

## Photographing Buildings - A Challenge

One of the challenges in photographing buildings is perspective. We usually have to “look up” at buildings, yet they appear to be straight to us. When we photograph buildings, they are often seen to be leaning over or “out of shape”.

The culprit is “perspective” – our brains compensate and interpret the lines as we expect to find them. However, the camera only records what it sees, literally.

To cut a long story short, the key to controlling perspective is very simple – keep the plane of the building and the plane of the image parallel!

OK, that’s sometimes easier said than done, so here are some hints:

- Keep the camera horizontal, side-to-side and front-to-back (use a miniature spirit level that fits into the flash shoe), and turned so that the image plane is parallel to the building face, then crop out the unwanted space
- or
- Use a wider angle lens (and leave a good amount of spare space all around the image that you want to end up with) – then fix the resultant image in the darkroom or your digital editing software
- or
- Shoot it as a panorama of stitched images
- or
- Use a “perspective control” lens, that has some of the shift/rotation capability of a view camera (several lens/camera manufacturers make these for 35mm or digital cameras)
- or
- Use a view camera and make all the adjustments before you shoot!

So it really is that simple, and costs almost nothing! We will not dwell on the last two methods, since we can solve the problem with the first three.

The spirit level will keep the camera on a horizontal plane, to keep the plane of the building face parallel to the image plane there is a simple trick – the shortest distance between you and the building must end in the center (horizontally) of the image.

You can check this in the viewfinder by making sure that any prominent vertical or horizontal lines are both parallel to the edges of the image.

Of course, if you want to look along the street, you really do want perspective to be evident in that dimension, so just ensure that the camera/lens is horizontal and the natural perspective, that you can see, will be evident in the image.

Part two of this field trip will be to explore software methods of correcting perspective using Photoshop and other software. This will be demonstrated at the Digital Editing group meeting in November.

In the darkroom, you can do perspective correction by tilting the paper easel (or enlarger head) to “reverse” the incorrect image. This requires a lens that stops down to a fairly small aperture to get the required depth of field, with a resulting longer exposure.

An extension of perspective correction is shooting panorama’s. The key here is to make sure the “optical centre” of the camera/lens combination (very roughly, this is about half way between the front of the lens and the image plane, but depends on the lens design) is stationary as you pan/tilt the camera to get a series of overlapping frames. We will explore some simple ways of doing this. For frame overlap, try and aim for about a 30% overlap to allow for the stitching process but also the area lost around the edges when correcting the assembled panorama.

Single row panoramas are relatively simple. Multi-row images become more complicated with more corrections required as you will have increasing distortion as you raise the vertical angle of the lens axis. However, you can get a great amount of detail in you images this way.

Stitching the panorama together is best done with specialist software (including Photoshop, PanoTools, AutoPano etc.). We will be demoing this at the Digital Editing meeting in November.

My plan is to have a demo set up on Johnson Street at the beginning of the trip, then you are on your own to wend your way around to the lunch spot.

**Meeting place:** Johnson Street entrance to Market Square – bonus, if it's wet, we can shoot inside Market square.... Parking available on street or in the Yates St. Parkade (free/no limit on Sundays).

**Equipment:** a tripod is very desirable. I have a couple of spirit levels so those will be available.

**Lunch:** Irish Times Pub, Government at Bastion Square @ 12pm

**Locations:** Johnson Street, colourful building facades; between Wharf and Douglas, north of Fisgard, older "industrial" buildings; Fan Tan, Waddington, Trounce Alleys, narrow spaces, Old Customs Building (wharf Street) etc..

**Web Resources:**

Some resources are listed here. There are also listservers and forums covering the field.

Max Lyons (PTAssembler): <http://www.tawbaware.com/maxlyons/index.html>

Panorama.net: <http://www.panoramic.net/>

360Rage: <http://www.360rage.com/>

AutoPano: [autopano.net](http://autopano.net)

Additional resources will be discussed at the Digital Editing meeting.