

Creating Panoramic Photographs

By
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Digital has made panoramic photography much easier. In the past a special camera was needed to make a panoramic photograph. Today anyone with a camera and computer can make stunning panoramic photographs. This is done by taking two or more images and “stitching” them together in a program such as Photoshop. Sounds easy-- it is if you follow a few basic guidelines.

Most of my panoramic photographs start out as four or five individual images that have been stitched together in Photoshop. Select your scene by choosing the area you want to cover. Remember to think of good composition. Your scene should have a subject or center of interest. There should be a beginning and an end. Your individual images should overlap by approximately 1/3. The composition can be either vertical or horizontal.

Work carefully. Good photography begins in the camera. The more time and care you take in the field setting up your panoramic photograph, the fewer problems you will have stitching the individual images together in the computer.

Level your camera. The first step is to use a tripod. The tripod must be level. Many tripods have a level built in. This is a great aid. Otherwise, just carry a small level with you. Once the tripod is level, the camera must be leveled. The easiest way to do this is through the use of a small bubble level that fits in your camera hot shoe. They can be purchased in most camera stores. Now that you have the tripod and camera level, we will start with the camera settings.

Camera settings are very important. The most important thing is to take your camera out of any automatic settings. This means both focusing and exposure. Use manual focus and manual exposure. The reason to use manual is that as you turn your camera from frame to frame there may be slight differences in light readings and focus points. Those differences will make stitching the images together later much more difficult. Do not use a polarizing filter if there is sky in your photograph as the angle to the sun will change as you move through the image and make the sky very difficult to stitch together into an even color.

Lens Selection. On the surface it would seem that a wide angle lens would be the best to use since you are making a very wide image. Actually the opposite is true. My favorite lens for panoramic photographs is the 70-200 mm zoom lens. The longer focal length lens has less distortion than a wide angle lens. A wide angle lens such as a 20 mm or 24 mm tends to distort the edges of the frame making it almost impossible to match them together later on since the two images must align almost perfectly for an invisible seam. If a short telephoto lens is used the images should overlap by 1/3 or even less – though I see no reason to overlap less than 1/3. If the scene is such that a wide angle lens must be used, you can alleviate some of the distortion problem by increasing the overlap to almost _.

Use manual exposure. As you pan through your scene you may see that your exposure will change slightly from frame to frame. You must use the same exposure for each frame in your panoramic picture. This involves some compromise. My suggestion is to get the correct exposure for the middle image in your composition and use that for all of the images. Another method would be to get the correct exposure for the subject or most important element in the picture and use that for the other images. Either way, the exposure must be the same for all the images in your panorama or the images will not fit together without evidence of a seam.

Now you are ready to start taking the individual images needed to make your panorama. Most start the process by working from left to right. It is always best to be consistent. Start with the image on the left, and make the image. Rotate the camera to the right, remembering to overlap by 1/3 and make the next image etc., until you have

reached the end of the composition.

If you have been careful, the final phase of stitching the images together should be fairly easy. Open the images in Photoshop so all of the individual images are on your desktop. The images must be open as they were taken. Make no adjustments to the individual images to correct exposure, color, etc. at this time. The entire image can be adjusted later after it is stitched together.

These instructions are for Photoshop CS3 but the idea is the same for any of the Photoshop programs or Photoshop Elements. Go to File>Automate>Photomerge. Once you are in Photomerge, you will be asked to choose your files. Since they are on the desktop, choose, "add open files." For layout, use "Auto." There are other choices you may want to experiment with after you become more experienced. Check the box "Blend images together." Then click "OK" and let Photoshop do the work for you. When you first see your Panorama you may be disappointed in that there could be lines where the images were blended. You will notice that each image forms a separate layer. Just flatten the image by going to Layer>Flatten and those lines should go away. Now the image may be cropped, and corrected with levels, curves, or whatever your normal workflow would be on an image.

There is an alternate software solution if you do not use Photoshop or have a current version on Photoshop. Some of the earlier versions of Photoshop did not do near as good a job of stitching images together as CS3. The program is ArcSoft Panorama Maker 4 Pro. Although I have not tried the latest version I have heard it does an excellent job with many people claiming it is better than Photoshop. A trial version can be downloaded from their web site. Just go to www.arcsoft.com The price for the regular version is \$39.99 while the Pro version is \$79.99. The difference between the two is that the Pro version supports RAW and would be the best way to go for those of you who do shoot RAW. I recommend shooting RAW but that is another matter and just my recommendation. Great panorama images can be done with JPEG files also.

In summary, if you get it right in the camera, the rest is easy. The secret is keep the camera level and the exposure consistent throughout the process. Do that and overlap by 1/3 and the images will come together easily for your panorama photographs.

A few final thoughts. Many people like to make their panorama images using a 3 to 1 ratio. Examples would 8 X 24 or 10 X 30. However, that is a personal matter. I always try to shoot a little more on each end just to give myself options when cropping to the final size. Unfortunately there seem to be times when the scene just does not lend itself to a panorama. For example, the light may be changing too fast to get a series of four or five images with the same exposure. But that should be rare. If you like the scene, shoot more than one series. One of them should work. There are also times when the subject is moving and it is not possible to get it all together. An example would be the group of white pelicans on the sand bar. You may have to take several series and hope to get lucky with one of them.

Panorama photography is fun and rewarding. Once you start looking around you will find many subjects that lend themselves to the panorama style of photography. Enjoy and if you have any questions feel free to contact me.

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