

## Panorama Workshop

Stitching many pictures together to create a panorama has been around for many years. Adobe Photoshop and Adobe Photoshop Elements have a capability called Photomerge.

The traditional Photomerge created one-dimensional panoramas where many pictures were lined up side-by-side and a wide picture was the result. For this to work the photographer was warned to:

- Overlap each picture by at least 20%.
- Turn off almost all the automatic features such as Focus, Exposure, White Balance, Image Stabilization and the like. Use Manual Mode.
- Mount the camera on a tripod and check that it is level.

In the last few years a different stitching method has emerged where the only hard-and-fast rule is to continue overlapping the pictures. The new software will straighten each picture and adjust the exposure. The new software will stitch both horizontally and vertically – and the results are far superior to what was possible before.

The new Adobe Photomerge software, found in Photoshop CS3 and Photoshop Elements version 6, as well as the free Autostitch Demo software, have revolutionized panoramas. With the two dimensional capability you can merge almost anything – landscapes, buildings, rooms, objects and the like. Keeping in mind the requirement that each picture needs some overlap let's grab a half dozen or so pictures to try the Autostitch software. Transfer the pictures from your camera to a folder on the desktop.

### Autostitch

Google the word **Autostitch** to reach the download site. First look at some of the examples and then download the program to a folder on the desktop. Unzip the program and it's ready to go, no installation required.

After starting the program you are asked to select the JPEG pictures. Open the desktop folder where we saved our pictures and highlight them. Once this is done the program starts and creates the panorama placing the result, *pano.jpg*, in the same folder containing the original pictures.

Boy that was simple!

### The Panorama – Print or View?

To view a picture, any picture, on a computer monitor requires relatively small pixel dimensions – less than 800 pixels wide and 600 pixels high. Printing a high quality picture on an ink-jet requires about 240 pixels per inch. When the panorama is completed you should examine the result in a graphic viewer program, such as FastStone Image Viewer, to determine if Autostitch gave you enough information (pixels) to get a quality print.

The default Output Size (Edit > Options) parameter in Autostitch is probably not sufficient for a quality print. Determine how big the print ought to be (after cropping) and change the Output Size parameter to get more pixels on the paper. Ignore most of the other stuff in the Autostitch Options screen.

I think this is the easiest way to do it. Give Autostitch a try, examine the results (*pano.jpg*) in an image viewer, adjust the Autostitch Output Size and create a new *pano.jpg*. Open the new try in FastStone, crop it and print it.

This is some of the README.TXT file that accompanies the program.

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Autostitch - Demo Version  
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Autostitch(TM) is world's first fully automatic 2D image stitcher. This demo has been created to demonstrate the basic functionality of Autostitch. The user simply selects a set of images using the windows interface, and the software automatically stitches them into a panorama. This program has been tested under Windows XP/2000/98.

**How to use this demo:**

1. Run the program autostitch.exe.
2. Select File->Open and select a set of images to be stitched. Currently, the input images must be in JPEG format.
3. The program will align the images, taking a few seconds per image.
4. The program outputs the file pano.jpg in the input directory. It also attempts to open the output panorama using the default image viewer.

NOTE: if the image viewer command fails, an error message will appear. Navigate to the directory of input images and open the file pano.jpg to view the result.

**Options:**

Using Edit->Options you can set the following options:

1. Output Size

You may specify the output size based on the desired output width, height or relative size compared to the input images. Be sure to check the radio button beside width, height or relative size appropriately.

2. Blending Method

Select linear or multi-band blending. Multi-band blending is slower but gives better results.

8. Other Options

Choose a JPEG quality setting in the range 75-100.

Setting the System Memory allows the program to allocate resources more efficiently. If you get an "Out of Memory" message, try decreasing the System Memory.