

For Patent Information go to <https://goo.gl/2z62aS>



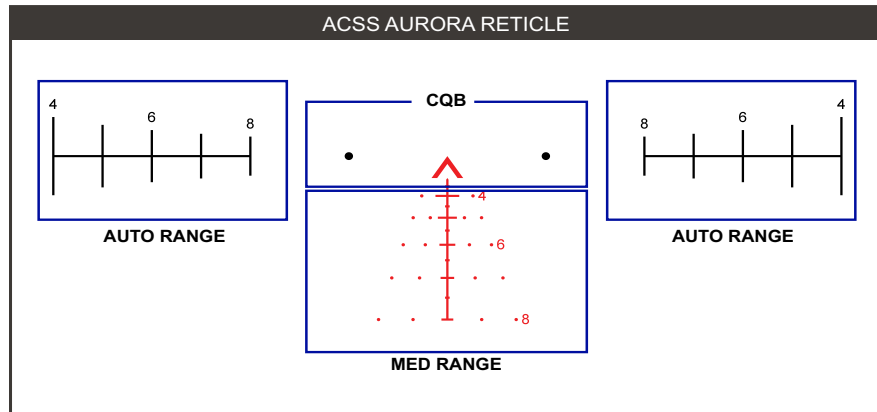
# SECOND FOCAL PLANE RETICLE MANUAL

ACSS AURORA 5.56, M



## GETTING TO KNOW THE ACSS® AURORA™ RETICLE

ACSS is a giant leap forward in reticle design that utilizes bullet drop compensation correlated with range estimation, wind holds, and moving target leads in one simple to use system. The ACSS Aurora reticle is calibrated in meters rather than yards. It is a two-part reticle that allows you to be very fast from 0 to 300 meters and very accurate from 400 to 800 meters.



## GETTING TO KNOW YOUR BULLET DROP COMPENSATION (BDC)

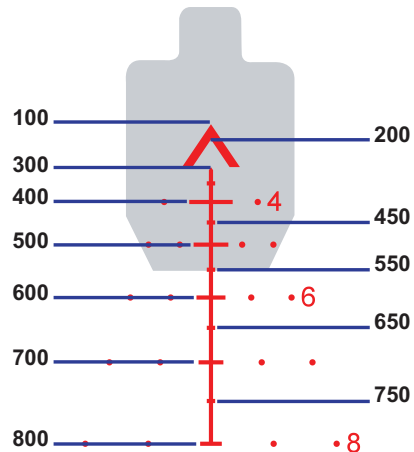
Gravity will affect the bullet's trajectory (or path). The BDC starts at the tip of the chevron and finishes at the 800 meter mark indicated by the number (8). We recommend you establish a steady shooting position in order to utilize the BDC.

## ACHIEVING CLEAR PICTURE

Setting the adjustable diopter ring at the rear of the eyepiece is a critical first step to successful precision shooting. Looking at a featureless light background like a clear blue sky or blank wall, the reticle should appear sharp and crisp. If it does not, you need to adjust by turning the diopter ring. Look at the scope with quick glances and adjust until the reticle is clear at first glance. This is a one-time adjustment. Because everyone's eyes are different, the ideal adjustment will vary from person to person.

The reticle details may appear small when not looking at the ranges they are set for, beyond 300 meters. Shooting at those ranges is best done from a well-supported position.

## BULLET DROP COMPENSATION (BDC) IN METERS



## DIALING IN FOR YOUR BARREL LENGTH AND AMMUNITION

Using a bipod or sandbags, preferably on a bench or in the prone position, adjust your turrets to dial in your point of impact to the chevron tip. Each click is 0.5 MOA, or 1/2 inch at 100 yards (13.7 mm at 100 meters).

Your point of impact will vary depending on type of ammunition, barrel length, and altitude above sea level. Locate your ammunition type in the chart below. Match your barrel length with your altitude above sea level, and zero your scope at the distance indicated. Plus (+) and minus (-) numbers indicate desired bullet impact in inches above or below the point of aim. For example, a marksman with a 16" barrel shooting M193 55gr ammo at 2000 ft. above sea level needs to sight in 0.5" high at 100 meters.

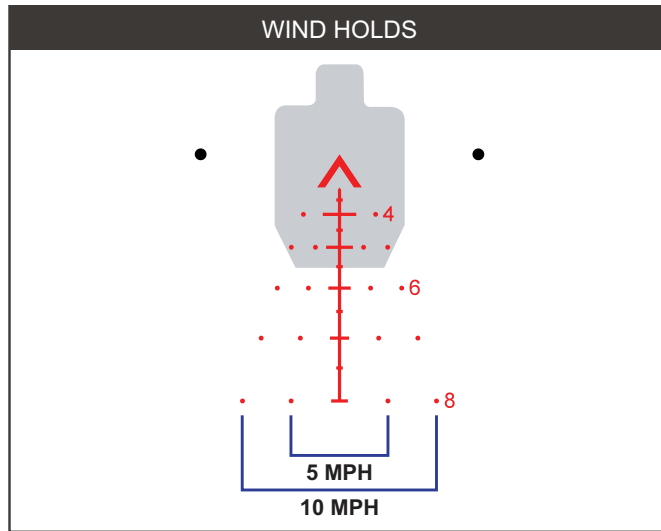
ER stands for the Effective Range of the Aurora's BDC marks. Beyond the ER distance, bullet flight diverges from the BDC markings by 0.5 MIL or more. While hits are still certainly possible on larger targets, precision shooting at smaller targets beyond ER range is more difficult. After initial sight-in, we recommend fine tuning point of impact at distances of 400-600 yards to maximize precision throughout the BDC.

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M855 62gr					M193 55gr				
	Sea Level	1,000 ft.	2,000 ft.	3,000 ft.		Sea Level	1,000 ft.	2,000 ft.	3,000 ft.
14.5" Barrel	50 meter zero ER 700 meters	50 meter zero ER 700 meters	100 meter +1" ER 800 meters	100 meter zero ER 800 meters	14.5" Barrel	50 meter zero ER 500 meters	50 meter zero ER 500 meters	50 meter zero ER 500 meters	50 meter zero ER 500 meters
16" Barrel	100 meter +.5" ER 800 meters	100 meter +.5" ER 800 meters	100 meter zero ER 800 meters	100 meter -.25" ER 800 meters	16" Barrel	100 meter +.5" ER 500 meters	100 meter +.5" ER 500 meters	100 meter +.5" ER 600 meters	100 meter +.5" ER 500 meters
18" Barrel	100 meter zero ER 800 meters	100 meter zero ER 800 meters	100 meter -.5" ER 800 meters	100 meter -1" ER 800 meters	18" Barrel	100 meter zero ER 700 meters	100 meter zero ER 700 meters	100 meter zero ER 800 meters	100 meter zero ER 700 meters
20" Barrel	100 meter zero ER 800 meters	100 meter zero ER 800 meters	100 meter -.75" ER 800 meters	100 meter -1" ER 750 meters	20" Barrel	100 meter zero ER 700 meters	100 meter -.25" ER 700 meters	100 meter -.25" ER 700 meters	100 meter -.25" ER 700 meters
Mk262 77 gr					7.62 NATO/.308 WIN				
	Sea Level	1,000 ft.	2,000 ft.	3,000 ft.	50 Meter Zero				
14.5" Barrel	50 meter zero ER 500 meters	50 meter zero ER 500 meters	50 meter zero ER 500 meters	50 meter zero ER 500 meters	175gr Sierra Match King at 2,500 fps				
16" Barrel	50 meter zero ER 600 meters	50 meter zero ER 700 meters	50 meter zero ER 800 meters	50 meter zero ER 800 meters	168gr Sierra Match King at 2,600 fps				
18" Barrel	50 meter zero ER 700 meters	50 meter zero ER 800 meters	50 meter zero ER 800 meters	100 meter zero ER 800 meters	M80 Specification at 2,700 fps				
20" Barrel	100 meter +1" ER 800 meters	100 meter +.5" ER 800 meters	100 meter zero ER 800 meters	100 meter -.25" ER 800 meters	Effective Range 800 meters				

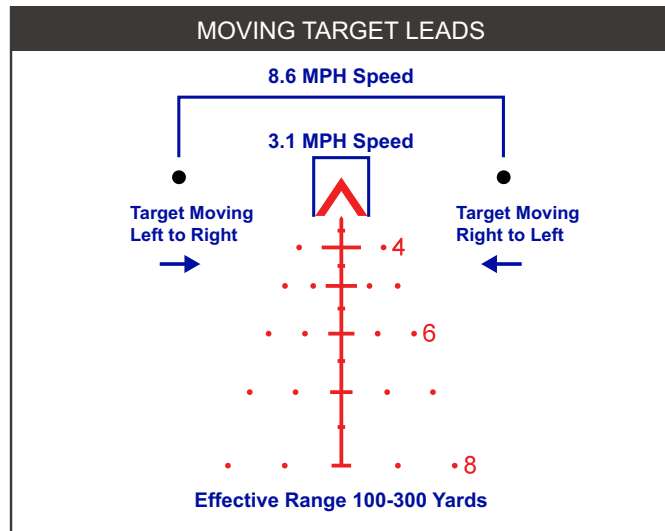
## UNDERSTANDING THE WIND AND BULLET DRIFT

Notice the dots aligned with the BDC marks below the chevron. They are 5 mph (8 kph) and 10 mph (16.1 kph) wind marks. Wind will cause the bullet to drift left or right depending on wind direction. For a wind blowing from your left to your right, aim using the appropriate dot on the right side. For a wind blowing right to left, use the left side dot. You can use the dots as a starting point in different conditions. For example, if you have approximately a 2.5 mph (4 kph) wind, you would hold half-way to the dot nearest to the center of the BDC. If you have a 20 mph (32.2 kph) wind, you would double the distance from the appropriate 10 mph (16.1 kph) dot, and so on.



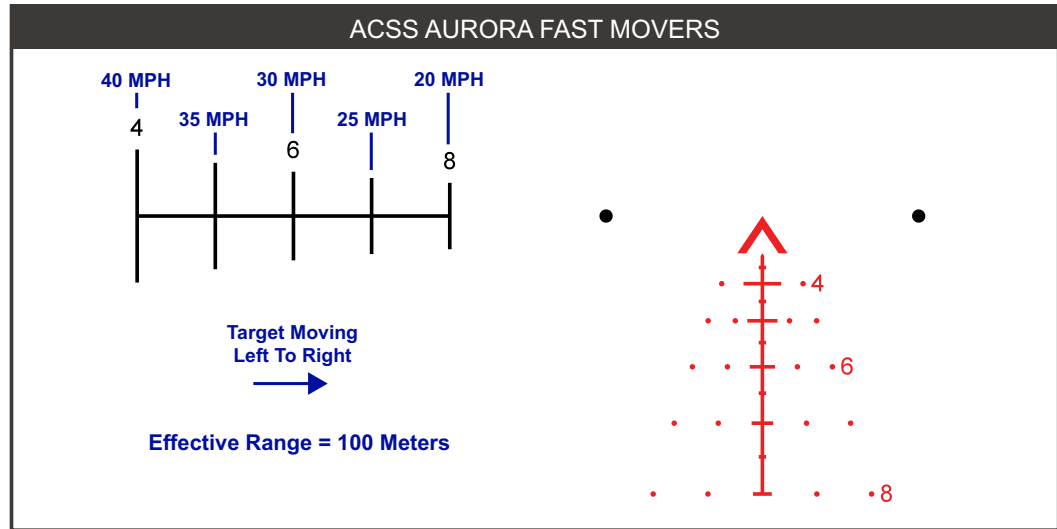
## LEADING YOUR TARGET

The outer tips of the chevron serve as moving target leads for targets moving at 3.1 mph (5 kph) at a 90 degree angle to the marksman. Lead dots on each side of the chevron are set for targets moving at 8.6 mph (13.8 kph). For a target moving left to right, use the left side moving target lead. If the target is moving right to left, use the right side moving target lead. This technique is best used from 100 to 300 meters, and is highly effective on moving targets.



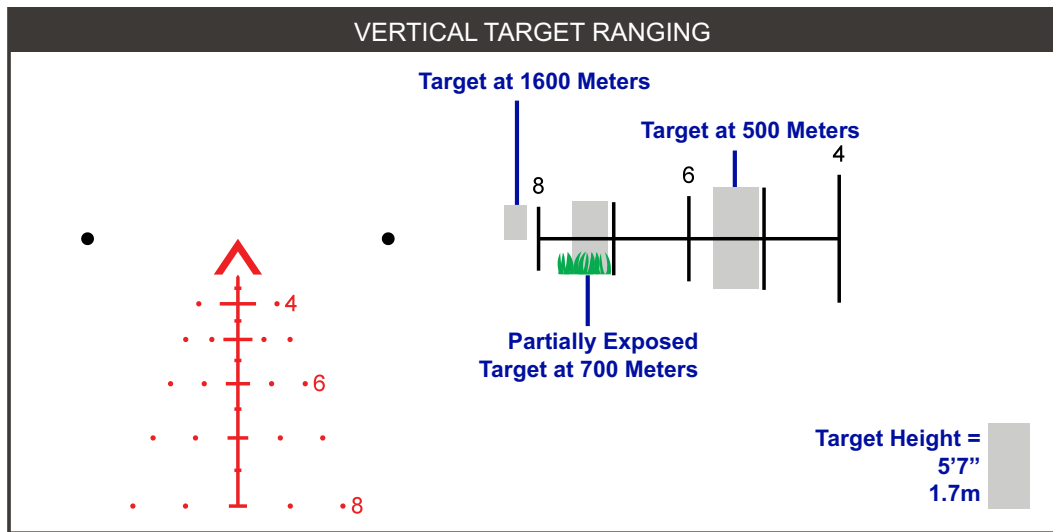
## LEADING FAST MOVING TARGETS

The ranging bars located to the left and right of the center chevron can be used as moving target leads for fast moving targets traveling at roughly a 90-degree angle to the marksman. These leads are most effective at target ranges around 100 meters.



## HOW TO RANGE YOUR TARGET

The vertical ladder marks are calibrated to range a target measuring 5'7" tall (1.7 meters). Place the bottom of the target at the bottom of the vertical hash mark and measure upwards to match its height with the appropriate mark to find the range. For targets that are partially obscured, for example targets located in tall grass, place the central dividing line halfway up the target and range using the part of the target you can see. The vertical hash marks can also be utilized as a good starting point to make more intelligent decisions about range. For example, a full target measured from the central dividing line will double the indicated range, and a target with an apparent size in between two ranging lines will be located approximately halfway between their indicated ranges.

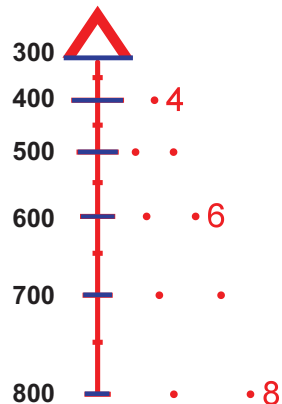




## HORIZONTAL RANGING

Horizontal ranging is correlated with the bullet drop compensation marks, calibrated to match a 19" (48.3 cm) wide target at the range indicated. Simply match up the width of the target to the appropriate BDC mark and you are already using the correct holdover to fire accurately (assuming no need to shift left or right due to wind).

## HORIZONTAL AUTO RANGING



## Why ACSS®?

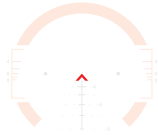
The Advanced Combined Sighting System (ACSS) is a ballistic drop compensating reticle system that eliminates the inefficiencies and dangers present in a traditional reticle.

In a conventional MIL or MOA dot scope, the user operates through a complex process of target estimation, subtension alignment, and mathematics before determining trajectory. By integrating common holds, ranging tools, and wind corrections right into the reticle, ACSS provides a 'heads-up' approach to ranging and engagement.

**ACSS reticles distill complex math into an intuitive reticle that matches your rifle's ballistic profile.**

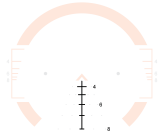
**Primary Arms Optics are available with a wide variety of ACSS reticles to pair with different calibers and use cases. For a full list of reticle and optic options, please visit [www.primaryarmsoptics.com](http://www.primaryarmsoptics.com)**

## Elements of an ACSS Reticle



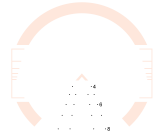
### 1. Infinitely Precise Center Chevron

ACSS reticles take a different approach to the typical crosshair. In traditional reticles, crosshair lineweights can obscure the target. ACSS's center chevron provides an infinitely small point of aim while also leading the eye to the target.



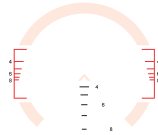
### 2. Calibrated Bullet Drop Compensation

Whether hunting, shooting targets, or competing, speed matters. Calculating point of impact manually takes time, and errors have drastic effects. ACSS reticles do the math for you. They are calibrated to popular loadings so that you know where your shot will go every time.



### 3. Wind Holds

Wind is always changing, and the ability to adjust to it fluidly spells the difference between a shot on target and a lost opportunity. ACSS reticles incorporate wind holds that are calibrated for popular loadings so that your shots go where they're supposed to.



### 4. Ranging Ladders

Knowing the distance of targets is integral to knowing where to hold, and estimating distances with traditional reticles requires quick math that can result in errors. ACSS reticles simplify ranging with a wide array of features that allow you to determine distances immediately.



### 5. Moving Target Leads

In practical applications, most targets will be on the move. When this is the case, eyeballing holds can hinder shot placement. ACSS's moving target leads show exactly where to hold to compensate.



## LIFETIME WARRANTY

Your Primary Arms SLx Rifle Scope is covered by the Primary Arms Lifetime Warranty. If a defect due to materials or workmanship, or even normal wear and tear has caused your product to malfunction, Primary Arms will either repair or replace your product. You can find more details about our lifetime warranty at [www.primaryarmsoptics.com](http://www.primaryarmsoptics.com).

Email: [info@primaryarmsoptics.com](mailto:info@primaryarmsoptics.com)

Toll-free at 855-774-2767

[www.primaryarmsoptics.com](http://www.primaryarmsoptics.com)

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