Export regulations under the United States International Traffic in Arms Act (ITAR) prohibit the transfer of certain observation, acquisition and night vision technologies and may require state department approval prior to export. CMOG complies with all federal regulations. Intended Military and Law Enforcement Only. Always note power before ranging.

Congratulations! You now own a proven, battle-tested optical device that is regarded by many as one of the best riflescopes in the world. All of us at CounterSniper™ sincerely thank you for your purchase! With minimal maintenance, your new or NDI riflescope will provide you decades of reliable service. Instructions and a brief history are below.

Borne of a decade of development for the sterile and untraceable optical rifle sighting requirements of Special Operations and clandestine warfare, CounterSniper™ Military Optical Gunsight Corp. manufactures a line of optical weapon sighting systems and visible and IR laser aiming systems from CQB to long range sniping and competition. The CMOG Titanium Line is the only tactical riflescope in the world UNCONDITIONALLY warranted for life. Battle damage, bomb damage, even bullet impacts are covered. If it is damaged unworkable, send it to us and we will fix it or give you a new one.

CounterSniper™ Military Optical Gunsight Corp. is headquartered in Rochester NY, the imaging capital of the world. Long a primary Soviet nuclear impact target due to the creation of optical sighting systems for satellites, spy planes and now digital imaging devices, it is home to some of the premier optical creation, coating and imaging companies. The integration of these capabilities yield some of Americas most critical observation technologies. Among these are the world’s first extreme zoom range scopes, offering ranges of 1-8 power, 2-16 power and 3-24 power.

For more info on these remarkable tools of the preservation of liberty, call us, see the web, or see your authorized CounterSniper™ Dealer.

CSO Crusader and Avenger Series Riflescopes
CounterSniper's™ world renowned titanium rifle scopes are considered by many to be the finest optical gunsights available at any price. Military direct prices range from $1125.00 to $2860.00 dollars for the T6061 Aircraft aluminum models and from $4129.00-$7150.00 for the Titanium models. What makes a riflescope cost up to $7000 dollars? Add these features to the specs below it yields a war fighting optic worthy of the operators who use them. They are in service today with elite Military and Law enforcement units in variable power ranges from 1-8x up to 10-40x, with a power range for nearly every known tactical application. This combination of the best components the world offers with an attention to detail on which your life can depend is why they are so highly sought after by elite operators and long range marksmen.
These features include:

- Forged and milled pure Titanium or T6061 aircraft aluminum bodies.
- Impact resistance to more than 5000 times the force of gravity.
- Lenses of utterly flawless transmissivity, compositoed to aspheric lens elements to eliminate chromatic aberrations with apochromatic lenses with Extra Low Dispersion Glass.
- Proprietary-230-+485°F degree stable pure optical glass
- 24 step vacuum Bertrillium-Zantitium™ multicoating, raises the light transmission coefficients to beyond anything previously possible.
- Massive 56mm primary objective lenses offer nearly triple the light transmission area of lesser designs.
- Vacuum and lifetime sealed with a mixture of nitrogen and rare earth gasses.
- Vaporless, fogless, mirageless- unaffected by atmospheric ranges from below sea level to 5 miles above it. They are waterproof for marine-ops, dustproof for desert warfare & ergonomically compatible with arctic gloves or desert heat.
- Revolutionary front and rear reticle focal plane designs dramatically reduce parallax & provide an immovable reticle plane with variable power accuracy identical to fixed power designs.
- Selective ranging at power allows for 1 fourth to 1 milliradian ranging, zoomable as needed on FFP Models.
- Variable power illumination to the reticle-red and green and black

A full line of mounts is available at www.CounterSniperuUSA.com, and at premier tactical dealers worldwide.

Specifications:

**Optical Glass Construction:** Primary objectives to 60mm in Proprietary, Hi-Flourite, Leaded 99.997 % Pure Optical Glass with (Aspheric Lamination on the Titanium models, apochromatic ELD on Aluminum), Features 230-+485 degree stable Bertrillium-Zantitium™ multicoated optics on both primary, secondary and interior lens groups, Night Vision Compatibility available. 10-14 lenses in 7-12 groups depending on power.

**Turret Construction:** Patent pending turret locking system, 7.5 or 15 MOA per revolution, scopes can be locked down in applications that do not require ranging. Stainless Steel & brass construction, rustproof, triple sealed. 1/8th or 1/4 MOA increments.

**Focusing:** SideFocus, Torsional Friction lock, indexed for distance, left hand side, non-focusing models feature our power dependent parallax free design.

**Eye relief:** Extended eye relief design for high power rifles, minimum 3.02 inches to 6.44 inches based on model.

**Waterproofing & Chemical Survivability:** Internally pressurized, Viton Sealed, MilSpec Immersion Tested & Waterproof, Autoclavable Decon OK

**Reticule & Illumination:** Mildot, Tactical Cross, TDRM Front or Rear Focal Plane Engraved Glass shockproof to 5000g's. Tri~Color Red, Green, Black Variable Intensity, 4 Color Red, Green, Blue, Black Variable Intensity on Titanium models

**Tube Diameter:** 30mm/1.18 or 35mm, model specific, 44mm ocular diameter

**Finish:** MilSpec Covert Ano Blk Matte Hardcoat, custom finish available

**Diopter Range of Adjustment:** Minimum -3.5 to +3.5 model dependent

**Windage and Elevation Adjustment:** 45 MOA Minimum up to 240MOA, lockable-see specs for specific model

**Tube Construction:** Forged & milled Titanium Space Alloy MilSpec Hard Ano 30 or 35mm Milled 1 pc SquareSaddle Tube or Forged T6161 Aircraft Aluminum Alloy Covert Black Anodized Body 30 or 35mm Milled 1 pc SquareSaddle Tube, Titanium Springs

**AntiFog Gas Purge & Seal:** Proprietary rare earth/nitrogen/argon gas purged, hard earth sealed
**Optical Transmissivity Coating:** 24 step vacuum Bertrillium-Zantitium™ multicoating on both primary, secondary and interior lens groups, proprietary dim and blue light dawn/dusk enhancing coating provides dramatic increase in low visible spectrum light settings, enhances clarity and contrast.

**AntiScratch Coating:** TitaniStar 68 Rockwell Mil Spec AntiScratch coating, all exposed primary and ocular lenses

**Mirage & Haze Filter Daylight Coating:** InfraShield proprietary Daylight InfraRed spectrum blocker for rays 685nm and higher

**Water Displacement/Ice Shield Coating:** CSO Proprietary HydroShear Moisture Displacement Coating

**Dust Prevention Coating:** CSO Proprietary DustCaster Anti-Static IonCharge

**Warranty:** The world’s most comprehensive warrantee on optical gunsights. The world’s only lifetime warrantee on tactical scopes. Limited Lifetime on optical aluminum models, Lifetime UNCONDITIONAL with full battle damage replacement on Titanium models. See card within package for details, reflex and electronic sight warrantees and overruns or contract designate, certain limitations apply.

**CounterSniper’s™ Lenses and Proprietary Coating Systems**

Glass looks smooth...until you see it under a microscope. You can smooth it out by surface flame annealing and some similar processes but they will destroy the critical spherical dimensions of the optical systems. Many less expensive scopes make huge tradeoffs in these critical areas to make them affordable. In order to get the maximum amount of accurately transmitted and collimated light through the optical group, those microscopic canals and ridges induced by the manufacturing processes need to be polished and coated to perfection-(less than 1/1200 of a human hair). This attention to detail is why the CSO lenses are so astonishingly distortion free. Even at extreme ranges and powers, the edge to edge clarity and sharpness is the envy of any operator who had to engage targets under extreme circumstances. Very few lenses actually pass our quality control points and have the perfection to make into the CounterSniper™ tubes. The use of Fujinon Interferometers allow us to accurately design and test these, this isn’t left to subjective evaluation! This is also one of the reasons that some of our scopes exceed $7000 dollars. While a subjective evaluation of a "look through the scope" can be a good quick test, without expensive and accurate scientific equipment, evaluation a optical solution becomes very subjective. If you are looking through a 40 power scope at a distant object and it doesn't appear as clear or contrasty as a 4 power scope focused on something closer, the actual difference is only the amount of haze, pollution and mirage...at least with CounterSniper's™ Bertrillium-Zantitium™ scopes! The optical accuracy and clarity of a lens can be accurately tested and tuned for optimum performance. This attention to detail is why CounterSniper™ riflescope are considered by many to offer some of the most distortion free optical solutions in the world. Add aspherics to correct chromatic aberrations and you have optics bordering the incomparable...and should you be in harm's way, it is good to know that at least one piece of your gear wasn't made by the low bidder...

CSO uses a hybrid of coatings to let the maximum amount of broad spectrum visible light pass through. Yet another coating blocks IR light, a feature appreciated by snipers with extended time behind the scope in desert sun. *(Note; Coating will provide sun based IR blocking, but will not protect the eye from laser bandwidth in both viable an IR spectrum. Use appropriate eye protection when working in enemy IR/laser environments. Scopes designated for night vision eyepieces are coated for enhanced IR spectrum transmission)*

CounterSniper™ uses a 24 stage processing system that takes the broadband light transmissivity coefficients to levels exceeding anything we are aware of to date. Coating science is an art that needs to be tailored to the mission. You will find with CounterSniper™ scopes a remarkable series of proprietary optical enhancements. Under bright sunlight the haze and glare is filtered out with a non-light-reducing proprietary polarization type function. In lower light, such as dusk, dawn and shadowed area's that reflect less light, CounterSniper’s™ Bertrillium-Zantitium™ Electron beam coatings let pass all the light in those bandwidths unfiltered and spectral-enhanced. Coupled to our massive 56mm primary objective
lenses, you will actually see more in dusk and dawn with our scope in front of your eye than you can with your naked eye alone. CounterSniper™ lenses are coated for transmissivity, spectral enhancement and balance, and an additional 9 step final anti-reflection and hard coat that exceeds Mil-Spec. The combination of bandwidth specific coatings and massive light collection surfaces focuses all that light on the retina of the shooter. If you have ever started a fire with sun and a magnifying glass, you get an illustration of that light collimation effect. Your eye has a dusk-time light collection area of approx. two thirds of a centimeter. The collection area of the CounterSniper™ massive objective lens is almost 21 times the size. In simple terms, like a polarized pair of sunglasses, CSO coatings enhance contrast and color while providing the maximum amount of dim-light blue band light to pass through.

INSTRUCTIONS:

WARNING:
Before mounting, always be sure that the weapon is unloaded, magazine out and chamber empty. While checking, always keep the weapon’s safety engaged and the muzzle of the barrel in a safe direction. Modern rifles can fire bullets in excess of 2000 meters. Always practice safe firearms handling, our 2nd Amendment Rights are under enough pressure without accidental discharges. We recommend Otis™ Cleaning systems and use them for all our test guns at the CounterSniper™ Manufacturing centers in Rochester, New York and Springfield, MO.

Mounting Procedures
Use the best rings you can get. It is pointless to have a $6000 dollar scope with rings that flex or give under impact. CounterSniper™ makes rings ideally matched to your scope. If you are planning to attach Lasers, Lights or InfraRed Targeting accessories or systems, use the Countersniper™ RapierRailTM mounts with built in Picatinny/Weaver rails. For scopes with Front Objectives 50mm or larger use the RapierRails or CSO Precision Standard mounts. For 42mm and below, You can use CSO Precision Low Profile mounts, particularly if you are working with hunting rifles that have lowered cheekpieces, albeit the standard height versions will also work well, as well as provide slightly more clearance over the ejection port.

Assuming you are using CounterSniper™ match grade mounts, follow the instructions below. Other manufacturers of mounts may have different instructions and different torque levels. If so, use theirs.

To mount, unscrew the top half of the mounting rings and set those pieces aside. It is easiest if you can have the weapon held vertically. If you have no stationary vice set-up, take two big bricks, wrap them in towels and place the gunstock between them. Position the rear scope mount on the rail as far forward as you can get it with larger scopes to preserve maximum eye relief. Screw the base bolt on finger tight. Position the bottom half of the second ring as far forward as you can, but before the scope up-tapers to the bell area. The greater the distance between the mounts, the stronger the hold, but if you are using any of the CSO mounts, the system will be so strong that it is academic. Place the scope in the cradles and raise the gun to your eye (DONT LET THE SCOPE DROP FROM THE CRADLE!) Check to see that your eye relief is correct, set the weapon back down and position the top half of the scope rings back over the scope. Gently put in one Torx head screw at opposite corners and tighten finger tight. With the weapon held securely vertically, check to make sure that your crosshairs are exactly on the 90 degree axis to the barrel and that the windage crosshair is exactly horizontal to the barrel. If this is not done, long range ranging will not be true. After the scope is properly positioned, seat it gently, tighten the Corner torx bolts, securely tighten the mounting hex bolts, add the remaining torx bolts and tighten securely. Torque values for the mounting bolts should be 16ft/lbs and 8ft/lbs for the torx bolts holding
the upper half of the rings. Don't over tighten the torx bolts as you will strip them from the mount rendering the mounts useless. The supplied torx wrench with your hands will give you all the force needed!

**Setting Your Eyepiece focus:**
All CounterSniper™ scopes come with eyepiece adjusters that allow you adjust the scope for the optimum setting for your eyes. If your scope has protective lens covers, remove the ocular side. (The side you look INTO!) Once you have done an eyepiece adjustment, you can set it and forget it. This is different from the side focus or front objective ring that you will focus for distance on non PermaLax™ Models. To set your eyepiece, remove any scope caps that may be attached and look through the scope at the sky or a distant, light-colored background. (if your unit has a side focus control, make sure this is set for the correct distance or to infinity if looking at the sky. The cross-hairs should appear razor sharp. The dioptr settings are very forgiving as all CSO scopes feature our extended depth of field designs. You typically only need to tweak this if you use corrective lenses and choose not to wear them while shooting, or slight adjustments for cross hair sharpness. If you have trouble focusing the crosshairs on the target, you may adjust it here, but don’t mix this function with the side focus that is used for overall subject focus. The range of dioptr adjustment is appx. 3 dipters in each direction. This allows our scopes to be set to the individual eyes of users, as well as to optimize different lens combinations. The user can be fairly near or far sighted and still use the scope without glasses. If glasses or contacts are not perfect for the user, they can be compensated for by the scope. If this is not set for you, your reticle and the target may not appear to be in focus in the same plane.

**CounterSniper™ Locking Turrets.** (US, Intl. Patents Pending)
You may notice a second knob on top of the turrets in certain models. This is a unique internal locking mechanism that allows you to freely range the turrets for extreme accuracy and/or lock them permanently in place. The ability to set crosshairs for specific distance and windage is universally used in Military and Tactical applications. For hunting applications, or for consistent shots at known distance, the ability for a permanent lockdown provides the best of all worlds. These turrets are also re-settable for zeroing and giving yourself the basis point of your choosing. After zeroing, you may reset the actual turret to the zero point at the windage or elevation hash mark. Inside the turret cap are three allen-head bolts that are recessed into the cap. You may loosen these, gently twist the turret cap to the desired position and retighten. Be sure to loosen adequately to let the turret rotate freely so you don't inadvertently twist the internal windage or elevation tube. Make sure that you securely retighten those allen-head bolts, or you could lose your zero settings. Unlike other models, CounterSniper™ uses three bolts per turret, although the turret will hold with only one of these tightened. This is consistent with the overbuilding we do for military grade products. This feature allows you to use the same scope for military, law enforcement, hunting or extreme target shooting.

**Changing the Battery and your Illuminated Reticle**
Your scope comes with a 1, 2 or 3 color illuminated reticle. At CounterSniper™, we include extremely bright settings for the operator to use in daylight built up urban environments. These are useful when targets move into shadowed settings form sunlight, or are in backlit shadowed areas, or you must engage targets in darkened rooms through windows. These high-power settings will correspondingly dazzle at night. If you use the brightest settings in darkness, you will get the expected brightness bouncing about in the scope tube. This is not a flaw, this is an additional level of capability that other manufacturers don’t provide, presumably due to battery life or the fact that their internal lenses aren’t coated and a bright light will really expose design flaws. As this was a tactical request from in-theater operators, we have it included. For night work, simply use the low power settings, and always make sure when using the illuminated reticles to open your scope caps. The scope caps don’t have the super expensive coatings that the optics do, so they will refract light. To change the battery (CR2032 lithium, available in any camera store or from our website), unscrew the top of the reostat cover (The knob that turns the reticle on). Be careful not to get sand or grit into the gasket area-that will make it not
waterproof!! Insert a new battery, positive side up, and reaffix the cap-finger tight is fine. Check it periodically after sustained weapons fire to make sure it hasn't come loose. Also be sure to shut it off between uses. With intermittent use, the battery can last years. In constant on mode life runs from 40 hours to 400 hours, depending on color, model and power.

Zeroing your Scope:
Your scope comes with between 42 and 140 Minutes of Angle of adjustment. One MOA is appx.1 inch at(1.047) 100 yards, 2 inches at 200 yards, 3 inches at 300yards and so on. At one hundred yards, moving the windage knob 1 click will move the bullet point of impact left or right 1/8 inch on CSO scopes with 1/8 MOA adjustment turrets and 1/4 inch on 1/4 MOA Turrets. Same for the elevation turret. (The top one, this moves the bullet impact up or down). Scopes with side focus adjustment knobs allow you to set the scopes focus for the proper viewing distance. If you have no side focus knob, it means your scope is one of our PermaLax™ parallax free designs, such as our 3-9, 2.5-10 or 3-12by 50mm. You scope will arrive to you approximately zeroed in the middle of the range of windage and elevation.

Warning! If your scope has lockable turrets (You will see a second smaller knob on the top of the turrets) make sure you loosen this before adjusting windage or elevation. If you don’t you will strip the internal indexing grooves or shear off the tip of the indexing pin, both fixable, but considered operator abuse. As a practical matter you would need an awful lot of force to do that-if the knobs won’t turn, be sure to unlock them first!

After mounting, fire three shots at a target 25 yards or so out. With the distance between the center-line of the scope and the barrel, this will give you an approximate 200 yard zero, without the extended time of trying to get on paper at distance. Your group of bullet impacts on the target should be relatively close or you may have an ammo, gun, or mounting problem. If you are not grouping closely (within an inch or two) keep shooting groups until you get a group that is. After that, you can make your adjustments. Assuming a close group, take the distance between your aiming and impact points and adjust your turrets so that the next group hits at the aiming point. For each inch off at 25 yards, you will need to adjust your scope 16 clicks on the 1/4 MOA models and 32 clicks on 1/8 MOA models. Once you have done this, shoot another 5 shot group at 100 yards. Always zero by firing on a bench or prone with sandbags. Unless you have a solid shooting platform, you will be at this all day. Make sure you are using match grade ammo, or bullet/powder inconsistencies will cause you all sorts of headaches.

If you get lost or are not on paper, you can get yourself back to basic ground zero. Take each turret and gently screw it all the way down. STOP when you feel the slightest snugness. That means you have turned the turret down to the maximum setting. If you over-turn the turret, you will either crush the reticle in the erector tube (turning the turret to far in, you can watch the turret get shorter as you turn it) or break the elevation or windage stop collar, snapping off the base of the turret, (the part that touches the internal erector tube). The very fine nature and gentle pitch of the grooves on the turrets internal mechanism allow you an astronomical amount of mechanical advantage when you are turning them. (Up to 120 threads per inch!)We can fix them if you break this, but it is not covered by warrantee. If you are short on time and don’t wish to count, gently turn both knobs so that they appear apprx. half way in and move your sighting distance down to ten yards. You’ll be on paper quick!

To get back to the scope centerline, gently screw the turret all the way down until you feel it get snug. Then turn the turret the other way, several turns until you feel snugness at the top of the travel. Keep track of the number of total revolutions. Once you reach the full range of travel, turn the scope turret back in the opposite direction exactly one half the number of turns. This will put you at the approximate optical centerline of your scope. Your scope is shipped from the factory at this setting, so unless you or the sales person has changed these, you should be able to affix to your gun and be reasonably close
right from the box. For extreme distances, you may choose rings or elevated rear bases that "shim-Up" the rear of the scope 20, 40, or 60 MOA. This is very common for long range shooters as well as on heavy bullet systems, namely 338 Lapua and .50 BMG. For sources of components see www.CounterSniperUSA.com

**Coatings and Protecting Your lenses**

CounterSniper™ utilizes some of the most sophisticated lens coating systems in the optics industry. Reasonable care should be taken to avoid damaging these lenses, although they will take a considerable amount of abuse. The one thing to avoid is grinding dirt into the lens. The best way to clean built up dirt is with running water. All CSO scopes are waterproof and a squirt from your hydration system will wash off the grit. The VaporShear™ coating will sheet the water away and your lenses will air-dry water spotless and clean-touch up with dust free microfiber cloth. Dust and dirt buildup on the scope body won't hurt anything, albeit you should blow-out the accumulation of desert sand around the points where the turrets meet scope body. A puff of air from your mouth is all that is needed, don't use high pressure compressed air or you can force grit past the seals! Beneath the water-sheeting coating are the TitaniStar™ anti-scratch coating that is over the 32 step Bertrilium-Zantitium™ light transmission coatings. Once the lenses are 100% grit free, you can use an optical microfiber cloth to remove any stains.

**Maintenance and Cleaning**

CSO Scopes are some of the most durable optical devices in the planet. If you are in the field, there is no need to remove surface dirt, other than keeping the lenses clean. Leave it dirty, it helps with camouflage. If severely dirty, you may hose it off. Do not use power washers as you can force dirt into the many hi-temp pressure seals that keep the inert anti-fog rare earth gasses inside the tube. If greasy, use any mild soap and water mix, do not use harsh gun cleaning solvents that can seep into seals. You may paint the scope as needed, but don't paint to heavy or to quickly and don't let the paint seep into the edges of the turrets or around the zoom ring. To much paint and you will make those rotating parts harder to turn. Also mask off the screw threads on the front of the scope in case you later wish to affix sunshades or Anti-Reflection devices

**NEW! Special Note on the 1-8x scopes**

The Countersniper™ StormBringer™ 1-8x CQB to Intermediate range sniper Scope is a revolutionary optic that may finally be the answer to the vast majority of the optical needs of urban warriors who may be engaging targets in the same room or 100 yards away on a rooftop moments later. It is the only true 1-8x range scope in the world. The design is to our knowledge the only scope built to the full optimal spec of the Army's CQB optical acquisition program designed to work with the latest version of the ACR. Developed as an NDI, (Non-Developmental Item) it is available now for operators' months ahead of the evaluation process. A true 1 power, it can be used as a dot site for CQB work. Conversely, a twist of the zoom ring and the operator has an 8 power optic- or any range of magnification in between. Available in Titanium or Aircraft Aluminum, the StormBringer™ offers a front reticle design, GRB (GREEN/RED/BLACK) illuminated reticle with 5 power level settings and an oversized 34mm tube offering over 140 minutes of angle of windage and elevation. For .223 weapons and short barreled .308 weapons, it is the ideal range to take advantage of the relative level of lethality of those two weapon systems.

**Product Warrantee**

Used as above your scope will provide you with a lifetime of reliable service. CounterSniper™ offers the
best warrantee of any tactical scope in the world. For our Titanium Line, the scope is unconditionally warranted for life and includes a repair or replacement warrantee for battle incurred impact damage. Certain exceptions apply, primarily for malicious destruction, but any reasonable damage incurred in a war zone or on a tactical law enforcement operation will get you an as-new or brand new replacement. See the web for specific details.

For Factory New Unissued Models in the Aluminum line, the warrantee is also Lifetime, covering manufacturing defects, albeit battle and accidental damage and normal wear and tear are not covered. Periodically, we make available contract designate, ND1’S (Non Developmental Item) or overruns and eval units. These items carry a ten year warrantee against manufacturing defects and offer a fantastic value, as they are re-inspected to perform as new. We have a quick and affordable repair department for the repair of any damage you may incur under any circumstances. In all cases your warrantee card must be on file. Please be sure to send in your warrantee card! This also allows us to contact you with new products or enhancements that may be of value to you in the future. We do not sell, rent or otherwise publish or share our databases. We reserve the right to substitute a newer or improved model if the existing model cannot be returned to spec. Should you need warrantee service, return it to us freight prepaid with a photocopy of your receipt and photocopy of your warrantee card and we will repair or replace it with a new one and pay the freight back to you! This warrantee is only valid to the original purchaser of the optic.

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