

PR035, MINI35: How to Adjust the Target Speed

Many customers asked for a setup procedure for the best speed of the oscillating target glass in the PR035 or the MINI35 Image Converter

Electronic cameras become better and better in quality very fast. While with the first generation of MiniDV cameras the target speed was not a major issue, it is now more important. High Definition cameras see more details than Standard Definition cameras. As well recording systems with compression can cause big trouble from noise or other artifacts. This is just ONE opinion how you can optimize your results - we know that there are many reasons to do it in a different way.

What is the best speed?

We refer to the fact, that a non-visible target-glass causes no problems.

Recommendations:

- Shoot wide open on the front lens if possible
Less Depth of Field (DoF) makes sure that the target does not get in focus
Use the camera / rear iris to expose your image
Use optical filters in front of the lens in addition for light reduction
- Use 'normal' shutter-speeds (1/48s, 1/50s, 1/60s)
This enables the target to oscillate in the proper way (see Technical Info No. 61 "Variable Frame Rates & High Shutter Speeds" for details)

Why is not maximum speed the best speed?

- In principle, a fast moving target leaves you more freedom than a slow moving target (that is the principle functionality of the Image Converters)
- Sync the P+S Technik Image Converter's target speed to the camera's shutter speed - this eliminates additional (maybe) visible interferences AND if you get the target in focus, the structure is not moving / less visible
- Usually you have one speed for a given camera at a given shutter speed / framerate

Adjustments:

- Connect the camera to a quality monitor (best: native resolution monitor)
 - Shoot a flat and even lit surface like a grey or coloured wall
 - Use a wide angle lens
 - Turn on the Image Converter
- Stop down on the front lens until you can clearly see possible moving artefacts (this might only happen on a high T-stop)
 - Compensate to the light level



When do I have to re-adjust the target speed?

- If the camera is changed
- If the shutter-speed (framerate) is changed
(see P+S Technical Info No. 61 "Variable frame rates & high shutter speeds" for details)
- If your operation temperature changes heavily
(see P+S Technical Info No. 47 "Increased Power Consumption in cold temperature" for details)
- Short focal length lenses are usually more critical than longer focal length lenses due to different DoF characteristics. Maybe this results in different target speed settings.