

 PRIMARY ARMS®

# ***PLx8 1-8x24*** ***First Focal Plane*** ***Scope***

*with ACSS® Raptor M2 5.56 Reticle*



**PLx8**

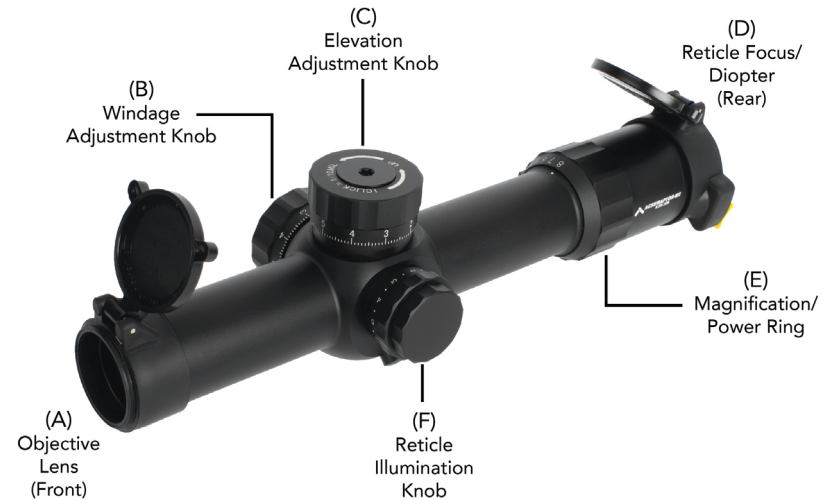
For Patent Information go to: [goo.gl/2z62aS](https://goo.gl/2z62aS)

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## INTRODUCING THE PLx8 1-8X24 FIRST FOCAL PLANE SCOPE

The Primary Arms PLx8 1-8X24 First Focal Plane Scope is designed from the ground up with uncompromised craftsmanship and optical clarity in mind. Engineered and fully manufactured in Japan for durability and reliability, this scope is capable of handling heavy recoil and abuse. It is fast at 1X and extremely accurate at 8X, remaining true at all magnifications due to its first focal plane configuration.

The ACSS (Advanced Combined Sighting System) 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 Raptor M2 reticle increases first hit ratio and decreases time of engagement dramatically. It is a two-part reticle that allows you to be very fast from 0 to 200 yards, and very accurate from 300 to 800 yards.

## ACHIEVING A CLEAR RETICLE PICTURE

Your PLx8 1-8x24 FFP scope comes with an adjustable Diopter Ring (D) that must be set to match your eye. Located at the rear of the eyepiece, it is marked simply **[+ 0 -]**. The diopter ring changes the focus of the reticle as you see it inside the scope. It does not change the focus of objects that you look at through the scope. Setting the diopter is a **critical first step** to successful precision shooting. You can set the diopter before you have even mounted the scope in its rings.

1. Turn the Power Ring (E) to the highest setting, 8x, and point the scope at a bright, featureless background such as blue sky or a blank white wall.
2. With your head in position behind the scope, look at the wall or sky instead. If you look through prescription glasses when shooting, wear them now too. After 5 or 6 seconds, close your eyes.
3. Now open your eye, glance through the scope and immediately see if the reticle is sharp or blurry. If you notice that the reticle seems blurry at first and then suddenly sharpens, your eyes have focused on the reticle itself instead of looking **through** the scope. You must adjust the diopter ring (D) and try again.
4. If the reticle was blurry, turn the diopter ring (D) and repeat the process again. The process will take multiple adjustments. Each time you repeat the process, ask yourself if the reticle was sharper or more blurry than before. The final adjustments may be very fine. If your eyes get watery or tired, walk away for a bit and come back to this later.
5. Once the reticle appears sharp as soon as you glance through the scope, the diopter is set for your eyes. Everyone's eyes are slightly different, so the ideal adjustment changes from person to person. Many shooters will mark their correct diopter position with a little dab of paint or fingernail polish next to the 0 mark, in case the ring gets turned accidentally later on. Others will apply electrical tape around the diameter of the ring to hold it in place.

This is a one-time adjustment. Reticle details may appear small when not looking at medium or long range targets, especially at low magnification. Shooting at those ranges is best done from a well-supported position using a bipod or sandbags.

## RETICLE ILLUMINATION

Reticle Illumination Knob (F) on the left side of the scope is marked with 11 numbers of increasing brightness. Between each number is an OFF setting. The lowest two settings, marked N1 and N2, are compatible with night vision devices and cannot be seen by the naked eye. Settings 1 through 9 follow and can be seen without night vision. The cap unscrews counter-clockwise, holding a CR2032 battery with the positive (+) side facing towards the cap. Reticle illumination at the lower settings is useful in low light situations like sunrise and sunset, or indoors. The highest two settings are "daylight bright" settings. Reticle "bleed out", abnormalities and small imperfections may be visible when viewed indoors or in low light conditions at these two settings. This is a normal result of the reticle etching process. Abnormalities at these settings will not be visible when viewed in daylight conditions. Using these settings in low light situations will overpower your eye's ability to see the target and make the reticle appear distorted. The right amount of illumination creates a clear contrast between the reticle and your intended target, without straining the eye.

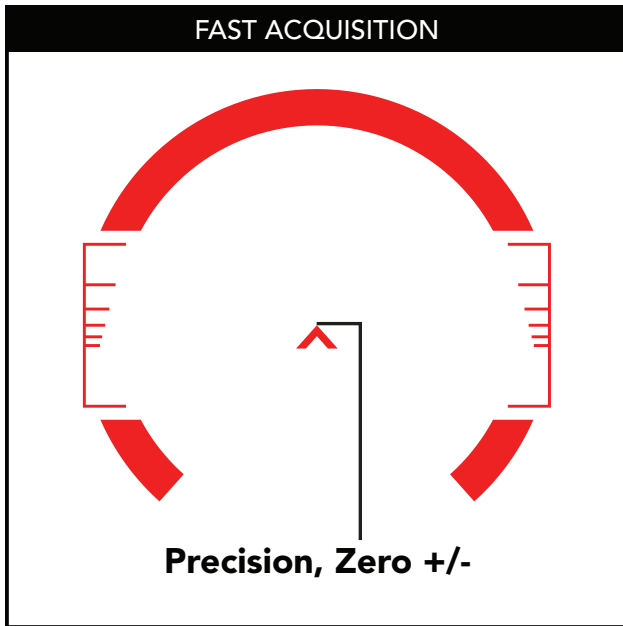
## ESTABLISHING ZERO

Using a bipod or sandbags, preferably on a bench or in the prone position, turn the Power Ring (E) to a high magnification to see your target as easily as possible. Dial in point of impact to coincide with the tip of the chevron. When the numbers on the adjustment knobs are adjacent to the scope body, the knobs are in the "locked" position and cannot be turned. Pull the knobs away from the scope body to unlock and adjust them. When sighting in your rifle, if your shots are hitting low, turn the Elevation Knob (C) counterclockwise to bring the point of impact up. If your shots are hitting to the left, turn the Windage Knob (B) counterclockwise to bring the point of impact right. Once you are finished sighting in, you can push the knobs back toward the scope body to lock them, preventing accidental rotation.

### How to use the Zero Chart

Starting on the left, locate your ammunition type and barrel length for 5.56 NATO or 5.45x39. For .223 Remington, .308 Win, or 6.5 Grendel, locate your bullet weight and velocity. Adjust zero depending on which combination matches your rifle, and dial in +/- in inches at 100 yards.

| 5.56mm                                       |          |          |          |            |
|--|----------|----------|----------|------------|
| M855 62gr                                    | 1000 ft. | 2000 ft. | 3000 ft. | 0 Distance |
| 14.5" Barrel                                 | +1.0     | +0.5     | 0        | 100 yards  |
| 16" Barrel                                   | +0.5     | 0        | -0.5     | 100 yards  |
| 20" Barrel                                   | 0        | -0.5     | -1.0     | 100 yards  |
| M193 55gr                                    | 1000 ft. | 2000 ft. | 3000 ft. | 0 Distance |
| 14.5" Barrel                                 | 0        | 0        | 0        | 50 yards   |
| 16" Barrel                                   | +1.0     | +0.5     | 0        | 100 yards  |
| 20" Barrel                                   | 0        | 0        | -0.5     | 100 yards  |
| .223 Remington                               |          |          |          |            |
| 55gr VMAX 0 at 100 yards 3100 - 3200 fps     |          |          |          |            |
| 60gr VMAX 0 at 100 yards 3050 - 3150 fps     |          |          |          |            |
| 69gr SMK 0 at 100 yards 2900 - 2950 fps      |          |          |          |            |
| 75gr HNDY +0.5" at 100 yards 2700 - 2750 fps |          |          |          |            |
| 77gr SMK +1.0" at 100 yards 2700 - 2750 fps  |          |          |          |            |
| 7.62x51mm / .308 Winchester                  |          |          |          |            |
| M80 147gr +1.0" at 100 yards 2650 - 2700 fps |          |          |          |            |
| 168gr SMK +1.0" at 100 yards 2600 - 2650 fps |          |          |          |            |
| 5.45 x 39mm                                  |          |          |          |            |
| 7n6 53gr                                     | 1000 ft. | 2000 ft. | 3000 ft. | 0 Distance |
| 16" Barrel                                   | 0        | 0        | -0.5     | 100 yards  |
| 6.5 Grendel                                  |          |          |          |            |
| 123gr VMAX 0 at 100 yards 2600 fps           |          |          |          |            |
| 123gr VMAX 0 at 50 yards 2550 fps            |          |          |          |            |
| 123gr VMAX 0 at 200 yards 2500 fps           |          |          |          |            |



### RESETTING ZERO FOR WINDAGE AND ELEVATION

You can reset your Windage (B) and Elevation (C) Knob positions to read “zero” after sighting in your rifle. Using a T30 Torx wrench, turn the locking screw in the knob cap counter clockwise and remove it. Carefully pull the outer knob straight away from the scope tube until it comes completely off. Line up the 0 mark with the center line underneath, and press the outer knob straight towards the scope tube to reinstall. Finger pressure is all that is needed. With the outer knob reinstalled, push down towards the scope tube to ensure the knob is locked and cannot rotate. Then carefully tighten the knob cap. Do not over torque the locking screw.



### THE ACSS RAPTOR M2 RETICLE

The ACSS Raptor M2 reticle includes a center chevron aiming point, bullet drop compensation ladder, wind hold dots, and moving target lead dots. A thick CQB horseshoe surrounds the reticle to provide a bold point of aim that catches the eye instantly at low magnifications for quick reflexive shooting at close range. Ranging ladders are built into the left and right sides of the CQB horseshoe.

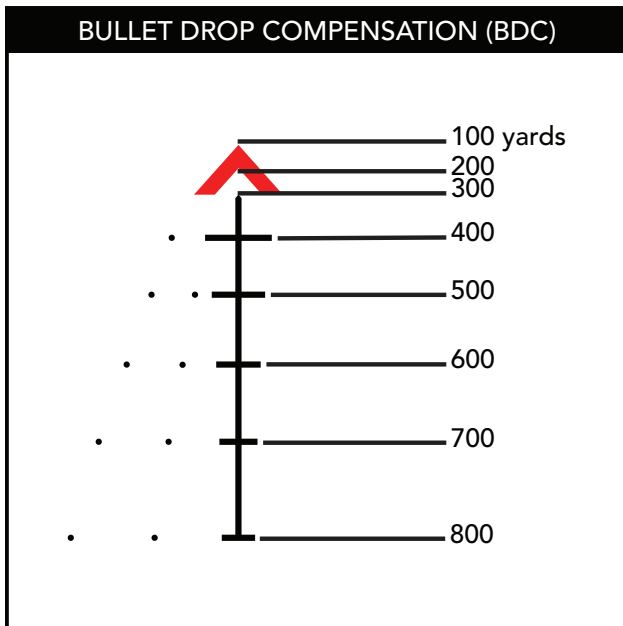
### CLOSE QUARTERS SHOOTING

In close quarters, sight acquisition speed is paramount. For targets which might appear suddenly at close range, maximize field of view by selecting a low magnification. Many shooters can shoot quickly and comfortably at close range with both eyes open using 1x magnification. At low magnifications, the finer reticle features will become impossible to discern quickly, and the thick CQB horseshoe will appear as a small ring. At very close range, place the ring in the center of the target and fire immediately for extremely fast hits. Targets out to 100 yards can be engaged with impressive speed and surprising accuracy at 1x by centering the target inside the ring. With a bit of practice, this method of aiming becomes instinctive. Activating reticle illumination can help make the reticle faster to acquire at 1x magnification.

### PRECISION / MEDIUM RANGE SHOOTING

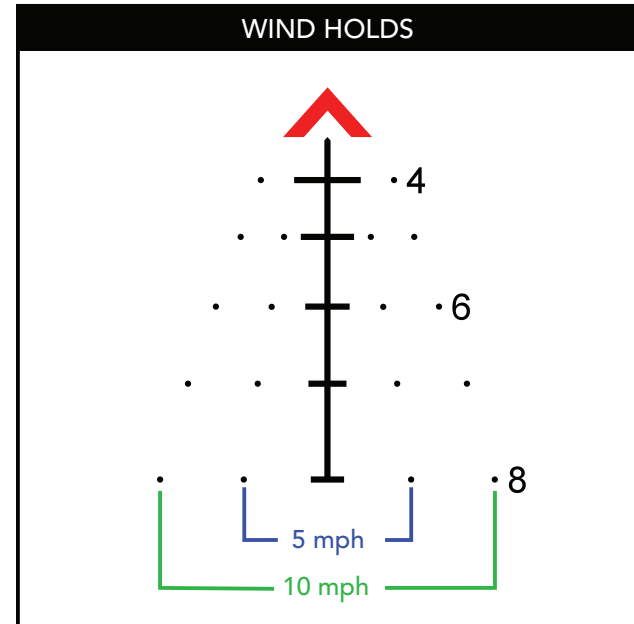
If more precision is required and time allows, increase magnification and use the chevron tip as your point of aim. The chevron tip provides an infinitely small aiming point without obscuring the part of the target you want to hit, for a fast yet very precise sight picture.

ACSS Raptor M2 includes built in bullet drop compensation (BDC) for 5.56 NATO, 5.45x39, .308 Win, and 6.5 Grendel. The BDC starts at the tip of the chevron and finishes as the 800 yard mark, indicated by the fifth large hash mark below (aligned with the number 8 on each side). Simply aim using the point in the reticle that coincides with the range to target. For targets at ranges between points you can split the difference. For example, for a target at 450 yards you should aim halfway between the 400 and 500-yard hash marks. We recommend that you establish a steady, supported position in order to utilize the BDC. Due to the scope's first focal plane configuration, the BDC is "true" at all magnifications, but the BDC is easiest to use at higher magnifications.



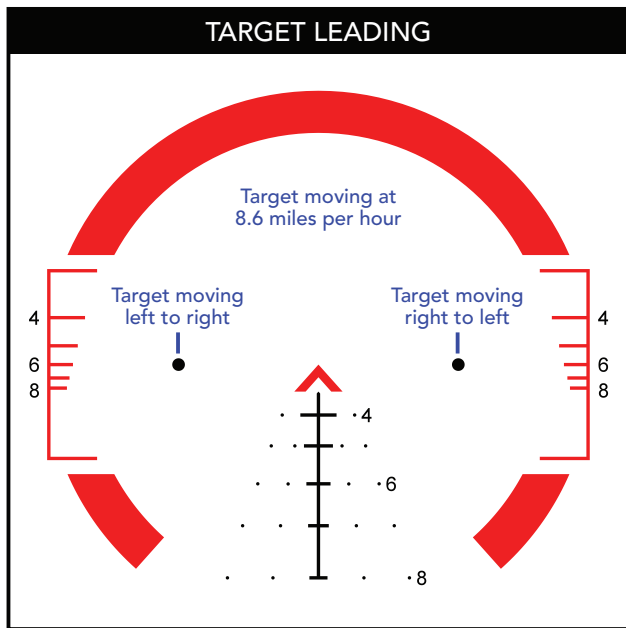
### UNDERSTANDING THE WIND AND BULLET DRIFT

Notice the dots aligned with the BDC marks below the chevron. They are 5 mph and 10 mph wind marks. Wind will cause the bullet to drift left or right depending on wind direction. Understanding the wind is important, as even a 2 mph wind at a 90 degree angle to the bullet's path can cause the bullet to drift over 10" at 600 yards. 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 wind, you would hold half-way to the dot nearest the center of the BDC. If you have a 20 mph wind, you would double the distance to the appropriate 10 mph dot, and so on. The wind hold dots will work with the optic set to any magnification, but are most easily seen and utilized at higher magnifications.



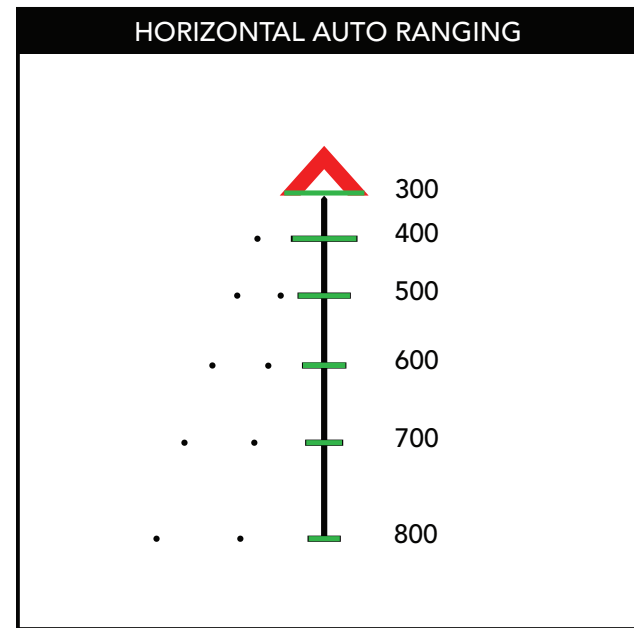
### LEADING YOUR TARGET

The "lead dots" on each side of the chevron are set for a target moving at a 90 degree angle to the shooter and travelling at 8.6 mph. Depending on the direction of the target's movement, fire using the lead dots instead of the center chevron. If the target is moving left to right, use the left lead dot. If the target is moving right to left, use the right lead dot. The lead dots are best used from 100 to 300 yards and are highly effective on moving targets. Due to the scope's first focal plane configuration, the lead dots will function as intended at all magnifications, but they are easiest to use at higher magnifications.



### AUTO RANGING

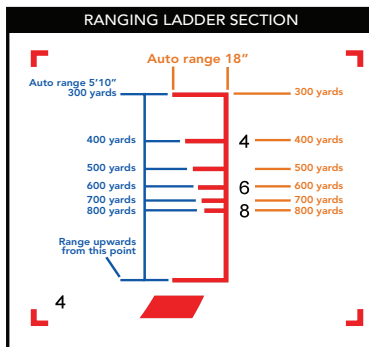
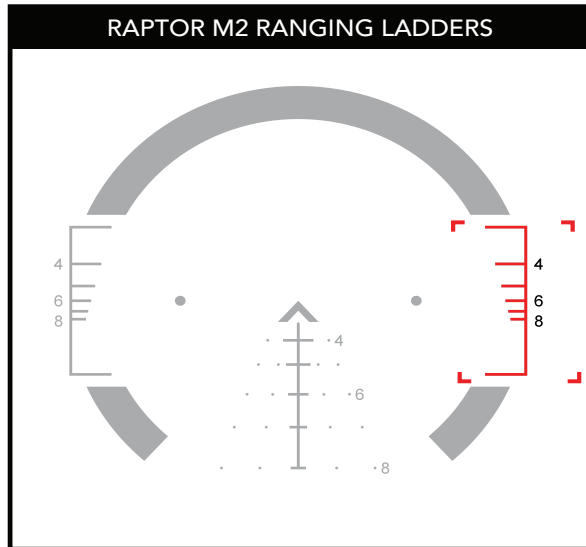
Knowing the proper range to your target is crucial in order to use the right hold on the BDC. Horizontal auto ranging is correlated with the BDC's horizontal hash marks. Ranging is calibrated for center mass on targets 18" wide, and predators or small game with an approximately 18" measurement from shoulder to hip. From edge to edge, the chevron's legs measure 300 yards distance. Horizontal auto ranging out to 800 yards is correlated with the BDC marks below. When using the BDC to auto range, simply fit the target's width inside the BDC mark that matches it, and fire (unless wind must be accounted for).



### THE RANGING LADDERS

Located inside the horseshoe, ranging ladders are located to the left and right of center. Vertical ranging is calibrated for a 5'10" tall target. Looking through the scope at the target, line up the bottom of the target with the horizontal crosshair. The line that coincides with the top of the target indicates the distance to the target. For example, if the top of the target touches the line with a "4" next to it, the target is 400 yards distant. The ranging lines may be used as reference points to make more precise, yet quick ranging determinations. For example, a 5'10" target with its top midway between the "4" line and the "5" line will be approximately 450 yards away.

Horizontal ranging is calibrated for an 18" wide target. Simply line up the target's width with the appropriate line to determine range to target. For example, an 18" wide target that appears to be the same width as the ranging line with a "6" next to it will be 600 yards away. This method is useful when the target's height is partially obscured, as with a target in tall grass.



### SPECIFICATIONS

|                                      |  |
|--------------------------------------|--|
| Magnification: 1-8X                  | Weight (w/ battery, w/o lens covers): 26.9 oz. |
| Objective lens diameter: 24 mm       | Field of View:                                 |
| Eye Relief: 3.9" – 4.0"              | 105.8 feet @ 100 yards at 1X                   |
| Ocular lens diameter: 36 mm          | 13.3 feet @ 100 yards at 8X                    |
| Exit Pupil: 11.7 mm - 3.0 mm         | Click Value: 0.1 MIL                           |
| Tube diameter: 34 mm                 | Total windage and elevation adjustment:        |
| Length (w/o lens covers): 10.5"      | 100 MOA / 29.01 MIL                            |
| A5056 aluminum, anodized matte black |  |

### FEATURES

|                                 |   |
|---------------------------------|---|
| Red partial illumination        | Nitrogen purged                             |
| Night vision compatible         | High quality flip-up lens covers included   |
| Fast focus eyepiece             | Uses one CR2032 battery (included)          |
| Waterproof: Meets IP67 standard | Made in Japan                               |
| Fog resistant                   | Lifetime warranty (see website for details) |
| Fully multi-coated lenses       |   |

Specifications may vary and are subject to change without notice.

### LENS CARE

Please do not use any organic solvent such as alcohol or acetone on your scope. First, blow dust or any foreign objects off of the lens. Then, use a soft cotton or microfiber lens cloth to clean any fingerprints or smears off the lens. Alternatively, you may use a piece of professional lens paper for further cleaning, if necessary.

- ⚠️ **WARNING:** Always ensure your firearm is unloaded (chamber empty and magazine removed) before installing optics or accessories.
- ⚠️ **WARNING:** Improper installation of firearm parts or accessories may result in death or serious personal injury. If you are not properly trained in the installation of these parts, have them installed by a gunsmith or armorer.

### REMEMBER: THE FOUR RULES OF FIREARMS SAFETY

1. Treat every firearm as if it were loaded
2. Never let your muzzle cover anything you are not willing to destroy
3. Keep your finger off the trigger until your sights are on target
4. Be sure of your target and what is behind it

NOTES

NOTES



P L X 8   S E R I E S



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### WARRANTY

Your PLx8 Series 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 out more details at [www.primaryarmsoptics.com](http://www.primaryarmsoptics.com).

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