

## Corel® AfterShot™ Pro: How to create a lens profile

All camera lenses create distortion in photos. This can include perspective distortion, chromatic aberrations, and vignetting at the edges of the image. Lens profiles counteract lens distortion. In some cases, cameras automatically fix lens distortion in JPEGs. For RAW photos, where you have complete control over image processing, you can apply a lens profile to fix lens distortion in your photos. Corel® AfterShot™ Pro includes many lens profiles, but if you happen to have a lens that has no profile (uncalibrated lens), you can create one by following the instructions below. You can create, save, and share lens profiles with the AfterShot Pro community.

### What you'll need

- Camera with lens for which you want to create a profile
- Tripod
- Levelling tools are helpful to ensure that your camera is level
- A room with good lighting

### Photos that work well for a lens profile

Photos that have strong horizontal or vertical lines often show lens distortion. Here's an example of an image that works well for creating a lens profile.

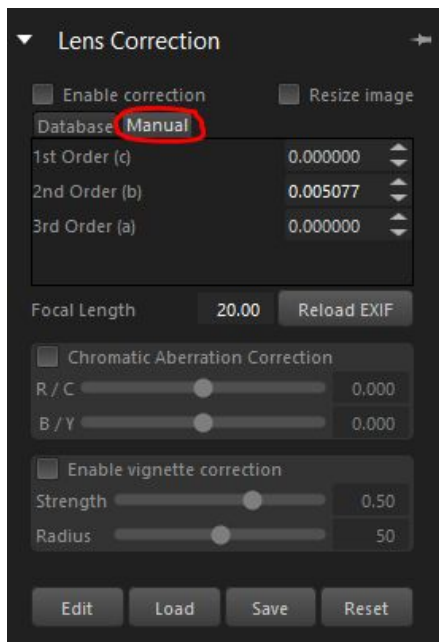


*The bookshelf filled with books has horizontal and vertical edges that make it easy to spot lens distortion*

## To create a lens profile in AfterShot Pro

**Note:** These instructions are based on AfterShot Pro 3.

1. Copy your photos to your computer and open AfterShot Pro.
2. In the **File System** tab, navigate to the photos that have the distortion, and select the first photo.
3. In the **Tools** panel, click the **Detail** tab.



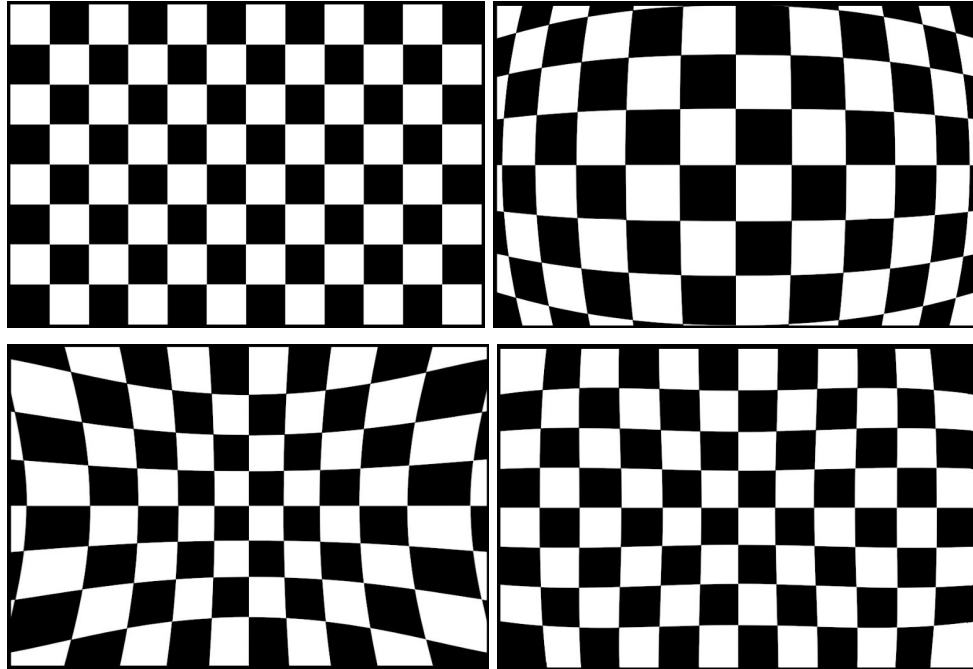
4. In the **Lens Correction** area, click the **Manual** tab.
5. For a straight lines reference, you can activate a crop grid by clicking the **Crop** tool.



The grid for the **Crop** tool can help you identify the distortions in the image.

6. If you notice that your image is tilted at this point, use the **Straighten** slider in **Basic Adjustments** to level the image.
7. Mark the **Enable correction** check box (check mark appears) to show your changes.
8. Adjust the following controls to correct the distortion (listed in suggested order). You will need to experiment with the settings to get the effect you want.
  - **2nd order** — often used to correct Pincushion distortion
  - **3rd order** — often used to correct Wavy distortion (also known as Moustache distortion)
  - **1st order**— often used to correct Barrel distortion

**Note:** If you are using a mouse with a mouse wheel, the easiest way to adjust the values is to click the arrows to the right of the number box for the control and use the mouse wheel to adjust the values.



The images above illustrate: 1. No distortion (top left), 2. Barrel distortion (top right), 3. Pincushion distortion (bottom left), 4. Wavy/Moustache distortion (bottom right)



The distortion in the bookshelf has been minimized by adjusting the 1st Order, 2nd Order, and 3rd Order sliders

9. To correct for chromatic aberration, mark the **Chromatic Aberration Correction** check box (check mark appears), and adjust the following sliders to reduce the unwanted color fringe (for example, a purple fringe) that appears around elements in the image:
  - **R/C** — controls the shift of colors along the Red/Cyan color axis
  - **B/Y** — controls the shift of colors along the Blue/Yellow color axis

10. To correct for vignetting, mark the **Enable vignette correction** check box (check mark appears), and adjust the following sliders to reduce the dark edges:
  - **Strength** — controls how light (positive or right) or dark (negative or left) the correction will be
  - **Radius** — controls how far into the image the correction should extend
11. When you are happy with the lens correction results, click **Save**.
12. Click **Yes**, and type a meaningful name for the XML file. You can share the XML file with other AfterShot Pro users.

**Note:** You can edit the lens profile at any time—fine-tuning a profile can be an ongoing process.

**Tip:** You can click the **Load** button to add a lens profile that has been saved as an XML file.