

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

L: Layer blending

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>

Working in Photoshop is all about making layers interact with each other. In the next issue of *MacUser*, we'll look at how to use Layer Masks to control the visibility of a layer selectively, but you can achieve a lot without touching any of the painting tools. The two main ways to control a layer's visibility is to use different layer blending modes and to use the so-called 'advanced blending' controls, and it's these we'll look at here.

At the top of the Layers palette, you'll see a pop-up menu, set by default to Normal. This is where you can choose from all of the blending modes Photoshop has to offer. It's a long list, and many of the modes here have specialist uses that you'll rarely touch. However, it's worth getting to grips with the basic modes, as they can have a radical effect on your ability to work with layers.

Two modes that produce a dark result are Multiply and Darken, but these work in subtly different ways. Both will remove pure white from a layer, which is ideal when you're working with a logo on a white background: change to either of these modes and the background will vanish. The difference, however, is that the part of the layer that remains visible in Multiply mode will always make the layers beneath look darker, as

if you're looking through a layer made of translucent glass.

Darken, however, produces a subtly different result: here, the layer to which the mode is applied will darken underlying layers only if they're darker than the target layer. If the underlying layers are already darker, they won't be affected. There are fewer uses for this mode: one might be if you're trying to remove burnt-out white patches from a portrait. Painting in a light fleshtone on a layer set to Darken will conceal the white, but won't affect areas of the portrait darker than the current colour.

Screen and Lighten modes are the counterparts of Multiply and Darken, and they brighten the layers beneath. Screen mode is useful when working with filters such as Lens Flare, which are hard to position as the underlying layers aren't visible in the preview. However, when they're applied to a separate layer filled with black, in Screen mode the black disappears and only the flare result is visible against the background, enabling it to be moved more easily to the right location. In Lighten mode, painting with a bright colour on a photo of a Union Flag, for instance, will affect the darker blue and red areas, but won't affect the white stripes.



▲ This plaque is set against a corrugated iron wall in Normal mode.



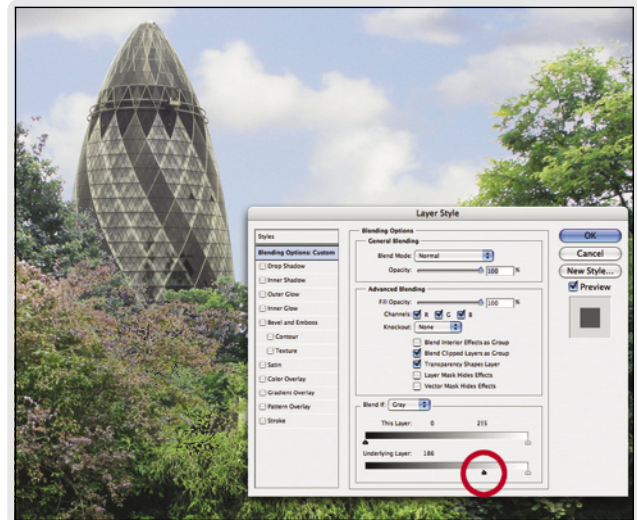
▲ In Multiply mode, the wall is darkened by the whole plaque, but we can still read the lettering.



▲ In Darken mode, the plaque is invisible where the wall is darker than it, making the text illegible.



▲ This image of the Gherkin building is placed in front of a foliage background.



▲ By dragging the black slider in the Underlying Layer section to the right, we hide the Gherkin where the background is darker than this value, so it only shows up over the brighter sky.

One of the most useful layer modes of all is Hard Light. In this mode, midtone grey areas of the layer are hidden; the brighter or darker the layer becomes, the more visible it is. This makes it very useful for adding shading to multiple layers, as when a layer is filled with Hard Light neutral colour, it's initially invisible. Using the Dodge and Burn tools on this layer will add highlights and shadows, which will be clearly visible. Hard Light layers filled with this neutral grey also make a good 'base' for filters such as Noise and Plastic Wrap, producing translucent results in which only the filter's effect is seen.

All the other blending modes are worth experimenting with and produce variations on the effects described here. One worth further mention is Difference, which produces an inverted result on the layer beneath. It's especially useful when comparing two images that are identical apart from small variations: in Difference mode, identical regions will appear as black, clearly highlighting the areas of difference. This mode is most useful for doctors comparing medical scans, but can also

be a valuable aid to designers who want to check the differences between two PDFs of the same page: when imported into Photoshop and overlaid on each other, any differences will stand out.

There are keyboard shortcuts for all of these blending modes: hold down alt-shift and H for hard light, M for multiply and S for screen. Alternatively, hold down alt-shift and press the + and - keys to cycle through all the variations.

When you double-click a layer in the Layers palette, the Layer Styles dialog appears. Right at the bottom of the main pane is the advanced blending section, which determines the visibility of the layer based on its brightness.

Two sliders control the visibility of the current layer, marked by the This Layer section of the Blend If panel. Dragging the left-hand slider to the right will hide any parts of the layer that are darker than the numerical value shown, so in the case of a night photograph, the black sky can be made to disappear entirely. Dragging the right-hand slider to the left will limit the

visibility of the bright parts of an image – for example, making white clouds disappear.

Dragging these sliders produces a hard cut-off between what's visible and what's hidden, which can appear ragged and ugly. However, there's a further trick: alt-selecting this slider will split it in two. Everything darker than the left-hand slider of this pair will be invisible, everything brighter than the right-hand slider will be visible and everything in between will fade smoothly into view.

The Blend If controls are hugely powerful, allowing you to show and hide regions of a layer based entirely on the layer's brightness. Alternatively, use the Underlying Layer section to control a layer's visibility depending on the brightness of the layers beneath it. With these controls, you could, for example, place a photograph of a view on top of a shot of an overcast day taken through a window. By hiding our view layer where the room layer is dark – that is, where it overlaps the interior of the room – we can make the view appear only where it overlaps the bright clouds outside, making it appear to be the other side of the window.



▲ In Screen mode, the wall is brightened by the whole plaque.



▲ In Lighten mode, the plaque can't be seen where the wall is already brighter than it.



▲ In Hard Light mode, the midtone grey disappears entirely, leaving the highlights, shadows and text visible at full strength.