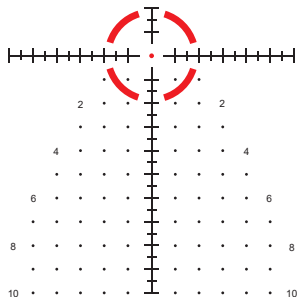
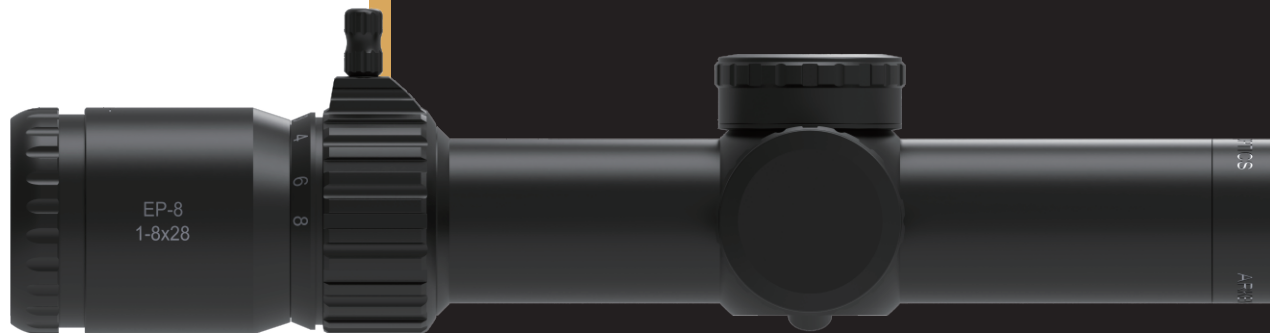


# EP-8

## 1-8X28 FFP LPVO Product Manual



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## 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** 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.



# Welcome

## EP-8 1-8x28 FFP LPVO



The EP-8 1-8x28 Low Power Variable Optic (LPVO) is a cutting-edge addition to Arken Optics' impressive lineup. This LPVO is engineered to deliver unparalleled performance. It's designed to meet the demands of both tactical teams and competitive shooters, providing versatility and ensuring you have the opportunity to take that perfect shot when you need it.

### Bridging the Gap with Unmatched Versatility

Whether you're transitioning from holographic or red-dot optics to a higher magnification scope, the EP-8 effortlessly bridges the gap. This LPVO excels in Close Quarters Combat (CQC) situations, a feature not traditionally associated with high-magnification optics. This versatility is a game-changer, ensuring you're prepared for any encounter, from rapid target acquisition to increasing your chance at hitting ranged shots with ease.

### Seamless Transition from 1X to 8X

The EP-8's unique design allows for swift adjustments between 1X and 8X magnification. With its thin edges and expansive Field of View (FOV), you'll experience true 1X performance, perfect for close-quarters engagements. When the situation demands extended range, a quick throw of the lever seamlessly transitions you to 8X magnification, instantly expanding your effective range and enhancing your accuracy.

ARKEN OPTICS invites you to explore the EP-8's exceptional capabilities. This LPVO was crafted to meet the needs of shooters, providing clarity, identification, and adaptability. With the EP-8, you're equipped to dominate a lot of shooting scenarios, from rapid response situations to long-range engagements.



# EP-8 Specifications



|                          |                    |
|--------------------------|--------------------|
| Magnification:           | 1x-8x              |
| Objective Lens Diameter: | 28mm               |
| Eye Relief:              | 3.74"              |
| FOV@1X:                  | 121.15' / 22°      |
| FOV@8X:                  | 14.56' / 2.78°     |
| Tube Size:               | 34mm               |
| Turret Adjustment:       | 0.25MOA / 0.1MRAD  |
| Reticle Position:        | FFP                |
| Reticle:                 | KLBOX / KLGRID     |
| Flip-Its Size Range:     | 44-49mm<br>30-35mm |

|                             |                         |
|-----------------------------|-------------------------|
| Elevation Adjustment Range: | 110MOA / 30MRAD         |
| Windage Adjustment Range:   | 110MOA / 30MRAD         |
| Illuminated Reticle:        | Red                     |
| Turret Rotation:            | Counter Clockwise (ccw) |
| Color:                      | Matte Black             |
| Weight:                     | 21oz.                   |
| Sunshade:                   | No                      |
| Battery Model:              | CR2032                  |
| Throw Lever:                | Integrated / Removable  |

# Identification / Characteristics



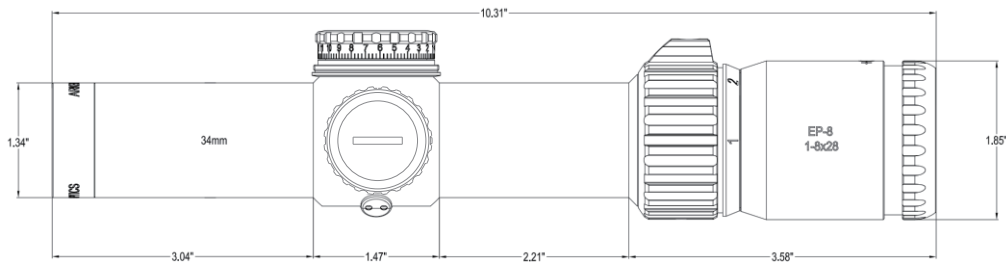
- A. Eyepiece / Ocular Lens
- B. Diopter / Ocular Focus Ring
- C. Magnification Ring / Throw Lever
- D. Illumination Turret
- E. Battery Cap
- F. Elevation Turret (Turret caps screw over turret)
- G. Windage Turret (Turret caps screw over turret)
- H. Objective Lens

# Mounting Tips and Tricks



When it comes to securing your EP-8 to your firearm, getting it right the first time is crucial for accurate shooting. Here are some tips and tricks to ensure your scope is mounted correctly on your rifle.

- ⚠ **We recommend using ARKEN OPTICS Mounts:** Select mounts designed to complement ARKEN scopes, ensuring a seamless and stable connection between your scope and rifle.
- ⚠ **Clean and Degrease:** Before mounting, clean the mounting surfaces on both the rifle and the scope. Remove any old oil or residue to ensure a solid connection.
- ⚠ **Torque Wrench is Your Friend:** Use a torque wrench to tighten screws to the recommended specifications. This ensures consistent pressure and prevents over-tightening.
- ⚠ **Properly Level the Scope:** A leveling tool helps ensure the scope is perfectly aligned with the rifle. This step is often overlooked but is crucial for accuracy.
- ⚠ **Eye Relief:** Position the scope to achieve the proper eye relief for your shooting style. This is the distance between your eye and the scope.
- ⚠ **Bore Sighting:** Before finalizing the mounting, perform a bore sight. This gets your scope on paper before you head to the range for fine-tuning.
- ⚠ **Recheck and Test:** After mounting, recheck all screws for tightness. Take your rifle to the range and test for accuracy.
- ⚠ **Consider Recoil:** If you're mounting on a high-recoil rifle, ensure there's enough eye relief to prevent scope bite.
- ⚠ **Apply Thread Locker Sparingly:** Use a small amount of thread locker on screws and bolts to prevent them from loosening due to recoil vibrations.
- ⚠ **Consult a Professional:** If you're unsure, seek advice from a professional gunsmith. They can ensure your scope is mounted perfectly.



*A well-mounted scope can make a world of difference in your shooting experience. Following these tips will help you achieve the best results with your scope.*

## Focusing the EP-8 / Setting the Diopter



1. Begin with the magnification ring set at 1X.
2. Keep both eyes open and ensure proper eye relief, ensuring there's no shadowing around the edges of your view.
3. Gradually rotate the ocular ring to align the peripheral view with the internal view seen through the optic.
4. Continue adjusting until you achieve a flat, distortion-free image and a crisp, clear reticle.
5. Ensure there's no deviation in the image from the peripheral to the internal view — this is the hallmark of a true 1X magnification setting.

This calibration process ensures that your EP-8 delivers optimal performance, providing you with a genuine 1X magnification experience.

## Variable Power Adjustment

1. Begin with the magnification ring set at 1X.
2. Rotate the magnification ring until the indicator aligns with the desired power level marked on the ocular housing.
3. Gradually increase the magnification for a closer view of your target.  
The EP-8 scope offers a versatile range from 1X for quick acquisition to 8X for honing in on distant details.



## ARKEN EP-8 Throw Lever

1. Begin by locating the raised tab on the magnification ring of your EP-8 scope.
2. Take the provided Throw Lever and screw it into the threaded hole in a clockwise direction.  
Ensure it is snug but avoid over tightening, as this can lead to thread or slot damage.
3. With the Throw Lever in place, you now have an extension for your magnification adjustments.  
This enhancement allows for rapid and precise changes.

# Windage and Elevation Adjustments



Making precise adjustments to windage (horizontal) and elevation (vertical) settings on your EP-8 scope is crucial for achieving accurate shots. Following are the quick guidance of the process:

**1. Locate the Turrets:** Identify the windage and elevation turrets on the scope body. Looking directly at the eyepiece, the windage turret is located on the right side, and the elevation turret is on top. The windage and elevation turrets are the only turrets that have caps on them that cover them completely.

**2. Understand the Directional Movements:**

**Windage:** Turning the windage turret clockwise moves the point of impact to the left and counter clockwise moves it to the right.

**Elevation:** Rotating the elevation turret clockwise lowers the point of impact and counterclockwise raises it.

**3. Making Adjustments:**

**Windage:** Use the windage turret to move the point of impact horizontally, aligning it with your point of aim.

**Elevation:** Utilize the elevation turret to adjust the point of impact vertically, aligning it with your point of aim.

**4. Recording Changes:**

Keep track of the adjustments made. Scopes use Minute of Angle (MOA) or Milliradian (MRAD) measurements for precision.

**5. Fine-Tuning:**

Fire additional shots, making minor adjustments as needed to achieve the desired point of impact.

Remember, each click of the turret represents a specific angular measurement. It's recommended to get familiar with the scope specifications and ballistic calculations for more accurate adjustment.





| MOA     |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|
| 100 yds | 200 yds | 300 yds | 400 yds | 500 yds | 600 yds | 700 yds | 800 yds |
| 1"      | 2"      | 3"      | 4"      | 5"      | 6"      | 7"      | 8"      |

| MRAD    |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|
| 100 yds | 200 yds | 300 yds | 400 yds | 500 yds | 600 yds | 700 yds | 800 yds |
| 3.6"    | 7.2"    | 10.8"   | 14.4"   | 18"     | 21.6"   | 25.2"   | 28.8"   |

# Zero your EP-8

## 1. Bore-Sighting Preparation:

Begin by bore-sighting your rifle. This ensures that the initial shots are close to the point of aim.

## 2. Firing Initial Rounds:

Fire a series of three to five rounds at the target.

## 3. Measure POA vs. POI:

Determine the difference between the point of aim (POA) and the point of impact (POI). Use the reticle or a measuring device on the target.

## 4. Adjust Elevation and Windage:

Using the adjustment turrets, make necessary changes to align the POA with the POI.

## 5. Confirmation Rounds:

Fire an additional three to five rounds to verify the zero. Continue adjustments until the POA and POI coincide.

**Please note:** Each click of the turret represents a specific angular measurement. Familiarize yourself with your scope's specifications for accurate adjustments.

## Standard information required:

Bullet weight, caliber, ballistic coefficient, muzzle velocity, and atmospherics.

## Zero to 50/200 Yards

|      | True to 800 | True to 600 |
|------|-------------|-------------|
| 5.56 | 62gr        | 55gr        |
|      | 77gr        |             |
| 7.62 | 168gr       | 150gr       |
|      | 175gr       |             |

# Utilizing the EP-8 8X Magnification



Follow these steps to utilize the 8X magnification feature effectively:

## 1. Zeroing at 50/200 Yards:

Begin by zeroing your rifle at a distance of 50 or 200 yards.

## 2. Utilize a Ballistic App:

Employ a ballistic application to calculate the elevation adjustments needed for distances of 600 and 800 yards. Keep in mind the bullet's Ballistic Coefficient (BC).

Note: For bullets with a low BC, the true distance will be 600 yards. For those with a high BC, it will be 800 yards. Refer to the provided reference chart for guidance.

## 3. Adjust the Elevation:

From the reticle center mass hold on the reticle, subtract the calculated MOA/MIL value for the respective distance (600 or 800 yards).

Example:

For 600 yards: Subtract -14.78 MOA / 4.30 MIL

For 800 yards: Subtract -26.12 MOA / 7.60 MIL

## 4. Elevation Turret Adjustment:

Based on the result obtained, make adjustments to your Elevation Turret:

If the value is positive, **\*\*ADD\*\*** it to your Elevation Turret.

If the value is negative, **\*\*SUBTRACT\*\*** it from your Elevation Turret.

By diligently following these steps, you'll be able to effectively utilize the 8X magnification feature on your EP-8 scope, ensuring accurate and precise shooting at extended distances. The following pages offer sample problems for reference.

# Sample Problems for 5.56



| RANGE (YARDS)                                                                                           | VELOCITY (FT/SEC)        | BULLET PATH (MOA) | BULLET PATH (MIL) |
|---------------------------------------------------------------------------------------------------------|--------------------------|-------------------|-------------------|
| 0                                                                                                       | 2720                     | 0                 |                   |
| 100                                                                                                     | 2475                     | 2                 | 0.6               |
| 200                                                                                                     | 2242.8                   | 0                 | 0.0               |
| 300                                                                                                     | 2023.2                   | -2.9              | -0.8              |
| 400                                                                                                     | 1817.1                   | -6.3              | -1.8              |
| 500                                                                                                     | 1622.2                   | -10.5             | -3.1              |
| 600                                                                                                     | 1441                     | -15.3             | -4.4              |
| 700                                                                                                     | 1284.6                   | -21.1             | -6.1              |
| 800                                                                                                     | 1158.8                   | -27.9             | -8.1              |
| 900                                                                                                     | 1066.1                   | -36               | -10.5             |
| 1000                                                                                                    | 998.8                    | -45.3             | -13.2             |
|                                                                                                         |                          |                   |                   |
|                                                                                                         | KLBOX solution @ 800     | -26.12            |                   |
|                                                                                                         | Ballistic Solution @ 800 | -27.9             |                   |
|                                                                                                         |                          | 1.78              |                   |
| (Positive # means we ADD) Dial (+) 1.75 MOA to Elevation Turret (rounded to nearest 1/4 MOA adjustment) |                          |                   |                   |

# Sample Problems for 7.62



| RANGE (YARDS) | VELOCITY (FT/SEC)        | BULLET PATH (MOA) | BULLET PATH (MIL) |
|---------------|--------------------------|-------------------|-------------------|
| 0             | 2600                     | 0                 | 0.0               |
| 100           | 2424.5                   | 2.1               | 0.6               |
| 200           | 2255.8                   | 0                 | 0.0               |
| 300           | 2093.7                   | -2.9              | -0.8              |
| 400           | 1938.6                   | -6.2              | -1.8              |
| 500           | 1790.7                   | -10               | -2.9              |
| 600           | 1648.3                   | -14.2             | -4.1              |
| 700           | 1515.8                   | -19               | -5.5              |
| 800           | 1394.6                   | -24.4             | -7.1              |
| 900           | 1286.6                   | -30.5             | -8.9              |
| 1000          | 1193.8                   | -37.4             | -10.9             |
|               |                          |                   |                   |
|               | KLBOX solution @ 800     | -26.12            |                   |
|               | Ballistic Solution @ 800 | -24.4             |                   |
|               |                          | -1.72             |                   |

(Negative # means we subtract) Dial (-) 1.75 MOA to Elevation Turret (rounded to nearest 1/4 MOA adjustment)

# Illuminated Reticle Adjustment



Your EP-8 scope features a daylight-visible, externally adjustable illumination for enhanced visibility.

Here's how to effectively manage it:

## 1. Locating the Illumination Turret:

The illumination turret is conveniently positioned opposite the windage turret for easy access.

## 2. Battery Cap Placement:

It's important to note that the battery cap for the illumination turret is situated on top. However, rotating the battery cap will not affect the illumination settings.

## 3. Activating the Illuminated Reticle:

To activate the illuminated reticle, simply rotate the external dial:

\*\*1 through 9\*\* adjusts the intensity of the illumination.

\*\*0\*\* represents the "off" setting.

## 4. Conserving Battery Life:

When not in use, always ensure the scope is set to \*\*0\*\* to prevent unnecessary drainage of the CR2032 battery.

## 5. Environmental Considerations:

Keep in mind that lighting conditions and the environment can impact the optimal setting. In low light, excessive illumination may lead to unintended effects.



# Battery Replacement

The EP-8 uses a CR2032 battery, located within the illuminated reticle turret (opposite side of the windage turret). You'll find the battery cap positioned atop this turret. To access, install, or replace the battery, rotate the cap counterclockwise. It will gradually come off, revealing the designated battery slot. Ensure that the positive side (+) of the battery is oriented towards the top. Replace the cap on top and turn it clockwise by hand to securely seal the battery. Be sure to tighten it appropriately, taking care not to cross-thread it. Use a comfortable level of hand strength for sealing.

## Setting to "0" slip, if desired:

1. Unscrew the EP-8 toolless retention center cap. Hold the outer body of the turret in place to ensure it doesn't move during this process.
2. Slide the turret to "0":
  - ⚡ Slide off the numbered cap.
  - ⚡ Rotate and align the "0" indicator mark of the numbered cap with the indicator mark on the scope tube.
  - ⚡ Slide the cap back onto the main body.
3. Screw in the EP-8 toolless retention center cap. Take care not to cross-thread.



# Reticle Overview: FFP KL BOX



The KLBOX Reticle covers the typical 5.56 and 7.62 cartridges, which is a revolutionary Ballistic Drop Compensation (BDC) style design, deliberately crafted to enhance performance in tactical scenarios, more suitable for instinctive real-time quick decisions.

## Easy Distance Reference

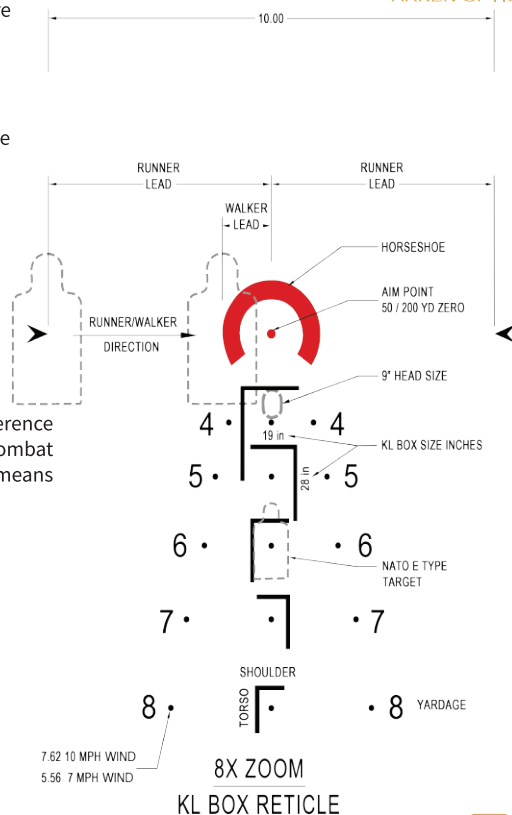
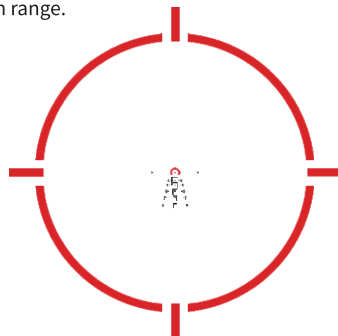
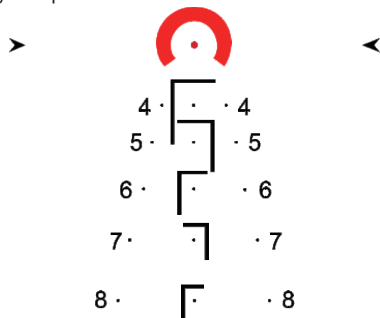
Extending diagonally below the centerline, the outer numerical markers represent distances in yards. Those along the right and left edges serve as general references, each denoting 100-yard intervals starting at 400 yards. 4 = 400 yards | 5 = 500 yards | 6 = 600 yards | 7 = 700 yards | 8 = 800 yards

## Wind Assistance and Moving Targets

A dot adjacent to each number signifies a 7mph wind hold for 5.56 and a 10mph wind hold for 7.62. The arrows flanking the centerline provide approximate holds for moving targets in their respective directions.

## Frame and Fire!

With the KLBOX Reticle, aligning a silhouette target becomes a seamless process. By using natural reference points like shoulder, torso, and head measurements, you can swiftly gauge the distance. Engineered with combat effectiveness in mind, this reticle simplifies distance estimation within the operational range of 1X-6X. This means quicker target acquisition and more effective shots down range.



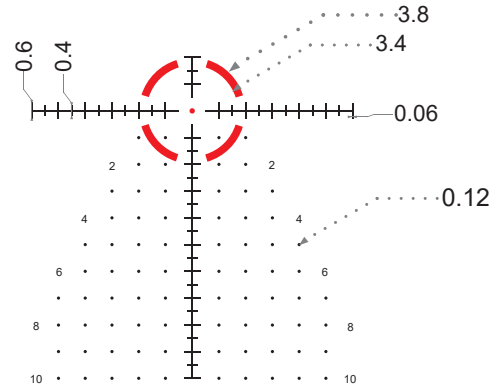
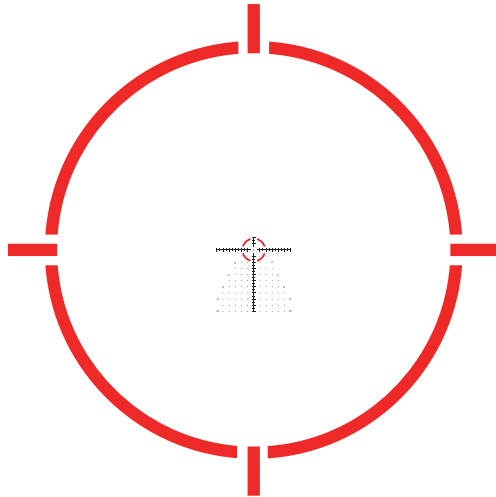
# Reticle Overview: FFP KLGRID



The FFP KLGRID is a First Focal Plane (FFP) reticle engineered to maximize the operational range of the Arken EP-8 LPVO. Evolving from the standard FFP KLBOX, the KLGRID retains the bold, illuminated segmented outer circle and center dot, ensuring rapid target acquisition and instinctive aiming at 1x magnification.

As magnification increases, the reticle scales proportionally, revealing a comprehensive mil-based "Christmas tree" grid in the lower quadrants. This precision grid features numbered elevation holdovers down to 10 mils, detailed horizontal milling increments (such as 0.4 and 0.6 mil hashes), and 0.12 mil floating dots for refined windage corrections.

This hybrid design allows the operator to seamlessly transition from close-quarters engagements to accurate, dial-free range estimation and ballistic holdovers at maximum magnification.







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