



# 3D Stitch Artist

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## User's Guide

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# Getting Started

Welcome to 3D Stitch Artist. 3D Stitch Artist gives you an easy-to-use Design Wizard for converting pictures into 9mm or Maxi stitches for your Pfaff creative 7570 or 2140 series machine. Also use 3D Stitch Artist to create your own stitch designs, edit existing stitch designs and mix and match elements from stitch designs. You can also export an embroidery design.

You can select from nine different stitch types, including QuickTrace, Satin and FreeHand™ stitches. QuickTrace follows the outlines of your image automatically, to create lines of Running or Triple Stitch. Three types of Satin Stitch create beautiful parallel columns of stitching. FreeHand™ stitches include traditional Candlewicking knots.

Editing is easy, too. Select the stitches that you want to edit, then cut, copy and paste them. Selected areas can also be enlarged, reduced, mirrored horizontally or vertically, and rotated.

In this User's Guide, we will explain how to start the module, give you some QuickStart Exercises and an overview of its features. For a full reference guide to 3D Stitch Artist, look at the online help or print out the 3D Stitch Artist Reference Guide supplied in PDF format. Keep the Quick Reference Card by your computer as a convenient guide to the module functions.



The most up-to-date details about the module are in its Readme.rtf file. (Double-click on a Readme file to open it in WordPad or Microsoft Word.) If you have any questions that cannot be solved by reading the help, Reference Guide or readme.rtf files, try the technical notes files in the 'Technical' folder of your CD.



## Sample Files

Samples are included for use in the QuickStart Exercises, including pictures created during the exercises. The sample files will be installed to subfolders of C:\3DEmbroidery\Samples\StArt or the folder of your choice.

The default main folder for your 3D Stitch Artist module is C:\3DEmbroidery.

# Where To Start

## Starting 3D Stitch Artist

### Start Menu

1. Click the Start button at the bottom left of your computer screen and the Start menu appears.
2. Move the arrow pointer to All Programs and another menu will appear.
3. Move the arrow pointer to 3D Embroidery System and a menu of programs will appear.
4. Double-click on 3D Embroidery to launch it.
5. Click Accessories on the QuickLink toolbar, then click 3D Stitch Artist. 3D Stitch Artist will start.



### Shortcuts on the Desktop

An alternative to the Start menu method described previously is to use a Shortcut to the 3D Embroidery System on your Windows® desktop. This is created automatically during the installation process if that option was selected.

1. Close or minimize any programs you have running.
2. Double-click on the Shortcut to the 3D Embroidery System folder. A list of programs appears.
3. Double-click on 3D Embroidery to launch it.
4. Click Accessories on the QuickLink toolbar, then click 3D Stitch Artist. 3D Stitch Artist will start.



# 3D Stitch Artist Terms and Conventions

For a general overview of terms and conventions, please refer to the 3D Embroidery System Getting Started Guide.

## On-screen Pointers



The mouse pointer is most commonly shown as an arrow on the screen.



If it is positioned over a text box it changes to an I-bar and you can type, such as the Notes in the Design Information box.



If Zoom In or Zoom Out is chosen, the Zoom pointer appears.



In the Design Wizard Crop Picture page, the mouse pointer becomes a cross-hair when you draw a new crop area, a double-headed arrow when you move the crop lines or a four-headed arrow when you move the crop area.

## File Formats

### Picture Files

3D Stitch Artist can produce stitches using any of the following picture file formats: Windows Bitmap or OS2 (.bmp), JPEG-JFIF compliant Files (.jpg, .jif, .jpeg), Tagged-Image File Format uncompressed (.tif), Portable Network Graphics (.png), Windows MetaFile (.wmf), Windows Enhanced Metafiles (.emf), and Windows Icon (.ico). The picture is saved as part of the stitch design file.

### Design Files

3D Stitch Artist loads and stores stitch design files in .9mm and .max formats. In addition, .pcq and .pcd files can be imported with Insert Stitch Design.

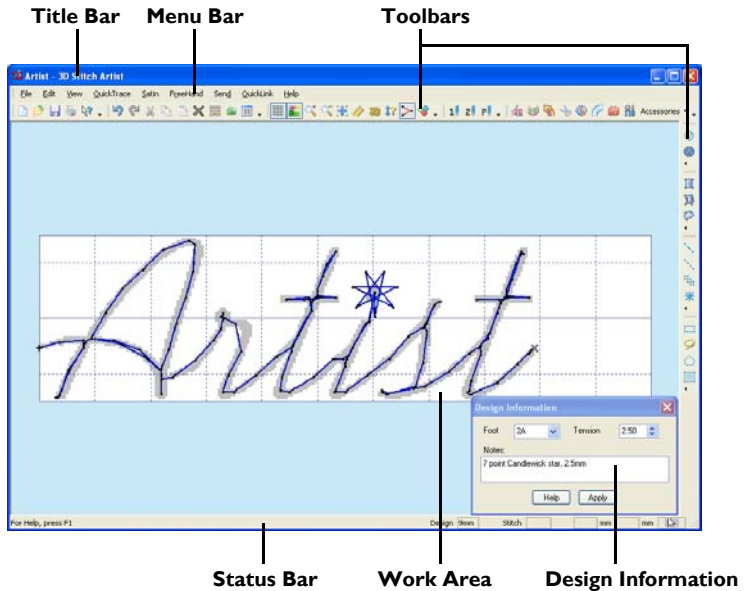
When a design is saved, the picture is saved with it. The picture cannot be saved separately.



## Embroidery Files

A stitch design can also be exported as an embroidery file to any of the following formats: Brother/Babylock/Bernina PEC (.pec), Brother/Babylock/Bernina PES (.pes version 5), Compucon/Singer PSW (.xxx), Husqvarna (.hus), Husqvarna Viking / Pfaff (.vp3 and .vip), Janome (.jef and .sew), Melco Expanded (.exp), Pfaff (.pcs), Tajima (.dst) or Toyota (.10o).

# Parts of the Software Window



## Title Bar

The title bar at the top of the window is highlighted if 3D Stitch Artist is active. The title bar shows the module name and the name of the currently loaded picture.

## Menu Bar

There are nine menus: File, Edit, View, QuickTrace, Satin, FreeHand, Send, QuickLink and Help.

To access the menu options, use the mouse to pull them down from the menu Bar.

An alternative way to access menu choices is to touch the Alt key, then the underlined letter of the menu name, followed by the underlined letter in the menu option, e.g. Alt , F O to open a file.

## Toolbars

There are nine toolbars with icons for quick access to frequently used features. The Main toolbar is shown here.



## Work Area

The work area is the area where the picture is displayed and edited.

The work area is the area where the stitch design file is loaded. It is the light blue background with a grid on which the stitches are drawn. If there is a picture, this will be shown on the work area. The picture can be shown or hidden using the Picture icon or View, Picture.



The size of the work area changes according to whether the stitch design file is a 9mm (33mm x 9mm) or Maxi (166mm x 60mm) design. The grid may be turned on or off using the Grid icon or View, Grid.



Black dots show the stitch points (needle insertions) into the fabric. The stitch points can be turned on and off as required. The first stitch is shown as a plus (+), and the last stitch is shown as a cross (x).

The grid size can be changed using the Screen Preferences.

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*The background and grid colors can be changed using 3D Configure. The background texture is not displayed, as this would hide any picture.*




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## Status Bar

The status bar is found at the bottom of the window. Starting from the left, the status bar shows:

- Short descriptions of the actions of menu items or icons.
- An indication of the design size (9mm or Maxi).
- The stitch number when a single stitch is selected.
- The position of the mouse in millimeter coordinates on the picture.
- A box showing the current mouse mode.

The mouse coordinates and mode box are used as follows:

Indicator	Mode	Coordinate indication
	Normal	All operations other than moving or resizing a selection of stitch points. The coordinates show the position of the mouse point from the grid origin (center left). The coordinates are blank when the mouse pointer is not on the grid.
	Move	Move a selection of stitch points. The mouse coordinates show how far the selection has been moved.
	Scale	The mouse coordinates show the overall size of the selection.

## Design Information

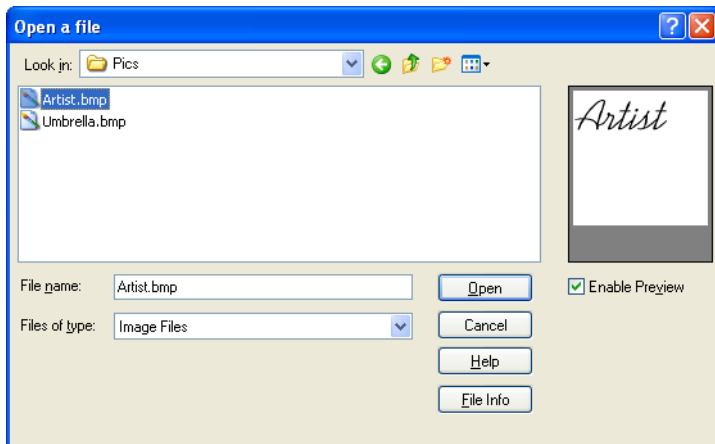
The Design Information box is used to enter the Foot, Tension and Notes. You can position the Design Information box anywhere on the screen by clicking and dragging its title bar. If you close the Design Information box, it will be opened automatically when you start a new design or when you open a stitch design file.

# QuickStart Exercises

## Design Wizard, Candlewicking and Moving Stitches — Artist (9mm)

In this exercise, learn how to load a picture in the Design Wizard and use it to create a new stitch design. Add a candlewick stitch, then view the design in Realistic mode. Move the end point to add space between designs and view again. Add Notes and print a worksheet. Finally, save the stitch design file in .9mm format.

1. Click the Start button at the bottom left of your computer screen and the Start menu appears.
2. Move the arrow pointer to All Programs and another menu will appear.
3. Move the arrow pointer to 3D Embroidery System and a menu of programs will appear.
4. Click on 3D Embroidery to launch it.
5. Click Accessories on the QuickLink toolbar, then click 3D Stitch Artist. 3D Stitch Artist will start.
6. If the Design Wizard does not appear when you start 3D Stitch Artist, click the New icon. Click Next to accept the 9mm design size and go to the Choose Picture page.
7. Click the Load Picture icon.
8. In the Look in box, browse to the folder C:\3DEmbroidery\Samples\StArt\Pics.



9. Click the file named 'Artist.bmp' and a thumbnail will be shown in the preview box.

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*Your computer may simply show the file name as 'Artist' without the .bmp extension.*

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10. Click Open. The picture is shown in the preview box on the Choose Picture page with its name, 'Artist.bmp', underneath.
11. Click Next and the Monochrome Threshold page is shown.
12. Click Next, as there is no need to adjust the threshold, and the Crop Picture page is shown. Notice that automatic cropping has already selected the desired section of the picture.



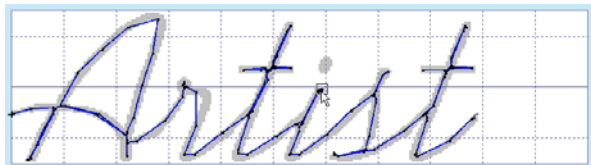
13. Click Next and the Scale and Position page is shown. The picture fills the preview design area at the maximum height of 9mm.
14. Click Next and the AutoTrace page is shown.
15. Make sure that Use AutoTrace is checked and that QuickTrace Light is selected.
16. Click Finish. The picture is traced automatically and the resulting stitch design is shown in the design area.

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*Notice that the Design Information box is automatically opened when the Design Wizard has finished working. If required, click and drag the title bar of the Design Information box to move it to the required position.*

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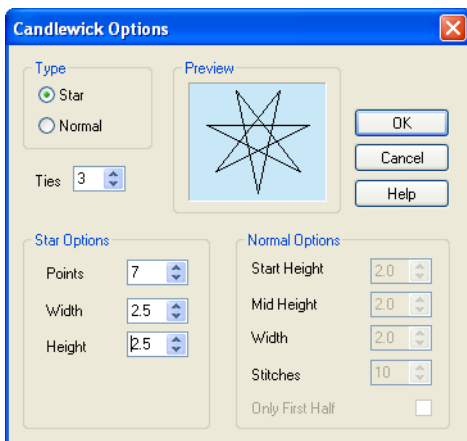
17. Click the stitch at the top of the i, just below the dot. A square will appear around the selected stitch point. This can now be used as the insertion point for new stitches.



18. Click the Candlewicking icon, then click the dot above the i in the word Artist in the design. The Candlewick Options dialog is shown.

19. Select Star as the Candlewick Type and set the Ties to 3.

20. In the Star Options, set the Points to 7, and the Width and Height to 2.5. The Preview box will show how the candlewick stitch will be made.

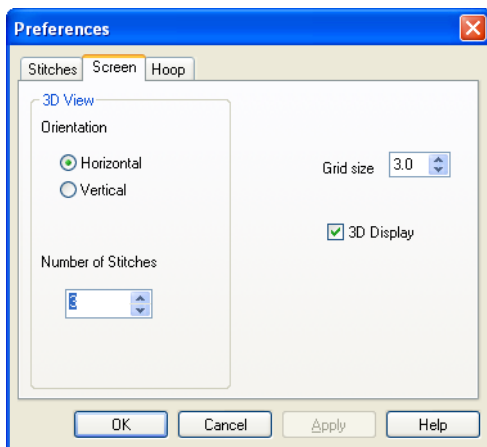


21. Click OK. The candlewick stitch will be placed on the dot of the i.
22. Right-click to deselect the Candlewicking function.



23. Click the Preferences icon, then click the Screen tab.

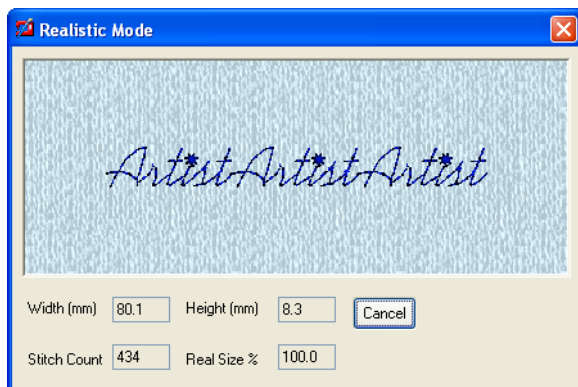
24. In the 3D View options, ensure the Orientation is Horizontal, and set the Number of Stitches to 3. Make sure the Grid size is set to 3.



25. Click OK.

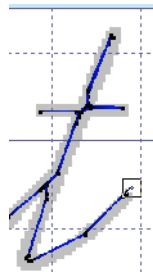


26. Click the Realistic Mode icon. Notice that the stitch designs are close together.



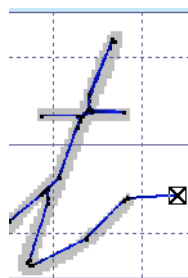
27. Click Cancel to close the dialog box.

28. Click the last stitch in the design, which is at the end of the tail of the last t. It is indicated by a cross (x) sign. A small box will appear around the stitch to show that it is selected.

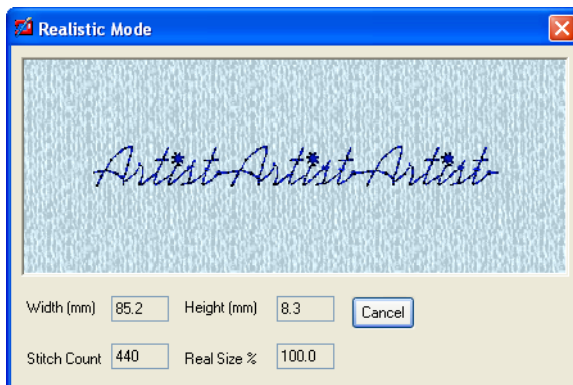




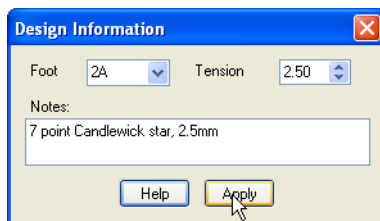
29. Click and drag the stitch approximately half a square to the right so that the thread ends a short way from the tail on the t. Don't move the stitch up or down, to ensure that a chain of the stitch designs will line up correctly..



30. Click the Realistic Mode icon. Notice that each copy of the stitch design is now more distinct.



31. Click Cancel.
32. Move the mouse over the Notes area in the Design Information box and the arrow will become an I-bar. Click in Notes and type in '7 point Candlewick star, 2.5mm', then click Apply.



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*You must always click Apply after changing or entering anything in the Design Information box, otherwise the changes will be lost.*

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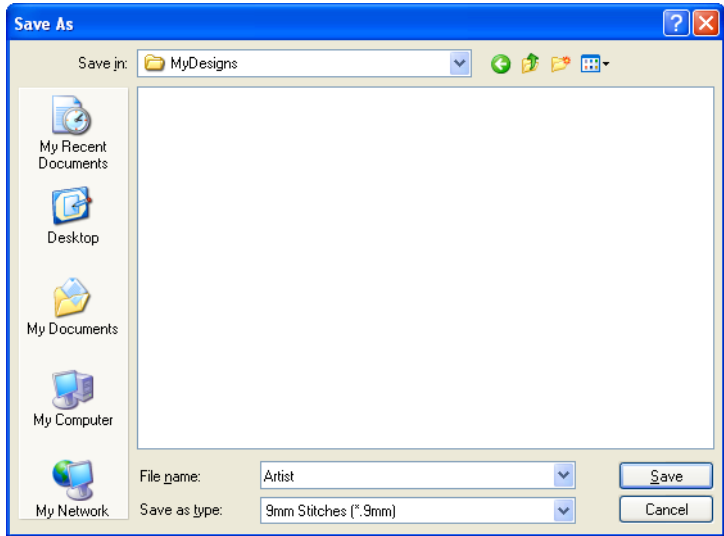


33. Click Print to make a worksheet. A Windows® Print dialog box will appear. When the Settings are as desired, click OK. A stitch design worksheet is printed.



34. Click the Save As icon and the Save As dialog box will appear. Notice that 'Artist' is already entered as the file name, which is the same as the picture name.

35. In the Save In box, browse to C:\3DEmbroidery\MyDesigns.



36. Click Save.

37. For sewing the stitch as a 9mm stitch, transfer the stitch to your 7570 machine or 2140 series machine using the Send 1 or Send 2 option, as set in 3D Configure.

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*When you want to sew the stitch, you should always make a test on the desired fabric and stabilizer. This will indicate if you need to use Balance to adjust the feed motion of the machine.*

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# Single Stitch, Curved Column, QuickTrace Light, Candlewicking and Stitch Color — Umbrella (Maxi)

In this exercise, learn how to load a picture in the Design Wizard and process the picture without automatically creating stitches. Use Single Stitch to move to an appropriate start point, then add curved columns of satin and view the design in Realistic mode. Use QuickTrace Light on the main section of the design and embellish it with three candlewick stitches. Set the stitch color. Adjust the start point and view three stitches in sequence. Change the design information and print a worksheet. Finally, save the stitch design file in .max format and export it as a .vp3 embroidery file.

## Start 3D Stitch Artist

1. Click the Start button at the bottom left of your computer screen and the Start menu appears.
2. Move the arrow pointer to All Programs and another menu will appear.
3. Move the arrow pointer to 3D Embroidery System and a menu of programs will appear.
4. Click on 3D Embroidery to launch it.
5. Click Accessories on the QuickLink toolbar, then click 3D Stitch Artist. 3D Stitch Artist will start.
6. If the Design Wizard does not appear when you start 3D Stitch Artist, click the New icon. Select Maxi as the Design Size, then click Next to go to the Choose Picture page.
7. Click the Load Picture icon.
8. In the Look in box, browse to the folder C:\3DEmbroidery\Samples\StArt\Pics.
9. Click the file named 'Umbrella.bmp' and a thumbnail will be shown in the preview box.
10. Click Open. The picture is shown in the preview box on the Choose Picture page with its name, 'Umbrella.bmp', underneath.
11. Click Next and the Monochrome Threshold page is shown.

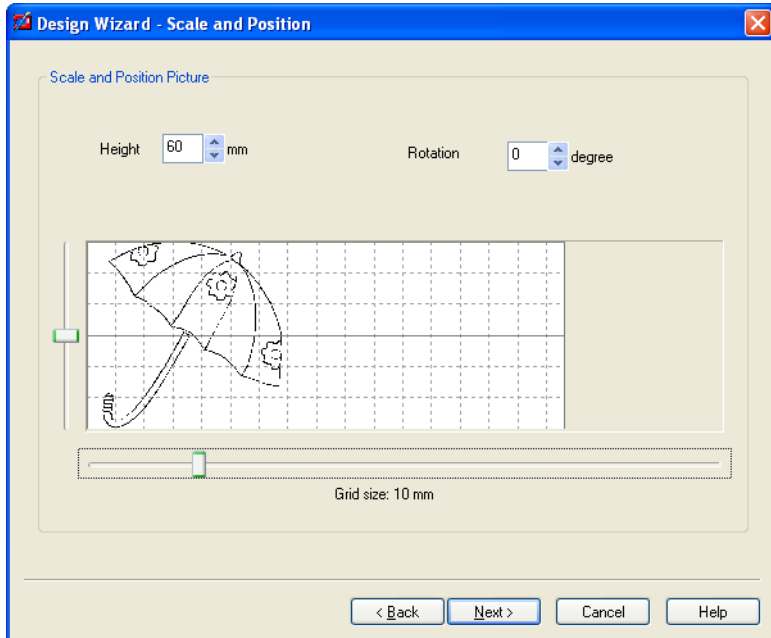


12. Move the slider bar to the left until the threshold value is about 100, so that only the outline of the umbrella is shown in the preview.



13. Click Next and the Crop Picture page is shown. Notice that automatic cropping has already selected the desired section of the picture.
14. Click Next and the Scale and Position page is shown.

15. Click and drag the slider bar under the design preview a little to the right, so that the inside of the end of the handle touches the first grid line. This will create some space to the left of the design so that you can more easily control its position.



16. Click Next and the AutoTrace page is shown.
17. Uncheck the Use AutoTrace option and click Finish. The umbrella picture will be shown in the design area.

---

*AutoTrace should not be used for this design as part of it will use satin stitches. To avoid connecting stitches between inserted satin columns, it is often best to place any desired satin first. Then use one of the QuickTrace functions to trace the desired parts of the picture, rather than using AutoTrace.*

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18. Click the Preferences icon.
19. Set the Satin Density to 8 and the Running Length to 1.5mm.
20. Click the Screen tab.
21. In the 3D View options, ensure the Orientation is Horizontal, and set the Number of Stitches to 3. Make sure the Grid size is set to 3.
22. Click the Hoop tab.
23. In the Export Settings, make sure that Orientation is Horizontal and that Center Start Position is checked.

24. Click OK.



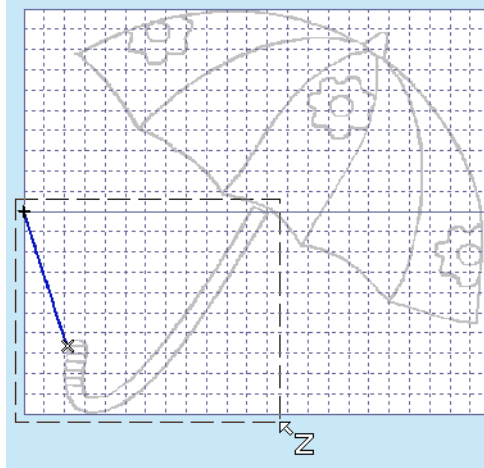
25. Click Single Stitch and then click the left side of the end of the umbrella handle. The stitch will be placed from the start point to the umbrella handle.

26. Right-click to deselect the Single Stitch function.



27. Click Zoom In and the arrow pointer changes to one with a Z attached.

28. Click and drag the mouse around the umbrella handle, so that the handle is enclosed in the dotted box that appears.



29. Release the mouse and the level of magnification increases.

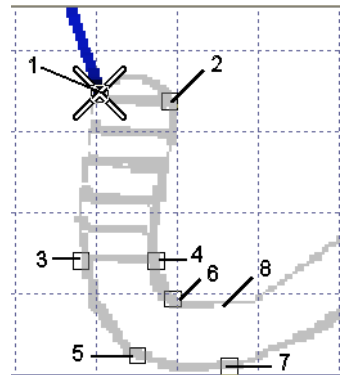


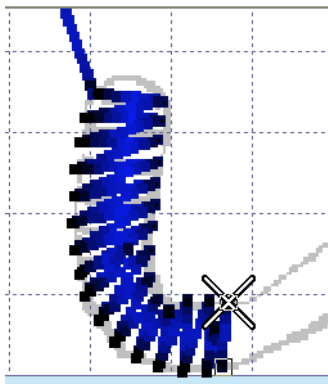
30. Click Curved Column and you will see that the end of the single stitch is marked with a box. This is now point 1 of the Curved Column. You are going to place another 7 points, to make a total of 8, that will define the Curved Column. All the odd numbered points are placed on one side of the Curved Column (the outer curve of the handle), with all the even numbered points opposite (the inner curve of the handle).

31. Click to place point 2 across the handle from point 1.

32. Click down the handle below point 1 to place point 3.

33. Click to place point 4 across the handle from point 3.





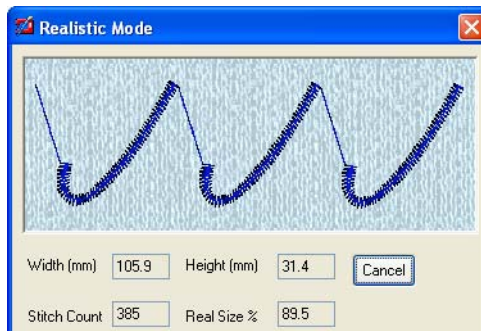
34. Continue to place the remaining points, as shown, so that this first curved column goes part of the way round the bend in the handle. As soon as you place point 8, the satin stitches are added to the design. Notice that points 7 and 8 are left marked. This is because they are now points 1 and 2 of the next curved column, which you can add directly onto the column you just placed.

---

*If you do not achieve a satisfactory result, you can Undo the curved column and try again.*

---

35. Click to place points 3 to 8 along the handle, so that the curved column covers half the remainder of the handle. Make sure that the matching odd and even points (3 & 4, 5 & 6 and 7 & 8) are directly opposite each other on the handle, otherwise the satin will appear twisted.
36. After the second section of satin stitches, click to place points 3 to 8 of the third section on the remainder of the handle, with points 7 and 8 opposite each other at the top end of the handle.
37. Right-click to deselect the curved column function.
38. Click Zoom To Fit so that you can see the whole design again.
39. Click the Realistic Mode icon.

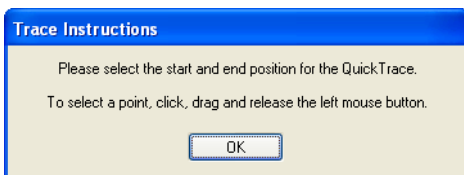


40. Click Cancel.
41. Click Zoom In and click and drag around the umbrella top to zoom in on it.



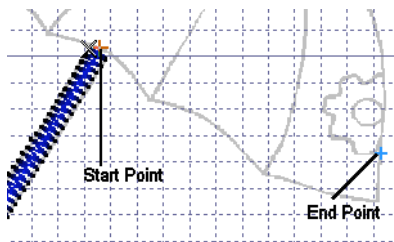


42. Click QuickTrace Light, then click the outline of the umbrella top. An animation will play while the outline is



detected. Then a message will be displayed instructing you to select two points on the outline. Click OK, or allow the message to disappear automatically.

43. Click and hold the mouse button, then move the mouse pointer across the outline. You will see a red cross following the mouse pointer around the outline.
44. Move the mouse pointer to the top of the umbrella handle, so that the cross is just above the handle, and release the mouse button. The cross will stay in position. This is the start point for the trace.
45. Click and hold the mouse button again. You will see a blue cross following the mouse pointer. It is also confined to the outline.
46. Move the mouse pointer to the right side of the umbrella so that the cross is just at the lower point where the flower intersects the outside of the umbrella.
47. Release the mouse button and the outline will be traced.



---

*Alternatively, click the desired start point, then click the desired end point.*

---

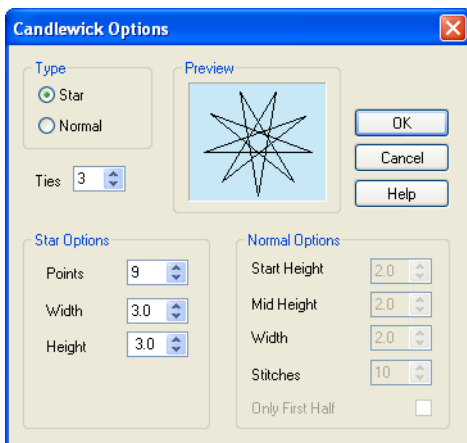
48. Click a stitch where the center of the left-hand flower meets the umbrella outline. This will avoid a connecting stitch to the candlewick stitch. A small square box will appear around the selected stitch point.
49. Click the Candlewicking icon, then click in the center of the left-hand flower. The Candlewicking Options dialog will be displayed.





50. Select Star as the Candlewick Type and set the Ties to 3.

51. In the Star Options, set the Points to 9, and the Width and Height to 3.0. The Preview box will show how the Candlewick stitch will be made.



52. Click OK. The Candlewick stitch will be placed in the middle of the flower.

53. Right-click to deselect the Candlewicking function.

54. Click a stitch on the lower edge of the middle flower.



55. Click the Candlewicking icon, then click in the center of the middle flower. The Candlewick Options dialog will be displayed.

56. The options already have the desired settings, so click OK to place the candlewick stitch, which will be placed in the middle of the flower.

57. Right-click to deselect.

58. Click a stitch where the center of the right-hand flower meets the umbrella outline.



59. Click the Candlewicking icon, then click in the center of the right-hand flower. The Candlewick Options dialog will be displayed.

60. The options already have the desired settings, so click OK to place the candlewick stitch, which will be placed in the middle of the flower.

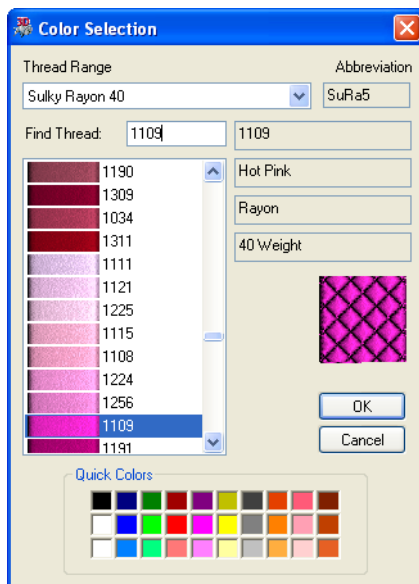
61. Right-click to deselect.



62. Click Zoom To Fit so that you can see the whole design again.



63. Click the Set Stitch Color icon, and the Color Selection dialog box will be shown.
64. Click the middle purple color in the Quick Colors at the bottom of the dialog box.
65. Click OK and the whole design will change color.



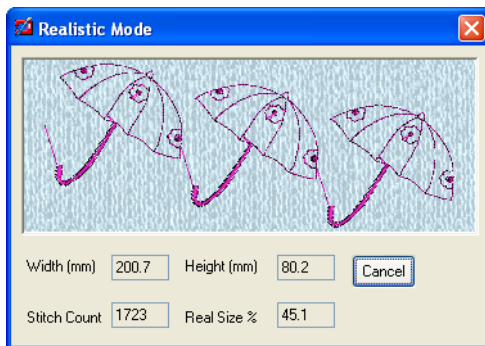
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*The stitch color is used for display, for printing the worksheet and to set the color when the stitch design is exported as an embroidery file. Color is not used when sending the stitch to a sewing machine.*

---



66. Click the Realistic Mode icon. Notice how the umbrellas are stepping down, instead of being lined up straight across. This is because the first stitch in the design is higher than the last stitch.

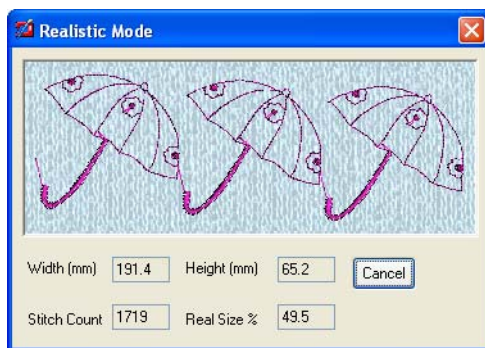


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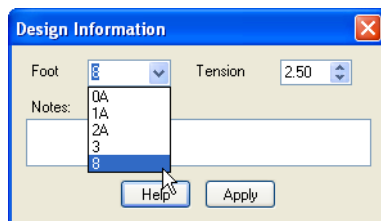
*You may need to make the Realistic Mode dialog box larger to see all three umbrellas at 100%. Move the mouse pointer over any corner of the Realistic Mode dialog box and it will change to a double-headed arrow. Click and drag to change the size of the box, then release the mouse button when the box is the desired size.*

---

67. Click Cancel to close the dialog box.
68. Click the first stitch in the design, which is represented as a plus (+) sign. A small box will appear around the stitch to show that it is selected.
69. Click and drag the stitch approximately three and a half grid squares down. This should be on the same horizontal grid line as the last stitch in the design, which is where you placed the end point for tracing the umbrella earlier. The last stitch is represented as a cross (x).
70. Click the Realistic Mode icon again. The umbrellas will now be lined up straight across.



71. Click Cancel.
72. In the Design Information box, click the drop-down arrow for the Foot setting and select Foot 8.




---

*The foot setting is used in the creative 2140 series only, when you ask for information about the foot and the top feed.*

---

73. In the Notes area, type the following: 'Satin Density 8 and three 9 point Candlewick stars at 3mm'.

74. Click Apply to save the changes to Foot and Notes.

---

*You must always click Apply after changing or entering anything in the Design Information box, otherwise the changes will be lost.*

---



75. Click Print to make a worksheet. A Windows® Print dialog box will appear. When the Settings are as desired, click OK. A stitch design worksheet is printed.



76. Click the Save As icon and the Save As dialog box will appear. Notice that 'Umbrella' is already entered as the file name, which is the same as the picture name.
77. In the Save In box, browse to C:\3DEmbroidery\MyDesigns.
78. Click Save.
79. For sewing the stitch as a Maxi stitch, transfer the stitch to your 7570 machine or 2140 series machine using the Send 1 or Send 2 option, as set in 3D Configure.

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*When you want to sew the stitch, you should always make a test on the desired fabric and stabilizer. This will indicate if you need to use Balance to adjust the feed motion of the machine.*

---

80. In the File Menu, select the Export option and the Export dialog box will be shown. Notice that 'Umbrella' is already entered as the file name.
81. In the Save In box, browse to C:\3DEmbroidery\MyDesigns.
82. Check that the Save As Type box is set as 'Husqvarna Viking / Pfaff (.vp3)'.
83. Click Save.
84. To embroider the stitch on your creative 7570 or 2140 series machine, load the embroidery in any other 3D Embroidery System module and transfer it using the Send 1 or Send 2 option, as set in 3D Configure.

# Designing Stitches

## Design Tips

Your 3D Stitch Artist creates stitch designs up to 9mm or 60mm high. This size limits the amount of detail that can be placed in a stitch design. See the stitches that are supplied with your machine, also in C:\3DEmbroidery\Samples\StArt\Machine, for examples of a suitable level of detail.

---

*Use Realistic Mode when you create stitch designs to remind yourself of the true size of the design.*

---

### Stitch Density

Avoid overlapping and other effects that could cause very dense stitching. Dense areas of stitching will make it more difficult for the machine to feed the fabric over these areas. Dense stitching can be caused by overlapping areas of satin, or very small and tightly packed candlewicking.

### Moving Forward

In 3D Stitch Artist, the design direction from left to right represents a forward movement on your sewing machine. Generally, you should attempt to keep the design moving from left to right, and avoid long stretches of reverse stitching. This will make it easier to sew the stitch design accurately.

### Lining Up the Stitch Design

It is usually desirable for the first and last stitches to be created on the same horizontal line of the grid, so that a series of stitch designs will stitch in a straight line. If you have just started a new design with an AutoTraced picture, the AutoTrace process will make sure that the first and last stitches line up. However, if you add stitches to the end of the design then they may no longer line up.

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*Set the Number of Stitches in Screen Preferences to three or more. Then click Realistic Mode and see if the stitch designs line up straight.*

---

The first and last stitches are marked with a plus (+) and a cross (x). The last stitch is always selected when nothing else is selected.

## **Satin**

### **Satin Angle**

Satin will generally work best for the sewing machines when it is placed at 90 degrees to the grid center line (that is, with the stitches straight up and down on the screen, similar to the fixed angle satin in 3D Stitch Artist). This requires less feed dog movement and should provide a more accurate result.

### **Use Satin Sparingly**

Use any type of satin sparingly, to emphasize small areas only. Satin will increase the stitch density where it is used. If you look at built-in machine stitches, you will see that stitch designs that use satin only are confined to relatively simple shapes.

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*Note that the restrictions listed above do not apply to the creation of designs to be embroidered in the hoop. To save a stitch design as an embroidery file, use File, Export.*

---

## **Test Stitch-outs and Balance**

Always test your stitches on scrap pieces of the fabric you are going to use. For large stitches, always use stabilizer to help the feed dogs move the fabric accurately. Adhesive stabilizer is recommended.

### **Balance**

Use the Balance function on your creative 7570 and creative 2140 series machine to adjust the feed motion of the machine as needed. This allows you to correct for variations in fabric type, thickness, number of layers, and so on. To learn more about Balance, check your creative 2140 series User's Guide section I-20 or creative

7570 User's Guide Section 'Balance' (page 61). Make sure you make another test after adjusting the Balance.

### **Quality Factors**

There are many other factors that can affect the stitch-out, such as the type of needle, the sharpness of the needle, the quality and weight of thread, the speed of the machine, and even your own experience and technique. You can only account for these factors, and possibly correct them, by testing until you are satisfied that you will get the desired result.

### **Stitch Points on the Machine**

The machine will generally follow the thread lines and stitch points that are in the stitch design. However, when there are long steps between stitch points, the machine may need to place extra stitch points to traverse the line.

The limitations on the feed dog and needle movements may cause extra stitch points to be added. Alternatively, if you use short stitches you will reduce the need for additional stitch points.

### **Machine Stitches**

3D Stitch Artist is supplied with a library of many of the stitches available on the Pfaff creative 2140 series machines. You can open these, or import them as part of a stitch design. However, the process of loading these stitches into 3D Stitch Artist and then sending them back to a sewing machine will make subtle alterations in the stitch design. This means that the result you get from this process may differ from the result you would get by using the stitch directly on a Pfaff creative 2140 series machine.

# Optimizing Pictures for the Design Wizard

## Picture Selection

3D Stitch Artist converts images to black and white using the Monochrome Threshold in the Design Wizard. The objective is to end up with a black and white line drawing, because machine stitches are normally designed using only one color. The AutoTrace and QuickTrace functions also work best with line drawings. Ideally, it is best if the image is already a line drawing, or is composed of areas with distinct outlines. If there are large solid areas that cannot be removed with the Monochrome Threshold, it may be best to edit the image before loading it so that the solid areas are removed or disconnected from the outlines.

## Image Proportions

The size of the design area depends on the stitch type. For a 9mm stitch, the design area is 9mm high and 33mm wide, which makes the design area approximately 3.6 times wider than it is high. For a Maxi stitch, the design area is 60mm high and 166mm wide, which is approximately 2.75 times wider than it is high. If an image is wider than this then not all of it will initially fit the design area in the Scale and Position page of the Design Wizard. This is because the Design Wizard initially uses 'fit to height', and you will need to reduce the Height and adjust the horizontal position in the Scale and Position page if you want the whole image to fit in the design area.

Height and width in 3D Stitch Artist are measured by the vertical and horizontal size of the design as shown on the screen. For stitching out purposes, the height in 3D Stitch Artist corresponds to the width for sewing, and the width in 3D Stitch Artist corresponds to the length for sewing.

## Connecting Parts of an Image

AutoTrace and/or QuickTrace will only trace a section of the image that is entirely connected. For instance, you



may have a picture that has a double outline, one inside the other. If there is no direct connection between the two outlines, they will be treated as separate parts of the image by AutoTrace and/or QuickTrace. If you want to make sure all parts of the image are traced by AutoTrace and/or QuickTrace, you may need to add connecting lines in an image editor, for example 3D PictureStitch or Windows® Paint, before you load the picture.

## Simple is Best

Complex images will produce more stitches from AutoTrace and/or QuickTrace, which means more movement when you try to sew the stitch. In particular, there will be more sections of the design where stitches go back and forth over the same section. This in turn will make it more difficult to sew a 9mm or Maxi stitch accurately.

---

*Remember, the stitches are only up to 9mm or 60mm high, which does not provide a lot of room for detail. See the stitches that are supplied with your machine, also in C:\3DEmbroidery\Samples\StArt\Machine, for examples of a suitable level of detail.*

---

## Horizontal or Vertical

If you have a vertical picture that is tall and thin that you want to place lengthwise along the stitch design area, you can rotate it by 90 or 270 degrees in the Scale and Position page of the Design Wizard. If you cannot show the design at a high enough magnification, rotate it in an image editor before loading it in the Design Wizard.

## Cleaning an Image

Some images may have random marks, speckles or excess details. If desired, use an image editor to clean up your picture before importing it, as this will give a better result from AutoTrace and/or QuickTrace. This will also make it easier for you to follow the image when you are working with the design.

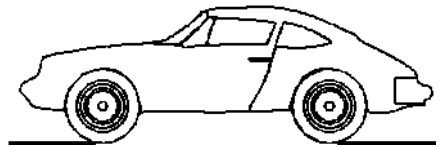


The example is a detail from an old woodcut drawing, where marks were added along the line to add a shading effect to the picture. However, this amount of detail is not necessary in a stitch design, and removing the marks will allow AutoTrace and/or QuickTrace to give a much cleaner result, which is easier to sew.

## Lead-in and Lead-out Lines

You can take advantage of the way that AutoTrace works by adding lines that lead in and lead out of your picture. These will force AutoTrace to start and end at the left and right points of your choosing. Also, the lines can help you align the picture with the grid center line in the Scale and Position page of the Design Wizard, if that is what you wish to do.

The example shows how you might use lead-in and lead-out lines; they have been added to give the illusion that the car is sitting on the road.



Notice that the lead-in and lead-out lines are the furthest left and furthest right parts of the picture. Also note that the hub details on the wheels will be ignored by AutoTrace because there are no connections to the main outline. (The hub details are examples of areas that would be suitable for Candlewicking.)

# Creating Stitches with the Design Wizard

## Overview

3D Stitch Artist gives you an easy-to-use Design Wizard for converting pictures into 9mm or Maxi stitches. The Design Wizard opens automatically when you start 3D Stitch Artist or if you use the New function.

---

*To create a new stitch design you must use the Design Wizard. There are other options to open previously saved options (Open, Insert Stitch Design or Insert from 7570).*

---

## Using the Design Wizard

### Select a Stitch Design Size

1. Click 9mm or Maxi, as desired, on the first page of the Design Wizard.
2. Click Next.

### Choose a Picture

3. Click either:  
Load Picture to select a Picture file that already exists.

or

Scan Picture to obtain a Picture from a scanner or digital camera (for instance, if you have drawn your own quilt stitch).

4. Click Next.

### Set the Monochrome Threshold

5. Move the monochrome threshold slider to show the desired Picture outline.
6. Click Next.

### Crop the Picture

7. The Picture is automatically cropped to remove excess white space. If required, adjust the crop lines to select the desired part of the Picture.
8. Click Next.

### **Scale and Position the Picture**

9. Set the height of the Picture in mm.
10. If required, rotate the Picture to any angle from 0 to 360 degrees.
11. Use the positional slider bars to place the Picture at the desired point in the stitch design area.
12. Click Next.

### **Select the AutoTrace Method**

13. Click QuickTrace Light or QuickTrace Heavy as required.  
(Alternatively, if you wish to use the picture as a background Picture or to choose selected areas for QuickTrace, uncheck AutoTrace.)
14. Click Finish. AutoTrace will start at the left hand side of the Picture and trace the part of the Picture that is nearest to the left. Any parts of the Picture that are not connected to the selected part will be ignored.
15. You can save, send and use the stitch immediately.

## **Design Tools**

In addition to the Design Wizard, 3D Stitch Artist has a full range of tools to create and modify stitch designs.

# Creating Stitch Designs

## Quick Trace

Use the QuickTrace functions to place lines of stitches on the center lines of the section of the picture you select. The QuickTrace tools are not available if there is no background picture.

---

*QuickTrace only works on a connected section of the picture. Use QuickTrace more than once if areas of the picture are not connected. The connected area that is traced can be black or white. If AutoTrace is selected on the final page of the Design Wizard, a QuickTrace will be made automatically on the area of the picture that is furthest to the left.*

---

### QuickTrace Light



Create an outline trace with Running stitch, which doubles back where necessary. For instance, for a branching shape there would be a single layer of Running stitch along the middle, with a double layer of Running stitch along each branch because it needs to double back to return to the middle line. The line is calculated and stitches are placed along the line according to the Running Stitch Length in Stitches Preferences, which can be any length from 1mm to 6mm.

### QuickTrace Heavy



Create an outline trace with Triple stitch, with a double layer of Running stitch where it is necessary to double back. For instance, for a branching shape there would be Triple stitch along the middle, with a double layer of Running stitch along each branch because it needs to double back to return to the middle line. The line is calculated and stitches are placed along the line according to the Running Stitch Length in Stitches Preferences, which can be any length from 1mm to 6mm.

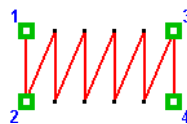
# Satin

Use the satin functions to place stitches that are parallel to each other. Satin areas can be straight columns, curved columns or fixed angle.

## Straight Column



Create straight-edged columns of satin stitch. Each straight column is defined by four points making up two sides, with parallel stitches running between the two sides. Typical shapes are squares, rectangles and triangles. They are made of satin stitches, which run the whole width of the column.

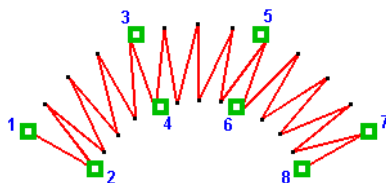


Set Density from 2 to 15 using Stitches Preferences.

## Curved Column



Create curved-edged columns of satin stitch. Each curved column is defined by eight points making up two sides, with parallel stitches running between the two sides. Typical shapes are arches, semicircles, circles and ovals.

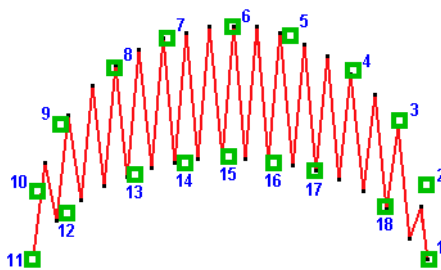


Set Density from 2 to 15 using Stitches Preferences.

## Fixed Angle



Create an irregular area of satin by placing points to define the shape of the area, which is then filled with Satin stitches at 90 degrees to the center grid line. This works best with the feed motion of sewing machines.



Set Density from 2 to 15 using Stitches Preferences.

# FreeHand™ Stitches

Use the FreeHand™ Stitches functions to create single stitches and lines of running and triple stitches, by placing points.

## Single Stitch



Create a Single Stitch or series of Single Stitches. A Single Stitch may be any length. They can be divided up according to the Maximum Stitch Length by using Break Up Stitches, or by the sewing machine according to the feed dog motion.

## Running



Place points to define curved or straight lines of running stitch (small stitches going forward). After placing the points, the line is calculated and stitches are placed along the line according to the Running Stitch Length in Stitches Preferences, which can be from 1mm to 6mm.

## Triple



Place points to define curved or straight lines of triple stitch. Triple Stitch is a row of small three-part stitches, each composed of one stitch going forward, one going backward then one going forward. After placing the points, the line is calculated and stitches are placed along the line according to the Triple Stitch Length in Stitches Preferences, which can be from 1mm to 6mm.

## Candlewicking



Design and place candlewicking stitches. These are small groups of stitches that are arranged in patterns to create a decorative effect. Two styles of candlewicking can be created, Star for star-shaped candlewick stitches or Normal for satin-style candlewick stitches.

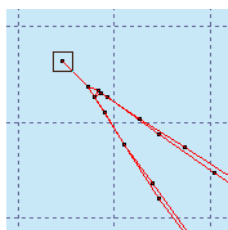
# Editing Stitch Designs

## Select and Move Individual Stitches

The default action in 3D Stitch Artist is to select and edit single stitches. This is possible when you have no group of stitches selected in the current stitch file and no functions are active. It may be helpful to select 2D view and Zoom In close enough to see the separate stitch points. Ensure Stitch Points is turned on.



Simply click a stitch point and a box appears around the point to show that it is selected. (Alternatively, step through the stitch points one at a time with the left and right arrow keys until the desired stitch is selected.)



You can now move the stitch point by dragging it, or you can Delete it.

Also, once a stitch is selected, it will be used as the insertion point for the next function you select or stitches you paste or insert.

For instance, click a stitch and then use candlewicking to add a decorative detail part way through your stitch design. The candlewick stitch will be placed between the selected stitch and the one immediately following it.

When inserting stitches, remember that every stitch is sewn. This means that you should select an insertion point that is near to the place where you want the inserted stitches. This will avoid long connecting stitches that may make the stitch design look untidy.

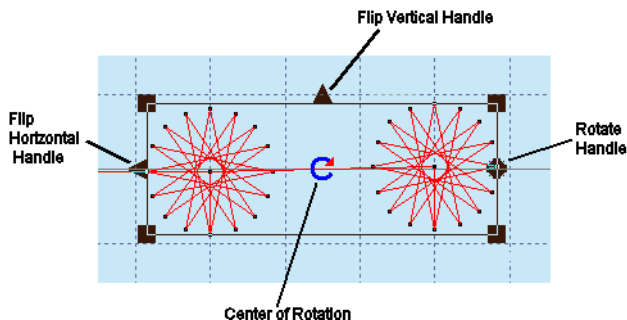
## Select a Block of Stitches

The select functions allow you to select a block of stitches. A selected block of stitches can be scaled, rotated, mirrored, moved, copied, cut and deleted.

When a block has been selected, it has a selection box around it on the work area. The selection box has



handles which are used to scale, rotate and flip the block.



Click and drag inside the block to move it. Click and drag the square corner handles to scale the block. Click and drag the round rotate handle to rotate the block freely. Click and drag the blue center of rotation to rotate around a different point. Click the triangular handles to flip the block horizontally or vertically.

---

*If the block is smaller than 1.5mm high or wide, the selection box will just be a plain rectangle with no handles.*

---

### **Select a Series of Stitches with the Keyboard**

Click on a stitch to select it. A square is shown around the stitch and the stitch number is shown on the Status Bar. Step through the stitches one at a time with the left and right arrow keys on the computer keyboard until the desired start stitch is selected. Hold down Shift, then press either the left or right arrow key repeatedly to select the desired series of stitches. When you get to the last stitch, release the Shift key and the selection box will show you the extent of the block. The Box Select tool will be activated, so you must right-click to make a new selection using this method.

### **Select a Series of Stitches with the Mouse**

Click the first required stitch point, then hold down Shift (on the keyboard) and click the last required stitch point. The two stitches you click and all stitches between them will be selected. The Box Select tool will

be activated, so you must right-click to make a new selection using this method.

### **Box Select**



Click and drag around the stitches you want to select. When you release the mouse button, the selection box will show you the extent of your selection. Right-click to deselect.

### **Freehand Select**



Click and drag to draw an irregular outline around the desired stitches. When you release the mouse the area is closed automatically with a straight line between the last mouse position and the start position. The selection box will show you the extent of your selection. Right-click to deselect.

### **Polygon Select**



Click a series of points to create an irregular outline of straight lines around the desired stitches. Right-click when the area is complete. The area is closed automatically with a straight line between the last point and the start position. The selection box will show you the extent of your selection. Polygon Block may be easier to use than Freehand Block for precise selections. Right-click to deselect.

### **Select All**



Click Select All to select all stitches in the design. This is useful to scale or re-align the entire design.

### **Pasting Stitches and Inserting Designs**

When stitches are pasted into a design they are automatically selected and Box Select is activated. The block is attached to the currently selected stitch, or the last stitch in a selected group. This also happens when a design is inserted.

### **Deselecting a Selection**

Click the design area outside the box to deselect the stitches. The box showing the size of the selection will disappear.

# Modifying a Block of Stitches

## Move

Move a block of stitches using click and drag. Click inside the box and drag it to the required position. Any stitches which lead to or from the selection will be stretched to accommodate the new position of the stitches moved.

---

*If you accidentally move the blue center of the rotation simply click and drag inside the selection box again.*

---

## Scale

Scale a block of stitches by clicking and dragging one of the scaling handles.

## Rotate

Click and drag the rotation handle to rotate the block to any angle. If desired, move the center of rotation before rotating the block.

The selection box around the block and the block outline are rotated around the center of rotation. When you release the mouse button, the block will be redrawn in its new position.

### **Move the Center of Rotation**

The center of rotation is initially shown in the middle of the block. It is a circular blue arrow with a red head. Click on it or within the center of rotation, then drag it to any position in the stitch design. This changes the pivot point around which the block rotates for any of the rotation methods.

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*When the block is moved or scaled, the center of rotation is returned to the center of the block.*

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## Mirror

Click the Flip Horizontal handle to mirror a block horizontally. Click the Flip Vertical handle to mirror a block vertically. The Reverse Stitch Order option in Stitches Preferences controls whether or not the stitch point order will also be reversed.

# Cut, Copy and Paste Stitches

Once stitches have been selected, they can be cut and copied.

## Cut



Use Cut to cut out the selected stitches and place them on the clipboard. The selection can then be pasted back in.

## Copy



Use Copy to copy the selected stitches to the clipboard, without affecting the current selection. The selection can then be pasted back in.

## Paste



Use Paste to paste the stitches on the clipboard back into the design. Attach the pasted stitches to the currently selected stitch, or the last stitch in a selected group. If there is no stitch selection, the pasted stitches are attached to the last stitch in the design. The pasted stitches are always shown in the top left-hand corner of the work area.

## Delete



Use Delete to delete a block of stitches after it has been selected using one of the block selection methods (Box Select, Freehand Select, Polygon Select or Select All).

---

*This function differs from Cut because it does not place the stitches on the Clipboard. Therefore stitches that have been Deleted cannot be pasted into another design (although Undo can be used if the wrong stitches are deleted).*

---

## Delete Single Stitches

When you have a single stitch selected, Delete will remove the stitch point.

# Insert Stitch Design



Use Insert Stitch Design to insert existing designs into the current design. You can browse through thumbnails of stitch designs. 9mm designs are indicated by dotted lines in the thumbnail. If you are inserting into a 9mm design, grayed out thumbnails indicate stitch designs that are too large to fit in the 9mm design area.

Insert Stitch Design allows you to browse and insert .pcq and .pcd designs, in addition to .9mm and .max files.

## Insert From 7570

Use Insert From 7570 to insert a stitch directly from the P-memory of a creative 7570 machine. A stitch inserted from a 7570 machine is attached to the selected stitch in the same way as pasting a block, or at the end of the design if no stitch is selected. The inserted stitch is also automatically selected so that it can be scaled, moved, and so on. Stitches are inserted at their actual size.

## Break Up Stitches



Insert stitch points so that no stitches exceed the Maximum Stitch Length set in Stitches Preferences.

Click the icon and extra stitch points are added immediately, where necessary.

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*The machine may need to place extra stitch points to traverse a line. This is owing to the limitations on the feed dog and needle movements.*

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## Undo and Redo

### Undo



Use Undo to reverse the last action. There are unlimited undo steps. Every time you click on Undo, the previous action is reversed. If you are not satisfied with the result of the Undo, click Redo.

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*The Zoom commands cannot be reversed using Undo.  
Changes made using Preferences cannot be reversed  
using Undo.*

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## Redo



Use Redo to reverse the last action that was undone by Undo. If you are not satisfied with the result of the Redo, click Undo.