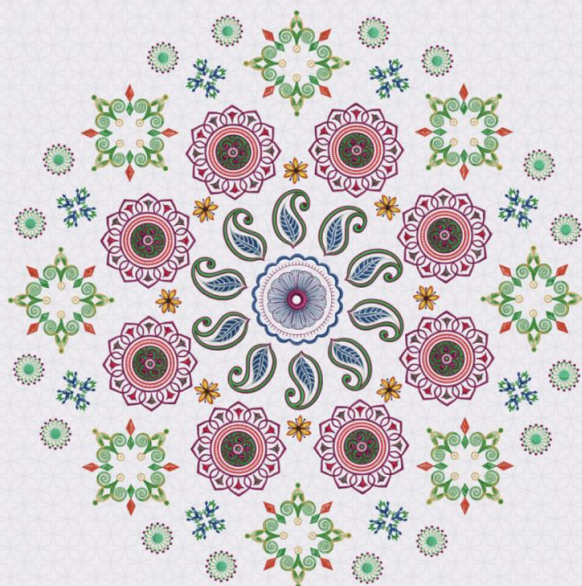


Digitizer V5.5



USER GUIDE
USER GUIDE
EDIT OBJECTS
EDIT OBJECTS

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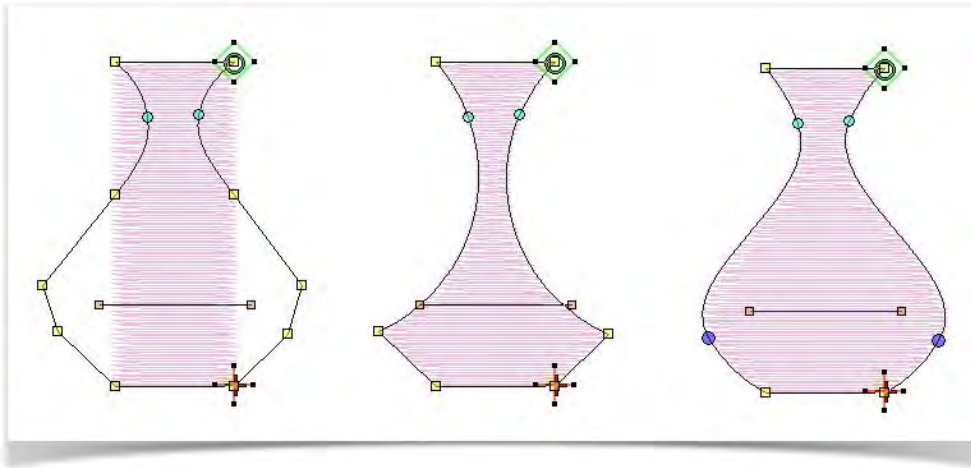
Any replacement Digitizer Embroidery Software will be warranted for the remainder of the original warranty period or thirty (30) days, whichever is longer.

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INTRODUCTION

In addition to making global changes to a design, such as changing the thread palette and design colors, you can edit design objects and even individual stitches. The Edit Objects toolbox provides many tools for reshaping, resizing, rotating objects, as well as add or remove stitch angles. Explore the topics listed on the right.



Selection functions

Keyboard shortcuts are available for most selection functions:

To	Press
Choose Select tool	<O>
Select multiple objects	<Ctrl> + left-click
Select a range of objects	<Shift> + left-click first and last objects
Select next object	<Tab>
Select previous object	<Shift + Tab>
Add next object to selection	<Ctrl + Tab>
Add previous object to selection	<Ctrl + Shift + Tab>
Select all objects	<Ctrl + A>
Deselect all objects	<Esc> or <X>

Editing functions

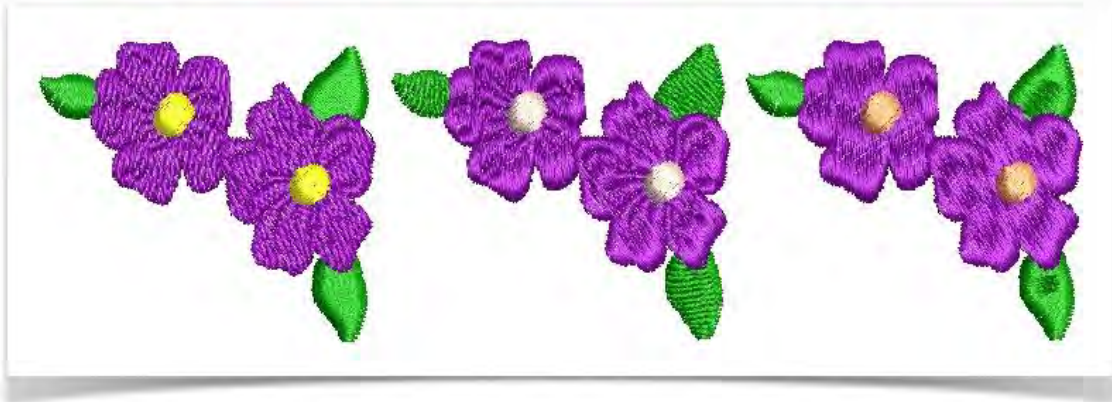
Keyboard shortcuts are available for most editing functions:

To	Press
Center current stitch	<C>
Cut selected objects	<Ctrl + X>

To	Press
Copy selected objects	<Ctrl + C>
Paste selected objects	<Ctrl + V>
Duplicate selected objects	<Ctrl + D>
Duplicate selected objects with offset	<Ctrl + Shift + D>
Delete selected objects	<Delete>
Group selected objects	<Ctrl + G>
Ungroup selected objects	<Ctrl + U>
Lock selected objects	<K>
Unlock objects	<Shift + K>
Reshape selected objects	<H>
Apply closest join to selected objects	<J>
Nudge selected objects	Left-click + arrow keys
Undo a command	<Ctrl + Z>
Redo a command	<Ctrl + Y>
Cancel a command	<Esc>
Delete last reference point (when digitizing)	<Bksp>
Toggle underlay in selected objects on/off	<U>

OBJECT PROPERTIES

Designs are composed of 'embroidery objects'. They are called 'objects' because they can be manipulated independently of each other. Like drawing objects, embroidery objects have defining characteristics or 'properties' such as color, size, position, and so on. They also have properties unique to embroidery such as stitch type and density. The most important property of an embroidery object is its stitch type. Other important properties include underlay type and pull compensation.



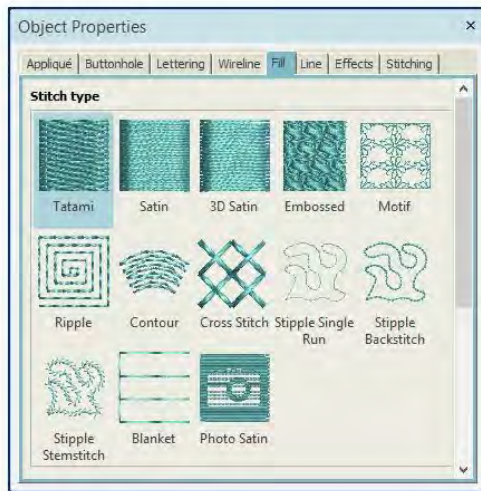
Access properties



Use Edit Objects > Object Properties to preset properties or adjust them for selected objects.

When you start a new design, the software uses settings associated with the chosen fabric. Some properties can be modified on-screen – for example, you can change object size by scaling with selection handles. Others, such as stitch spacing or length, can be modified via the Object Properties docker. This docker is open by default.

- To change object properties, select the object/s to change.
- If not already open, double-click to open the properties docker. If you select more than one object, only settings relevant to all are displayed.



- Select a tab and adjust settings.
- Click OK to apply changes.

Changing details of selected objects does not affect default settings, nor the properties of any objects not in the selection. Changes to object properties are preserved if an object is modified and regenerated.

Copy properties



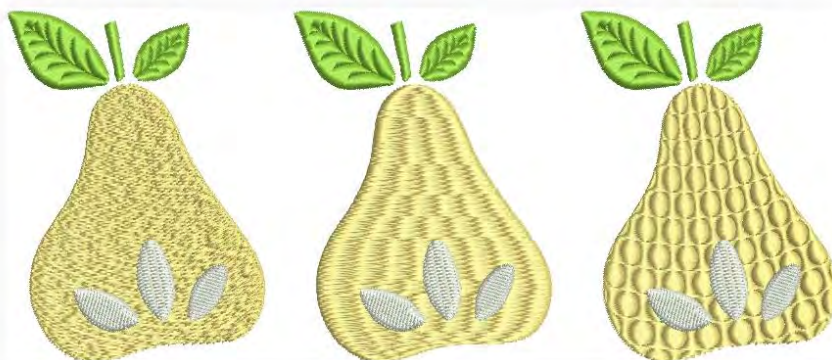
Use Edit Objects > Copy Object Properties to make properties of a selected object current for the design.



Use Edit Objects > Apply Object Properties to apply current settings to selected objects.

You can make a selected object's 'actual' properties 'current' for all new objects or apply them to other objects.

- To copy properties, select the object and click Copy Object Properties.
- Alternatively, right-click the object and use the popup menu command.



- Select the target object/s and click Apply Current Properties. The popup menu command is also available.



Adjust stitch spacing

% Use Customize Design / Edit Objects > Adjust Stitch Spacing to manually override stitch densities of selected objects or entire designs.

The software lets you change spacing of most stitch types across the whole or selected parts of a design. To override current properties, select the object, click the tool, and set a percentage adjustment - e.g. 150% to increase stitch spacing and thereby reduce overall density. Check the revised stitch count in the Status Bar.



TRANSFORM OBJECTS

Often you will want to scale a design for use in different contexts. For instance, a design originally made to fit a pocket may be adapted to fit a cap. The software provides techniques for transforming design objects just like a graphics program ... with one difference. When you scale, rotate, skew, or flip an embroidery object, stitches are regenerated.

The scalability and stitching quality of a design ultimately depend on its original source. Only native designs such as EMB or JAN, contain the complete set of design information required for 100% perfect scaling and transformation. If you scale a stitch design by more than 5%, changes to stitch density will affect design quality.

Scale objects



Use Select > Select Object to select an object or group. Or drag a selection marquee to select multiple enclosed objects or groups.



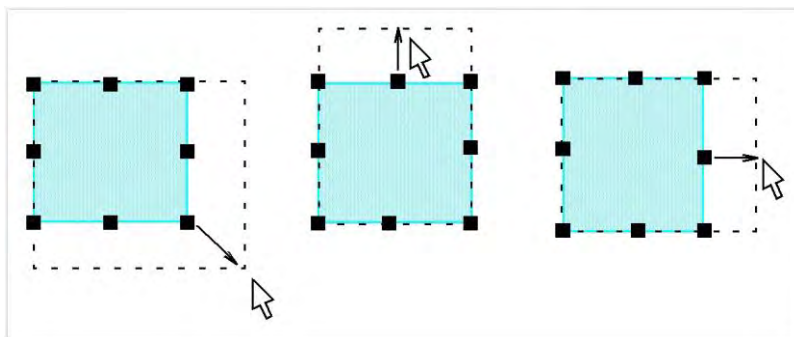
Use Context > Size + 10% to increase the size of selected objects in 10% increments.



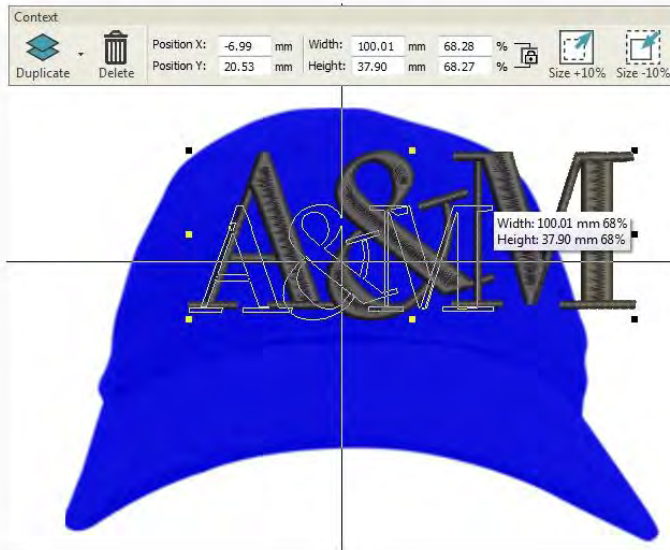
Use Context > Size - 10% to decrease the size of selected objects in 10% increments.

You can scale objects by dragging the selection handles with the mouse or by specifying the exact dimensions in the Context toolbar. As an object is scaled, the stitch count changes to preserve current stitch spacing.

- To scale objects using click and drag, select the object/s to scale. Click and drag a selection handle to resize the object.



- You can also scale selected objects or a whole design using Width and Height settings. Stitches are regenerated and original stitch density preserved.



- Alternatively, use the Size buttons to resize in 10% increments.

After scaling, the new object size is reset to 100%.

Rotate objects



Use Select > Select Object to select an object or group. Or drag a selection marquee to select multiple enclosed objects or groups.



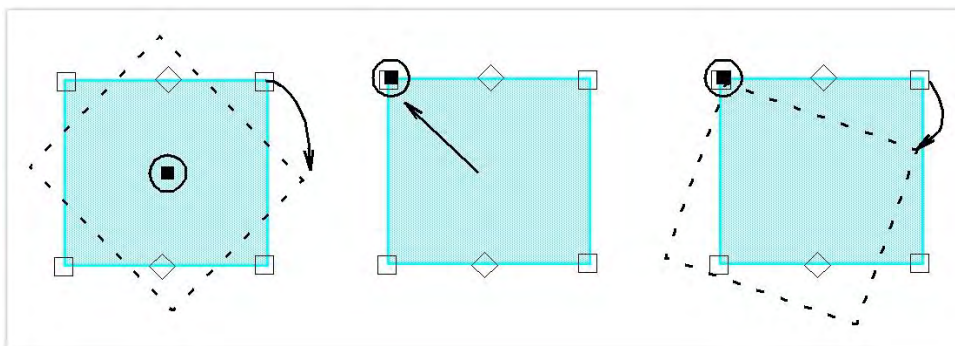
Use Context > Rotate Left 15° to rotate selected objects in 15° anti-clockwise increments.



Use Context > Rotate Right 15° to rotate selected objects in 15° clockwise increments.

When creating design layouts, you'll frequently find yourself duplicating objects and rotating them into position.

- When you select an object or group, selection handles display at its extremities. Click the object a second time. Rotation handles appear at the corners of the object and an anchor point displays at the object's center. Click a rotation handle, and drag clockwise or anti-clockwise.



- If required, drag the rotation anchor from the center to a new position.
- Alternatively, use the buttons to rotate selections by 15° rotations in either direction. Alternatively enter a precise rotation value in the Rotate field and press <Enter>.



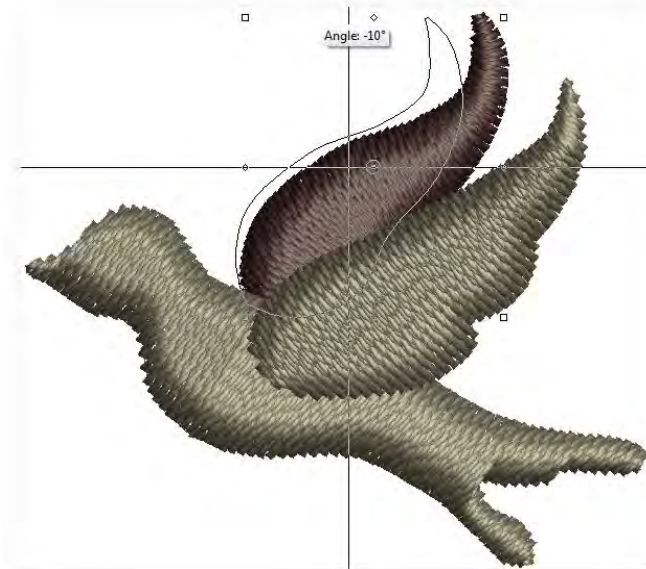
- Alternatively, right-click the object and select a Rotate command from the popup menu.

Skew objects



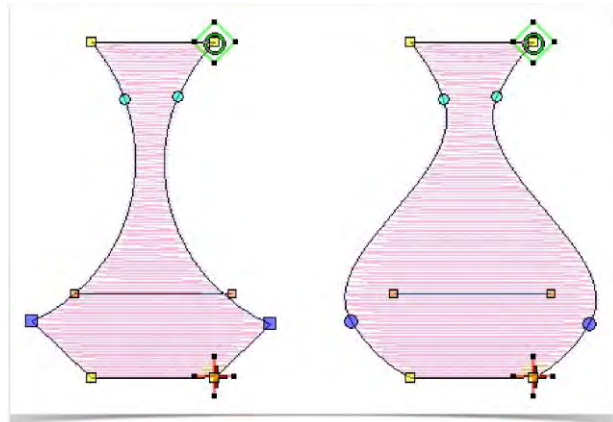
Use Select > Select Object to select an object or group. Or drag a selection marquee to select multiple enclosed objects or groups.

You can skew objects along the horizontal plane by clicking skew handles and dragging to the required angle. Skew handles are diamond-shaped and appear at the center-top and bottom of the object. Alternatively enter a precise skew value in the Skew field and press <Enter>.



RESHAPE OBJECTS

You modify object shapes in your embroidery software by means of control points similar to objects in a graphics package. These vary slightly with object type. For some objects, you can change control points from corners to curves. Stitch angle adjustments depend on object type. With some objects you can set a single stitch angle. With others, you adjust turning angles. You can also change entry and exit points. This is useful in order to minimize travel runs between objects. Modify outline by adding, deleting, or moving control points.



Adjust control points



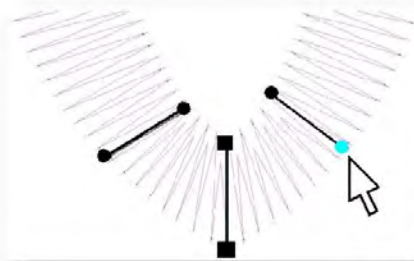
Use Select > Select Object to select an object or group. Or drag a selection marquee to select multiple enclosed objects or groups.



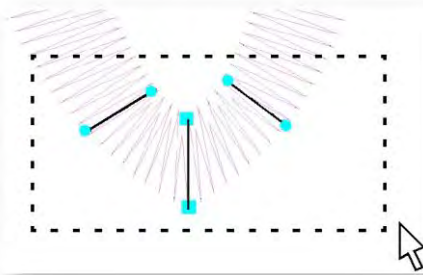
Use Select > Reshape to adjust object outlines, stitch angles, start and end points, curves lines, etc.

Control points can be selected individually or together, for repositioning or modification.

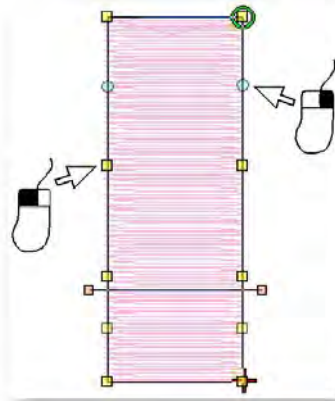
- Click to select a single control point.



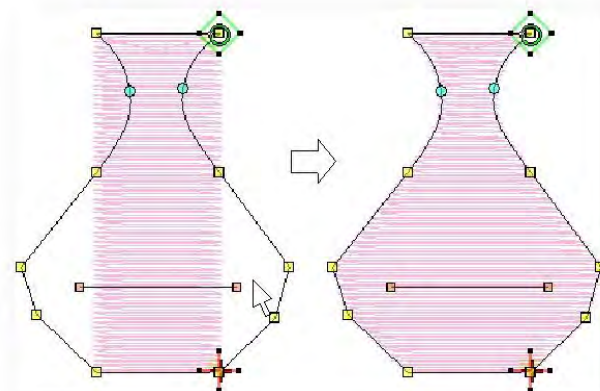
- Holding down <Ctrl>, click to select multiple control points. Or click and drag a bounding box around a group of control points.



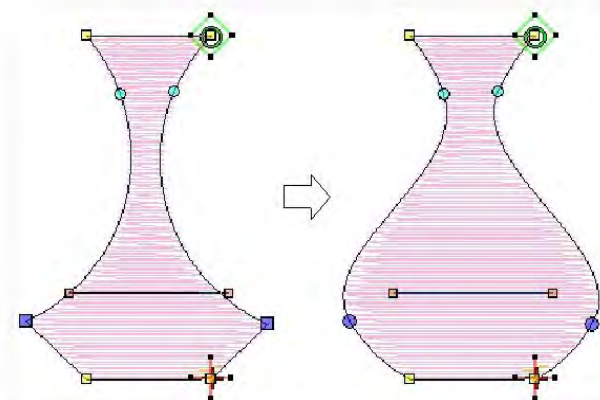
- Press <Delete> to delete selected control points.
- Add control points to object outlines by clicking with the Reshape tool selected. Left-click to add a corner point. Right-click for curve points.



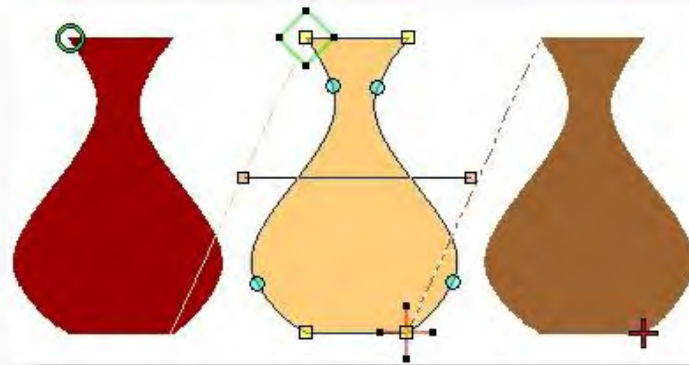
- Reposition control points to change an outline shape. Simply click and drag to a new position along the boundary. Or click and drag multiple points as needed. Use the arrow keys to 'nudge' selected reshape nodes.



- Press <Spacebar> to toggle between corner and curve points.



- If you make a mistake, press <Esc> to remove changes. Press <Esc> again to exit the Reshape tool.
- When in Reshape mode, use the <Tab> or <Shift + Tab> keys to jump between objects.



Smooth shapes



Use Auto-Digitize / Edit Objects > Smooth Shapes to remove excess reshape-nodes from embroidery objects for smoother outlines.

Like vector objects, embroidery objects contain reshape nodes on their outlines. On curved shapes, the software may insert hundreds of nodes, making reshaping difficult. This is particularly so when using auto-digitizing methods to generate objects. And even more so if the edges of shapes are jagged. The Smooth Shapes command lets you apply curve 'smoothing' to embroidery objects.



Adjust entry & exit points



Use Select > Reshape to adjust object outlines, stitch angles, start and end points, curves lines, etc.

You can change stitch entry and exit points of individual objects. Do this to place the exit point next to adjoining objects for smaller connecting stitches, or to reduce the number of travel

runs. Select the entry or exit point as required, and drag it to a different position on the object outline. The cross represents the end point.

- Select the object and click Reshape Object. Reshape nodes appear, including entry and exit points.



- Select the entry or exit point as required, and drag it to a different position on the object outline. To minimize gaps in your embroidery, place entry and exit points opposite each other on the outside boundary.



- Press Enter to apply the changes, then Esc to finish.
- It's a good idea to define the stitch angle so it is perpendicular to the line between entry and exit points.

The default Closest Join method automatically calculates the closest join between objects while digitizing – no need to think about object entry and exit points. The Software Settings > User Interface > General tab lets you deactivate if so required. When deactivated, all newly digitized objects are joined by the As Digitized method. This means you are prompted to enter entry and exit points as you digitize.

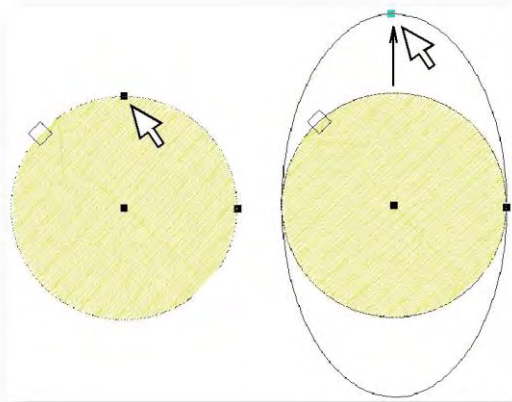
Reshape circle objects



Use Select > Reshape to adjust object outlines, stitch angles, start and end points, curves lines, etc.

You can change Circle objects to ovals using the Reshape tool. Circle objects have two reshape control points (used to change the radius and orientation of the object), a center point (used to

reposition it), and a stitch entry point. You cannot add, change or delete control points in these objects.



Adjust stitch angles

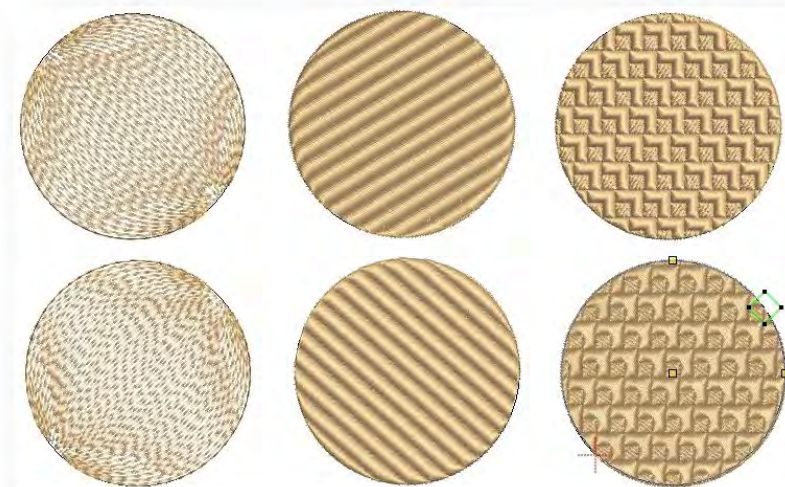


Use Edit Objects / Digitize > Add Stitch Angles to add stitch angles to selected closed objects with or without holes.



Use Edit Objects > Remove Stitch Angles to remove stitch angles from selected objects with turning stitching.

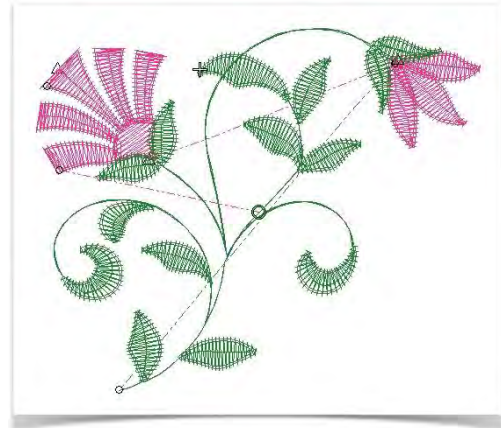
Stitch angle adjustments depend on the type of object you are working with. With filled objects you can set a stitch angle for the entire object. Alternatively, you can add multiple stitch angles with the Add Stitch Angles tool. You can also adjust the stitch angle using the Reshape Object tool.



In Circle objects, only the entry point appears. The stitch angle is perpendicular to the line connecting the entry point to the circle center. Thus, changing the stitch entry point in a Circle object changes its stitch angle.

CLOSEST JOINS

Designs stitch out more efficiently when the connectors between objects are short. This also tends to reduce the number of trims in a design. The software has a Closest Join method which can be applied while digitizing and/or after editing. When activated, entry and exit points of objects are automatically placed close together while you digitize. However, closest joins are not automatically maintained when objects are moved, re-sequenced, or edited. Closest Join can be (re-)applied to selected objects or entire designs after editing.

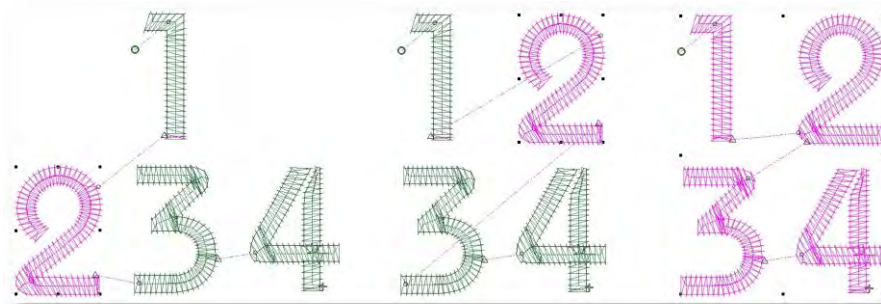


Apply closest join



Use Edit Objects > Apply Closest Join to join selected objects at the closest point. Re-apply closest join after editing.

When you are digitizing closed objects, the Closest Join method automatically calculates the closest join between them, saving you having to think about entry and exit points. The Apply Closest Join feature allows you to (re-)apply closest join to selected objects after editing. The image below shows a) joins as digitized, b) joins after repositioning, c) joins after reapplying closest join. The Apply Closest Join command is only enabled when two or more embroidery objects are selected.



The Apply Closest Join is also available from the Edit menu or by pressing <J>.

The software also allows you to manually change entry and exit points of individual objects.

Closest join option

The Closest Join method (the default) automatically calculates closest join between objects while digitizing. When deactivated, entry/exit points of all newly digitized objects are set manually. If you want to deactivate it for this purpose, choose Embroidery Settings from the Software Settings menu and deactivate the option on the Design tab.

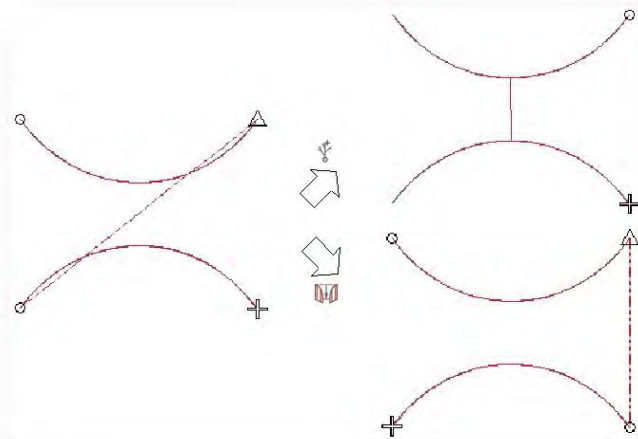


Closest join limitations

The Apply Closest Join feature is not applicable to all objects in all circumstances. Closest Join requires the complete stitch regeneration of the selected objects – the whole object, not just connectors. Stitch regeneration has its limitations:

- Recognized objects – i.e. opened from stitch files – may generate poor or incorrect embroidery.
- Manual (unrecognized) objects cannot be changed by stitch regeneration. Thus Closest Join will not work properly for them.
- Manual stitch edits to objects will be lost.
- Manually inserted machine functions may be mistakenly regenerated on the underlay.
- Nested objects are not supported. They will become un-nested and placed after the object in which they were originally nested.

The Closest Join technique is not as powerful as Branching for run objects. The best it can do is swap the ends of the runs whereas Branching produces a nicely-merged double-run joined in the middle.



Obviously, it only makes sense to apply closest join to sequential objects. Any non-sequential embroidery objects in the selection will trigger an error message.

SEQUENCE OBJECTS

The embroidery objects in a design form a stitching sequence. Initially, objects are stitched in the order in which they were created. You can change the position of a selected object by cutting and pasting it elsewhere in the sequence, or by using the Resequence docker. As a general rule, it is important to establish the stitching order so that objects in the foreground are sewn after those in the background. If you combine designs or design elements, you will also want to ensure that like-colors are sewn together.



Sequence by cut & paste



Click Standard > Copy to copy the selection and place it on the clipboard. This tool is also available via Edit menu.

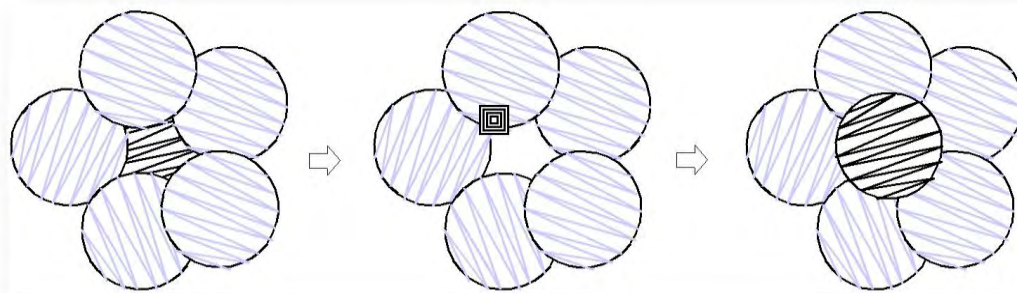


Click Standard > Cut to cut the selection and place it on the clipboard. This tool is also available via Edit menu.



Click Standard > Paste to paste contents of the clipboard. This tool is also available via Edit menu.

You can resequence objects by cutting an object from the design and pasting it back at a different point in the sequence. This does not change the physical location of the object.



Cut the object to resequence and paste. By default, the object is pasted at the end of the sequence. Alternatively, travel to a point in the stitching sequence where you want to paste the object. You can paste between other objects or 'nest' the cut object within another object.

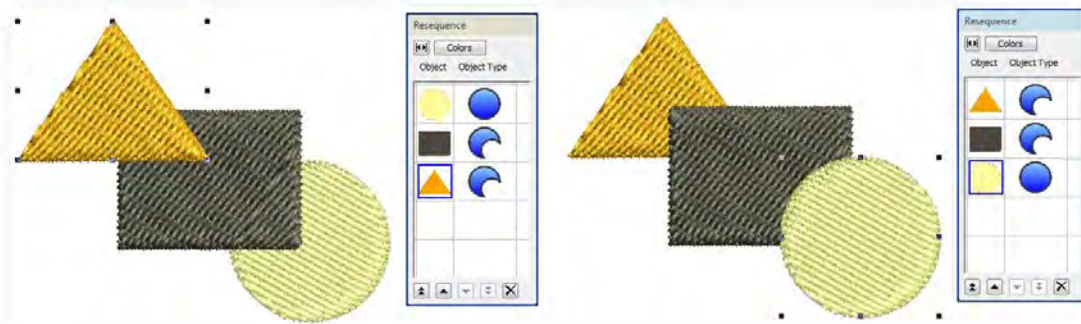
Sequence by object or color



Use Edit Objects > Resequence Manually to show or hide Resequence docker. Use it to resequence objects and color blocks in a design.

The Resequence docker provides an easy way to select objects in designs and sequence them in the preferred stitching order. Use the button at the top to toggle between objects and color

blocks. Select the object or color block you want to resequence. Use the buttons or drag-and-drop to reposition.

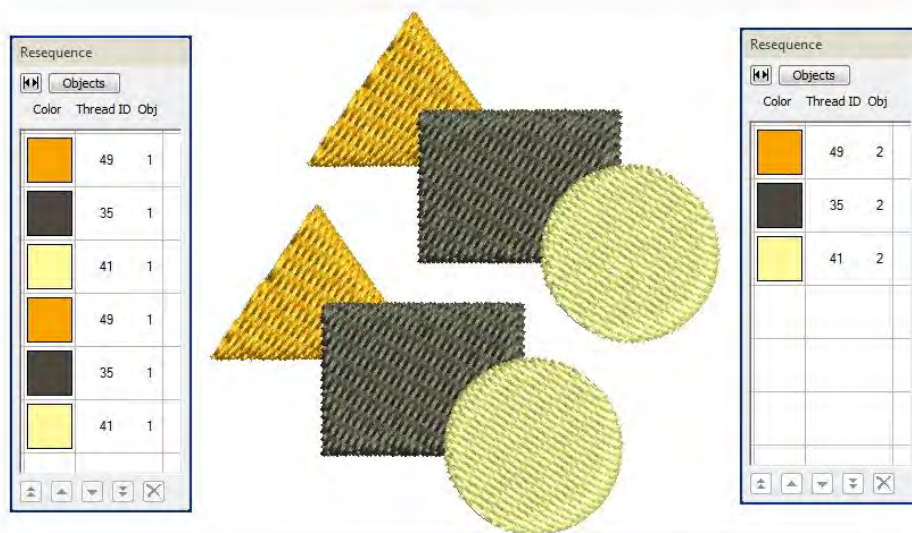


Entry and exit points should also be checked when you are resequencing objects in a design.

Optimize color changes

- ▼ Use Edit Objects > Optimize Color Changes to optimize design by reducing color changes to a minimum, while maintaining color layers.
- ▲

It is important to be able to resequence objects by color. This reduces the number of potential color changes in a design. Use the dialog to manually resequence objects of the same color.



Alternatively, click the Optimize Color Changes button on the toolbox or dialog toolbar. This command optimizes production by reducing color changes to a minimum while maintaining color layers. In many cases you can rely on the software to work out the optimum stitching sequence for you. The example shows the results of color resequencing on the right - three color changes as opposed to the original six.

Don't rely on automatic color change optimization as there may be instances where you want the same color to be stitched at different stages.

Sequence by selection order



123 Use Edit Objects > Resequence by Selected Order to resequence objects in the order of selection.

Another useful technique is to sequence objects by order of selection. Simply select the first object you want to include in the sequence. Holding down <Ctrl>, select subsequent objects in the desired stitching order. You can do this on-screen or with the Resequence docker. Click the Resequence by Selected Order button. The objects are resequenced in the order of selection.

SPLITTING OBJECTS

Certain objects such as appliqué, are 'compound' objects and cannot be ungrouped in the normal way. Sometimes, you may want to edit components which cannot be done within the grouped compound object. For example, you may want to make edits to the various layers of appliqué such as the tackdown stitch, etc. Alternatively, you may want to resequence the stitching order of appliqué components. To perform such editing operations, compound objects need to be 'broken apart'.

Sometimes you may need to manually cut filled objects into smaller objects. This is important where changes in stitch direction are necessary. This is especially useful for editing converted TrueType fonts.

The design should be saved before you break it apart. Save to a different name so you can go back to the original compound object to edit if necessary.

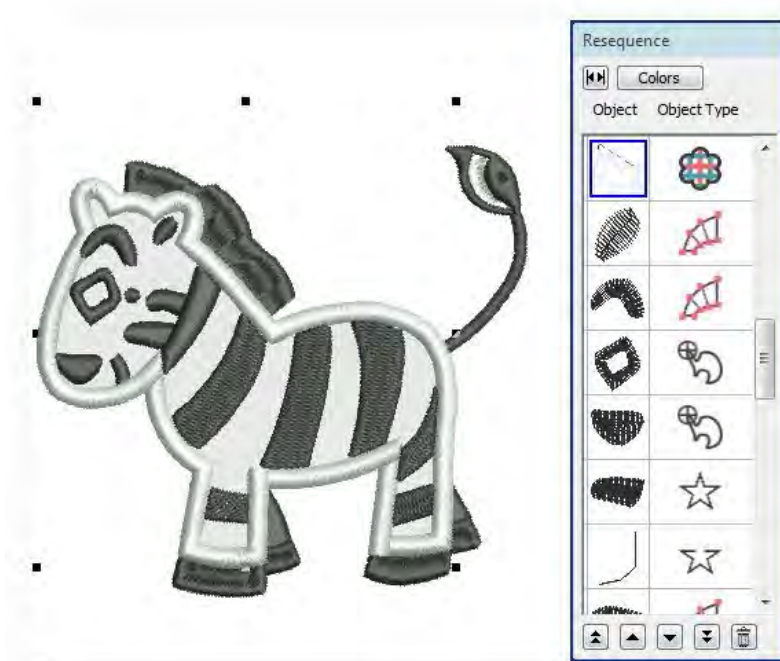
Breaking apart objects



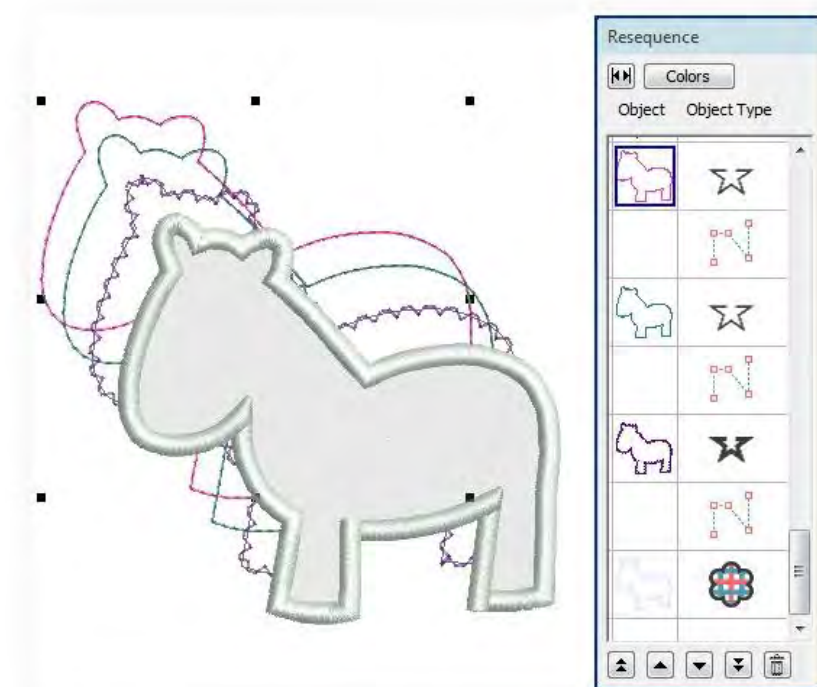
Use Edit Objects, Appliqué or Lettering / Monogramming > Break Apart to split composite objects - monograms, appliqués, lettering, etc - into components. Allows each to be edited individually. This tool is also available via Edit menu.

The Break Apart tool allows you to separate appliqué objects into their components. It can also be used with monograms, lettering and blackwork runs. The effect on these objects is similar to the ungrouping operation. However, once it is broken apart, it cannot be re-grouped as a compound object again.

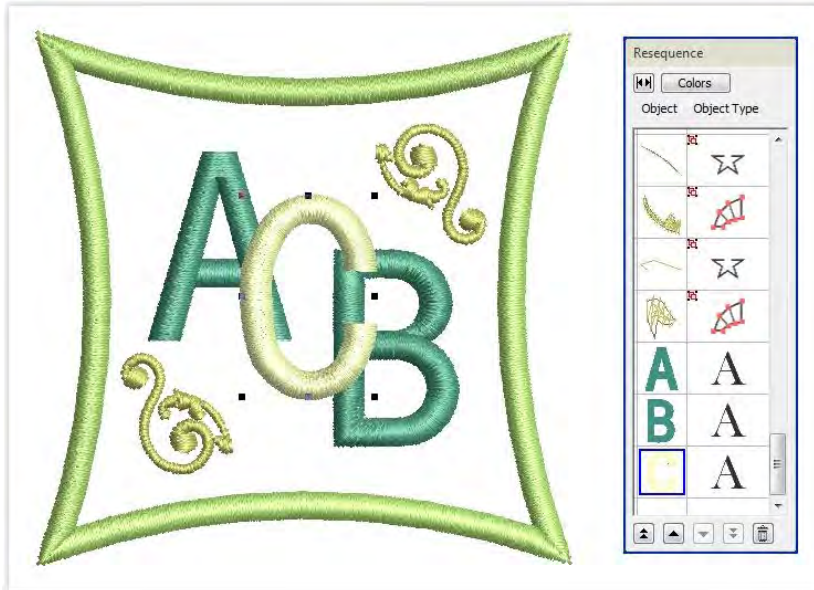
- Select the object to break apart – open-object appliqué, auto-appliqué, monogram, or lettering. The Break Apart command is activated.



- Click Break Apart. The object is separated into its component source (primary) and any generated (secondary) objects.



- The operation ungroups open-object appliqué into its components – source (primary) objects, generated (secondary) objects. It also creates an auto-appliqué object from each piece of fabric in the design. These will have no stitching.
- The operation ungroups monograms into component objects – a lettering object, ornaments (each ornament set remaining as a group) and borders (also grouped). See also Break apart lettering / monograms.



- To modify individual objects – e.g. to change the stitching sequence of monogram borders – use the Design Sequence dialog to ungroup objects and resequence. See also Sequence objects.

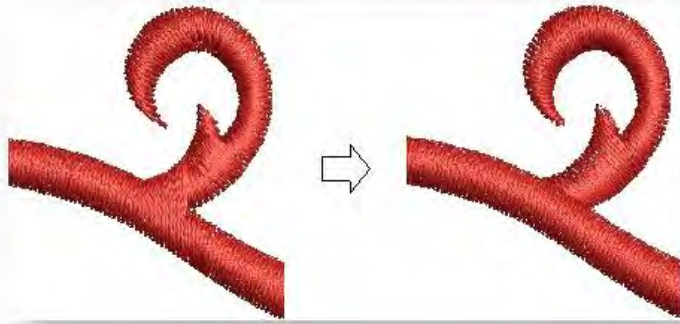
When saved into earlier versions of the software, monograms, appliqués, lettering, and blackwork runs may be subjected to the Break Apart procedure by default.

Cutting objects



Use Edit Objects or Lettering / Monogramming > Knife to cut objects along a digitized line, preserving stitch settings and colors.

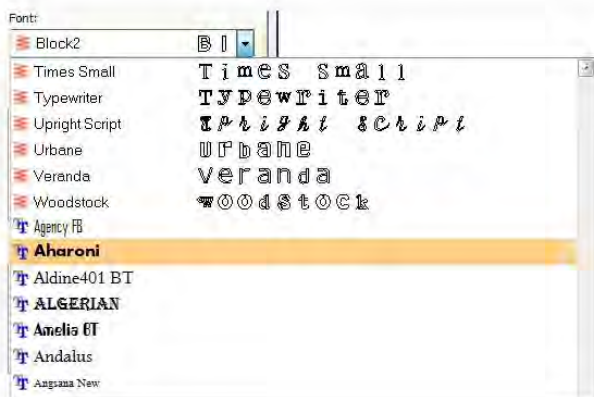
The Knife tool is used to manually cut filled objects into smaller objects. This is important where changes in stitch direction are necessary. Cut objects are generated with stitching – parallel or turning – appropriate to their shape.



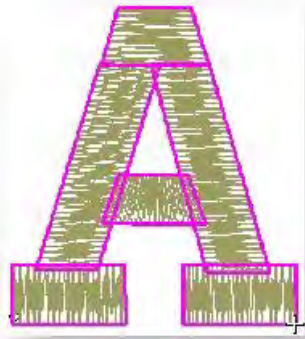
The Knife tool has two modes of operation:

- It will only cut selected objects when there is something in selection.
- It will cut all objects under the knife when there is nothing selected.

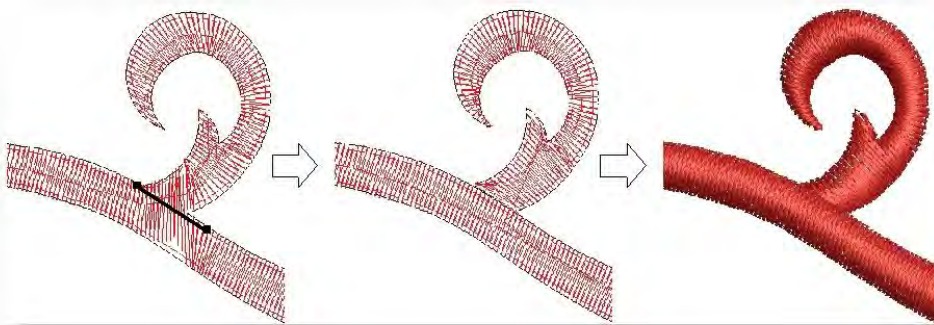
The Knife tool is especially useful for editing converted TrueType fonts. When you select a TrueType font in the Font list, it is automatically converted to embroidery lettering.



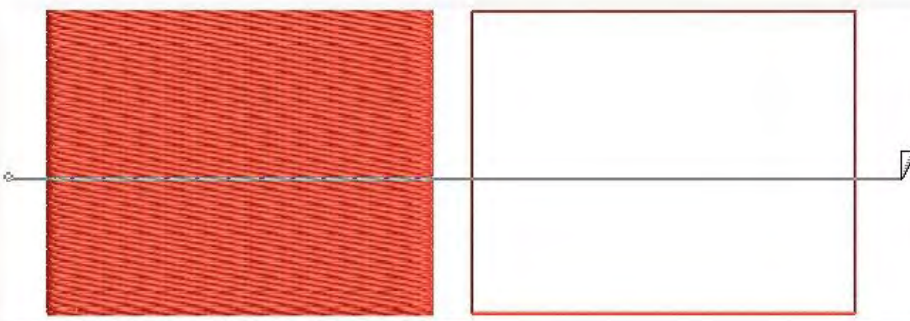
While TTF conversion produces similar results to digitized embroidery fonts, the quality may not always be quite as high. Narrower serif type fonts generally produce the best results. However, in 99% of cases, conversion problems can be fixed with the Knife tool. When you select a lettering object to cut, the object is highlighted with a thick magenta outline.



With or without an object selected, digitize a cutting line as you would any other line – left-click for corner points, right-click for curve points – and press Enter. By default the software reorders resulting objects into a closest-join sequence that preserves the source object's entry and exit points. Manually adjust object overlaps using the Reshape tool. See also Reshape objects.



Note that the Knife tool will cut both filled objects and outlines...

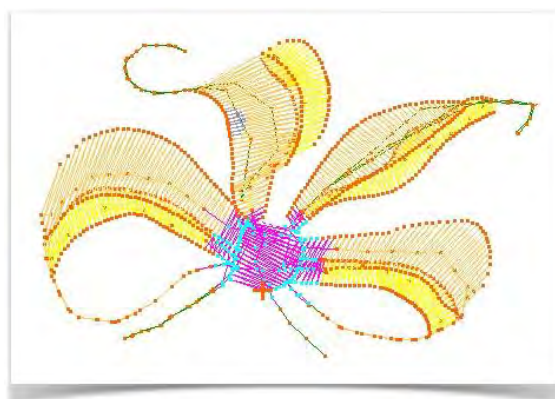


EDIT STITCHES

With embroidery designs, stitches are automatically generated from design outlines and properties. This means you can scale, transform and reshape designs without affecting stitch density or quality. However, the software also lets you edit individual stitches.

For example, you can insert stitches in an object to fill gaps, or move and delete individual or clusters of selected stitches. You may need to do this, for example, when working with 'stitch files' which do not contain design outline data. In essence, you simply select and manipulate stitches like any other object.

Where possible though, edit object properties rather than individual stitches. All stitch edits are lost when an object is modified and regenerated. For that reason, stitch edits are mainly applied to stitch files rather than design files.



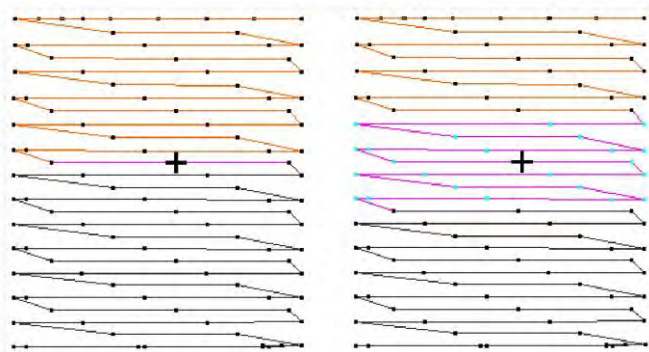
Select stitches



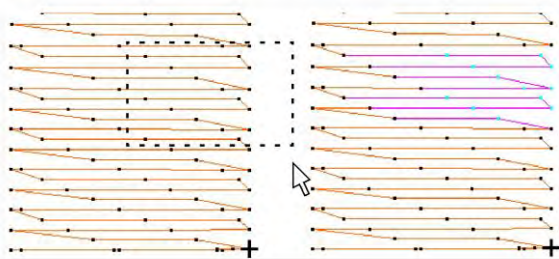
Use Edit Objects > Stitch Edit to place stitch cursor at selected insertion point. Allows editing of individual stitches.

The Stitch Edit feature lets you select single stitches, several stitches, or a range of stitches by selecting their needle points.

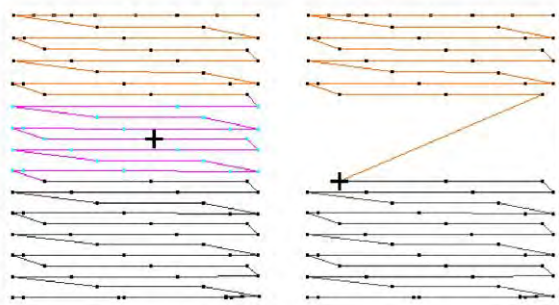
- Zoom in and display the needle points for easier selection.
- Select the object and click Stitch Edit.
- Select individual stitches in Stitch Edit mode by selecting their needle points.
- The needle point and stitch colors change and the needle position marker moves to the selected stitch. All stitches after the needle position marker in the stitching sequence appear in black.



- To select multiple stitches, hold down <Shift> or <Ctrl> as you click.
- Alternatively, drag a selection marquee around them.



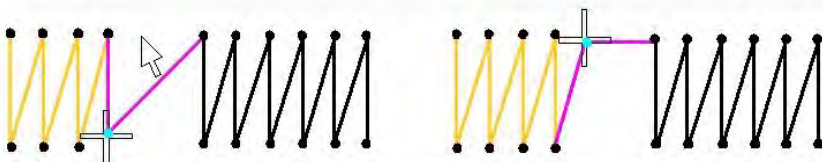
- Press <Delete> to eliminate unwanted stitches.



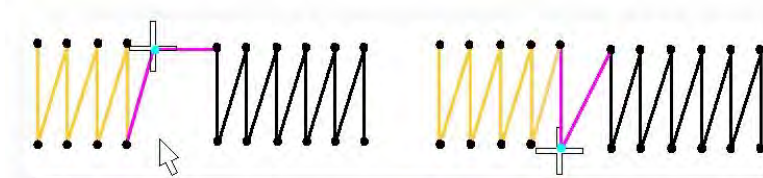
Insert stitches

You can insert stitches in an object to fill gaps. Inserted stitches are incorporated into the object. They will, however, be lost if the object's stitches are regenerated.

- Select a needlepoint. The needle point and stitch colors change and the needle position marker moves to the selected stitch. All stitches after the needle position marker in the stitching sequence appear in black.
- Use the arrow keys to travel between stitches.
- Move the mouse pointer where you want to insert the new stitch, and right-click.



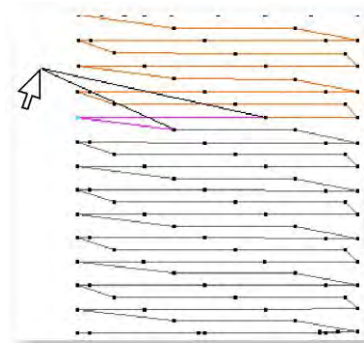
- Continue right-clicking as needed.



Move stitches

You can move individual or groups of selected stitches. As always, if an object's stitches are regenerated for any reason, all stitch editing functions are lost.

- Zoom in, select the object and click Stitch Edit.
- Select the stitches to move.
- Drag them to a new position. The stitch shadow outline shows the new position.



Select while traveling



Use Travel > Select While Traveling to toggle on to select stitches, objects, or colors while traveling through a design.

Traveling through a design is usually associated with checking the stitching sequence. However, you can also select objects as you 'travel'. With the Select While Traveling tool activated, use any of the Travel tools and as you move through design, objects are selected. In order to select while traveling, you must be working in stitch edit mode.

