



RETICLE MANUAL

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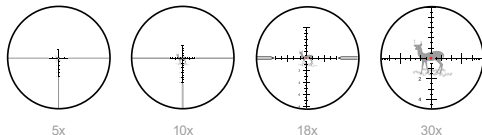
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FIRST FOCAL PLANE RETICLES

A first focal plane (FFP) reticle is a type of reticle that is commonly used in long-range shooting.

These reticles are designed to change their size proportionally to the magnification of the scope. This means that the reticle remains accurate at any magnification, making it ideal for long-range shooting. In an FFP reticle, the reticle markings appear to grow and shrink as the magnification is adjusted, which allows for accurate holdovers and range estimations at any power setting.

Compared to the second focal plane (SFP) reticle, the FFP reticle offers greater versatility and accuracy. FFP reticles are particularly useful in tactical shooting scenarios where quick and precise adjustments need to be made.

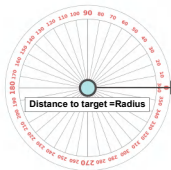


MILS / MRAD EXPLAINED

MILs, or milliradians, are a unit of measurement dividing radians in a circle. A radian is equal to 57.3 degrees, with $6.2832 (\pi \times 2)$ radians in a circle. There are 1000 milliradians in 1 radian, and therefore 6.283 milliradians (or mils) in a circle.

1 MIL equals 1/1000 of any shooting distance. So 1 MIL is 1 meter at 1000 meters, and 1 yard (36") at 1000 yards. Then **1 MIL is approximately 10cm at 100m**, 20cm at 200m and so on. Likewise, **1MIL is approximately 3.6 inches at 100 yards**, 7.2 inches at 200 yards and so on.

A mil is so large that it's usually broken into tenths in order to make precise adjustments on your scope turret.

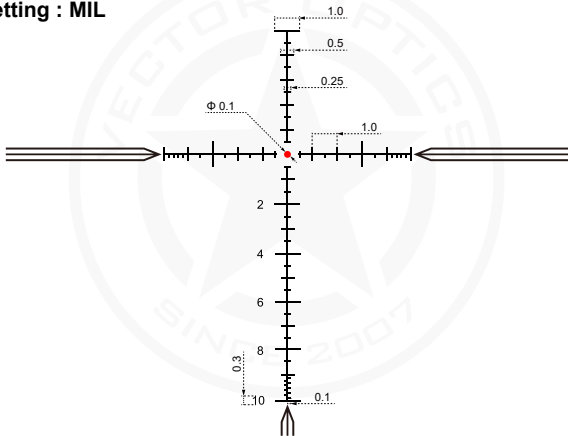


THE Vector Optics® MPX1 FFP MIL RETICLE

The Vector Optics **MPX1 FFP** reticle features a unique inverted "T" Mil-radian ranging scale, with a clear 0.1 MIL dot in the center, and a 1 Mil diameter circle space between the center dot and the ranging scale. It is designed to maximize long distance shooting and ranging abilities.

The MPX1 FFP reticle can be used to effectively determine ranges, holdovers, windage corrections and moving target leads. The inverted "T" Mil-radian ranging scale allows for precise measurements and calculations, while the center dot and circle space provide a clear and unobstructed view of the target. The 0.1 MIL dot in the center allows for accurate aim at long distances, and the 1 Mil diameter circle provides a quick reference for holdovers and windage adjustments. This reticle is ideal for field tactical, long-range hunting and varmint shooting.

Setting : MIL



WIND DRIFT COMPENSATION

The MPX1 FFP reticle can help the shooter compensate for wind drift. You can use the horizontal line width changes as reference points to complete wind drift compensation. To compensate for wind drift, first, estimate the wind's speed and direction. Then, using the line width changes, estimate the amount of holdover required to counteract the wind drift.

RANGING WITH THE MPX1 FFP RETICLE

The MIL is an angular measurement -- 1/6400th of a circle -- which equals almost precisely one yard at 1000 yards or one meter at 1000 meters. To use the Mil Dot 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 Mil Dot Reticle to measure the target in mils. This proportional relationship makes possible a simple formula to compute distances:

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)

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

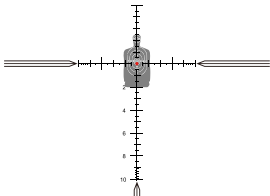
EXAMPLE

If the height of an adult male is 5.91ft, and measures 4.5Mils across the reticle, that is:

**Distance to Target (yards) / 27.78 * Mils =
Height of Target (inches)**

"5.91ft = 70.9 inches

70.9 (inches) / 4.5 mil x 27.78 = 438 (yards)



HOW TO MEASURE TARGET HEIGHT

If the distance of the target is determined, then the shooter can use the Mil Dot Reticle to measure the target height. You can use the following formula:

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

Distance to Target (yards) / 27.78 * Mils = Height of Target (inches)

(1 inch ≈ 0.0277778 yards)

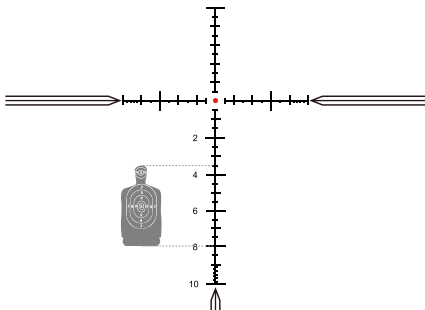
This formula works equally well with meters, but don't mix meters and yards:

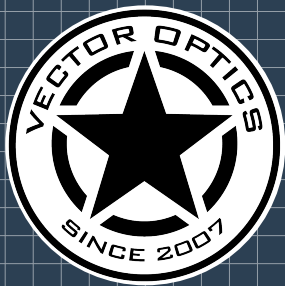
Distance to Target(meters)/1000 * Mils = Height of Target(meters)

EXAMPLE

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

$$400 \text{ (meters)} / 1000 * 4.5 = 1.8 \text{ (meters)}$$





MPX1 FFP

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