The Flyer

Official Newsletter of the Airfield Shooting Club

Volume 20, Issue 3

June 2025

Airfield Shooting Club

at the Airfield 4H Center ~ Wakefield, Virginia

P.O. Box 250, Wakefield, VA 23888

Summer Edition

"Safety First: Upholding Standards at Our Rifle Range" by Tom Sanford

Introduction:
Safety is the first priority of any shooting activity anywhere, not just at the range. At ASC range, we prioritize the well-being of every member and visitor first.

This article reminds us of the essential safety protocols and best practices to ensure a secure and respectful environment for all. There is a full range safety manual posted for reference in the sign in sign-in shed and on the ASC webpage.

Core Safety Rules:

- Always Keep the Muzzle Pointed in a Safe Direction: At ASC this means down range. This fundamental rule ensures that even if an accidental discharge occurs, it won't result in injury. Keep it unloaded in your rifle case or in the range provided gun rack empty with a chamber flag, if at a shooting station and not discharging your weapon at an approved target system, empty the weapon of round and magazine, insert a chamber flag and place on your table, remember to keep your weapon pointed down range.

- Keep Your Finger Off the Trigger Until Ready to Shoot: This prevents unintended discharges.

- Always Keep the Firearm Unloaded Until Ready to Use: Ensures that firearms are only loaded when on the firing line and ready to shoot.

Personal Protective Equipment (PPE):

- Eye Protection: Protects against potential ricochets and debris.
- Hearing Protection: Reduces the risk of hearing damage from repeated gunfire exposure.

Range Etiquette:

- Follow Range Officer Instructions: They are there to ensure *everyone's* safety.
- Be Mindful of Others: Avoid disruptive behavior and respect others' space and concentration, especially when the range is at capacity.
- Clean Up After Yourself: Dispose of spent casings and trash appropriately. Don't just sweep them off the concrete, get them picked up and dispose of properly in the brass buckets.

Conclusion:
Adhering to safety rules and proper etiquette not only ensures your safety but also enhances the experience for everyone at the range. Let's commit to maintaining a safe and respectful environ-

RANGE SAFETY RULES

(https://airfieldshootingclub.org/wp-content/uploads/2025/08/Range-Rules-and-Regulations-250816.pdf)

Firearm Safety Reminders

Firearm safety is the first step in responsible firearm use, whether at a professional shooting range, a private facility, or an informal outdoor setting. It includes a set of protocols, practices, and principles designed to protect shooters, spectators, and surrounding areas from accidents and injuries. Firearm handling carries inherent risks, and strict adherence to range safety guidelines is critical to ensuring a secure and enjoyable experience for everyone. This article explores the key components of range safety, including universal rules, range-specific protocols, personal responsibility, and the role of range safety officers (RSOs).

At the heart of range safety is the universal rules of firearm handling, which apply in any context where firearms are present. These rules, often attributed to firearms expert Jeff Cooper, form the foundation of safe gun handling:

1. Treat Every Firearm as If It's Loaded: Always assume a firearm is loaded, even if you believe it's not. This mindset prevents complacency and ensures careful handling at all times.

2. Never Point a Firearm at Anything You Are Not Willing to Destroy: The muzzle must always be directed in a safe direction, typically downrange or toward the ground, to prevent accidental harm.

3. Keep Your Finger Off the Trigger Until Ready to Shoot: The trigger finger should remain outside the trigger guard until the shooter is aligned with the target and ready to fire.

4. Be Sure of Your Target and What's Beyond It: Shooters must identify their target clearly and be aware of what lies beyond it to avoid unintended damage or injury.

Leave It Better Than You Found It: A Friendly Reminder

Our shooting range is more than just a place to practice skills—it's a shared space built on respect, safety, and pride. Every member plays a role in keeping it clean, organized, and ready for the next shooter. The golden rule here is simple: leave the range better than you found it.

- Store Wooden Frames Properly

After your session, please return wooden target frames to their designated storage areas:

⇒ Short Range Berm (SRB)

⇒ 25- and 50-yard ranges

⇒ 100-yard range

Proper storage prevents damage, keeps the range tidy, and ensures frames are ready for the next shooter.

- Trash Belongs in the Trash Cans

ASC provided trash cans at every range for your convenience. Please use them for paper targets, food wrappers, and other waste.

If a trash can is full, don't leave garbage piled on top—help out by "taking out the trash." Simply tie up the bag and place it in the dumpsters placed just to the left before you turn to enter the range.

This small act keeps our range clean and pest-free.

- Sweep Up Spent Casings
- Spent casings can be a hazard and an eyesore.
- If you're not reloading your brass, sweep it up and place it in the brass buckets located at each range.

This keeps the firing line safe and helps us recycle valuable materials.

- Why It Matters

A clean, organized range:

- Promotes safety by reducing tripping hazards.
- Preserves equipment and facilities.
- Shows respect for fellow members and visitors.
- Reflects the pride we take in our shooting community.

Let's all do our part to keep our range a place we're proud to call ours. The next time you pack up, take one last look around—if it's cleaner than when you arrived, you've done it right.

ment. Refer to the ASC website for a current range safety rules.

"Maintaining Your Firearm: A Guide to Better Performance

Introduction:
Regular maintenance of your firearm is crucial for its performance and reliability. This guide provides comprehensive tips to keep your equipment in top condition, as known from this authors personal experience.

Why Maintenance Matters:

- **Safety:** A well-maintained firearm reduces the risk of malfunctions.

Photo from www.remington.com

- **Performance:** Clean firearms function more reliably and accurately.

- **Longevity:** Regular care extends the life of your firearm.

Maintenance Steps:

1. Ensure the Firearm is Unloaded: Always check and double-check before beginning any maintenance.
2. Disassemble as Recommended: Follow the manufacturer's guidelines for disassembly.
3. Clean the Barrel and Chamber: Use appropriate cleaning rods and solvents to remove residue.
4. Lubricate Moving Parts: Apply suitable lubricants to prevent wear and corrosion.
5. Inspect for Wear and Damage: Regular checks can catch issues before they become serious problems.
6. Proper Storage: Store firearms in a cool, dry place, preferably in a safe or gun cabinet.

Conclusion:
Regular maintenance is not just about preserving your firearm; it's about ensuring safety and optimal performance every time you shoot.

"Essential Firearm Maintenance Routines: Ensuring Performance and Longevity"

Regular maintenance of your firearm is crucial for its performance and longevity. Whether you're a seasoned shooter or a new gun owner, understanding and implementing proper maintenance practices ensures that your firearm operates safely and reliably for years to come. This comprehensive guide provides essential tips to keep your equipment in top condition.

Prioritize Safety First
Before beginning any maintenance, always ensure your firearm is unloaded. Remove the magazine, open the action, and visually and physically inspect the chamber to confirm it's clear. It's advisable to perform maintenance in a well-lit, well-ventilated area, free from distractions, and with all ammunition stored separately. This foundational step is critical to prevent accidents during the cleaning process.

Disassemble According to Manufacturer Guidelines
Consult your firearm's manual for specific disassembly instructions. Most routine maintenance requires only a field strip, which allows access to essential components without complete disassembly. Following manufacturer guidelines ensures that you don't inadvertently damage parts or void warranties.

Thorough Cleaning of Components
Barrel: Use a bore brush appropriate for your firearm's caliber, along with a quality cleaning solvent, to remove fouling and residue from the barrel. Run cleaning patches through the barrel until they come out clean.

Action and Other Parts: Clean the action, chamber, and other accessible parts using a solvent and a nylon brush. Pay special attention to areas with visible dirt or grime.

Proper Lubrication
After cleaning, apply a light coat of firearm-specific lubricant to moving parts to reduce friction and prevent rust. Be cautious not to over-lubricate, as excess oil can attract dirt and debris, potentially leading to malfunctions.

Reassembly and Function Check
Carefully reassemble your firearm according to the manual, ensuring all parts are correctly aligned and secured. After reassembly, perform a function check to verify that all components operate smoothly and safely. This step confirms that the firearm is ready for use and that maintenance was successful.

Regular Inspection for Wear and Damage
Regularly inspect your firearm for signs of wear, damage, or loose components. Check grips, sights, magazine springs, and other critical parts for any abnormalities. Address

any issues promptly to prevent potential malfunctions or accidents.

Safe and Secure Storage
Store your firearms in a secure, locked container, such as a gun safe, to protect them from unauthorized access, theft, and environmental factors. Use dehumidifiers or desiccant packs to control moisture levels and prevent rust or corrosion. Proper storage is vital for maintaining your firearm's condition and ensuring safety.

Professional Maintenance and Servicing
While routine cleaning and maintenance can be performed at home, certain situations require professional attention. If you notice unusual wear, damage, or performance issues, consult a qualified gunsmith. Regular professional inspections and maintenance can extend the life of your firearm and ensure it remains in top condition.

Importance of Using Quality Cleaning Products
Investing in high-quality cleaning products is essential for maintaining your firearm's performance and longevity. Quality solvents and lubricants effectively break down fouling and provide adequate protection against corrosion. Using the right tools and supplies makes the cleaning process more effective and efficient.

Establish a Maintenance Routine
Develop a regular maintenance schedule based on how often you use your firearm. Cleaning after each use is ideal, especially if you've fired several rounds. Even if unused, a monthly cleaning can help prevent rust and ensure your firearm is ready for use when needed.

Regular maintenance of your firearm is not just about keeping it clean; it's about ensuring its performance and safety. By following these comprehensive tips, you can keep your equipment in top condition, ensuring reliability and longevity. Remember, responsible firearm maintenance is vital to being a responsible gun owner.

How to clean and maintain high-powered scopes and binoculars by Tom Sanford

High-powered scopes and binoculars are precision instruments, and proper maintenance is crucial to preserving their optical quality and longevity. Improper cleaning can damage delicate lens coatings and internal components, so it's essential to use the proper techniques and products.

Essential tools and materials

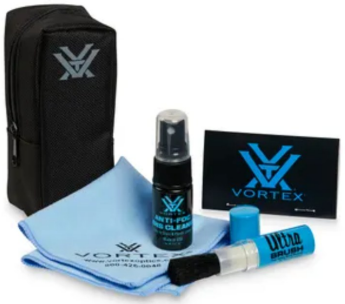
Lens Brush or Air Blower: A soft-bristled brush or a can of compressed air specifically designed for optics will safely remove loose dust and debris without scratching the lenses.

Microfiber Lens Cloths: High-quality, lint-free microfiber cloths are gentle and effective for cleaning lens surfaces without leaving scratches or streaks.

Optics Cleaning Solution: Choose a specialized solution designed for optical lenses that won't harm coatings or leave residue. Isopropyl alcohol can be used, but avoid dish soap as it can damage protective coatings and leave residue.

Cotton Swabs: These are useful for cleaning tight spaces and around turret knobs.

Lens Pen: A two-in-one tool with a soft brush on one end and a cleaning tip or pad on the other for tackling smudges and fingerprints.



www.vortexoptics.com

Protective Lens Caps/ Covers: Essential for preventing dust, fingerprints, and physical damage when the optics are not in use.

Silica Gel Packs: Help absorb moisture and prevent fogging, mold, and corrosion, especially in humid environments or for long-term storage.

Cleaning the Lenses

1. Remove Debris: Gently remove loose dust and debris using a lens brush or air blower.

2. Apply Cleaning Solution: If necessary, apply a small amount of optics cleaning solution to a microfiber lens cloth or lens tissue, not directly onto the lens.

3. Wipe Gently: Use slow, circular motions to wipe the lenses, working

from the center outward. Don't scrub or apply excessive pressure.

4. Dry: Allow the lenses to air dry, or gently wipe away any remaining moisture with a clean, dry microfiber cloth.

Cleaning the Housing

1. Remove Debris: Use pressurized air to clear grit and debris from hinges, seams, and mechanical components.

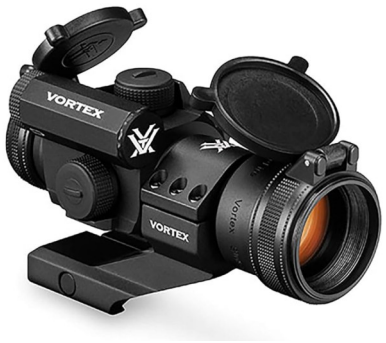
2. Wipe Down: Wipe down the exterior housing (rubber armor, anodized aluminum, etc.) with a damp cloth (not soaked) to remove mud, dust, and fingerprints.

3. Use Mild Soap (if necessary): For stubborn stains or blemishes on the housing, a mild soap can be used.

Dry: Ensure all components are completely dry before storage or use.

Developing a Maintenance Routine

- Regular Cleaning: Clean your optics after every use or whenever



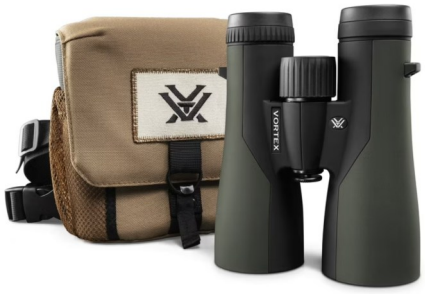
www.vortexoptics.com

they become soiled.

- Store Properly: Keep optics in a padded, dry, and climate-controlled environment. Use silica gel packs to absorb moisture.

- Use Lens Caps: Always use protective lens caps or covers when the optics are not in use.

- Periodic Inspection: Regularly



www.vortexoptics.com

check for loose screws, worn cables, or signs of wear on moving parts.

- Avoid Extreme Temperatures: Protect your optics from sudden temperature fluctuations and prolonged exposure to extreme heat or cold.

Professional Servicing: For complex repairs or cleaning of internal components, consult the manufacturer or a qualified technician.

What not to do

- Avoid harsh chemicals: Never use isopropyl alcohol, dish soap, or other household cleaners on the lenses, as they can damage delicate coatings.

- Don't use abrasive materials: Avoid using paper towels, facial tissues, or coarse cloths to wipe lenses, as they can scratch the surfaces.

- Don't disassemble unless trained: Do not attempt to take apart your scope or binoculars for cleaning or repairs unless you are a trained technician, as it can void the warranty or cause permanent damage.

Don't leave batteries in for long periods: Remove batteries from electronic optics during long-term storage to prevent corrosion. I need to follow this more often as I find that I am replacing batteries every time I bring my optics to the range.

By following these maintenance guidelines, you can ensure your high-powered scopes and binoculars remain in optimal condition, providing clear vision and reliable performance for years to come. Take a moment and try to come up with a standard system so when it is time to race through a steel target match or take down that 8-pointer, your weapon system will always work for you. In the last three out of five matches, this shooter was ill prepared causing missed opportunities during my shooting experience.

References: www.vortexoptics.com

Essential items for a range pre-trip inspection

Being prepared for the range or a shooting competition means more than just showing up with your firearm and ammo. A well-stocked and inspected range bag can be the dif-

ference between a frustrating day and a successful one.

PPE Protection

Eye and Ear Protection: Essential for any shooting activity. Ensure your eye protection is ballistic-rated (e.g., ANSI Z87.1) and consider carrying both clear and tinted options for different lighting conditions. Bring both electronic earmuffs (this allows conversation while muffling shots) and backup earplugs.

Gloves: Protect your hands from scrapes, burns, and the elements.

First Aid/Trauma Kit: Accidents happen, and being prepared for minor injuries (scrapes, cuts, burns) and potentially more serious ones (like a gunshot wound with a tourniquet and hemostatic gauze) is vital. Consider a separate trauma kit for severe injuries.

Sun and Bug Protection: For outdoor ranges, don't underestimate the need for sunscreen and bug spray.

Firearms and Ammunition

Firearms: Bring the specific firearms needed for the competition, including any backup guns, and ensure all necessary paperwork is accessible.

Ammunition: Have enough dependable ammunition for the match, including extra for potential reshoots or malfunctions. Store ammo safely, ideally in marked hard-sided containers, away from other gear that might damage it.

Magazines and Loaders: Bring enough magazines to complete the course of fire and potentially some extras, according to Academy. A magazine loader can save time and effort during reloading.

Holsters and Belt: If required by the competition, use a sturdy belt and a safe, appropriate holster (check competition rules for restrictions on material and position).

Tools and Maintenance

Basic Cleaning Kit: Include brushes, solvent, oil, cleaning rod or bore snake, and patches to keep firearms functioning optimally throughout the competition. Having the right lubricant is essential, particularly for certain types of firearms.

Multi-tool/Gun-specific tools: Useful for making adjustments, tightening screws, or fixing minor issues.

Chamber Flags: Essential for safety and often required by range officials to indicate an empty chamber.

Dummy Rounds/Snap Caps: Helpful for practicing techniques without live ammunition.

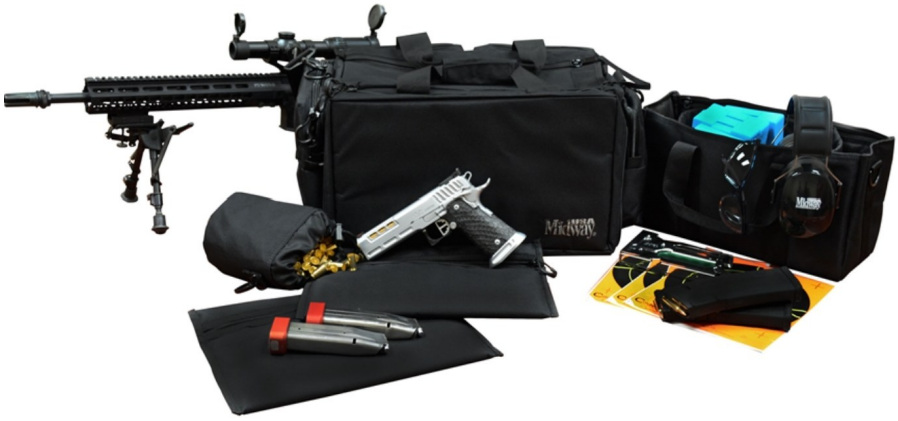
Competition-Specific and Miscellaneous Items

Targets and Target Accessories: If allowed, bring paper targets, a stapler, staples, and tape for mounting and patching targets.

Shot Timer: Crucial for competitive shooters to track performance and measure improvement.

Scorebook/Notebook and Pen: Keep notes on performance, make adjustments, and track progress,

Hydration and Snacks: Stay hydrated and energized throughout the competition, especially during longer events.



https://gunsgearandguystuff.com/2016/05/17/review-midwayusa-competition-range-bag/

Range Bag/Cart: A dedicated range bag or cart will help keep your gear organized and easily portable, protecting it from dirt and weather.

Weather-dependent Gear: Pack appropriate clothing, including a hat,

rain gear, or warm clothing as needed.

Documents: Bring necessary identification and any required permits or licenses.

Pre-competition inspection checklist:

Before leaving for the competition, inspect your gear thoroughly.

It's a good practice to follow this with your firearms gear as well.

Firearms: Ensure firearms are clean, lubricated, and functioning correctly. Check for any loose parts or malfunctions.

Magazines: Inspect magazines for wear, damage, or dents that could affect feeding. Definitely need to have these in your rifle bag or it will be a bad day at the range.

Optics and Sights: Ensure optics are securely mounted and zeroed. Check iron sights for proper alignment and tightness.

Belt and Holster: Ensure the belt is sturdy and the holster provides good retention and is securely attached to the belt.

Ammunition: Double-check that you have the correct type and amount of ammo.

Ear and Eye Protection: Ensure your eye protection is clean and free of scratches, and that your ear protection is functioning correctly (check batteries for electronic muffs).

First Aid Kit: Verify that your first aid kit is stocked and easily accessible.

In summary, a shooter's range bag used for the general range shooting or local competition should be a support your discipline and needs, Prioritized with safety gear and competition-specific tools and supplies, then customized for comfort and individual preferences.

The "seasoned barrel" concept in firearms

The concept of a "seasoned barrel" in firearms refers to a barrel that has been fired a sufficient number of rounds to achieve optimal accuracy and consistency. It's not about making the barrel dirty, but rather about reaching a state where the bore's internal characteristics (including the interaction with fouling) stabilize and contribute to better performance.

Fouling and the seasoning process

Initial fouling: When a barrel is new or freshly cleaned, a thin layer of carbon and copper fouling begins to build up with each shot. This process helps to fill in microscopic imperfections in the bore, creating a smoother and more consistent surface for the bullet to travel through, according to Guns and Ammo.

Stabilized friction: The consistent layer of fouling (the seasoning) contributes to more uniform friction between the bullet and the bore, which in turn leads to more consistent muzzle velocities and improved accuracy.

The point of diminishing returns: There's a "sweet spot" for each rifle where the barrel is considered seasoned. After a certain point, excessive fouling can start to degrade accuracy by causing inconsistent friction, increased pressures, and variations in the bore diameter, says Accurate Shooter.

Achieving a seasoned barrel

No "one-size-fits-all" solution: The number of rounds needed to season a barrel varies depending on factors such as barrel quality, caliber, bullet type, and individual rifle characteristics.

Shooting and Cleaning: One common approach is to follow a break-in procedure that involves a series of shooting and cleaning steps to allow the barrel to stabilize and develop a consistent fouling layer. This typically includes alternating between cleaning and firing groups of rounds.

Observation and Testing: The best way to determine when your barrel is seasoned is through observation and testing. Pay close attention to group sizes, muzzle velocity (using a chronograph), and point of impact consistency. When these metrics stabilize and achieve optimal performance, your barrel is likely seasoned.

Maintaining a seasoned barrel

Careful Cleaning: Once your barrel is seasoned, cleaning needs to be done strategically to avoid disrupting the consistent fouling layer. Excessive or improper cleaning can strip away the seasoning and require the process to be repeated.

Cleaning intervals: The cleaning interval will depend on your rifle's characteristics, the type of ammunition used, and the level of accuracy you're striving for. Many shooters find that cleaning every few hundred rounds is sufficient to maintain a seasoned barrel's performance.

Environmental Considerations: Consider cleaning more frequently if the rifle is exposed to harsh environmental conditions or experiences heavy fouling with certain ammunition types.

In summary, a seasoned barrel is a barrel that has reached a stable state of fouling where it delivers its best accuracy and consistency. It's achieved through a process of shooting and careful cleaning, and maintaining this state is crucial for optimal performance, especially in precision shooting applications.

Why is it important to offset parallax and elevation to your rifle system when changing shooting distance?" by Tom Sanford and Paul Lynch

To maintain accuracy and prevent damage to equipment, it is crucial to adjust for parallax and elevation when changing shooting distances. This applies to scenarios involving specialized equipment like a rifle scope on a shooting range or a sophisticated target system. Failure to correct for these factors leads to a discrepancy between your point of aim and the actual point of impact, potentially causing missed shots and collateral damage. The importance of this lax in judgement can cause severe damage to the wooden frames or target fixtures. (see photos on next page).

This is offset is described by Paul Lynch using 5.56 NATO rounds, "if you have an optic on a firearm, particularly a rifle, the line-of-sight through the scope is higher than the center of the bore, and that difference is what we call offset". "When the rifle is zeroed, these lines will cross. If you move back or forward from the distance a rifle is zeroed at, it will affect the height at which the bullet will hit. In other words, when you take a shot with rifle zero at 50 yards at a target 100 meters away, the impact could be as much as several inches higher than the line of sight".

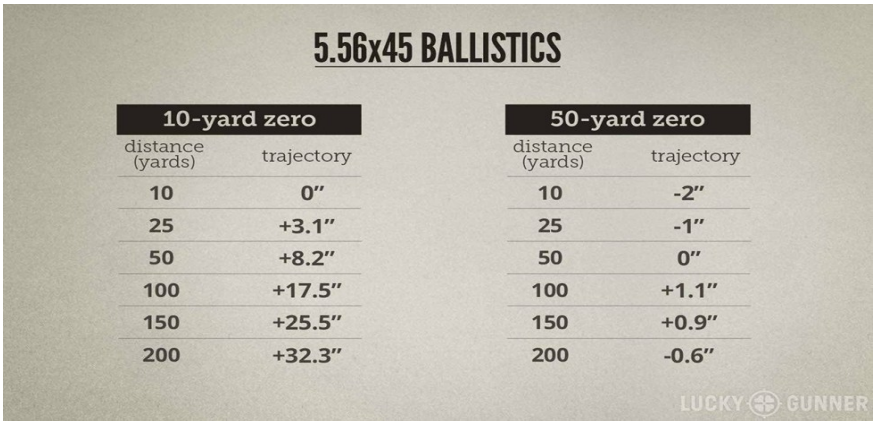
While you might have a dedicated rifle specifically zeroed for the distances typically encountered in a home-defense scenario or practice at the short-range berm, verify if you take the same gun over the 100-meter range. The offset can be as high as 2 feet off the line of sight.

The table below lists the average offset measurements for 5.56 NATO zeroed at 10 yards and 50 yards.

To further explain the difference between parallax and elevation and its impact continue to read further to understand how it works, and problems that occur.

Parallax

Parallax is the apparent movement of the aiming reticle relative to the target when your eye position changes. It occurs when the image of the target and the reticle are not on the same focal plane inside your optics.

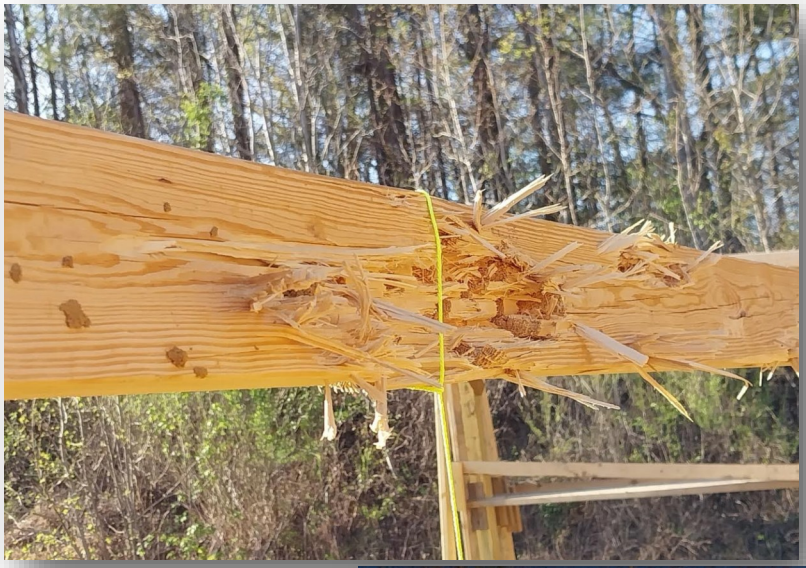


www.luckygunner.com

How it works: When a scope's parallax is set for a specific yardage, it ensures the reticle and target appear stationary relative to each other. If you move your eye slightly while looking through the scope, the crosshairs will remain fixed on the exact same spot on the target.

The problem with different yardage:

If you change your shooting distance without adjusting for parallax, the reticle will appear to shift and "float" across the target if you move your head. This optical illusion can lead to an inaccurate shot, especially at longer distances where even a small error is magnified.



The risk to target frames: On a shooting range with automated or mechanical target systems, a significant aiming error caused by uncorrected parallax could send a bullet outside the designated target zone. This could hit and damage the target frame or sensitive mechanical components.

Elevation

Elevation adjustment is necessary because the force of gravity causes a bullet's path to curve downward over distance, a phenomenon known as bullet drop.

How it works: A firearm's sights or optic are zeroed to a specific range (e.g., 100 yards) where the bullet's point of impact is perfectly aligned with the point of aim. To hit a target at a different distance, you must compensate for the change in bullet trajectory.

The problem with different yardage: If you aim at a target that is farther away than your zeroed distance without adjusting your elevation, the bullet will strike significantly lower than your aiming point.

The risk to target frames: Similar to parallax, misjudging elevation can cause a round to miss the target completely and strike the frame. Target systems are expensive, and a lack of proper elevation adjustment is a leading cause of preventable damage to the equipment.

How the two errors combine

Both parallax and elevation adjustments become increasingly critical as shooting distance increases. If you miscalculate both, you have a compounded error that can cause a shot to be off-target horizontally and vertically. For a mechanical target system, this could mean:

A miss that damages the side or corner of the target frame due to uncorrected parallax.

A low shot that hits the base or lifting mechanism of a target, causing costly damage due to improper elevation.

Correctly compensating for both factors is therefore essential for accurate shooting and the safe operation of target equipment.

The photos above are what happens when parallax and elevation is not properly set on your rifle system.