

## Re: Wild M420

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- *From:* [r914g@xxxxxxxxxx](mailto:r914g@xxxxxxxxxx)
  - *Date:* Wed, 26 Dec 2007 12:28:29 -0800 (PST)
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On Dec 23, 9:44 am, scitech200 <scitech...@xxxxxxxxxx> wrote:

Hello Graybald,

Thank you very much for your informative post.

The optical path is pure vertical.

Yes, this is exactly why I want to use the M420 module I have available – I don't know how I managed to include stereo in my post, probably because I'm usually trying to get images from a stereo stand! Of course, the superb M420 zoom is nice to have....

...aperture diaphragm is in the viewing head, so you need to consider how you are going to do something similar to control depth of field.

I'm OK with this as I have spare diaphragms that can be mounted in custom machined parts.

However, the relay optics between the Makro zoom module and the camera may be more of a challenge?  
I may not have been explicit, but I do not have a viewing head.

an ISO photo tube.

This is a simple tube without optics, but well specified diameter, etc – correct?

–Keith

Keith:

Re: Wild M420

Happy holidays! It sounds like you understand depth of field control (aperture diaphragm).

What you need to do now is to find the parfocal mounting point for your camera, relay lens, or imager. It will be a location where adjusting the zoom ring on the M420 lens does not require changing the distance to the subject to refocus. Maybe Leica headquarters or one of their dealers can tell you this.

On my McBain converted M400 (with the zoom achromat) the top of the phototube is about 7-1/2 inches above the top face of the zoom objective lens. The Olympus photo eyepiece for my Diagnostic Instruments 35mm camera adapter is another 3/4 inch up from there. You did not say which zoom lens you have. I don't know if the location will be exactly the same for the achromat and the apochromat.

What you want to do has been done before. Occasionally on eBay you will see a used Wild macrozoom (achromat) lens sold from New Mexico or California. Presumably they originally came from one of US national weapons labs (or maybe the semiconductor industry) and were built into custom imaging systems.

Keep in mind that the M400 was introduced about thirty years ago, so the zoom achromat is not the most recent or very best current technology. My M400 system was rescued from the tool crib at Boeing Surplus in Kent, Washington. I cherish it because I know I never will find another similar scope for such a reasonable price.

Macroscopes and stereomicroscopes are an excellent and versatile way to do photomacrography if you have the money and need to have a long working distance (4 inches) between the lens and the subject. There are other less versatile but cheaper set ups involving used macro lenses (or short focal length movie lenses, reverse mounted) and bellows on single lens reflex cameras.

Nearly twenty years ago I was rummaging through some used 8mm and 16mm movie camera lenses at a camera show in the American Midwest. The seller told me he knew one of the insect photographers who wrote articles for Ranger Rick (a magazine for kids from the National Wildlife Federation). He said that guy used 13mm and 25mm focal length reverse mounted movie lenses glued on to plastic camera body caps. That is about \$25 worth of used equipment rather than \$2500 or \$25,000.

Graybald

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