

tor, and I don't want to talk about the amount of money spent on research and prototyping. Small companies cannot even afford to design such a lens. It took me over a year to design the mechanical parts of an 18-210mm zoom lens for TV and another six months to test and improve the original design.

Later in the field, the lens has to take a lot of abuse during shooting, transportation etc. and these conditions cause a lot of problems. A prime lens stands up much better, the reason being that it has fewer parts and the design is simple compared to a zoom lens. With a little care and understanding of the system, the life expectancy can be lengthened, and maintenance costs kept to a minimum.

To help solve or prevent some common problems, here are a few tips:

1. Check lens mount for damage.
2. Check if mount is loose.

3. Check camera mount for dirt and damage.

4. Check turret for bending and play with focal flange depth gauge.

5. Check seating of lens in camera mount.

6. By using zoom support, check alignment of holders or brackets. This can be done by holding the camera mount facing upwards, set lens in and adjust your support to the lens as it sits now.

7. If collimeter is available, check for collimation of the lens.

8. Mount lens on camera and check with an open shutter, the focus on the focal plane (gate) using optically flat frosted glass, and if necessary - a prism and magnifier.

If all this proves satisfactory, you can be sure your groundglass on the camera is out, and this shows up especially on short focal lengths. The job has to be

done by a professional and needs some special tools, but you are not lost yet. You can keep on shooting if you set your focus strictly by tape, and use the viewfinder only as a reference to check your framing.

Correcting other troubles like rough and jumping zoom barrel, object running off centre during zooming, stiff focus, stiff aperture etc. I would not recommend doing anything if you don't have the skills and experience. You can do more damage than good.

In conclusion, I could say treat your zoom lens like any piece of precision equipment, prevent hard shocks and dusty or wet environment and the lens will reward you with a good performance.

- Gerd Kurz

- compiled and edited by Frederik Manter

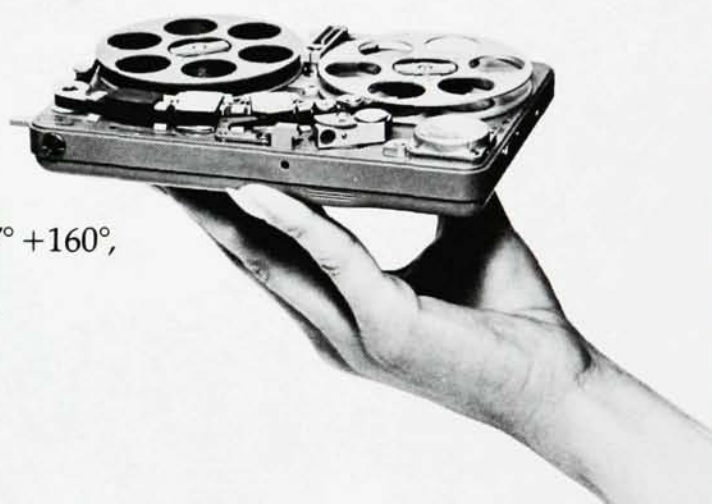
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