

Complex reflections



SOME REFLECTIONS ARE AS SIMPLE as flipping an object vertically or horizontally: a man's profile looking in a mirror, for example, would suit this technique. Other reflections don't fall into place so easily.

In this example, we're going to create a reflection of the digital camera as if it's standing on a somewhat reflective surface. The procedure is made more complicated by the fact that we're looking down on the camera, resulting in a tricky three-point perspective viewpoint: not only is it going away from us left to right and front to back, it's also receding top to bottom.

The technique we'll use is a little surprising, because we're not going to flip the camera at all to create the reflection: instead, we're going to translate it down the lines of perspective, through the imagined surface.

1 Begin by taking a copy of the camera, and moving the copied layer behind. Now use Free Transform to shrink the copy so that the sides form a continuous straight line down the original camera and through the copy. A small amount of distortion is needed to achieve this.



4 We now need to get rid of the original flash and other elements that shouldn't show up on the reflection. The easiest way to this is to make a new 'patch' layer, and use the Clone tool set to Sample All Layers. This way, we can keep the cover-ups on their own layer for convenience.

2 The lens is in the wrong place: it's sited lower than half way down the face of the camera, so in the 'reflection' it looks too high. Using the Pen tool, we can select just the lens in the reflection and copy it to a new layer. It then needs to be dragged up to the right optical placement.



5 We need to lower the opacity of the reflections as a whole. The trick here is to group them all together into a new Layer Set, and then to lower the opacity of the set. Remember, you can change the opacity of a layer or set by pressing the number keys 1 to 0 for 10% increments.

3 The old lens on the reflection can be removed with the Clone tool and a little Dodge and Burn. The new lens also needs its highlights to be removed, by copying and rotating a section of it; and we can also copy and distort the reflected elements such as the flash and camera name.



6 The reflection looks more convincing if it fades away. Create a layer mask for the reflection set, and use the Gradient tool set to Black-White. Drag it along the central vertical axis of the camera; then adjust the resulting mask with Brightness & Contrast until the effect looks right.



HOT TIP

This technique works well for all kinds of symmetrical objects such as furniture, computer equipment, and technology of all kinds: try reflecting a chest of drawers in a vertical mirror, for example. Lowering the opacity of the finished reflection helps to conceal any vagaries or inaccuracies that may crop up in the final mix.