

Panoramas

How to shoot a panorama

- Overlap by about 40%.
- If you use a zoom lens, don't change the focal length (zoom in or out) while taking your pictures.
- Shoot in Manual exposure mode with Manual Focus. This will ensure all the photographs shot have an exact exposure value and focus throughout all the images.
- Keep camera level and stay in same position. Using a tripod with a rotating head helps maintain camera alignment and viewpoint.
- Avoid using distortion lenses which can interfere with Photomerge: Auto option adjusts for images taken with fish-eye lenses.
- Use tripod if possible but will work well hand held.
- Shoot quickly so light conditions and the position of people, cars etc haven't changed too much.

Horizontal or vertical

If you shoot in landscape mode, the resulting panorama will be short in height and there will be a lot of redundant or blank areas, which need to be cropped out. This will further reduce the height of the panorama. Therefore shoot the panorama in Portrait (Vertical) mode. This will give a greater image height which can be cropped out as required

Processing Your images: 1. Lightroom

1. Select the source images in Lightroom.
2. Select **Photo > Photo Merge > Panorama** or press Ctrl/Control+M.
3. In the **Panorama Merge Preview** dialog box, choose a layout projection:

***Spherical:** Aligns and transforms the images as if they were mapped to the inside of a sphere. This projection mode is great for really wide or multirow panoramas.*

***Perspective:** Projects the panorama as if it were mapped to a flat surface. Since this mode keeps straight lines straight, it is great for architectural photography. Really wide panoramas may not work well with this mode due to excessive distortion near the edges of the resulting panorama.*

***Cylindrical:** Projects the panorama as if it were mapped to the inside of a cylinder. This projection mode works really well for wide panoramas, but it also keeps vertical lines straight.*

All of these projection modes work equally well for both horizontal and vertical panoramas.

4. While previewing panorama, select **Auto Crop** to remove areas of transparency around the merged image.
5. You can use **Boundary Warp*** slider setting (0-100) to warp panoramas to fill the canvas. Use this setting to preserve image content near the boundary of the merged image, that may otherwise be lost due to cropping. The slider that controls how much **Boundary Warp*** to apply.
** The Boundary Warp feature is available only in Lightroom CC 2015.4 and later.*
6. Once you've finished making your choices, click **Merge**. Lightroom creates the panorama and places in catalog

2. Photoshop

1. Choose File > Automate > Photomerge.
2. Under Source Files in the Photomerge dialog box, choose option
Files: Generates the Photomerge composition using individual files.
Folders: Uses all the images stored in a folder to create the Photomerge composition.
3. Select a Layout option from lefthand dialogue and other boxes
***Auto:** Photoshop analyzes the source images and applies either a Perspective, Cylindrical, and Spherical layout, depending on which produces a better photomerge.*
***Perspective:** Creates a consistent composition by designating one of the source images (by default, the middle image) as the reference image. The other images are then transformed (repositioned, stretched or skewed as necessary) so that overlapping content across layers is matched.*
***Cylindrical:** Reduces the "bow tie" distortion that can occur with the Perspective layout by displaying individual images as on an unfolded cylinder. Overlapping content across files is still matched. The reference image is placed at the center. Best suited for creating wide panoramas.*

Spherical: Aligns and transforms the images as if they were for mapping the inside of a sphere, which simulates the experience of viewing a 360-degree panorama. If you have taken a set of images that cover 360 degrees, use this for 360 degree panoramas. You might also use Spherical to produce nice panoramic results with other file sets.

Collage: Aligns the layers and matches overlapping content and transforms (rotate or scale) any of the source layers.

Reposition: Aligns the layers and matches overlapping content, but does not transform (stretch or skew) any of the source layers.

4. Select any of the following options:

Blend Images Together

Finds the optimal borders between the images and creates seams based on those borders, and color matches the images. With Blend Images Together turned off, a simple rectangular blend is performed. This may be preferable if you intend to retouch the blending masks by hand.

Vignette Removal

Removes and performs exposure compensation in images that have darkened edges caused by lens flaws or improper lens shading.

Geometric Distortion Correction

Compensates for barrel, pincushion, or fisheye distortion.

Content Aware Fill Transparent Areas

Seamlessly fill the transparent areas with similar image content nearby.

Click OK.

Photoshop creates one multi-layer image from the source images, adding layer masks as needed to create optimal blending where the images overlap. You can edit the layer masks or add adjustment layers to further fine-tune the different areas of the panorama.

Note:

To replace empty areas around image borders, use a content-aware fill.

High Dynamic Range

Lightroom HDR Photomerge

Use automatic bracketing on your camera to take a series of images at different exposures – at least 1- and preferably 2-stops apart.

1. Cmd/Ctrl-click the images in Lightroom to select them.
2. Select Photo > Photo Merge > HDR. or press Ctrl+H.
3. In the HDR Merge Preview dialog, deselect the Auto Align and Auto Tone options if necessary.
Auto Tone: Provides a good starting point for an evenly-toned merged image
Auto Align: Useful if the images being merged have slight movement from shot to shot. Enable this option if the images were shot using a handheld camera. Enabling this option may not be necessary if the images were shot using a tripod.
5. Sometimes, after the exposure-bracketed images are merged, some areas in the HDR image may appear unnaturally semi-transparent. Select one of the following deghosting option in the HDR Merge Preview dialog box to correct these anomalies: None, Low, Medium, or High. Try Low deghosting first to obtain a clean merged image. Try higher settings if necessary.
Low: Cures little or minor movement between frames
Medium: Cures considerable movement between frames
High: Cures high movement between frames
6. Click Merge to create the HDR image (.dng). Lightroom creates the image and displays it in your catalog.

Photoshop HDR Photomerge

The Photomerge option in Photoshop is more sophisticated – suggest that you Google instructions for this and experiment.

