WILCOM

EMBROIDERY STUDIO 2026



Sequin Supplement

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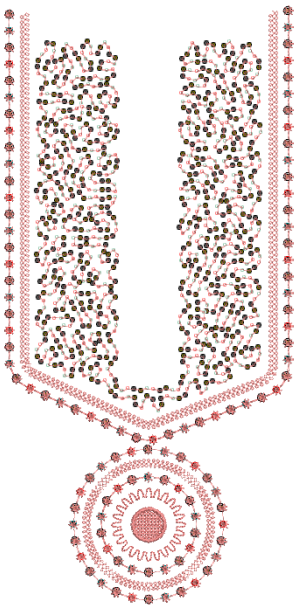
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Sequin Embroidery



The sequin capability in EmbroideryStudio provides digitizers with the tools to create professional sequin embellishments for embroidery machines equipped with sequin-dropping devices. These specialized machines can automatically position and attach sequins to a garment during stitching, creating dazzling decorative effects.

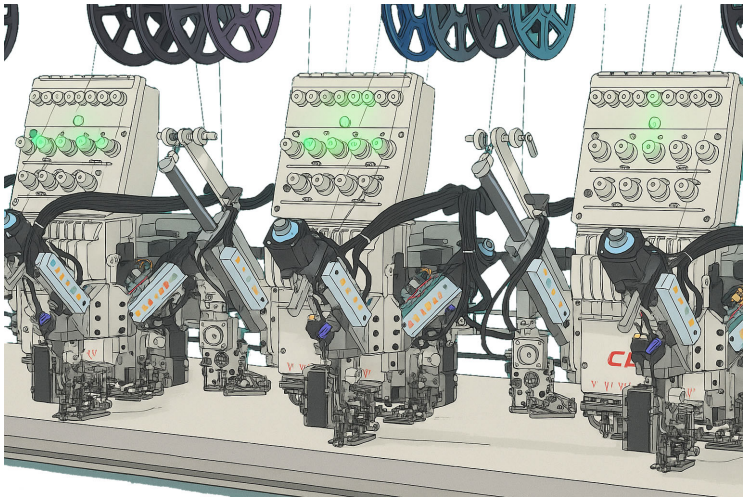
EmbroideryStudio supports this process by allowing users to digitize sequin designs directly, with full control over size, shape, color, and placement. It also includes automatic tools that can convert sequin artwork into precise sequin runs, ensuring that digitized designs align with machine-specific requirements and sequin feed configurations.

Because machine capabilities vary – from simple single-sequin setups to advanced multi-sequin systems – EmbroideryStudio provides flexible configuration options. Users can select sequin-capable machine formats such as Barudan, Dahao, Tajima, SWF, and others, then set up a custom sequin palette reflecting the available devices and sequin types. The software intelligently handles aspects like sequin stacking, fixing stitch placement, and feeding direction to match each machine's protocol.

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

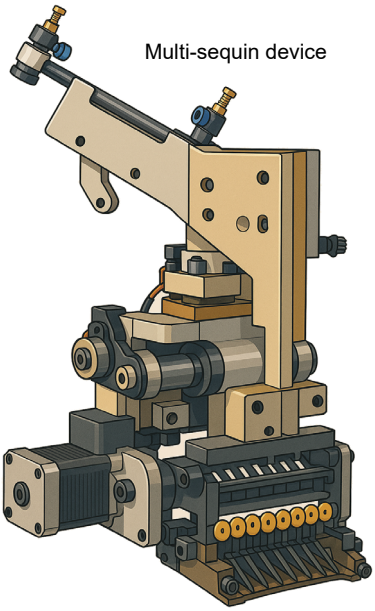
Setting up for sequin digitizing

Before using the **Sequin** tools, you need a machine format that supports sequin output. You can then set up a dedicated sequin palette from a list of predefined or custom shapes and sizes.

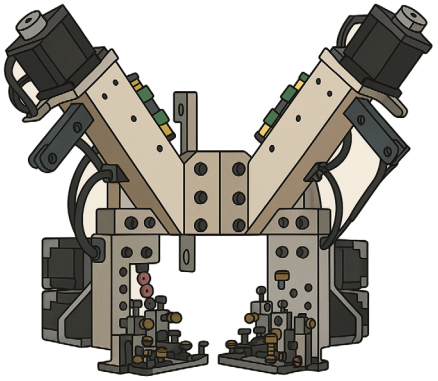


Machine capabilities

Machine capabilities vary widely. Some machines only support single-sequin devices. These may be mounted on the first or last needle, or sometimes both. Some machines support twin-sequin devices. These too can be mounted on first and last needles. Newer machines can support multi-sequin devices. These may perform consecutive sequin feeds – one at a time whilst stitching. Some may allow 'stack feeding', where multiple sequins are dropped and secured with a single fixing stitch.



Multi-sequin device



Double twin-sequin device with stack sequin capability

In summary, the main sequin device configurations include...

- Machines supporting one sequin per device. These feed only one sequin at a time.
- Machines supporting one or two devices per machine head, usually on first or last needles.
- Machines supporting twin-sequin devices with no stack feeding – e.g. Barudan FDR-II Twin Sequin, Tajima TBF, SWF Twin Sequin.
- Machines supporting twin-sequin devices or even double twin-sequin devices with stack feeding – e.g. Dahao.
- Machines supporting multiple sequins per device – four, six, eight, and possibly more sequins – with or without stack feeding.



Note: An increasing number of machines support multiple decoration types including sequins in combination with chenille, beading, cording, and others.

Single- vs twin-sequins

Single and twin configurations still represent the most common type used in sequin production. Even then, different configurations and design types are possible:

Configuration	Design type
Single-sequin device on one needle	The simplest configuration possible, this allows you to produce designs incorporating single-sequin fills, runs, and individual sequin drops.
Single-sequin device on two needles	Usually mounted on first and last needles, this setup allows you to incorporate two types of single-sequin fills, runs, and sequin drops.
Twin-sequin device on one needle	This configuration allows you to incorporate twin-sequin runs and fills. Some configurations (Dahao) also allow twin stacking.
Twin-sequin device on two needles	This configuration allows you to incorporate two types of twin-sequin runs and fills. Again, some may allow twin stacking.
Double twin-sequin device on one needle	This configuration allows you to incorporate two types of twin-sequin or quad-sequin runs and fills, as well as twin or quad stacking.



Note: The kinds of design work you can do with two single-sequin devices and a single twin-sequin device are different. The twin single-sequin setup will allow you to include runs and fills of either sequin, but not both together in the same run or fill.

Sequin machine formats

Before using the **Sequin** tools, you need to choose a suitable machine format. Only some machine formats support sequins – e.g. Barudan FDR-3, Dahao, Tajima TBF, 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 sequin capability, the sequin palette will display. However, if you attempt to create a sequin object, fixing stitches will be digitized without sequin drops.

Dahao machine format

EmbroideryStudio supports the Dahao machine format which in turn supports multi-sequin devices. Up to eight (8) sequins can be defined per device. The Dahao controller is used on many Chinese machines.

When you select Dahao as your machine type, Dahao multi-sequin DST file format is available on output. The **Drop Sequin** functions are inserted according to Dahao multi-sequin requirements.

The actual Dahao definition for multi-sequin drops is this: one Jump signifies drop sequin A, two Jumps on the same spot mean drop sequin B, three Jumps signify a sequin C drop, and so on.

Dahao control panels include a protocol to interpret this encoding. Tajima machines, on the other hand, strictly follow the DST file specification. Namely, one Jump per sequin drop.



Note: The Dahao controller is configured according to the capabilities of the particular sequin device. The digitizer needs to know what the device is capable of – e.g. whether capable of sequin stacking, etc.

Select sequin-capable machine

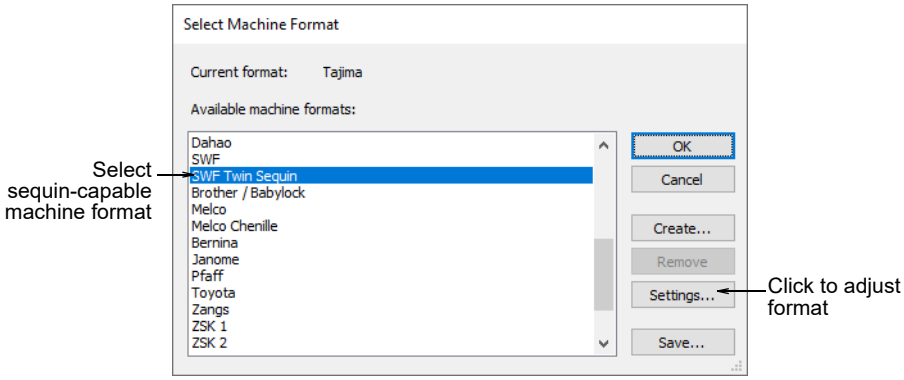
Before you can use the **Sequin** tools, you need to choose a suitable machine format.



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

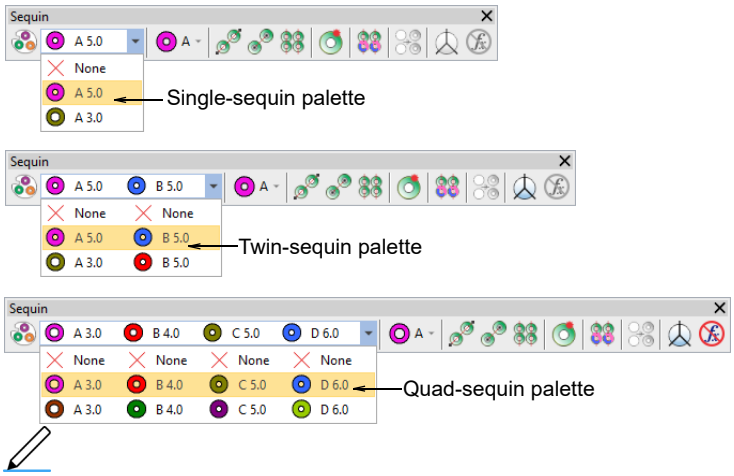
To select a sequin-capable machine...

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

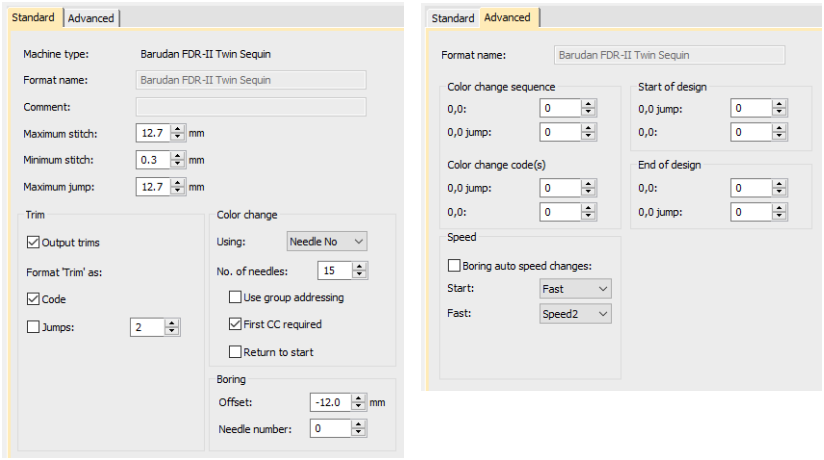


2 From the **Available Machine Formats** list, select a sequin-capable machine format – e.g. Schiffli, Tajima, Barudan, SWF, ZSK, etc.

3 Click **OK**. Default sequins appear in the sequin palette. It is ready to be configured. If you have selected a twin-sequin-capable machine, sequins are displayed in pairs.



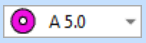
Note: Different machines require different presets. Typical modifiable values include stitch and jump length, trim functions and color change functions. Use the **Machine Format Settings** dialog to customize values if outputting to a specific machine format.



Related topics...

- Embroidery machine formats (Reference Manual)
- Exporting designs for machine (Reference Manual)
- Creating multi-sequin runs

Set up sequin palette



Use Sequin > Sequin Palette to select from a default or user-defined palette of sequin shapes for the current design.



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

The **Sequin Palette Editor** allows you to prepare a palette of sequins according to the capabilities of your chosen machine. Choose sequins from a library of predefined shapes or define your own. Define as many devices as your machine supports. Typical configurations include:

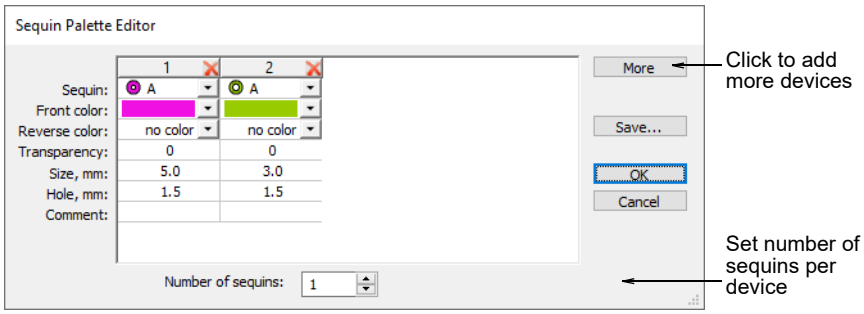
Device	Configuration
1 x Single sequin	A
2 x Single sequin	A / A
1 x Twin sequin	AB
2 x Twin sequin	AB / AB
1 x Double twin (Dahao)	ABCD
2 x Double twin (Dahao)	ABCD / ABCD
1 x Multi-sequin (6, 8, 12, etc)	ABCDEF...

Typically the machine operator will use Needle 1 to position the starting point. Thus single devices are usually mounted on the last needle. Generally, sequins are fitted to the device first and the sequin palette configured accordingly.

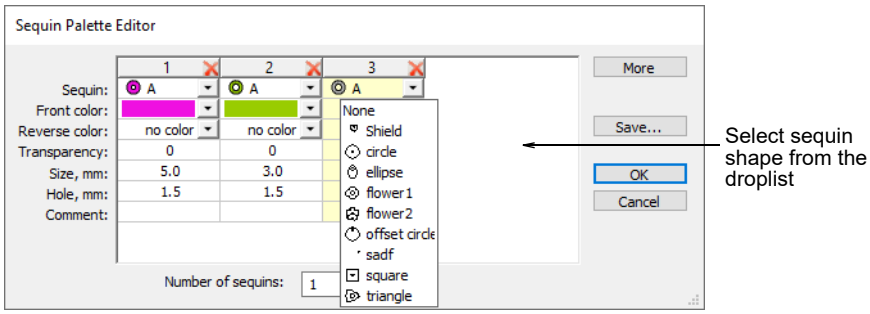
Tip: Sometimes the design may be stitched on another machine with a different configuration. The digitizer then needs to resequence the palette to avoid reconfiguring the machine. See Resequence sequin palette for details.

To set up a sequin palette...

1. Select the machine format that supports the machine you are using or the design type you want to create.
2. Click the **Sequin Palette Editor** icon. Fields are arranged so that parameters for each sequin can be viewed at once.

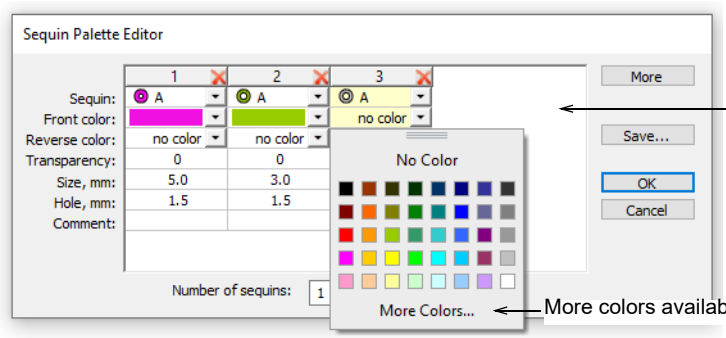


3. Set the number of sequins available per device. Depending on machine type, up to eight (8) sequins may be supported. If you have chosen a twin-sequin machine, this value is limited to 2.
4. Use the **More** button to add devices. Click **X** in the column header to remove.



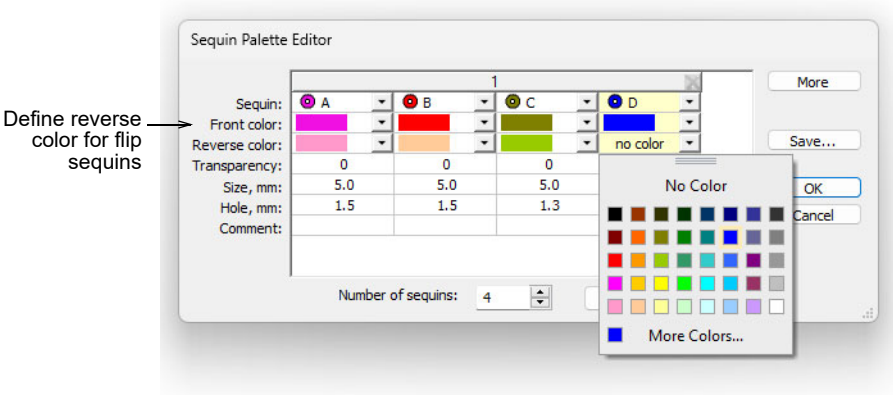
5. Select predefined or custom sequin shapes from the droplist.

Set color and size for each sequin as well as hole size. Colors can be defined for front and reverse sides as well as a transparency factor for translucent sequins.

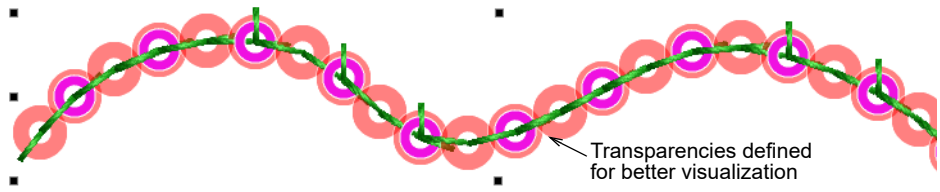


Note: Generally, sequins are fitted on the machine first and the sequin palette configured accordingly. See also Resequence sequin palette.

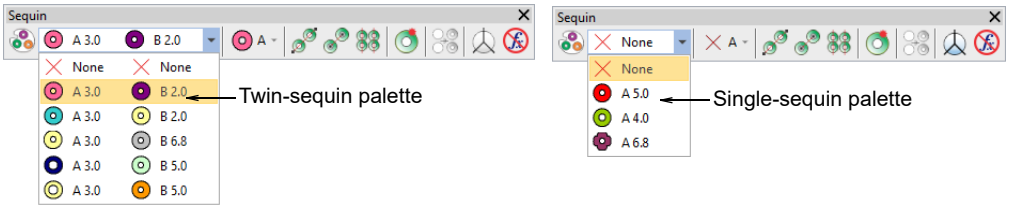
6 If you are using reversible or 'flip' sequins, define the reverse color as well. Flip sequins are generally used with twin- or multi-sequin machines, but may be used on their own.



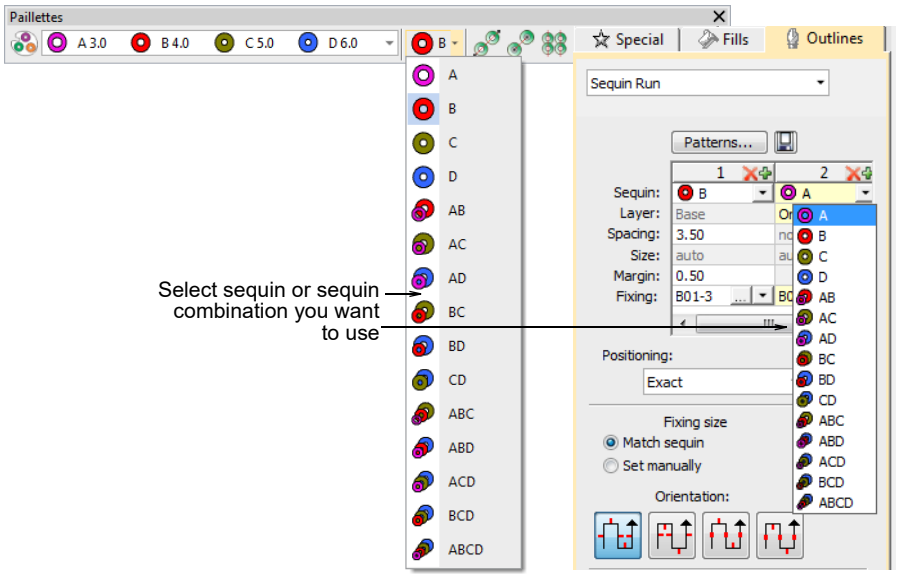
7 If you are using transparent sequins, define a transparency factor from 0 to 90 for each sequin.



8 Click **OK**. Sequins are available for selection from the **Sequin** toolbar and **Object Properties** docker.



Permutations for sequin stacks are automatically calculated and displayed in the **Manual Sequin** droplist and **Object Properties**.



Tip: The digitizer needs to know the machine capabilities by heart. If an unsupported combination is selected – e.g. four sequin stack feeding – the drop code is ignored on the machine.

Related topics...

- Select sequin-capable machine
- Resequence sequin palette
- Creating multi-sequin runs

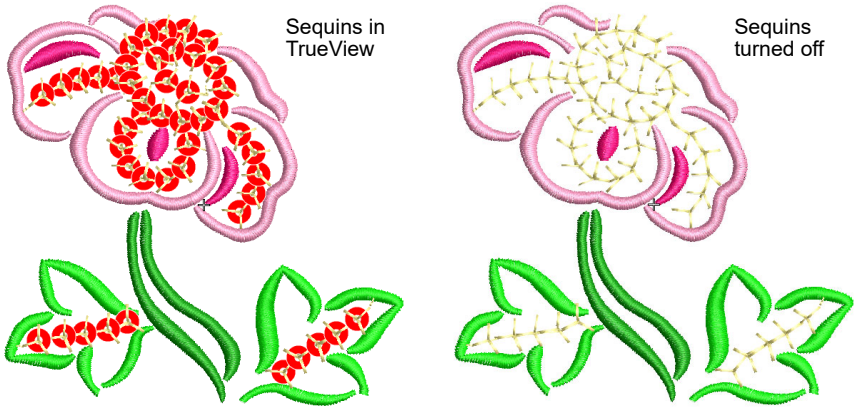
Visualizing sequin designs

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

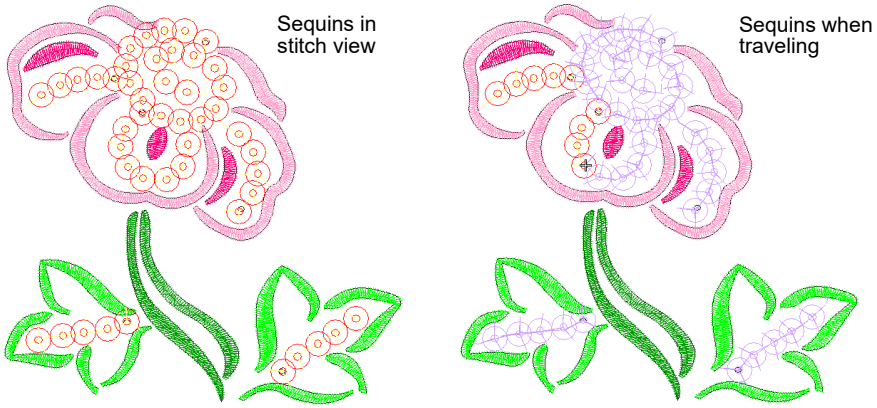
Use View > Show Stitches to toggle embroidery stitching display. Right-click for settings.

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

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



Both sequins 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 sequin design, 'undropped' sequins appear in the 'unsewn' color defined in the **Background & Display Colors** dialog.

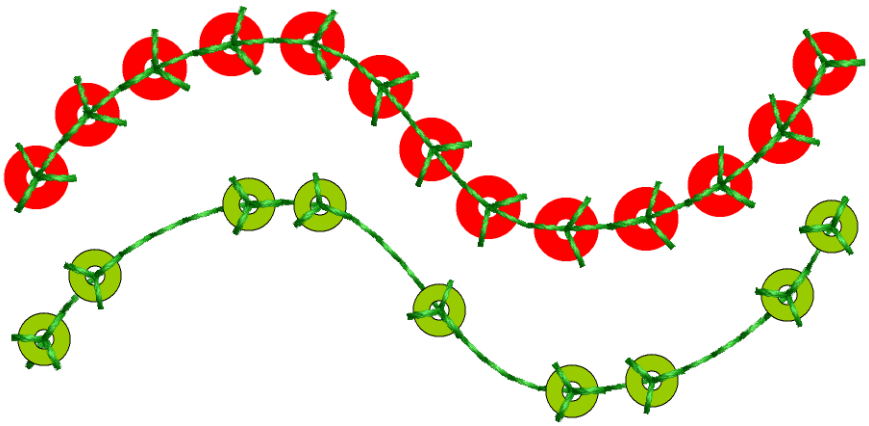
Tip: The **Show Repeats** function displays repeating designs, including sequins, in both **TrueView** and stitch view. You can view a design, even while digitizing, with any number of repeats.

Related topics...

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

Creating sequin runs

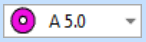
EmbroideryStudio provides tools for creating a string of sequins along a digitized line according to preset spacings or as marked by the digitizer.



Digitize sequin runs

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

 Use Sequin > Sequin Run Manual to manually digitize sequin-drops along a digitized line.



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

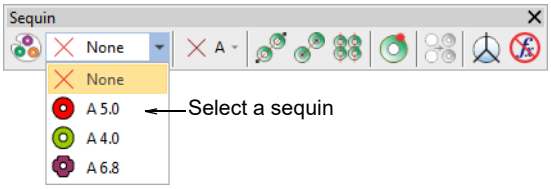
 Use Graphics Digitizing > Continue Digitizing to continue digitizing selected objects from the exit point. Right-click object to continue from the entry point.

Digitize sequin runs as you would motif runs. If you use the manual method, you define spacings between sequin-drops with every click you make. If you use the automatic method, sequin-drops are calculated according to current settings.

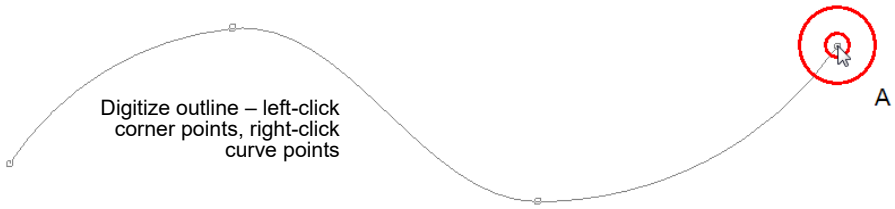
To digitize a sequin run...

1 Select a sequin-capable machine from the **Select Machine Format** dialog.

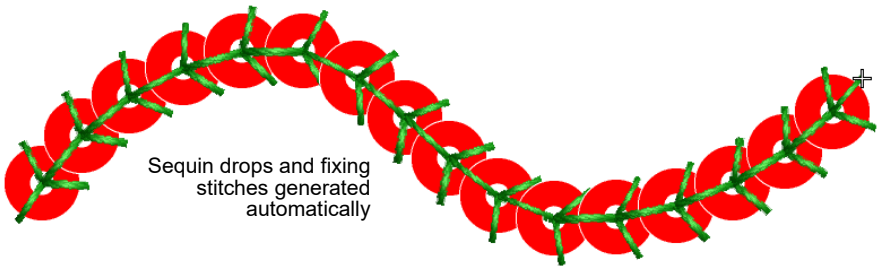
2 Define your palette and select a sequin shape from the droplist. For simplicity, we show a single-sequin setup.



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

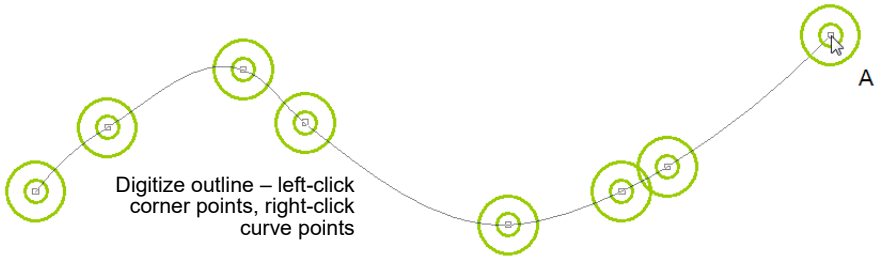


4 Press **Enter** to complete. Sequin drops are automatically generated along with their fixing stitches. Automatic sequin runs can be scaled.

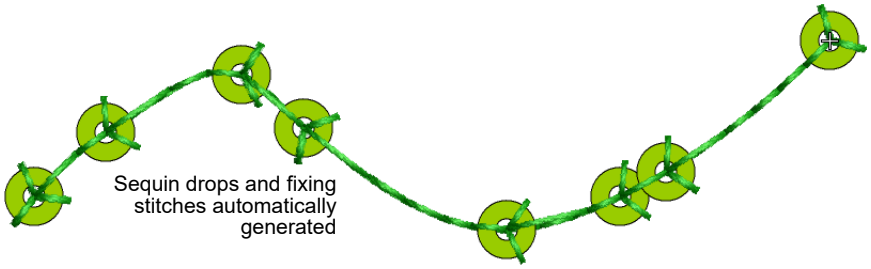


To control placement of sequin drops...

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

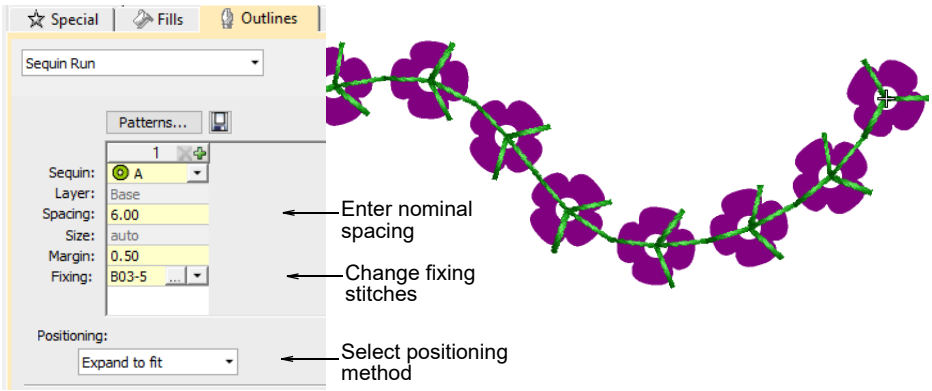


- Press **Enter** to complete. Sequin drops are generated at each reference point. Connecting and fixing stitches are automatically generated.



To modify sequin run properties...

1 Double-click to access object properties. Change sequins and adjust spacing properties as necessary.



2 In the **Spacing** field, enter a nominal spacing. This is measured from the center to center. Minimum spacing is automatically calculated.

3 Select a **Positioning** method from the droplist:

Option	Function
Exact	Uses nominal spacing. This may result in gap formation at the end of the path.

Option	Function
Expand to fit	Expands nominal spacing to evenly spread sequin distribution.
Contract to fit	Contracts nominal spacing to evenly spread sequin distribution, resulting in an extra sequin.
Manual	Turns any sequin run into a manual run so that the number of sequins won't change during editing.

4 To change fixing stitches, click the button in the **Fixing** field. The docker expands to show a library of fixing stitch types.

Usage tips...

- You can convert a normal run to sequin run by selecting and clicking the **Sequin Run Auto** tool.
- If you change a manual sequin run to exact spacing, all sequin drops are recalculated and manual placements lost.
- If you want to resume digitizing without starting over, click the **Continue Digitizing** tool and select the object.

Related topics...

- Select sequin-capable machine
- Creating multi-sequin runs
- Manual sequin digitizing
- Edit sequin runs
- Reinforcing outlines (Reference Manual)
- Adjust entry/exit points (Reference Manual)
- Continue digitizing (Reference Manual)

Edit sequin runs


Use Select > Select to resize objects using selection handles.

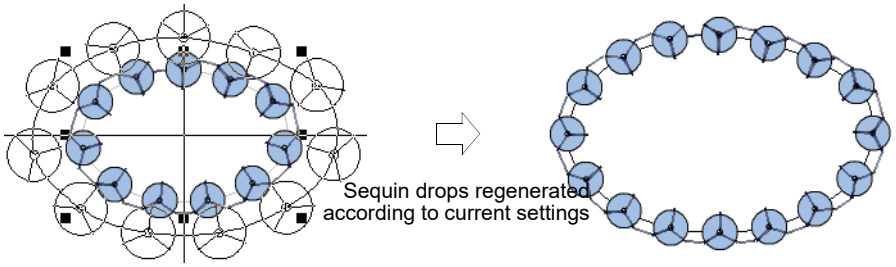

Use Reshape > Reshape Object to reshape selected sequin-run objects.


Use Sequin > Sequin Edit to fine-tune placement of individual sequins.

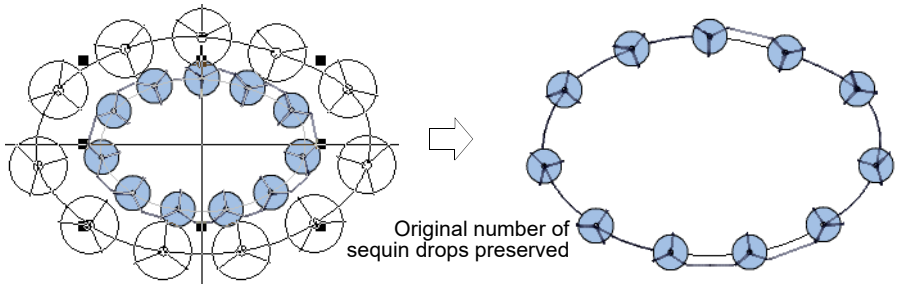
You have complete control over scaling and reshaping sequin-run objects. You can also manually fine-tune sequin spacings as well as remove or add individual sequins. You can even edit individual fixing stitches.

To edit a sequin run...

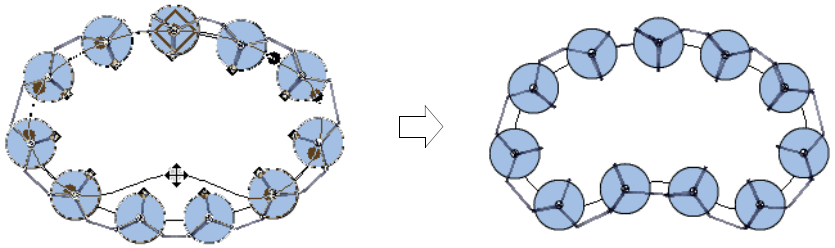
- Scale sequin-run objects by clicking and dragging selection handles, or by adjusting general properties.
  - If the object is created with the **Sequin Run Auto** tool, the sequin drops are automatically recalculated.



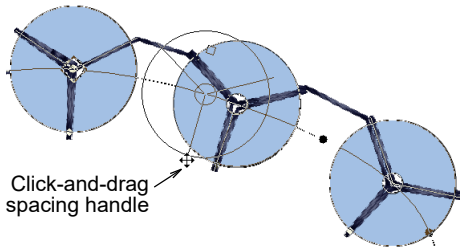
  - If the object is created with the **Sequin Run Manual** tool, the original number of sequin drops is preserved.



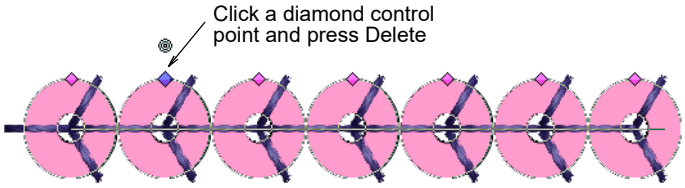
- Reshape sequin run lines with the **Reshape** tool. Add reshape nodes by left- or right-clicking the outline.



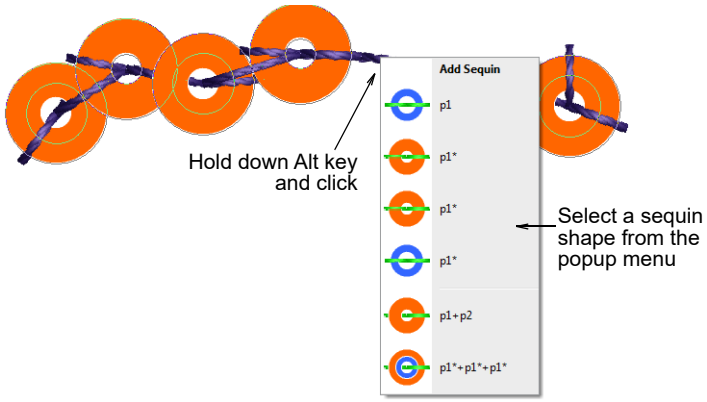
- Fine-tune individual sequin spacings with the **Sequin Edit** tool – click-and-drag a diamond control point. Hold down **Shift** or **Ctrl** keys to select a range or multiple control points.



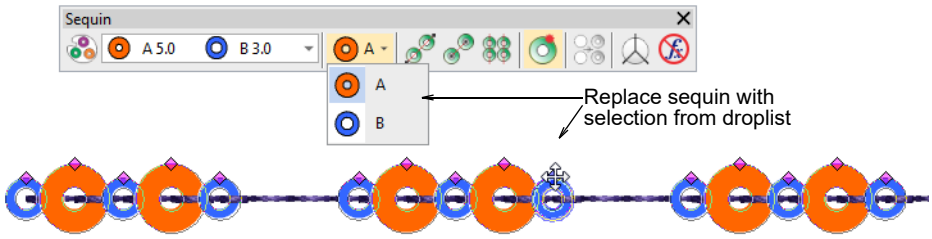
- Delete selected sequins by pressing **Delete**.



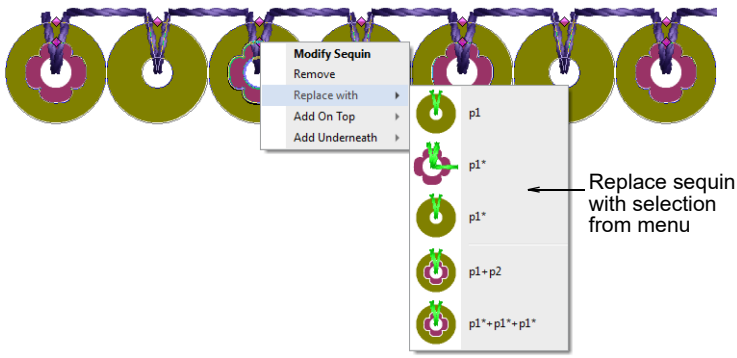
- Add sequins by holding down the **Alt** key and clicking the run. If you are in multi-sequin mode, select options, including stack sequins, from the popup menu.



- To replace a sequin in multi-sequin mode, click a diamond control point and select an alternative from the **Manual Sequin** droplist.



- In multi-sequin mode, right-click a diamond control point while modifying a particular sequin. Options include: removing the sequin, replacing it, adding another sequin on top or beneath.



Usage tips...

- Performing manual edits to sequin-run objects automatically deselects all options. If you reset to **Exact**, **Contract to fit**, or **Expand to fit**, all manual edits are lost and sequin drops recalculated.
- If you want to resume digitizing without starting over, click the **Continue Digitizing** tool and select the object.

Related topics...

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

Sequin fixings

EmbroideryStudio provides a library of predefined fixing stitches for use with sequin outlines or fills. Just as you can digitize sequin drops manually or allow the system to calculate them for you, you can manually set fixing size or allow the system to determine it according to sequin shape. And just as you can define custom sequin shapes, you can also define custom fixing stitches to support multi-head sequin devices.

Fixing stitch color

Generally digitizers reserve a single thread color for all sequins, regardless of sequin color. Transparent thread is often used on the machine to avoid differences between thread color and sequin color.

Fixing type

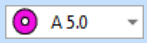
The choice of fixing stitch really depends on customer requirements. Some may want sequin placements to withstand repeated washing. Others may want to save on stitches to reduce production costs. As the

digitizer, you would typically consider the cost of embroidery production against sequin weight in order to find a balance.

Decorative fixings

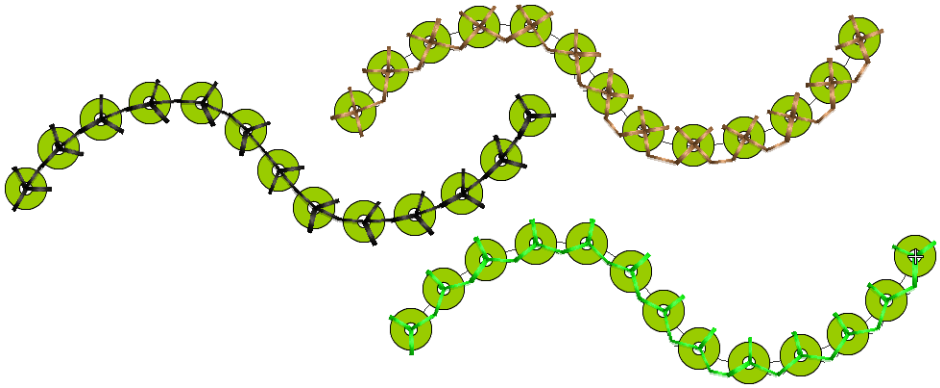
Fixing stitches are not generally part of the decoration. They are there simply to fix sequins to the fabric. That said, **Sequin Run** has potential as a decorative stitch in its own right. For this purpose you can select **None** in the **Sequin Palette**. This option is best used with the **Sequin Drop Direction** set to **Any**.

Apply sequin fixings



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

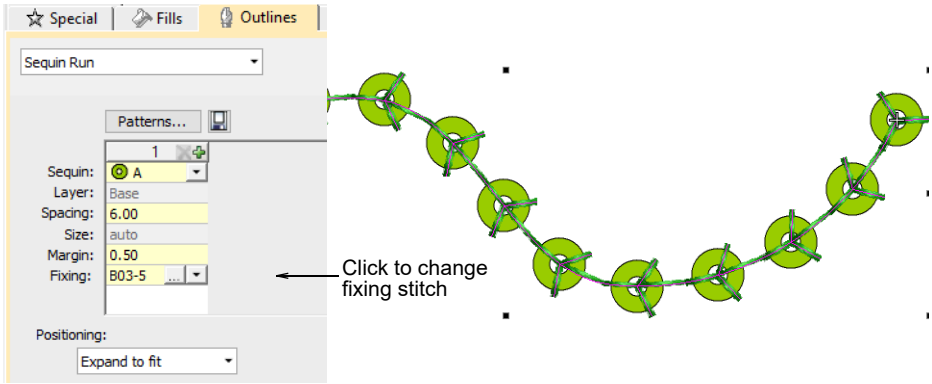
You can select sequins before or after digitizing. Similarly, you can preset fixing stitches or change them at any stage.



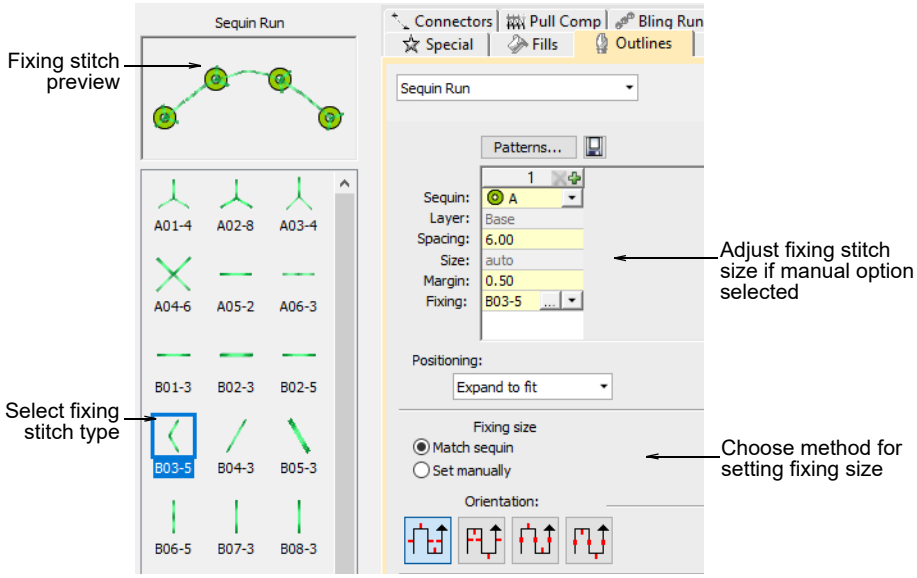
Tip: Digitizers sometimes want to generate a sequin run and overlay it with a plain run so that sequins are more securely fixed. Another reason for backtracking is to avoid jump stitches between objects. The **Backtrack/Repeat** tool is enabled for sequin-run objects. When applied, EmbroideryStudio generates manual stitches but leaves other functions unaffected. See also Reinforcing outlines (Reference Manual).

To apply sequin fixing stitches...

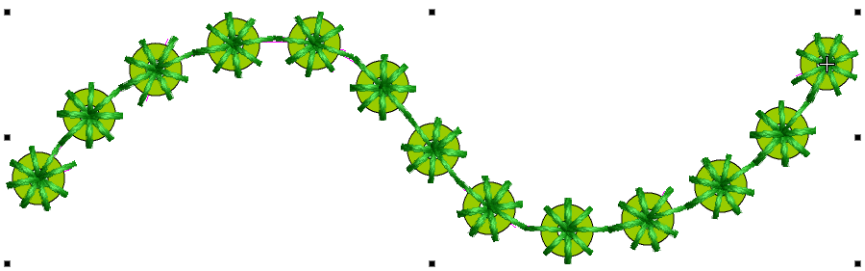
1 To change fixing stitches, double-click to access object properties.



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



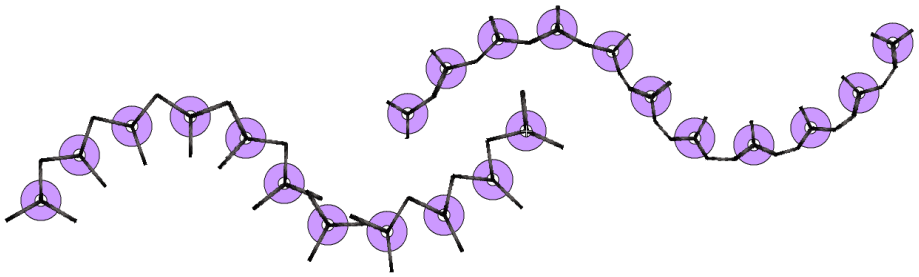
3 Select the preferred type.



4 To adjust fixing stitch size, select a method:

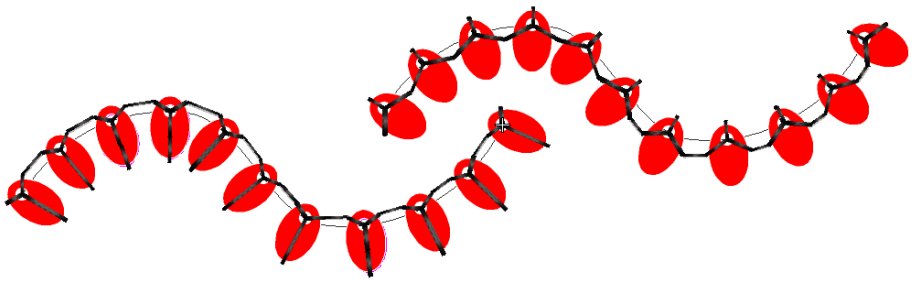
Method	Function
Match sequin	Automatically sets a margin around the sequin so that fixing stitches don't punch too close.
Set manually	Enables the Size field and lets you set a fixing stitch size independent of sequin size.

5 If you choose the manual option, specify a value in the **Size** field. Size is measured from the center of the sequin. Enter a value from 2.50mm to 30.00mm.

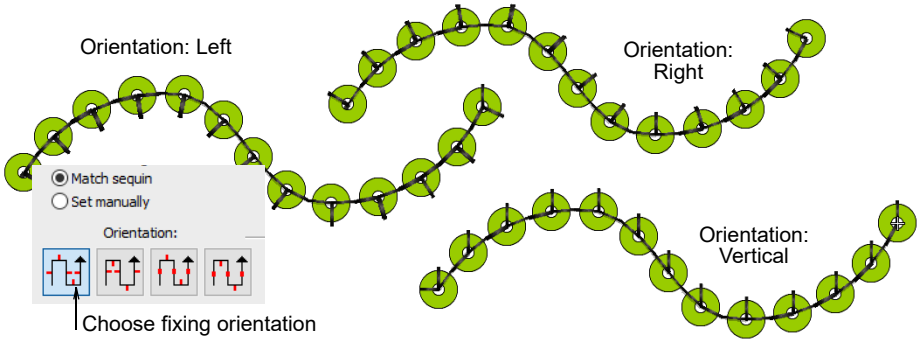


6 If you have chosen automatic matching, specify a margin for the fixing stitch in the **Margin** field. Enter a value from 0.20mm to 2.00mm. This ensures that the fixing stitch does not punch too close to the sequin.

7 If you have chosen an eccentric sequin shape such as 'ellipse', fixing stitches automatically adapt to fit.



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

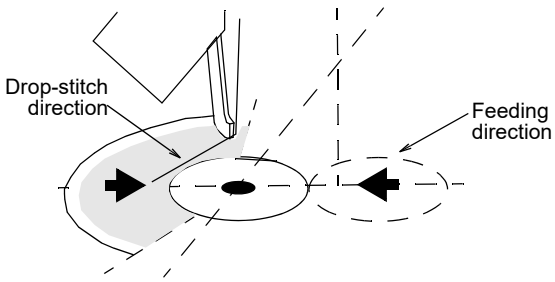


Related topics...

- Create sequin fixings

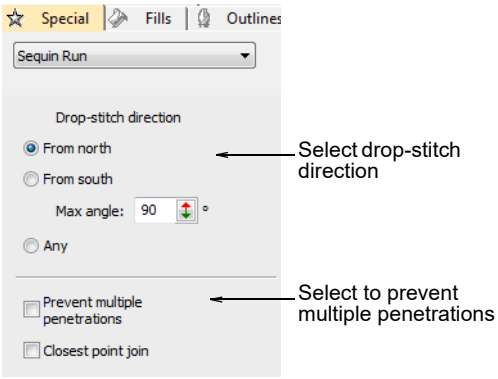
Set drop-stitch direction

There is an option to ensure that the initial fixing stitch **before** the sequin drop is placed **opposite** the feeding direction, as recommended by the machine manufacturer. Otherwise, the sequin may be deflected by the thread. If the needle then misses the center of the sequin because of incorrect placement, the embroidery material, needle or needle plates may be damaged. In multihead machines, sequins are fed from the front or 'south' which means that the initial fixing stitch or 'drop stitch' should be placed on the 'north' side (the default). In Schiffli machines, the opposite is the case.



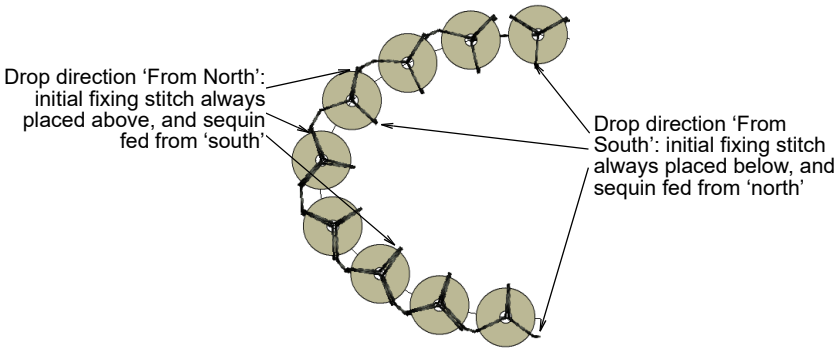
To set the drop-stitch direction...

1 Select a sequin-run object and double-click to access object properties.



2 Select the drop-stitch direction to ensure that the initial fixing stitch is opposite the feeding direction:

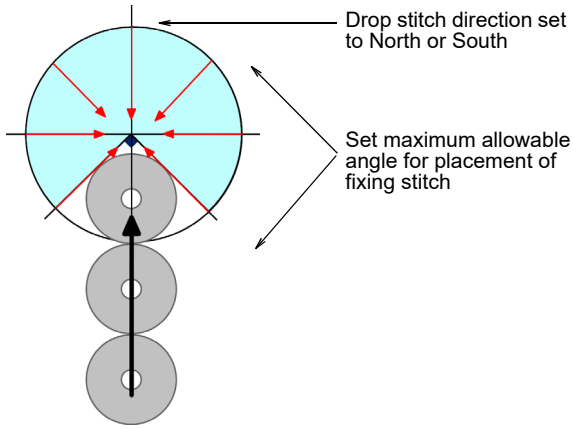
Drop-stitch direction	Feeding direction
From north	Front or 'south' – which is the case in multihead machines.
From south	The top or 'north' – which is the case in Schiffli machines.



Caution: With the **Any** option, direction is not important. This option generates the least number of fixing stitches but may not be suitable for your sequin device. Check your machine documentation.

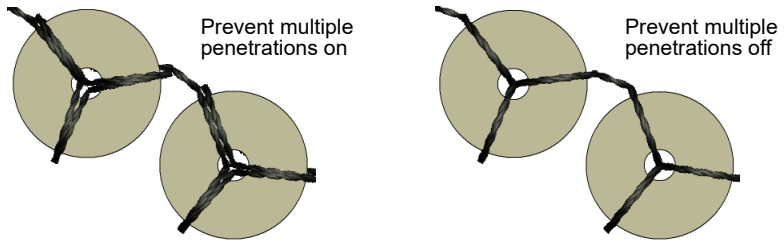
3 Enter a **Max Angle** to specify an angular range within which drop-stitch will fall.

You can set the value for either north or south fixing stitches. The default is 90° but this can be increased or decreased depending on the capabilities of your machine.



4 Select the **Prevent multiple penetrations** option as required.

This option is used to minimize penetrations at the same point, and to generate Schiffli-compatible fixing stitching. If you select the Schiffli template, the option is 'on' by default. When set to 'off', some fixing stitches will have multiple penetrations at the same point, both at the sequin center and outer edge.

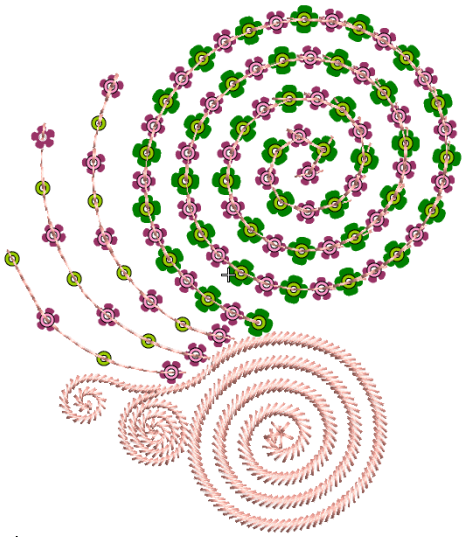


5 Select the **Closest point join** option as required.

By default, this option is off, meaning that the system connects the exit leg of the fixing stitch motif, wherever it happens to be, to the entry leg of the next fixing stitch motif, again wherever it happens to be. That is, unless the connector exceeds the maximum sequin stitch. Choose the **Closest point join** option if you want to **always** connect fixing stitch motifs from the leg closest to the nearest leg of the next fixing stitch motif.

Creating multi-sequin runs

EmbroideryStudio enables the creation of multi-sequin designs for supported machines. Create and visualize predefined patterns of sequin runs. These may comprise multiple sequins of different size, color, and shape.

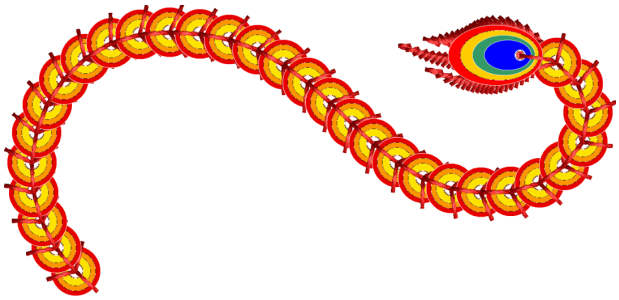


Tip: Twin-sequin mode also allows you to convert vector artwork to twin-sequin outlines. See also Convert sequin artwork.

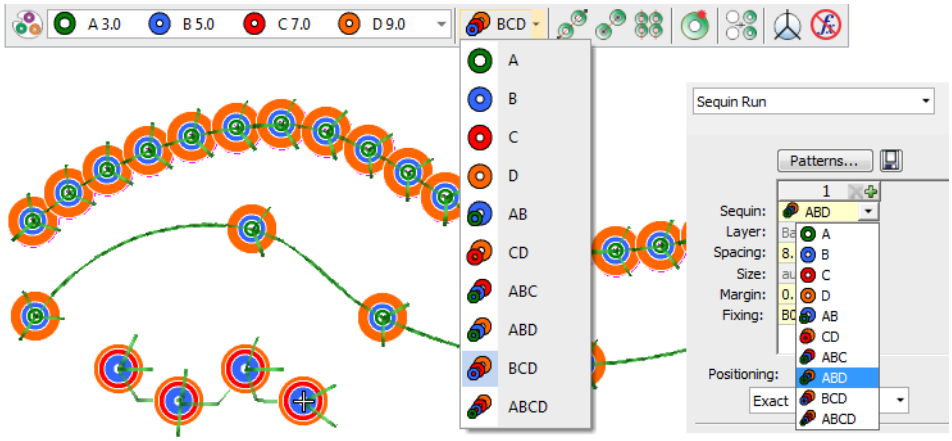
Stacked sequins

	Use Sequin > Manual Sequin to digitize individual sequins.
	Use Sequin > Sequin Run Auto to create a string of sequins along a digitized line according to current settings.
	Use Sequin > Sequin Run Manual to manually digitize sequin-drops along a digitized line.
	Use Sequin > Sequin Fill to digitize and fill large, irregular shapes with sequins.

For those machines that support it, EmbroideryStudio allows you to define multiple sequin drops on the same needle.



Stacked sequins can be used with **Manual Sequin** and **Sequin Run** digitizing methods. Permutations are automatically defined according to the sequin palette.



For those machines that support it, fixing stitches are only applied after all sequins have been dropped. In the case of many twin-sequin machines, the first sequin is dropped, fixed in place, and another dropped on top and stitched again.

Note: If you choose a stacked sequin configuration that the sequin device does not support, the machine will simply ignore that particular drop code.

Related topics...

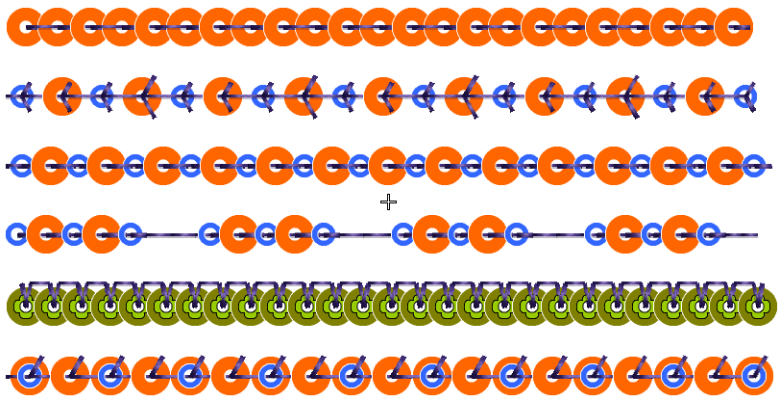
- Set up sequin palette
- Creating sequin runs
- Digitize sequin drops with fixings

Apply multi-sequin run patterns

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

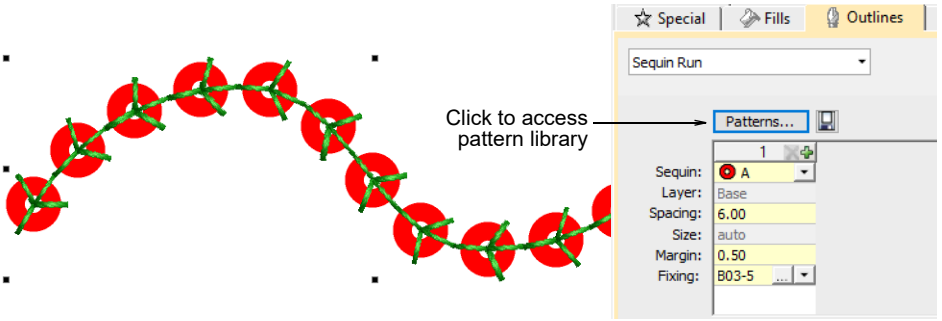
A 5.0 Use Sequin > Sequin Palette to select from a user-defined palette of sequin shapes for the current design.

In EmbroideryStudio, you select multi-sequin patterns from a pattern library. While patterns can be used with single sequins, they make more sense when applied to multi-sequin palettes.



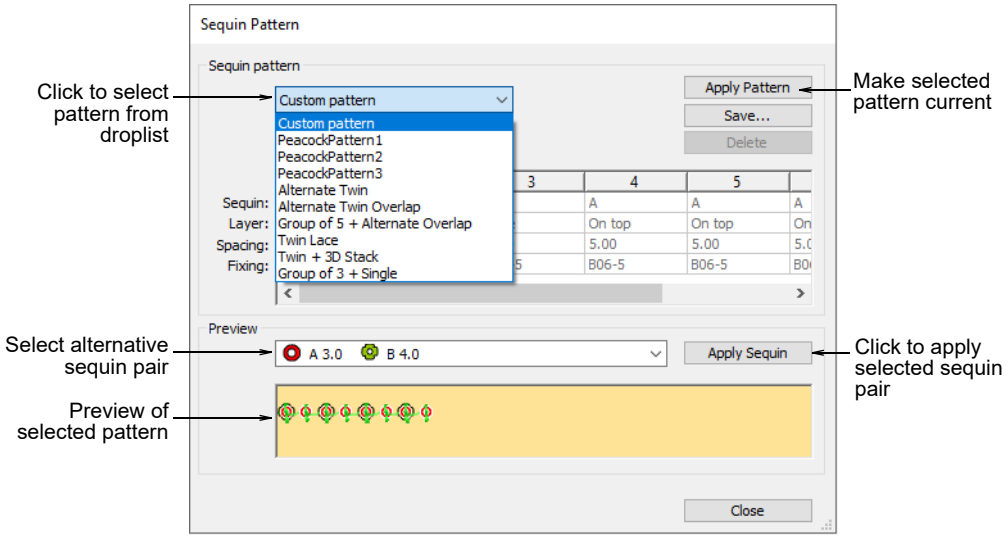
To apply a multi-sequin run pattern...

1 Optionally, choose an existing sequin run and open **Object Properties**.

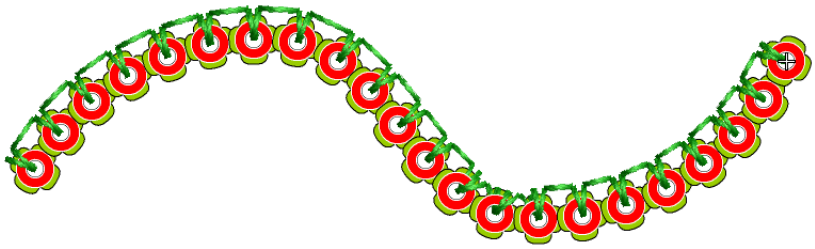


2 Go to the **Outlines > Sequin Run** tab and click the **Patterns** button to access the library.

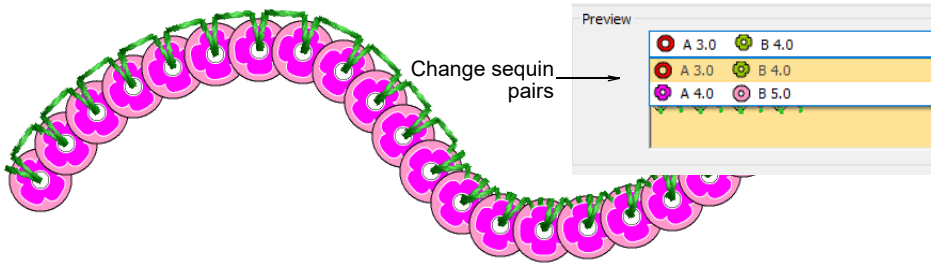
3 Select a pattern from the menu. A preview is displayed.



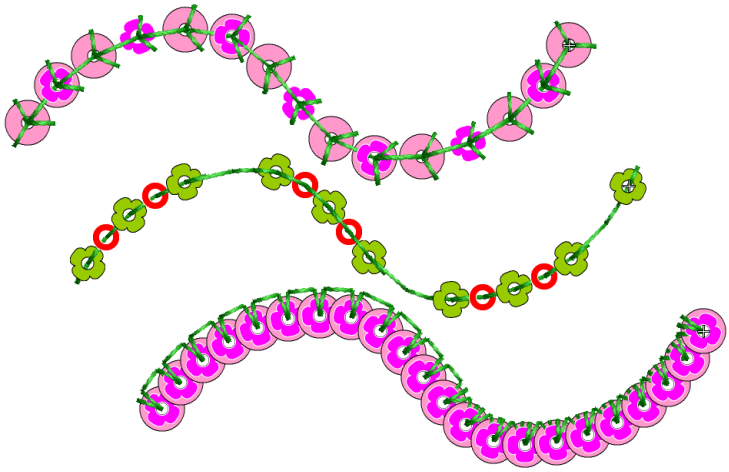
4 Click **Apply Pattern** to make the selected pattern current. The pattern is immediately applied to any selected sequin-run objects.



5 Optionally, select a different sequin combination from the **Preview Panel** droplist and click **Apply Sequin**.

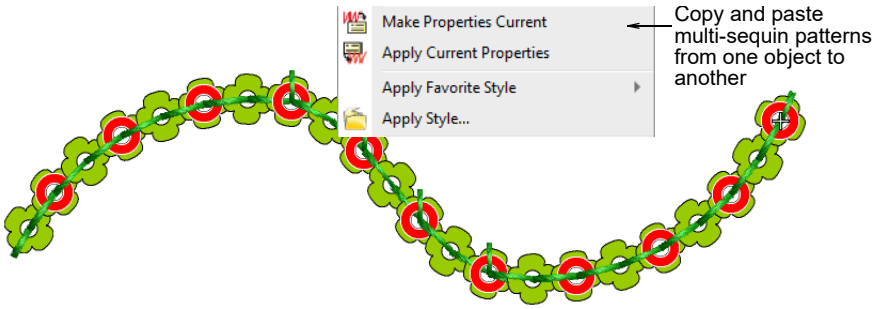


6 Using the **Sequin Run Auto** tool, create your runs. The same pattern will apply until you change it.



Usage tips...

- Use the **Pattern** table in the **Object Properties** docker to define your own patterns. See below.
- Make a selected object's properties current, including multi-sequin patterns, and apply them to existing objects.



Related topics...

- Select sequin-capable machine
- Setting up for sequin digitizing
- Creating sequin runs
- Creating multi-sequin runs
- Copy properties (Reference Manual)

Create multi-sequin run patterns

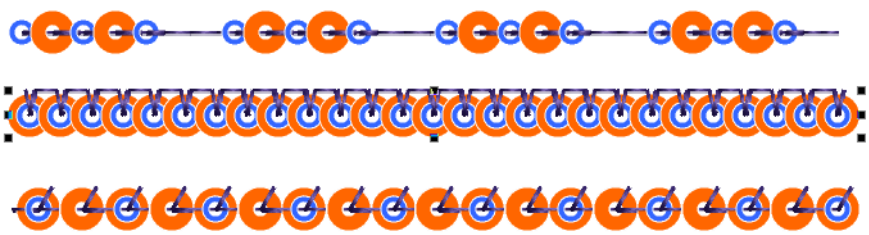
Use Sequin > Sequin Run Auto to create a string of sequins along a digitized line according to current settings.

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

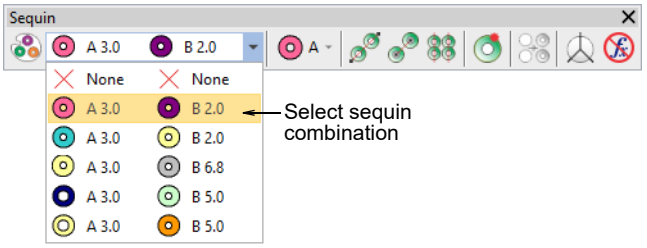
With EmbroideryStudio, you can create sequin run patterns and, optionally, save them to a pattern library for later use. Depending on machine capabilities, patterns may involve twin- or multi-sequin drops, with or without sequin stacking.

To create a multi-sequin run pattern...

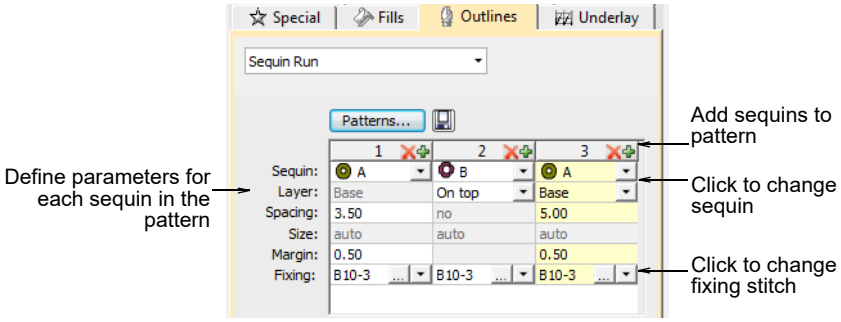
1 Create a sequin-run object with **Sequin Run Auto** or select an existing object. This allows you to preview your pattern as you go.



2 Select the sequin combination you want to use.



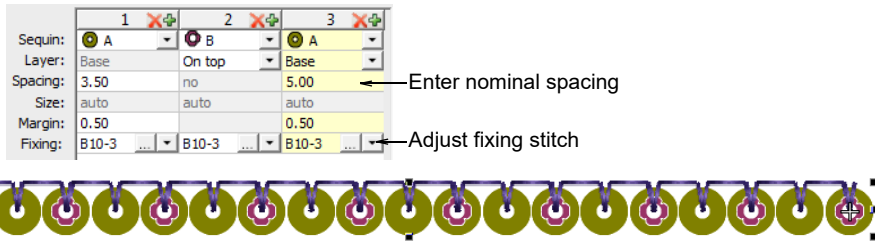
3 Open **Object Properties**. The **Pattern** table displays sequins currently in use.



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

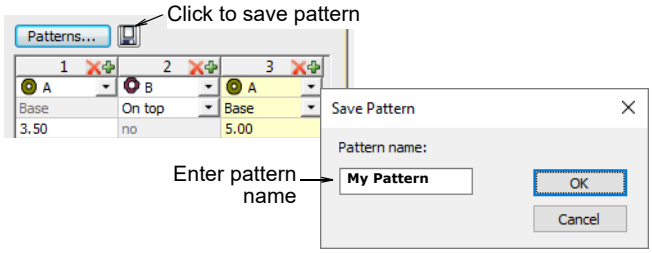
5 Select a sequin from the droplist. The selected sample updates immediately.

6 In the **Spacing** field, enter a nominal spacing for each sequin. Spacing is measured from the center of one sequin to the center of the next.



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

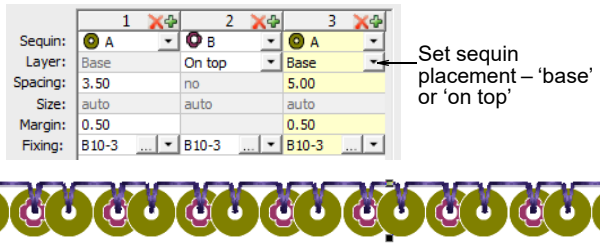
8 When satisfied with the sequin-run pattern, click **Save** to record the pattern for future use.



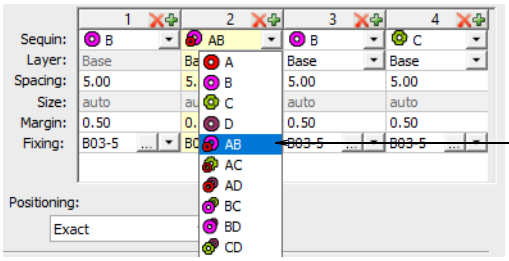
9 Enter a name for the pattern and click **OK**. It is now available in the **Sequin Pattern** dialog.

Usage tips...

- With sequin patterns, the software actually allows you to apply a different fixing type to each sequin. Normally however, you would use the same fixing for all sequins in the pattern. Typically you would consider the cost of embroidery production against sequin weight in order to find a balance. The fewer stitches used, the lower the production cost. At the same time, you want sequins to stay in place during use or washing.
- For stacked sequins, pattern setup depends on machine capabilities. With Dahao format, the sequin stack is dropped and secured with a single fixing stitch. For non-Dahao machine formats, the first sequin is dropped, secured, and another dropped on top and stitched again.
- If your machine format supports it – e.g. Tajima TBF, Barudan FDR II or 3, SWF Twin Sequin, etc – you can set up stack sequins using the **Layer** field. Specify whether the sequin is to be stacked ('on top') or to form a new 'base'.



- With Dahao format, you can choose sequin stacks from the combinations in the droplist. In this case, two or even three sequins can be dropped simultaneously and locked with a single fixing stitch.



- The digitizer needs to know the machine capabilities by heart. If an unsupported combination is selected – e.g. four sequin stack feeding – the drop code is ignored on the machine.

Related topics...

- Select sequin-capable machine
- Creating sequin runs
- Apply multi-sequin run patterns

Advanced Sequins

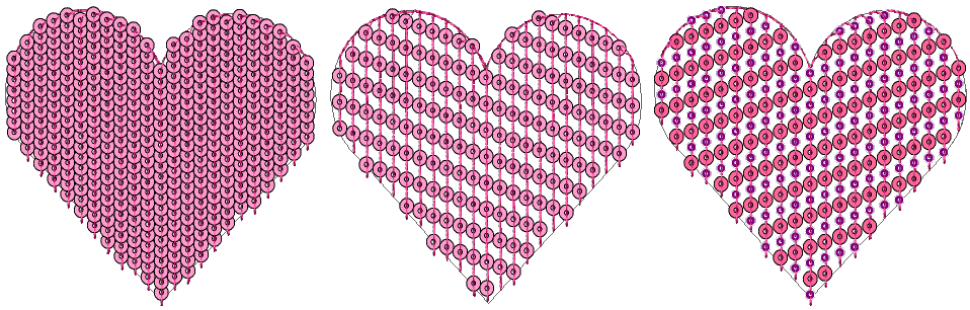
Some embroidery machines are equipped with devices that can drop sequins onto the garment as it stitches. Machine capabilities vary widely. Some machines only support single-sequin devices. Some machines support twin-sequin devices. Newer machines can support multi-sequin devices. These may perform consecutive sequin feeds – one at a time whilst stitching. Some may allow 'stack feeding', where multiple sequins are dropped and secured with a single fixing stitch.



This section describes how create sequin fills, both single- and multi-sequin, with and without borders. It discusses fancy sequin fills as well as flip sequins. It also covers editing sequin fills and converting objects to sequins. It deals with single sequin digitizing and custom sequins as well as outputting sequin designs.

Creating sequin fills

The **Sequin Fill** feature provides a means of filling complex shapes with sequins generally arranged in columns. The fill can also include a border, with or without a margin. This can be made from the same or a different sequin and is a property of the object.



Sequin fills are tied together by run stitches and travel runs. Travels are placed along the object outline. Sequin centers never fall outside the object outline. Sequin fixing stitches, however, can lie outside the outline depending on current settings.

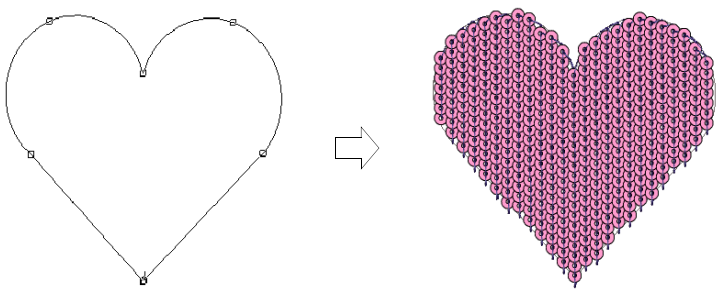
Tip: The **Show Repeats** function displays repeating designs, including sequins, in both **TrueView** and stitch view. You can view a design, even while digitizing, with any number of repeats. See also Viewing design repeats (Reference Manual).

Digitize sequin fills

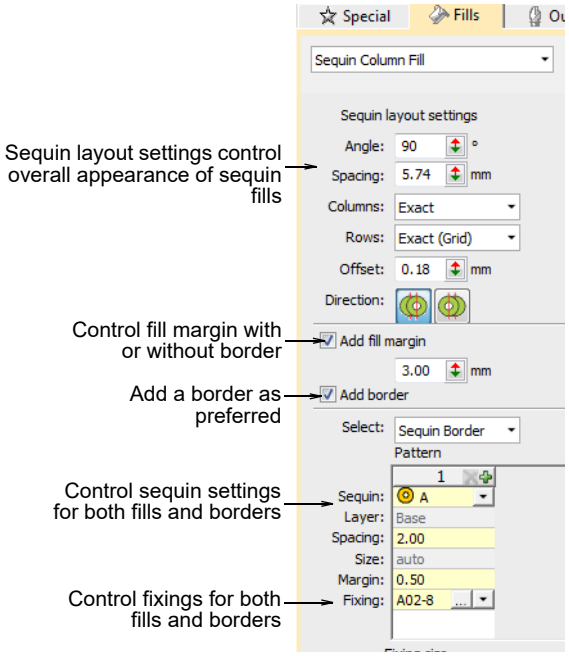
Use Sequin > Sequin Fill to digitize and fill large, irregular shapes with sequins.

Before you can use the **Sequin** tools, you need to choose a suitable machine format. Similarly, you need to prepare a palette of sequins according to capabilities of your chosen machine. See Setting up for sequin digitizing for details.

Once set up, the palette is available for use from the **Sequin** toolbar and **Object Properties**. Digitizing sequin-fill objects is essentially the same as digitizing complex fill objects.



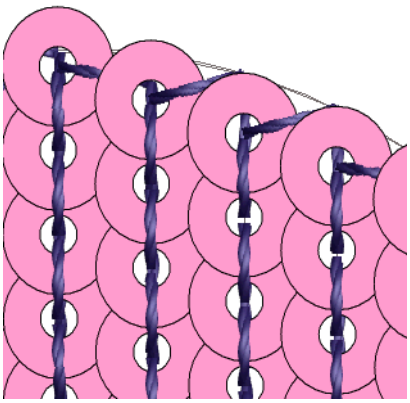
Double-clicking the object will invoke **Object Properties** similar to sequin run properties. See Creating sequin runs for details.

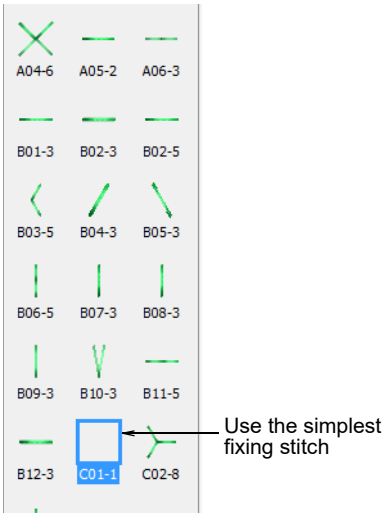


Controls available on the **Fills > Sequin Column Fill** tab for patterns and fixing stitches are summarized below.

Control	Description
Sequin layout settings	Use these settings to control the overall layout of the fill grid, including angle, sequin spacings, and offsets within the grid. See Adjust sequin layouts for details.
Fill margin	Include a fill margin or not as required. No sequin will have its center placed outside the fill margin. Usually used with a border but not necessarily. See Adjust sequin layouts for details.
Add border	Sequin fills can include a border, with or without a margin. The border is a property of the object. See Fancy sequin fills for details.
Select	Determines what patterns are displayed: • Sequin Fill: displays the fill pattern • Sequin Run: displays the border pattern. All other controls work the same as for Sequin Run.

Fixing stitches are selected in the same way as for sequin runs. For sequin fills, we recommend the simplest fixing stitch available – C01-1.





Usage tips...

- Sequin fills should be fully covered by sequins, like fish scales.
- Fixing threads should be invisible and covered by sequins.
- Apply 'Add fill margin' to cover any fixing stitches that protrude from the sequin block.

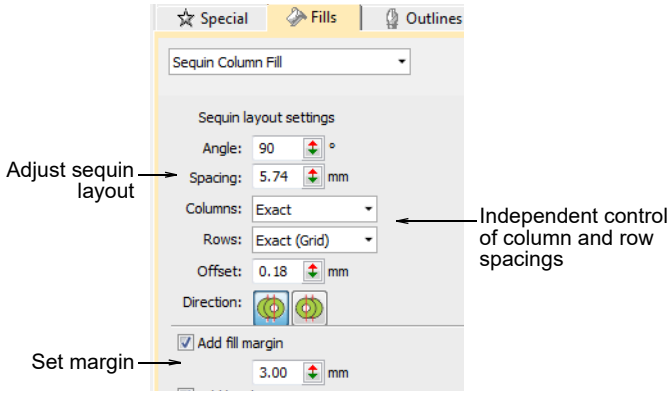
Related topics...

- Setting up for sequin digitizing
- Creating sequin runs
- Sequin fixings
- Creating free-form shapes

Adjust sequin layouts

Use Sequin > Sequin Fill to digitize and fill large, irregular shapes with sequins.

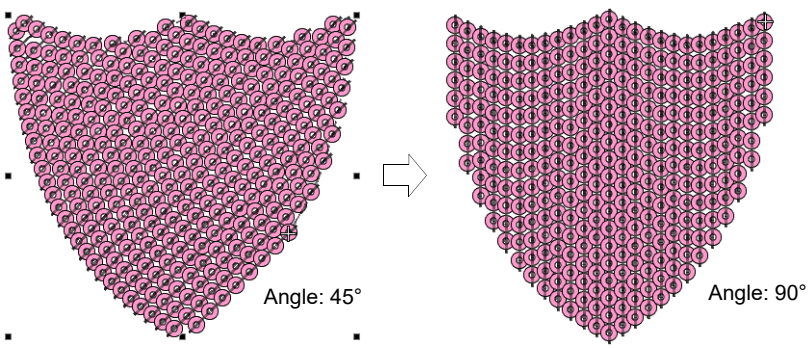
Use sequin layout settings to control the overall layout of the fill grid, including angle, sequin spacings, and offsets within the grid.



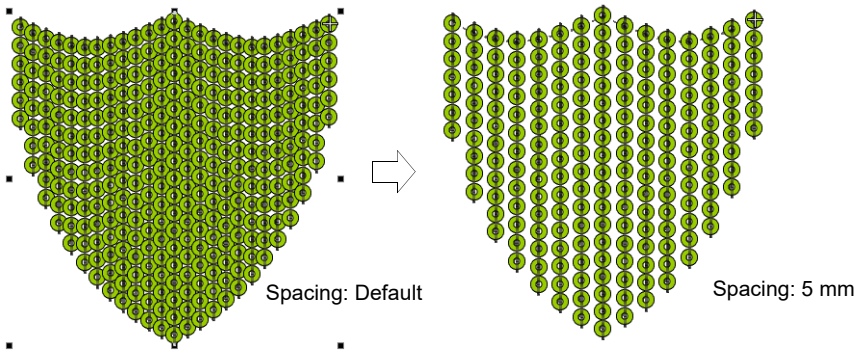
Sequin Fill provides independent control of column and row spacings. Set the nominal spacing in the **Spacing** field. You have the option of expanding or contracting spacings in rows or columns. Each line is adjusted independently. The aim is to make sequins follow to the edge of the shape as closely as possible. This is less important if you add a border to the fill.

To adjust sequin layouts...

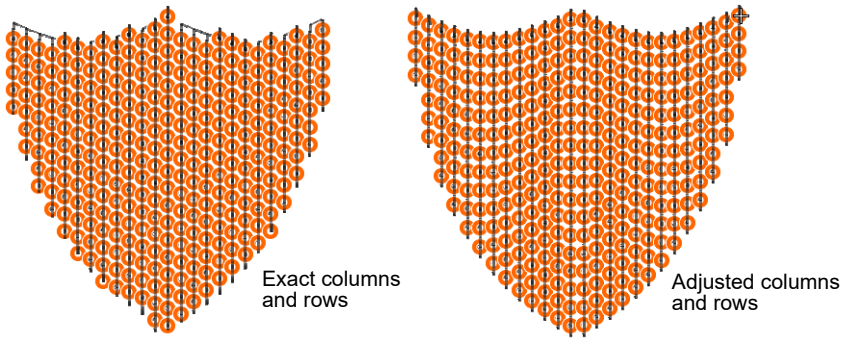
- Adjust **Angle** as shown...



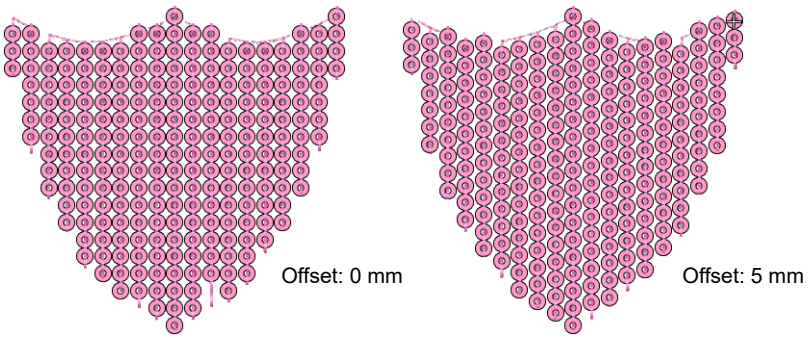
- Adjust **Spacing** as shown. This setting controls column spacing, not row spacing.



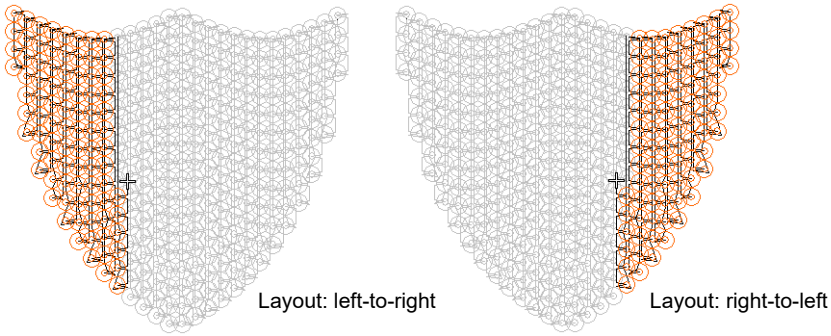
- Use **Columns** and **Rows** settings to make sequins fit the grid or adjust line-by-line to fit the shape. This is less important if you add a border to the fill.



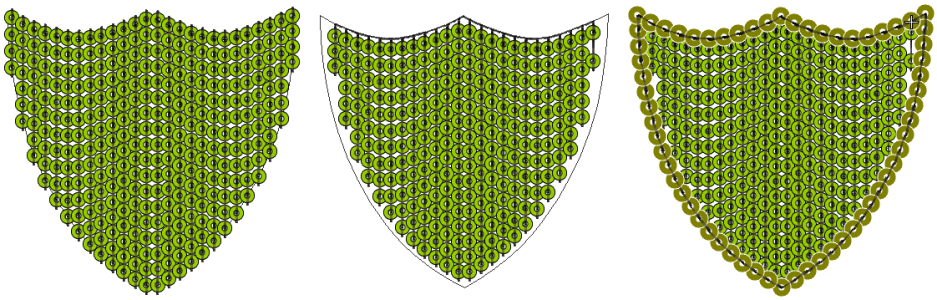
- Adjust **Offset** as shown. This only works if you have set **Rows** to 'exact' spacing.



- Adjust **Direction** as shown. This does not affect sequin layout, but it does affect stitching order, whether left-to-right or right-to-left. It may affect the appearance of fixing stitches.



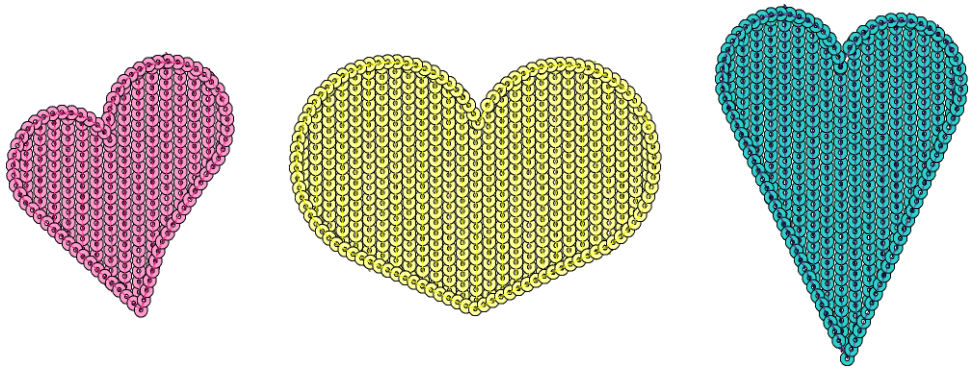
- Activate **Add Fill Margin** and adjust setting as necessary. This is generally used in conjunction with the **Add border** option. See below.



Edit sequin fills

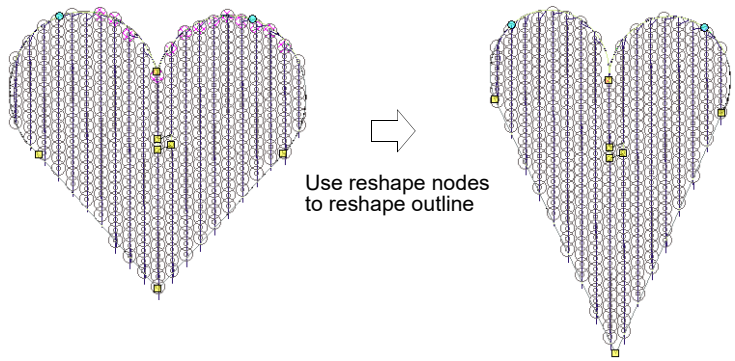
	Use Reshape > Reshape Object to reshape selected objects by means of control points.
	Use Sequin > Sequin Edit to fine-tune placement of individual sequins.

Either by means of object properties or the **Reshape Object** tool, you can control the overall shape of sequin fills as well as their layout. You can also set entry and exit points to avoid excessive needle penetrations.

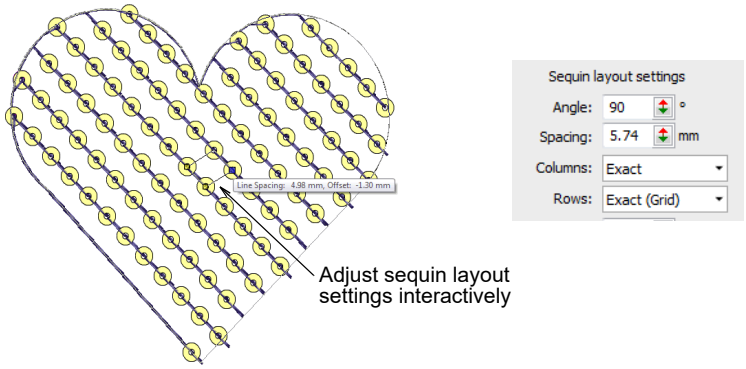


To reshape and edit a sequin fill...

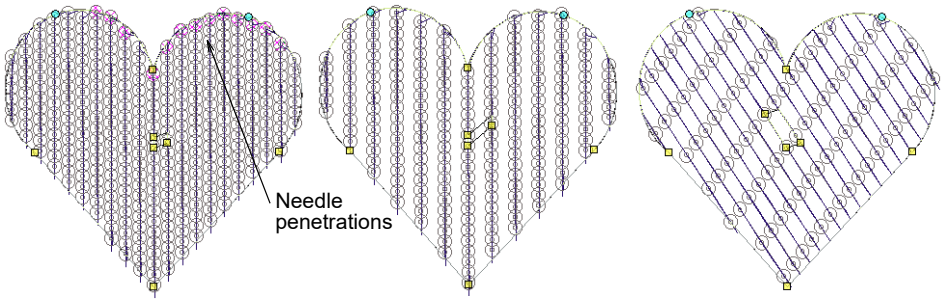
1 Select a sequin-fill object and click the **Reshape** icon.



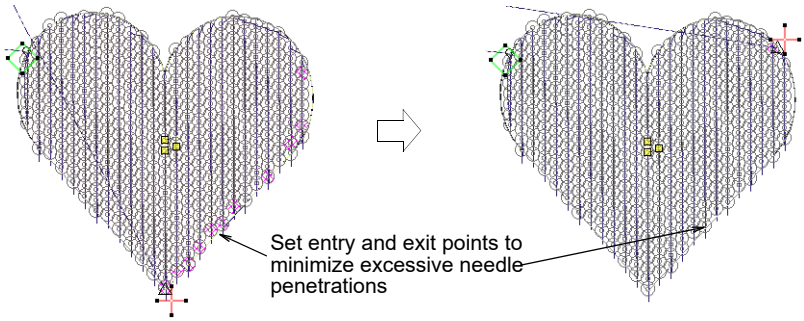
2 Use the three central control points to adjust sequin layout settings interactively. These control **Direction Angle**, **Spacing**, and **Offset** settings. Pattern spacing is also influenced.



- Pattern spacing is also controlled numerically via the **Patterns** panel.



- Adjustments can cause needle penetrations to occur within sequins. Affected sequins are highlighted in pink. Adjust layout and/or entry/exit points to minimize unwanted needle penetrations.



3 Fine-tune individual sequin spacings with the **Sequin Edit** tool – click-and-drag a diamond control point.

Tip: Holes can be digitized in sequin-fill objects in the same way as any free shape.



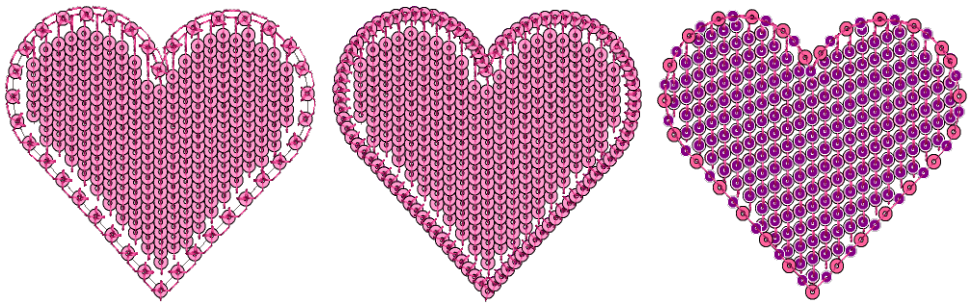
Related topics...

- Reshaping objects (Reference Manual)
- Edit sequin runs

Creating free-form shapes (Reference Manual)

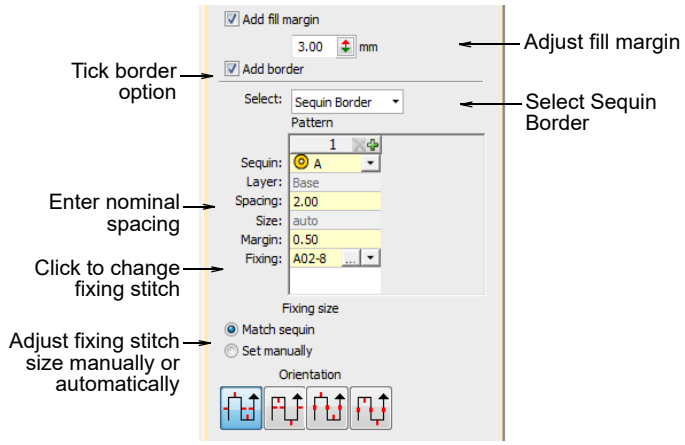
Add sequin borders

Sequin fills can include a border, with or without a margin. The border is a property of the object. If a twin-sequin capable machine is selected, the border and fill can differ. They can be comprised of single sequins or sequin patterns.



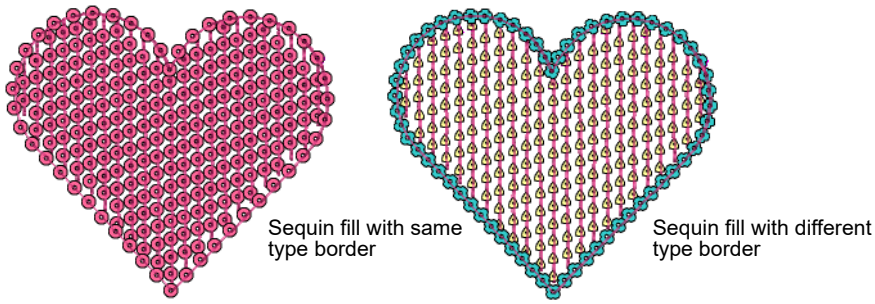
To add a sequin border...

1 Select a sequin-fill object and double-click to access object properties.

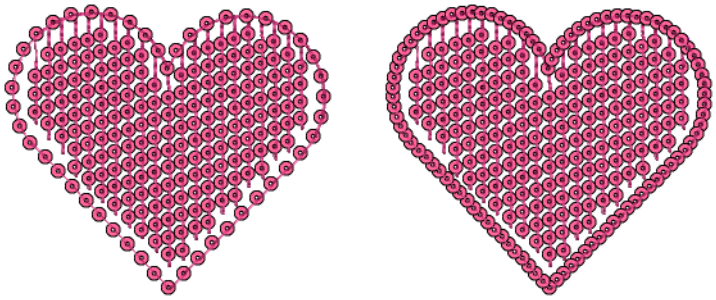


2 Tick the **Add Border** checkbox and select **Sequin Border** from the droplist.

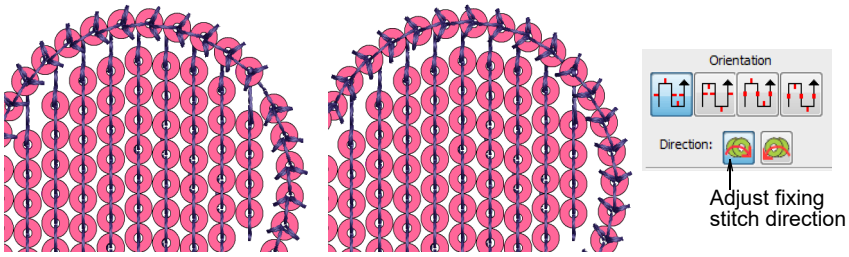
3 Adjust sequin type as shown. This can be the same or different to the sequin fill if you have a twin-sequin capable machine.



4 Adjust the fill margin and border spacing as shown.



5 Set sequin border fixing stitch direction as shown.

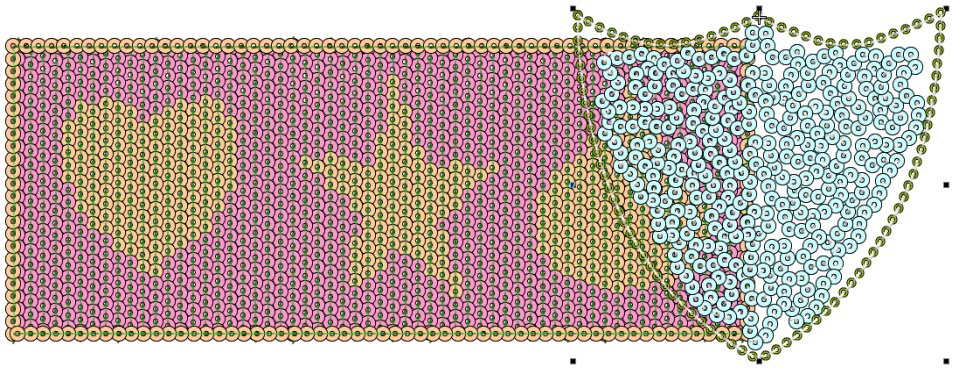


Related topics...

- Creating sequin runs
- Sequin fixings

Special sequin fills

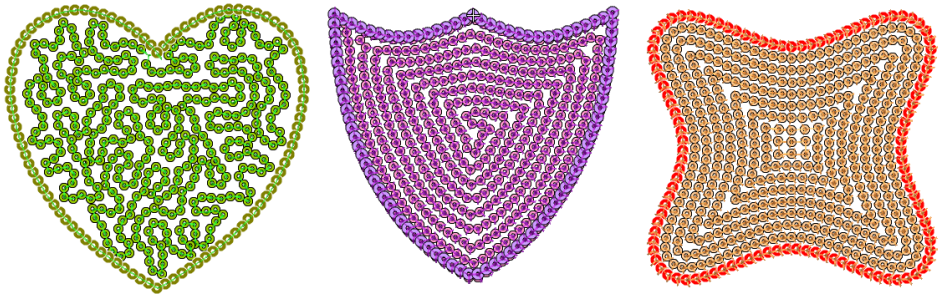
EmbroideryStudio provides techniques for creating special sequin fills, including scalable sequin stipple, maze, and offset fills, multi-sequin fills, reversible or 'flip' sequin fills, and split sequin fills. This topic looks at all techniques.



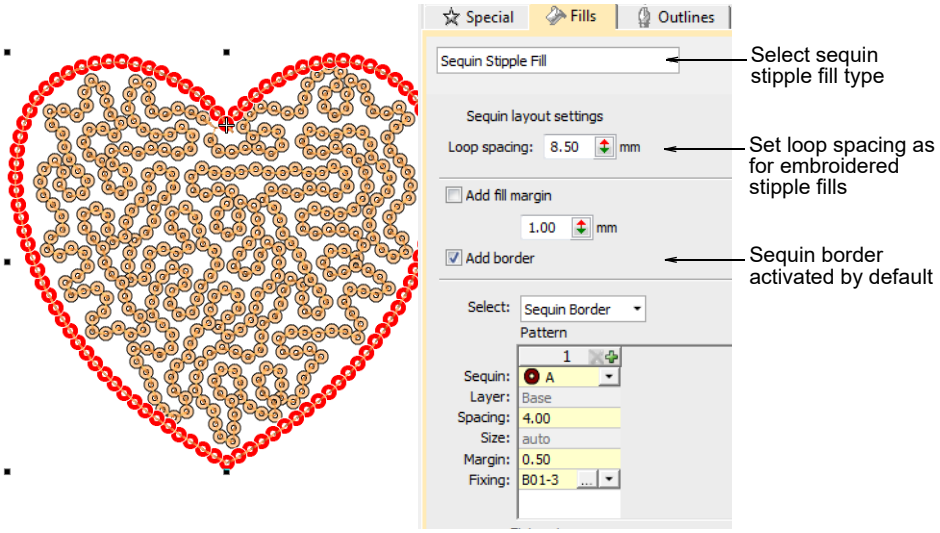
Fancy sequin fills

Use Sequin > Sequin Fill to digitize and fill large, irregular shapes with sequins.

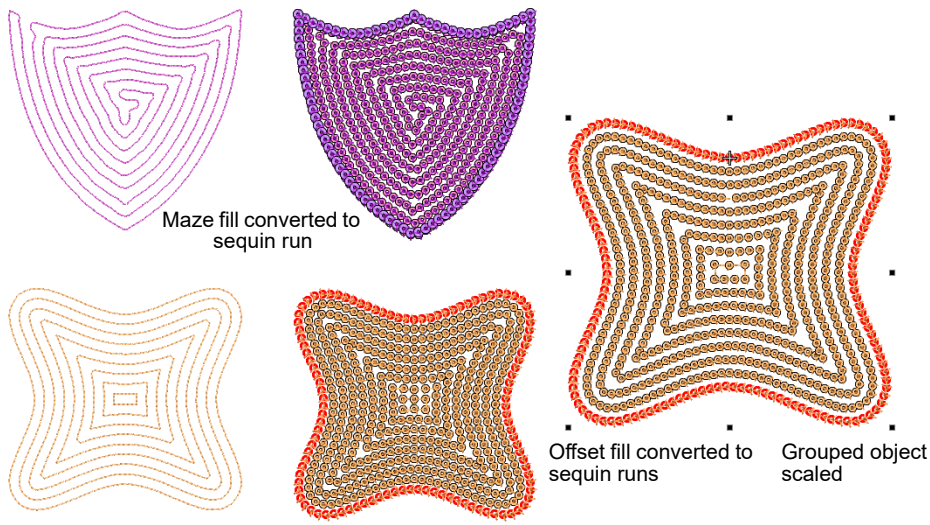
EmbroideryStudio allows you to create fancy sequin fills by a variety of methods.



Create variegated stipple fills automatically with single or multi-color sequin patterns. These objects are fully scalable and can be reshaped like any embroidery object. For stipple fills, sequin borders are activated by default.



You can create other fancy sequin fills by the conversion method. This is technically a 'workaround' since it does not produce a scalable sequin object. However, if your design requires it, you can first create the desired shape using, for example, **Maze** or **Offset** fill. Set spacing sufficient to accommodate the sequins you want to use. Then break apart and convert the resulting run objects to sequin runs. These can be grouped. But note what happens when you scale the object – sequins are recalculated for each run, but the gap between lines increases.



Related topics...

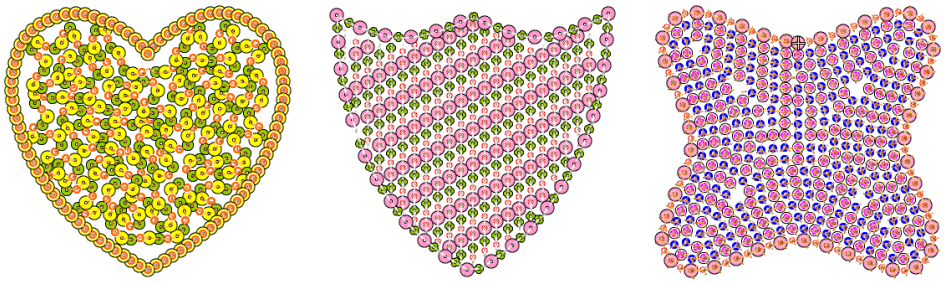
- Convert objects with Wilcom Workspace (Reference Manual)
- Break apart composite objects (Reference Manual)

- Stippling effects (Reference Manual)
- Maze fills (Reference Manual)
- Offset fills (Reference Manual)

Multi-sequin fills

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

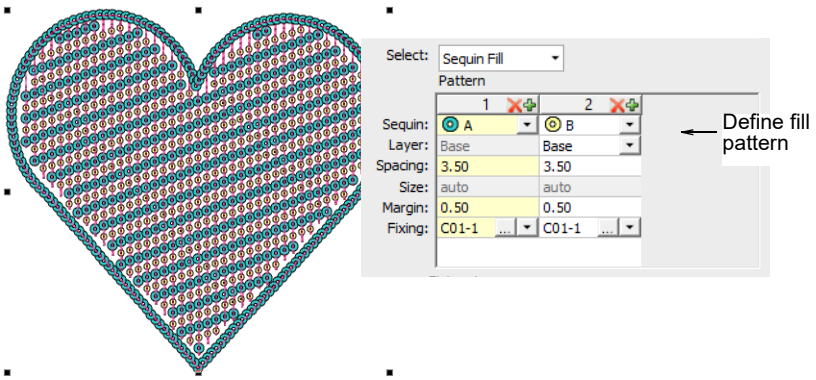
If you have a twin- or multi-sequin capable machine, you can use the **Pattern** control to create patterned borders and/or fills. Use it also to control sequin spacing independently of line spacing. Most controls work the same as for **Sequin Run**. The process is essentially the same as for multi-sequin run patterns, except that you can't save them for later use.



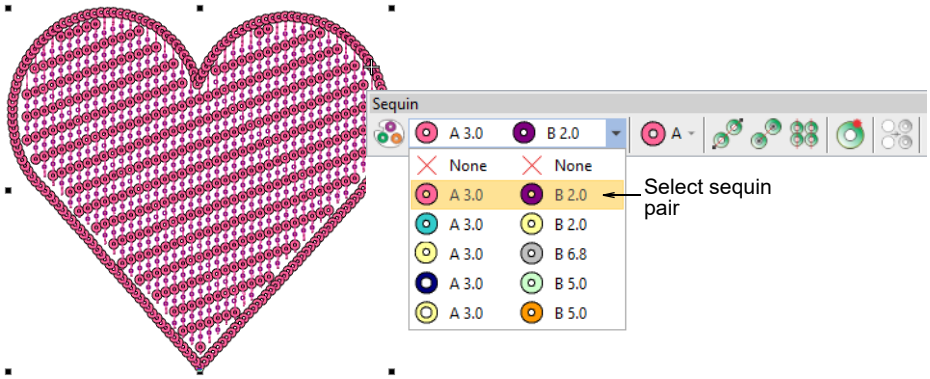
Tip: Twin-sequin mode also allows you to convert vector objects to twin-sequin outlines. See also Convert sequin artwork.

To create multi-sequin fill patterns...

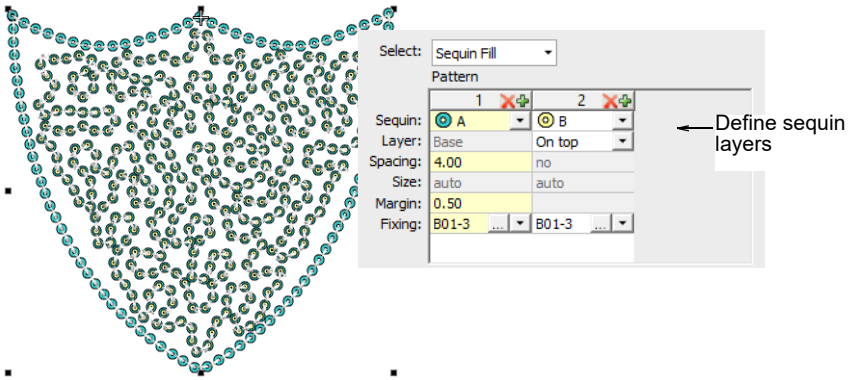
1 Open **Object Properties** and define a fill pattern as you would for a sequin run.



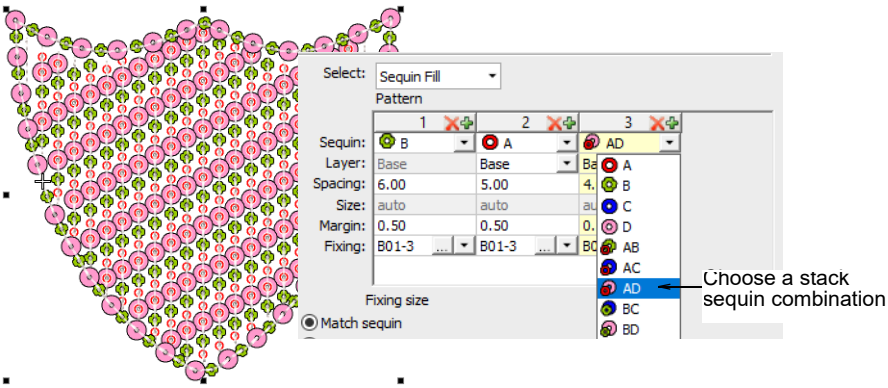
2 Change sequin combinations as desired.



3 If your machine format allows it, define sequin layers as you would for a sequin run, one sequin serving as the 'base', and the other dropped 'on top'.

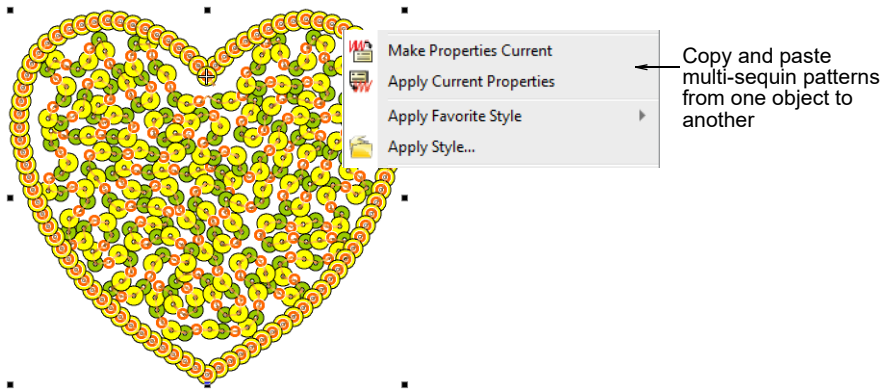


4 With Dahao format, choose sequin stacks from the combinations in the droplist.



Usage tips...

- If you choose a stacked sequin configuration that the sequin device does not support, the machine will simply ignore that particular drop code.
- Make a selected object's properties current, including multi-sequin patterns, and apply them to existing objects.



Related topics...

- Creating multi-sequin runs
- Sequin fixings

Split sequin fills

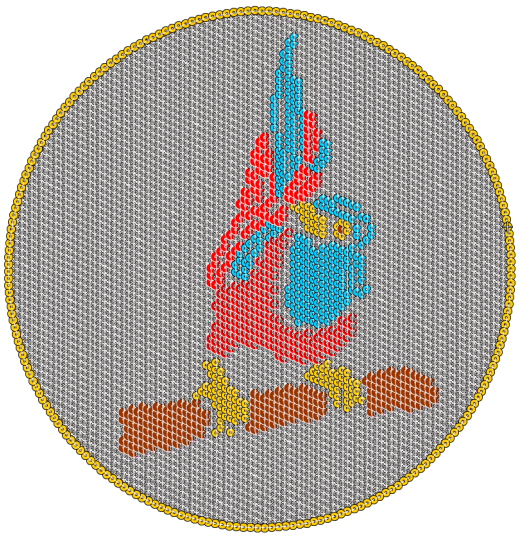
Use Sequin > Sequin Fill to digitize and fill large, irregular shapes with sequins.

Use Sequin > Sequin Split Edit to assign sequins to split areas of sequin fills.

Use Sequin > Sequin Edit to fine-tune placement of individual sequins.

Use Docker > Carving Stamp to define a pattern of needle penetrations using a 'carving stamp' as a template.

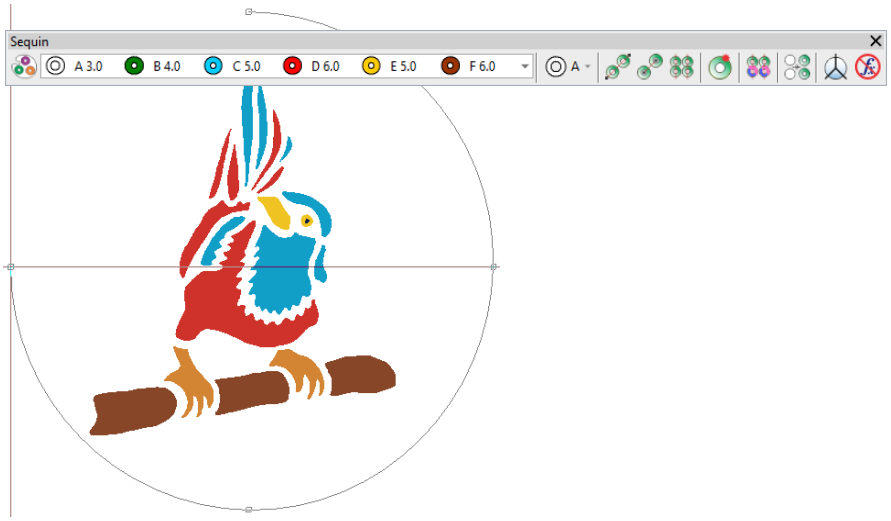
If you have a multi-sequin capable machine, you can assign different sequins from the palette to split areas within sequin fills. The process is analogous to creating stitch patterns with custom splits.



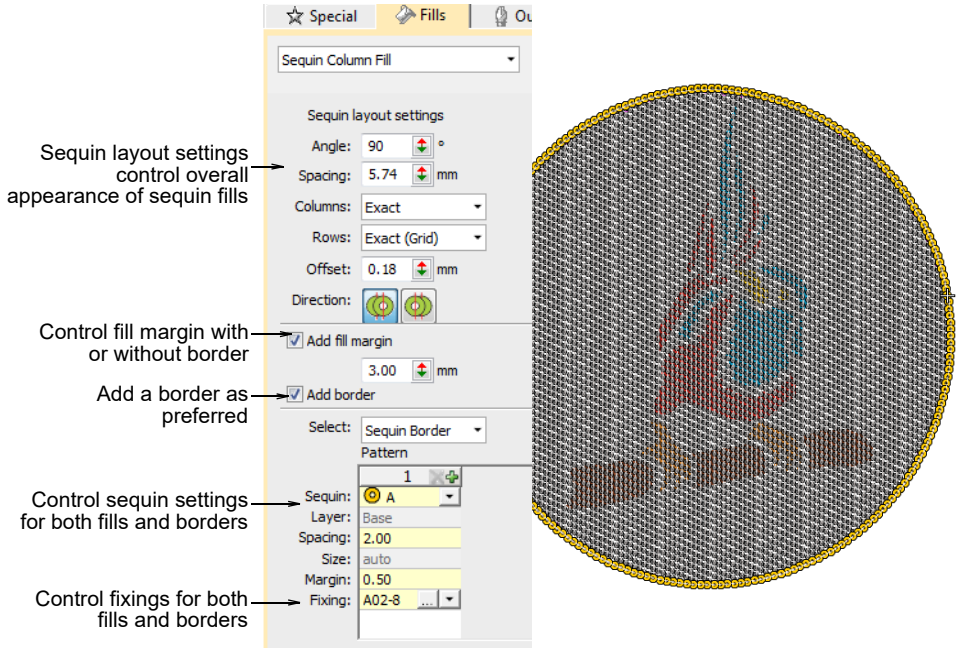
To create split-sequin fills...

1 Choose a suitable machine format and prepare a palette of sequins according to capabilities of your chosen machine.

2 Load any artwork you intend to use and digitize the background fill with the **Sequin Fill** tool.



3 Double-click the object to open **Object Properties**. Adjust settings as necessary.

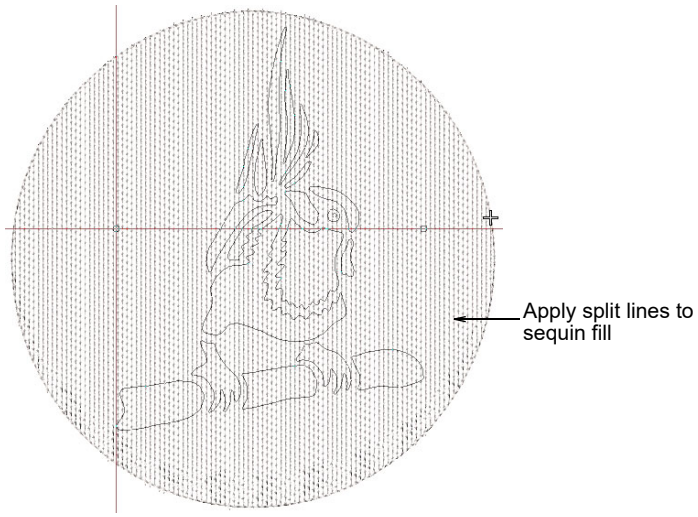


4 Create the outlines you will use to create the pattern. **Sequin Fill** is used in combination with **Carving Stamp** to create stamp patterns.

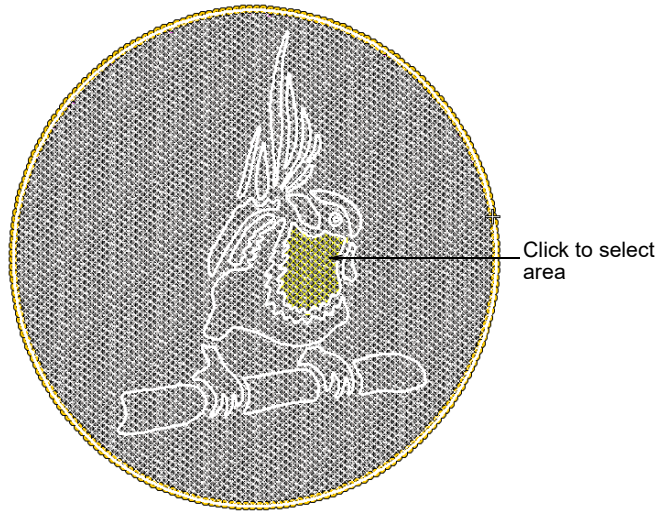


The **Use Object** tab allows you to select object outlines from the design window for use as a temporary stamp. You can use an embroidery object or vector object as the template.

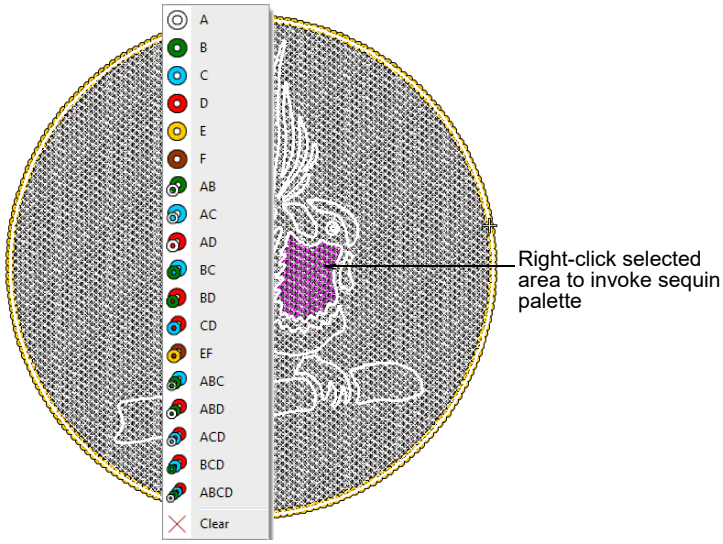
5 Adjust view settings as necessary and click **Use Stamp** to apply split lines to your sequin fill.



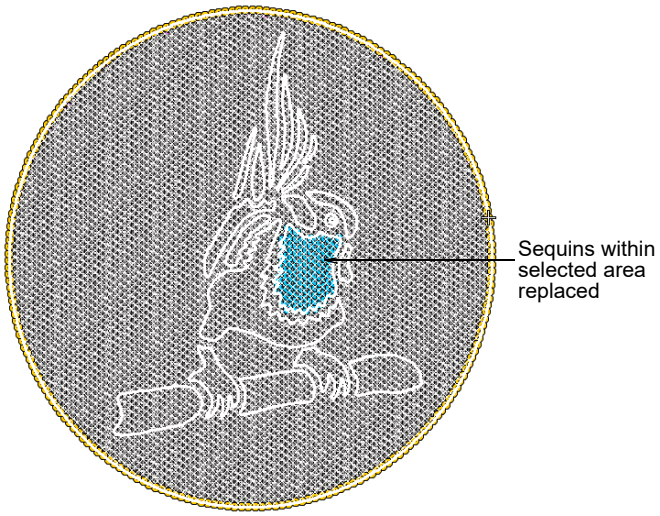
6 Click the **Sequin Split Edit** tool. Split lines appear within the sequin fill. Move your cursor over the areas to highlight each in turn.



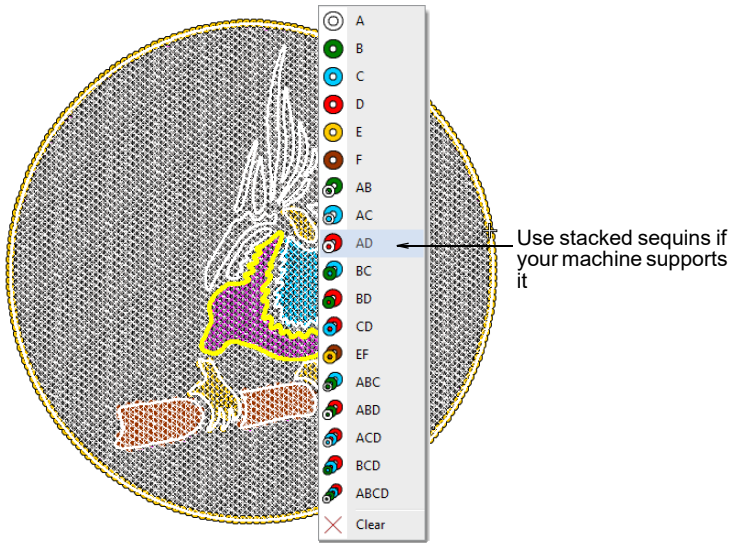
7 Click an area to select it and right-click to invoke the popup sequin palette.



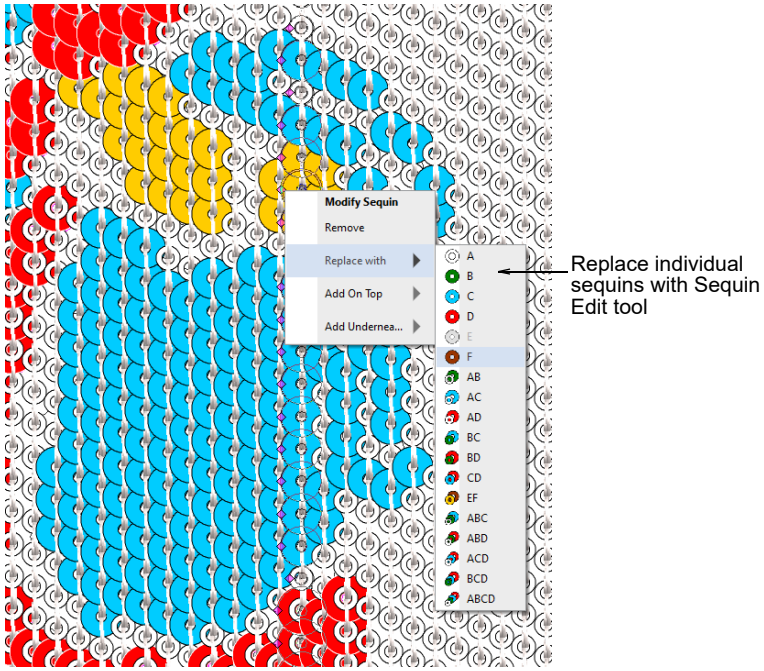
8 Select a replacement sequin from the popup menu.



9 Continue in the same manner, clicking areas to select and choosing replacement sequins from the popup menu. If your machine supports it, you can use stacked sequins.



10 For fine-tuning, instead of using the **Sequin Split Edit** tool, use the **Sequin Edit** tool to swap individual sequins.



11 Press **Esc** to complete and zoom out to inspect the result.

Tip: If you have defined reversible or 'flip' sequins, click the **Flip Sequin** toggle to view the reverse side as it will appear in stitchout. See Flip sequins for details.

Related topics...

- Setting up for sequin digitizing
- Digitize sequin fills
- Use objects as carving stamps (Reference Manual)

Flip sequins

	Use View > Show Functions to toggle display of machine function symbols. Right-click for settings.
	Use View > Flip Sequins to toggle between front and reverse sides of sequin runs and fills in reversible sequin designs. Define colors in the Sequin Palette Editor.
	Use Sequin > Sequin Fill to digitize and fill large, irregular shapes with sequins.
	Use Sequin > Sequin Split Edit to assign sequins to split areas of sequin fills.
	Use Docker > Carving Stamp to define a pattern of needle penetrations using a 'carving stamp' as a template.
	Use Reshape > Reshape Object to reshape selected objects, edit stitch angles, and adjust entry/exit points.

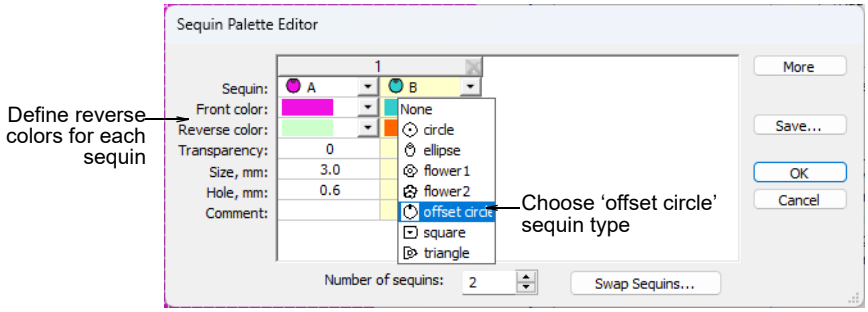
Reversible or 'flip' sequins create color-changing effects. Flip sequins have found a wide variety of applications, from reversible sequin shirts, children's wear, pillowcases, bags, notebooks, and more. They have also found their way into high fashion. Their use is simple – swipe up or down to reveal the reverse side with sometimes surprising effects.



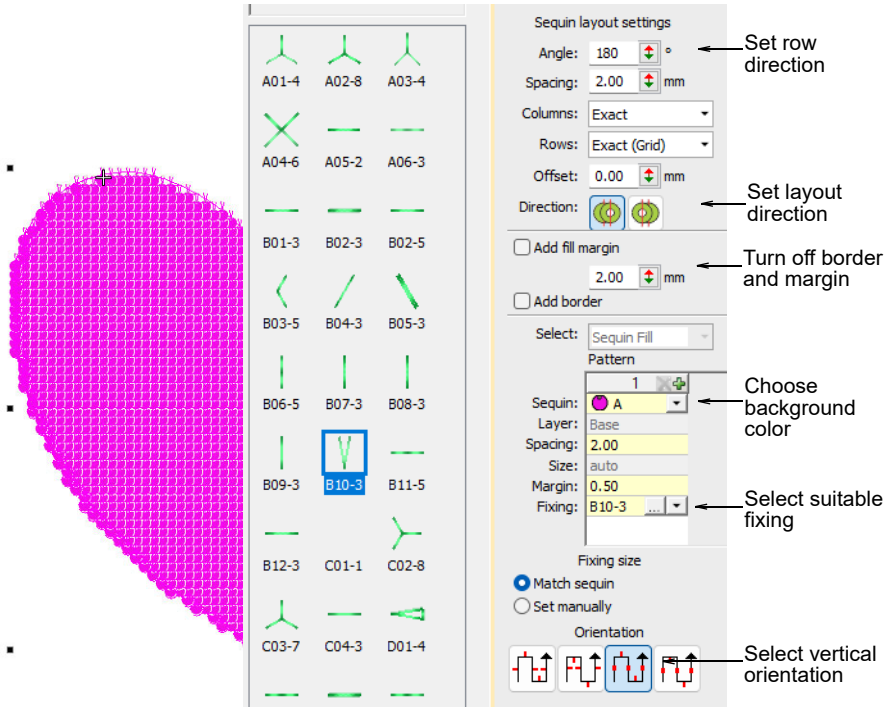
Tip: Multi-sequin machines can create flip sequins with twin patterns, one on either side. This can be achieved with a Dahao control panel and multi-sequin device.

To set up a flip-sequin layout...

1. Choose a suitable machine format – e.g. Tajima TBF.
2. Set up your sequin palette in the **Sequin Palette Editor** and define reverse colors for each sequin.



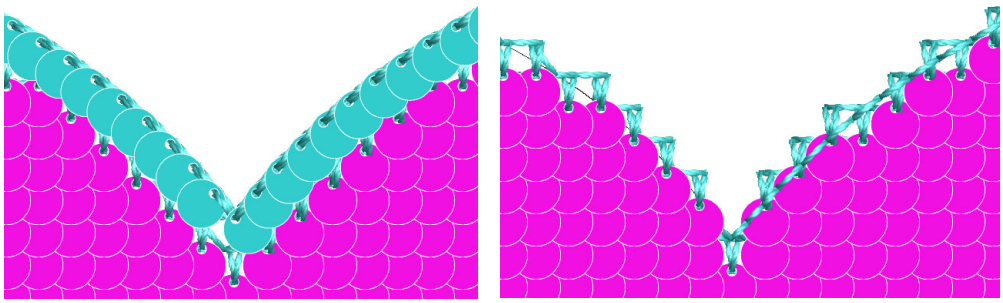
3. Choose 'offset circle' as your sequin type. This makes it possible to flip sequins.
4. Create a background fill and choose a background color.



5 Choose a suitable fixing stitch. EmbroideryStudio supports 'V' type fixings for flip sequin work.

6 Choose a thread color for your sequin fill. Transparent thread is often used on the machine to avoid differences between thread color and sequin color.

7 Turn off border and margin. Flip-sequin fills cannot include a border.



With border

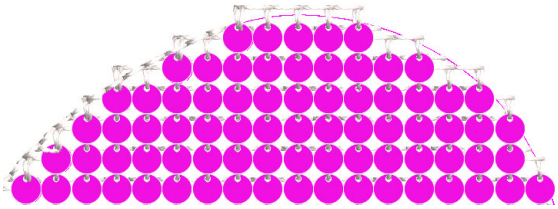
No border

8 Set the flip-sequin direction. Indicative settings are:

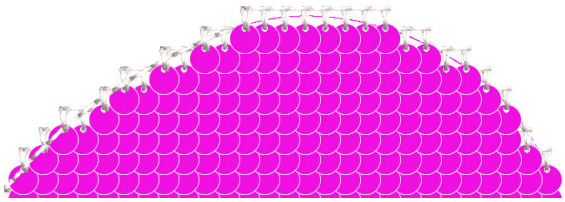
Setting	Bottom-Top	Left-Right
Layout angle	180°	-90°
Layout direction	Left-to-right	Right-to-left

Setting	Bottom-Top	Left-Right
Fixing orientation	Vertical	Left

9 Adjust row and column spacings as necessary. Use exact row and column spacings and set the offset to '0'. Otherwise patterns may distort.

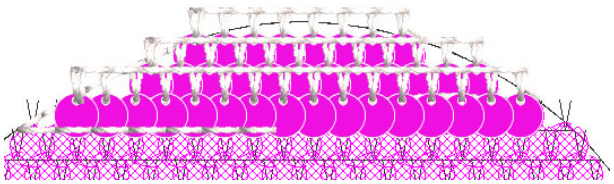


Sequin spacing: non-overlapping

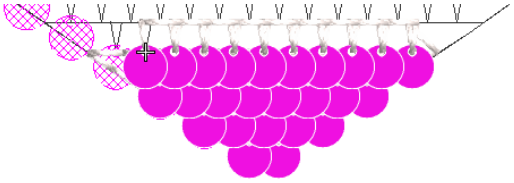


Sequin spacing: overlapping

10 Run **Stitch Player** to visualize exactly how fixing stitches and sequins will be placed on the machine.



Fixing stitches overlapping sequins

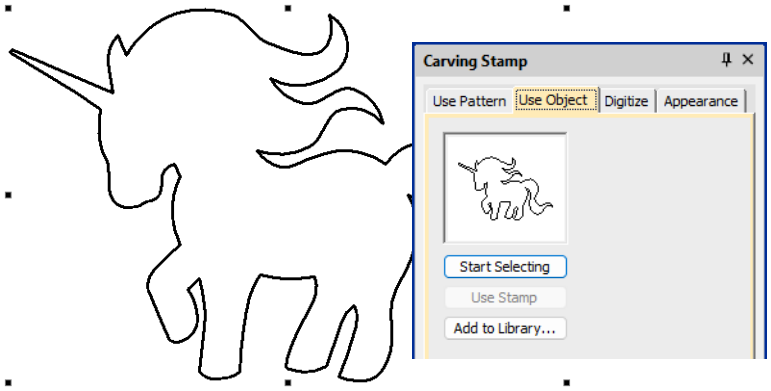


Sequins overlapping fixing stitches

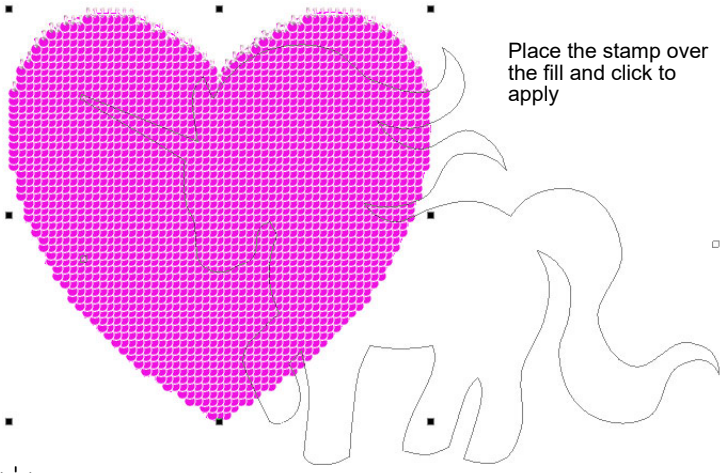
Tip: If necessary, toggle sequin layout direction. Sequins must overlap each row of fixing stitches. Not vice versa.

To create a reverse color fill...

1 With the **Carving Stamp** tool, select a pre-defined pattern from the library or use your own.



2 Use the pattern as a stamp and apply it to your sequin fill background.

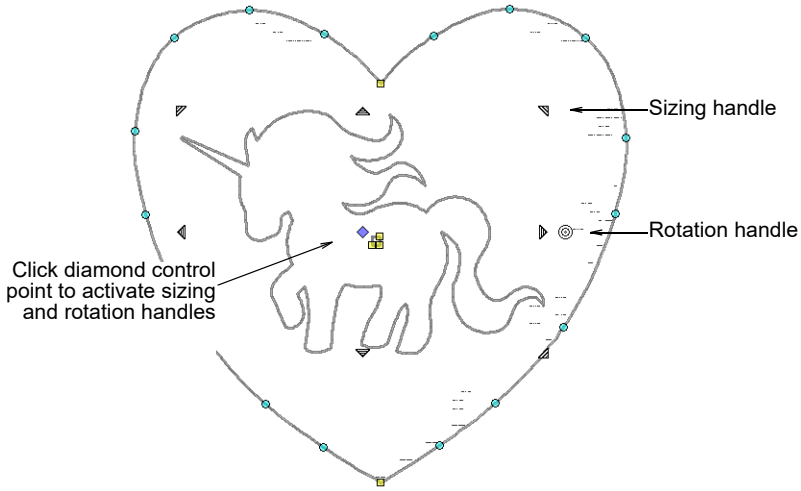


Tip: Turn off **TrueView** and **Show Functions** buttons to view the stamp outline on the sequin fill.

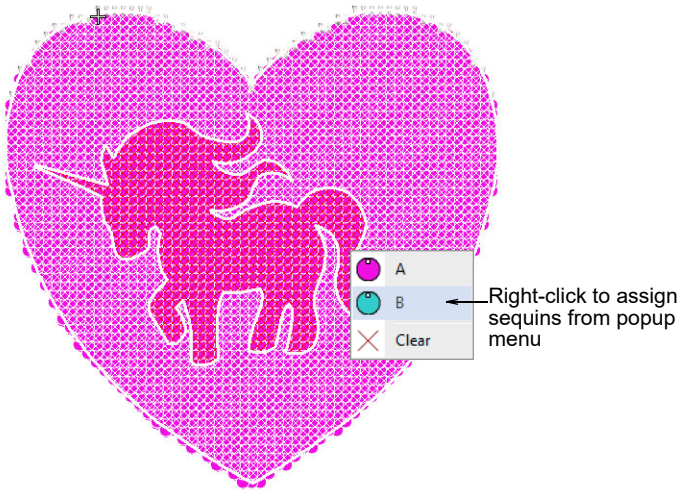
3 Place the stamp pattern as follows:

- Click a start point.
- Hold down **Shift** to resize.
- Hold down **Ctrl** to constrain orientation to 15° increments.
- Click to apply.
- Press **Esc** to exit.

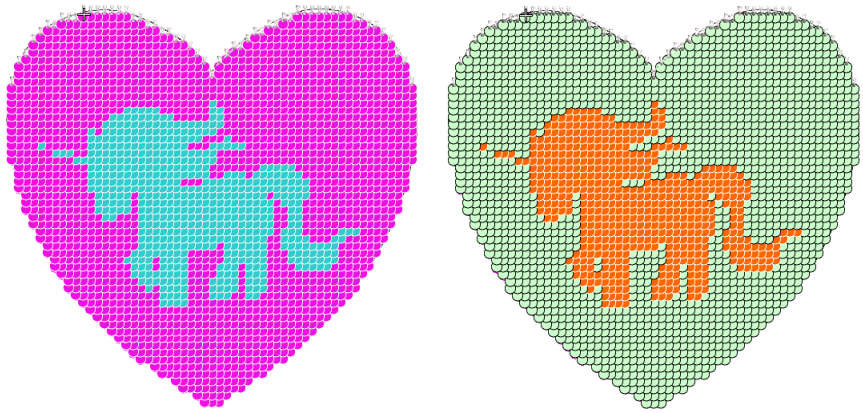
4 Use the **Reshape** tool to size, rotate and position the stamp pattern. Click the diamond control point to activate sizing and rotation handles.



5 Select the sequin fill and activate the **Sequin Split Edit** tool. Click the area and right-click to invoke the sequin menu. Select the color you want.



6 Click the **Flip Sequins** toggle to view the reverse side as it will appear in stitchout.



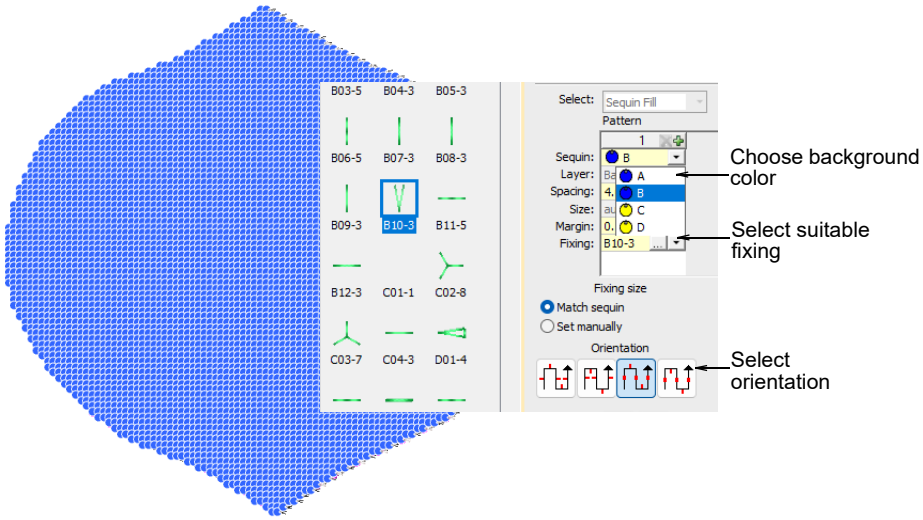
To create a reverse pattern fill...

1. Choose a suitable machine format – e.g. Dahao.
2. Set up your palette in the **Sequin Palette Editor** and define reverse colors for each sequin. The palette must include all combinations of colors for both sides.



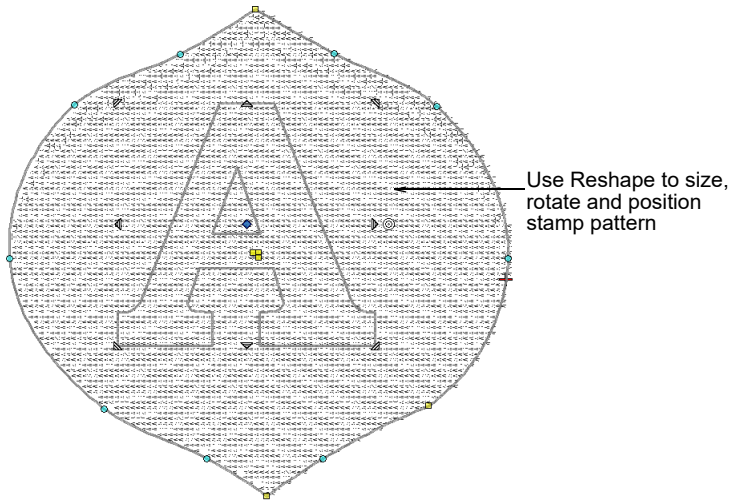
Note: Here, the setup is for a quad-sequin device. Our design includes two patterns – letter 'A' (front) and letter 'B' (back) – two colors either side. This gives us four color combinations: front to back, letter A to back, letter B to front, letter A to letter B.

3. Create a background fill and turn off border and margin. Use the 'V' type fixing stitch.



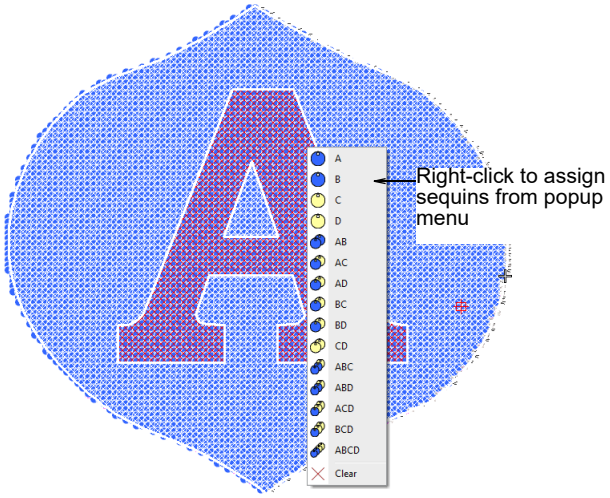
4 Choose a background color. In this case, we want the fill to flip between blue and yellow backgrounds. So we choose 'B' from the droplist (blue-on-yellow).

5 With the **Carving Stamp** tool, set up your first pattern. This is to be a yellow letter 'A'.



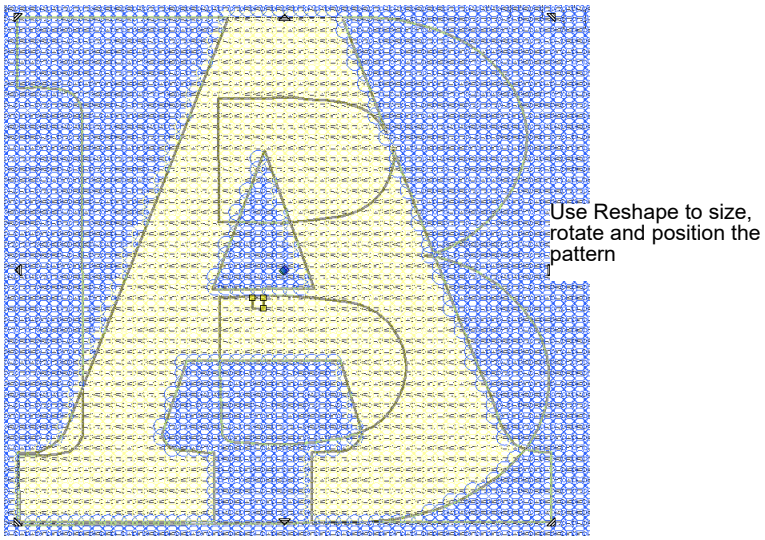
6 Use the **Reshape** tool to size, rotate and position the stamp pattern. Click the diamond control point to activate sizing and rotation handles.

7 Use the **Sequin Split Edit** tool to assign sequins to the selected area. Here we choose 'D' from the menu (yellow-on-yellow).

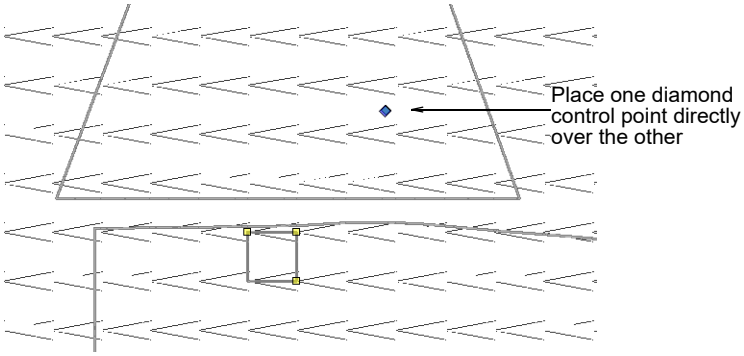


Tip: The sequin popup only shows the front color. Use **Flip Sequins** to check both sides.

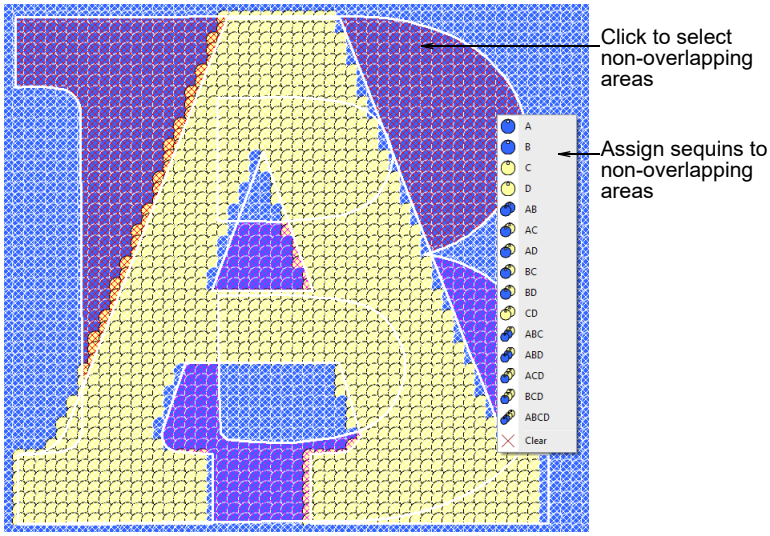
8 With the **Carving Stamp** tool, set up your second pattern.



9 Use the **Reshape** tool to size and position the second pattern in relation to the first.

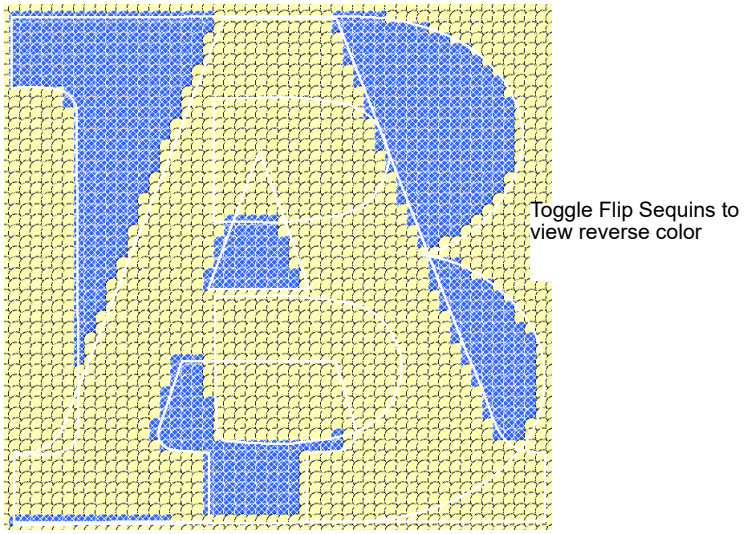


10 Use the **Sequin Split Edit** tool to assign sequins to the second pattern. Holding down **Ctrl**, click to select multiple areas.

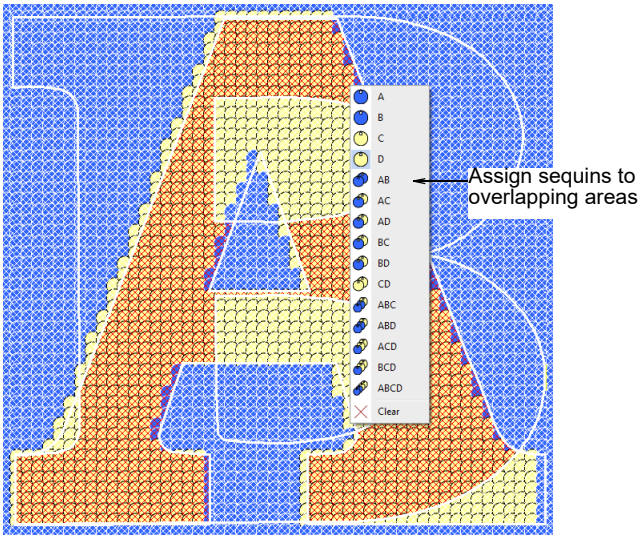


11 Work systematically through the split areas of the second pattern:

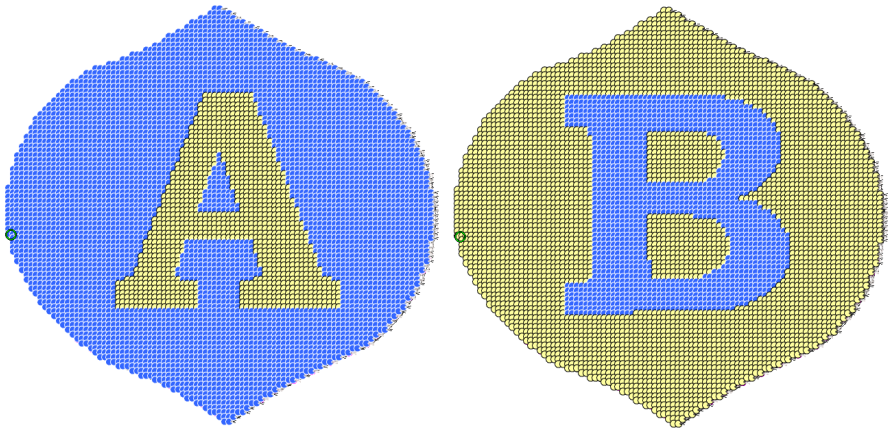
- Start with the non-overlapping areas.
- Hold down **Ctrl** to select multiples.
- Assign sequins from the popup menu. Here we choose 'A' from the menu (blue-on-blue).
- Toggle **Flip Sequins** to view the reverse color.



12 Next look for the overlapping areas. Here we choose ‘C’ from the menu (yellow-on-blue).



13 Click **Flip Sequins** to view the reverse side as it will appear in stitchout.

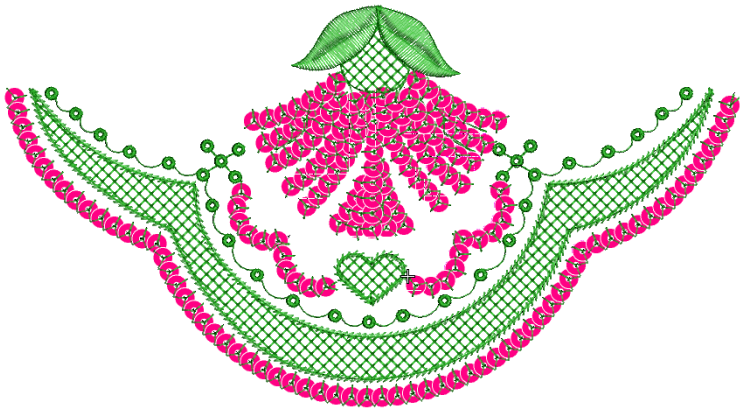


Related topics...

- Select sequin-capable machine
- Set up sequin palette
- Split sequin fills (Reference Manual)
- Use objects as carving stamps (Reference Manual)
- Reshaping objects (Reference Manual)

Converting embroidery to sequins

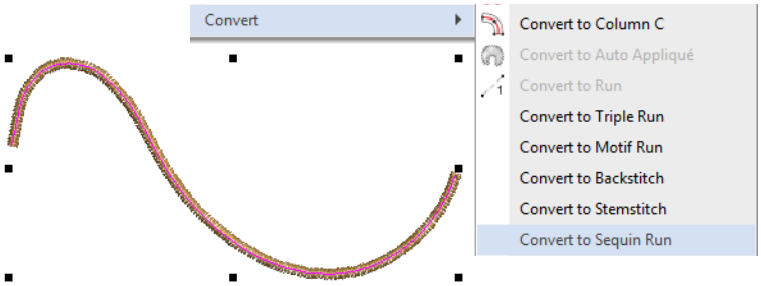
Most objects in EmbroideryStudio are inter-convertible. Open and closed sequin objects are no exception. Any open object – Run, Stemstitch, Motif Run, Freehand, Column C, Vector – can be quickly converted to sequin run. Similarly, any closed object – Column A/B, Complex Turning, or Complex – can be converted to sequin fill. EmbroideryStudio also provides a dedicated tool for automatically converting sequin artwork in the form of a vector file to sequin runs.



Convert objects to sequins

	Use Sequin > Sequin Run Auto to create a string of sequins along a digitized line according to current settings.
	Use Sequin > Sequin Fill to digitize and fill large, irregular shapes with sequins.

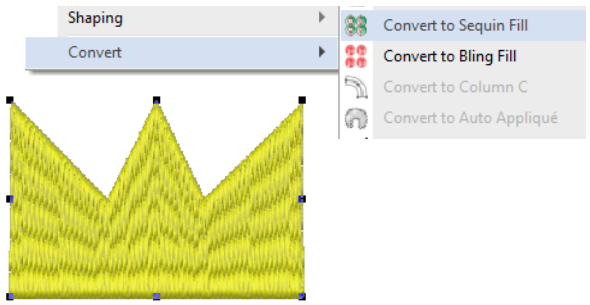
Convert any open object – Run, Stemstitch, Motif Run, Freehand, Column C, Vector – to sequin run.



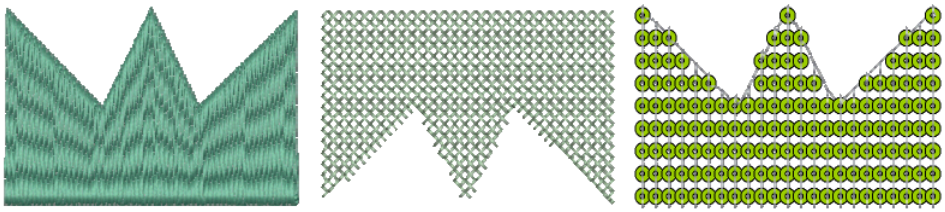
Right-click and select **Convert > Convert to Sequin Run**. Alternatively, simply click the **Sequin Run Auto** icon.



Similarly, convert any closed object – Column A/B, Complex Turning, or Complex – to sequin fill.



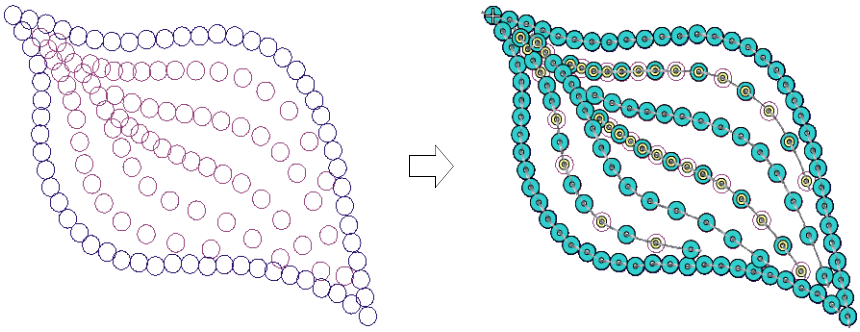
Right-click and select **Convert > Convert to Sequin Fill**. Or click the **Sequin Fill** icon.



Convert sequin artwork

Use Sequin > Vectors to Sequins to create a sequin run from a set of sequin vector objects selected by intersecting line.

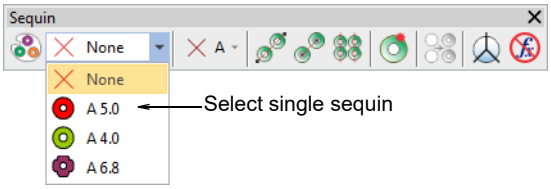
Frequently, artwork for sequin designs is independently created by a specialist designer and supplied to the embroidery digitizer as a vector file. The **Vectors to Sequins** tool is available for just this purpose. A sequin run is automatically created from a set of vector objects representing sequins. Fixing stitches are generated automatically according to current settings. If you are digitizing twin-sequin runs, EmbroideryStudio will generate sequin drops according to the currently selected sequin run pattern.



To convert sequin artwork...

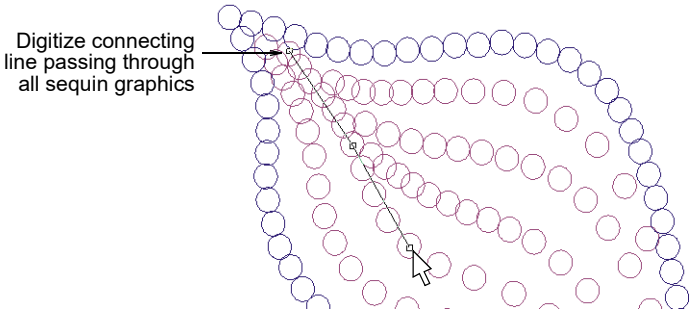
1. Select a machine format that supports sequin mode via the **Select Machine Format** dialog.
2. Insert the sequin artwork into the design.

   Properly designed artwork will contain vector objects centered on the exact locations required for sequins in the design.
3. Select the sequin shape you want to use from the droplist in the **Sequin Palette**.



4 Select the **Vectors to Sequins** icon.

5 Click the sequin graphic which will start the sequin run.

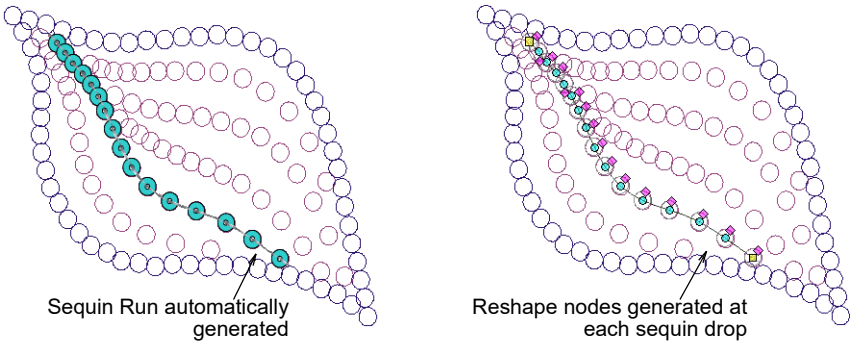


6 Digitize a line connecting all sequins to be included in the sequin run.

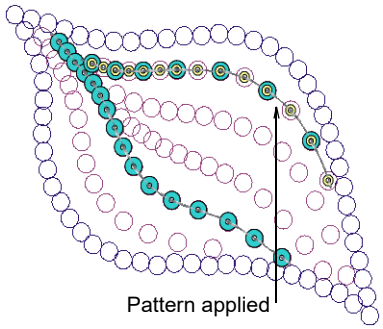
The line only needs to touch the sequin object somewhere within its boundary. Left-click for corner points, right-click for curve points.

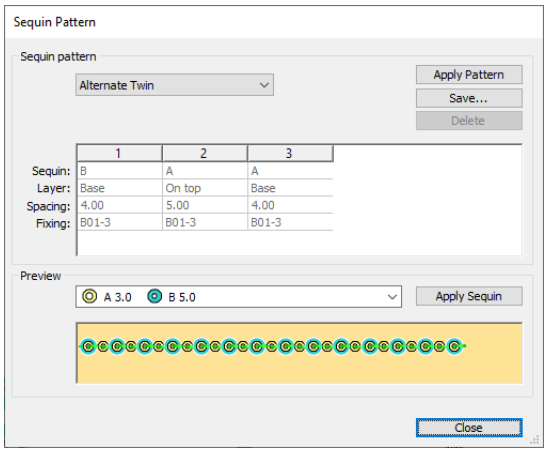
7 Press **Enter**.

A sequin run is generated along a curve that passes through the center of each sequin graphic with sequin objects positioned at these centers. Current properties are applied and the object is set to 'manual' by default. The generated curve contains a reshape node at each sequin position.



Tip: If you are running twin-sequin mode and preset a sequin pattern in **Object Properties**, this pattern is applied to the converted sequin objects while sequin spacing is preserved as per the artwork.



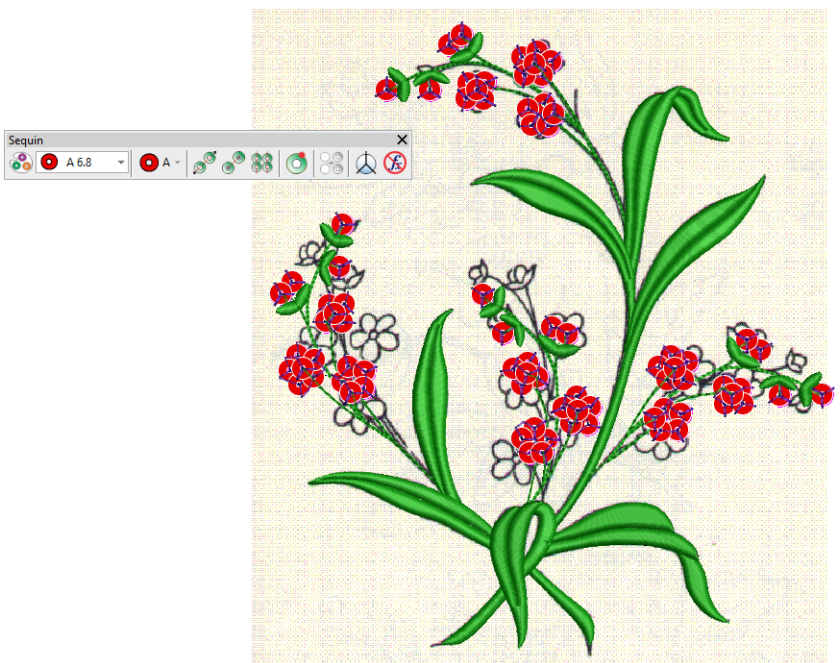


Related topics...

- Select sequin-capable machine
- Creating multi-sequin runs

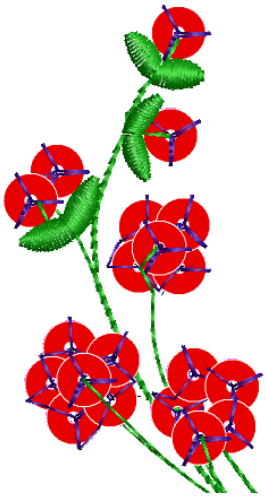
Manual sequin digitizing

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



Digitize sequin drops with fixings

Use Sequin > Manual Sequin to digitize individual sequins.

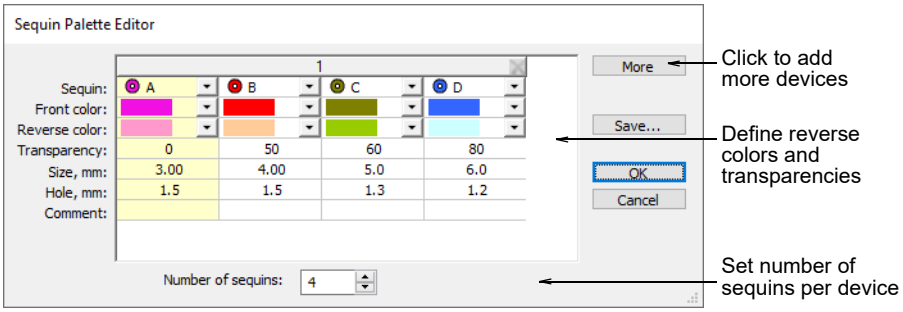


The **Manual Sequin** input method allows you individual control over sequin placement and fixing stitches. Create decorative outlines and patterns manually using sequins from the selection list. To add a sequin to the stitching sequence, simply drop it onto the design and secure it with manual stitches. Manual sequin 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.

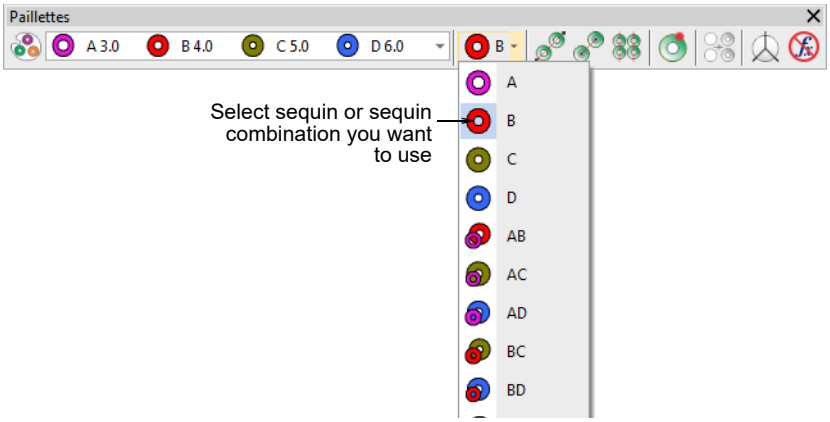
Note: Sequin mode is supported in Schiffli, Tajima, Barudan and ZSK embroidery machine formats. Before you can use **Sequin** mode, you must select a machine format that supports it. Similarly, before you can use **Twin-Sequin** mode, you must select a suitable machine format.

To digitize sequin drops with fixing stitches...

1. Select a machine format that supports sequin mode via the **Select Machine Format** dialog.
2. Set up your palette in the **Sequin Palette Editor** according to the machine type – single, twin, multi-sequin – that you have selected.



3. Select a color for the fixing stitching from the **Color** toolbar.
4. Click the **Manual Sequin** icon. If your machine format supports it, stack sequin permutations are displayed in the droplist.

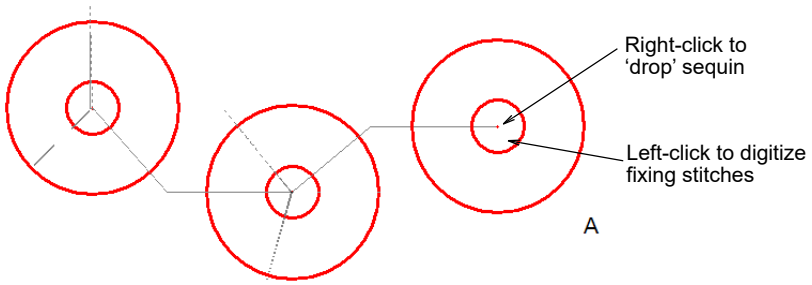


5 Select the sequin or combination you want to use.

6 Left-click to begin your manual sequin placement. It must start with at least one stitch.

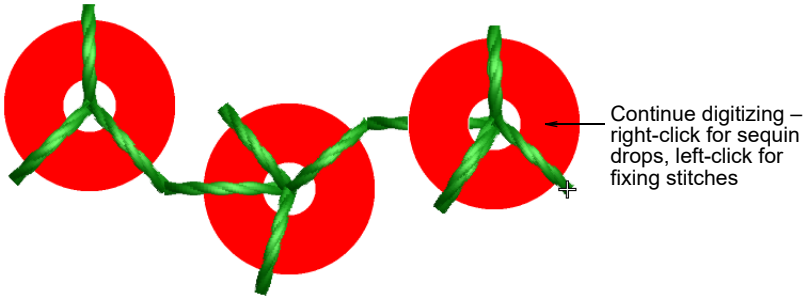
Tip: Zoom in for more accurate digitizing.

7 Right-click to drop a sequin. A sequin outline appears.



8 Left-click to digitize fixing stitches around the sequin to secure it.

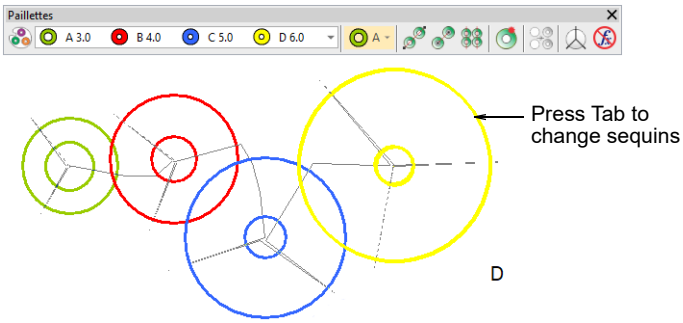
Three stitches in the shape of a 'Y' are generally used. The needle points of each stitch must be placed precisely to ensure that sequins are not pierced by the needle when stitching.



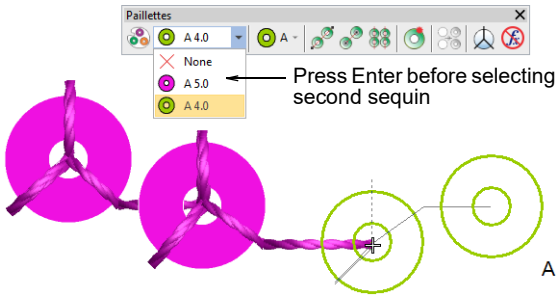
9 Continue digitizing manually in the same way – right-click to add a sequin, left-click to digitize fixing stitches. Press **Enter** to finish.

Usage tips...

- If you make a mistake while digitizing, press **Backspace** to retrace your steps.
- If you have activated twin- or multi-sequin mode, press the **Tab** key to switch between available sequin shapes while digitizing.



- If you have set up a palette for a machine with two single-sequin devices, press **Enter** before changing sequins in the palette droplist.



Related topics...

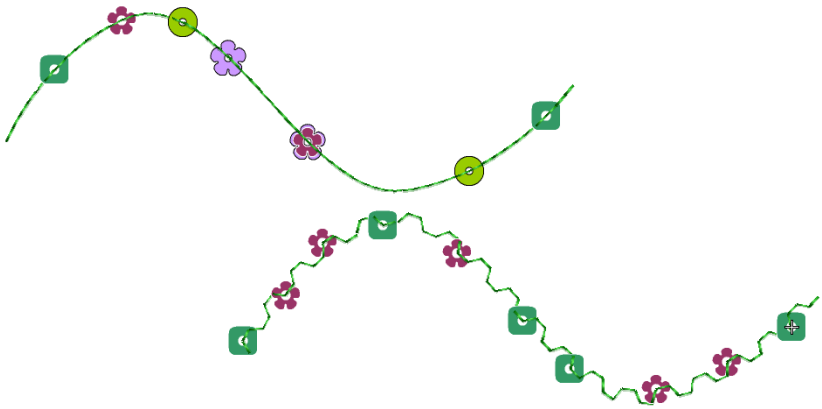
- Select sequin-capable machine
- Set up sequin palette
- Creating multi-sequin runs

Insert manual sequin drops

Use Outline > Digitize Run to place a row of single or triple run stitches along a digitized line.

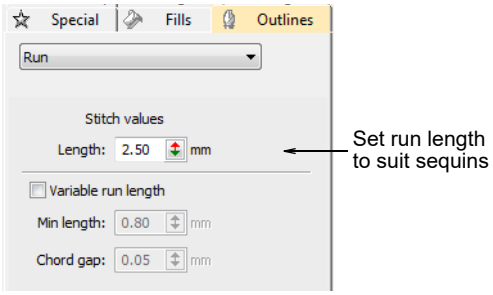
	Use Outlines > Motif Run to create a string of motifs along a digitized line.
	Use Docker > Stitch List to toggle Stitch List display on and off. Use it to select individual stitches.
	Use Travel > Travel 1 Stitch to move stitch cursor forwards/backwards 1 stitch at a time. Left/right click.
	Use Sequin > Drop Sequin to drop a sequin at the current needle position. For twin-sequin machines, left-click to drop a left-sequin, right-click to drop a right-sequin.
	Click Function > Insert Function to insert machine function at current stitch cursor position.
	Use Sequin > Clear Function to remove any sequin functions from the current needle position.
	Use Traditional Digitizing > Backtrack to reinforce an outline, stitching it in the reverse direction to the original.

In preference to the **Manual Sequin** tool, some digitizers flesh out designs using **Run** or **Triple Run** or even **Motif Run** and then travel through it, dropping sequins manually as and where required. The running stitch itself works as fixing stitch. It can be reinforced with **Backtrack**. The technique can be used with single or multi-sequins.

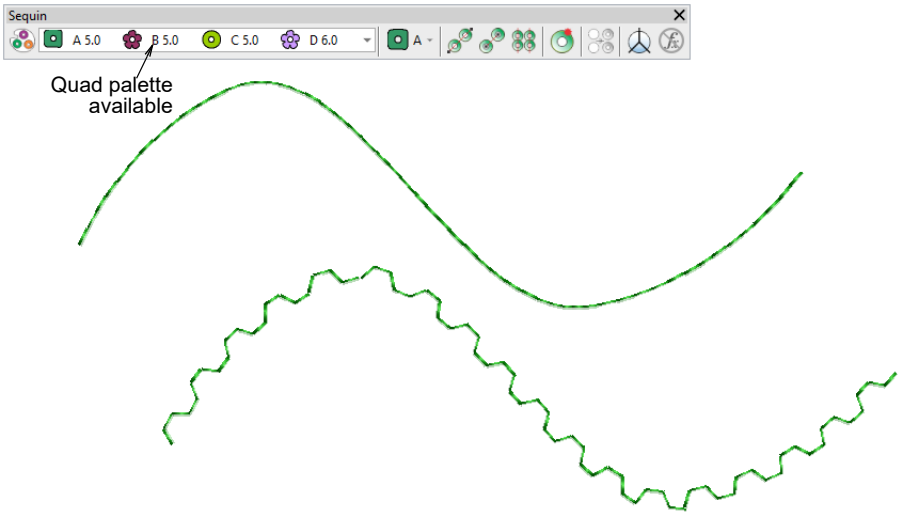


To insert manual sequin drops...

1. Select a machine format that supports sequin mode via the **Select Machine Format** dialog.
2. Set up your sequin palette – single, twin, quad, etc – according to machine capabilities.
3. Set a fixed run length to suit the sequin type/s you are using.



4 Choose a digitizing method to create the design or pattern you want.

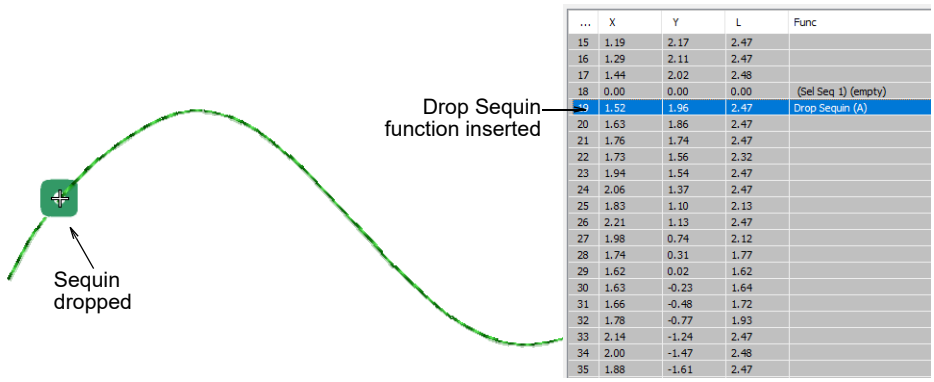


5 Open the **Stitch List**.

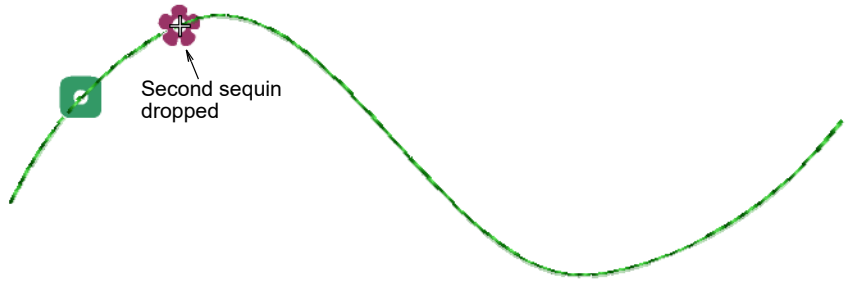
6 Press the **Home** button and travel through the design using arrow keys or **Travel** tools.

To insert sequin drops using hotkeys...

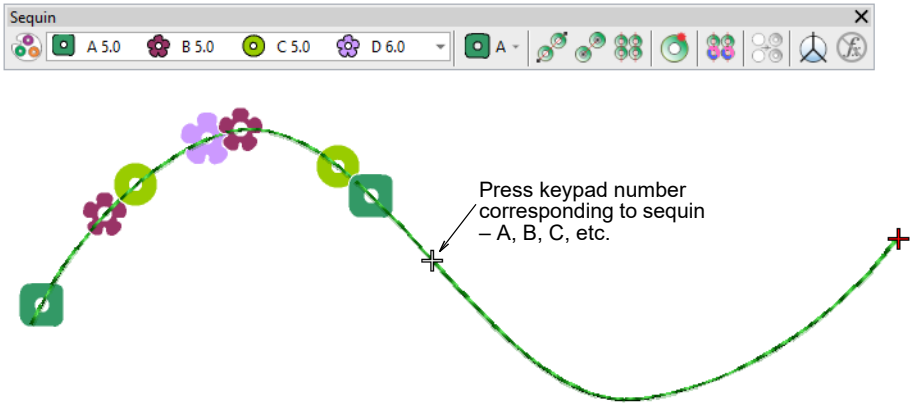
- Travel to the insertion point.
- If you are using a twin-sequin palette, press the hotkey **5** to drop Sequin A. Alternatively, left-click the **Drop Sequin** button.



- Press hotkey **6** to drop the other sequin or right-click the **Drop Sequin** button.

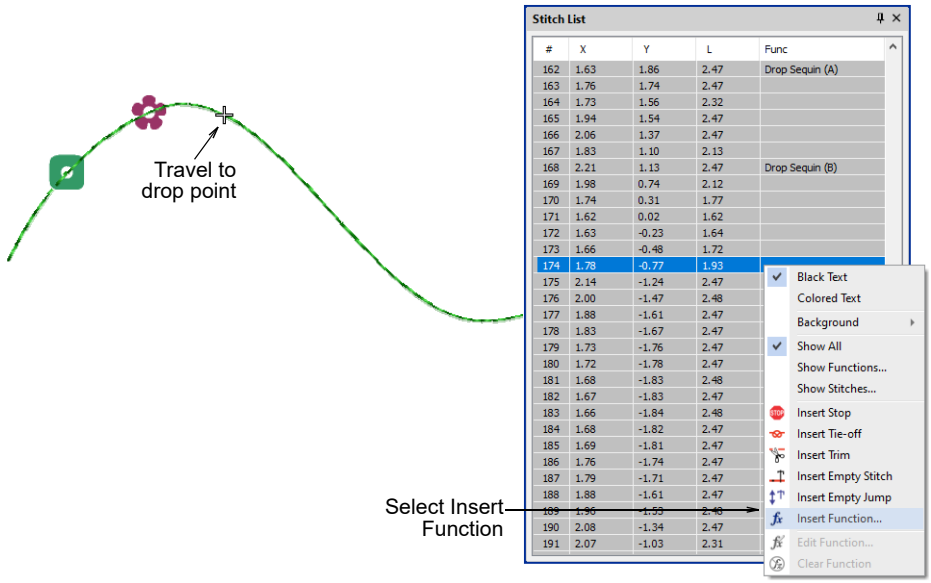


- If you are using a multi-sequin palette, use the keypad to drop multiple sequins, where 1=Sequin A, 2=Sequin B, 3=Sequin C, etc.

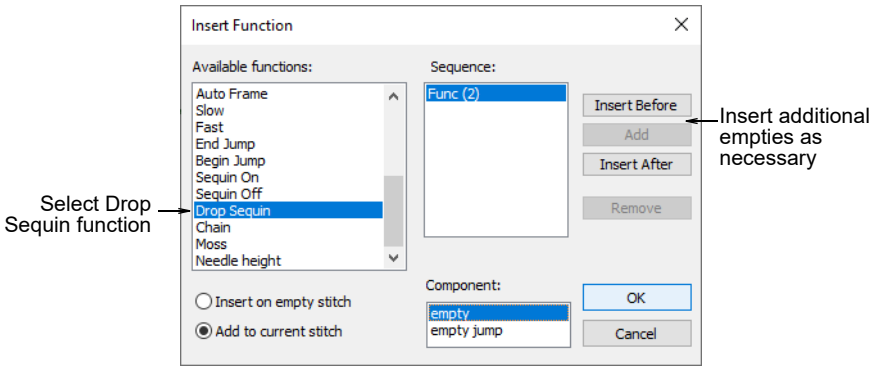


To insert sequin drops using the stitch list...

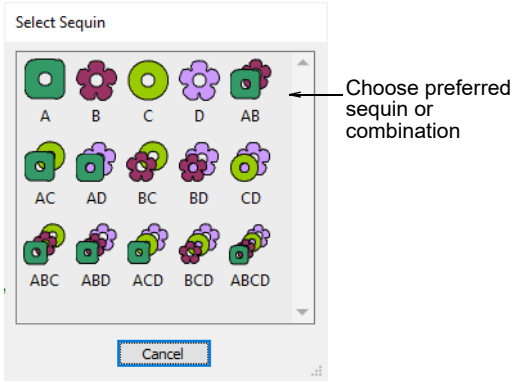
1 Select **Insert Function** from the toolbar or the **Stitch List** popup menu.



2 From the **Functions** list, select **Drop Sequin**. 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.

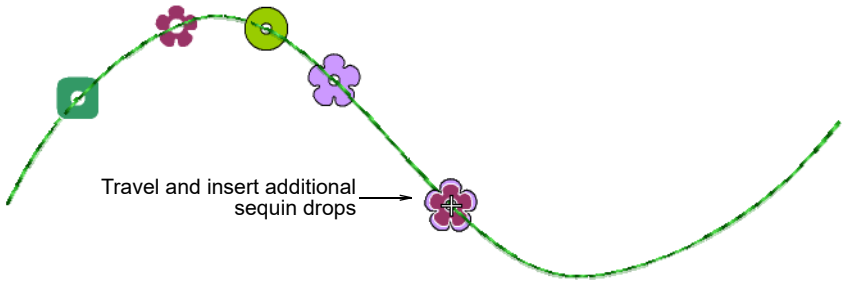


3 When the **Drop Sequin** function is correctly defined, click **OK**. The **Select Sequin** dialog opens showing available sequins.



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

5 Continue traveling and inserting sequins by the same methods.



6 To delete a sequin drop, travel to the location and press **4**. Alternatively, click the **Clear Sequin** button.

Tip: If you are using **Triple Run**, the repeat stitch will tack down your sequin drop. If you are using **Single Run**, you can use the **Backtrack** tool to tack down the sequin drops.

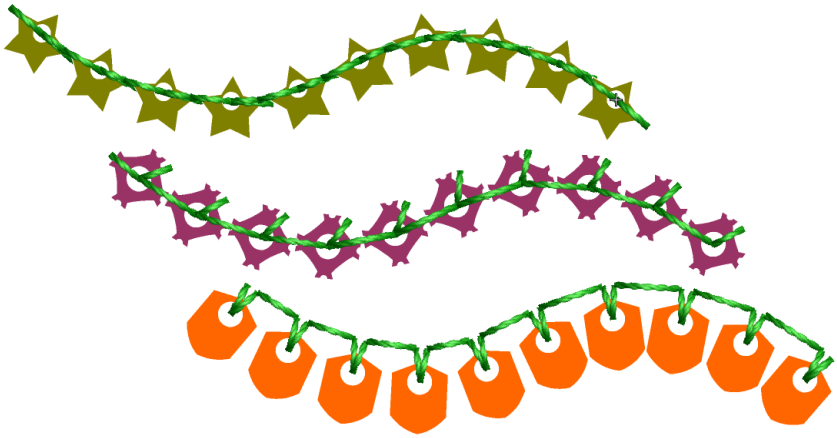
Related topics...

- Select sequin-capable machine
- Travel through designs (Reference Manual)
- Insert machine functions (Reference Manual)

Custom sequins

EmbroideryStudio supports custom sequin shapes with offset holes. Such sequin shapes can be utilized for flipping sequins on the fabric to form two different sequin fill patterns. Alternatively, you may be working with

sequins which don’t appear in the standard sequin library. Define your own sequins using circle, oval, rectangle, or other shapes.



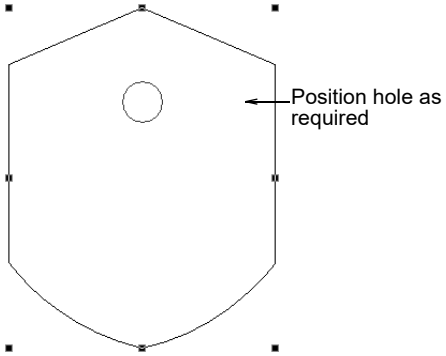
Create sequin shapes

	Use Graphics Digitizing > Ellipse to digitize ellipse or circle vector outlines.
	Use Graphics Digitizing > Basic Shapes to digitize basic shapes. Press <Ctrl> to maintain aspect ratio. Press <Shift> to center at the first point.
	Use Outlines > Vector Outline to create vector outlines with no stitch properties applying.

The software allows you to define your own sequin shapes with their own hole position.

To create a custom sequin...

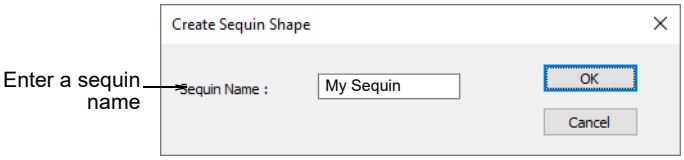
1 Create a sequin shape using vectors only. The **Ellipse** or even **Basic Shapes** tools can be useful. Outline and hole must be digitized as separate objects.



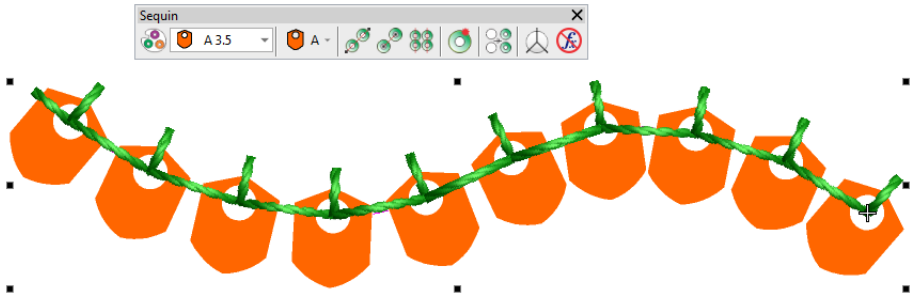
2 Position the hole.

3 Size the sequin shape to a nominal size – e.g. 1.5mm.

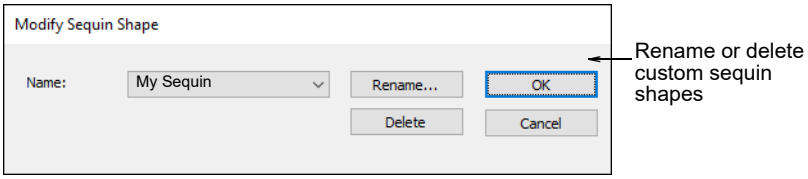
4 Select both objects and choose **Object > Create Sequin Shape**.



5 Give your sequin a name and click **OK** to save. The custom shape is available from the sequin droplist for use in sequin palettes. Use it in sequin outlines or fills.



Tip: Use the **Setup > Manage Sequin Shape** command to rename or delete custom sequin shapes from the library.



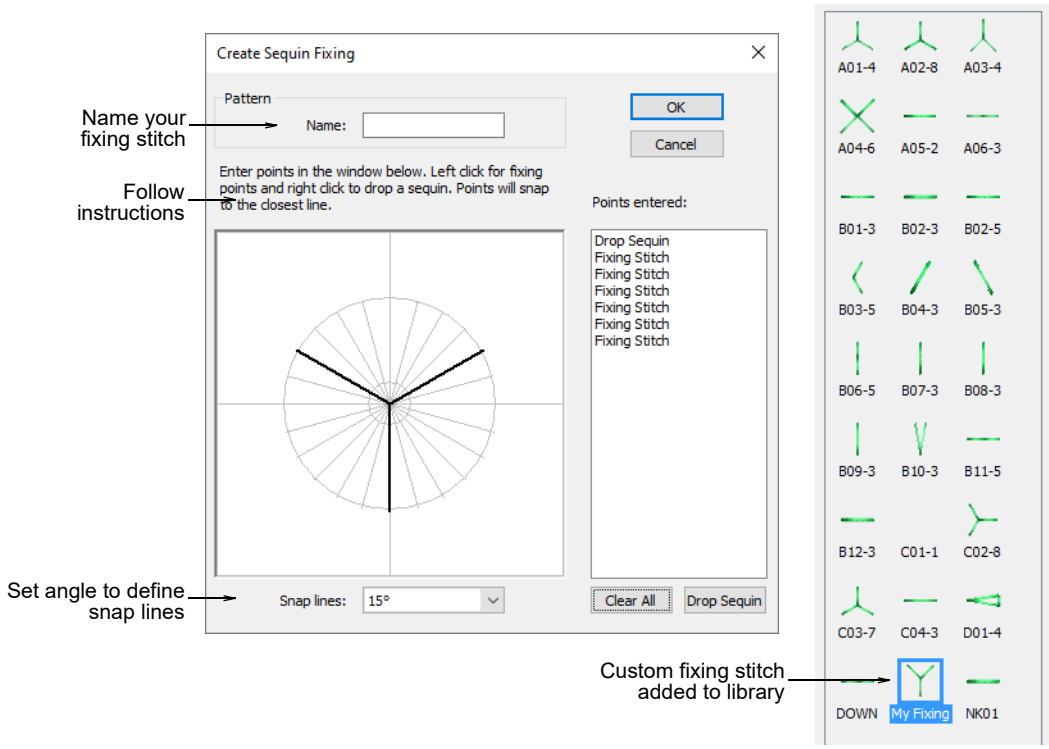
Related topics...

- Create vectors (Reference Manual)

- Digitize stars & rings (Reference Manual)
- Digitize basic shapes (Reference Manual)
- Manage custom motifs (Reference Manual)

Create sequin fixings

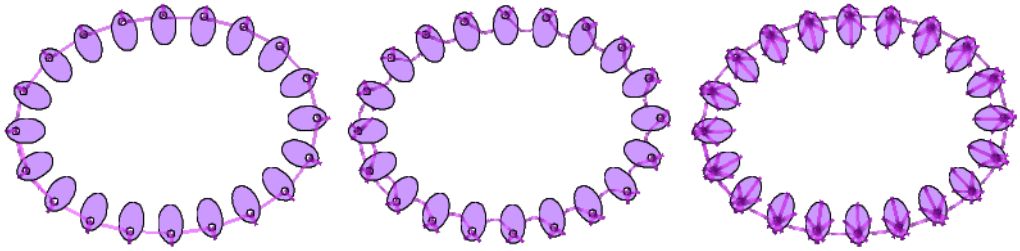
Just as you can define custom sequin shapes, you can define custom fixing stitches to support multi-head sequin devices. Some limitations might exist for older more complicated sequin devices. Access the dialog via the **Object > Create Sequin Fixing** command.



Custom sequin fixings mean you can:

- Create multiple layers of stitching for decorative effects, sometimes in different thread colors (Barudan).
- Reduce stitch counts in large sequin designs.
- Accommodate specific fixing requirements.
- Accommodate new capabilities – e.g. offset holes.

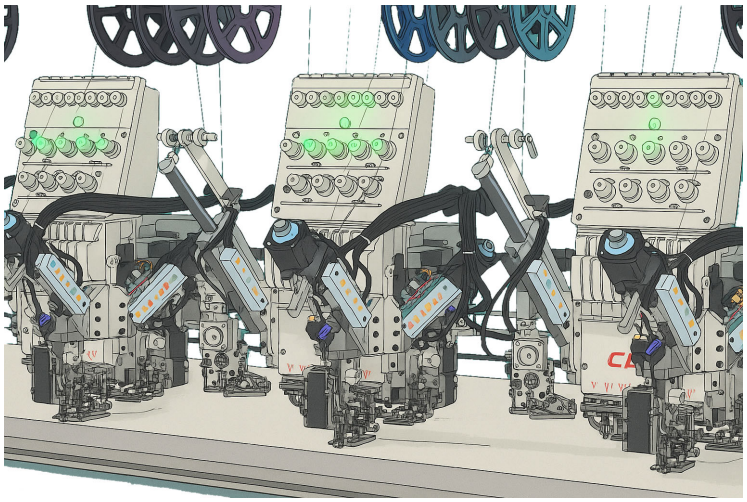
Tip: If you have chosen an eccentric sequin shape such as an 'ellipse', fixing stitches automatically adapt to fit.



Tip: Use the **Setup > Manage Sequin Fixing** command to rename or delete custom sequin fixings from the library.

Sequin/bead 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.

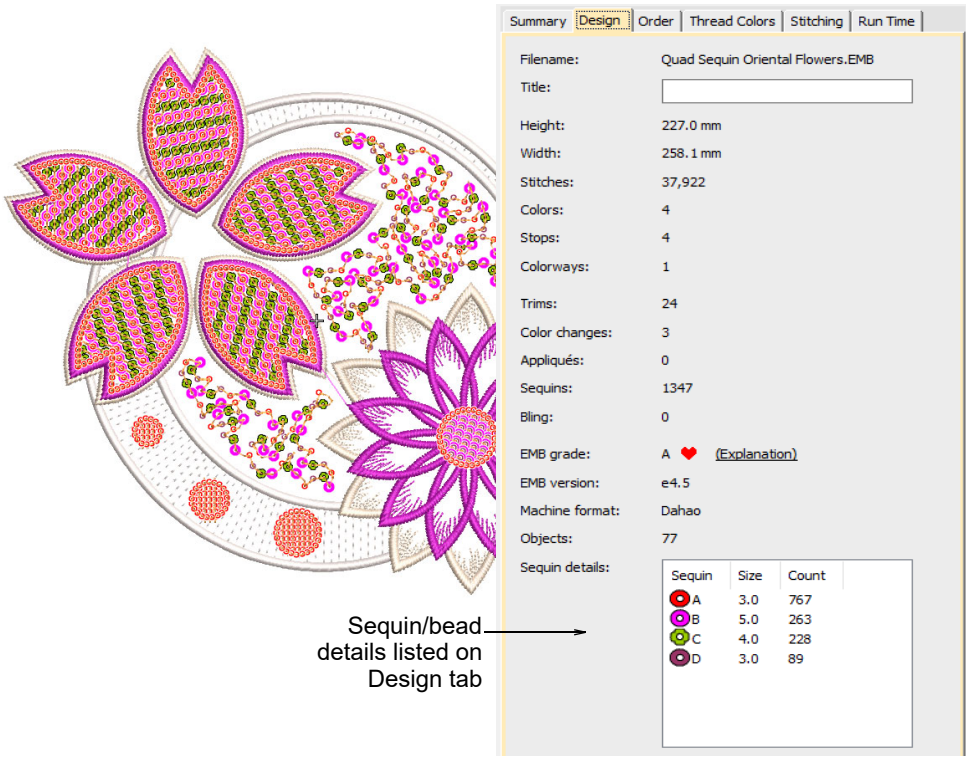
Output production files

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	•	
U??	Barudan FDR-II Twin Sequin	•	
U??	Barudan FDR-II Twin Sequin Chenille Combination	•	

File format	Associated machine format	Sequins	Beads
ZSK	ZSK	•	

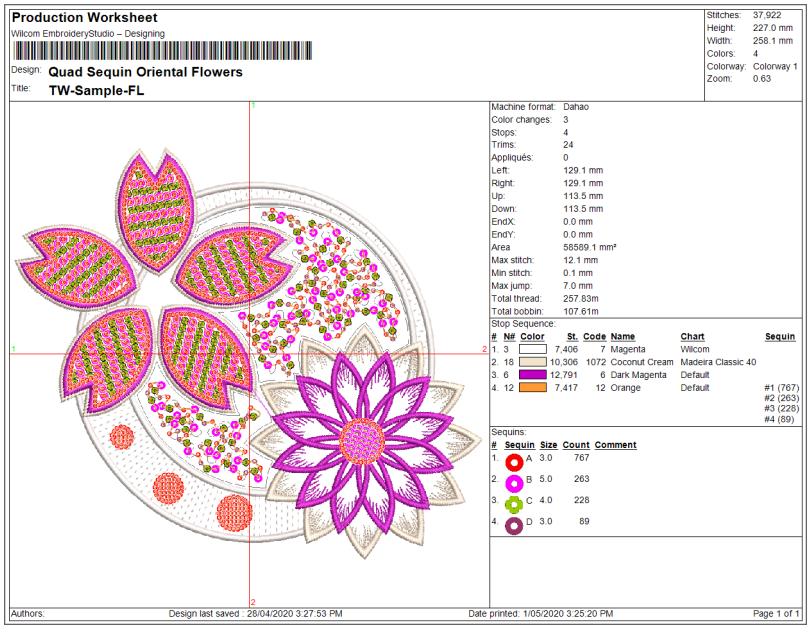
Note: When you select Dahao multi-sequin DST as your output file format, **Drop Sequin** and **Drop Bead** functions are inserted according to Dahao requirements. Dahao control panels include a protocol to interpret this encoding. Tajima machines, on the other hand, strictly follow the DST file specification.

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

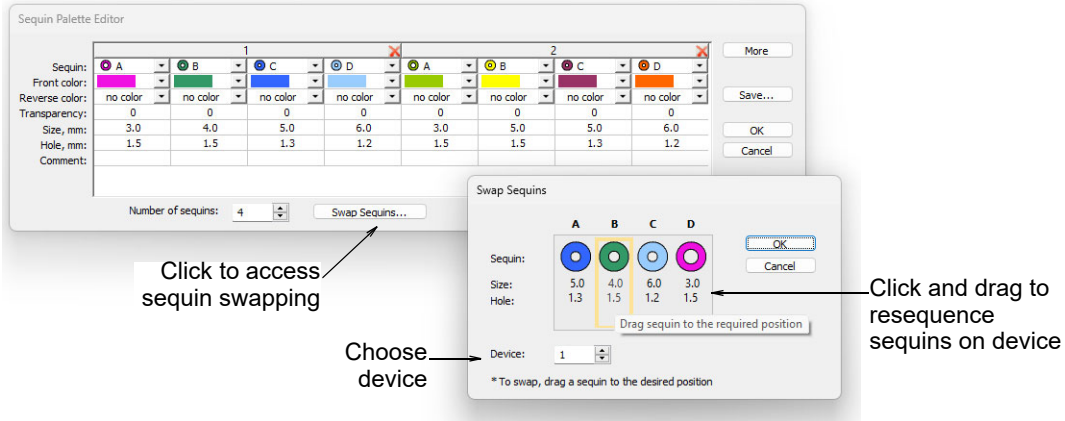
Generally, sequins are fitted on the machine first and the sequin palette configured accordingly. Sometimes the design may be stitched on another machine with a different configuration. Occasionally you may need to re-sequence the sequin palette in order to avoid reconfiguring feeders on the machine.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

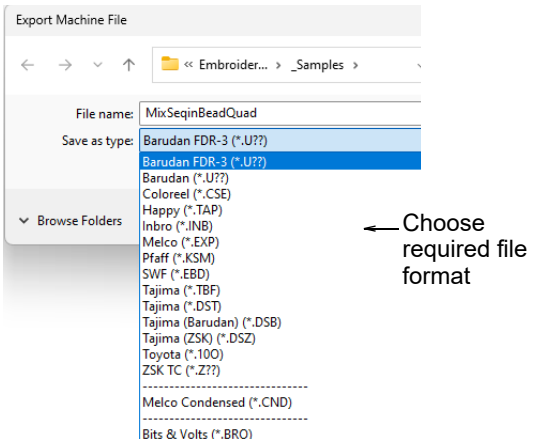
EmbroideryStudio provides separate **Drop Sequin** and **Drop Bead** functions which are saved with the native EMB design file. However, when

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.

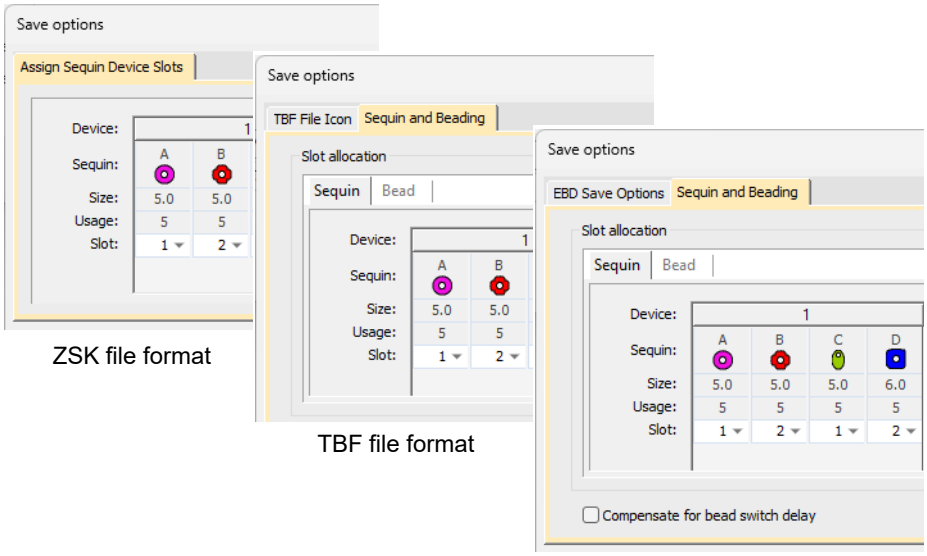
2 Select **File > Export Machine File**. The **Export Machine File** dialog opens.



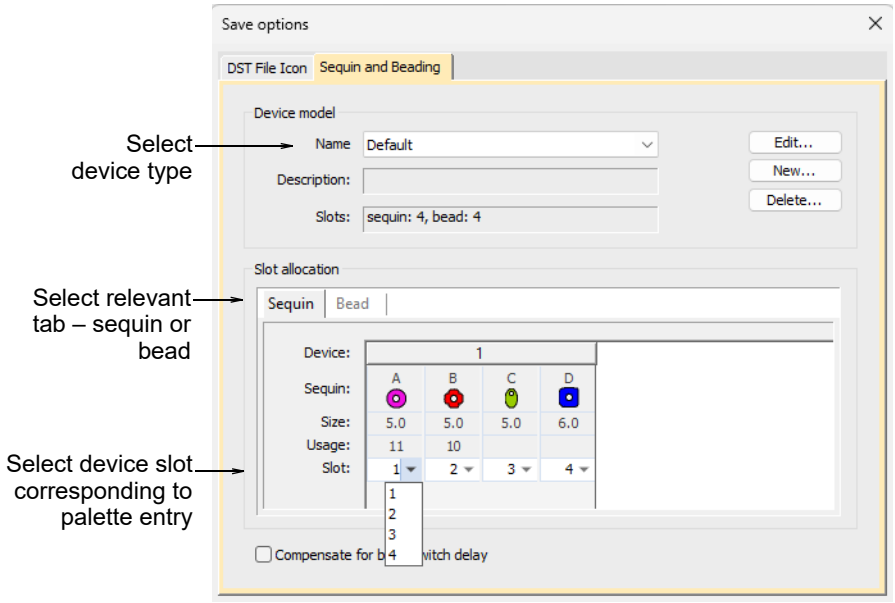
3 Choose the required format from the **Save as type** droplist.

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.



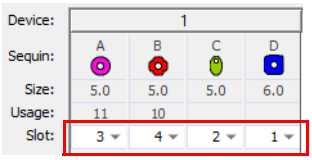
5 If using Dahao DST, select the device model you intend to use from the **Name** droplist – e.g. 'sequin: 4, bead: 4'.

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

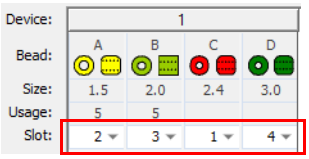
adapt these for use with your device. See Specify mapping rules for Dahao DST for details.

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

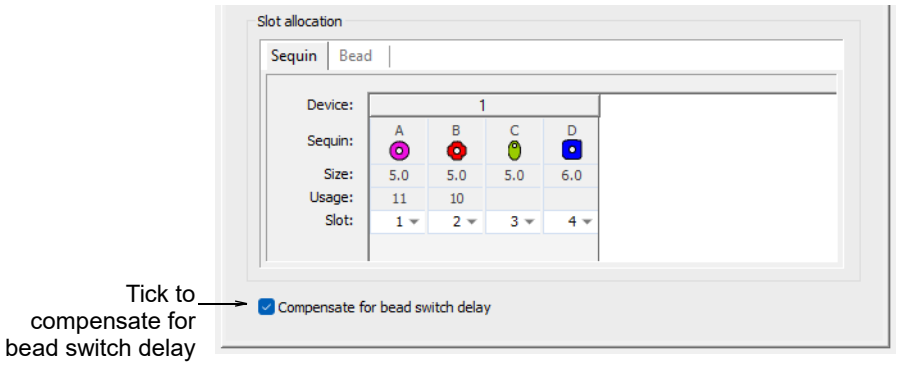


Beads assigned to device slots

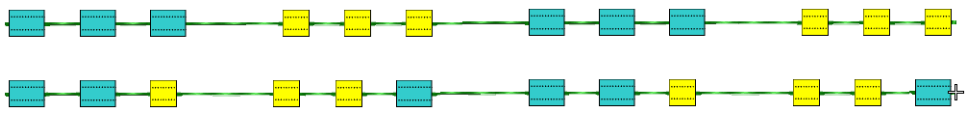
Note: This mapping is not indicated on the production worksheet since it only affects the machine file, not the design file.

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.



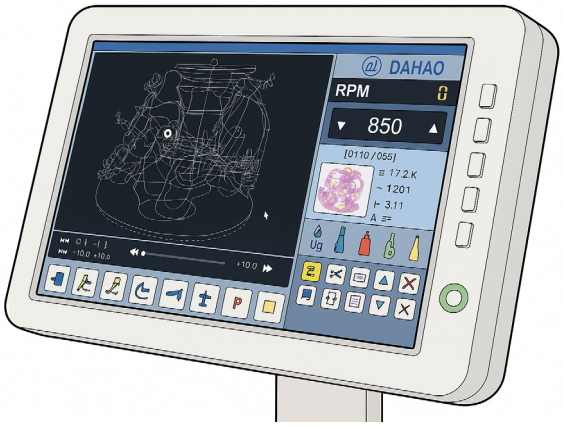
You can compensate for this behavior by employing a preemptive bead swap. This will shift bead changes by one step. By ticking **Compensate for bead switch delay**, the first line becomes re-encoded as shown...



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

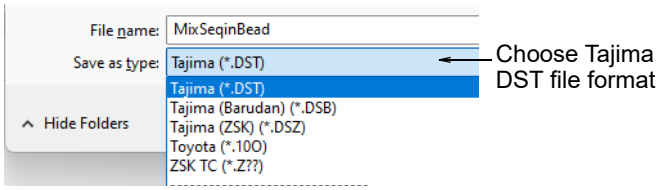
Specify mapping rules for Dahao DST

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.

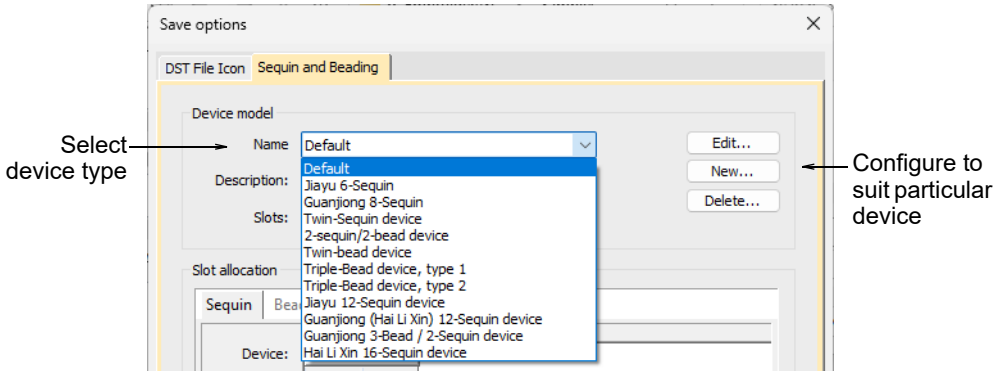


To specify mapping rules...

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

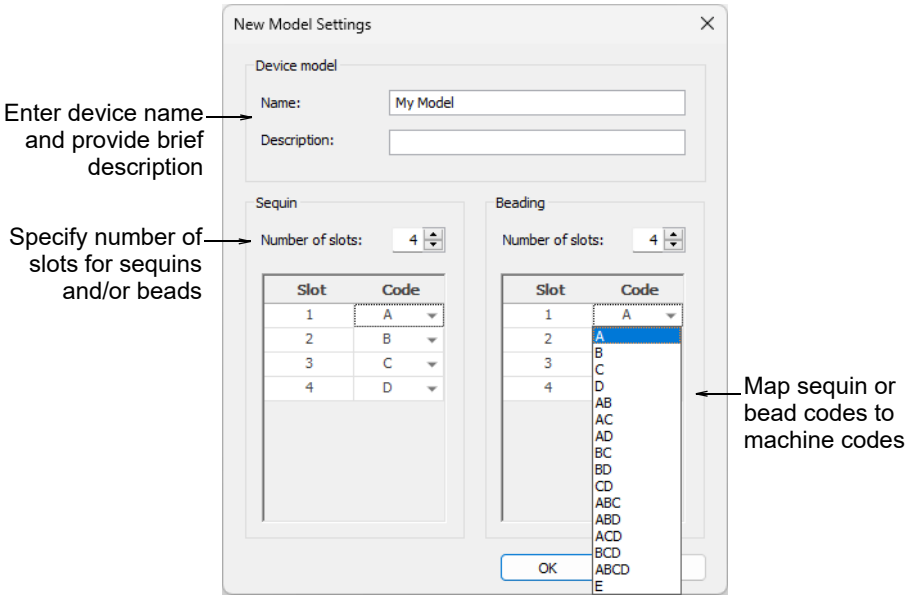


3. Choose **Tajima DST** from the **Save as type** droplist.
4. Click **Options**. The **Save Options** dialog opens. Select the **Sequin and Beading** tab.



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'.

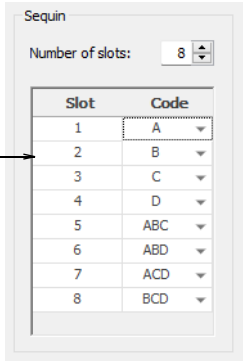
6 Click **New** to create a new device model based on the selected.



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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