WILCOM

EMBROIDERY STUDIO 2025



Beading Supplement

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Rev 1 Jan 2025

Bead Embroidery

Bead embroidery is a type of applied decoration where beads, like sequins, are stitched rather than glued to fabric, suede, or leather. Unlike woven, knitted, and crocheted beading, embroidered beading does not form part of the fabric structure. Traditionally, it has been used on garments and decorative textiles. Accessories such as handbags or belt buckles may also be embellished with bead embroidery. As may household items such as pillowcases or cushions.



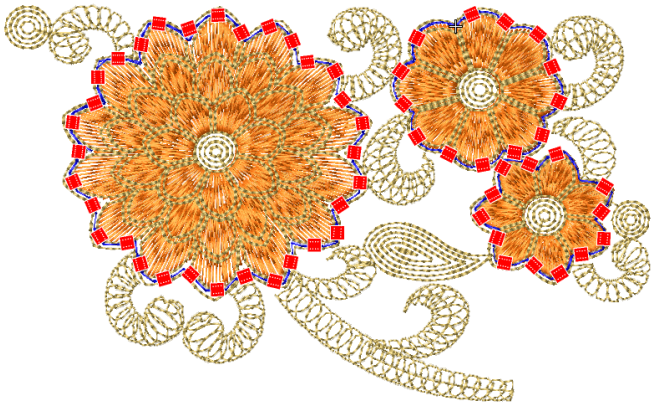
Embroidery machines can be equipped with a device that drops beads onto fabric as it stitches, similar in principle to sequin embroidery. EmbroideryStudio includes a **Beading** capability which supports beading devices. A library of beads of different size, shape and color, is available, together with fixing stitches supporting classic upright, flat and sideways beading.

This section describes how to set up bead palettes and how to visualize bead designs. It explains how to create single-bead as well as multi-bead runs. It also covers bead fixings as well as reshaping and editing. It also deals with individual bead drops.

Beading mode

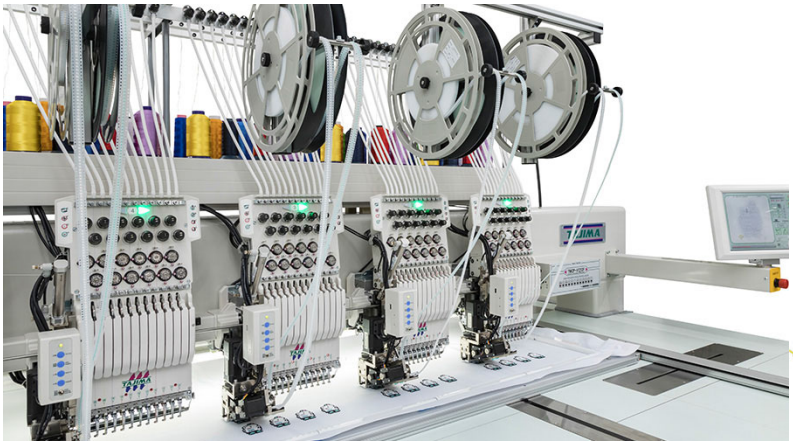
Before using the **Bead** tools, you must select a machine format that supports bead output. You can then set up a dedicated palette for your

design from a list of shapes. Each can be adjusted in size, height and color.



Machine beading

Capabilities vary but bead devices are not as varied as sequin devices. There are two categories: bead tape and loose beads. For both types of setup, twin-bead configurations are currently the most popular.

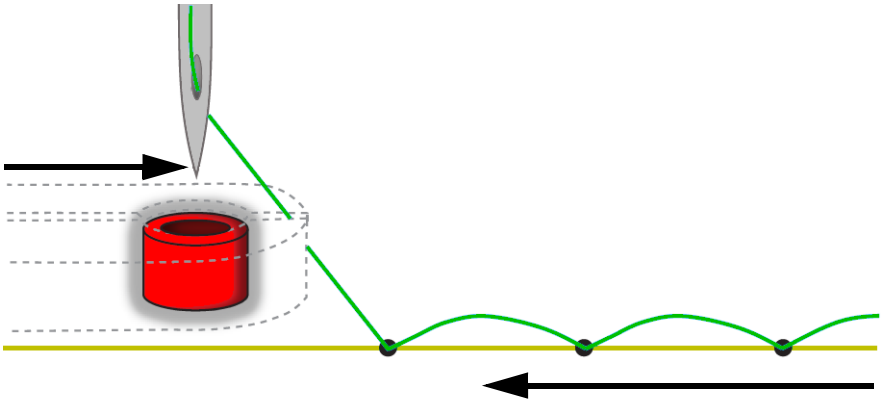


Twin-bead tape device



Twin-beading loose bead device

Bead tapes, like sequin reels, provide controlled placement of beads on fabric. With loose beads, containers hold them on top of the dispenser. This method is not quite as reliable as beads on tape.



Various layout methods are available on the machine. EmbroideryStudio supports the classic fixing stitch types – 'upright', 'flat', and 'sideways' – as well as decorative variants.

Related topics...

- Embroidery machine formats (Reference Manual)

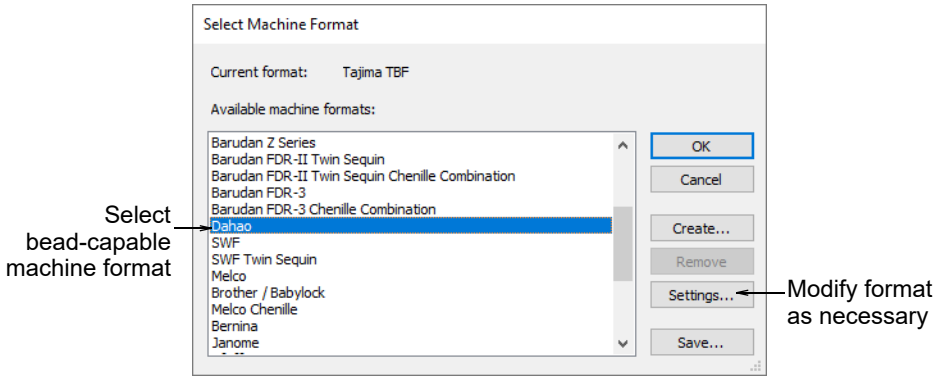
Select bead-capable machines

Before using the **Bead** tools, you need to choose a suitable machine format. Only some machine formats support beading – e.g. Tajima TBF, Dahao and SWF Twin Sequin. Refer to your machine manual for information about support for this type of decoration.

Note: For machine formats that have no bead capability, the bead palette will display. However, if you attempt to create a bead object, fixing stitches will be digitized without bead drops.

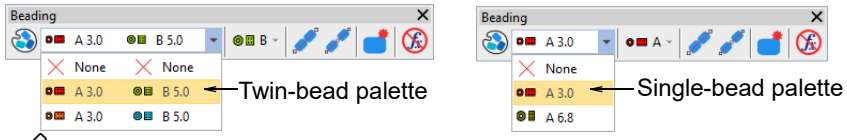
To select a bead-capable machine...

1 Select **Design > Select Machine Format**.

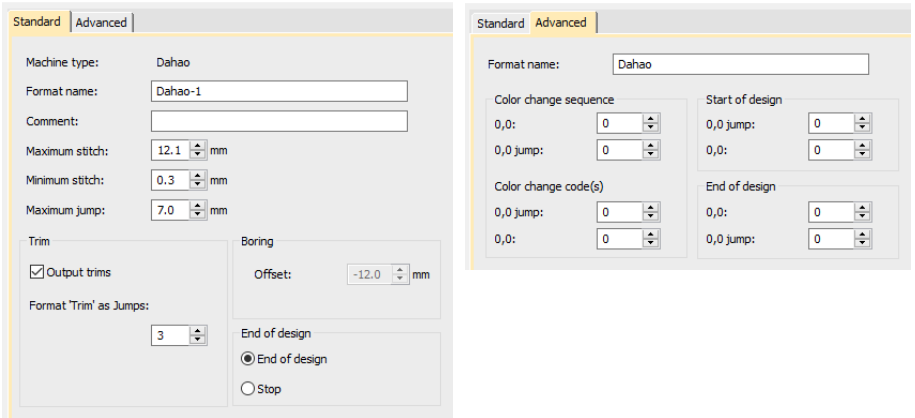


2 From the **Available Machine Formats** list, select a bead-capable machine format – e.g. Tajima TBF, Dahao.

3 Click **OK**. Default bead shapes are now available for selection from the **Bead Palette**. If you have selected a twin-bead-capable machine, bead shapes and sizes are displayed in pairs. Up to eight (8) beads can be supported when the Dahao machine format is selected.



Note: Different machines require different presets. Typical modifiable values include stitch and jump length, trim functions and color change functions. Use the **Machine Format Settings** dialog to customize values if outputting to a specific machine format.



Related topics...

- Embroidery machine formats (Reference Manual)
- Exporting designs for machine (Reference Manual)

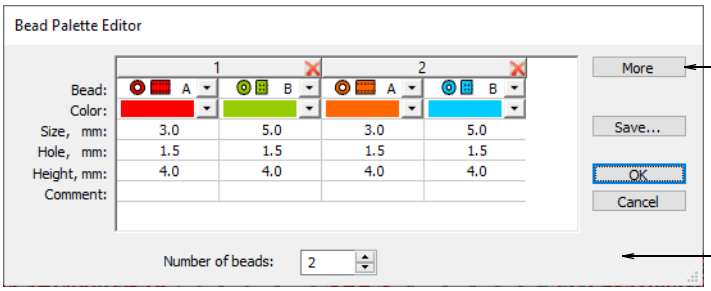
Set up bead palette

Use Bead > Bead Palette Editor to select shapes from a bead library, and define bead colors and sizes.

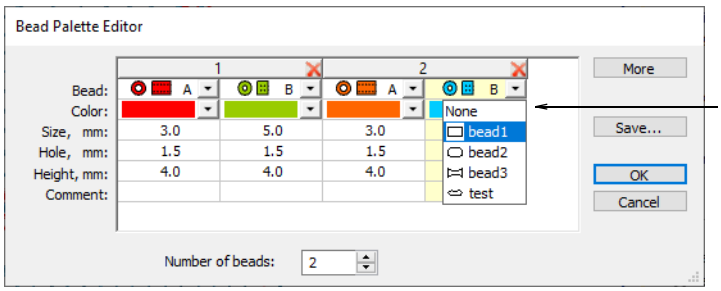
Use the **Bead Palette Editor** to prepare a palette of beads for use according to your machine capabilities. Bead devices are normally attached to the first or last needle of the machine head. Currently, EmbroideryStudio supports up to eight (8) beads in one design. The palette does not allow more than 8 entries.

To set up a bead palette...

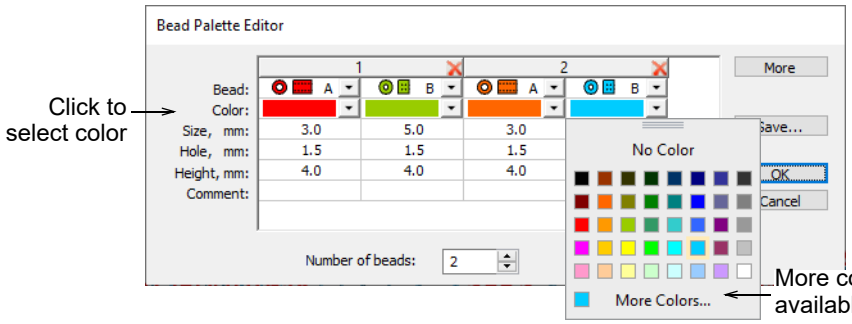
1. Select the machine format that supports the machine you are using.
2. Click the **Bead Palette Editor** icon. Fields for each bead are arranged in tabular form.



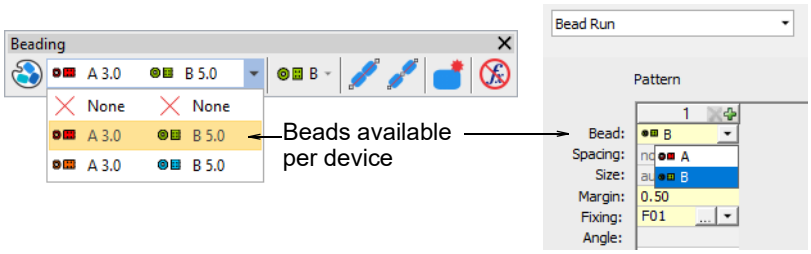
3. Set the number of beads available per device. Depending on machine type, up to eight (8) beads may be supported. If you have chosen a twin-bead machine, this value is limited to 2.
4. Use the **More** button to add devices. Click **X** in the column header to remove.



5. Select a bead from the droplist.
6. Set color, bead and hole size, as well as height.



7 Set up other beads in the same way, and click **OK**. Beads are available for selection.



Related topics...

- Select bead-capable machines

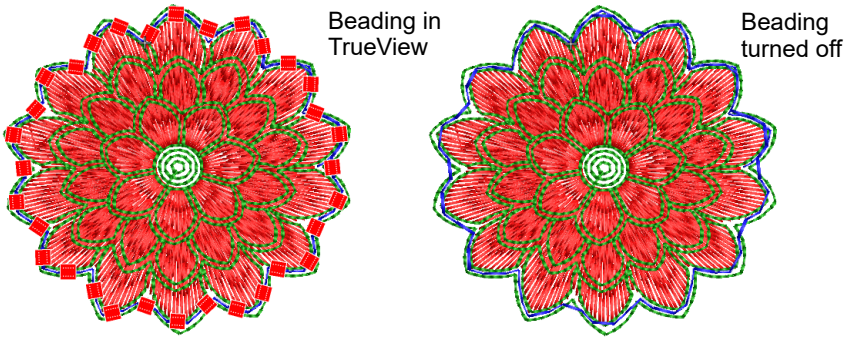
Visualize bead designs

Click View > TrueView to toggle between stitch view and TrueView™. Right-click for settings.

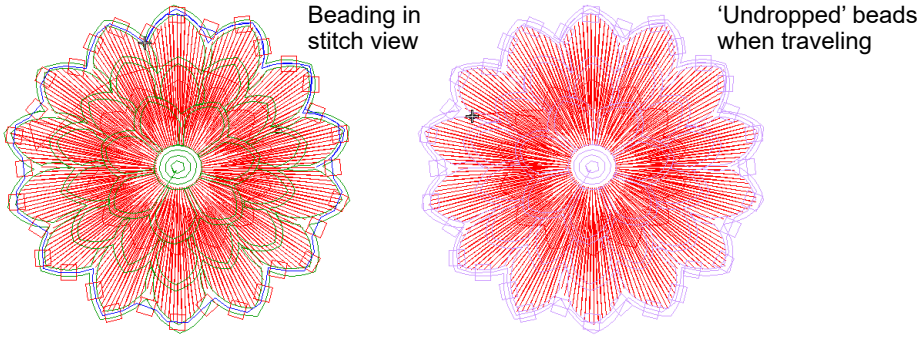
Use View > Show Stitches to toggle embroidery stitching display. Right-click for settings.

Use View > Show Functions to toggle display of machine function symbols. Right-click for settings.

Beading can be viewed in **TrueView** or stitch view while **Show Functions** is toggled on.



Both beads and fixing stitches appear in their selected colors and can be turned on or off via **Show Functions** and **Show Stitches** toggles.



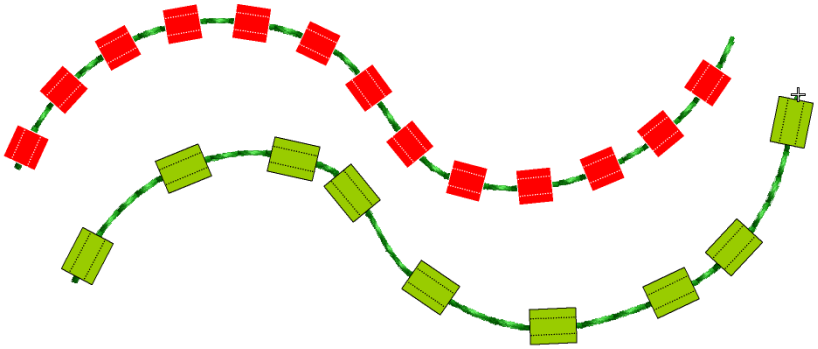
When traveling through a beading design, 'undropped' beads appear in the 'unsewn' color defined in the **Background & Display Colors** dialog.

Related topics...

- Travel through designs (Reference Manual)
- Viewing design repeats (Reference Manual)
- Change display colors (Reference Manual)

Creating bead runs

EmbroideryStudio provides tools for creating a string of beads along a digitized line according to preset spacings or as marked by the digitizer.



Digitize bead runs as you would do sequin runs. If you use the manual method, you define spacings between bead-drops with every click you make. If you use the automatic method, bead-drops are calculated according to current **Bead Run** object properties.

Digitize bead runs

Use Bead > Bead Run Auto to create a string of beads along a digitized line according to current settings.

Use Bead > Bead Run Manual to manually digitize bead-drops along a digitized line.

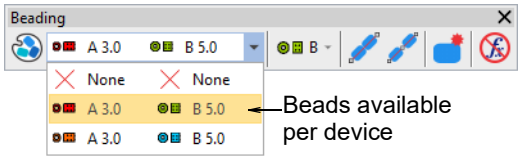
A 3.0

Use Bead > Bead Palette to select from a user-defined palette of bead shapes for the current design.

Normally beads are stitched last, after motifs and other embroidery are complete. With the **Bead Run** tools you have the option of digitizing individual bead drops or letting the system generate them for you. Automatic bead runs can be scaled.

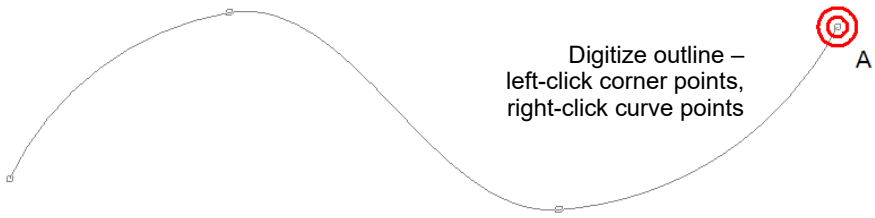
To digitize a bead run...

1. Select a bead-capable machine from the **Select Machine Format** dialog.
2. Define your palette and select bead shapes you want to use from the droplist, in this case a twin-bead setup.

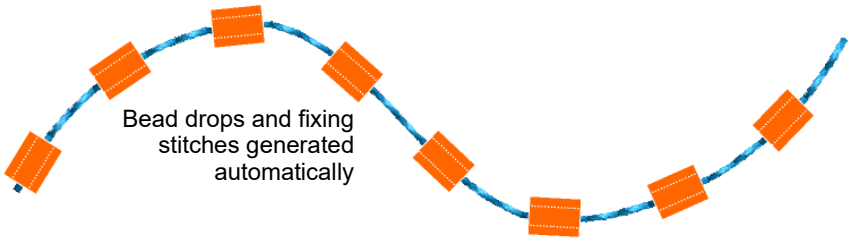


To digitize automatic bead drops...

1 To digitize a scalable bead run, use the **Bead Run Auto** tool. Enter reference points – left-click for corner points, right-click for curve points.

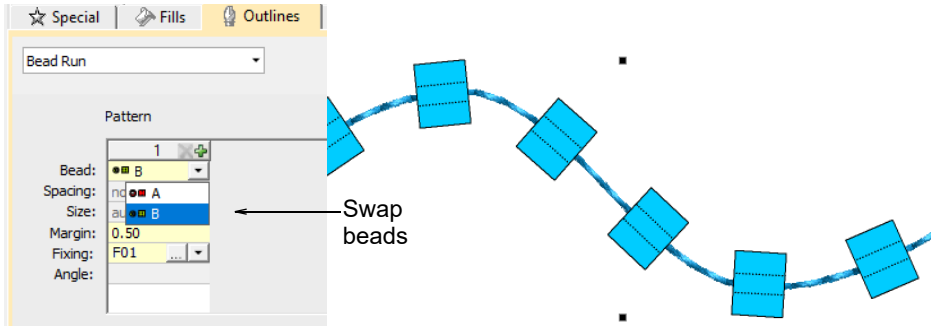


2 Press **Enter** to complete. Bead drops are automatically generated along with fixing stitches according to current **Bead Run** object properties.

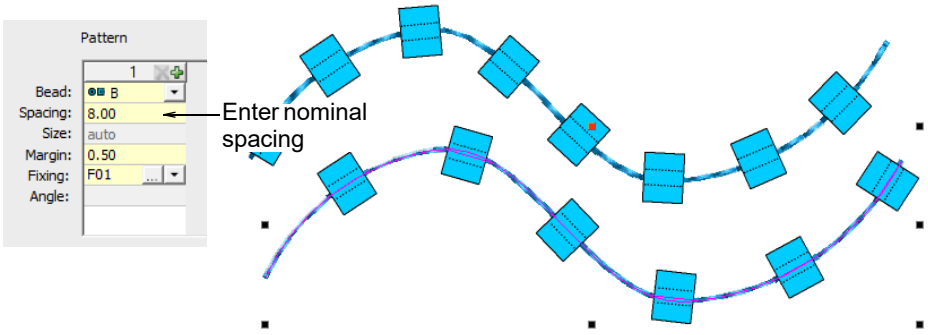


Tip: You can convert a normal run to bead run by selecting and clicking the **Bead Run Auto** tool.

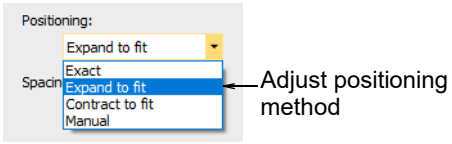
3 Double-click the object to access properties and swap beads as preferred.



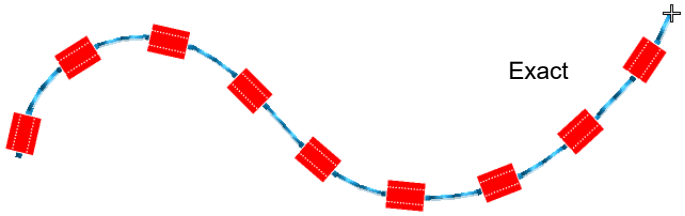
4 In the **Spacing** field, enter a nominal spacing. By default, this is measured 'along baseline', from one bead drop to the next. Minimum spacing is automatically calculated.



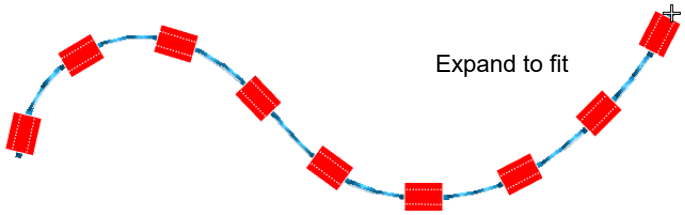
5 Adjust **Positioning** method as preferred:



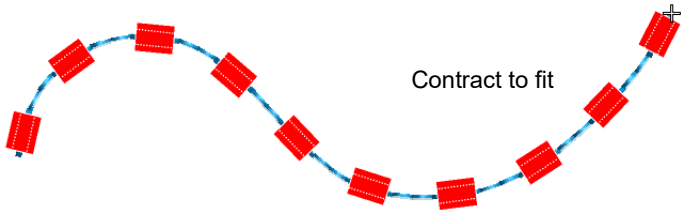
- **Exact**: Uses nominal spacing. This may result in gap formation at the end of the path.



- **Expand to fit**: Expands spacing to evenly spread bead distribution.

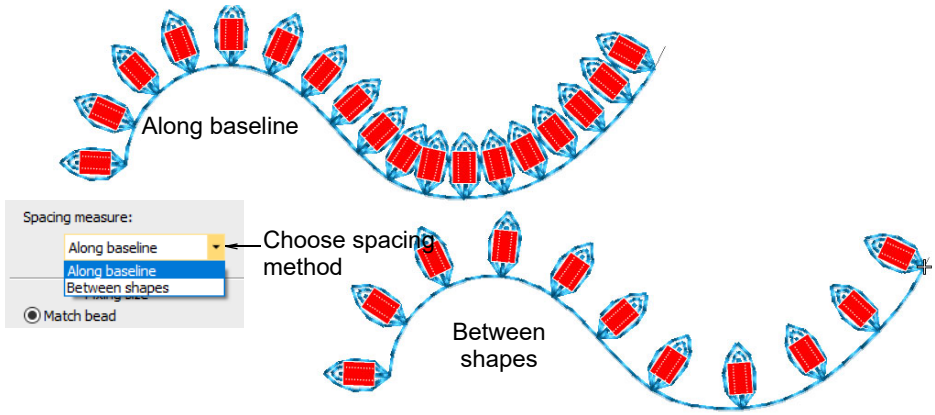


- **Contract to fit**: Contracts spacing to evenly spread bead distribution, sometimes resulting in an extra bead.

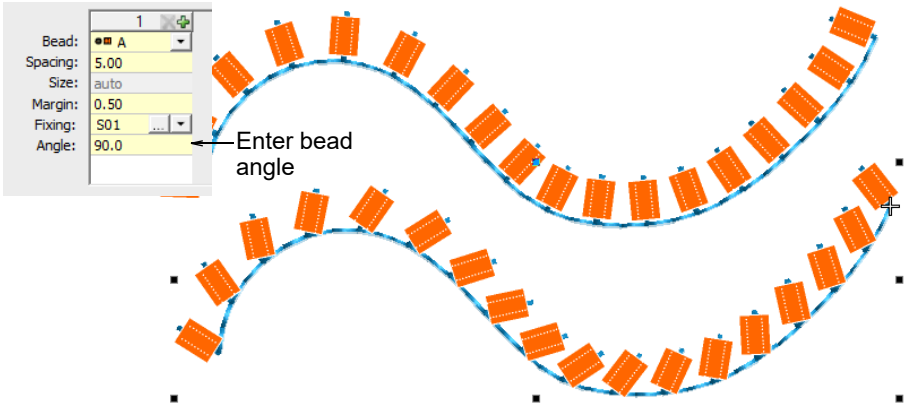


- **Manual**: Turns bead run to 'manual' so that the number of beads won't change when scaling.

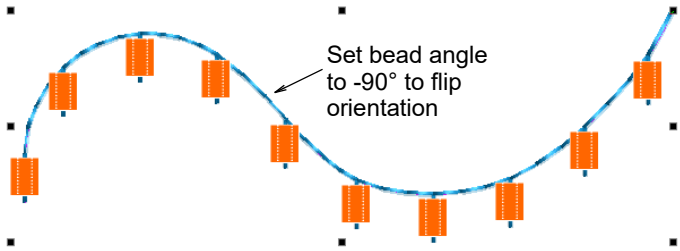
6 Change the **Spacing measure** as necessary in order to prevent bead bunching.



7 Use **Angle** to orientate beads in relation to the run line. Fixing stitches are adjusted accordingly.



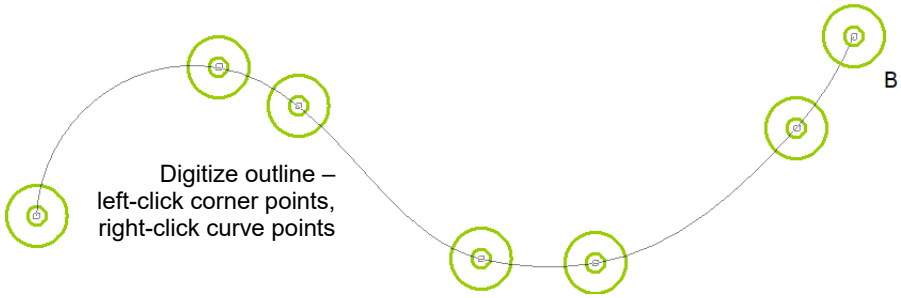
8 Set **Angle** to -90° to flip bead orientation.



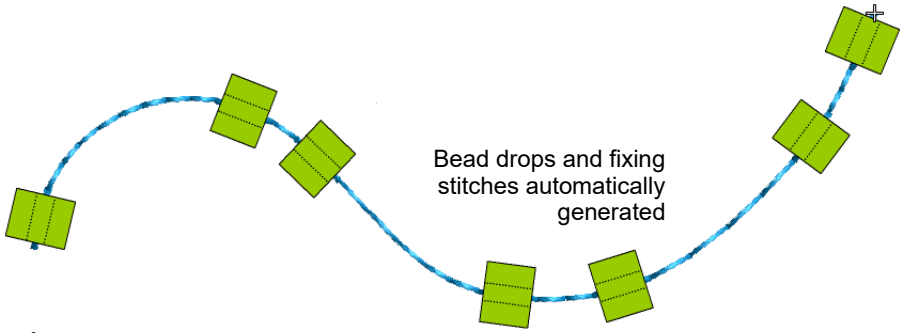
9 To change fixing stitches, click the '...' button in the **Fixing** field. The docker expands to display a library of fixing stitch types. See below.

To digitize manual bead drops...

1 To control the exact placement of your bead drops, use the **Bead Run Manual** tool. Digitize individual bead drops with left and right mouse-clicks.



2 Press **Enter** to complete. Bead drops are generated at each reference point. Connecting and fixing stitches are automatically generated.



Note: Manual placements can be reset by choosing a different **Positioning** method. If you change to exact spacing, all drops are recalculated and manual placements lost.

Create patterned bead runs

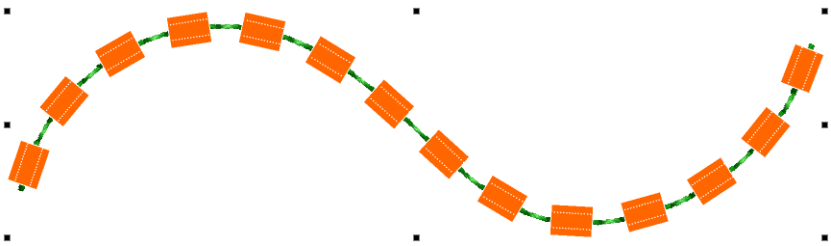
Use Bead > Bead Run Auto to create a string of beads along a digitized line according to current settings.

Use Docker > Object Properties to toggle the docker on/off. Set properties for the current design.

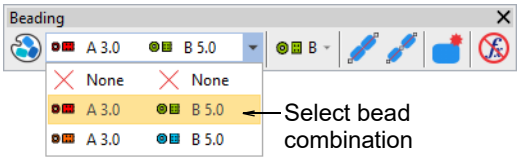
With EmbroideryStudio, you can create bead run patterns for immediate use. Patterns generally involve multi-bead drops.

To create a patterned bead run...

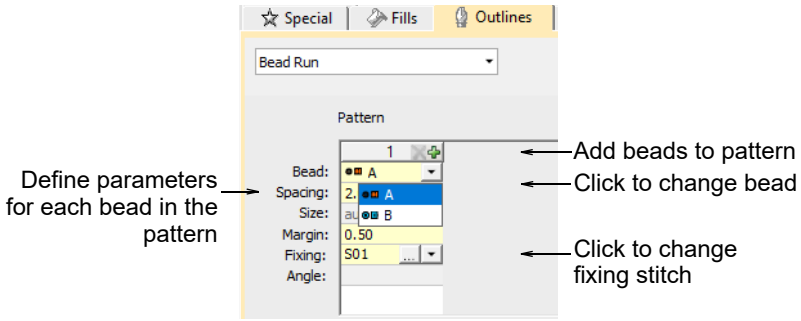
1 Create a bead-run object with **Bead Run Auto** or select an existing object. This allows you to preview your pattern as you go.



2 Select the bead combination you want to use.



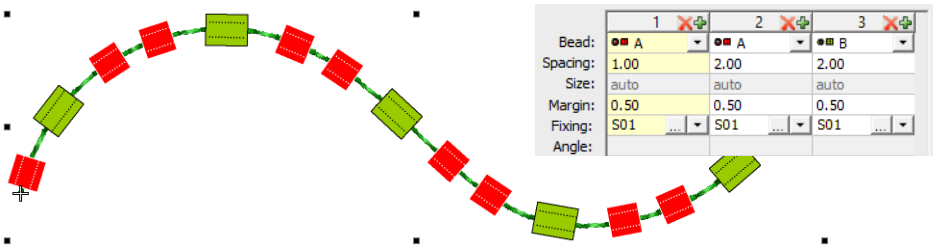
3 Open **Object Properties**. The **Pattern** table displays beads currently available.



4 Add or remove beads via the **+** and **X** buttons in the column header.

5 Select a bead from the droplist. The selected sample updates immediately.

6 In the **Spacing** field, enter a nominal spacing for each bead. By default, spacing is measured along the digitized line.



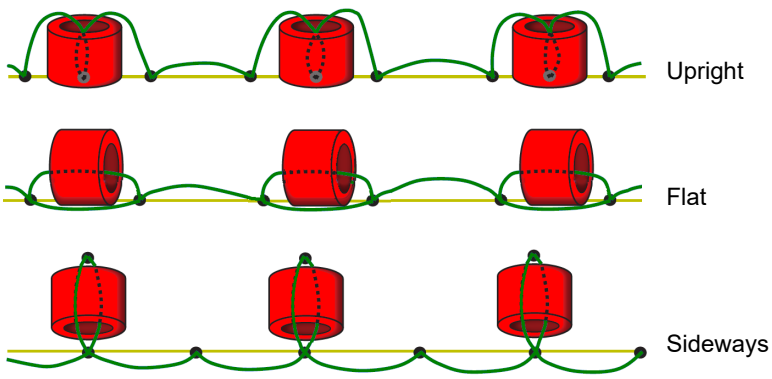
7 In the **Fixing** field, select the type of fixing you want. Generally you'll use the same fixing for all beads in the pattern.

Related topics...

- Select bead-capable machines
- Digitize bead runs

Bead fixings

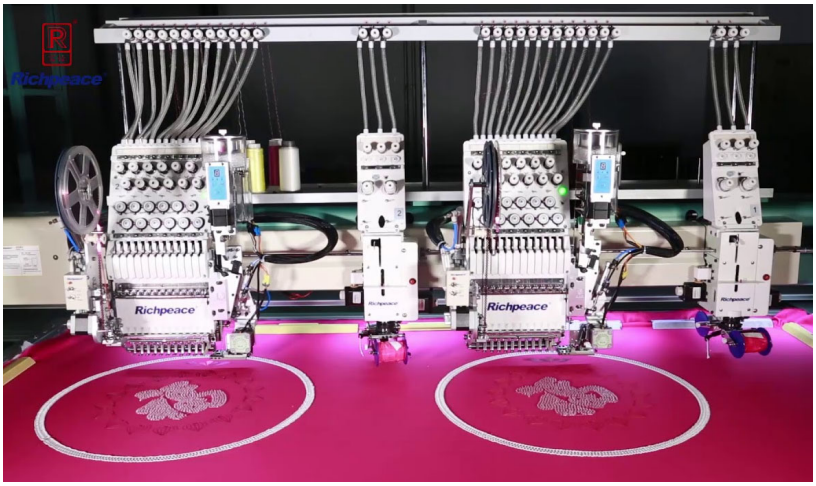
EmbroideryStudio provides a library of predefined fixing stitches for use with bead runs. Generally digitizers reserve a single thread color for all beads, regardless of bead color. Transparent thread is often used in order to avoid differences between thread color and bead color. Various layout methods are available. EmbroideryStudio supports the classic types – 'upright', 'flat', and 'sideways' – as well as variants. Fixing stitches are generally not part of the decoration.



Bead fixing considerations

Fixing type is independent of device type. The bead is always dropped in the same way. Fixing stitches control bead orientation. However, different

machines and dispensers have their own production requirements and idiosyncrasies.



Bead production vs sequin production

Bead production is more exacting than sequin production. While sequin devices used to have similar issues, they have matured to the point where they can manage all kinds of fixing types at high speed. Moreover, sequin materials are more forgiving. Needle penetrations do not generally cause serious problems. The minimum commercial operating speed for bead production is 800 rpm or higher. Typical problems which can occur at high speed:

- Beads are missed
- Beads are smashed
- Needles are broken.

Testing for high speed production

You may need to modify or 'tweak' predefined fixing types provided by the software in order to run reliably at high speed. This will involve testing on the machine. While fixing stitches in EmbroideryStudio automatically adapt to bead size, each bead type will need to be tested separately. Generally speaking, bead production can be stabilized when running machines at low speed, say, 600 rpm. This is suitable for testing.

A typical scenario might be:

- Develop a bead embroidery design.
- Carry out a sampling test at low speed.
- Test at production speed in order to calculate costs.
- Assess whether bead fixing meets high speed requirements – e.g. beads are missed or smashed.

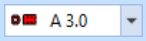
- Adjust bead fixings and test again.

Options for editing bead fixings

Options available in EmbroideryStudio for bead designers are:

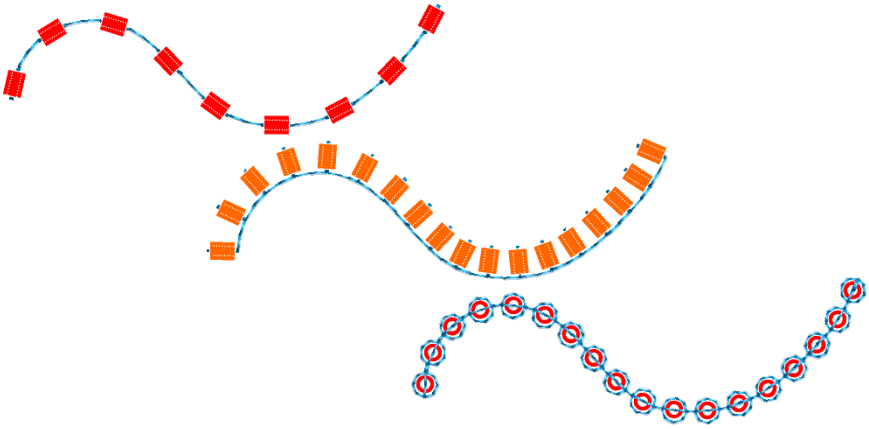
- Modify or 'tweak' fixing stitches by means of object properties. This may involve:
  - Trying out different fixing stitch types
  - Testing automatic as well as fixed spacings
  - Modifying margin settings.
- Edit bead fixings with the **Bead Edit** tool.
- Digitize bead drops with the **Manual Bead** tool.
- Insert bead drops with the **Insert Function** capability.
- Create your own bead fixings and save them as custom motifs.

Apply bead fixings



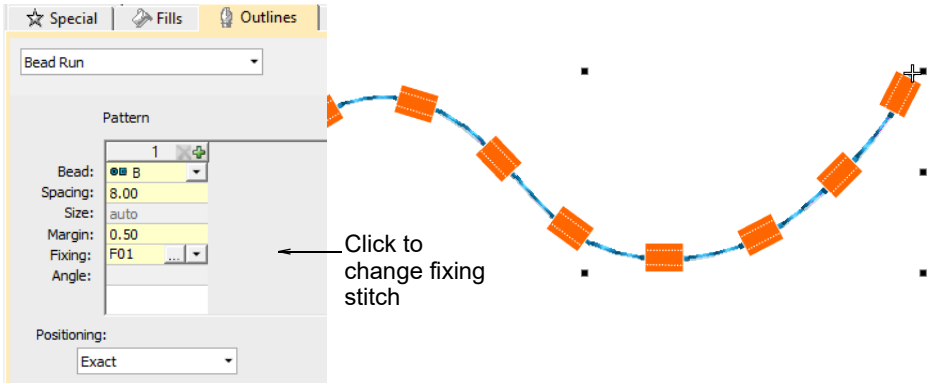
Use Bead > Bead Palette to select from a user-defined palette of bead shapes for the current design.

You can select beads before or after digitizing. Similarly, you can preset fixing stitches or change them at any stage.

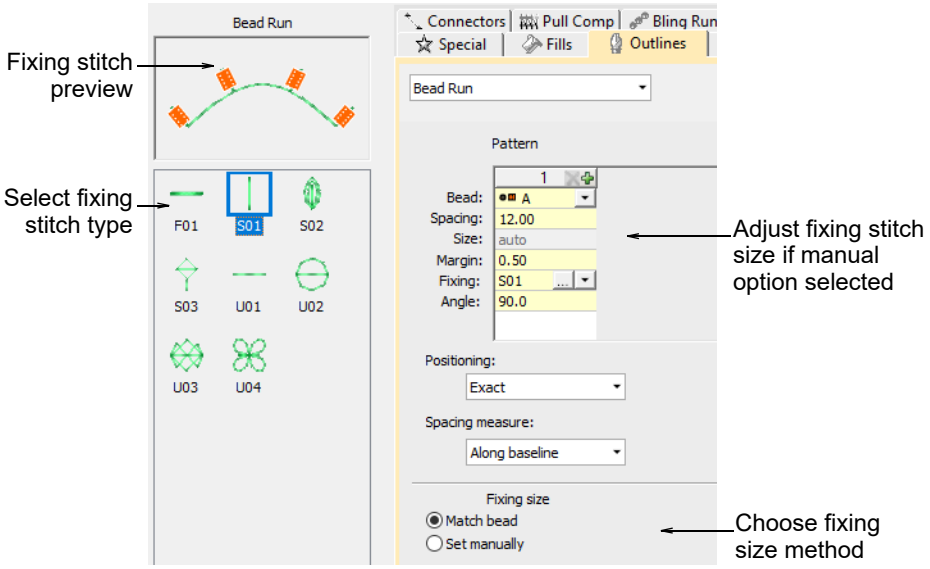


To apply bead fixing stitches...

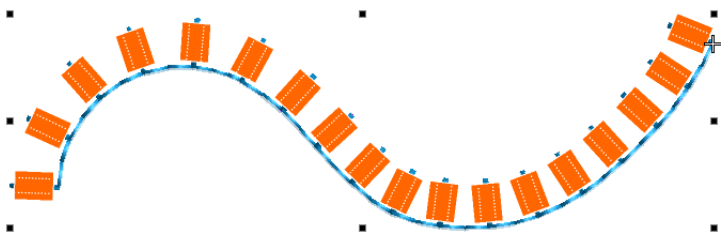
1 Double-click a selected object to access object properties.



2 Click the '**...**' button in the **Fixing** field. The docker expands to display a library of fixing stitch types.



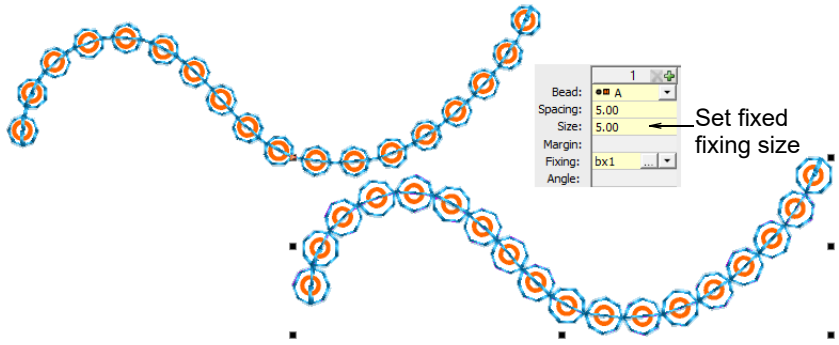
3 Select the preferred style – 'upright', 'flat', 'sideways'.



4 To adjust fixing stitch size, select a method:

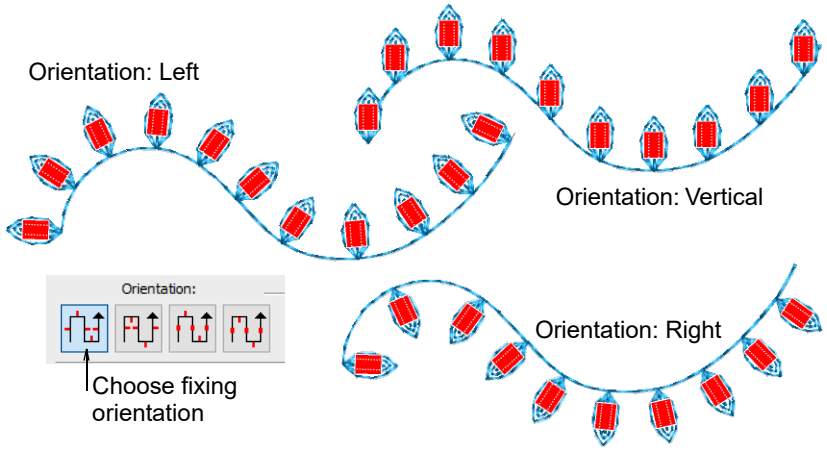
Method	Function
Match bead	Automatically sets a margin around the bead so that fixing stitches don't punch too close.
Set manually	Activates the Size field and lets you set a fixing stitch size independent of bead size.

- If you choose 'set manually', specify a value in the **Size** field. Size is measured from the center of the bead. Enter a value from 2.50mm to 30.00mm.



- If you choose automatic matching, specify a margin for the fixing stitch in the **Margin** field. Enter a value from 0.20mm to 2.00mm. This ensures that the fixing stitch does not punch too close to the bead.

5 To adjust fixing orientation, choose one of the preset directions – left/right, up/down.

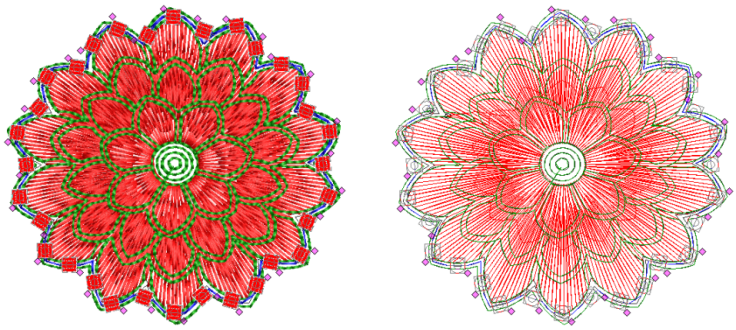


Related topics...

- Create sequin fixings (Reference Manual)

Editing bead runs

Bead-run objects can be edited like any other embroidery object. Parameters can be adjusted via object properties, or bead runs reshaped and edited, right down to individual bead orientations and fixings.



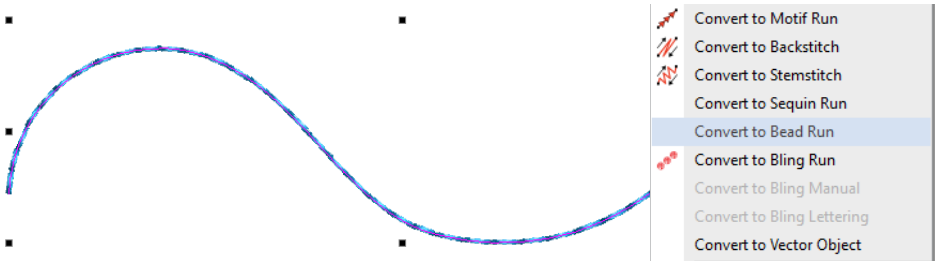
Convert objects to bead runs

Use Bead > Bead Run Auto to create a string of beads along a digitized line according to current settings.

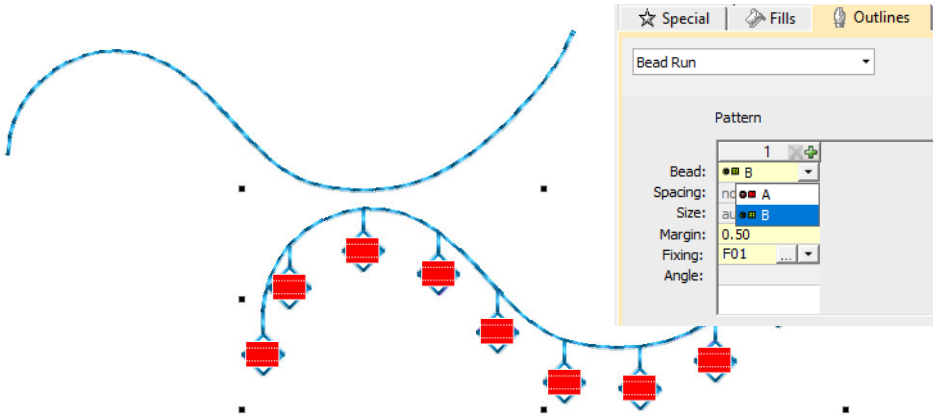
Most objects in EmbroideryStudio are inter-convertible. Bead runs are no exception. Any outline object – Run, Stemstitch, Motif Run, Freehand, Column C, Vector – can be quickly converted to bead run.

To convert an object to a bead run...

1. Select the object – Run, Stemstitch, Motif Run, Freehand, Column C, or Vector.
2. Right-click and select **Convert > Convert to Bead Run**.



3. Alternatively, click the **Bead Run Auto** icon.



4 Double-click to access object properties.

Edit bead runs

	Use Select > Select Object to resize objects using selection handles.
	Use Reshape > Reshape Object to reshape selected bead-run objects.
	Use Bead > Bead Edit to fine-tune placement of individual beads.

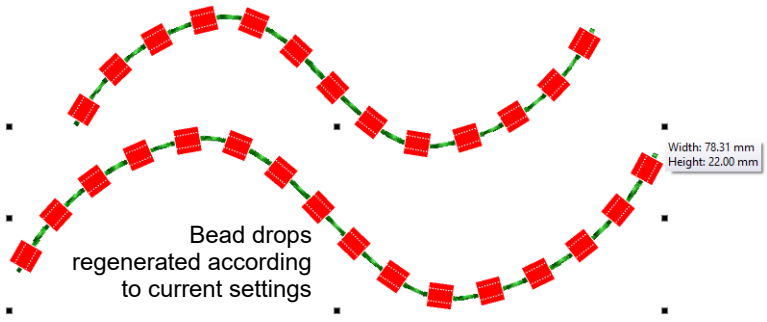
You have complete control over editing bead-run objects, from scaling to adding or removing individual beads. You can also manually fine-tune bead spacing and orienation. You can even edit individual fixing stitches.

Tip: Performing manual edits automatically sets bead positioning to **Manual**. If you reset to **Exact**, **Contract to fit**, or **Expand to fit**, all manual edits are lost.

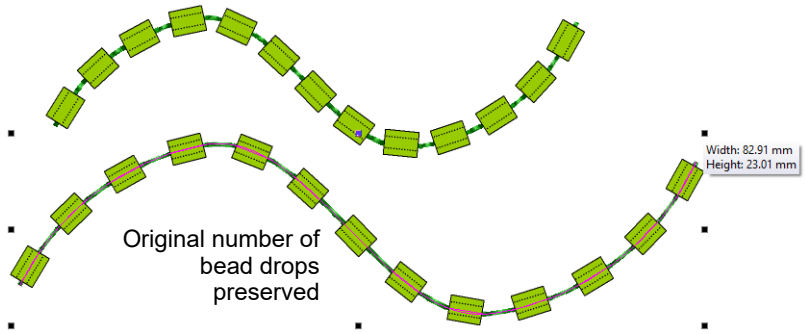
To edit a bead run...

1 Scale bead-run objects by clicking and dragging selection handles, or by adjusting general properties.

- With **Bead Run Auto** objects, bead drops are automatically recalculated.

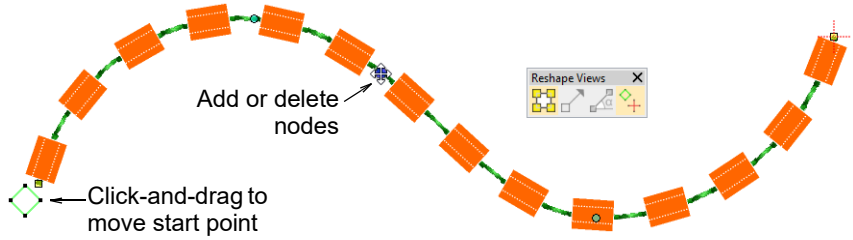


- With **Bead Run Manual** objects, the original number of bead drops is preserved while spacing is increased.

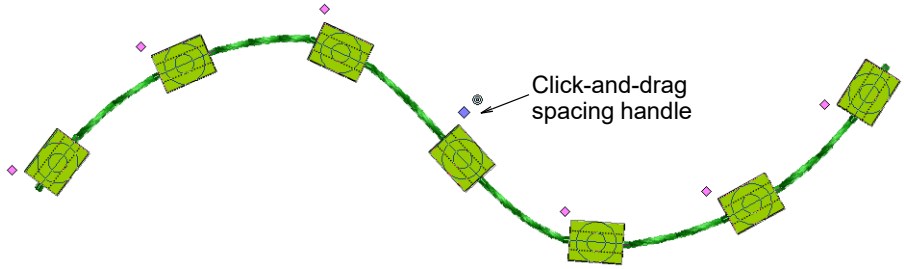


2 Edit bead runs with **Reshape**:

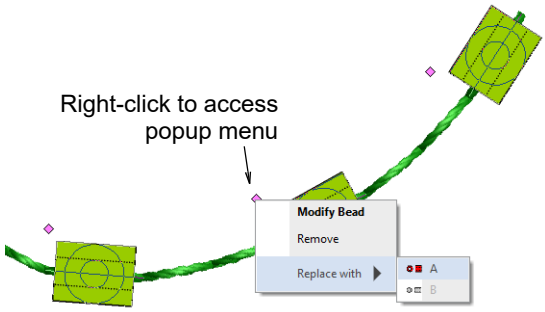
- Add nodes by left- or right-clicking the outline.
- To remove a node, select and press **Delete**.
- Click-and-drag to move the start point. To reverse stitch direction, apply **Edit > Reverse > Reverse Curve**.



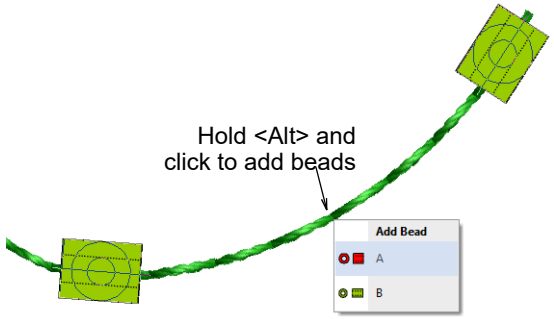
3 Fine-tune individual bead spacings with the **Bead Edit** tool. Click-and-drag a diamond control point. Hold down **Shift** or **Ctrl** keys to select a range or multiple control points.



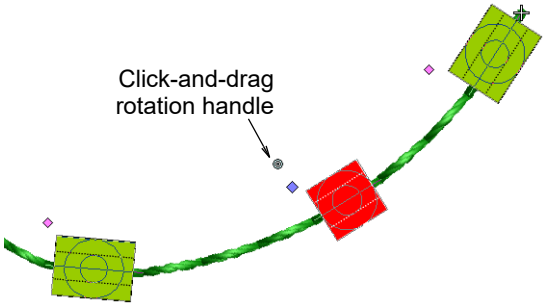
4 Remove selected beads by pressing **Delete** or via the popup menu. Use the same menu to replace individual beads from the current palette.



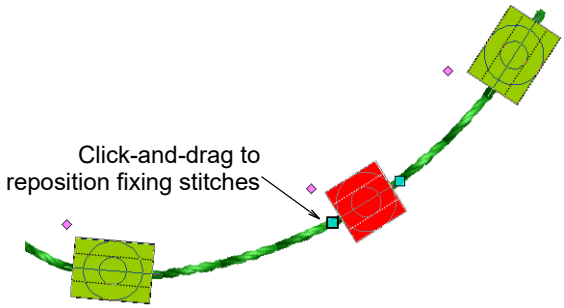
5 Add beads from the popup menu by holding down the **Alt** key and clicking the bead run.



6 To rotate an individual bead, click the diamond control point. Use the rotation handle to orient the bead as necessary.



7 Click the bead to activate fixing stitches. Use the handles to fine-tune as necessary.

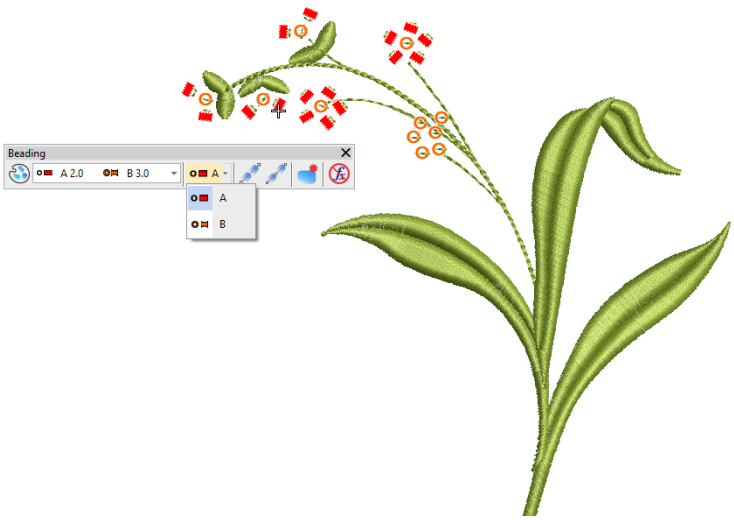


Related topics...

- Scaling objects (Reference Manual)
- Reshaping objects (Reference Manual)

Manual bead digitizing

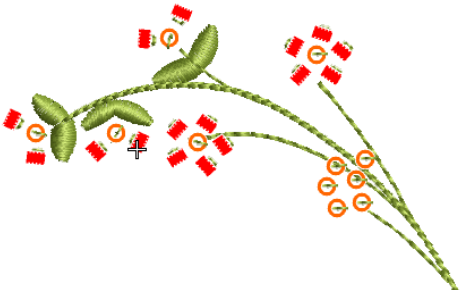
If you require precise control over the positioning and encoding of your bead drops, EmbroideryStudio provides manual techniques for this purpose. Digitize your own bead drops with fixings. Even insert individual bead-drop functions while traveling through the design. Or create your own bead fixings for use as custom motifs.



Digitize manual bead drops

Use Bead > Manual Bead to digitize individual beads.

The **Manual Bead** input method allows you individual control over bead placement and fixing stitches. Create decorative bead placements or 'clusters' using beads from the palette. To add a bead to the stitching sequence, simply drop it onto the design and secure it with manual stitches.

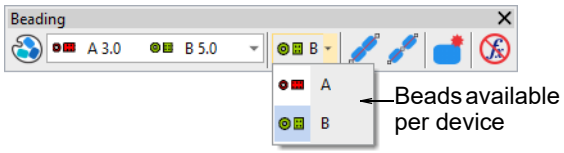


Note: Manual bead stitching is a difficult digitizing skill to master and you need to plan the stitching sequence carefully in order to minimize unnecessary stitches. Experiment with your machine and stitch length and spacing settings to achieve the desired result.

To digitize manual bead drops...

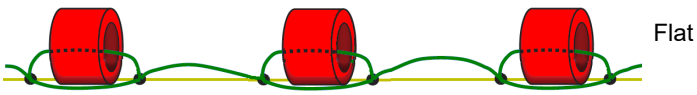
1. Select a machine format that supports bead mode via the **Select Machine Format** dialog. See Select bead-capable machines for details.
2. Set up your palette in the **Bead Palette Editor** according to the machine type – single, twin, multi-bead – that you have selected.
3. Select a color for the fixing stitch from the **Color** toolbar.

4 Click the **Manual Bead** icon. If you have activated twin-bead mode, bead options are displayed in the droplist.



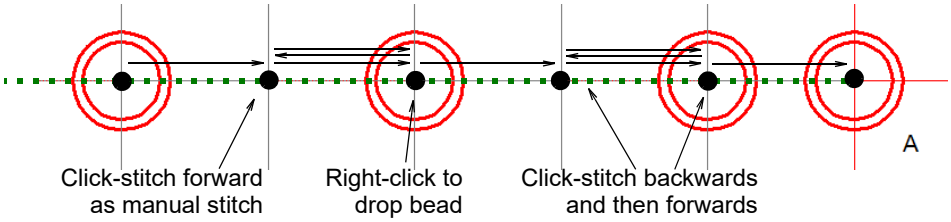
Tip: Zoom in for more accurate digitizing. Hold down **Ctrl+Shift** to constrain the cursor to horizontal and vertical directions, or 15° increments.

5 Select a bead and left-click to begin your manual bead placement. It must start with at least one stitch. How you proceed depends on the layout style you are aiming for. The most common is 'flat':



6 One technique for creating a 'flat' fixing stitch is as follows:

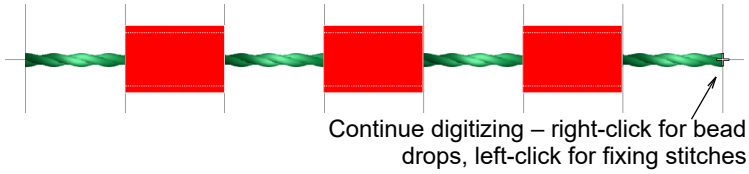
- Click-stitch forward as manual stitching.
- Move forward one bead length and right-click to drop a bead. An outline appears.
- Click-stitch backwards. This stitch is going through the hole and will pull the bead back and down.
- Click-stitch forward across the bead to the drop point.



- Click-stitch forward as manual stitching until you reach the next drop point.

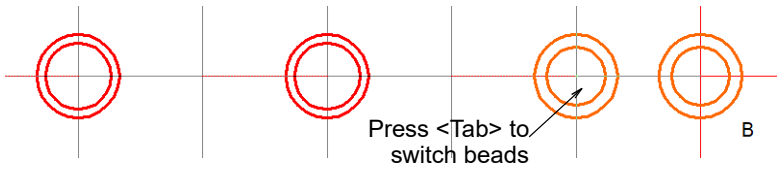
Tip: If you make a mistake while digitizing, press **Backspace** to retrace your steps.

7 Continue digitizing manually in the same way – right-click to drop a bead, left-click to digitize fixing stitches. Press **Enter** to finish.

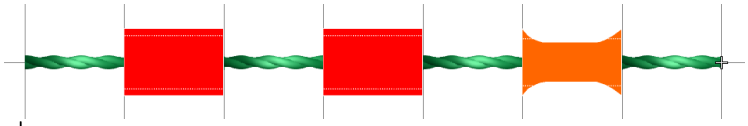


Tip: Remember to test your beading drops on the machine at normal speed (low-to-medium) and then at high speed. Differences will show up at high speed.

8 If you have activated multi-bead mode, press the **Tab** key to switch between available bead shapes while digitizing.



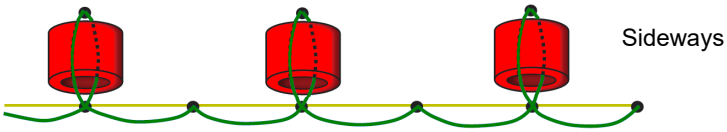
9 Press **Enter** to finish.



Tip: Typically, you combine manual bead drops with **Run** stitch. Use **Run** to 'map out' the design and use **Manual Bead** to digitize individual bead drops or 'bead clusters'.

To digitize sideways fixing stitches...

The recommended technique for creating a 'sideways' layout is similar in principle to 'flat'.

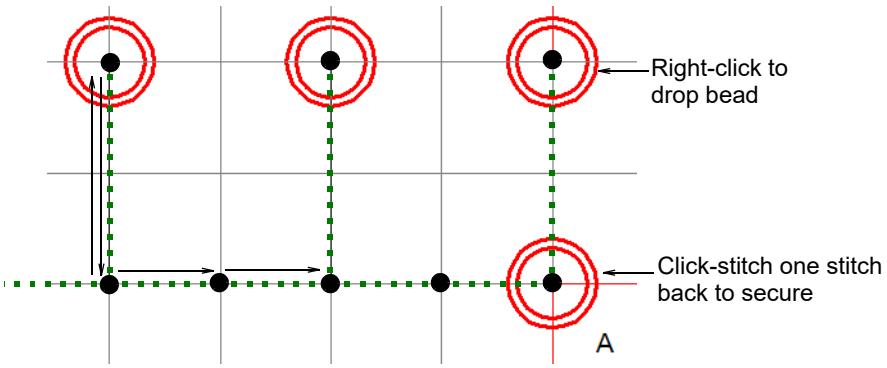


1 Click-stitch forward as manual stitching.

2 Turn sideways at the point you want to drop the bead.

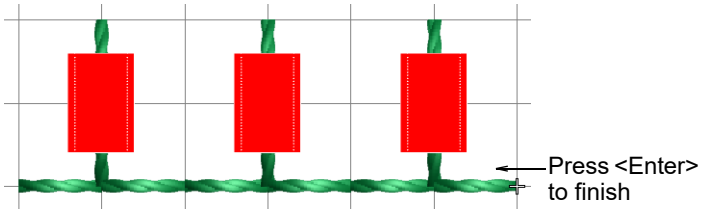
3 Move forward one bead length and right-click to drop the bead. A bead outline appears.

4 Click-stitch backwards. This stitch is going through the hole and will pull the bead back and down.



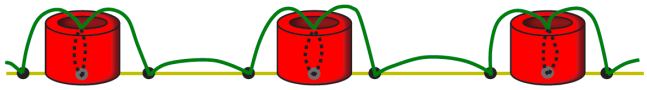
5 Click-stitch forward as manual stitching until you reach the next drop point.

6 Press **Enter** to finish.



To digitize upright fixing stitches...

Below is the 'classic' upright layout. In this procedure we add some stitch reinforcement to help position the bead.

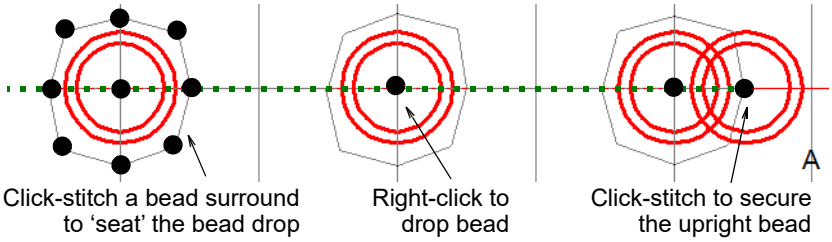


1 Click-stitch forward as manual stitching.

2 Optionally, click-stitch a bead surround in manual stitching. This will help 'seat' the upright bead.

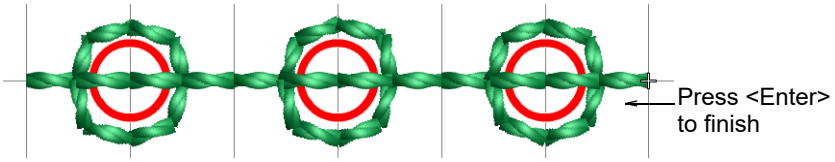
3 Right-click in the center of the surround to drop the bead. A bead outline appears.

4 Click-stitch forwards to the edge of the bead surround. This stitch is going through the hole and will secure the bead in the upright position.



5 Click-stitch forward as manual stitching until you reach the next bead surround.

6 Press **Enter** to finish.



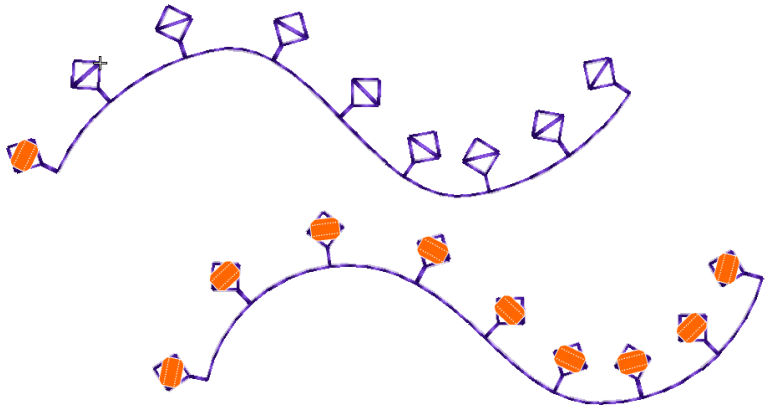
Related topics...

- Select bead-capable machines
- Beading mode

Insert bead drops

	Use Outline > Digitize Run to place a row of single or triple run stitches along a digitized line.
	Use Outline Stitch Types > Motif Run to create a string of motifs along a digitized line.
	Use Docker > Stitch List to toggle Stitch List display on and off. Use it to select individual stitches.
	Use Travel > Travel 1 Stitch to move stitch cursor forwards/backwards 1 stitch at a time. Left/right click.
	Click Function > Insert Function to insert machine function at current stitch cursor position.
	Use Bead > Clear Function to remove any bead functions from the current needle position.

In preference to the **Manual Bead** tool, some digitizers flesh out designs using **Run** or **Motif Run** and then travel through it, dropping beads manually as and where required. This technique can be used with single or multi-beads.

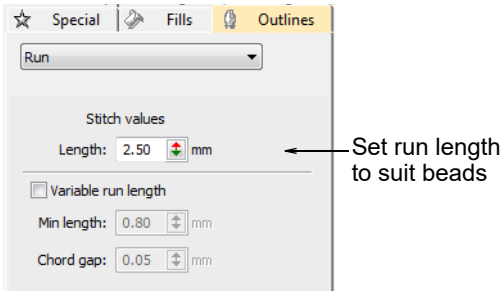


To insert bead drops...

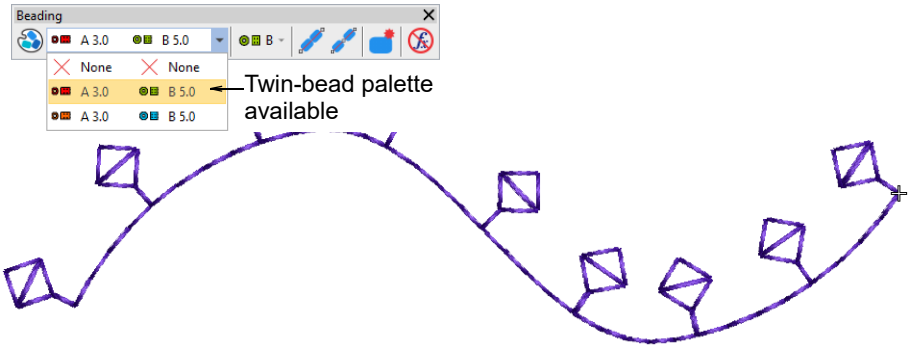
1 Select a machine format that supports bead mode via the **Select Machine Format** dialog.

2 Set up your bead palette – single or more – according to machine capabilities.

3 Set a fixed run length to suit the bead type/s you are using.



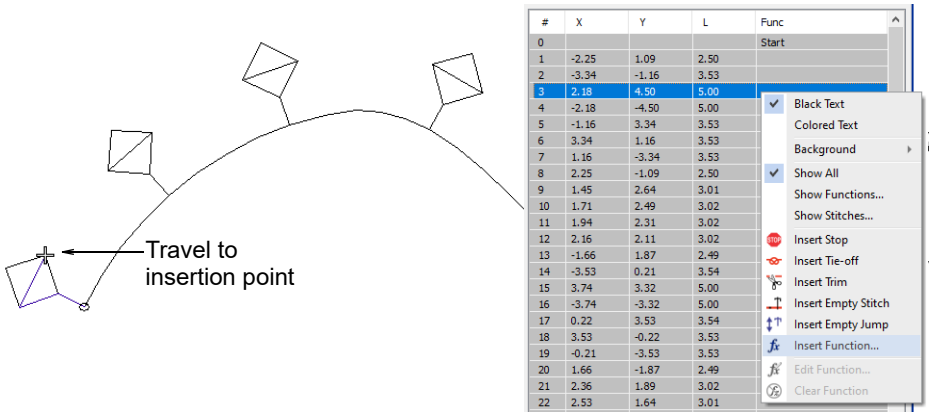
4 Create the design or pattern you want and choose the bead or beads to use.



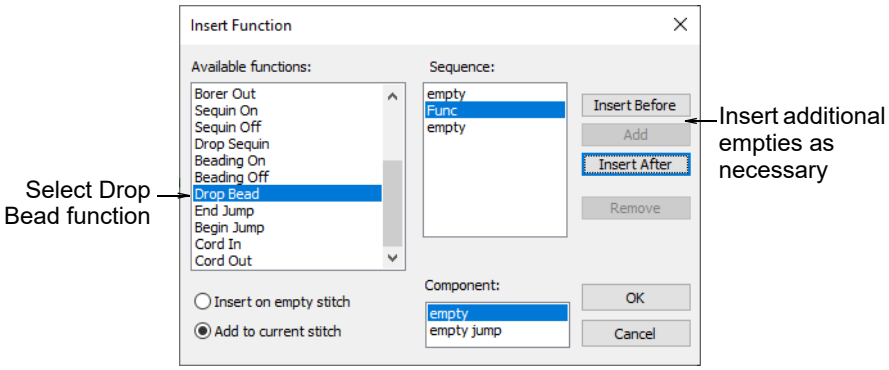
5 Optionally, open the **Stitch List**.

6 Press the **Home** button and travel through the design using arrow keys or **Travel** tools.

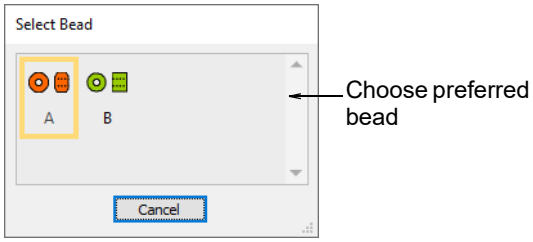
7 Travel to the insertion point and select **Insert Function** from the toolbar or **Stitch List** popup menu.



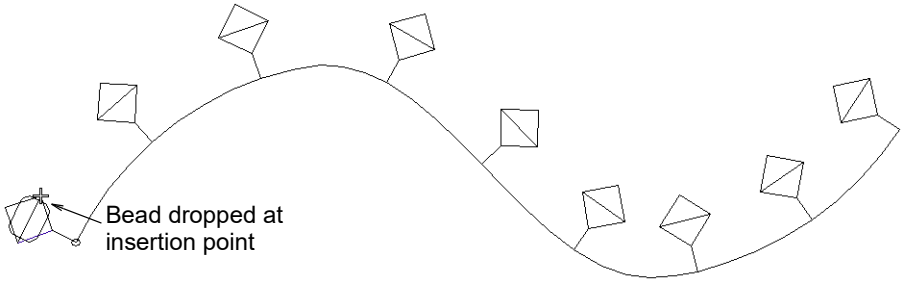
8 From the **Functions** list, select **Drop Bead**. Depending on machine requirements, you will either add the function to the current stitch, or insert it on an empty stitch or empty jump. See your machine manual for details.



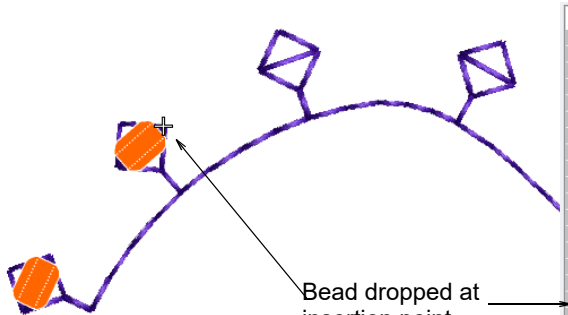
9 When the **Drop Bead** function is correctly defined, click **OK**. The **Select Bead** dialog opens showing available beads.



10 Choose a preferred bead. The **Drop Bead** function, together with any additional empty stitches or jumps, is added at the current needle position.



11 Continue traveling and inserting beads by the same method.



#	X	Y	L	Func
0				Start
1	0.00	0.00	0.00	BdOn (1) (empty)
2	-2.25	1.09	2.50	
3	-3.34	-1.16	3.53	
4	2.18	4.50	5.00	Drop Bead (A)
5	-2.18	-4.50	5.00	
6	-1.16	3.34	3.53	
7	3.34	1.16	3.53	
8	1.16	-3.34	3.53	
9	2.25	-1.09	2.50	
10	1.45	2.64	3.01	
11	1.71	2.49	3.02	
12	1.94	2.31	3.02	
13	2.16	2.11	3.02	
14	-1.66	1.87	2.49	
15	-3.53	0.21	3.54	
16	3.74	3.32	5.00	Drop Bead (A)
17	-3.74	-3.32	5.00	
18	0.22	3.53	3.54	
19	3.53	-0.22	3.53	
20	-0.21	-3.53	3.53	
21	1.66	-1.87	2.49	
22	2.36	1.89	3.02	

12 To delete a bead drop, travel to the location and click the **Clear Bead** icon.

Related topics...

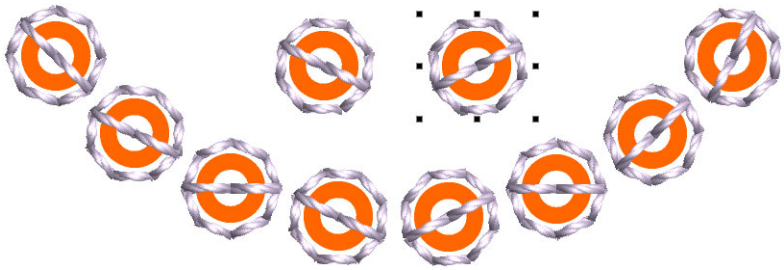
- Digitizing outlines & details (Reference Manual)
- Motif runs (Reference Manual)
- Select bead-capable machines
- Travel through designs (Reference Manual)
- Insert machine functions (Reference Manual)

Custom bead motifs

Use Traditional Digitizing > Use Motif to add motifs to design one-by-one. Rotate, scale, or mirror as you add.

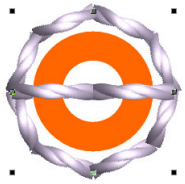
Use Outline Stitch Types > Motif Run to create a string of motifs along a digitized line.

Another technique for deploying custom bead fixings is to save them as motifs and use them singly or in motif runs. The **Create Motif** function lets you save your own motifs for future use. Custom motifs are saved in custom 'motif sets'.

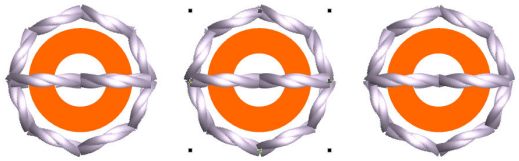


To create and save a motif...

1 Create your custom bead and fixing stitch or edit an existing one.



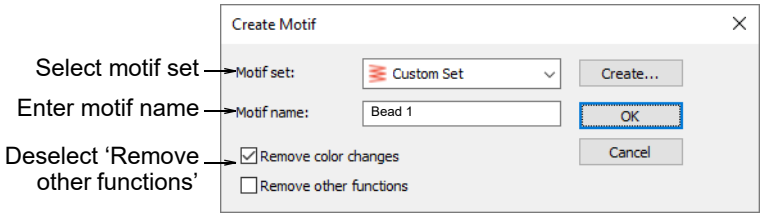
2 Duplicate and align the motif as you want it to appear in a motif run. Use **Alignment** tools for precise arrangement.



Determine nominal layout

3 Once you have determined the layout, select objects and apply **Closest Join**. Use the middle motif to determine reference points.

4 Select the motif and choose **Object > Create Motif**.

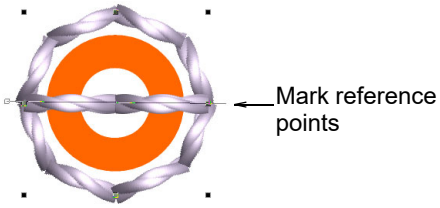


5 Select a custom motif set from the droplist and enter a name in the **Motif Name** field.

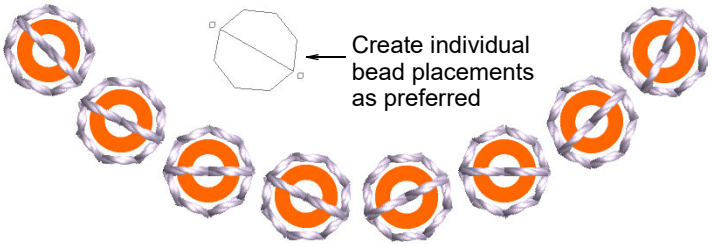
6 Deselect the **Remove other functions** option. This ensures that beads are preserved.

7 Click **OK**.

8 Click two reference points for the bead motif. These should coincide with entry and exit points.



9 Use you custom bead and fixing in bead runs or individual placements.

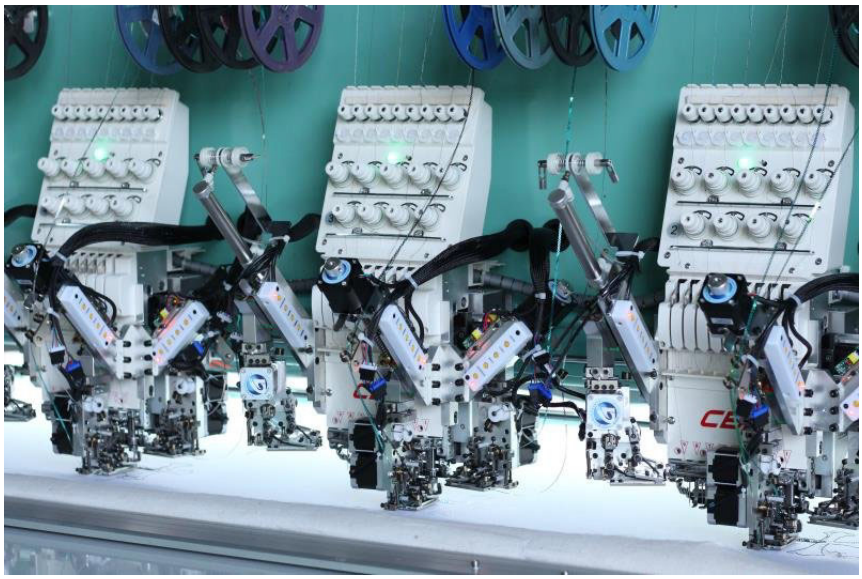


Related topics...

- Custom motifs (Reference Manual)
- Selecting & placing motifs (Reference Manual)
- Motif runs (Reference Manual)

Outputting sequins/beads for production

Once your sequin/bead design is ready for production, you can output to machine file. EmbroideryStudio currently supports all popular sequin/bead file formats, including Dahao.



EmbroideryStudio provides separate **Drop Sequin** and **Drop Bead** functions which are saved with the native EMB design file. However, when exporting to machine file, 'Drop Sequin' and 'Drop Bead' functions are replaced by Jump codes. Currently, EmbroideryStudio supports up to eight (8) sequins and/or eight (8) beads per design.

Note: Currently, EmbroideryStudio supports multiple sequins and multiple beads in the one design but no sequin/bead mix within a single object.

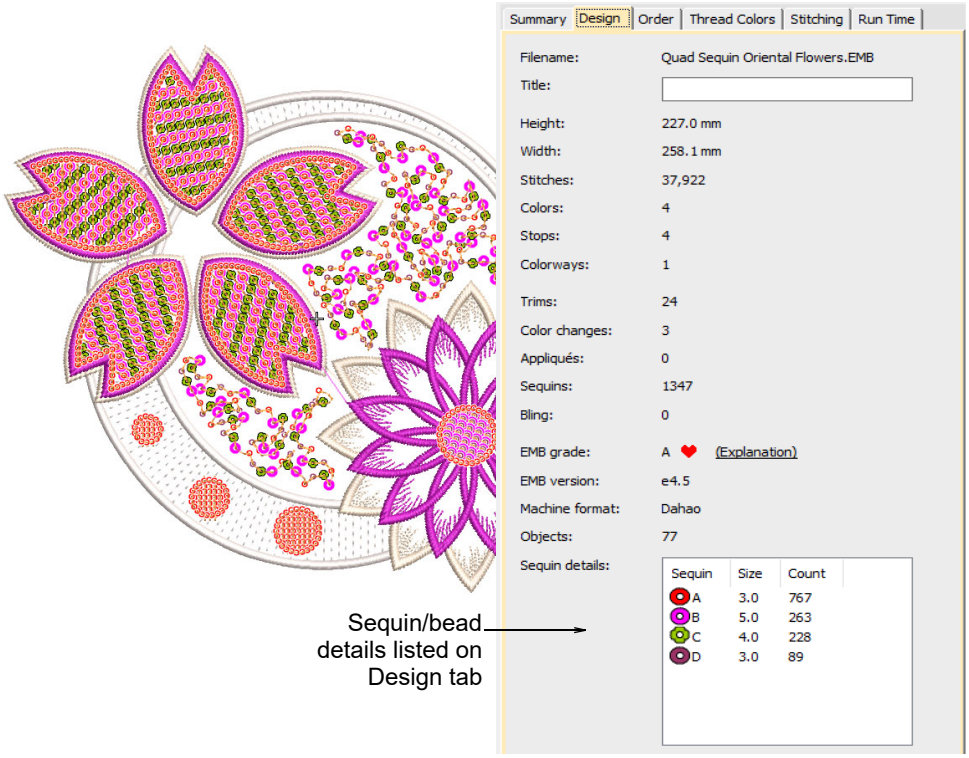
Output production files

Use Docker > Design Information to view and modify design details prior to design approval or stitchout.

Click Standard > Print Preview to preview the production worksheet on screen.

Use Standard > Export Machine File to export the current design to a machine file for stitching.

Once your design is ready for production, check all design details via the **Design Information** docker. The **Design** tab provides a summary of all sequins/beads used in the design.



Compatible machine files

When you come to output your design to machine file, make sure you are using the correct file format. EmbroideryStudio currently supports the following...

File format	Associated machine format	Sequins	Beads
DST	SWF	•	
DST	Tajima	•	
DST (Dahao)	Dahao	•	•
EBD	SWF Twin Sequin	•	•
ESS	Schiffli	•	
TBF	Tajima TBF	•	•
U??	Barudan FDR-3	•	
U??	Barudan FDR-3 Chenille Combination	•	

File format	Associated machine format	Sequins	Beads
U??	Barudan FDR-II Twin Sequin	•	
U??	Barudan FDR-II Twin Sequin Chenille Combination	•	
ZSK	ZSK	•	

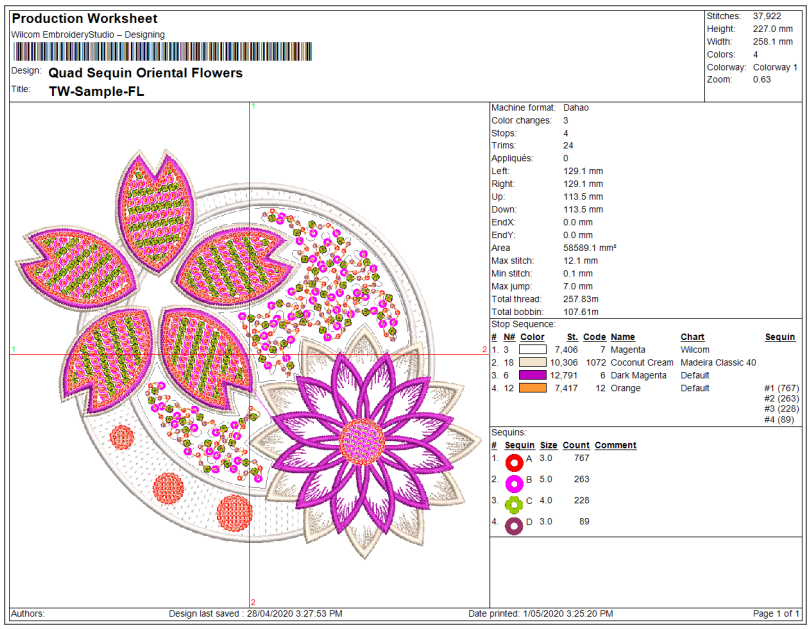
Note: When you select Dahao multi-sequin DST as your output file format, **Drop Sequin** and **Drop Bead** functions are inserted according to Dahao requirements. Dahao control panels include a protocol to interpret this encoding. Tajima machines, on the other hand, strictly follow the DST file specification.

Related topics...

- Select bead-capable machines
- Opening machine files (Reference Manual)
- Exporting designs for machine (Reference Manual)

Production worksheets

Create a hard copy of your production worksheet to provide thread and sequin/bead information for the machine operator.



Related topics...

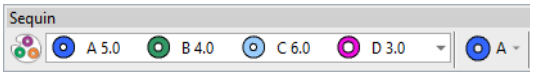
- Printing design reports (Reference Manual)
- Exporting designs for machine (Reference Manual)

Resequence sequin palette

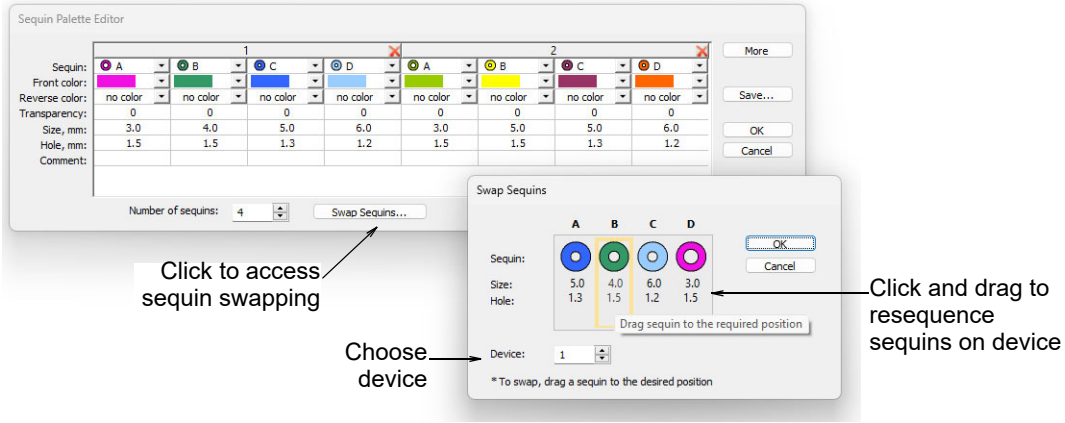
Generally, sequins are fitted on the machine first and the sequin palette configured accordingly. Sometimes the design may be stitched on another machine with a different configuration. Occasionally you may need to re-sequence the sequin palette in order to avoid reconfiguring feeders on the machine. Let's say the **Sequin Palette** has the following configuration...



On the target machine, however, the configuration is as follows...



Rather than reconfiguring the machine, it's much simpler to reconfigure the palette. The **Sequin Palette Editor** dialog includes a **Swap Sequins** button which makes this possible.



To swap sequin slots, simply drag-and-drop sequins to correspond to the sequin feeder setup on the machine. The result of swapping is immediately visible in the **Sequin Palette Editor**. Click **OK** to apply the changes. The existing design is not affected by these changes.

Related topics...

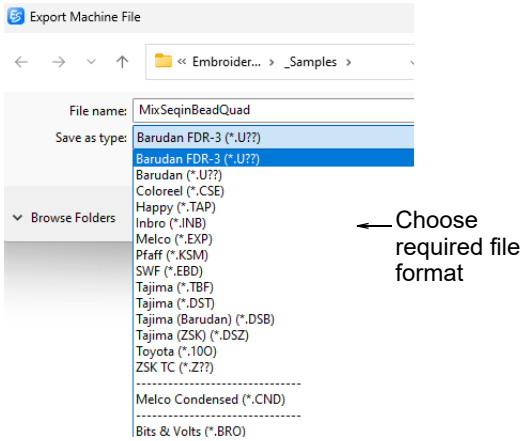
- Setting up for sequin digitizing

Assign sequin/bead device slots

EmbroideryStudio provides separate **Drop Sequin** and **Drop Bead** functions which are saved with the native EMB design file. However, when exporting to machine file, 'Drop Sequin' and 'Drop Bead' functions are replaced by Jump codes. Currently, EmbroideryStudio supports up to eight (8) sequins and/or eight (8) beads per design. If the current palette does not correspond to the current device configuration, sequins and beads can be assigned to their respective slots on export. Some machines support up to sixteen (16) 'slots' per device. Any of these can be used and assigned to 8 sequins and/or beads.

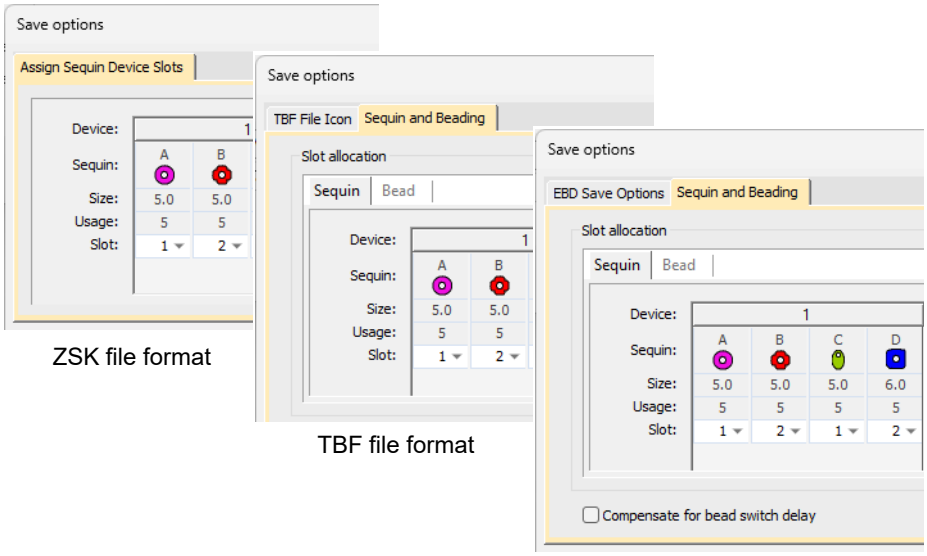
To assign device slots on export...

1. Open the sequin/bead design you intend to export.
2. Select **File > Export Machine File**. The **Export Machine File** dialog opens.

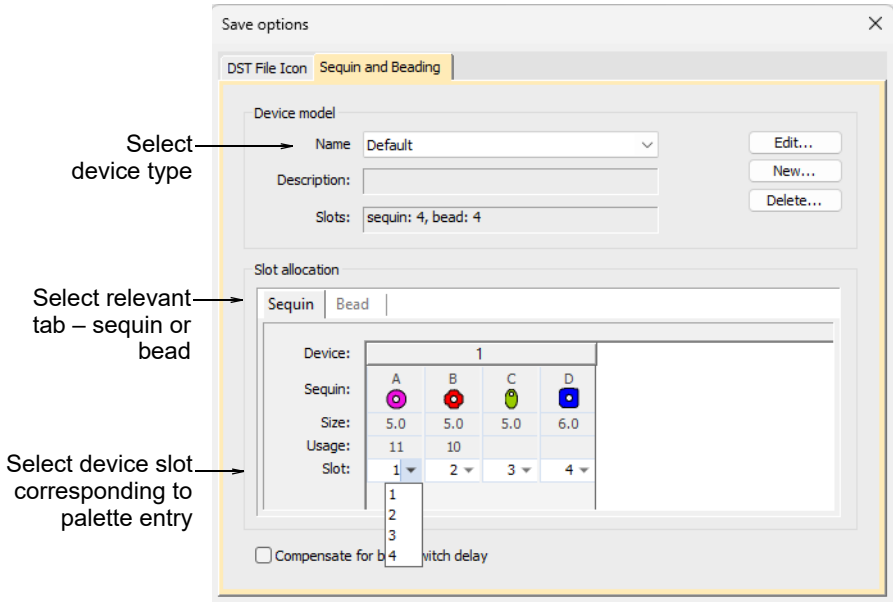


3. Choose the required format from the **Save as type** droplist.
4. Click **Options**. The **Save Options** dialog opens.

   Depending on whether your file format supports sequins or beads, you will see a tab of the following kind...



If your design uses Dahao machine format, the DST machine file uses a modified protocol for non-standard use of Jump codes. You will see the tab shown below. The aim is always to assign sequins and/or beads to their respective slots on the device.



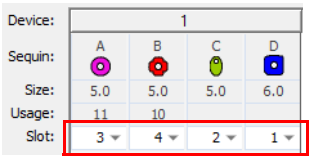
5 If using Dahao DST, select the device model you intend to use from the **Name** droplist – e.g. 'sequin: 4, bead: 4'.

Different controllers use specific code combinations to address slots on the device. Some predefined factory mappings are provided. You can

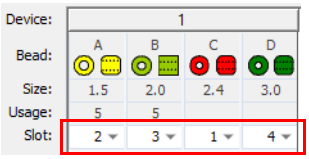
adapt these for use with your device. See Specify mapping rules for Dahao DST for details.

6 Select the required tab – **Sequin** or **Bead**.

From the **Slot** droplist in each column, select the corresponding device slot. In the case of our 4-sequin 4-bead design, we may end up with a mapping like this...



Sequins assigned to device slots

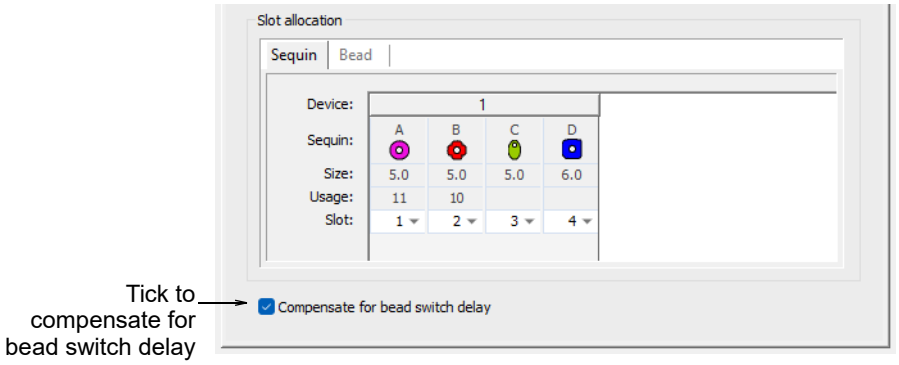


Beads assigned to device slots

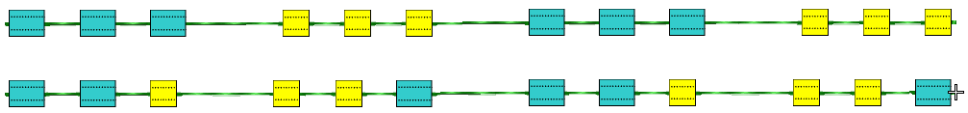
Note: This mapping is not indicated on the production worksheet since it only affects the machine file, not the design file.

Compensate for bead switch delay

Some machine configurations are one step late when switching beads. When controllers encounter a command to drop Bead X, the machine will drop whatever bead is in the picker and only then make the switch.



You can compensate for this behavior by employing a preemptive bead swap. This will shift bead changes by one step. By ticking **Compensate for bead switch delay**, the first line becomes re-encoded as shown...



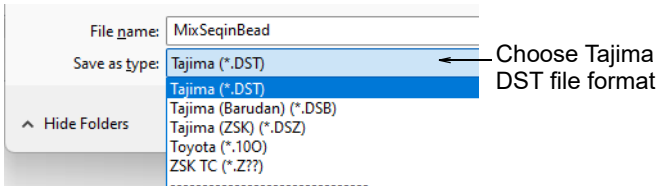
Note: Installation engineers can advise if you need to compensate for 'bead shift'.

Specify mapping rules for Dahao DST

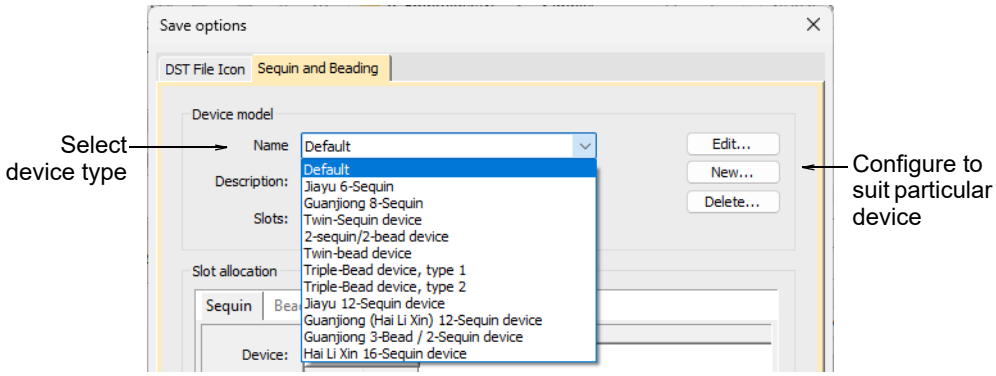
If your design uses Dahao machine format, the DST machine file uses a modified protocol for non-standard use of Jump codes. This format is also used by compatible controllers. Controllers use their own code combinations to address slots on the device. The mapping rules may be specified by the device manufacturer. Alternatively, it may involve an amount of trial and error with test samples. For flexibility and scalability, EmbroideryStudio supports all types of mapping. Some predefined factory mappings are provided. You can adapt these for use with your own device. This is a 'set and forget' operation.

To specify mapping rules...

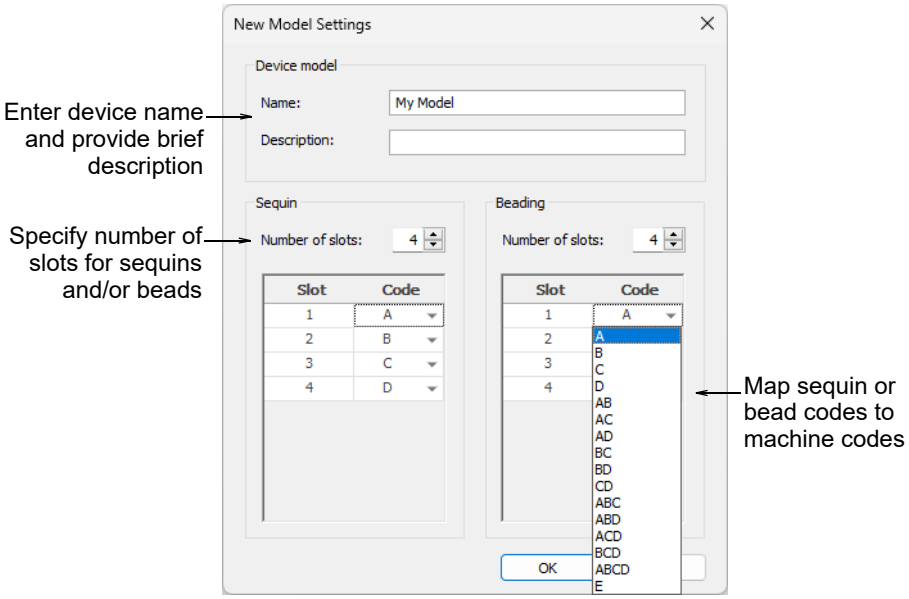
1. Open the Dahao-format design you intend to export.
2. Select **File > Export Machine File**. The **Export Machine File** dialog opens.



3. Choose **Tajima DST** from the **Save as type** droplist.
4. Click **Options**. The **Save Options** dialog opens. Select the **Sequin and Beading** tab.



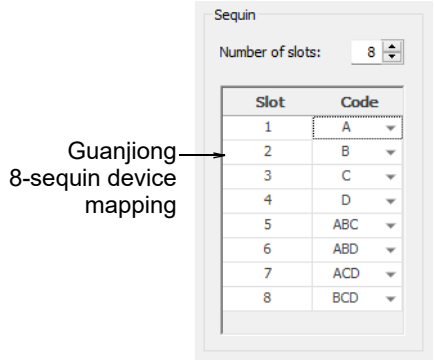
5. From the **Name** list, select the model which most closely matches the device on the target machine. Here we use the default 'sequin: 4, bead: 4'.
6. Click **New** to create a new device model based on the selected.



7 Give the device a name and brief description as necessary.

8 Specify the number of slots dedicated to sequins and/or beads.

9 Now map each slot to the required code – e.g. A, B, C, D, or combinations of these. For example, the Guanjiong 8-sequin device currently uses these mapping rules...



10 Click **OK** to confirm. This information is saved with the named device model and will be applied whenever you map a DST file using this model.

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