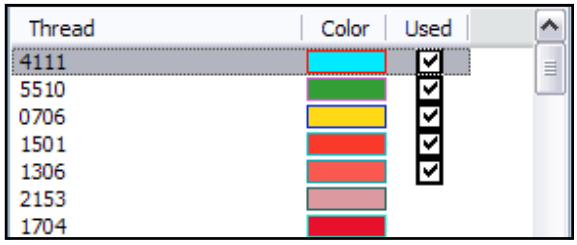




4. If you double click on one of the color chips in the Thread column, all the color choices of that thread brand will be shown as illustrated in the top right Isacord chart. To change the selected color chip to a new color, double click on the desired color in the dialog box. The thread color chip in the *Color Reduction* dialog box will change to the new color.



5. Clicking on the heading of the columns (thread, color, used) will reorder the lists. By clicking on the Used column, the list will show all the thread colors used in the design.

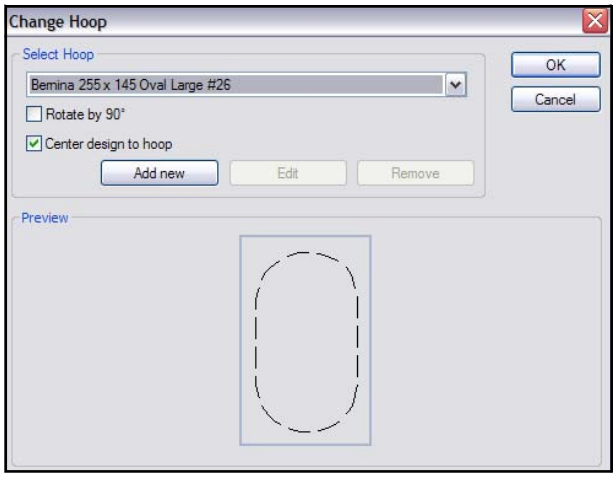


More on Hoops

Changing a Hoop

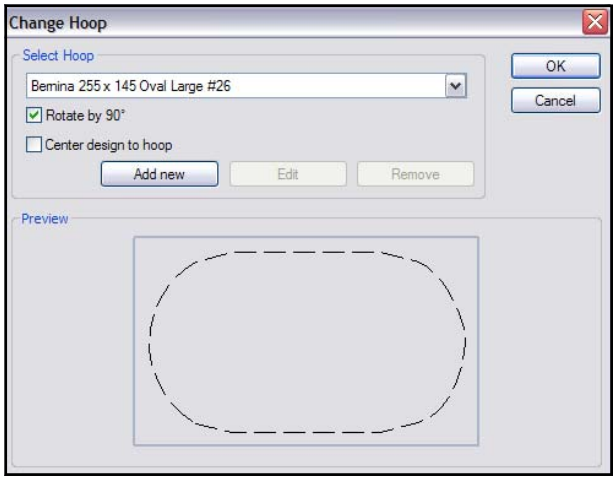
1. If the hoop is not visible on the screen, select *View > Hoop.*
2. After working through the wizard, you may decide to make a change in the hoop.
3. Select the *Hoop* icon from the toolbar. A dialog box will open.
4. You can select a hoop from the drop down choices.
5. Press *OK* to confirm the choice.

Note: Selecting *None* from the drop down box will remove any existing hoop.



Rotate the Hoop

1. Place a check mark in front of *Rotate by 90°*.
2. Confirm with *OK*.
3. The hoop will be rotated on screen.
4. When the design is exported to the machine, it will be sent in the same relationship to the hoop arm as is shown on screen.

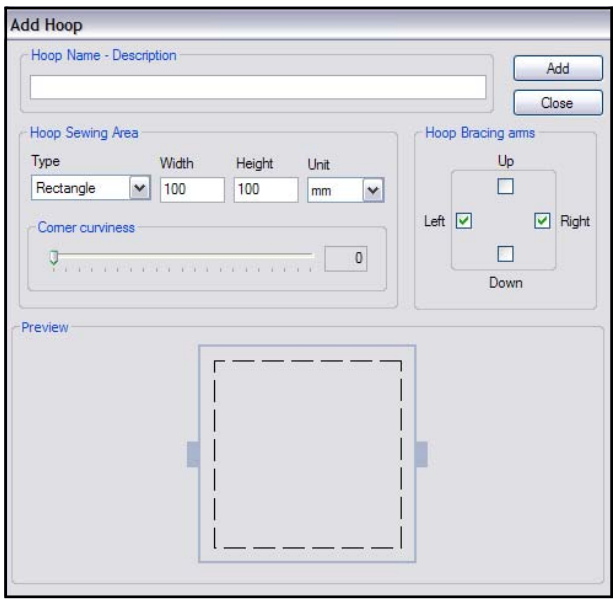


Centering Design

1. By checking the box, *Center design to hoop*, designs imported will be centered in the hoop.
2. Additional objects drawn or inserted will not be automatically centered.

Add a Custom Hoop

1. Click on *Add new*.
2. A dialog box opens and you can add a custom hoop with the dimensions you specify from the manufacturer of the hoop.
3. Specify the name, type, the location of the hoop brace, the curvature of the hoop.
4. See more information in the *Help > Help Topics* under *Add New Hoop*.
5. Custom hoops can also be Edited and Removed.
6. Built-in hoops cannot be edited or removed.



Software Exercises

BERNINA CutWork Software offers many options for the embroidery enthusiast. There are 34 .draw files ready to send to the machine for cutwork or embroidery. There are 200 ready-to-stitch embroidery designs included with the software. These can be sent to the machine to stitch as embroidery files or edited to create other designs with cutwork. There are 200 vector image files that can be transformed to cutwork, appliqué, net fill, or outline designs. Images can be imported into the software to be traced or to be used as a backdrop for creating cutwork, appliqué, net fill, or outline designs. You can use your scanner or a webcam to import these files. The cutwork designs you create can be used to cut appliqué shapes, to cut intricate quilt blocks, or to create traditional cutwork designs. In addition, you can use built-in shapes and drawing tools to create your own unique designs.

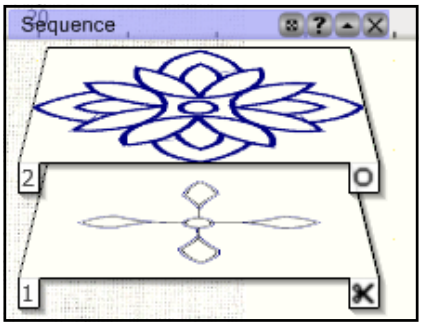
Each of the following exercises has been designed to take you through the process of creating different types of cutwork or embroidery files.

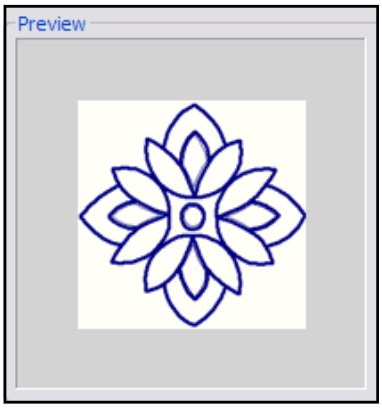
Class Exercises:

Open an Existing Cutwork Design

Open an Existing Design

1. If you have just opened the software, click on *Open Existing* in the wizard and then click on *Finish* at the bottom of the dialog box.
2. Otherwise, click on *File* > *Open* in the menu.
3. In the CutWork Sample folder, select Flower_01.draw from the choices. Notice that a picture of the design appears in the *Preview* section of the dialog box.
4. Click on *Open.*
5. The design opens on the design screen.
6. The *Sequence Manager* shows the layers of the design. The first layer of the design will be the cutwork portion of the design. The second layer is the satin stitch.
7. Before sending the design to the machine, watch a virtual stitch out by clicking on the *Slow Redraw* icon.





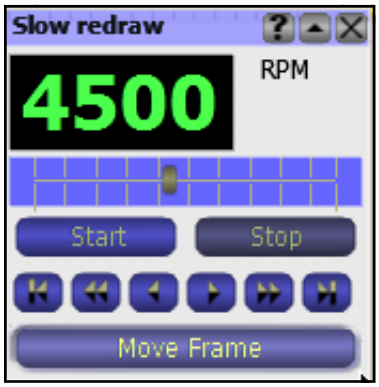
SEQUENCE MANAGER

If Sequence Manager is not visible, go to the *View* menu. Make sure that there is a check in front of *Sequence Manager.* Notice the designation on the layers of the Sequence Manager. The O is for outline; the scissors represent the cutwork.

ABOUT SLOW REDRAW

Title Bar

- You can click and drag to move the dialog box wherever you wish.
- The Question mark icon will take you to *Help Topics* to give you more information about *Slow Redraw* if you click on the *Title Bar*.
- If you wish to minimize the *Slow Redraw* dialog box, click on the middle icon on the title bar.
- To close the *Slow Redraw* dialog box, click on the "x."



Simulation Speed

Simulation speed can be between 100 and 9900 RPM. The track bar adjusts the speed. Click and drag to adjust.

Start & Stop

These buttons start and stop the redraw. Escape also stops the process.

Move Through Objects/Stitches

Design start: Takes you to the first stitch of the design
Previous object: Goes to the previous object
Previous stitch: Moves to the previous stitch
Next stitch: Goes to the next stitch
Next object: Moves to the first stitch of the next object
Design end: Goes to the last stitch of the design

View Options

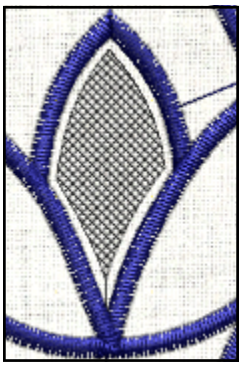
Move Frame: Previews the simulation with the frame moving, as it would appear in real embroidery.
Move Head: The head of the embroidery machine moves in the simulation.

Open an Existing Cutwork Design

The design begins by stitching a *Running Before* stitch around the area to be cut. You will learn about how to add this type of stitch to your cutwork designs in later exercises.

Next, the simulation will take you through the cutwork steps showing blade positions 1, 2, 3, and 4.

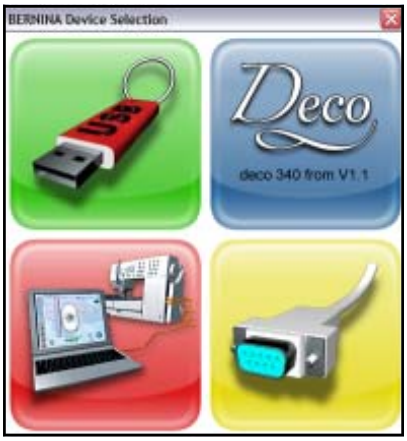
The last step shows you the underlay and satin cover stitches that stitch around the cut areas of the design.



Cutwork areas in the design are designated by a black net area around the shape of the design. This option can be adjusted to view the net area only when the mouse is over the area or to view the net area at all times. This is selected in *Tools* > *Options* > *View tab* > *Useful Areas Always Visible.*

EXPORTING A DESIGN FOR STITCHING

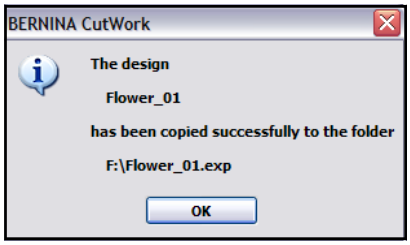
1. To export the design to be stitched, click on the *Export* icon.



2. A dialog box will open that will allow you to choose the type of connection you have.

   - Choose the USB connection if you have an artista embroidery machine (630, 640, 730, updated 200), or an 830.
   - Choose the Deco box to send the stitch file to your Deco 340.
   - Choose the Direct Connection section if you have an aurora embroidery machine (430, 440, or 450).
   - Choose the serial port connection if you have an older artista model (180 or 185).

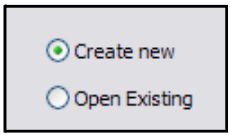
3. You will receive a message that the design has been successfully sent.



4. Close the file by clicking on the X by the file name on the tab of the design area.

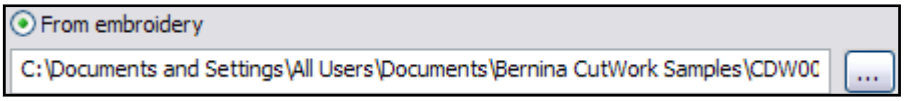
Sample 1 - Open an Existing CutWork Design

Sending a Stitch File to be Embroidered

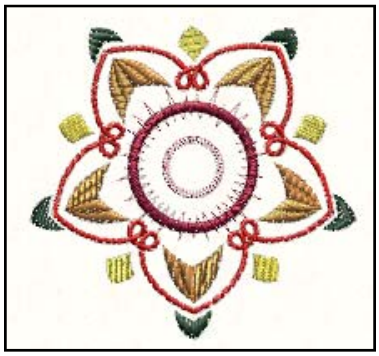


Opening a Design

1. Select *File* > *New*. Select *Create New* from the wizard that opens.
2. Click *Next*.
3. Select *From Embroidery* from the wizard selections.



4. Click on the *Browse* icon.
5. Navigate to the BERNINA CutWork Samples folder and click on the *View* icon.
6. From the drop down choices, select Thumbnails (for XP) or View Large Icons (for Vista and Windows 7).
7. Select the design CDW0032.ngs. Click on *Open*.
8. From the hoop choices, select *Bernina 130 x 100 Medium #26*.
9. Click on *Next* at the bottom of the dialog box.
10. Work your way through the wizard dialog boxes making the choices you wish and click on *Finish* when completed.

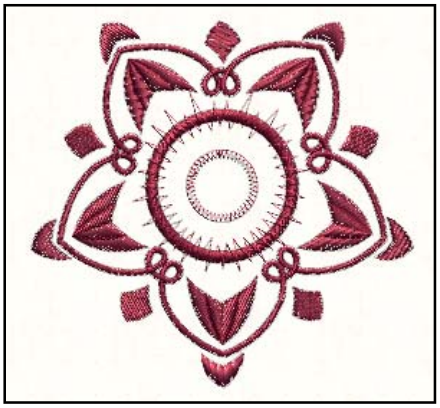


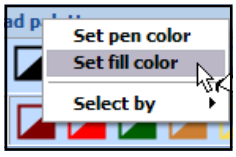
Changing Hoop Size

1. Notice that the design is too large for the hoop.
2. Click on the *Manage Hoop Options* icon.
3. Select *Bernina 255 X 145 Large Oval Hoop #26*.
4. Click OK.
5. The design can be sent to the embroidery machine to stitch out as is or it can be edited.

Editing the Design: Reducing Colors

1. Select *Edit* > *Select All*.
2. Right click on the thread color you wish to change to in the *Thread Palette* toolbar and select *Set Fill Color or Set Pen Color.* The design will change to all one color.





Reducing Colors
To change the design to stitch as a single color, you could decrease the number of colors in the *Color Reduction* dialog box to one while working through the *Wizard*. You can also reduce the colors on the design screen.

Sending a Stitch File to be Embroidered

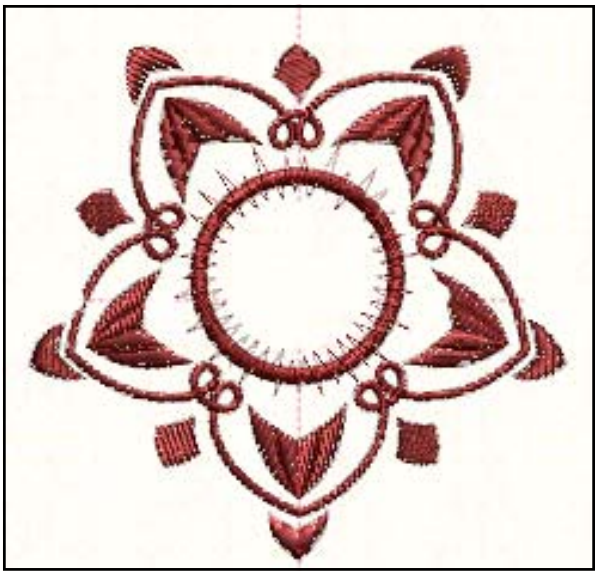
Editing the Design: Deleting Stitches

1. To delete certain stitches from the design, select the *Select Rectangle tool* and click on any area you wish to delete; then press *Delete* on the keyboard.
2. Select the center outline circle and press delete.
3. Select the center zigzag stitch and press delete.

Saving the Design + Sending to the Machine

1. Select *File* > *Save As*.
2. Create a new folder in the Bernina Cutwork Samples folder and name it *Mastery.* Open the folder.
3. In the File Name, name the file, *Stitch File*.
4. Click on *Save*.

5. Export the file to the machine of your choice for stitching. See page 26 of this workbook.
6. Close the file by clicking on the X by the file name on the tab of the design area.



CREATING FOLDERS:

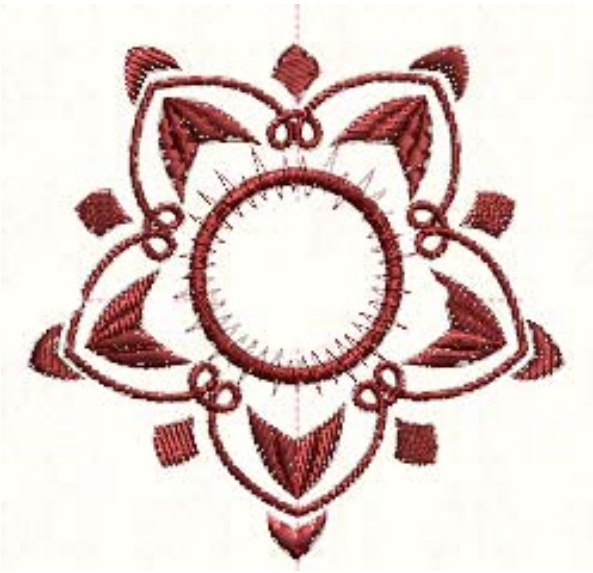
With some operating systems, you may have to refresh the screen before the new folder appears. Right click in the white area of the dialog box and select *Refresh*.

SAVING + EXPORTING

Always save a file before exporting it to the machine. The file is saved in the Cut-Work software as a .draw file and further changes can be made to the file.

After it is exported as a stitch file, the file will have limita-tions in editing, so it is best to always save the file in both .draw and .exp.

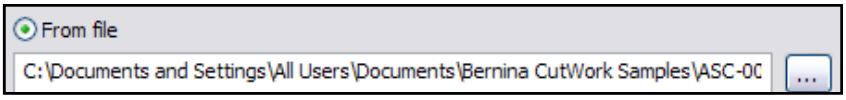
Sample 2 - Embroidered Stitch File



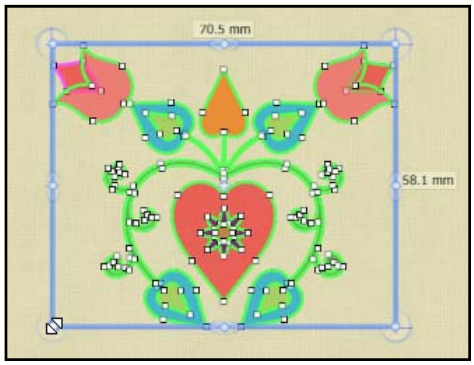
Converting a Vector to an Outline Design

Open a Vector File

1. Select *File > New*.
2. Make sure *Create New* is selected in the wizard.
3. Click on *Next*.
4. Click on the *From File* option in the *Artwork Source* dialog box.



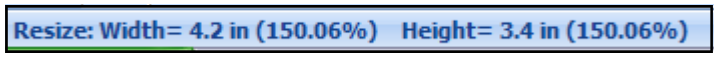
5. Click on the *Browse* icon.
6. Select ASC-00000.cmx.
7. Click on *Open*.
8. From the hoop choices, select *Bernina 255 X 145 Large Oval Hoop #26.*
9. Click on *Next* at the bottom of the dialog box.
10. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.



Resize the Design

1. Select *Edit > Select All*.
2. Change the size of the design by clicking in a corner of the design and dragging to a new size.

3. The dimensions and the percent of change will be shown on the status bar at the bottom of the screen. Drag the design until the design is approximately 150%. Release the mouse to accept the change.



4. To reset the design to the center of the hoop, click on *Manage Hoop Options.*

5. Place a check in front of *Center Design to Hoop*. Click *OK.*

Note: Holding the *Shift Key* while resizing the design will keep the design in the center of the hoop.

Changing the Offset

1. Activate the *Offset* option by placing a check in the box in *Object Properties.*
2. Enter a value of one. The value defines the distance that the running stitch will have from its initial position.

Changing the Passes

1. Click inside the *Passes* box and change the number of repeats a design or part of design will have.
2. Change the number of passes to 3.

OBJECT PROPERTIES

If the *Object Properties* dialog box is not visible, go to *View > Toolbars* and make sure *Object Properties* entry has a check mark in front of it.

You must also make sure that an item is selected before you have access to the *Object Properties* options within the dialog box.

When vector designs are brought into the software, a basic running stitch is applied to the artwork.

Offset: Range is from –15 mm to +15 mm.
A negative value will be an inner offset; a positive value will be an offset beyond the original design.

Passes: This sets the number of passes that a running stitch will make to create the design. The maximum number is 9 and the mini-mum is 1. You can change the value in the field and press enter to activate the change or click inside of the field and use your mouse wheel to change the value.

You will not see a visible change when you change the number of passes, but you will be able to see the change in Slow Redraw.

Converting a Vector to an Outline Design

Changing Stitch Styles

1. Select *Undo*.
2. In *Object Properties*, select stitch 31. The design is automatically updated with the new outline stitch.

2. Convert the design to all satin stitches by selecting the *Satin Serial* icon. The design automatically updates to a design with satin stitches instead of decorative stitches.
3. Select *Undo* two times to return to the running stitch.

Changes to Length of the Running Stitch

1. Change the length option by placing a check mark in the box.
2. Change the length of the stitch to 2.2 mm.

Remove Overlaps

- Remove overlaps removes all overlaps between the objects. This is usually left at *Auto* as it creates the best possible option.
- *Never* doesn't allow an object to trim the objects that it overlaps.
- *Always* trims all the objects it overlaps.

Sequence

- This option becomes available at the bottom of Object Properties by clicking on the *Auto Sequence* icon (the light bulb).
- You can change the sequence of the design.
- To start sets the selected object to be embroidered first.
- To end sets the selected object to be embroidered last.

Saving the Design + Sending to the Machine

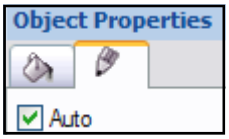
1. Select *File* > *Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the File Name, name the file, *Outline File*.
4. Click on *Save*.

3. Export the file to the machine of your choice for stitching. See page 26 in this workbook.
4. Close the file by clicking on the X by the file name on the tab of the design area.

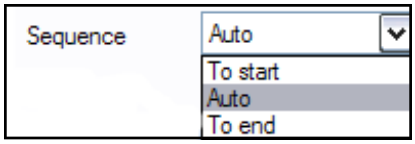
Running Stitches

When selecting all or part of the design, you may change the basic running stitch to another type of outline stitch.

These choices appear in the Object Properties. When a new option is selected, the Auto becomes unchecked at the top of *Object Properties* and the design changes on the screen.

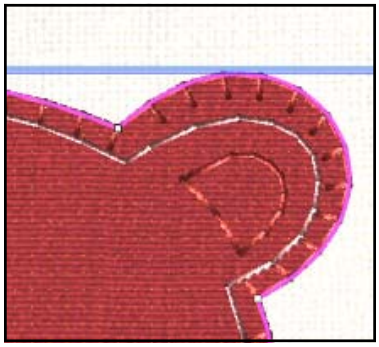


The first three styles in the Object Properties dialog box are automatically selected depending on the thickness of the border width. There are many styles to choose from.



Sample 3 - Convert a Vector to an Outline Design

Converting a Vector to an Appliqué Design



Opening the Vector

1. Select *File* > *New*; *Create New* is pre-selected in the wizard.
2. Click *Next.*
3. Click on the *From File* option in the Artwork Source.
4. Click on the *Browse* icon.
5. Select ASC-00340.cmx.
6. Click on *Open*.
7. From the hoop choices, select *Bernina 130 x 100 Medium #26.*
8. Click on *Next*.
9. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.

Converting the Design to an Appliqué

1. Zoom in on the design by clicking on the *Zoom* icon and dragging a bounding box some where along the outline of the bear.
2. Click on the outermost outline of the bear.
3. In the *Outline tab* of Object Properties, click on *None*. This will convert the stitch to an E-stitch around the appliqué after the appliqué is applied.
4. Click on the *Fill tab* in Object Properties.
5. Select the *Appliqué* icon.
6. An E-stitch is added around the bear.

Editing the E-Stitch

1. To change the width of the E-stitch (blanket stitch), click on the Outline tab in *Object Properties*.
2. Select *Running* from the stitch types.
3. Select the *Appliqué* stitch from the *Stitch Selection* box.
4. Place a check mark in front of the *Length* at the bottom of the *Object Properties* box.
5. Change the value in the box to 2.75.
6. Press *Enter* to activate.

Saving the Design + Sending to the Machine

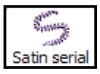
1. Select *File* > *Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the File Name, name the file, *E-Stitch Appliqué.*
4. Click on *Save*.
5. Export the file to the machine of your choice for stitching. See page 26 of this workbook.
6. Close the file by clicking on the X by the file name on the tab of the design area.

Converting a Vector to an Appliqué Design

You can also create an appliqué with a satin stitch outline. Let's use the same vector to create this appliqué.

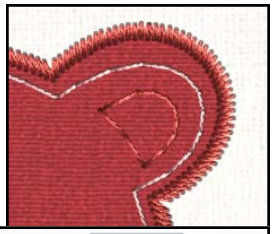
Opening the Vector

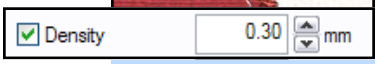
1. Select *File* > *New*; *Create New* is pre-selected in the wizard.
2. Click *Next*.
3. Click on the *From File* option in the Artwork Source dialog box.
4. Since the bear file is already the one selected, click on *Next*.
5. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.

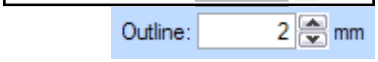


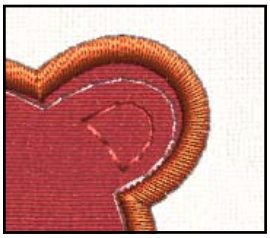
Converting the Design to a Satin Stitch Appliqué

1. Zoom in on the design by clicking on the *Zoom* icon and dragging a bounding box along the outline of the bear.
2. Click on the outermost outline of the bear.
3. In the *Outline tab* of *Object Properties*, click on *Satin Serial*.
4. Click on the *Fill tab* in *Object Properties*.
5. Select the *Appliqué* icon.









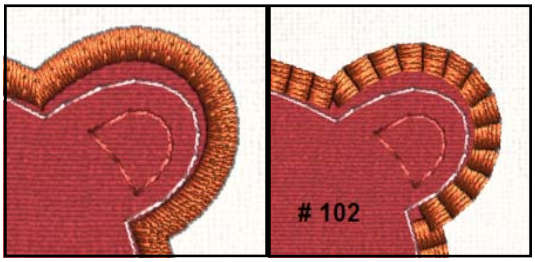
Changing the Stitch Properties

1. Click on the *Outline tab.*
2. Place a check mark in front of *Density* in Object Properties.
3. Change the density to .30 in *Object Properties*.
4. Press *Enter* to activate.
5. Change the width of the stitch to 2 mm in *Tool Options* by changing the Outline entry.
6. Press *Enter* to activate.
7. Select *File* > *Save As*.
8. Navigate to the *Mastery* folder. Open the folder.
9. In the File Name, name the file, *Satin Stitch Appliqué.*
10. Click on *Save*.
11. Export the file to the machine of your choice for stitching. See page 26 in this workbook.

Other Options: To add a fancy satin stitch, select one of the pattern choices from the *Satin Serial Object Properties*.
To add a special running stitch, select one of the patterned running stitches from *Object Properties*

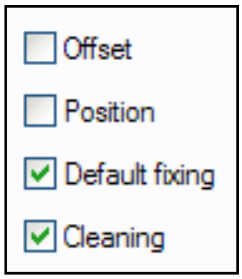
To Create the Cut Shape

1. Select the outline stitches in *Sequence Manager*.
2. Press *Delete*.
3. Select the *Appliqué* shape.
4. Select *CutWork* in *Object Properties*.
5. Switch to the *Fill tab* in *Object Properties*.
6. Select *None*.
7. Select *File* > *Save As*.
8. Navigate to the Mastery folder and name the file, *Cutwork Bear.*
9. Click on *Save.*
10. Export the design to the machine.
11. Close the file by clicking on the X.



More on Appliqué

OTHER APPLIQUE OPTIONS



Cleaning: Altering the Method for Embroidering the Appliqué

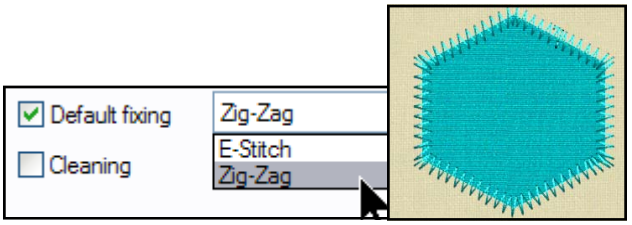
1. After embroidery:
   - The shape of the appliqué is stitched with a running stitch for placement.
   - Machine stops so that appliqué shape can be placed.
   - The cover stitch is stitched.
   - Cut around the appliqué with scissors.

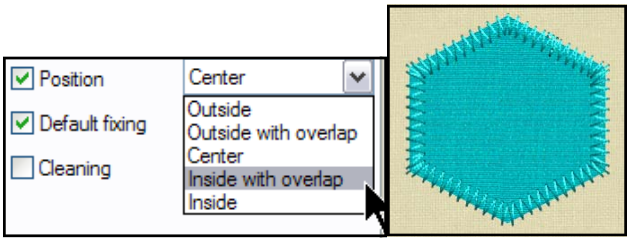
2. During embroidery (default)
   - The shape of the appliqué is stitched with a running stitch for placement.
   - Machine stops so that appliqué shape can be placed.
   - Another running stitch is stitched around the shape
   - Machine stops so that the fabric can be trimmed around the running stitch.
   - The cover stitch is stitched.

3. Laser cut (use this method when the cutwork file has been created for the shape)
   - The shape of the appliqué is stitched with a running stitch for placement.
   - Machine stops so that appliqué shape can be placed.
   - The cover stitch is stitched.

Default Fixing + Position

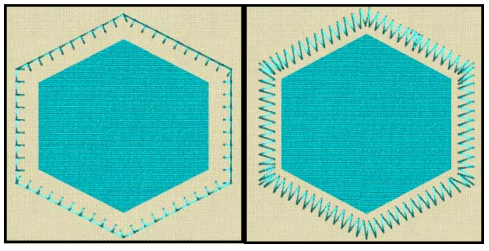
- By choosing this option, cover stitches will be the same color as the fill area.
- Placing a check mark in front of *Default Fixing* and choosing a zigzag stitch will open the *Position* option.
- You can change the position of the zigzag to one of five positions.





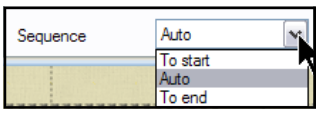
Offset

- This value can be changed from –15 mm to +15 mm; the default is zero.
- This defines the distance you want the cover stitches to have from the initial position.



Sequence

- When *Auto Sequence* is selected, this option becomes available. It is located at the bottom of *Object Properties*.
- You can use the choices to change the embroidery sequence.
- *Auto* is the default; the software makes the choice.
- *To start* moves the selected object first; *To end* moves it to the last object.

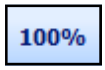


Sample 4 - Convert a Vector to an Appliqué Design

Converting a Vector into a Cutwork Design

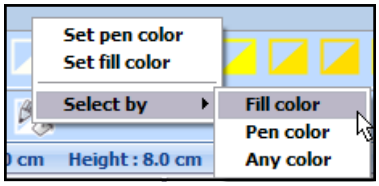
Opening the Vector

1. Select *File* > *New*; *Create New* is pre-selected in the wizard.
2. Click *Next.*
3. Click on the *From File* option in the Artwork Source.
4. Click on the *Browse* icon.
5. Select ASC-00143.cmx.
6. Click on *Open*.
7. From the hoop choices, select *Bernina 130 x 100 Medium #26.*
8. Click on *Next*.
9. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.



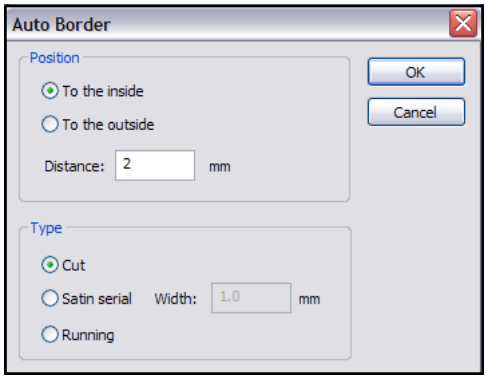
Deleting Colors

1. Click on the *100%* icon on the Icon Toolbar.
2. Left click to select; then right click on the orange outline of the moon face in the design.
3. Select *Delete* from the menu.
4. Select the turquoise moon sliver.
5. Press *Delete* on the keyboard.
6. Right click on the white color chip in the *Thread Palette*.
7. Select "*Select By*" and choose *Fill Color*.
8. Select *Delete from the menu*.



Auto Border

1. Select the remaining purple circle.
2. Click on *Auto Border & Cut* icon.
3. Select the radio dot next to *To the inside*.
4. Change the distance to 2 mm.
5. Make sure *Cut* is selected for the type.
6. Click *OK.*
7. A black netting is formed in the circle, indicating cutwork has been added.



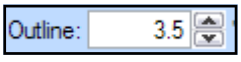
Auto Border + Cut.
This is a way to add a running stitch, satin stitch, or cutwork automatically to objects. Select the object(s) you wish to apply the border.

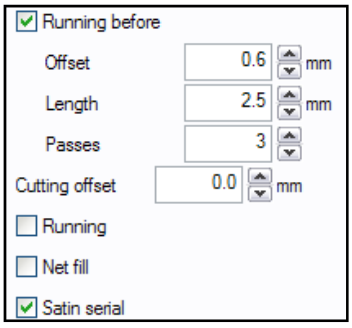
Stitch Type: Choose running, satin, or cutwork. Specify the width of the satin stitch.

Position of Border: This defines the distance between the vector border and the new position—either inside or outside the object's border. By leaving the value at 0, the border will be placed on top of the vector border.

Altering CutWork Properties

1. Place a check mark in front of *Running Before* in *Object Properties*.
2. Change the offset to .6. A positive offset sets the running stitch to the outside of the cut area.
3. Change the number of passes to 3.
4. Place a check mark in front of *Satin Serial*.
5. In *Tool Options*, change the Outline entry to 3.5. Press *Enter.* This will increase the width of the satin stitch.

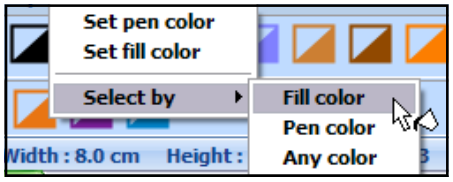


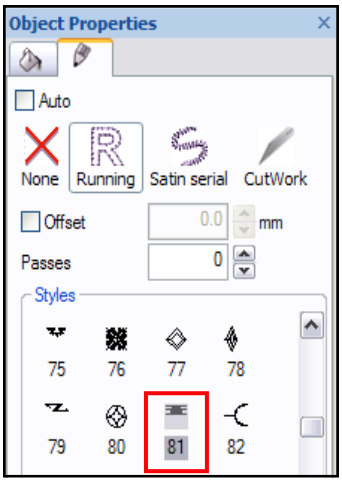


Converting a Vector into a Cutwork Design

Changing the Outline Stitch

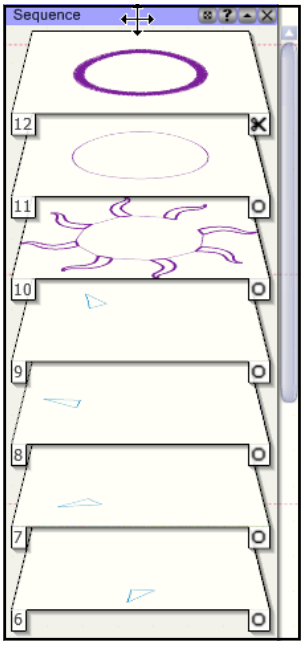
1. Deselect the cutwork circle by clicking outside the design.
2. Select the purple rays by holding the *Shift* key and selecting each ray.
3. In *Object Properties*, select stitch #81.
4. The design is automatically updated.
5. While they are selected, right click within the selection rectangle and select *Combine*.

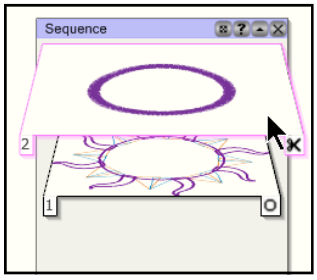




Sequencing the Design

1. If *Auto Sequence* is highlighted, click on it to deselect.
2. Notice all the layers in Sequence Manager.
3. Right click on the orange color chip in the *Thread Palette*.
4. Select *Select By > Fill Color*.
5. While they are selected, right click within the selection rectangle and select *Combine*.
6. Notice what happens in *Sequence Manager*.
7. Repeat for the turquoise color chip.
8. Turn Auto Sequence back on and all the colors combine in the first layer.





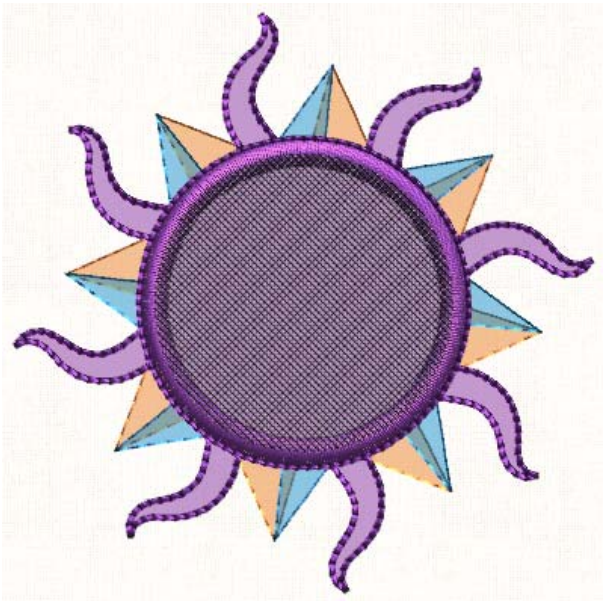
AUTO SEQUENCE
When Auto-sequence is enabled the program automatically decides the sequence of all stitch objects, so you don't have any control of the sequence of the design items via sequence manager in this case. The only items that are separated are the Cutwork and appliqué objects.

If you want to have full control of the ordering of all stitch objects you can disable Auto-sequence. This can be easily done by pressing Auto-sequence. Once Auto-sequence is disabled all design items become separate layers in the sequence manager. Click and drag the items in the Sequence Manager to re-order the sequence of stitching.

Saving the Design + Sending to the Machine

1. Select *File > Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the File Name, name the file, *Vector to Cutwork.*
4. Click on *Save*.
5. Export the file to the machine of your choice for stitching. See page 26 in this workbook.
6. Close the file by clicking on the X by the file name on the tab of the design area.

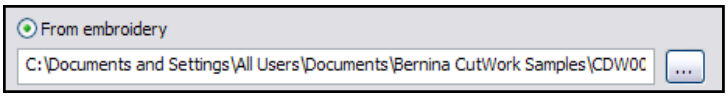
Sample 5 - Creating a CutWork from a Vector File



Editing an Embroidery Design

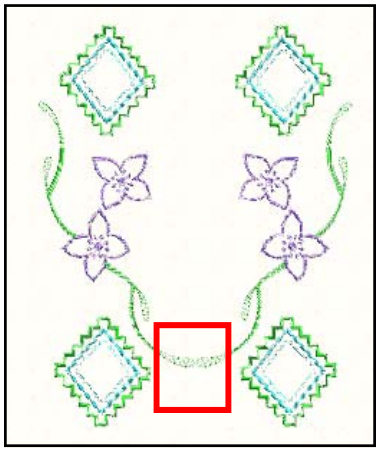
Opening the Design

1. Select *File* > *New*. *Create New* is pre-selected in the wizard.
2. Click *Next.*
3. Click on the *From Embroidery* option in the Artwork Source.



4. Click on *Browse.*
5. Select CDW0019.ngs. Click on *Open.*
6. From the hoop choices, select *Bernina 256 x 400 Jumbo #26.*
7. Click *Next.*
8. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.

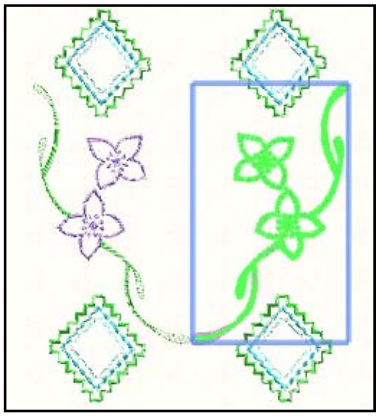
EDITING EMBROIDERY DESIGNS
You can make color changes, rotate, skew, move, resize, and delete objects, but you cannot change stitch types of the embroidery files.



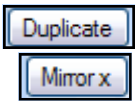
Editing Through Tool Options

1. If the *Tool Options* dialog box is not visible, go to *View* > *Toolbars* and place a check mark in front of *Tool Options*.
2. Select *Edit* > *Select All* or use *Ctrl* + *A* on the keyboard to select the entire design.
3. Place a check mark in front of Proportional in Tool Options. Change the scale of either the width or the height to 80%.

4. Press *Enter* to activate the change.



Making a Duplicate; Mirror and Moving



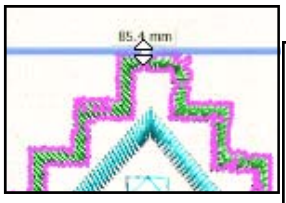
1. Select *Duplicate* in *Tool Options*.
2. Click on *Mirror X* and move the selected duplicate by dragging it to the right. Use the right arrow key on your keyboard to fine tune. Move the duplicate until the lower part of the swirls of the designs just touch. (See red rectangle.)

3. Open *Manage Hoop Options* and place a check mark in front of *Center design to hoop.* Click *OK*.
4. Click away from the design to deselect.
5. Click and drag a bounding box around the duplicate swirls and flowers to select only that portion of the design. (See blue rectangle.)
6. While selected, right click and choose *Group* from the menu options
7. In the *Tool Options* in the rotate field, enter 60°; press *Enter* to activate.

8. While it is selected, move it as desired by clicking on a part of the selected object's outline and dragging it to a new location.
9. Deselect the group.
10. Use the lasso tool to select the lower right hand diamond.
11. While it is selected, use the arrows on your keyboard to move the diamond into a pleasing position.

MOVING OBJECTS:
When moving an object, if you hold the *Ctrl* key, the object will snap to guidelines on every 22.5°. If you hold the *Alt* key, horizontal and vertical guidelines will appear. The object will snap to the closest guideline intersection.
When using the arrow keys, objects move 1 mm with every click. Hold the *Ctrl* key and they will move 5 mm. Hold the *Shift* key and they move 1 mm. You can change these defaults in the Options menu.

Editing an Embroidery Design

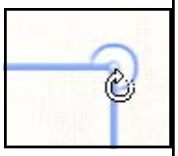


Editing a Design Visually: Resizing

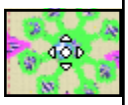
1. Select the *Zoom In* icon and draw a bounding box around this diamond shape you just moved.
2. While it is selected, rest your cursor on the white dot in the middle of the top horizontal line until you see double pointed arrows; click and drag your mouse to increase the size of the rectangle vertically.
3. The new dimensions will be shown when you rest your cursor on the selection outline surrounding the object. The sample was increased to about 90 mm.

4. Zoom out by selecting the *Zoom Previous* icon.
5. Make sure that *Proportional* is not checked in *Tool Options*. Select the upper left hand rectangle and change the height of the object to 95 mm. Press *Enter* to activate.

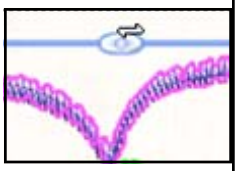
Rotating a Design Visually



1. Select the flower on the right side that is not connected to a swirl.
2. Right click and select *Ungroup*; then draw a bounding box around the flower to select it.
3. Rotate your mouse wheel away from you to zoom in.
4. If you place your cursor on one of the corners of the selection box, rotation handles appear. You can now freely rotate this part of the design visually.

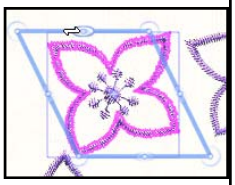


5. Rotate the design by clicking and dragging on the corner.
6. You can change the center of the rotation by clicking and dragging the center to a new location before you rotate the object.



Skewing a Design

1. Select the second flower not connected to a swirl. Rest your cursor just above the white dot in the middle of the top horizontal line until the cursor changes to a two sided half arrow. Skew the flower to one side.
2. You can change the skewing center by clicking on the center of the selection area and dragging the center to a new location.



Saving the Design + Sending to the Machine

1. Select *File* > *Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the File Name, name the file, *Edited Design.*
4. Click on *Save*.
5. Export the file to the machine of your choice for stitching. See page 26 in this workbook.
6. Close the file by clicking on the X by the file name on the tab.

RESIZING

You can change the size of the design proportionally or disproportionally either numerically in *Tool Options* or visually by clicking and dragging. If you click and drag in the corner of the design, it will change proportionally. If you click and drag on one of the sides, the object is changed disproportionally.

If you hold the *Ctrl* key while sizing an object, the object will be sized proportionally and will snap on every 25%. If you hold the *Shift* key while resizing the corner handle, you can change the object proportionally based on the initial center of the design. If you hold the *Alt* key while sizing, you can resize the object freely

ROTATING

If you hold the *Ctrl* key while rotating, the object snaps to guidelines that appear on every 22.5°.

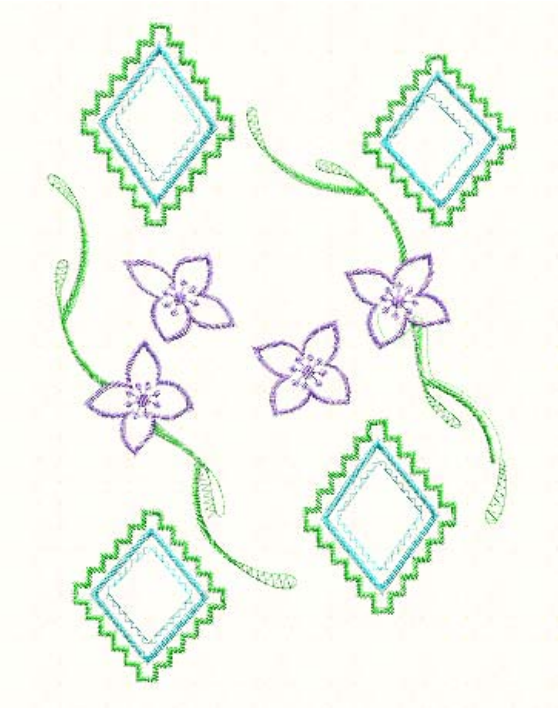
If you hold the *Alt* key while rotating, the object snaps to horizontal and vertical guidelines.

If you hold the *Shift* key down while rotating, the center of the design rotation automatically moves to the diagonal opposite of the rotation handle.

SKEWING

If you hold the *Shift* key down while skewing, the center of the design automatically is positioned at the opposite side of the direction of the skew.

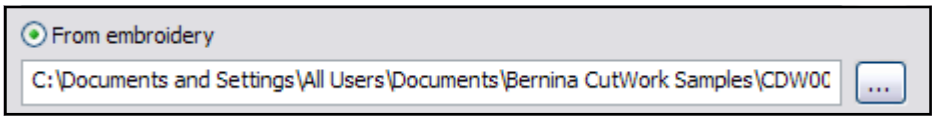
Sample 6 - Editing an Embroidery Design



Adding Cutwork to an Existing Design

Opening the Design

1. Select *File* > *New*; *Create New* is pre-selected in the wizard.
2. Click *Next.*
3. Click on the *From Embroidery* option in the Artwork Source.

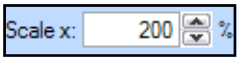


4. Click on Browse.
5. Navigate to the file, CDW0191.ngs. Click on Open.
6. From the hoop choices, select *Bernina 130 x 100 Medium #26.*
7. Click on *Next.*
8. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.

Altering the Design

1. *Edit* > *Select All.*
2. Place a check mark in front of *Proportional* in *Tool Options*.

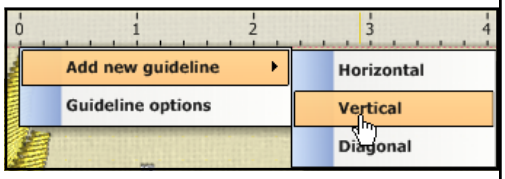
3. Change the Scale % of either the width or height to 200%. Press *Enter* to activate.



4. Select the Zoom In icon and draw a bounding box around the design.
5. Select the eyes, nose, and mouth stitches inside the sun while holding the *Shift* key and press *Delete* on the keyboard.

Adding Guidelines

1. Adding guidelines at the center of the design will help accurately add cutwork to the center of the sun.
2. Make sure guidelines and rulers are activated by going to the *View Menu.* Make sure there are checks in front of Guidelines and Rulers.
3. Right click on 0 along the horizontal ruler at the top of the design area.



4. Select *Add New Guideline* and then select *Vertical*.
5. A vertical guideline will be placed at the 0 location.
6. Right click on 0 along the vertical ruler at the left of the design area.
7. Select *Add New Guideline* and then select *Horizontal*.
8. A horizontal guideline will be placed at the 0 location.
9. Zoom in to check the accuracy of the guidelines by moving your mouse wheel away from you.
10. Move the guidelines if they don't' cross at 0,0. Rest the cursor on the guideline until you see a double pointed arrow. Move as needed.

MORE ON GUIDELINES

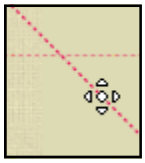
Guidelines help in aligning objects. You can add vertical, horizontal, or diagonal guidelines.

You can click on the Vertical ruler and drag the vertical guideline into the desired position.

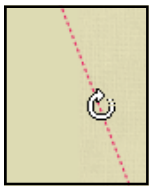
You can click on the Horizontal ruler and drag the horizontal guideline into the desired position.

Diagonal guidelines can be added by right clicking on the rulers. Select *Add New Guideline; then Diagonal.*

Reposition by clicking and dragging it from the middle.



Rotate the diagonal guideline by moving the cursor until it changes to a rotation icon; then by clicking and dragging, rotate it to the desired position.



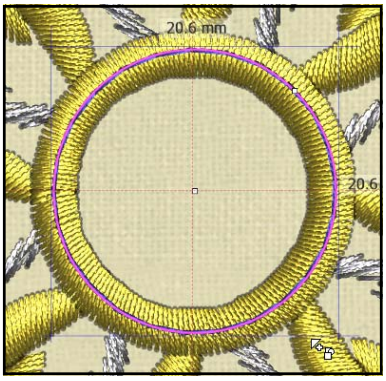
Holding the *Ctrl* key while rotating snaps the guideline on every 22.5° for precise rotations.

Note: If Guidelines are locked, you cannot move them. Right click on the ruler to access *Guideline Options*.

Adding Cutwork to an Existing Design

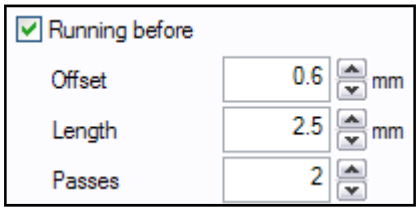
Using the Shapes Tools

1. Select the *Create Ellipse* tool.
2. If it is not visible on the Toolbar, rest your cursor on the black triangle in the corner of the visible shape and drag your mouse to select the Ellipse shape.
3. Click on the intersection of the guidelines at 0,0 and hold both the *Ctrl* + the *Shift* key to draw a perfect circle from the 0,0 location of the design.
4. When the circle is about half way into the satin stitch of the center, release the mouse; then release the *Ctrl* + *Shift* keys.



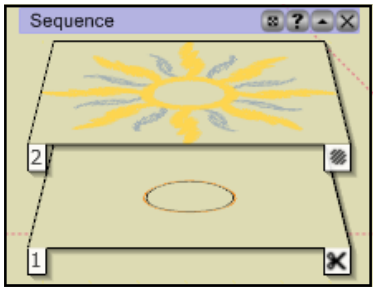
Adding CutWork

1. Make sure that *Object Properties* dialog box is visible. If it isn't go to *View* > *Toolbars* and place a check in front of *Object Properties*.
2. Select the *CutWork* icon in *Object Properties*.
3. Place a check mark in front of *Running Before* in *Object Properties*.
4. Highlight the *Offset* value; change the offset to .6mm.
5. Use the up arrow to change the number of passes to 2.



Changing the Sequence

1. If the *Sequence Manager* is not visible, go to *View* > *Sequence Manager*.
2. Notice that the embroidery design is stitching before the cutwork. We need to have the cutwork layer stitched first.
3. Select the cutwork layer and drag it into position one.



Saving the Design + Sending to the Machine

1. Select *File* > *Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the File Name, name the file, *CutWork Added.*
4. Click on *Save*.
5. Export the file to the machine of your choice for stitching. See page 26 in this workbook.
6. Close the file by clicking on the X by the file name on the tab of the design area.

CutWork Properties:

Running Before adds a running stitch to a design before cutting and stabilizes the fabric prior to cutting.

Offset: You can adjust the offset from –15 to +15 mm. A negative value results in an inner offset; a positive value results in an outer offset.

Length: Ranges from .8 mm to 99.9 mm.

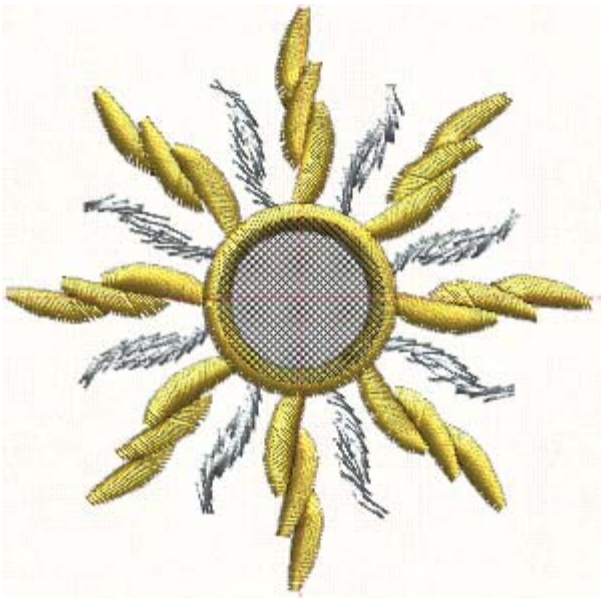
Passes: Minimum is 1; Maximum is 9.

Cutting Offset: Changes the cutting line relative to the running before outline. A positive number makes the cut outside the running outline; a negative number makes the cut inside the running outline. Range is from –15 mm to +15 mm.

Running After: This will apply running stitches after the cutwork. You may change the offset, length, and passes as above. These can be used to add decorative stitches

Styles: You can choose different types of stitches to surround the cutwork.

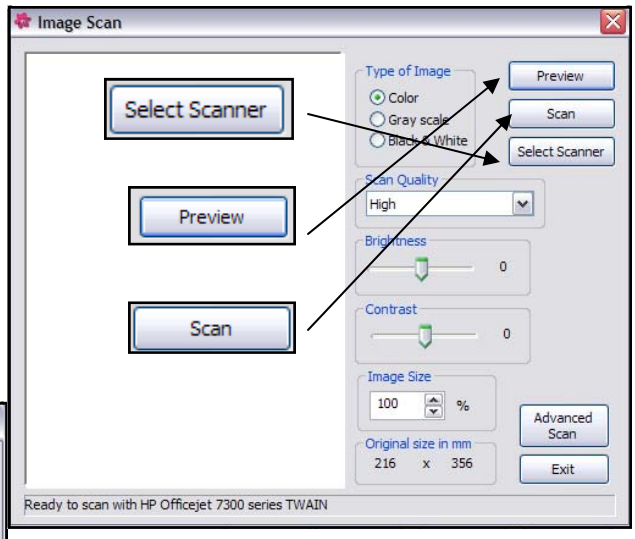
Sample 7 - Adding Cutwork to an Existing Design

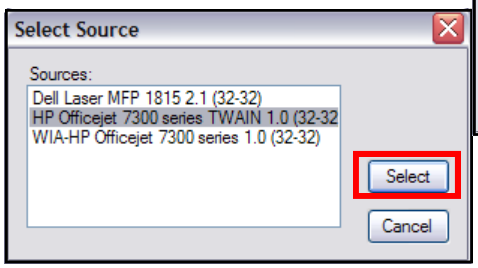


Using a Scanner to Trace a Shape

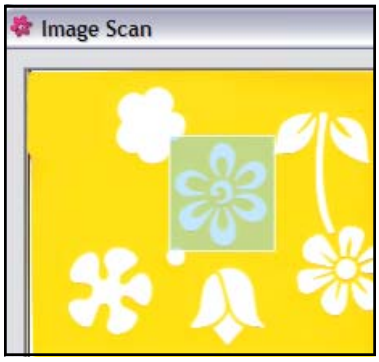
Retrieving an Image from a Scanner

1. Place a stencil on the bed of the scanner.
2. Select *File > New*. *Create New* is pre-selected in the wizard.
3. Click on *Next*.
4. Place a dot in front of "Get image from scanner."
5. Select the appropriate hoop size for your scan.
6. Click *Next.*
7. When the Image Scan dialog box opens, select the option, *Select Scanner*.
8. Highlight the source of the scan from the list and click on *Select*.



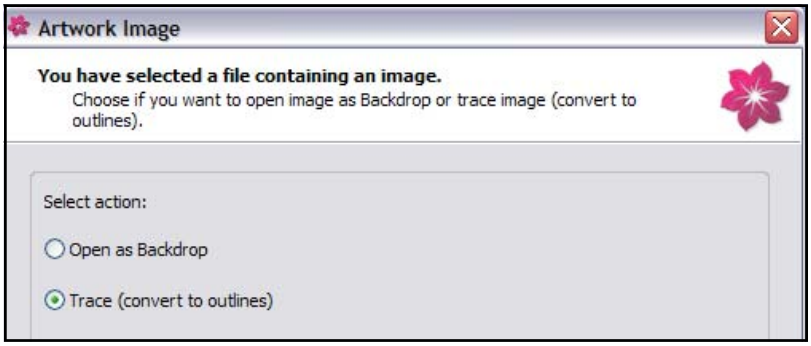


9. Click on *Preview*. This will allow you to see the image you want to scan. The design will be scanned and added to the Preview Window.
10. Click and drag a box around the part of the scan you wish to capture; then click on *Scan*.
11. When the *Save As* dialog box opens, navigate to the folder where you wish to save the scan, name the file, and click on *Save.*



Preparing the Image

1. In the *Artwork Image* dialog box that opens, select Trace (Convert to Outlines).
2. Click *Next* at the bottom of the dialog box.



Tracing an image converts the scanned bitmap to a vector image.

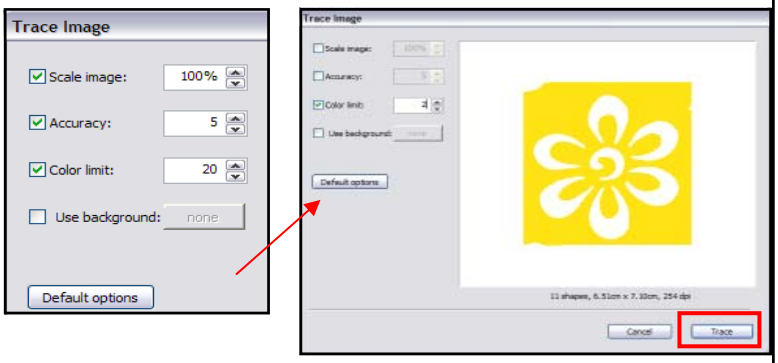
Images must be clear and outlines connected. If the image doesn't process, the image needs to be manually traced before scanning.

.

For more complicated images, it is better to open as a backdrop.

Using a Scanner to Trace a Shape

3. After the image is scanned, place a check in front of *Color Limit* and change the number to 2. (black + white) in the *Trace Image* dialog box. The image will reprocess.
4. Click on *Trace.*
5. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.

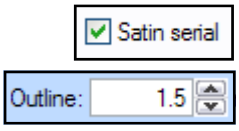


Deleting Areas

1. After processing, the design will appear.
2. A border is generally added around the design.
3. Select the border and press delete on the keyboard to eliminate the stitching around the border.
4. Delete any additional areas you wish to delete.

Adding Cutwork

1. Select the areas you wish to have cutwork. Hold down the *Shift* key to select multiple areas.
2. Click on the *CutWork* icon in *Object Properties*.
3. While these areas are selected, right click and select Combine from the menu. This will keep all the cut positions combined.
4. Place a check mark in front of Running Before. Change the Offset to .8 and the passes to 2.
5. Place a check mark in front of *Satin Serial*.
6. Change the *Outline* value to 1.5 in *Tool Options.*
7. Press *Enter* to activate the changes.



Saving the Design + Sending to the Machine

1. Select *File* > *Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the File Name, name the file, *Scanner.*
4. Click on *Save*.
5. Export the file to the machine of your choice for stitching. See page 26 in this workbook..
6. Close the file by clicking on the X by the file name on the tab of the design area.

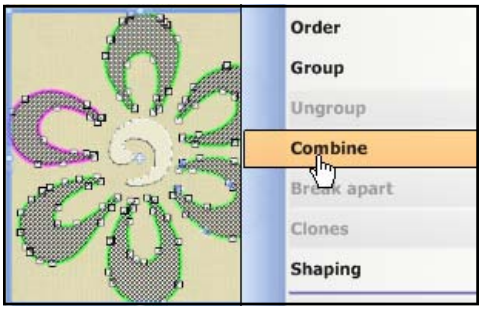
REFINING THE IMAGE

***Scale*:** Always opens at 100%, but can be changed. Place a check mark in front of *Scale Image* and then change the percent of scale. It is always a proportional scaling.

Accuracy: Affects the detail in the design. 8 is the highest degree of accuracy; 1 is the lowest. Changes are updated in the *Preview* window.

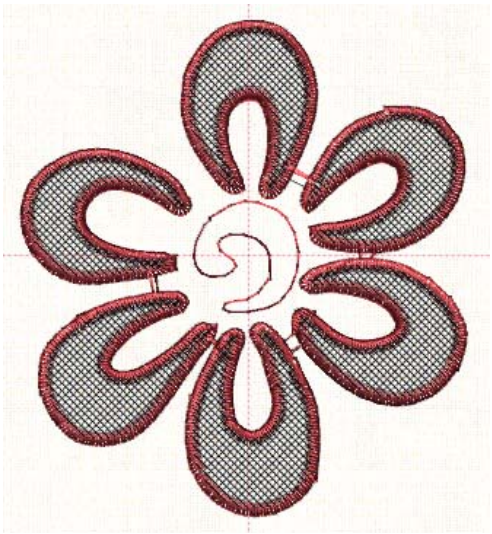
Color Limit: Affects the number of thread colors. 20 is maximum. This does affect the way that the bitmap will be converted.

Use Background: You can make a color that you choose from the Preview area transparent. This removes the color from the Bitmap image. Place a check mark in the field; then move the mouse to the Preview area. The mouse changes to an eyedropper. Select the color you wish to change; it automatically becomes transparent. Only one color can be made transparent.



A traced design must be edited to prepare it for embroidery. See p. 57 of this workbook for information on editing nodes. Also, look at Help > Help Topics> Editing Nodes.
Zoom in to see if your design needs to be edited.

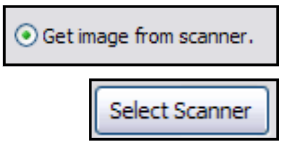
Sample 8 - Using a Scanner to Trace

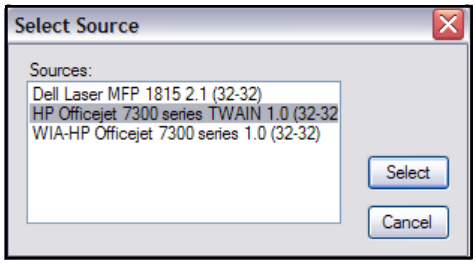


Using a Scanner for the Backdrop

Retrieving an Image from the Scanner

1. Draw a straight line shape on a piece of paper with a pen and a ruler.
2. Place the paper on the bed of the scanner.
3. Select *File* > *New*. *Create New* is pre-selected in the wizard.
4. Click on *Next*.
5. Place a dot in front of "Get image from scanner."
6. Select the hoop size that is appropriate for your drawing.
7. Click *Next.*
8. When the Image Scan dialog box opens, select the option, *Select Scanner*.
9. Highlight the source of the scan from the list and click on *Select.*





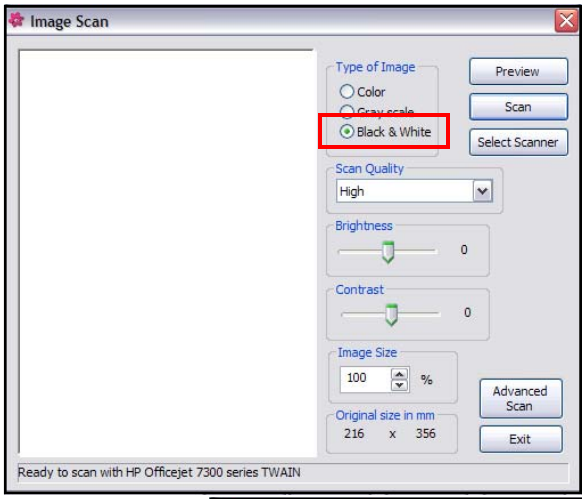
10. Place a radio dot in front of *Black & White* in Type of Image.
11. Click on *Preview*. This will allow you to see the image you want to scan. The design will be scanned and added to the Preview Window.
11. Click and drag a box around the part of the scan you wish to capture in the *Image Scan* dialog box; then click on *Scan*.
12. When the *Save As* dialog box opens, navigate to the folder where you wish to save the scan, name the file, and click on *Save*.

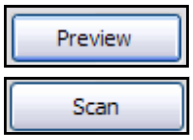
Preparing the Image

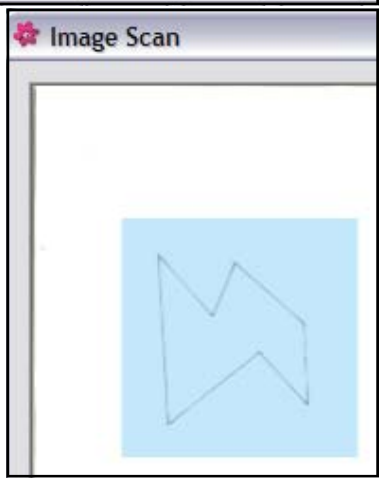
1. In the *Artwork Image* dialog box that opens, select *Open as Backdrop*.
2. Click *Next.*
3. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.

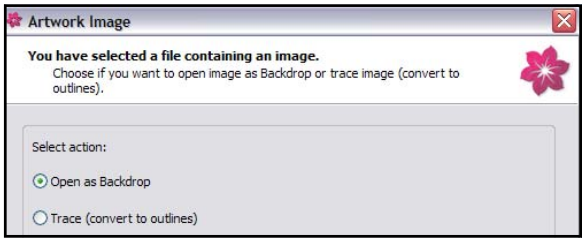
USING IMAGE AS BACKDROP

When you elect to *Open as a Backdrop,* the image will be imported in the software so you can manually draw your embroidery or cutwork design. This is a good option for complex images that cannot easily be traced.

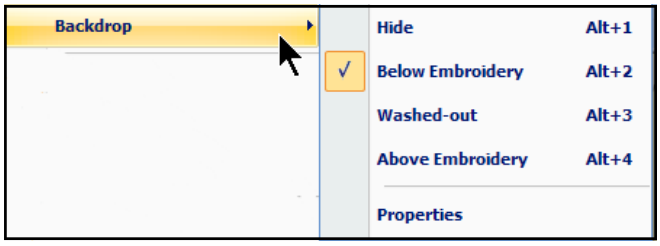






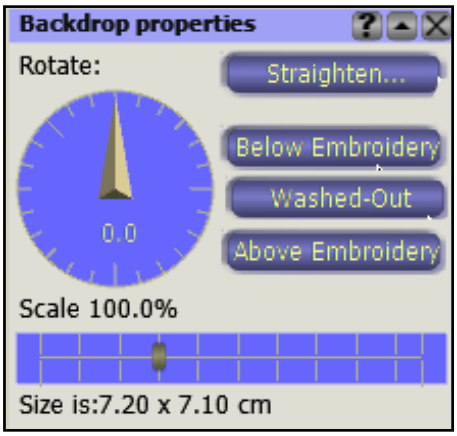


Using a Scanner for the Backdrop



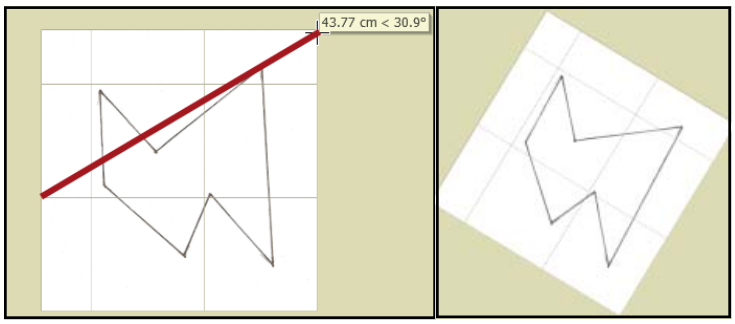
View Menu Options for the Backdrop

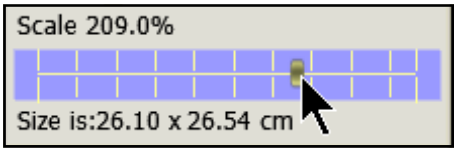
- Hide: Hides the imported backdrop.
- Below Embroidery: Backdrop is below the design you create.
- Washed Out: The backdrop color will be washed out.
- Above Embroidery: Backdrop appears above the design you created.



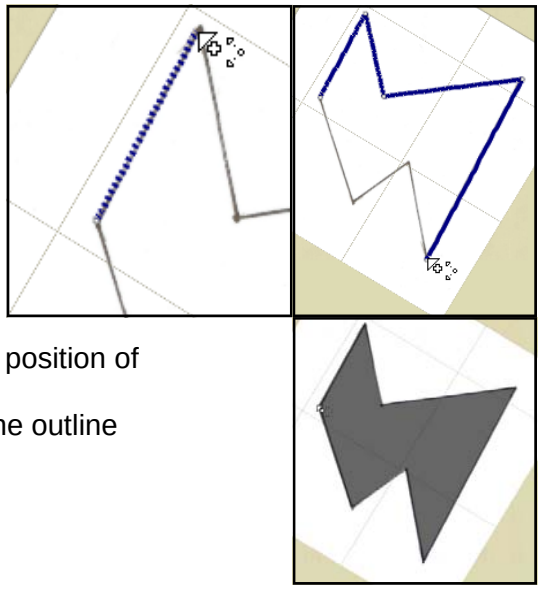
Backdrop Properties

- Go to *View* > *Backdrop* > *Backdrop Properties*.
- Ways to alter the backdrop include:
    - Straighten: Select Straighten; click on the image and drag a line you wish to use for alignment.
    - Image will rotate based on the line you drew.





    - Scale: Click and drag on the slider bar to increase or decrease the size of the bitmap.
    - Rotate: You can rotate the image by clicking and dragging on the arrow on the rotate wheel. The default is the zero position.
    - Close the dialog box by clicking on the "x."



Drawing the Shape with the Bezier tool

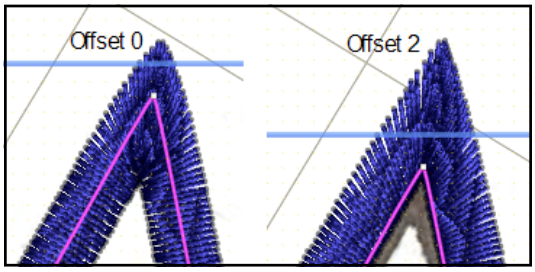
1. Select the *Create Bezier Shapes* icon.
2. Click on each point of the design to draw a straight line.
3. If you wish to delete one click, select the *Backspace* key.
4. Click all around the design and the final click will be at the position of the first click.
6. When the design is completed, the enclosed area within the outline will turn dark.

Using a Scanner for the Backdrop

Altering the Properties

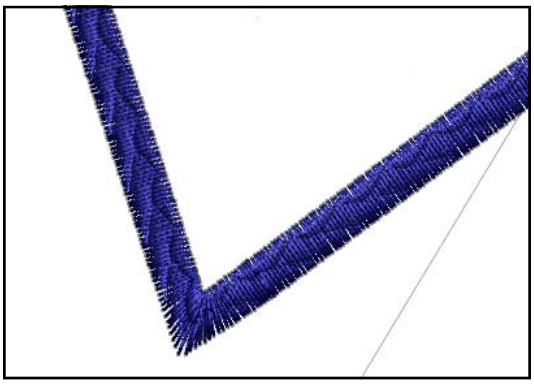
1. Press the space bar on the keyboard to toggle to the *Rectangle Selection tool.*
2. You may now add cutwork, running stitches, decorative stitches, or appliqué to the drawn shape.

3. For this exercise, select *Satin Serial* in *Object Properties*.
4. Place a check in front of *Offset.* Change the value to 2 mm. A positive offset moves the satin stitch beyond the drawn vector line. Press *Enter* to activate.



5. If the *Tool Options* dialog box is not visible, select *View* > *Toolbars* and place a check mark in front of *Tool Options*.
6. Change the *Outline* value to 4 mm. Press *Enter* to activate.
7. In *Object Properties*, change the Pattern of the satin serial type to Wool.

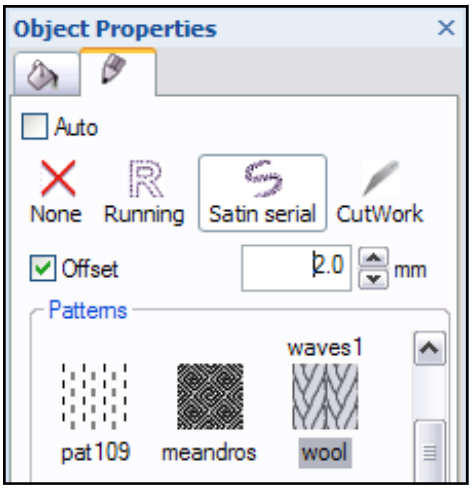
8. Zoom in to see the design created within the satin stitch.



Saving the Design + Sending to the Machine

1. Select *File* > *Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the *File Name*, name the file, *Bezier Tool.*
4. Click on *Save*.

5. Export the file to the machine of your choice for stitching. See page 26 of this workbook.
6. Close the file by clicking on the X by the file name on the tab of the design area.



MORE ON SATIN SERIAL

Patterns: The width of the stitch must be changed to see the pattern changes. "None" within the patterns restores to a regular satin stitch.

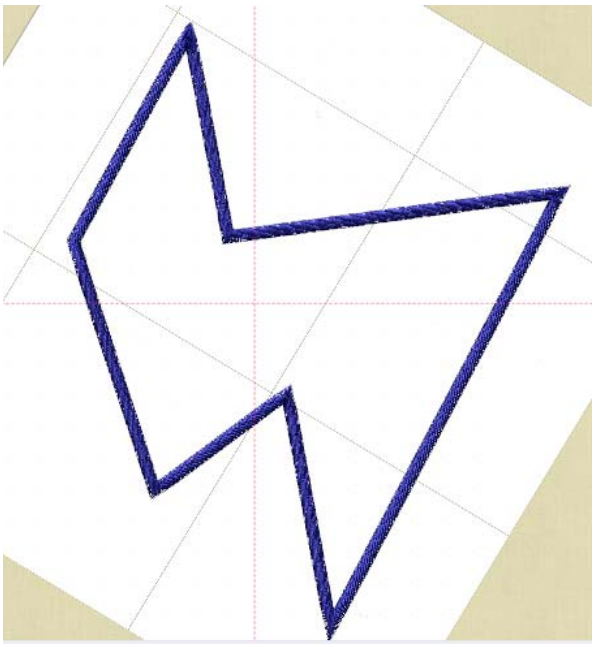
Offset: Activate the offset by placing a check mark in front of it. You can change the offset of the satin stitch from –15 mm to + 15 mm.

Underlay: Underlay is automatically added and the software selects the appropriate type for you. If you wish to change the type of underlay, you may place a checkmark in the field and select from nine types.

Density: You can change the density of the stitch by placing a check mark in the field and changing the value. Select *Enter* to activate.

Compensation: The default pull compensation depends upon the fabric you selected in the wizard. The compensation can be changed by checking the field and changing the value. The range is from 0 mm to 2 mm. The entered value changes the width of the stitch.

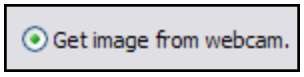
Sample 9 - Using a Scanner for Backdrop



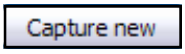
Using a Webcam to Create a CutWork Design

Retrieving an Image from the Webcam

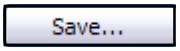
1. Place the item you wish to capture under the web-cam.
2. Select *File* > *New*. *Create New* is pre-selected in the wizard.
3. Click on *Next*.
4. Place a dot in front of *Get image from webcam*.



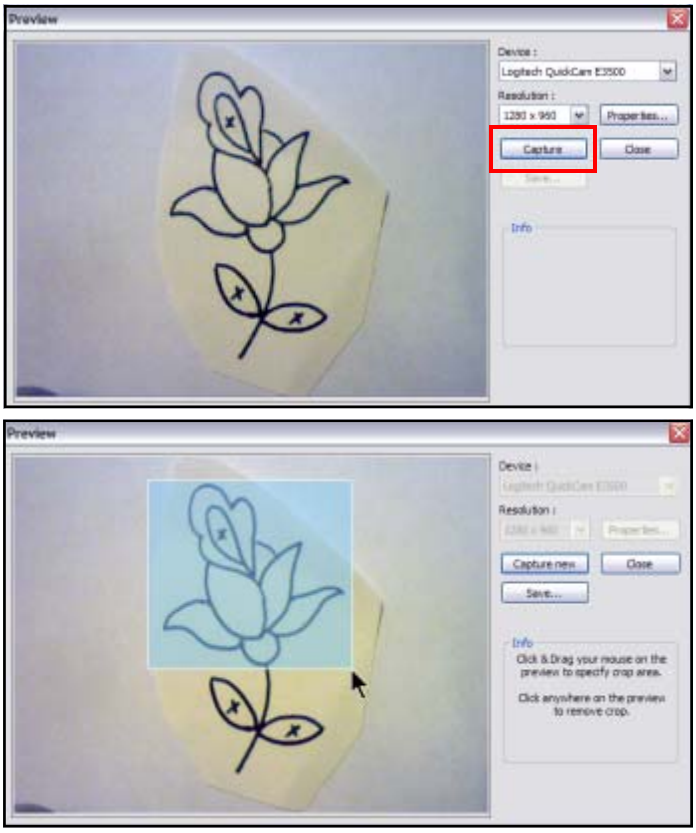
5. From the hoop choices, select *Bernina 255 x 145 Large Oval #26.*
6. Click *Next.*
7. A Preview window opens. Click on *Capture*.
8. If you wish to capture a different image you can click on *Capture New,* which will be shown in the dialog box.



9. Click and drag your mouse to crop the capture.
10. When you are satisfied with the capture, click on *Save*.

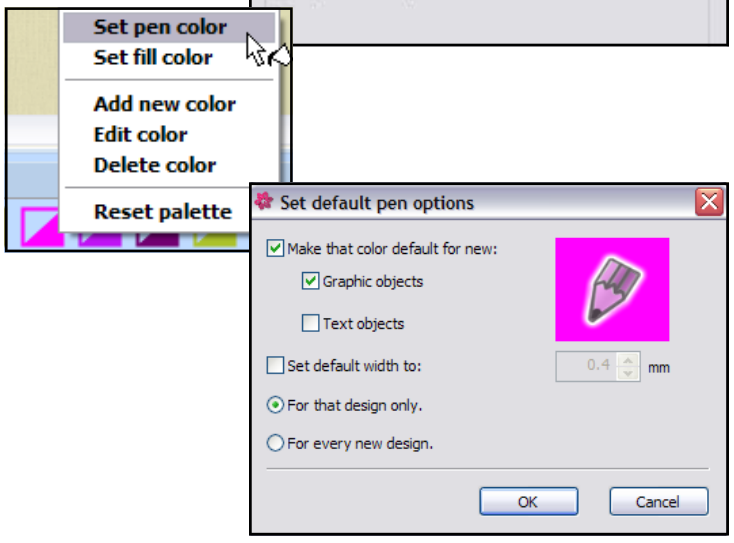


11. Navigate to the location where you wish to save the capture, name the file, and save the bitmap.
12. The Artwork Image dialog box opens and you can choose between *Open as Backdrop or Trace* (convert to outlines).
13. Choose *Open as Backdrop*.
14. Click *Next.*
15. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.



Setting the Pen Color

1. Choose the pen color prior to drawing.
2. To set the pen color, right click on the *Thread Palette* color you wish to use.
3. Select “Set pen color” from the list of options.
4. Choose *For that design only.*
5. Click *OK* to activate the change.

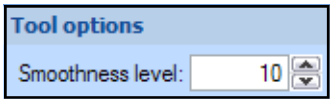


Using a Webcam to Create a CutWork Design

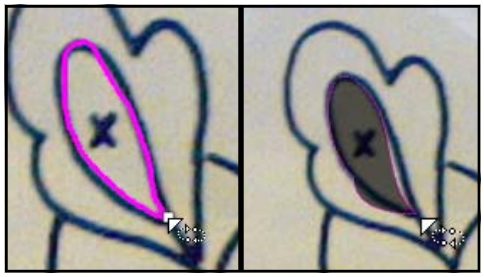


Using the Create Freehand Shapes Tool

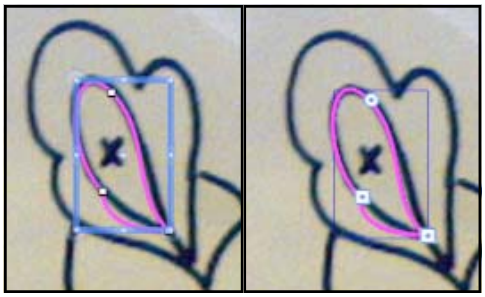
1. Turn off *Auto Sequence*.
2. Click on *Zoom In* icon and drag a bounding box around the part of the design you wish to start with.
3. Select the *Create Freehand Shapes* tool.
4. Set the *Smoothness Level* in *Tool Options* to 10. This makes the lines you draw smoother, with fewer nodes.



5. Click and drag a line around the first area of the design. When the mouse is released, the line will automatically be smoothed and a shadow will appear around the enclosed area.



6. Press the space bar key and the area will become selected.
7. Select the *Edit Shape Nodes* icon.
8. Edit the area as necessary.



9. To reselect the area, press the space bar.
10. You can add cutwork or change the type of stitch as you draw or after you draw all the areas.

CREATING TIPS

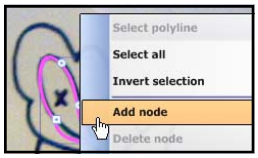
It is best to draw in the order you wish to have the design stitch, so you may wish to number the order on a paper copy of the design. Work from background to foreground.

EDITING NODES

Select a node by clicking on it. It turns blue. See more information on selecting and editing nodes in the *Help* menu.

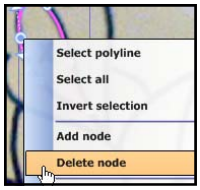
To add a node:

Right click on the line where you wish to add the node and select *Add node* or simply double click on the position. A smooth node is always added.



To delete a node:

Right click on the node and select *Delete node* or select the node and press delete.

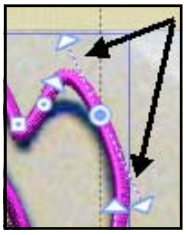


To change a node:

Select the node you wish to change, right click and select the opposite type from the menu. A smooth node creates curves; a cusp node creates points and straight lines.

To move a node: Select the node and drag it into a new location.

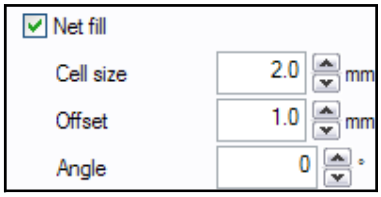
To reshape the outline, you may also change the direction or shorten/lengthen the control handles.

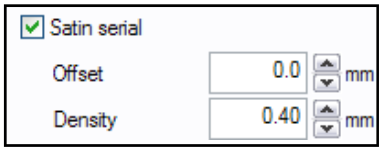


Using a Webcam to Create a CutWork Design

Adding Cutwork + Net Fill

1. Cutwork is added to the center of the rose by clicking on the *Cutwork* icon in *Object Properties*.
2. Place a checkmark in front of *Running Before*.
3. Highlight the value in the *Offset* field and change the value to .8.
4. Press *Enter* to activate.
5. Place a check in front of *Net Fill* and stitches will be added across the cutwork area. You can change the cell size and the angle if you wish.
6. Make sure you **always** change the offset so that the net fill will grab the cut fabric edge. Change the *Offset* to 1.
7. Add a satin serial stitch around the cutwork area by placing a check mark in front of *Satin Serial* in *Object Properties*.
8. Change the Outline width in *Tool Options* to 2.5.





NET FILL PROPERTIES

Cell size: Range is from .5mm to 9.9 mm.

Offset: You can specify the distance from –15 to + 15 mm. A negative number will be inside the object; a positive number outside the object.

Angle: You can change the value between 0 and 360°.

SATIN SERIAL PROPERTIES:

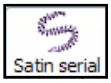
Offset: The range is from -15 mm to +15 mm.

Density: You can also change the density of the satin serial stitch. Range is from .2 to 9.99.

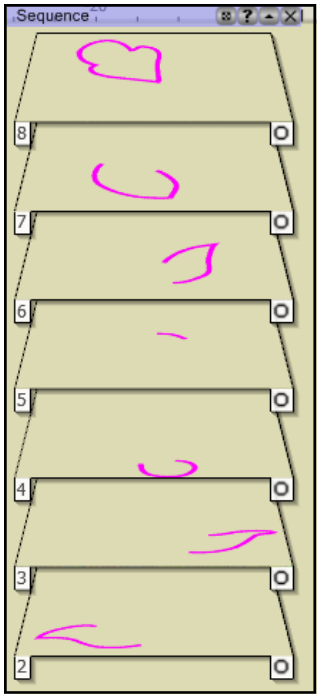
Use the arrows or change the value in the box and press Enter to activate or click inside the field and use your mouse key to change the value.

Completing the Design

1. Continue to draw the design with the *Freehand* tool, working from back ground to foreground.
2. Edit the shape of the design as necessary. See previous page on how to edit the nodes.
3. Select each of the outline stitch layers in the *Sequence Manager* while holding the *Shift* key.



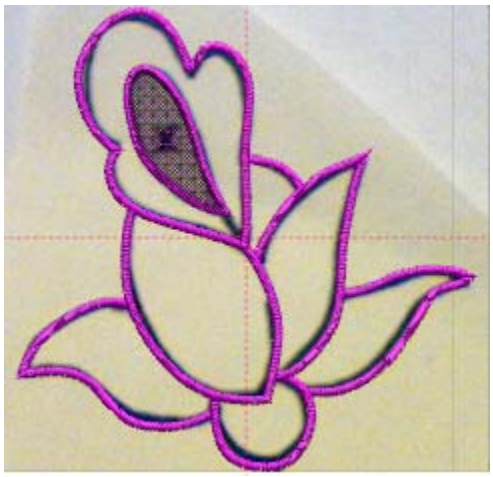
4. Change them all to *Satin Serial* by clicking on that icon in the *Object Properties* box.
5. Change the width of the satin stitch to 2.5 in *Tool Options* > *Outline*.
6. You can also change the density of the satin stitch in Object Properties.
7. You may find that more editing will need to be done after applying the satin stitches.



Saving the Design + Sending to the Machine

1. Select *File* > *Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the *File Name*, name the file, *Webcam CutWork.*
4. Click on *Save*.
5. Export the file to the machine of your choice for stitching. See page 26 of this workbook.
6. Close the file by clicking on the X by the file name on the tab of the design area.

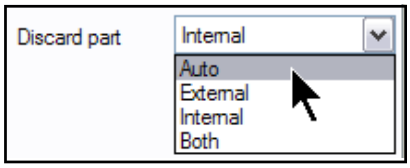
Sample 10 - Using a Webcam to Create Cutwork

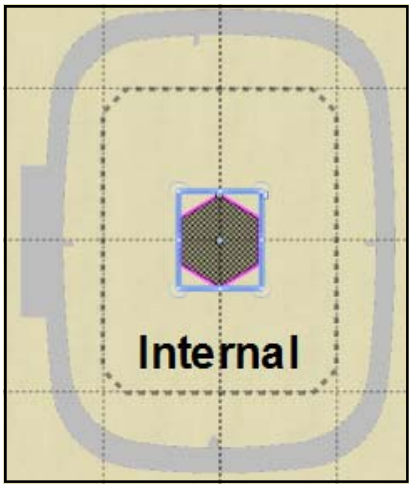


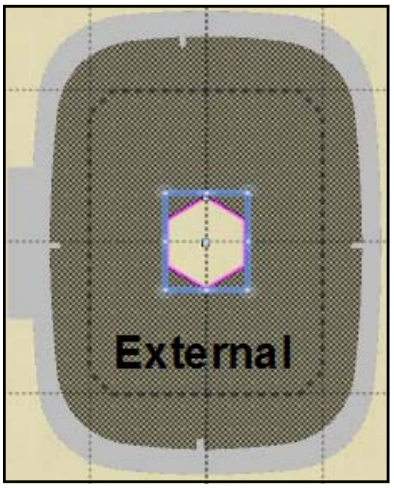
More About CutWork

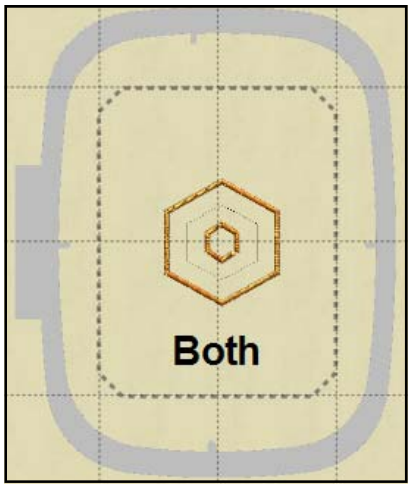
Discard Part

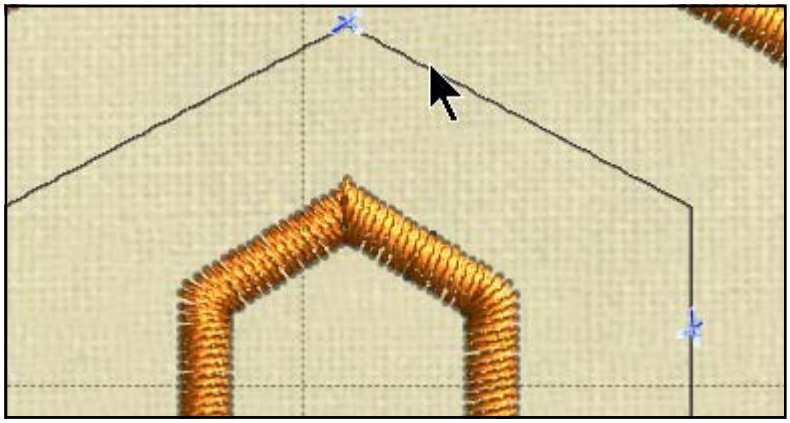
- Auto: The software automatically decides which part will be discarded.
- Internal: The fabric inside the outline will be removed.
- External: The fabric outside the outline will be removed.
- Both: The netting background disappears and only a small pair of scissors appears when you rest your cursor on the outline.







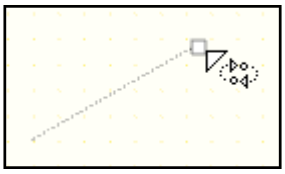




Note: To always show the netting area that is to be discarded, go to *Tools* > *Options* > *View tab.* Place a check in front of *Useful area always visible*. Otherwise the netting only appears when the mouse is over the cutwork object.

Freehand Tool

Creating Shapes & Lines



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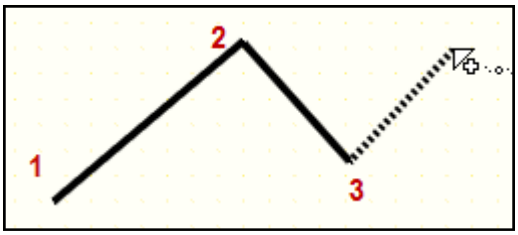
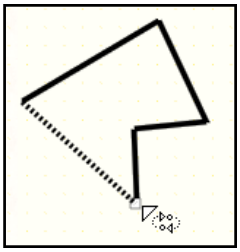
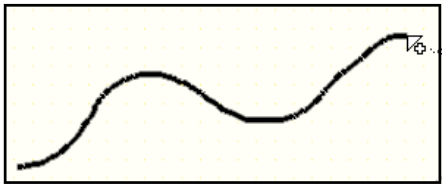


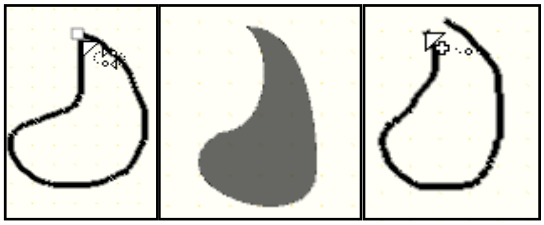
To draw a straight line, click once at position one, move your mouse to the next position, click again. If you wish to continue the line, small square appears at the end of the line segment just drawn, click at position 2 on the square, move the mouse to the next position and click again. Continue to complete the line segments, beginning at the square each time. End your shape by right clicking.



To draw an enclosed shape, repeat the process, except place the last click at the position of the first click.

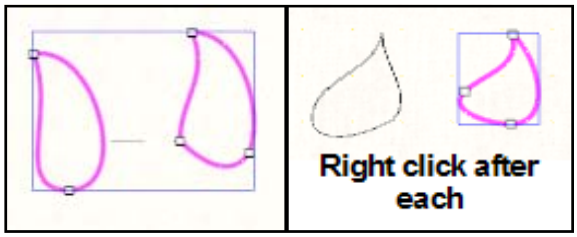


To make freehand shapes, simply click and drag the mouse to make the shape you wish to make.



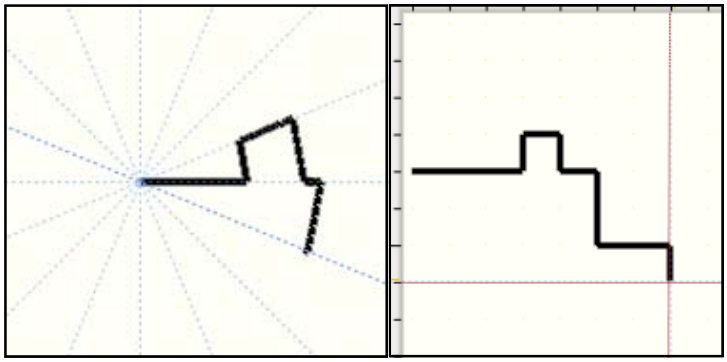
To enclose the shape, end at the same point you started. The square symbol will display and then the shape will be filled in. If it doesn't fill in; then the shape will be an open shape.

Multiple Shapes



If you draw more than one object, you must right click to end the object or all the drawn objects will be grouped.

Special Keys



Shift Key: Hold down this key when drawing to make smoother curves.

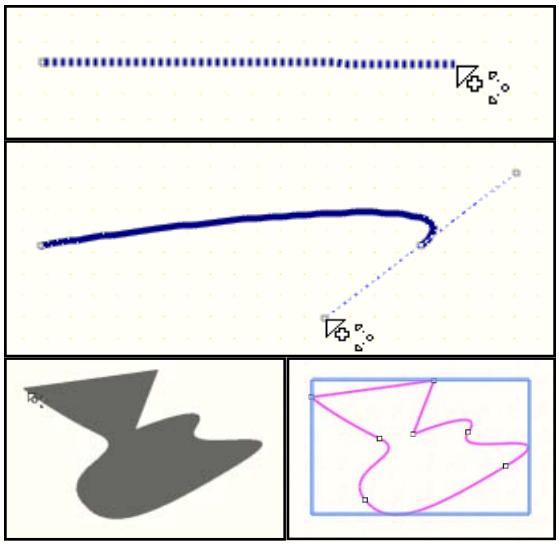
Ctrl Key: Hold down the control key for diagonal guidelines 22.5° apart. The line will snap to the closest guideline.

Alt Key: Vertical and horizontal guidelines appear on the X and Y axis.

Backspace Key: Erases a node at a time.

The Bezier Tool

Creating Shapes & Lines
With this tool, you can trace shapes that are scanned in as background images or create your own design. You draw the object in segments and you can use curved or straight lines. Each segment can be adjusted with the control handles of each node. Right click to set the shape.

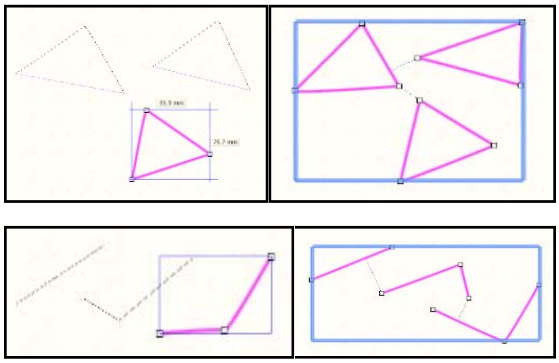


To draw a straight line: Click on the design area and move to the next position and click again. A straight line is created.

To draw a curved line: Click on the design area and move to the next position, click and drag. Use the control handles to drag the curve as needed. Release the mouse when it is in the desired position.

To create a closed shape, connect the last node with the first one. The shape will fill in with a shadow and that way you will know that it is an enclosed shape. Hit the space bar to select the shape.

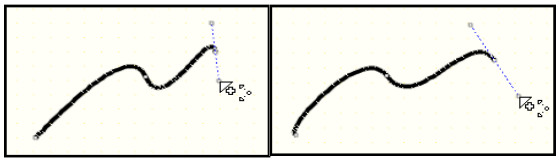
Creating Multiple Shapes
If you are creating multiple enclosed shapes for a design, right clicking once after enclosing the object will keep the objects as separate objects and different stitch properties can be applied to each object. Moving to a new location to create subsequent objects without right clicking will keep then grouped.



For line art object, right click twice to create separate objects and right click only once to keep them grouped.

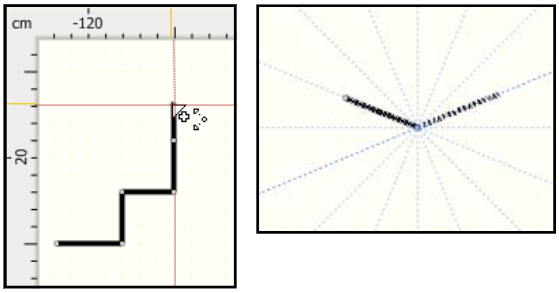
Grouped objects can be broken apart by selecting them and right clicking to select Break Apart from the menu.

Using Special Keys to Draw
Shift Key: Holding the shift key as you move the control handle of a node allows you to move the position of the node. Release the shift key and you can then use the control handles to shape the curved line.



Alt Key: Holding the Alt key while drawing will show vertical and horizontal guidelines on the X and Y axes and the line will snap to the closest intersection.

Ctrl Key: Holding the Ctrl key while drawing will show diagonal guidelines on every 22.5° of the x and y axis. The drawn line will snap to the guideline.

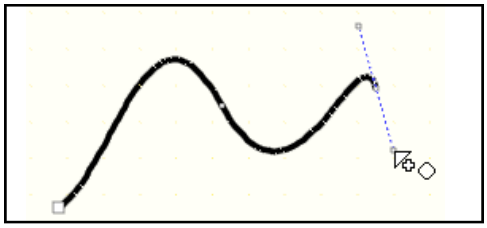


The Create Outline Tool

The Create Outline Tool is similar to the Bezier tool, but the lines created by default are curve based. You alter the curves of the segments with the control handles of the node.

Creating Shapes & Lines

To create a curved line, click in the design area; then move the mouse to the next area and click and drag to reveal the control handles of the next node. Release the mouse to set the node and continue to draw.



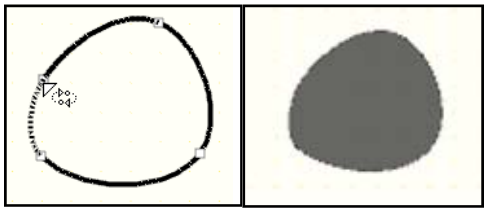
To draw a straight line, click, hold the Shift key down and click at the next location.

To create a closed node, click on position of the first node.

To end the shape, right click once and move to the next position.

Creating Multiple Shapes

If you are creating multiple enclosed shapes for a design, right clicking once after enclosing the object will keep the objects as separate objects and different stitch properties can be applied to each object. Moving to a new location to create subsequent objects without right clicking will keep then grouped.



For line art object, right click twice to create separate objects and right click only once to keep them grouped.

Grouped objects can be broken apart by selecting them and right clicking to select Break Apart from the menu.

Special Keys

The backspace key erases the last node created. You can use the backspace key more than once to erase more nodes.

Diagonal guidelines will appear every 22.5° when you draw while holding the Ctrl key. Lines will snap to the closest guideline.

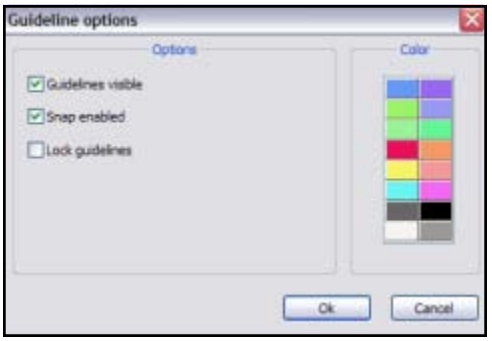
Holding the Alt key will show horizontal and vertical guidelines as you draw and the line will snap to the ruler when the grid is enabled under the View menu.

After inserting a node, if you hold the Shift key down, you can move the last node. Don't hold it before you insert a node, or you will get a straight line.

Create a Design using the Create Shape Tools

Opening the Design Screen

1. Select *File > New*.
2. *Create New* is pre-selected in the wizard.
3. Click on *Next*.
4. Place a dot in front of *New Graphic*.
5. From the hoop choices, select *Bernina 255 x 145 Large Oval #26.*
6. Click on *Next.*
7. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.
8. The blank designing screen opens.



Adding Guidelines

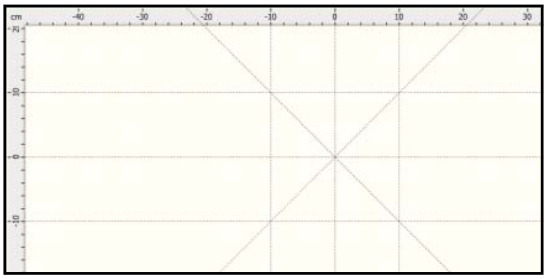
1. Right click on either the horizontal or the vertical ruler and select *Guideline Options*.
2. Select red from the available choices.
3. Make sure *Guidelines Visible and Snap Enabled* are activated and *Lock Guidelines* is disabled.
4. Click *OK*.
5. Review the information on page 44 of the this workbook. If you right click on the ruler, you have options for horizontal, vertical, and diagonal guidelines.
6. Add guidelines at -10, 0, and +10 on both the vertical and the horizontal axes.
7. Add two diagonal guidelines crossing at 0,0. Rotate and move the guideline so the two diagonals cross at 0,0 and intersect with the corners of the vertical and horizontal guidelines. (see below)
8. You may wish to zoom in to check for accurate placement of the guidelines.
9. After placing the guidelines, reopen *Guideline Options* and place a check mark on *Lock Guidelines*; select *OK.*

More About Guidelines:
Snap enabled allows the objects of a design to align automatically to a guidelines.

Lock guidelines is useful after you get them in place so you don't accidently move them.

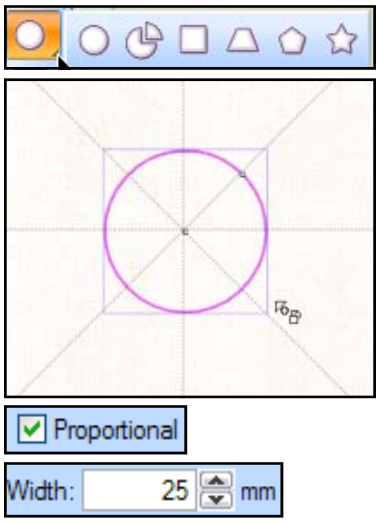
Double clicking on a color chip will open a Color dialog box and you can choose from additional colors.

Learn more in *Help* under *Working with Guidelines*.



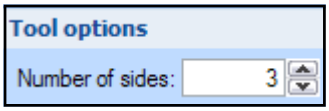
Using the Create Shape Tools

1. By resting your cursor on the *Create Shape* icon on the lower right hand corner, all the shape tools will be shown.
2. Select the *Ellipse* tool by dragging the mouse to the circle.
3. Hold the *Shift* + *Ctrl* key down and click at the 0,0 intersection and draw a circle by dragging your cursor. Don't worry about the size of the circle.
4. After the shape is drawn, press the space bar, open *Tool Options*, make sure Proportional is checked, and change the value of the X or Y to 25 mm.
5. Press *Enter* to activate the change.



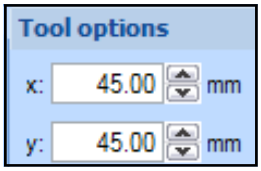
Create a Design using the Create Shape Tools

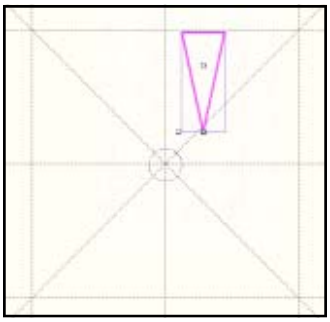
Adding More Shapes

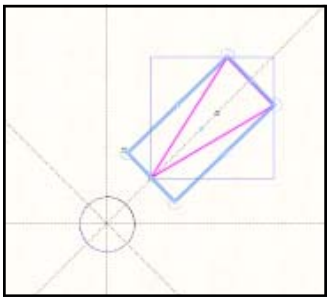


1. Select the *Create Polygon* icon.
2. In *Tool Options*, change the number of sides to 3.
3. Click and drag to form the triangle from the circle up; don't worry about exact placement at this time.
4. Press the space bar to select the triangle.

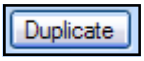
5. Enter -45 in the *Rotate* field. Hit *Enter.*
6. Click on the outline of the object, hold the *Ctrl* key and drag into place. By holding the Ctrl key, the triangle will snap into place on the diagonal guideline.
7. In *Tool Options*, change the value of the X and the Y to 45. Hit *Enter.*



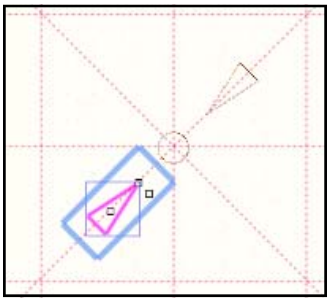




Making Copies and Aligning

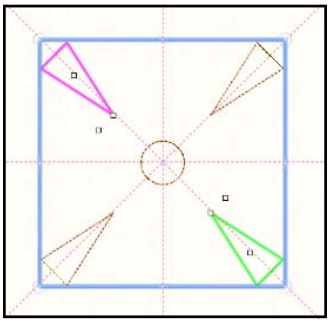


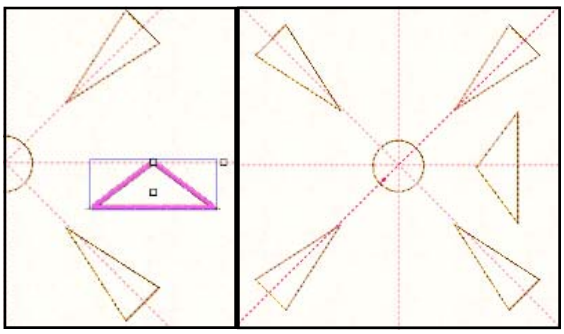
1. Click on *Duplicate* in *Tool Options*.
2. Click on *Mirror X and Mirror Y.*
3. Change the value of the X axis to -45 and the value of the Y axis to -45. Press *Enter* to activate.
4. While holding the *Shift* Key down, select both triangles, click on *Duplicate*, and enter 90 in the *Rotate* field.
5. Hit *Enter.*



Adding Another Shape.

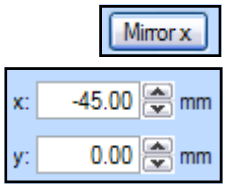
1. Select the *Create Polygon* icon once again. Notice how it remembers how many sides you last used.
2. Draw another triangle. Again, don't worry about placement, but draw from the horizontal guideline down to the right of center.
3. Press the space bar to select the triangle.
4. Enter -90 in the Rotate field. Hit *Enter.* Notice how this value rotated the triangle in the wrong direction.
5. Select *Edit > Clear Transformation*. This is a special undo for objects.
6. Enter 90 in the *Rotate* Field. Hit *Enter*.
7. In *Tool Options*, change the value of X to 45; the Y to 0.
8. Press *Enter* to activate the changes.
9. Select the triangle, click on *Duplicate.*

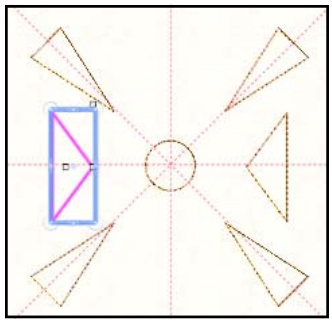


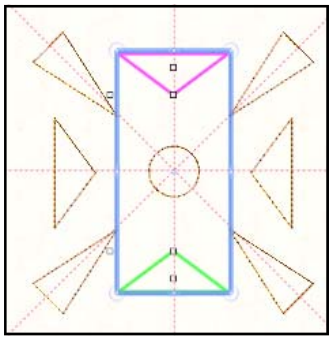


Create a Design Using the Create Shape Tools

9. Click on *Mirror X.*
10. Enter -45 for the X axis; 0 for the Y.
11. Press *Enter* to activate.
12. Hold the *Shift* key and select the two new triangles.
13. Select *Duplicate*.
14. Enter 90 in the *Rotate* field and *Enter* to activate.

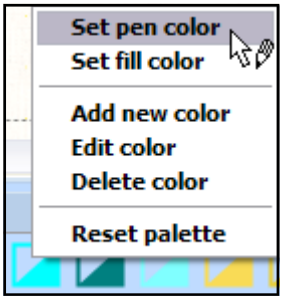


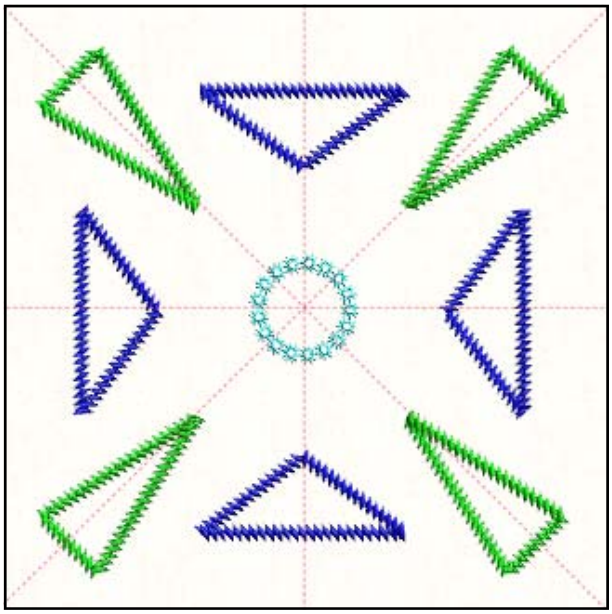




Changing the Stitch Types and Colors

1. Select the center circle and from *Object Properties*, select stitch #20.
2. While the circle is selected, select *Edit > Invert Selection.* This selects everything except the circle.
3. Select stitch #109.
4. Select the center circle.
5. Right click on the color you wish to make the center and select *Set Pen Color* from the choices.
6. Select the vertical and horizontal triangles while holding the *Shift* key.
7. Left click on the color you wish to change the triangles. Make sure you click on the upper left triangle of the color chip to change the outline color.
8. Select the diagonal triangles by holding the Shift Key and click on a color from the *Thread Palette*.

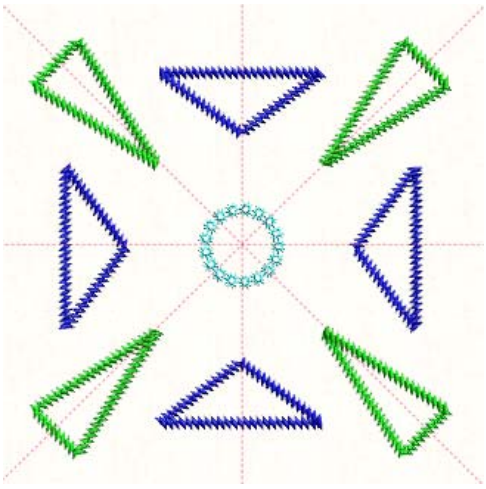




Saving the Design + Sending to the Machine

1. Select *File* > *Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the *File Name*, name the file, *Create with Shapes.*
4. Click on *Save*.
5. Export the file to the machine of your choice for stitching. See page 26 in this workbook.
6. Close the file by clicking on the X by the file name on the tab of the design area.

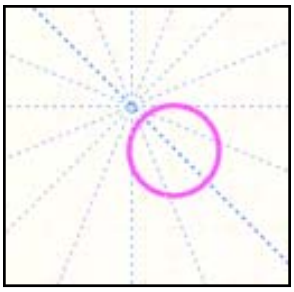
Sample 11 - Create a Design Using Shape Tools

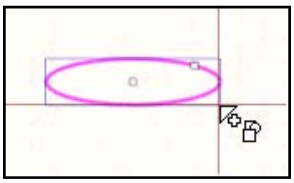


More on Create Shapes Tools

Drawing Ellipses and Circles

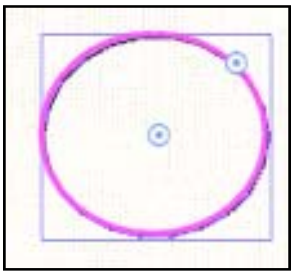
- Select the tool; then click and drag to draw the shape.
- Hold the Ctrl key while drawing to reveal diagonally guidelines every 22.5° Clicking and dragging diagonally will draw a circle. The object will snap to the guidelines. Release the mouse before releasing the Ctrl key.
- Hold the Alt key and draw to reveal horizontal and vertical guidelines. The ellipse will snap to the guidelines.
- Hold the Shift key and draw the ellipse center from the point where you started to draw.
- You can also hold both the Ctrl + Shift key to draw a perfect circle from the point where you started to draw.
- While drawing any shape, right click before releasing the left click and drag it into a new position.





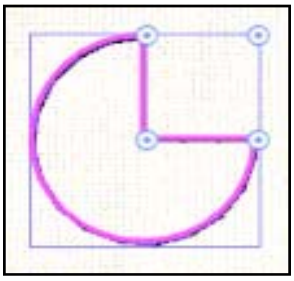
Editing Ellipses and Circles

- Select the *Edit Shape Node* icon.
- The center handle moves the ellipse or circle.
- The outside handle will change the size of the circle or ellipse. You must hold the Ctrl key to maintain the circle shape. Hold the Shift key to change the size while maintaining the center point.



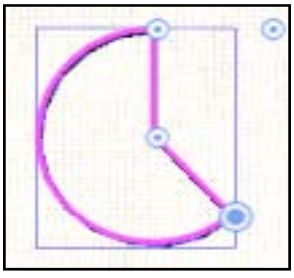
Drawing Pie Shapes

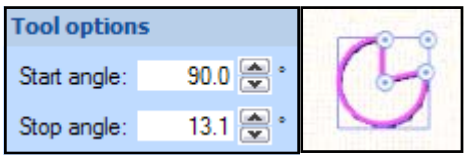
- Select the tool; then click and drag to draw the pie shape.
- Ctrl, Alt, and Shift keys work in the same way as for the ellipse. For example, the Ctrl key will draw a pie shape that is based on a circle.

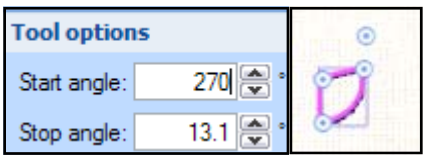


Editing Pie Shapes

- Select the *Edit Shape Node* icon. Four handles appear.
- The center handle will move the pie.
- The vertical or horizontal handle will change the shape of the pie by increasing or decreasing the opening of the pie. Holding the Ctrl key while dragging snaps the position to a diagonal guideline.
- The corner handle will change the size of the pie. You can use this in conjunction with Ctrl, Alt, or Shift key.
- You can change the Start + Stop angles of the pie shape in Tool Options.

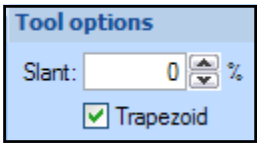




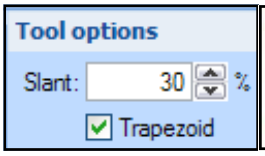


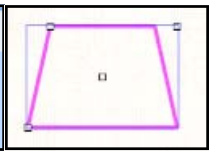
More on Create Shapes Tools

Drawing Trapezoids and Parallelograms

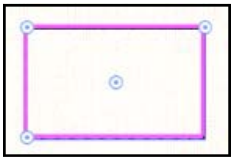


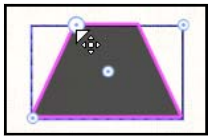
- Select the tool; then click and drag to form the shape. The first time you use the tool, it will draw a rectangle that you can edit.
- In *Tool Options*, the Slant value will be zero. You can change the slant value from 0 to 100. A value of 100 forms a triangle.
- Changing the value of the slant, changes the rectangle to a trapezoid. Press enter to activate the change.

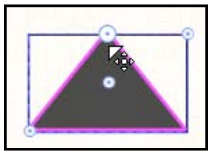


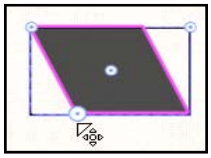


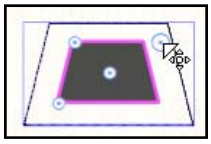
Editing Trapezoids and Parallelograms





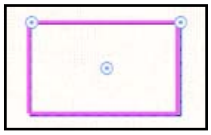






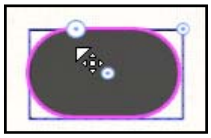
- Select the *Edit Shape Node* icon. Four handles will appear.
- The center handle will move the shape.
- By clicking and dragging the top left corner to the right, the rectangle changes to a trapezoid shape.
- By clicking and dragging the top left corner to the center, a triangle can be formed.
- By clicking and dragging the lower left corner, the rectangle is transformed into a parallelogram. You can also toggle between trapezoid and parallelogram by checking/un-checking the Trapezoid option in *Tool Options.*
- By clicking and dragging the top right corner, you can change the size of the object.
- Ctrl, Alt, and Shift keys have the same functionality as described earlier.

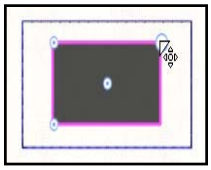
Drawing Rectangles & Squares

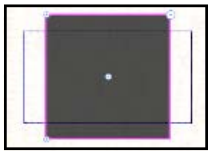


- Select the tool; then click and drag to form the shape.
- By holding the Ctrl key and dragging diagonally, you can draw a square.
- Ctrl, Alt, and Shift keys have the same functionality as described earlier for guidelines and center points.

Editing Rectangles & Squares





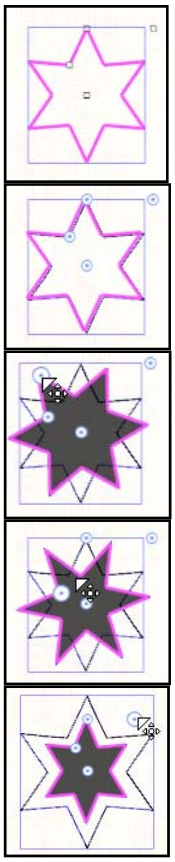


- Select the *Edit Shape Node* icon. Three handles will appear.
- The center handle will move the shape.
- By clicking and dragging the left handle, the corners of the object will round. You can also adjust the roundness of the corners in *Tool Options*. The value can range from 0 to 100.
- By clicking and dragging the right corner, you can change the size of the object.
- By holding the Shift key and clicking and dragging the right corner, the rectangle changes to a square.

More on Create Shapes Tools

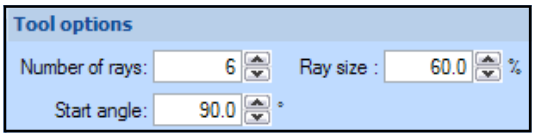
To Create Star Shapes

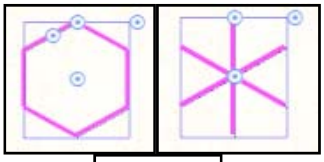
- Select the Shape tool and click and drag diagonally on the design area to create the shape.
- Holding the Ctrl key while dragging creates a star with equal dimensions of the rays.
- The Ctrl, Alt, and Shift keys have the same functionality as with all the shape tools.



Editing Star Shapes

- Select the *Edit Shape Node* icon. Four handles will appear.
- The center handle will move the shape.
- By clicking and dragging vertical axis handle, you can change the angle of the star by rotating clockwise or counterclockwise. Holding the shift key down will make precise rotations.
- By clicking and dragging the handle between the two rays at the top left, you can change the distance of the rays from the center of the design.
- By clicking and dragging the upper right corner handle, the size of the star can be changed.
- You can also edit the star in *Tool Options*.
  - The minimum number of rays is 3; maximum is 16. Press enter to activate changes.
  - The ray size value is from 0 to 100. At 100, the star becomes a polygon. At zero, the star becomes intersecting lines.
  - Changing the star angle rotates the star.

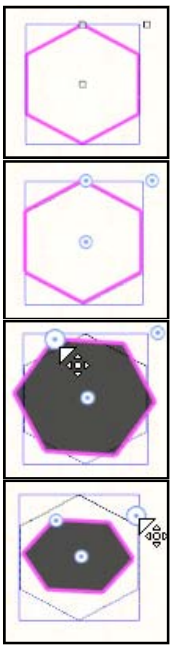




Ray Size

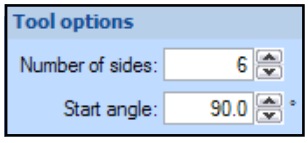
Drawing Polygons

- Select the Shape tool and click and drag diagonally on the design area to create the shape. By holding the Ctrl key down as you draw, the polygon formed will have equal sides.
- The Ctrl, Alt, and Shift keys have the same functionality as with all the shape tools.



Editing Polygons

- Select the *Edit Shape Node* icon. Three handles will appear.
- The center handle will move the shape.
- The vertical handle changes the angle of the polygon by rotating clockwise or counterclockwise.
- By clicking and dragging on the corner handle, you can change the size of the polygon.
- In *Tool Options*, you can change the number of sides. The default is 6, the range is 3 to 16. Press enter to activate the change.
- The Start Angle can also be changed. This will change the position of the points.



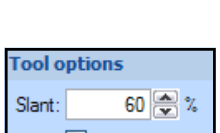
Circular Array Tool

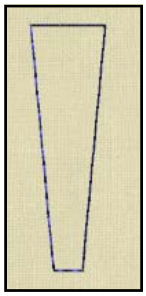
Opening the Design Screen

1. Select *File* > *New*.
2. *Create New* is pre-selected in the wizard.
3. Click on *Next.*
4. Place a dot in front of *New Graphic*.
5. From the hoop choices, select *Bernina 255 x 145 Large Oval #26.*
6. Click on *Next*.
7. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.
8. The blank designing screen opens.

Using the Create Shapes Tools

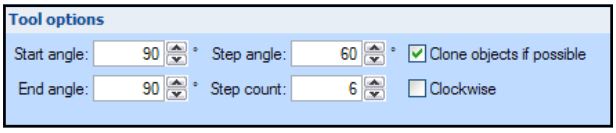
1. By resting your cursor on the *Create Shape* icon on the lower right hand corner, all the shape tools will be shown.
2. Choose the *Create Trapezoid/Parallelogram* icon.
3. Make sure *Tool Options* is open and that *Trapezoid* is checked.
4. Draw a shape similar to the one shown by clicking and dragging your mouse upward.
5. Select the *Edit Shape Node* icon and click on the center circle to move the drawn object to the center of the hoop. Use the 0 guideline on the ruler as a guide.
6. Press the space bar to select the shape.

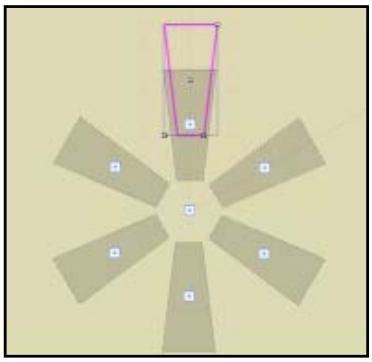


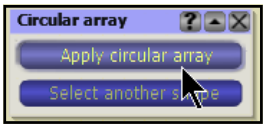


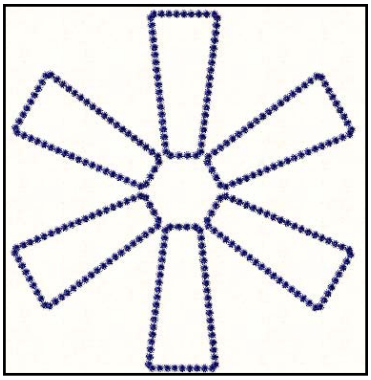
Adding Circular Array

1. Select *the Circular Array* tool from the toolbar. If it is not visible, hold your mouse on the lower right hand corner of the *Rectangular Array* tool and drag your mouse to select.
2. In *Tool Options*, make sure that the Start and End angle values are 90°. Change the step count to 6. Notice that the step angle automatically adjusts to 60 degrees between the objects. These two values are interdependent.
3. You will see a preview of what the array will look like.
4. You can click and drag on the center square of the original object and move the clones closer together or further apart.
5. You can rotate the array by clicking on the rotate arrow.
6. When you like the way they are arranged, click on *Apply Circular Array.*
7. *Edit* > *Select all.* Apply stitch #119.





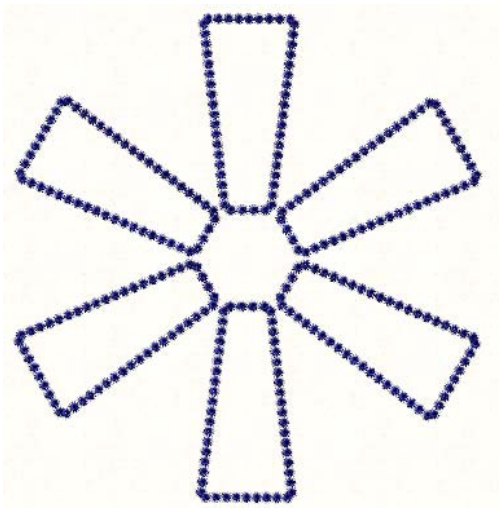




Saving the File

1. Select *File* > *Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the *File Name*, name the file, *Circular Array.*
4. Click on *Save*.
5. Export the file to the machine of your choice for stitching. See page 26 in this workbook.
6. Close the file by clicking on the X by the file name on the tab.

Sample 12 - Circular Array



Rectangular Array: CutWork Rag Quilt

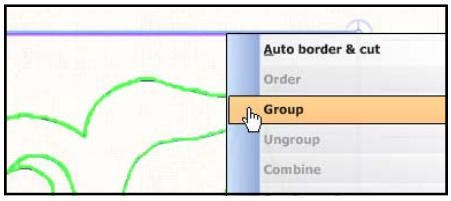
Before You Start: *This exercise requires that the HT115.art file from the Holice Turnbow folder in BERNINA Embroidery Software be saved as a .exp file for opening in CutWork. You can substitute any outline quilting design for this exercise.*

Opening the Design

1. Click on *File* > *New*. *Create New* is pre-selected in the wizard.
2. Click on *Next.*
3. Place a dot in front of *From Embroidery*. Click on *Browse.*
4. Navigate to the location where the Holice Turnbow file was saved.
5. Click on Open.
6. From the hoop choices, select *Bernina 256 x 400 Jumbo Hoop #44.*
7. Click on *Next.*
8. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.

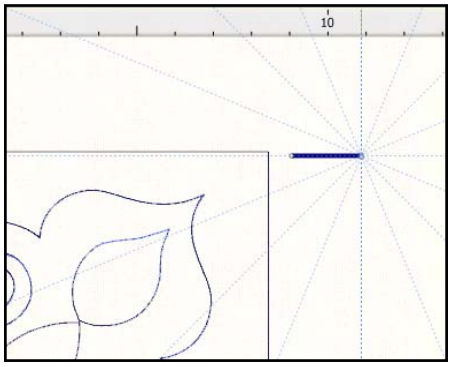
Adding a Stitching Line Around the Design

1. Select the *Create Rectangle* tool. Hold down the *Ctrl* key.
2. Draw a square just a little larger than the design.
3. Press the space bar.
4. *Edit* > *Select All.*
5. *Align Centers Vertically*.
6. *Align Centers Horizontally*.
7. Right click on the selected objects and select *Group.*



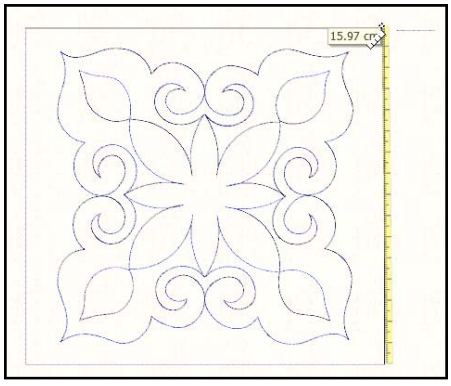
Add Fringe Cutting Lines

1. Zoom in on the upper right corner of the design by selecting the *Zoom In* icon and dragging a box around the corner.
2. Select the *Create Bezier Shapes* tool.
3. Make sure the rulers are visible. Go to *View* > *Rulers* if they are not visible.
4. While holding the *Ctrl* key, click at the upper right hand corner of the design, about 1 cm from the edge of the square. Use your rulers as a guideline.
5. Move the mouse 2cm. Click again.
6. Right click to end the drawn straight line.

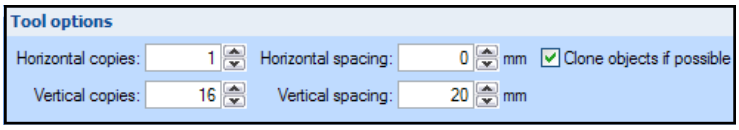


Add Rectangular Array

1. Zoom out. Click on the *Measure Tool* icon.
2. Click on the upper right hand corner of the outlined square and drag to the lower right hand corner to measure the side of the rectangle. Note: You can also select the square and read the dimensions in the *Tool Option* box. Remember this number.
3. Hit the space bar and click on the drawn horizontal line.
4. Click on the *Rectangular Array* icon.
5. The last options applied with the Array tool will be active.

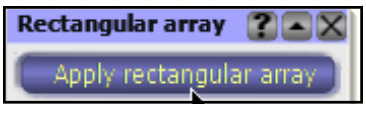


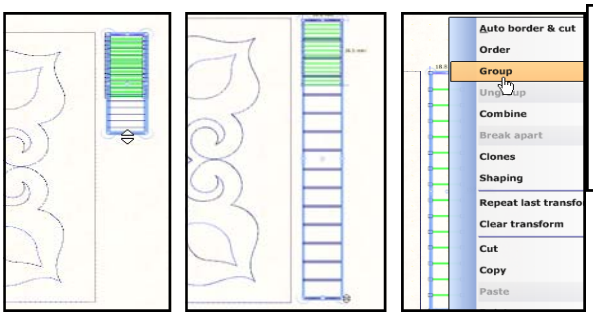
Rectangular Array



Editing Rectangular Array

1. In *Tool Options*, change the horizontal copies option to 1; change the vertical copies to a number that will allow about one cut for every centimeter. Use the measured dimension as a guide.
2. Click on *Apply Rectangular Array*.
3. Press the space bar to select the lines.
4. By clicking on the lower edge of the array until you see a double arrow, you can spread or compress the array until it stretches from edge to edge of the square.
5. While they are selected, right click and select *Group*.
6. Hold the *Ctrl* key down and select the quilting group so everything is selected.
6. Click on *Align Horizontal Centers*.

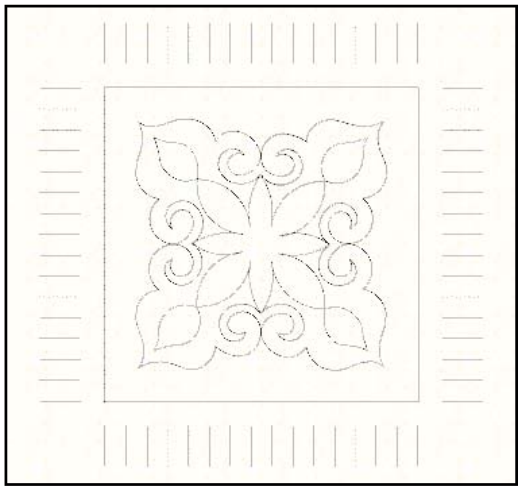




Alignment tools are based on the last selected object when you select with the Rectangle Selection tool and hold the Shift key.

Making the Duplicates.

1. Deselect; then select just the array and click on *Duplicate.*
2. Move the duplicate to the left side of the square with the left arrow key on the keyboard.
3. Hold the *Shift* key and select the two array groups; right click; and choose *Group*.
4. Hold the *Ctrl* key and select the quilting design.
5. Click on *Align Vertical Centers*. Deselect by clicking outside the design.
6. Select the grouped array.
7. Click on *Duplicate*.
8. In *Tool Options*, enter 90° in the Rotate box.
9. Press *Enter* to activate.

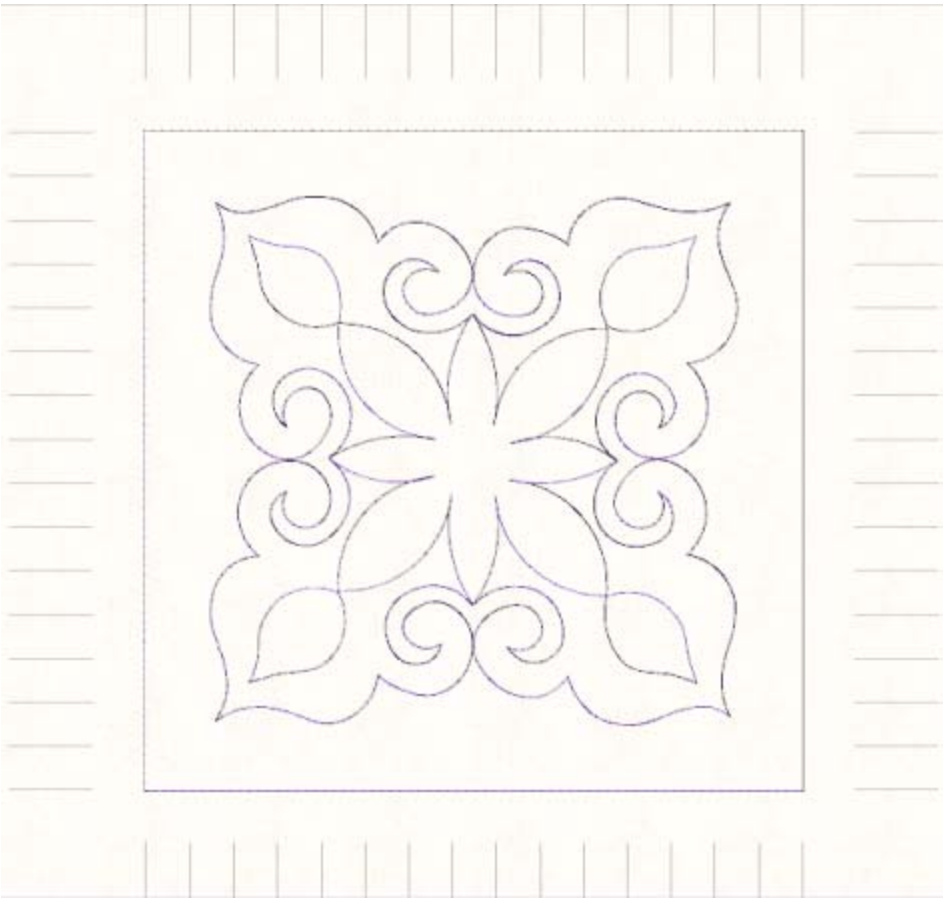


Applying Cutwork

1. Select both array groups by holding the Ctrl key.
2. Click on the *CutWork* icon.
3. While the arrays are selected, right click, select *Combine.*
4. Select *File > Save As*.
5. Navigate to the *Mastery* folder. Open the folder.
6. In the *File Name*, name the file, *Rectangular Array.*
7. Click on *Save*.

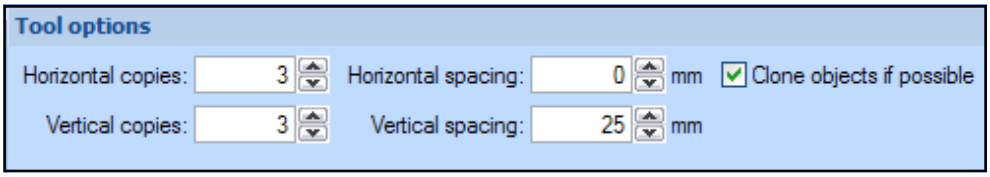
8. Export the file to the machine of your choice for stitching. See page 26 of this workbook.
9. Close the file by clicking on the X by the file name on the tab of the design area.

Sample 13 - Rectangular Array



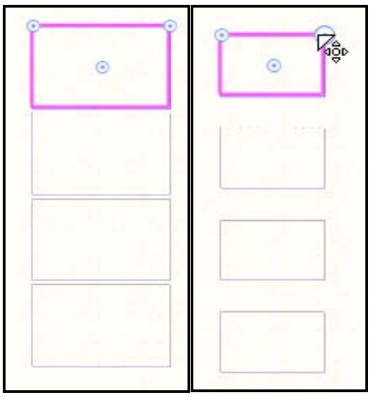
More on the Array Tools

Rectangular Array



Editing Arrays

If cloning is enabled, all copies of the object will be clones and all the objects can be reshaped or edited by editing one of them. You must apply the array before you can make changes; you will receive a warning message if you haven't applied the array.

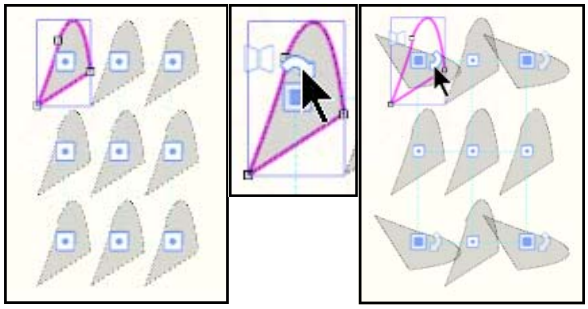


1. To edit, select any of the cloned objects after applying the array.
2. Click on *Edit shape nodes*.
3. Reshape the object.
4. The reshape is automatically applied to all clones.

These changes can be made prior to activating the array:

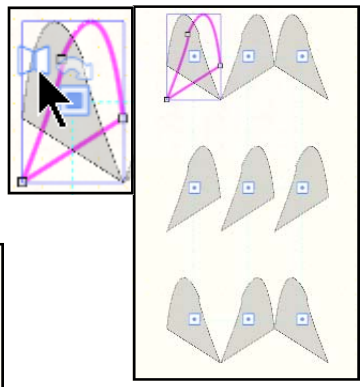
Rotating Copies

1. Placing the mouse over any of the clones will give you handles over the clone.
2. Place the mouse on the arrow part of the handle.
3. To rotate, click on the handle and every other clone will rotate 90°. Every time you click on the clone, the object will rotate another 90°.



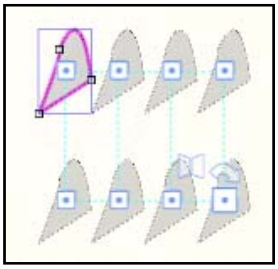
Mirroring Copies

1. Place the mouse on the mirror part of the handle.
2. To mirror, click, and every other shape will be mirrored.

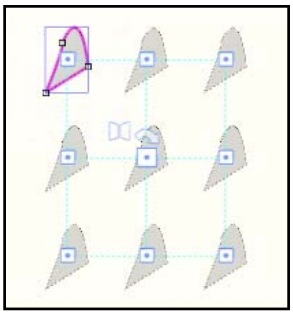


Changing the Number of the Array

1. Click and drag one of the control handles of any of the clones while holding Shift.
2. Holding the Shift key while dragging the original moves the array.
3. The direction you drag determines the effect on the number of rows and columns.
4. The distance you drag determines the number.
5. The distance between the copies remains the same.

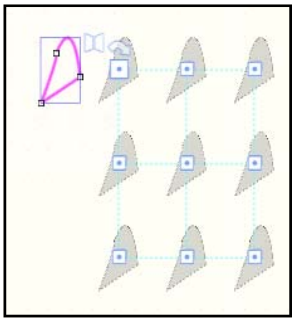


More on the Array Tools



Change the Spacing

1. To change the distance click and drag any of the control handles except the top left one.
2. If you hold the Ctrl key, the horizontal and vertical spacing is kept the same.

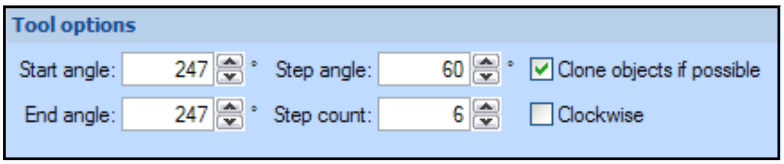


To Move the Array

1. Click on the top left copy control handle and drag array to its new location.

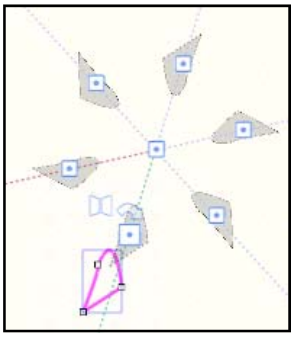
Circular Array

With Circular Array, you apply copies on an arc-circle. You can modify the properties visually through the control handles or mathematically through the Tool Options box.



Start/End Angle

1. You can specify where the copies are to be placed along an arc or a circle (both The Start and End values will be the same for the circle).
2. The Step Count will change based on the size of the arc.



Step Angle/Step Count/Clones

1. The *Step Angle* can be specified and its value affects the *Step Count* within the size of the arc-circle.
2. The *Step Count* can be specified and its value affects the *Step Angle* within the size of the arc-circle.
3. You can also specify the direction of the copies—clockwise (default); unchecked box is counter-clockwise.
4. Cloned objects mean that what you do to one of the objects will change all the objects. You make the changes by clicking on *Edit Shape Nodes* icon.

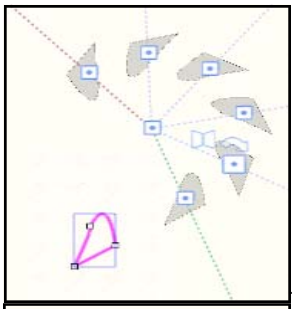
Moving Array

1. To move the array, click on the control handles of the original object.
2. Drag this toward or away from the center to change the distance from center. If you hold the Shift key, only the distance will change, not the placement.
3. You can also rotate the position of the start/end angle.
4. Hold the Ctrl key to snap on every 15°.

More on the Array Tools

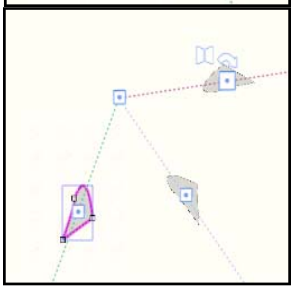
Changing the Step Angle (Distance)

1. To change the distance between the copies, move the control handle of any other object but the original.
2. This automatically changes the end angle. The number of copies remains the same.



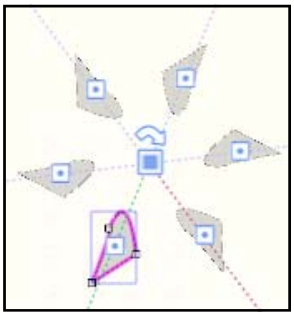
To Change the Number of Copies

1. To change the number of copies, hold the *Shift* key and move the control handle.
2. Move your mouse circular to add or remove copies. If you have specified clock-wise in *Tool Options*, moving the mouse clockwise will add and counter-clockwise will remove. If clockwise is not checked in *Tool Options*, the opposite is true.
3. The distance between the objects doesn't change.
4. The end angle will change.



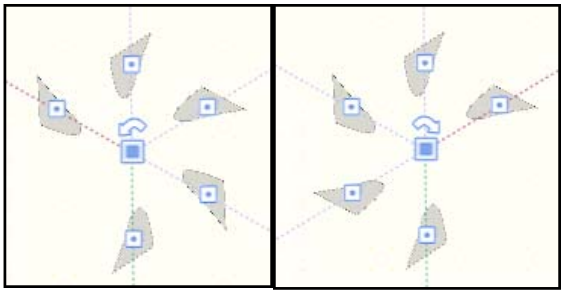
Move Array Center

1. By clicking and dragging on the array center, you can move the array without changing any of its parameters.
2. By holding the *Shift* key down while clicking on the array center, you can change the distance the objects are from center and the *Start-End angle*.



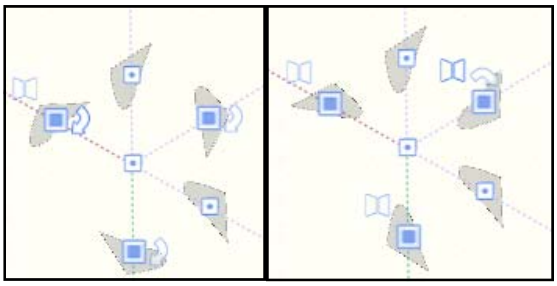
Change the Rotation

1. Change from clockwise to counter-clockwise by clicking on the arrow at the center rotation.
2. This will toggle between clockwise and counter-clockwise.



Rotate/Mirror Copies

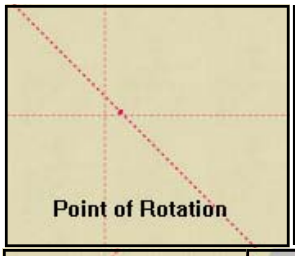
1. By clicking on the arrow rotation handle, the object and every other copy will rotate 90°; you can repeat to rotate these objects another 90°.
2. By clicking on the mirror handle, the object and every other object will become mirror images. The mirror is applied based on the horizontal center of the object.

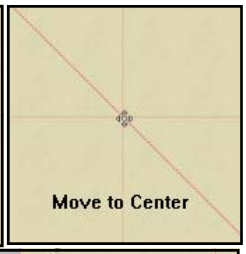


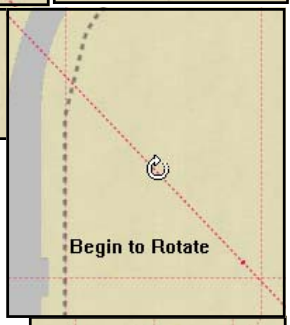
Clones

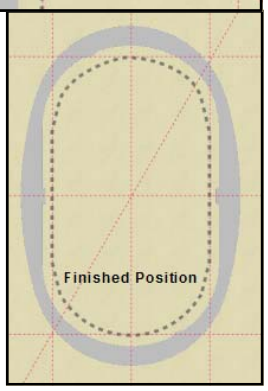
Opening the Design Screen

1. Select *File > New*.
2. *Create New* is pre-selected in the wizard. Click on *Next*.
3. Place a dot in front of *New Graphic*.
4. From the hoop choices, select *Bernina 255 x 145 Large Oval #26.*
5. Click on *Next.*
6. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.
7. The blank designing screen opens.









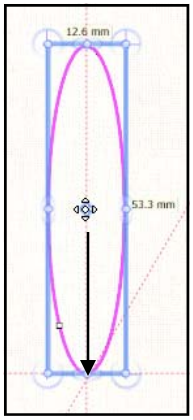
Setting Up the Screen

1. Add a vertical and horizontal guideline at the center of the hoop. See page 44 in the CutWork Mastery to review how to achieve this.
2. Right click on either the horizontal or vertical ruler and select *Add New Guideline.*
3. Select *Diagonal*.
4. Rest your cursor on the diagonal line until a darker red dot appears.
5. Place your cursor on this darker dot and move it toward the intersection of the vertical and horizontal guidelines.
6. Move your cursor to the upper part of the diagonal line until you see a rotate icon.
7. Rotate the line until it is as close to 60° as you can get. A flag with the degrees will appear as you rotate.
8. Zoom in close to the 0,0 intersection to check for accuracy.
9. Move the diagonal line if necessary so that it intersects with the 0,0 intersection.
10. This diagonal line will serve as a guideline for creating the first clone.

Creating the Original Object

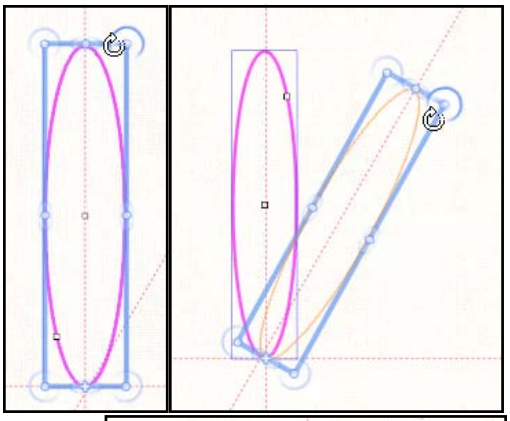
1. Select the *Create Ellipse* tool.
2. Hold the *Shift* key and click and drag from the vertical guideline to create a long, narrow oval. Release the mouse before releasing the *Shift* key. This will place the oval at the vertical center of the hoop.
3. Hit the space bar to select the oval.
4. Move the oval until the base of the oval is located at the 0,0 intersection of the hoop.

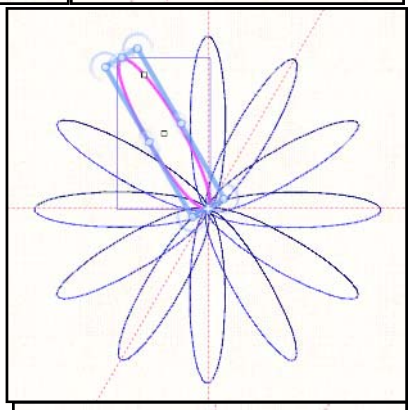
5. Zoom in on the object for accuracy.
6. Select *Edit > Add new objects as clones*.
7. Zoom out by rolling the mouse wheel toward you.
8. Select the rotation center of the object and move it to the base of the ellipse at the 0,0 intersection.

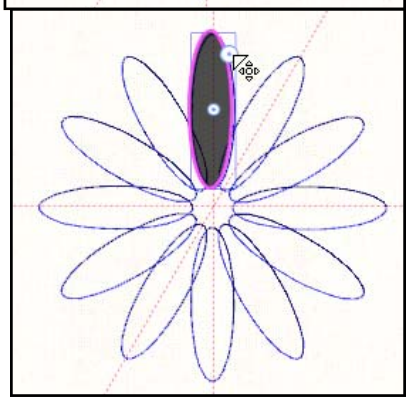


Clones

8. Place your cursor on the upper right hand corner until you see the rotation handle. Left click and drag the copy into its new position. Use the diagonal guideline for placement. DO NOT RELEASE THE LEFT MOUSE CLICK.
9. Before releasing the left click, right click. Release the left mouse button and then release the right mouse button and select *Copy* from the menu options.
10. To make additional copies, select *Edit > Repeat Last Transformation (or Ctrl R)* and continue until you have made a total of twelve flower petals as pictured.







Editing the Shape

1. Select *Edit Shape Nodes*.
2. Select any of the clones and edit it as desired.
3. The changes are applied to all the clones.
4. Hit the space bar.
5. *Edit> Select All.*
6. Apply any stitch that you wish.
7. Select *File > Save As*.

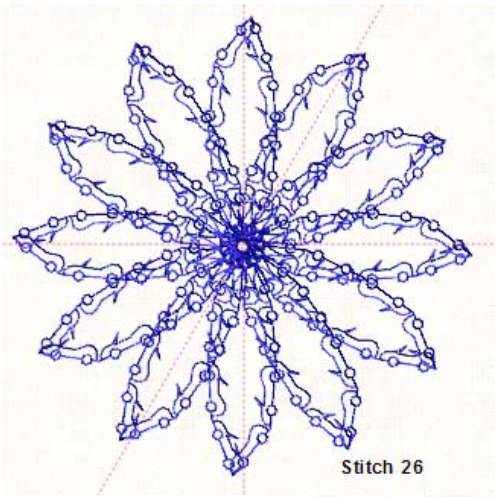
8. Navigate to the *Mastery* folder. Open the folder.
9. In the *File Name*, name the file *Clones.*
10. Click on *Save*.
11. Export the file to the machine of your choice for stitching. See page 26 of this workbook.
12. Close the file by clicking on the X by the file name on the tab.

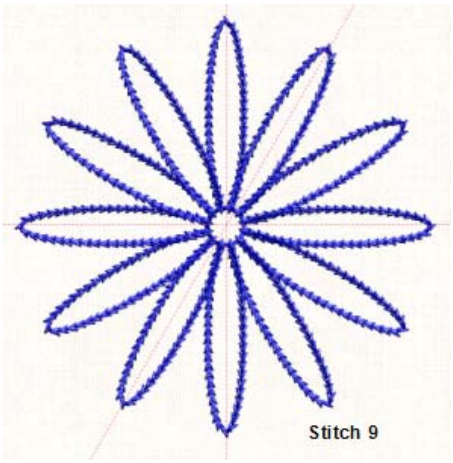
Note: You can edit the clones and save several versions of the flower and apply different stitches to each version.

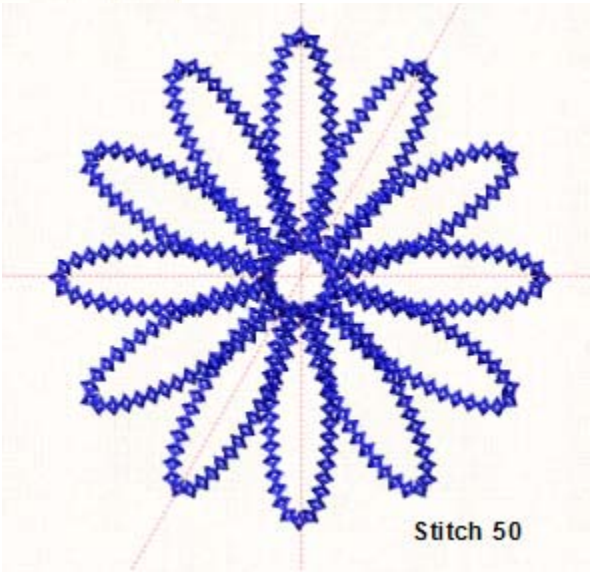
Selecting/Detaching

1. Select one of the clones and right click to open a menu that makes it easy to select all clones.
2. You can also choose to detach a clone from the group.

Sample 14 - Clones



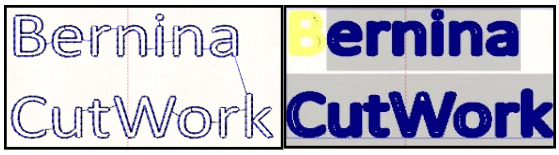




Working with Text

Opening the Design Screen

1. Select *File* > *New*.
2. *Create New* is pre-selected in the wizard. Click on *Next*.
3. Place a dot in front of *New Graphic*.
4. From the hoop choices, select *Bernina 255 x 145 Large Oval #26*
5. Click on *Next*.
6. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.
7. The blank designing screen opens.



Adding Text

1. Select the *Edit Text* tool.
2. Click on the design screen where you would like to add text.
3. Type *Bernina.*
4. Press *Enter* to make a new line and type *CutWork*.
5. Press the *Rectangle Selection* tool to activate the text.

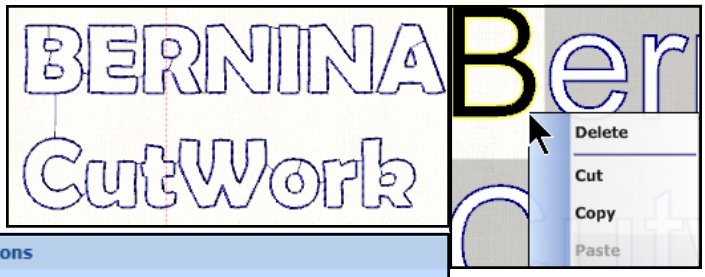
MORE ON TEXT
All fonts installed in Windows are available to use for text.

Shift + Home and Shift + End can also be used to select all characters between either the beginning and the selected point or the end and the selected point.

There are right click options as well for editing.

Editing Text

1. While the text is selected, select the *Edit Text* tool.
2. Click and drag the mouse over the letter B. You can also click where you wish to make changes and use the arrow keys on your keyboard while holding the *Shift* key. This will highlight the text and you can edit the selected text.
3. We will apply changes to all the letters, so hold the shift key and press End.
4. While Bernina is highlighted, type BERNINA.
5. Change the font type by selecting one listed in *Tool Options* drop down menu.
6. Change the font size to 30 and press *Enter* to activate the change.
7. You can also make the font bold or italic in *Tool Options*.



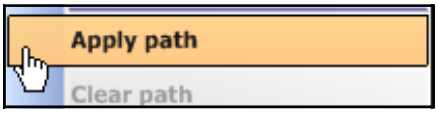
Editing Text Shape

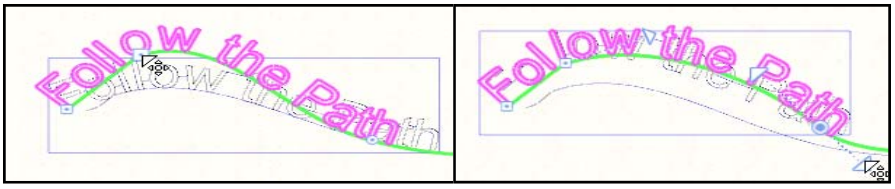
1. Click on the Rectangle Selection tool and click on the text.
2. Click on *Edit Shape Nodes*.
3. The nodes will allow you to change the position of each character.
4. Click on the node of the letter you wish to move and drag it to a new location.
5. Click on the space bar; then deselect the lettering.

Working with Text

Creating Text on a Path

1. Select the *Create Freehand Shapes* tool.
2. Draw a path in the design screen by clicking and dragging a line.
3. Select the *Edit Text* tool. Click anywhere on the screen.
4. Type *Follow the Path*. Select the text with the *Rectangle Selection* icon.
5. Hold the *Ctrl* key to select the path.
6. Right click and select *Apply Path.*
7. By selecting *Edit Shape Nodes,* you can edit the path by moving the nodes or the control handles.
8. To edit the text, select the *Selection Rectangle* and select the *Edit Text* tool. You can change the type, the size, and the style, as well as add or delete letters with the text.
9. Change the font type and apply Bold to the text.
10. Click on the *Selection Rectangle*; then deselect.





EDIT TEXT PATH
You may change the text placement one of four ways.

Baseline is the default.
Bottom positions the text over the curve. Letters such as “g” will be placed over the curve completely.
Ascent positions the text under the curve with letters like “h” or capital letters touching the curve.
Top positions the text under the curve a small distance from the curve.

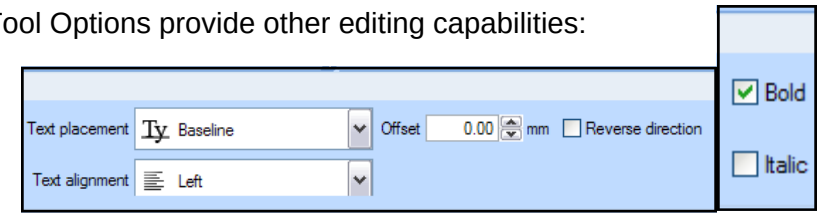
Text alignment will position the text to the left, center, or right justification.

Offset changes the distance from the location. It can be + or –.
Reverse direction will change the direction of the letters based on how the path was drawn.

To remove the text path, select the text and the path, right click and select *Clear Path*.

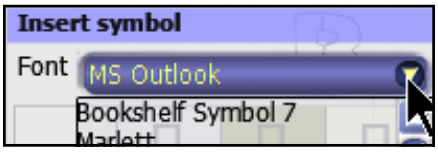
You can change the selection of symbols by clicking on fonts in the dialog box.

11. Tool Options provide other editing capabilities:



Insert a Symbol

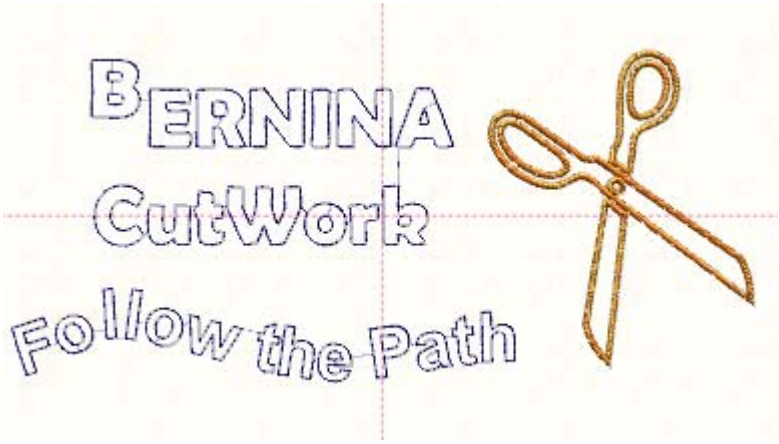
1. To insert a symbol, select *Tools* > *Insert Symbol*.
2. Choose the scissors and click on *Insert*.
3. Click the cursor where you wish to add the scissors and drag to the desired size.
4. Release the mouse to set the position.
5. While selected, select Satin Serial.



Save the File

1. Select *File* > *Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the *File Name*, name the file, *Text.* Click on *Save*.
4. Export the file to the machine of your choice for stitching. See page 26 of this workbook.
5. Close the file by clicking on the X by the file name on the tab.

Sample 15 - Working with Text



Transforming Shapes

Opening the Design Screen

1. Select *File > New*.
2. *Create New* is pre-selected in the wizard. Click on *Next.*
3. Place a dot in front of *New Graphic*.
4. From the hoop choices, select *Bernina 255 x 145 Large Oval #26.*
5. Click on *Next.*
6. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.
7. The blank designing screen opens.

SPECIAL EDITING TOOLS
These editing tools allow you to create irregular shapes.

The last object selected while holding the Shift key will be the one that dictates the properties of the transformed object.

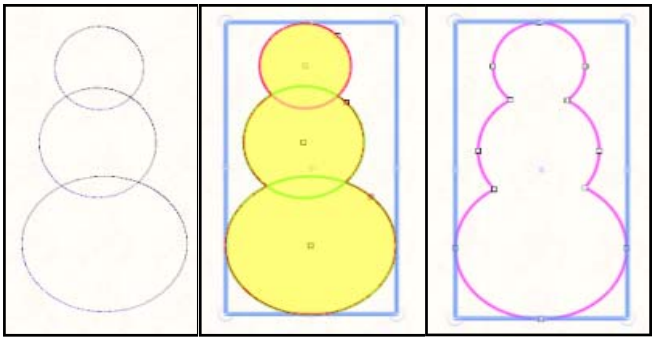
If you used the Selection Rectangle or Lasso, the object underneath will determine the properties.

Weld

1. Select the *Create Ellipse* icon.
2. While holding the *Ctrl* key, draw three circles, each larger than the previous. Draw them so they are not touching.
3. Press the space bar key. *Edit > Select All.*

4. Click on *Align Vertical Centers* icon.
5. Click on the outline of the second circle and move it using the up arrow on the keyboard so that it overlaps slightly with the first circle.
6. Repeat for the third circle, forming a snowman.
7. Select *Edit > Select All*.

8. Rest your cursor on the *Weld* icon. You will see a preview of how the Weld will look. There will be a red line around the welded object.
9. To apply, click on the icon.

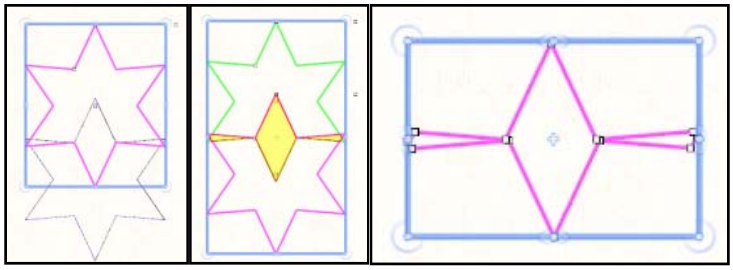


Intersect

1. Select the *Create Star* icon.
2. Change the *Number of R*ays to 6 in Tool Options
3. Create one star while holding the *Ctrl* key.

4. Press the space bar key.
5. Zoom in on the star.
6. Click on the upper outline of the star and drag down, creating a diamond shape in the overlapped areas. A shadow of the duplicate will appear and the cursor will change in appearance.
7. When the shadow is in position, as you release the left mouse click, right mouse click and select *Copy* from the menu.
8. If necessary, use the arrow keys to move the duplicate into exact position.
9. Draw a bounding box around the two stars.

10. Rest the cursor on the *Intersect* icon. A preview will be shown.
11. Click on the icon to set the intersection.
12. Move the intersection to a new location by clicking and dragging on the outline. You now have a new shape to edit.
13. Delete the stars used for creating the intersection by selecting them and pressing delete.

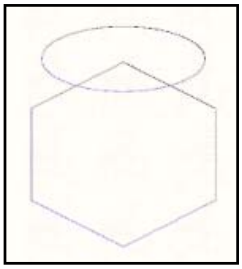


This method of duplicating is fast and easy and is precise in placement.

Transforming Shapes

Trim Objects

1. Select the *Create Polygon* icon.
2. In *Tool Options*, enter 6 for the *Number of Sides*.
3. Draw a hexagon by clicking and dragging on the screen.
4. Select the *Create Ellipse* icon.
5. Draw an Ellipse slightly overlapping the hexagon shape as shown.
6. Press the space bar key.



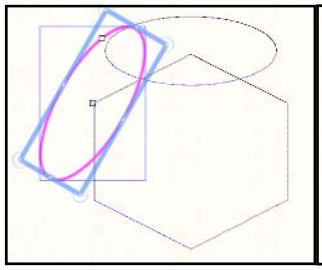
Trim can be applied to over-lapping objects as well.

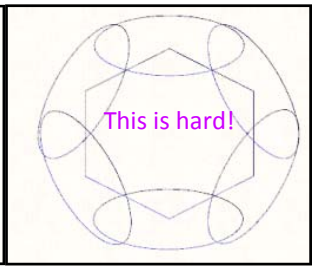
Select the source object first (one that is used to trim the object); then select the target object (the one to be trimmed) by holding the Shift key. You can make multiple trims.

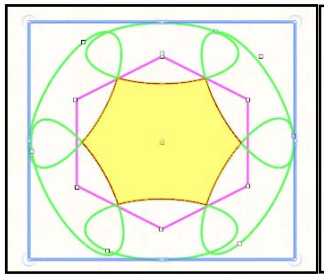
You can use this method to create holes in objects.

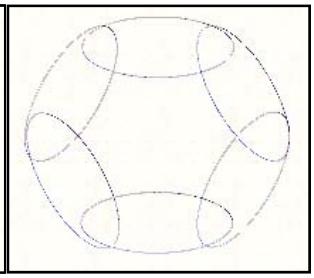
Creating the Source Object Shape

1. Draw a selection rectangle around the two objects.
2. Select the *Align Centers Vertically* icon.
3. Select the ellipse.
4. Right click and select *Copy*.
5. Right click and select *Paste.*
6. Enter 60 in the *Rotate* box.
7. Press *Enter.*
8. Click on the outline of the copy and move the copy to align the center of the ellipse with the point of the hexagon.
9. Repeat this same process four more times, placing an ellipse at each point of the hexagon.



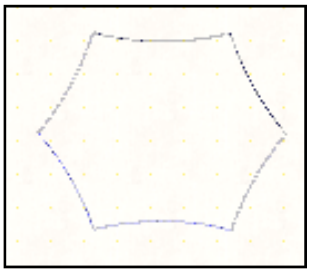






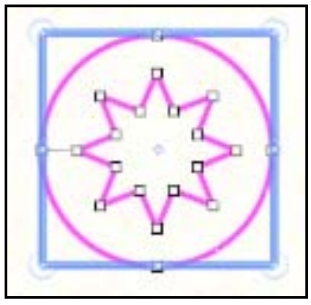
Trimming the Object

1. Draw a selection rectangle around the newly created objects.
2. Rest your cursor on the *Trim* icon to preview the creation.
3. Click on the *Trim* icon to activate the trim.
4. Deselect the objects by clicking outside the shapes.
5. Hold the *Shift* key down and select all the ellipse shapes.
6. Right click and select *Delete.*
7. This will leave the trimmed object and you can apply properties to this new shape.

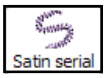


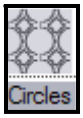
Another Method For Creating Holes

1. Select the *Ellipse* tool and hold the *Ctrl* key down to draw a circle.
2. Select the *Star* tool and change the *Number of Rays* to 8 in *Tool Options.*
3. Hold the *Ctrl* key down and draw a star, slightly smaller than the circle.
4. Click on the space bar to select the *Rectangle Selection*.
5. While holding the *Shift* key, select the star and the circle.
6. Click on *Align Centers Vertically* and *Align Centers Horizontally*.
7. While both are selected, right click and choose *Combine* from the listed options.



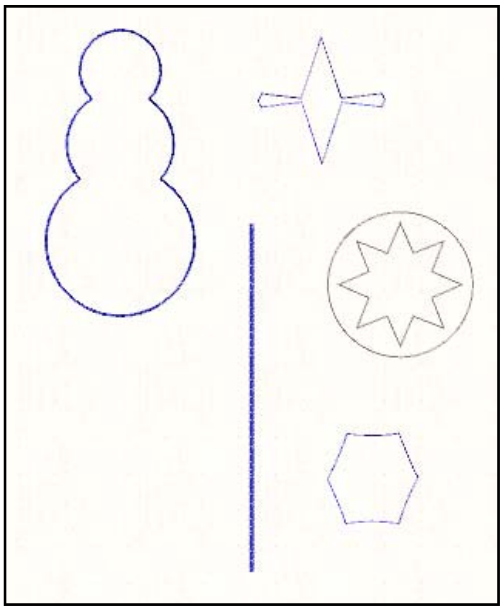
Transforming Shapes





Adding a Thick Satin Line

1. Select the *Create Freehand Shape* icon.
2. Draw a straight vertical line with two left clicks.
3. Right click to set the line.
4. Hit the space bar to select the line.
5. Choose *Satin Serial* in *Object Properties*.
6. Change the *Outline* value in *Tool Options* to 10 mm.
7. Hit *Enter* to activate.
8. While the line is selected, choose *Circles in Object Properties*.



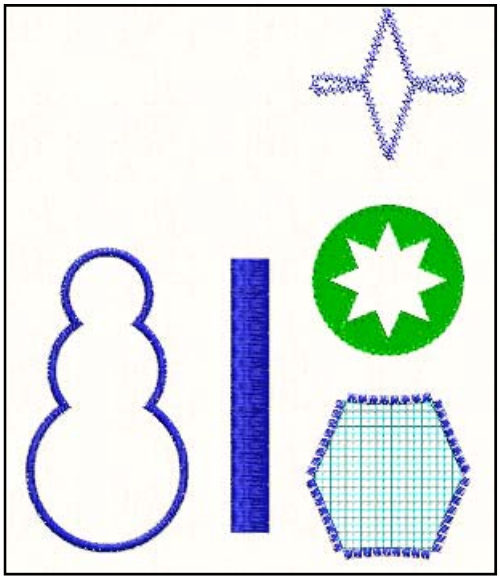
Adding the Properties

1. Select the Snowman.
2. Click on *Satin Serial* in *Object Properties*.
3. Change the Outline in *Tool Options* to 2 mm.
4. Change the Height (Proportional checked) to 80 mm.
5. Select the intersected diamond shape. Select stitch #16.
6. Select the trimmed hexagon.
7. Select stitch #45 in *Object Properties*.
8. Right click on a color chip in the *Thread Palette*.
9. Select *Set Fill Color*.
10. Click on the *Fill tab* in *Object Properties*.
11. Click on *Net fill*.
12. Select the cut hole object.
13. Select *None* for the outline.
14. Repeat steps 8, 9 and 10 above for this object.
15. Choose *Appliqué.*
16. Change the Height (Proportional checked) to 40 mm.

SIZING & SPACING
The last object selected will be the referenced object for resizing and respacing.

Sizing & Spacing of Objects

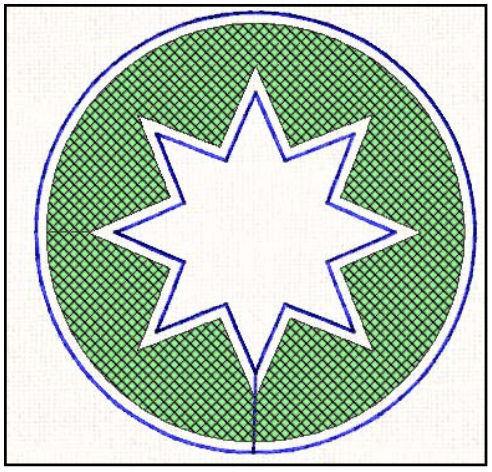
1. Hold the *Shift key* down and select everything except the Snowman and the satin line; select the Appliquéd object last.
2. Select the *Make the Same Size* icon.
3. If any of the objects are overlapping, move them.
4. Select all but the Snowman and the satin line again.
5. Select the *Equal Vertical Spacing* icon.
6. While they are selected, Click on *Align Centers Vertically*; then right click and select *Group*.
7. Move any overlapping objects.
8. Select the line; then select the Snowman.
9. Select *Make the Same Height* icon.
10. Select all the objects; click on the Snowman last.
11. Select *Equal Horizontal Spacing*.
12. While they are all selected, select *Align Bottom*.



Transforming Shapes

Save the File

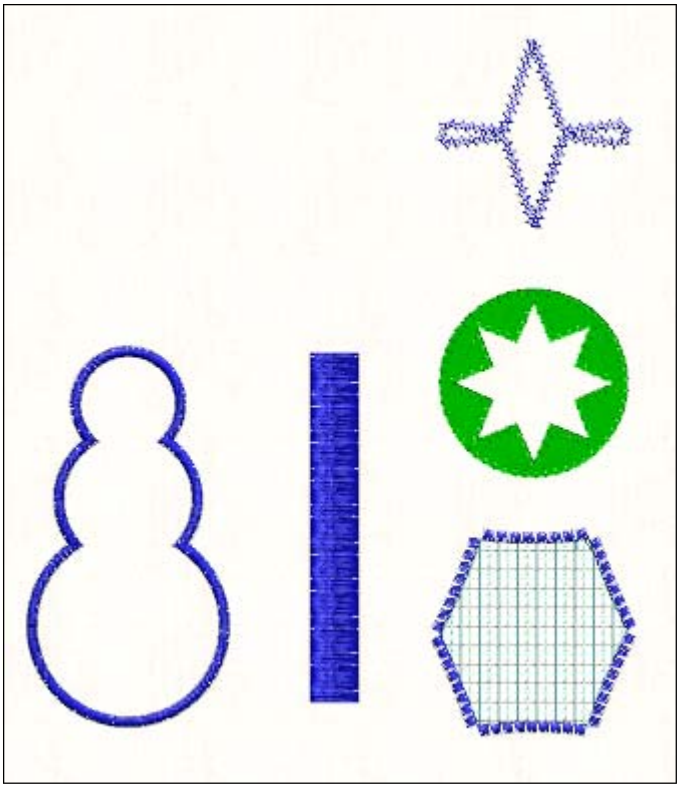
1. Select *File* > *Save As*.
2. Navigate to the *Mastery* folder. Open the folder.
3. In the *File Name*, name the file, *Transformations.* Click on *Save*.
4. Export the file to the machine of your choice for stitching. See page 26 in this workbook.



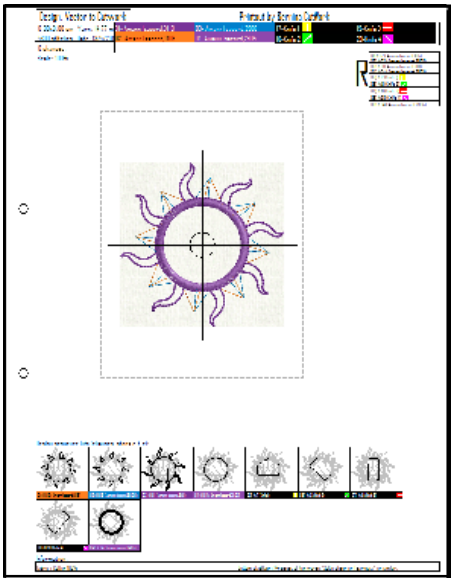
Adding a Separate Cutwork File

1. Select the appliqué, right click, and select *Ungroup* from the options.
2. Select the appliqué again, right click and select *Copy*.
3. Select *File* > *New*.
4. *Create New* is pre-selected in the wizard. Click on *Next*.
5. Place a dot in front of *New Graphic*.
6. From the hoop choices, select *Bernina 130 x 100 Medium #26.*
7. Click on *Next.*
8. Work through the remaining wizard dialog boxes as outlined on pages 18-20 of this workbook.
9. Right click and select *Paste*.
10. While the object is selected, click on *None.*
11. Switch to the *Outline tab* and select *CutWork*.
12. Add a check mark to *Running Before*, change the number of passes to 2, and change the offset to 1mm.
13. Select *File* > *Save As*.
14. Navigate to the *Mastery* folder. Open the folder.
15. In the *File Name*, name the file, *Appliqué Shape.*
16. Click on *Save*.
17. Export the file to the machine of your choice for stitching. See page 26 of this workbook.
18. Close the file by clicking on the X by the file name on the tab of the design area.

Sample 16 - Transforming Shapes



Printing

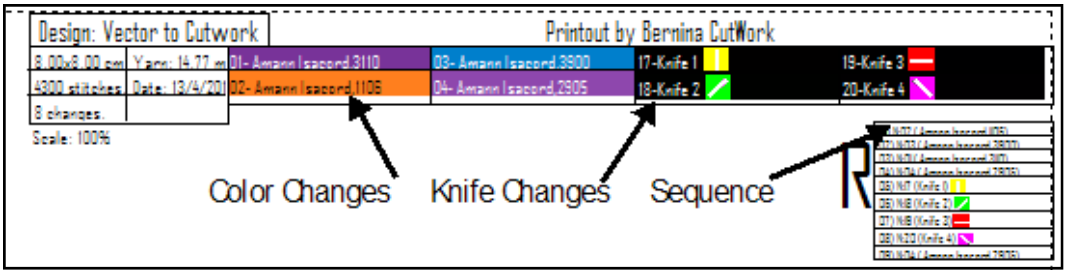


Printing A Guide Sheet

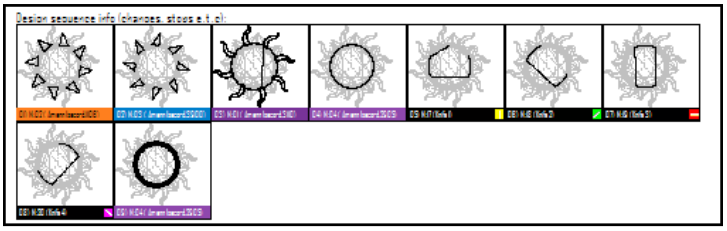
1. Select *File* > *Open*.
2. Open the design, *Vector to Cutwork*.
3. Select *File* > *Print* or click on the *Print icon*.
4. Press *OK* to print the design sheet from your printer.
5. All the information is listed on this design sheet.

Header

The header provides information on the size of the design, the color changes, the amount of thread needed, the colors of the design, and the position of the knife if cutwork has been added.



The stitch sequence is shown graphically at the bottom of the design sheet.

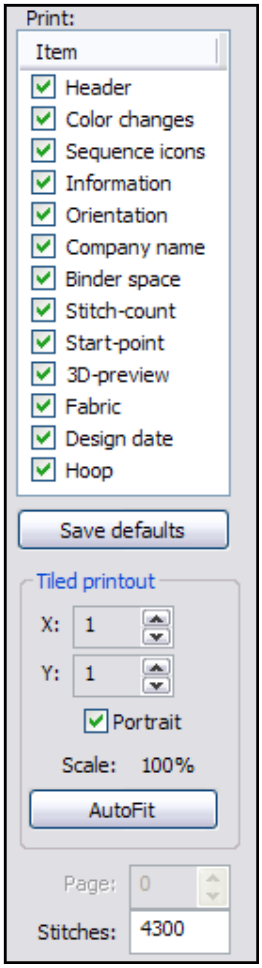


There are numerous print options that can be changed through the listed properties (see picture at the right of the page). To find out about these options, go *Help* > *Help Topics.* Select the *Search Tab*. Type *"print"* in the search field. Press *Enter.*

Click on *Print Your Design* and read the information listed in this section.

Printing Artwork

You can also print the artwork onto fabric printing sheets. *Select File* > *Print Artwork*. You will get a preview with available options to adjust.



Other Options

Design Properties: General Tab

1. Go to *File > Design Properties.*
2. Add information within the fields as desired.
3. Click on *OK* and the information will be saved with the design.

Design Properties: Optimizer Tab

1. There are many options that can be set in the Optimizer tab.
2. These all affect the production of the design.
3. These options are particularly important when you are trying to optimize the time spent stitching the design and are used to set the parameters of the software.
4. Refer to the *Help menu* for more information.