

## Parallax

Parallax is hard for most people to understand. One way to help explain it is to picture the following: Most rifle scopes in a medium-high variable power range, say 10X or slightly higher, which often don't have external parallax adjustments, are parallax corrected at either 100 or 150 yards. If you take one of these scopes that is set at 100 yards and put it in a vise on high power, with the crosshairs centered on a bullseye on a target at say, 25 yards, and move your head slightly off center to the left and right or up or down, you'll see the crosshairs move off the bullseye, even though the scope has not moved. The scope's "eye" is not focused at the proper distance. This will also happen if the target is set at a much further distance, say 300 yards.

Another way to look at it is like this: Put a small mark from a pencil on a table, and put an inch or so of water in a clear drinking glass. Hold the glass an inch over the mark and move it around slightly in different directions. Looking down into the glass, watch the dot move in directions other than where it should be.

External parallax adjustments, called adjustable objectives or side focuses, are generally on scopes of more than 10 power, or on scopes that are used at close distances. Parallax adjustments are made at the objective lens with a rotating dial marked in incremental distances. Recently it has become popular to install parallax adjustment dials on the left side of the turret housing, which is much more convenient and user friendly. This will become even more common.

Airgun scopes sometimes have high power of 18 or more, even for 10 meter targets. A bad parallax setting may not only appear out of focus, but will wreak havoc on your group sizes, even though your shooting might be technically perfect. For hunting big game, a parallax error will not be as significant as the movement your heartbeat and breathing will cause. You also have another thing to think about if you have to adjust something, using precious time and perhaps a missed or at least hurried shot.

Just because you get a clear sight picture doesn't mean you are parallax free.

A customer asked me the other day if he could get a clear picture through a 2X handgun scope at the 12 foot distance he shoots his air pistol in his house. I went into our warehouse and checked out several different brands. The answer was yes, a clear picture, but by nodding my head even slightly, the crosshairs moved inches off my target. These scopes would be practically unusable at that distance.

If a person only looked directly through the center of their scopes the same every time, parallax would not be an issue, but only a robot could be that repeatable, not a human.

Remember, adjustable objectives are generally not needed for hunting scopes under 10 or even a bit more power. It's just an unnecessary feature to get in your way, and another thing to think about. Keep it simple. The slightly different points of impact possible in hunting applications make the usefulness of this feature negligible.

Airgun scopes and higher power scopes almost always have adjustable objectives that go down to 10 meters (33 feet), which is a standard airgun competition distance. Airgun scopes are generally listed as such, and are durable enough to withstand the severe punishment a reverse-recoil spring piston air rifle delivers. Parallax on rimfire scopes is often set at 50 yards. Shotgun scopes often at 60 or 75 yards. Rifle scopes mostly at 100 or 150 yards.