



INTRODUCTION TO GRAPHICS

Fixing Distortion in Photoshop

Information
Sheet No.



All wider angle lens cause distorted images. If you are like most people the "normal" lens on your camera is purposely designed to have a wider field of view than would be normal. For most photography, this native wide angle lenses or an attachment to make

quay. Even from a distance, the downtown buildings were so tall that the camera had to be tilted up to get them all in the image. Note that they tend to be leaning in as if Singapore isn't built on a firm foundation (which it isn't).

For demonstration purposes, place the image on its own new layer (Control-J) and unlocked it.

With the Move tool selected, choose Free Transform Control-T).



it so stays on the camera almost all of the time. The trade-off for this wider field of view is that any zoom range of your lens is cut down significantly.

With this arrangement your camera is generally setup for virtually any subject, with a few exceptions.

That said, all wide angles lens do present some problems with image distortion. Point a wide angle up at a tall building and the building will seem to fall away in altered perspective. Here's a simple fix in Photoshop for that problem (it also works for distorted perspective when the lens is pointed down).

Look a Singapore's skyline from the boat

Next, select the upper right corner handle and click and hold down, then hold down Control-Alt- Shift and drag the handle to the right. As you do, the left corner moves out as well, correcting the tilting perspective.

While this technique brings the perspective to a normal view, it also has the effect of shortening the buildings. To correct this, grab the center bottom handle and drag it down until the buildings look their correct height.

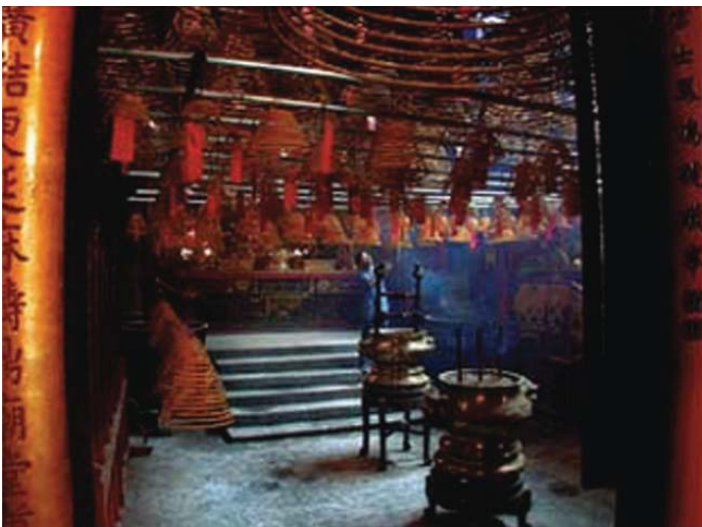
When you click the Return key, the image will be corrected and some portions of the image will be automatically cropped.



While this technique solves the perspective distortion from a wide angle lens, there is a second serious and common kind of distortion introduced by some camera lens -- barrel distortion (perpendicular images bowing out at the edges like the sides of a barrel).

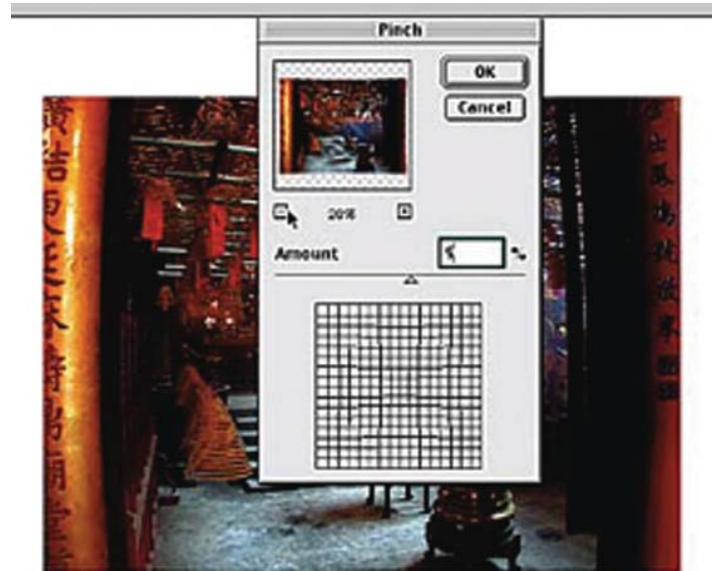
For most images, you just live with the effect or don't even notice it because your mind automatically compensates without consciously realizing it. While you could use Andromeda's Lens Doc plug-in for precise correction, this tool is not available on most systems. Not to fear, here's a simple correction technique in Photoshop.

Note that the pillars on each edge of this picture have a graceful bow to the outside.



XXXX - FIXING DISTORTION IN PHOTOSHOP

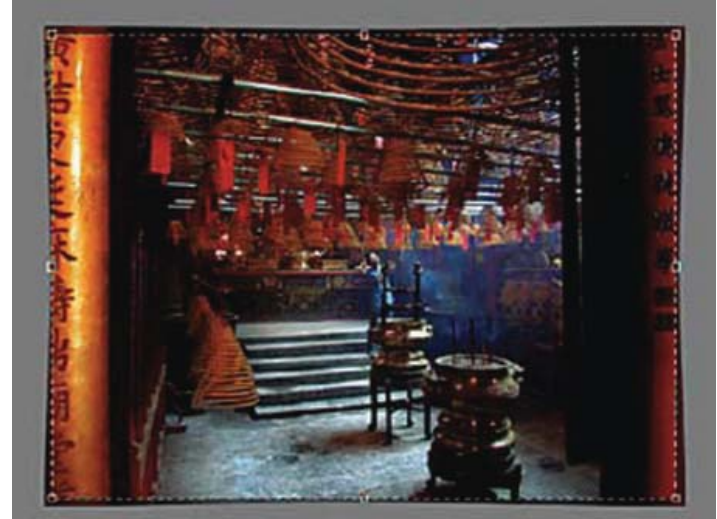
Send the image to its own layer (Control-J) and erase the background image to white, then increase the canvas size to create a white border for this tutorial.



The image of Man Mo Temple in Hong Kong doesn't have any vertical lines in its center and the distortion of the rafters isn't as noticeable as the vertical pillars. This is an ideal image for the Pinch filter.

Choose Filter>Distort>Pinch. You'll have to experiment to find the best factor to make a perfect correction. Experiment with a lower number for your particular image but if you must go over 10, the problem is so severe that the best solution is not in Photoshop, but in purchasing a much better lens (or camera).

Look the effect of the Pinch filter against the white background. Unless you like wavy



edges, use the Crop tool (C) and trim the image down to square edges.

