

# PARALLAX

When attempting to achieve the highest degree of repeatability i.e. smallest group size, with any HYSKORE® shooting rest, it is important to have a clear understanding of parallax. Even experienced, good shots can improve their group size by up to 30% by paying close attention to parallax. Parallax is the difference in apparent position of an object viewed along two different lines of sight. To experience parallax extend one of your arms, hold an index finger up, close your left eye, and align the index finger with an object on the distant wall. Now close your right eye and open your left. The object has appeared to have moved. What has actually happened is that you are now viewing the object along a different line of sight. This is exactly what happens inside a rifle scope. We have prepared three diagrams to show you the various conditions that may develop in sighting with a scope.

- A. This is a parallax free focusing arrangement. The image of the target is focused on the reticle. (The reticle is the optical element inside the scope on which the cross hairs are inscribed.)
- B. The image focuses in front of the reticle and in this case you would experience parallax.
- C. The image focuses behind the reticle and also in this instance you could experience parallax.

The correction in diagrams B and C is to adjust the objective lens of the scope so the image focuses on the reticle. On better scopes there is usually an adjustment on the objective bell (this is the end of the scope facing the target) with yardage markings. By turning this you can approximate the correct adjustment. However, since parallax is magnification and range variable, it is a good idea to clamp the rifle in a solid vise on the bench top (The HYSKORE® #30022 Parallax Cleaning and Sighting Vise is perfect for this.) Look at the target through the scope and shift your eye left to right, if the cross hairs remain dead center on the target you are parallax free, if not, you need to do additional adjustment. Inexpensive and low magnification scopes are usually parallax free at a specific range, and do not have parallax adjustments.

Keeping the pupil of your eye concentric with the optical axis of the scope is critical to eliminating parallax. If you can keep your eye positioned on the axis every time you will experience parallax free shooting. Of course, this is almost impossible to do and repeat shot after shot. Moving your eye even a few thousandths of an inch off dead center, when parallax is present, will influence your visual alignment and cause you to change your point of aim, resulting in expanding your group. Therefore, you must make the appropriate adjustments at the designated range to remove parallax. Unfortunately, most scope manufacturers assume that all shooters have a working knowledge of parallax. As a result, the instructions they provide give little or incomplete details regarding this optic condition.

