

How to Prevent Curved Walls

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Another common mistake Realtors make with marketing photos is to use images in which the walls don't appear to be straight. Almost all wide-angle lenses and converters have what is called barrel distortion. That is, distortion will make straight lines near the edges of the frame look curved. Inexpensive lenses are have even worse barrel distortion.



Example of barrel distortion – curved lines at the edge of the image



Barrel distortion removed with Photoshop Elements Lens distortion filter

Why Not Having Perfectly Vertical Straight Walls is a Problem

Not having straight walls is very similar to having converging verticals. Curved walls distract from the purpose of real estate photographs. Curved walls create the same visual tension that slanting walls cause.

How to Minimize Curved Verticals

Curved verticals result from inexpensive wide-angle lenses or wide-angle converters. For example, I have a Nikon WC-E63 screw on wide-angle converter (cost about \$180 new) that screws on many older Nikon CoolPix cameras. It produces images that have a noticeable barrel distortion. On the other hand my Canon EF 16-35mm f/2.8L USM cost \$1,300 still has barrel distortion. However if you **choose your composition so that long straight lines don't appear close to the left or right frame edge** most people will not see the barrel distortion. When you purchase a wide-angle lens or converter be aware of how much barrel distortion it has before you buy it.

How to Correct Curved Lines Caused By Barrel Distortion

There are 3 ways to fix barrel distortion:

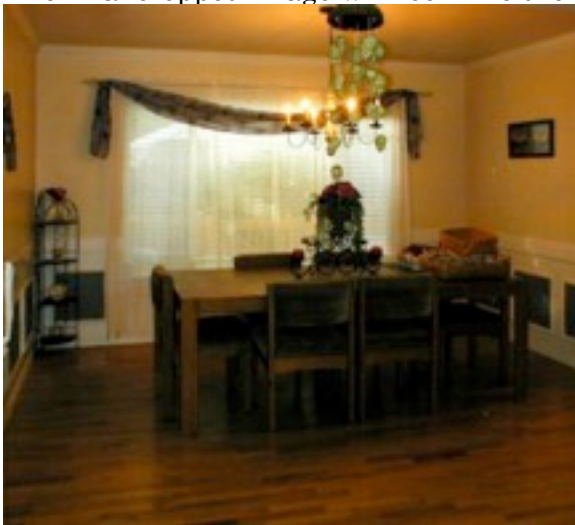
1. Use PTlens, by Thomas Niemann (<http://epaperpress.com/ptlens>) For \$15 is complete lens correction software that can be used either standalone or as a Photoshop Plug-in. Thomas has complete instructions on this site.
2. Use the Lens correction filter in Photoshop CS2 or greater:
 1. Open image in PS CS2
 2. Under "Filter>Distort" click on "Lens Correction"
 3. Move the "Remove Distortion" slider at the top right until the curved lines become straight.
 4. Click OK and save the corrected image.
3. Use the lens correction filter in Photoshop Elements 5 which is essentially identical to the one in PS CS2;
 1. Open image in PSE 5.
 2. Click on "Filter>Correct Camera Distortion..."

3. Use the “Remove Distortion” slider to remove barrel distortion.
4. Use the “Vertical Perspective” slider to remove converging verticals in this image.



No matter which of the above techniques you use after removing the distortion you’ll have to re-crop the image because the edges will be curved and stretched.

The final cropped image will look like the following:



The image still has a color cast problem and is a little dark but we’ve fixed the barrel distortion and converging verticals problem.

Note that even though we straightened out the curved walls a similar result could have been achieved by cropping alone. This is frequently the case since barrel distortion occurs mostly at the edge of lenses. In this case the usable image is made a little larger by fixing the barrel distortion and converging verticals first and then cropping.