

9.0 Blending Photos to make a panorama by R. Berdan

For Best results photos should have been taken using a tripod, camera set to manual exposure mode so all pictures have the same exposure and lock the white balance. Try to overlap each image by about 20-30%. Number your images sequentially e.g. file01.jpg file02.jpg etc. You can use .jpg files or RAW files – if you use RAW just make sure when you open each image you keep the same exposure and white balance settings. With this technique you can make any lens capable of taking wide-angle views.

Two methods in Photoshop for stitching images together are:

- A. Use Photoshop CS or CS2 automate>photomerge> select images>OK
- B. Use layer masks to blend images – this offers more control but requires more time.



1. Photomerge is available in Photoshop CS and CS2 only (and in photoshop elements II+). File>automate>photomerge Browse to folder with sequence of images and select those images to be in the pan>OK – they will line up in a window when done click on the OK button. In the photomerge window you can resize and move images by dragging on them.
2. You may have to crop the final pan and do some additional retouching so the blends appear seamless. Usually adjust the hue saturation and sharpen the image as well.

This technique does not always line up all the images properly and you may have to move some of the images in the merge window manually. Try the panocars folder to try this method select images cars1.jpg to cars6.jpg. You will need to crop the images and do some local touching up (burning & dodging) on the image before you save it for printing.

The more careful you are when taking your images the easier it will be to stitch them together. Use manual mode or some compact digital cameras have a pan-stitch mode where the exposure is based on the first frame and then locked. Choose your first frame in your camera carefully, it should not be too dark or too light when you start taking your pan series. If the sun is in the scene, try to position it behind a tree or post for best results.

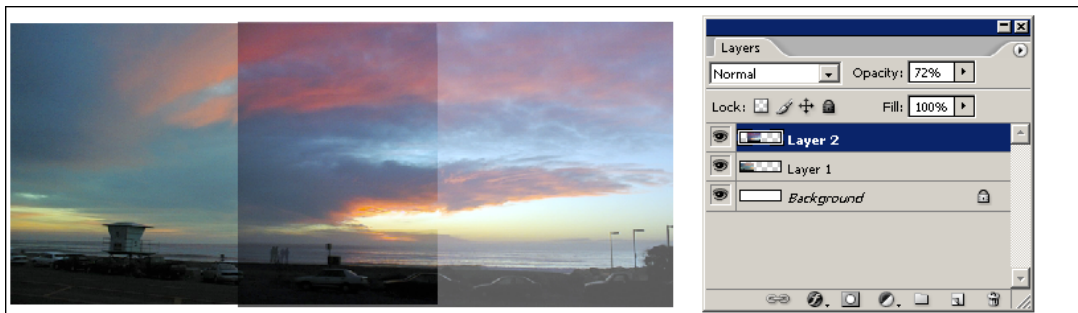
9.1 Using Layer Masks to create Panoramas

I developed this method in order to blend very large images together to create large pans for printing. The method works well with landscapes, but there are dedicated programs for stitching images together where the images have many angles such as inside a room. Different variations of this technique can be found in several books, but once you master my method you can quickly and easily stitch images together to create wide-angle views. You may choose to stitch 2 or 3 images or a whole series of images to make a 360-degree pan. As stated above all the images should have the same exposure and white balance and have 20-30% overlap on each side.

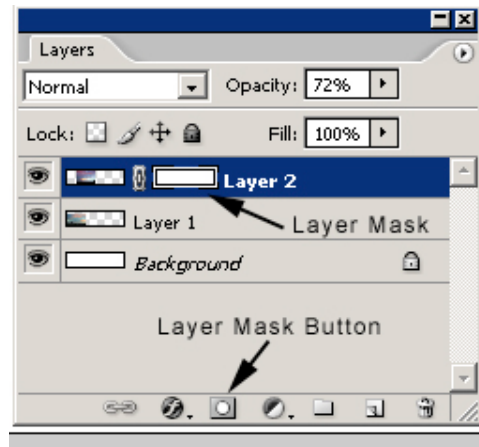


This pan was created by stitching 3 separate exposures together

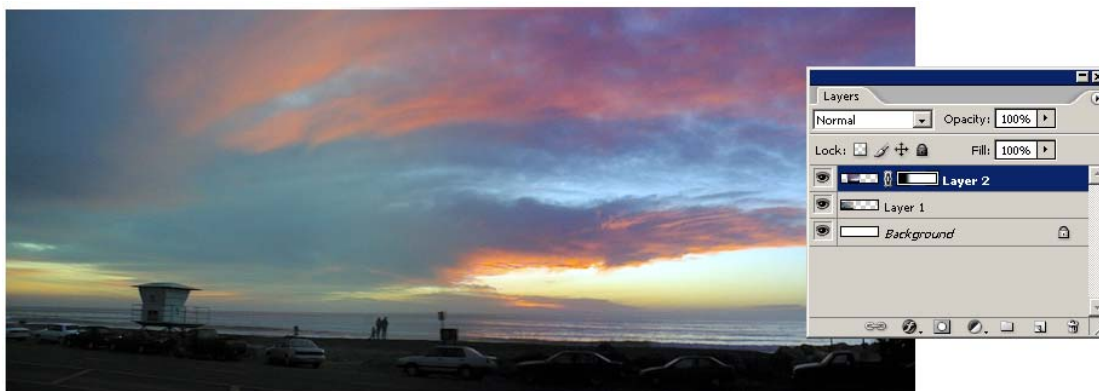
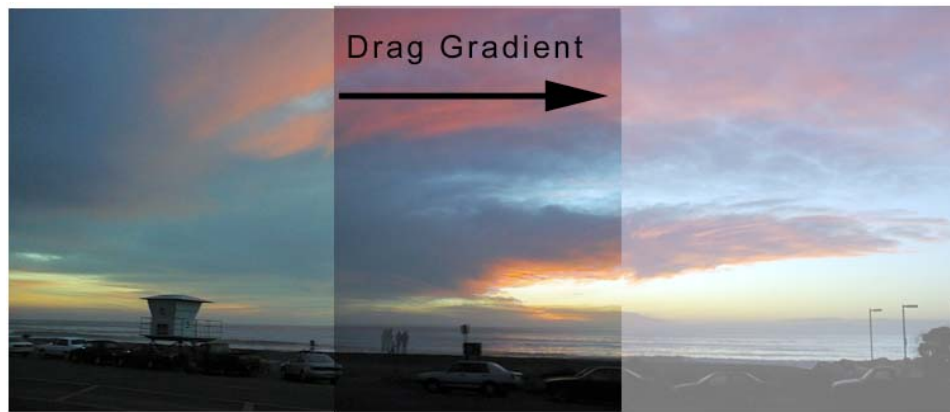
1. To create a stitched pan – first open all the images you want to stitch together in Photoshop. Determine how large you want the final image to be and what the final resolution should be. Take the number of images you want to stitch together e.g. 3 images each is 4 inches wide then your final pan will be 3 x 4 or 12 inches. For example if you have 3 images 968 x 637 pixels – then create a blank canvas about 3000 x 700 pixels x 200 ppi – large enough to fit all 3 images side by side. File>New>Width 3000 pixels Height 700 pixels Resolution 200 ppi – background white.
2. Drag the first image stitch01.jpg onto the large canvas – use the move tool, click on the image drag and drop it onto the canvas. Do the same with stitch02.jpg.
3. Open the layers palette and select the top layer (stitch02.jpg) reduce the opacity to 50-75% and move this image overtop of the first image with the move tool so they line up perfectly. See below.



4. With layer 2 selected in the layers palette, go to the bottom of the layers palette and select the layer mask button to create a layer mask on layer 2 (see below).



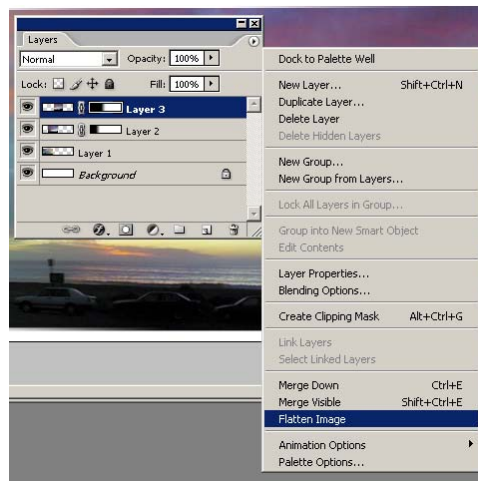
5. Make sure the foreground color on the tools palette is set to BLACK and the background color is set to WHITE.
6. Select the Gradient tool in the tools palette and drag the gradient tool from the left edge of stitch02.jpg to the right edge of stitch03.jpg (make sure you have layer 2 selected in the layers palette). Then adjust the opacity of layer 2 back to 100% and you should see a nice smooth blend.



7. Repeat these steps with the next image stitch03.jpg. First drag stitch03.jpg using the move tool onto the large canvas. Reduce the opacity of the layer 3 and move the image over top so it lines up with the image in layer 2.
8. Add a layer mask to layer 3, select the gradient tool (Black to white) and drag it from left to right from the left edge of stich03 to the right edge of stitch02.jpg to create a soft blend. Adjust the opacity of layer 3 back to 100%.



9. Finally you can flatten the image layers, crop and retouch the final image by adjusting hue saturation, burn, dodge, sharpen and stroke the image before saving it or sending it to the printer.



To flatten the layers select the right arrowhead at the top right of the layers palette and from the pop out box select flatten layers. Once the layers are flattened you will not be able to move the images in the individual layers or modify the gradient masks. If you think you might like to do this you can save the image with the layers as a .psd file. If you wish to stitch more then 3 images just keep repeating the steps above to add more images to your panorama. You can increase the size of the canvas at any time by selecting Image>Canvas size – and adjusting the dimensions.

Note it is possible to fine-tune the layer masks using by painting with black or white paintbrush with a soft edge. Painting with black makes areas below show through, painting with white blocks areas from the layer below from showing through.