RECENT POSTS
Why Nikon, Why Photographers Must Care
Nikon Announces Mirrorless Camera
Nikon Announces Mirrorless Camera
Nikon Announces Mirrorless Camera
Fujifilm Announces Mirrorless Camera
Fujifilm Announces Mirrorless Camera
Fujifilm

pax / Ctein

Posted by: ctein | Friday, 13 January 2012 at 12:06 AM

Wayne

In the 70s Kodak researched that problem and came up with the Kodak Projection Ektanar C (curved field) Lens, supposedly after measuring the curve of a bunch of slides.

They are pretty easy to find, just about every 1970s and later slide projector came with one. I found mine sitting on the sidewalk in the trash.

I just pulled one out of my big drawer of lenses and found that using it as a relay lens* in front of my 105mm Nikkor focused at infinity it covers pretty much exactly the frame.

I think that the field curvature would work out, but I'm not inclined to put any effort into it at the moment.

I have been thinking of rigging up a carousel projector into a slide film chain as part of a project to dupe thousands of family slides using just such a setup. TV stations used to use a setup like that in the days before digital frame stores

*Either I'm focusing on the aerial image produced by the projector lens, or I'm using it as a 9.8 diopter lens depending on how you want to think about it.

Posted by: hugh crawford | Friday, 13 January 2012 at 12:27 AM

Although I am OK with the results from my Coolscan IV, resolution wise, the thin depth of field gives me fits with transparencies, even remounting the film in tensioning mounts. So I have sprung for a Olympus bellows, slide copy unit and 80mm macro. Not sure if this will solve the DOF issue - at the working distance for duping, it looks like the DOF is around .02" at f8, but we'll see.

Posted by: Alan Fairley | Friday, 13 January 2012 at 11:11 AM

Good article, this one is better than the first one in the series. Even though I've done multiple experiments on this, it's very interesting to get ideas around the topic.

Personally I feel that alignment and flatness are the trickiest problems. I have seen focus stacking suggested, but I haven't tried it on film myself, must try to do that. It's a bit cheating, but might be the most practical solution in the end.

What comes to lenses, at 1:1 the Apo Rodagon D 75/4 is inexpensive considering the quality and a solid choice. At other magnifications good enlarging lenses or macro lenses work. The 55 mm micro Nikkors are in my experience good and of newer lenses the Zeiss macros should be worth a look. I would generally prefer a short focal length.

Posted by: Oskar Ojala | Friday, 13 January 2012 at 04:58 PM

One more thing: the required resolution really depends on what one is scanning. For example, I tried this technique on some 100 ISO/ASA slide film from the mid 70's and the grain and detail was such that I'm confident that fully using 12 mpix is enough for that. For better resolving films (ISO 25 BW, modern color) higher pixel counts do make sense. But a friend of mine uses a Coolscan 9000 with glass holders and rarely uses the maximum resolution, since he feels that it really doesn't add anything of significance and increases the processing time too much compared to a slightly lower resolution.

For those reasons, I actually value good contrast, dynamics and low noise more than a very high resolution when scanning (I'm assuming a decent resolution of course).

Posted by: Oskar Ojala | Saturday, 14 January 2012 at 02:04 AM

The comments to this entry are closed.