

Nikon introduces a new lens to bridge the wide-angle gap. You'll need software to fix the chromatic aberration, but it's worth the trouble. **BY ELLIS VENER**

Reach for the Wide

A LOOK AT THE 10.5MM F/2.8G ED AF DX FISHEYE-NIKKOR



For those of us who like wide-angle, and I mean really wide angle, the DSLR revolution is something of mixed blessing. Unless you go with a camera with a full-frame sensor like the Canon EOS-1Ds series or the Kodak Professional DCS14n or Pro SLR series, you can go only so wide.

This is the major downside of digital's focal length multiplication factor (FLMF).

On current Nikon and Fujifilm DSLR

cameras with 23.7x15.6mm CCD or CMOS sensors, your 17-35mm f/2.8 AFS Nikkor zoom effectively becomes a 25.5-52.5mm f/2.8 lens (1.5X MLMF)—a nice general range but not ultra-wide. The more exotic 14mm f/2.8D ED AF Nikkor becomes a 21mm f/2.8 lens.

Even though these lenses have an effectively longer focal length (considering only the angle of view captured by the

sensor), the depth of field at any given f/stop will be the actual focal length of the lens. If you like really shallow depth of field, this can work against you. If your goal is to have the primary subject in definite focus, it will make your life easier.

Hearing rumblings of discontent from the field, Nikon has introduced two new lenses to bridge the wide-angle gap: the 12-24mm f/4G ED-IF AF-S DX Zoom-Nikkor and the 10.5mm f/2.8G ED AF DX Fisheye-Nikkor.

You can't exactly say that the 10.5mm Fisheye Nikkor has a 1.5X FLMR, because Nikon's fisheye lenses don't work the same way optically as standard lens designs. On a Nikon DSLR, the diagonal angle of view captured by the 10.5mm is 180 degrees, or about 99 degrees across the short side of the DX sensor and 150 degrees across the long side.

All in all, at about 2.5x2.5 inches and 10.8 ounces, this is a neat little, well

10.5mm f/2.8 DX Nikkor on Nikon D70 original capture. No modification.



All images ©Ellis Vener

performing lens. It can focus down to shooting distance of 5.5 inches, and when stopped down to $f/22$, with a depth of field from infinity to just under 8 inches.

For an AF lens, the manual focusing ring feels good; it's responsive and neither sticky nor too slick. Being a G-type Nikkor, there is no manual aperture ring on the lens, so aperture is controlled strictly from the camera body. You can mount the lens on a Nikon film SLR, but you'll crop off the long ends of the format and also see the inside of the built-in lens shade.

To record a 180-degree image to film or to a digital sensor, a fisheye lens must use an extreme amount of barrel distortion—we all know the look. If used intelligently, this results in a great looking image. If not, it can look like a gimmicky psychedelic crutch.

There's a bonus feature when you use this lens on a Nikon DSLR body. When you shoot in the Nikon NEF format, you can use Nikon Capture 4.1.3 (or later) software to remap the captured image into rectilinear perspective.

There is a downside to this remapping option, and it's inherent to all ultra wide-angle and fisheye lenses used on digital cameras: chromatic aberration. When you use the remapping function in Nikon Capture to convert to rectilinear view, the problem gets worse. Part of the problem lies in the conversion process, when the software converts the original fisheye image (2,000x3,008 pixels with the Nikon D70), and crops it severely, and then interpolates it back up to the original file size.

There is a solution to the chromatic aberration problem: Adobe Photoshop CS combined with the LensFix plug-in from www.kekus.com. The Lens tab in the Photoshop CS Camera Raw advanced mode accesses a menu with four



10.5mm image converted to rectilinear rendering with Nikon Capture 4.1.3 software



Panotools Remap Action used to transform image from "fisheye" rendering to rectilinear rendering

settings: Chromatic Aberration R/C, Chromatic Aberration B/Y, Vignetting Amount, and Vignetting Midpoint. Try setting the R/C level to around -38 and the B/Y level to around +28. Leave the vignetting settings at zero. This should take care of most of the problem.

But the image will still be a fisheye view; you can't convert the image to the rectilinear view in Nikon Capture. Save the converted image as an NEF file and then open it in Photoshop CS. The best technique I've found for a quick conversion to rectilinear is to do the chromatic aberration correction in Photoshop CS Camera Raw, save the

converted file as a TIFF, then use the Remap function of the Kekus Panotools plug-in to convert the image to rectilinear view.

This also interpolates the image file size, *but* (and it's a big but) it doesn't crop the image: it retains the full height and width. The chromatic aberration correction in Camera Raw is a linear correction, and that's fine for low-end chromatic aberration correction. If you need a more precise correction, Panotools has a radial correction feature, but that will require a bit more time and effort on your part. ■