Nikon 24-120 and 28-105 Comparison

Early days yet, but here is a quick comparison of the 24-120 and 28-105. Used Fuji Sensia 100 in Nikon N8008s and heavy duty tripod and remote release on same scene outdoors in good sunlight for every shot. Compared quality of details on printed signs and other architectural detail at maybe 200 metres using a laboratory microscope at about 40x magnification on the slides.
Earlier tests with other lenses convinced me to bypass testing with print film as the slide film result yields an easier way to see differences.
When I buy a film scanner you will get to see the differences but as of now you have to trust what I saw and reported below.
I was putting off this comparison because I thought I would have difficulty, but as it turned out the differences were easy to spot so proving to me that the 28-105 is the better lens.
So far I have only briefly examined the centre & edge detail, closer examination may alter things a little.
The edge detail was checked at approximately 18mm from the centre, ie the frame side area.

	Nikon 24-120 @ f/11	Nikon 28-105 @ f/11
28mm		Best centre, best edge
35mm	Best edge	Best centre
50mm	Best edge	Best centre*
70mm	Best edge	Best centre
85mm	Best edge	Best centre
105mm		Best centre, best edge

* at 50mm the centre difference was only very slight, at all other focal lengths it was quick and easy to see the difference.

	Nikon 24-120 @ max aperture	Nikon 28-105 @ max aperture
28mm		Best centre, best edge
35mm		Best centre, best edge
50mm		Best centre, best edge
70mm	Best edge	Best centre
85mm		Best centre, best edge
105mm		Best centre, best edge

So it appears at both wide open and at f/11 (usually the best aperture for resolution) the 28-105 yields a better centre image. The edge detail fall off seems to be more with the 28-105 for a certain range of focal lengths. When projected on a screen I didn't pick differences but then my projector lens is nothing amazing. I trust the optics in my nice old Reichert laboratory microscope more than I do the projector lens.

Tested at all apertures at 24mm, the 24-120 shows objectionable light fall off to the corners at f/3.5, less at f/5.6, practically gone at f/8 and completely gone at f/11.

Tested at all apertures at 28mm, the 28-105 shows light fall off to the corners at f/3.5, a lot less at f/5.6 and is gone by f/8.

The 24-120 at 120mm yields quite a bit of distortion and a city skyscraper situated on the edge of the frame gets a distinct banana shape.

The 24-120 was not supplied with a lens hood but I took care to hold some black cardboard to act like a sun shield. The direction of the shots meant both lenses would not have had sun falling on any part of the front element or surround if I didn't have a lens hood, so lack of hood was not really an issue.

Other observations...
The 24-120 is heavier and "chunkier" than the 28-105 but still is nicely balanced and convenient to use.
The 24-120 uses 72mm filters as opposed to 62mm filters on the 28-105.
The 24-120 zoom ring operates in an opposite direction to other Nikon zooms I have tried. No big deal, just odd.
The 28-105 focusses close enough to get 1/2 life size on film, the 24-120 can only focus close enough to get a bit better than 1/5 life size.
Both zooms are hard to focus manually particularly at the maximum focal length in dimmer light, but the auto focus works well with both lenses in conditions so dim the view screen is nearly impossible to see.
In other comparison tests I thought the 28-105 was fairly bad wide open compared to prime lenses at the same aperture, but the 24-120 is even worse.
Other reports have had the story that the 24-120's strength is at the 24mm end but I found the performance lacking at all focal lengths except the comparison at 50mm was oddly close.

Summary....
The 24-120 may be OK for a handy to carry tourist lens as long as you only looked at 4"x6" prints.
Critical slide use or print enlargements are bound to disappoint.
The 28-105 gives a better performance than the 24-120 but even then it would be wise to stick around f/8 to f/11 to try and get decent performance out of it. If really serious about results you should be using prime lenses, after all I am the "prime lens preacher"!

More later..... regards, Guy

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