

*Loes van der Heijden*



# ART AND STITCH, THE BOOK

*User Guide for*



*Digitizing software for longarm quilters  
and machine embroiderers*





### How to Activate Art and Stitch:

Register your copy of Art and Stitch by sending us your full name and registration number printed on the Art and Stitch CD-rom.

For registration details visit <http://artnstitch.com/register.htm>

Fill in the form that opens when you start Art and Stitch and enter the Activation Serial Number that you received after your registration. Click on the button Activate now. Details how to activate can be found via menu Help > How to activate / deactivate.

### When to deactivate Art and Stitch:

Deactivate before replacing hard drives, before doing any repair work on the computer, before changing the operating system, or before replacing your computer:

See menu Help > How to Activate / Deactivate  
and also the FAQ page on our website: <http://artnstitch.com/faq.htm>

### How to deactivate Art and Stitch:

Choose menu Help > License Activator > button "Deactivate".  
Then you can use the same Activation Serial Number on your new or repaired computer.

*Art and Stitch - User Guide  
Version 4.0 - August 2015*

*Pages that have changed compared to the previous User Guide (version 3.0)  
show a blue asterisk \* in front of the page number.  
For a full Version History of the software, please visit <http://artnstitch.download>*

This User Guide is written by Loes van der Heijden, Artistitch v.o.f., Oss, Netherlands.  
You are allowed to print a copy of this User Guide for personal use  
on your printer at home, or via a copy shop / print service.



# WELCOME

Thank you for purchasing Art and Stitch, the one of a kind digitizing software written for longarm quilters and machine embroiderers.

This program is my dream come true. It is a new way of digitizing quilt patterns and can be used to create embroidery designs as well.

The beautiful motif and special effects available in embroidery digitizing for years, can now be used in quilt designs too. Motifs are a quick way to create stunning artistic quilt patterns, are great to use as background fillers and are a perfect alternative for stippling.

But it's not only the Motif function that makes this software a dream: ease of use was at the top of our list of specifications. Since 1996 our company motto has been "Making Digitizing Easier" and that is exactly what Art and Stitch will do. You don't have to be an architect or rocket scientist to draw in Art and Stitch. You must be a quilter / embroiderer who wants to be creative.

Enjoy the software, that makes digitizing easier.

## *New to Art and Stitch?*

*The quickest way to learn the Art and Stitch basics (or refresh your skills) is to start with Part 1. Read it in the given order, follow the exercises and stitch the results. Watching your machine stitch your designs will enhance your skills.*

*And then? Then you forget all about it for a couple of days.... just let it sink in.*

*The next stage is to try the extra exercises at the end of Part 1. After that you are ready to go through the Artwork and Stitch Chapters of Part 2 and Part 3.*

*The Table of Contents on the following pages can help you find specific subjects and special techniques.*



**PART 0 - Introduction..... 1**

    Welcome..... 3

    Table of Contents..... 4

**PART 1 - Getting Started..... 1**

    1.1 Main Window..... 2

    1.2 Art and Stitch in a Nutshell..... 3

        1.2.1 First Exercise: Draw a continuous pattern..... 4

    1.3 Reshape basics..... 5

    1.4 Tracing an image..... 6

        1.4.1 Second Exercise: open and trace an image..... 6

    1.5 Opening existing quilt patterns - saving in another format..... 7

    1.6 Opening and tweaking existing quilt patterns..... 8

    1.7 Salami Tactics..... 9

        1.7.1 Warming up exercise before diving into Part 2..... 10

**PART 2 - The Artwork Chapters..... 1**

    2.1 Main Window and Toolbars..... 2

    2.2 The Reshape tool..... 3

        2.2.1 Edit - Reshape: Anchors and Properties of the points..... 4

        2.2.2 Edit - Reshape: Stitch Edit Mode..... 5

    2.3 Zoom - Navigator - Pan..... 6

    2.4 Measure tool..... 7

    2.5 Artwork Toolbar: Vector drawing tools - Close shape - Pen Width ..... 8

        2.5.1 Artwork Exercise: How to use the Pencil tool, How to Reshape..... 9

        2.5.2 Artwork Exercise: How to use the Line Tool..... 10

        2.5.3 Artwork Exercise: How to use the Curve tool..... 11

        2.5.4 Artwork Exercise: How to use the Bezier tool..... 12

        2.5.5 Artwork Exercise: How to use the 3 pt Arc tool..... 13

        2.5.6 Artwork Toolbar: Add Seam Allowance (¼ inch) - Patchwork templates..... 14

        2.5.7 Artwork Toolbar: Add Seam Allowance - Needle turn Appliqué..... 16

        2.5.8 Artwork Toolbar: Connect Objects..... 17

        2.5.9 Artwork Toolbar: AutoShapes..... 18

        2.5.10 Artwork Toolbar: Library..... 19

        2.5.11 Artwork Toolbar: Backdrop (Open, Manipulate, Select, Crop, Scan)..... 20

        2.5.12 Artwork Toolbar: How to turn a Backdrop into the true size..... 22

        2.5.13 Artwork Toolbar: AutoTrace using Magic Wand (Closed areas)..... 24

        2.5.14 Artwork Toolbar: AutoTrace using Magic Wand (Line Art)..... 26

        2.5.15 Artwork: AutoTrace with the Outline Wizard..... 27

        2.5.16 Artwork: Simplify and Simplify Smoother..... 28

        2.5.17 Artwork Toolbar: Import Vector artwork (DXF, Ai, WMF, EMF, SVG)..... 29

        2.5.18 Artwork: Import Vector artwork via menu Edit > Paste Special..... 30

        2.5.19 Artwork: Export Vector artwork (DXF, AI, EMF, WMF, PLT, PAT, SVG)..... 30

        2.5.20 Artwork Toolbar: True Type Fonts..... 31

    2.6 Artwork Effects toolbar: Creative Fills, Echo, Geometric Echo..... 32

    2.7 Undo - Redo - Cut - Copy - Paste - Duplicate..... 33

    2.8 Resize - Rotate - Flip / Mirror..... 34

    2.9 Why Size is Important..... 35

    2.10 Properties Panel, Reset Toolbars..... 36

    2.11 Sequence View Panel, Resequence..... 37

    2.12 Design Page Background: Color or Fabric..... 38

    2.13 View Toolbar (set of Show / Hide buttons) ..... 40

    2.14 Units: Millimeters or Inches - Grid - Snap - Guidelines..... 41





2.15 Interlocking Preview.....43  
 2.16 Center objects, Align objects, Center in grid box, Distribute objects.....44  
 2.17 Group / Ungroup .....45  
 2.18 Connect objects - button in Artwork Toolbar.....46  
 2.19 Manually Connect artwork objects - “Tie Together” - in Reshape mode.....47  
 2.20 Connect the unconnectable: Merge.....49  
 2.21 Split Lines.....50  
 2.22 Slice: Divide closed shapes.....51

**PART 3 - The Stitch Chapters..... 1**

3.1 Artwork ready? Time to apply stitches.....2  
 3.2 Apply stitches to outline OR fill.....3  
 3.3 Stitch Toolbar - Introduction.....4  
   3.3.1 Line sew types: Run (single, double, bean), Motif, Satin.....5  
   3.3.2 Exercise: Using a Motif line sew type.....6  
   3.3.3 Fill type: Standard fill (Embroidery).....7  
   3.3.4 Fill type: Motif fill.....8  
   3.3.5 Exercise: Using a Motif fill.....9  
   3.3.6 About filled shapes in longarm quilting.....10  
   3.3.7 Fill type: Hatch fill.....11  
   3.3.8 Fill type: Echo Fill.....14  
   3.3.9 Fill type: Appliqué.....16  
   3.3.10 Fill type: Auto Stipple.....17  
 3.4 Initial Jump for .HQF .TXT and .SSD.....18  
 3.5 Back to Artwork.....19  
 3.6 How to change the stitch direction (Swap Entry / Exit Points) - stitch based.....20  
 3.7 How to change the stitch direction - a permanent change in artwork.....21  
 3.8 Color Palette .....22

**PART 4 - Special Design Tools..... 1**

4.1 Repeat function.....2  
 4.2 Magic Circle.....4  
 4.3 Magic Square.....5  
   4.3.1 Help I can’t Draw... but I can Doodle! Magic Square Exercise.....6  
 4.4 Magic Rays.....7  
 4.5 Design on Path .....9  
 4.6 Create and Save your own Design Paths.....13  
   Make a backup of your own Design Paths.....13  
 4.7 Power Copy.....14  
 4.8 Power Copy EE.....15  
 4.9 Meandering Anything - a Power Copy tutorial.....16  
 4.10 Echo Quilting / Create Boundary.....20  
 4.11 Geometric Echo.....22  
 4.12 Fill around a shape (leaving the shape open).....24  
 4.13 Create your own Motif patterns.....25  
 4.14 Creative Fills - Introduction.....27  
   4.14.1 Creative Fills - Apply Creative Fill Effect .....28  
   4.14.2 Creative Fills - Apply Creative Fill Effect - Tips about Size.....29  
   4.14.3 Creative Fills - Make your own Creative Fills.....30  
   4.14.4 Creative Fills - Make a fill with the Power Copy function.....31  
   4.14.5 Creative Fills - Check if everything is still one continuous path.....32  
   4.14.6 Creative Fills - How to use a Creative Fill around a shape.....33  
 4.15 Transform Artwork: Remove Overlap, Unite, Intersect, Exclude, Clip.....35  
 4.16 Transform (Envelope shapes).....37



4.17 Special Effect: Distortion (Zigzag, Wave, Twirl, Pinch, Spherize) .....39

4.18 Free Distort: Squeeze a pattern into a not-so-perfectly pieced block.....41

4.19 Free Distort: Turn a square pattern into a “lone star” diamond.....42

4.20 How to create and print Pantos (Make repeatable - Repeat - Resize - Print - PDF).....43

4.21 How to make patterns repeatable (Split line, Draw traveling lines).....47

4.22 How to create Mitered Corners.....49

**PART 5 - Full Quilt Layout.....1**

5.1 Layout a full quilt.....2

5.2 Create a Template.....6

**PART 6 - Embroidery Digitizing.....1**

6.1 Introduction to Embroidery Digitizing.....2

6.2 Getting started: Set Style to EMBROIDERY.....3

6.3 Getting started: Choose your Embroidery Hoop.....4

6.4 Exercise: Your first embroidery design.....5

6.5 About Pull Compensation.....8

6.6 Stitch Toolbar Fill type: Standard Fill (Embroidery).....9

6.7 Modify Toolbar Color Sort.....12

6.8 Modify Toolbar Optimize Sequence button or manually resequence.....13

6.9 Create Appliqué .....14

6.10 Cut appliqué fabric and Embroider.....15

6.11 Appliqué Properties.....16

6.12 Mini Project: Embossed towel .....17

6.13 Redwork “Auto Branching”.....18

6.14 Special stitches: Sashiko and Stem Stitch .....19

**PART 7 - Organizing.....1**

7.1 Menu Tools > Preferences.....2

7.2 Open existing designs.....4

7.3 Saving a design.....5

7.3.1 Batch save function for designers.....6

7.3.2 Tips for Designers: Special requirements for various quilt formats.....7

7.3.3 Copyright Notes and Notes on the Design Page.....8

7.3.4 Organizing your design files - Tips.....9

7.3.5 Backup ! (menu Tools > Backup User Files).....10

7.4 Browser - A quick way to find all patterns.....11

7.5 Print, Print Setup.....12

7.6 Preview of print out on Design Page.....15

7.7 Print Catalog.....16

7.8 Export as Image.....18

**PART 8 - This and That.....1**

8.1 List of keyboard shortcuts .....2

8.2 Printable full page screenshot of Main Window.....3

8.3 Oops ! Operator error - remove operator, press any key :).....4

8.4 Support / Contact info - where to find help.....6

8.5 Our webinars and Stay@Home classes.....7

A Big Thank You to our developers, users, designers and quilt artists.....8

A Big Thank You to our Certified Teachers.....9

Copyrights.....11



# 1. Getting Started

Art and Stitch for Beginners

Here you will find the bare basics, the “need to know” things to get started.

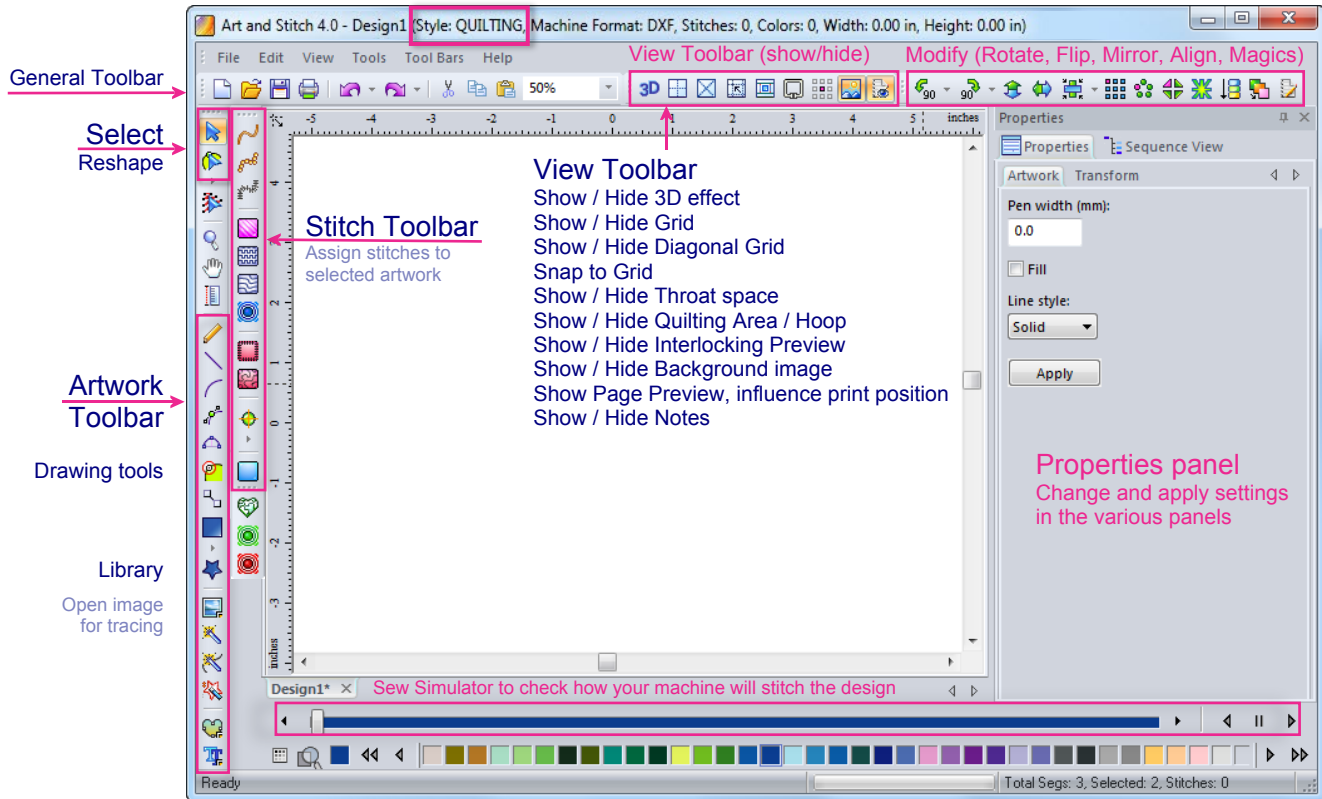
The base principle of Art and Stitch:

- Start with your artwork
- Reshape to perfection
- Turn into stitches
- Save and sew

Tip: Don't skip the exercises!



## 1.1 Main Window



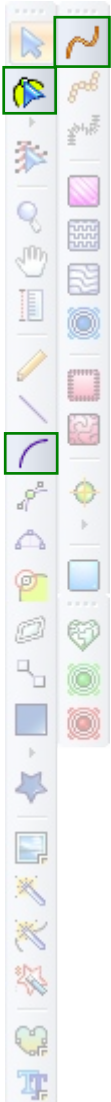
This is the main window of Art and Stitch. The buttons are placed in sets that belong together. Their functions are explained in Part 2 The Artwork Chapters.

For now, familiarize yourself with the location of the Artwork Toolbar, the Stitch Toolbar, the set of Show / Hide buttons in the View Toolbar, know where to find the Select and Reshape tools and know where to find the Sew Simulator.

Hovering your mouse over a button in Art and Stitch will show the name and function of that button. It's like having the User Guide at your fingertips :)



## 1.2 Art and Stitch in a Nutshell



### How to use Art and Stitch - a tiny, mini, one page User Guide:

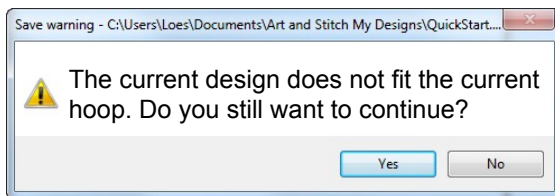
1. Choose menu File > New and set Style to QUILTING or EMBROIDERY, depending on the type of pattern you are going to make.
2. Create your artwork by using the vector drawing tools in the Artwork Toolbar. Draw from scratch, or trace a backdrop. To draw: take a tool and click from point to point. Right-click to finish drawing.
3. Perfect the lines where needed by selecting and moving points with the Reshape tool.
4. Select the design by clicking on it with the Select tool and assign stitches by clicking on one of the Line Sew or Fill buttons in the Stitch Toolbar. The design is ready.
5. Check your design in the Sew Simulator to see how your machine will stitch it. What you see is what you get:



*Start the Sew Simulator to check your design.  
The Sew Simulator will only be active when stitches are assigned.*



6. Save the pattern. Always save the pattern first in the native Art and Stitch .ANS format. Save in the folder "Art and Stitch My Designs" located in My Documents. Do not save on an external drive.
7. Then choose menu File > Save as and select the desired File Type from the drop down list, to save the pattern in the file format of your quilt system or embroidery machine.



*When this warning pops up, ignore it when you are saving for longarm quilt systems, as those are not limited by hoop size. Just click on OK.  
When it pops up when saving in embroidery format, click on No. Resize the design in Properties Panel, tab Transform. The design MUST fit the hoop of your embroidery machine or your machine cannot read it.*

8. Outside Art and Stitch copy the saved quilt or embroidery file to a USB thumb drive and insert the thumb drive into your machine. Load and sew the pattern.

**Important: When you want to re-open a pattern later to edit or re-use, always open the original .ANS format, not the machine format, to maintain the superb vector quality.  
The machine format is for stitching only, not for editing.**

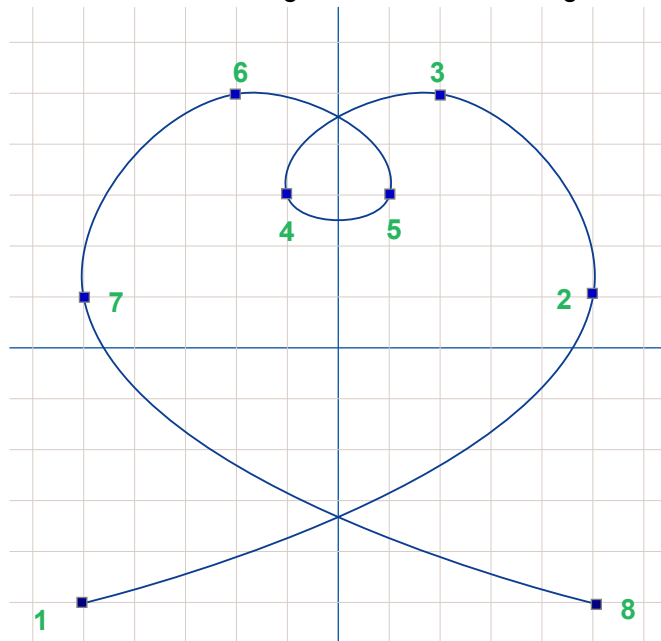


### 1.2.1 First Exercise: Draw a continuous pattern

**Step 1.** For this exercise be sure that the Grid is showing. Turn Snap to Grid on in the View Toolbar, section Show/Hide buttons:



**Step 2.** Take the Curve tool by clicking on it in the Artwork Toolbar on the left. Draw the heart by clicking the points shown in the image below. After clicking the last point #8, right-click to finish drawing.



*With the Curve tool click from point to point, right-click after point 8 to finish.  
Notice that you only need a few points to get nice smooth lines.  
In this example Snap to Grid is turned on.*

**Tip:** after using the Snap to Grid function as in this example make it a habit to turn it off. If you forget that Snap is on and you start a new drawing, the points won't end up where you click them because they are snapping to the grid. So, when points don't land exactly where you click while drawing, then check if maybe Snap to Grid is still on.



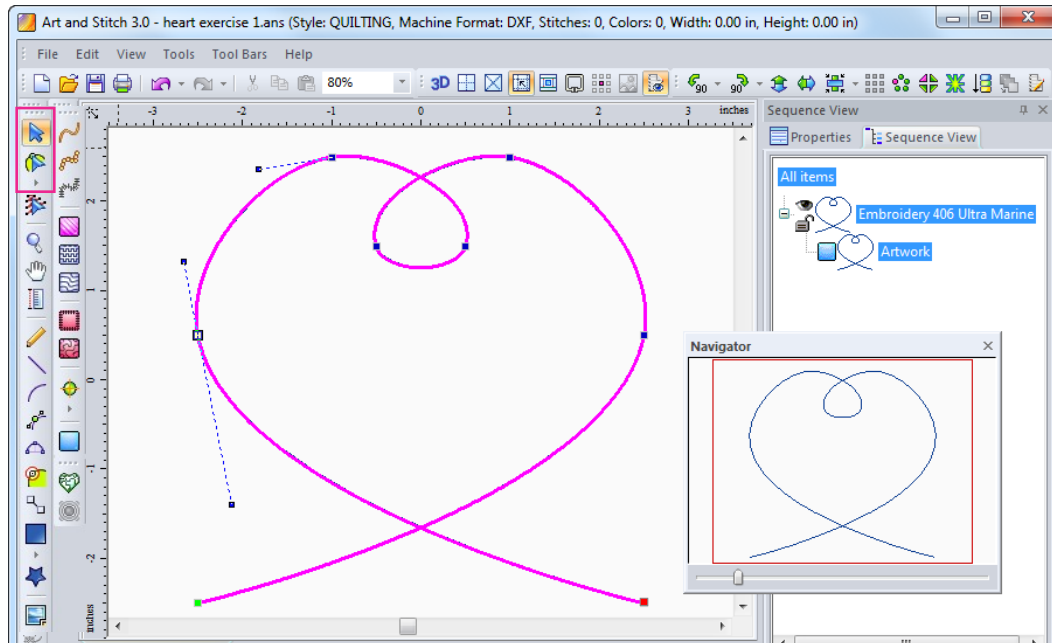
**Step 3.** When the heart is finished, take the Select Tool, click on the heart to select it. Turn it into stitches by clicking on the Line Sew button in the Stitch toolbar. The pattern is now ready to be sewn. Look at the Sew Simulator at the bottom and see how your machine will sew it.

**Step 4.** Save as .ANS file. To stitch the pattern, choose menu File > Save As and save in the format of your machine. Copy this last file to a USB thumb drive and take it to your machine.





## 1.3 Reshape basics

Select  
Reshape

To reshape a drawing:



Take the **Reshape** tool (or press letter R on your keyboard) and click on the object you drew. Single click on one of the points: the point turns yellow and anchors appear. Anchors control the shape of the curve. You can move those anchors in a different direction to reshape the curve. You can also make the anchors longer or shorter, to control a larger or smaller part of the curve.

**To just move a point**, without changing the anchors: click and hold the mouse down on a point and move it.

**To reshape by moving the anchors**: single click on a point, do NOT move it (not even a tiny bit!), release the mouse. Then click on an anchor, hold down the primary mouse button and move the anchor in the desired direction.

To make a pattern repeatable - let first and last point snap to the same grid line:

The heart design made in the exercise is a continuous path where the first and last stitch are on the same plane. As you made this pattern with Snap to grid turned on, it is already a truly repeatable E2E pattern for your quilt system.

To make a pattern repeatable afterwards (as in step 4 of the next exercise), turn Snap to Grid on, take the Reshape tool. Select and move the first point a little bit and let it snap to the grid. Select and move the last point of the pattern and let it snap to a grid intersection on the same horizontal grid line.

Important: after you turn a repeatable pattern into stitches don't move the first and last point anymore.



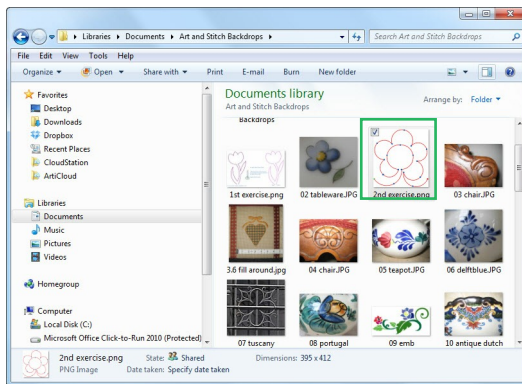
## 1.4 Tracing an image

*Drawing from scratch is fun, but a little help from a backdrop image makes things easier.*

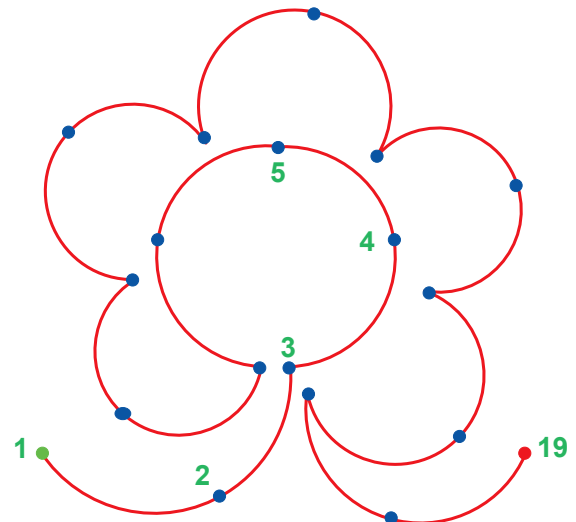
### 1.4.1 Second Exercise: open and trace an image



**Step 1.** Click on the Backdrop tool in the Artwork toolbar on the left. Navigate to the folder Art and Stitch Backdrops, located in "Documents". Open image "2nd Exercise.png".



1. Click on the Backdrop tool to load a background image



**Step 2.** Take the 3 pt Arc tool and start tracing the image, by left-clicking on the points shown in the backdrop image. Start clicking on the green point on the left and end on the red point on the right, then right-click to finish. In Part 2, the Artwork Chapters you will learn more about the 3 pt Arc tool.

**Step 3.**



Hide the image: click on the Show / Hide Backdrop tool in the View Toolbar to see the result of your tracing work.

**Step 4.** Take the Reshape tool and let the first point snap to the grid. Let the last point (19) snap to a grid intersection on the same horizontal grid line. This makes the pattern repeatable.



**Step 5.** Turn the artwork into stitches by clicking on the Run Stitch button at the top of the Stitch Toolbar. Check the Sew Simulator under the Design Page: what you see is what you get.

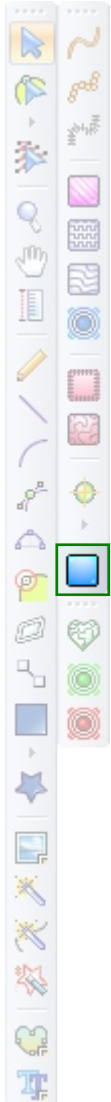


**Step 6.** Save the design as .ANS and save again in the format of your machine. Copy the machine format to a USB thumb drive and insert in your quilt system or embroidery machine. Sew the pattern.





## 1.5 Opening existing quilt patterns - saving in another format



File > Open → File > Save as. That easy!



When you want to use a design (not made in Art and Stitch) in another format than the format you purchased or downloaded and you don't want to make any change to the pattern, you can simply open the pattern in Art and Stitch (without ticking the box "convert to outlines") and directly choose menu File > Save as and save in the file format of your machine.

Art and Stitch can open all major quilt and embroidery machine formats and can save in all major quilt and embroidery machine formats. So you can even open an embroidery design and save it for your quilt system.

### Tips:

When opening a quilt design made for embroidery machines always zoom in and check the Sew Simulator at the lowest speed, to see if the stitches are running stitches. A triple stitch or bean stitch is not suitable for a quilt system. Don't forget that a design in an embroidery machine is made by the movement of the hoop - the machine itself stays in the same place, but a quilt system will stitch the design by moving the entire machine! You don't want the complete machine take two stitches up, one stitch back, two stitches up etc.

Embroidery designs are typically smaller than quilting patterns. If you want to enlarge an embroidery design for your quilt system, then be sure that the box "Convert to outlines" is ticked on when opening the pattern. Select it and use the blue Back to Artwork button, then resize in Properties Panel, tab Transform to the desired quilt design, assign a Line Sew type Running stitch and save in the format of your quilt system. See the next chapter.

Another tip: "Open as Untitled"

When you want to open a design to (re)use you can also open a copy of it, by ticking the box "Open as Untitled". Then you can play with the design without the risk of ruining the original :)



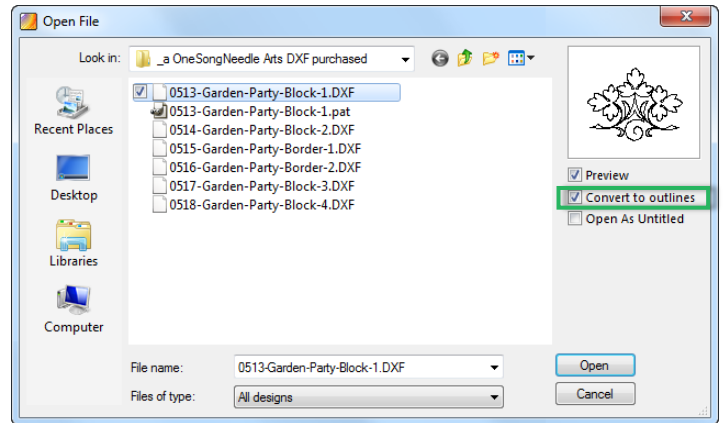
## 1.6 Opening and tweaking existing quilt patterns

When opening a design for tweaking, always open the original .ANS format. If the design was not made in Art and Stitch, you won't have the .ANS source format. In that case open the format that you downloaded or purchased.



Click on the button "Open" in the General Toolbar and navigate to the desired folder and design.

In the "Open File" dialog window tick the box "**Convert to outlines**". That will make it possible to edit the design with the Reshape tool. Open the design.



Turn the design into editable artwork by clicking on the **blue Back to Artwork button** under the Stitch Toolbar.



Take the **Reshape tool** and tweak the design where needed by moving points.

**Resize the design** if needed, by selecting it and entering new dimensions in Properties Panel, tab Transform. Click on Apply.



Select the design and **turn into stitches** by clicking on the Line Sew button in the Stitch Toolbar.



**Save the design under a different name.** Add e.g. "Converted" to the design name, so that you know that this is not an original .ANS pattern. Save as .ANS and then save in the format of your machine. When reopening this pattern, be sure to reopen the "Converted .ANS pattern". Do not open the stitch file, because that would mean another conversion, another "translation". Always stay as close to the original as possible.

**Important:** always check the Copyright statement of the designer to see what the designer allows you to do with the pattern. When downloading / purchasing patterns make it a habit to save the Copyright notice of the designer in the same folder.

You will never be allowed to share or resell the design. Many designers allow you to tweak the design for the sole purpose of fitting the quilt you are working on. Other designers don't. So it is important to check.







## 1.7 Salami Tactics

### Don't try learning it all at once!

Relax for a couple of days. Do something totally different. Art and Stitch can do so much that you have to take it in one piece at a time. Otherwise it will just be too overwhelming.

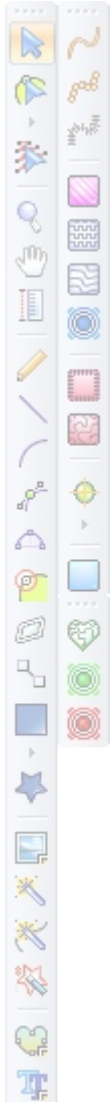
Also when you have been out of the Art and Stitch loop for a while, redoing this Part 1 is the best way to refresh your knowledge.

At this point you should be familiar with the basics of Art and Stitch:

-  • Start with your artwork (draw from scratch or trace a backdrop image).
-  • Reshape to perfection (move points with the Reshape tool).
-  • Resize to the desired quilting or embroidery size (Properties Panel, tab Transform).
-  • Turn into stitches.



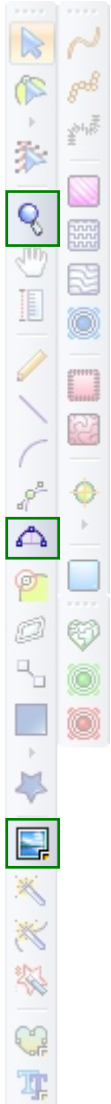
- Save as .ANS format and save again in the format of your machine.
- Copy the machine file to a USB thumb drive, load in your machine and sew.
- When you want to reopen the pattern later to edit, always use the .ANS format, not the machine format.







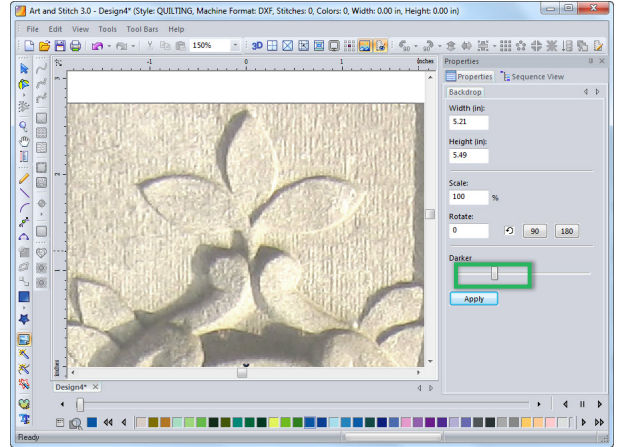
### 1.7.1 Warming up exercise before diving into Part 2



**Step 1.** Click on the Backdrop tool in the Artwork toolbar and open image “16 Inspiration.jpg” located in the Art and Stitch Backdrops folder in My Documents.

While the image is still selected, move the slider bar in Properties Panel, tab Backdrop towards “Lighter”.

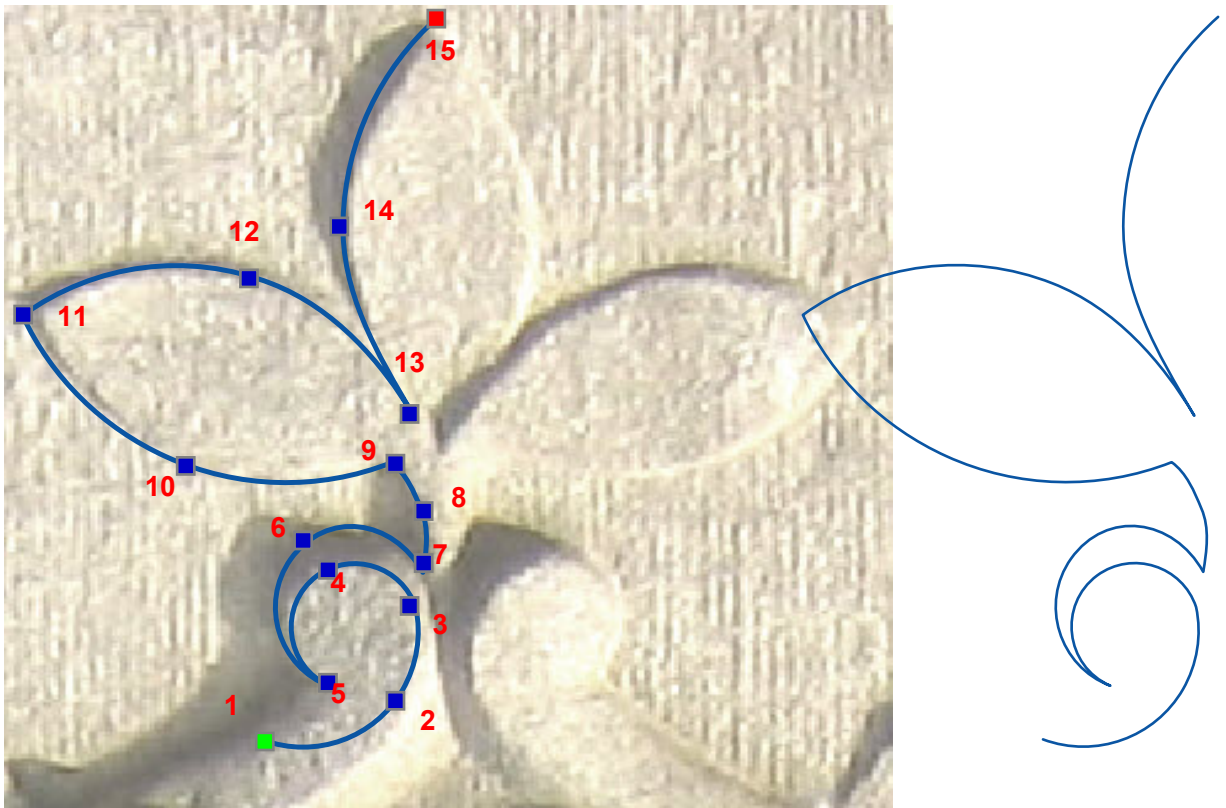
That gives more contrast between the image and the drawing you are going to make. Click on Apply.



**Step 2.** Take the Zoom tool and drag around the top part of the image to zoom in. Take the 3 pt Arc tool from the Artwork Toolbar on the left and start tracing half of the “design-to-be”. You can use any artistic freedom - the backdrop is your inspiration.

The 3 pt Arc tool needs 3 points for the first arc and then only 2 points for the rest (the last point of one arc is automatically the first point of the next, so only two points per arc). Every point shown below only needs 1 click. More about the 3 pt Arc in the Artwork Chapters of this User Guide.

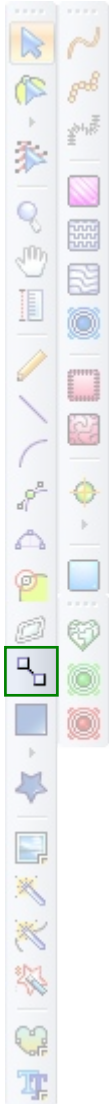
After you have clicked point #15, right-click to finish.







### 1.7.1 Warming up exercise - Cont'd

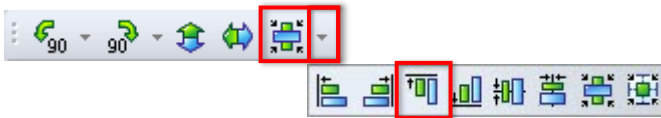


**Step 3.** You can now hide the backdrop image using the button in the View toolbar

**Step 4.** Select the design and choose menu Edit > Duplicate (Ctrl+D) to place a copy a little offset of the original.



**Step 5.** Select this duplicate and click on the Mirror button in the Modify Toolbar. Move the mirrored duplicate over to the right side of the original as precise as possible. Zoom in to be sure that the two tops are not crossing each other.

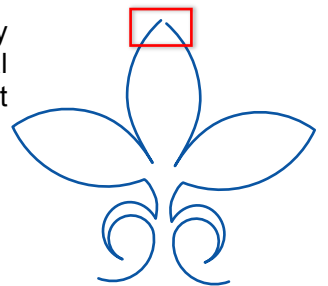


**Step 6.** Align the two shapes: Choose menu Edit > Select All to select both shapes together. In the Modify Toolbar click on the little triangle next to the Center button to open the flyout of Alignment options. Click on "Align Top".



**Step 7.** Select both shapes together and click on the button Connect Objects in the Artwork Toolbar on the left. Your design is now one object, one path.

**Step 8.** Save the design, as artwork, in .ANS format.



On the next page you will find a few examples how this design can be finished. Give it a try. If it's too much right now, don't worry. After going through Parts 2 and 3 you can do this with your eyes closed.



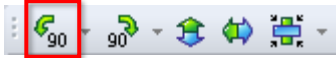


### 1.7.1 Warming up exercise - Cont'd



#### Taking a field trip to Chapter 4.2 - Magic Circle

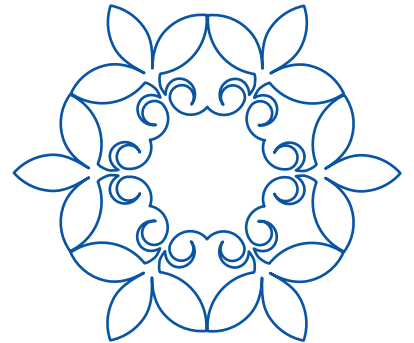
**Step 1.** Open the pattern saved in the previous exercise.



**Step 2.** Select the pattern and rotate it 90 degrees by clicking on the button in the Modify Toolbar.



**Step 3.** Select the rotated pattern and click on the Magic Circle tool. The Magic Circle dialog window opens. Keep the count at 6. To let the objects touch each other make the circle smaller by clicking on the down arrow for Circle Dimensions. For better precision you can make the dialog window as large as your monitor by grabbing and moving a corner of the dialog window. When ready, click on OK.



**Step 4.** After using the Magic Circle the objects will be grouped. They still have to be connected into one path. Click on the group to select all objects, then click on the Connect Objects button in the Artwork Toolbar on the left.

**Step 5.** Choose menu File > Save as and save under a different name.

#### Field trip to Chapter 4.3 - Magic Square

**Step 1.** Open the original pattern.

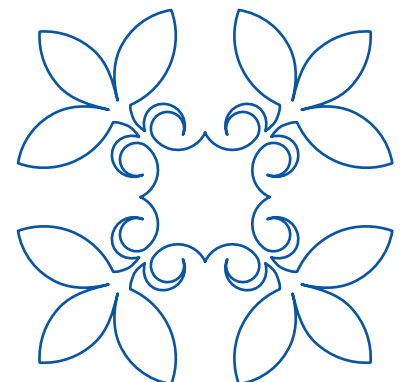
**Step 2.** Select the pattern and rotate it 45 degrees by clicking on the button in the Modify Toolbar (use the flyout for the 45 button)



**Step 3.** Select the rotated pattern and click on the Magic Square tool. The Magic Square dialog window opens. Click on OK.


**Step 4.** Select all objects, then click on the Connect Objects button in the Artwork Toolbar on the left.

**Step 5.** Choose menu File > Save as and save under a different name.





## 2. The Artwork Chapters

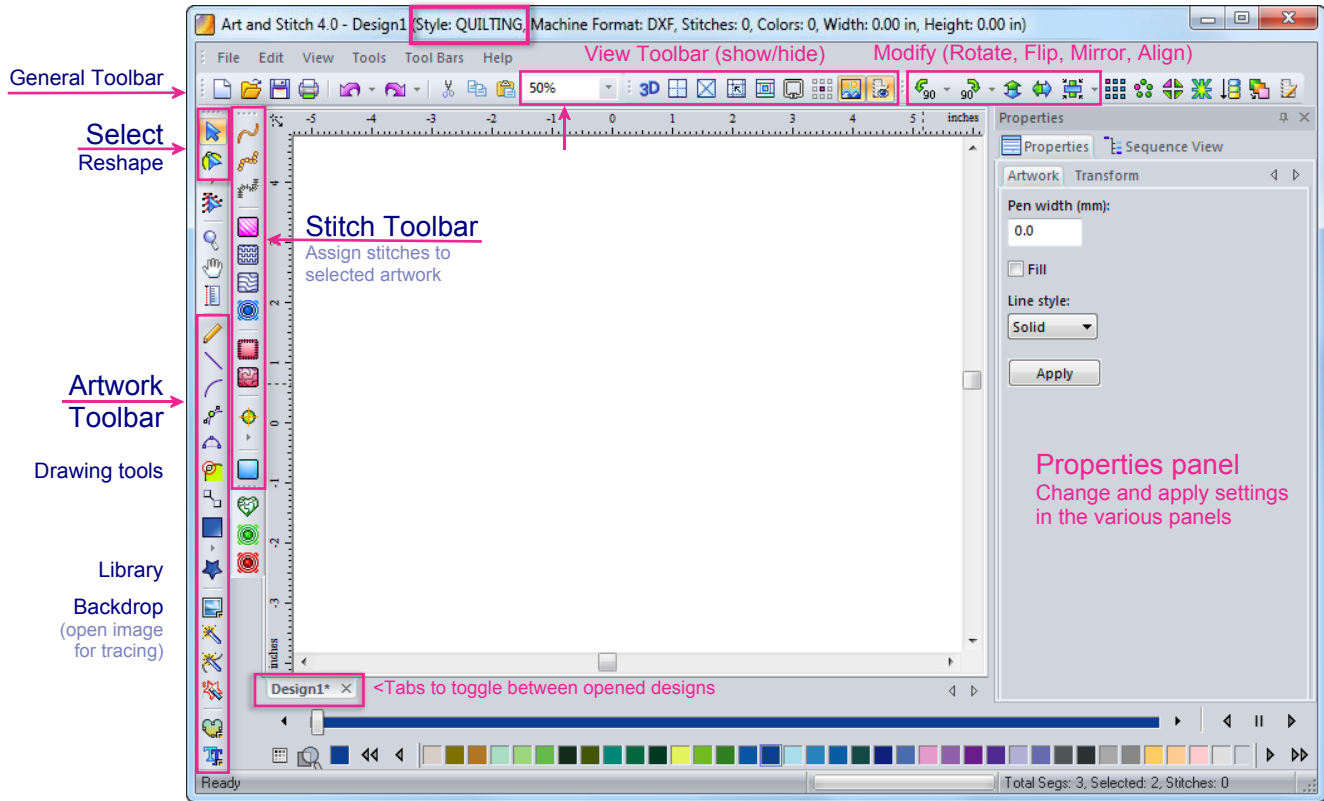


In Art and Stitch you start with your artwork. In this Part 2 you will find all about it: The Design Page, the drawing tools, how to edit/reshape artwork, how to open and trace an image.

Tip: Read in the given order and do all exercises!



## 2.1 Main Window and Toolbars



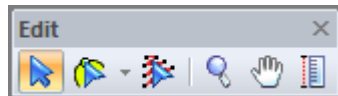
The Main window of Art and Stitch.

### Style: QUILTING

In the Title bar at the top you can see that the Style is set to QUILTING. In Part 3, the Stitch Chapters you will find an explanation why it is important to change from style QUILTING into style EMBROIDERY when creating designs for your embroidery machine. For example in Style QUILTING the program will not add tie in and tie offs and it will not add any underlay to a design, things you do need for embroidery designs.

### Moving the Toolbars

Each of the Toolbars can be grabbed and moved. That is particularly handy for the Edit Toolbar:



You can place the Edit Toolbar close to the area you are working on when reshaping and tweaking.

*Menu Tool Bars > Reset Toolbars will put everything back into place.*

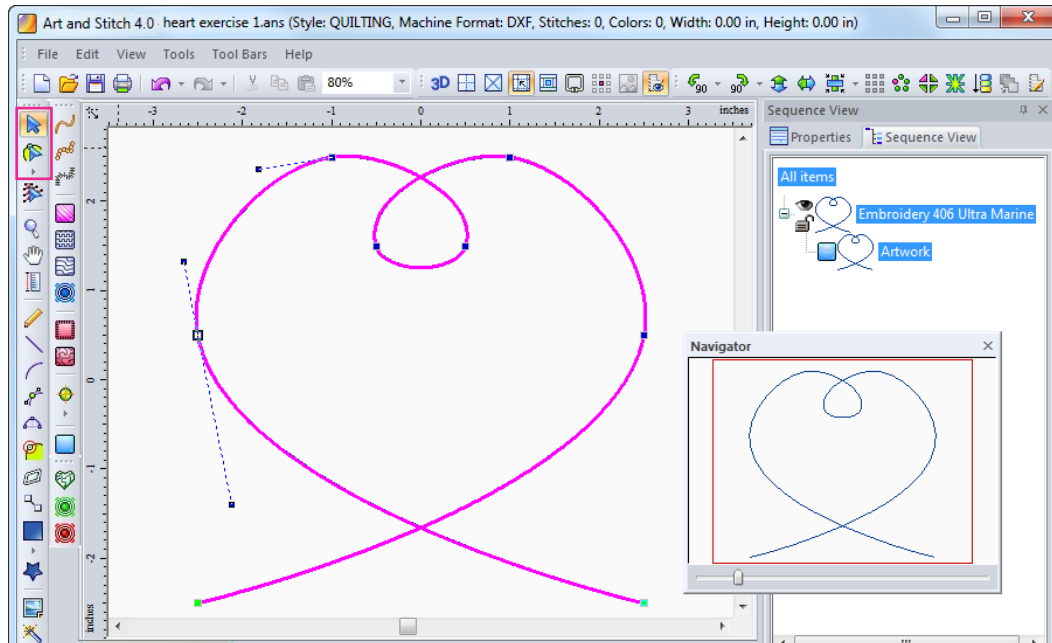
**The Properties and Sequence View Panels** on the right will update, depending on the type of object selected on the Design Page. When nothing is selected only the Copyright box will show. The panels can be undocked by grabbing and moving them. Double-clicking on a panel's title bar will undock it. Clicking on the tiny push pin will auto hide a panel.

*Menu Tool Bars > Reset Toolbars will put everything back into place.*



## 2.2 The Reshape tool

Select  
Reshape



To reshape a drawing:



Take the **Reshape** tool (or press letter R on your keyboard) and click on the object you drew. Single click on one of the points: the point turns yellow and anchors appear. Anchors control the shape of the curve. You can move those anchors in a different direction to reshape the curve. You can also make the anchors longer or shorter, to control a larger or smaller part of the curve.

**For more precision**, you can change the view in Reshape mode to **Hairlines** by pressing letter H (for Hairlines) on your keyboard. Pressing H again will return to the “normal” Reshape view.

**To just move a point**, without changing the anchors: click and hold the mouse down on a point and move it.

**To reshape by moving the anchors**: single click on a point, do NOT move it (not even a tiny bit!), release the mouse. Then click on an anchor, hold down the primary mouse button and move the anchor in the desired direction.

With **Ctrl+arrow keys** you can select the next or previous point. This comes in handy when points are close together and it's hard to select the right one: in that case click on a point farther away and go to the desired point by holding Control and pressing the arrow keys on your keyboard.

With **Shift+arrow keys** you can move a selected point in small increments, for precise editing.

To **select multiple points**: hold down Ctrl and click in the desired points to select them, or drag a selection marquee around the desired points. All of this with the Reshape tool.

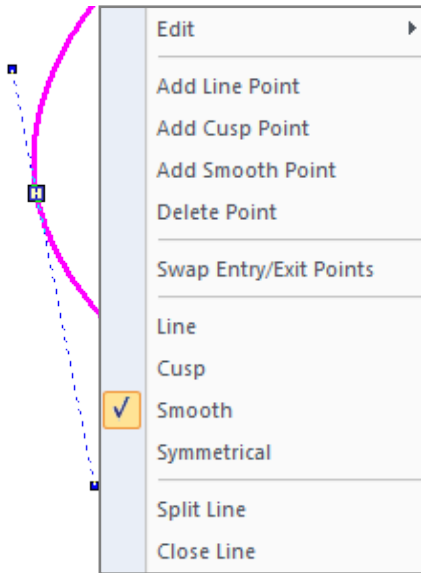
To **de-select selected points**: hold down Ctrl and click in the points you want to de-select.

When you click on a point with the Reshape tool, the anchors of the selected point appear, but also the anchors of the next points on both sides of the selected point. Handy if a point is hard to reach: click on its neighbor and you can select and move the anchors of the desired point.






### 2.2.1 Edit - Reshape: Anchors and Properties of the points



#### Right-click context menu in Reshape mode:

 Right-click with the Reshape tool on a point or a line. A menu pops up where you can choose one of the available options:

- **Edit > All, Outlines or Entry/Exit.** For easier access of the points when stitches are applied you can choose “Outlines” to get the entry/exit points out of the way; choosing “Entry/Exit” will get the anchor points out of the way and only show the first and last stitch of the selection.
- **Add Point (choose between Line, Cusp, Smooth)** will create an extra point at the position where you right-clicked on a line. Alternatively you can double-click on a line segment to add a Smooth point, or hold down Shift and double-click to add a Cusp point.
- **Delete Point** will delete the selected point. Alternatively you can click on a point and press Delete on your keyboard.
- Right-click exactly in the green Entry or red Exit **stitch** point and choose **Swap Entry/Exit Points** to change the stitch direction of the selected line. Not available in artwork mode.

To change the properties of the points/anchors:

- **Line** will turn a curve point into a sharp point without anchors.
- **Cusp** lets the 2 anchors each have their own direction. **Tip:** you cannot change a line point into a Cusp: a changed point will inherit the anchors of the existing point. As a Line point doesn't have any anchors, the new Cusp point won't have any anchors either. Therefore change to Smooth first and then to Cusp.
- **Smooth** will turn the selected point into a curve point.
- **Symmetrical** makes the anchors on both sides of the point the same length.
- **Split Line** will split the line at the position where you right-clicked on the line.
- **Close Line** will close the shape in Reshape mode. Alternatively a shape can be closed when the Select tool is active, by clicking on the Close Shape button in the Artwork Toolbar.



To stop reshaping: press Q (for Quick Select) on your keyboard or take the Select Tool.

#### Tips where to find functions and commands:

Although most functions are available through the various menus, there's a quick rule: if a function has a button, **use the button**. Clicking on a button is easier and quicker than choosing the same function in a menu.

To **see the name and function of a button**, hold your mouse over that button and a **tooltip** appears. It's like having a cheat page right inside the software :). In the beginning read those tooltips before clicking on a button. It will shorten the learning curve!

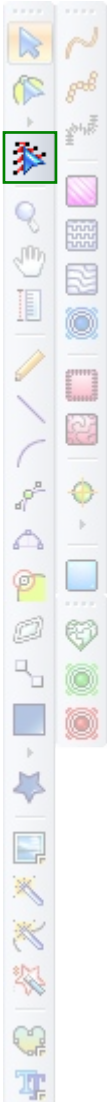
The **right-click menu** is also a very quick way to use a function.

For often used commands there are **shortcuts** available: keyboard combinations to perform an action. For a list of shortcuts, see Chapter 8.1.





## 2.2.2 Edit - Reshape: Stitch Edit Mode



In Stitch Edit Mode you can tweak designs on a detailed stitch-by-stitch level. This is mainly used for embroidery digitizing, not so much for quilt patterns. Basically the Reshape tool is really your preferred way of editing!

In the Embroidery Manual (open via menu Help) you will find all information about the Stitch Edit tool.



**Important:** Before using the Stitch Edit tool on object-based (vector-based) designs made in Art and Stitch save the design under a different name and be sure that you have done all “normal” editing with the Reshape tool and any resizing. Reason: when you would resize or reshape an object after using the Stitch Edit tool, the object will revert to its original shape and the stitch editing work will be lost. **The Stitch Editing work is therefore typically done last.**

Only use Stitch Edit if you cannot perfect your design with the Reshape tool.

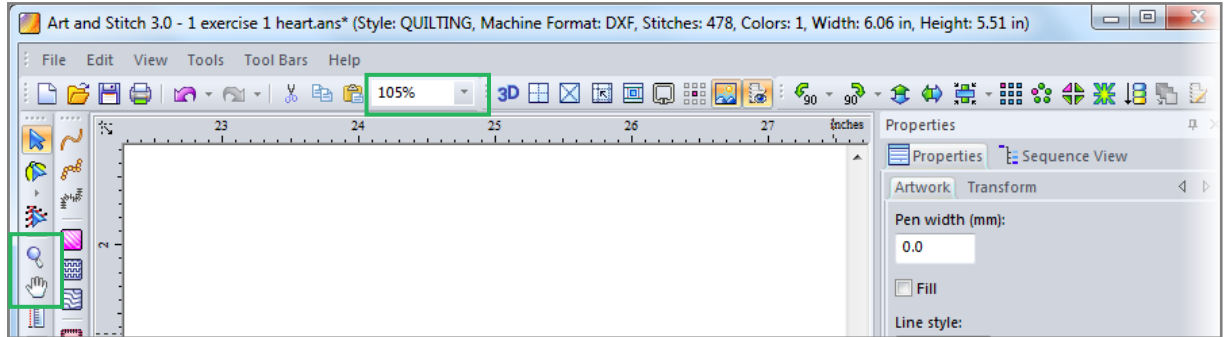
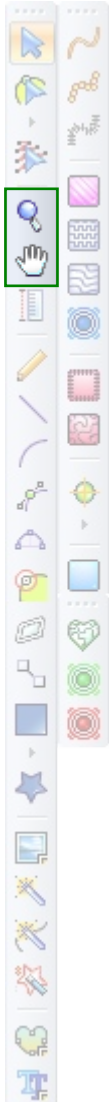


Reshape should be your first choice.

For more details: see Embroidery Manual, open via menu Help.



## 2.3 Zoom - Navigator - Pan



Zooming in or out can be done in various ways:

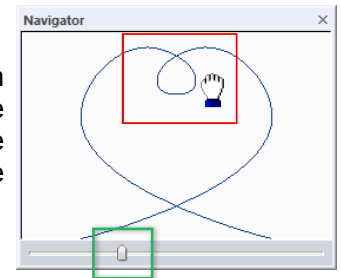


- Choose one of the percentages in the drop down list, or type a value and press Enter.
- Press the Plus + or Minus - key on your keyboard.
- Take the Zoom tool in the Artwork toolbar.
- Use the scroll wheel of your mouse to zoom in or out: when something is selected on the Design Page, scrolling will zoom in on the center of the selection.

When in Reshape mode, don't scroll! Instead use the Navigator window or the keyboard shortcuts as described below.

### Easiest way: Zoom and Pan in Navigator window

- Zooming in or out can best be done by moving the sliderbar in the **Navigator window** (letter N on your keyboard will toggle between Navigator on or off). Moving the red frame in the Navigator window will move your view of the Design Page (same as panning).



**Golden Tip: Pressing the Space bar = zoom to fit.**

### Precision editing using keyboard shortcuts:

Take the Reshape tool by pressing letter R on your keyboard and click on the object you want to work on. Press H to toggle between Hairlines or normal width of the pink lines while reshaping. Then press letter Z (for Zoom) on your keyboard and drag a selection marquee around the areas you want to zoom in. Press R again to start Reshaping in this zoomed-in mode. Press M (=Move Design Page) on your keyboard to move the Design Page and work on another area - still in this zoomed-in mode. When done: press letter Q on your keyboard. Q stands for Quick Select.

These keyboard shortcuts are a great help and they are not hard to learn:

R Reshape, Z Zoom, H Hairlines, M Move design page, Q Quick select.



## 2.4 Measure tool

### Measure Tool



A useful tool to measure parts of your drawing is the **Measure tool** in the toolbar on the left. Zoom in first for better precision.

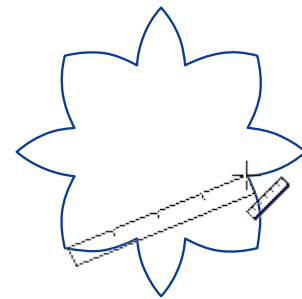
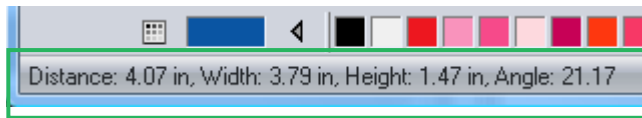
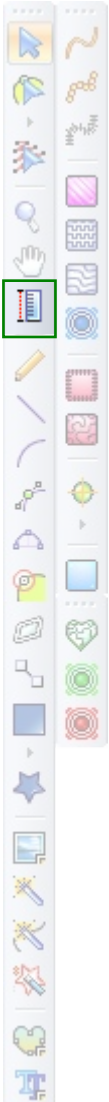


Take the Measure tool by clicking on it, click and hold the mouse button down where you want to start measuring, then drag to the second point and - still holding the mouse button down - read the distance in the Status bar at the bottom of the window.

Measuring point is the center of the cross hair showing in the mouse pointer.

In the Status bar you can read the measurements of Distance, Width, Height and Angle.

With respect to the measured height: the Measure tool does not have to be straight up and down to measure the height. Art and Stitch calculates the height as well as the three other pieces of information, no matter at what angle the Measure tool is held.





## 2.5 Artwork Toolbar: Vector drawing tools - Close shape - Pen Width



The Drawing Tools: Activate a tool by clicking on it.

### Pencil (shortcut P).



Click on the Pencil tool (or press letter P on your keyboard) and draw by moving the mouse. Release the mouse to pause drawing, click and move to continue. Right-click to finish.\*

### Line Tool (shortcut L).



Click from point to point for straight lines, right-click to finish\*. To create a Smooth point while using the Line tool: hold down the Control key and click to create a Smooth point.

### Curve Tool (shortcut C).



Click from point to point for curved lines, right-click to finish\*. You only need a few points for nice smooth curves. Fewer points make smoother curves. To create a Cusp point while drawing with the Curve tool: hold down the Control key and click to create a Cusp point.

### Bezier Tool (shortcut B).



Click for straight lines, click-and-drag for curves, immediately controlling the curve by moving the mouse in the desired direction. Pressing Ctrl on your keyboard and then click and moving the anchor will create a cusp point. One tool for all types of curves and lines. As with all drawing tools in Art and Stitch: right-click to finish.\*

### 3 pt Arc tool (shortcut A).



Arcs are parts of circles. Click from point to point, three points for the first arc, then only two for the following arcs. Right-click to finish.\*

### \* Close Shape.

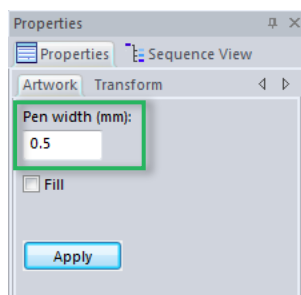


Before finishing an object by right-clicking, click on this button if your pattern has to be a closed shape, so it can be filled with stitches.

\* Tip: As long as you don't right-click to finish an object, you can combine all tools while drawing. Or - even easier - finish an object by right-clicking, take another tool and turn **"Connect to Path"** on (letter T on your keyboard, or right-click on a ruler and click on the line "Connect to Path"). Start drawing with the new tool near the last point of the previous object. The first point will snap and connect to the last point of the path you just drew.

### Thickness of artwork lines - Pen Width:

The default thickness of artwork lines drawn in Art and Stitch is 0.0 mm showing as 1 pixel. You can change the width in Properties Panel, tab Artwork by entering a different value (between 0.0 and 10.0) for Pen Width. Click on Apply. Via menu Tools > Preferences > tab Style you can set your preferred pen width as default.

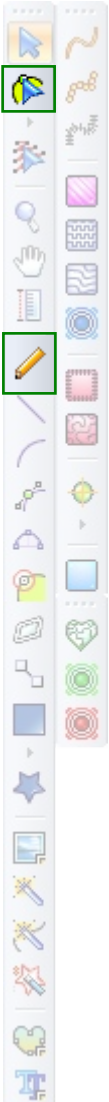


Pen Width is important when printing a catalog, printing patchwork templates and when exporting artwork as Image. A few examples:





## 2.5.1 Artwork Exercise: How to use the Pencil tool, How to Reshape



### How to use the Pencil tool



**Pencil** (shortcut P). Click and hold the mouse down on the design page, move the mouse to draw. Release the mouse to pause drawing, click and move to continue. Right-click to finish.

#### Exercise:

Take the Pencil tool by clicking on it (or press letter P on your Keyboard). Write your name in one continuous path. Right-click to finish the object. After right-clicking, the object shows the points created while you were drawing. You will notice that the lines are already smoothed and that the number of points is very acceptable, but.. you will be reducing them anyway just for the purpose of this exercise: practicing with the Reshape tool.

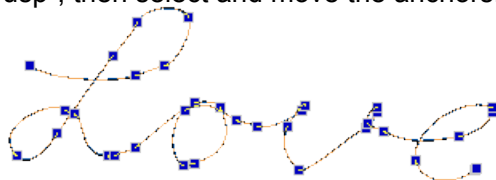
### How to Reshape - important exercise!

Curves are smoother when you use as few points as possible:

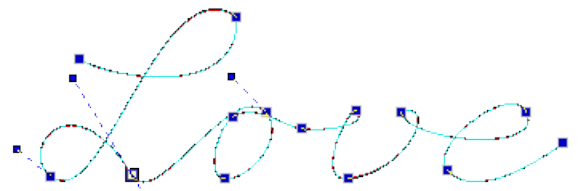
#### Exercise:



Take the Reshape tool and click on the path you just drew. Let's start by deleting points which are close together. With the Reshape tool active, click on a point that is close to another point. Press Delete on your keyboard. Then select the remaining point by clicking on it. Two anchors appear. Move the anchors to perfect the curve shape. When a point seems to be sharp, right-click on it and choose "Smooth". Then click on the point again and move an anchor. **You will be amazed how much one anchor can control!** Keep deleting points and moving the anchors of the remaining points and try to keep only a few points. Compare the number of points in the two "Before" and "After" images below. To be able to let each anchor of a point move independently, right click on a point and choose "Cusp", then select and move the anchors.



Before deleting and reshaping points



After deleting and reshaping points

**To just move a point**, without changing the anchors: click and hold the mouse down on a point and move it.

**To reshape by moving the anchors**: single click on a point, do NOT move it (not even a tiny bit!) release the mouse. Then click on an anchor, hold down the primary mouse button and move the anchor in the desired direction.



To stop reshaping or stop using a drawing tool: click on the Select tool.





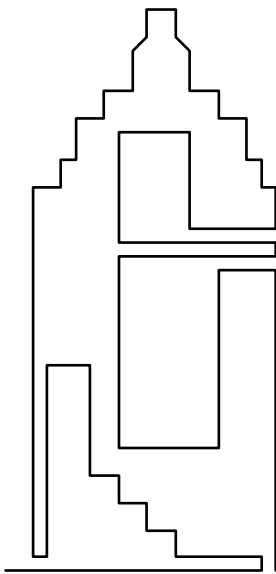
## 2.5.2 Artwork Exercise: How to use the Line Tool

### How to use the Line tool



**Line Tool** (shortcut L). Click from point to point for straight lines, right-click to finish. To create a Smooth point while using the Line tool: hold down the Control key and click to create a Smooth point.

For this exercise take the Line tool from the Artwork Toolbar on the left (or press the letter L on your Keyboard). Click from point to point to draw a pattern consisting of straight lines.



Right-click in a ruler and choose Grid Settings. Change the Horizontal and Vertical Spacing values to 0.2 inch.



Turn Snap to Grid on using the button in the View Toolbar. Now it is a breeze to draw a canal house like this. Draw the entire path as one continuous path, clicking from point to point. No separate doors or windows: you don't want extra starts and stops or jumps!

Start and end at the same level, to make the drawing repeatable. Practice and change some of the windows and the steps. That way you can create a nice street as a panto, a border or an E2E pattern.

**Tip:** when you made a mistake while drawing, you can press the **Backspace key** on your keyboard to step back and then continue drawing. Do NOT use Undo while you are still drawing! As long as an object is not finished by right-clicking, it is not an action that can be undone. Undo would then undo the "previous" action.



**Tip:** To change a straight point into a Smooth point while drawing: hold down the Control key and click. The point will be smooth. In the above example this technique was used for a door and a roof top.






### 2.5.3 Artwork Exercise: How to use the Curve tool

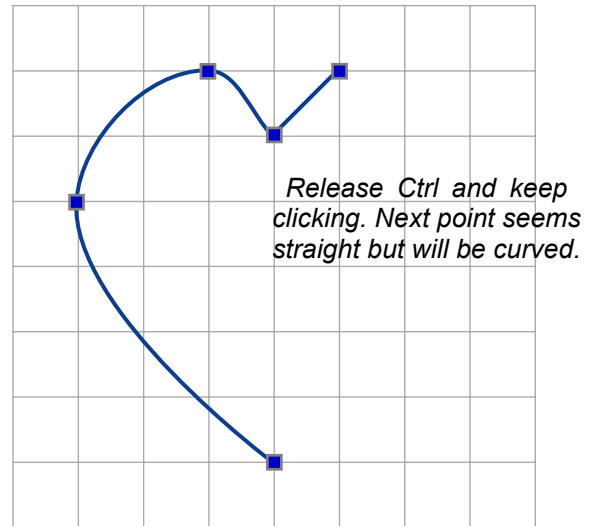
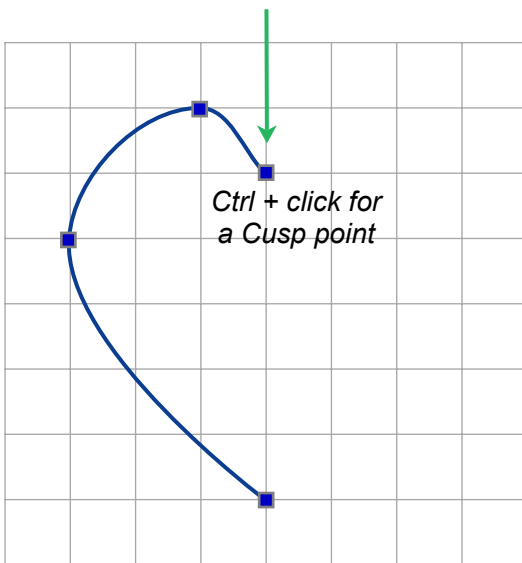


#### How to use the Curve tool

 **Curve Tool** (shortcut C). Click from point to point for curved lines, right-click to finish. To create a sharp (Cusp) point with the Curve tool: hold down the Control key and click that point.

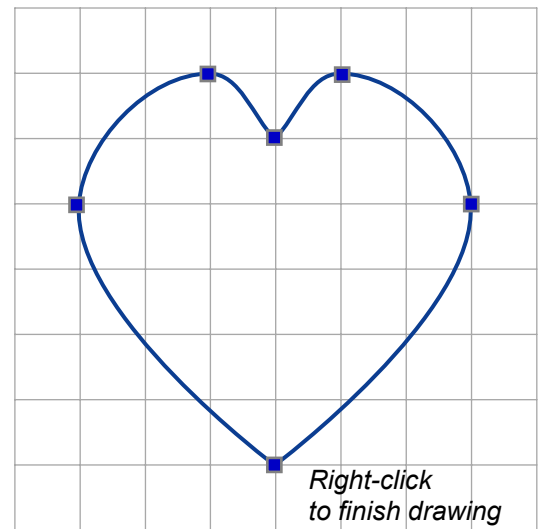
For this exercise take the Curve tool from the Artwork Toolbar on the left (or press the letter C on your Keyboard). Turn snap to grid on. Click from point to point to draw a heart.

As you have seen in the Reshape exercise, use as few points as possible. To create a Cusp point in the top center: hold down the Control key **and click** the point in the top center. Release the Ctrl key and continue drawing, then right-click to finish the heart shape. You will notice that the next point after the Ctrl-clicked point will look like a straight line: it will become a curve when you keep drawing. See images below.



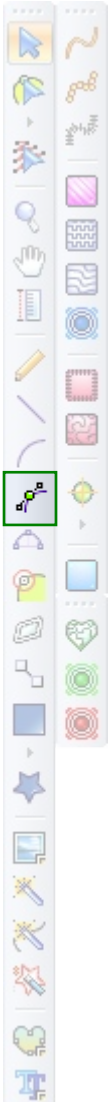
**Tip:** when you made a mistake while drawing, you can press the **Backspace key** on your keyboard to step back and then continue drawing.

Do NOT use Undo while you are still drawing! As long as an object is not finished by right-clicking, it is not an action that can be undone. Undo would then undo the "previous" action.





### 2.5.4 Artwork Exercise: How to use the Bezier tool



#### How to use the Bezier tool



**Bezier Tool** (shortcut B). Click for straight lines, click-and-drag for curves, immediately controlling the curve by moving the mouse in the desired direction. Pressing Ctrl on your keyboard and then click and move the anchor will create a cusp point. One tool for all types of curves and lines ! As with all drawing tools in Art and Stitch: right-click to finish.

If you haven't done the Exercise "How to Reshape" in Chapter 2.5.1, please do that first. It will give you a feeling for the anchors and you will see how much of a curve can be controlled by one anchor.

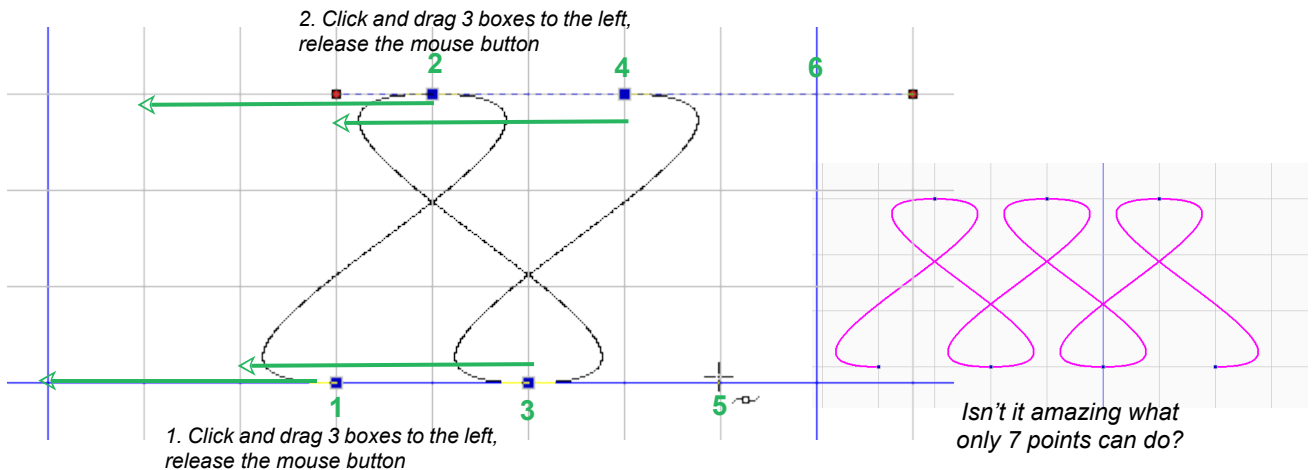
In this exercise you will use the Bezier tool to create a nice sashing pattern.

Start a new design by clicking on the button "New" in the General Toolbar (or pressing Ctrl+N). Right-click in a ruler and set the system units to show inches (English). In Grid Settings set the Horizontal and Vertical Spacing values to 0.5 and click on OK. Click on the button Snap to Grid in the View Toolbar to turn it on.



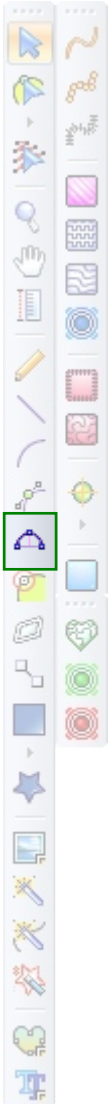
Take the Bezier tool from the Artwork Toolbar on the left (or press letter B on your keyboard). Click and at the same time hold the left (primary) mouse button down and move it 3 grid boxes to the left. Release the mouse button. Click (and keep the left mouse button down) on the next position: 3 grid boxes up and 1 block to the right and - still with the mouse button down - move it 3 grid boxes to the left, then release. Click (again keeping the mouse button down) on the next position (3 grid blocks down and on the right side of the next empty grid box) and move the mouse 3 grid boxes to the left and release the mouse. Repeat.

*At first the Bezier tool can be a quite intimidating. Don't let it scare you and give it a try. The tool is a powerful drawing tool with amazing results. Learn more in the excellent Addendum 18 on our website about the Bezier tool, written by our Certified Teacher David Smith. Link to the Teachers page on our website can be found in Menu Help > Online Academy.*





### 2.5.5 Artwork Exercise: How to use the 3 pt Arc tool



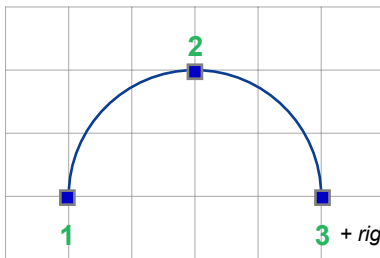
#### How to use the 3 pt Arc tool



**3 pt Arc tool** (shortcut A). Arcs are parts of circles. This tool has been made as easy as clicking from point to point. Right-click to finish.

The Arc tool here in Art and Stitch is semi-automatic:  
The last point of one arc is at the same time the first point of the next Arc.

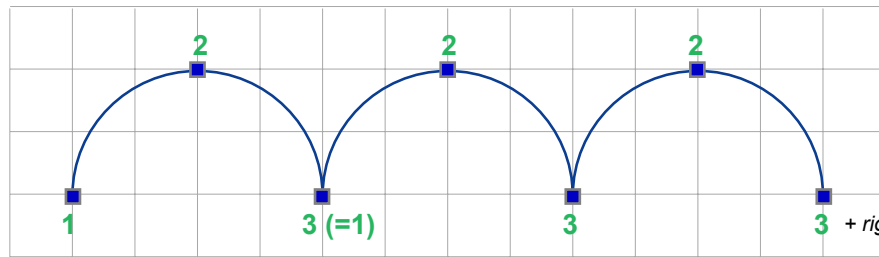
Draw 1 arc:



Take the Arc tool by clicking on it (or press letter A on your keyboard) and draw one arc: click 3 points, then right-click to finish.

Draw 3 arcs:

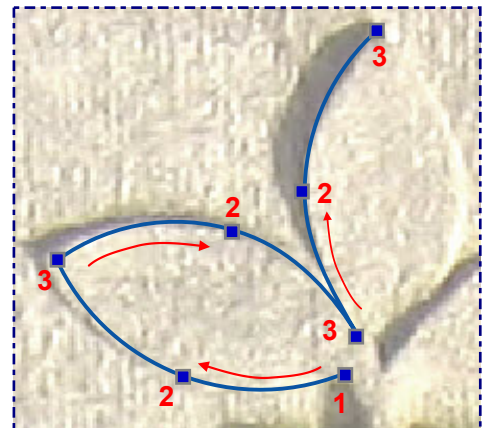
Press letter A on your keyboard to activate the Arc tool and draw three arcs. Draw 3 points for the first arc, then continue drawing: the third point is at the same time the start of the next arc so you don't have to click on that same point anymore. After the first three points, each of the next arcs only needs two points: 2 is the top of the next arc, 3 is the end of an arc AND the start of the next arc. It's easier than you think :)



**Tip:** The second point of an arc always looks like a straight line first. When you click the third point, it will become an arc. Second point must be placed halfway between the arc.

When drawing patterns with the Arc tool, count 1, 2, 3 for the first arc only and then keep counting 2, 3... 2, 3 for the next arcs. See image on the right.

**If your arc suddenly turns into a strange big bubble** you lost count and your number 2 is not placed halfway between the arc !





### 2.5.6 Artwork Toolbar: Add Seam Allowance (1/4 inch) - Patchwork templates



The function **Add Seam Allowance** turns Art and Stitch into an allround quilt program:

Select an artwork object and click on the Seam Allowance button to add an extra outline at a distance of a quarter inch. The two shapes are grouped.

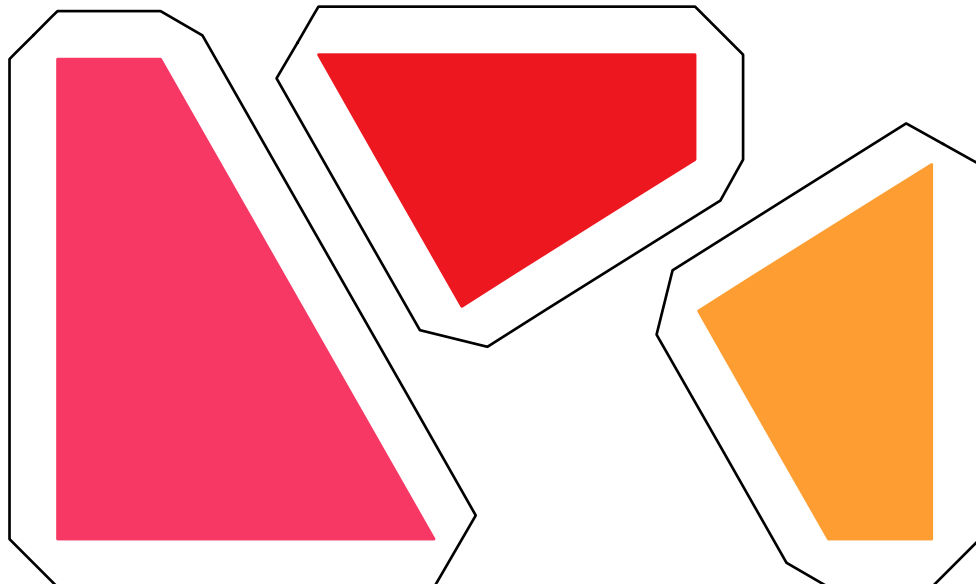
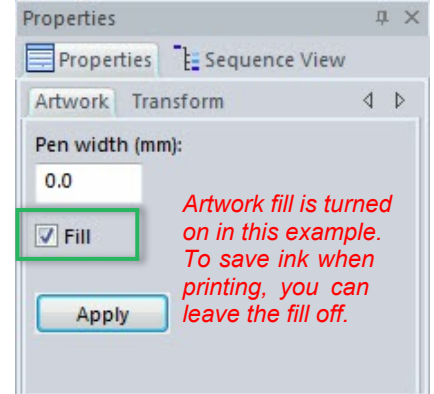
**Create your own patchwork templates without doing any math at all:** Draw a square and make it the desired size. Slice into separate parts, add seam allowance and print at actual size (in Print Settings tick the box "Print Actual size"). Use a 1/4 inch foot on your sewing machine.

In this example a square is sliced into a crazy quilt block (see Slice chapter 2.22). Desired size is set in Properties > Transform.

Duplicate the shapes and move them apart to make room for the seam allowance.

Select one of the separate objects and click on the Seam Allowance button. Select the second object, add Seam Allowance. Repeat. By adding the Seam Allowance to the individual objects, each patch and its seam allowance will be grouped together. Do NOT resize after the seam allowance has been added - otherwise the allowance would not be a quarter inch anymore.

The seam allowance inherits the color of the first object in Sequence View. For best printing quality select the seam allowance objects in Sequence View and color them black.



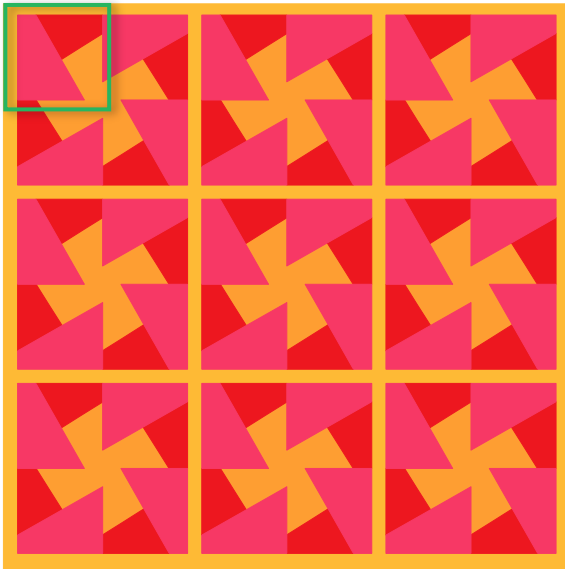


2.5.6 Artwork Toolbar: Add Seam Allowance (1/4 inch) - Patchwork templates

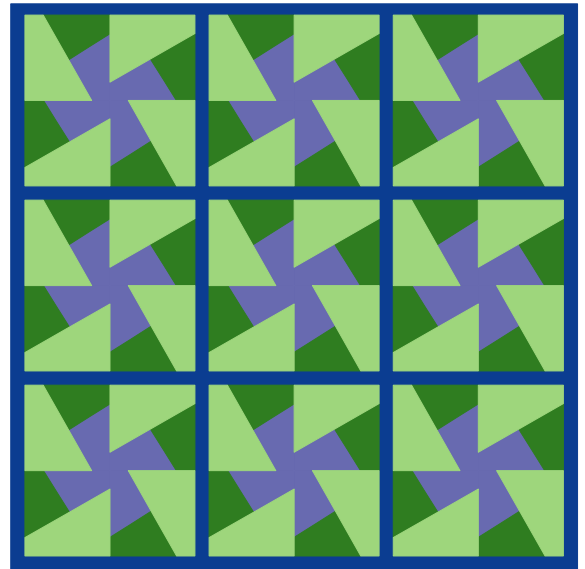


Examples of patchwork templates for piecing

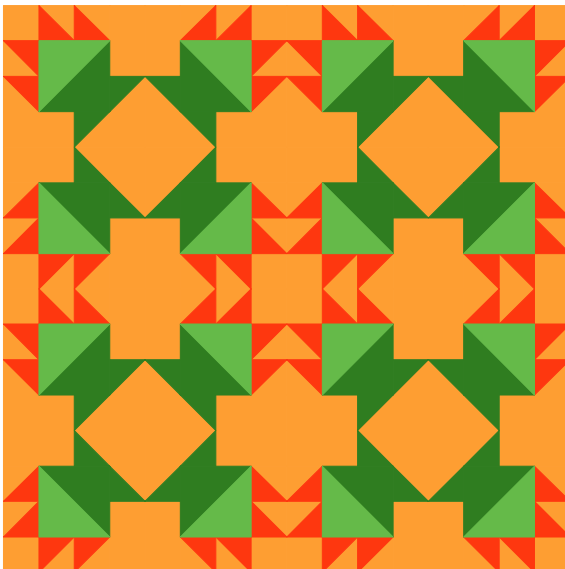
Use the templates to cut the pieces for your blocks (or export as artwork for your electronic cutting machine or print the templates at actual size for the Brother Scan N Cut machine. Below are some examples as inspiration how to create your own patchwork templates, how a quilt top looks in different colors. Art and Stitch is suitable to design the quilt top too, using the Repeat function.



Here is the randomly sliced square of the previous page: Grouped, Repeat 2x2, each block rotated, Repeat 3x3 distance 1" between repeats.



Same quilt top, just different colors, changed in Sequence View. Very helpful to see the amazing effect of color and the funny turning effect of the blocks.



Basket in Library, Patchwork folder, Magic Square, Grouped, Repeat tool.



Advantage of having it all in one program: Create matching quilt designs for the blocks



### 2.5.7 Artwork Toolbar: Add Seam Allowance - Needle turn Appliqué

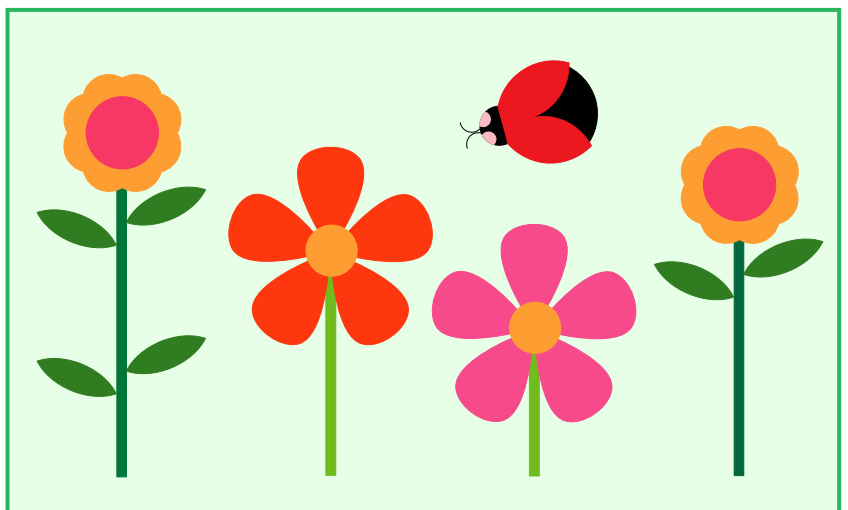
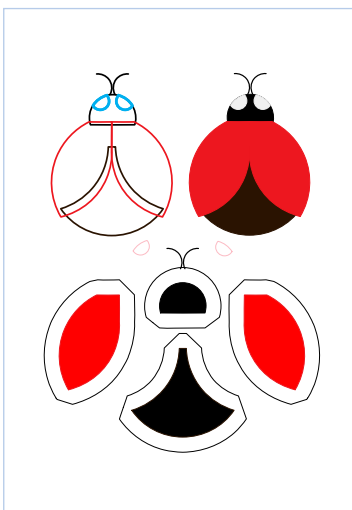
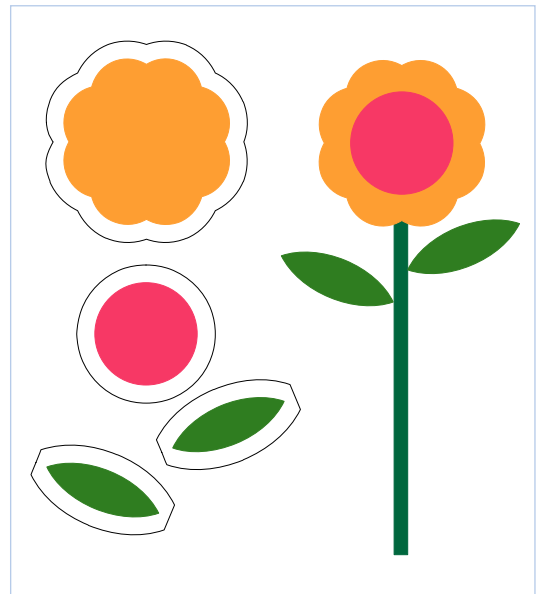
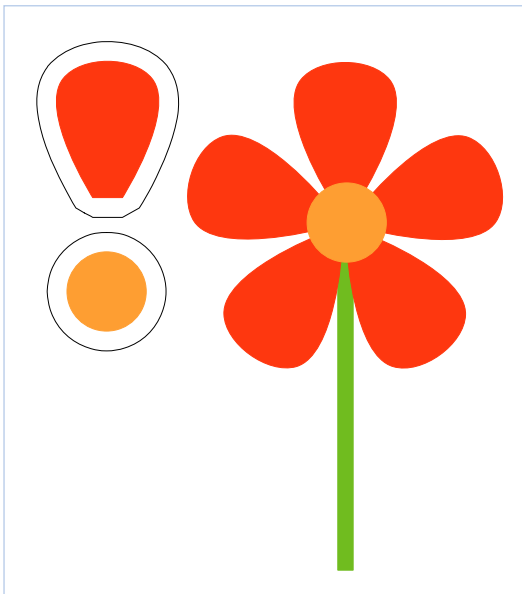


#### Examples of Needle turn Appliqué

With the function Add Seam Allowance and the option to print at actual size, Art and Stitch is very useful for needle turn appliqué too.

You can draw your own appliqué shapes in Art and Stitch, resize to the desired size. Then add a seam allowance to each of the separate shapes (select a shape and click on the button Add Seam Allowance, repeat for all shapes) and print at actual size. Use the printout as paper template to cut the pieces.

Here's an example to get inspired. These designs are in the Art and Stitch Library, folder Patchwork.







### 2.5.8 Artwork Toolbar: Connect Objects

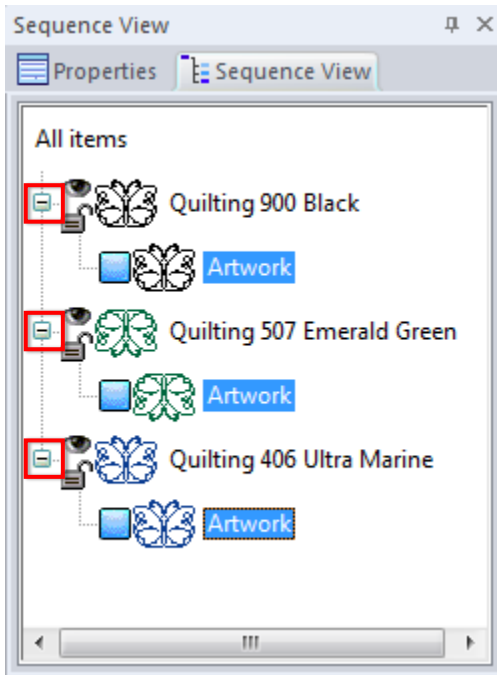


#### Connect Objects button



For quilting patterns it is important to connect objects into a continuous path, with one start and one stop. Select two or more objects, where the last point of one object is close to the first point of the next object and click on the Connect Objects button in the Artwork Toolbar, or right-click and choose Connect Objects.

Connecting will turn multiple parts into one continuous path.



#### Sequence View > All Items > Expand All

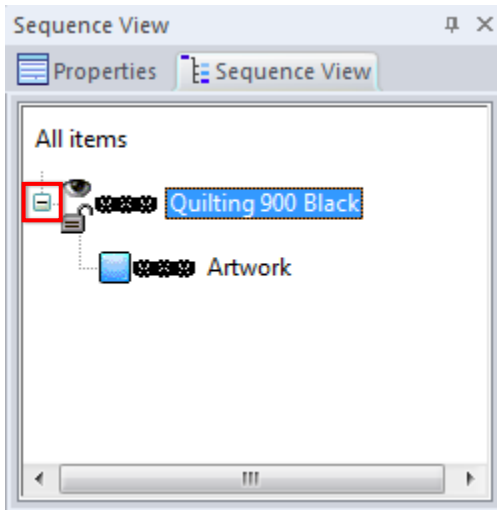
Always open up the “tree” of objects in Sequence View to see all objects by clicking on the plus + sign in front of the color name(s), or by right-clicking on the line “All Items” and choosing “Expand All”.

Select the objects to be connected:

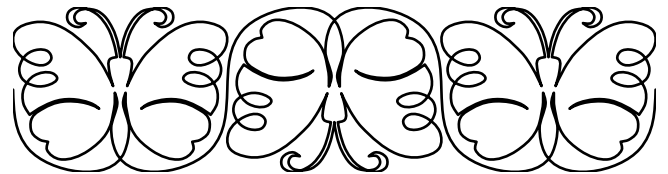
Click on the first object, hold down Ctrl key on your keyboard and click on the other object(s) to be connected.



Click on the Connect Objects button.



The selected objects will be connected into a continuous path. In Sequence View it will show as one piece of Artwork.

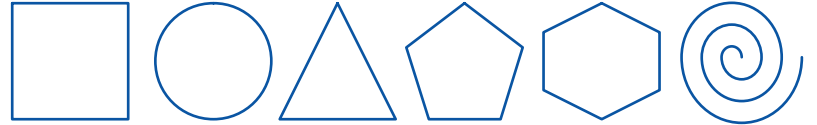




### 2.5.9 Artwork Toolbar: AutoShapes



#### AutoShapes

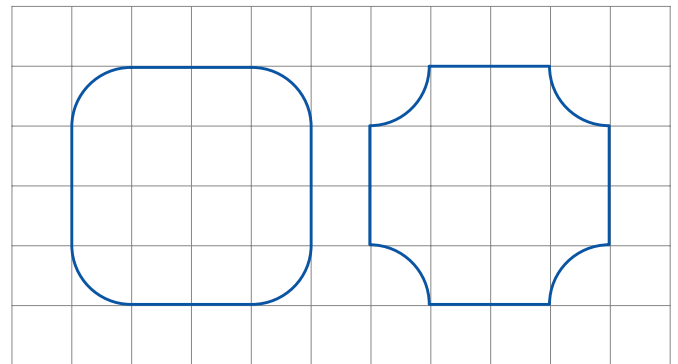
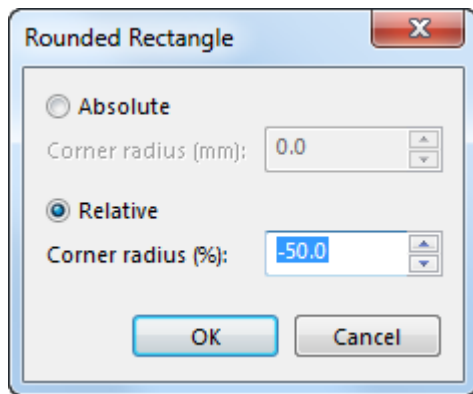


Click on the little arrow under the button for a fly-out. Choose between Rectangle, rounded Rectangle, Ellipse, Triangle, Pentagon, Hexagon or Spiral.

To draw a **Rectangle, Ellipse, Triangle, Pentagon or Hexagon**: click on the tool, click in the Design Page, hold primary mouse button down, move the mouse and release. Hold down Ctrl while drawing, for a precise Square, Circle, Triangle etc.

To draw a **Rounded Rectangle**: click on the tool. A dialog window will open where you can set the roundness of the corners as absolute value (in mm) or relative as a percentage of the shape. The value controls 1 of the 2 corners on each side. So 50% makes the corner a quarter of the full shape. You can also enter negative values as in the example on the right below: it will result in inside corners, great for frames! Set the desired values and click on OK. Then click and drag to create the rounded rectangle.

After creating a rounded rectangle, you can resize and reshape but you cannot change the corner radius other than reshaping it. If it's not what you expected, draw a new one using different values. Play with the tool and settings to get familiar with the effects.



Choosing a **Spiral** from the AutoShapes fly-out will open a dialog box with choices between single and double spiral, single and double swirl, where you can set the number of revolutions. For swirls you can also set the distance between the rings ("expansion factor"). 100% is maximum distance. A lower expansion value brings the rings closer together.



Single spiral  
3 Revolutions



Double spiral  
3 Revolutions



Single swirl  
2 Revolutions  
Expansion 100%



Single swirl  
4 Revolutions  
Expansion 100%



Doubleswirl  
3 Revolutions  
Expansion 100%

**Tip:** The AutoShapes button will show the last used shape. Click on the arrow under the button to open the fly-out and make another choice.

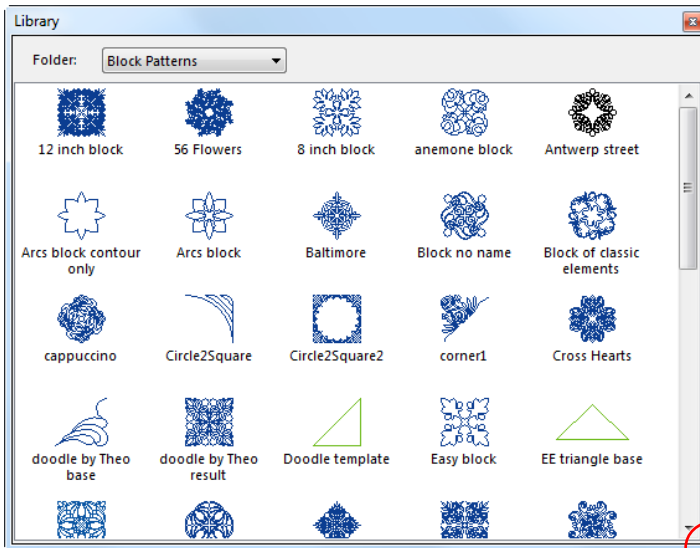
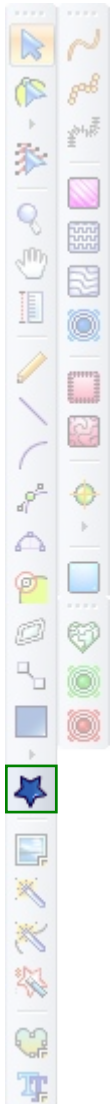


### 2.5.10 Artwork Toolbar: Library

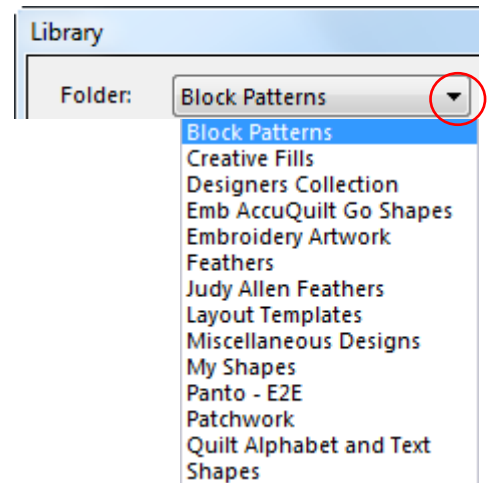
#### Library



To open a design from the Library always click on the star-shaped button in the Artwork Toolbar. Do not use menu File Open! The Library contains over 500 vector artwork patterns, divided over several categories. Select a design to open it. A copy will be opened and the original stays in the Library.



You can grab a corner and resize the Library window to see more designs in one view



The drop down list of categories in the Library

To save your own designs in the Library, create your vector artwork, reshape to perfection, select it and choose menu Tools > Save into Library. Save into folder / category My Shapes. Only elements that you want to use often should be saved in the Library.

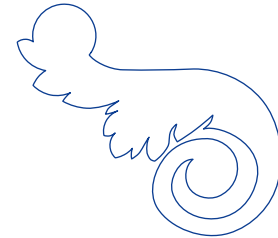
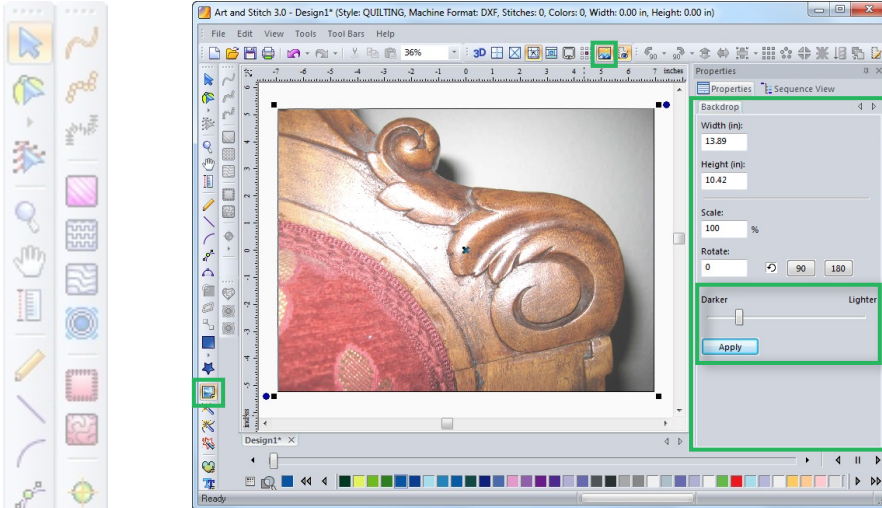
Only selected artwork will be saved via Tools > Save into Library. Stitch objects cannot be saved in the Library. Other objects on the Design Page, which are not selected, will not be included in the saved design.

After saving your design into the Library, make it a habit to save it as .ans too via menu File > Save as and save in My Documents\Art and Stitch My Designs - for example in a sub-folder "My Library designs").

Tip: via menu Tools > Backup User Filers you can make a backup of your Library files saved in "My Shapes". See details in Chapter 7.3.5.



### 2.5.11 Artwork Toolbar: Backdrop (Open, Manipulate, Select, Crop, Scan)



*Photo of my grand-mother's chair used as design inspiration. I used the Curve tool to trace. See result in chapter 3.1*

#### To open an image for tracing



Click on the Backdrop tool in the Artwork Toolbar on the left.

The "Load Backdrop" window opens. Navigate to the folder where you keep your images (the above example is located in the folder Art and Stitch Backdrops in "My Documents"), select an image and click on Open. The tab Backdrop will now be active in the Properties Panel on the right .

#### Tip: About the size / quality of a backdrop image

Be sure that the image is smaller than 1 MB. Camera's / phones make megapixel images these days. Make the image smaller **before** opening in Art and Stitch to prevent the program from slowing down. Quality: as long as you can see the image on your screen, quality is good enough to trace it. For the AutoTrace/Magic Wand functions the image needs clearly defined solid color regions.

#### To manipulate an image in Properties Panel, tab Backdrop



In the Backdrop tab you can **resize or rotate the image**. With the slider bar you can **make the image lighter**, to make the contrast sharper between the image and your drawing.

**Click on Apply** after making changes in the Properties Panel.



**To stop manipulating the image**, take the Select tool, or take a drawing tool and start tracing. The Backdrop tab in Properties panel disappears.

#### To select the image

Click on the Backdrop tool in the Artwork Toolbar to re-select the backdrop. Backdrop tab in Properties Panel is active again.



#### Show / Hide backdrop

Click on the Show/Hide Backdrop tool in the View Toolbar.



#### To delete the image

Click on the Backdrop tool, right-click and choose Delete Backdrop. This will remove the link between the design and the image. The image itself will still be in the same folder on your computer.



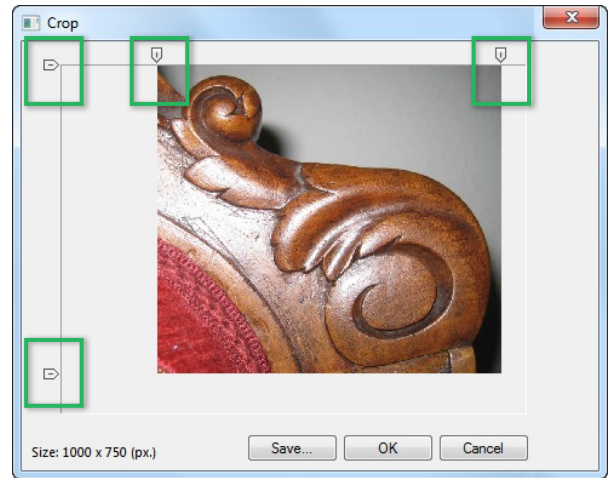
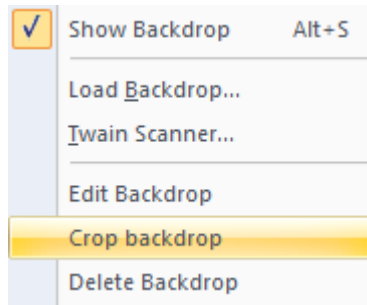


2.5.11 Artwork Toolbar: Backdrop (Open, Manipulate, Select, Crop, Scan) - Cont'd



To crop the backdrop image

If you only want to trace part of an image, it's a good idea to crop it. Click on the Backdrop tool in the Artwork Toolbar to select the image, right-click and choose Crop Backdrop. Move the sliders to crop the unwanted part of the image away. You can save this as a new image or you can click on OK to start working on it. Please note that if you want to crop the same image a second time, it will first revert to the original image, unless you saved after cropping it the first time.



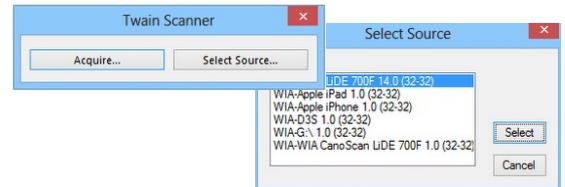
To paste a backdrop

To paste a backdrop that was copied to the Windows Clipboard in another application, choose menu Edit > Paste Backdrop. The "Save as" window opens. Name the file and save it - for example in the folder "My AnS Backdrops". The saved image will now show on the Design Page.

To scan a backdrop image

Choose menu File > Twain Scanner. In the Twain Scanner window click on "Select Source" and select your scanner. Then click on "Acquire". The program installed with your scanner will open. Follow the scan procedure in that program, be sure to use a low resolution.

*IMPORTANT: instead of using this scan method it is better and easier to scan an image outside Art and Stitch, using the default scanner program installed on your computer. Use a low resolution. Save the scan in "My AnS Backdrops" and load it as backdrop as described on the previous page.*



To edit the backdrop image

Click on the Backdrop tool in the Artwork Toolbar to select the image, right-click and choose Edit Backdrop. Microsoft Paint will open where you can make changes. Save and close to return to Art and Stitch. In Menu Tools > Preferences > Options you can change the associated program from MSPaint into another image editing application installed on your computer.

To re-open a design with a backdrop



When you re-open a design where a background image was used, click on the Backdrop Tool in the Artwork Toolbar on the left, to show the backdrop linked to this design. Note: If you have renamed the image or its containing folder, or moved it to another folder, you will have to use the Backdrop Tool to navigate to and re-open the background image.



### 2.5.12 Artwork Toolbar: How to turn a Backdrop into the true size

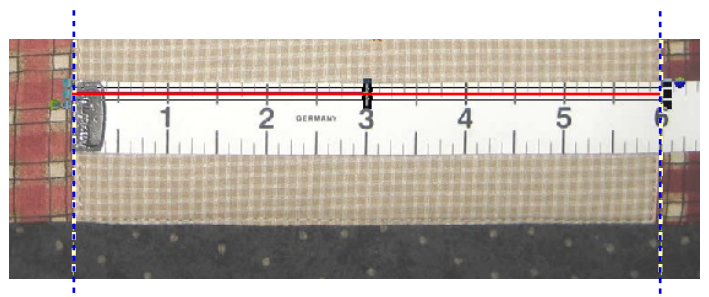


To be able to fill around an appliqué or embroidery in a quilt, you need to know the exact size of the section to be filled. Here is how:

1. Place a measure tape on the block, in a straight angle. In Step 5 this measure tape will be used to draw a reference line, therefore it must be clearly visible in the photo. Don't let it cover important details that must be visible for tracing.
2. Make a photo of the full block. The embroidery or appliqué, the block boundaries and the measure tape must be visible. Important: hold the camera at a straight angle to prevent distortion.
3. Save the photo on your computer, folder Documents > Art and Stitch Backdrops > My ANS Backdrops.
4. Click on the Backdrop tool in the Artwork toolbar and open the photo.
5. If you like you can right-click on the backdrop and choose "Crop Backdrop" as described on the previous page. Before you do that, remember that important edges of the block must be inside the photo too, so don't crop those details away.

Photos are *\*just\** pixels on your screen. They don't have the true size of what's in the photo (a photo of a skyscraper is not 22 stories high). To resize this photo so that it becomes the true size, we need to know the scaling percentage. To find it, we use a reference line.

6. Draw a reference line:  
 Drag a Guideline out of the ruler on the left of the Design Page and place it exactly at the start of the measure tape. Place another Guideline on a full visible inch (or cm) on the right side in the photo.  
 Turn Snap to Guidelines on (Right-click in one of the rulers alongside the Design Page). Take the Line tool and draw a line over the measure tape from one guideline to the other, right-click to finish.

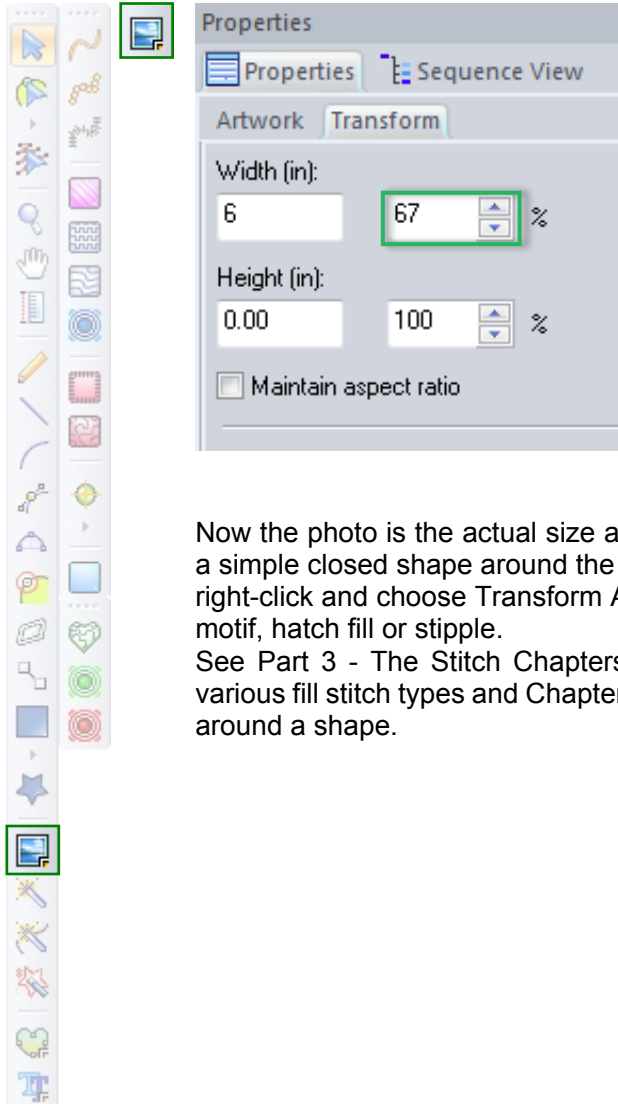


7. The measure tape in your photo tells you what the true size of the line you just drew should be. Here 6 inch. Select the line. In Properties Panel, tab Transform, box "Width" type the size of what the reference line should be: 6 inch. Don't click on Apply! Now look at the Percentage box: in this particular uncropped example it shows 67% to make the line 6 inch wide. Make a note of the percentage. That is what we need to know for the next step.





2.5.12 Artwork Toolbar: How to turn a Backdrop into the true size - Cont'd



8. Select the backdrop image by clicking on the Backdrop tool in the Artwork Toolbar. In Properties Panel, tab Backdrop, enter the scaling value found in step 7 in the box Scale (here 67%) and click on Apply.

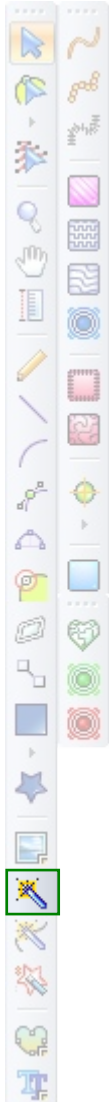
Now the photo is the actual size and you can trace the block. Draw a simple closed shape around the embroidery, select both together, right-click and choose Transform Artwork > Exclude. Then fill with a motif, hatch fill or stipple.

See Part 3 - The Stitch Chapters for more information about the various fill stitch types and Chapter 4.12 for more details about filling around a shape.





## 2.5.13 Artwork Toolbar: AutoTrace using Magic Wand (Closed areas)



**Important:** *The better the quality of the background image (nice solid colors, clearly defined contrast), the better the result of this AutoTrace tool will be. The functions Simplify and Simplify Smoothen, both available when right-clicking on selected artwork, can improve the result. The Simplify functions are explained in chapter 2.5.16.*



The Magic Wand (Closed areas) button is active when a backdrop is open on the Design Page. Take the Magic Wand tool and click on a colored region of the backdrop: the tool will create a vector outline around the region. Hide the backdrop using the Show/Hide Backdrop button in the View toolbar to see the new object. You can edit the object with the Reshape tool to perfect the lines.

### Magic Wand (Closed areas) Exercise for embroidery



**Step 1.** Choose File > New, set Type of Design to Embroidery. Click on the Backdrop Tool in the Artwork Toolbar and open a background image - in this example I am using "Flower for MagicWand.bmp" in the folder Art and Stitch Backdrops in My Documents.





**Step 2.** Take the Magic Wand (closed areas) tool and click in the regions of the image you want to use in your design. The Magic Wand tool will vectorize the edges of the regions, resulting in artwork outlines.



**Step 3.** Hide the backdrop using the tool in the View Toolbar to check if all regions are outlined. When all regions are done, keep the backdrop hidden.

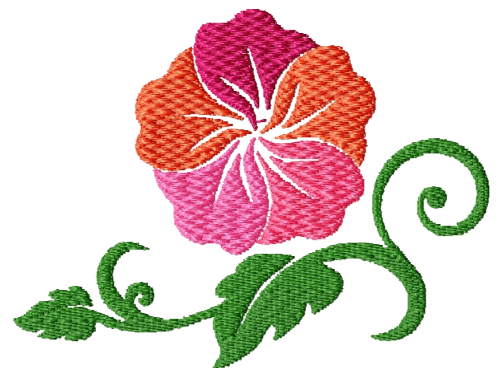
**Step 4.** Select All and open the Transform Tab in the Properties Panel on the right. Resize the design to the desired size. Here the width value is changed to 2 inch (50 mm if you are using metrics). Click on Apply.

**Step 5.** While all petals are still selected, Group them by clicking on the Group icon under the selection.  



**Step 6.** Click on the Standard Fill (Embroidery) button in the Stitch Toolbar. This will fill all petals. Take away the Underlay: Properties Panel, Tab Underlay - un-tick all boxes and click on Apply. Click on the Tab Fill and choose Pattern 3. Click on Apply. Save the design as "emb magic wand.ans".

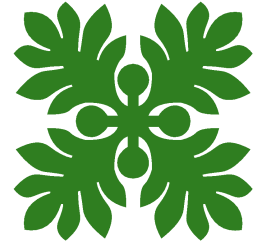
*The artwork of this flower was made with the Magic Wand (Closed Areas).  
The stem / leaf part was made with the Outline Wizard, see chapter 2.5.15*





2.5.13 Artwork Toolbar: AutoTrace using Magic Wand (Closed areas) Cont'd

Magic Wand (Closed areas) Exercise for quilting



**Step 1.** Choose File > New, set Type of Design to Quilting. Click on the Backdrop Tool in the Artwork Toolbar and open "22 Hawaiian.png".



**Step 2.** Take the Magic Wand (closed areas) tool and click in the image. The Magic Wand tool will vectorize the edges of the bitmap into an artwork outline.



**Step 3.** Hide the backdrop using the tool in the View Toolbar.

**Step 4.** Select the design and open the Transform Tab in the Properties Panel on the right. Resize the design to the desired quilting size.

**Step 5.** Before turning the artwork into stitches, select the design, right-click and choose Simplify Smoothen. Move the top slider bar all the way to the left and the middle and lowest all the way to the right. Click on OK. (Settings of Simplify Smoothen are explained in Chapter 2.5.16).

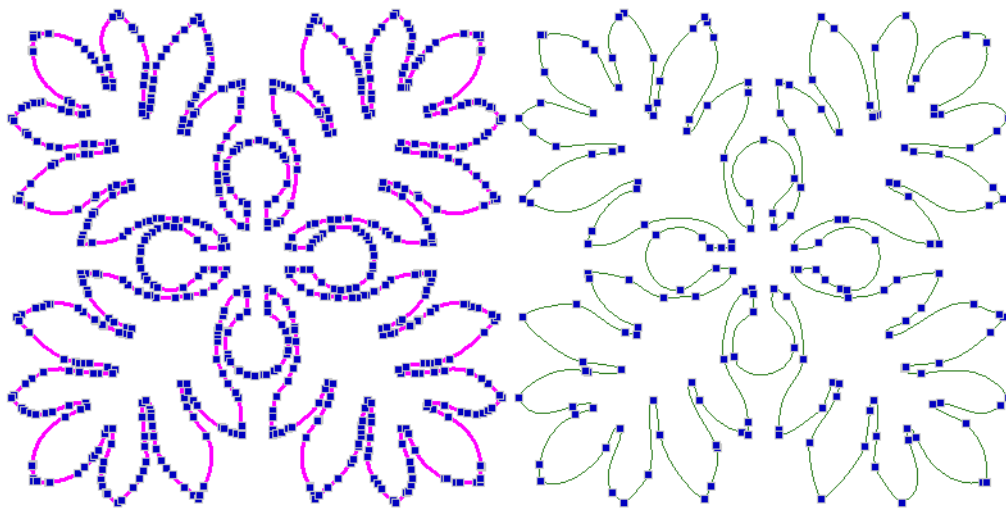


**Step 6.** Select the design and take the Reshape tool to fine tune the result.



**Step 7.** Assign a Line sew type Running stitch. Look in the Sew Simulator to see how your machine will stitch it.

Note: you don't have to save this - it is just an exercise to see what quality of image you need for a nice result with the Magic Wand tool. This particular design is already in the Library.



AutoTrace result  
(before Simplify Smoothen)

Result of Simplify Smoothen



### 2.5.14 Artwork Toolbar: AutoTrace using Magic Wand (Line Art)



**Important:** The better the quality of the background image (clearly defined contrast, sharp smooth lines), the better the result of this AutoTrace tool will be. The functions *Simplify* and *Simplify Smoother*, both available when right-clicking on selected artwork, can improve the result. The *Simplify* functions are explained in more detail in chapter 2.5.16.

#### AutoTrace with the Magic Wand (Line Art)



The Magic Wand (Line Art) button is active when a backdrop is open on the Design Page. Take the tool and click on a line of the backdrop: a vector outline will be created that follows the center of the selected line in the backdrop. You may have to zoom in to click exactly on the line. Please know that lines in a raster based image are not really lines, they are simply pixels of the same color value in a row. Hide the backdrop using the Show/Hide Backdrop button in the View toolbar to see the new object. You can edit the object with the Reshape tool to perfect the lines.

Best result is achieved when the “lines” in the image all have the same width, like in coloring books. The tool “scans” the pixel contrast and cannot follow a path, because in pixels there’s not a real path. Lines should be fairly thick.

After using the Magic Wand (Line Art) tool look in Sequence View. Open the tree of objects by clicking on the plus + sign in front of the color names.

If the result is acceptable, use it: reshape, edit and connect the objects. Always decide before Reshaping if editing the result is quicker than tracing the image with the drawing tools.

#### Magic Wand (Line Art) - Exercise



**Step 1.** Click on the Backdrop tool in the Artwork Toolbar and choose image “21 Anchor.png” or “23 Seven Seas.gif” in the Art and Stitch Backdrops folder.



**Step 2.** Take the Magic Wand (Line Art) button and click on a line.

**Step 3.** Hide the backdrop using the Show/Hide Backdrop button in the View Toolbar.

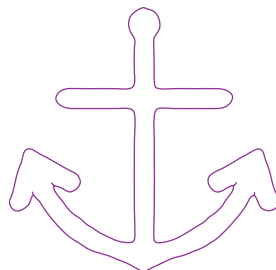


**Step 4.** Take the Reshape Tool and click on the result. Reshape to perfection. If the results shows a lot of points, then Simplify first (see Chapter 2.5.16).

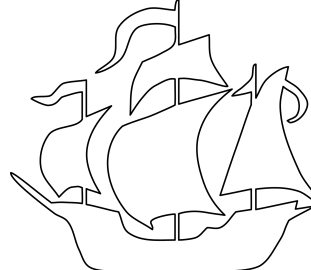
21 Anchor.png



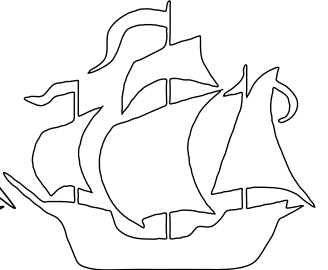
Result AutoTrace



23. Seven Seas.gif



Result AutoTrace





## 2.5.15 Artwork: AutoTrace with the Outline Wizard

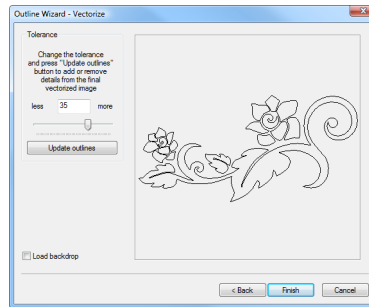
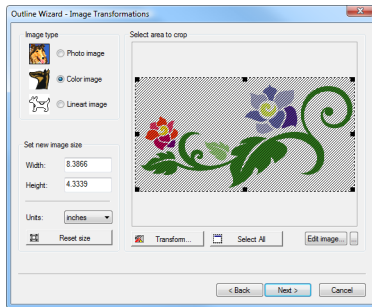
## AutoTrace: Outline Wizard (Leaf)



1. For this example choose File > New, set Type of Design to Embroidery. Click on the Outline Wizard button in the Artwork Toolbar. A new window opens. Click on the button "Select Image". **IMPORTANT: if the field "File name" shows the name of the last opened image, clear the field.** Then navigate to the folder Art and Stitch Backdrops in "Documents", and choose "09 emb flower.png". Click on the button "Next".

2. Choose between Image Types "Photo image", "Color image" and "Lineart image". In this example choose "Color image".

If your image needs any editing (erasing parts) click on the button "Edit Image" to open Paint, edit the image and close the window. You will be asked if you want to save the changes, click on Yes. In this case, no editing needs to be done. Click on the button "Next" at the bottom of this dialog window.



*When the lines in your image are not acceptable, you can move the slider bar for Tolerance and click on Update outlines. Or go back and choose another Image type.*

*As said before, images must be perfect for the Outline Wizard.*



3. In this example click on Finish. While the objects are selected, click on the Back to Artwork tool. This turns the autotraced image into editable vector artwork. Click outside the selection to de-select. Here we only use the leaf part.



4. Take the Reshape tool or press letter R on your keyboard and click on the leaf part. The leaf at the left side needs a little tweaking, as some lines are too straight. Right-click on a point and choose Smooth. Repeat until you like the result. You can even delete points and move the anchors of the next points to simplify the pattern. Please follow the Reshape exercise in Chapter 2.5.1, to learn how to control curves.

5. Select the leaf part, choose panel Properties > Tab Transform and resize to 3.9 inch (99mm) wide, click on Apply.

6. Combine with the flower: Copy the leaf, open the flower you made in the previous exercise "emb magic wand.ans" and paste the leaf part.

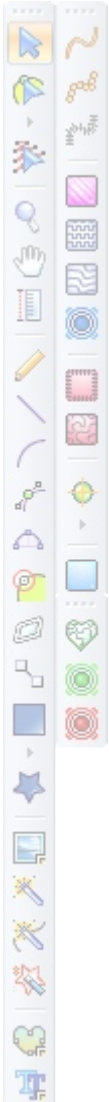


7. While this leaf is still selected, click on the button Standard Fill (Embroidery). In Properties Panel > Tab Underlay, un-tick all boxes and click on Apply. Move the leaf part in place. Save as "emb flower.ans". Then choose File Save as to save in the format of your embroidery machine. Copy the machine file to a USB stick, insert it into your machine and embroider the result. The design will fit the smallest hoop, as it is smaller than 4x4 inch (100x100 mm).





### 2.5.16 Artwork: Simplify and Simplify Smoothen



#### Simplify

Fewer nodes in a vector path makes smoother curves. When the AutoTrace process results in lines with a lot of points (visible in Reshape mode), you can improve the result as follows:

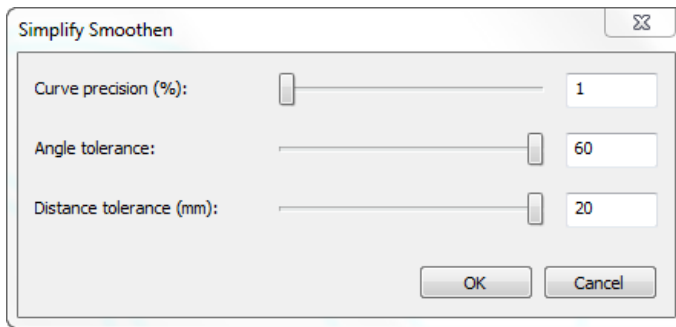


Select the object with the Select tool, right-click and choose Simplify. You can do that 3 times. After the 3rd time it won't have any effect anymore. Check the new number of points with the Reshape tool.

#### Simplify Smoothen



Another way to reduce the number of points to get smoother lines is using the controls in the Simplify Smoothen function. Select the artwork, right-click and choose Simplify Smoothen. A Dialog window opens.



*Play with the settings. To see what the settings do, use extremes to exaggerate the effect.*

*For example set the slider bar for Curve Precision all the way to the left (1%) and set Angle tolerance and Distance tolerance all the way to the right. Click on OK and take the Reshape tool to see the result with fewer points.*

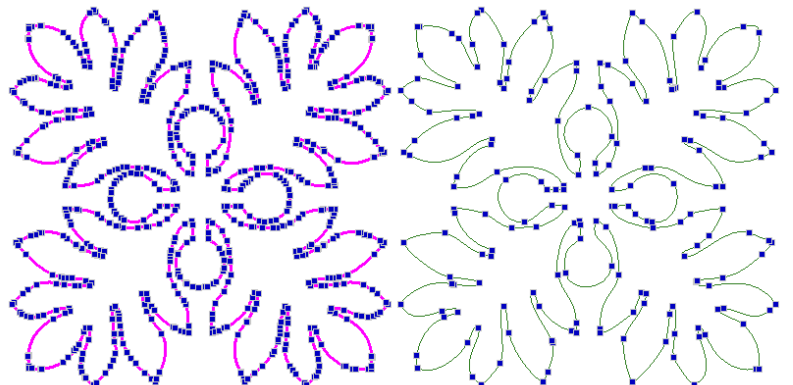
**Curve Precision:** Determines how true to the original curve the resulting simplified curve needs to be. The lower the %, the smoother the curve. The higher the %, the more it will try to maintain the original shape of the curve, at the cost of smoothness. This value can range from 1% to 100%.

*Both the Angle tolerance and the Distance tolerance settings act on "critical corners". Critical corners are those that the program determines are significant. Oftentimes, these will be cusps that are not collinear.*

**Angle tolerance** will determine which of these corners are collinear and which are not. Values can range from 10-degrees to 60-degrees.

**Distance tolerance** is the minimum space between significant corners for such a corner not to be ignored. Values can range from 2.0mm to 20.0mm.

*Before and after Simplify Smoothen, with the settings shown in the above screenshot*







## 2.5.17 Artwork Toolbar: Import Vector artwork (DXF, Ai, WMF, EMF, SVG)

### Import Vector Art

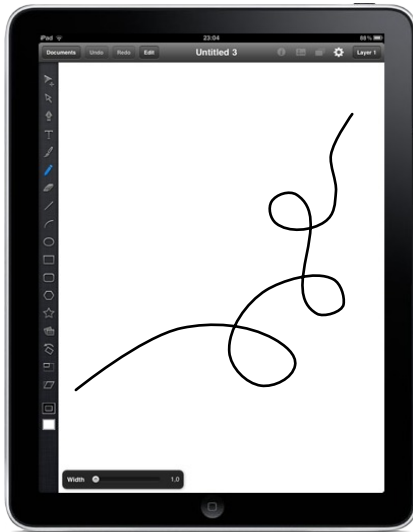


By clicking on this button (or choosing menu File > Import Artwork) you can import artwork made in other vector based drawing programs, such as .dxf files, Adobe Illustrator (Version 8 .ai files), .wmf, .emf, .svg (drawings made on an iPad for example!) and .plt files. Simply Reshape the artwork where needed and assign stitches. Your design is ready.

You can reshape, edit, and tweak imported artwork, then apply stitches. If you already have a lot of patterns in vector format, this is a great time saver.

Click on the button "Import Vector Art" in the Artwork Toolbar, or choose File > Import Artwork. A dialog window opens where you can navigate to the drive and folder and import the following formats:

- AutoCAD (DXF)
- Adobe Illustrator **8** (Ai) - **important:** must be Ai version 8, as later Ai versions won't import properly!
- Enhanced Windows Metafile (EMF)
- Windows Metafile (WMF)
- Scalable Vector Graphics (SVG) - great to doodle on your iPad, export as SVG and finish in Art and Stitch!

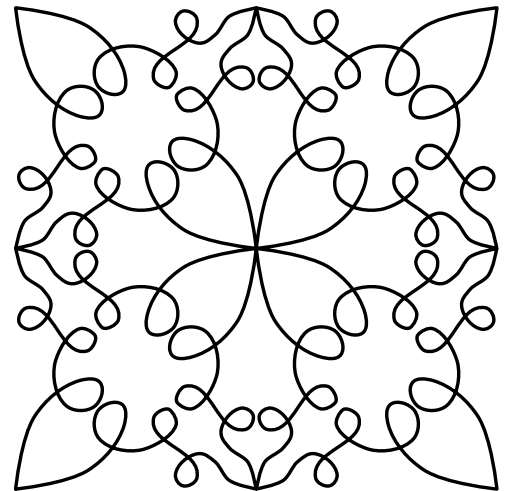


*From a doodle\*) on your iPad to a quilt pattern in Art and Stitch.*

*See Chapter 4.3.1 "Help I can't draw", how to turn doodles into patterns.*



*\*) Made in iDraw, an app for the iPad.*



### Two methods to open a DXF

You can import DXF files into Art and Stitch as vector artwork via File > Import Artwork, but also as stitch-based file via menu File > Open. When opening via File > Open, be sure to put a checkmark in the box "Convert to Outlines" in the File Open dialog box, so that you can edit the artwork. Which of the two methods to choose depends on how and where the original DXF pattern was made. Try both ways to find the best result. Some DXF types may not even show at all when opened via File > Open. In that case use File > Import Artwork.

For owners of **ElectricQuilt**: Choose Export as Metafile, save as EMF and import into Art and Stitch as described above. Please know that the quilt blocks in ElectricQuilt are not made as continuous paths, so you can only use them as quilt layouts and templates, not as quilting patterns - you would end up with hundreds of jumps and double stitching, plus EMFs from EQ contain thousands of polylines. So retrace for better quality.



### 2.5.18 Artwork: Import Vector artwork via menu Edit > Paste Special

Another way to import vectors made in other programs, without having to redraw them in Art and Stitch is as follows:

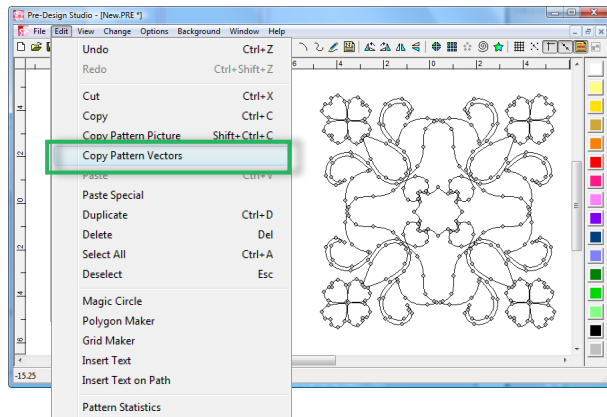
In your other drawing program (e.g. Adobe Illustrator, Corel Draw, Pre-Design Studio, AutoCAD or AutoSketch) select and copy the vector objects to the Windows clipboard. Then, in Art and Stitch, choose menu Edit > Paste Special.

**Tip:** if a pasted or imported pattern has a lot of points, select, right-click and choose **Simplify**. Repeat Simplify 2 times. Or right-click and choose Simplify Smoother. See chapter 2.5.16.

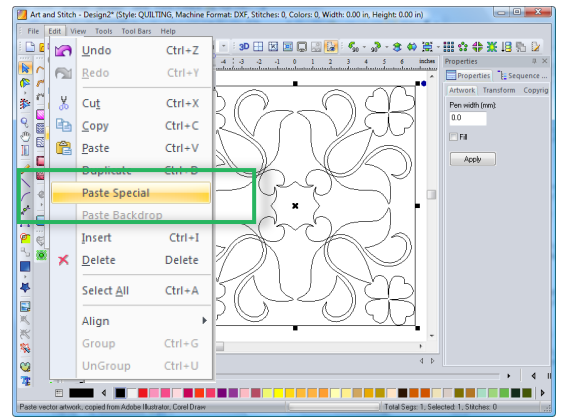
#### Example Pre-Design Studio

To copy patterns from our Pre-Design Studio software into Art and Stitch:

In Pre-Design Studio choose menu Edit > Copy Pattern Vectors. Then go to Art and Stitch and choose menu Edit > Paste Special. The pattern is now editable artwork in its original quality. It has the same number of points as used to draw the pattern in Pre-Design Studio. So if you have been drawing in Pre-Design for years, this is the easiest way to get your work into Art and Stitch.



Copy Pattern Vectors in Pre-Design Studio



Paste Special in Art and Stitch

### 2.5.19 Artwork: Export Vector artwork (DXF, AI, EMF, WMF, PLT, PAT, SVG)

To export designs made in Art and Stitch as vector artwork: choose menu File > Export Artwork. Choose one of the following file types:

**AutoCAD (DXF)** - can be used in Adobe Illustrator, Corel Draw, for laser cutting machines, for fabric cutting machines such as Silhouette Cameo and Pazzles.

Notes: for AutoSketch use File > Save as DXF. Do NOT use DXF for quilt systems! It is much better to use the format of the quilt system itself to prevent an extra conversion.

**Adobe Illustrator (Ai)** - can be used in Illustrator, many vector drawing programs, many cutting machines.

**Enhanced Windows Metafile (EMF)** - can be used in various graphics programs.

**Windows Metafile (WMF)** - this creates a better WMF than saving a stitch file as WMF via File > Save as. But still: WMF is a pretty old format that doesn't support curves. EMF is better.

**HPGL Plotter file .PLT** - Qbot can take stitch based PLT files as well as artwork PLT files.

**ABM Innova .PAT** - ABM can take stitch based PAT files as well as artwork PAT files.

**SVG - Scalable Vector Graphics** - Great for electronic cutting machines.

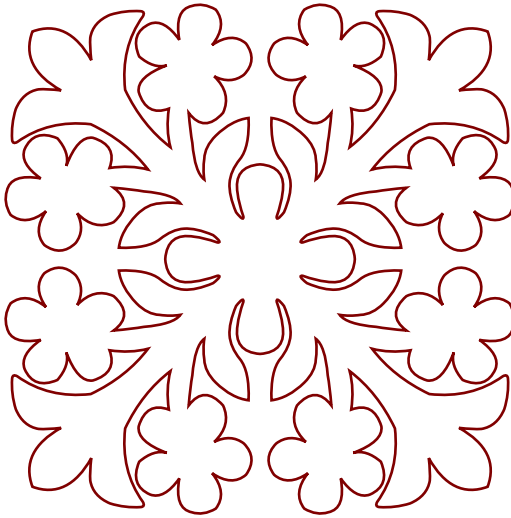


### 2.5.20 Artwork Toolbar: True Type Fonts



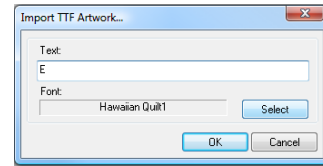
#### Turn True Type Fonts into vector artwork

*This is a wonderful function: drawing without actually drawing. Believe it or not, this design takes only 20 seconds to make and save for your longarm system, ready to sew!*



*Based on Hawaiian Quilt.ttf  
A font made by Pokelele*

- Click on the TTF button at the bottom of the Artwork Toolbar, a dialog box opens:



- Click on the button Select. Choose one of the fonts installed on your computer. In this example a downloaded font Hawaiian Quilt1 is used.
- Set the size to 72 and click on OK.
- Type the desired text: in this example letter “E”
- Click on OK.
- While the (color filled) design is still selected, click on the button Line Sew Type, to apply a Running Stitch.
- Resize to the desired size via Properties Panel, Tab Transform.
- Save the design as .ANS file and then in the format of your quilt system. Ready, steady, sew!

#### Dingbat fonts, where to find them and how to install

Searching the Internet for Dingbat fonts will return thousands of hits. Please note that not each and every font will be suitable to be used. Many of the free fonts are bitmap fonts, made by someone who just copied an image and turned it into a font. The best quality fonts are true vector fonts, digitized as fonts and not just copied.

Good places to start looking are <http://www.fontriver.com/dingbats/> and [www.fontgarden.com](http://www.fontgarden.com)

Download the font you like.

Unzip the font file.

Double-click on the font. A preview window opens showing several characters of the selected font. When you like the font, click on the button “Install” at the top of the preview window. It will now be available in all programs on your computer that can open TTF files, including Art and Stitch.

Very creative ways to use True Type Fonts in Art and Stitch can be found in the Addendum by Linda Matteotti on our website.  
Link via Menu Help > Online Academy. Navigate to “Certified Teachers”.



## 2.6 Artwork Effects toolbar: Creative Fills, Echo, Geometric Echo



Special effect tools for selected artwork (examples in Part 4)

### Creative Fill



The Creative Fill button becomes active when two artwork objects are selected together: a continuous path that will be used as the creative fill and a simple closed shape on top, that will be used to cut out the creative fill.

When both are selected together click on the Creative Fill button. It will cut away everything of the creative fill outside the closed shape.

Important: the result is still artwork and will need a Line Sew type Running stitch.

The creative fill effect will not work:

- When one of the two objects, or both are stitch-based and not artwork based.
- When the creative fill is not one continuous path. Look in Sequence View and click on the plus sign in front of a color name to see if it is one objects or more separate artwork objects.

More information, examples and exercises are given in Chapter 4.14.



The Echo Quilting / Create Boundary button can be used to echo around a selection or to create a Boundary (basting line) around a selection. It will open a dialog where you can choose between Echo or Boundary. Set the number of echoes (ripples) around the selected object(s) plus the spacing between each. The spacing is calculated from each line of the ripples and extra points will be added where necessary. Choose the type of echo: cascade plus join repeats or spiral. The boundary function will create one outline around the selection at the desired distance.

The result is artwork and needs a Line sew type Running stitch.

More information and examples are given in Chapter 4.10.



Geometric Echo can be used when a single artwork object is selected. A dialog opens where you can choose the number of echoes (ripples) around the selected artwork plus the distance between each.

The distance is calculated from each of the original points of the selection. For symmetrical shapes the results will be exactly what you expect from an echo. For other shapes, the results are different because of the mathematical calculation of the points. Try and see the sometimes interesting results!

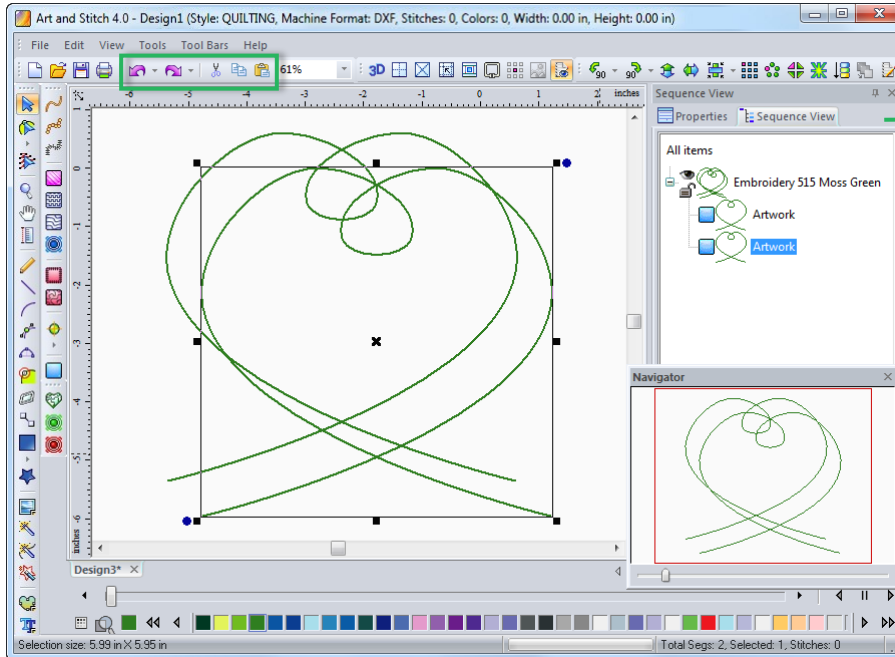
Geometric echo allows negative values, so that you can use the tool to fill inside a selected shape. For Geometric echo you can also choose between Cascade and Spiral:

- Cascade results in separate objects, merged together. To turn them into separate objects, right-click on the result and choose Break Apart.
- Spiral will connect the echoes (ripples) into a continuous path.

More information and examples are given in Chapter 4.11.



## 2.7 Undo - Redo - Cut - Copy - Paste - Duplicate

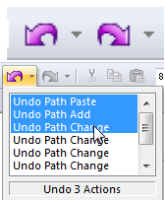


Select  
Edit / reshape

**Sequence View:** Here you can see, select and change the sequence of the various objects on the Design Page.

Tip: when checking a design, always open the full tree of objects by clicking on the + sign in front of the color name in Sequence View.

Without expanding the view, you might think that you have one object, when in fact there are separate objects of the same color!



### Undo Redo

If you are new to digitizing, the Undo and Redo buttons will be your best friends. You can undo multiple steps to correct mistakes. Clicking on the little triangle next to Undo will show the various actions. To undo more than one change at a time, just move your cursor down and click. Shortcut for Undo is the keyboard combination Ctrl+Z. *Important: while you are still drawing, before right-clicking to finish an object, do NOT use Undo, because the drawing was not a finished action yet. Instead click on the Backspace key on your keyboard to take away the last point(s) you drew.*

### Cut



To delete a shape, select it and press Delete on your Keyboard. Or cut it away using the button or pressing Ctrl+X. Cut objects are still available on the Windows clipboard and can be pasted back.

*To duplicate a shape choose one of the following methods:*

### Copy and Paste



Select a shape, click on the Copy button (or press shortcut Ctrl+C) followed by clicking on the Paste button (Shortcut Ctrl+V). This will place the copy exactly on top of the original. The copy is now selected. You cannot see it in the Design Page itself, but it will show in the Sequence View tab in the Properties Panel on the right. Important: Always click on the + plus-signs in Sequence View to open the entire tree of objects.

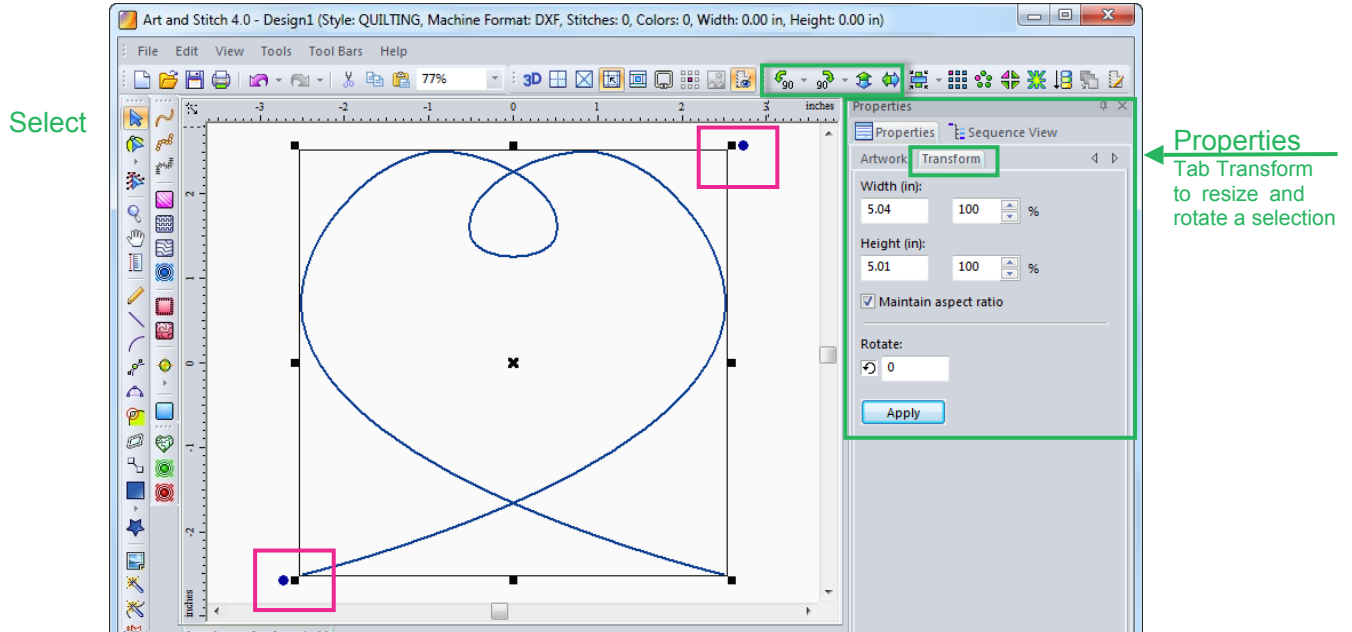
### Duplicate

Select a shape and choose menu Edit > Duplicate (or press shortcut Ctrl+D). This will place the selected copy a little offset of the original. By using this method you can clearly see the copy on the Design Page. It is also visible in the Sequence View tab in the Properties Panel on the right.





## 2.8 Resize - Rotate - Flip / Mirror



To resize, rotate, mirror your drawing:



Take the **Select tool** and click on the object you drew, to select it. Now you can use the controls surrounding the selected object to resize or rotate manually by dragging the handles:



The **square handles** in the corners let you **resize proportionally**. The square handles on the sides let you make the design wider/smaller (keeping the original height) or taller/shorter (keeping the original width). In the Status bar you can check the size while dragging the square handles.



The **round handles** on two of the corners let you rotate the selected object. Look in the Status bar at the bottom of the window to see the rotate angle while dragging this round Rotate control.



Use the **Rotate tools** in the Modify toolbar to turn a selection 90 degrees or - using the fly-out - 45 degrees counter clockwise or clockwise. 45 Degrees is a quick way to turn squares “on point”. For other rotation values, click on the tab “Transform” in the Properties Panel on the right.



The **Flip or Mirror tools** in the Modify Toolbar let you manipulate the selection very quickly.

Resize / Rotate precisely using the **Transform tab** in the Properties Panel:

Select an object. In the Properties Panel on the right, click on the tab “Transform”. Here you can enter the new size of the object. After changing the settings, click on Apply or press Enter. By un-checking the box “Maintain Aspect Ratio”, you can make the selection wider or smaller, taller or shorter. Art and Stitch remembers the last used setting of the box “Maintain Aspect Ratio” and will keep it turned on or off until you change it again.





## 2.9 Why Size is Important

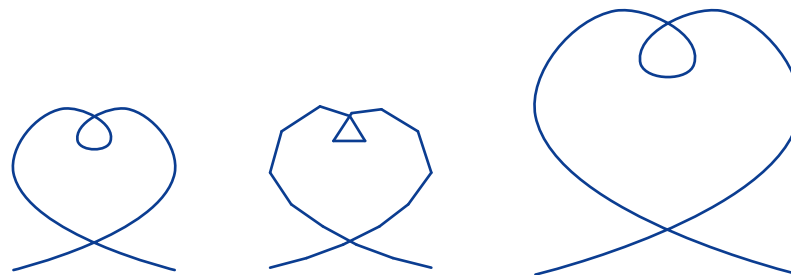


Status bar shows size of a selected object

### About Size - Why it is important to resize designs to the final quilt or embroidery size before saving in the file format of your machine

To resize a design select it and go to Properties Panel > Tab Transform. Enter the desired width or height and click on Apply. Art and Stitch is vector based, so you can resize original AnS designs here in Art and Stitch without limitations.

- You may recognize this: you made a nice smooth design, but as soon as you assigned stitches it became ugly: the smooth curves became straight lines. Well, check the size! The design is probably so small that those straight edge lines are actual stitches. Select the design and in Properties > Tab Transform change the Width/Height to the desired pattern size and click on Apply.



Design getting edgy after assigning stitches? It is too small.  
Resize to the desired size and it will be smooth again.

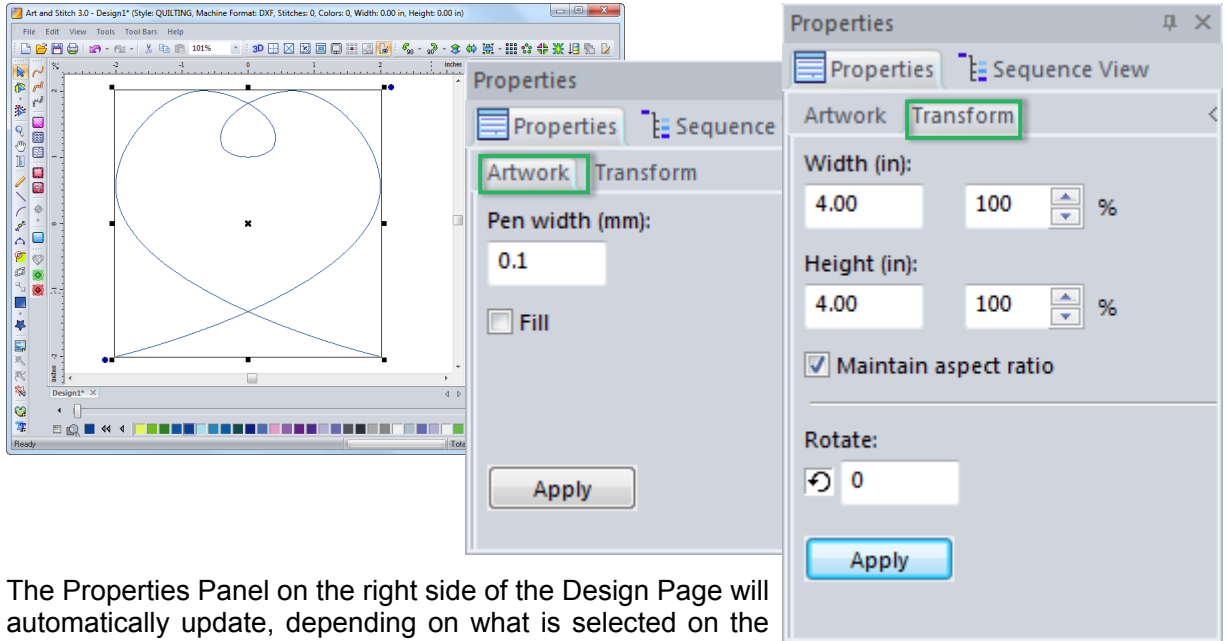
- When a design is much smaller than you would stitch it, it will get blocky when it is enlarged outside Art and Stitch, so make it the right size before saving in the format of your machine.
- When you use Motif fills or Motif outlines, you must work with the real size to let the motifs fit properly inside the shape or around the object.
- When you use Art and Stitch to **print your own quilt pantos** you must use the exact desired size.
- If you are digitizing **designs for your embroidery machine** size does matter! Every embroidery machine has its own hoop size / embroidery area. Therefore your design must be the desired embroidery size, that fits in the hoop of your machine, before saving in the embroidery format of your machine. To set the size of your hoop, choose menu Tools > Select Quilting Area / Hoop, or press Ctrl+Q. When a design does not fit the hoop of your embroidery machine, your machine cannot open it.

**When making patterns for others**, add a note to your customer that she should NOT make a pattern larger. Making it smaller is fine, but enlarging a finished pattern *outside* Art and Stitch might make it look blocky! It's a good idea to make the design larger than needed, so a customer would only make it smaller to fit her needs.

Again: you can make a design any size in Art and Stitch as Art and Stitch is vector based. But outside Art and Stitch enlarging designs more than 120% may result in loss of smoothness.



## 2.10 Properties Panel, Reset Toolbars

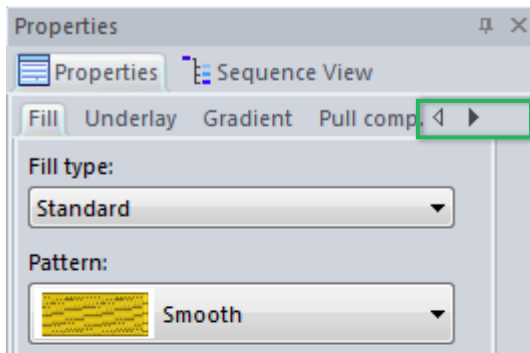


The Properties Panel on the right side of the Design Page will automatically update, depending on what is selected on the Design Page.


For example when selecting an artwork object, a tab “Artwork” will appear, where you can change the thickness of the artwork by changing the Pen width (mm).

No matter what is selected on the Design Page, there will always be a tab “Transform” in Properties panel, where you can change the size and where you can rotate the selection.

**Tip:** Always click on Apply after you made changes in the Properties Panels.



When a stitch object is selected the Properties Panel will update and show more tabs, where you can change the stitch type, stitch length, Underlay, Pull compensation etc. You may have to click on the arrows next to the names of the tabs, to scroll and see all available tabs.

 Using these little buttons in the top right corner of a panel you can autohide or close the panel. You can also double-click on the title bar of a panel to close it.

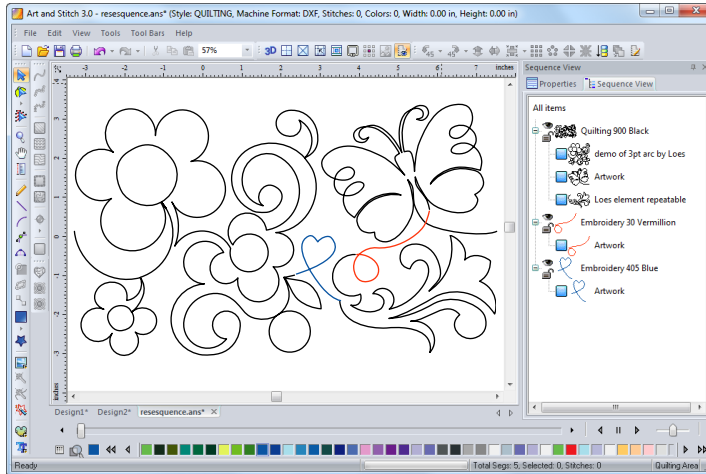


Grabbing a toolbar by the dotted divider at the top edge or side edge of a toolbar you can move the toolbar around and place it somewhere else.

**Tip:** Menu Tool Bars > Reset Toolbars  
will put all toolbars and panels back into their default position



### 2.11 Sequence View Panel, Resequence

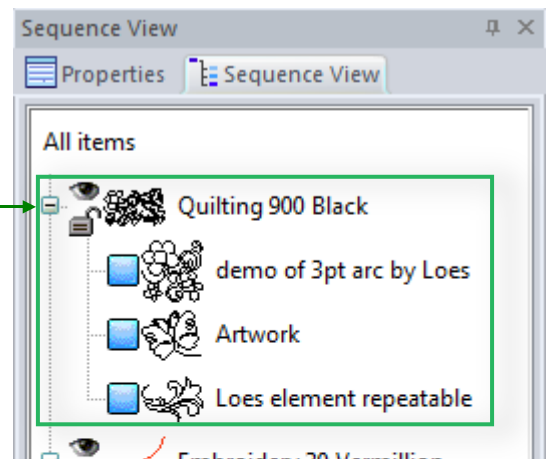
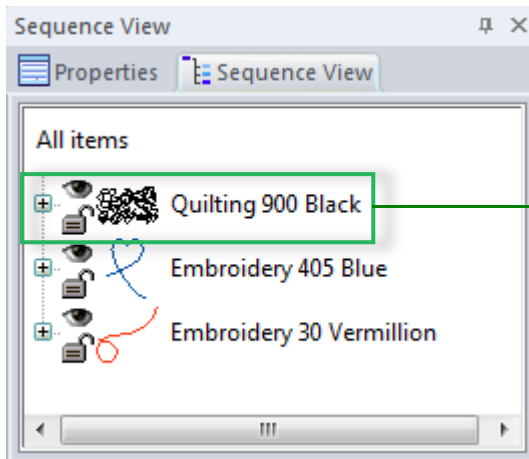


The Sequence View panel is used to see all layers, all separate objects of your design. By clicking on the name of a color in Sequence View you are selecting all objects in that color.

By expanding the list (clicking on the plus sign in front of a color name) you can select individual items.

Right-click and choose "Move" to change the sequence / sewing order of the design parts, by moving the selected part up, or down, first or last.

**Important:** Always click on the plus + sign in front of a color name in Sequence View or right-click on "All Items" and choose Expand All, to expand the tree of objects! It may look as if a design part consists of one object, but expanding the view could show multiple unconnected objects.



**To hide objects** (for example because they are in the way when editing) click on the tiny eye icon in Sequence View. The objects disappear from the Design Page. Clicking on the (dimmed) eye icon will show the objects again.



**To lock objects** so that they cannot be edited or accidentally moved on the Design Page: click on a color in Sequence View, then click just once on the tiny padlock icon, immediately followed by clicking in the Design Page. The selection marquee disappears and the item is locked. To unlock click on the closed padlock icon.

**You can also Resequence by simply selecting the objects on the Design Page in the desired order:** right-click on an empty spot on the Design Page, choose Resequence and then click on the separate objects in the order in which you want them to be sewn. Numbers will appear on all objects, the last object will show a number plus "Last" so that you know you are at the end. Click on the Select tool to stop the process. The Resequence shortcut is F8.

## 2.12 Design Page Background: Color or Fabric

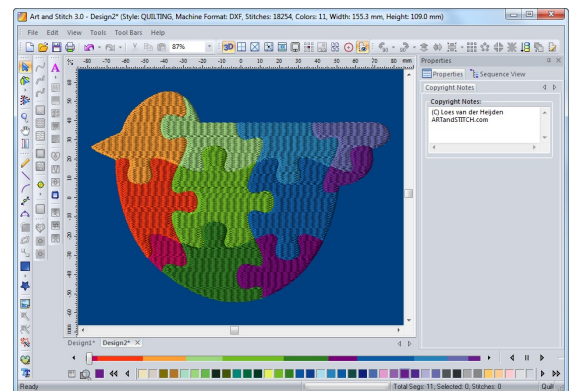
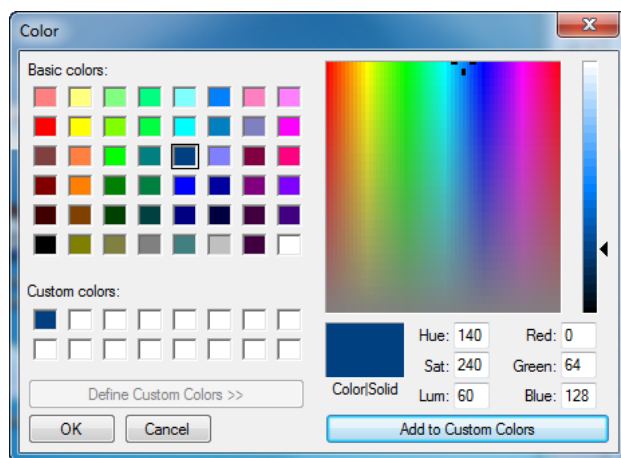
The default color of the Design Page is white. To see how your design will look on different colors, you can change the background into another color or let it show fabric as background.

### To change the color of the Design Page:

Choose menu View > Background > Color. The standard Windows color Dialog window will open.

Choose one of the 48 color swatches or mix your own by clicking inside the color preview and fine tuning it with the slider bar on the right hand side of the preview. When you like the color, click on Add to Custom Color. It will get its own swatch. Then click on OK to use as background of the Design Page.

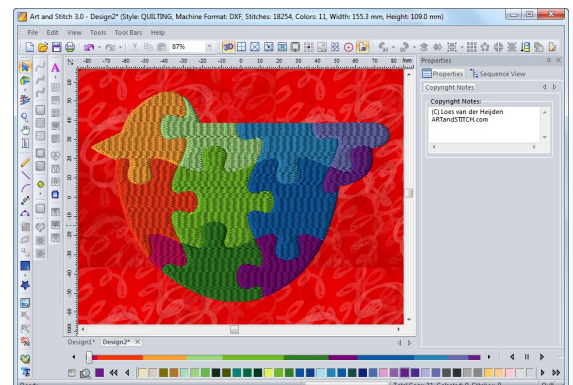
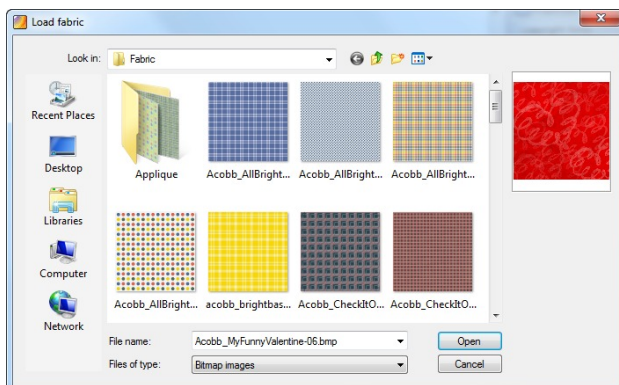
The chosen background stays until you change it again. When saving a design, it will also save the background choice for that design.



### To show fabric as background of the Design Page:

Choose menu View > Background > Fabric. The Load Fabric Dialog window will open the Fabrics folder with fabrics, located inside the Art and Stitch program folder. Choose a fabric and click on OK.

The background will stay until you change it again. When saving a design, it will also save the background choice for that design.







---

## 2.12 Design Page Background: Color or Fabric - Cont'd

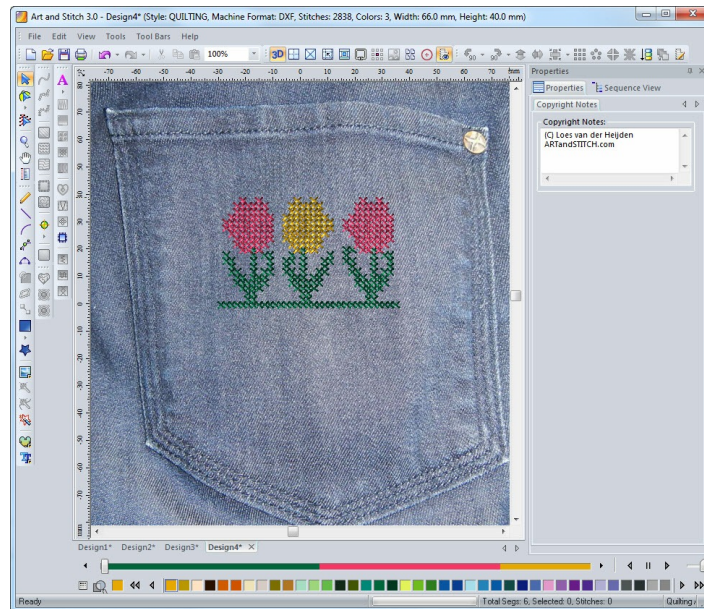
### Using your own fabric as background

You can use your own fabric swatch too. Best is a tiling image of about 350x350 pixels. The image will be tiled as background. Important: the background of the Design Page will not move or resize. It stays the same even when you zoom in or out.

Add your fabric image as described in Appliqué chapter 6.9.

How large it will show on the Design Page or how many tiles are visible depends on the resolution of your monitor. The same image can differ when used on another monitor.

In the example below I scanned a jeans pocket, cropped the image and resized it in a photo editing program to the true size of 16 cm (approx 6 ¼ inch) and the resolution of my monitor = 96 dpi. Then copied into the Fabric folder. And used as Background via menu View > Background > Fabric. Now with a zoom percentage of 100% I can see how my design will look.



*Background of design page:  
scan fabric or garment at 100%, use resolution of monitor (in my case 96 dpi)  
Save in Fabric folder*

**Tips:** An alternative for using a garment photo as Design Page Background is to use the photo as **Backdrop**. That way you won't have to worry about screen resolution. Use the method described in 2.5.11 and 2.5.12 to open it in true size as Backdrop.





## 2.13 View Toolbar (set of Show / Hide buttons)



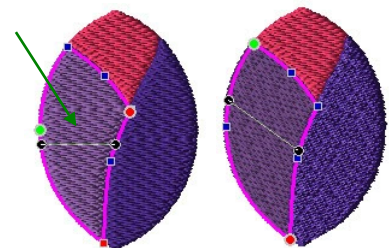
This is the set of **Show / Hide buttons** in the View Toolbar. Clicking on these buttons will switch between on and off (remember that hovering over a button will show the name and function of the tool):

1. View stitches with a 3 dimensional effect, click again for a normal view. See tip below.
2. Show / hide the Grid.
3. Show / hide the Diagonal grid.
4. Turn Snap to Grid on or off.
5. Show / hide Usable Throat Space of your Longarm system. See Part 5 Full Quilt Layout.
6. Show / hide Quilting Area / Embroidery hoop.
7. Show Interlocking Preview (see Chapter 2.15 for details).
8. Show / hide Backdrop.
9. Show / hide Page Preview of printout.
10. Show / hide Notes placed on the Design Page (see Chapter 7.3.3 how to place notes).

### TIPS about 3D View:

3D View is necessary to see the effects of Fancy Fills (Embroidery). You won't see those effects in normal view.

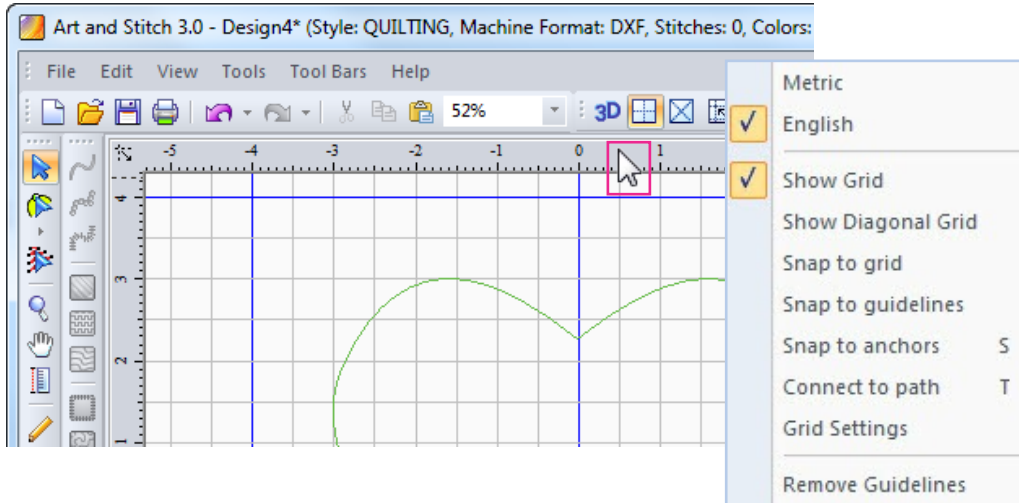
3D View is also helpful to see how stitch lines in one object line up: if you see a line of larger stitches in the middle of an object, take the Reshape tool and change the position of the first stitch (green dot) and the last stitch (red dot). Then take the Select tool to update the view. See also Embroidery Manual Chapter A.4, step 13.



Although we are very proud of the way a design looks in 3D view, please **do NOT judge the design by its 3D preview!** The 3D view is still \*just\* pixels on your screen with some shadow effects, making the lines look thicker. Gaps in 3D view certainly do not indicate that those will occur in the real stitching. Again: 3D view is just pixels on your monitor. You have to stitch a sample for the real look of a design.



## 2.14 Units: Millimeters or Inches - Grid - Snap - Guidelines

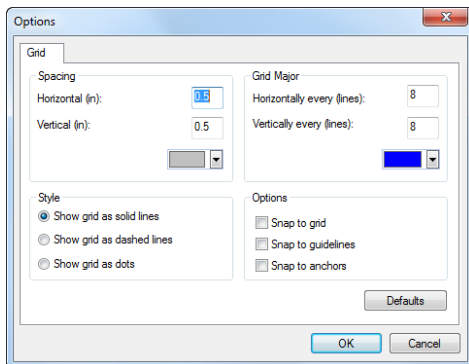


### Units: Millimeters or Inches:

Right-click in one of the rulers along the Design Page to choose between millimeters or inches (English). Please note that traditionally digitizing is done in millimeters, so all stitch settings will be in millimeters only. This gives more increments and more detailed settings. Quilters will probably prefer the grid to show inches. This will make it easier to resize a pattern to fit a block, because you all know by heart how large an 8x8 inch block is, or a 12x12 inch block. The two settings (millimeters for stitch sizes and inches for grid settings) work very well together. The default stitch size of 2 mm is 12-13 stitches per inch. Your quilt system will use its own settings!

### Grid:

Use these buttons to toggle between show / hide the grid and to turn Snap to Grid on or off:



### Grid settings:

To change the grid settings, right-click in the ruler and choose "Grid Settings". The changed settings will be kept by the program until you change them again.

### Snap functions:

**Snap to Grid** and/or **Snap to Guidelines** is useful to set first and last point on the same level. **Snap to Anchors** (shortcut letter S) is useful in backtracking, to step back in the exact same points or in Reshape mode to let points snap on top of each other.

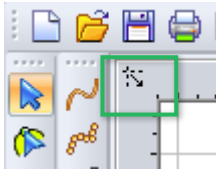
Click on the button "Defaults" to turn the grid settings back to their original values.

Another *Snap function*: "**Connect to Path**" can be toggled on or off by right-clicking in a ruler and choosing Connect to Path, or by pressing letter T on your keyboard. When you start drawing and click close to the first or last point of an existing artwork object, the object you are drawing will automatically connect to the existing object connecting the two objects into one. That way you can use different drawing tools in one object.



2.14 Units: Millimeters or Inches - Grid - Snap - Guidelines - Cont'd

Reposition the grid

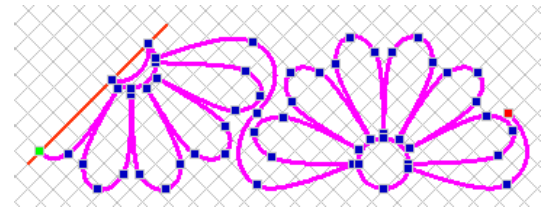
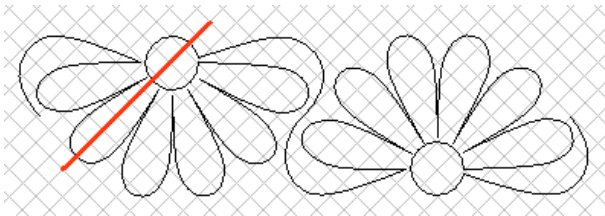


Click and drag the top left corner of the rulers to the desired position, e.g. the middle of a backdrop: this will be the new 0,0 grid position.

Diagonal Grid



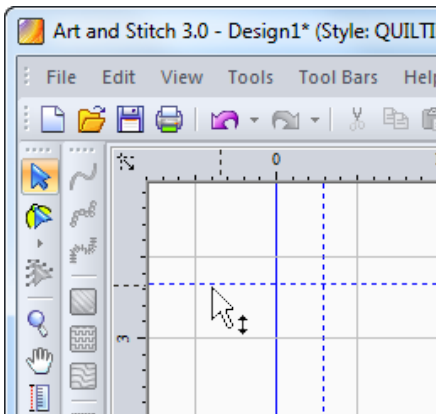
The diagonal grid can be turned on / off with this button in the View Toolbar. It can be used with or without the “normal” grid and is very helpful when working with On Point quilt blocks or creating mitered corner designs. Snap to grid will also work with the diagonal grid.



The Diagonal grid is a great help in creating mitered corner designs See tutorial in Chapter 4.22

Guidelines

Guidelines are very helpful in drawing and aligning.



To set a guideline, click and hold the mouse button down in a ruler along the Design Page and drag the dotted guideline to the desired position. For precise placement look at the ruler while dragging the guideline.

To remove a guideline, click on the guideline, outside any other object on the Design Page. Mouse pointer turns into double arrows. Then drag the guideline back into the ruler.

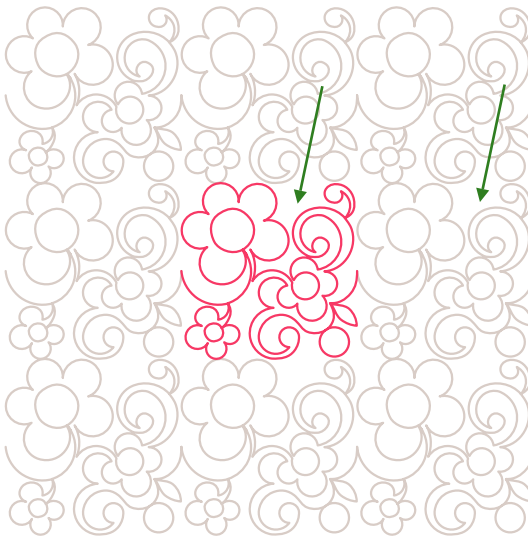
To remove all guidelines at once: right-click in a ruler and choose “Remove Guidelines”. Guidelines are saved with a pattern and will show after re-opening.



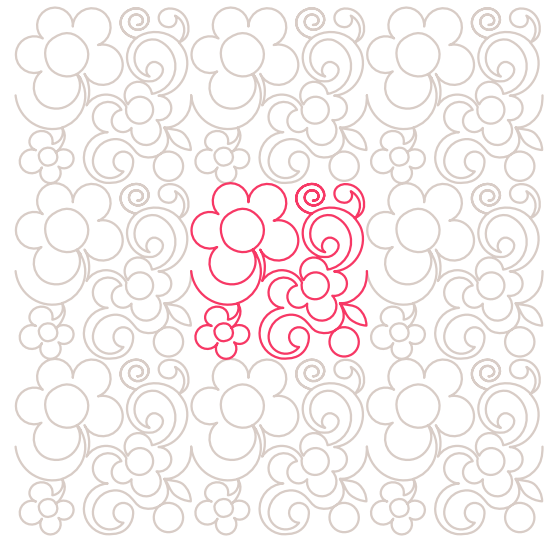
## 2.15 Interlocking Preview



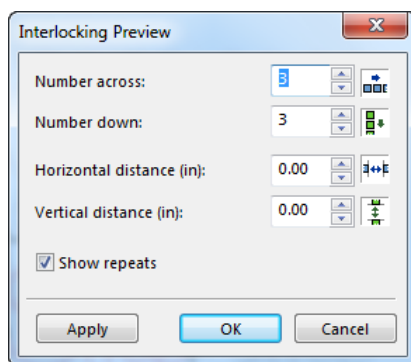
Turning the Interlocking Preview on helps in seeing if a pattern repeats well while you are still drawing it. You will see where details need to be added to prevent gaps in an overall design. The Interlocking Preview is intended for the design stage and therefore available for artwork only, not for stitch objects.



*Interlocking preview shows in this example that some detail is needed to prevent a big open space.*



*Detail added. Looking in Interlocking Preview helps to see when the design is OK.*



Menu **View > Interlocking Preview Settings** will open the dialog with the following options:

**Number across** and **number down** defines how many repeats are visible.

**Horizontal** and **vertical distance** can be changed to add spacing between the repeats, or to nest them (using minus values).

**Show repeats** on or off is the same as using the show/hide Interlocking Preview button in the View toolbar.

Interlocking Preview only shows repeats; it doesn't actually make the repeats. How to use the Repeat function is explained in Chapter 4.1.



## 2.16 Center objects, Align objects, Center in grid box, Distribute objects

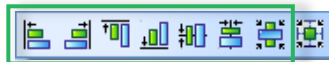


### Center selection

The alignment button in the Modify Toolbar becomes active when an object is selected. When only 1 object is selected, this button can be used to center the object on the 0,0 position of the rulers. The alignment options are also available via menu Edit > Align, but using buttons is quicker than using menu options.

### Aligning objects

When 2 objects are selected, clicking on the little arrow next to the button will open a fly-out where you can choose various alignment options:



Align Left - Align right - Align Top - Align Bottom - Align Vert. Center - Align Horiz. Center - Center. For precise placement: e.g. "Align tops" will move the objects so that the tops of all selected objects are on the same level.

### Center a selection in a grid box



This is very useful when setting up a full quilt layout: set the Grid Spacing to the size of 1 quilt block. Select a block and click on "Center to Grid". Great in combination with the other alignment options for precise placement.

### Spacing / "distributing" objects




When 3 or more objects are selected, two extra options become available: "Distribute evenly across" and "Distribute evenly down". This will equalize the space between the objects.

*Tips: The Alignment button in the Modify Toolbar will show the last used option and it might therefore look different from what you expect. Click on the little arrow for the fly-out to see all available options. If you have selected just 1 object, you won't see any alignment buttons, just "Center Objects" and "Center to Grid".*



*If "Center to Grid" was the last used option, use the following tip to retrieve the other alignment options:*

*Go to a new Design Page, create / select one object and choose "Center Objects":  This will now be the last used option. Go back to the original Design Page and all alignment buttons will be available again, depending on how many objects are selected. If you select only 2 objects, you won't see the Distribute Evenly across/down buttons.*






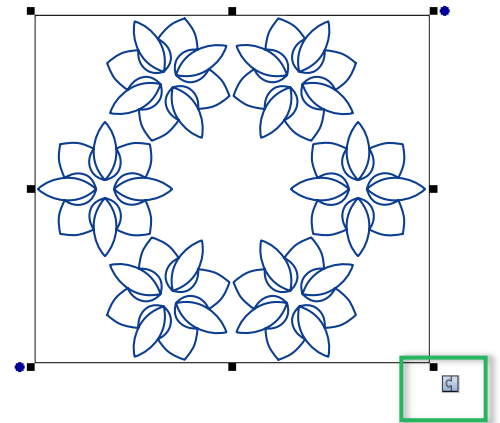
## 2.17 Group / Ungroup

When 2 or more objects are selected on the Design Page, a little icon appears in the lower right corner that allows you to group or ungroup the selection. Simply click on the icon. Alternatively you can Group or Ungroup by right-clicking on the selection and choosing Group or Ungroup from the right-click Menu.

Grouping objects comes in handy for objects that are aligned, to prevent that they are accidentally moved.

 Multiple items selected, click to group.

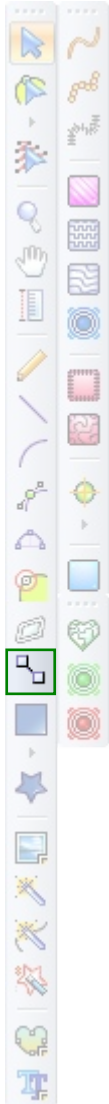
 A group of objects selected, click to ungroup.



*After using the Magic Circle,  
objects are grouped*



## 2.18 Connect objects - button in Artwork Toolbar



Most quilters prefer to have as few starts and stops as possible and create patterns as continuous paths, sewn in one pass, without stopping. Creating a complete pattern as one object is not easy to do, so you will probably draw separate parts and then connect those parts into a continuous pattern.

Connect is better than Merge. Where possible, use Connect Objects, or manually connect the objects in Reshape mode with the help of the letter T on your keyboard. This will connect the last point of one object with the first point of the next object. So those points must be close together, to prevent long connecting lines going through the pattern.

### When a pattern is a continuous path: **CONNECT**



Connecting two parts that form a continuous path together is done by selecting the two parts together, right-clicking and choosing Connect Objects, or click on the Connect button in the Artwork toolbar, or use the method to manually connect as described on the next page.

Objects forming a continuous path **MUST BE CONNECTED** into one object, otherwise the machine will stop at the end of each object.

On the next page you will find a description how to manually connect parts of a wreath made with the Magic Circle.

### How to “unconnect”

Of course you can use the Undo button when working on a pattern. But after the pattern is saved and closed, use the following method to split a continuous path:



Take the Reshape tool, right-click on a line and choose Split Line. Repeat at the places where you want to split the design.



## 2.19 Manually Connect artwork objects - "Tie Together" - in Reshape mode



When you use the Connect Objects button to automatically connect multiple objects, you don't have control over the way the program connects the objects: it connects the dangling points closest together. This chapter describes a more precise method.

To control the way all objects are connected to form a continuous path, connect them manually in Reshape mode, with the help of the letter T ("Tie Together") on your keyboard. This method joins the two connected points into one shared Cusp point, a high quality connection.

**Rule # 1:** This "Tie Together" method works for artwork, not for stitch-based objects.

**Rule # 2:** After connecting and assigning stitches, the stitch direction will depend on the direction of the first connected object. If the first object was drawn left to right, the connected object will also sew left to right. Therefore: draw that first object in the right stitch direction. See Chapter 3.6.

In the example of a wreath created with the Magic Circle, select the wreath first and Ungroup. Deselect by clicking outside the selection marquee. For this method the design must be kept as Artwork. Do not assign stitches yet.

Design used for this example: Library > folder Shapes > "Floral element MC".

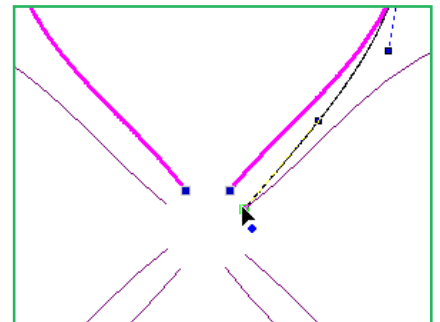
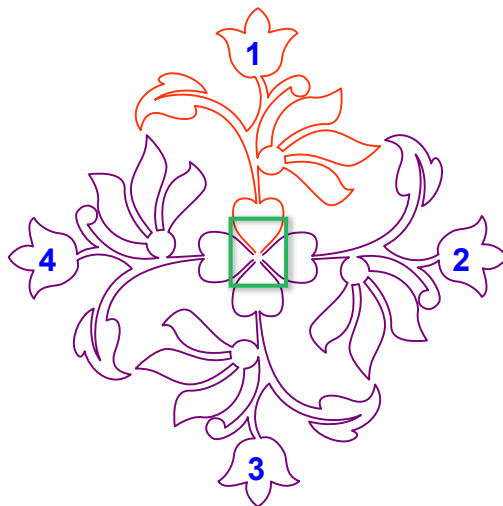
While still selected, take the Magic Circle, Object Count 4, Circle dimensions 66, click on Apply and on OK.

### How to Tie Together (Reshape tool + T-key)



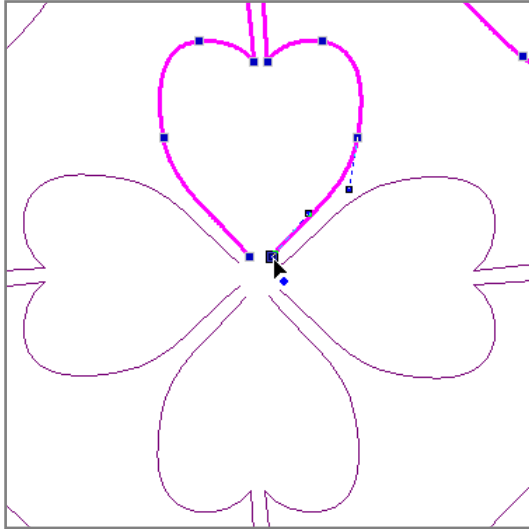
1. With the Reshape tool click and hold on the last point of the part to be sewn first.
2. Press and hold the letter T on your keyboard (not Ctrl T, just letter T)
3. Move the selected last point of the object over to the first point of the next object. (If objects are really close, just move the mouse a tiny bit). You will see the points blink:
4. Release the mouse first,
5. Then release the letter T. Both lines will now show the magenta Reshape color.

The two objects have become one object with a shared Cusp point, with two anchors. See step by step images on the next page.

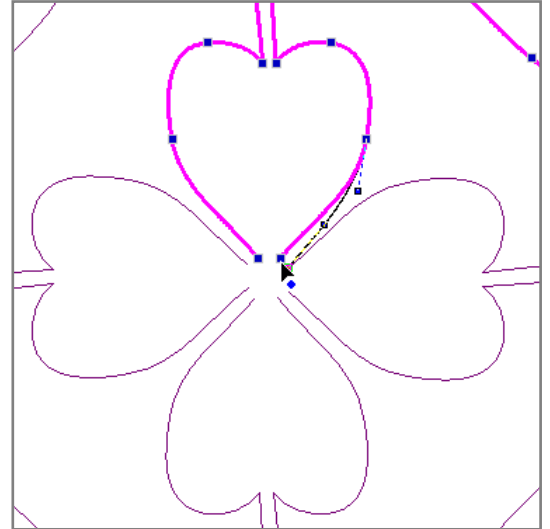




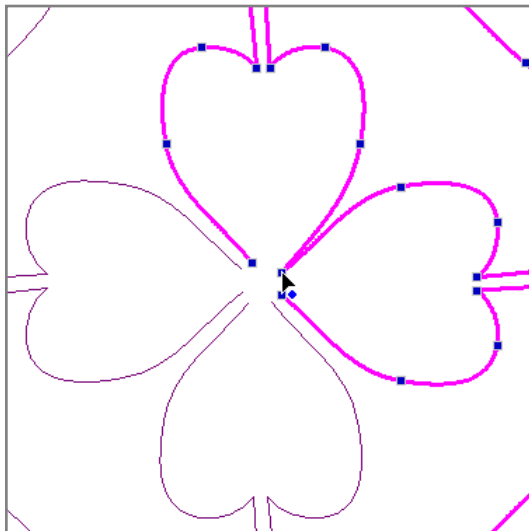
2.19 Manually Connect objects - "Tie Together" - in Reshape mode - Cont'd



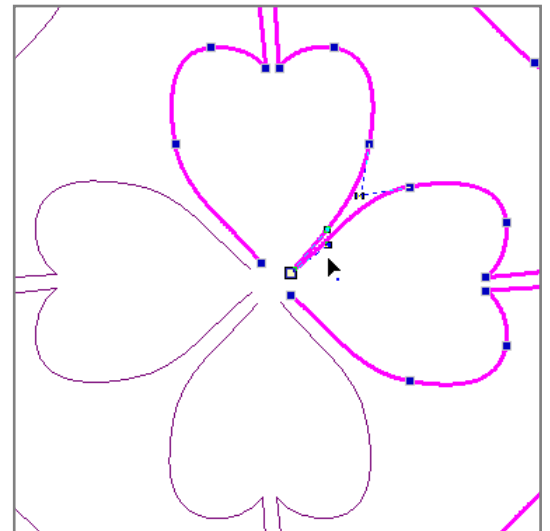
**Step 1**  
*With the Reshape tool click and hold on the last point of the first object.*



**Step 2**  
*Press and hold letter T on your keyboard (not Ctrl+T, just T). Move the mouse, still holding letter T, to the first point of the next object.*



**Step 3**  
*Release the mouse first, then release letter T. The two objects have become one.*



**Step 4**  
*The points you just connected are now one shared Cusp point. If necessary tweak the connected shape by adjusting the anchors.*

**Step 5**  
*Repeat until all objects are tied together. In designs made with the Magic Circle the last point and the first point will be close together, but not connected. Still in Reshape mode, right-click on the object and choose "Close Line".*



## 2.20 Connect the unconnectable: Merge



For quilting patterns it is best to draw a design as a continuous path. You don't have to draw it all in one session, but when finishing part of the design and resuming later, be sure to start the next part of the design at the place where you left off before. Then tie the objects together. That makes it into a single continuous path.

When a path is NOT continuous and cannot be made continuous because the end points of lines are not close to start points of the next line, you cannot connect the lines. In that case you can let the program find a continuous path for you by selecting all elements, right-clicking and choosing: MERGE

The entire object will be sewn as a continuous line pattern, but... not as a single path. There will be over stitching because the program will have to find its own route to link all parts together without jumps. So no extra starts and stops, but a continuous path that will automatically backtrack in several places.

Rule of thumb is to **Connect where possible** to turn continuous objects into a single line pattern. If Connect Objects causes long visible connecting lines and reshaping those lines to make them part of the pattern is not doable, only then use **Merge** to let the program find its own jump-free path for non-continuous patterns.

**Connect is better than Merge.  
Merge only in case of emergency!**

If the double stitching is not acceptable, then choose File > Export Image, to turn it into a template. Open the image as a Backdrop, take a drawing tool and trace the pattern in one continuous path. If that is not doable without a lot of backtracking, then trust the program: let it create the backtracking paths for you!

### How to “unmerge” or “break apart”

Of course you can use the Undo button when working on a pattern. But after the pattern is saved and closed, use the following method:



For Merged elements select the pattern, right-click and choose Break Apart. This works for artwork only. If stitches were already assigned to the pattern, take it back to Artwork first, then right-click and choose Break Apart. Look in Sequence View: right-click on “All Items”, choose “Expand All” to see the separate objects.

Although over stitching or double stitching sounds like something you don't want, don't let it stop you from being creative!

After all, freemotion artists do the same: they go over the same line several times to go to and from other parts of a pattern in a quilt.

In some cases it will even have a wonderful effect. For example in the Pebbles fill: more thread around the pebbles will actually let them stand out more.





## 2.21 Split Lines

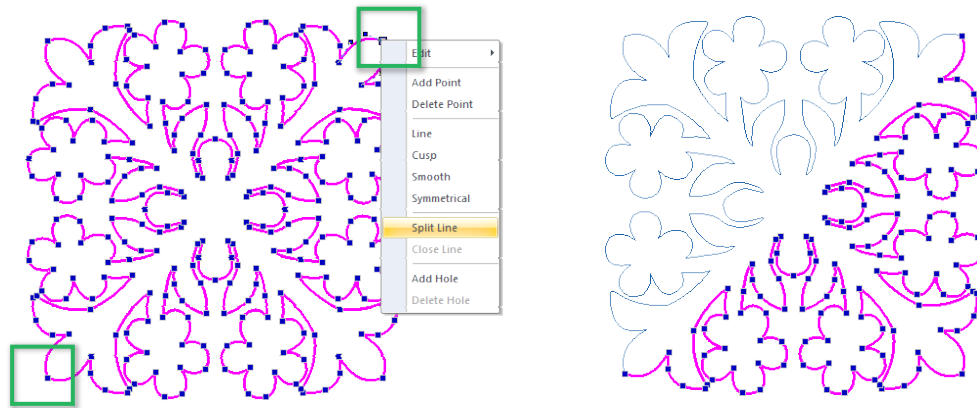


### *Reshape tool > right-click > Split Line*

Select an object with the Reshape tool, right-click on the position where you want to split the object and choose Split Line. Still with the Reshape tool active, move the new point away from the original. *When it doesn't seem to split at all, then right-click on the line instead of on a point and choose Split line. It could be that there are two or more points on top of each other and then it won't split.*

### *Use Split Line to make a Corner block*

This method is very useful when you want to connect separate closed shapes: open up a closed shape using the method described above, reshape the endpoint and let it connect to the next opened shape, or draw a connecting line between the opened shapes and connect. See Chapter 4.21 (How to make patterns repeatable).



*Using the Reshape tool and splitting in two corners is a great way to make a corner block.*

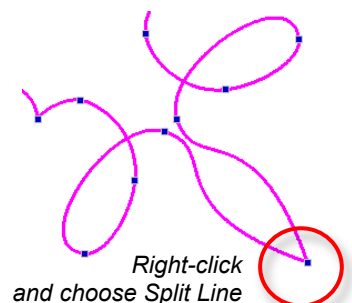
### *Use "Split Line" to force the start and stop of a closed shape (contour)*

A **closed** shape will always start and stop at the exact same place: normally the place where you started drawing. After assigning stitches you can use the Reshape tool and move the Green (start) and Red (stop) dot anywhere over the closed shape where you want to start and stop stitching. Be sure to put the start and stop dots on top of each other to prevent over stitching. But... as soon as you would click on the Back to Artwork button and then reassign stitches again, the start and stop will revert back to the original place.

To "force" the start and stop in a specific place, take the Reshape tool, right-click on the desired place in the line and choose "Split Line". Now this will be the new start and stop. Click on the Close Shape button in the Artwork toolbar.

### *Use "Split Line" to force a start/stop in the lower right corner (for use with Magic Square)*

In Chapter 4.3.1 "Help, I can't Draw" you can see how easy it is to create a block from a doodle. You would use the Magic Square and then Connect and Close to make a block pattern. Before using the Magic Square another time, to turn the block into a more detailed block of 4, it's very useful to force the start/stop in the lower right corner. That way each of the 4 elements created with the Magic Square will start and stop in the center of those 4 and can be Connected and Closed.





## 2.22 Slice: Divide closed shapes

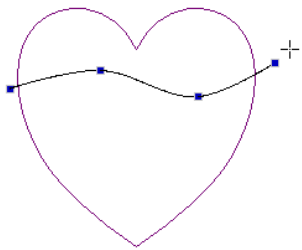


Slicing is the way to divide a **closed** shape into multiple parts. The slicing path will be the same on both divided parts, which makes slicing a valuable function for embroidery designs, where the neighboring parts must fit together. And it makes it a breeze to create your own patchwork blocks and templates in combination with the Add Seam Allowance function as described in Chapter 2.5.6. There are two methods to slice closed shapes in Art and Stitch.

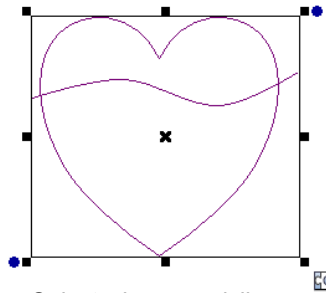


### Method 1 (the easiest way): Draw slicing path, right-click > choose Slice

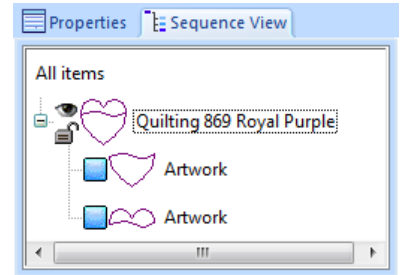
1. Draw the closed shape (or open a shape from the Library).
2. Take a drawing tool and draw the dividing line - let it extend over the shape.
3. Select both shapes together, right-click and choose Slice.
4. Look in Sequence View and click on the + plus sign in front of the color name to open the tree of objects: you will see two separate closed shapes now.
5. To create more divisions, draw another line over one of the two shapes, let it extend over the shape, right-click and choose Slice. Repeat for all parts that need to be divided.



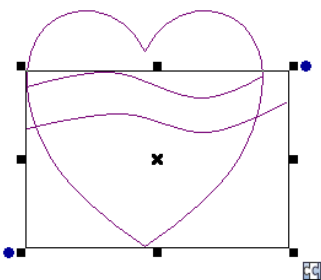
Curve tool:  
Draw the slicing path



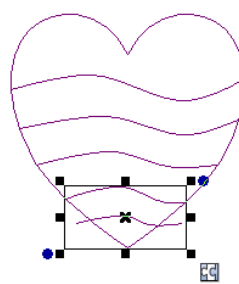
Select shape and line together, right-click and choose Slice



Sequence View:  
result is two closed shapes



Repeat steps



The Tangram design in the Library (Embroidery Artwork) started with a square. I sliced it piece by piece with the Line tool, Snap to Grid on, Diagonal grid showing. Then colored the parts.

Search the internet for Tangram images and create new designs with the puzzle pieces in the Library.





2.22 Slice: Divide closed shapes - Cont'd

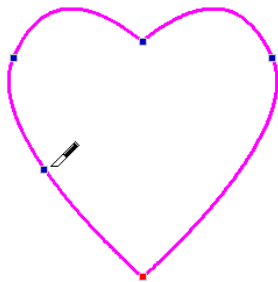


Method 2: Reshape > Slice objects tool

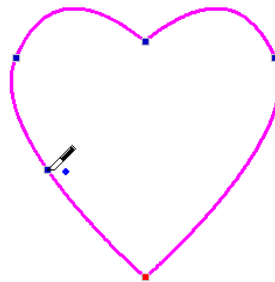
Select the object and take the Slice Tool located in the fly-out under the Reshape tool

- Click in the point on the outline where you want to start slicing. If that is an existing point, then an extra dot will appear on the mouse pointer showing that you are close to a point.
- Click and drag to draw your slicing path: if the line isn't perfect, use the Backspace key on your keyboard to step back and improve the line. Draw it as perfect as possible, as the slicing path will be the new outline for each of the resulting two shapes.
- When you reach the other side, click on the outline. If it's not perfect yet, use the Backspace key and redraw the last point. When you're satisfied, right-click to finish.
- Look in Sequence View and click on the + plus sign in front of the color name: the result will be two separate closed shapes, each with an identical outline where the shapes touch each other.

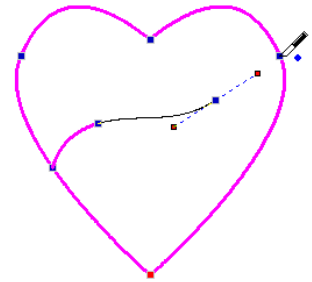
Tip: Practice, practice, practice: when the slicing path is perfect, you don't have to reshape later. Reshaping later would mean reshaping each of the two sliced shapes. It's hard to get the two exactly the same, so better make a perfect slicing path! Using Method 1 is therefore much easier.



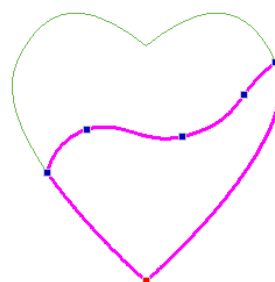
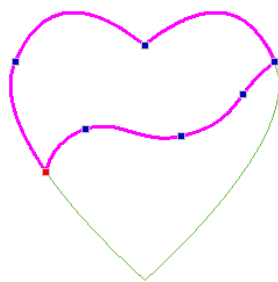
Take the Slice tool and click on the outline



Click and drag to draw the slicing path. The path must be perfect.



Use Backspace key if necessary to go back and improve. Click on the outline, then right-click to finish.



The result after slicing: two closed shapes

**Tip:** Slice is only useful for **closed shapes**. For open paths use "Split Line", as described in the previous chapter.



# 3. *The Stitch Chapters*

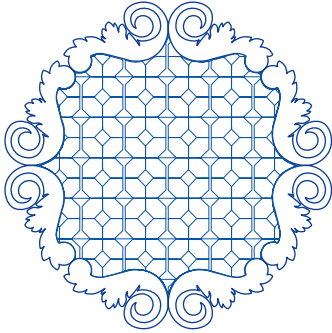
Once your artwork is ready, it has to be turned into stitches for your machine.

In this Part 3 you will find all about Line and Fill stitch types and their settings.

Tip: Mandatory exercises included!



### 3.1 Artwork ready? Time to apply stitches



*Design inspired by my grandmother's chair*

#### Art... and Stitch

Now that you know how to create your Artwork, how to draw shapes and create patterns, it's time to work on the Stitch part and apply stitches.

Assigning or applying stitches is done by selecting the pattern and clicking on one of the stitch types in the Stitch toolbar:



*For an open path* (pantos, borders, continuous patterns) click on one of the **Line Sew** type buttons in the Stitch Toolbar.



*To fill a closed shape with stitches*, click on one of the **Fill** stitch type buttons in the Stitch Toolbar, for example a Motif or a Hatch fill, Appliqué or Auto Stipple.

Artwork alone cannot be saved in quilt or embroidery machine formats. If you try to save a design in one of the available quilt or embroidery formats without assigning stitches first, you will get a warning that this is an empty design that cannot be saved.

After assigning stitches save the design, first as .ANS format, then choose menu File > Save as and save in the quilt or embroidery format of your machine. Copy the machine format to a USB thumb drive, insert the thumb drive into your machine, load the pattern and sew.

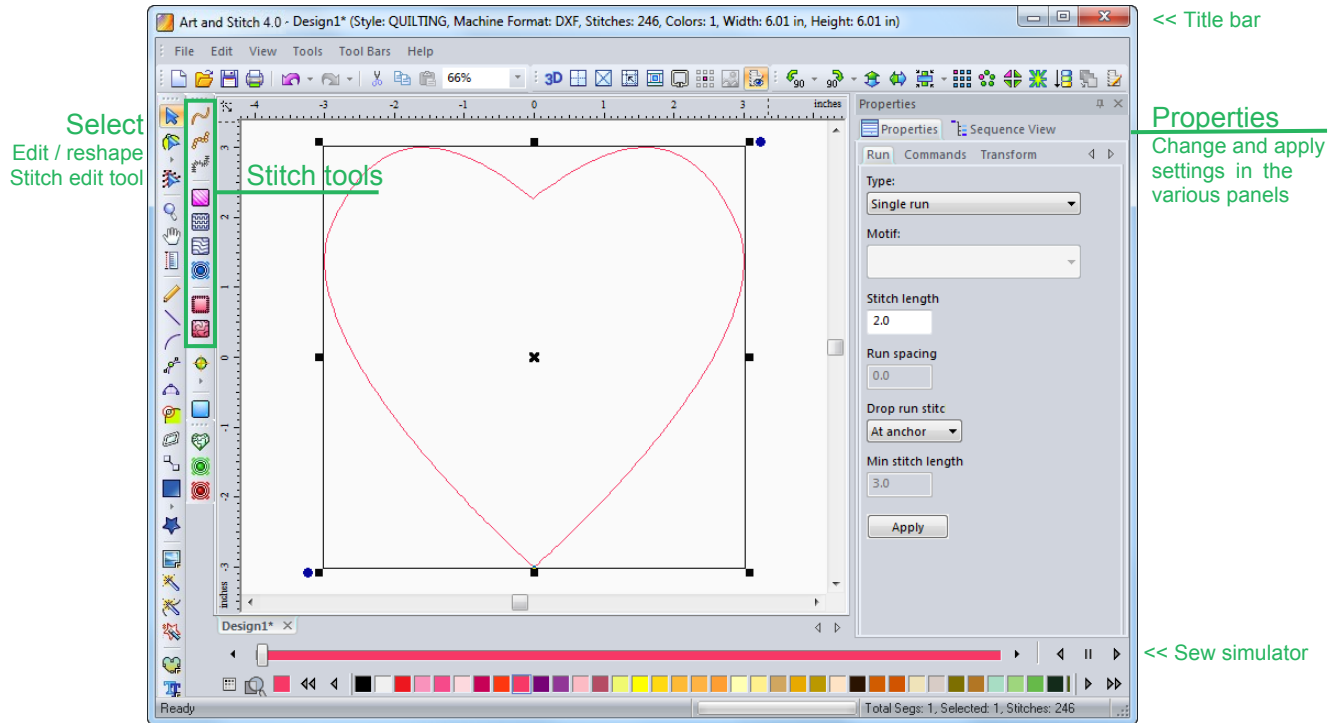
**Important: The native format .ANS is your most important source file! To edit / tweak a design, always open the original .ANS format, never the quilt or embroidery machine format.**

**The machine format is for your machine only, not for editing in Art and Stitch.**





### 3.2 Apply stitches to outline OR fill



#### Apply Stitches to outline or fill:



When your artwork is finished, take the Select tool and click on the object you drew (or opened), to select it. The Stitch Toolbar becomes active.

Tip: You can choose to apply stitches to the outline, OR apply stitches to fill a closed shape. If you want an outline AND a fill, then you need two objects: copy (Ctrl+C) and paste (Ctrl+V) the selection. The copy will now be selected. Use the copy as outline and use the original as the fill.



Select a shape and apply stitches to the outline by clicking on the first button in the Stitch Toolbar. Several things happen, which will show that your Design Page contains a stitch file now:

- At the top of the Art and Stitch window the Title bar will show the number of stitches, colors, and dimensions of the design.
- At the bottom of the window, the Sew Simulator can now be used to see how the design will be sewn. Always check your design before saving in a quilt or embroidery format.
- The Properties Panel on the right will be updated with a tab "Run", showing the properties of the stitches. You can make changes here: change stitch type (change to Double run, Bean or Motif), or change the stitch length. Click on Apply. The options are explained on the next pages.

Click on the 3D effect button in the View Toolbar to toggle between a realistic preview of the stitches and the normal view.

Once stitches are assigned, you can save the design in a quilt or embroidery format.  
Artwork alone cannot be saved as quilt or embroidery machine formats.

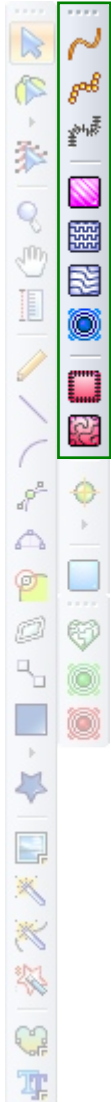


### 3.3 Stitch Toolbar - Introduction

**Note:** the same **Select / Reshape / Edit tools** used for artwork can also be used to select and reshape objects after stitches are applied.

#### Stitch Toolbar

When your artwork is ready, select an object and click on one of the **Line Sew type buttons**, or one of the **Fill type buttons** to assign stitches. This will **turn your artwork into a stitch object**, ready to be saved in the format of your computer guided longarm quilt system or embroidery machine.



These are the **Line Sew type buttons** to **assign stitches to a selected line or outline**:

- Running Stitch - single or double run, bean or motif
- Motif - many motif patterns are included, optimized for quilting. The special embroidery motifs are marked with “\_emb”.
- Satin.

These are the buttons to **assign fill stitches to selected closed regions**:

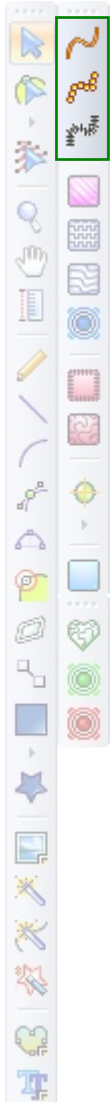
- Standard Fill (Embroidery) - important: not suitable for quilting.
- Motif Fill - many motif patterns are included, optimized for quilting. The special embroidery motifs are marked with “\_emb”.
- Hatch Fill - several options: line, wave, cross hatch.
- Echo Fill - create an echo around excluded shape. Button becomes active when two shapes are selected together, right-click and choose Transform Artwork > Exclude. It will fill around the inner shape up to the boundaries of the outer shape in a continues echo path. Use simple closed shapes for best results.

With these buttons you can turn a selected closed shape into:

- **Appliqué** - creates 3 layers of stitches: material, placement, tack down.
- **Auto Stippling** - density and stitch length can be changed in the Properties Panel.



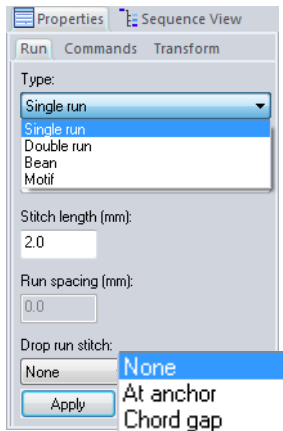
### 3.3.1 Line sew types: Run (single, double, bean), Motif, Satin



**Line Sew Type Running Stitch** (Single run). Default stitch length is 2 mm, comparable to 12 stitches per inch. Suitable for most quilt patterns and outlines in embroidery designs.

**For longarm quilting:** consider this stitch length as “just a value”. Your longarm quilt system will override it anyhow. A longarm quilt system will use its own stitch length value (stitches per inch), set by you in your longarm system. This particular stitch length will create a nice smooth path for longarm quilt systems. Change to 1 mm for a higher density pattern (may slow down the system). In menu Tools > Preferences > tab Style you can set your preferred stitch length as default.

**For embroidery digitizing:** this stitch length of 2 mm is a default setting in embroidery digitizing software. You can change it if you wish, by choosing another value and clicking on Apply. For example: Redwork in a thicker cotton thread does great with a stitch length of 2.5 or 3 mm.



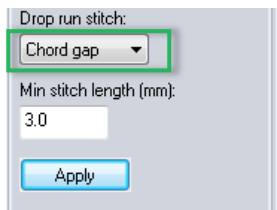
#### Properties panel, tab Run

**Double run:** will sew twice over the same path. Intended for embroidery digitizing, for thicker outlines. Not suitable for longarm systems.

**Bean:** Triple stitch, will sew each stitch 3 times. Intended for embroidery digitizing, for thick outlines. Not suitable for longarm systems.

**Drop run stitch** settings are used for proper placement of stitches:

- **“None”** forces the stitches to follow the stitch length setting. They will run smoothly along the segment.
- **“At anchor”** (default setting) will place stitch points at the anchor points. Useful to prevent skipping stitches in sharp corners.
- **“Chord Gap”** places the stitches to fit curves smoothly by shortening the stitches at the top portion of a small curve. It works in conjunction with the Minimum stitch length: in “Min stitch length” enter the smallest size you want the stitches to be shortened to fit the top portion of the curve.



After changing properties, click on Apply.



**Line sew type Motif:** Motif outlines are suitable for embroidery digitizing as well as for longarm quilting, for example for sashings and small borders. See exercise on the next page.

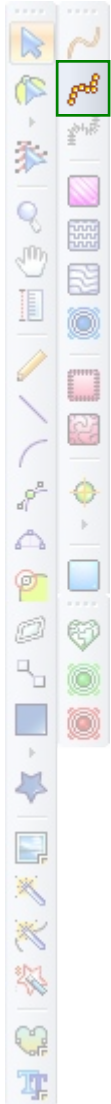
**Tip:** there are different types of Motifs in the software: the ones for embroidery digitizing start with “emb\_”. These embroidery motifs are much smaller than the Motifs made for quilting. If you want to stay friends with your longarm system, don’t use the \_emb motifs in a quilt pattern!



**Line sew type Satin.** Default width is 3.5 mm (approx. 0.14 inch). Spacing, Underlay and Tie off settings depend on the Style of the Design Page. When creating embroidery designs, set it to EMBROIDERY, when creating quilt patterns, set it to QUILTING via menu File > New. Because of the different settings it is important to make the right choice. See also Chapter 6.2.



### 3.3.2 Exercise: Using a Motif line sew type



There are two different Motif stitch types:



Motif **Line** sew type, for lines, curves.



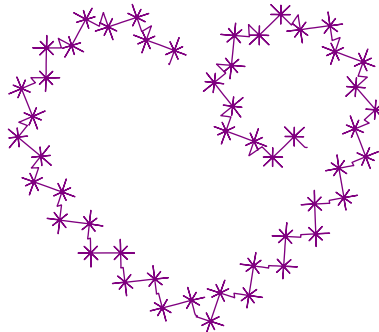
Motif **Fill** stitch type, to fill a closed shape.

By drawing a simple line and assigning the Line sew type Motif you can quickly create nice quilt designs, sashings and borders.

#### Example 1



- Open the Library and in the folder Shapes select the design “Heart path” to open it.
- Select the design and click on the Line sew type Motif button to assign (motif) stitches.
- In Properties panel on the right, tab Run, open the drop down list of Motif patterns and choose pattern 213. Click on Apply.
- Properties panel, tab Transform, change width to 9 inch and click on Apply.
- Save as .ANS first. Save again in the format of your machine.



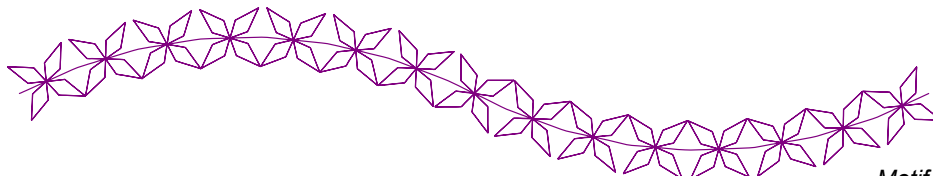
#### Example 2 - one minute to create a border



- Draw a curve path (or open the one in the Library > Shapes > Curve path).
- Select the path and assign a Line sew type Motif.
- In Properties Panel choose pattern 224, set “Run spacing” to 2.0 and click on Apply.
- Save as .ans. Save again in the format of your machine.



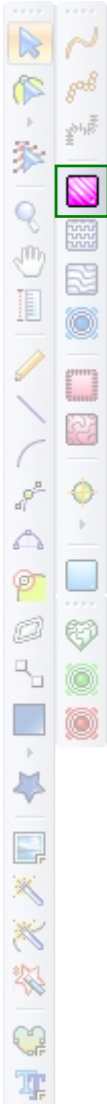
*Curve path as artwork*



*Motif 224 assigned to the curve path*



### 3.3.3 Fill type: Standard fill (Embroidery)



#### Fill type: Standard fill (Embroidery)

**This fill type is not suitable for longarm quilting:** it is intended for embroidery digitizing only. Detailed description can be found in Chapter 6.6 (Stitch Toolbar - Standard Fill Embroidery).

#### **Stitch settings are in mm**

Please note that traditionally digitizing is done in millimeters, so all stitch settings will be in millimeters only. This gives more increments and more detailed settings.

In longarm quilt systems, the stitch values of Art and Stitch will be ignored: the quilt system will use its own settings. So just see these settings as “a value”

- 2 mm is 0.08 inch (12-13 stitches per inch)
- 3 mm is 0.12 inch
- 6.4 mm is a quarter inch





### 3.3.4 Fill type: Motif fill



#### Fill Type: Motif fill

**For longarm quilting:** this type of fill is new in quilting. Motifs have several special effects in a quilt:

- They make a design look creative and artistic.
- They have the same effect as traditional Blackwork: a complex motif has more color than an open motif.
- Motifs can create Sashiko effects.
- They have special popup effects.
- Motifs are a great alternative to stippling.

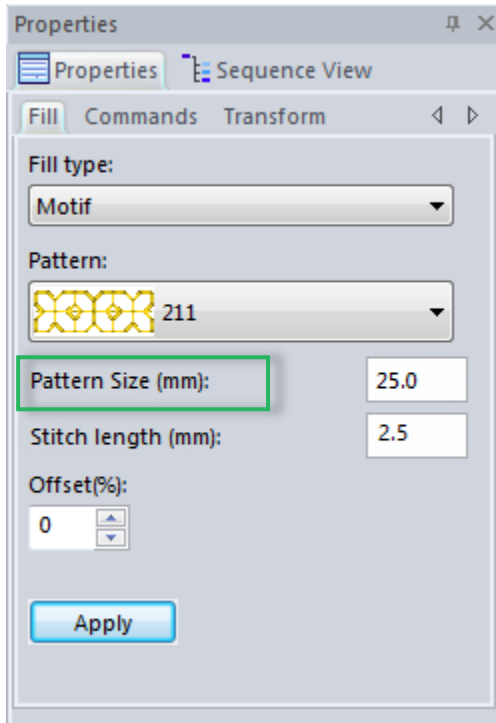
**For embroidery digitizing:** Motifs give a design a lacy look and have several effects, just like traditional Blackwork.

#### Difference between Motifs for quilting and for embroidery is **size**:

Although Motifs can be used for longarm quilting as well as embroidery designs, there's a big difference: the Motifs for quilting are much larger than Motifs for embroidery digitizing.

In the list of available Motifs in the Properties panel be sure to choose the right type: the names of the smaller Motifs for embroidery start with emb\_.

Motifs for Quilting have a pattern size of about 1 inch (25 mm). Ideal size for an embroidery motif is about 6 mm (quarter inch). Sizes can be changed in the Properties Panel:



#### Properties Panel, tab Fill

**Fill type:**

“Motif” is the regular Motif fill. Change direction using the Reshape tool, moving the black points over the contour. When you rotate an object, the direction of the fill will rotate along with it. See exercise on the next page.

**Pattern:** choose between many patterns, listed in alphabetical order. Your own patterns will be listed in a different color.

**Pattern Size:** to change the motif pattern size, enter a new size and click on Apply. Size 25.0 in this example is 1 inch.

**Offset (%)**: changing the value will offset every other row of motifs by the chosen percentage.

When you change a setting: click on Apply.



### 3.3.5 Exercise: Using a Motif fill



**Step 1.** Click on the Library button, choose folder "Shapes". Choose a closed shape, in this example Bird1.

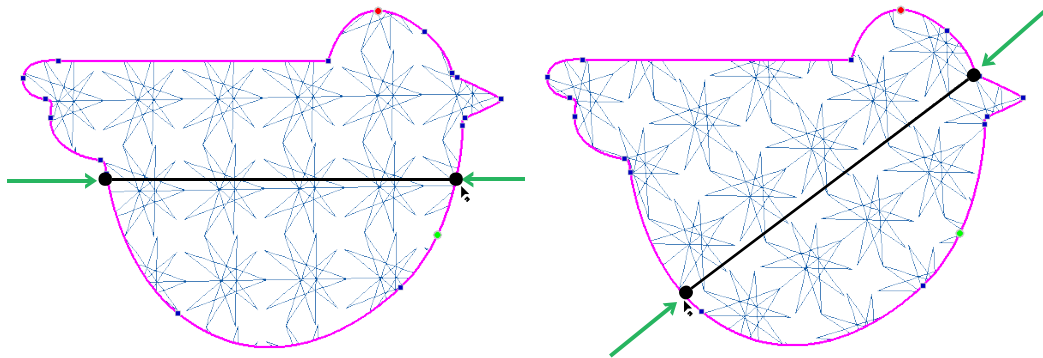


**Step 2.** Click on the Motif fill button in the Stitch Toolbar to apply a Motif fill.

**Step 3.** In the Properties panel on the right, tab Pattern, choose a different pattern (in this exercise scroll down in the list to pattern f039) and click on Apply.



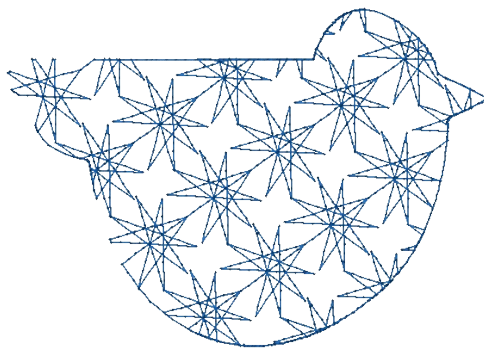
**Step 4.** While the pattern is still selected, take the Reshape tool: move the black end points of the angle line so that it crosses the pattern diagonally. Then click outside to apply the new angle:



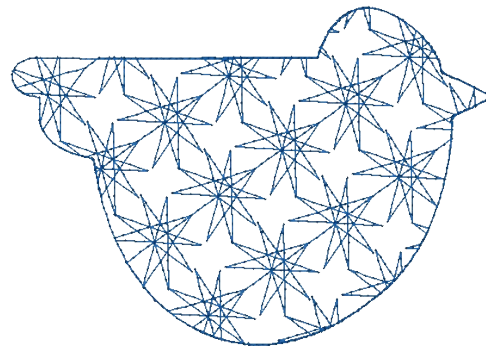
Move the black end points of the angle line to change the direction of the Motif fill

#### Where did the outline go?

**Stitches can be applied to an outline OR can be used to fill a selected object.** It can't do both in one object. To get both a fill and an outline: select the object, then copy (Ctrl+C) and Paste (Ctrl+V) it. The copy is now selected. Apply running stitches to the selection by clicking on the first button in the Stitch Toolbar.



1 object, filled



2 objects: Original, copied, pasted.  
Line sew type Run stitch applied to the copy.



### 3.3.6 About filled shapes in longarm quilting

#### Important - When filling shapes “Think Quilt”

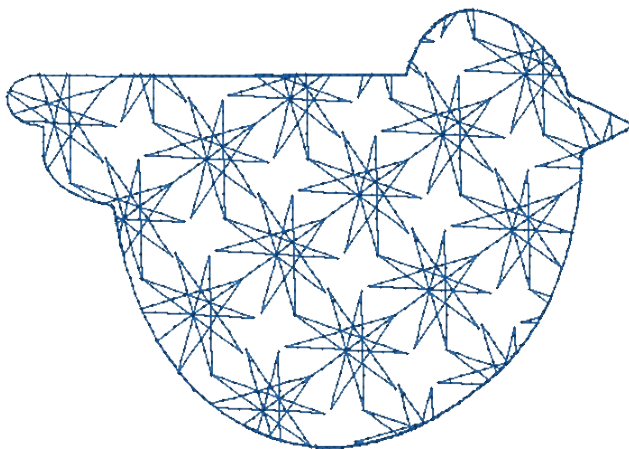
Shapes with Motifs or (Cross) hatching have minimal oversteitching: the motifs are repeated throughout the shape. To go from one row of motifs to the other, the program will use the contour as traveling path.

The complexity of the shape will affect the way the program finds the most economical route through the contour to go from one row to the next. The simpler the shape, the easier it will be, resulting in a perfect quality.

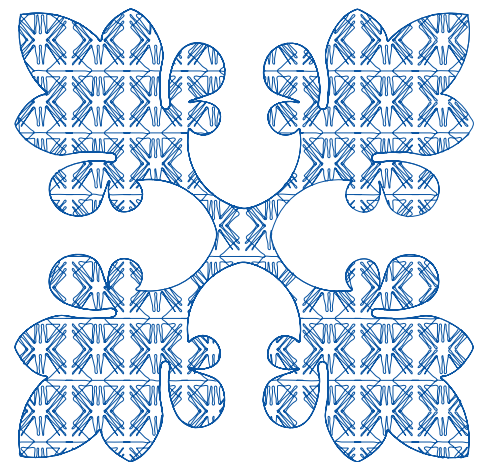
Take a look at the shapes below and try to imagine how they will be sewn. Example A, the bird will have minimal oversteitching in the contour, as the shape is simple.

Example B: When contours of a shape have small tiny details and extensions, the software will still try to fill all parts. But this can force the program to go back and forth over the same part of the contour, just to be able to reach each and every extra detail.

So my advice is to keep shapes filled with motifs or hatch fills simple, for best quality patterns. The motif itself has a lot of artistic appeal already: motifs don't need complex shapes to be beautiful.



*Example A  
Good, simple shape to fill*



*Example B: Shape too complex.  
Causes too much oversteitching*

#### Size Matters...

Keep an eye on the size of the pattern! Although you can zoom in and out in the software and everything looks beautiful, the 8x8 inch pattern Example B has 13780 stitches, and that is too much for quilting.

In short: don't fill complex shapes with Motifs. It's overkill.



### 3.3.7 Fill type: Hatch fill



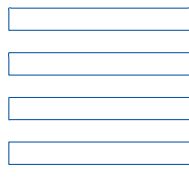
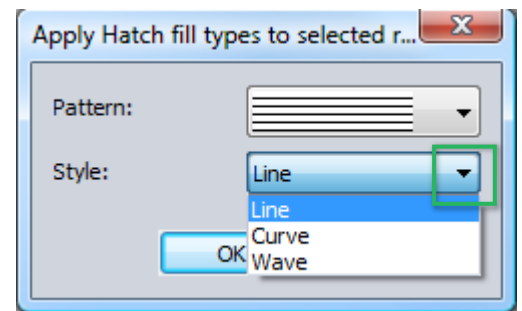
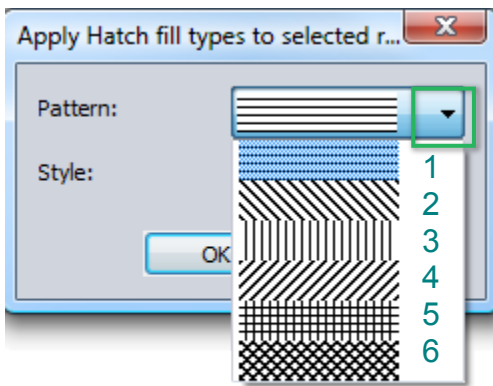
#### Fill Type: Hatch fill

Hatching or Cross hatching is crossing a shape with parallel lines from one side of an object to the other side and back.

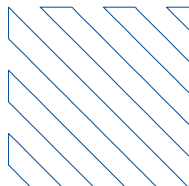
**For longarm quilting:** Very common in longarm quilting, to cover a large part of a quilt, making other parts (for example feather designs) stand out.

**For embroidery digitizing:** The Hatch settings can be used, with a much smaller spacing as a lace base.

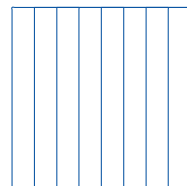
Draw a shape and select it, then click on the Hatch Fill button in the Stitch Toolbar. The following dialog window opens, where you can choose between six Hatch patterns, and combine with three styles. Choose a pattern and a style and click on OK:



Pattern 1, Style Line



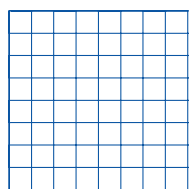
Pattern 2, Style Line



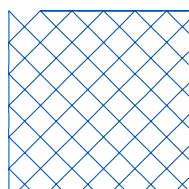
Pattern 3, Style Line



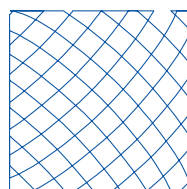
Pattern 4, Style Line



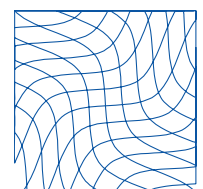
Pattern 5, Style Line



Pattern 6, Style Line



Pattern 6, Style Curve

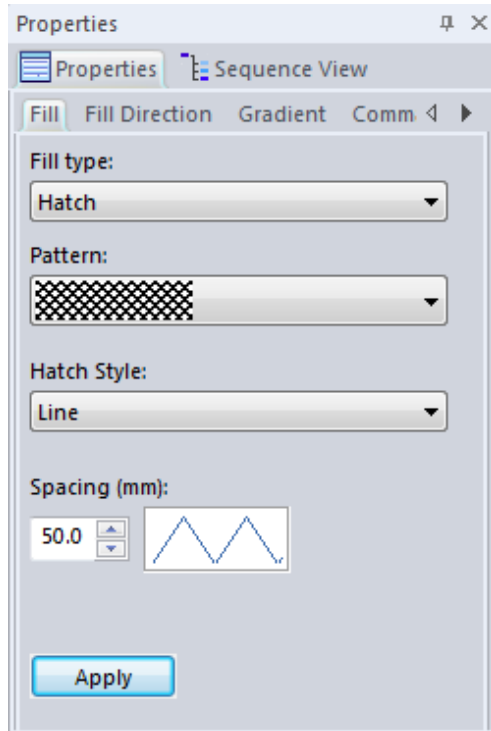
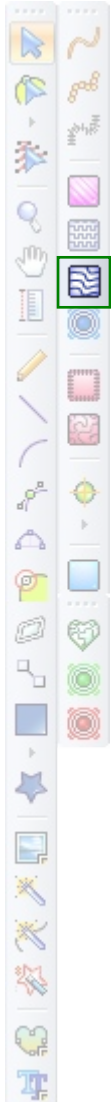


Pattern 6, Style Wave



### 3.3.7 Fill type: Hatch fill - Properties

#### Fill Type: Hatch fill - Properties Panel



#### Properties Panel, tab Fill

**Fill type:** Choose between Hatch, Standard, Fancy or Motif. Alternatively you can click on another fill type button in the Stitch Toolbar.

**Pattern:** Choose between 6 Line and Hatch patterns.

**Hatch Style:** Choose between Line, Curve, Wave.

**Spacing** defines the distance between two hatch lines. Default is 50 mm, one inch, suitable for most quilts. Depending on the shape and the size of your design, you can make the distance smaller or larger.

Always click on Apply when you change properties.

#### Tips:

It's a good idea to create and **sew a sampler of various Hatch styles** for future reference.

Other than changing the Fill type, the spacing and the direction of the Hatch fill you cannot edit the individual lines and points of the Hatch fill stitch type itself.

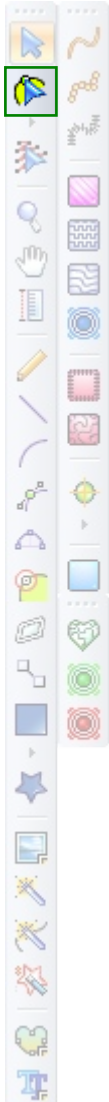
As an alternative for the Hatch fill there are two **vector artwork Hatch designs included in the Library, folder Creative Fills**. These designs can be used with the Creative Fill function: Open the artwork hatch from the Library, place a shape on top, move the shape into position, select the artwork hatch plus shape together and click on the Creative Fill button. The artwork hatch fills the shape now, still in artwork. It can be edited with the Reshape tool. Finish by selecting the design and clicking on the Line sew type Running stitch button.





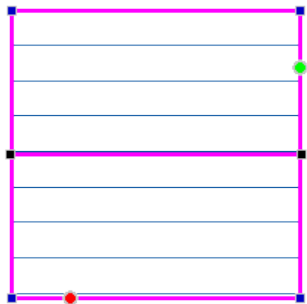


### 3.3.7 Fill type: Hatch fill - Reshape

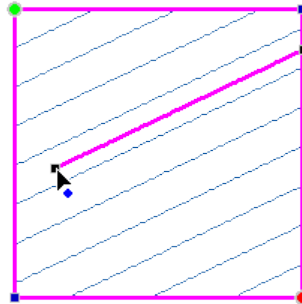


#### Fill type: Hatch fill - Special effects with the Reshape tool

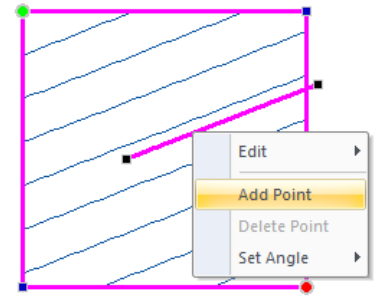
The 6 Hatch Patterns can be changed in various ways using the Reshape tool: Select a Hatch fill object and click on the Reshape button in the Toolbar on the left, or press letter R on your keyboard.



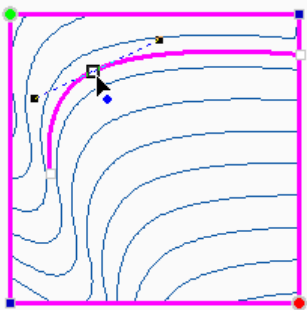
Changing the position of the first stitch (green dot) and last stitch (red dot) will change the sewing route.



By moving the angle line inside the shape, you can change the angle of the Hatch fill.



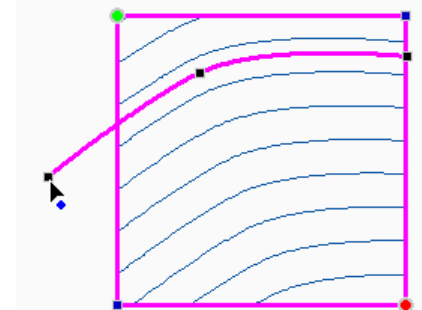
By right-clicking on the angle line, and choosing Add Point, you can make a straight Hatch fill into a curved Hatch fill.



The points in the angle line have anchors, which can be moved to reshape. In this image, the angle line is shorter than the shape, resulting in a wave effect.

#### Important:

Reshaping of a Hatch fill should be done when the design is almost ready: when you would click on the Hatch fill button in the Stitch Toolbar again, the reshaping work is gone!



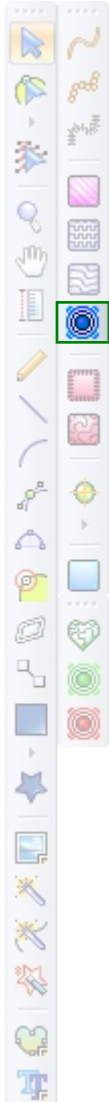
The end point of the angle line can be moved anywhere, even outside the shape, to influence the hatch effect.

#### Golden Tip

When working on a design, copy it to a new Design Page, so that you can keep experimenting, while the original is unchanged.



### 3.3.8 Fill type: Echo Fill



#### Fill type: Echo Fill - Create an echo around an excluded shape

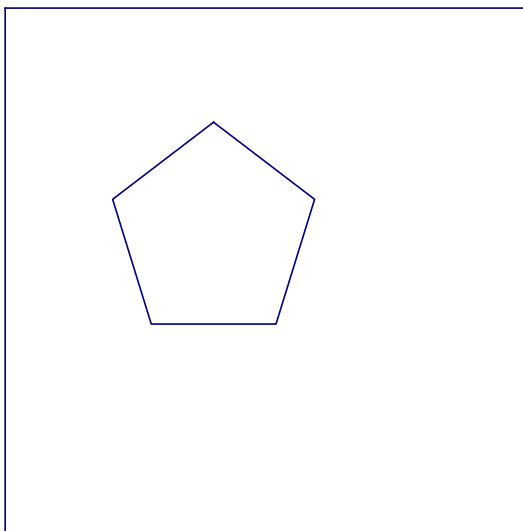
This function is a dream to fill around a shape that has to be kept open. The function will echo around a shape and when it encounters the outer boundary it will finish the echo lines in each corner region one by one, to minimize over stitching.

*Use simple closed shapes for best results.*

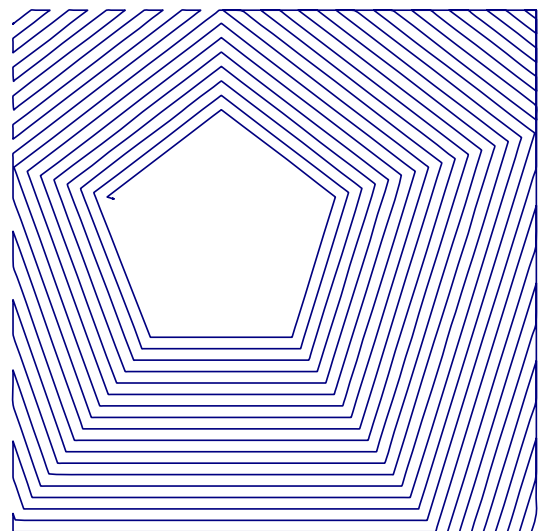
#### To use the Echo Fill:

As the name implies it will need a shape to go around and it will need a boundary to know when to stop.

1. Draw the inner shape that has to be kept open.
2. Draw the outer shape - the outside of the filled region, many times that will be the block outline.
3. Select both together, right-click and choose Transform artwork > Exclude.
4. Click on the Echo fill button that is only active when an excluded shape is selected.
5. The function needs time! Depending on the chosen shapes this can take a couple of minutes.
6. Default spacing is 10 mm. You can change the settings and click on Apply. Give it time!



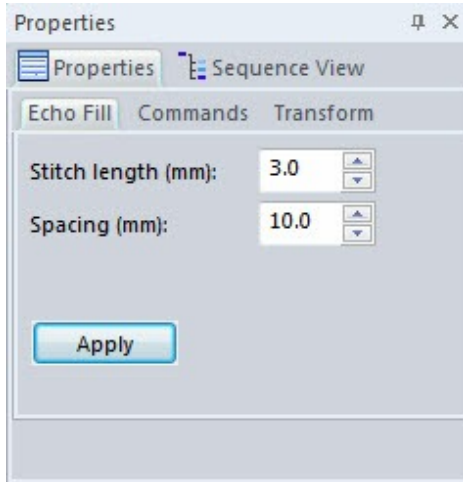
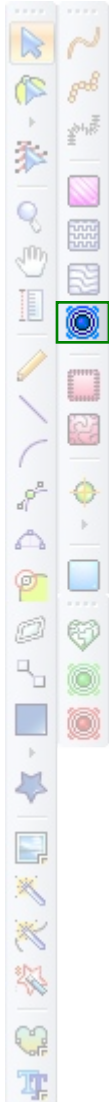
*Steps 1-3: Pentagon from AutoShapes flyout (3.4x3.5 inch) plus 9x9 inch square selected together, transform Artwork > Exclude*



*Step 4: Echo Fill, default settings.*



### 3.3.8 Fill type: Echo Fill - Cont'd



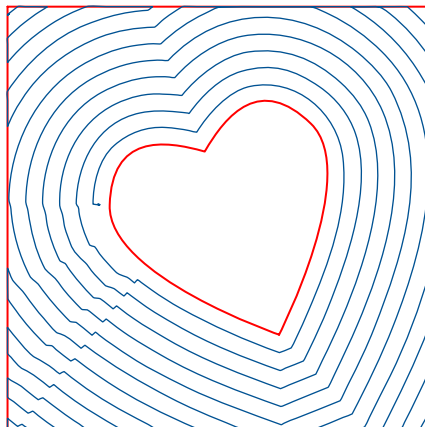
#### Properties Panel - Tab Echo Fill

**Stitch length:** to change the stitch length, enter a new value and click on Apply.

**Spacing:** is the spacing between the echo lines. To change it, type a new value and click on Apply.

*Changing the values takes time!*

The Echo Fill will start from the inside out. You cannot change the position of first and last stitch and you cannot swap entry/exit points.



#### Important note by Loes

Although a dream function, the Echo Fill is not perfect yet! Sometimes the echo lines seem to have hiccups. Instead of waiting a year to put a smoother function into Art and Stitch I decided to include this not-so-perfect version now. I hope you like it. If the result isn't nice enough to be used, then choose another fill type.



For a description of the Echo functions in the Artwork Effects toolbar (red and green Echo buttons) see Part 4, chapters 4.10 and 4.11



### 3.3.9 Fill type: Appliqué



#### Fill type: Appliqué

By clicking on the Appliqué button in the Stitch Toolbar, a selected shape is turned into three layers, together making an appliqué design. The individual layers can be turned off:

1. Placement: this running stitch line is sewn to show where to place the appliqué material.
2. Tackdown layer: the second running stitch line is sewn on the final fabric, tacking down the appliqué fabric. Cut the excess appliqué fabric away, as close as possible around the stitch line.
3. Finish: this will finish the edges of the appliqué patch.

**For longarm quilting:** Completely new in longarm quilting! You will love it. When the Style of Design is set to Quilting (chosen via menu File > New), the Finish layer has a low density.

**For embroidery digitizing:** Appliqué is often used in embroidery digitizing. It saves stitches (thus time). Use decorated fabric for a special effect when combined with embroidered details.

In Art and Stitch you can open images of fabrics, which will show inside the appliqué shape. Turn the 3D stitch effect on and you will be able to see the end result.

For more information about Appliqué see the Appliqué Chapters 6.9, 6.10 and 6.11.

#### Another way to create an Appliqué pattern:

You can also manually create an Appliqué design, using two Motifs inside the Motifs collection: "Blanket\_Inside" and "Blanket\_Outside". **Please note** that if a closed shape was merged, or drawn counter-clockwise, the blanket stitch is reversed. In that case, use "Blanket\_Outside".

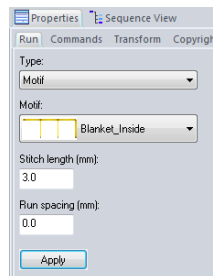
1. Draw a closed shape, copy and paste it. While the copy is still selected, change its color.



2. In Sequence View open up the tree by clicking on the plus sign. Select the first shape and assign a Run stitch to the first outline by clicking on the first button in the Stitch toolbar.



3. In Sequence View select the copy and assign a Motif line sew type to the second line. Don't use the Motif fill stitch type, you just want the contour to be a blanket stitch!



4. While this copy is still selected, go to Properties Panel, tab Run, and choose as Motif "Blanket\_Inside" (stitches will point inwards) for the selected copy and click on Apply.

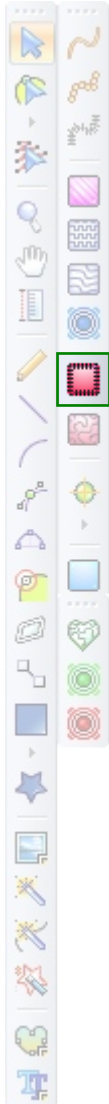
Here in Properties Panel, tab Run, you can change the size of the Blanket motif. Click on Apply after each change. Try different settings and make notes.

This method is perfect for pre-cut appliqué shapes, where the finishing layer has to be exactly the same size and shape as the first placement layer.

**Tip:** If you have the optional Art and Stitch PLUS Embroidery Module you will have more advanced options for appliqué. See Chapter 6.11 of this User Guide.

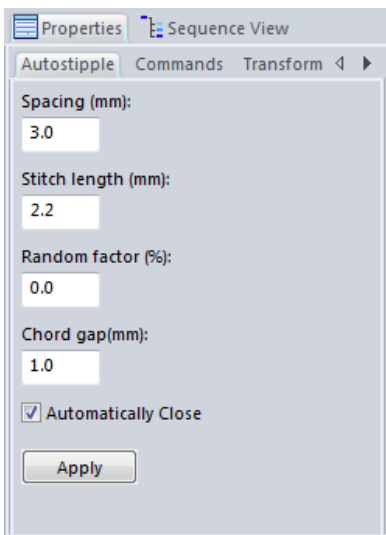


### 3.3.10 Fill type: Auto Stipple



#### Fill type: Auto Stipple

Stippling / Meandering is a way to fill parts of a quilt with a continuous pattern in a more or less unpredictable path, where the lines never cross each other. Stippling parts will let the other parts of a quilt stand out. To play with the various settings: draw a square. Select it and click on the Auto Stipple button in the Stitch Toolbar to apply Stippling. In the Properties panel on the right, tab Autostipple, you can change the settings. Remember: When you change a setting: **click on Apply**.



#### Properties Panel, tab Autostipple

**Spacing** will change the density of the stippling effect: a higher value means fewer shapes and a loose effect. A lower spacing value will set more curves closer together, resulting in a dense stippling effect.

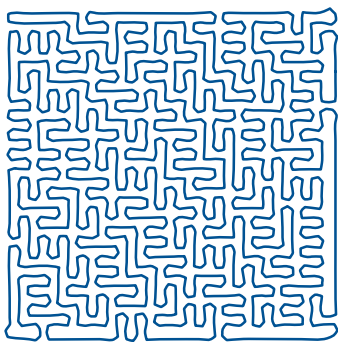
**Stitch length**: Default 2.2 mm. With a higher value (for example 3 mm) the result will be less smooth, but fewer stitches = shorter sewing time.

**Random factor**: The default 0% creates a nice regular stipple. Setting this to e.g. 50% will create a wilder look. See examples below. Try which setting you like best and make notes!

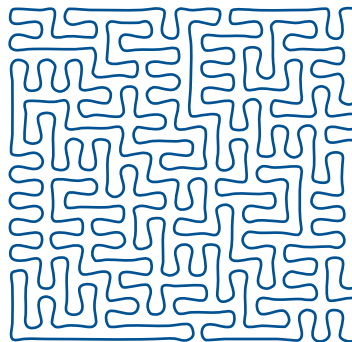
**Chord Gap**: A lower value makes the curves rounder, with smaller stitches. Note: this will increase the stitch count.

**Automatically Close**: Will connect the first and last stitch.

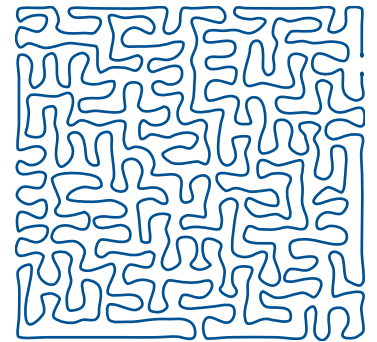
The blocks in these examples are 4x4 inch:



Default settings:  
Spacing 3.0  
Stitch length 2.2  
Random factor 0%  
Chord gap 1.0  
Closed



Spacing changed into 4.0  
Stitch length 1.2  
Random factor 0%  
Chord gap 1.0



Spacing 4.0  
Stitch length 1.2  
Random Factor changed into 50%  
Chord gap 1.0

Stippling around a shape, leaving the shape open, is shown in Part 4, Special Design Tools, Chapter 4.12 "Fill around a shape".

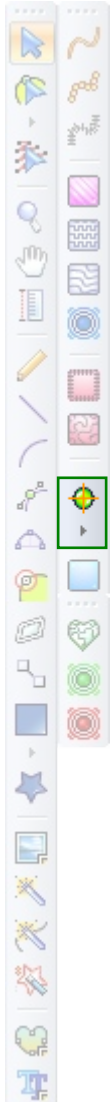




### 3.4 Initial Jump for .HQF .TXT and .SSD

An Initial Jump makes it easier to align the second row of an overall-interlocking pattern. In most systems, aligning can be done directly in the quilt system itself, but for PC Quilter and Side Saddle the information has to be inside the pattern. In HQ Pro-Stitcher and Pro-Stitcher, aligning can be done in the system, but it is just a bit easier to have the jump position included in the pattern.

In the Stitch Toolbar you will find the special button to set the initial jump for the mentioned systems. Click on the little arrow underneath the button to open the list of options. Choose one of the available positions, or choose "Custom" to put the jump anywhere you want:

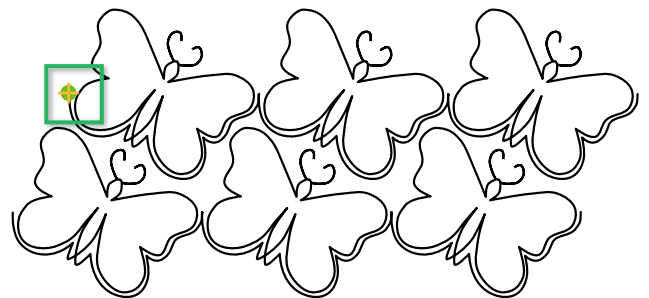


#### Custom jump position

Click on little arrow under the Initial Jump button and in the list of options choose "Custom". Then click on the place in the pattern where you want the initial jump for the second row. A green button appears.

*Clicking on the Initial Jump button under the Stitch toolbar will toggle between show and hide this Initial Jump position. When you want to reposition a jump, click again on "Custom" in the list, then click on the new position.*

The best position is somewhere in the first row at a spot you can easily identify, so that when this row has been stitched you can align your machine to that position and then let the machine jump to the first stitch of the second row. The custom position must be a place that you can recognize in the stitched pattern. For example the first stitch of the first row as shown in the image below.



#### Save the two rows as two separate files

The initial jump is typically for a second row, to align it to a row that has already been sewn.



Apply stitches to the first row only (keep the second row as artwork) and save this as "Row 1" in the format of your system (.HQF, .TXT, or .SSD).

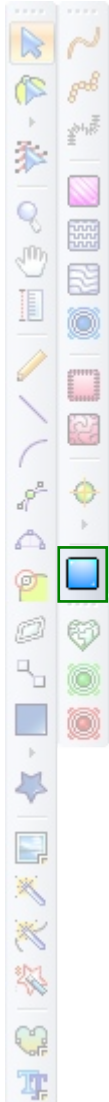


While Row 1 is still selected, click on the blue Back to Artwork button under the Stitch toolbar to turn Row 1 back into artwork. Apply Stitches to Row 2 and set the Initial Jump at the desired position. Save as "Row 2".

At the machine, load and stitch pattern "Row 1" first. Then load pattern "Row 2", align the needle to the place where you set the jump on "Row 1". (In the classic Pro-Stitcher version press "Reset Home" and let the machine jump from there to the start of Row 2.)



### 3.5 Back to Artwork



#### Back to Artwork: Designs made in Art and Stitch

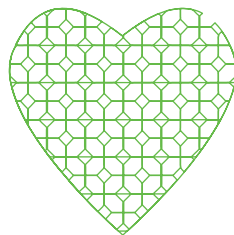
The base principle of Art and Stitch is to start creating artwork, reshape until the design is ready, select the object and apply stitches or fills. Then it has become a Stitch object and can be saved in any of the quilting or embroidery machine formats.

There are situations where you might want the design to be artwork again, instead of a stitch object:

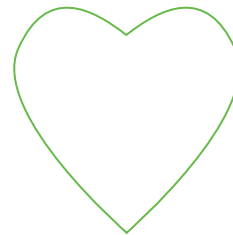
- Transform a shape can only be done in Artwork mode, not on a stitch object.
- Slice an object, for example to make a corner pattern, can only be done on artwork.
- Echo Quilting effect can not be applied to a stitch object.
- Creative Fills can only be applied when two artwork objects are selected together.
- Export as Adobe Illustrator file, or as EMF can only be done with vector artwork.

To turn a stitch object back into artwork: select the object and click on the Back to Artwork button, under the Stitch Toolbar. It is now a vector based artwork object, which allows the above mentioned effects to be applied. After you have applied the desired changes or effects, select and apply stitches again.

**Caution!** Plan ahead in digitizing and be sure that the artwork is ready before assigning stitches. Reason: when you have applied stitches, then go back to artwork and apply stitches again, the previous stitch settings are not remembered!



Heart filled with Motif Stitch



Heart, back to artwork

#### Convert to artwork: Designs NOT made with Art and Stitch

Quilt patterns or embroidery designs NOT made with Art and Stitch, will always be read into Art and Stitch as a stitch-based design. To turn existing designs into artwork, open the existing quilt design and be sure that in the File Open Dialog window the box "Convert to outlines" is ticked on. Then select the design and click on the blue Back to Artwork button.

Warning: opening designs that were NOT made in Art and Stitch means a conversion step. Depending on the design, the digitizing software and the method used to digitize the design, this conversion may cause variations in the pattern. When it takes too much time to edit a converted existing pattern, consider opening the existing design without converting to outlines, locking it to the Design Page to turn it into a template. Then take the drawing tools to trace it in Art and Stitch. Oftentimes that will be quicker than Reshaping.

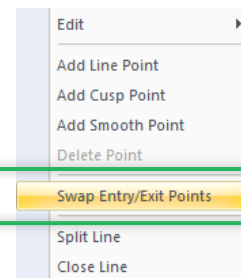
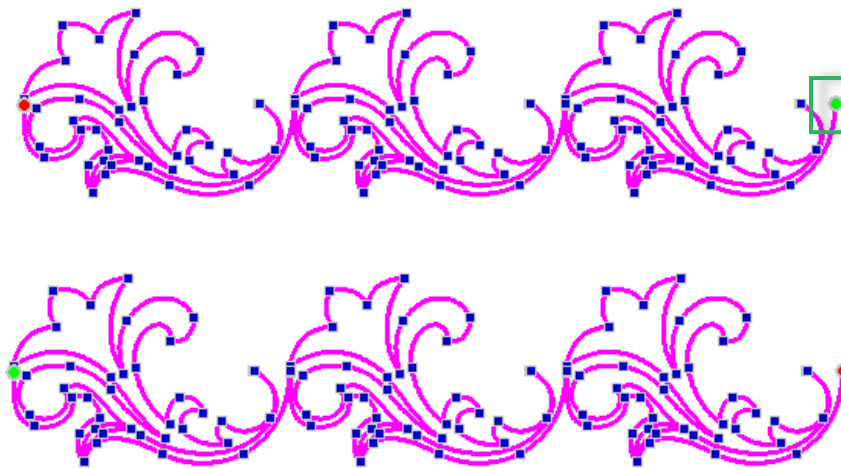


### 3.6 How to change the stitch direction (Swap Entry / Exit Points) - stitch based

When checking a design in the Sew Simulator and it doesn't go in the desired direction, you can change the stitch direction by swapping the Entry / Exit points. For example when you have mirrored a panto because you like it better that way, but you still want it to stitch from left to right:



1. Take the Reshape tool and click on the design. It shows the magenta Reshape mode color.
2. **Right-click** on the green or red dot representing the first and last stitch of the design.
3. Choose Swap Entry Exit points.
4. Check the design again in the Sew Simulator.



#### Notes about Swap Entry / Exit Points

- \* Note: this works for stitch paths only - for artwork see technique on next page.
- \* When opening existing designs, not made in Art and Stitch, be sure to open them with the box "Convert to Outlines" ticked on in the File Open Dialog window. Otherwise the Reshape tool is not available.
- \* This technique only makes sense for continuous paths. Closed shapes where the start and stop are exactly on top of each other won't need a change.
- \* When you go back to artwork, and later assign stitches again it will revert to the original sewing direction and you will have to swap Entry/Exit again.
- \* On the next page you will find a description how to make the change permanent, in artwork mode, by adding a help line at the desired start of the path, tying it to the path and deleting the help line.



### 3.7 How to change the stitch direction - a permanent change in artwork



The stitch direction of manually connected objects (Chapter 2.19) depends on the drawing direction of the first part that is connected: if you drew the first part from right to left, then manually connect with the Reshape tool using the letter T on your keyboard, the entire connected path will stitch from right to left. Even when all other connected objects were drawn the other way:

**Rule: When tying objects together, the first selected part defines the stitch direction.**

This knowledge can be used to change the stitch direction when it is still artwork:



**Step 1.** Be sure that your object is still artwork or turn it back into Artwork.

Draw a help line: Take the Line tool and draw a single line (just two clicks) in front of the object, at the place where you want it to start sewing and in the desired sewing direction - most of the time that will be from left to right. Right-click to finish.



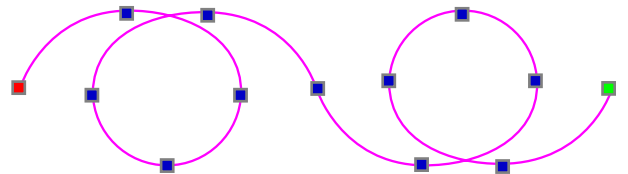
**Step 2.** Take the Reshape tool, click and hold in the last point of the help line, hold down letter T on your keyboard, drag the selected last point to the dangling point of the larger object and release the mouse, release letter T. The two objects are now connected.

**Step 3.** Still with the Reshape tool delete the first point, to remove the help line.

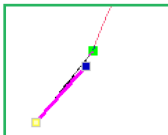
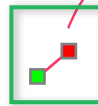


**Step 4.** Assign stitches and you will see that the entire object will now sew in the same direction as you drew the extra help line. See example below:

The green (start) and red (end) points in Reshape mode indicate that this will sew from right to left.

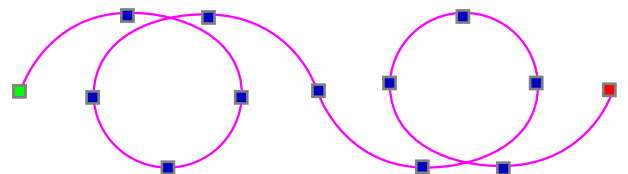


For a permanent switch take the Line tool and draw a straight help line of 2 points and a right-click in the desired direction, on the side where you want the object to start sewing: in this example on the left.



Tie the help line and the object together: Take the Reshape tool, click and hold the last point of the help line, hold down letter T on your keyboard and move the help line towards the object. When the points start "blinking", release mouse first, then the T key. The help line is now connected with the object, with a shared cusp point.

Still with Reshape tool delete the first point of the Help line. That will delete the entire help line, as the second point of the help line became the shared connection point. The direction of the object has now permanently changed.



### 3.8 Color Palette


To change the color of an object on the Design Page, simply select it and click on a color in the Palette at the bottom of the Art and Stitch window:



Colors are important for embroidery designs but not so much for quilting patterns. Colors are very helpful though to use in the design stage: I often use different colors so that I can quickly see the separate objects of the pattern I am working on. Once my design segments are ready, I connect them into a continuous path.

For designing purposes I use a “small” thread chart, such as the “Quilting” thread chart, so that I don’t have to scroll very much to find different colors.



 In Art and Stitch you will find thread charts of several brands of embroidery thread. To choose a thread chart click on the little icon in front of the color palette under the sew simulator under the Design Page. A list opens where you can choose the desired thread. This chart will stay until you change it again.

For embroidery digitizing use your preferred brand of thread.

In the optional Embroidery Module you can create your own Thread Chart. See Embroidery Manual, chapter H.





# 4. Special Design Tools

Let the Magic begin !

In Part 4 the extra tools are explained that allow you to make master pieces of simple designs. Even if you can't draw a straight line, our Magic Tools can turn doodles into beautiful blocks.

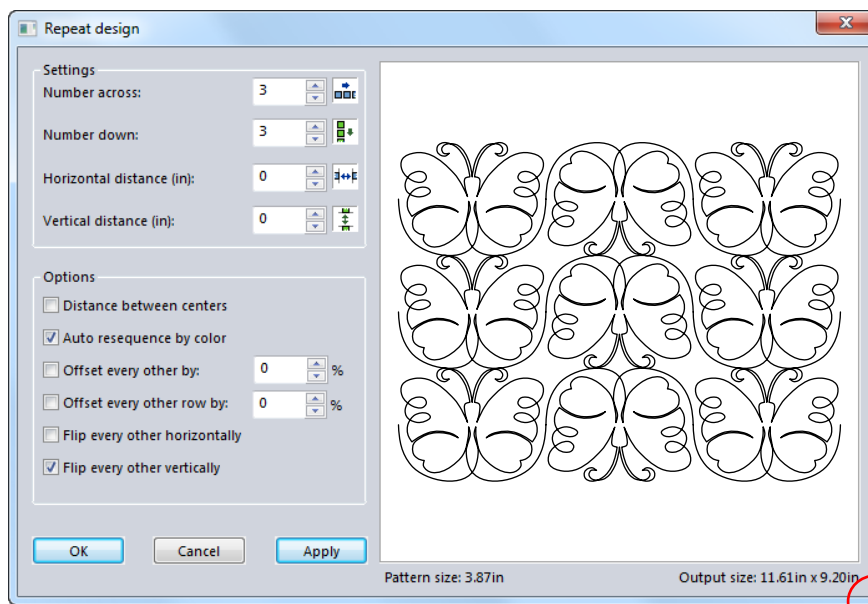
Tip: Exercises and tutorials included

## 4.1 Repeat function



The **Repeat** function is a quick way to create Pantos and overall E2E patterns. It works for vector based artwork as well as for stitch-based designs.

Select a pattern and click on the Repeat button in the Modify Toolbar. The Repeat dialog window opens. Use the arrow buttons to change values, or type a value and click on Apply.



### Tips:

When changing values by using the little arrow buttons, the preview will instantly update.

When changing values by typing them, click on Apply to update the preview.

Click on OK to accept the result.

Library > Panto E2E > "Butterfly3", Flip every other vertically

Grab a corner and resize window for more precision

**Number across:** Use the small arrow buttons to change the value. Preview will automatically update.  
**Number down:** Use the small arrow buttons to see the Preview update (or type a value and Apply).  
**Horizontal / Vertical distance:** Before changing a value to add or remove space between the objects, tick the box "Distance between centers" in the Options section.

**Auto resequence by color:** For designs with multiple colored objects.

**Offset every other by ..%:** Creates distance between every other object in the same row

**Offset every row by ..%:** Moves every other row to the right (or left with negative values). See example on next page.

**Flip every other horizontally:** Mirrors every other pattern

**Flip every other vertically:** Flips every other pattern.

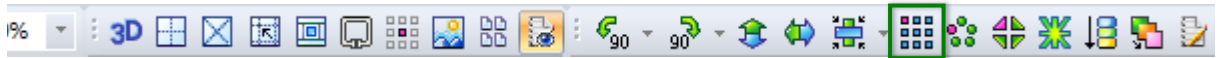
**Output Size:** In lower right corner you can see the resulting size (can be changed afterwards).

Play with the settings - it's the quickest way to see the effect. When ready, click on OK, or click on Cancel to return to the Design Page without the repeats.

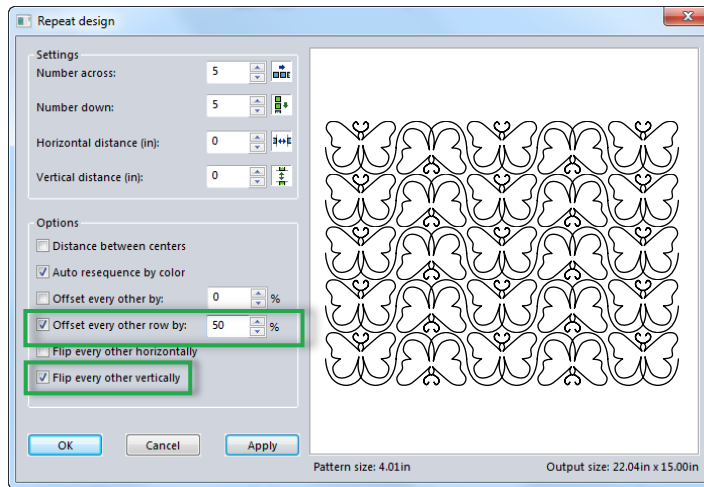
**IMPORTANT:** After using the Repeat function, right-click on an empty spot on the Design Page and choose **Resequence**. Click in the desired sequence in each of the objects. Then connect the objects row by row, turn into stitches and save.



### 4.1 Repeat function - Cont'd

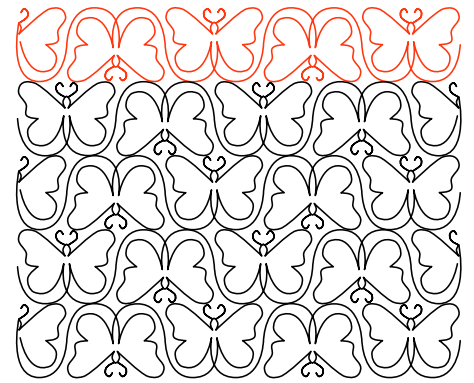
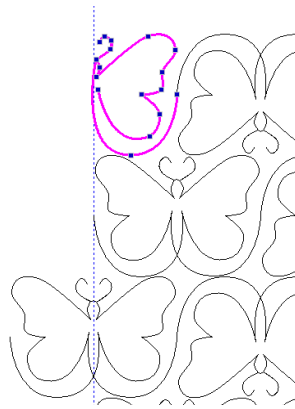
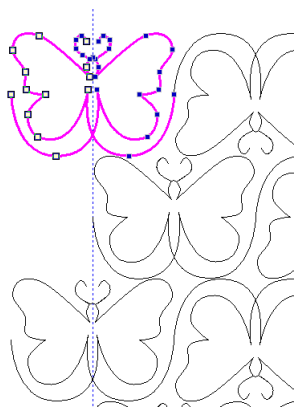


#### Offset every other row for interlocking patterns



In the Repeat dialog window, section Options, you can offset every other row. This makes it possible to create interlocking overall patterns.

Tick the box "Offset every other row" and enter a percentage. Click on Apply. In this example I used 50%. Play with the settings and see the effect, you can also use negative values to let the row "move" to the left. When you have reached the desired effect, click on OK.



In this particular example you can easily take away half of the butterflies that cross the edges of the overall pattern:

1. Drag a guideline from the ruler on the left and drop it on the desired edge of the pattern.
2. Take the Reshape tool and drag around the points that cross the edge marked with the guideline
3. Press Delete on your keyboard.
4. Repeat for the other design parts that cross the edges.
5. Take the Select tool and select the first row by dragging a selection marquee around it. Click on Connect Objects. Repeat for each of the rows.

**Tip:** you only need two rows that interlock. Let your machine do the rest of the repeats.



## 4.2 Magic Circle

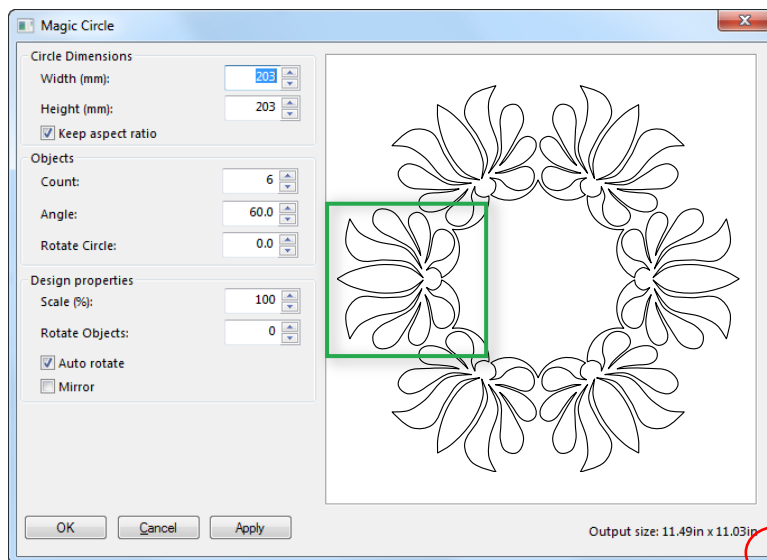


**Magic Circle** - to create a wreath (array).

Before using the Magic Circle function, you may have to rotate the original. In the example below the original object is marked with a green frame. To be sure that the first and last point of the object are either pointing to the center of the wreath or to their neighboring objects, rotate 90 degrees left.



Select the pattern with the Select tool, NOT the Reshape tool, and click on the Magic Circle button. The Magic Circle dialog window opens.



### Tips:

When changing values by using the little arrow buttons, the preview will instantly update.

When changing values by typing them, click on Apply to update the preview.

Click on OK to accept the result. If you don't like the result after all, click on Undo.

Grab a corner and resize window for more precision

### Circle Dimensions:

**Width/Height:** Use the arrow buttons to change the spacing between the objects by making them larger or smaller. The size of the original selected object will not change this way. For special effects uncheck the box "Keep aspect ratio".

**Objects > Count:** Set more or fewer objects in the circle.

**Angle:** This is automatically calculated. A circle is 360 degrees. 6 objects in a circle makes 60 degrees.

**Rotate Circle:** After setting the number of objects, you can rotate the circle for a better composition.

### Design properties:

**Scale:** Changes the object size, influencing the spacing between the objects.

**Rotate objects:** Very useful for the final fine tuning: it will rotate the individual objects, keeping their position in the circle.

**Auto rotate:** When unchecked, all objects are in the same direction as the original selection. When checked, the objects follow the circle as in the example on the left.

**Mirror:** Mirrors all individual objects.

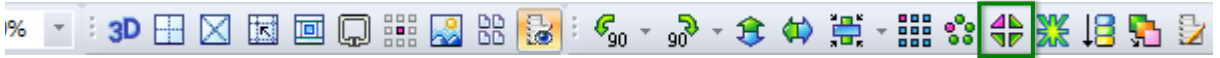
**Output size:** In lower right corner shows the resulting size. Size of the design can be changed afterwards.



The objects are grouped. Take the Reshape tool and tie the objects together one by one in the desired order.



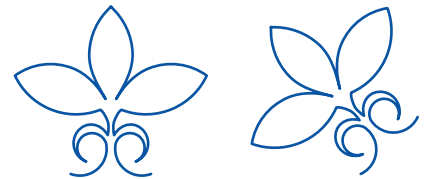
### 4.3 Magic Square



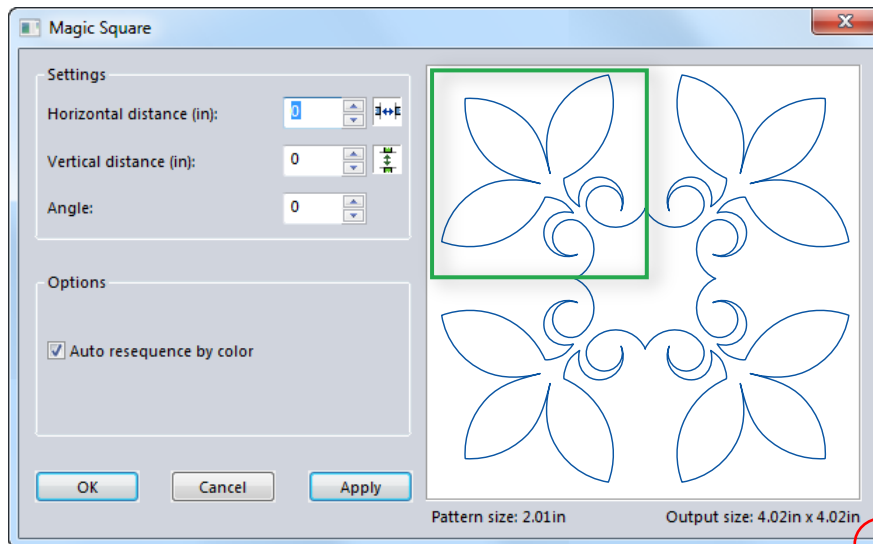
**Magic Square** - Turn selection into a block of 4

The Magic Square will copy the original, mirror it and place it on the right. Then it will copy the two objects together, flip vertical and place them under the original. So you will get 4 elements with one click.

Before using the Magic Square function, rotate the original in the right direction: in this example a continuous path was used, with first and last point on the same level. A rotation of 45 degrees left results in a nice block.



Select the pattern with the Select tool, NOT the Reshape tool, and click on the Magic Square button in the Modify Toolbar. The Magic Square dialog window opens.



**Tips:**

When changing values by using the little arrow buttons, the preview will instantly update.

When changing values by typing them, click on Apply to update the preview.

Click on OK to accept the result.

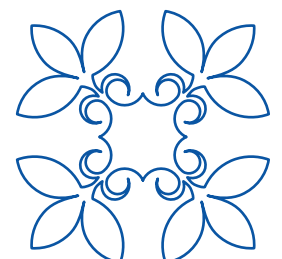
*Resize window for more precision*

- Horizontal and Vertical distance:** create space between the objects.
- Angle:** rotate the objects.
- Auto resequence by color** is important for designs with different colored parts.
- Pattern Size:** size of the original selection.
- Output size** (in lower right corner of window) shows the resulting size.

When ready, click on OK, or click on Cancel to return to the Design Page without any changes. If you don't like the result after all, click on Undo in the General Toolbar.

The design opens on the Design Page.

To turn the result into a continuous path, select the 4 objects together and click on the Connect Objects button, or tie them together using the T-key method in Reshape mode.



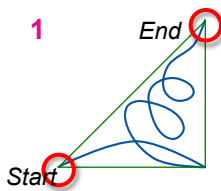




### 4.3.1 Help I can't Draw... but I can Doodle! Magic Square Exercise



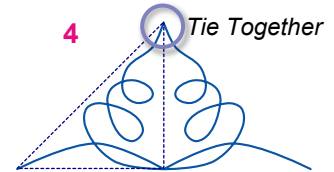
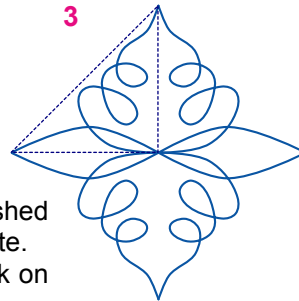
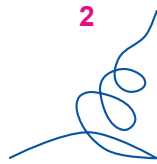
Click on the Library button in the Artwork Toolbar and open "Doodle Template". Take your favorite drawing tool, choose a different color. Turn Snap to Anchors on and start drawing in the lower left corner. Fill the triangle with anything, be sure it is a continuous path, end in the upper right corner. Reshape. Turn Snap to Anchors off. Delete the green template. Select your masterpiece and click on the Magic Square button



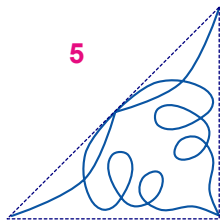
**Step 1.** Draw a doodle. When finished select and delete the triangle template.

**Step 2.** Select your doodle and click on Magic Square.

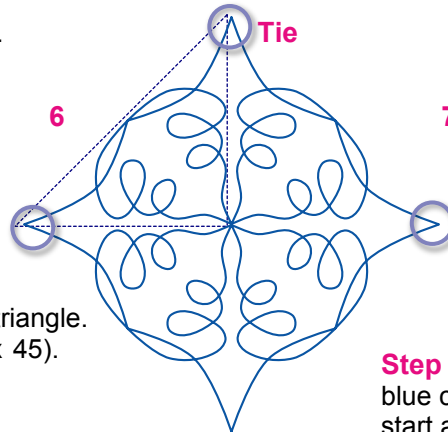
**Step 3.** Click on OK to accept.



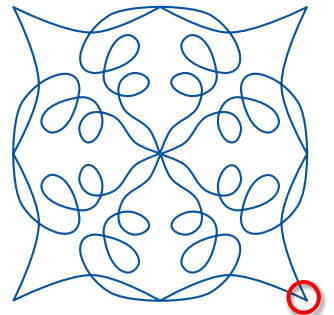
**Step 4.** Select and delete the two objects at the bottom. **Tie the two remaining objects together** at the top.



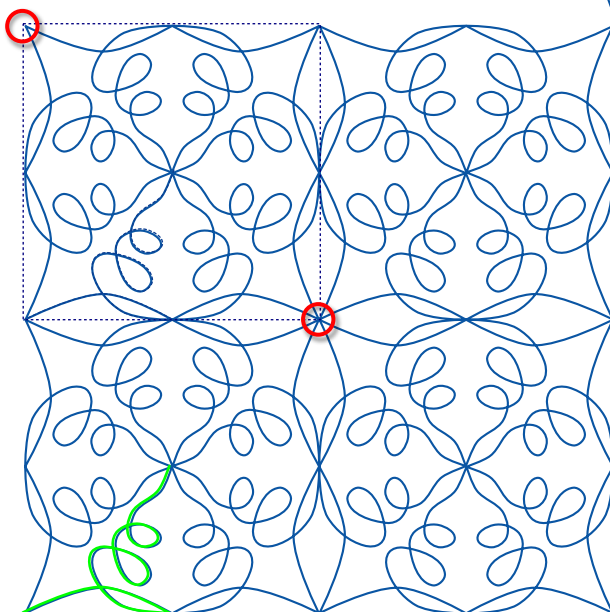
**Step 5.** It has become a new triangle. Rotate right 135 degrees (3 x 45). Click on Magic Square button.



**Step 6.** Tie the objects together (see blue circles). It is now 1 object, with the start and end points at the bottom.



**Step 7.** Select and rotate left 45 ° (start and end are now in lower right corner).



**Step 8.** Select the block and click on the Magic Square again. Click on OK.

**Step 9.** The start and end points of the 4 objects are now in the center. **Connect all objects** and close the shape.

**Step 10.** With the Reshape tool, right-click on the object at the place where you want to force the start/stop to be, e.g. the upper left corner: choose Split Line. Your block is ready.

<< The original doodle, highlighted in green.

## 4.4 Magic Rays



**Magic Rays** - Add continuous rays around a simple closed shape

With the Magic Rays function you can add rays, as a continuous path, around a selected closed shape. **IMPORTANT:** this shape must be a **simple closed shape**, not too many inside curves, no backtracking. See examples below. In the Magic Rays dialog window you can choose to add a rectangle mask, so that the result is a square/rectangular pattern instead of a circular pattern.

### Exercise with the Magic Rays

**Step 1.** Draw a closed shape or open one from the Library (Folder Shapes > Bird 1).

**Step 2.** Select the shape and press Ctrl+D to duplicate it (you may need it later - move this Duplicate aside).

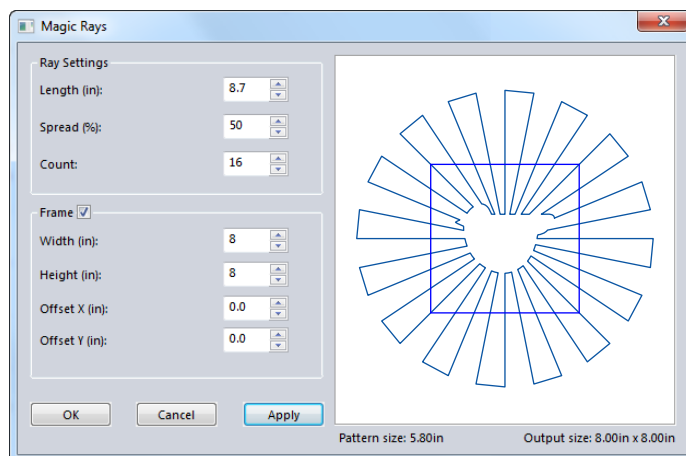
**Step 3.** Select the original shape and click on the “Center” alignment button in the Modify Toolbar. (Centering the shape makes it easier to put the duplicate on top if you need that later).



**Step 4.** While still selected, click on the Magic Rays button: in “Count” type 16 and click on Apply. When you want them to be equally spread, type 50 in “Spread (%)” and click on Apply.

**Step 5.** Decide if you want the resulting pattern to be circular or square/rectangular. For the latter tick the box “Frame”. Set the desired width and height of the frame and play with the offset settings if you want the shape to be off center. You may have to adjust the length in the Ray settings to make the rays longer than the frame. Click on Apply after making changes. All set? Then click on OK. Your pattern is ready.

**Step 6.** Depending on your settings, the original shape may not be that clear anymore. That is where the duplicate made in step 2 comes in: Select it and Center it. Apply Stitches and enjoy your Magic Rays!



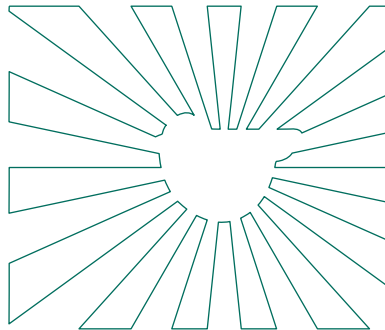
**Length:** From center to circle outline.  
**Spread:** 50% is an even spread.  
**Count:** Number of rays.

**Frame:** To make a square/ rectangular pattern instead of a circle.  
**Width / Height:** To set the resulting size of the block when using a frame.  
**Offset X:** To move the frame left (negative values) or right.  
**Offset Y:** To move the frame up or down.

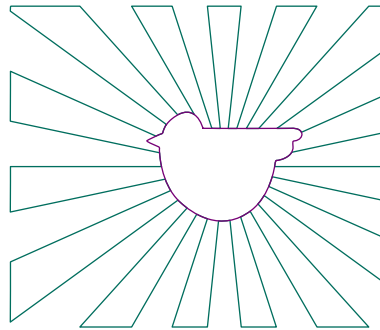
**Pattern Size:** Size of the closed shape.  
**Output size:** Size of the final result. When a frame is used, the frame size will be the output size. In this example 8x8 inch.



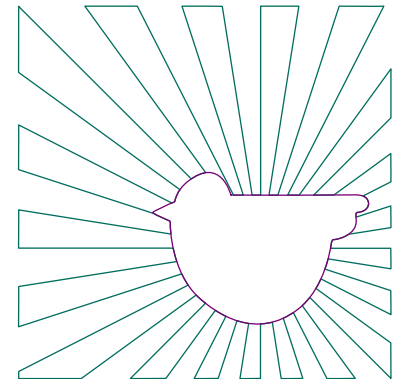
4.4 Magic Rays - Cont'd



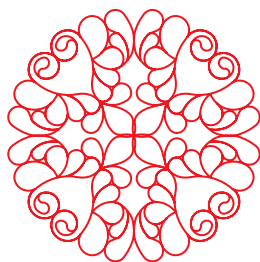
Result of settings exercise



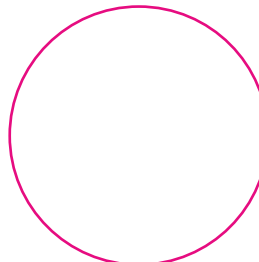
Duplicate shape pasted and centered



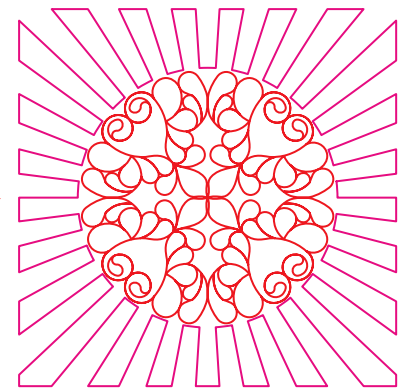
Count 20, frame 10x10  
Offset -1



Not a simple closed shape!



So draw a simple closed circle and use that for the Magic Rays



It's an easy way to turn a round design into a square block pattern.

**Note:** When clicking on the Magic Rays button the following message opens:

Magic Rays will be applied to the selected element.  
(Warning: element must be a simple closed shape).  
Continue?

- If you are absolutely sure that the selection is indeed a simple closed shape, click Yes.
- If the design has backtracking or is a complex or an open path, then click on No!

If you would continue with a complex path or outlines with backtracking, the program will take a long time to try to fulfill your command.

Via menu Tools > Preferences you can turn the warning off so that it will not appear anymore.

## 4.5 Design on Path

### Design on Path: “repeat” patterns in a creative way

To access the Design on Path function: select an object, right-click and choose Design on Path.

Rule # 1: You may have to resize either the path or the pattern for the best effect.

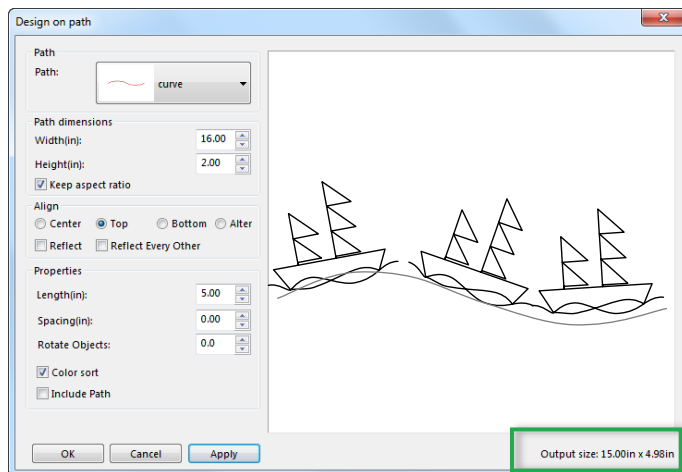
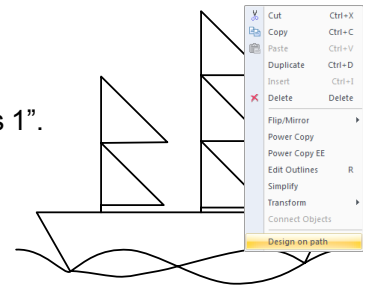
Rule # 2: Because of the mathematical way the patterns are placed on the path, there will be overlaps in sharp curves: after applying the effect, select and move for the best result. Do NOT rotate the design elements.

#### Example 1: Curve path

For this example open the Library, folder Panto - E2E, “Making Waves 1”.

Right-click on the pattern and choose Design on Path.

The following dialog window opens. Choose the path “Curve”.



Changing the setting “Properties” > “Length” to 2.4 inch will make the object smaller. This results in more objects on the path.

**Path dimensions:** It depends on the original size of your selected pattern how many will fit on a path. You can resize the path or the pattern itself for the best fit. Click on Apply after each change.

**Important:** If nothing is showing in the Preview pane, then your selected pattern is too big for the path. Click on Cancel, make your pattern smaller and try again.

On the next page you will find a table with all path shapes and their sizes in inches.

**Align** will put the pattern along the **center**, **top** or the **bottom** of the path. **Alter** will put the patterns alternating on top / bottom / top etc. The objects will be oriented towards the path.

**Reflect / Reflect Every Other** will mirror (every other) pattern.

With the setting **Properties > Length** you can resize the width of the pattern itself. Making it smaller will let more patterns fit on the path. Making it bigger will put fewer patterns on the path.

**Properties > Spacing** controls the spacing between the patterns. Depending on the chosen path shape, you will have to play with the settings for the best fit.

**Color sort** can be ticked on for embroidery designs with multiple colors. Sorting the colors will save thread changes later.

**Include Path** can be ticked to include the path itself in the final result. This can be helpful as a template to align the elements, or you can split the path into separate segments, and tie the elements to the path segments.

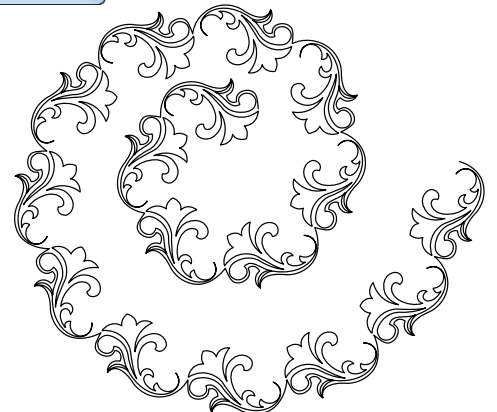
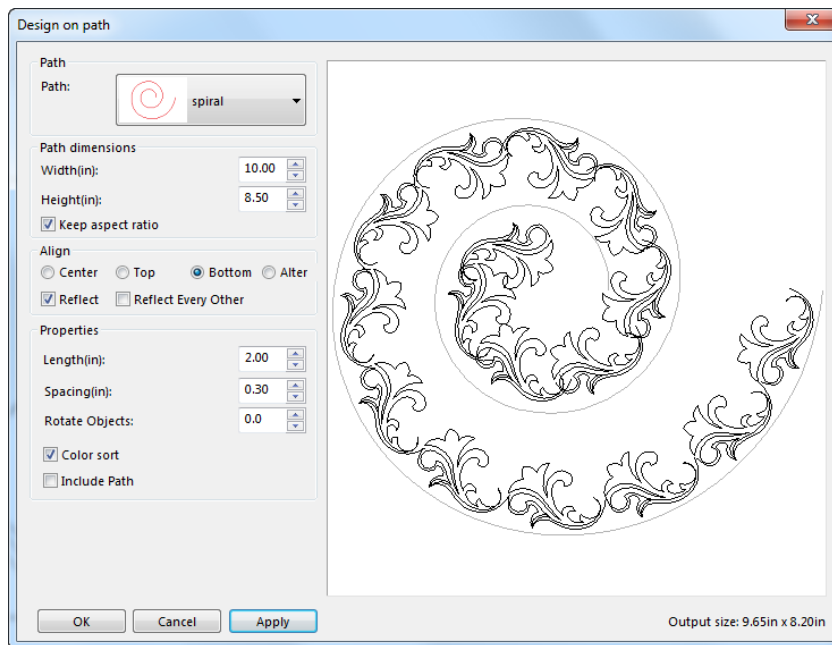
The **Output Size** of the result will be shown in the lower right corner of the dialog window.



## 4.5 Design on Path - Cont'd

## Example 2: Spiral 2

- From the Library, folder Panto - E2E, open pattern “Element classic 1 repeatable”.
- Right-click on the pattern and choose “Design on Path”. Choose the Spiral path. Settings: Bottom, Reflect. Properties > Length 2 inch, Spacing 0.30 inch. Click on Apply, then on OK.
- Right-click on the result and choose “Ungroup”.
- In the sharper curved part of the spiral path some patterns will overlap. In the flatter part of the Spiral path the patterns will have too much space. Therefore select the individual pattern elements and move them in place. Start aligning the second element in the Center of the spiral to the first Do NOT rotate the elements! Just move so that the first point of this second element touches the last point of the first element. Then move the third element in place, align to the previous element. It helps to change the color of an element once it is in place, just to keep track of the finished parts.
- Take the Reshape tool and connect all patterns manually, with the help of the letter T on your keyboard. See chapter 2.19 how to tie objects together.
- Finally select the pattern and in Properties panel, tab Transform, change the size to e.g. 14 inch.



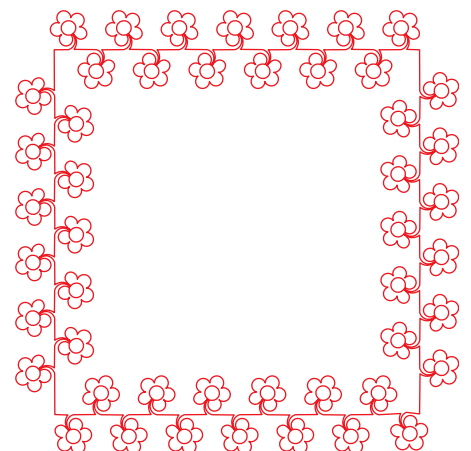
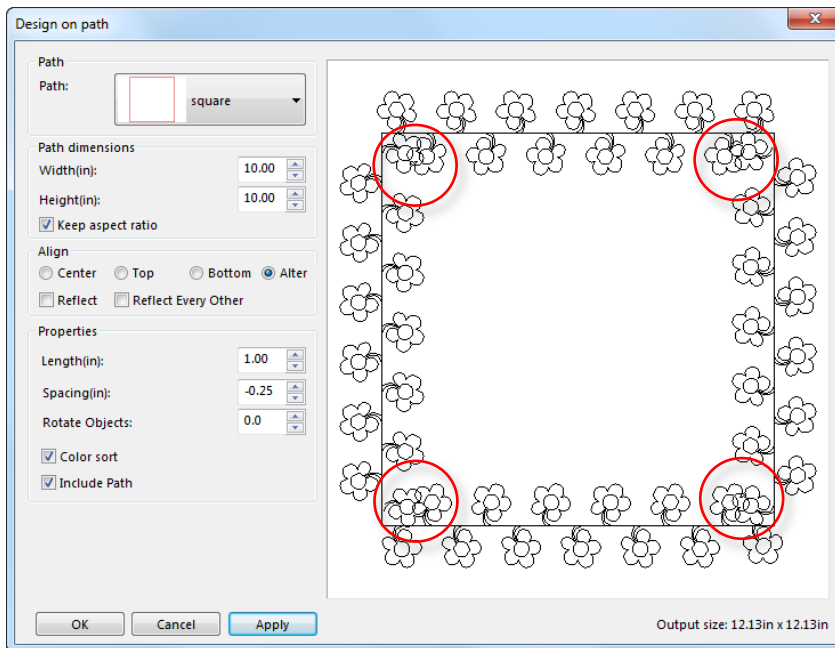




4.5 Design on Path - Cont'd

Example 3: Using the setting "Alter"

- From the Library, folder Panto - E2E, choose "flowerbase "
- Right-click on the design and choose Design on Path
- From the Path drop down list choose Square
- Change the following settings and click on Apply: Align: Alter; Length: 1.00; Spacing: -0.25; Tick the box "Include Path". Click on OK
- Ungroup, then select and delete one of each double element in the corners - as indicated in red in the image below.
- Select the square path, recolor the path. Then select all flower elements, click on the Connect button first and then on the Close shape button.
- The corners will have been cut off as "Connect" takes the shortest distance: take the Reshape tool and add a Line Point in all corners of the design. Move the points in place into the corners - use the original square path shape as your template.
- When finished, select and delete the original square path shape.







4.5 Design on Path - Cont'd

Available path shapes and their sizes

Play with the settings and the sizes of the pattern and the paths. Just to get an idea of the dimensions, I have put the current path shapes and their sizes in inches in this table.

Even without knowing the sizes, you can see the effect in the Preview window and the output size will be shown in the lower right corner of the dialog window.

You can always resize the result afterwards too.

	Path	Width (inch)	Height (inch)		Path	Width (inch)	Height (inch)
	arc	10	3		ribbon down	15	7
	circle	12	12		ribbon up	15	7
	curve	16	2		spiral	10	9
	greek	10	8		spiral2	8	9
	hs triangle	10	10		square	10	10
	heart	12	10		top	12	6
	hexagon	10	12		triangle	11	11



## 4.6 Create and Save your own Design Paths

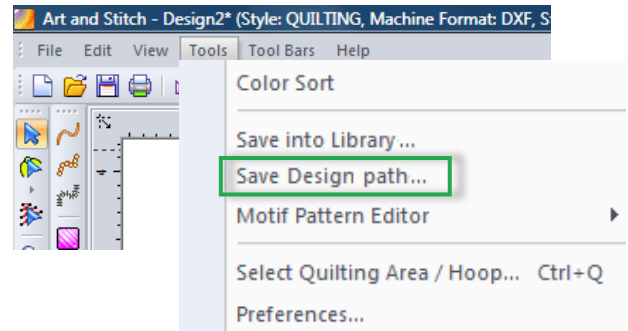
There are 14 ready made Design paths available, but you can create and save your own paths too: draw a path. For longarm quilting make the width approx 8-10 inch.

For embroidery, keep the width at about 4-7 inch.

Reshape until it is perfect.

In Properties panel > tab Artwork, set the Pen width to 0.4 and click on Apply.

While the path is still selected, choose menu Tools > Save Design Path. Name the file and click on Save.



### Make a backup of your own Design Paths

After saving your Design Path via menu Tools, choose menu File > Save As, and save the same path design in a new subfolder of the Art and Stitch My Designs folder, for example Documents\Art and Stitch My Designs\Backup Design Paths.

Make a backup of that folder on an external drive. When disaster strikes, open the design path from that backup location, select it and go to menu Tools > Save Design Path.



### 4.7 Power Copy

#### How to use Power Copy

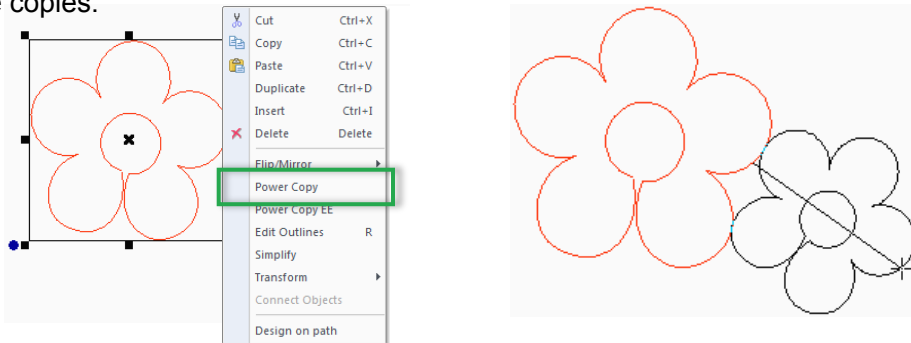
With Power Copy you can copy, paste, rotate, and resize in one step.

Draw a shape. Take the Reshape tool to perfect the lines. Select the shape, and resize it to a good base size via the Transform tab in the Properties Panel.

“Think Quilt” when you set that size: for the Creative Fill “Flower Fill” (Library > Creative Fills) I used a size of 1.7 inch for the original flower, before starting the power copy.

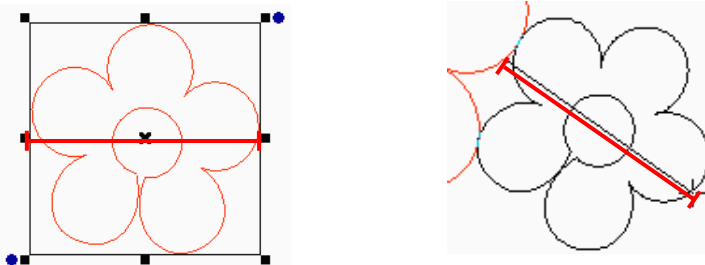
When your base shape is ready, select it, right-click and choose Power Copy.

Then click and drag in the Design Page, where you want to “stamp” copies of the original. Release the mouse and a copy has been made. Keep clicking, dragging, and releasing the mouse to make more copies.



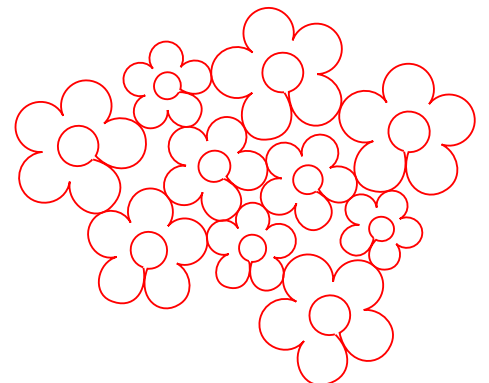
The direction in which you drag defines the size and direction of the resulting copy. While clicking and dragging you will see the shape plus a center line on the Design Page: this Power Copy baseline represents the direction and the width of the pattern. In the Status Bar you can read the distance while dragging.

Tip: For more precision, turn Snap to Grid on.



Here you can see the baseline of Power Copy.

To stop the Power Copy function, click on the Select Tool at the top of the Artwork Toolbar, or press Escape. Then select an object and move, resize, rotate etc.





### 4.8 Power Copy EE

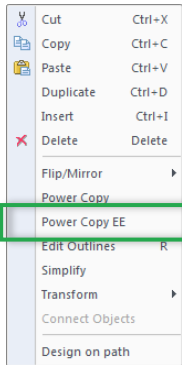
#### How to use Power Copy EE (EE stands for “Entry Exit”)

This Power Copy EE function uses a different base line. In the previous Power Copy description you have seen a baseline through the pattern, defining the width of the copy.

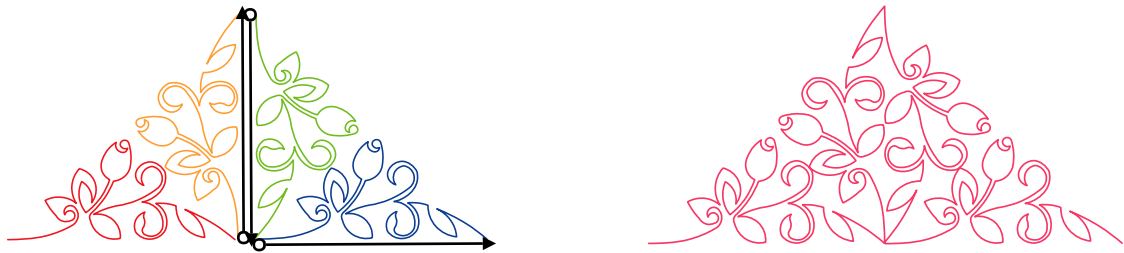
In Power Copy EE the first drawn point of an object and the last point (Entry / Exit points) define the baseline of the Power Copy EE function. And although the principle is the same, the result is quite different.

This Power Copy EE function can be used to create borders but is also a great way to play with half square triangle “Point to Point” patterns AND can be used to make continuous Creative Fills.

In this example I used the “Anne Bright Rosebud EE” design (Library > Designers Collection). Turn Snap to Grid on for more precision.



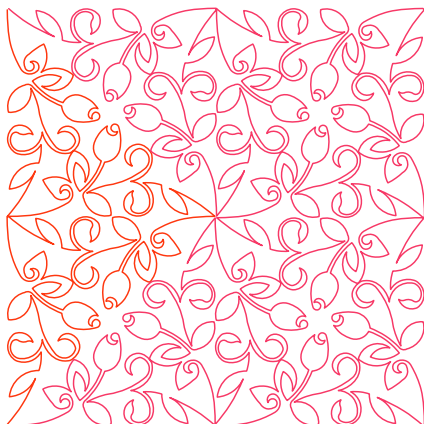
The red Rosebud design is the original. Select, right-click and choose Power Copy EE. Then follow the arrows in the left image below: click at the start point of an arrow and drag to the end point. Release the mouse. Click on the start point of the next arrow, drag to the end point and release the mouse. It helps to turn the Grid on. If you set the Grid spacing to the width of the single pattern, it is even easier.



In the example on the left I kept a distance between the design parts and used different colors so you can see the different copies. In the “real life” example (on the right) you should click exactly at the end point of one design, drag, release the mouse. Then click in the same spot and drag.

Finally connect the objects: with the Reshape tool click on the last point of the first object, hold down letter T on your keyboard (just press letter T, not Ctrl+T) and move the point a bit, then drop it on the first point of the next object. The points will snap and join. More details in Chapter 2.19.

Repeat to connect all objects in the desired sequence. See the above example on the right.



*Don't stop playing!*

*Rotate the resulting triangle 90 degrees right, then use the Magic Circle, Count 4. Make the circle dimensions smaller so that the objects touch and click on OK. Manually connect the objects and assign stitches.*

Tip: With this Power Copy EE function you can create continuous paths by clicking and dragging exactly from point to point. Manually connect the objects with the Reshape tool in the desired sequence. This method can be used to create a continuous Creative Fill - no need to “merge” the objects.





### 4.9 Meandering Anything - a Power Copy tutorial

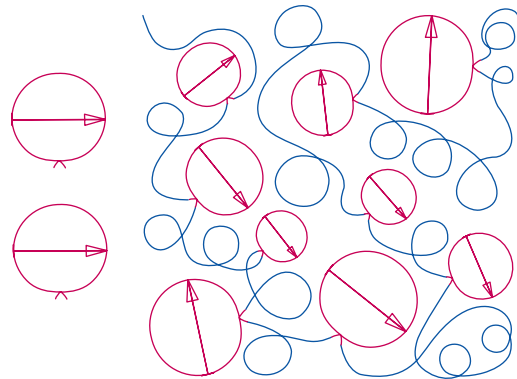
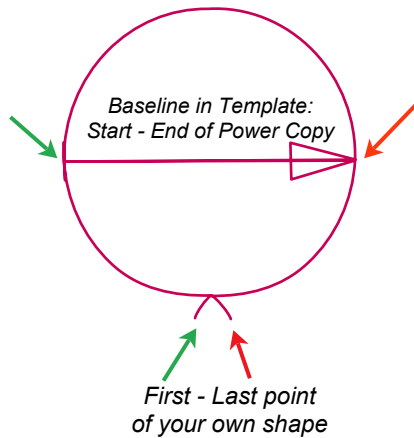


*Meandering Loops and Stars, you can probably do that freemotion with your eyes closed. But.. what if you could make a variety of meandering patterns in just a few minutes and let the computer sew it for you? Then you could really sit down with your eyes closed, dreaming about your next pattern. This is a nice exercise for the Power Copy function.*

#### Step 1



Click on the Library button in the Artwork Toolbar. Choose Folder Panto - E2E and click on "Meandering Anything". This is your base pattern, where the round objects will be replaced with your own creations and the blue curves and loops will be connected to your design elements.



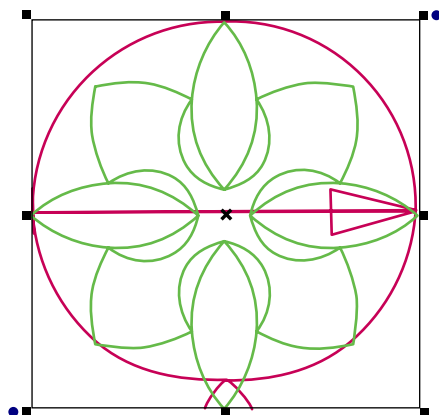
Two templates on the left to prepare two designs. Red templates to be replaced with your designs. Blue curves and loops to be tied together with your designs.

#### Step 2

The round object is the placeholder for the shapes to be inserted in the meandering loops pattern. I have prepared this template to be used with the Power Copy function.

#### Step 3

Open one of your own patterns, or take a drawing tool and draw a shape. The shape must fit in the round template, with first and last point of the design at the bottom, reshaped to fit the first and last point of the template.



#### Step 4

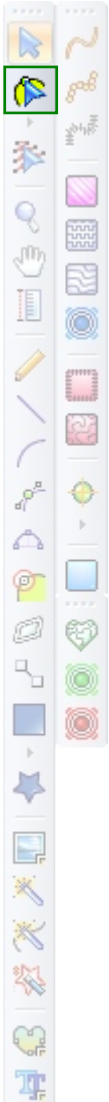
For this example click on the Library button and choose folder Block Patterns > Arcs Block.

While it's still selected, recolor to a color different from anything on the Design Page.

Move it over to the round template and resize by using the sizing handles on the selected object.



4.9 Meandering Anything - a Power Copy tutorial - Cont'd



**Step 5**

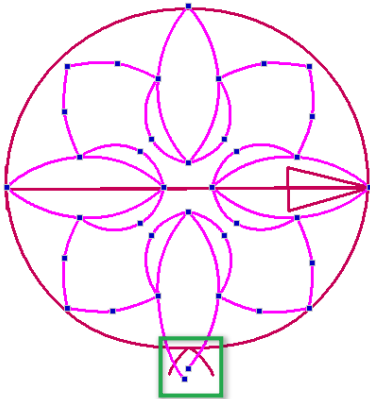
Take the Reshape Tool and right-click in the lowest point of your design and choose Split Line. Move one of the points away to open the shape.

**Step 6**

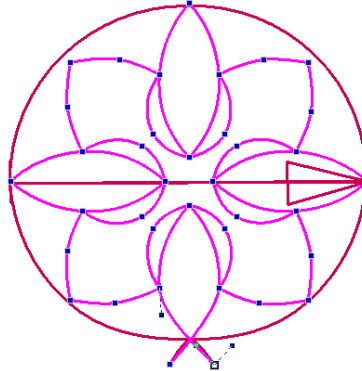
Move the green start and red end point of your drawing in place precisely over the first and last point of the round template. In this particular example you should mirror the arcs block design.

**Step 7**

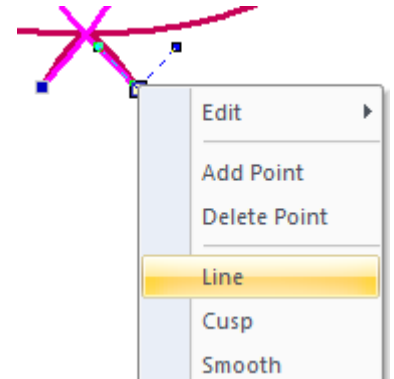
VERY IMPORTANT: change the properties of the first and last point of your shape into "Line": right-click on the first point with the Reshape tool, and choose Line. Repeat for the last point.



Step 5: Reshape tool > Split Line to open up the block pattern



Step 6: Reshape tool > move first and last point in place



Step 7: Reshape tool > change first and last point into "Line"

**Important Tip about connecting objects / properties of the points:**

Changing the properties of the first and last point of your shape into "Line", as done in Step 7, is not only important here, but has to be done every time you want to connect two or more objects together.

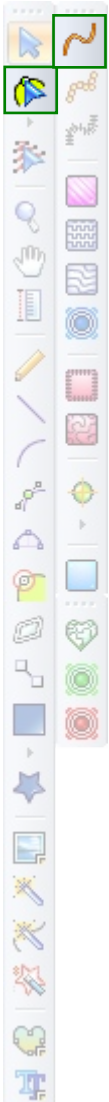
The property "Line" does not have any anchors. Therefore if two or more objects are connected, there will be no anchors getting in the way, influencing the shape of the line at the connecting point.

If you would leave the properties as they are, with anchors, then a strange little curl or curve can occur at the position of the connecting point, caused by the anchors on both sides.

Without anchors, you will have two straight points on top of each other after connecting. One of those points (and maybe even both) can be deleted.

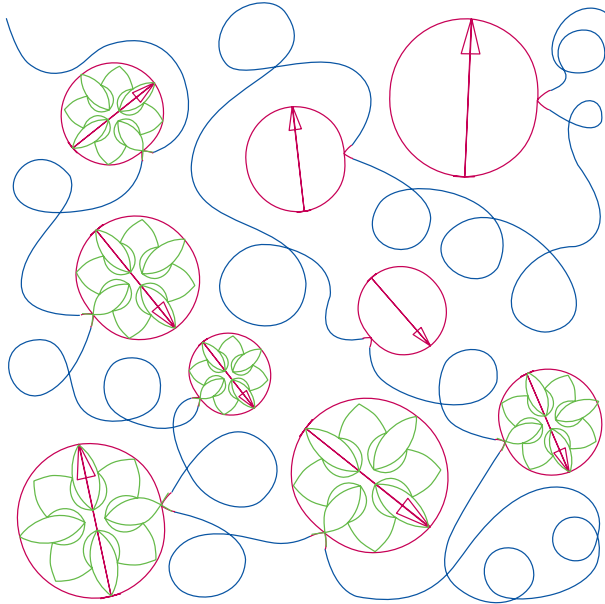


4.9 Meandering Anything - a Power Copy tutorial - Cont'd



**Step 8**

When your own pattern is ready (resized, opened-up, first and last point in place, anchors away from the first and last point), take the Select tool and select the pattern. Right-click and choose Power Copy.



Now the fun begins:

*Click and hold on the start point of the first round placeholder in the meandering pattern, drag the mouse pointer in the direction of the arrow and release the mouse button.*

Then click and hold in the first point of the next round placeholder, drag the mouse pointer to the end point, release the mouse button.

Repeat: Power Copy your own drawing over the round placeholders. Be as precise as possible.

When the last one is in place, stop Power Copying by clicking on the Select tool in the Artwork Toolbar.

**Step 9**

Delete the round placeholders: In Sequence View panel click on the line of the red placeholders to select all red objects and press Delete. The pattern used as the basis for the Power Copy can be deleted as well.

**Step 10**

Ungroup the blue curves and loops by selecting them and clicking on the little Group icon under the selection.

**Step 11**



**BEFORE ASSIGNING STITCHES, CONNECT ALL OBJECTS:** best quality is to take the Reshape tool and tie the loops to the designs in the right sequence using the T key on your keyboard (see Chapter 2.19). Or press Ctrl+A to Select All, right-click and choose Connect Objects.

**Step 12**



Take the Reshape tool and tweak the pattern: delete the double points at the connections by clicking on a point and pressing Delete. In some cases you can even delete both connecting points for a smoother pattern. When you manually tied the objects together, you don't need much reshaping in this step. To stop reshaping: take the Select tool.



**Step 13**



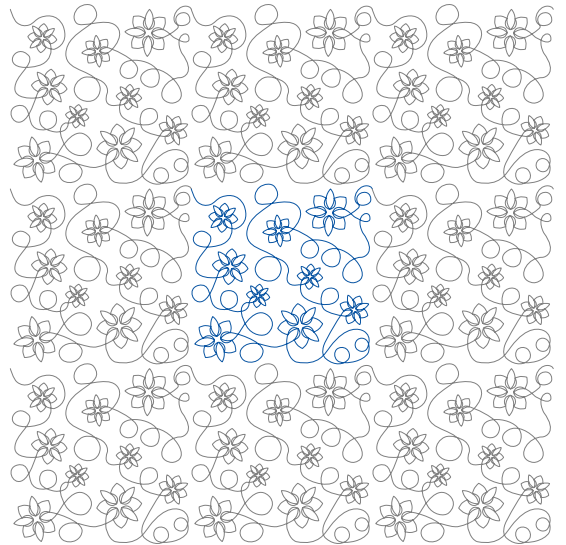
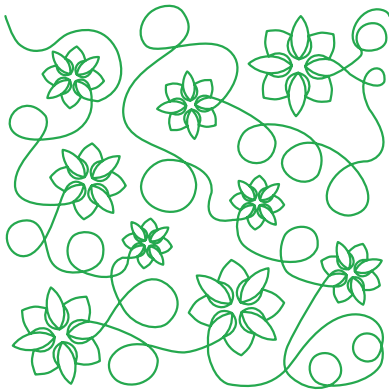
Select the pattern and apply Line sew type Running stitch. Save as .ANS and save again in the format of your machine.



4.9 Meandering Anything - a Power Copy tutorial - Cont'd

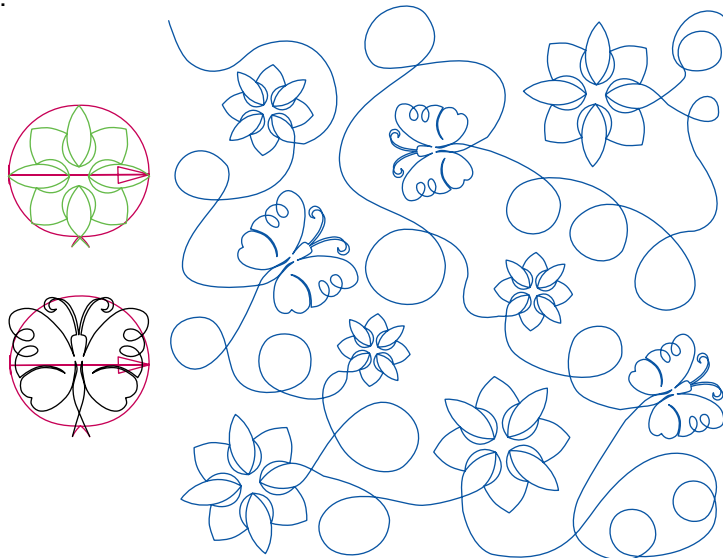
Use Interlocking Preview to check the pattern

Your meandering pattern is ready now. Turn Interlocking Preview in the View Toolbar on to see how the pattern looks when it is repeated. Tweak the design where needed.



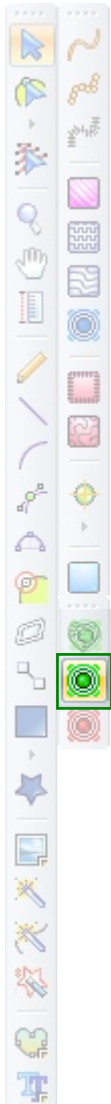
Double the fun

Prepare two different designs instead of only one. Power copy the first design over part of the red templates. Then take the Select tool to stop power copying, select the second pattern, right-click and choose Power Copy and power copy over the remaining templates. Tie the objects together in the right sequence.





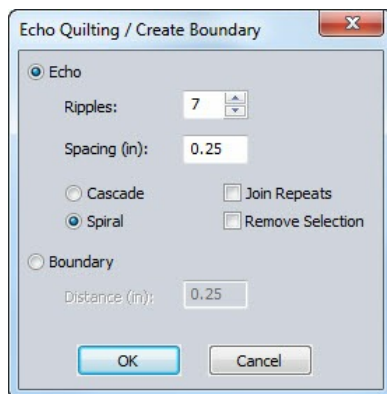
### 4.10 Echo Quilting / Create Boundary



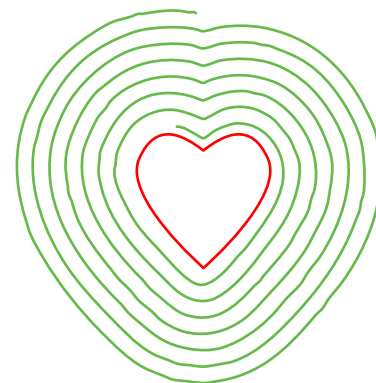
#### Echo Quilting

Echo quilting is a traditional technique, where parallel lines are sewn around an appliqué in a quilt.

The Echo quilting function in Art and Stitch will create echoes around a selection. This selection can be artwork based or stitch based and the echo function will work on one selected object or on multiple selected objects. Make the desired selection, click on the button and choose Echo, set the number of echoes (Ripples) and the spacing between them. Click on Apply.

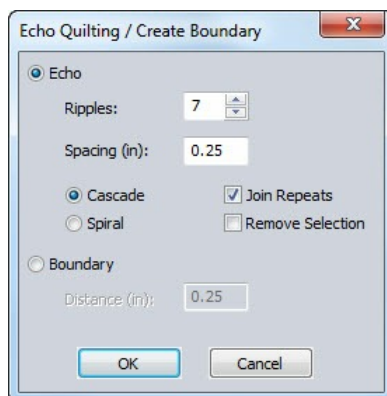


*Echo: Spiral*

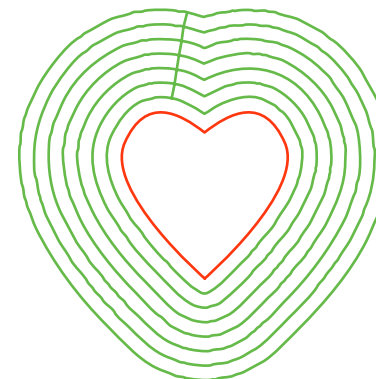


**Echo - Spiral:** The first echo will follow the original path closely and will then gradually smoothen towards the end, just like you would do in freemotion echo quilting. You will notice that the echo on one side of the original heart shape is farther away. That is because with each ripple the distance grows a little to keep going in continuous spirals around the selected shape. Therefore select the echo part and move it until it looks good. With the Reshape tool you can move the start of the echo into the original shape if you like.

**Echo - Cascade:** creates separate echo lines around the selection. By ticking the box "Join Repeats" the separate lines will be connected and the result will be a continuous path.



*Echo: Cascade and Join*



The result will be artwork. To turn it into stitches: select the echo object and click on the Line Sew button (Running stitch) to turn the echo into stitches.

Save the pattern first in the original Art and Stitch format .ANS, and then choose File > Save As and save in the format of your machine.





4.10 Echo quilting / Create Boundary - Cont'd



**Create Boundary**



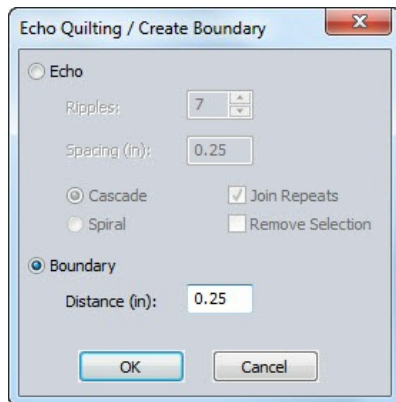
With the same button you can create an artwork outline around a selection. The selected objects can be artwork or stitch-based and you can select one or more objects.

Make the desired selection and click on the Echo/Boundary button. Choose Boundary, set the Distance. A quarter inch works fine in most cases. Click on OK. The boundary artwork shape will be the last object in Sequence View and has inherited the color of the first object in Sequence View. Select the boundary and recolor when needed.

**Tip:** The boundary should go around the selection. If it goes into open spaces between the selected objects, then “Undo” and enter a higher value for distance, higher than the distance between the selected shapes.

To use the resulting boundary line to **create embroidery patches:** set to sew last and assign a satin line sew type. In the machine: stitch the embroidery part first, then slide felt under the hoop and stitch the satin boundary. Cut closely along the boundary for a nice, clean embroidered patch.

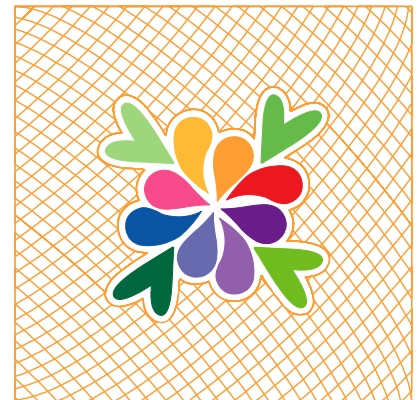
To use the boundary line **to fill around a selection:** Take the Rectangle tool and draw a square/rectangle around the design. Select the block and resize to the desired dimensions, Then select boundary and block together, right-click and choose Transform Artwork > Exclude. Assign one of the fill stitch types.



Create Boundary



For embroidery patches



To fill around



### 4.11 Geometric Echo



Geometric Echo can be used when a single artwork object is selected. A dialog opens where you can choose the number of echoes (ripples) around the selected artwork plus the distance between each.

The distance is calculated from each of the original points of the selection. For symmetrical shapes the results will be exactly what you expect from an echo. For other shapes, the results are different because of the mathematical calculation of the points. Try and see the sometimes interesting results!

Geometric echo allows negative values, so that you can use the tool to fill inside a selected shape. For Geometric echo you can also choose between Cascade and Spiral:

- Cascade results in separate objects, merged together. To turn them into separate objects, right-click on the result and choose Break Apart.
- Spiral will connect the echoes (ripples) into a continuous path.

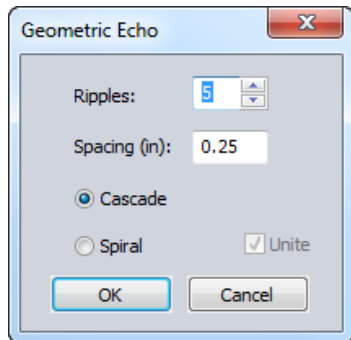
### Examples



Click on the Library button and open "Arcs block Contour only".



While the pattern is still selected click on the Geometric Echo button in the Artwork effects toolbar. The Echo Dialog window opens.



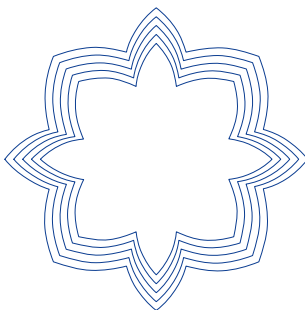
**Ripples:** Number of echo lines.

**Spacing:** Distance between the points of the selected pattern. A negative value will echo into the shape.

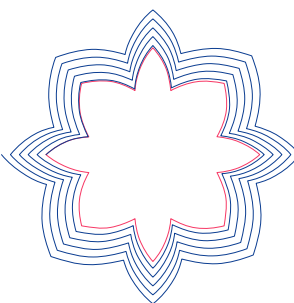
**Cascade:** Creates separate lines, not connected to each other

**Or Spiral:** Creates a continuous path around the selected pattern. Path starts close to the original selection and spirals out to the chosen distance. When finished you would delete the original shape. The red shape in the Spiral examples below is the original.

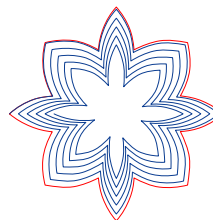
**Unite:** When two or more simple overlapping shapes are selected, checking "Unite" will create an echo around the combined shapes. Use simple shapes only to prevent freezing of the program.



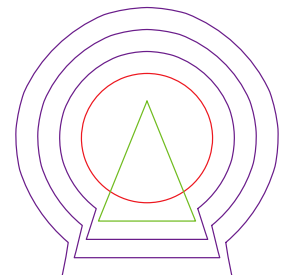
Ripples: 5  
Spacing 0.25 inch  
Cascade



Ripples: 5  
Spacing 0.25 inch  
Spiral



Ripples: 5  
Spacing **Minus** 0.25 inch  
Spiral



Two shapes (red circle, green triangle) selected together, Ripples 3, Unite, Cascade

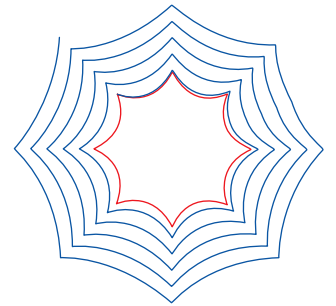
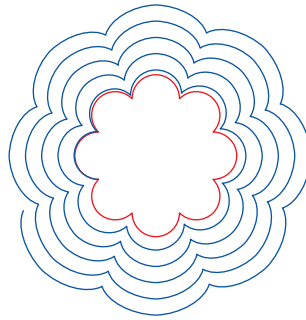
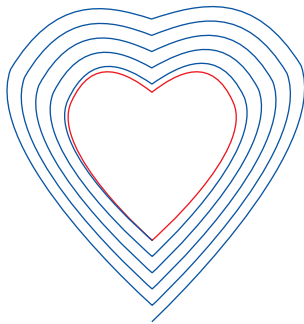


4.11 Geometric Echo - Cont'd



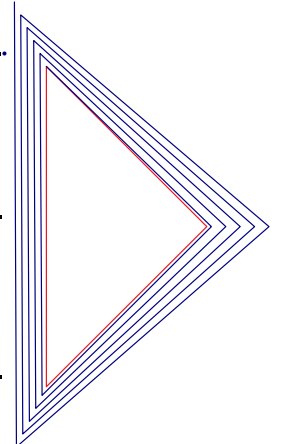
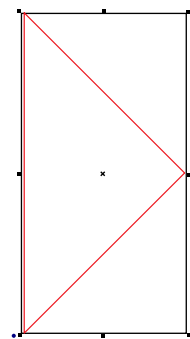
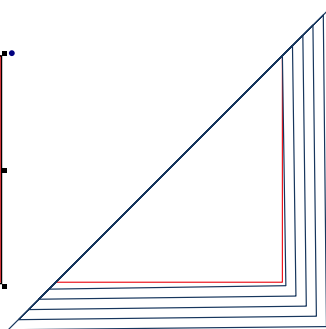
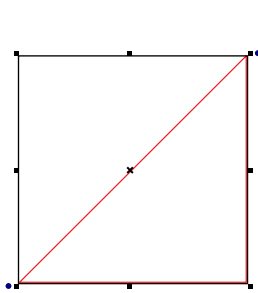
Simple Closed (symmetrical) Shapes

It is essential that you use simple closed shapes for this geometric echo function. If you would use a complex path with backtracking, the program will freeze, as it cannot fulfill your command. Symmetrical shapes work best.



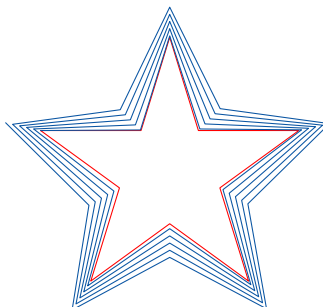
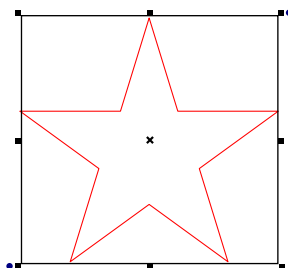
Angle between center of selection and points of the shape

Geometric Echo creates a new path, calculating the position of the new points at the exact chosen distance from the original points relative to the center of the selection. The distance between the points is exactly the same, but because of the angle from the center of the selection to the points used to create the object the distance between the lines can be different.



Triangle: nothing to the left of the center point of the selection, so no distance there between the lines.

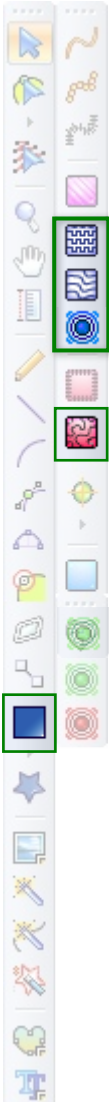
Same triangle, rotated. Now the center point can add distance between the points at all sides.



Play with the settings and experiment. You now have a choice between two different echo styles.



### 4.12 Fill around a shape (leaving the shape open)



#### How to fill around a shape

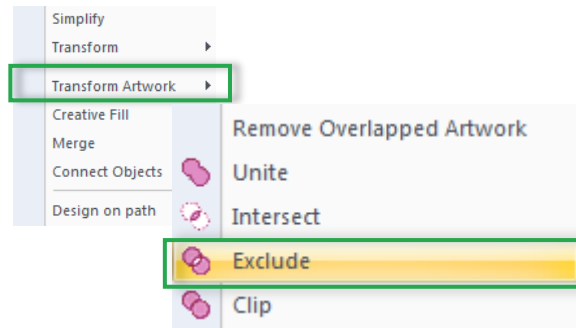
To fill a block with motifs or a hatch fill and leave a “hole” open for appliqué or an embroidered part in the quilt top: draw an outline around the region to be filled and draw another outline around the part that has to stay empty. Select both, right-click and choose Transform artwork > Exclude. Then use one of the available fills - it will fill the outer shape and leave the excluded part open.

#### Exercise

**Step 1.** For this exercise click on the Library button and from the folder Block Patterns choose “Arcs block contour only”. This Arcs block will act here as the part in the quilt that has to be left open.

**Step 2.** Click on the AutoShapes button in the Artwork Toolbar and draw a square of 8x8 inch. This will act here as the region to be filled. Select and click on the Center button to center this block.

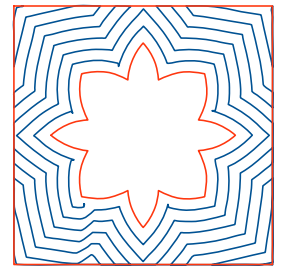
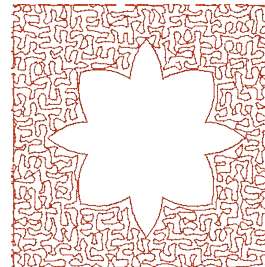
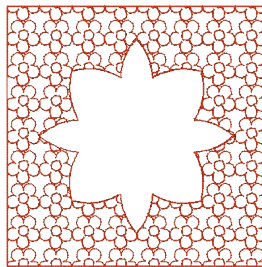
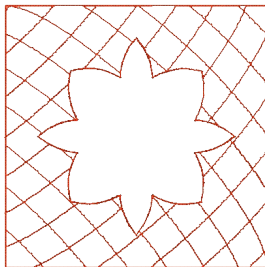
**Step 3.** Select both shapes together. Before doing anything else, click on the Copy button in the General Toolbar, start a new Design Page and click on the Paste button to paste the two selected shapes. You may need these shapes later to stitch the outlines of the filled region



**Step 4.** Go back to the original Design Page, select both shapes together, right-click and choose **Transform Artwork > Exclude**.

**Step 5.** Select this combination and choose a Fill: for example a (cross) Hatch fill, Echo Fill, a Motif pattern, or Auto Stipple: it will fill around the “excluded” shape.

**Step 6.** Depending on the chosen fill you may want an extra contour around the shape. If so, go to the extra Design Page of step 3, select and copy the shape(s) and paste it on the original Design Page. Assign a Line Sew type Run Stitch.



**Tip:** Just in case a solid jump line is crossing the “empty” shape, try resizing the pattern first (Properties Panel, tab Motif > “Pattern Size”, or tab Hatch > “Spacing”). Or choose a different pattern. You can also take the Reshape tool and change the angle of the motif. It will force the program to find a different route and will almost always remove the jump line. See Chapter 3.3.5 how to change the motif angle.





### 4.13 Create your own Motif patterns



Art and Stitch includes many Motif patterns ... and you can create your own Motifs too:

**Step 1.** Draw a pattern with one of the drawing tools (here Spiral tool: single swirl, 2 rev. Exp. 100%).

**Step 2.** Reshape to perfect the lines. Take the select tool to stop reshaping.

**Step 3.** While the pattern is **selected**, go to the Properties Panel, tab Transform and resize it to a size you will most likely use: for longarm quilting a size of 1 inch (25 mm) is nice. Un-tick the box "Maintain Aspect ratio" and make it 1 inch in both width and height. If you want to create a Motif to use in embroidery, use a size of a quarter inch, about 6 mm.

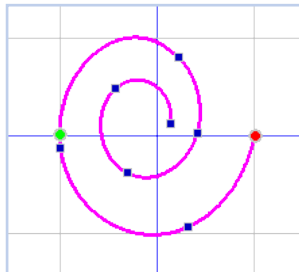


**Step 4.** While the pattern is still selected, click on the Line Sew Type button and assign a Running Stitch. Stitch length 2 mm, or perhaps smaller, depending on the complexity of the pattern.

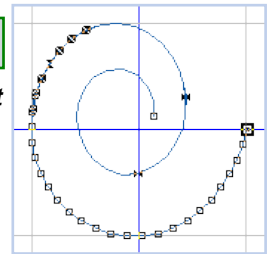


**Step 5.** Zoom in! Take the Reshape tool and move first and last stitch (green and red dot) to the left and right outer parts of the Motif - green on the left and red on the right. Be sure that they are both on the same level. Drag a guideline from the ruler at the top to help aligning precisely. In general a motif should start from the left and finish on the right. This is because the stitch engine repeats the motif along a path. The next repeat starts at the last point of the previous motif.

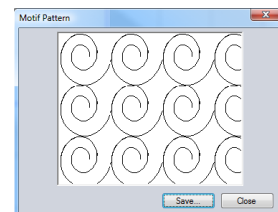
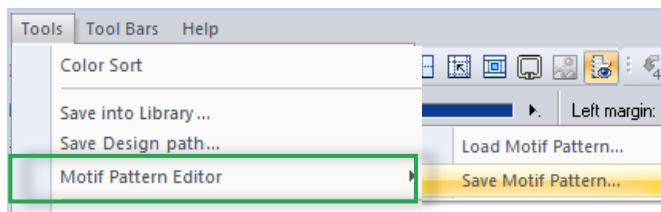
Step 5: Single swirl 1x1 inch. First (green) and last (red) stitch moved to the same level with the Reshape tool.



Step 6: Take the **Stitch Edit** tool and drag a selection marquee completely around the pattern. Then menu Tools > Motif Pattern Editor and save the Motif.



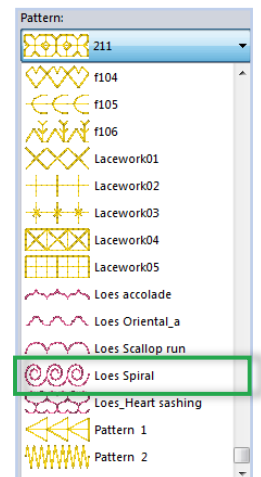
**Step 6.** Take the **Stitch Edit** tool, and drag a selection marquee around the entire Motif pattern to select it: choose menu Tools > Motif Pattern Editor > Save Motif Pattern. Give the Motif a descriptive name. Always start with your own name, so that your motifs are listed together.



**Step 7. Make a backup of your motif:** choose menu File > Save as and save the motif as .ans file in your Backup folder (e.g. My Documents \ Art and Stitch My Designs \ Backup Motif Patterns). When disaster strikes, restore the motif by opening the .ans file in the backup location and saving it as a Motif as described in step 6 above.



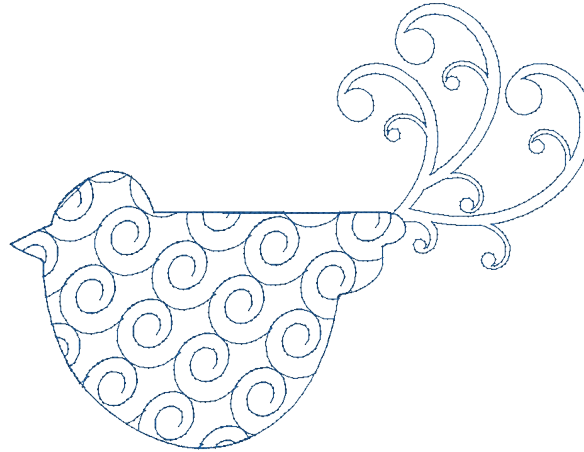
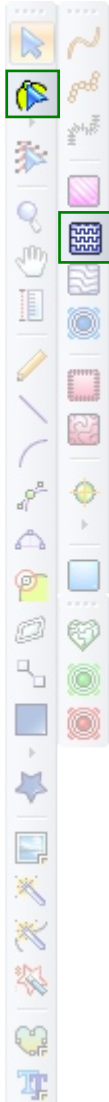
**To use your motif:** Draw a closed shape, choose Motif as Fill Sew Type. In Properties Panel > tab Fill open the Pattern drop down list. Your own motifs will be in the list in alphabetical order in a different color >>







4.13 Create your own Motif patterns - Cont'd



The Motif used in a closed shape from the Library. With the Reshape tool I changed the direction of the Motif by moving the angle line (See Chapter 3.3.5).

What's so special about Motifs?

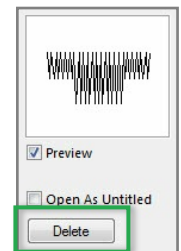
Motifs are totally new in longarm quilting. Here's why you would start using Motifs:

- Without being an artist, you can create truly artistic quilt patterns.
- When using a contrasting thread color, motifs can have effects similar to traditional Blackwork in embroidery: more stitches means more color.
- When using an "invisible" thread color or a thread color matching the quilt, motifs will create different popup effects in a quilt.
- Work with density: smaller motifs flatten a quilt more than larger open motifs.
- Motifs can be used for Sashiko style quilt effects.
- It's like stippling, but way more creative!

Deleting a Motif

When you're not so happy with a Motif pattern that you made, you can delete it. **Important:** Before you do that, try the pattern in a fill or as line sew pattern one more time and check the name of the pattern so that you are absolutely sure you are deleting the right pattern :)

To delete: Choose menu Tools > Motif Pattern Editor > Load Motif Pattern. Select the pattern to be deleted and click on the button Delete. When you restart Art and Stitch the pattern will be gone from the list of Patterns.





### 4.14 Creative Fills - Introduction



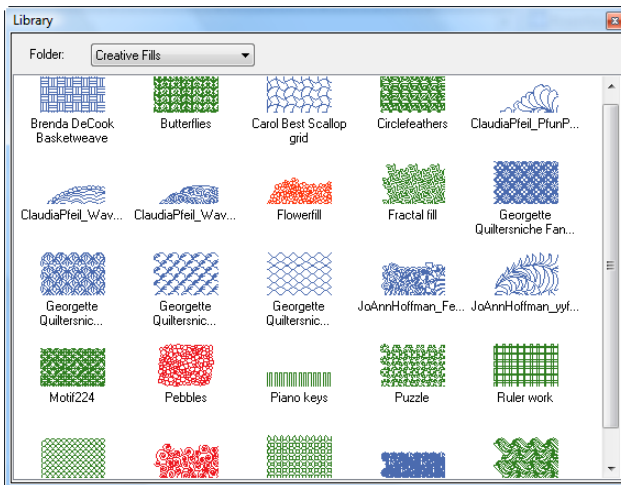
Creative Fills are large continuous line patterns, which can be used inside a shape by the function "Apply Creative Fill effect" The creative fill will be cut out and put inside the shape. You can draw anything (preferably as a continuous path) to be used as a creative fill. That way, the creative fill will be similar to a freehand background filler. The look and feel can be as creative as freemotion artists can achieve, and still be sewn with your computer guided longarm system.

### Difference between Creative Fills and Motifs - About overstitching

Motifs are repeated throughout the shape, as one continuous path, with minimal overstitching (you won't find a better path). Motifs are stitches; a creative fill is vector based artwork.

Creative fills are similar to freemotion background fillers: if the Creative fill was not drawn as a continuous path, then double-stitching cannot be prevented: the program will find it's own jump free path, just like you would do manually with the machine. Examples of such can be found in the Library > Creative Fills: Flower Fill, Pebbles and Spiral Fill. Those were made with the Power Copy function with random shapes scattered over an area. Because the shapes are touching each other, they can be merged and will sew continuously, but there will be overstitching because the program will have to find a path to link them all together. Those fills are colored Red in the Creative Fills folder.

If you draw the Creative Fill as a continuous path, then there will be no overstitching. The sewing path will go from one cut off part of the creative fill to the next part through the contour of the shape itself. Good examples of Creative fills drawn as a continuous path are Fractal Fill, Puzzle and the Wavy Hair fill. Basically the fills with a green color in the Creative Fills folder.



The green Creative Fills are continuous paths.

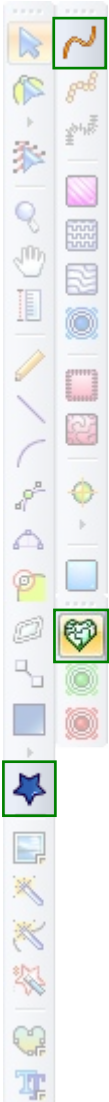
The red fills are not continuous! They will fall apart and have to be "Merged" after applying the Creative Fill effect.

The blue fills are donated to the Library by users of Art and Stitch / designers.

**Tip:** you can make creative fills which look like motifs too, for example Motif224 and CircleFeatherLoes. Advantage is that this "Motif" will be artwork and not stitch based and that you can let these artwork elements interlock / mirror / flip when you make the Creative Fill, which cannot be done when saved as a Motif.



### 4.14.1 Creative Fills - Apply Creative Fill Effect



#### Apply Creative Fill

**Rule 1:** A creative fill is one continuous artwork path.

**Rule 2:** The “masking shape” must be one closed artwork shape on top of the creative fill. (In Sequence View the Creative Fill should show first in the list and then the closed shape).

**Rule 3:** The two artwork objects must be selected together.

**Rule 4:** The creative fill can only remove parts on one side at a time.



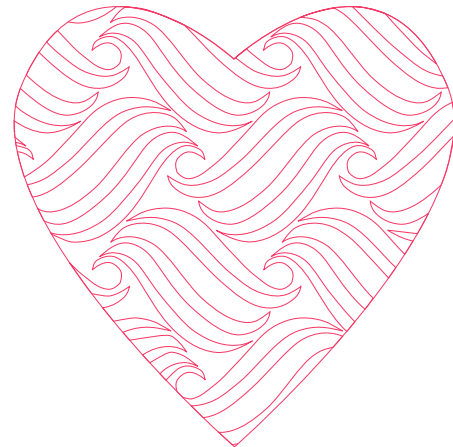
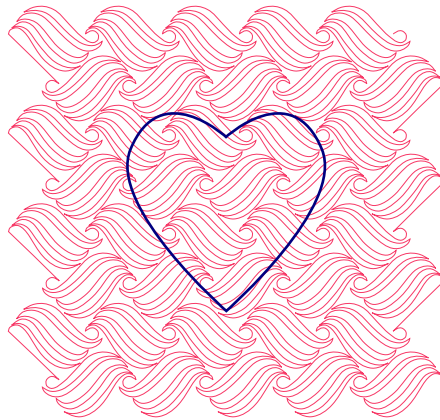
1. Click on the Library button and in folder “Creative Fills” select pattern “Wavy Hair”. This will be the fill for the final pattern.

2. Click again on the Library button. In folder “Block Patterns” select the “Heart” pattern.



3. Press Ctrl+A to Select All. Then click on the Button “Apply Creative Fill effect” in the Artwork Effects Toolbar.

In a few seconds the design is ready. The shape (in this example the heart) is now filled with the Wavy Hair pattern. All you have to do now is maybe tweak a little with the Reshape tool and then apply a running stitch.



4. Select the fill by clicking on it, then click on the button Line Sew Type - Running Stitch in the Stitch Toolbar, to turn the artwork fill into stitches.

Start the Sew simulator and see that the entire fill is sewn in one continuous path. Decide if you want the outline to be sewn as well. If so: select the contour and click on the Running Stitch button.



A jump appears. To remove it: Select the contour (NOT the fill) in Sequence View and take the Reshape tool: move the first stitch (= green dot) of the outline, as well as the last stitch (red dot) to the other side of the dashed jump line between fill and outline. NEVER change start and stop of a Creative Fill / continuous path, only of the closed contour, to remove the jump. Click on the Select Tool to de-select and update the view: your jump is gone now.



5. Select All. In Properties Panel > tab Transform choose the desired size. In this example I made it 8 x 8 inch. See also tips about size on the next page. Save the pattern as .ANS. Save again in the format of your machine and copy that file to a USB thumb drive. Sew the pattern. You will love it!



### 4.14.2 Creative Fills - Apply Creative Fill Effect - Tips about Size

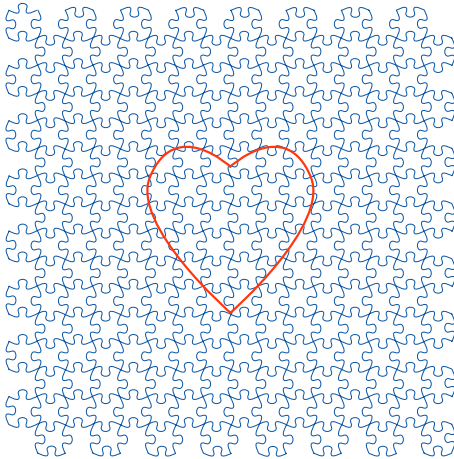
#### Size matters - Designer Tips

Before applying a Creative Fill in a shape, move the shape over the fill to **find the best fit**. Give the shape a different color to make it easier to choose where exactly it has to be cut out of the Creative Fill layer. You can also change the pen width in the Properties panel on the right and make it for example 1.0 - click on Apply.

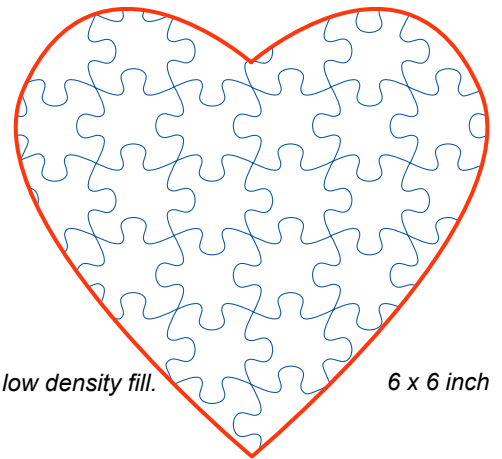
Also select and resize the shape (or the Creative Fill), **make it bigger or smaller for a better composition**. Best practice is to resize the shape to the final desired pattern size. Then adjust the size of the Creative Fill for the desired fit and density.

Think "Quilt" before applying the Creative Fill: look carefully if the fill isn't going to be too dense, lines too close together. Dense patterns will flatten a quilt more than larger, open patterns. A dense part will also make other open parts stand out more. A dense pattern means more stitches = more sewing time... time is money.

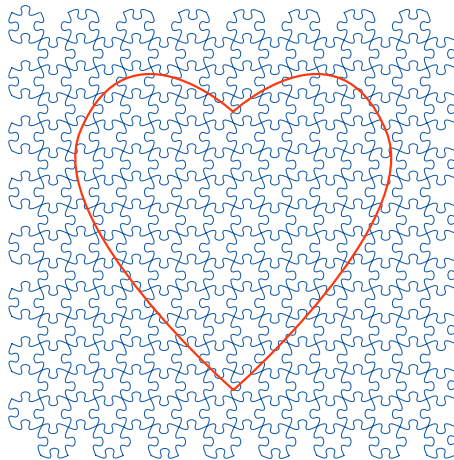
Once the Creative Fill has been applied, **you can still resize the artwork**: that will resize the design. Both hearts in this example have been resized after applying the Creative Fill effect to 6x6 inch.



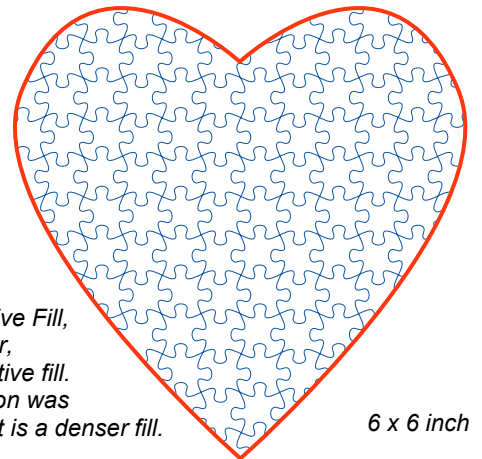
*Default sizes: result is a low density fill.*



*6 x 6 inch*



*Before applying the Creative Fill, the heart was made bigger, grabbing more of the creative fill. Afterwards, the combination was resized to 6x6 inch. Result is a denser fill.*



*6 x 6 inch*





### 4.14.3 Creative Fills - Make your own Creative Fills

#### Drawing

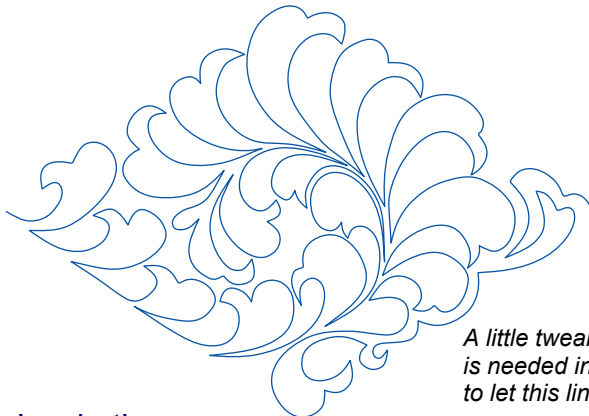
To make your own fill, take one of the vector drawing tools and draw a pattern: you could draw just a single element of a pattern and then repeat it, flip, mirror, and connect in the desired order. When ready, choose menu Tools > Save into Library and save in the folder Creative Fills.

#### Size

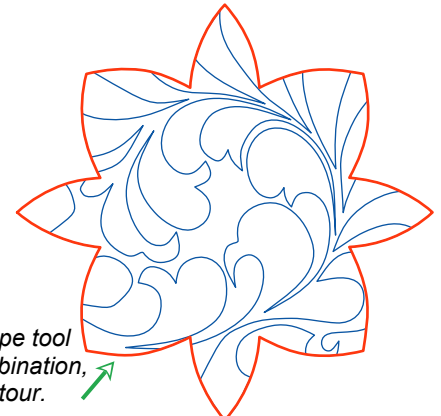
The total pattern should be a little larger than any block or shape you want to “fill” with your creation. It doesn’t have to be much larger than the usable throat space of your machine. See the background filler as a piece of decorated fabric: it must be large enough to cut out the desired shape and to move the shape over the fill to find the best fit, like “fussy cutting”.

#### Continuous Path

Basically there’s no limit in how creative you can be. If you don’t like overstitching, then be sure that the final pattern is one continuous path: you must be able to follow the entire line in one run. Claudia Pfeil’s PfunPfeiling pattern is a good example of a continuous path. When used as a Creative Fill and a Run Stitch type is applied, it will be sewn without overstitching:



*A little tweaking with the Reshape tool is needed in this particular combination, to let this line run along the contour.*



#### Inspiration

To create your own background fillers, you can open any background image to trace it. Or maybe you already have your own favorite freemotion background filler - your own “signature”: then you can either record it in your quilt system and open the recorded pattern in Art and Stitch (be sure to tick the box “Convert to outlines” when opening the pattern), tweak it and save into the Library. Or you can make a photo of a freemotion part in a quilt, open that photo via the Backdrop tool in the Artwork Toolbar and trace it with one of the drawing tools.



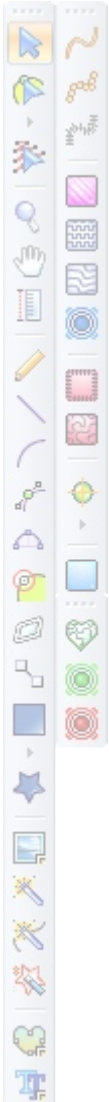
*Detail of the stitch out*

For the Creative Fill pattern “Wavy Hair” I started by tracing the logo of a shampoo, opened via the Backdrop tool. After tracing I deleted the background image and started reshaping the pattern until I liked the result. It doesn’t look like the logo anymore, but for me it still looks like hair waves, so that is where the name of the pattern comes from :) I made just one pattern element, then repeated it, duplicated the entire row and aligned. Finally put everything in the right sequence (Sequence tab in Properties panel) and connected all parts, one by one: select one part, hold down Ctrl and click on the next - right-click and choose Connect Objects. Repeat until everything is connected.





### 4.14.4 Creative Fills - Make a fill with the Power Copy function



Creative Fill “Flower Fill” (Library > Creative Fills) was made using the Power Copy function. If you want to make your own Creative Fill with Power Copy, then be sure that all objects are touching each other. Preferably at two or even more places. That way it will be easier for the program to find a continuous path, linking all objects together.

Once your total pattern is ready, large enough to be able to put any shape on top, press Ctrl+A to select all, right-click and choose **Merge**. As the path is not continuous and cannot be made continuous you cannot “Connect” the objects, so you will have to use “Merge” to let the program find its own path, backtracking / overstitching where needed.

While the pattern is still selected, choose menu Tools > Save into Library and save in the Creative Fills folder. Also choose menu File > Save as and save as a backup copy in your own folder, named “Backup My Library”

To apply your own power-copied creative fill:

Start a new Design Page and click on the Library button. Choose the fill you made. Click again on the Library button and choose a shape to be filled with your pattern (in this example Teapot from the Shapes folder). Or take one of the drawing tools and draw a shape suitable for the quilt you are working on. Select the shape and make it a different color than the fill.



Press Ctrl+A to Select All and click on the Apply Creative Fill effect button.

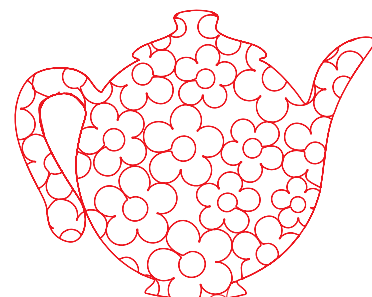
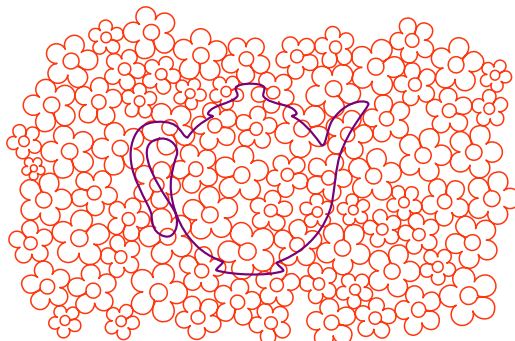
Before assigning stitches, Select All, right-click and choose Merge, as this path is not continuous. Merge will tell the program to find its own continuous path without jumps, backtracking where needed.



Then click on the Line Sew type “Run Stitch”.

Creative Fills drawn and connected as one continuous path will be sewn without overstitching, as shown in the PfunPfeiling example in the previous chapter.  
Warning: do not use Merge on continuous paths, because that would cause unnecessary overstitching.

Patterns that cannot be connected into a continuous path, as in this example made with Power Copy, have to be “merged”. When applied as a Creative Fill, the program will have to find it’s own path to link all parts together: this will cause overstitching. In the Sew Simulator you can see how the pattern will be sewn. If there’s a lot of overstitching, then you might want to use a thinner thread when using patterns with merged fills.





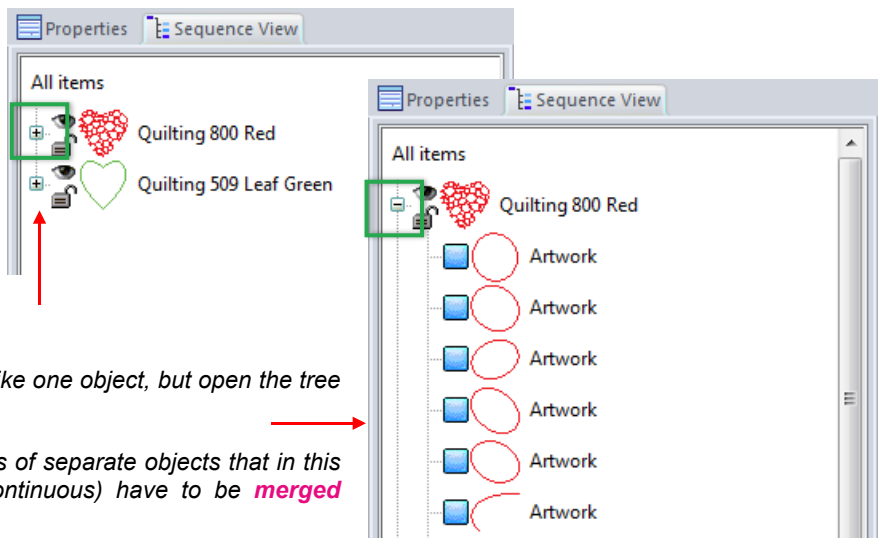
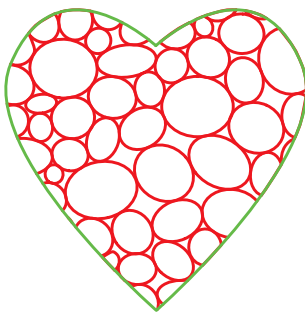
### 4.14.5 Creative Fills - Check if everything is still one continuous path

After applying a Creative Fill effect you will always have to check if the fill didn't fall apart because of the mask shape used:

Look in Sequence View and open the tree of objects by clicking on the + sign in front of the color name, or by right-clicking on "All Items" at the top of the list in Sequence View and choosing "Expand All"!

**The red colored Creative fills in the Library will definitely fall apart** as they were not continuous at all and cannot be connected. They will therefore have to be **merged**. Select the broken parts plus the mask shape together in Sequence View, right-click and choose Merge.

**If a shape was continuous but still falls apart** (the mask shape may have sliced up the connection between the first and last point of the continuous shape) you can **connect** the broken parts: click on the name of the color in Sequence View to select all of the broken parts, right-click and choose Connect Objects.



Here the red Pebbles fill looks like one object, but open the tree by clicking on the plus sign...

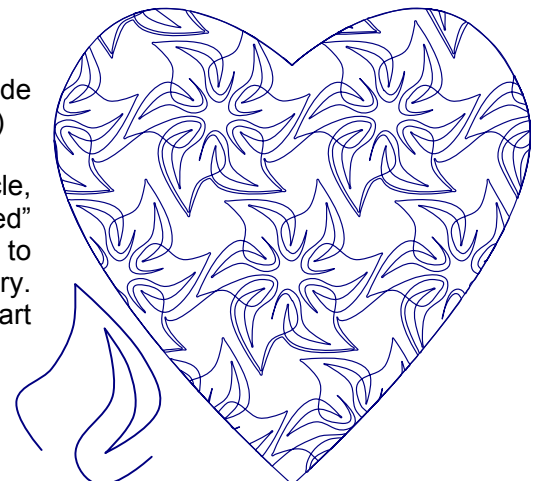
... and you will see lots and lots of separate objects that in this case (original fill was NOT continuous) have to be **merged** before assigning stitches.

### Be creative!

Anything will do as a start of a pattern. This design is made by Theo with his special "Design by Accident" method :)

Theo started drawing just one petal, used the Magic Circle, drew a connecting line, connected the "Magic Circled" objects, repeated the pattern, repeated rows, connected to turn the pattern into one path and saved into his Library. Then applied this pattern as a Creative Fill effect in a heart shape.

The result will sew as one continuous line without over stitching.



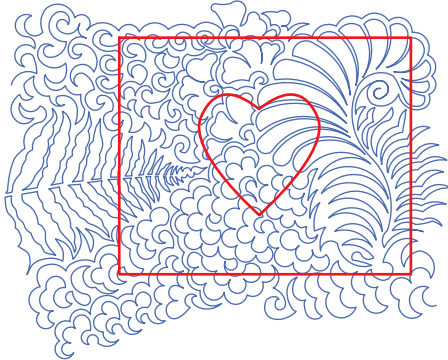


### 4.14.6 Creative Fills - How to use a Creative Fill around a shape



The Creative Fill function will remove all parts outside the contour of the “masking” shape on top of the fill. To fill around a shape and leave that inner shape open, Rule 4 is important:

**Rule:4:** The creative fill can only remove parts on one side at a time.



In this example you can see that to use a Creative Fill around the heart, the fill would have to be removed on 2 sides: inside the heart and outside the rectangle.

As the Creative Fill can only do one side at a time, we have to divide the process into 2 steps:

- Remove the parts outside the outer boundary first,
- Remove the inner shape.

#### Step 1 - The outer boundary

- Open the Creative Fill of your choice in the Library.
- Draw the boundary shape (the outline of the block in the quilt). In this example a rectangle.
- Draw the inner shape that has to be left open. In this example a heart from the Library. Move in place on the Creative Fill.

Note: for your own designs make both shapes the desired size, matching the size of the actual block and appliqué of the quilt.

- In Sequence View , right-click on “All Items” and choose “Expand all”.
- Select the creative fill, hold down Ctrl and select the outer boundary too (in this case the rectangle), do NOT include the inner shape in the selection!
- Click on the Creative Fill button. This will remove the parts outside the rectangle.
- Select this creative fill and in Properties Panel, tab Transform resize to 99% .



Now this fill will fit inside the boundary shape. Fitting inside is the important trick that makes this technique work: in the next step the fill will only be removed in the inner shape, as there is nothing outside the boundary anymore to be removed.



*The creative fill is now a little bit smaller than the outer boundary, ready for the next step*



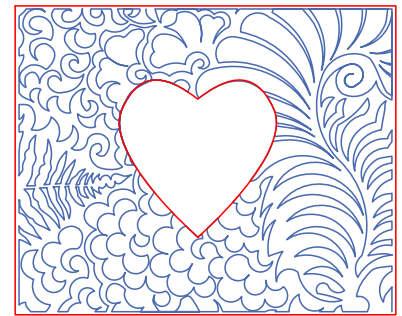
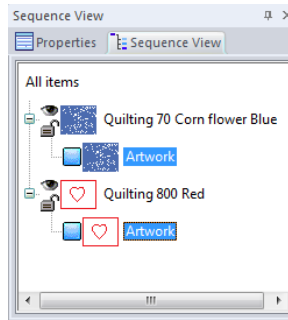
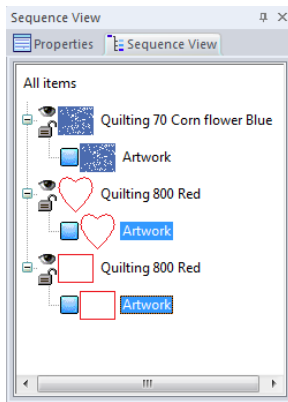
4.14.6 Creative Fills - How to use a Creative Fill around a shape - Cont'd



Step 2 - The inner shape

- In Sequence View right-click on All Items > Expand all.
- Select the inner shape that has to be left open, hold down Ctrl and click on the outer boundary to include it in the selection. Right-click and choose Transform Artwork > Exclude.
- In Sequence View move this merged shape down so that it is on top of your cut-out Creative Fill.
- Select both Creative Fill and Boundary/Inner shape together and click on the Creative Fill button.

Result: a creative fill surrounding an open area (for example appliqué or embroidery) in your quilt.

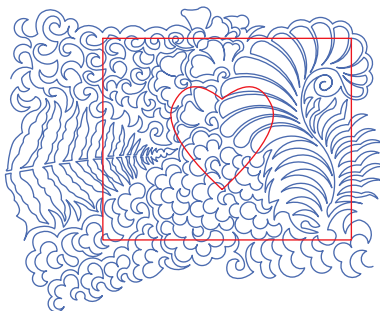


This result is artwork based. It is a continuous path. Take the Reshape tool and fine tune the lines where needed.



To turn into stitches, assign a Running Stitch Line sew type for this path. Check the design in the Sew Simulator.

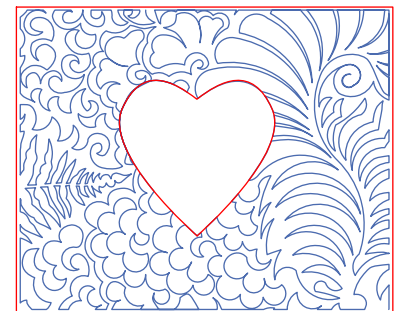
Recap of the 2-step process



Creative Fill, outer boundary and inner shape in place



Select Fill + outer boundary only and apply Creative Fill effect. Resize the fill 99%



Select Inner shape and outer boundary together > Exclude. Then select all together and apply Creative Fill effect

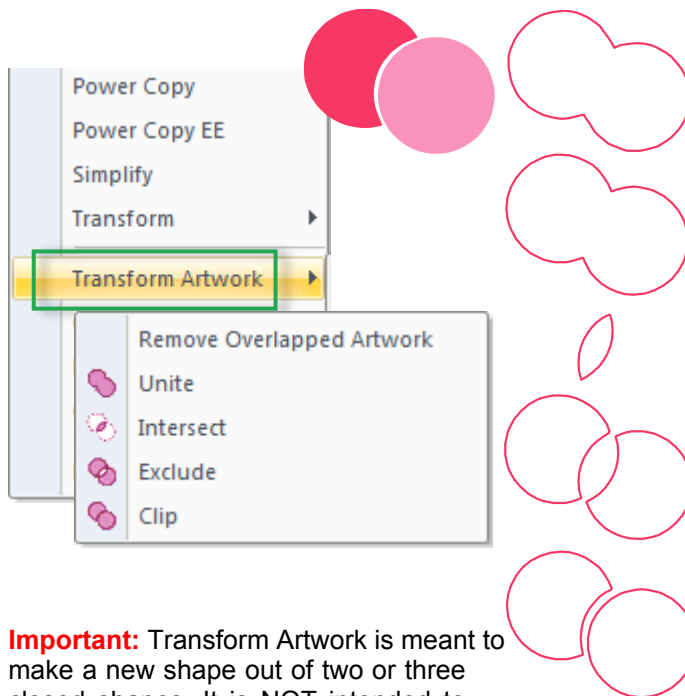




### 4.15 Transform Artwork: Remove Overlap, Unite, Intersect, Exclude, Clip

**Transform Artwork** is a powerful function to create surprising design elements by combining **closed shapes**.

To learn what the various options do, draw one circle. Select the circle and press Ctrl+D to duplicate. Move the duplicate a little so that it overlaps the original a little bit. Then select both circles together, right-click and choose Transform Artwork. Choose one of the options. Repeat until you have seen the effect of all available options.



**Remove Overlapped Artwork:**  
For filled objects only. Two different color **fills**: takes the underlying overlap away (same as Clip). Same color **fills**: same as Unite.

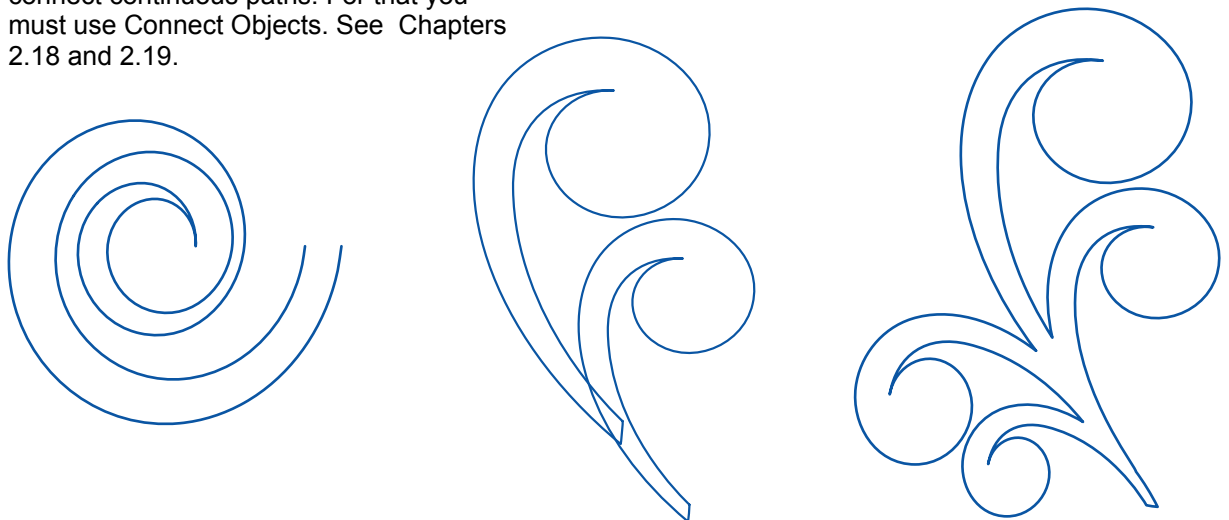
**Unite:**  
Will join selected artwork into one object, removing all overlaps.

**Intersect:**  
Takes away everything outside the overlapping parts of selected artwork.

**Exclude:**  
Will delete overlapping parts and keep the remaining areas as separate objects. Move one of the objects to see the result. Also used to fill around a shape, leaving the shape open.

**Clip:**  
Clips the overlapping part of the first object. Move one of the objects to see the result.

**Important:** Transform Artwork is meant to make a new shape out of two or three closed shapes. It is NOT intended to connect continuous paths. For that you must use Connect Objects. See Chapters 2.18 and 2.19.



Double swirl, sliced and reshaped, duplicated, selected together, right-click > Transform Artwork > "Unite". Duplicate again, rotate a bit and "Unite" again. Playtime!

This is a quick way to create new vector objects. Besides creating interesting artwork, this function is also handy to create an outline around multiple objects (for embroidery digitizing) and to turn a line of text into one continuous object (for quilt labels).

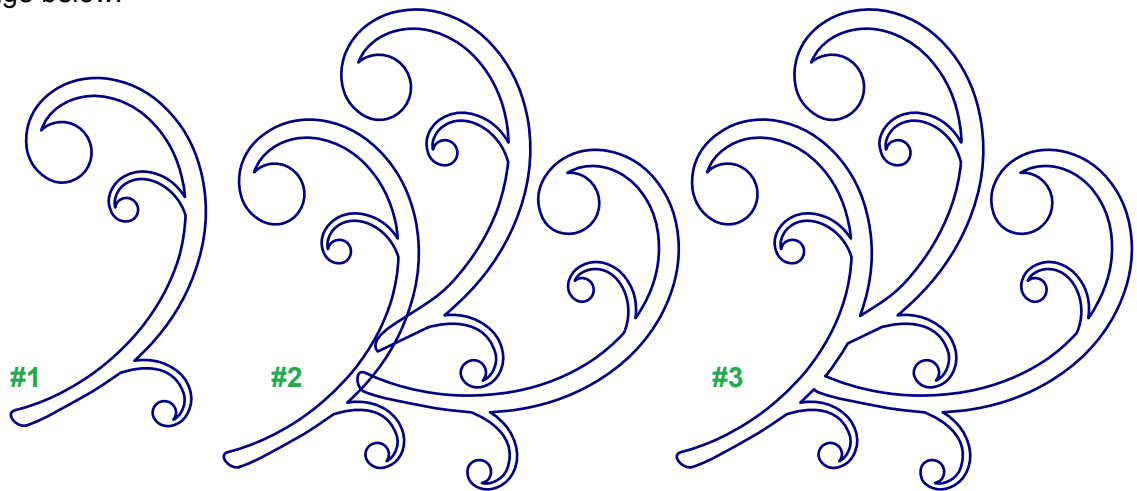




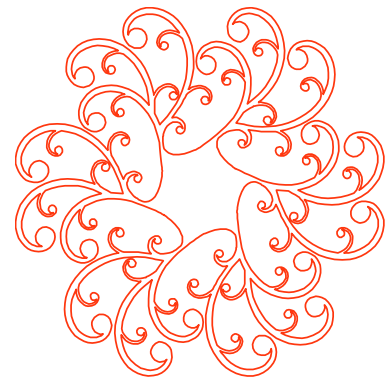
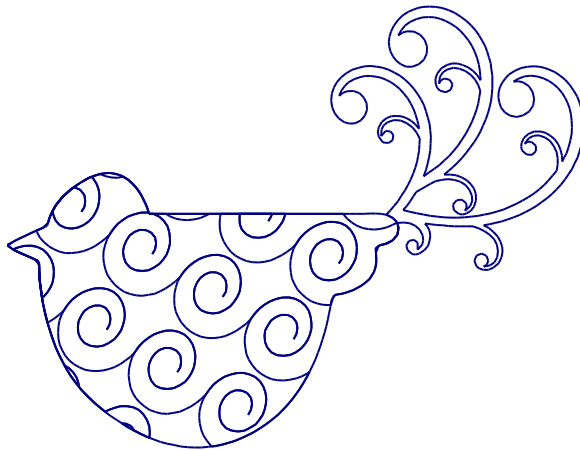
4.15 Transform Artwork: Remove Overlap, Unite, Intersect, Exclude, Clip - Cont'd

Playtime

I made 1 swirl (2 rev.) with the spiral tool. I cut away part of the line ("split line") to create a keynote type spiral, reshaped. Duplicated and resized. Duplicated again and mirrored. Moved until I liked the composition, then selected, right-clicked and united via Transform Artwork. Result is #1 in the image below.



I duplicated the base shape #1, moved the three objects around and made combination #2. Then selected the three objects together, right-clicked and chose Transform Artwork > Unite, resulting in #3. This is playtime and an easy way to make very creative combinations.



The united swirls and Magic Circle function

Bird:

Library > Shapes > Bird1.

Filled with a self made Motif "Spiral".

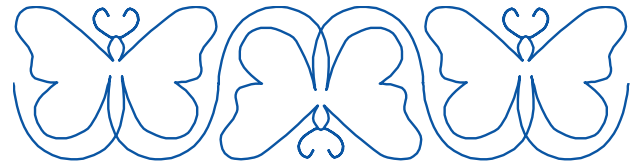
Copied and pasted and Running stitch applied to the outline, to create a contour around the bird.

Tail: united element described above. With the reshape tool I split both lines at the places where it touches the bird. Deleted the small end parts.

Finally I changed the sewing order and repositioned the first (green dot) and last (red dot) stitches of the 3 objects (the filled bird, running stitch outline and running stitch tail), so that it stitches as a continuous path.

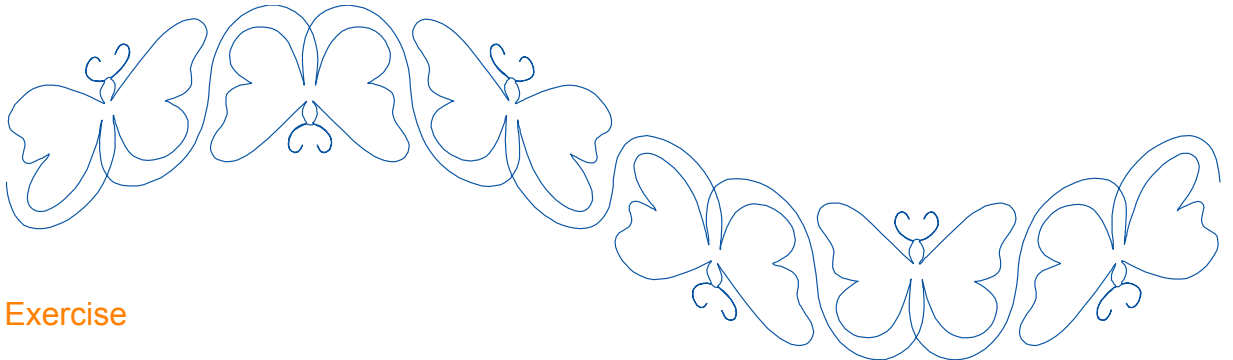


### 4.16 Transform (Envelope shapes)



#### Transform shapes

With the Transform function (for artwork only, not available on stitch objects) you can achieve special effects, and create curvy borders on the basis of a repeatable pattern.

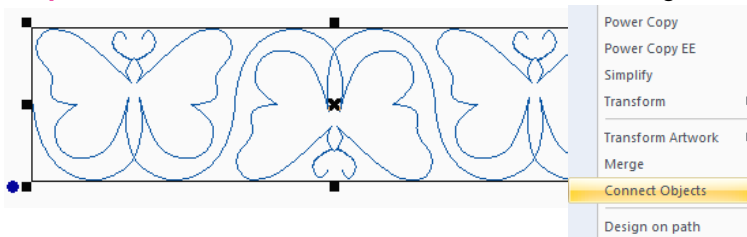


#### Exercise

**Step 1.** Click on the Library tool in the Artwork Toolbar, choose folder Panto - E2E and click on Butterfly1.

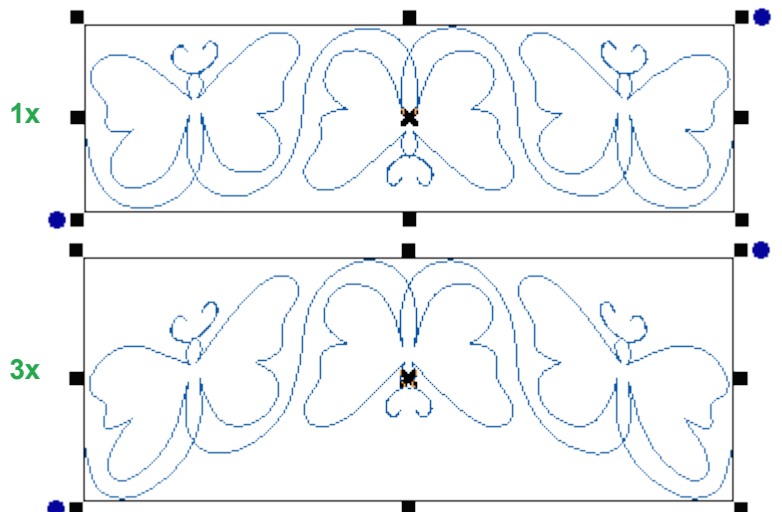
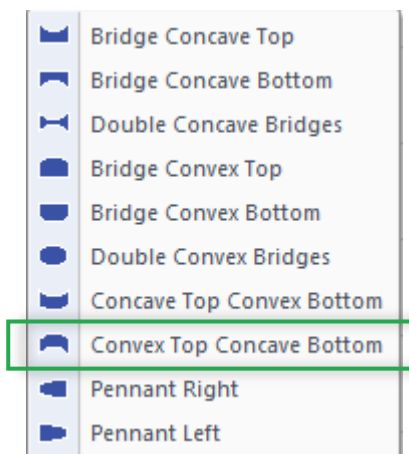
**Step 2.** Click on the Repeat button in the Modify Toolbar. Set Numbers across to 3. Number down to 1. Put a checkmark in the Options box "Flip every other vertically". Click on OK.

**Step 3.** While the three butterflies are still selected, right-click and choose "Connect Objects".



**Step 4.** With the connected objects selected, right-click again, click on the line "Transform". From the 10 available transform shapes choose Convex Top Concave Bottom for this example. It will curve the selected shape a little up. The transformation is very subtle and in this case, you can repeat the same transform shape two more times.

Transform > Convex Top:





4.16 Transform (Envelope Shapes) - Cont'd

**Step 5.** With the curved combination selected, press Ctrl+D to duplicate. Move the duplicate over to the right and click on the Flip Vertical button in the Modify Toolbar.

**Step 6.** Align both copies: last point of the original should touch first point of the duplicate.

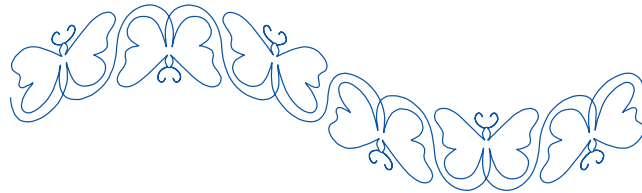
**Step 7.** Select all, right-click and choose Connect Objects. Result is a repeatable border pattern.



By using the Repeat function you can see the result when repeated multiple times.



**Step 8.** Click on the Line Sew Type at the top of the Stitch Toolbar to apply a Run stitch. Save in the Art and Stitch .ANS format and then choose File > Save as and choose the format of your longarm or embroidery machine. Copy the machine file to a USB memory stick, insert in your machine, load the pattern and sew.



*The result of this exercise is repeatable*





### 4.17 Special Effect: Distortion (Zigzag, Wave, Twirl, Pinch, Spherize)

#### Create special effects with the Distortion function

To access the Distortion function: select a stitch-based object, right-click and choose Distortion.

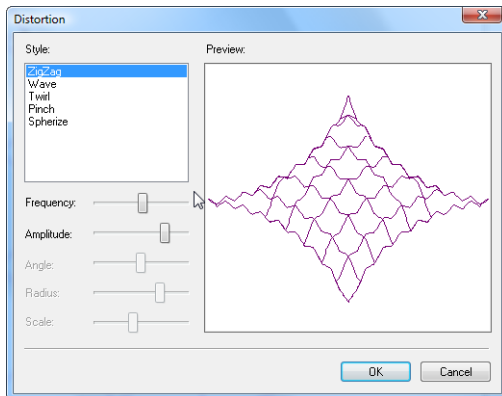
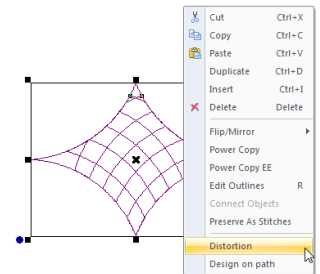
**Rule # 1:** This Distortion function works on stitch-based patterns only, not on Artwork.

**Rule # 2:** After applying the effect, you can use Magic Square, Magic Circle and Repeat if you like, but you cannot reshape, connect, or close anymore (although, there is a workaround. See tips at the end of the next page).

**Rule # 3:** All lines of the original pattern will sew, even if they seem to disappear by the effect.

#### Example 1: Zigzag effect and Wave effect

For this example open the Library, folder Judy Allen Feathers, “Curved Cross Hatch element”. Assign a Running stitch. Right-click on the pattern and choose Distortion. The following dialog window opens. Click on the line “Zigzag” or “Wave” (difference is straight or curvy lines):



For the Zigzag and Wave effect you have the following options:

**Frequency:** the number of zigzags or waves.

**Amplitude:** the “depth” of the zigzag or wave effect.

Use the slider bars to play with the settings. When you are satisfied with the result, click on OK.

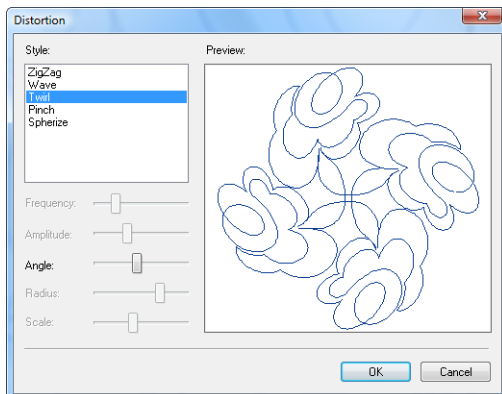


Another example of Distortion > Zigzag

#### Example 2: Twirl

For this example open the Library, folder Block Patterns, “Anemone Block”. Assign a Running stitch. Right-click on the pattern and choose Distortion.

The following dialog window opens. Click on the line “Twirl”:



The Twirl effect gradually rotates the pattern. It rotates more on the outside than on the inside. You can control the effect with the slider bar for **Angle**.

Use the slider bar to play with the settings. As you can see the effect for a rectangular shape, such as the text here, is totally different. Play!

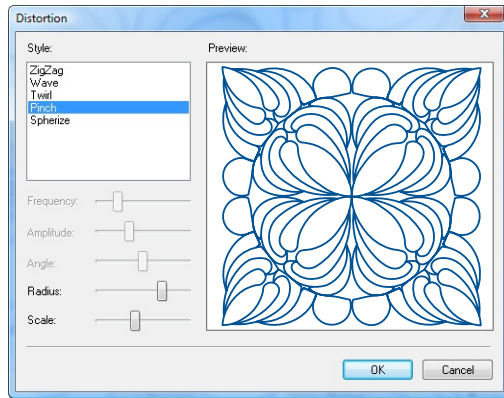
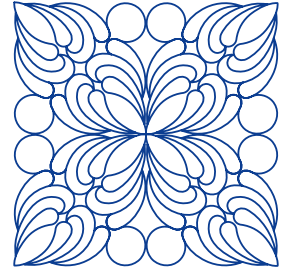




4.17 Special Effect: Distortion (Zigzag, Wave, Twirl, Pinch, Spherize) - Cont'd

Example 3: Pinch

For this example open the Library, Folder Block Patterns, "Doodle by Theo Result". Assign a Running stitch. Right-click on the pattern and choose Distortion. The following dialog window opens. Click on the line "Pinch":



For the Pinch effect you have the following options:

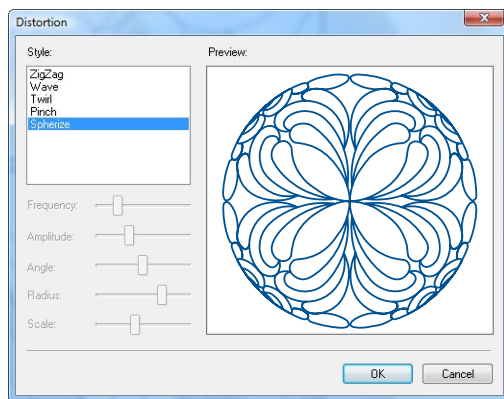
**Radius:** Defines how much of the center is affected.

**Scale:** Defines the "poof" effect.

Use the slider bars to play with the settings. When you are satisfied with the result, click on OK.

Example 4: Spherize

For this example use the same "Doodle by Theo Result". Assign a Running stitch. Right-click on the pattern and choose Distortion. The following dialog window opens. Click on the line "Spherize":



The Spherize effect doesn't have any controls. The pattern will be round and will have a "poof" effect.

A Spherized pattern can be used as a nice center medaillon.

Tips:

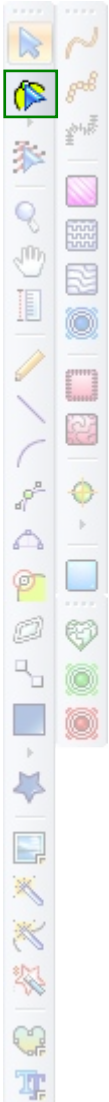
A quick way to undo the Distortion effect is to resize. Then try a different effect.

To turn a Distorted pattern into artwork use this workaround: save as .QLI. Then re-open that QLI-file with the box "Convert to Outlines" in the File Open dialog window ticked on. Select the pattern, click on the button Back to Artwork. Save under a different name. Now you can reshape, connect with other objects etc.





### 4.18 Free Distort: Squeeze a pattern into a not-so-perfectly pieced block



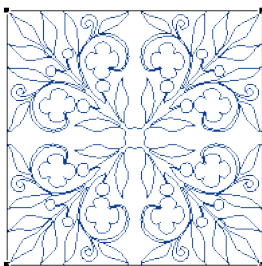
Your patterns can be so nice and perfect, but still... they must fit in a block on the actual quilt. Now what if the piecing wasn't done so perfectly? Many quilt systems allow you to put in boundaries to let the pattern fit in. But if your quilt system doesn't have that option, then the Free Distort function in Art and Stitch comes in very handy!



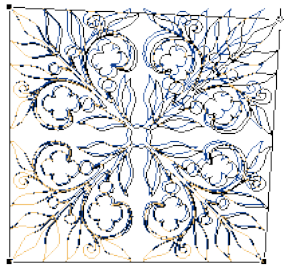
- Select a pattern and press letter D on your keyboard (not Ctr+D, just the letter D). Small corner handles appear around the selection.
- Grab any of the handles and move in any direction to distort the pattern.
- Press Enter to apply.
- To finish distorting take the Select tool (or press letter Q for Quick Select).

It's a good idea to save the distorted pattern under a different name, so that you still have the original version.

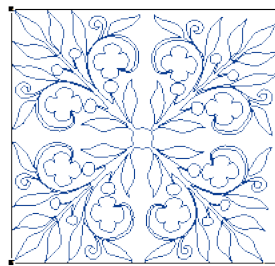
The free distort function works on vector artwork as well as on stitch-based patterns.



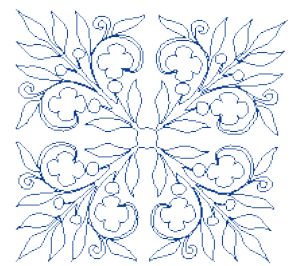
1. Select and press D



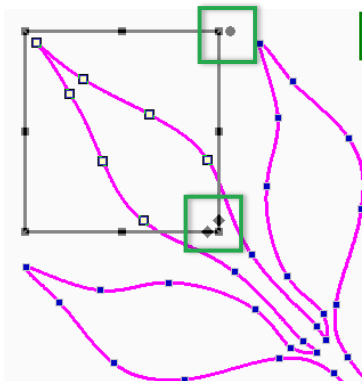
2. Grab a corner and drag



3. Press Enter to apply



4. Press Q (Select) to finish



Still need more detailed tweaking after this Free Distort? Take the Reshape tool, click on the pattern and then drag around a part to select multiple points: click and hold one of the points of the selection and move the selected points all at once to a better position.

\* Or use the control handles on the sides to squeeze the selected points together.

\* You can rotate the selected points using the round Rotate control in the upper right corner of the selection marquee.

\* With the little diamond shaped controls in the lower right corner of the marquee you can skew the selection.

Be sure to give the program ample time to complete the action.

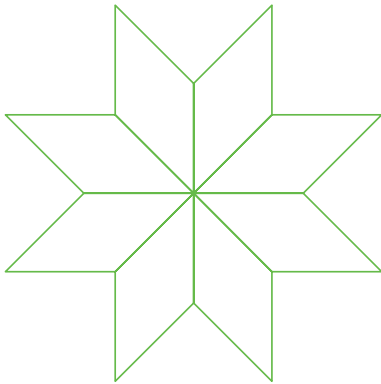
**Tip:** to know how much distortion is needed to make the pattern fit the crooked block, make a photo of the block in the quilt and open the photo as a backdrop.

A detailed description how to take a photo of a quilt block and how to get it in Art and Stitch in the true size can be found in Part 2, Chapter 2.5.12.

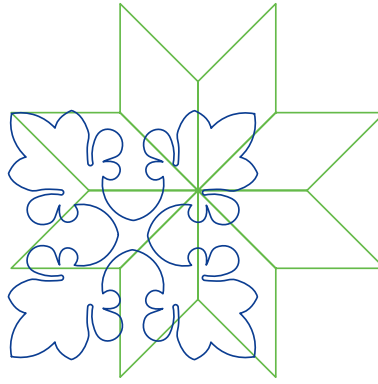


### 4.19 Free Distort: Turn a square pattern into a "lone star" diamond

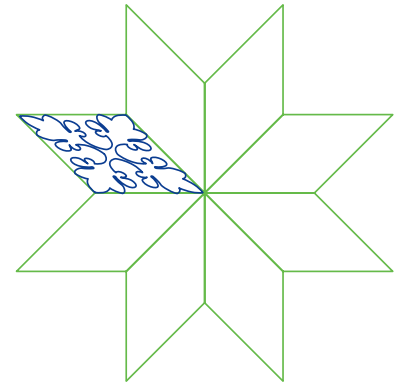
The free distort function is great to tweak designs as explained in the previous chapter, but it is also very helpful to skew square patterns into a 45 degree diamond pattern, for example to fit a Lone Star block. Here are some ideas as inspiration.



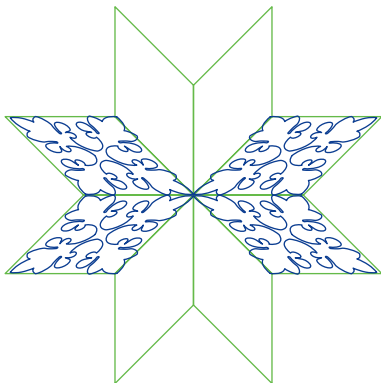
Open the Lonestar template in the Library (folder Layout templates)



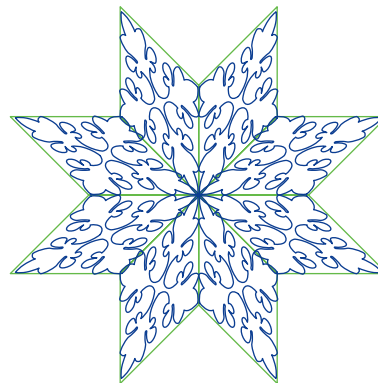
Open a block pattern in the Library (here "Easy Block") and move it into left template corner



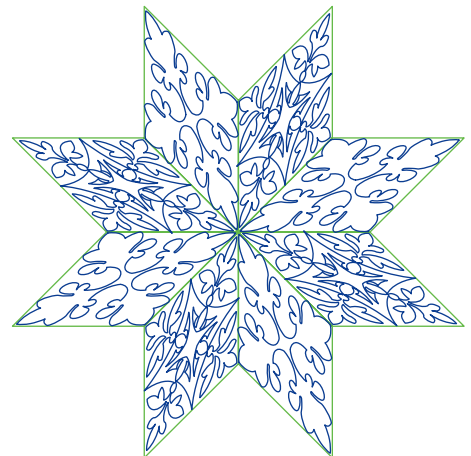
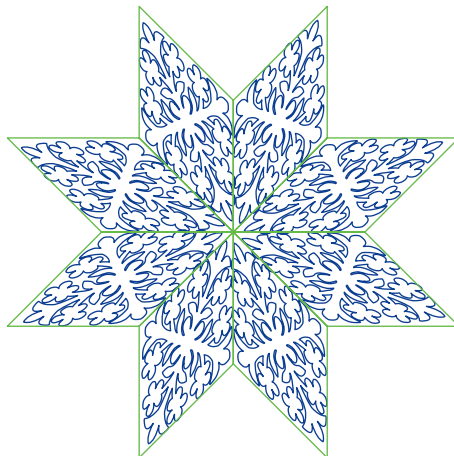
Select the block, press letter D and move the tiny handles into the template corners. Press Enter. Split lower right corner of block with Reshape tool.



Select the distorted block and use the Magic Square tool. Click OK.



Group the 4 blocks, select, copy, paste and rotate 90 degrees. Finally: right-click on the Design Page and Resequence. Connect the blocks, delete the template.





### 4.20 How to create and print Pantos (Make repeatable - Repeat - Resize - Print - PDF)



When you have a computer guided longarm machine, your system can create repeats for you and you can open a single pattern at any size. This tutorial is for pattern designers who want to offer their design in all quilt formats, including a printable PDF, and for quilters who don't have a computer guided longarm system and want to use paper pantos.

#### Step 1



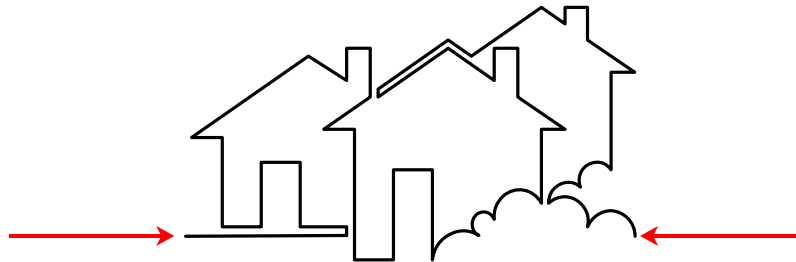
Click on the Library button in the Artwork Toolbar and choose folder Panto - E2E. Click on the pattern "Houses" to open it.

#### Step 2

While the pattern is selected, set the desired height for the panto / E2E pattern: In the Properties Panel > Tab Transform enter a Height value - in this example 4.5 inch - and click on Apply.

#### Step 3

In this example the first and last stitch are already on the same level, making the pattern repeatable, so you don't have to do anything here in this exercise. For your own patterns, see tip below.



For Pantos: first and last point must be on the same level. The entire pattern must be a visible continuous path - no guessing where to go.

#### Tip: About backtracking and How to make a pattern repeatable

First be sure that for a panto pattern the path is continuous without any backtracking. You don't want backtracking in paper pantos: it is extremely hard to follow with the laser light, you would get stuck on backtracking parts as you cannot see where to go next!

If backtracking is really needed in your panto, add arrows showing the direction. An arrow shape is included in the Library, folder Panto - E2E. Open the arrow, rotate and let it point into the right direction.

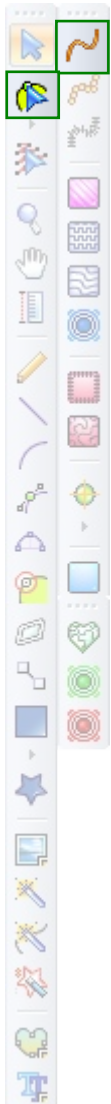
To make the pattern repeatable, set horizontal and vertical grid dimensions to a smaller value. Select the pattern and move it so that first and last stitch are on the same level. Then turn Snap to Grid on, take the Reshape tool and let the first point snap to the nearest grid point. Repeat for the last point. Turn Snap to Grid off.

#### Step 4

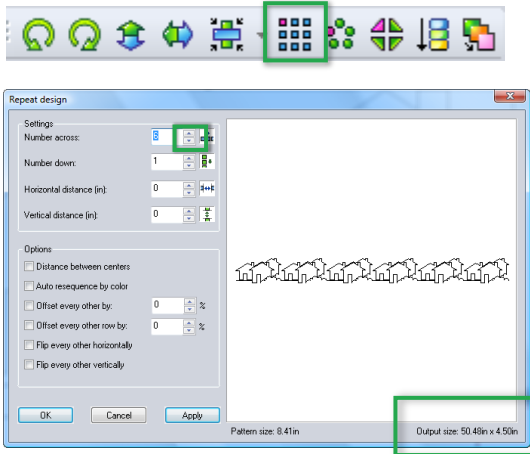
Measure the width of the quilt on which you want to use the panto. In this example a lap quilt of 50 inch. Make a note of the measurement (for example in the Notes section in the Properties Panel).



4.20 How to create and print Pantos (Make repeatable - Repeat - Resize - Print - PDF) - Cont'd



**Step 5**



Select the pattern and click on the Repeat button in the Modify Toolbar.

Change the setting for “Number Down” to 1. Click on the little arrow-up button, next to the value “Number Across” to create repeats.

In the lower right corner keep an eye on the Output Size. It will probably not be the exact size of your quilt. Use as many repeats as needed to reach the closest output size.

In this case, 6 repeats will be 50.48 inch. This is close to the desired width of 50 inch for our lapquilt. Click on OK.

**Step 6**

While the pattern is selected, resize it to the size needed for the quilt (50 inch wide): open the Transform Tab in the Properties Panel.

Currently the repeated pattern is 50.48 wide and 4.5 high. In this case you can un-tick the box “Maintain aspect ratio”, enter 50 in the box for Width and click on Apply. The pattern will still have a height of 4.5. The distortion (caused by not maintaining the aspect ratio) will be minimal.

When a pattern would be distorted too much, then click on Undo. Tick the box “Maintain aspect ratio” and enter the desired width: this will affect the height of the pattern.



Alternatively you can choose to let the size unchanged for now, take the Reshape tool and delete/reshape a few lines at the start and the end of the pattern, for a better fit.

**Step 7** - for computer guided longarm systems only:

Select one of the patterns, press Ctrl+C to copy. Open a new Design Page and press Ctrl+V to paste the single pattern. While this is still selected, click on the Line Sew Type button “Running Stitch” at the top of the Stitch toolbar. This is your base pattern: if you have a computer guided longarm system this is all you need, as your system can do the repeats. Save this single copy first as .ANS file and choose menu File > Save as, to save in the format of your longarm system. Close this pattern.



**Step 8**

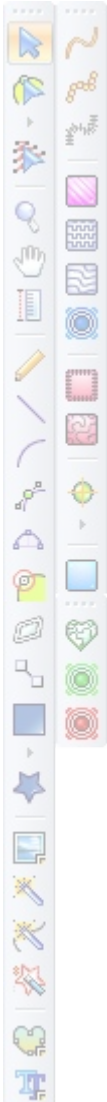
Back to the original repeated design: select it, right-click and choose Connect Objects. While still selected, click in the Properties Panel > tab Artwork: change the Pen width to 0.7 mm. This will give you thicker lines in the printed panto.

*Tip: you can use the Repeat function again, this time “Number across” down to 1 and “Number down” to 2. Then play with vertical distance to let the pattern interlock. Click on OK. Re-color this second row and print it too, for easier aligning when following the second row with the laser light.*





4.20 How to create and print Pantos (Make repeatable - Repeat - Resize - Print - PDF) - Cont'd



Step 9 - Print setup



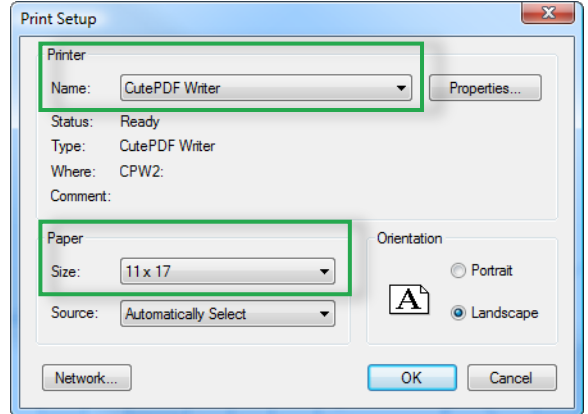
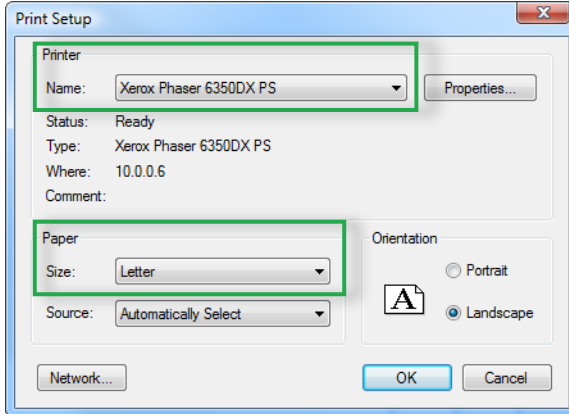
First Save the pattern, so that the print-out will show the proper design name. Then click on the button **Print Preview** in the General Toolbar. Click on the button **Settings**. In the Print Settings window click first on the button **Print Setup**. In this case the most economical way is to print in landscape orientation - if you used two interlocking rows, then Portrait is the best choice. Still in this Print Setup window, select the desired printer:

Print on Paper:

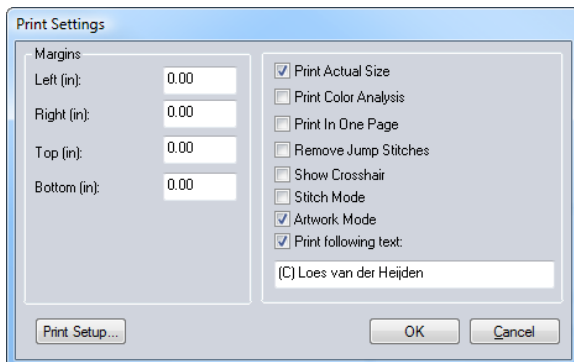
In the panel "Printer", choose the printer connected to your computer. In the panel "Paper" open the drop down list "Size" and choose the desired Paper Size. If your printer can print on large paper or banner paper, that particular paper will show in the list. Click on OK.

Create a PDF file:

In the panel "Printer", choose a PDF writer (see also Tip at the end of Chapter 7.7 where to find a PDF writer). in the panel "Paper" open the drop down list "Size" and choose the desired Paper Size. You can even use a large paper size and send the PDF to a print shop to print. Click on OK.



After clicking on OK you are back in the Print Preview window. Click again on the button **Settings**.



Back in the Print Settings dialog window, set all Margins to zero, choose **Print at Actual Size**, Artwork Mode and add your copyright note or designer name. Click on OK.

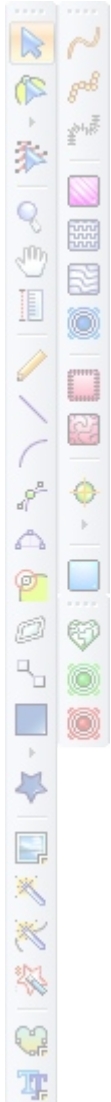


The Print Preview window is showing again. Check how the pattern will print.





4.20 How to create and print Pantos (Make repeatable - Repeat - Resize - Print - PDF) - Cont'd



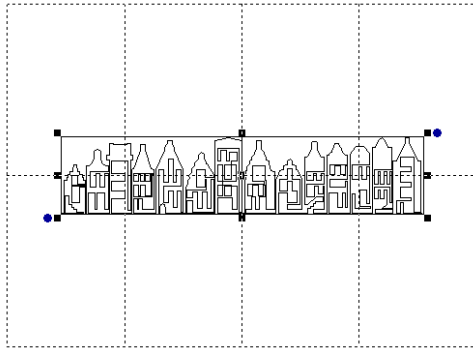
**Step 10. Influence the position of the design on the printout and on the PDF pages**

You can control where the panto will print on the pages. Before doing anything, be sure to set the Print Settings at "Actual Size", Click on OK. Again in Print Settings > Printer Setup, choose the desired paper size and orientation. Click on OK.

To control the position on the printout: click on the button Page Preview in the View Toolbar.



Dotted lines representing the pages appear on the Design Page. The size and orientation of the pages in this Page Preview is taken from your Printer Setup. The left image below shows the default location. In the right image I have changed the Orientation to Landscape (Print Preview > Print Settings > Printer Setup > Landscape) and moved the design on the Design Page up so that it prints on 3 pages only.



**Step 11.** When the print setup is ready, click on the button Print in the Print Preview toolbar. When you have chosen to **create a PDF**, a new dialog box opens where you name the PDF-file and navigate to the folder where you want to save the PDF.

When you have chosen to **print the panto**, the Print dialog box opens. As you have set all options in the previous steps, you can click on OK to print the panto.

The pattern will be divided over several numbered pages. Dashed lines over the margins will help you align the pages.

**My good-old "taping-pages-together-isn't-a-nightmare" tip:**

To make taping the pages together a breeze, use little Post-it notes to hold the pages down on the table. Then take Sellotape and tape the pages together. The little post-it notes will prevent the pages from jumping up to your Sellotape!



### 4.21 How to make patterns repeatable (Split line, Draw traveling lines)



This is a very important exercise, showing how to open closed shapes, add lines to connect to other shapes and see where connecting lines have to be positioned, to make any pattern repeatable. You will use this a lot when you are digitizing your own patterns.

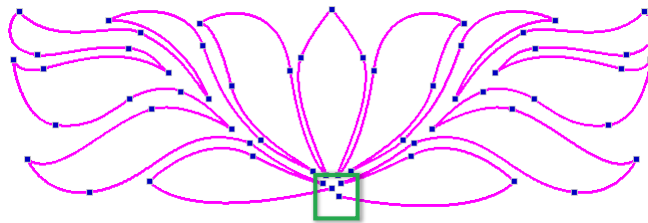


**Step 1.** If the grid is not visible, click on the Show/Hide Grid button to show the grid. Click on the Library button in the Artwork Toolbar and choose folder "Panto - E2E". Click on "Border Element2" to open it. Press the Space bar to zoom in. It is a closed shape.



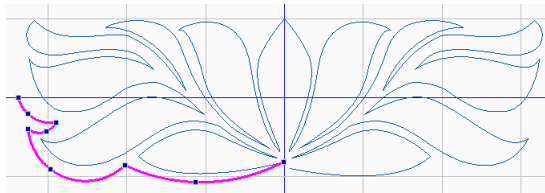
**Step 2.** Take the Reshape tool, click on the lowest center point, right-click and choose "Line". This will turn the point into a straight point without anchors. This makes aligning the connecting line in the next steps easier.

**Step 3.** Still with the Reshape tool, right-click on the same point and choose Split Line. Click in the point and move it down.



**Step 4.** Take the 3 pt Arc tool, click on the color Red in the palette under the Design Page to make the line another color than the pattern itself and draw a nice connecting line, starting on the left side of the pattern (on the blue horizontal line in the middle = zero position of the vertical ruler), following the shapes of the pattern, ending on the left center point, that was split in step 3.

*Tip: for nice matching connections, "echoing" lines are the best. Follow the existing shapes with a distance of about a quarter inch. This will look natural in most patterns.*



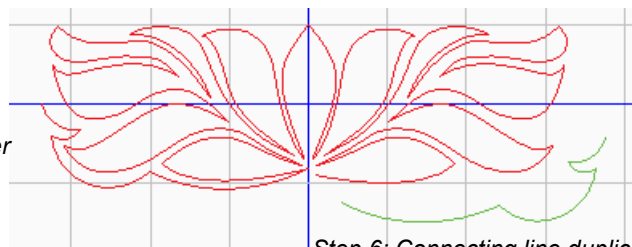
**Step 5:** Select this new line, press R and tweak it with the Reshape tool.



**Step 6.** Take the Select tool and press Ctrl+D to duplicate it. While the duplicate is still selected, click on the button Flip Horizontal and move it aside for later use. Give this duplicate a different color, for easy identification. In this example Green.

**Step 7.** In the Properties Panel > Sequence tab, select the connecting line, hold down Ctrl key and click on the Border element, right-click and choose Connect Objects. The object inherits the color of the first object, the connecting line:

Step 7: connecting line and border element connected



Step 6: Connecting line duplicated, re-colored and moved aside for now



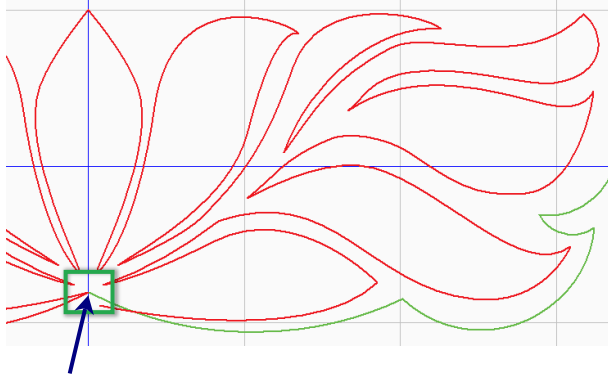
4.21 How to make patterns repeatable (Split line, Draw connecting lines) - Cont'd



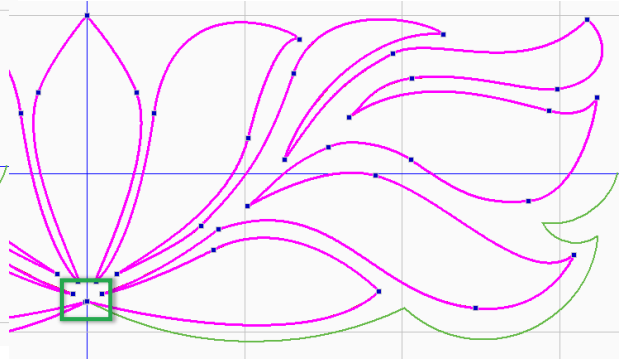
**Step 8.** In the Sequence tab, move the second (green) connecting line all the way down: you should have two objects, the original pattern including the left connecting line, and the second connecting line at the end of this short list.



**Step 9.** Select the green connecting line on the Design Page and move it exactly in the right place = aligned to the center point which was split in the first step; not to the end point of the red pattern, as that point is still moved off center. Zoom in for better precision! You can hold down Ctrl and use the arrow keys of your keyboard to move the selection in small increments.



Step 9: Take the Select tool, click on the Green connecting line and move this line to its final position



Step 10: Take the Reshape tool, click on the end point of the red pattern and move this point back to the center



**Step 10.** Take the Reshape tool and click on the red pattern. Move the end point on top of the first point of the green connecting line.

**Step 11.** Select both objects together, right-click and choose Connect Objects (or take the Reshape tool, click in the last point of the first object and manually connect using letter T on your keyboard).

**Step 12.** Final tweaking. Because of the extra connecting line, the pattern is a little taller now and therefore the center is not the same anymore:



Select the pattern and click on the Center button in the Modify Toolbar.

Right-click in a ruler, choose Grid Settings and temporarily change the Horizontal and Vertical values to 0.05 inch (or 1.2 mm if you are using metrics). Turn Snap to Grid on. Click on OK.



Take the Reshape tool, zoom in and let the first and last point snap to a point on the blue line. This makes the pattern repeatable.



Finally Select the pattern, choose menu Tools > Save into Library and save in your own My Shapes folder or in the folder Panto - E2E. Name it "Border Element 2 repeatable". Save it again in your own Backup folder.

Turn Snap to Grid off and set the Grid settings back to normal: 0.5 inch.



### 4.22 How to create Mitered Corners

*This is a new and easy method to turn a design into a corner. Just a little Reshaping, then copy, paste, rotate, flip, align and tie together. Try it, you will love it!*

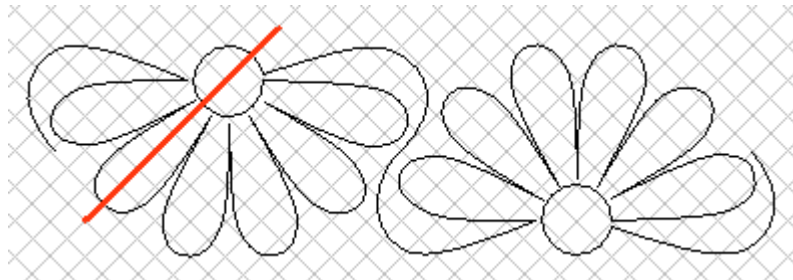
**Step 1.** Click on the Library button in the Artwork Toolbar and choose folder Panto - E2E. Click on "Daisy" to open it. This design will be turned into a corner pattern.



**Step 2.** Turn the Diagonal grid and Snap to Grid on and hide the "normal" grid by using the respective buttons in the Show/Hide section of the View Toolbar.

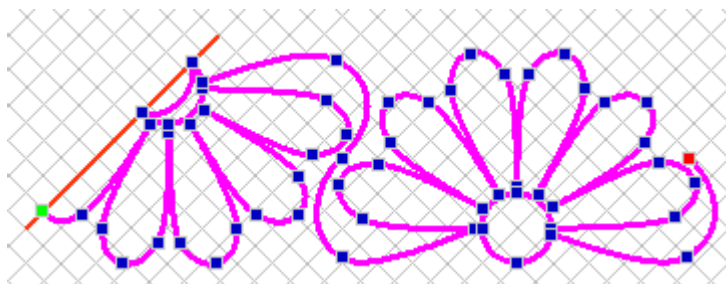
**Step 3.** Take the Line Tool and draw a help line in a 45 degree angle - with the Diagonal grid and Snap to Grid turned on this is simply a matter of clicking a point, then follow the grid line and clicking again, right-click to finish. This help line will define your mitered corner.

**Step 4.** Select the help line, click on the color red in the palette for better visibility and move the line over your pattern. Place it where you want the corner to be. In this example through the center of the left flower. Everything on the left side of that help line will be deleted in the next step.

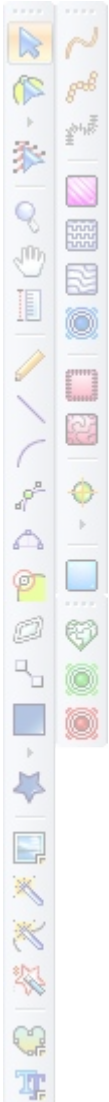


**Step 5.** Turn Snap to Grid off. Take the Reshape tool and click on the design. Change the properties of the points on or close to the red help line into Cusp. Add extra Cusp points on the lines of the pattern that are crossing the help line.

**Step 6.** Still with the Reshape tool, **delete** all points on the left of the help line. You can grab multiple points with the Reshape tool and press Delete on your keyboard. Or click on one point, hold down Ctrl and click on the other points you want to delete. Press Delete. *Please note that for complex patterns this might take a while, so be patient.*

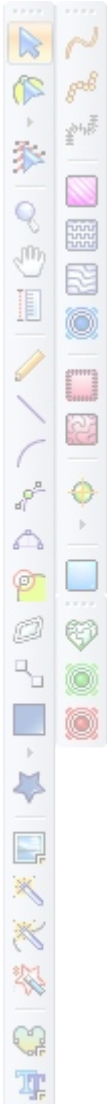


**Step 7.** The result is half of your corner pattern. Reshape the last points close to the 45 degree help line and keep in mind that this will be the meeting line of the copy of the next steps. You don't want lines following that 45 degree angle line, because that would mean double lines on top of each other.



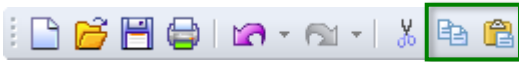


4.22 How to create Mitered Corners - Cont'd



**Step 8.** When half of your corner pattern is reshaped to perfection, take the Select tool and click on the help line: delete it.

**Step 9.** Now copy and paste the pattern using the following buttons in the General and the Modify toolbars: select the pattern and click on Copy, Paste, Rotate 90 degrees right, Flip:

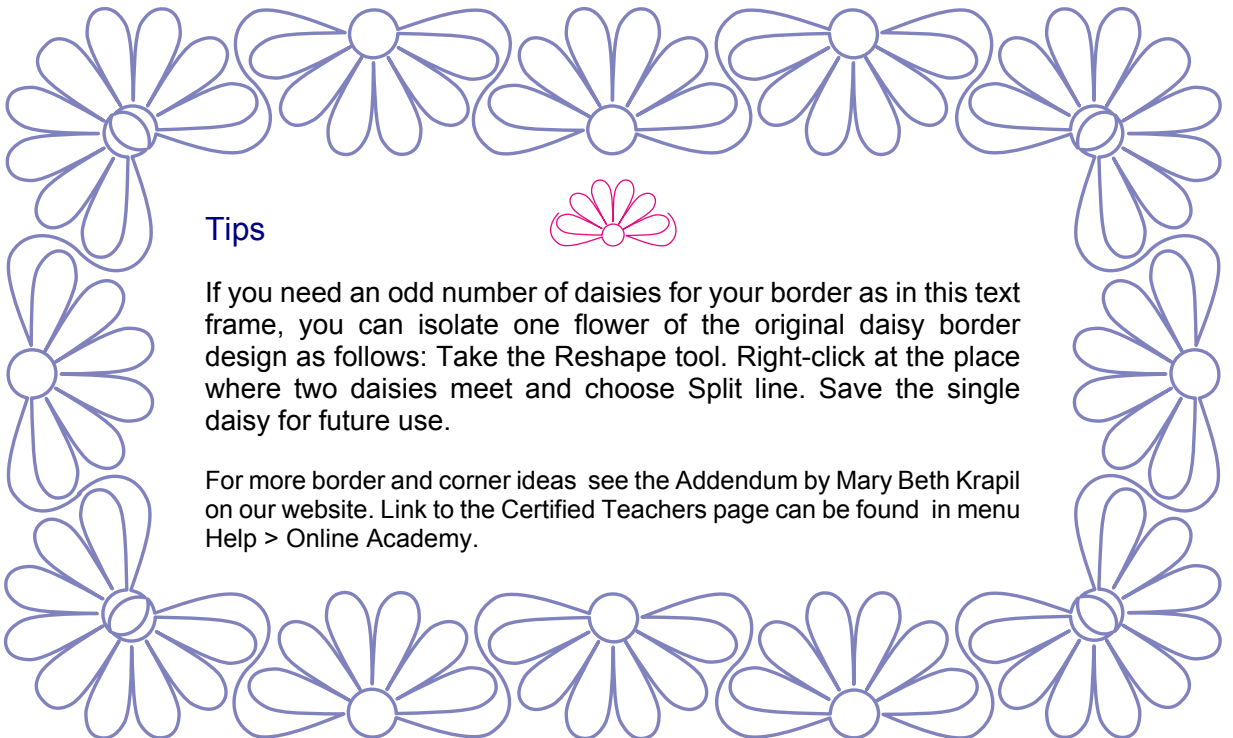


**Step 10.** Next step is to select this copy and move it in place.



**Step 11.** Finally, take the Reshape tool and manually tie the two parts together using the T-key on your keyboard: click and hold on an end point of the first part, press and hold letter T on your keyboard and move the mouse a tiny bit in the direction of the start point of the other part. When the points “blink” release the mouse first, then release the T-key. This will join the two parts, with a shared cusp point. For details see Chapter 2.19.

**Step 12.** Save the corner pattern. It will be a perfect match for the original design that was used as basis.



**Tips**

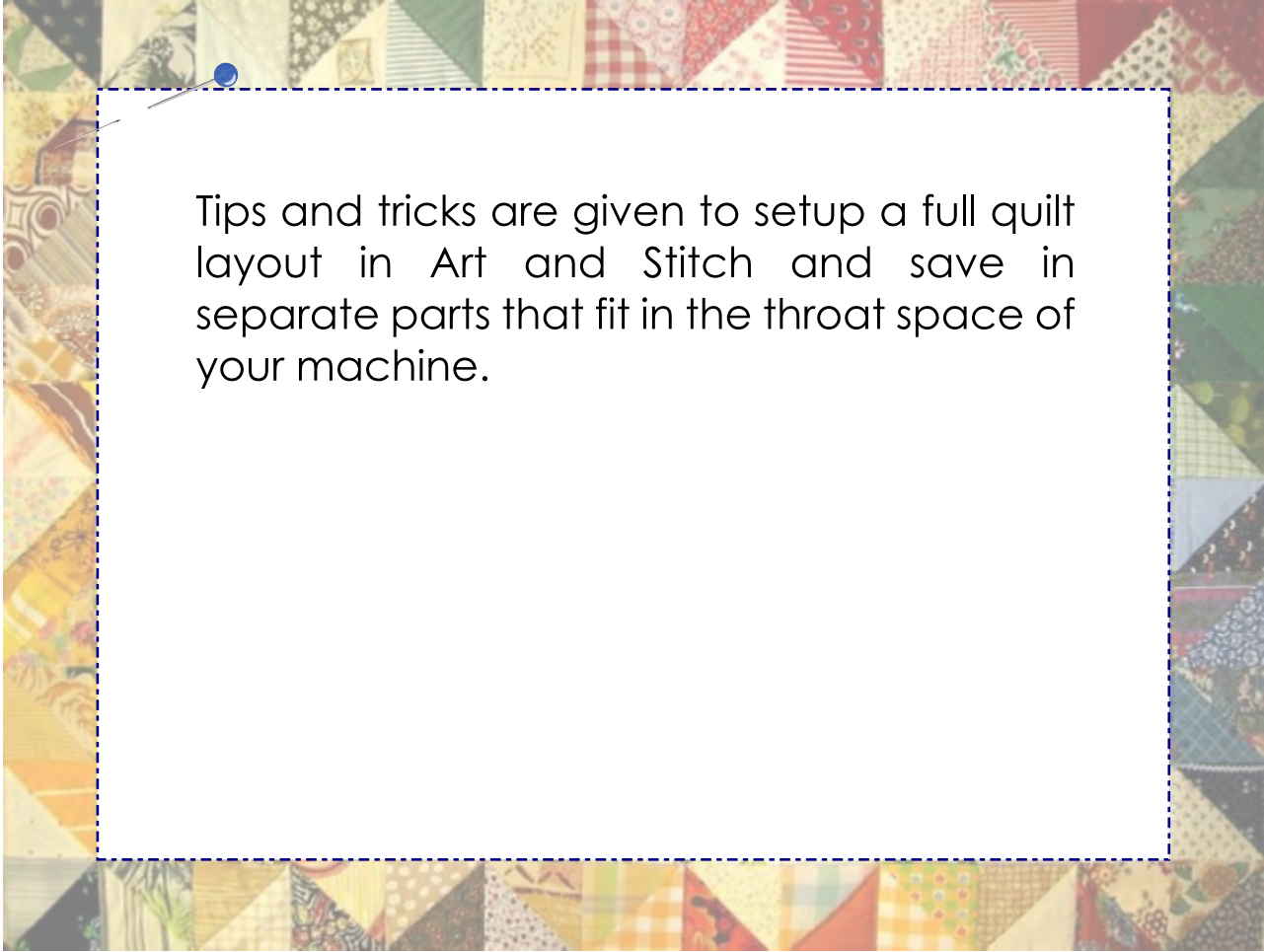
If you need an odd number of daisies for your border as in this text frame, you can isolate one flower of the original daisy border as follows: Take the Reshape tool. Right-click at the place where two daisies meet and choose Split line. Save the single daisy for future use.

For more border and corner ideas see the Addendum by Mary Beth Krapil on our website. Link to the Certified Teachers page can be found in menu Help > Online Academy.





# 5. Full Quilt Layout



Tips and tricks are given to setup a full quilt layout in Art and Stitch and save in separate parts that fit in the throat space of your machine.



## 5.1 Layout a full quilt

To setup a full quilt in Art and Stitch: import all finished blocks on the design page, arrange and align the blocks, resequence, select the first set of blocks that fit in the throat space of your machine, choose menu Save as, choose the format of your system, tick the box "Save Selected" and save as Row 1. Select the next set of blocks and save this selection as Row 2 etc. Here's a detailed description of the process.

### Step 1: Finish your blocks / designs

Before starting to layout your full quilt, be sure that all blocks to be used are ready, reshaped and perfected. Be sure all artwork is turned into stitches and also be sure that the blocks are checked in the Sew Simulator.

Then save the blocks together in a folder specially made for your project.

### Step 2: Prepare the first helper: the available Throat Space

Choose menu Tools > Preferences > tab Machine. Set the available Throat depth to the real usable space. You want a little overlap and you don't want to stitch too close to the bars. If your machine's manual says 24 inch throat space, set it here to 21 to be on the safe side.

In the View Toolbar click on the button Show/Hide Available Throat Space. Two green bars show the space you can sew in one pass.



### Step 3: Prepare the second helper: Set and show the Quilting Area

Choose menu Tools > Select Quilting Area. Click on the button "New" and enter the width and height of the full quilt. Give it a name and include the dimensions in the name. Click on OK. Select this new Quilting Area in the list and click on OK.

In the View Toolbar click on the button Show/Hide Quilting Area / Hoop. A brown rectangle shows the outer edges of your full quilt.



### Step 4: Prepare the third helper: set the grid spacing to the size of one block

Right-click in a ruler and change the grid spacing to the size of the blocks in your quilt. For example 8 inch. Click on OK.

In the View Toolbar click on the button Show/Hide Grid so that the grid is visible.



**Tip:** Turning the Diagonal Grid on is helpful for quilt layouts with "on point" blocks.



### 5.1 Layout a full quilt - Cont'd

#### Step 5: Collect the patterns to use in the quilt layout

Save the (still empty) design. Name it for example "Full Quilt Mrs Johnson.ans". Start opening your blocks: choose menu File > Import Stitch/ANS file, in the Browser window click on the plus signs to open the tree of folders and find the special folder that holds the patterns for this quilt. Tick the square in front of that folder name to show the contents in the Browser window.

Click on the first pattern, hold down Ctrl key on your keyboard and click on each of the other patterns for this quilt to include them in the selection. Click on Open. A copy of each of the blocks will open on the design page.

#### Step 6: Arrange and align the patterns

Select and move the blocks so that they don't overlap anymore. Resize blocks where needed: select a block and in Properties Panel > Tab Transform enter the desired width / height. Click on Apply.

Then start building your entire quilt on the Design Page: arrange everything the way you want to stitch your quilt. When the blocks are in place, use the tips below to align them perfectly.

#### How to align blocks

To get all blocks perfectly in place you can use the following tools:



#### Center in Grid box

Select one block, click on the flyout of the Alignment button and choose "Center to Grid".



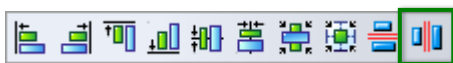
#### Align tops

Select all patterns of one row, click on the flyout of the Alignment button and choose "Align Tops".



#### Distribute Evenly across

Be sure that the first block and the last block of one row are at the correct positions. Then select all patterns of this row, click on the flyout of the Alignment button and choose "Distribute evenly across". This will create the same space between all blocks.



#### Nudge

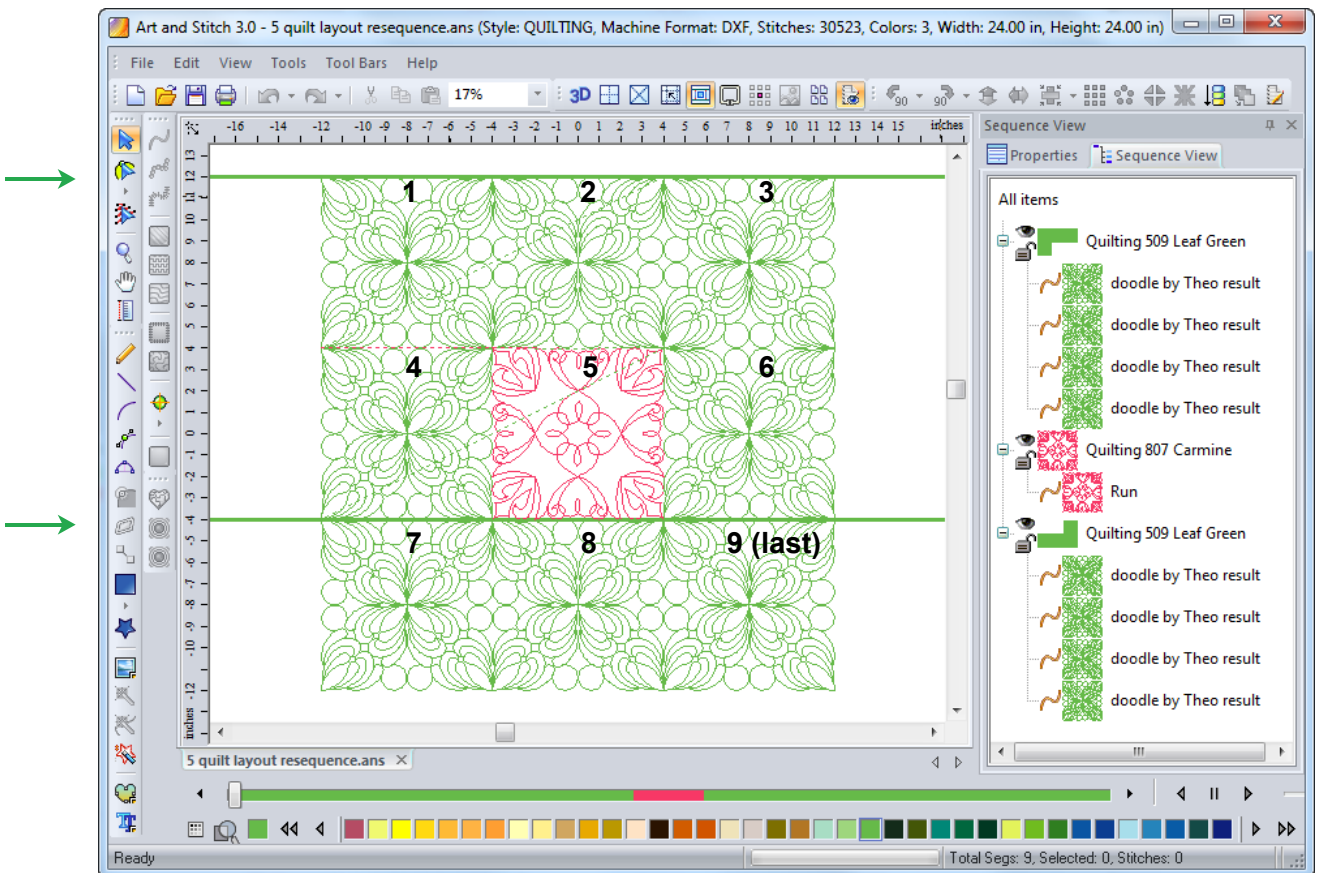
Select, hold down Ctrl and use the Arrow keys to nudge the selection up or down, left or right.



## 5.1 Layout a full quilt - Cont'd

## Step 7: Resequence

To let the blocks and rows stitch in the desired order, use the Resequence method: right-click on an empty space on the Design Page (or press function key F8 on your keyboard) and click on each block in the desired order. The blocks will show a number, the last block will show "Last". The Sequence View panel will automatically update during this Resequence process.



## Step 8: Decide how many blocks you want to combine into one pattern

You will have to decide: do you want to load the blocks in your quilt system as individual blocks or turn an entire row into one pattern, or maybe even two rows together, fitting the throat space of your machine?

**Individual blocks:** this is the most used way on pieced quilt tops. The computer is totally exact in size, but maybe the piecer wasn't that precise! Then it is very useful to align every block to the quilt top on the frame.

**Sewing the blocks row by row:** this is very doable on a wholecloth quilt without pieced blocks. You can then even choose to send two rows - 8 blocks as one pattern to the machine.

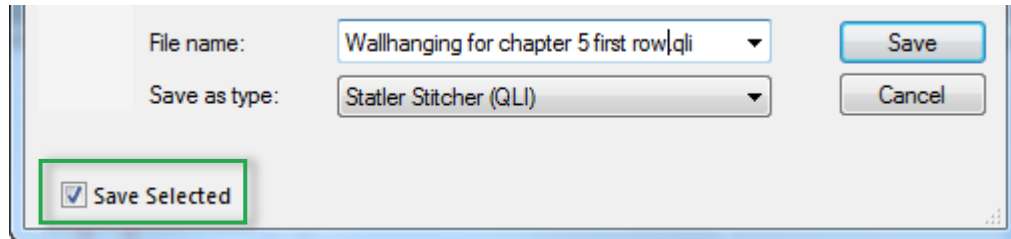


---

## 5.1 Layout a full quilt - Cont'd

### Step 9: Select the first pass and choose File > Save as, tick "Save Selected"

Select the first pass, choose menu File > Save as. Navigate to the special folder made for this project. Most important here: Tick the box "Save Selected" in the lower left corner of the dialog window:



Then choose the format of your quilt system and save as Pass 1, or Row 1. Repeat for all passes.

*Tip: Immediately after saving it for your system, give the selection on the Design Page a different color so that you can keep track of the parts already saved.*

Outside Art and Stitch copy the quilt files from the special quilt folder made in Step 1 to a USB thumb drive and load the patterns in your quilt system.

**Tip:** It's very helpful to **print the pattern** (setting "Print in One Page" on, uncheck "Actual Size") so that you can make notes and write down the names of the various passes on the printout.

During the quilting process this printout is a valuable help: once a block, row or pass is quilted, mark it on the printout. After advancing the quilt your notes and marks on the printout will show exactly where you are, even when the quilted section is not visible anymore because it has meanwhile been rolled on the take up bar.



## 5.2 Create a Template

### Helpful: Create a layout template

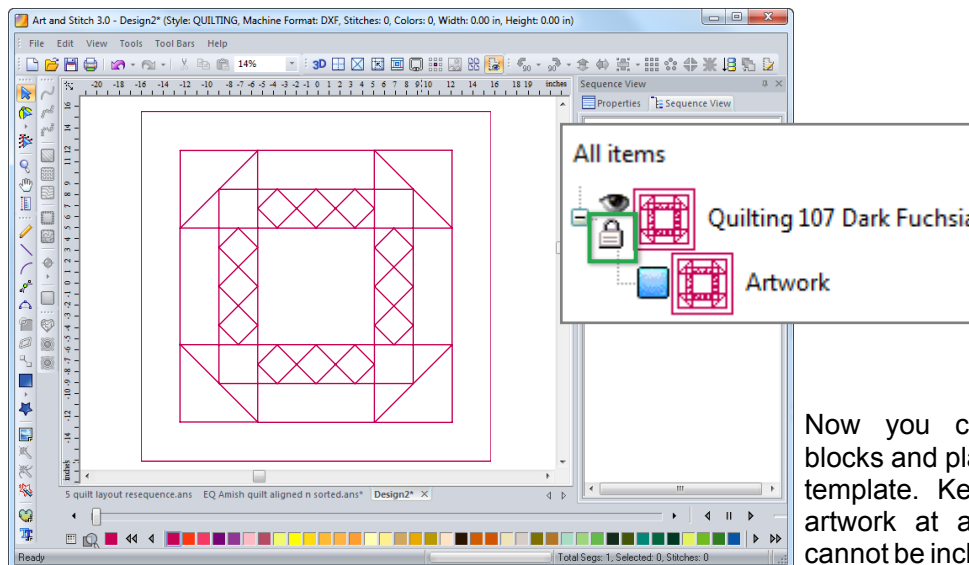
When your quilt is not just blocks, but includes sashings, borders etc, you can create a template of your quilt, in the exact dimensions of the quilt you are going to work on.



For a template example, click on the Library button, choose folder Layout Templates and open one of the templates. They were made using the Rectangle tool - resized using the Transform Tab in the Properties panel, and duplicated precisely using the Repeat function and then Merged.

This example shows that you can draw any template, any shape, any size. The lines don't need a specific sequence and they don't have to be continuous. Once ready, merge the template objects.

To "lock" a template: In Properties Panel > Sequence View tab, click on the name of the color, click on the little padlock icon and then click in the Design Page. The padlock icon will close.



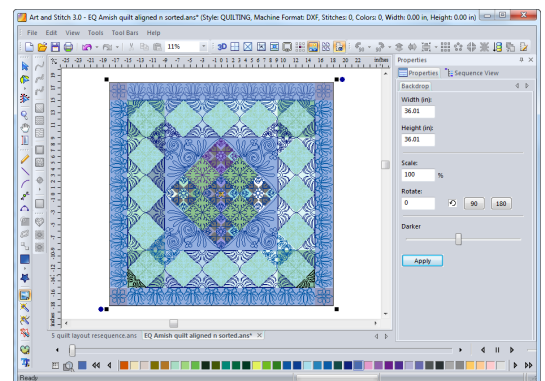
Now you can assemble your blocks and place them on the quilt template. Keep the template in artwork at all times, so that it cannot be included in the quilt files.

You can also open an image of a quilt layout from Electric Quilt®<sup>1</sup> in actual size:

In EQ open the desired quilt from the Sketchbook. With the quilt on the Work table choose menu File > Export Image (still in EQ). Save in jpg format. In the next window choose a low resolution and set the size of the image to the real size of the quilt. Export. Open this exported jpg image in Art and Stitch using the Backdrop tool in the Artwork Toolbar. Use as template to place your blocks.

See movie on our Academy website:  
[http://artnstitch.academy/videos\\_base.htm](http://artnstitch.academy/videos_base.htm)  
 Tab Older Videos.

When the image is too big to export or import, use it at 50% of its size.



<sup>1</sup> Electric Quilt® is third party software to design quilt tops and blocks for piecing.



## 6. Embroidery Digitizing

Art and Stitch Base can also be used to create embroidery designs as shown here in Part 6.

The techniques and functions described in Parts 1 - 4 are needed for embroidery digitizing too.

Tip: The real advanced embroidery designs - such as lace, hardanger, cutwork - can be made with the optional Embroidery Module that turns Art and Stitch Base into our top level Art and Stitch PLUS.

The additional manual for Art and Stitch PLUS can be opened via menu Help > Embroidery Manual.



## 6.1 Introduction to Embroidery Digitizing

All drawing exercises in previous parts of this User Guide are very useful to learn how to digitize embroidery designs.

The main difference between digitizing quilt patterns and embroidery designs is size. In longarm quilt systems you can open a pattern in any size and resize it in the longarm system.

In embroidery designs, you **MUST** use the proper size, dictated by the brand of your embroidery machine and the available hoops, otherwise your machine will not be able to open the design. So keep an eye on the size and resize if needed (in Properties Panel > tab Transform) when following the exercises in the previous chapters.

### Stitch settings are in mm

Please note that traditionally embroidery digitizing is done in millimeters, so all stitch settings will be in millimeters only. This gives more increments and more detailed settings.

In longarm quilt systems, the stitch values in Art and Stitch will not be used: the system will use its own settings. So just see these settings as “a value”

- 2 mm is 0.08 inch (12/13 stitches per inch)
- 3 mm is 0.12 inch
- 6.4 mm is a quarter inch

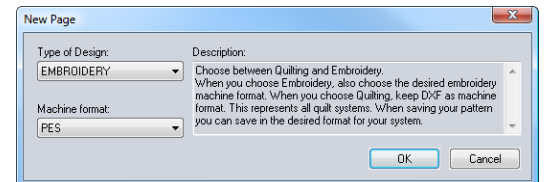
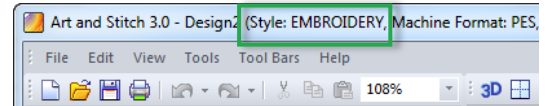


## 6.2 Getting started: Set Style to EMBROIDERY

### File > New

For embroidery designs, you must set the Design Page Style to “EMBROIDERY”.

**For a quick change of Style** choose menu File > New, and change the Type of Design to EMBROIDERY.

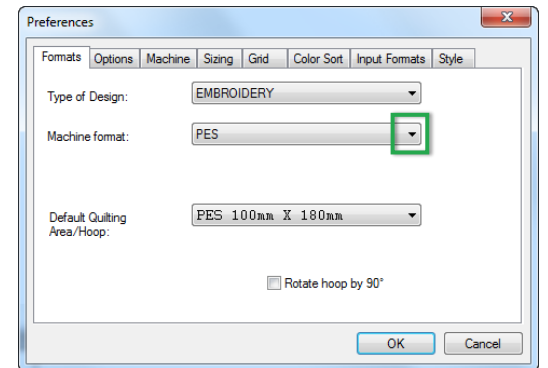


### Tools > Preferences > Formats

**For a permanent change of Style** choose menu Tools > Preferences > tab Formats. Set Type of Design to EMBROIDERY and choose the format of your machine. This Style and format will be kept by the program until you change it again via Tools > Preferences.



Clicking on the “New” button will open the Design Page style set in Tools > Preferences.



### Why choose?

- In Style EMBROIDERY, the Commands “Tie in” and “Tie off” (Properties Panel, tab Commands) will be turned on, set to Basic. Line Sew Type Satin will have a lower spacing = stitches closer together, and underlay settings will be turned on.
- In Style QUILTING, no Tie in / Tie off stitches are added, as these can be applied in the longarm quilt system itself, Line Sew type Satin will have more space between the stitches and underlay settings will be off. Especially in Text and Lettering objects Style QUILTING would result in a very poor quality, therefore do not forget to make the right choice!

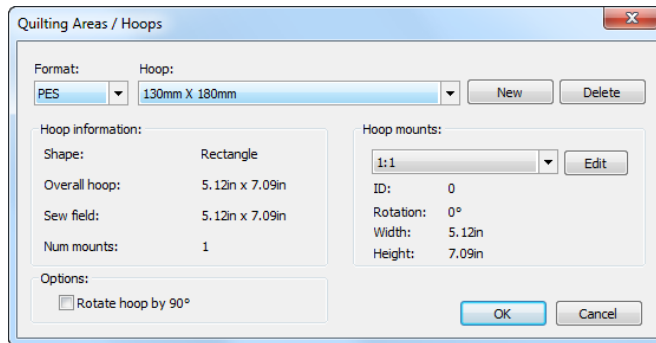


## 6.3 Getting started: Choose your Embroidery Hoop

### Set Hoop size

Press Ctrl+Q or choose menu Tools > Select Quilting Area / Hoop. Choose the file format of your embroidery machine. It will show the available hoop sizes for this machine format.

As every machine has its own embroidery field, you also have to pick the hoop size which fits your machine. Look in the manual of your machine to see which hoop sizes can be used. Click on OK. The hoop will show on the Design Page.



#### TIPS:



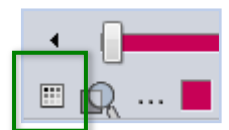
After choosing the desired Quilting Area / Hoop size you can see the area on the Design Page, by clicking on the Show/Hide Quilting Area / Hoop size in the View Toolbar or via menu View. It is very helpful in \*seeing\* the size of a block you are working on in relation to the full quilt size, or the quilt row.

In embroidery digitizing it will help in keeping all design parts inside the available hoop.

When saving a pattern in the machine format, you will be warned if a design is larger than the selected Quilting Area / Hoop size. For quilt formats you can ignore the warning. For embroidery designs you **MUST** change the size - otherwise your embroidery machine cannot read it!

### Choose an embroidery thread chart

Click on the button in the lower left corner of the Art and Stitch window and choose a thread chart.





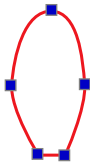
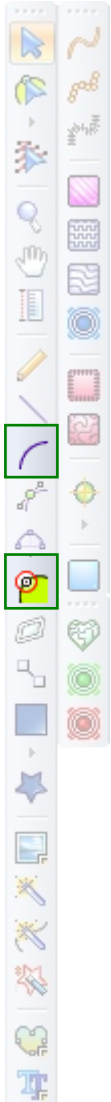


### 6.4 Exercise: Your first embroidery design

#### Start with your artwork

In this exercise you will create a flower design from scratch, starting with the artwork first. It's a nice design to use as a border for a garden table cloth.

For the exercises in this Part 6, you must have read Part 2, The Artwork Chapters.



#### Step 1



Take the Curve Tool from the Artwork Toolbar, choose color red from the color palette at the bottom of the Art and Stitch window and draw 5 points.

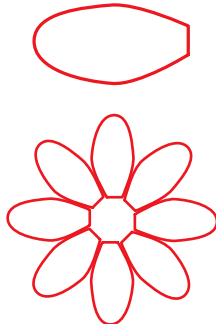


Before right-clicking to finish the object, click on the Close Object tool. Then right-click to finish the flower petal.



#### Step 2

While the petal is selected, click on the Rotate left button in the Modify Toolbar.



Click on the Magic Circle button.

Set Objects > Count to 8 by clicking on the little arrow next to the value field. In Circle Dimensions change the value for height so that the petals are closer together, almost touching each other, but don't let them overlap! You can grab a corner of the dialog window to make it bigger, for better precision.

#### Step 3



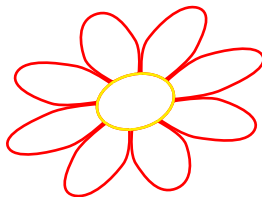
Click on the AutoShapes button in the Artwork Toolbar and from the fly-out choose the Circle shape. Draw a circle in the center, covering the ends of the petals.

#### Step 4

Select All, right-click and choose Transform Artwork > Clip. This will remove all overlaps, but will keep each object separate and closed. Select the circle in the middle and make it yellow. Select All and Group the objects.

#### Step 5

To make the design a little more interesting, distort the artwork: Select the group and press letter D on your keyboard. Move the tiny handle in the top right corner a bit down and to the right. Move the tiny handle in the top left corner a bit down and to the right too. Press Enter to apply and take the Select tool to stop distorting.





6.4 Exercise: Your first embroidery design - Cont'd



Artwork ready - assign stitches

Step 6

Select All. In the Properties Panel on the right, click on the Tab Transform. Change the width of the selection to 2.5 inch (or 60 mm if you have set the program to show Metrics).

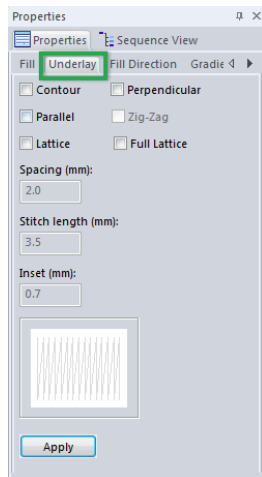
Step 7

With the grouped flower still selected, click on the Standard Embroidery Fill button in the Stitch Toolbar.

All objects will be filled with stitches in the colors of the artwork: red for the petals and yellow for the center.

Step 8

The design is ready, but let's change some settings here, so that you know where to find those:



Properties Panel > Tab Fill:

Change the Stitch length to 4 mm. Click on Apply.

Properties Panel > Tab Underlay:

Un-tick the box Perpendicular and click on Apply. For this design underlay is not needed: you are going to change the stitch direction for all petals in the next step. That way there won't be large sections in the same direction (which would be a reason to use Underlay).

Properties Panel > Tab Pull Compensation:

Not yet! For the best understanding finish this design first and sew a sample without applying Pull Compensation.

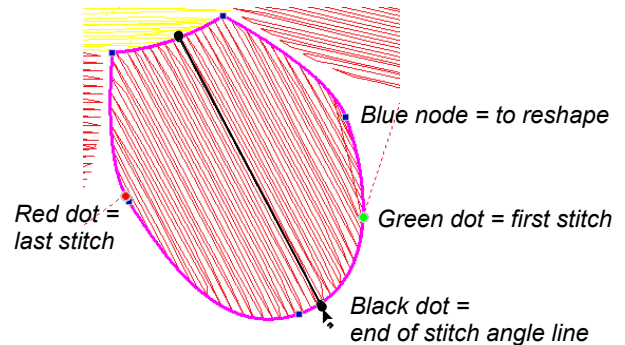
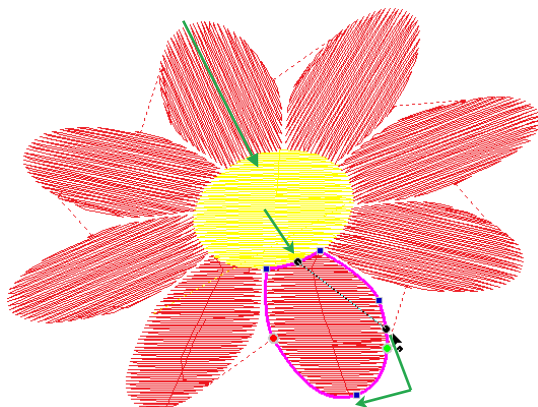
Step 9



Change the stitch direction, to let the stitches of each petal point towards the center.

Take the Reshape tool and click on a petal.

Move the black dots of the angle line. You can see the change when you click somewhere else.





---

## 6.4 Your first embroidery design - Embroider the result

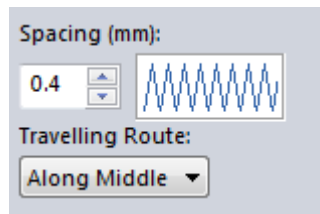


### Add details, save and embroider

#### Step 10

Before sewing this design, add some leaves: Click on the Library button in the Artwork Toolbar. From the Folder “Shapes” choose “leaf element1”. It will land in the center and on top of the embroidery design. While still selected, choose color green, move it aside, rotate, mirror and make a nice combination. Click on the Standard Embroidery fill to assign stitches. In Properties Panel, tab Fill change the Travelling Route from Along Edge to Along Middle and click on Apply. In tab Underlay remove the underlay by unticking all boxes. Click on Apply.

Duplicate the leaf and move the duplicate, rotate, flip or mirror to finish the design.



*Properties Panel, tab Fill:  
Set Travelling Route  
for leaf element  
to “Along Middle”.*



#### Step 11

Always save a design in the smallest hoop size possible: this design will fit in a 100x100 mm (4x4 inch) hoop. Press Ctrl+Q, choose the format of your brand of embroidery machine and select the 100x100 mm hoop. Click on OK to apply. If necessary, move the leaves a bit, so that everything fits inside the hoop.

#### Step 12

Choose menu File > Save. First save in the native .ANS format (when you want to use this design again, edit, reshape, make a combination with other designs, always open the .ANS file; stitch files are for your machine only).

Then choose File > Save As and from the drop down list of “Save as type” choose the format of your embroidery machine. Copy this machine format to a USB thumb drive. Insert the thumb drive in your embroidery machine, load the pattern and sew.

**Tip:** Use the Magic Circle on Artwork only, not stitches

The Magic Circle works best when the design doesn't have stitches yet. Stitches make the Magic Circle react very slow. Therefore use it when the design has no stitches yet. If you already assigned stitches, then select the design and press on the Back to Artwork button, or be patient while the Magic Circle is used.



---

## 6.5 About Pull Compensation

*After sewing this design, you will see that the circle, touching the petals on the Design Page, is not touching in the embroidered design: while sewing the design, the stitches have pulled the fabric together. The petal stitches are pointing to the center and will have pulled the fabric away from it. There is a special function to compensate for this pull effect of stitches on fabric: "Pull Compensation".*



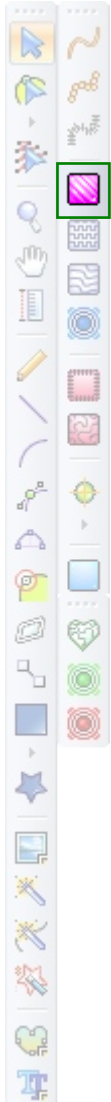
In the stitch out you can see how much Pull Compensation is needed. Select the flower (still grouped), click on the Tab Pull Compensation in the Properties Panel and choose Absolute Value 0.5 mm. Click on Apply or press Enter.

You will see that the stitches of the petals and center are now overlapping each other on the Design Page. Save again and sew this new sample. It is the best way to learn the effect of Pull Compensation.

The available stitch settings are explained on the following pages.



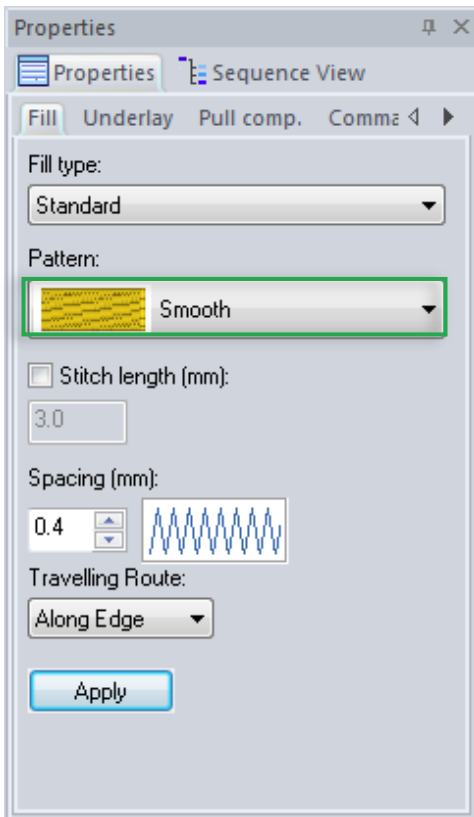
### 6.6 Stitch Toolbar Fill type: Standard Fill (Embroidery)



Fill type: **Standard Fill (Embroidery)**

**For longarm quilting:** *not suitable! This fill type is intended for embroidery digitizing only. It is too dense for a quilt. If you do select it when Style "QUILTING" is chosen via File > New (style is visible in Title bar), then this fill type will have no underlay settings.*

**For embroidery digitizing:** With the Style set to "EMBROIDERY", the default setting of a Standard Fill has an underlay. In the Properties Panel on the right you can choose from several standard fill effects. Turn the 3D view on by clicking on the 3D button in the View Toolbar, to see the stitch effect for the various Standard Fill patterns.



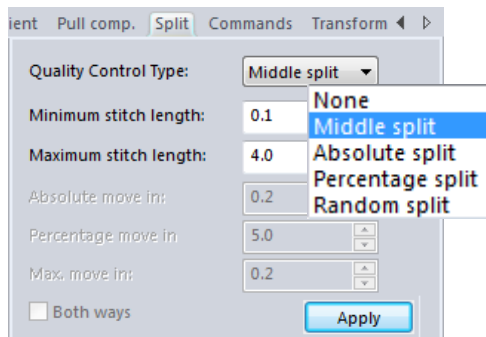
The Properties Panel will change, depending on what is selected on the Design Page.

When an object is selected and the Standard Fill (Embroidery) is assigned by clicking on the button in the Stitch Toolbar, new tabs appear in the Properties Panel:

#### Tab Fill

- **Fill Type** lets you change the fill type to one of the other fill types in the Stitch tool bar: Motif or Hatch.
- **Pattern** gives a choice between 14 fill stitch effects. Smooth is the default.
- **Stitch length (mm)** default setting for fill stitches is 3 mm.
- **Spacing (mm)** can be changed: a higher value makes a filled region less dense. The default density setting works best with 40 weight embroidery thread.
- **Travelling Route:** this is the path the machine takes to go from one section of a fill to another section inside the same fill. Default is set to run along the edge of the shape.

When you change a setting, click on Apply.



#### Split Satin - for special effects!

When choosing a Satin as Fill Type, a tab "Split" is available (scroll to find it). You can choose several ways to split satin stitches, to prevent too long stitches.

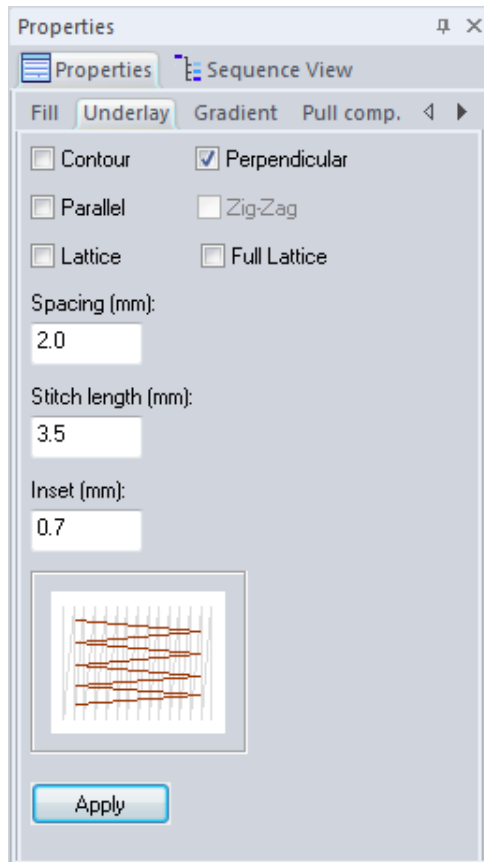
Combination of the various settings will result in special effects. Example: **Middle Split** > max. Stitch length 4.0. Apply. Look in 3D view to see the effect.

When using **Absolute** or **Percentage Split** you must also change the "Move in" setting: it defines where the split starts measuring. "**Both ways**" for Absolute or Percentage Split defines if the split is measured and set from one side of the design or from both sides. Playtime!



6.6 Stitch Toolbar Fill type: Standard Fill (Embroidery) - Cont'd

 Fill type: **Standard Fill (Embroidery) - Underlay**

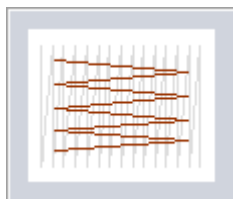


Properties Panel

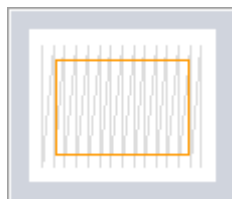
Tab Underlay (embroidery digitizing only)

Underlay is used in machine embroidery to prevent distortion and puckering of large regions in one stitch direction. When you change a setting, click on Apply.

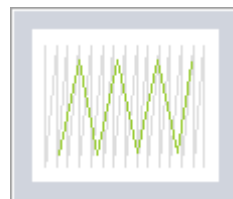
- **Perpendicular** is the default setting for designs, style Embroidery. It will create one layer of stitches under the fill stitches in the opposite direction of the fill stitches.
- **Contour** will go along the inside of the outlines of the shape.
- **Parallel** will create an open density layer in the same direction as the fill stitches.
- **Zigzag** can be used as underlay for Line sew type Satin.
- **Lattice** is comparable with Perpendicular, but the angle towards the fill stitches is smaller.
- **Full Lattice** is a double lattice: second lattice layer in a 90 degree angle towards the first lattice layer.
- **Spacing** is the space between lines of underlay stitches. A high value creates more space.
- **Inset (mm)** will change the distance of the underlay to the outline of the shape.



Underlay Perpendicular



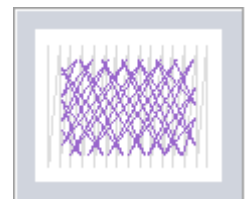
Underlay Contour



Underlay Parallel



Underlay Lattice



Underlay Full Lattice

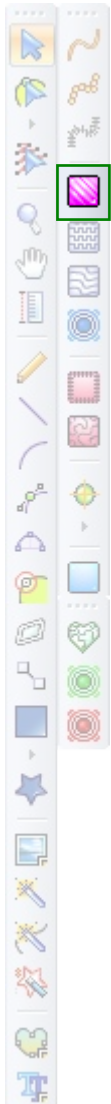
**Combined underlay settings or no underlay**

You can combine various underlay settings together, but that is hardly ever needed. Commercial embroidery machines usually need more underlay than domestic embroidery machines.

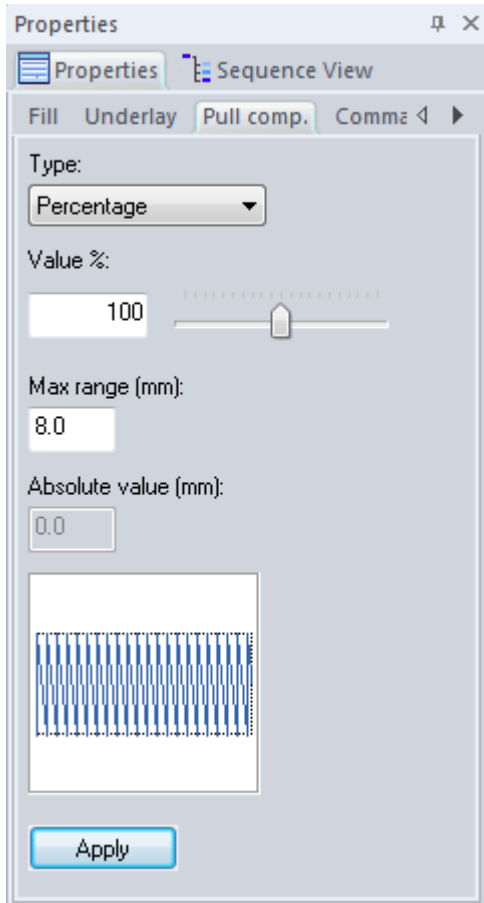
Personally I don't use Underlay at all (un-tick all boxes): I use different stitch directions in the various regions of an embroidery design, plus proper stabilizer, and get nice results without any underlay. You will have to find your own preferences and embroider various samples. Make notes of the settings and staple those to the embroidered samples



6.6 Stitch Toolbar Fill type: Standard fill (Embroidery) - Cont'd



Fill type: **Standard fill (Embroidery) - Pull Compensation**



Properties Panel

Tab Pull Compensation (embroidery digitizing only)

Pull Compensation is used in machine embroidery to prevent outlines being "off".

Fabric - if not stabilized properly - will shrink during the embroidery process: it will be pulled together. Outlines will be sewn at the end of the embroidery process and they will go exactly where they were ordered to be sewn, but.. by that time the fabric isn't there anymore, it has been pulled inside. Adding Pull Compensation will create extra stitches at the end of each row of stitches, in the same direction as the fill, to compensate for that pull effect.

Always use proper stabilizer, hooped with the fabric: the stabilizer should prevent the fabric from being stretched in the hoop. It should be ironed on the fabric, so that you can hoop the fabric tight, without stretching it. In that case, you will hardly need Pull Compensation :)

**Type** You can set the Pull Compensation settings in two ways:

- As a **Percentage** of the filled region: 100% is no pull compensation. 102% would be a nice setting.
- As an **Absolute value**: e.g. 0.3 mm is good for most fabrics, such as stabilized cotton, sweatshirt, towels. 0.4 mm would be best for lycra, pique, pullover, t-shirt, velvet. Non stabilized, as in the sample of the first Embroidery Design can even use a setting of 0.5 mm.

**Change your embroidery needle on a regular basis**

Outlines being off is often caused by a dull needle. You can hardly see it, but needles get dull over time. And with a dull needle, not 'sliding' through the fabric as a sharp needle does, but 'ticking' on the fabric thousands of times during the embroidery process, chances are that the fabric will shift during the embroidery. At the end of the design, when the outlines are sewn, that fabric is not in the same place anymore as when the machine started. Result: outlines are off.



## 6.7 Modify Toolbar Color Sort



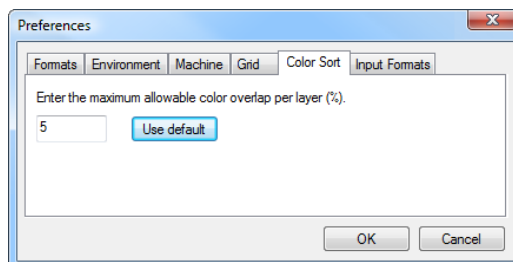
### Color Sort

When multiple objects are selected, the Color Sort button in the Modify Toolbar becomes active. This function will combine the same colors in a design to be sewn together, preventing unnecessary thread changes. So this function is actually changing the sewing sequence when two or more parts are using the same thread color.

#### Warning

When regions of a design are partially overlapping other regions, then using Color Sort is not a good idea, because it may cause the overlapping region (for example a shading part) to be sewn first, together with an object using the same color, to end up under the region, making it totally invisible.

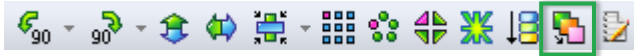
You can change the percentage of overlap you allow to influence the Color Sort function via menu Tools > Preferences, Tab Color Sort. The allowable overlap setting of 5% will keep the extra thread change. Changing it to for example 15 means that if a color, already used earlier in the same design, is overlapping up to a maximum of 15% of a region, you are allowing the Color Sort function to change the sequence and let that color be sewn together with the earlier color.



In short: Color Sort is a very useful function in embroidery digitizing, to put the same colors together and prevent extra thread changes. Do not use the function when there are shading parts (extra color layers on top of other layers) in your design.



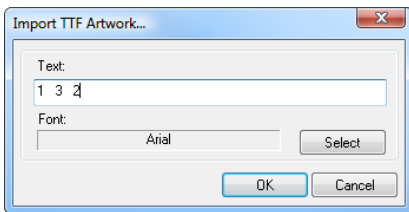
## 6.8 Modify Toolbar Optimize Sequence button or manually resequence



### Optimize Sequence

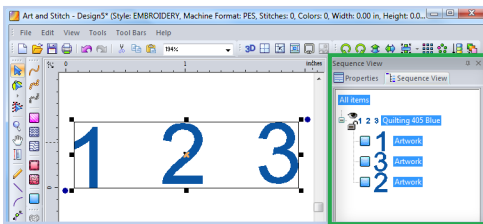
When more objects are selected, the Optimize Sequence button in the Modify Toolbar becomes active. This function will change the sequence so that objects which are closer together will be sewn one after another.

For a better understanding of this function it's easier to see it in action:

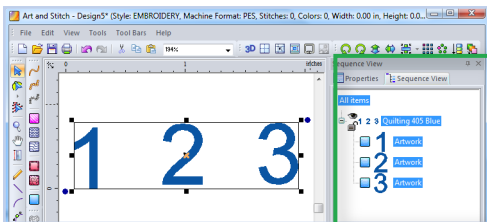


1. Take the Insert Text button and type 1 3 2 in that order. Click on OK.

Now move the objects on the Design Page so that you can read 1 2 3 from left to right.



2. Open the Sequence Tab in the Properties Panel on the right: although you have moved the objects on the Design Page in the right order, you will see the original sequence in which the objects were made in the Sequence Tab: 1, 3, 2.



3. Select all and click on the Optimize Sequence button: you will see that this has changed the sequence into 1, 2, 3: the objects you moved in the right order will now also sew in that order.

### Manually Resequence

A quick way to set the desired sewing order is by simply selecting the objects on the Design Page in the right order:

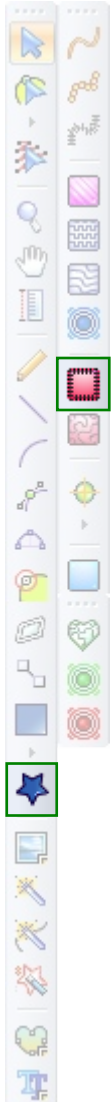
Right-click on an empty spot on the Design Page, choose Resequence (or press F8 key), and then click on the separate objects in the order in which you want them to be sewn.

Numbers will appear on all objects, the last object will show a number plus "Last" so that you know you are at the end.

Click on the Select tool to stop the process. Sequence View panel will instantly update.



### 6.9 Create Appliqué

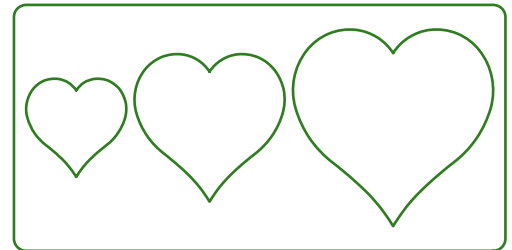


*Appliqué is a quick and fun way to fill large areas not with stitches but with fabric. Choose decorated fabric for a special effect. Combining with embroidered details is the icing on the cake. Creating an appliqué design is as easy as drawing a shape, select it and click on the Appliqué button in the Stitch toolbar. Draw details on top and fill those with Standard Fill (Embroidery).*

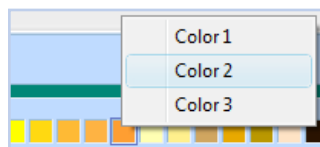
**Step 1.** Choose menu File > New and choose EMBROIDERY as type of design. Choose the format of your embroidery machine. Click on OK.

**Step 2.** Set the hoop size: press Ctr+Q or choose menu Tools > Select Quilting Area/Hoop and choose the format of your embroidery machine and select a hoop of 100x100 mm. Click on OK.

**Step 3.** Draw your appliqué shape. In this example click on the Library button in the Artwork Toolbar on the left. From the Folder Emb AccuQuilt Go Shapes choose "55029 Heart 2 3 4 inch". In this example keep only the smallest heart on the left, select the other parts and press Delete.



**Step 4.** Select the appliqué shape (in this example the heart) and click on the Appliqué button in the Stitch Toolbar. The shape is turned into appliqué consisting of three layers:  
Layer 1: Placement - Running stitch line showing where to place the appliqué patch.  
Layer 2: Tack down layer - to secure the appliqué patch on the project with a running stitch line.  
Layer 3: Finish layer - Satin, Blanket or Motif stitch to finish the edges of the appliqué.



**Step 5.** If you like you can change the color of the appliqué layers: With the appliqué part selected, click on a color in the palette at the bottom of the window. In the popup choose for which of the layers you want to use the chosen color.

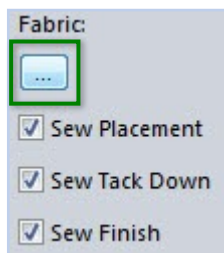
**Step 6.** Finish the design by adding embroidery details if you wish.

**Step 7.** Save as "Appliqué Heart.ans". Choose menu File > Save as and save again in the format of your embroidery machine.

Outside Art and Stitch copy the saved embroidery file to a USB thumb drive, insert into your embroidery machine.



#### See Appliqué fabric and add your own fabrics



**To see the Appliqué as Fabric** select the Appliqué object and in Properties Panel, Tab Appliqué click on the button "Fabric" (button shows three dots). Choose one of the available fabric swatches and click on Apply.

**Add your own fabric swatch:** Use the same button to open the Fabrics box. Click on Add and open the location where you saved your fabric image. Click on OK to import the image and add it to the Fabrics box.





## 6.10 Cut appliqué fabric and Embroider

### Cut the appliqué fabric:

- **Paper pattern:** Copy the appliqué part to a new Design Page, click on the Back to Artwork button. Select it and in Properties Panel, tab Artwork, change the pen width to 1 mm. Print at actual size. Use this printout as paper pattern to cut out your appliqué fabric.
- **Brother Scan N Cut** machine: scan the printout into the Brother Scan N Cut machine and cut the appliqué fabric.
- **AccuQuilt Go!** cutting machine: cut the heart shape using the die in this example (or use the technique for one of the dies you own).
- **Electronic cutting machine (e.g. Silhouette):** choose menu File > Export Artwork and Export the artwork shape as SVG (can be read by most electronic cutting machines), as DXF or as Adobe Illustrator format. Import into the software of your cutting machine, check the size and cut the shape.

### Embroider the Appliqué Design:

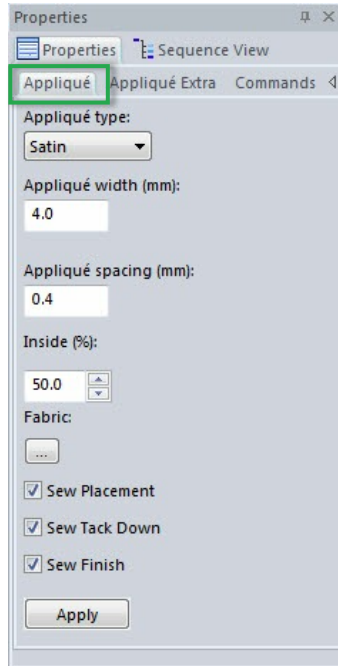
- Hoop the fabric of the project and sew the first appliqué layer: the placement layer. It will show where to place the appliqué patch. It is best to keep the hoop on the machine to prevent any distortion.
- Take the appliqué patch, spray a little adhesive spray on the back and place it carefully on the hooped fabric, inside the running stitch placement line. Again, be sure not to distort the fabric or accidentally move the hoop.
- Sew the second appliqué layer: the tack down layer. This will stitch the appliqué patch down with a running stitch.
- Sew the last layer to finish the appliqué. Then sew the final details.





## 6.11 Appliqué Properties

Appliqué Properties (after changing settings click on Apply)



**Appliqué Type:** choose between Satin, Blanket and Motif. For your first try choose Satin and click on Apply.

**Appliqué width:** width of Satin stitch.

**Appliqué spacing** (when Appliqué Type Satin is chosen): a higher value creates more space between the satin stitches.

**Blanket Density** (when Type Blanket is chosen): a higher value creates more space between the blanket stitches.

**Motif stitch length** (when Type Motif is chosen): size of the Motif pattern. Choose one of the available embroidery motifs (name starts with \_emb).

**Inside (%)**: this setting defines where the satin, blanket or motif run around the original artwork. The default setting of 50% means that half of the stitch is inside the artwork line and half of it is outside.

Example: If you are using a motif with a small width, then set this to 70% Inside, to be sure that the motif grabs the appliqué patch.

**Fabric:** show fabric in the design. See Tip at end of Chapter 6.9.

**Sew Placement, Sew Tack Down, Sew Finish:** you can choose to omit one of the layers: for example when using a Blanket, you would untick the box Sew Tackdown, to prevent the running stitches showing through the open blanket or motif.

### Tips for Appliqué

When creating a design with **multiple overlapping appliqué pieces**, it is helpful to untick the box “Sew Finish” in the Appliqué Properties tab, so that the satin will not be sewn. Then draw a separate line along the edge of the visible part. Start and end that line a little under the overlapping appliqué patch and turn into a Satin line sew type. The appliqué placement layer and tack down will secure the underlying patch and the extra satin line will finish the visible part without going all the way under the overlapping part. In Sequence View move the extra satin line to sew before the overlapping appliqué object.

My **favorite Motifs for appliqué** are “emb\_206”, “emb\_216” and “emb\_f043”.

The **tack down line is very important when using a satin finish**: if you would only have a placement line, adhered the patch and then stitch the satin finish, chances are that the denser satin will “grab” the appliqué fabric, causing it to shrink a bit. And then the satin stitches on the other side cannot reach the fabric edge anymore (ask how I know). For this same reason stay with your machine while stitching appliqué.

In **Art and Stitch PLUS** (our top level program that includes the Embroidery Module) there is an extra tab in **Properties Panel “Appliqué Extra”**, allowing you to use a small open zigzag as tack down stitch (very helpful) and allowing to change the settings of the inset values for the three layers.



### 6.12 Mini Project: Embossed towel

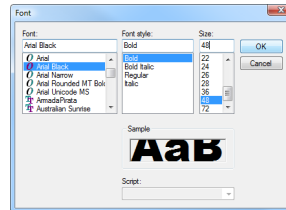
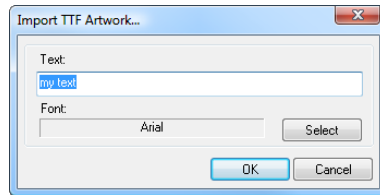
*This little project can be used as a quick gift: a towel with embossing effect - an initial “popping up” because the surrounding area is flattened by stitches. The result is a nice “hotel-type towel”.*

1. Click on the little arrow under the AutoShapes button in the Artwork Toolbar on the left. From the fly-out choose the Ellipse tool. Draw an oval. While it is selected, open the Tab Transform in the Properties Panel on the right, un-tick the box “Maintain aspect ratio” and use the following dimensions: Width 3.4, Height 3.9 inch. Click on Apply.



2. While the oval is still selected, click on the Center button in the Modify Toolbar.

3. Click on the True Type Font button - last button of the Artwork Toolbar on the left. In the Dialog window, box Text, type the initial (here “M”). Click On the button “Select” and choose font “Arial Black”. For this embossing effect you need a thick, fat, bold letter. Set the size to 48 points and click on OK twice to close the “Import TTF Artwork” dialog windows. While the letter is still selected, center it, by clicking on the Center button in the ModifyToolbar.



4. Select both objects (oval and letter) together, right-click and choose Transform Artwork > Exclude.



5. Click on the Hatch fill button in the Stitch toolbar on the left, click on the Pattern button, choose the straight cross hatch. As Style choose “Line”. In the Properties Panel on the right, Tab Fill, change the Spacing value to 2 mm and click on Apply. Save the file as EmbossingM.ans. Choose menu File > Save As and save again in the format of your embroidery machine. Save on a USB stick and insert into your machine.

#### Embroider the towel:

Hoop the towel with water soluble stabilizer on top, as well as under the towel. This will prevent the towel loops to pop between the stitches during the embroidery process. Top AND bobbin thread: same color as the towel. Embroider. Wash the towel to remove the stabilizer. Wrap in gift paper :)





## 6.13 Redwork “Auto Branching”



*Creating Redwork, an embroidery design consisting of outlines only, sewn as one continuous path, is easy in Art and Stitch: either you draw the entire design as a continuous path, or you just draw all curves and lines, be sure they are touching each other and let the program figure out the path for you.*

### Redwork drawn as a continuous path

You don't have to draw the entire design in one run. You can draw in separate objects, but be sure that everything together forms a continuous path: start drawing the next object where you ended the previous one. You must be able to follow all lines, then the machine will sew the entire design in that order too.

After finishing all parts, Select All, right-click and choose **Connect Objects**.

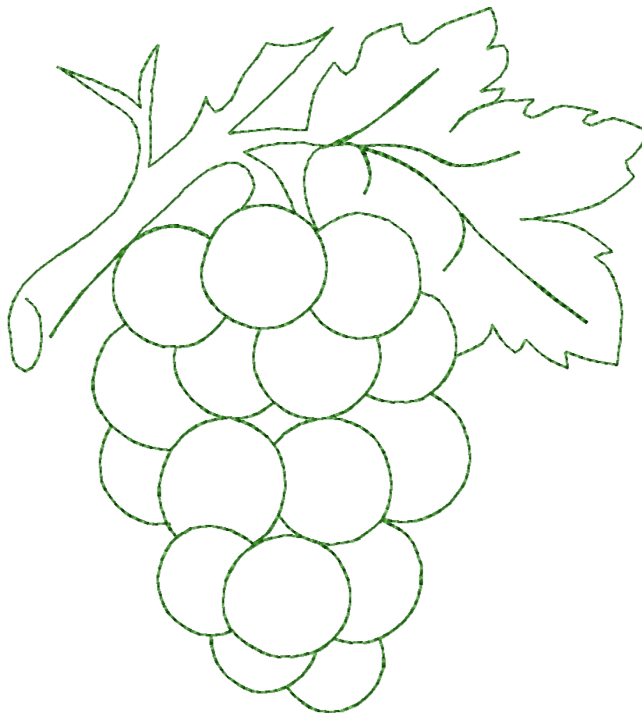
Reshape where needed.

Select the design and click on the Line Sew Type button to apply stitches to the Redwork design. In Properties Panel, Tab Run choose between a Running Stitch or a Bean Stitch (stitch length 2.5 mm is very nice for Redwork).

### Not drawn as a continuous path: Merge = “Branching” or “Auto Branching”

When the design consists of separate paths that cannot be connected, you can let the program turn it into a continuous path for you. This process is called Branching or Auto Branching. Draw or trace an image. Edit all lines. Be sure that all lines touch each other: lines not touching other lines will result in jumps. Select All, right-click and choose **Merge**.

Select the design and click on the Line Sew Type button to apply stitches to the Redwork design. In Properties Panel, Tab Run choose a Running Stitch (stitch length 2.5 mm is very nice for Redwork). As you did not draw the design as a continuous path, the program will find it for you, going over parts of a design twice or three times to stitch all of the touching parts as a continuous path without jumps.



In this example I traced image Grape231 of Dover Publication named “Floral Embroidery Designs” (ISBN 0-486-99536-4).

I used the Curve tool and traced the stem and leaf as one continuous path, one object. Then I took the 3 pt arc tool and traced the grapes. I let all grapes touch each other.

Then I selected all, right-clicked and chose “Merge”. The program created the jump free Redwork route for me. The design fits a 5x7 inch hoop and is available as RedworkGrape231 in the Library, folder Embroidery Artwork.

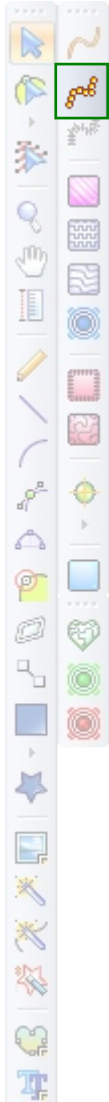
It is already merged, ready to assign a running stitch.

If you want to analyze this design, open it via the Library button, right-click and choose “Break Apart”: in the Sequence Tab you can see the various parts of the design.





## 6.14 Special stitches: Sashiko and Stem Stitch



Art and Stitch includes a collection of more than 300 Motif patterns, most of them to be used as fill stitch type and suitable as line sew type too. Motifs are beautiful to finish appliqué edges. In the Motif pattern collection there are two patterns specifically intended to use for lines only, not to be use as fill:

**Stem stitch** motif gives outlines in embroidery a professional look. The Stem stitch is similar to a bean stitch, but the stitches are not placed on top of each other, but close to each other. This makes Stem stitch lines stand out more.

**Sashiko** line motif, use it for straight lines, stitch on dark blue felt and be amazed how much it resembles a handstitched Sashiko look! A Sashiko sampler design is included in the Library. Warning: very addictive...

### Special trick to apply a Motif to lines in embroidery designs

The default motif that is applied when you click on the Motif button in the Stitch toolbar is a 1 inch large quilt motif. Much too big for embroidery designs.

Therefore instead of directly assigning a Motif, click on the first button in the Stitch Toolbar to assign a Line sew type: Running Stitch. While the object is still selected, go to Properties Panel, tab Run and change the stitch Type into Motif. Do not click on Apply yet, but choose one of the motifs made for embroidery. Names start with “emb\_”.

### Sashiko sampler

Click on the Library button in the Artwork Toolbar on the left and in folder Embroidery Artwork scroll down to select “Sashiko Sampler”.

In Sequence View select all blue items and apply a Run stitch as line sew type.

In Properties Panel, tab Run change Type into "Motif". Choose Motif Pattern \_emb\_Sashiko Line, Use Stitch length 3.6, Set Run spacing to 1.0 Click on Apply.

Use white thread on dark blue embroidery felt. The result is really resembling hand stitched work. You will love it.

Sashiko patterns are simple geometric designs and it is easy to get addicted to making your own Sashiko patterns in Art and Stitch!









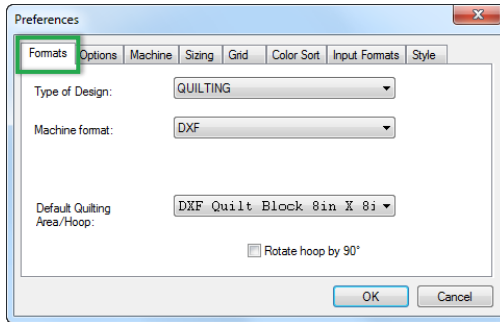
# 7. Organizing

Here in Part 7 you will find important organizing tips:

How to save, know where to save and know where to find things. How to create and print a catalog and how to export your design as an image.

## 7.1 Menu Tools > Preferences

Various settings can be set as default via menu Tools > Preferences

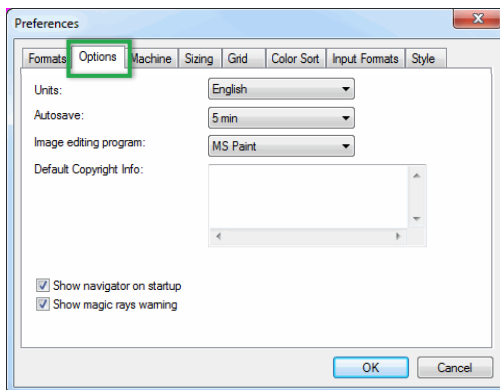


### Formats:

**Type of Design:** choice between QUILTING and EMBROIDERY.

**Machine format** for longarm quilting is DXF, which represents all computerized quilt formats.

Embroidery machine formats can be set to: DST, EXP, HUS, JEF, PES, PCS, SEW, VIP, XXX, SHV, VP3. Which to choose depends on your embroidery machine. See your machine's Manual.



### Options:

**Units:** choose between Metrics (mm) and English (inch). It's better to make this choice by right-clicking in a ruler. Important: When you change it here, click on OK before changing any other Preferences.

### Autosave

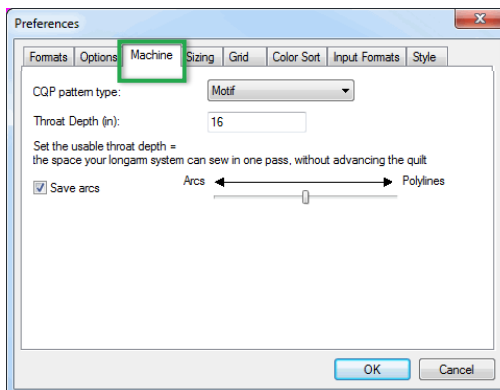
can be set to 1, 3, 5 or 10 minutes or turned off.

**Image editing program:** Default is MS Paint, or browse to another paint program on your computer.

**Default Copyright Info:** type your text here and it will automatically appear in the Properties Panel > Notes tab, for all new designs. A time saver for pattern designers :)

In Options, you can turn the **Navigator** off if you don't want navigator to show when you start Art and Stitch.

Useful: when taking the Magic Rays tool, you are asked if your shape is a simple closed one. That extra **warning** prevents lots and lots of waiting time if you clicked on the tool by mistake. Here in Options you can turn the warning off.



### Machine (for longarm quilting) - Ctrl+T:

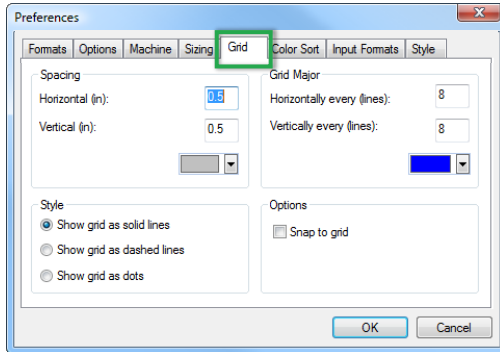
Before saving in a longarm quilt format, choose the desired settings here. It will add the right properties/tags to the various files.

**CQP Pattern Type:** Before saving a pattern in CompuQuilter's CQP format, choose between Motif, Repeatable (be sure first and last point are on the same level) or Corner.

**Throat Depth:** Set the usable throat space: the space your longarm machine can sew in one pass, without advancing the quilt. See Part 4 - Setting up a full quilt layout.

**Save Arcs:** For quilt systems that read arcs (Statler QLI, ABM Innova PAT), Middle setting means that the arcs that are more 'clear' are saved as arcs. This setting doesn't allow for much deviation when saving them. This produces better results: your output will be closer to the original design. The file will contain more stitches though than with the slider bar at the maximum arcs setting. Other quilt systems use polylines and will ignore the setting.

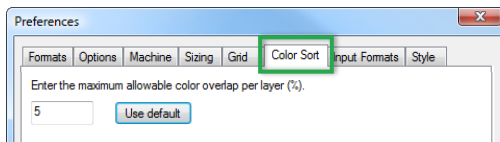
7.1 Menu Tools > Preferences



**Grid:**

Can also be set by right-clicking in a ruler. This dialog window lets you change the color of the grid lines, change them into dashed or dotted grid lines, and set extra help lines “Grid Major” in a color of your choice.

The settings are very helpful in digitizing (combine with snap to grid on or off) and in setting up a full quilt, to align blocks.

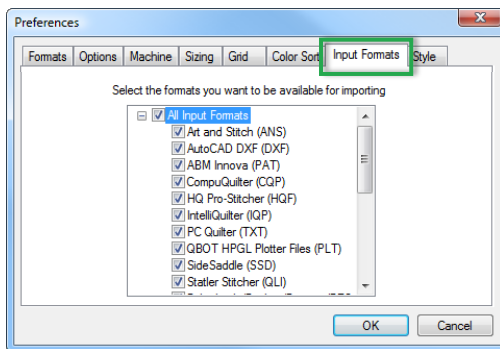


**Color Sort (for embroidery digitizing):**

The Color Sort function in the Modify Toolbar will try to combine the same colors in a design to be sewn together, preventing unnecessary thread changes. This will change the sewing sequence when two or more parts are using the same thread color.

Here in Preferences, tab Color Sort, you can enter the maximum allowable overlap per layer in percentage. Default setting is 5%. This tells the Color Sort function that it is okay to change the sequence, even if 5% of a region is overlapping another region. Setting Color Sort to a higher value, means that you allow it to change the sequence even if a larger part is overlapping.

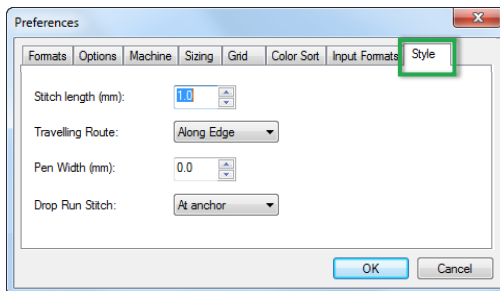
*Important: Do not change to a higher value if overlapping parts (for example shading) must be sewn on top.*



**Input Formats:**

Here you can select which file types are showing in the File > Open dialog window, the Browser Function and the function Print Catalog. Default setting is to show all quilting and embroidery formats which can be opened in Art and Stitch.

It may come in handy to show for example only the .ANS files: that way you won't accidentally open a quilt format when you want to resume work on a pattern made in Art and Stitch. You can print a catalog only showing your original .ANS patterns and not the saved quilt or embroidery formats.



**Style:**

Here you can set your preferred stitch length, traveling route (along edge or along middle), the pen width for artwork and Drop Run Stitch (to None, at Anchor or Chord Gap).

The tab **Sizing** is only available in the optional Embroidery Module. It lets you choose to “Keep original stitch length” when opening existing designs, or set a minimum and maximum stitch length.



## 7.2 Open existing designs



To open an existing pattern, choose one of the following methods:

Choose File > Open, click on the Open button in the General Toolbar, or use shortcut Ctrl+O.

To open multiple patterns on one Design Page: Choose menu File > Import Stitch file (this will open a copy, keeping the original unchanged).

You can open the following formats:

### Source format of Art and Stitch:

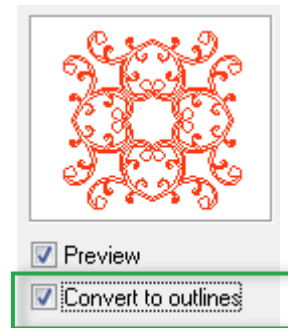
Art and Stitch (ANS)

### Computerized quilt formats:



Tip: when opening one of the computerized quilt formats, it is a good idea to tick the box “Convert to outlines”, so that you can convert the stitch based file into artwork, using the Back to Artwork button under the Stitch Toolbar, but... when the design was made in Art and Stitch, then **it is always better to open the source .ANS format!**

- AutoCAD DXF (DXF)
- ABM Innova (PAT)
- CompuQuilter (CQP)
- HQ Pro-Stitcher (HQF, HQV)
- Handi Quilter Rec. (TAP)
- IntelliQuilter (IQP)
- PC Quilter (TXT)
- QBOT - HPGL Plotter Files (PLT)
- 4QB files (4QB)
- SideSaddle (SSD)
- Statler Stitcher (QLI)




Tip: Some quilt systems can **record and save freemotion work**. When opening the result in Art and Stitch you will see in Reshape mode that those recorded files have lots and lots of points. Take the Select tool, right-click and choose Simplify or Simplify Smoothen to improve the result, as explained in Chapter 2.5.16. Sometimes it's more efficient to retrace it with the Curve or 3 pt Arc tool, using as few points as possible, instead of spending hours on editing, moving, deleting points to perfect a recorded pattern. To make retracing easy: select the original and lock it to the Design Page by clicking on the Lock icon in the Properties panel > Sequence Tab. Using a different color makes tracing a breeze. After tracing, unlock and delete the original.

### Machine embroidery formats:

Tip: when opening one of the machine embroidery formats, only tick the box “Convert to outlines” if you want to resize it. Never bring an embroidery design “Back to Artwork”.

- Baby Lock/Brother/Bernina (PES, PEC)
- Bernina (ART)
- Elna/Janome/Kenmore (SEW)
- Janome/Elna (JEF)
- Melco/Bernina (EXP)
- Pfaff (PCS)
- Singer (XXX)
- Tajima (DST)
- Viking D1 (SHV)
- Viking (HUS)
- Viking/Pfaff (VIP)
- Viking/Pfaff (VP3)

When opening **existing embroidery designs not made in Art and Stitch**, you can change the size, colors, color order. You can combine designs. You can delete parts of a design and you can edit stitch by stitch, using the Stitch Edit button, under the Reshape tool in the Artwork Toolbar. 

You cannot change stitch types or motifs used in the design or change the density of an existing design. That can only be done in the software used to create the original design. See Chapter H - “Editing Embroidery Designs” (Embroidery Manual, open via menu Help).





---

## 7.3 Saving a design



Always save your design in an early stage in the “source” format of Art and Stitch: .ANS. Give your designs a descriptive name, and create separate folders for different types / categories of designs.

While working on a pattern, save it at regular intervals by clicking on the Save button in the General toolbar or by pressing Ctrl+S. Once it is ready, then apply stitches. Save as .ANS first and then choose menu File > Save as and save in the format needed for your longarm system or embroidery machine. Choose the format of your machine and do not use “All Quilt formats” or “All Embroidery Formats”, as that is a batch save function to create multiple files of the same design in the supported formats.

You can save in:

**Source format of Art and Stitch:**  
Art and Stitch (ANS)

**Computerized quilting formats:**  
AutoCAD DXF (DXF)  
ABM Innova (PAT)  
CompuQuilter (CQP)  
HQ Pro-Stitcher (HQF)  
HQ Pro-Stitcher (HQV)  
IntelliQuilter (IQP)  
PC Quilter (TXT)  
QBOT - HPGL Plotter Files (PLT)  
SideSaddle (SSD)  
Statler Stitcher (QLI)

Windows Metafile (WMF)

**Machine embroidery formats:**  
Baby Lock/Brother/Bernina (PES v8)  
Baby Lock/Brother/Bernina (PES v7)  
Baby Lock/Brother/Bernina (PES v6)  
Baby Lock/Brother/Bernina (PES)  
Elna/Janome/Kenmore (SEW)  
Janome/Elna (JEF)  
Melco/Bernina (EXP)  
Pfaff (PCS)  
Singer (XXX)  
Tajima (DST)  
Viking D1 (SHV)  
Viking (HUS)  
Viking/Pfaff (VIP)  
Viking/Pfaff (VP3)

### Tips:

- Artwork alone (vector objects) cannot be saved in quilt or embroidery formats. Therefore if your pattern is not ready yet, just save in the source format .ANS.
- Once stitches have been applied to a pattern, it is optimized for quilt systems / embroidery machines and then the pattern can be saved in the format your machine requires. See the formats listed here.
- Never reopen a machine format that was made in Art and Stitch: to edit a design always open the original source format .ANS.
- **“Warning: The current design does not fit the current hoop. Do you still want to continue?”**  
*Ignore and click “Yes” for quilt formats (they are not limited to a hoop size). Definitely click “No” for embroidery files, as those MUST fit in the chosen hoop. Resize or choose another hoop.*
- Art and Stitch remembers the last used location for opening and saving designs and backdrop images. Therefore it is a good idea to use the special folder for your own designs in My Documents > Art and Stitch My Designs (create sub-folders for special categories if you wish). Once you have opened or saved a design in that special folder, next time you open or save a design Art and Stitch will go to that same folder.
- Copy the designs from that folder to a USB thumb drive and insert it into the machine.
- If your embroidery machine does not have a USB port, then transfer the design to your machine with the same method you are using to get downloaded or purchased embroidery designs into your machine.

Although Art and Stitch can read Bernina’s .ART format, it cannot write in .ART format. Instead save as Melco/Bernina .EXP, which can be used in Bernina embroidery machines. Print the design including the “Color Analysis”. Keep the printout as a thread color reference during embroidering.



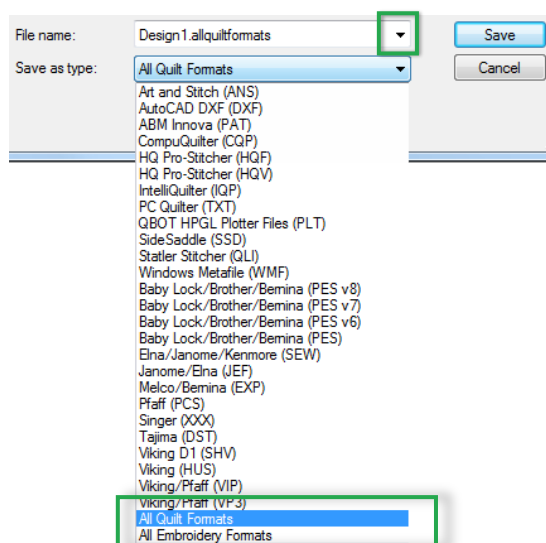
### 7.3.1 Batch save function for designers

This is a very nice time saver for quilt pattern designers and embroidery digitizers, who want to sell or share their patterns in all available quilt or embroidery formats. You create the set of files in one step.

Always save your design in an early stage in the “source” format of Art and Stitch: .ANS.

When the pattern is ready to be saved in all quilt formats, add a copyright note / designer name in the Notes field in the Properties panel. Check in menu Tools > Preferences > Machine (Ctrl+T) if all settings are right: e.g. Motif, Corner or Repeatable checked for CompuQuilter. Then you can save it in one step in all supported quilt formats:

- Choose menu File > Save as.
- Navigate to the folder where you want to save the files (or make a new folder to keep all formats of the same pattern together)
- Click on the little triangle next to the “Save as type” box to open the drop down list of file types
- Scroll down and select the line “All Quilt Formats”.



Then click on “Save”.

The pattern will now be saved in the selected folder in all supported quilt formats.

All files will be saved in the chosen folder and will have the same file name, with a different file extension for each of the supported quilt formats.

*When saving in All Quilt Formats you can ignore the warning that a pattern is larger than the hoop size. Important: this warning cannot be ignored when saving in All Embroidery formats.*

We have chosen not to combine the batch save function as one step in ALL formats, as embroidery designs are typically smaller than quilt patterns.

See Tip below.

#### Tips about saving in “All Embroidery Formats”:

It is important to check the size of the embroidery design before using this function.

The design should fit the hoop sizes of all available embroidery machines to be able to use this Batch save function. Which means that the design cannot be larger than 4x4 inch (100x100 mm). The SEW-format is even smaller than that. If your design is larger, don't use the batch save function, but save individually in each of the embroidery machine formats: first choose the proper hoop via Tools > Select Quilting Area / Hoop, choose the format and choose a hoop size. Resize the design to fit the chosen hoop. Then save in that format.

This function is provided as is. Depending on the complexity of a pattern it might not be suitable for all formats. In case of errors, the solution is to manually save in each of the available formats.



---

### 7.3.2 Tips for Designers: Special requirements for various quilt formats

**Always save in the format of the quilt system itself!** Now that you have Art and Stitch, never use DXF format anymore. All quilt formats are much more efficient than a DXF. Quilt systems can open DXF files, but they still have to translate this DXF into the system's own "language"! Art and Stitch saves directly in that more efficient language of the quilt systems. The DXF format is made for architects and engineers, Art and Stitch is made for quilters and machine embroiderers.

#### Tell your customer: do NOT make a design larger outside Art and Stitch

As Art and Stitch is vector based, you can resize to any size inside Art and Stitch, but do not resize outside Art and Stitch. Making a design smaller is fine, but enlarging it outside Art and Stitch may result in edgy blocky lines. To be on the safe side, make a design larger, so that - if any resizing would occur - a user would only tend to make it smaller, not larger. See Chapter 2.9.

#### Sending designs per email: ZIP them

When sending designs in quilt or embroidery format per email, compress them first, to prevent that they end up as long lines of text inside the email. Especially PAT files are sensitive and must be zipped.

#### CompuQuilter: "Tags" Motif, Corner or Repeatable, Fixed Index

Some systems require extra "tags": for example CompuQuilter wants to know if the design is a Motif, a Corner, or a Repeatable pattern. You can set that in menu Tools > Preferences > Machine (Ctrl+T). The fixed index for CompuQuilter can be calculated as follows: align two rows manually on the Design Page, take the Measure tool and measure the distance between the two rows. Or select one row, use the Repeat function, tick the box Distance between Centers, and use the little up or down arrows next to Vertical Distance to align the rows. Then make a note of the Vertical Distance value and use this value to set the index in the CompuQuilter system.



#### Pro-Stitcher, PC Quilter and Side Saddle: Initial Jump

Pro-Stitcher, PC Quilter and Side Saddle users can set an initial jump: click on the little arrow of the button "Initial Jump for .HQF and .TXT" under the Stitch Toolbar. See Chapter 3.4.

#### Statler Creative Studio: Arcs, First and Last commands, other special requirements

Statler's Creative Studio and ABM Innova prefer Arcs. Art and Stitch writes as arcs per default and the slider bar in Tools > Preferences > Machine is therefore set to the optimal position: the middle.

**First and Last commands needed for Statler Stitcher are automatically added when a pattern is saved in QLI format.** So you do not have to add macros. Therefore save in the format of the targeted system and test the pattern.

#### About Pauses or Thread Changes - Dashed jump lines

- If you want the pattern to sew in one continuous run, be sure that all parts of the pattern are one continuous path and that all objects are connected into one object.
- If you want the machine to pause, to change thread colors, then do NOT connect the parts. The program will automatically add a dashed "jump"/ "no sew" line.
- To be able to change thread colors in Statler Creative Studio, we have added extra macros: do not connect the parts if you just want a pause. If you also want the machine to stop for a thread change, then use different colors for the various objects. When sewing the pattern, your system will stop at each color and allow you to change the thread.

**Use the Sew Simulator** to check the pattern before saving. You might have accidentally copied and pasted a pattern and then you end up with double lines, or maybe the pattern sews in reverse order. So always check the Sew Simulator at the bottom of the Art and Stitch window.



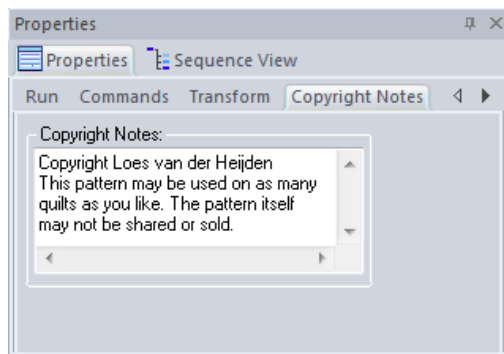
### 7.3.3 Copyright Notes and Notes on the Design Page

#### Copyright notes

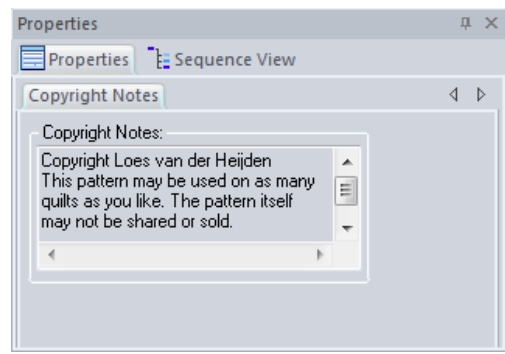
Use the Copyright Notes field (click on the Copyright Notes tab in the Properties Panel), to add your name, date and anything you want to remember about this specific pattern. Very useful for patterns in progress, to remember important notes and instructions to yourself. Once a pattern is ready, enter your name / copyright notice and save with a proper name in the right folder.

Copyright Notes are included in the saved file. Also when saved in longarm quilt formats which support (copyright) notes, such as .CQP, .HQF, .PAT, .QLI, .PLT. For the QBOT .PLT format, copyright notes cannot be more than 20 characters. Other systems support more characters, but don't write a novel!

TIP: You can set a default copyright note in menu Tools > Preferences > Options.



Add copyright notes to your designs



Copyright Notes in existing quilt patterns cannot be edited or removed

#### About copyright information in existing quilt patterns

When an existing quilt pattern contains copyright information, that information is carved in stone and cannot be edited or removed.

Art and Stitch will not open designs that are password protected, or encrypted by the original designer, e.g. password protected IntelliQuilter files, or .PAT-files made and encrypted by Gammill's Creative Studio.

*Please note that the supported .PAT format in Art and Stitch is the pattern format of ABM Innova, which is not the same type of file as the encrypted .PAT files of Gammill's Creative Studio.*

#### Placing notes on the Design Page



Notes on the Design Page are different from the Copyright Notes described above. Notes on the Design Page will NOT end up in any quilt or embroidery format. The notes can be printed along with the design: handy for printable pantos, to number patchwork pieces, for class handouts etc.

To **place notes** on the Design Page, click on the Notes button (most right tool in the Modify Toolbar), click on the desired place in the Design Page and type your text. You can **move the notes** by selecting and moving. A selected notes object shows a dashed rectangle around it. You can **recolor notes** by picking a different color from the palette and you can **edit and rotate notes** by selecting the notes on the Design Page and changing the settings in the "Notes" tab in Properties panel. **Show/Hide notes** is done by clicking on the Show/Hide Notes button. When Notes are hidden, they will not print. To **delete notes**: select the notes object and press Delete on your keyboard.



---

### 7.3.4 Organizing your design files - Tips

#### Get organized: Create folders in categories

The most important thing when saving designs is knowing where to find them again! Here are some tips to make that happen:

1. Take the time to think about how to set this up: imagine that - in a year from now - you want to find a design you made today. How would you search? That is how you have to name your designs and create your folders now.
2. Use descriptive names.
3. Create folders for each category: for your own digitized files, keep the original .ANS file in a safe place, for example in a folder named "Source ANS format". Save the quilt or embroidery files in categories.
4. Make separate folders for purchased designs, per designer name, or also as categories. Downloaded freebies are easily found when you save them in a folder named after the website where you downloaded the file. That will also prevent you from downloading that same design again.
5. Make a folder for "Patterns in Progress": clean it every day, save the files which are ready in the "Source ANS format" folder and the right category folder and delete the tryouts which will not be used.
6. Use the folder Documents > Art and Stitch Backdrops > My ANS Backdrops for your background images to be used as inspiration to trace and create your own patterns.
7. Once you're all organized, create a Catalog of your designs - to print for your customers to choose from, or to save as a PDF on your computer, via menu File > Print Catalog. It's a great way to keep track of your designs. See Chapter 7.7.
8. Backup your special files that reside inside the program (motifs, paths for Design onPath etc). See next Chapter 7.3.5
9. Make a daily backup of your designs on an external drive. And keep a second backup somewhere else (not at home). Not only of your design work in Art and Stitch but of all files you create or edit during the day in other programs as well. There will be a time, that you are so happy to have a backup. Hopefully there won't be a time that you think "my gosh, I wish I followed up on that great Tip 9 in Chapter 7.3.4 in the Art and Stitch User Guide..."





## 7.3.5 Backup and Restore special User Files


### Backup

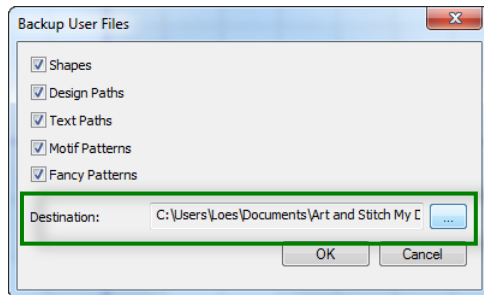
Via menu Tools > Backup User Files you can let the program make a backup of the following special types of files saved by you via menu Tools:

- Designs you saved into the Library (folder “My Shapes” only),
- Paths for the Design on Path function,
- Paths for the Text on Path function (Embroidery Module),
- Motif patterns,
- Fancy patterns (Embroidery Module).

For this purpose a special backup folder has been created during the installation of Art and Stitch, as a sub-folder inside the folder “Art and Stitch My Designs” in My Documents, named “Backup of my Motifs and Library patterns”.

#### Step 1

Choose menu Tools > Backup User Files and set the destination. Click on the dotted button  and navigate to the desired folder.



It's a good idea to use the folder made for you by the program: “Backup of my Motifs and Library patterns” in My Documents\Art and Stitch My Designs.

When the Destination folder has been set, click on OK. The special types of files listed above will be copied to the destination folder inside their own sub-folders.

Important: Do not change the names or structure of the various sub-folders made during the backup process.

#### Step 2

Outside Art and Stitch, using Explorer, make a copy of the folder Documents \ Art and Stitch My Designs (including the Backup sub-folders inside). Copy the folder to an external drive and keep that in a safe place. When disaster strikes, this is the backup drive you need to restore the files. Make it a habit to backup frequently AND to keep the copy on the external drive updated as well.

### Restore the backup files

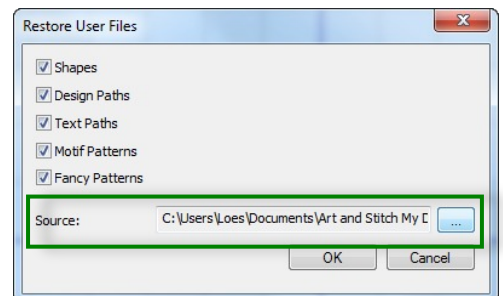
#### Step A

On your new or repaired computer, after the reinstallation of Art and Stitch, copy the backup folder made in Step 2 above from your external drive into My Documents.

#### Step B

To restore the back up files, choose menu Tools > Restore User Files.

Navigate to the Source folder copied from your external backup drive. Click on OK.



Your own special files - Shapes, Design paths, Text Paths, Motif and Fancy patterns - will now be listed again in the right locations.



## 7.4 Browser - A quick way to find all patterns

Use the Browser function to quickly see all designs in a folder or on a drive

Don't know where that pattern is? Use the Browser function to find it.

See important tips on the previous pages how to organize your design files, save with the right names, in the right folders, create categories etc.

1. Choose menu File > Browser.

**IMPORTANT: Do NOT click in one of the bold squares or on a folder name yet !!** If you would click on a square in front of an entire drive, the program starts searching the entire drive which takes a lot of time.



**Only click on a plus sign** to open the tree of folders and navigate to the right folder.

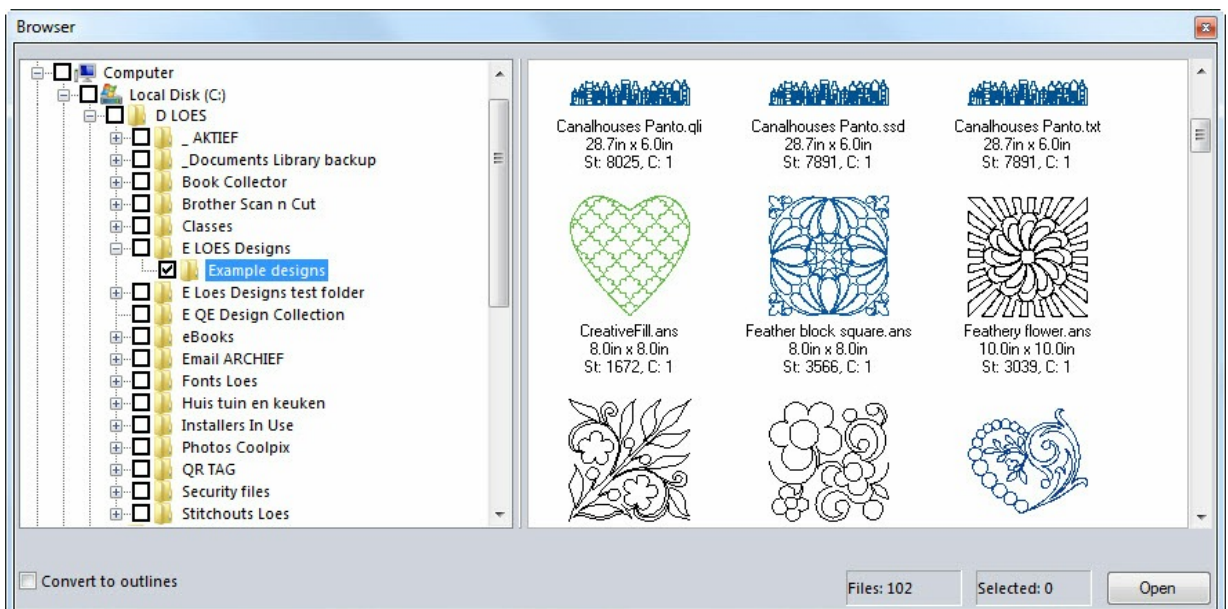
You can resize the window and move the panel divider to fit the tree of folders.

2. Once you have found the folders with your designs, click in the squares of the folder(s) you want to open with the Browser function. In the example below I navigated by scrolling down in the left pane, and opening up the tree of folders by clicking on the plus signs.

The patterns in the selected folders appear as thumbnails on the right side.

3. Select the desired pattern by clicking on it. You can select multiple patterns at once by holding down the Ctrl key and clicking on the patterns you want to open.

4. For existing quilt patterns - NOT made with Art and Stitch - you can tick the box "Convert to Outlines" in the lower left corner of the window, so that you can turn them into artwork to edit.



## 7.5 Print, Print Setup

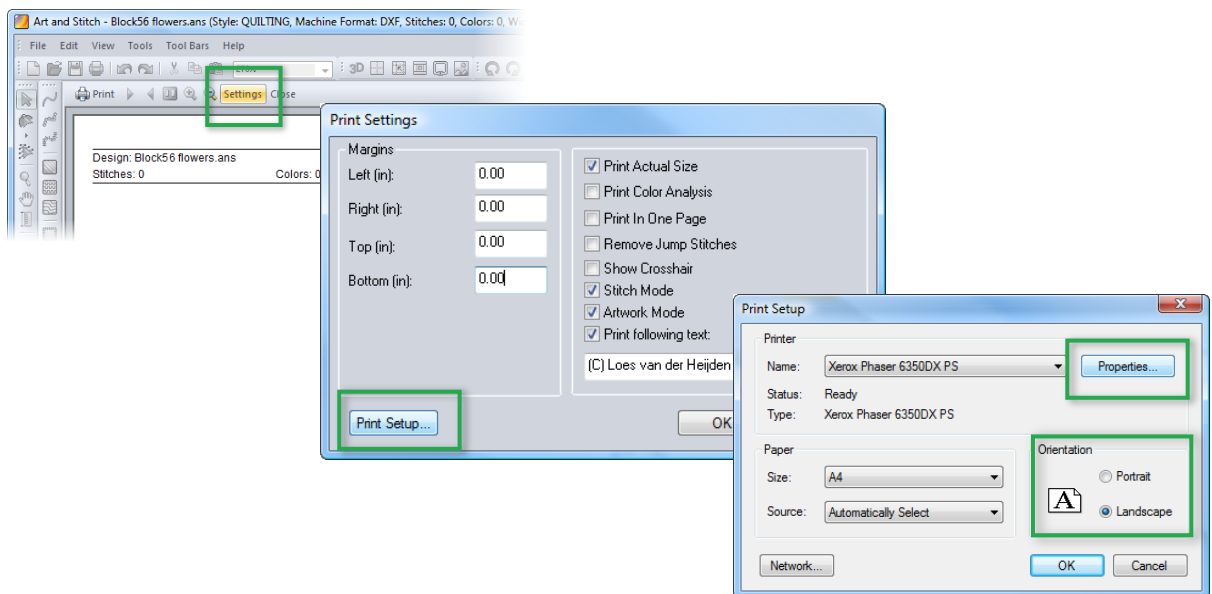
To print patterns, Art & Stitch offers a wide range of options. The various options are useful to print pantos at actual size and create your own panto rolls. Also handy to print embroidery patterns at actual size - with or without center crosshairs, so that the print-out can be used for perfect alignment of the embroidery on the garment. Below is a description of the various options.

The print settings remain the same (including the copyright text) until you change them again.

Before printing a pattern, select it, and check the size via Properties Panel > Transform tab. Enter the desired size and click on Apply.



**Step 1.** Click on the **Print Preview** button and click on the button **Settings**. In the Print Settings Window click on the button **Print Setup**.



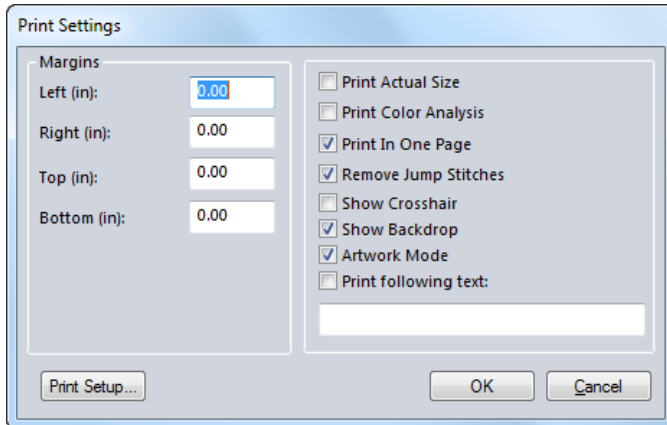
**Step 2.** In the **Print Setup** window choose the desired settings:

- Choose orientation Landscape or Portrait.
- Choose the right printer (if you want to create a PDF, choose a PDF writer - see Tip in Chapter 7.7 "Print Catalog").
- If you have a large paper printer, click on Properties > button Advanced and choose the desired paper size. This is also needed when you are going to send a PDF of a large pattern to a print shop.
- Click on OK.
- These settings will be remembered, so you won't have to change those until you want to print on a different type of paper or use another printer.



7.5 Print, Print Setup - Cont'd

**Step 3.** Back in the **Print Settings** window, choose the desired settings for the actual print out:

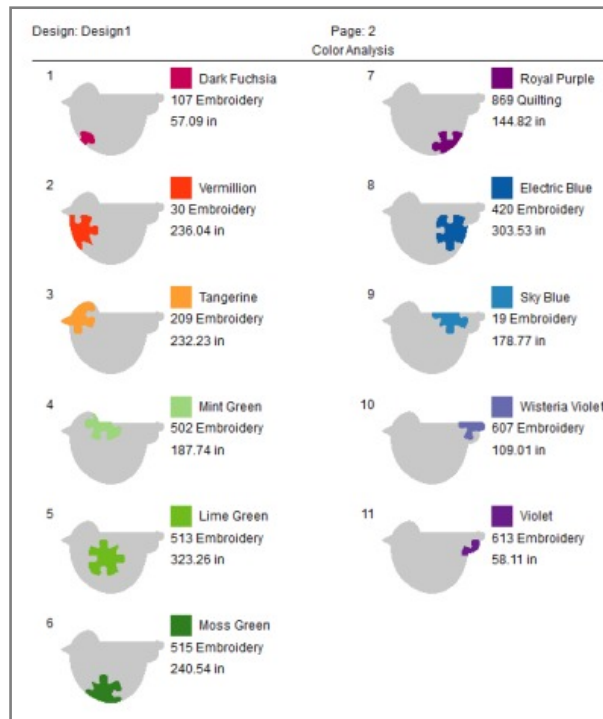


**Margins:** set all margins to 0.00. That way the default printer margins will be used, which are as small as possible.

**Print Actual Size:** when you are going to use a pattern as a template or as a panto, then this box must be ticked.

**Print Color Analysis:** for colored (embroidery) designs. With this option turned on, a page will be printed showing all colored objects, each color inside the grayed out total design. The thread color number is showing, as well as the length of thread needed.

**Note:** When “Print in One Page” is turned on, Color Analysis will show small color swatches instead of the shapes.



*Print Actual Size  
Print Color analysis*



## 7.5 Print, Print Setup - Cont'd

**Print in One Page:** to print the pattern on one page, no matter the actual size. At the top of the print out you can read the scale % up to 3 decimal points. To calculate the measurement of the printed design: measure on the paper, divide by the scale percentage and multiply by 100. This will be as accurate as the ruler you use to measure the printed design.

**Remove Jump Stitches:** when ticked, jumps (in Stitch Mode) will not show in the print-out.

**Show Crosshair:** turn off for pantos which print over multiple pages. Turn on for embroidery patterns as a help in aligning the pattern on the garment.

**Show Backdrop:** when ticked the backdrop will be included in the print out in the same lightness as used on the design page. This function is great to **audition designs**. Open a photo of your (customer's) quilt and put designs in place. Print several design options to show your customer. Tip: you can also print as a PDF to send to your customer.

*Note:* only the part of the backdrop where a design is on top will be printed (see left image below). If you want to include the full backdrop image in the printout, draw a rectangle as big as the backdrop, then print (see right image below).



*"Artwork" mode unticked. Only the stitch based part and its backdrop area will be included in the printout.*



*"Artwork" mode ticked and rectangle drawn around backdrop. Full backdrop will now be included.*

**Artwork Mode:** when ticked all design parts will be included in the print out, not just the stitch objects.

**Print following text:** here you can enter a copyright note and/or name of the designer. The text will be printed at the top of the Color Analysis page as well as on the page with the full design. Notes entered in the Notes field (Properties Panel) will be printed at the bottom of the last page.

**Step 4.** Click on OK and **click on Print**.

Large patterns printed at Actual Size will be divided over multiple numbered pages, with dashed margin lines, for precise aligning.

Note: Before clicking on Print you can **influence the position of the designs on the sheets of paper**. See description on the following page.



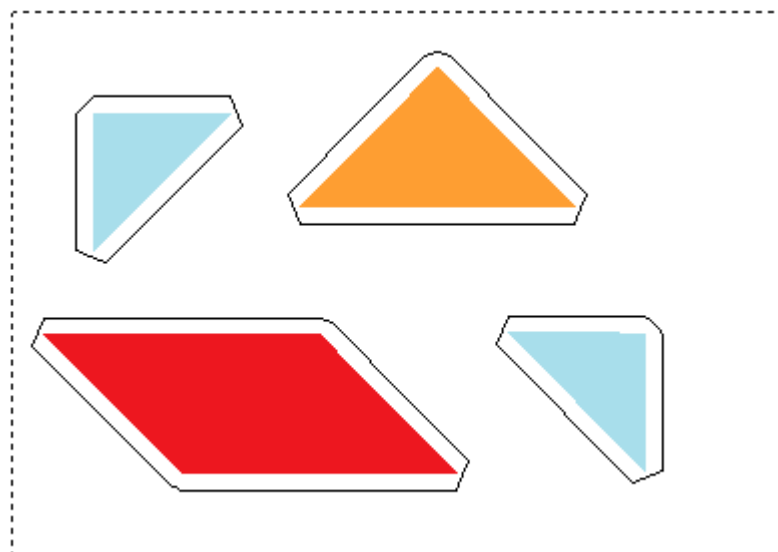
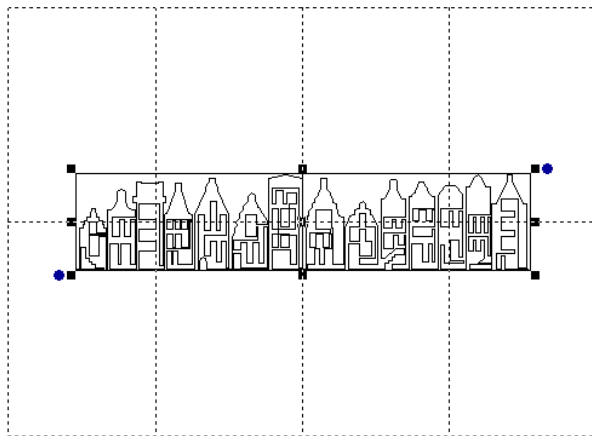


### 7.6 Preview of print out on Design Page



With the Page Preview button in the View Toolbar you can see where a pattern will be printed on paper. The dashed lines represent the pages. Page size and orientation are taken from your print settings. For larger designs you will see multiple pages.

You can influence where the pattern will be printed by simply selecting the design and moving it to the desired location in the dashed lines. Helpful for pantos to use as few sheets of paper as possible and also for patchwork templates, to prevent that templates are divided over multiple pages.





## 7.7 Print Catalog

### How to create and print a catalog of your patterns.

A catalog can be used to let your customer choose a pattern, or you can “print” a catalog as a PDF, for yourself or to use on a website.

Follow the tips on the previous pages and organize your files in folders and categories. You can print a Catalog per folder, so if the folder is well organized, your catalog will be organized too.

For often used designs, open the design, use the Repeat function and make a separate design with a few repeats horizontally and vertically. Save under the same name and add “Repeat” after the design name. It will show up in the catalog and your customer will be able to see how the pattern looks when it is repeated.

#### 1. Choose menu File > Print Catalog

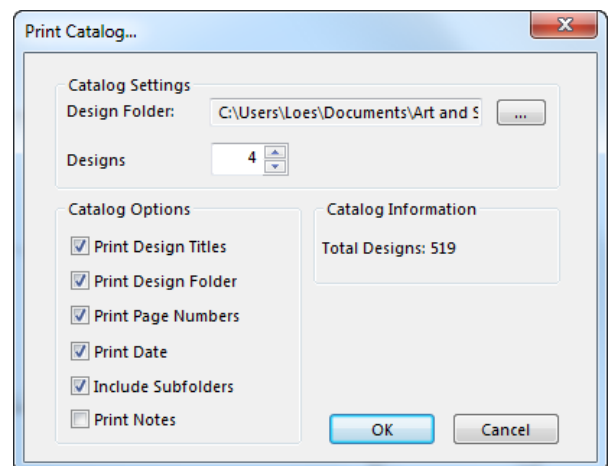
A window opens where you can choose the following settings:

Browse to the folder of which you want to print a Catalog

Set the number of columns (between 2 and 20). 3 columns will create thumbnails which are large enough to judge a pattern from. 4 columns will create a catalog with smaller thumbnails = fewer pages to print. Any higher number will make the thumbnails very small.

Choose the following Catalog options, if you want to print the:

- Design Titles under each thumbnail,
  - Design Folder name (very handy for yourself to know where a pattern is saved on your computer),
  - Page number and/or
  - Print Date.
- 
- Include Subfolders: check this option if you want to include subfolders, then browse to the “parent” folder of your designs collection.
  - Print Notes: for a catalog you want this unchecked, as notes cannot resize and might partially cover the thumbnails.

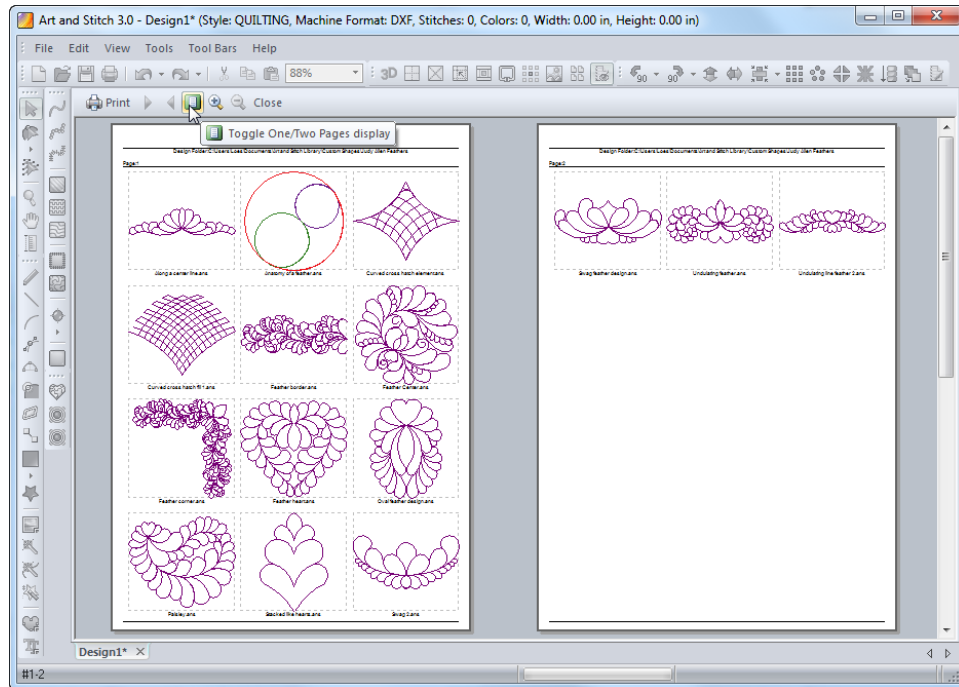


Before printing a catalog, it can be worthwhile to change the Input Formats in menu Tools > Preferences: un-tick the box All Formats and only tick Art and Stitch (ANS). That way only the ANS source files will be included in the catalog. You can set it to any type of file.

7.7 Print Catalog

2. When all is set, click on **OK**. The Print Preview window opens and you can preview the Catalog. If you change your mind and want larger or smaller thumbnails, click on Close and repeat the first step. Use a different number of Columns.

3. When the result is OK, then click on **Print**. To “print” as a PDF, see next tip.



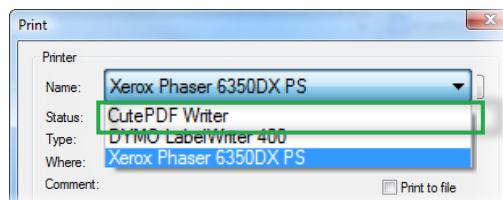
**Tip: “Print” a catalog as a PDF**

To create a catalog for yourself, or to use on your website, you can click on Print and then on a PDF writer if it’s installed on your computer.

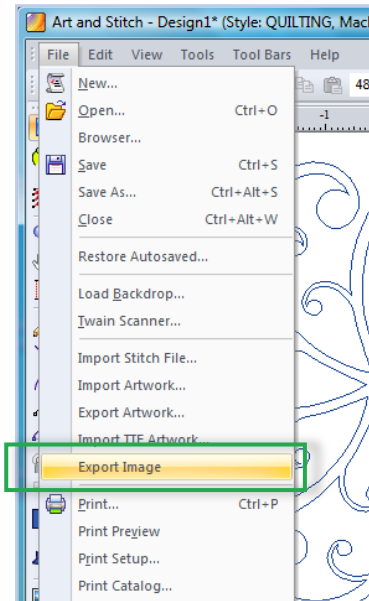
A good PDF writer is the full version of Adobe Acrobat (not just the free Reader). If you don’t have Adobe Acrobat, then a good alternative is for example a free program called CutePDF Writer, which can be downloaded and installed from <http://www.cutepdf.com>

After the installation you can create PDFs from anything on your computer that can be printed. Just click on Print and from the list of installed printers choose CutePDF Writer. Name the file, navigate to the folder where you want to save it and the PDF will be created for you. For a PDF catalog with more than 100 designs, give it ample time and better choose 4 rows than 3.

CutePDF is a third party program - we don’t have any affiliation with the company, we just like it :)



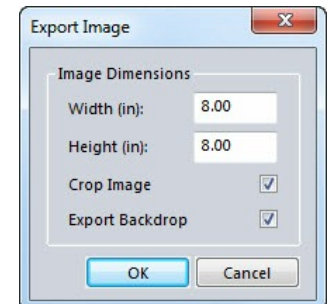
## 7.8 Export as Image



You can make an image of your drawing by choosing menu File > Export Image.

A “Save As” dialog box opens where you can choose the location where to save the image, choose the File format: .BMP, .JPG or .PNG and decide if you want the backdrop included.

After naming the file and choosing the file format, a new box opens where you can change the size of the image if you wish. The default size is the actual size of the patterns on the design page. If you want to change the size, you just have to change either width or height.



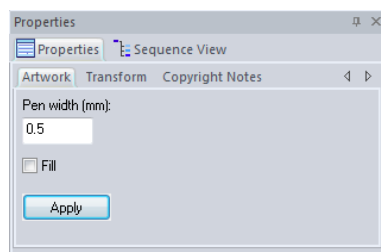
About a quarter inch extra space is added around the pattern. If you don't want the extra white space, then tick the box “crop image”.

Tick the box “Export Backdrop” to **audition designs**. See description in Chapter 7.5, last page of Print Setup.

### Images for a webpage

To use the image for a website, choose .JPG or .PNG format (.BMP files would be too big). For a large pattern change the Image Dimensions to a smaller value in the Export Image window.

### Look and feel of the lines in the image



The line width, color, fill and look of an exported image is the same as the pattern on the Design Page when exporting. If you want the lines to be thicker, then - before exporting as image - select the pattern on the Design Page and in Properties Panel, tab Artwork, change the Pen width to e.g. 0.5 and click on Apply. Play with the Pen width settings to find your own favorite width.

When you assign stitches to the pattern and turn 3D view on in the section Show/Hide, you will get a very nice image too.

See examples on the next page.

#### Tip: Use Export Image to make a template for tracing

Export image is a great way to just start doodling, drawing and make a casual pattern on the Design Page and then turn this not-so-perfect-pattern into a template and trace it. Many times it is quicker to “just draw” something first and worry about the continuous path later. Then export this pattern as image. Open a new Design Page, click on the Backdrop tool and open your own exported doodle. Take a drawing tool and start tracing your doodle “for real”, thinking ahead of the sequence / continuous path and drawing the yes-it-is-now-perfect-pattern.



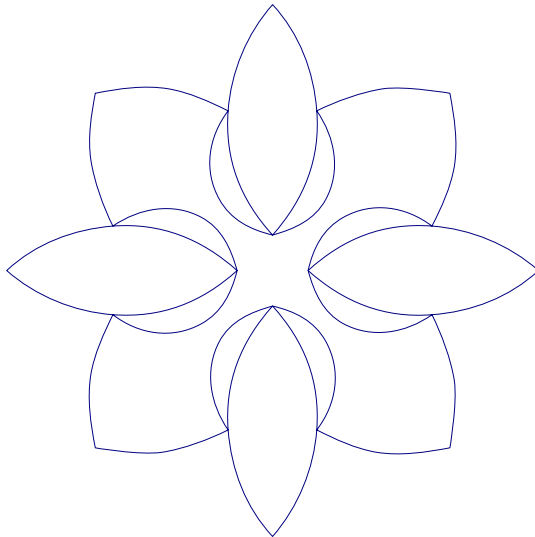
7.8 Export as Image

What you see (on the Design Page) is what you get (in the exported image):

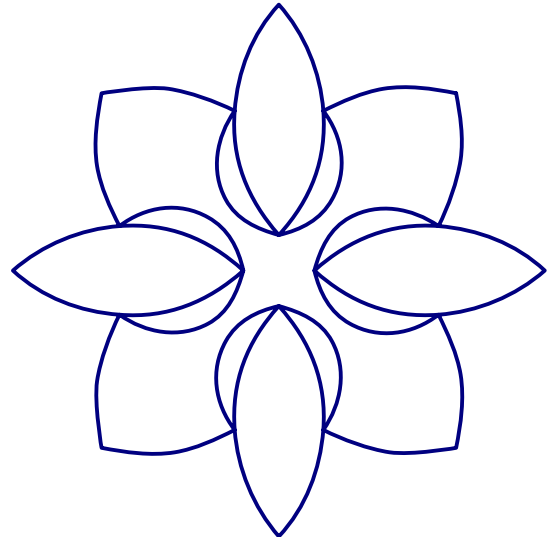
When Notes are showing on the Design Page, they will be included in the exported image. Turn the 3D view on for a stitch based pattern, and the exported image will show as stitches:



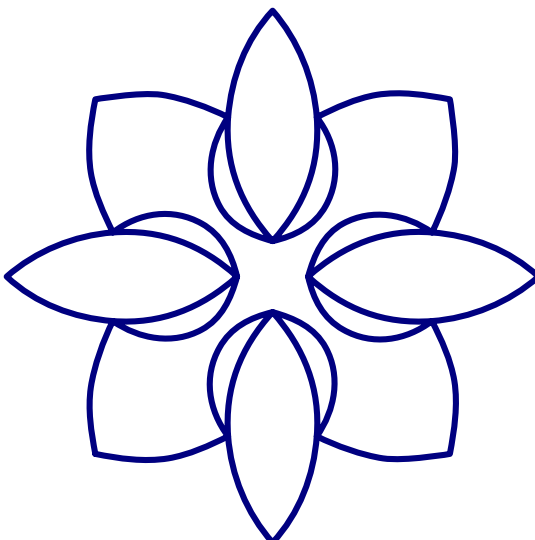
Samples of various pen widths (change pen width in Properties > tab Artwork):



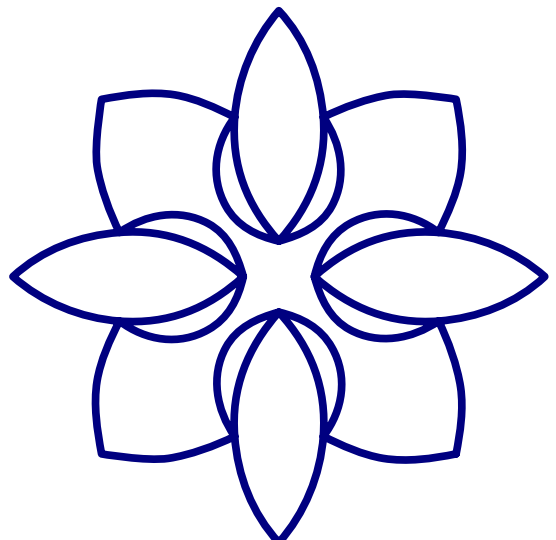
Pen width 0.0 (1 pixel in exported image)



Pen width 0.5



Pen width 0.8



Pen width 1.0







# 8. *This and That*

In this Part 8 you will find things, useful things:

A list of keyboard shortcuts of Art and Stitch, a printable screenshot of the Main Window with names of the toolbars.

Our Thank You pages, info about copyright, permission to print the User Guide for your own personal use, tips where to find help, classes, and the infamous Oops! Page.

Things :)



## 8.1 List of keyboard shortcuts

### While drawing

Pen	P
Line	L
Curve	C
Bezier	B
3 pt Arc	A
Release last drawn point(s)	Backspace
Snap to Anchor points	S
Connect to Path (Tie to existing object)	T
See stitches in Power Copy mode	W
Create Hardanger Embellishment	E (available in Embroidery Module only)

### Design Page

Zoom in / out	Scroll wheel
Zoom in	+
Zoom out	-
Zoom to fit	Space
Navigator on or off	N
Activate Magnifying (Zoom)Tool	Z (press Escape to return to the last used tool)
Pan (move the Design Page)	M (press Escape to return to the last used tool)
Scroll Design Page	Arrow Keys
View > 3D effect for stitches	Ctrl + 3
View > Backdrop	Alt + S
Tools > Select Quilting Area/Hoop	Ctrl + Q
Tools > Preferences > Throat Space	Ctrl + T

### While editing

Quick Select	Q
Nudge a selection	Ctrl + Arrow Keys
Distort a selection by moving corner handles	D
Reshape	R

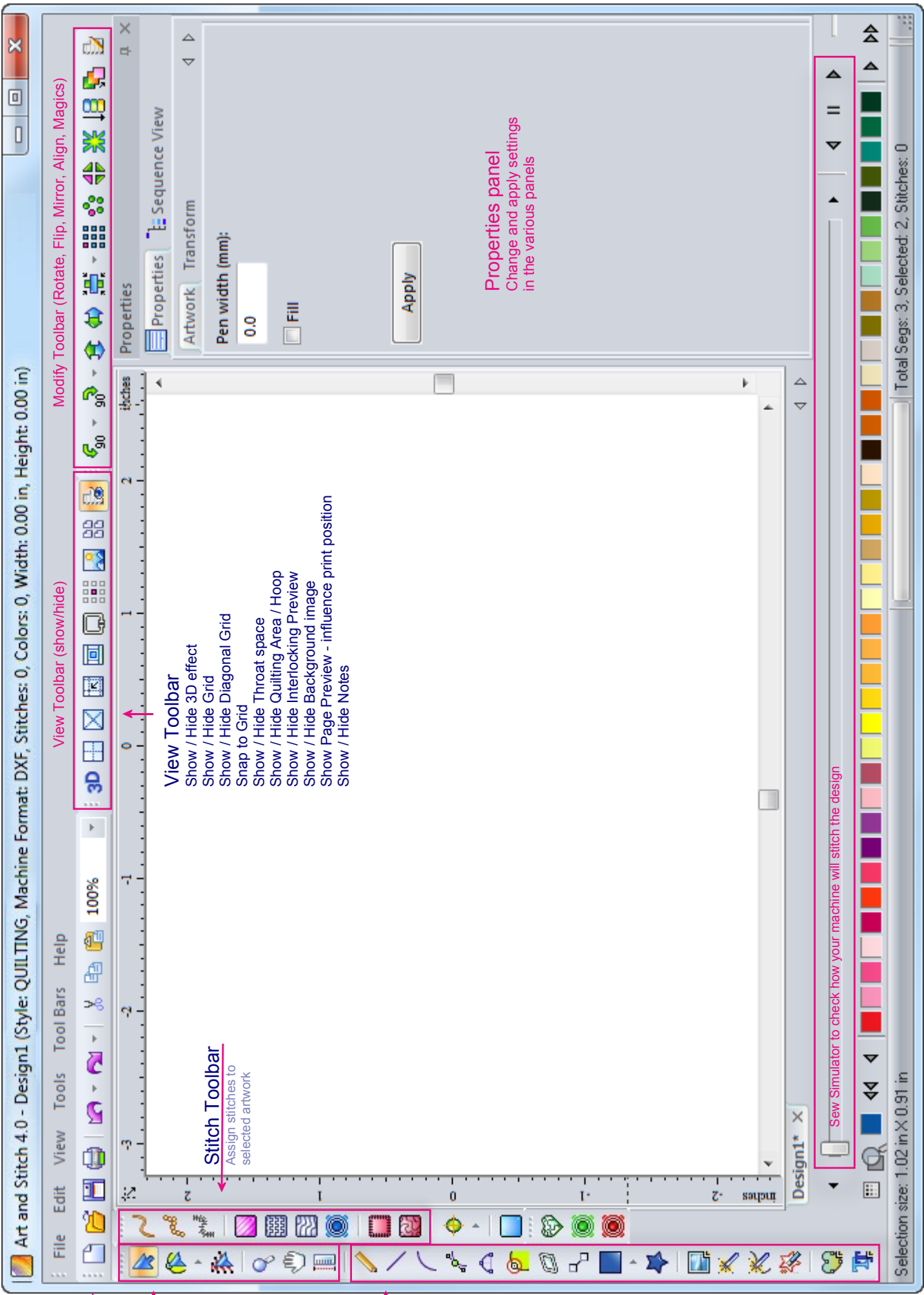
When *Reshape tool* is active:

Toggle between normal view and hairline view	H
Step from one point to the next	Ctrl + Arrow Keys
Move selected points in small increments	Shift + Arrow Keys
Snap to Anchor points	S
Add a smooth point	Double-click
Add a cusp point	Shift + Double-click
Delete a selected point	DEL
Tie objects together (click last point, drop on first)	T

Edit > Undo	Ctrl + Z
Edit > Redo	Ctrl + Y
Edit > Cut selection to Clipboard	Ctrl + X
Edit > Copy selection	Ctrl + C
Edit > Paste selection	Ctrl + V
Edit > Duplicate selection	Ctrl + D
Edit > Insert	Ctrl + I
Edit > Delete	DEL
Edit > Select All	Ctrl + A
Group selection	Ctrl + G
UnGroup selection	Ctrl + U

### Files

File > New Design	Ctrl + N
File > Open Design	Ctrl + O
File > Save	Ctrl + S
File > Save As	Ctrl+Alt+S
File > Close	Ctrl+Alt+W
File > Print	Ctrl + P
File > ExitAlt + F4	



General  
Toolbar

Select  
Reshape

Edit  
Toolbar

Artwork  
Toolbar

Drawing  
tools

Library

Open image  
for tracing

Properties panel  
Change and apply settings  
in the various panels

Sew Simulator to check how your machine will stitch the design



---

## 8.3 Oops ! Operator error - remove operator, press any key :)

### Freezing or cooking?

Art and Stitch has so many functions and features that it may occur that you are trying something that is not possible.

For example when you select a complex shape, intended as a continuous quilting path, and assign a Motif fill, the program won't tell you that that is not such a good idea; it will start trying where it can find closed shapes and turn those into continuous path motif fills. Well, that takes time and the program may even display a "Not Responding" message in the Title bar. It will look like it is freezing, but the program is working hard for you to fill your request. That may even take up to 5 minutes.

And then you can see that **it's not a good idea to fill a complex drawing that is not intended to be filled** :)

Another example: when you would use Transform Artwork > Unite on two selected elements which are not closed or which are just too complex, the program might lock up. Please know that Transform Artwork > Unite should not be used to connect patterns. It's just a nice toy to create new design elements out of 2 slightly overlapped closed shapes.

Or when you try to use the Magic Rays function on a too complex or an open shape: program will try, but it will take a long time before it shows that **Magic Rays cannot be applied to a complex or open shape**. There's a warning when clicking on the Magic Rays tool asking you if the shape is a simple closed shape. So you can still get yourself out of trouble by clicking on "No" in the Warning dialog..

### Program not responding

**When turning a merged shape into stitches, the program needs time, up to 5 minutes for really complex paths**. Please be patient. Even when a not responding warning shows, the program is finding a jump-free route for you. Don't click anywhere. Hover your mouse over a button: when a tooltip shows, it is ready.

### Smooth curves become edgy

When you assigned stitches and the nice smooth lines become edgy: check the size. It could be so small that those straight lines are stitches! **Remedy: resize to the desired quilt or embroidery size**.

### Design is continuous, but still shows a lot of over stitching

You have probably used "Merge" instead of "Connect Objects". **Never "merge" objects that form a continuous path**. To check if you Merged instead of connected, select the pattern, turn it back into Artwork and right-click. If you see a line "Break apart" then you have Merged the objects. Click on the line Break apart and then connect. See chapter 2.18 Connect Objects and 2.19 Manually Connect.

### Title bar looking odd?

Older graphics programs forcing Windows to temporarily change its color scheme can make other applications look odd. For example, if you run a graphics program like the old Macromedia Fireworks or Adobe Illustrator, the Art and Stitch window may look different. **Remedy: Close the other application**.

### Toolbars or Properties Panel vanished?

Double-clicking on the Properties Panel or the Sequence Panel will undock the panel. By grabbing the panel in its title bar you can move it. If you accidentally closed it, **choose menu Toolbars and click on Reset Toolbars**.

### Extra shape as result of Magic Circle or Magic Square?

If you clicked on the Magic Circle or Magic Square button in Reshape mode instead of using the Select tool, there will be an extra shape in the middle of the result of the Magic Circle. The Magic Square will also have an extra shape, but that will only be visible in Sequence view. The Magic Square result should be 4 objects, not 5. Therefore it is very important to **use the Magic Circle and Magic Square only with the Select tool active, not the Reshape tool**.





---

## 8.3 Oops ! Operator error - remove operator, press any key :) - cont'd

### Creative Fill button grayed out?

Check if both selected objects are artwork. **Creative Fill effect cannot be applied to stitch-based patterns.** Also look in Sequence View and open the full tree of objects by clicking on the plus signs in front of the color names: maybe you have selected more than two objects. **Creative Fill effect can only be used on two objects, the Creative Fill should be first, then a closed shape on top.**

### Points not landing where you clicked?

Snap to Grid or Snap to Anchors are probably active. Right-click in one of the rulers and turn the snap options off.



### Design gone? Here are some anti-panic tips:

- When you are using the Sew Simulator and move the Simulator slider bar, your mouse pointer will show a little clock. If you click on Undo while in Sew Simulator mode, or move the slider bar to the left, it might look as if your design is gone now. Don't worry. **As long as you see that little clock, you are still in Sew Simulator mode: simply click on the Select tool** at the top of the Artwork Toolbar or press Q (= Quick Select) on your keyboard to get a normal view.
- Or maybe you **scrolled away from your design!** In that case just **press the Space bar** to show everything on your design page.
- Or maybe you clicked on Undo one time too many: in that case click on Redo.

None of the above? **Check in the Sequence View panel on the right.** If that doesn't show any objects, then you have deleted your drawing, or cut it away, or maybe you're on a new empty design page. Look at the tabs under the Design Page and see if your design is still open.

### Program suddenly in trial mode? Login with the correct User Account.

If you didn't change anything on the computer but suddenly Art and Stitch wants to be activated again, you may have logged in under a different Windows User Account than the one under which Art and Stitch was installed. Reboot your computer and login with the correct user Account.

Or maybe you turned the Art and Stitch Base version into trial mode of Art and Stitch Plus by clicking in Menu Help on the line "Run in full demo mode". To return to the activated Art and Stitch Base version, choose menu Help > "Run in Normal Mode".

### Program crashes.

On some computers AutoSave causes the program to crash. Remedy: **turn AutoSave off** in menu Tools > Preferences > Options.

When using the **Outline Wizard or AutoStitch Wizard** be sure to **clear the file name of the last opened image** in the Open Image dialog window before navigating to another folder.

## Important - Deactivate Art and Stitch:

Before replacing hard drives, before doing any repair work on the computer, before changing the operating system, or before replacing your computer:  
**DEACTIVATE Art and Stitch** first via menu Help > License Activator > button "Deactivate".  
Then you can use the same Activation Serial Number on your new or repaired computer.  
See menu Help > How to Activate / Deactivate  
and also the FAQ page on our website: <http://artnstitch.com/faq.htm>



---

## 8.4 Support / Contact info - where to find help

*We have tried to make Art and Stitch the most user friendly vector drawing software on this planet. Please read this User Guide at least once, just to learn the possibilities of the program, to get inspired and to know where to find more information on tools and techniques.*

*Make a note in your calendar on a date two months from today: "Read Art and Stitch User Guide". You will be amazed how much more sense this user Guide will make after working with the program. You will surely pick up new things again!*

### Reference and index

Print the Table of Contents in Part 0 and the Main Window page of Chapter 8.2 as a helpful reference. As the User Guide is a PDF file, you can use the search function in Adobe Reader's menu Edit > Find (Ctrl+F). Type a word or a phrase and links are given to the respective pages in this guide.

### Tutorial Movies on our website

In Art and Stitch menu Help you will find a link to our ArtnStitch.academy website with lots of help resources, such as tutorial movies.

[http://artnstitch.academy/videos\\_base.htm](http://artnstitch.academy/videos_base.htm)

### F.A.Q. Page on our website

Our Frequently Asked Questions page on our website is a valuable resource. It is updated frequently depending on the feedback of our users. <http://artnstitch.com/faq.htm>

### Join the Art and Stitch User Group at Yahoo.com:

We do not send newsletters via email. The best way to be kept up to date on information, tips, Webinars, updates, upgrades etc. is to join the special Art and Stitch Yahooogroup at

<http://groups.yahoo.com/group/artandstitch/join>

You are welcome to ask any questions and post your own tips in the group.

### Support via Email:

For additional support, contact us per email at [info@artandstitch.com](mailto:info@artandstitch.com)

*Always include your full name and registration number, printed on the CD in your email. If you want us to call you, please include your phone number and address, so we can calculate the time difference between the Netherlands and your location.*

Artistitch v.o.f.  
Brucknerlaan 10  
5343 EW Oss,  
Netherlands

## 8.5 Our webinars and Stay@Home classes

### Webinars

Attending our Webinars is a good way to learn a lot in an hour. The date and time of the webinars are set in CET = **Central European Time**. On the Webinar Registration page you will find a link named "Show in my Time Zone". Click on that link. Select your time zone to display the time of the webinar in your own time zone, then finish the Registration. See example image below. These free online webinars will not be recorded.



The screenshot shows a registration form for a webinar titled "Introduction to Art and Stitch" on Sunday, 8:00 PM - 9:00 PM CET. A red box highlights the "Show in my Time Zone" link. A dropdown menu titled "Select Your Time Zone" is open, showing various time zones. The "GMT-07:00 Mountain Time (US and Canada)" option is selected and highlighted in blue. Green arrows point to "GMT-05:00 Eastern Time (US and Canada)" and "GMT-06:00 Central Time (US and Canada)".

**Webinar**  
Introduction to Art and Stitch  
Sunday, Month, Date, 8:00 PM - 9:00 PM CET - [Show in my Time Zone](#)

**Webinar Registration**

\* First Name:  \* Last Name:   
 \* Email Address:  State/Province:   
 Country:  Phone:   
\* Indicates a required field

By clicking the "Register Now" button you submit your information to the Webinar organizer, regarding this event and their other services.

[View system requirements](#)

**Select Your Time Zone**

- (GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
- (GMT-04:00) Santiago
- (GMT-05:00) Bogota, Lima, Quito
- (GMT-05:00) Eastern Time (US and Canada) ←
- (GMT-05:00) Indiana (East)
- (GMT-06:00) Central Time (US and Canada) ←
- (GMT-06:00) Mexico City
- (GMT-07:00) Arizona
- (GMT-07:00) Mountain Time (US and Canada)**
- (GMT-08:00) Pacific Time (US and Canada); Tijuana
- (GMT-09:00) Alaska
- (GMT-10:00) Hawaii
- (GMT-11:00) Midway Island, Samoa

### Art and Stitch Stay @ Home classes

Our Stay @ Home classes can be watched at your own time, your own pace, in the comfort of your home.

In each Stay @ Home class Loes will show a special drawing / digitizing technique in Art and Stitch or Art and Stitch PLUS and various ways to get creative results, all focused on one subject.

You can register for a Stay @ Home class and watch it at your own time, your own pace, pause when needed, rewind and watch as often as you like. When you pay the registration fee for a class you will receive a class handout with notes and tips on the subjects taught in the class AND you will receive the designs made during the classes.

The webinars and Stay @ Home classes are announced on our [Artstitch.academy](http://Artstitch.academy) website and in the Art and Stitch Yahoogroup



---

## A Big Thank You to our developers, users, designers and quilt artists

To the team of developers at Pulse MicroSystems, who have turned all of my wishes, ideas and specifications into this wonderful Art and Stitch software!  
<http://www.pulsemicro.com/>

A Big Thank You to the following pattern designers, quilt artists, users of Art and Stitch

### Creative fills in the Library by:

Carol Best - <http://www.simplythebestquilting.com/>

Brenda DeCook - <https://www.facebook.com/brenda.decook>

Vivian Lemoine - <https://www.facebook.com/vivian.lemoine>

### Feathers in the Library by:

Judy Allen - <http://www.judyallenfeathers.com>

### Patchwork templates and Appliqué designs in the Library (folder Patchwork) by:

Marjorie Busby - <http://b-quilts.com>

### Designers Collection in the Library

- Anne Bright - <http://www.annebright.com>
- Georgette Dell'Orco - <http://www.quiltersniche.com>
- Darlene Epp - <http://www.trilliumhousedesigns.com>
- Karen Farnsworth - <http://wildflowerquilting.com>
- Todd Fletcher - <http://www.thequiltingschool.com>
- JoAnn Hoffman - <http://www.compuquilterdesigns.com>
- Page Johnson - <http://www.thequiltingpage.com>
- Judy Lyon - <http://www.meadowlyon.com>
- Leona McCann - <http://tirnanogstudio.com>
- Amanda Murphy - <http://www.amandamurphydesign.com>
- Iris Noitalay - <https://www.facebook.com/iris.noitalay>
- Claudia Pfeil - <http://www.quilt-und-co.de>
- Karlee Porter - <http://www.karleeporter.com/>
- Sherry Rogers Harrison - <http://www.sewfarsewgood.org>
- Sharon Chamber - <http://sharonschamber.com/>
- Jessica Schick - <http://www.digitechpatterns.com>
- Mark Sherman - <http://www.remarkablequilts.com>
- Jack Stewart - <http://jacksmagicstitches.com>
- Michele Vangraan - <http://www.edge2edgequilting.com/>
- Sarah Vedeler - <http://sarahvedelerdesigns.com>

### AccuQuilt® Go! shapes in the Library

A big thank you for the wonderful people at the AccuQuilt Company who gave us permission and helped us to include the vector artwork of their AccuQuilt Go! Appliqué dies (*in true size*).

Please note that AccuQuilt has changed some of their dies - sharp corners have been rounded for optimal cutting. The shapes in our Library are of the revised, newer dies (dies with two foam colors): 55007 - Round Flower, 55041 - Fall Medley, 55043 - Holiday Medley, 55055 - Ribbon Twist, 55092 - Alphabet Board 2, 55321 - Holiday Accessories, 55322 - Sleigh and Snowflakes, 55331 - Stems and Leaves.



---

## A Big Thank You to our Certified Teachers

Below please find the list of our Certified Teachers at the time of publication of this User Guide. For up to date information and to download the Special Techniques Chapters, written by our Teachers please visit the Teachers page on our website <http://artnstitch.academy/teachers/>

Addendum 1.

**Digitizing Feathers in Art and Stitch**, by **Judy Allen**: <http://www.judyallenfeathers.com>

Addendum 2.

**Creating Very Detailed Patterns**, by **Jack M. Stewart**: <http://www.jacksmagicstitches.com/>

Addendum 3.

**Stained Glass Windows and the Magic Square in Art and Stitch**, by **Michele Hawley**:  
<http://www.michelehawleyquilting.com/>

Addendum 5

**Half Square Triangles to Piece on your Longarm**, by **Julie Crossland**: <http://www.juliecrossland.com>

Addendum 6

**Inspiration, Creation and Implementation - Back to the Basics**, by **Janiece Cline**:  
[janiece.cline@gmail.com](mailto:janiece.cline@gmail.com)

Addendum 7

**Introduction to Longarm Appliqué with Art and Stitch**, by **Susan Smith**:  
<http://www.pinecreekquilting.com>

Addendum 9

**Designing with TrueType Fonts** by **Linda Matteotti**: <http://www.lindamatteotti.com/>

Addendum 10

**Borders and Matching Corner Designs in Art and Stitch** by **Mary Beth Krapil**:  
<http://www.redbearquilts.com/>

Addendum 11

**Dimensional Quilting (Trapunto)** by **Krys Swirydczuk**: [swirydczuk@aol.com](mailto:swirydczuk@aol.com)

Addendum 12

**Celtic Knots in Art and Stitch** by **Leona McCann**: <http://www.tirnanogstudio.com>

Addendum 13

**Appliqué Designs Beyond the Basics** by **Anne Hurlburt**: <http://www.scandiaquiltstudio.com>

Addendum 14

**Ease of Quilting an Appliqued Quilt Top** by **Alice Boothe**:  
<http://www.quilting-tidbits.com/machine-quilting-patterns-page2.html>

Addendum 15

**Beyond the Mouse - Drawing on a Tablet for Art and Stitch** by **Carol Best**:  
<http://www.simplythebestquilting.com>





---

A Big Thank You to our Certified Teachers - Cont'd

Addendum 16

**Auditioning Quilting Designs** by **Brenda DeCook**: [Brenda.decook@gmail.com](mailto:Brenda.decook@gmail.com)

Addendum 17

**Art and Stitch and Statler Sticher - Enhancing Creative Studio** by **Lynne Blackmann**:  
<http://www.oldecityquilts.com/lynne-blackman.htm>

Addendum 18

**The Bezier Tool in Art and Stitch**, by **David Smith**: <http://www.pinecreekquilting.com>

Addendum 19 (Embroidery Specials for Art and Stitch PLUS)

**Creating In The Hoop Designs**, by **Cookie Gaynor**: <http://www.cookiescreations.com/public/>

Addendum 20 (Embroidery Specials for Art and Stitch PLUS)

**Creating a DXF Cut File From an Embroidery File in Art and Stitch Software**, by **Marjorie Busby**:  
<http://bluefeatherquiltstudio.com>

Addendum 21 (Embroidery Specials for Art and Stitch PLUS)

**Digitizing Machine Embroidery Appliqué for Precut Shapes and for Traditional Appliqué**, by  
**Marjorie Busby**: <http://bluefeatherquiltstudio.com>

Addendum 22

**How do I Quilt This?** by **Kari Schell**: <http://www.onpointquilter.com/>

Addendum 23

**Puzzle Pantos** by **Iris Noitalay**:  
<https://www.facebook.com/iris.noitalay>

Addendum 24

**Using Art and Stitch with the Pro-Stitcher**, by **Linda Gosselin**: <http://thequiltershelpdesk.com>

Addendum 25

**Designing Whole Cloth Quilts in Art and Stitch**, by **Vickie Haskins**:  
<http://www.salamancastitches.com>

Addendum 26

**How to draw Continuous-line Landscapes for Creative Fills**, by **Michele Vangraan**:  
[www.Edge2EdgeQuilting.com](http://www.Edge2EdgeQuilting.com)

Addendum 27

**Personalized Meander in Art and Stitch**, by **Lynn Mintz**: [lmintz1@gmail.com](mailto:lmintz1@gmail.com)

-----  
Fact sheet accompanying Library Designs by Quilters Niche

**Celebrating Spring - Examples of what can be done with a triangle**, by **Georgette Del'Orco**:  
<http://www.quiltersniche.com/>



---

## Copyrights

### Copyright information

The artwork included in the software in the Library is copyrighted by Loes and Theo van der Heijden, Netherlands. The donated designs are copyrighted by the designers mentioned on the previous pages. You are allowed to use the included vector artwork to create quilt / embroidery patterns and use those on as many quilts and garments as you like, using a (computerized) longarm system. The copyrighted designs from the Library may **not** be used for mass production of quilted products.

You are not allowed to share the included artwork in any quilt format, embroidery machine format or vector art format. The included artwork may not become part of a quilt pattern collection or embroidery design collection to be shared or sold.

The documentation included with the Art and Stitch software as printed matter and on the CD-rom, including this User Guide and the tutorial movies, are for your own personal use only and may not be copied, shared, published or sold.

### Permission to print

You are allowed to print one copy of this User Guide and the Addendums (Special Techniques) for personal use - on your printer at home, or via a copy shop / print service.

### Copyright Disclaimer

All names of hardware and software in this book are at the same time registered trademarks of the respective owners and have to be treated as such:

Adobe Reader is a trademark of Adobe Corp.,  
ABM Innova of ABM International,  
Brother Scan N Cut: Brother International Corporation,  
CompuQuilter: S&D Stitches S. Townzen,  
DXF: AutoDesk Inc.,  
Electric Quilt: The Electric Quilt Company,  
Handi Quilter Pro-Stitcher: Handi Quilter Inc.,  
IDraw: Indeeo, Inc.,  
IntelliQuilter: IntelliStitch/KasaEngineering,  
iPad and iTune: Apple Inc,  
Microsoft and Windows are trademarks of Microsoft Corp.,  
PC Quilter: Quilting Technologies,  
Pre-Design Studio: Artistitch v.o.f.,  
SideSaddle: The Quilting Solution Inc.,  
Silhouette Cameo: Silhouette America, inc,  
Statler Stitcher: Gammill Inc.



Art and Stitch, The Book  
*User Guide for the Art and Stitch digitizing software for  
longarm quilters and machine embroiderers*

is a publication of Artistitch.com - Netherlands

ISBN / EAN 978-90-70050-05-4



9 789070 050054 >