

TRUGLO[®]

WHEN BRIGHTNESS COUNTS[™]

EMINUS[™]

Precision Riflescopes

Congratulations on your purchase of a TRUGLO® **EMINUS** series scope, specifically designed for accuracy and reliability on modern sporting rifles. **EMINUS** literally means “from a distance”. Enjoy the power of an optic that can reach out to long ranges with a full palette of intuitive and rock-solid controls.

MODELS:

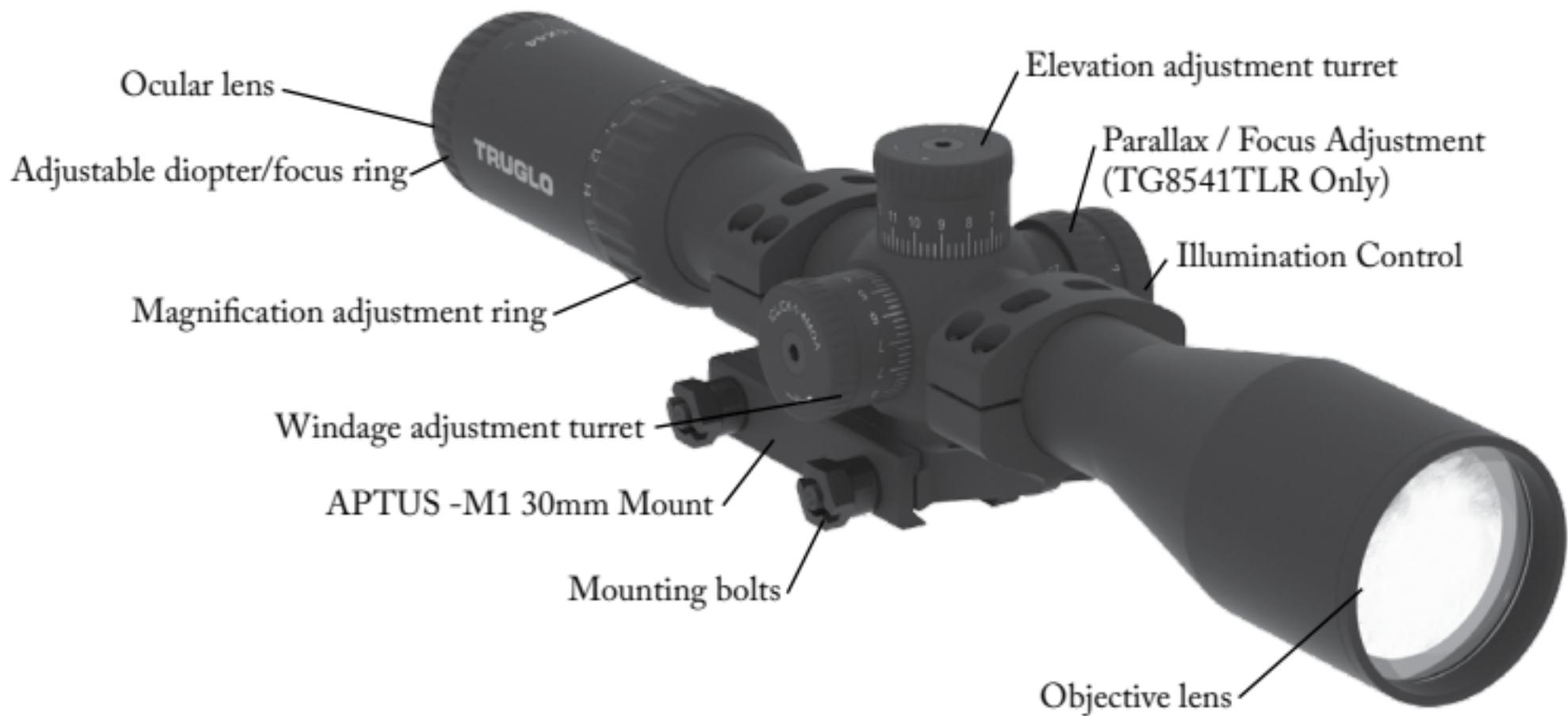
EMINUS 9 3-9 x 42mm Illuminated Reticle (**TG8539TLR**)

EMINUS 16 4-16 x 44mm Illuminated Reticle, Side focus (**TG8541TLR**)

Both **EMINUS** models share all of the features demanded on high performance tactical riflescopes, and a comfortable user interface for fast and consistent control.



- Multi-coated lenses for enhanced clarity and contrast
- 30mm tube for increased turret adjustment range and increased brightness
- 1/4-MOA locking target turrets and MOA based reticle for simplified adjustments, tracking, and holdover.
- Included **APTUS-M1** mount for a strong hold and ideal mounting position on modern sporting rifles
- Illuminated TacPlex Reticle (T.P.R.) for precision measurement (in MOA) without a crowded sight picture
- Hardcoat anodized matte finish
- Nitrogen gas-filled, fog-proof construction
- Water-resistant and shock-resistant
- Illuminated glass-etched reticle
- Leaf-spring turret control for positive and responsive click adjustments.
- Generous eye relief
- Side focus dial, 20yds — ∞ (TG8541TLR)



MOUNTING

To get the best performance from your scope, it must be mounted properly. If you are not familiar with the process of mounting a scope, it is strongly recommended that you seek assistance of a qualified professional.

Your **EMINUS** scope includes the **APTUS-M1** mount, specifically designed for mounting on modern sporting rifles with flat-top receivers utilizing standard 1913 / Picatinny rails. If mounting on a rifle without a Picatinny rail (such as a traditional bolt-action hunting rifle) additional 30mm rings will be needed. If primary shooting distances are at extreme long ranges, (beyond 800 meters) it is recommended to use a forward-canted Picatinny rail (+ 20-MOA angle, for example) or 30mm rings with adjustable angle/ offset.

1. Loosen the 2 mounting bolts on the bottom of the **APTUS-M1** mount. Position the scope and mount on the railed receiver of the rifle. Move the scope and mount forward or backward to achieve proper eye-box position. (Check eye relief at both the highest power and lowest power to ensure proper placement.)

2. After the proper rail position has been identified, push the optic forward slightly so the integrated lug is positioned as far forward as possible in the desired rail slot. Carefully tighten the mounting bolts to hold the **APTUS-M1** mount in this position. Do not over-tighten. (Recommended max torque is 20 inch-lbs on standard rails) For additional security, a drop of non-permanent thread locking fluid (Such as blue Loctite®) can be added to the mounting bolts before final tightening.
3. Slightly loosen the screws on the top of the mount. (do not remove completely) Rotate the scope to achieve proper level / alignment. It is recommended to use two leveling instruments: (bubble level or similar leveling device) One on the receiver of the rifle, and another on the elevation turret of the scope. At this time, more precise eye relief adjustments can be made by sliding the scope forward or back within the mount. Be sure that the scope is mounted a sufficient distance from the shooters eye / face to prevent contact under recoil. After proper level and position have been achieved, carefully re-tighten the screws. Tighten each screw the same amount (example: 1 turn) while alternating screws until tight. Do not over tighten. This ensures that the optic is held firmly in all positions of the mount and is not torqued in any direction. **NOTE:** The mount is installed on the scope at an approximate level from the factory. Exact leveling should be confirmed on the rifle.

ZEROING—OVERVIEW

After the scope and mount are installed correctly, the scope can now be zeroed to the rifle. From the factory, the windage and elevation dials are aligned to the center of the scope. Initial bore-sighting is recommended to obtain a more accurate zero, as well as to save time and ammunition during live-fire zeroing. Remove the bolt and use a bore-sighting laser or visually bore-sight by looking through the barrel and upper receiver. Sight a target through the bore, and adjust the alignment of the scope to the same position. Only minor adjustments should be needed. If major adjustments are needed, check the mounting of the scope. **NOTE:** Your click adjustments will appear to move “backwards” (relative to the markings on the turrets) in this process as you are moving the scope reticle relative to the target, rather than moving a point-of-impact to a point-of-aim.

After bore-sighting, the scope is ready for live-fire zeroing. Only fire your rifle in a safe manner at an approved shooting location. Your **TRUGLO** scope has precise windage and elevation adjustments with audible and tactile clicks. The recommended initial zeroing distance for your **EMINUS** scope is 100 yards — a naturally user-friendly distance for minute-of-angle based turrets and reticles. The target turrets are divided in angular increments, and not calibrated for any particular speed or projectile, any zeroing distance can be used. 100 yards is recommended for simplicity.

ZEROING — TURRET CONTROLS

EMINUS scopes are equipped with locking target turrets. This provides the advantage of target turrets that can accommodate adjustments and then return to a preset zero, as well as the ability to lock the turrets in place to prevent undesired movement. The rifle should only be fired with the turrets in the locked position. To unlock the turret, pull the turret outward. (Up on the elevation turret, right on the windage turret.)

With the turrets in the unlocked position, adjustments can now be made. Adjust turrets as needed to obtain the proper zero at 100 yds. Remember, each click is 1/4-MOA (approximately 1/4 in. at 100 yards, 1/2 in. at 200 yards, etc.) After each adjustment is made, push in on the turrets to lock them in place before shooting again. For each adjustment, it is recommended to use the average of a 3-shot group rather than a single shot.

Example: If your shot (or shot group average) is 2 in. high and 1 in. left at 100 yards, adjust the elevation turret down (direction indicated on turret) 8 clicks and the windage turret right (direction indicated on turret) 4 clicks to obtain the proper zero. Lock the turrets and shoot again to confirm.

After you have zeroed the point-of-aim of your scope to the point-of-impact, the turret caps will likely be in the incorrect position (indexed to any number other than "0") and will need to be indexed correctly. To "slip the caps" back to "0", first make sure the turrets are in the locked position. Use the included torx wrench to loosen the screw on the end of each turret cap. (It is not necessary to remove it completely, just enough for the cap to turn freely) Once the cap can rotate freely, align the "0" mark to the indexing dot on the scope body. The turret should

NOT click when rotated (as the turret is in the locked position and only the external turret cap is moving). Re-tighten the screw on the cap to hold the cap firmly in place. Do not over-tighten. Do not apply threadlocker to this screw.

FIRING SOLUTIONS

With the scope and caps now properly adjusted to zero, you will be able to hold or dial additional adjustments (bullet-drop, wind, spin-drift, etc.) into the optic as needed for a particular shot and then return the optic back to your predefined zero.

EXAMPLE: If .308 168gr. Hornady A-Max (2700 FPS, Ballistic Coefficient .475) drops 4.59-MOA at 300rds in your rifle (zeroed at 100yds) you could:

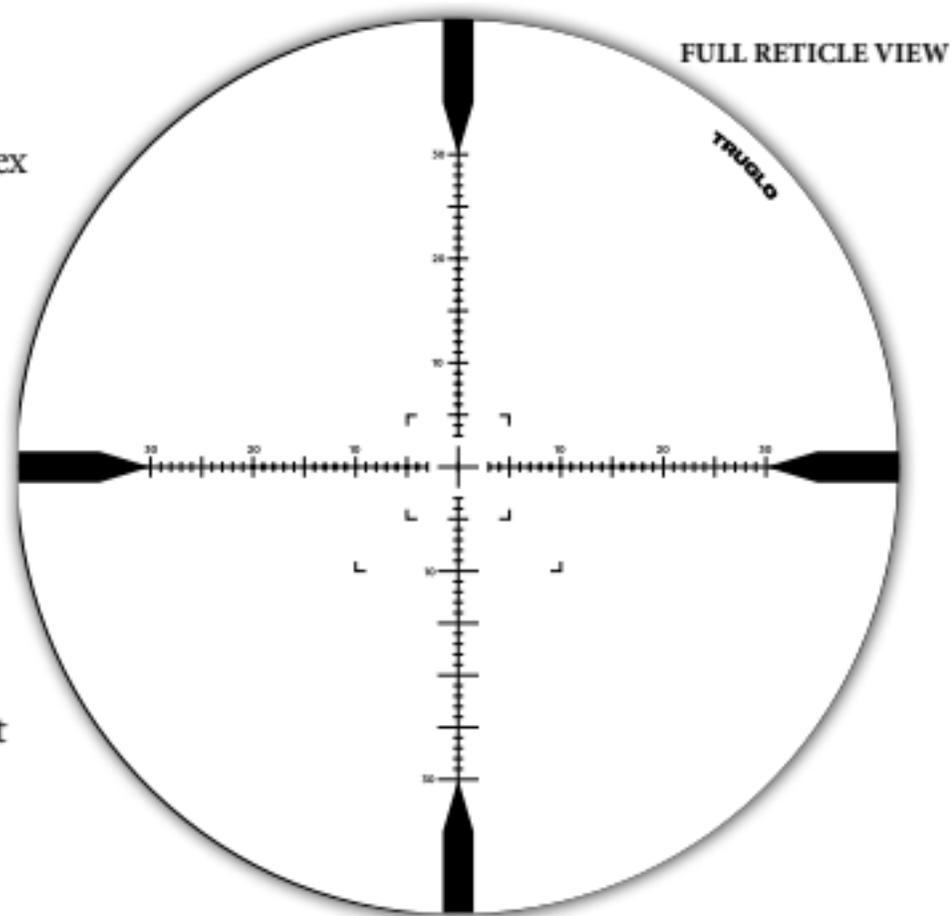
HOLD: 4.59 MOA (just above the large 5-MOA hash mark) below the center crosshair. The bullet will impact at this hold-over point. This must be done at maximum magnification.

or **DIAL:** 4.5 MOA UP (18 Clicks) on the elevation turret. Remember, the direction marked on the turret refers to the point-of impact. (POI) The crosshair will now be aligned to the temporary firing solution. With this method, magnification has no effect on POI and can be set at any level. However, maximum magnification is still recommended for accurate shot tracking. (Example: You see in the scope that the wind increased and moved the POI 2-MOA to the left. You can now hold or dial the windage adjustment. Reset to zero after the shot is made.

T.P.R. (TACPLEX RETICLE, MOA)

EMINUS series scopes utilize an advanced reticle based on familiar duplex hunting reticles, but with MOA hashmarks optimized for MOA turrets and illuminated reference marks to aide in holdover. The TacPlex Reticle combines the best features of tactical and hunting reticles, without crowding or over complicating the visual space.

- 1.5-MOA heavy crosshairs point inward, helping the eye located the center of the reticle quickly and easily.
- Center illuminated crosshair is 4-MOA with a 1-MOA margin for a 5-MOA center targeting box.
- A larger 10-MOA illuminated targeting box (5-MOA, each direction) aides in quick holdover approximation, leads, and target or distance measurement.



- The largest illuminated targeting box is 20-MOA wide (10-MOA each side) for continued holdover, lead, or size/distance approximation. Note: these hashes only extend below the center of the reticle — a 10-MOA “holdunder” is not needed.
- The illuminated reference marks are all 1-MOA tall and 1-MOA wide.
- Illuminated line thickness (Interior crosshair & reference marks): .12-MOA (**EMINUS 16**) .25-MOA (**EMINUS 9**)
- Non-illuminated line thickness: .10-MOA (**EMINUS 16**) .15-MOA (**EMINUS 9**)
- 30-MOA in each direction create a total measurable width that is exactly 1 degree within the field of view.

SECOND FOCAL PLANE

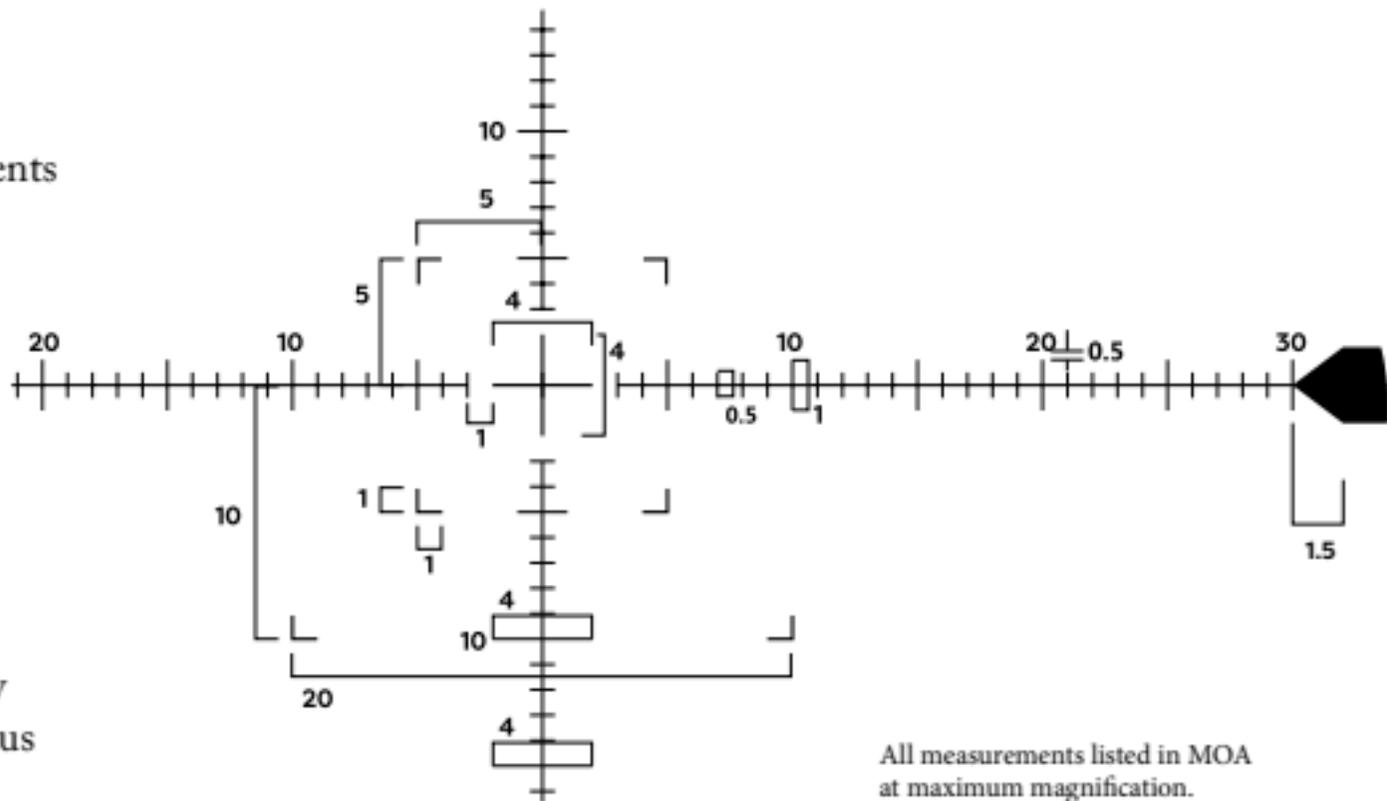
The reticle of the scope is positioned in the second focal plane. This means the reticle does not zoom or change sizes, and always fills the entire viewing area. (A first focal plane reticle changes sizes as you change magnification, and can be hard to read at some magnification levels) Because the reticle size stays constant, the indicated subtension measurements apply only to the maximum magnification level of the optic. (9x or 16x, depending on model) Subtension measurements can be calculated at other magnifications, but for the best accuracy, the maximum magnification should be used. Magnification has no effect on the point of impact, or turret adjustments.

T.P.R. MOA SUBTENSIONS

The illustration shows the MOA subtensions built into the TacPlex Reticle. All measurements are shown in minutes-of-angle.

Because the **EMINUS** turrets are also in MOA, converting measurements is not needed. These measurements can be utilized for approximating holdover or for shot tracking and ranging.

The TacPlex Reticle is not is not dedicated to any load or caliber, and can be used for any round. The use of a DOPE (Data On Previous Engagement) card is suggested.



All measurements listed in MOA at maximum magnification.

USING MOA

Minutes-of-angle (MOA) is a friendly system of angular measurement for shooters familiar with the English/customary system. For quick calculations, 1-MOA \approx 1 in. @ 100 yds. (2 in. @ 200 yds., 3 in. @ 300yds., etc.) Note: 1-MOA does not exactly equal 1in. @ 100yds. This is an approximate value (within about 5%) for easy zeroing of the rifle. For complex or long-distance firing solutions, use precise calculations. Your **EMINUS** scope is calibrated in MOA and not in “inches at 100yds” to ensure precision at all distances.

QUICK ZOOM LEVER

EMINUS comes with a quick zoom lever pre-installed. The lever increases torque on the zoom ring, making it easier to quickly adjust the magnification of the scope. To change the index location of the quick zoom lever, loosen the setscrew, rotate the lever to the desired position, and tighten the setscrew (do not overtighten). Check the full range of motion of the lever to ensure motion is not impeded by the mount, receiver or backup iron sight. To remove the quick zoom lever, remove the flip-up cap on the ocular lens, loosen the setscrew and slide the quick zoom ring back over the ocular lens.

ILLUMINATION CONTROL

Illuminated reticles come standard on many **TRUGLO** scopes including the **EMINUS** series. The etched reticle can be illuminated in red, as well as used in black without illumination. Simply rotate the illumination control dial to select the desired brightness level. To change brightness, rotate the illumination control dial in either direction. Small OFF positions are also located between brightness levels, making it easier to turn the illumination system on to a specific level instead of dialing through all brightness settings. Always select the lowest brightness setting that still provides good contrast against the target. The higher brightness settings should only be used in bright daylight (otherwise, the reticle may appear distorted). Turn the illumination system to the "0" (off) position after use to conserve battery power.

On the **EMINUS 16** model, the illumination control knob is located on the same axis as the parallax / focus adjustment, but is still adjusted in the same manner.

CHANGING BATTERIES

EMINUS scopes use the common 3V CR2032 battery. Replacement batteries can be purchased in many retail locations or ordered from **TRUGLO**. The battery is located inside of the brightness adjustment dial. To change batteries, unscrew the battery cap. (using a key, coin, or large flathead screwdriver) Remove the old battery and replace with a new CR2032 3V battery. The negative (-) side should face the scope tube and the positive (+) side should face the battery cap. Replace battery cap and screw firmly into place. Do not over tighten.



FOCUS ADJUSTMENT—DIOPTER

Your **EMINUS** scope features a diopter adjustment to optimize the focus of the optic for individual vision. The diopter adjustment wheel determines the focus inside of the optic, ensuring the reticle is in sharp focus for maximum clarity and accuracy. Proper adjustment is based on individual eyesight, and will vary from one individual to another. Adjusting the diopter will marginally change the magnification of the optic. This will not have a significant effect on the subtension measurements of the reticle.

FOCUS ADJUSTMENT—PARALLAX SETTING

EMINUS 9 utilizes a fixed focus that does not need to be adjusted. This focus is optimized at 100 yards. Objects viewed at extreme distances (far beyond 100 yards) may appear slightly less sharp than closer objects—this is normal for all fixed focus scopes and does not effect the precision of the crosshairs nor the alignment of the scope.

EMINUS 16 utilizes a “side focus” Parallax adjustment. This adjustment should be set to the proper shooting distance to ensure accuracy. This setting minimizes parallax by positioning the focus of the reticle and focus of the target on the same visual plane. This adjustment is common on higher magnification scopes, and allows for increased precision and longer distances and higher magnifications.

MAINTENANCE AND CLEANING

Although your **TRUGLO** scope is very durable, it is a precision instrument and should be treated with care. When not in use, cover the objective and ocular lenses with the provided lens caps to prevent dust and debris from collecting on the lenses. It is recommended to store precision rifles and optics in a hard-sided case.

Lenses: If the lens becomes dirty, blow loose dust/dirt off the lenses before cleaning. Use lens cleaning fluid and a soft cloth to dab at the surface to remove potentially abrasive bits of dirt or dust before applying more pressure. Be patient and clean in gradual stages. Too much pressure can grind abrasive debris into the lens, damaging the optical coating. The optical coatings are very durable and will last indefinitely as long as proper care is taken in the cleaning process.

Exterior: The body of the scope and mount can be wiped down to remove dust, oils, fingerprints, etc. On all riflescopes, solvents should not be used as they could potentially damage some components of your scope. (including the finish of the scope and the internal grease that keeps adjustment knobs turning smoothly)

WARRANTY AND SERVICE

There are no user serviceable parts inside your scope. Do not disassemble. Disassembly will void the factory warranty of this product. For complete warranty information and terms, see the warranty card provided with your scope.

For questions about usage, compatibility or other products, contact TRUGLO customer service at:
972-774-0300 or **contactus@truglo.com**.

RANGE NOTES:

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