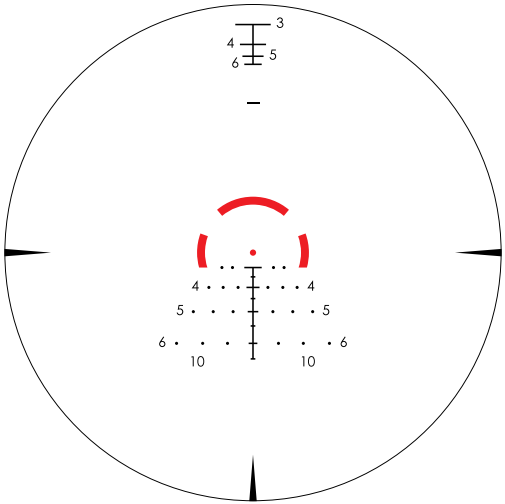
RETICLE MANUAL

AR-BDC3
MOA RETICLE

SECOND FOCAL PLANE
ILLUMINATED

AR-BDC3 MOA RETICLE

Our exclusive AR-BDC3 reticle facilitates rapid shooting at distances from 20 to 650 yards with popular .223/5.56mm and .308/7.62mm loads. This versatile reticle can also be used effectively with a wide variety of other firearms and loads using the Precision Technique outlined on page 9 of this manual.

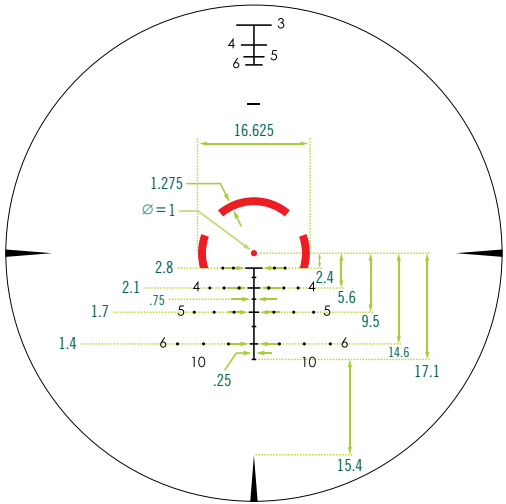


MOA Subtensions

The AR-BDC3 MOA reticle is based on Minute of Angle (MOA) subtensions. MOA is an angular unit of measurement used to account for bullet drop, wind corrections, and range estimation. 1 MOA will correspond to 1.047" for each 100 yards.

Note: Although 1 MOA is very commonly corresponded to 1" at 100 yards, this is not correct. 1 MOA at 100 yards equals 1.047". Calling 1 MOA, 1" per hundred yards may be acceptable for short distances but will result in a five percent error in ranging and holdovers. This could result in missed shots.

Subtension Chart

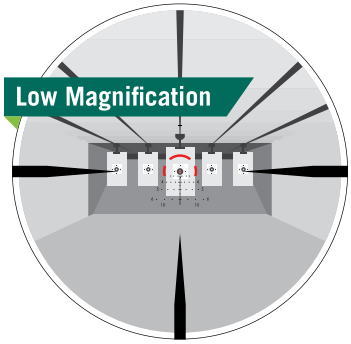


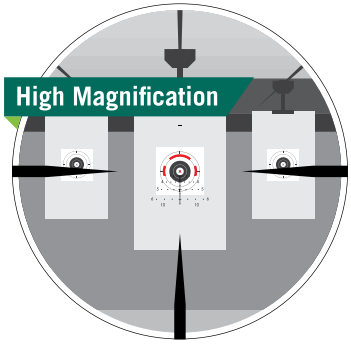
Note: The AR-BDC3 reticle is available in second focal plane (SFP) riflescopes. The MOA values are valid at the highest magnification on most models. Check your riflescope's product manual to validate the subtended magnification of your scope.

Note: Subtended magnification is the magnification to which the reticle is calibrated to and where all the values stated are correct.

Second Focal Plane Reticles

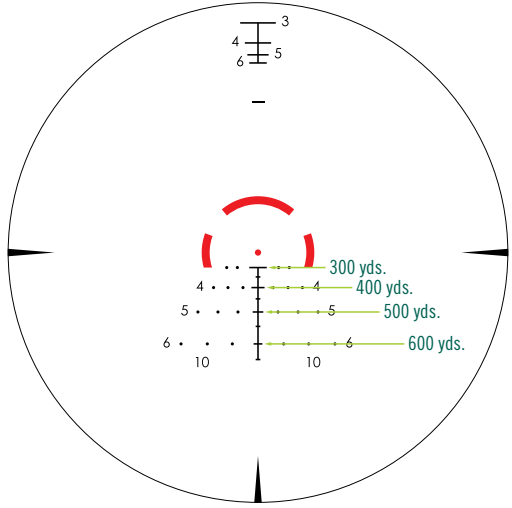
In second focal plane riflescopes, the listed MOA subtensions are calibrated to a specific magnification, typically the highest. The shooter can use the center dot on any magnification, but when using the hashmarks for longer-range shots or windage corrections, the shooter must be on the subtended magnification. If the shooter is not on the subtended magnification, additional calculations must be done to determine the hashmark's value.





Using the Reticle for Bullet-Drop Compensation

Most rifles will work well zeroed at 50/200 yards using the center dot. Consult the riflescope product manual for the sight in procedure. For most popular 5.56/.223 loads and .308/7.62mm loads, the center dot will then provide good accuracy from 20 to 220 yards. Use the lower hashmarks when aiming at targets farther than your zero distance. See the corresponding target ranges for the hashmarks listed on page 6.



STANDARD BULLET DROP FOR .223/5.56MM LOADS

.223/5.56mm, 60 gr., 3050 FPS Muzzle Velocity
(Main crosshair zeroed at 50/200 yds.)

HASHMARK	SUBTENSION	DISTANCE	BULLET DROP
Zeroed	–	200 yds.	0"
1st	2.4 MOA	300 yds.	7.5"
2nd	5.6 MOA	400 yds.	23.5"
3rd	9.5 MOA	500 yds.	49.7"
4th	14.6 MOA	600 yds.	92.7"

STANDARD BULLET DROP FOR .308/7.62MM LOADS

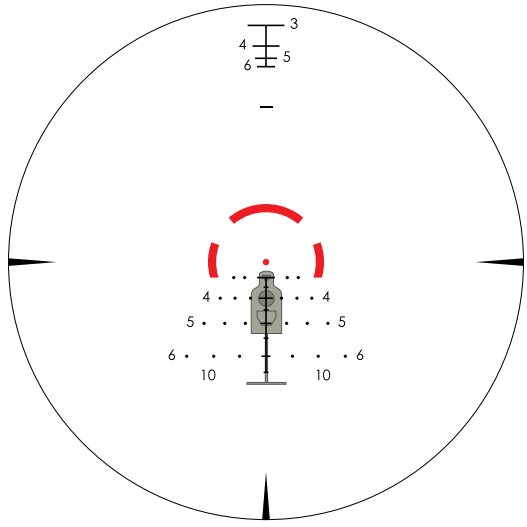
.308/7.62mm, 168 gr., 2650 FPS Muzzle Velocity
(Main crosshair zeroed at 50/200 yds.)

HASHMARK	SUBTENSION	DISTANCE	BULLET DROP
Zeroed	–	200 yds.	0"
1st	2.4 MOA	285 yds.	7.2"
2nd	5.6 MOA	385 yds.	22"
3rd	9.5 MOA	485 yds.	47.4"
4th	14.6 MOA	600 yds.	92"

Note: Bullet Drop Compensating (BDC) reticles are designed to get rounds on target quickly. Distances will be approximate, and will change depending on the gun, load, and environmental conditions. Using the MOA values for each hashmark you can figure out exactly where your specific load will line up with each hashmark. You are not limited to using a .223/5.56mm or .308/7.62mm. The AR-BDC3 MOA reticle is a second focal plane reticle, therefore all the hashmarks will only be true on their subtended magnification.

The AR-BDC3 MOA reticle makes it easy to quickly select the correct bullet-drop reference. If the shooter prefers to dial for bullet drop using the Elevation Turret, knowing the bullet drop in MOA will allow for much easier adjustments.

If shooting a known range, simply use the hashmarks that correspond to the ballistics of your ammo. Each hashmark down form the center dot represents 50 yards, with common .223/5.56mm loads.



Elevation correction at 400 yards and no wind (.223/5.56mm round).

PRECISION TECHNIQUE

If you wish to get the best accuracy, or have a caliber that is not listed, you can get more detailed ballistic data using the GeoBallistics® App.

For detailed instructions, scan for a video detailing how to build a profile within the GeoBallistics® App.

GEOBALLISTICS®

SCAN QR CODE TO GET STARTED.

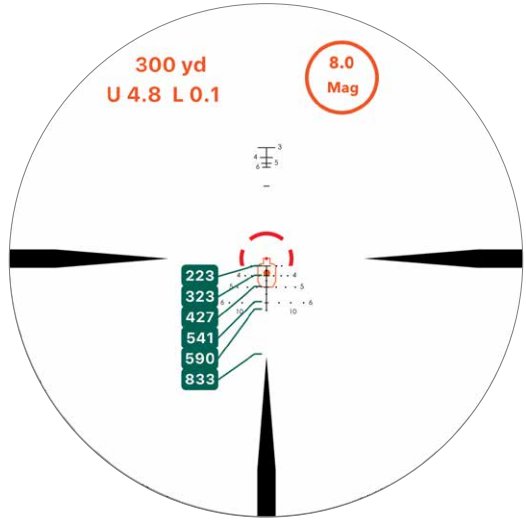
1. Now that you have built your profile, ensure your Vortex® riflescope and reticle have been selected within the Optic section of the rifle profile.
2. Set the range and input your environmental data within the app.
3. Open Reticle View from the GeoBallistics® quick-access menu.

   Note: You can select your appropriate target from various shapes of steel and game targets from the drop-down menu.

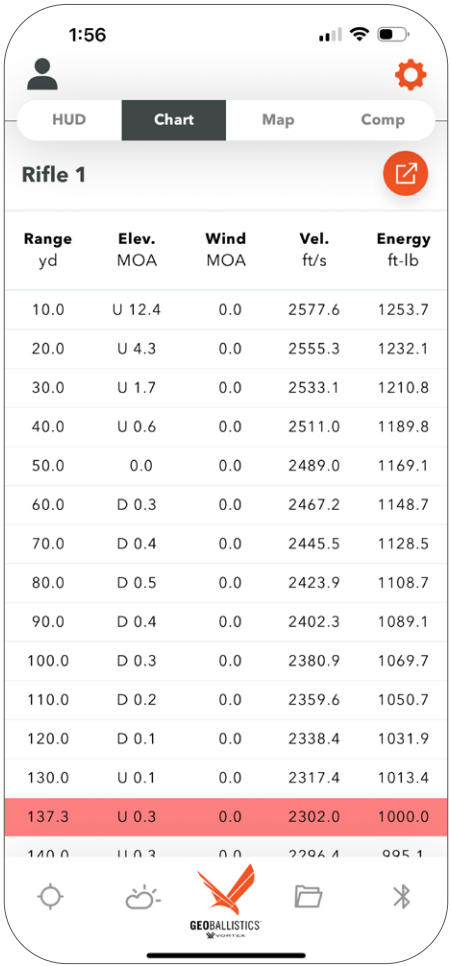
   Note: You can use the magnification slider to see how the target scales within the reticle. As you adjust magnification, the distances associated with each of your subtensions will change as well. Remember, for second focal plane (SFP) reticles, the subtensions are accurate at the subtended magnification. Be sure to check your riflescope's product manual for confirmation on the subtended magnification.

Tip: For a more comprehensive ballistic solution, you can build your ballistic chart within the GeoBallistics® App. You can input your max shooting distance and the yardage increments you would like displayed. We recommend selecting a shooting distance farther than what you plan on shooting, and the smallest distance increments possible.

With GeoBallistics® Reticle View tool, you'll see exactly what each mark means—based on the ballistic performance of your cartridge—so you're never guessing at the range or in the field.



Example shown is for a 85 gr. .223 zeroed at 50 yards.



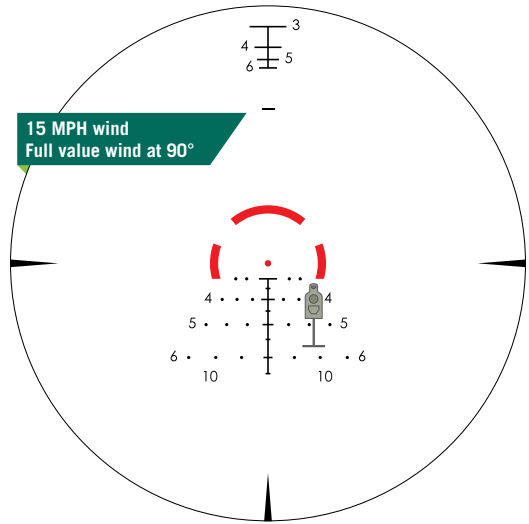
Range yd	Elev. MOA	Wind MOA	Vel. ft/s	Energy ft-lb
10.0	U 12.4	0.0	2577.6	1253.7
20.0	U 4.3	0.0	2555.3	1232.1
30.0	U 1.7	0.0	2533.1	1210.8
40.0	U 0.6	0.0	2511.0	1189.8
50.0	0.0	0.0	2489.0	1169.1
60.0	D 0.3	0.0	2467.2	1148.7
70.0	D 0.4	0.0	2445.5	1128.5
80.0	D 0.5	0.0	2423.9	1108.7
90.0	D 0.4	0.0	2402.3	1089.1
100.0	D 0.3	0.0	2380.9	1069.7
110.0	D 0.2	0.0	2359.6	1050.7
120.0	D 0.1	0.0	2338.4	1031.9
130.0	U 0.1	0.0	2317.4	1013.4
137.3	U 0.3	0.0	2302.0	1000.0
140.0	U 0.3	0.0	2296.4	995.1

Windage Correction Holdovers

Using the reticle for effective windage leads requires thorough knowledge of your weapon system's ballistic performance under varying conditions and experience in reading wind strengths. As a bullet drops, it is important to learn a particular weapon's windage corrections in MOA. Always hold the reticle into the wind when correcting for wind drift.

Basic Windage Correction on Center Dot

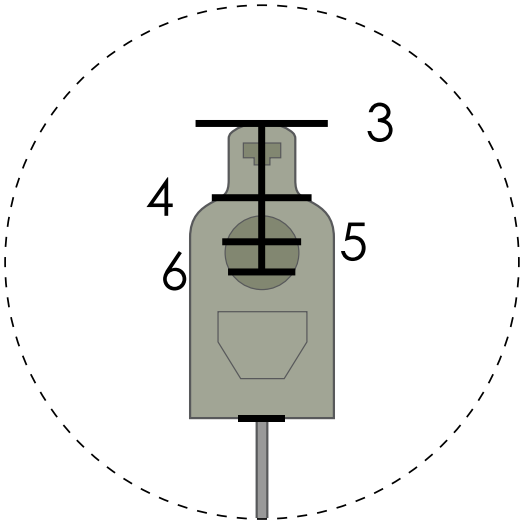
When dialing windage adjustments, use the center dot for windage or moving target leads. Starting at the vertical stadia, each dot represents a 5, 10, or 15 MPH crosswind hold.



Windage correction at 400 yards and 15 mph crosswind.

RANGING

The ranging feature at the top of the reticle can be used to range a silhouette target. The horizontal lines correlate to the width of the shoulders of a silhouette target (18" across and 40" tall) at each distance. Place the horizontal hashmark at the base of the target. With the firearm supported, look at the top of the target to see which reference line the target aligns with. The 3, 4, 5, and 6 indicate the range in hundreds of yards.



Note: Example of a 40" tall target at 300 yards.

VIP WARRANTY

VIP® WARRANTY

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- **Unconditional.**
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