



1-8X24 SECOND FOCAL PLANE SCOPE

WITH PATENTED ACSS®

.223/5.56, 5.45X39, .308 WIN RETICLE

U.S. PAT. NO.: 8,910,412 B2
MPN: PA1-8X24SFP-ACSS-5.56
UPC: 8 18500 01175 0

INTRODUCING THE 1-8X24 SECOND FOCAL PLANE SCOPE

The ACSS® (Advanced Combined Sighting System) is a giant leap forward in reticle design that utilizes bullet drop compensation correlated with range estimation, wind, and leads in one simple to use system. The ACSS® 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 300 yards, and very accurate from 400 to 800 yards.



ACHIEVING A CLEAR RETICLE PICTURE

Your 1-8X24 SFP scope comes with an adjustable diopter ring that must be set to match your eye. Located at the rear of the eyepiece, 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 the **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 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's ocular lens, 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 and try again.
5. If the reticle was blurry, turn the diopter ring 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.
6. 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 across the ring and the scope body, 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.

RETICLE ILLUMINATION

The Illumination Knob control on the left side of the scope is marked with numbers of increasing brightness from 1 to 11. The knob cap unscrews counter-clockwise, holding a CR2032 battery with the positive (+) side facing towards the cap. The windage turret cap on the opposite side holds a spare CR2032 battery inside. Reticle illumination at the lower settings is useful in low light situations like sunrise and sunset. At the higher settings reticle illumination provides a quick aiming point even in daylight, especially at low magnification.

UNDERSTANDING THE ACSS® RETICLE

Establishing Zero, or Dialing In Your Scope

Use the horseshoe for fast target acquisition and the chevron tip for precision. From a well-supported position using a bipod or sandbags, turn the power ring to maximum, and adjust your windage and elevation turrets to dial in your point of impact to the tip of the chevron at 100 yards. Each click is 0.5 MOA, or 0.5 inches at 100 yards. How high up or down you dial in relative to the chevron tip depends on your rifle and ammunition, as shown in the chart.

HOW TO USE THE ZERO CHART

- Starting on the left, locate your ammunition type and barrel length.
- Adjust zero depending on your bullet velocity, barrel length, and elevation above sea level, and dial in +/- in inches at 100 yards.



Zero in using the ballistic chart below according to your altitude and barrel length. Increments are in inches.

| 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 | | | | |
| 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 | | | | |
| M80 147gr +1.0" at 100 yards 2650 - 2700 fps | | | | |
| 168gr SMK +1.0" at 100 yards 2600 - 2650 fps | | | | |
| 5.45mm | | | | |
| 7n8 53gr | 1000 ft. | 2000 ft. | 3000 ft. | 0 Distance |
| 16" Barrel | 0 | 0 | -0.5 | 100 yard 0 |

ADJUSTING POINT OF IMPACT

With the scope mounted on your rifle, the turret caps can be removed revealing finger adjustable turrets underneath. When sighting in your rifle, if your shots are hitting low, turn the elevation turret counter-clockwise to bring the point of impact up. If your shots are hitting to the left, turn the windage turret counter clockwise to bring the point of impact right. Each turret click will change the point of bullet impact 0.5 minutes of angle (MOA), or 0.5 inches at 100 yards distance.



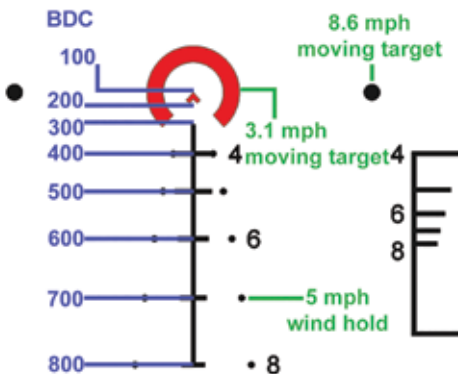
Once your rifle is sighted in, you can use a screwdriver or fingernail to turn the indicator dial set into the turret until the "0" matches up with a dimple machined into the turret cap threads. Turning this dial does not affect the point of impact and no clicks will be heard or felt. If you adjust the turrets later to compensate for wind or range, it will be easy to return your scope to your rifle's original "zero". Each white line represents one click, or 0.5 MOA. The numbers 8, 12, 16, 32, and 36 represent total adjustment in MOA. Thus, if you turn the elevation turret from "0" to "8" you will hear and feel the turret click 16 times, and your bullet will impact the target 8 inches higher than before at 100 yards distance.

GETTING TO KNOW YOUR BULLET DROP COMPENSATION

Gravity will affect your bullet's trajectory (or path). The BDC starts at the tip of the chevron and finishes at the 800 yard mark, indicated by the number 8. Simply aim using the hash mark that coincides with the range to target. For targets at ranges between hash marks 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.

UNDERSTANDING THE WIND AND BULLET DRIFT

Notice the dots aligned with the BDC. They are 5 mph wind marks. Wind will cause the bullet to drift left or right depending on wind direction. Understanding 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. 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, and so on.

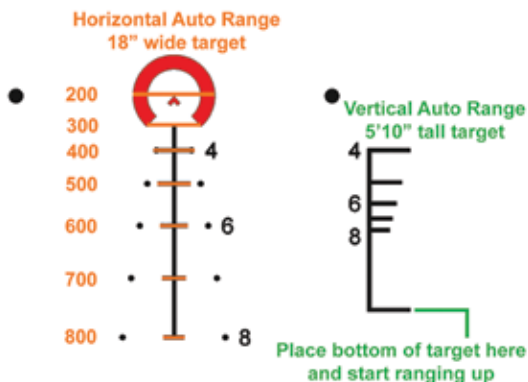


LEADING YOUR TARGET

The average target moves at 8.6 mph. The "lead dots" on each side of the chevron are set for a target moving at a 90 degree angle to the shooter. Depending on the direction of the target's movement, fire using the "lead dots" instead of the 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 at 100 to 300 yards and are highly effective on moving targets. You can use the leading edge of the chevron in the same way to lead targets moving at 3.1 mph.

VERTICAL AND HORIZONTAL AUTO RANGING

Knowing the proper range to your target is crucial in order to use the right hold on the BDC. Ranging can be accomplished using the range marks on the right side of the reticle, or using the BDC itself. To auto range a standard 5'10" target vertically, place the bottom of the target on the lowest line of the vertical range marks, and range upwards. Auto ranging a standard 18" wide target horizontally is correlated with the BDC. The horizontal bars range estimate center mass on targets 18" wide, and predators or small game with an approximately 18" measurement from shoulder to hip. When using the BDC to auto range, simply fit the target's width inside the hash mark that matches it, and fire. All the math has been done.




For more information about how to use the ACSS® reticle, please check out our YouTube video at <http://youtu.be/nxwaiDeXP8c>. Please type in the link exactly, it is case sensitive


SPECIFICATIONS AND FEATURES

- Tube Diameter: 30 mm
- Magnification: 1-8x
- Objective Diameter: 24 mm
- Ocular Diameter: 33.2 mm
- Exit Pupil: 9 - 3 mm
- Eye Relief: 3.3 in - 3.5 in
- Field of View:
110 feet @100 yards at 1x
14.5 feet @100 yards at 8x
- Click Value: 0.5 MOA
- Total Elevation: 50 MOA
- Total Windage: 50 MOA
- Length: 10 inches
- Net Weight: 16.9 oz.
With Lens Covers
- Red Partial Illumination
- Fast Focus Eyepiece
- Second Focal Plane
- Waterproof
- Nitrogen Purged
- Fog Resistant
- Fully Multi-Coated
- 6063 Aluminum,
Black Anodized Finish
- Uses one 3v CR 2032 battery
(included)
- Flip Up Lens Covers Included
- Limited Lifetime Warranty

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

WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **INTERNAL CHEMICAL BURNS** in as little as **2 HOURS**.
- **KEEP** new and used batteries **OUT OF REACH OF CHILDREN**.
- **SEEK IMMEDIATE MEDICAL ATTENTION** if a battery is suspected to be swallowed or inserted inside any part of the body.



- Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate.
- Even used batteries may cause severe injury or death.
- Call a local poison control center for treatment information.
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat above (manufacturer's specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.
- Ensure the batteries are installed correctly according to polarity (+ and -).
- Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries. Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
- Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.

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PRIMARY ARMS®

WARRANTY

Your PA1-8X24SFP-ACSS-5.56 is covered by the Primary Arms Limited Lifetime Warranty. If a defect due to materials or workmanship, or even 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.

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