

STEVE CAPLIN'S **A** TO **Z** OF DESIGN

G: Graphics tablets

Steve Caplin walks us alphabetically through the concepts essential to success for any jobbing or aspiring designer.



ABOUT THE AUTHOR

Steve Caplin is a designer and illustrator working for a range of national newspapers. His best-selling *How to Cheat in Photoshop*, now in its fourth edition, is published by Focal Press.
<http://books.macuser.co.uk/caplin>

As a point-and-click tool, the mouse is great for browsing websites, making menu selections and blasting aliens in 3D shoot-'em-ups. However, as a drawing implement it has many shortcomings: it's clumsy, inaccurate and awkward to use.

Instead, most professional designers invest in a graphics tablet, which typically ships with three components: the tablet itself, in a variety of sizes; a pressure-sensitive stylus with configurable buttons; and a cordless mouse, generally including two buttons and a scroll wheel.

The stylus isn't a pencil, though, and it's a mistake to assume that it feels like one in use. The first obstacle to overcome is that, unlike a mouse, the stylus has a 1:1 mapping with the monitor. Which means that the top left corner of the tablet will always map to the top left corner of the screen, for instance. It's a different mode of working to a mouse, other than just its form factor.

Because the stylus is a wholly different tool to either a mouse or a pen, many users have trouble getting to grips with it. At first, it seems unnatural and difficult to control. Although it's easy to add shading to an image right from the start, it takes practice before most people feel comfortable using it to manipulate anchor points on Bézier curves.

The first choice to make when buying a stylus/tablet combination is which brand to

go for. This is easy: only Wacom has comprehensively addressed the technology by offering a wide range of tablets in a variety of sizes and configurations.

The second choice is the size of the tablet. In our experience, the smallest mainstream tablet, with an A6 working area, is easily large enough to control even the biggest monitor resolutions with accuracy. Starting at about £60, this is a good size to begin with and may well suit all your future needs. Much larger tablets are available, but these are of benefit mainly for those wishing to trace CAD diagrams. There are also different model ranges available, with the more expensive tablets offering a greater degree of sensitivity.

Wacom also makes the innovative Cintiq tablet, which is built into a pressure-sensitive monitor. The advantage here is that you can draw or paint directly onto the artwork, which brings an immediacy and fluidity to illustration work. Apart from its price, though, the Cintiq has several drawbacks. First, drawing on a monitor is tiring in the long term unless you rest the heavy device on your lap. If you do work in this way, you then face the problem of where to put the keyboard: if it's moved to one side, the process of choosing keyboard shortcuts becomes that much clumsier. However, the main issue is that, unlike a regular tablet or



◀ Graphics tablets are available in a large variety of sizes and styles. German company Wacom makes the best tablets on the market.

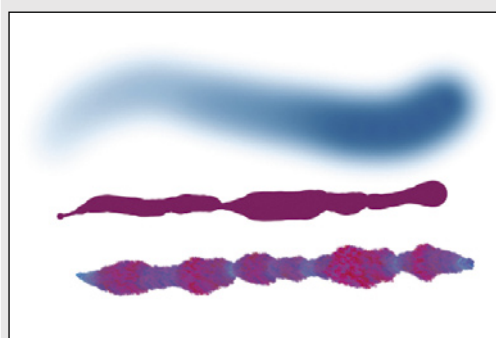
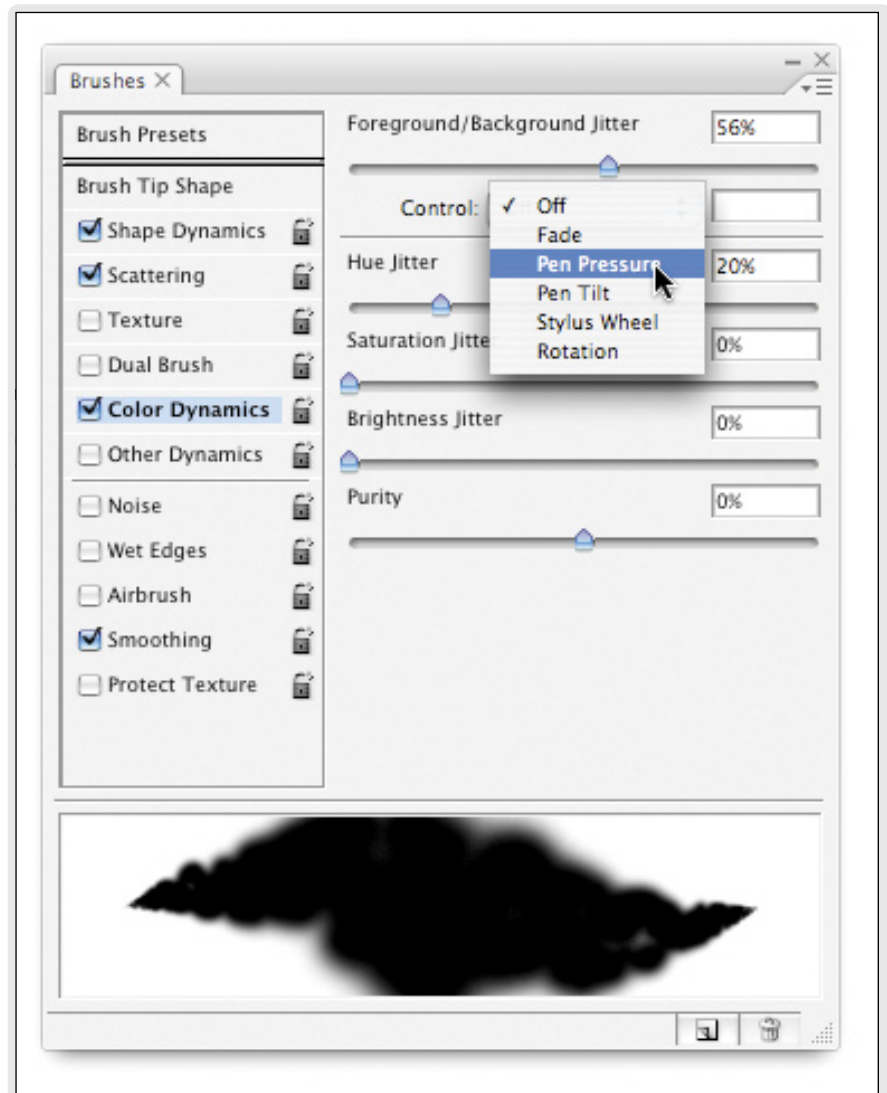
mouse, your hand is constantly in the way of the image when you draw.

A control panel sets basic behaviours for the stylus and mouse, both globally and on a per-application basis. This offers the flexibility of being able to set the scroll wheel to move one line per click in a word processing application, and 10 lines per click in Safari; or you could choose to have the right mouse button open a link in a new tab in Safari, and so on. For some applications, the mouse is better than the stylus, which is why it's shipped with it.

Some applications are fully tablet-aware, which means you can set up behaviour patterns for each tool directly within the application. So in Photoshop, for example, you can define a set of soft-edged brushes for which greater pressure produces a greater opacity. This is the standard mode of operation and enables such tasks as adding shadows to be accomplished with ease: the harder you press, the darker the result.

You might also choose to set up a hard-edged brush for which higher pressure produces a larger diameter, with a constant opacity. This would be useful when using the Healing tool or the History Brush, for example, where 100% opacity is generally required. In these cases, you'd press softly for a small brush when working in fine detail areas, and hard for a large brush for covering larger areas at a stroke. When defining custom brushes in Photoshop, you can make the pressure of the stylus determine just about any aspect of the brush. It could determine the angle, for example, or the roundness, or the colour.

There's also a range of extra tools to simulate airbrushes, marker pens, oil paint brushes and other natural media. Some tools can recognise the angle of the tool relative to the tablet, as well as its pressure. This provides an extra parameter to control



▲ Photoshop's brushes panel allows custom brushes to be built from scratch – with tablet support in virtually every category.

◀ You can use the stylus to vary painting opacity with pressure (top), or increase size (middle). It can also be set to change other parameters, such as the painting colour and scatter amount (bottom).

custom brushes, and also enables such tasks as painting on 3D surfaces to be accomplished with a more intuitive feel.

Applications such as Painter, in which simulating natural media is the key purpose, benefit hugely from the stylus and tablet approach; 3D modelling applications, including Cinema 4D, Maya, Bodypaint and ZBrush, also make good use of tilt capabilities. The handwriting recognition built into Mac OS X, known as Inkwel, is far easier to use with a stylus, of course.

Just about every graphics, audio, video, CAD and 3D application on the Mac has a range of settings specifically for tablet owners. It's not difficult to see why: with so many advantages, and a learning curve that means you can be an expert in a matter of days, ownership of a tablet is now essential for any serious designer. However, don't expect to take it right out of the box: it frequently takes several days of pain before using the tools becomes second nature.