

Re: Mirror Mount Question

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- *From:* redbelly <redbelly98@xxxxxxxxxx>
 - *Date:* Wed, 12 Sep 2007 06:51:26 -0700
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On Sep 11, 3:10 am, "Iain Mackay" <no_one@here> wrote:

Thanks for the reply folks

Unfortunately, I already have a few kinematics mounts but, as I mentioned in my OP, these aren't ideal if you only want to move the mirror in one plane – as in tilting 'forward' to produce fringes from the fully compensated (wide angle) position of a MI. (The KMs all seem to move the mirror in two directions at one. I know you *can* then correct this using one of the other screws but it gets to be fiddly after a while)

My "three screws in a triangle" comment is a mount has the spring-loaded screws in an equilateral triangle with one screw at the top centre of the plate that is set by the screws – this is the one you use to tilt the mirror forward for fringes. I was interested to see if anyone had this and the translation stage available.

Ah well, looks like a custom job after all.

Thanks

Iain

"Iain Mackay" <no_one@here> wrote in message

news:5cednaelqCYgnjbnZ2dnUVZ8sKlnZ2d@xxxxxxxxxxxxxxxxxx

Optics folks

I'm looking for a manufacturer of a mount suitable for use in the moving mirror in a Michelson Interferometer.

Re: Mirror Mount Question

I'm using 1" square mirrors and a 1" cube BS and tried using Edmunds mounts for the mirrors, but I now realise that these are kinematic mounts and are not really suitable for what I want. (I believe that they are designed to provide the maximum freedom of movement with the minimum number of 'screws'. It *is* possible to set up the MI with these mounts, but adjustment in one plane is difficult.

Before I set off on a possibly expensive custom mount I thought I'd check and see if there is anything out there.

What I'm looking for is a mount that will allow precise 'X' translation possibly with a differential type adjuster (to set the path length) together with a '3 screws set in a triangle' type of mount to allow parallelism and tilt (for controlled fringe formation) in the Z axis to be controlled.

Can anyone point me in the right direction? – a UK supplier preferred but not essential

TIA

Iain M

Iain,

I think most people would just bolt a mirror mount onto a translation stage to do this. You'd be purchasing three separate items from whatever supplier you end up going with: the mirror mount, the translation stage, and a micrometer screw assembly for the stage.

As Phil suggested, the screw assembly should probably be of the differential type for precise control.

Most (all?) commercial mirror mounts I've used were:

1. for round mirrors, and
2. had orthogonal tilt adjustments

You may need to either get a round mirror or have a local machine shop make an adapter for you.

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Regards,

Mark

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