

ALFA-METAL

Firearm Safety Handbook

*Professional Guide for Civilian Shooters, Security Personnel, Law
Enforcement and Military Professionals*

Comprehensive reference edition

Safety is not a separate skill. It is the foundation of every skill.

Alfa-Metal International Bodyguard and Tactical Academy

Contents

- Important Notice and Scope
- How to Use This Handbook
- 1. The Professional Safety Mindset
- 2. The Four Universal Firearm Safety Rules
- 3. Understanding Firearm Condition
- 4. Safe Administrative Handling
- 5. Safe Handover Between People
- 6. Loading, Unloading, Holstering, and Carrying
- 7. Dry-Practice Safety
- 8. Ammunition Safety
- 9. Misfire, Hangfire, Squib Load, and Other Stoppages
- 10. Cold Range and Hot Range Concepts
- 11. Shooting Range Safety Rules
- 12. Movement with Firearms
- 13. Vehicle Safety
- 14. Low-Light and Night Shooting Safety
- 15. CQB and Confined-Space Safety Principles
- 16. Safe Firearm Manipulation Under Stress
- 17. Eye Dominance and Vision Considerations
- 18. Hearing, Noise, and Lead Exposure
- 19. Firearm Inspection, Cleaning, and Maintenance
- 20. Storage and Access Control
- 21. Transportation
- 22. Children and Firearm Safety
- 23. Instructor and Range Safety Officer Responsibilities
- 24. Student Responsibilities
- 25. Spectator, Visitor, and Photography Safety
- 26. Common Causes of Firearm Incidents
- 27. Professional Best Practices
- 28. The Ten Golden Rules for Every Shooter
- 29. Operational Checklists
- 30. Frequently Asked Questions
- 31. Glossary of Firearm Safety Terms
- 32. Firearm Safety at Home
- 33. Competition and Organized Sport Safety
- 34. Suppressor and Accessory Safety
- 35. Common Myths About Firearm Safety
- 36. Human and Psychological Factors
- 37. Recommended Reading and Continuing Education
- 38. Reference Framework
- Conclusion

Important Notice and Scope

This handbook is an educational safety reference. It does not replace practical instruction, the firearm manufacturer's manual, range standing orders, organizational standard operating procedures, medical advice, or the law. Firearms, ammunition, ranges, training methods, and legal requirements differ by jurisdiction and equipment type. When any instruction in this handbook conflicts with the manufacturer's manual, an authorized range command, applicable law, or a formally approved organizational procedure, follow the more specific controlling requirement and stop if uncertainty remains.

The procedures below are intentionally conservative. They are designed to reinforce safe decision-making, not to teach offensive use of firearms. Advanced activities such as movement, low-light work, vehicle drills, close-quarters training, team exercises, and stress exposure must be conducted only by appropriately qualified personnel in a controlled environment under competent supervision.

CRITICAL PRINCIPLE

No written handbook can make an unsafe environment safe. When conditions, equipment, supervision, or individual readiness are inadequate, the correct action is to stop.

How to Use This Handbook

Read the handbook once from beginning to end, then return to the sections relevant to your role. New shooters should focus first on the universal rules, safe handling, range commands, loading and unloading, stoppages, storage, and transportation. Instructors and range personnel should also study the leadership, briefing, inspection, emergency, health, and checklist sections. Experienced professionals should use the handbook as a standardization and refresher tool rather than assuming familiarity equals competence.

- Before training: review the relevant procedure and equipment manual.
- During training: obey the designated Range Safety Officer or instructor immediately.
- After training: debrief errors without ego and correct weak habits before adding speed or complexity.
- For organizational use: adapt the checklists to the specific range, firearm systems, local law, medical plan, and emergency contacts.

1. The Professional Safety Mindset

Firearm safety begins before the firearm is touched. It begins with judgment, attention, emotional control, and the willingness to follow a proven process every time. A firearm is a mechanical device. It cannot identify a safe direction, recognize a bystander, correct the wrong ammunition, or decide that the shooter is too tired to continue. The person handling it must supply those safeguards.

Professionalism is not demonstrated by speed, tactical appearance, confidence, or the number of rounds fired. It is demonstrated by predictable behavior. A professional handles an unfamiliar firearm slowly, checks it personally, asks questions without embarrassment, follows the same clearing sequence every time, accepts correction immediately, and stops when conditions become unsafe.

Complacency and normalization of deviance

Many serious incidents are preceded by minor unsafe acts that caused no immediate consequence. A muzzle briefly crosses another person; a chamber is not checked; a shooter turns with a firearm; ammunition is left in a dry-practice room. Because nothing happened, the behavior begins to feel acceptable. Repetition then turns deviation into habit. The absence of an accident is not proof that a practice is safe.

INSTRUCTOR NOTE

Correct small violations early. The safest time to stop an accident is when it is still only a weak habit.

Layered safety

The universal rules overlap deliberately. A person may mistakenly believe a firearm is unloaded, but muzzle control and trigger discipline can still prevent injury. A mechanical safety may fail, but proper trigger-finger placement and safe direction remain effective. This redundancy is why the rules must be applied together rather than selected according to convenience.

Fitness to handle firearms

Do not handle firearms when judgment, coordination, vision, or attention is impaired by alcohol, recreational drugs, sedating medication, severe fatigue, illness, dehydration, emotional crisis, or uncontrolled anger. A responsible shooter is prepared to withdraw from training. There is no professional value in continuing when individual readiness is below the level required for safe performance.

2. The Four Universal Firearm Safety Rules

Rule 1: Treat every firearm as if it is loaded

Assume a firearm is loaded until you personally verify its condition, and continue to handle it with loaded-firearm discipline even after verification. Never rely on memory, appearance, a mechanical indicator, an open action, or another person's statement. A firearm that was clear a moment ago may have been loaded, exchanged, moved, or handled by someone else.

A proper condition check begins with a safe muzzle direction and indexed trigger finger. Remove the source of ammunition when the design permits, open the action, and inspect the chamber, magazine well, feed path, and bolt or breech face as appropriate. Visual inspection is primary; tactile confirmation may be added when appropriate, particularly in reduced visibility, but must not place fingers in danger or replace visual confirmation when light is available.

Rule 2: Keep the muzzle pointed in a safe direction

A safe direction is one in which an unintended discharge is unlikely to injure a person and is likely to be contained. It is not automatically the floor, sky, wall, or nearest berm. Hard ground, concrete, steel, water, rock, vehicles, and shallow angles may create ricochet or penetration hazards. Evaluate the actual environment, not a memorized direction.

Muzzle awareness is continuous. It applies while drawing, holstering, loading, unloading, moving, communicating, opening doors, entering vehicles, clearing a stoppage, and passing a firearm. The muzzle should not cross any person except in circumstances where pointing a firearm at that person is lawfully and operationally justified.

Rule 3: Keep your finger off the trigger until ready to fire

Keep the trigger finger straight and visibly indexed on the frame or receiver, outside the trigger guard, until the firearm is directed at a positively identified target and a conscious decision to fire has been made. Remove the finger immediately when the decision changes, when the sights leave the target, when moving, when communicating, when manipulating equipment, or when a cease-fire is called.

Placing the finger merely beside the trigger is not enough. Under stress, startle, loss of balance, sympathetic hand contraction, or contact with equipment may result in an involuntary press. A high, deliberate index provides a clearer safety margin and allows instructors to verify compliance visually.

Rule 4: Be sure of your target and what is around and beyond it

Positive identification means more than observing shape, movement, sound, or location. Know exactly what the target is, why firing is permitted, what is in front of it, beside it, and behind it, and what may happen if the projectile misses, penetrates, fragments, or ricochets. Every projectile remains the shooter's responsibility until it stops.

Low light, smoke, vegetation, glass, crowds, moving persons, structures, vehicles, and uncertain backstops increase the identification burden. If the target or background cannot be confirmed, the safe decision is not to fire.

THE FOUR-RULE TEST

Before every handling or firing action, ask: Is the condition known? Is the muzzle safe? Is the finger indexed? Is the target and background identified?

3. Understanding Firearm Condition

Safety requires knowing the actual condition of the firearm rather than using vague expressions such as safe, empty, ready, or unloaded without verification. Organizations should define condition terminology in their standard operating procedures and use it consistently.

Condition checks

A condition check should be deliberate, observable, and appropriate to the firearm design. Avoid repeatedly cycling the action without purpose, catching ejected live rounds in the air, or placing hands in front of the muzzle. Do not imitate a procedure learned on one firearm when the controls or mechanism differ.

Mechanical safeties and indicators

Safeties, decockers, firing-pin blocks, grip safeties, drop safeties, loaded-chamber indicators, and magazine disconnects may reduce risk, but they do not replace the universal rules. Mechanical devices may be misunderstood, damaged, disengaged, incorrectly assembled, or defeated by modification. Do not test a safety by pressing the trigger on a loaded firearm.

Unknown or unfamiliar firearms

When presented with an unfamiliar firearm, keep it pointed in a safe direction, keep the finger indexed, and ask a qualified person to identify the controls and clearing procedure. Do not experiment with controls while the firearm may be loaded. If the action cannot be opened safely, place the firearm in a controlled location and seek a competent armorer or gunsmith.

4. Safe Administrative Handling

Administrative handling includes all non-firing manipulation: inspection, issue and return, loading for duty, unloading after duty, cleaning, maintenance, demonstration, storage, transportation, and dry practice. These apparently routine moments deserve special attention because the user may relax after live fire or assume ammunition is absent.

Establish a handling area

Where possible, conduct administrative loading and unloading in a designated area with a verified safe direction or approved clearing device. Keep unrelated people away. Remove distractions. Do not combine handling with phone calls, conversation, photography, equipment adjustment, or paperwork.

Administrative loading

1. Confirm that loading is authorized and identify the designated safe direction.
2. Verify the firearm, magazine, and ammunition are correct, serviceable, and compatible.
3. Keep the trigger finger indexed and the muzzle controlled.
4. Load in accordance with the manufacturer's instructions and organizational procedure.
5. Avoid unnecessary cycling, repeated chambering, or administrative trigger manipulation.
6. Confirm the intended condition using the least manipulative method appropriate to the system.
7. Holster or secure the firearm without sweeping the body, clothing, equipment, or another person.

Administrative unloading

8. Enter the designated unloading area and establish a safe direction.
9. Keep the finger indexed throughout the procedure.
10. Remove the ammunition source first when the firearm design allows.
11. Open and lock the action to the rear or open position.
12. Eject and control any chambered cartridge without trying to catch it in the air.
13. Visually inspect the chamber, magazine well, feed path, and bolt or breech face.
14. Use a second independent check when required by policy.
15. Insert a chamber flag or leave the action open when required.
16. Secure ammunition separately before cleaning, demonstration, or dry practice.

COMMON ERROR

Removing a magazine does not unload a firearm if a cartridge remains in the chamber.

5. Safe Handover Between People

A firearm should be transferred only when both people are ready, attentive, and able to maintain control. The person handing over the firearm should make it visibly clear, with the action open where practical, the magazine removed, and the muzzle directed safely. The receiving person performs an independent condition check. Courtesy never replaces verification.

- State the condition clearly, but expect independent verification.
- Do not hand over a firearm by the trigger or with a finger inside the trigger guard.
- Do not release control until the receiving person has a secure grip.
- Do not pass firearms casually across a table, vehicle seat, firing point, or group of people.
- For unfamiliar systems, explain the controls before transfer or involve an instructor.

6. Loading, Unloading, Holstering, and Carrying

Loading and unloading on a range

Load and unload only at the authorized place and time. On a supervised range, the command structure controls when firearms may be handled. A shooter who finishes early keeps the muzzle downrange, finger indexed, and waits for instructions. Do not turn to speak to an instructor while holding a firearm.

Holstering

Holstering is an administrative action, not a speed event. Confirm the finger is indexed, visually check the holster mouth when circumstances permit, clear clothing and straps, and insert the firearm without forcing it. Stop if resistance is felt. Damaged, collapsed, contaminated, or unsuitable holsters must be removed from service.

Reholstering under stress should be delayed until the environment is controlled. There is rarely a safety benefit in racing the firearm back into the holster.

Slings and long guns

A sling assists retention but can also allow uncontrolled muzzle movement. Adjust it to the task, maintain positive control during transitions, and prevent the firearm from swinging when bending, climbing, kneeling, or assisting another person. Verify that the muzzle does not cover legs or feet in relaxed positions.

Safe carrying positions

Low ready, high ready, compressed ready, patrol carry, and slung positions each have context-specific advantages and risks. No position is universally safe. The correct choice depends on the environment, team geometry, proximity of people, likelihood of obstacles, and applicable training doctrine. Ready positions should be taught and standardized by qualified instructors.

7. Dry-Practice Safety

Dry practice can develop handling, sight alignment, trigger control, presentation, reload mechanics, and movement without live fire. It must be separated from live ammunition by space, time, and procedure. Many negligent discharges occur when a dry-practice session ends, the firearm is reloaded, and the user performs one more repetition out of habit.

17. Choose a room or area with a verified safe direction and suitable backstop.
18. Remove all live ammunition, loaded magazines, and people not involved in the practice.
19. Unload and inspect the firearm using the full clearing procedure.
20. State aloud that dry practice is beginning if this helps establish a mental boundary.
21. Use only inert training aids that are clearly distinguishable from live ammunition.
22. If interrupted, restart the entire clearing procedure.
23. At the end, state that dry practice has ended and put equipment away before bringing live ammunition back.
24. After reloading, do not perform another practice press or presentation.

DRY-PRACTICE RULE

No live ammunition in the dry-practice area. No “one last repetition” after reloading.

8. Ammunition Safety

Use only ammunition of the exact type, caliber, pressure specification, and condition approved by the firearm manufacturer and organizational policy. Similar appearance does not mean interchangeability. Incorrect ammunition may fail to chamber, obstruct the bore, damage the firearm, or cause catastrophic failure.

- Read the firearm markings and the ammunition packaging; do not rely on color or memory.
- Inspect cartridges for corrosion, deformation, high or damaged primers, bullet setback, contamination, and other visible defects.
- Do not use ammunition of unknown origin or ammunition that has been exposed to fire, severe impact, oil, water, or improper storage.
- Keep ammunition away from excessive heat, flame, solvents, and unauthorized access.
- Do not mix calibers or loads in loose containers.
- Repeated chambering may damage some cartridges; follow manufacturer or organizational guidance.
- Use reloaded ammunition only when lawful, appropriate, and produced under competent quality control.

Barrel obstructions

Before firing a firearm that has been stored, dropped, exposed to mud or snow, or involved in an abnormal report or recoil event, confirm the bore is clear using a safe procedure. Never look into the muzzle of an assembled firearm that has not been fully cleared and made safe. An obstructed bore may cause severe damage and injury.

9. Misfire, Hangfire, Squib Load, and Other Stoppages

A stoppage is an interruption in the normal cycle of operation. A malfunction is a failure of the firearm, ammunition, or magazine to operate as intended. Immediate action procedures vary by system and must be learned from qualified instruction and the manufacturer's manual. The universal rules remain in force throughout.

Misfire

A misfire occurs when the trigger is pressed but the cartridge does not fire. Keep the muzzle directed safely and the finger off the trigger. Do not immediately open the action unless the applicable procedure authorizes it. The cartridge may instead be experiencing delayed ignition.

Hangfire

A hangfire is a perceptible delay between the firing mechanism striking the primer and ignition. Because the cartridge may fire after the expected moment, keep the firearm pointed safely for the period specified by the manufacturer, ammunition guidance, range rules, or instructor. Do not place the face near the action or attempt to inspect the muzzle.

Squib load

A squib load produces insufficient energy to propel the projectile completely through the barrel. Warning signs may include an unusually soft report, reduced recoil, failure to cycle, smoke from the action, or a projectile impact that is not observed. Stop firing immediately. Keep the firearm controlled, unload it according to a safe procedure, and have the bore inspected and cleared by a competent person. Firing another round into an obstructed barrel can cause catastrophic failure.

Case rupture or abnormal pressure signs

If there is an unusually loud report, excessive recoil, gas release, damaged case, difficulty opening the action, or visible firearm damage, stop. Do not continue testing. Unload only if it can be done safely, isolate the firearm and ammunition, document the event, and have the equipment examined by a qualified armorer or gunsmith.

STOPPAGE PRIORITY

Muzzle control first. Trigger finger second. Diagnosis third. Speed is irrelevant when the cause is unknown.

10. Cold Range and Hot Range Concepts

The terms cold range and hot range describe administrative control systems, but definitions vary. Every safety briefing must explain the local meaning rather than assuming universal understanding.

Cold range

On many cold ranges, firearms remain unloaded except when the shooter is on the firing line and receives a command to load. Actions may be required to remain open and chamber flags installed when firearms are not in use. Handling firearms behind the line is normally prohibited except in a designated safe area where no ammunition may be handled.

Hot range

On a hot range, authorized participants may carry firearms in a prescribed loaded condition between exercises, often holstered or slung. This model requires mature participants, clear status rules, suitable equipment, strict muzzle and trigger discipline, and unambiguous administrative loading and unloading points. Hot does not mean unrestricted handling.

RANGE BRIEFING REQUIREMENT

Always define: where firearms may be handled, where ammunition may be handled, the permitted carry condition, who may issue commands, and what happens during a cease-fire.

11. Shooting Range Safety Rules

A shooting range is a controlled environment only when every participant follows the same command structure and respects the same boundaries. Local standing orders take priority over general custom.

Before entering the firing area

- Sign in and complete required documentation, declarations, and safety briefing.
- Wear suitable clothing, closed footwear, eye protection, and hearing protection.
- Confirm that firearms are in the condition required by the range.
- Keep firearms cased or holstered until handling is authorized.
- Identify the Range Safety Officer, first-aid equipment, emergency exits, and medical plan.
- Declare unfamiliarity, medical limitations, equipment defects, or special needs before training starts.

On the firing line

- Handle firearms only at the designated firing point and only when authorized.
- Keep the muzzle inside the approved firing sector and toward the backstop.
- Keep the finger indexed except during an authorized shot.
- Do not move forward of the firing line until the range is declared safe.
- Do not retrieve dropped ammunition or equipment if doing so would compromise muzzle control.
- Do not distract, touch, or crowd another shooter.

- Do not fire at unauthorized targets, target frames, fixtures, wildlife, or hard surfaces.
- Stop immediately if any person calls cease fire or identifies danger.

Cease-fire procedure

25. Stop firing immediately.
26. Remove the trigger finger and keep it visibly indexed.
27. Maintain the muzzle in the approved safe direction.
28. Follow the instructed unload-and-show-clear procedure; do not improvise.
29. Open the action and insert a chamber flag if required.
30. Step back from the firing point and do not touch firearms or ammunition.
31. Wait until the Range Safety Officer confirms the range status and gives further commands.

Any person should be empowered to call a cease-fire when an immediate hazard is observed. The call must be clear and loud. Debate comes after the range is safe.

Going forward of the line

No one goes forward until all firearms are made safe, the range is formally declared cold, and the responsible officer authorizes movement. Shooters remain behind the designated boundary and do not handle firearms, magazines, ammunition, optics, or gear on the firing bench while people are downrange.

Range etiquette

- Follow time limits and lane rules.
- Control ejected cases where possible without compromising safety.
- Report damage, ricochets, unusual impacts, and unsafe behavior.
- Clean the area using approved methods; do not dry-sweep lead-contaminated dust.
- Respect privacy, photography restrictions, and organizational security requirements.

12. Movement with Firearms

Movement increases risk because balance, muzzle orientation, background, and proximity to others change continuously. Movement with a loaded firearm should be introduced only after static handling is reliable and under qualified supervision.

- Move only on command or within a clearly authorized exercise.
- Keep the finger indexed during every step unless actively firing.
- Select a muzzle orientation that does not cover the body, teammates, or unknown areas.
- Slow down near obstacles, uneven ground, stairs, doorways, vehicles, and other people.
- If balance is lost, prioritize muzzle control and remove the finger from the trigger.
- Do not run with a finger on the trigger or with an unsecured firearm.
- Use team spacing and communication appropriate to the exercise.

Turning and changing direction

Turn the body in a way that preserves the safe muzzle sector. Instructors should teach specific procedures for turning with handguns and long guns. Shooters must know whether the exercise requires the firearm to remain downrange, be compressed, or be secured before turning.

13. Vehicle Safety

Vehicles create confined spaces, hard ricochet surfaces, blind angles, seat belts, steering wheels, doors, glass, passengers, and limited muzzle options. Firearms should not be handled inside or around vehicles casually. Vehicle drills require dedicated instruction, inert rehearsal, a sterile training area, clear role allocation, and an emergency plan.

- Secure the firearm against unauthorized access and unintended movement.
- Do not leave an unsecured loaded firearm on a seat, floor, dashboard, or loose bag.
- Avoid administrative loading or unloading inside a vehicle unless an approved procedure specifically requires it.
- Before entering or exiting, manage seat belts, slings, clothing, and door frames so they cannot enter the trigger guard.
- Know the location of passengers and teammates before changing muzzle direction.
- Treat vehicle bodywork, glass, road surfaces, and nearby structures as potential ricochet or penetration hazards.
- For temporary vehicle storage, follow applicable law and use a secured, concealed container fixed to the vehicle where possible.

TRAINING LIMITATION

Live-fire vehicle training belongs on a purpose-built range under specialists who understand ballistic effects, vehicle geometry, medical access, and fire risk.

14. Low-Light and Night Shooting Safety

Low light reduces target identification, depth perception, navigation, communication, and the ability to assess the background. A light source helps gather information but can also create glare, shadows, reflection, and visual fixation.

- Do not fire at shape, sound, movement, or assumed location.
- Use sufficient light to identify the target and evaluate the foreground and background.
- Keep the trigger finger indexed while searching or using a handheld light.
- Know the position of teammates before activating, moving, or firing.
- Prevent white light, laser, night-vision, or infrared equipment from being mistaken for positive identification.
- Check batteries, switches, mounts, eye protection, and backup lighting before training.
- Use clearly illuminated range boundaries and target systems designed for low-light work.
- Reduce speed. Darkness does not justify lowering the identification standard.

Night-vision and laser safety

Night-vision devices narrow the field of view and alter depth perception. Infrared lasers may be invisible to unaided observers. Training must establish laser discipline, eye-safe equipment requirements, restricted sectors, and procedures for persons without compatible observation equipment.

15. CQB and Confined-Space Safety Principles

Close-quarters training places people, walls, doors, targets, and muzzles in close proximity. It is advanced training, not an introductory activity. The purpose of this section is to identify safety controls, not to teach room-entry tactics.

- Use progressive training: classroom explanation, inert weapons, dry rehearsal, marking systems, and only then live fire when appropriate.
- Establish clear muzzle sectors and no-fire areas for every exercise.
- Use target systems and structures designed for the ammunition and angles involved.
- Control participant numbers and maintain instructor-to-student ratios appropriate to risk.

- Separate live ammunition from non-live force-on-force environments through documented inspection.
- Use distinctive equipment and physical search procedures before force-on-force training.
- Plan emergency access, extraction routes, communications, and medical support.
- Stop immediately when participant location, weapon status, or target identity is uncertain.

CQB SAFETY PRINCIPLE

Complexity must be earned. Do not add speed, darkness, movement, teams, or live fire until the previous level is consistently safe.

16. Safe Firearm Manipulation Under Stress

Stress can narrow attention, reduce fine motor control, distort time perception, increase grip pressure, and degrade communication. Safety under stress comes from simple, deeply practiced procedures and realistic progression, not from improvisation.

- Build competence without time pressure before adding stress.
- Add only one new stressor at a time: time, movement, noise, decision-making, low light, physical exertion, or team interaction.
- Use measurable stop criteria for unsafe muzzle direction, trigger contact, confusion, or loss of control.
- Allow recovery and debriefing between repetitions.
- Do not use humiliation, surprise physical contact, or uncontrolled startle as substitutes for sound training design.
- Instructors must be able to stop the exercise physically and verbally without entering an unsafe sector.

Startle, balance, and sympathetic contraction

A stumble, collision, loud noise, or forceful action by the support hand may produce involuntary contraction in the firing hand. The safest mitigation is a firmly established indexed trigger finger whenever firing is not intended, combined with stable movement and controlled training progression.

17. Eye Dominance and Vision Considerations

Eye dominance affects sighting preference and may influence head position, but it is not itself a safety rule. Shooters should avoid unsafe posture, closing both eyes during manipulation, or turning the firearm sideways merely to accommodate an unassessed visual issue. Qualified instruction can adapt technique for cross-dominance, corrective lenses, reduced vision, and aging eyes.

- Wear impact-rated eye protection suitable for the range.
- Use prescription inserts or lenses when required.
- Keep lenses clean and replace badly scratched protection.
- Inform the instructor of relevant visual limitations.
- Do not sacrifice muzzle direction or target identification to force a preferred sight picture.

18. Hearing, Noise, and Lead Exposure

Hearing protection

Firearm discharge can produce damaging impulse noise. Use appropriate hearing protection and follow range requirements. Double protection - properly inserted plugs plus earmuffs - may be appropriate indoors, around rifles, or

during high-volume training. Electronic protection can improve communication but must fit correctly and remain switched on and serviceable.

Lead exposure

Lead may be present in primers, bullets, dust, spent ammunition, bullet traps, and contaminated surfaces. Indoor ranges require suitable ventilation, housekeeping, hygiene, and occupational controls. Range workers and frequent users may have greater exposure, particularly during cleaning and maintenance.

- Do not eat, drink, smoke, or apply cosmetics on the firing range.
- Wash hands, face, and exposed skin after shooting and before eating.
- Use lead-removal products where appropriate; ordinary soap may not remove all residue effectively.
- Avoid dry sweeping or compressed air that redistributes contaminated dust.
- Wear appropriate gloves and protective equipment during range or firearm cleaning.
- Keep contaminated footwear and clothing from spreading residue into vehicles and homes.
- Pregnant persons, children, and workers with frequent exposure should seek professional guidance on risk and monitoring.
- Range operators should evaluate ventilation, cleaning practices, employee exposure, and applicable occupational requirements.

HEALTH NOTE

This handbook provides general prevention guidance only. Occupational exposure assessment and medical testing require qualified professionals and applicable national rules.

19. Firearm Inspection, Cleaning, and Maintenance

A firearm must be safe to operate before live fire. Inspection and maintenance should follow the manufacturer's manual, service schedule, and organizational armorer policy.

Before cleaning

32. Move to a location without live ammunition.
33. Establish a safe direction.
34. Unload and verify the firearm completely.
35. Remove ammunition from the work surface and nearby containers.
36. Use the correct tools, protective equipment, and ventilation for cleaning chemicals.

Inspection points

- Bore and chamber for obstruction, corrosion, bulging, or damage.
- Action, locking surfaces, extractor, ejector, and feed path.
- Sights, optics, mounts, screws, and accessories.
- Magazine body, feed lips, spring, follower, and base plate.
- Safety devices and controls, checked only as the manufacturer directs.
- Stock, grip, frame, sling points, holster, and retention equipment.

Do not modify triggers, safeties, chambers, barrels, or other critical parts unless the work is lawful and performed by a qualified person. After maintenance or parts replacement, conduct the prescribed function check in a safe environment before live fire.

20. Storage and Access Control

Safe storage must account for unauthorized adults, children, theft, fire, humidity, the intended readiness condition, and applicable law. A hiding place is not secure storage. Access control should be proportionate to the risk and should not depend solely on secrecy.

- Use a suitable locked safe, cabinet, lock box, or approved storage system.
- Control keys, combinations, biometric enrollment, and backup access.
- Store ammunition in accordance with law, manufacturer guidance, and the risk assessment.
- Use additional locking devices when appropriate, understanding their limitations.
- Prevent corrosion through environmental control and periodic inspection.
- Do not display unsecured firearms to visitors or on social media.
- Review access arrangements after household, staffing, or security changes.

Home-defense firearms

A firearm intended for emergency access creates a specific storage problem: it must remain inaccessible to unauthorized persons while available to an authorized, trained adult. The solution must be selected through a realistic household risk assessment, legal review, secure storage technology, and regular practice with the access system.

21. Transportation

Transport requirements differ widely. Before travel, verify the law for the origin, destination, transit jurisdictions, carrier, airline, border, and type of firearm or ammunition. Do not assume that a permit or practice accepted in one country applies elsewhere.

- Unload and verify the firearm before packing unless the law or official duty procedure specifies otherwise.
- Use a robust case that protects against impact and unauthorized access.
- Secure the case against casual theft and avoid visible branding where discretion is appropriate.
- Package and declare ammunition according to carrier and legal requirements.
- Maintain documentation, permits, serial-number records, and contact details as required.
- Do not leave firearms unattended in a vehicle unless unavoidable and lawfully secured.
- On arrival, verify the firearm's condition in an authorized safe area.

22. Children and Firearm Safety

Adults carry the responsibility for preventing unauthorized child access. Verbal rules are important but do not replace secure storage. Children may act unpredictably, may not distinguish real firearms from replicas, and may imitate behavior seen in media or at home.

- Store firearms and ammunition securely and control all access methods.
- Teach children never to touch an unattended firearm, to leave the area, and to tell a responsible adult.
- Do not rely on a child's age, maturity, fear, or prior instruction as the only barrier.
- Ensure toys, air guns, replicas, and training devices are controlled and clearly distinguished.
- Supervised education must be age-appropriate, calm, and led by competent adults.
- Never use a firearm to frighten, threaten, or impress a child.

ADULT RESPONSIBILITY

A child-safety message is a backup. Secure adult-controlled storage is the primary protection.

23. Instructor and Range Safety Officer Responsibilities

Instructors and Range Safety Officers carry responsibilities beyond demonstrating technique. They establish the safety system, verify participant readiness, control the environment, and intervene before errors escalate.

- Conduct a documented range and equipment inspection before training.
- Deliver a clear safety and medical briefing appropriate to language and experience.
- Define range status, commands, safe areas, ammunition areas, firing sectors, and emergency procedures.
- Confirm that participants understand, not merely that they heard.
- Maintain an appropriate instructor-to-student ratio.
- Position instructors where they can observe muzzles, fingers, and movement without creating crossfire risk.
- Stop unsafe behavior immediately and explain the correction once the line is safe.
- Use progressive complexity and objective readiness criteria.
- Keep first-aid equipment, communications, emergency contacts, and evacuation access available.
- Record incidents, near misses, equipment failures, and corrective actions.
- Remove any person whose behavior, condition, or equipment makes continued participation unsafe.

Physical intervention

An instructor may need to control a student's firearm or movement. Such intervention must be trained, decisive, and planned so the instructor does not enter the muzzle line, cause a trigger press, or create a struggle. Verbal commands remain the first option when time permits.

24. Student Responsibilities

- Disclose relevant limitations and lack of experience honestly.
- Listen to the full briefing and ask questions before handling firearms.
- Obey commands immediately, even when the reason is not yet clear.
- Use only authorized equipment and ammunition.
- Report unsafe conditions, damaged equipment, injury, or confusion immediately.
- Accept correction professionally and do not argue on an active firing line.
- Do not coach other students unless assigned.
- Stop voluntarily if concentration or physical condition deteriorates.

25. Spectator, Visitor, and Photography Safety

Spectators and visitors

- Remain in designated observation areas.
- Wear required eye and hearing protection.
- Do not cross barriers, approach shooters, touch firearms, or retrieve items.
- Keep children under direct adult control.
- Follow staff instructions and emergency commands.
- Do not distract participants with conversation, gestures, or sudden movement.

Photography and media

Photography must be subordinated to safety and security. A camera operator can become fixated on the viewfinder, step into a firing sector, distract a shooter, reveal sensitive identities or locations, or pressure participants to repeat unsafe actions for a better image.

- Obtain authorization from the range and participants.
- Assign fixed safe positions and movement limits.
- Use a spotter when working near active training.
- Prohibit drones unless specifically approved and integrated into range control.
- Never request staged muzzle violations, trigger contact, or unsafe poses.
- Respect operational security, privacy, and image-release requirements.
- Stop filming immediately on a cease-fire or emergency command.

26. Common Causes of Firearm Incidents

- Assuming the firearm is unloaded.
- Failing to remove the chambered cartridge after removing the magazine.
- Poor muzzle direction during turning, conversation, or movement.
- Premature trigger contact.
- Attempting to catch an ejected round.
- Rushing reholstering or allowing clothing into the holster.
- Using incorrect, damaged, or contaminated ammunition.
- Continuing after an abnormal sound or recoil event.
- Mixing live ammunition with dry or force-on-force training.
- Handling firearms while distracted, angry, impaired, or fatigued.
- Unclear range commands or undefined range status.
- Inadequate supervision and excessive exercise complexity.
- Unsafe photography or spectators inside controlled areas.
- Failure to report minor violations and near misses.

27. Professional Best Practices

- Standardize the clearing sequence across the organization while respecting firearm-specific differences.
- Use plain language and closed-loop communication for critical commands.
- Separate live-fire, dry-practice, and force-on-force equipment physically and administratively.
- Use chamber flags and open actions when they improve visible verification.
- Document inspections, maintenance, incidents, and corrective actions.
- Train stoppages first at low speed with inert equipment.
- Build complexity progressively and assess readiness before advancement.
- Treat near misses as valuable warning information rather than occasions for blame concealment.
- Review procedures after equipment, facility, staff, or legal changes.
- Maintain a culture in which anyone can call cease fire without fear of embarrassment.

28. The Ten Golden Rules for Every Shooter

37. Treat every firearm as loaded and verify its condition personally.
38. Control the muzzle continuously and never cover anything you are not prepared to damage.
39. Keep the trigger finger visibly indexed until a safe, identified shot has been consciously chosen.
40. Know the target, foreground, surroundings, backstop, and what lies beyond.
41. Use only correct, serviceable ammunition and a firearm proven safe to operate.
42. Never rely on a mechanical safety as a substitute for disciplined handling.
43. Wear suitable eye and hearing protection and control lead exposure.
44. Obey range commands immediately and call cease fire when danger is observed.
45. Secure firearms against children, unauthorized persons, theft, and careless access.

46. Train regularly, accept correction, and never allow speed, ego, fatigue, or stress to override safety.

29. Operational Checklists

Personal pre-range checklist

- Identification, permits, and required documentation.
- Correct firearm, magazines, ammunition, and manufacturer manual if unfamiliar.
- Eye and hearing protection; weather-appropriate clothing; closed footwear.
- Water, prescribed medication, and personal medical information as appropriate.
- No alcohol, impairing substances, or unresolved physical condition.
- Equipment inspected and packed in a secure condition.

Range opening checklist

- Backstop, side berms, target systems, firing line, lighting, ventilation, and access routes inspected.
- No unauthorized persons, animals, vehicles, or obstructions in danger areas.
- Communications, first-aid equipment, trauma kit, fire equipment, and evacuation route available.
- Range status, safe areas, ammunition areas, and signage established.
- Instructor assignments, ratios, commands, and emergency roles confirmed.
- Weather, visibility, heat, cold, and fire risk assessed.

Instructor briefing checklist

- Universal safety rules.
- Range boundaries and safe muzzle sectors.
- Cold/hot range definition and firearm carry condition.
- Loading, unloading, and chamber-flag procedures.
- Cease-fire command and actions.
- Stoppage procedure and instructor assistance.
- Movement, target, and firing restrictions.
- Medical plan, emergency communications, and evacuation.
- PPE, hydration, lead hygiene, and behavioral expectations.

Range closing checklist

- All firearms unloaded, verified, and secured.
- Ammunition accounted for and stored.
- Personnel and equipment accounted for.
- Targets and range systems made safe.
- Brass and waste handled using approved lead-safe methods.
- Damage, stoppages, incidents, near misses, and maintenance needs recorded.
- Final sweep confirms no firearm, ammunition, document, or personal item remains.

Emergency response checklist

47. Call cease fire and stop all shooting.
48. Make firearms safe only to the extent possible without delaying life-saving care.
49. Control the scene and prevent additional casualties.
50. Activate emergency medical services and provide exact location and access instructions.
51. Provide care within the responder's level of training.

- 52. Assign a person to meet and guide responders.
- 53. Preserve relevant equipment and evidence after immediate danger is controlled.
- 54. Notify responsible management and authorities as required.
- 55. Document facts, witnesses, actions, and times without speculation.

30. Frequently Asked Questions

Should I treat a firearm as loaded after I have personally cleared it?

Yes. Verification establishes the condition for the task, but loaded-firearm discipline should continue. The muzzle remains controlled and the finger remains outside the trigger guard.

Is pointing a firearm at the floor always safe?

No. Hard floors, concrete, rock, steel, and shallow angles may cause ricochets or penetration. A safe direction is determined by the actual environment.

Can I trust a loaded-chamber indicator?

Use it only as supplemental information. It does not replace opening the action and inspecting the chamber according to the firearm's manual.

Does removing the magazine unload a semi-automatic firearm?

Not necessarily. A cartridge may remain in the chamber. Remove the magazine, open the action, eject any chambered cartridge, and inspect the firearm.

When may my finger enter the trigger guard?

Only when the firearm is directed at a positively identified target and you have consciously decided that firing is lawful, necessary, and safe.

What should I do if the firearm does not fire?

Keep the muzzle safe, remove the finger from the trigger, and follow the range or manufacturer procedure. Account for the possibility of delayed ignition.

How do I recognize a squib load?

Possible signs include an unusually weak report, reduced recoil, failure to cycle, smoke from the action, or no observed impact. Stop firing and have the bore checked.

Can I continue after an unusually loud report or excessive recoil?

No. Stop, make the firearm safe if possible, and have the firearm and ammunition inspected by a competent person.

What is the difference between a cold and hot range?

Definitions vary. Generally, a cold range restricts loaded firearms to the firing line on command, while a hot range may permit prescribed loaded carry. The local briefing controls.

Who may call cease fire?

Any person who observes an immediate danger should be able to call cease fire. All shooters stop first; the issue is resolved after the line is safe.

May I handle my firearm while people are downrange?

No, unless a highly specific controlled procedure says otherwise. On ordinary ranges, do not touch firearms, magazines, ammunition, or bench equipment while people are forward.

Are chamber flags a substitute for checking the chamber?

No. They provide visible confirmation after inspection and can improve range control, but they do not replace a proper condition check.

Is dry practice safe in a normal room?

Only after live ammunition is removed, the firearm is fully cleared, a suitable safe direction is established, and interruptions are controlled. A purpose-built training area is better.

Can I dry-fire after reloading at the end of practice?

No. End the session before live ammunition returns. Do not perform one final repetition after reloading.

Should I wear both earplugs and earmuffs?

Double protection may be appropriate indoors, with rifles, or during high-volume fire. Select protection based on the environment and professional guidance.

How can I reduce lead exposure?

Use effective range ventilation, avoid eating or drinking on the range, wash exposed skin, use lead-safe cleaning methods, and prevent contaminated clothing and footwear from spreading residue.

Can ordinary household members access the safe combination?

Only authorized, competent persons should have access. Review access whenever household circumstances or risk changes.

Is a hidden firearm adequately stored?

No. Hiding is not access control. Use a suitable locked storage system and control keys, codes, or biometric access.

Can I leave a firearm in a vehicle?

Avoid it where possible. When lawful and unavoidable, unload or maintain the legally required condition, use a secured concealed container fixed to the vehicle, and minimize unattended time.

Can children be made safe around firearms through education alone?

No. Education is useful, but secure adult-controlled storage is the primary safeguard.

Do experienced shooters need safety refreshers?

Yes. Experience can produce skill but also complacency. Regular refreshers, observation, and correction preserve standards.

What should I do if I do not understand a range command?

Keep the muzzle safe, finger indexed, and stop. Ask the instructor before continuing.

Is reholstering supposed to be fast?

No. Reholstering is an administrative action. Look when appropriate, clear clothing, and stop if resistance is felt.

Can I use a firearm that has been dropped?

Stop and inspect it according to the manufacturer's guidance. Check for obstruction, damage, shifted sights, and unsafe condition before further use.

May spectators take photographs during live fire?

Only with range authorization, from designated positions, and without distracting shooters or entering controlled sectors. Photography stops on any safety command.

Is low-light shooting simply normal shooting with a flashlight?

No. Identification, navigation, communication, glare, shadow, equipment failure, and teammate location create additional risks requiring specialist instruction.

Can beginners participate in CQB or vehicle live fire?

Not safely without progressive prerequisite training. These are advanced activities requiring specialist facilities, supervision, and risk controls.

What is the correct response to fatigue during training?

Tell the instructor and stop or reduce activity. Fatigue is a safety condition, not a test of character.

Should I attempt to repair a firearm on the firing line?

Only perform the simple authorized procedure for which you are trained. Otherwise keep it controlled, notify the instructor, and move it only as directed.

Which safety rule is the most important?

All four universal rules work together. The system is strongest when every rule is applied continuously.

31. Glossary of Firearm Safety Terms

Term	Meaning
Administrative handling	Non-firing manipulation such as loading, unloading, inspection, storage, cleaning, issue, return, or demonstration.

Backstop	A structure or natural feature intended to safely stop projectiles.
Cease fire	An immediate command to stop firing and follow the prescribed safe procedure.
Chamber flag	A visible device inserted into the chamber or action to indicate an open, empty condition after verification.
Cold range	A range-control system in which firearms are generally unloaded except at authorized times and places.
Condition check	A deliberate inspection to determine whether a firearm is loaded, unloaded, or otherwise in the required state.
Dry practice	Training without live ammunition, conducted after a formal clearing and ammunition-separation procedure.
Hangfire	A delay between primer activation and cartridge ignition.
Hot range	A range-control system that may permit prescribed loaded carry by authorized participants.
Indexing	Placing the trigger finger straight along the frame or receiver, outside the trigger guard.
Malfunction	Failure of a firearm, magazine, or ammunition to operate as intended.
Misfire	Failure of a cartridge to fire after an attempted discharge.
Muzzle discipline	Continuous control of the direction in which the firearm's muzzle points.
Near miss	An event that did not cause harm but had the potential to do so.
Positive identification	Reliable confirmation of the intended target and relevant surrounding conditions before firing.
Ricochet	Deflection of a projectile or fragment after impact.
Safe direction	A direction in which an unintended discharge is unlikely to injure a person and is likely to be contained.
Safe area	A designated location where specified firearm handling may be allowed, usually with ammunition handling prohibited.
Squib load	A cartridge event with insufficient energy to propel the projectile completely through the bore.
Stoppage	An interruption in the firearm's normal cycle of operation.
Trigger discipline	Keeping the trigger finger outside the trigger guard until a conscious, safe decision to fire has been made.

32. Firearm Safety at Home

Home handling deserves the same discipline as range handling, but the environment is less controlled. Family members, visitors, pets, thin interior walls, furniture, distraction, and uncertain backstops make casual handling unacceptable. Establish a specific household policy for storage, authorized access, cleaning, dry practice, emergency readiness, and what to do when an unfamiliar firearm is found.

- Designate a safe administrative-handling area and do not use bedrooms, sofas, or kitchen tables by convenience.
- Keep live ammunition out of cleaning and dry-practice areas.
- Know which walls, floors, and directions offer the least risk, while recognizing that ordinary construction may not stop a projectile.
- Do not handle firearms during arguments, emotional distress, alcohol use, or social gatherings.
- Brief authorized household members on access-control systems and emergency contacts.
- Check guest access, contractors, children, and changes in household circumstances.
- If an unknown firearm is discovered, do not experiment with it; secure the area and obtain competent assistance.

33. Competition and Organized Sport Safety

Competitive shooting can create time pressure, performance anxiety, complex movement, and a strong desire to complete a stage. Match rules, Range Officer commands, and disqualification criteria exist to prevent performance goals from overriding safety.

- Attend the match briefing and understand the specific rule set.
- Handle firearms only in designated safe areas or under direct Range Officer command.
- Never handle ammunition in a safe area when the rules prohibit it.
- Accept a stop command or disqualification immediately and without argument on the active stage.
- Do not sacrifice muzzle discipline or trigger discipline to save time.
- Inspect holsters, belts, slings, optics, and retention equipment before the match.
- Spectators and media remain outside stage boundaries and obey officials.
- After a stage, complete the prescribed unload-and-show-clear sequence exactly.

34. Suppressor and Accessory Safety

Suppressors, muzzle devices, optics, lights, lasers, compensators, and other accessories can alter handling, balance, heat, sound, gas, visibility, and firearm reliability. Installation and use must comply with law and manufacturer guidance.

- Verify correct mounting, alignment, caliber compatibility, and attachment before firing.
- Stop if the device loosens, shifts, produces abnormal sound, or shows evidence of projectile contact.
- Treat suppressors and muzzle devices as extremely hot after firing; use appropriate cooling time and handling equipment.
- Do not assume a suppressed firearm is hearing-safe. Continue to use appropriate hearing protection.
- Account for increased length when moving, working near barriers, or entering confined spaces.
- Confirm that lights, lasers, pressure switches, and cables cannot enter the trigger guard or obstruct controls.
- Use only eye-safe laser equipment and follow range laser-control procedures.

35. Common Myths About Firearm Safety

An unloaded firearm cannot hurt anyone.

Many incidents occur because the firearm was only assumed to be unloaded. Safe handling remains necessary after verification.

The mechanical safety makes the firearm safe.

A safety is only one mechanical layer and may be misunderstood, disengaged, damaged, or defeated.

Pointing at the ground is always safe.

Hard surfaces and shallow angles may cause ricochet or penetration.

Experienced shooters do not need supervision.

Experience does not eliminate complacency, unfamiliar equipment, fatigue, or environmental hazards.

A suppressor makes shooting quiet and harmless to hearing.

Sound remains hazardous in many combinations, and appropriate hearing protection is still required.

Children who know the rules cannot access a firearm dangerously.

Education supports safety but never replaces secure adult-controlled storage.

Dry fire is risk-free.

Dry practice becomes dangerous when live ammunition is not separated or the session boundary is broken.

A firearm that falls should be caught.

Trying to catch a falling firearm may place the hand on the trigger. Move away and let it fall when possible.

Fast handling proves competence.

Speed without consistent safety is poor performance, not expertise.

36. Human and Psychological Factors

Human performance changes under stress, fatigue, social pressure, competition, fear, anger, and overconfidence. A good safety system anticipates these changes rather than expecting perfect attention.

- Use checklists for infrequent or high-consequence tasks.
- Avoid ambiguous commands and confirm critical information through closed-loop communication.
- Do not let status, rank, friendship, or embarrassment prevent a safety intervention.
- Recognize confirmation bias: people often see the firearm condition or target they expect to see.
- Recognize task fixation: a shooter may focus on a timer, malfunction, dropped item, or target and forget the muzzle.
- Use rest, hydration, realistic scheduling, and training limits to control fatigue.
- After a near miss, examine system conditions as well as individual behavior.
- Create a reporting culture that rewards early identification of hazards.

Emotional and crisis considerations

A person experiencing severe emotional distress, suicidal thinking, uncontrolled anger, or a domestic crisis should not have unsupervised access to firearms. Use lawful, trusted, and professionally guided temporary access-control measures appropriate to the jurisdiction and circumstances. Emergency mental-health or law-enforcement assistance may be necessary when there is immediate danger.

37. Recommended Reading and Continuing Education

Safety knowledge must be refreshed and adapted to the specific equipment, role, and jurisdiction. Recommended study should prioritize primary and authoritative materials.

- The current manufacturer manual for every firearm and accessory used.
- Range standing orders and organizational SOPs.
- NSSF firearm safety resources.
- SAAMI firearm and ammunition safety publications and technical standards.
- National occupational-health guidance for noise and lead exposure.
- Local firearms, transport, storage, hunting, sporting, and workplace legislation.
- Recognized first-aid and trauma-care training appropriate to the training environment.
- Periodic practical refresher training with qualified instructors.

38. Reference Framework

This handbook consolidates widely recognized principles found in firearms-industry safety guidance, manufacturer instructions, professional range practice, and occupational-health guidance. It is intentionally written as an original Alfa-Metal educational resource rather than a reproduction of any single source.

- National Shooting Sports Foundation (NSSF): Four Primary Rules of Firearm Safety and Ten Rules of Safe Gun Handling.
- Sporting Arms and Ammunition Manufacturers' Institute (SAAMI): Firearm Safety Rules, ammunition safety advisories, and technical standards.
- U.S. Occupational Safety and Health Administration (OSHA): guidance on lead hazards and worker protection at indoor firing ranges.
- U.S. National Institute for Occupational Safety and Health (NIOSH/CDC): guidance on reducing lead and noise exposure at indoor firing ranges.
- The applicable manufacturer's manual for every firearm, magazine, optic, suppressor, holster, and ammunition type in use.
- Applicable national law, range standing orders, organizational SOPs, medical plan, and emergency procedures.

Conclusion

Firearm safety is not a list recited at the beginning of a course and forgotten when training becomes difficult. It is a continuous system of decisions: verify the firearm, control the muzzle, index the trigger finger, identify the target and background, use serviceable equipment, follow commands, secure access, protect health, and stop when uncertainty appears.

The most capable shooter is not the person who performs the most complex drill. It is the person whose safe behavior remains reliable during routine handling, fatigue, stress, low visibility, equipment problems, and changing environments. Skills may differ between civilian, sporting, security, law-enforcement, and military contexts, but accountability for every handling action and every projectile remains constant.

Train deliberately. Correct small errors before they become habits. Respect the limits of written guidance. Seek qualified practical instruction. Never allow familiarity, speed, confidence, or pressure to weaken the standards that protect everyone present.

FINAL REMINDER

Safety is not what you intend to do. Safety is what your habits make you do every time.