



Movie 7

Photomerge and Align Image

Adobe Photoshop CS3 for Photographers by Martin Evening

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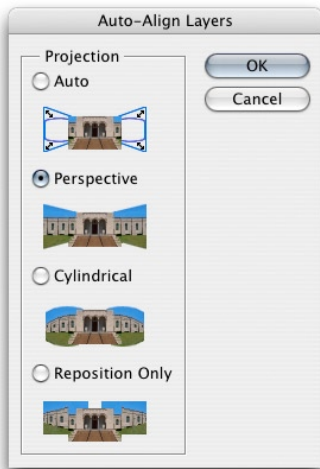
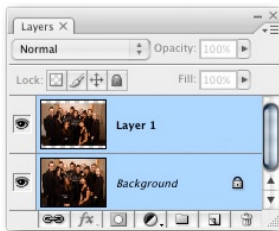
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Auto-Alignment

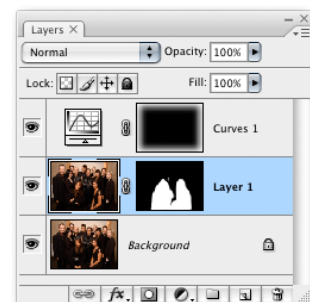
In the Image Stacks movie we looked at using auto-alignment in Photoshop CS3 when auto-aligning images into an Image Stack. Let's now look at how to auto-align image layers in a document.



1 Here are two photographs from a sequence of shots taken of a group portrait. Ideally, I wanted to combine the exposure at the top with the one below, where the two girls in the front looked more relaxed. To do this, I used the move tool (with the **Shift** key held down) to drag the lower photograph across to the top image to add it as a new layer in register with the one below. I then selected both layers and went to the Edit menu and chose Auto-Align Layers... I selected the Perspective option and clicked OK.



2 After applying the Auto-Align command, the two layers should be in close register. In this example, the Auto-Align process enlarged the Layer 1 slightly, so that the people in the Layer 1 photograph matched the size of the people in the Background Layer photograph. I then added a layer mask filled with black (⌘-click the Add Layer mask button in the Layers palette).



The interesting thing to note about the example used here is that the two photographs were taken from slightly different shooting angles and with different crops. But when the Auto-Align feature is used in the Perspective mode, it can do a really good job of aligning the images and getting them to match. If the photographs you are joining together were for example, shot with the camera locked in position on a tripod, then you might find it better to use the Reposition Only alignment.

Client: Clipso

Photomerge

The Photomerge command has been improved through the shared use of the new align content technology in Photoshop CS3. The difference between this and the Align Layers command is that you use Align Layers to align layers already in an image document. Photomerge is used to create an align layered image from a selected set of images.

Auto-Blend cut-outs

If you look closely at the way the Auto-Blend works, you will notice that when it analyzes the images, it adds a mask to each layer such that each area of the final composite is defined by a single portion from each layer. And the layers themselves are cut-out using a jagged outline to break up the edges of each layer element. As a result of this, you should find that the combined Auto-Align and Auto-Blend, or full Photomerge process will usually produce a composite free of overlapping picture elements and fuzzy sections, like you can see in the Step 1 result opposite.

Auto-Blend layers

The full auto-align process is carried out in two stages. Stage one is where the Auto-Align Layers command is used to align selected layers (a Background layer must be promoted to a normal layer if you want to align it), based on the image content and place them in register. An Auto-Blend Layers command can be used to complete the process, by intelligently analyzing the image and aggressively masking the individual layers to produce a composite in which the individual layers are all masked out like pieces of a jig-saw puzzle. In the example shown opposite, I used the Photomerge command settings shown in Figure 1 to merge a group of selected images using a Cylindrical layout, but without applying the 'Advanced Blending'. This allowed me the opportunity to apply some edits to the individual layers, before selecting the Edit ⇨ Auto-Blend layers command to merge the layers together more smoothly. Note that the Photomerge command shown below in Figure 1 shares the same interface options as the Auto-Align Layers dialog. Basically, the Auto-Align Layers is just performing the layer alignment step that is part of a full Photomerge operation.

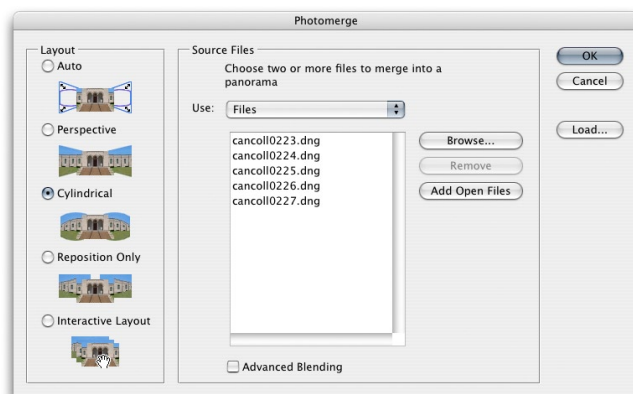
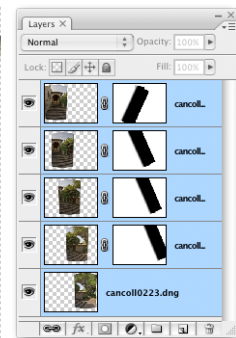
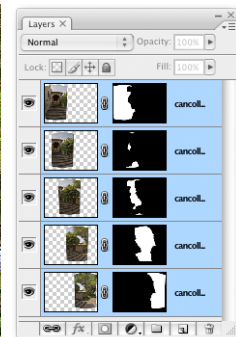


Figure 1 Here is the Photomerge dialog showing the settings used to create the Photomerge composite shown in Step 1, opposite. The Cylindrical layout can be used to create a photomerge image in which the natural perspective lines are constrained to a cylindrical mapping. This is a useful layout mode to choose when merging images that make up an extreme wide-angle view.



1 As was mentioned in the text on the opposite page, there are times when it is more helpful to carry out a photomerge in stages. In this example, I used the Photomerge command to align the selected images, so that I could edit them individually first before blending them.



3 Once I had edited the layers, I selected them all and chose Edit ⇒ Auto-Blend Layers to merge them and create the composite shown here (with a little extra work done to enhance the sky color).

Photomerge made simpler

Those of you who are familiar with this feature will notice that the new Photomerge options will make it much easier to render a Photomerge image using one of the Auto options in the Photomerge dialog, which are shown in Figure 3. The Interactive layout mode is retained so that you can have full manual control over a Photomerge image.

Photomerge in Interactive layout mode

Photomerge is mainly used for stitching photographs together to create panoramic compositions. There are other programs out there that can do the same kind of thing with varying degrees of success. But now with the improved auto-alignment in Photoshop CS3, I would consider the Photomerge feature to be among the best. I will often use Photomerge whenever I want to capture a view wider than the lens on my camera will allow. Photomerge will now work well in auto or one of the other new modes, and there are examples of Photomerge being used in these ways in the book. But in this section I want to show you how to use Photomerge in the Interactive layout mode.

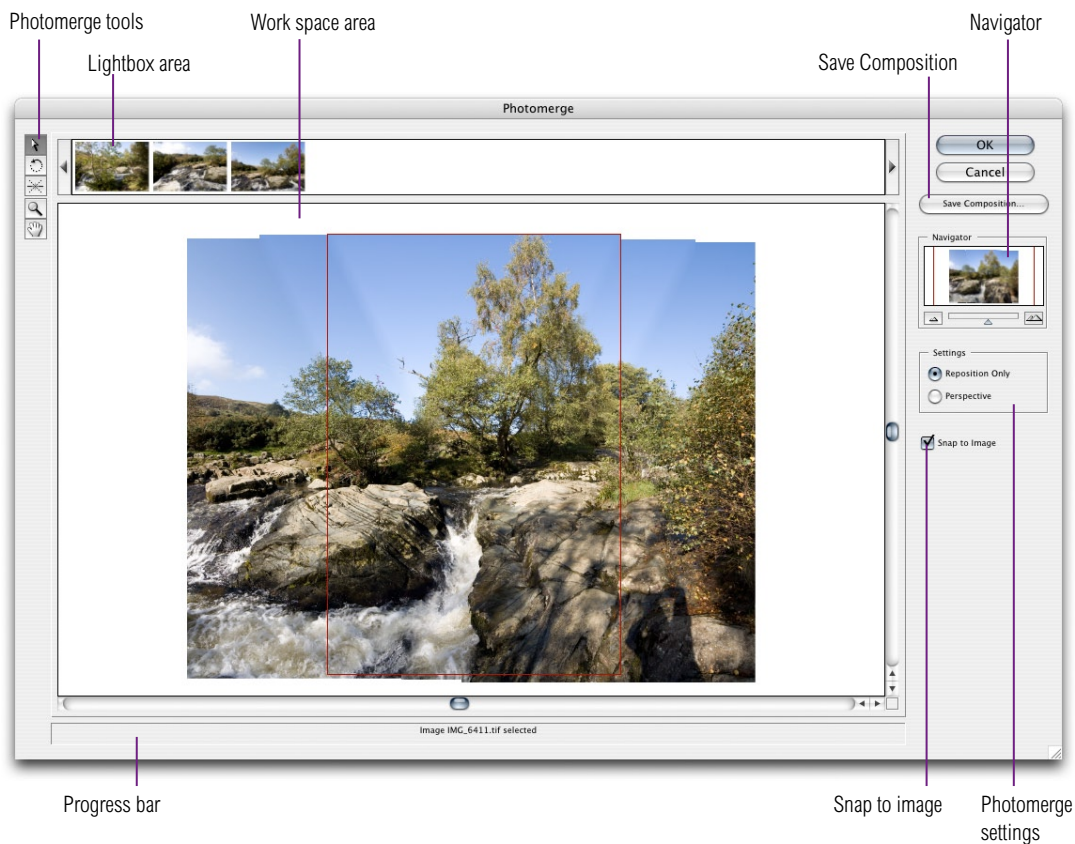
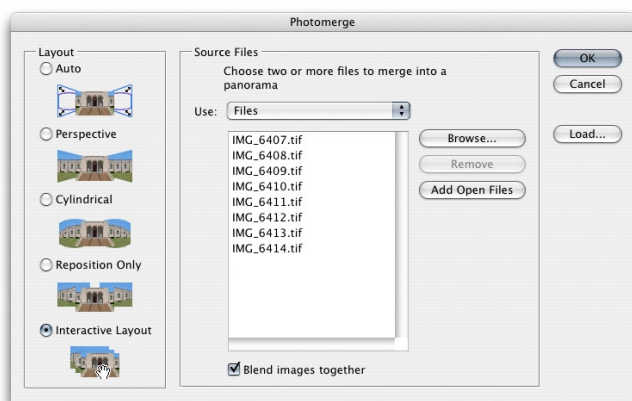


Figure 2 The main Photomerge dialog.

You will generally get good results if you start with a simple composition that stitches together just a few shots rather than bombarding it with too many images. And before you shoot the photographs, set the exposure setting to manual so that the exposures are all consistent. And if you are shooting digitally, make sure that the white balance setting also remains the same (although if you shoot raw, you can apply a single white balance in the Camera Raw processing). The focal length must remain constant as well; do not attempt to zoom in or out as you are taking photographs. Wide angle shots are more tricky to stitch together, so try to use a focal length that is equivalent to a 35 mm lens on a 35 mm camera, or longer.

There are two ways you can use Photomerge. The easiest way is to use Bridge to select the images you want to merge and choose Tools ⇒ Photoshop ⇒ Photomerge. The other way is to launch Photomerge from the File ⇒ Automate menu, and click on the Browse button in the introductory dialog to select a folder of images, or browse through the folders on your computer to add specific individual files you wish to merge together, or if the images you wish to merge are already open in Photoshop, select the Open Files option. If you then check the Blend images together option at the bottom, Photomerge will automatically attempt to join images together when it opens the Photomerge dialog shown in Figure 1.

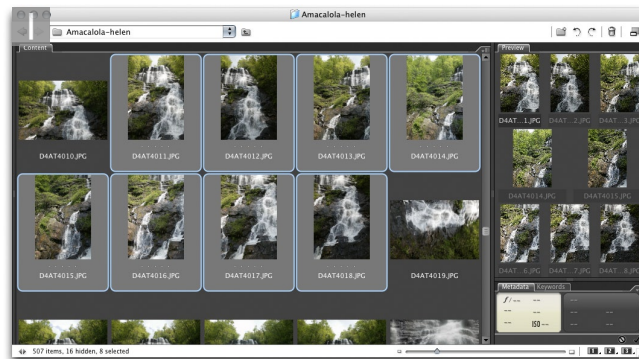


Photomerge photography tips

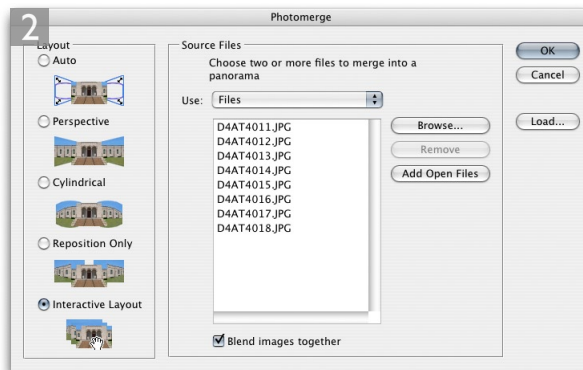
If you are planning to capture a panoramic scene, then you need to make sure that all the images overlap sufficiently, by at least 15%. As you take your series of pictures, rotate the camera in gradual steps aiming to pivot the rotation around the center of the lens. And try to prevent the camera lens axis shifting about too much. You can do this by handholding the camera, but to get the best results, you could consider using a tripod head like the Pan head from Manfrotto™, which when used with the angle bracket clamp, will let you capture images that align more easily in Photomerge, because the center of rotation can be positioned accurately around the center of the lens axis.

Figure 3 The Photomerge opening dialog where you can select which images to process and choose from the different Photomerge modes. If you wish to load a pre-saved composition, there must be no images loaded in this dialog. Start with an empty dialog and click the Load... button. This will load the saved composition data and locate the associated source files.

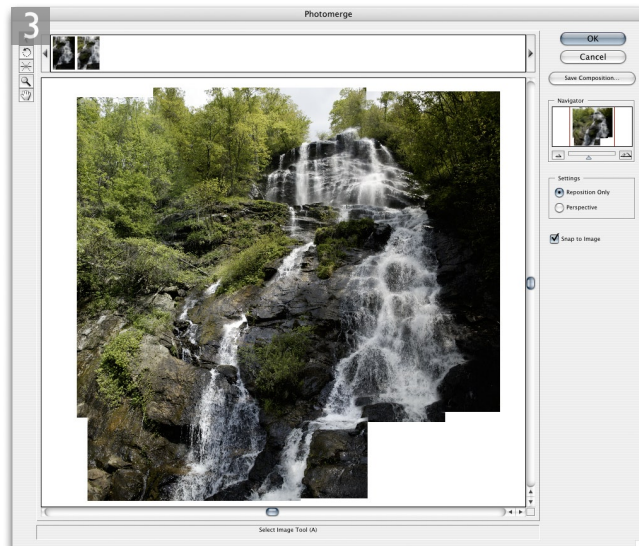
1 Although you can use the File ⇒ Automate menu in Photoshop, I find that the best approach is to make an edited selection of photographs via Bridge and choose Photomerge... from the Bridge Tools ⇒ Photoshop menu.

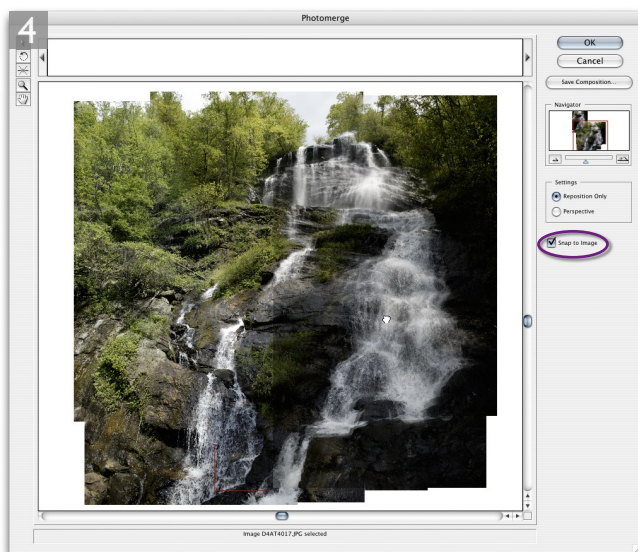


2 The Photomerge dialog will list the photographs that have been selected and present a range of Photomerge options. For the following steps I chose to use the Interactive Layout option (the one selected at the bottom of the list of options).

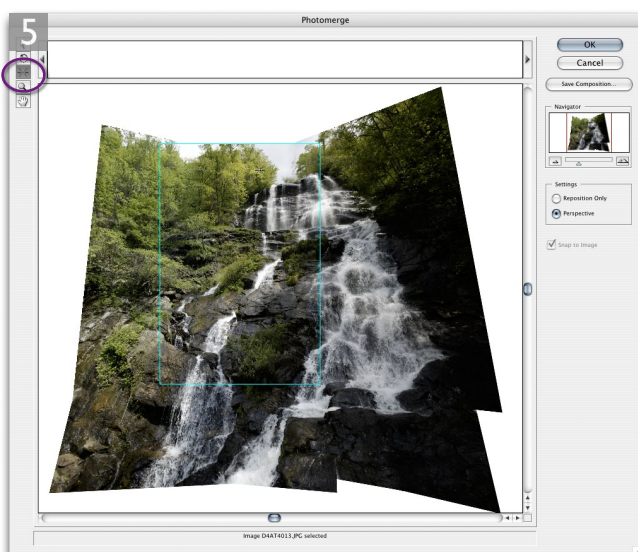


3 As Photomerge launched it opened all of the images in sequence and attempted to auto stitch the pictures together. As you can see here, Photomerge was able to work out how to assemble six of the eight shots in the work area all by itself. The two shots that wouldn't auto match were held in the Lightbox area above. At this stage I was able to use the Navigator controls to zoom in and out of the work space area and scroll around the composition.



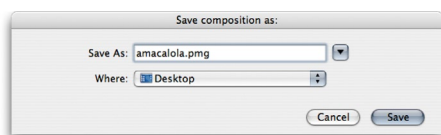


4 To merge the remaining images held in the lightbox area, I made sure the Select Image tool was active and the Snap to Image box (circled) was checked. I clicked to select the images in the lightbox area and dragged them across into the work area. The image appeared semitransparent where it overlapped the underlying composition. This enabled me to judge where to position it so that the image registers as closely as possible to the rest of the composition. If the image did not appear to match too well, I could have selected the rotate image tool and rotated it slightly until it did.



5 Once all the image components were in place, I could try making further improvements. I clicked on the Perspective button in the dialog settings and Photomerge adjusted the composition preview, transforming each image component in order to achieve an improved composition perspective, centered around the currently active image (which was the one outlined above in red). If the perspective needed adjusting, I could select the set vanishing point tool (circled) and click in the work area to set a new vanishing point. I then clicked OK to process the images and render a blended panorama photograph.

If at this stage I simply wanted to save the composition settings, I could click on the Save Composition button and name this as a saved Photomerge setting. To load a Photomerge setting, you can choose Photomerge from the Photoshop (not Bridge) File ⇨ Automate menu (see Figure 15.22) and click on the Load Composition button in the opening dialog. Photomerge settings can be saved anywhere, but they may fail to work if the source folder name is changed.



Automatic Photomerge

The new Align Content processing has also allowed the Photoshop team to update the Photomerge feature such that it can now do a really good job of automatically aligning a group of images, bypassing the need to use the interactive Photomerge layout dialog.

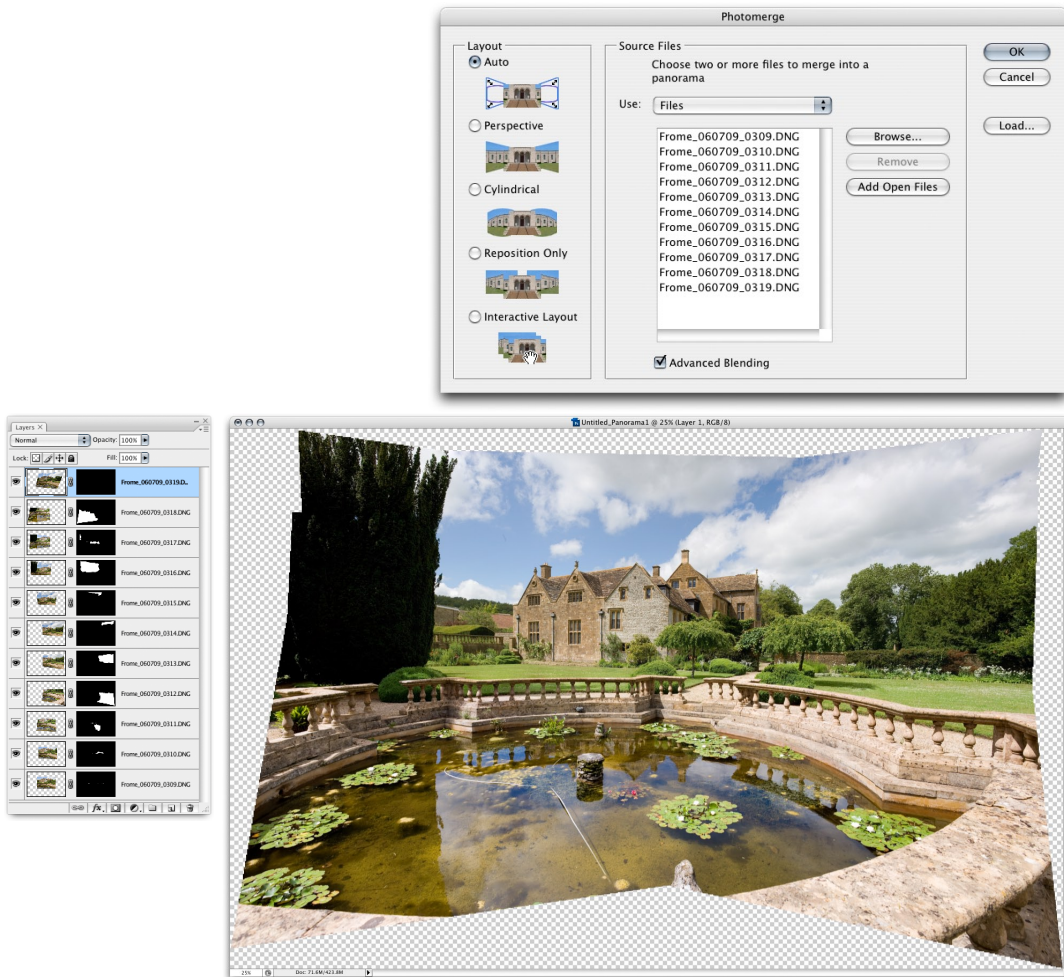


Figure 4 Shown here is the very first attempt I made at using Photomerge in Auto mode to align a set of 11 photographs, all shot from the same position. I have used Photomerge quite a bit in the past, but the improved accuracy of the results has really been quite impressive.