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Perspective warp

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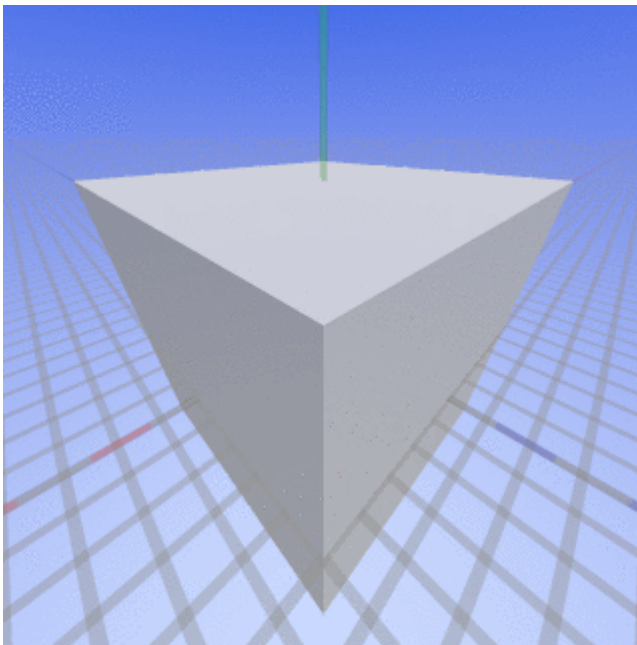
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Photoshop lets you easily adjust perspective in images. This feature is particularly useful for images having straight lines and flat surfaces—for example, architectural images and images of buildings. You can also use this feature to composite objects having different perspectives in a single image.

Background

Sometimes, an object may look different in an image from how it appears in real life. This mismatch is due to perspective distortion. Images of the same object captured from different camera distances and angles of view exhibit different perspective distortion.



Perspective distortion in images of the same object captured from different distances and angles

(Creative Commons image courtesy: [SharkD](#))

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Applies to: **Photoshop**

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Prerequisite: Enable the graphics

processor

Photoshop requires at least 512 MB of video RAM (VRAM) to run the perspective warp feature on 16-bit and 32-bit documents. For details, see [Photoshop graphics processor \(GPU\) card FAQ](#).

As a prerequisite to adjusting perspective, ensure that the graphics processor is enabled in your Photoshop preferences.

1. Choose **Edit > Preferences > Performance**.
 2. In the **Graphics Processor Settings** area, select **Use Graphics Processor**.
 3. Click **Advanced Settings**. Ensure that **Use Graphics Processor To Accelerate Computation** is selected.
 4. Click **OK**.
-

Adjust perspective

Define planes

Before you adjust perspective, you must define the planes of the architecture in the image:

1. Open the image in Photoshop.
2. Choose **Edit > Perspective Warp**. Review the onscreen tip and close it.
3. Draw quads along the planes of the architecture in the image. While drawing the quads, try to keep their edges parallel to the straight lines in the architecture.



Draw the edges of the quads roughly parallel to the lines in the architecture. As depicted in the illustration, you can snap two planes together. Here is a set of planes defined for a building.

Manipulate the planes

1. Switch to the **Warp** mode from the **Layout** mode.



Warp mode

2. Manipulate perspective in one of the available ways:
 - Move around the corners of the quads (pins) as appropriate. For example, you can adjust the perspective

of this image, such that the two sides of the building exhibit foreshortening in equal measures. The resulting perspective would approximate a direct view of the building from a corner.



Adjusting the perspective, such that the two sides of the building are equally foreshortened

- Shift-click an individual edge of a quad to straighten it and keep it straight during further perspective manipulation. Such a straightened edge is highlighted in yellow in the **Warp** mode. You can manipulate the corners of the quads (pins) for finer control while adjusting perspective.



Shift-click to straighten an individual edge of a quad and keep it straight during further perspective manipulation. The rightmost selected edge in this image is highlighted in yellow.




The selected edge is straightened. Also, the straightening of the edge is preserved during further perspective manipulation.

Note:

Shift-click the edge again if you don't want to preserve its straightening.

- In the **Warp** mode, you can click the following icons for

automatic perspective adjustment:

 Automatically level near horizontal lines




Level horizontally

 Automatically straighten near vertical lines



Straighten vertically

 Automatically straighten both vertically and horizontally



Straighten horizontally and vertically

3. Once you're done adjusting the perspective, click the Commit Perspective Warp icon ().

Keyboard shortcuts

The following keyboard shortcuts make it easier to adjust perspective:

Arrow keys Slightly move a corner of a quad (pin)

H Hides the grid when you're working in the **Warp** mode

L Switches to the **Layout** mode

W Switches to the **Warp** mode

Enter key In the **Layout** mode, you can press the Enter key to quickly switch to the **Warp** mode. In the **Warp** mode, the Enter key commits the current changes to the perspective.

Shift-click (*Warp mode*) Straightens an individual edge of a quad and keeps it straight during further perspective manipulation. If you don't want to preserve the straightening of the edge, Shift-click it again.

Shift-(drag an edge) (*Warp mode*) Constrains the shape of

a plane while lengthening it

Enhance landscapes using Perspective Warp

Video tutorial

How to use Perspective Warp to enhance landscapes




Greg Benz

<https://gregbenzphotography.com>

FAQ

- **Can I edit different perspectives in the same image?**

- **How much VRAM do I need to run the perspective warp feature?**
- **The onscreen tips are no longer displaying. How do I bring them back?**
- **Can I define different sets of planes for the same architecture?**

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