

Is the Pen Mightier than the Lasso?

Rob Dublin and Laura Balsam, Rev. 2, Dec. 2004

The pen is one of those tools that arouse great passions. One group of Photoshop users, mainly photographers, find it scary and won't go near it; the other, mostly graphic designers, think it's the most essential tool in the Tool box.

Bert Monroy, a digital artist and Photoshop Guru, definitely falls in the latter category and unequivocally states that it's the best tool for selections as well as drawing. I won't get involved, but just present the facts as a photographer, sometime web designer, who is just getting comfortable with the tool.



The pen tool creates paths, which are a sequence of points with handles, called anchor points, which connect curved segments. The handles control the shape of the curve between points, and function just like "French curves" in traditional drawing. When you select the pen tool the option bar at the top gives you two choices: The first, indicated by the square with anchor points in the corners, lets you draw shape layers filled with the foreground color; the second, indicated by the same square with the pen icon in the middle, lets you draw paths. We are focusing today on paths.

Paths themselves are just outlines and do not print. However, you can stroke a path with many of the tools in the Toolbox and this will create (or if you use the Eraser erase) an object on the active layer – usually you will use the Brush tool. You can also fill the path with a color or pattern, or convert a path to a selection.

To draw a path you select the pen tool and click and drag. This creates a handle for the first point. The actual line segment is formed when you click and drag the second point. If you just click and don't drag, you create an anchor point without handles, called a corner point, which is used to create straight lines. Holding down Shift restricts you to angles that are 45 or 90 degrees.

A well drawn path is one that employs the fewest anchor points to define it. However, this takes practice and the usual tendency is to use many closely spaced points.

It is sometimes necessary to draw a new curve from some point, for example, when the curve needs to suddenly change direction. You can do this by Alt-clicking on the point (not the handle) where you want to start the new curve and drawing a new handle in the direction you want to new curve to go. Then when you add a second point the new curve is started with the new handle determining its shape.

To add more points to the end of an open path place the pen tool over the end point you want to extend and click.

There are two types of paths:

○ - a **closed path**, where the end point is the same as the start point. To finish a closed path

click on the point you started with. Alt-clicking on the starting point results in a cusp.

U - an **open path**, where the end point is different than the starting point. To finalize an open path Ctrl click after the last point.

D - the points where curved lines meet straight lines is called a **cusp**. If two curves meet at an angle this is also called a cusp.

There are several additional tools under the Pen tool in the tool box. There is the free form Pen tool, the pen icon with a wavy line at the tip – no one I have encountered mentions using this; the Pen with a plus sign, P+, adds points; the Pen with the minus sign, P-, removes points, and the tool represented by the “**^**” symbol, which converts anchor points with handles to corner points without handles, and vice versa.

These tools work well together to facilitate the path construction process. For instance, when you are drawing a path if you move the cursor over a previously created segment the cursor changes to the P+ tool so clicking will add a point. Similarly if you place the cursor over a previously created point the cursor changes to the P- tool and clicking removes a point. If you hit the Alt key when you are over a point, the cursor changes to the **^** tool to convert between point types.

The path selection tools allow you to manipulate and move either the whole or part of a path.



- Selects the entire path



- Direct selection selects parts of a path

With either tool dragging creates a selection marquee that lets you select groups of points. In the case of the path selection tool you can select multiple path components or in the case of the direct selection you can select multiple points on a path.

The Path Palette is where your paths live. When you first start drawing with the pen tool the sub paths you are creating are stored in a path called “Work Path.” You should double click this name in the palette and give it a meaningful name. All open and closed segments that are created in the same p are called sub paths of that path. This allows you to create groupings but remember that you can only work on one path (and all of its sub paths) at a time. You can create a new path by clicking on the document icon at the bottom of the palette, the one next to the trash can (for, of course, deleting paths).

A path can be **filled** with color or pattern pixels, makes a picture element out of the abstract path shape. Make sure the layer you are on can hold pixels, (not an adjustment layer, etc). Make sure the path is has been saved and is no longer the work path. Select the path in the Paths palette.

At the lower left on the Paths palette you will find the fill path icon, the semi-filled circle on the left. Click it to fill the current path layer with the currently selected foreground color.

Alt+clicking brings up the fill dialog box, which provides lots more options. If the Pen or Path

Selection tool is active, right clicking will also bring up the fill dialog box, as will clicking on the top right menu selector of the Paths palette.

Stroking a Path with a pencil, brush, eraser, clone stamp, pattern stamp, healing brush, burn tool, dodge tool ... allows you to apply that tool all along the selected path or path segment. First select the tool you want to use and set any tool options. Make sure the layer you are on can hold pixels, not an adjustment layer, etc. Make sure the path is has been saved and is not longer the work path. Select the path in the Paths palette. At the lower left on the Paths palette you will find the fill stroke icon, a circle; click it to apply the current tool to the current path layer with the currently selected foreground color. Pressing the alt key brings up the Stroke dialog box. As with filling a path you can right click or choose the palette submenu to access the Stroke Path command.

Creating a Selection: By clicking on broken circle icon in the Paths Palette you can load the path as a selection. Thus the Pen tool is another, very powerful way to create selections.