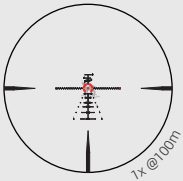
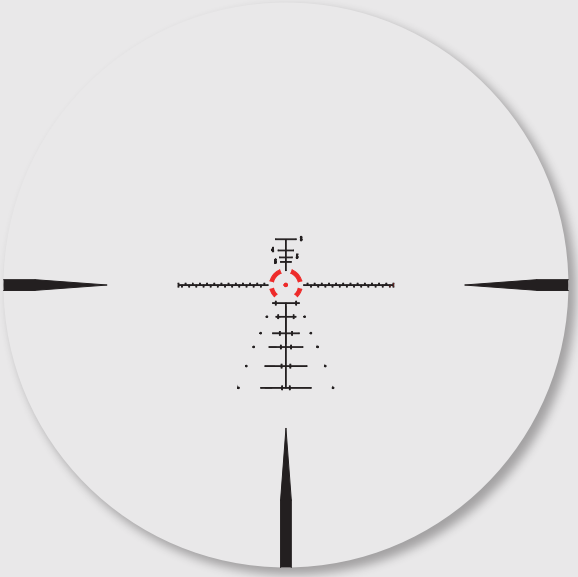
VOS-TMOA SFP RETICLE

The VOS-TMOA reticle is an advanced optical system designed for precision shooting and long range target acquisition. The combination of MOA-based subtensions, BDC marks, and distance ranging marks makes this reticle suitable for tactical and hunting scenarios.

The VOS-TMOA reticle features a distance ranging function. Shooters can align the mark lines below or above the center point with a USPSA (United States Practical Shooting Association) target's "shoulder" to quickly estimate the distance to the target. This significantly improves shooting efficiency in various scenarios.

For VOS-TMOA reticle, the suspension is valid at 10x.





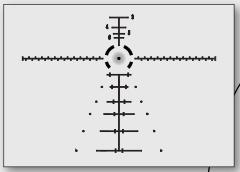
Red indicated illuminated portion of the reticle

COMPENSATION BULLET DROP

Holdover refers to the technique of adjusting the aim of a firearm to compensate for the effect of gravity on the bullet's trajectory. Bullet drop is the decrease in bullet height as it travels through the air. The shooter can use the MOA markings on the reticle to calculate the bullet drop. The MOA markings on the vertical axis represent the distance in MOA between each hash mark. The horizontal axis represents the windage adjustment.

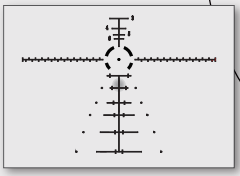
For example, under no wind condition, after zeroing your scope at 100yards, if you know your target is at 500yards and your ammo has a 40 inch bullet drop at that distance, you will need to use 8MOA holdover point. Here is how you get the 8MOA: since 1MOA equals 1 inch at 100yards, 5 inch at 500 yards, and then 40 inch equals 8 x 5 inch at 500, you need to hold the 8 MOA drop point to compensate for the 40 inch bullet drop, thus bring the aim point to line up with the bullet's point of impact.

Before

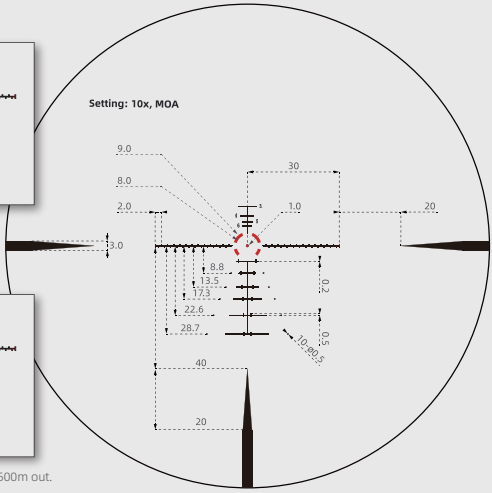


Red represents the chest height of the target

After

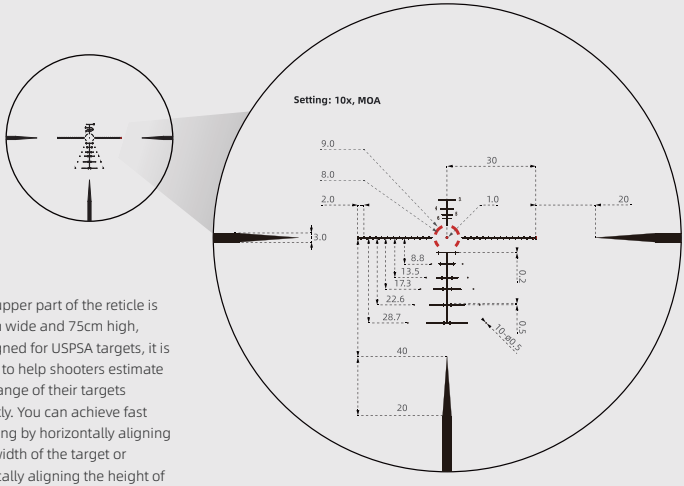


8MOA/40in holdover for a target @ 500m out.
No wind



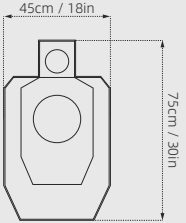
When it comes to wind correction in shooting, there are three key factors to keep in mind: the flying time of the bullet, the velocity and direction of the wind, and the ballistics coefficient (BC) of the bullet. By taking into account these three factors, a shooter can make the necessary adjustments to account for wind drift and achieve accurate shots even in challenging conditions.

FAST RANGING

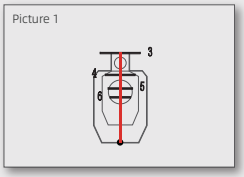


The upper part of the reticle is 45cm wide and 75cm high, designed for USPSA targets, it is used to help shooters estimate the range of their targets quickly. You can achieve fast ranging by horizontally aligning the width of the target or vertically aligning the height of the target.

If you vertically align the bottom of the USPSA target, and its highest point reaches mark 3 on the reticle, then the target is 300 meters away from you. (Picture 1)
If horizontally align the USPSA target's width, and its shoulder at the widest point reaches mark 3 on the reticle, then the target is 300 meters away from you. (Picture 2)

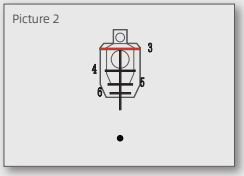


Picture 1



Red indicates the height of the target

Picture 2



Red indicates the shoulder width of the target

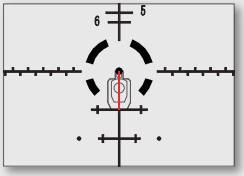
HOW TO MEASURE TARGET HEIGHT & LENGTH

To use the VOS-TMOA reticle for ranging, the shooter first needs to know the height of the target in question. Once the height of the target is determined, the shooter can use the VOS-TMOA reticle to measure the target in mils.

Height of Target (yards) / mils * 1000 = Distance to Target (yards)

If the height of target is in Inches, then the formula should be:
Height of Target (inches) / mils * 27.78 = Distance to Target (yards)
(1 inch ≈ 0.0277778 yards)

This formula works equally well with meters, but don't mix meters and yards:
Height of Target (meters) / mils * 1000 = Distance to Target (meters)



Red indicates the height of the target

If the height of an adult male is 5.91ft, and measures 5Mils across the reticle, that is:
Distance to Target (yards) / 27.78 * Mils = Height of Target (inches)

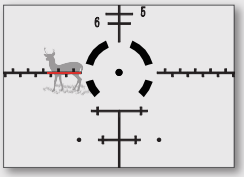
5.91ft = 70.9 inches
70.9 (inches) / 5 mil x 27.78 = 394 (yards)
2.0 (yards) / 5 MIL x 1000 = 394 (yards)
1.8 (meters) / 5 MIL x 1000 = 360 (meters)

If the distance of the target is determined, then the shooter can use the VOS-TMOA reticle to measure the target length. You can use the following formula:

Distance to Target (yards) / 1000 * Mils = Length of Target (yards)

Distance to Target (yards) / 27.78 * Mils = Length of Target (inches)
(1 inch ≈ 0.0277778 yards)

This formula works equally well with meters, but don't mix meters and yards:
Distance to Target(meters) / 1000 * Mils = Length of Target (meters)



Red indicates MILs of the target in reticle

If the Distance to Target is 400m, and the target measures 4.5Mils across the reticle, then the target length is:

400 (meters) / 1000 * 4.5 MIL = 1.8 (meters)
437 (yards) / 1000 * 4.5 MIL = 2.0 (yards)
437 (yards) / 27.78 * 4.5 MIL = 70 (inchs)

Measure the object in yards to find the distance in yards, and use meters to yield distances in meters.