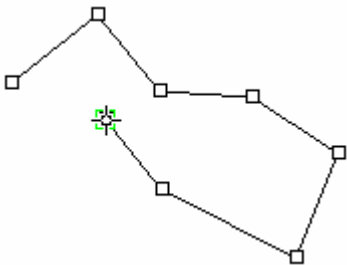


**Working with Nodes**

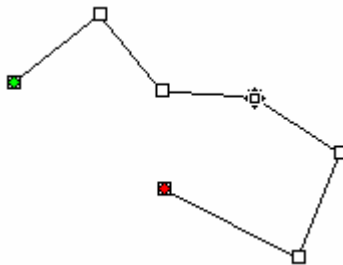
Nodes are points that appear with each mouse click when digitizing a section. Nodes can either be square or round, white or aqua in color (based on your version or settings they could also appear hollow or solid instead of with colors). Each illustration represents different modes of the node affected. The line between each node is called a segment. Sometimes the segment line will either be curved or straight depending on the node property. Nodes and lines form the perimeter of the segment whether it's an enclosed or open object. This article will concentrate on Node Properties and how to incorporate different functions including keyboard shortcuts as well as icons and right-click menus.

CREATION



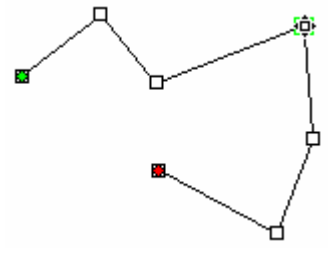
The creation of objects for a design begins with the tool selection (Path, Vector, etc). Regardless of tool or type of stitch selected, nodes will appear as in the illustration above upon tracing objects.

SELECTION



With the object completed, click on the Edit Section icon and then on any digitized node to select it. Once selected, you can apply different properties to that node.

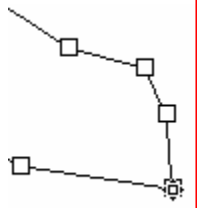
MOVEMENT



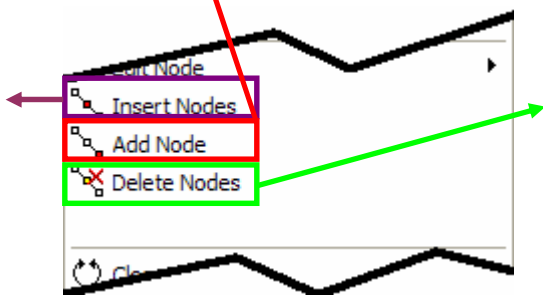
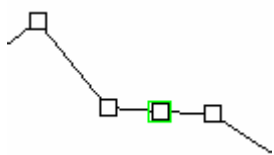
Moving nodes, one or many at a time, is a quick and easy way to reshape your objects. To move a node, just click on it to select it, and drag it to the desired new location.

**ADDING, DELETING, INSERTING NODES**

Select a node then right click the design area and select Add Node from the menu. Each mouse click will add a node. End this process by hitting **ENTER** on the keyboard.

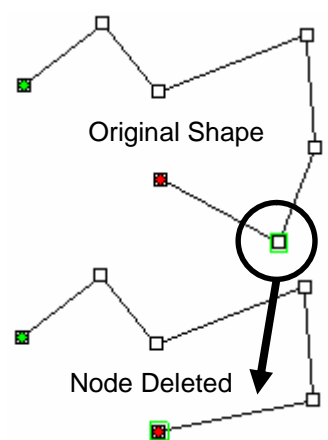


Left click the node on the object then right click on the design area and select "Insert Nodes" from the menu. A node will ALWAYS be added behind the selected node in the order that the nodes were created.



Original Shape  
Node Deleted

When deleting a node, its as easy as selecting the node then either hitting the keyboard **DEL** key or, right click on the design screen and select Delete Node from the menu.



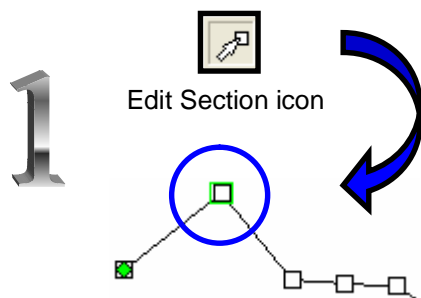
### TOGGLING NODES FROM STRAIGHT TO CURVE



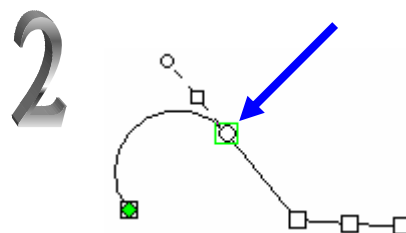
Straight mode: not pushed, this icon represents straight lines (square nodes).



Curve mode: pushed in, this icon represents curve lines (round nodes).

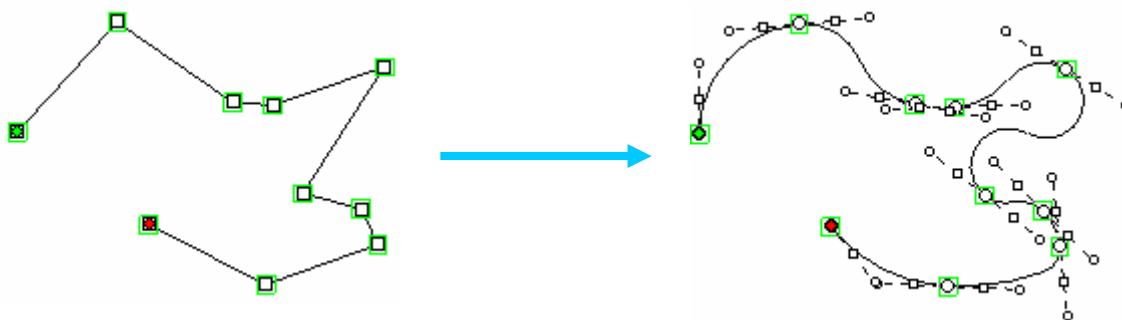


If you want to change the mode of a node once a section is created, click the Edit Section icon then click on the node you wish to change.



To toggle to a curve node, take one of the following options:  
 - Hit the **Q** keyboard key, or...  
 - Hit the "Straight/Curve" icon

### TOGGLING NODES FROM STRAIGHT TO CURVE (several or all at once)



Follow the steps below (on open and closed objects alike) to select and change settings on multiple nodes.

Click the Edit Section icon, and then click on the object to change (the wireframe will appear). To make changes to the nodes on that object, take ONE of the following steps to select all the nodes at the same time:

1. Click the "Select All" Icon, or...
2. Press the **CTRL** and **A** keys on your keyboard, or...
3. Click on the first node, hold down the **SHIFT** key then click on the last node

**Alternatively, to select more than one node but not all of them, first select one node, then hold down the **CTRL** key to select the other nodes; the software will only choose those nodes selected in this process.**

Once the nodes are selected, do ONE of the following to change them to curve:

1. Hit the "Normal/Corner" icon, or...
2. Hit **Q** on the keyboard

**Follow the above procedure to change selected nodes from straight to curve. However, the procedure is the same to change selected nodes from curve to straight.**

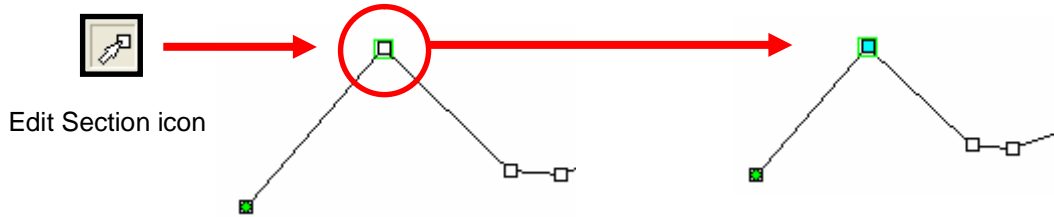
**TOGGLING NODES FROM NORMAL TO CORNER**



Normal mode: not pushed, this icon represents normal nodes (white or hollow nodes).



Corner Type—pushed in, this icon represents corner nodes (aqua or solid nodes).



If you want to change the mode of a node once a section is created, click the Edit Section icon then click on the node you wish to change.

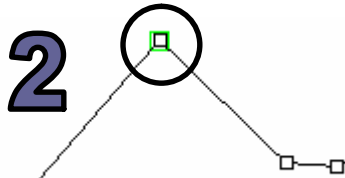
To toggle to a corner node, use one of the following options:  
 1. Press **CTRL** and **Q** on your keyboard, or...  
 2. Hit the "Normal/Corner" icon

*Follow the above procedure to change selected nodes from normal to corner, or from corner back to normal. You can also change the properties of several nodes at once by selecting them as shown on the previous page.*

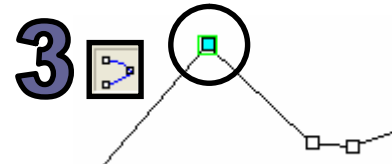
**CORNER PROPERTIES**



Click the Edit Section icon, then on the object to edit.

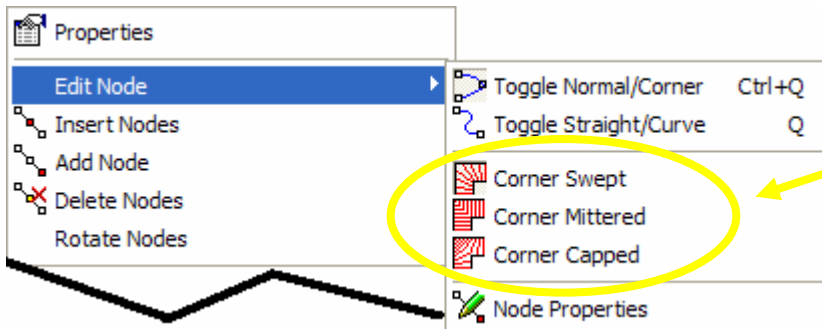


Click on the Node to be changed, then hit "Normal/Corner" icon to make it a corner.



The node turns aqua or solid and becomes a corner node to which you can specify the type of corner desired

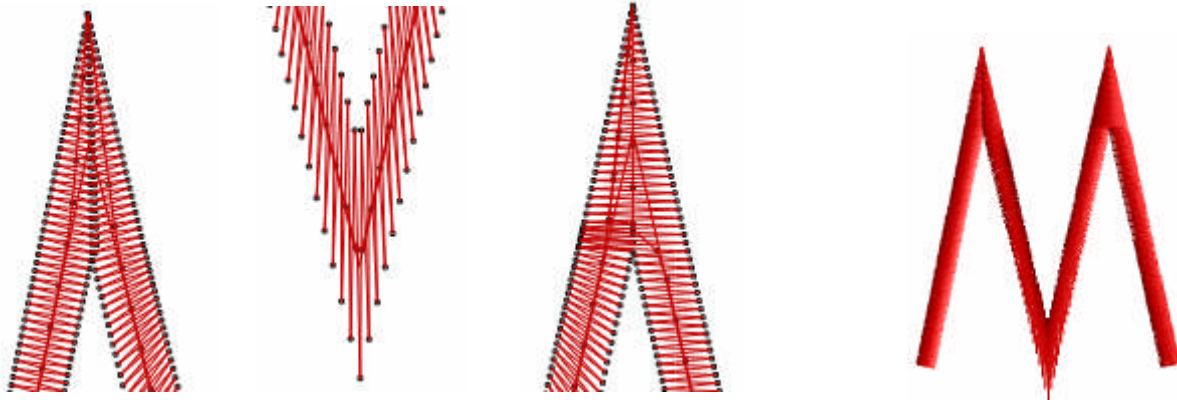
4



Once the node becomes a corner node, right click on it and choose "Edit Node". Notice the fly out menu with **three corner options**. Different corners will produce different appearances in looks and in the way they sew. Select the corner option best suited for the project at hand.

# 5

The ability to edit properties of corner nodes allows you to create different cap end effects. The illustration below shows Swept, Mitered and Capped corners, separately and all together. The Mitered Corner gives the end a chiseled look, much like the mitered corner of a door or the corner of a blanket. This corner type is best used when you want to give the corner a dimensional look. The Swept Corner is the default corner property. It is best used for softer angled corners. The stitches have a better “sweep” around the corner with a softer appearance and stitch uniformity. An example of the best use of this corner type would be a box. The Capped Corner property generates stitches perpendicular to the corner. This type of corner is best used when you want to give the corner stitching continuity with the rest of the object. A star outline might be one consideration to using this type of corner effect.

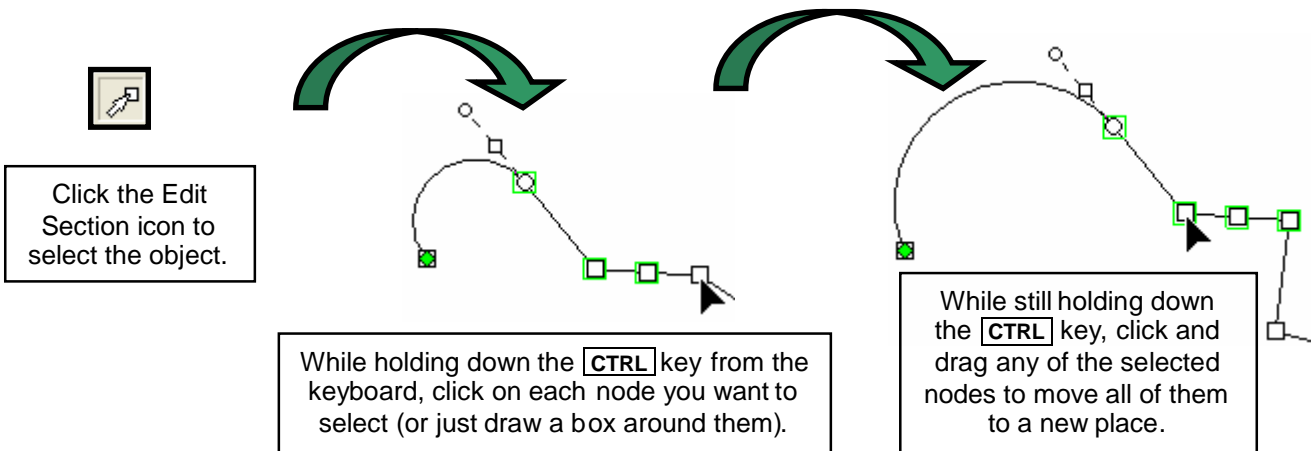


Mitered Corner      Swept Corner      Capped Corner      Stitch View of All Corner Types

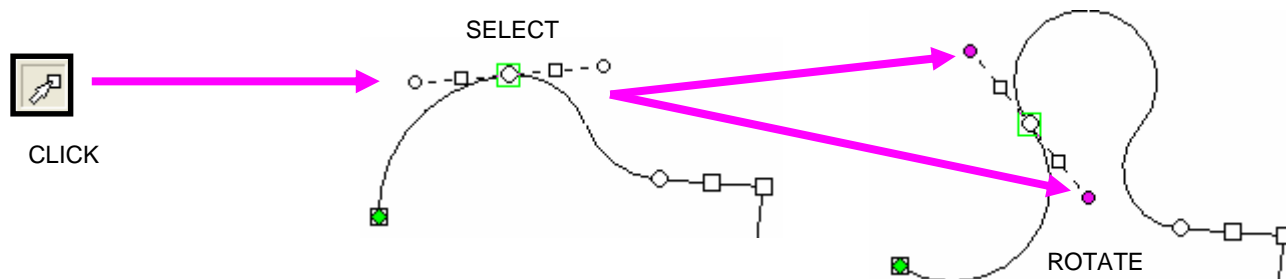
These corner properties are best used when outlining an object and a different effect would enhance the overall appearance of the object. The actual angle of a corner may also determine the node setting to use:

- Use “swept” for standard corners (90° or less)
- Use “mitered” for moderately acute corners (90° to 135°)
- Use “capped” for severely acute corners (135° or more)

### MOVING SELECTED NODES



### GRIPS (BEZIER)



Another graphic function available in your software is the use of grips on circular nodes. This feature allows you mold the curvature of any line digitized as a curve to better suit the contour of an object.

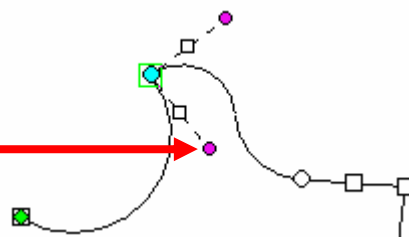
To use this feature, click the Edit Section icon and click on the object node to edit. Place the mouse on any of the grip ends and then click and drag as needed to maneuver the curved segment.

***When an end grip is edited, it will turn magenta / solid to signify that the Bezier feature is now active.***

You can also alter just one side of the curved segment, without affecting the opposite side.

To do this, just hold down the **CTRL** key from your keyboard, then click and drag one of the end grips to form a new curve.

This is especially useful when creating a shape that has sharp points and definition of that area is a must for the design. A heart might be a good example of the flexibility offered by this function.



***The intermediate square nodes (located between the main object node and its end grips) will disable the Bezier feature; clicking on any of these square points will turn off all Bezier properties for that end grip, which means that the original object node takes priority again and it will determine curvature of the line.***

***You can activate the Bezier feature in your software during digitizing and editing modes, following the steps above. However, if you wish to turn this feature off for either or both modes, you can go to the Miscellaneous tab of your Tools – Options menu to enable or disable the corresponding check boxes.***

***If you are not accustomed to this powerful graphic feature, but would still like to learn it so you can take advantage of its benefits, we recommend at first enabling the setting for the editing mode only.***

#### SIERRA SAYS...

Nodes are an inherent component of every digitized object, allowing for freedom of movement when certain properties are applied. Whether it's the ability to alter a curved line, or enhance an outline with special corner effects, nodes offer the mechanics to effectively finish the task quickly.

Use your Node Properties to polish your digitizing and to give it the kind of detailing work that your customers will take note of and appreciate.