

ACKNOWLEDGEMENTS

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Section A

DAILY ACTIVITIES

Day 1

Classroom 1800 - 2200

Introduction: Theory; Safety Rules; Range Procedures; Range Commands;
Where the Rifle Should and Should Not Be; Other Safety Considerations;
Lead Ingestion

Equipment and Modifications

Rifle Description and Nomenclature AR-15: Field Stripping; Assembly
and Disassembly

Rifle Description and Nomenclature Mini-14

Conditions and Methods of Carry

Firing Platforms: Shooting Positions; Unsighted Fire; Patrol Car Positions
Shooting on the Move.

Marksmanship: Sights and Sight Picture; Trigger Control;
Trigger Finger Location; Finger Contact.

Loading and Malfunctions

Sights and Sight Adjustment

Day 2

Range 0800 - 1700

Zeroing

Slow Fire/Marksmanship

7 yards and in – Mechanical offset

15 to 25 yards – Marksmanship/position shooting

50 yards – Marksmanship/positions (Standing, Kneeling, Prone)

LUNCH

Malfunctions/Reloads – practice and timed

Safety Circle

CQB

Hammers w/lateral movement

Failure drills

Multiple targets

Forward/Rearward/Box

Pivots

Tactics/Cover

Smith scramblers
Pick up and shoot drill
Qualification Course
Range clean up/Debrief/Depart

Section B

INTRODUCTION

Law enforcement agencies around the country are adopting rifles for patrol use. "Patrol Rifles" are, typically, short, magazine-fed, lightweight rifles chambered in an intermediate caliber, such as .223 Remington. Common examples of patrol rifles are the AR-15/M-16 family of weapons and the Ruger Mini-14. Less common are the Styer AUG, H & K, and other imported rifles. Some lever action rifles, like the 30-30 Winchester, are still in use, along with some rifles chambered for the 7.62x39 cartridge. Some agencies are deploying pistol-caliber carbines in the patrol rifle function. For ease of discussion, we will refer most often to the AR-15 / M-16 family and the Mini-14, both in .233 caliber.

Rifles have traditionally been used in law enforcement as the weapons of choice. Rifles offer increased magazine capacity, a longer sight radius, more stable shooting positions, and greater range. Many recent high-profile confrontations, such as the North Hollywood shooting, have made many administrators aware that rifles, after proper training and selection, increase the safety of the officer and the public.

This training program and manual will train the officer in the basic use of the patrol rifle selected. The manual does not directly address policy issues, such as when rifles should be deployed. The techniques presented herein are similar to those taught in most of the major firearms schools around the country, and have been selected, tested, and taught by agencies nationally. Used correctly, the methods presented in this manual will insure that the officer will prevail in an armed confrontation with a wide margin of safety.

This is not a select fire course!!

PATROL RIFLE THEORY

TACTICAL CONSIDERATIONS

Do not confuse the patrol rifle with precision or “sniper” rifles. The training emphasis should be on using the rifle within the handgun envelope. The rifle should usually be the weapon of choice.

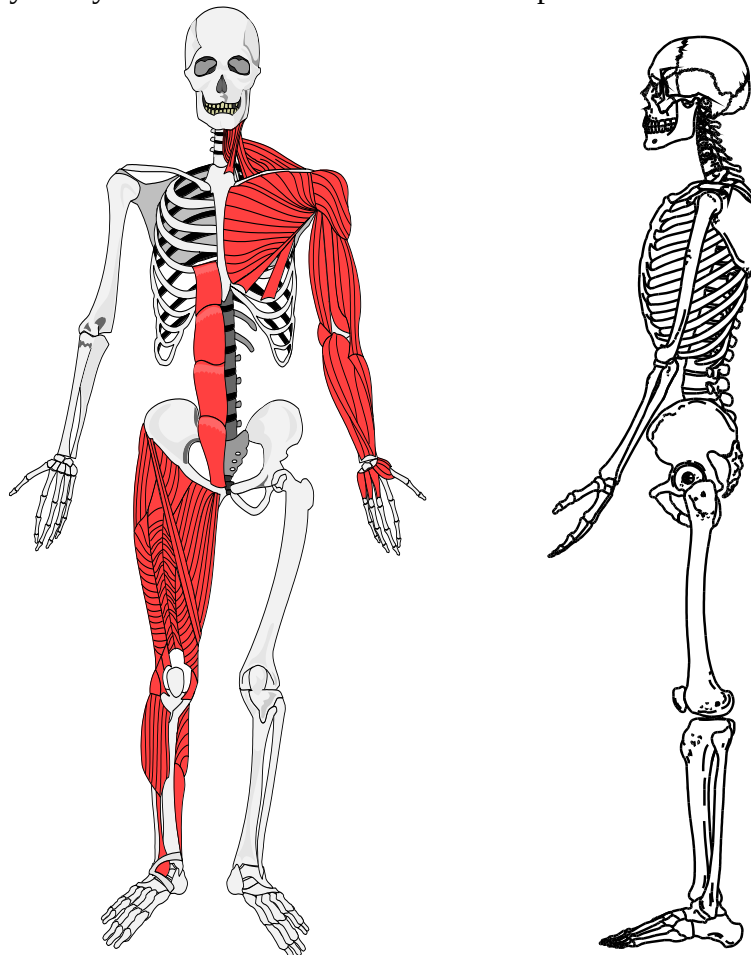
THIS IS THE THREAT SYSTEM YOU WILL FIGHT!!!!

It is armored and mobile; it can adapt quickly to conflict, and can resist damage.

It comes in many camouflage variations: male, female, juvenile, adult, white, black, brown, red; it can be short or tall, obese or thin and can wear any type of clothing or none at all.

Weapons available: Unlimited

To defeat this weapons system you must attack natural armor and press the attack until you win!!!!



*Based on “Urban Rifle” by Clint Smith

Patrol Rifle Definition: A lightweight, compact rifle or carbine, chambered in an intermediate caliber (.223, .30 Carbine, 7.62x39, .30 WCF, ETC.). Patrol rifles are generally fed from a detachable box magazine, but other systems are acceptable.

If by looking at the past we can prepare for the future, then the below listed information should be of interest to us. This information comes from direct or personal interviews and/or from actual case history. The application of the rifle to defensive / offensive operations in confrontational environments, in truth, turns out to be much different than:

“What We Think or Have Been Told”

We must consider many different things. The concept of reconnaissance by fire must be abandoned in law enforcement applications. The ranges, fields of fire and observation are restricted by furniture, structures, dust, smoke and debris. Because many of our problems are offensive in nature, we must operate against a threat who is on familiar ground, occupying a position that we must expose ourselves to, so that we may accomplish our task.

Let's start with something simple: Apply the basic firearms safety rules. Watch out for your partner. In a great number of fights 25% to 30% of all casualties are from friendly fire. Friendly fire isn't friendly! Watch your muzzle and be sure of your target!

The patrol rifle can and should be deployed in any armed confrontation where time allows. The ranges of gunfights have increased, due largely to better tactics on the part of the police. The distance from curb to porch, in most suburban neighborhoods, can be twenty-five (25) yards or more; this is dangerously pushing the capabilities of most pistol shooters.

Although overplayed by the media, there are actually very few incidents where criminals are armed with sophisticated rifles. However, when they are the result can be spectacular and tragic. The Miami shootout, the Los Angeles bank robbery, the Norco robbery, and the shootings of two New Hampshire Troopers were all done with rifles.

The use of the rifle in short and mid-range environments is generally overlooked or deleted in many training programs. Over the last few years, with increased emphasis on realistic ranges based on facts that **most rifle fights take place inside what are normally considered handgun ranges**, the IDAHO P.O.S.T. training format advocates the use of the patrol rifle. Virtually all police rifle shots are fired from 75 yards or less. Long range precision shooting is not the function of the patrol rifle; one or two rounds fired within a short time at close range is. The .223, or others previously mentioned, is an extremely effective round within its limits. A single round quickly delivered to the torso of your opponent will end most fights. Please, at every opportunity, SHOOT AND HIT the biggest part of the target that's available.

PRO's OF RIFLE USE:

Power of Cartridge (pistol cartridge is still a pistol!)
Effective Terminal Ballistics
Magazine Capacity (for reduced manipulation)
Improved Sight Radius

CON's OF RIFLE USE:

Ergonomics - Is It User Friendly?
Leading with muzzle - Tactical Applications
Weapon Retention - System Length

EMPHASIS ON:

A stable but mobile firing platform.
Establishing fire superiority.
Clearing stoppages and/or transition
Manipulation of equipment "eyes off."
Use the rifle within the handgun envelope.

RIFLE vs. SHOTGUN:

Tests on standard 870 police shotguns showed unacceptable shot dispersion at an average of seventeen (17) yards; figure fifteen (15) yards as the effective range when loaded with buckshot. Fifteen yards is also a long shot for most pistol shooters. Add in weight, recoil, and limited magazine capacity and the shotgun's appeal becomes limited.

Conversely, the .223 rifle has little recoil, weighs less, and has greater magazine capacity (for less manipulation). It is easily accurate at 100 yards. In most tactical applications, the rifle is the weapon of choice.

CONVENTIONAL RIFLES AND USE:

1. Individually carried and serviced.
2. Shoulder Fired
3. One Shot, One Hit concept (effective cartridge)

Marksmanship - Use of sights and trigger - only hits help.
Technique - Manipulation / Mechanics / Shooting Applied
Establish **Mental Conditioning** / Mind Set

THE PROBLEMS YOU ARE LIKELY TO ENCOUNTER:

Ranges - Short, close, within 21 feet.

Time Frame - Short; 2-3 seconds / Long; Miami, Waco (learn good position shooting)

Number Rounds Fired - 1980-2.8 / 1990-12.5 - Liability - Accountability

Target - Frontal or angular and moving.

Target Condition - Mental, state of mind (drugs) - Physical (Armor) (Body Type)

TRANSITIONING TO HANDGUNS:

This is a sound tactical consideration and should be learned and practiced. However, you have selected your rifle because the situation warrants it; why **abandon it**? Learn to clear the malfunction and drive on!

During the North Hollywood shootout, one suspect was unable to clear a stoppage on his AK-47. He abandoned his rifle and left cover firing a pistol, with far less effect. Had he been properly trained, he could have continued the battle with a more effective weapon.

PRINCIPLES OF TACTICS

Individuals or teams can apply tactics. There are many concerns in these potentially dangerous environments. A primary point of interest should be safety and survival. In this stressful environment, do not shoot yourself or your partner.

TACTICS INVOLVE DIFFERENT AREAS OF CONCERN:

1. **Movement** - to close or open the ground with the threat.
2. **Searching** - to find the threat, search is based on environment, NOT TECHNIQUE.

Each step you take you step into a new potential threat area.

“Pie” the threat area visually with your eyes (muzzle in support) to slice the potential threat area and maximize the available cover.

Look for things out of place, (toes sticking out, foot prints, furniture moved.) Check closets, attics, look up and down. Listen for movement.

Man Made Funnels i.e. doors, halls, corners, windows, are always a hazard. They reduce and constrict movement. They are bullet magnets! Avoid doors.

Natural Funnels are created by vegetation, terrain, waterways, animal trails, or snow removal.

Doors: Check hinge for direction of opening. Don't stand in front of the door when opening it. Don't stand in hallways, or in front of windows, on stairs etc. Watch backlighting.

A SUCCESSFUL SEARCH IS BASED ON:

Covering the ground required, as slow or quickly as required.

Maximizing the distance between you and the potential threat.

Minimizing yourself as a target.

If shooting is necessary... **Hit** what you shoot!

Remember: “You have the rest of your life to solve the problem; how long your life lasts depends on how well you do it!!” — Clint Smith

These are some tactical guidelines:

1. Use your **eyes and ears** ... sound, movement – remember target indicators, reflection.
2. Keep your eyes (visual) and head **up** (airway – keep blood flowing and air moving).
3. Keep your **balance** - (the short fat candle).
4. **Slice** corners, doors, hallways, and windows. Don't peek!
5. Use **cover** (what is it?) and **concealment**.
6. Think **firing signatures**
7. Look at or for the **sights**.
8. Watch lighting and back **lighting**.
9. Don't **charge** downed threats.
10. **Attack** natural armor with layered responses (A, B, C drills)

NIGHT USE:

Don't set a pattern of search with movement or flashlight use.

Move away from muzzle signatures after firing.

Getting lower can help backlight the threat.

Learn several good techniques with flashlights and rifles.

FIREARMS

Keep the gun **between** you and the threat / threat area.

Don't **lead** with the muzzle.

Don't point or **put** the muzzle near your head or face.

Do not **cover** yourself or your partners with the muzzle.

Watch the **front sight!!!**

Load when you can, not when you have to.

Be **sure** of your target and backstop.

DECIDING FACTORS IN CONFRONTATIONS

1. **Mental Preparation** — If / Then Thinking; Mindset.
2. **Tactics** — Ours and Theirs (LA “Fire Teams”).
3. **Your Skills** — Poor marksmanship is the single biggest flaw.
4. **Equipment** — Select the appropriate response to the threat.
5. **Opponent’s Skills** — Defeated by stealth / diversion / intimidation / good tactics; Clean manipulation of weapon(s).
6. **Luck ?** — “A Bad Day” can be affected by hard work and driving on.

GUIDELINES FOR USE:

1. Take a rifle whenever a firearm may be needed.
2. Minimize accessories.
3. Always carry a spare magazine.
4. If you can get lower, get lower; low is stable.
5. Balance speed and accuracy, and hit your opponent.

SAFETY CONSIDERATIONS

THE FOUR GENERAL SAFETY RULES

No mechanical device has a will of its own, and guns never “go off” unless someone causes them to do so. Guns are safe, people are dangerous.

Memorize the four principal rules of firearm safety, treat them with absolute seriousness, and commit them to your conscious and subconscious. You will never have a mishap with a gun if you follow these rules.

(The source of these rules is Col. Jeff Cooper of the American Pistol Institute, Paulden, Arizona.)

ALL GUNS ARE ALWAYS LOADED.

No Exceptions. Don’t pretend that this is true, be deadly serious about it. Unless the command is given to “Unload and Prepare for Non-Firing Practice”, it is the shooters responsibility (or is it obligation?) to keep the gun “fed.”

NEVER LET THE MUZZLE COVER ANYTHING YOU ARE NOT WILLING TO DESTROY.

This rule applies even while “indexing” during searching or challenging.

KEEP YOUR FINGER OFF THE TRIGGER UNTIL YOUR SIGHTS ARE ON THE TARGET AND YOU HAVE MADE THE DECISION TO SHOOT. Just like with the handgun, this translates to On target – On trigger. Challenging is done from the guard or low ready position.

BE SURE OF THE TARGET, AS WELL AS THE SURROUNDINGS AND BEYOND.

You are responsible for every bullet you send down range.

RANGE PROCEDURES

1. We run a “HOT” range; the rifle will be in a loaded condition at all times unless the command to “UNLOAD AND PREPARE FOR DRY PRACTICE” has been given by the Rangemaster.
2. Stand firm on the line. You may pick up any dropped equipment or ammunition from the ground if it is immediately accessible and does not put you or anyone else in the line of fire. **YOU MUST BE MUZZLE CONSCIOUS!**
3. Do not turn around, letting the muzzle track anyone. Sling or pocket carry the weapon in one of the approved conditions of carry, then turn around. When talking with an instructor on the line, continue to face downrange. SAFE AND HANG – Safety is ON, slung so muzzle is pointing at the ground, as close to center of stance as possible.
4. Never let the rifle dangle either in one or both hands.
5. Keep the muzzle downrange at all times. When loading and unloading the rifle, there seems to be a stronger tendency to wave the muzzle cross range.
6. Keep your finger outside of the trigger guard and along the side of the frame when you are in motion, even for one step! SAFETY ON.
7. If you must remove your rifle for maintenance or while off the firing line, contact a range officer for direction to the “fiddle table.” When using the “fiddle table,” face the table, be muzzle conscious, perform the necessary maintenance, and confirm the safety is on before turning away from the table.
8. Magazines maybe loaded, unloaded (quietly!), cleaned or in any other way manipulated, at any time, anywhere on the range, on or behind the firing line. They can be loaded into or removed from the rifle anywhere as long as **YOU MAINTAIN MUZZLE CONTROL.**
9. Dropped items may be picked up in a safe and tactical manner, with eyes and muzzle downrange.
10. Ammunition management is the shooter’s responsibility! After initial training, there will be a few “load” commands.

RANGE COMMANDS

These standard commands will be used during training:

1. ***“MAKE READY”*** - Protect eyes, protect ears, load rifle and spare ammunition carriers; in short, PREPARE FOR A FIRING DRILL.
2. ***“UNLOAD and PREPARE for DRY PRACTICE”***- clear the chamber and empty the magazine, then press check to confirm status.
3. ***“GO TO GUARD”*** - shooter assumes a firing stance with the rifle in the guard position. The gun is not on threat, and the shooter’s thumb is on the safety, trigger finger is straight. Focus is on the target.
4. ***“ON THREAT”*** - You are engaging a specific target; the sights are on the target (where you want your hits to be) your focus is clearly on the front sight, and finger on the trigger. Safety is off.
5. ***“CHALLENGE”*** – The shooter will verbally identify himself/herself and issue appropriate commands. Muzzle is depressed 45°, trigger finger straight! Safety on.
6. ***“FIRE”*** - (Go, Up, Shoot, Now, a whistle blast, an audible signal whistle, timer, etc.) This is a command to Fire or otherwise begin the drill. This command will normally follow a preparatory command, but may come at ANY time while on the firing line. (Hint - Ammo management is your responsibility!)
7. ***“STAND BY”*** - a preparatory command that alerts the shooter that a fire command is imminent.
8. ***“STAND EASY”*** - a command to relax briefly before starting the firing drill.
9. ***“CEASE FIRE”*** - this may be called by anyone who sees an unsafe act or situation. Shooters will immediately stop shooting and depress the muzzle; stand firm.
10. ***“CLEAR FOR THE BREAK”*** - The last command given at the conclusion of a range session (e.g., before lunch and at the end of the day). This means all shooters and instructors will come to the firing line and put their rifles and handguns in the appropriate condition for their intended activity. Weapons may be fully loaded to return to duty or leave the range complex, or unloaded and cleared so they may be cleaned. Usually it is the shooter’s choice.

CAUTION: All firearms must be cleared on the range before cleaning or maintenance is done in any cleaning area. NO live ammunition is permitted in the cleaning areas.

WHERE THE RIFLE SHOULD BE

Unless you are cleaning or otherwise performing maintenance on your rifle, it should **ONLY** be in one of the following four places:

- **STORED** - This usually means secured in a locked rack or locked in a place in your police vehicle (locked in a trunk). It can also mean that the rifle is in pocket carry, or slung over the shoulder on a carry strap, on a team sling, or an approved method of carry. It can also mean locked in an armory or safe, grounded, or on a rack.
- **GUARD POSITION** - With focus on the target and thumb or finger on the safety, the muzzle should be depressed off the target.
- **POINTED IN** - You are engaging a specific target; the sights are on the target (where you want your hits to be). Your focus is on the front sight and finger on the trigger. Safety is off.
- **CONTINUITY OF FIRE** - Any non-firing act associated with servicing the rifle to keep it or put it back into a fight-ready status (e.g.: tactical reloads, speed loads, run-dry, or clearing malfunctions, transitioning to handgun)

WHERE THE RIFLE SHOULD NEVER BE

If there are a limited number of places where the rifle is permitted to be, it stands to reason there are some specific places where it is **NOT PERMITTED** to be. As with all weapons, there are an unlimited number of places the weapon should never be. Several worthy of note are:

1. Unsecured
2. One handed at the balance point
3. Dangling (no muzzle control)
4. Brandishing
5. Balanced on the shoulder with the muzzle pointed horizontally behind the shooter.
6. Carried by the carrying handle

SPECIAL SAFETY CONSIDERATIONS

1. Immediately upon picking up the rifle, confirm the status of the safety and press-check the weapon to determine its condition.
2. In a range environment, never hand a rifle to, or take a rifle from, anyone unless there is no magazine, safety is on, action is open, and chamber is empty (condition 3). On the street, the rifle may be handed from officer to officer, in any of the 3 approved conditions of carry, with the coordination of both officers.

3. You may pick up any dropped equipment or ammunition from the ground if it is immediately accessible and does not put you or anyone else in the line of fire. **YOU MUST BE MUZZLE CONSCIOUS! (SEE RULE # 2)** Pick up dropped equipment in a safe and tactical manner.
4. When not on the firing line, the weapon will be slung or in the pocket carry unless a “fiddle table” or rack is provided.
5. **EYE PROTECTION:** Eye protection is required while firing at the range, or while being near someone who is firing at the range. Eye protection must meet or exceed the standards set by ANSI Z87.1. The lenses must be shatter resistant and offer side protection. Additionally, the eye protection should be designed to prevent objects from falling downward, from dropping behind the lens and becoming lodged between the lens and eye. If the eye protection is not designed to shield the eye from falling objects, the shooter must wear a ball cap in a manner that prevents falling objects from dropping behind the lens. This type of protection is necessary to protect the shooter from hot spent casings.
6. **EAR PROTECTION:** Hearing protection is required while firing at the range, or while being near someone who is firing at the range. Unprotected exposure to gunfire noise can cause permanent hearing loss. Ear muffs or disposable foam earplugs must be worn and must have a minimum protection of 14 decibels or greater. Electronic muffs are preferred.
7. **BALLISTIC PROTECTION:** Wearing a ballistic vest at the range is strongly recommended. The vest should be rated to offer protection from the bullets being fired by those you are shooting with. Even though such vests may not protect you from rifle ammunition, shooters often wear their vest in the performance of their duties and should wear them when practicing with the rifle.
8. **WEAPON MALFUNCTIONS:** Should you have a weapon malfunction that you can not clear by yourself, keep your weapon pointed down range and raise your empty hand. The range officer will assist you with clearing your weapon.
9. **PREGNANCY WARNING:** Officers who are pregnant should avoid being near gunfire. The effects of gunfire shock waves on a fetus are unknown at this time. Additionally, a normally insignificant exposure to lead for the mother may be a greater risk to the fetus.

REDUCTION OF RISK DUE TO LEAD INGESTION

Lead is a toxic substance. The human body uses many trace metals in day-to-day metabolism; however, lead is NOT one of them.

The following is a partial list of common symptoms of lead ingestion. These symptoms can vary from person to person as well as to the level of lead in a person's system.

- Loss of memory and difficulty in concentration; fatigue
- Irritability and aggressiveness
- Loss of sexual interest
- Insomnia
- Depression
- Headaches
- Neurological symptoms, such as muscle twitching
- Encephalopathy (major brain & CNS dysfunction)
- Elevated blood pressure
- Digestive difficulties and abdominal pain
- Weight loss
- Joint pain, particularly in long bone joints that move
- Kidney and/or liver damage
- In women, menstrual irregularity and decreased fertility
- Sore or bleeding gums

As you can see, some of these symptoms parallel clinical depression or acute stress.

The source of lead ingestion is usually inhalation of the particulates that saturate the air around the shooter at the moment of ignition of the firearm. Particles of the projectile from the firearm can be ingested as well as the particulates from the lead styphnate in the primers of most of today's cartridges.

PREVENTION: You can minimize exposure to lead ingestion by not shooting on an indoor range. If you must shoot on an indoor range, make sure that the **ventilation** system doesn't allow lead particulates, gases, and smoke to hang in the area of the shooters. A two-stage respirator, or at least a disposable paper dust mask, will filter out a good portion of the lead. When cleaning up the range, brass call is an inevitable part of shooting. **DO NOT put fired brass into your hat** as a method of picking up brass. The lead left behind in your hatband can be absorbed directly into the pores of your head. When you leave the range, **blow your nose**, and **wash your hands** immediately in COLD, SOAPY water.

Thoroughly cleanse the area around your mouth, particularly if you have a mustache or beard. Smoking on the range can allow the lead particles on your fingers to be inhaled along with the cigarette smoke. Obviously, you must **wash your face and hands** before eating at a lunch break in a shooting session. Try to wear an outer garment, such as a coverall or jumpsuit that you can take off before getting into your car or entering your home. Likewise, wear a pair of shoes on the range that you **don't wear into your home**. **Shower** when you get home, or before, in your department's locker room, and be sure to **wash your hair** to avoid leaving lead particulates on your pillow.

We realize that all of this seems like a lot of trouble. However, a generation ago, only the wimps wore hearing protection on the range and now there are a lot of retired cops running around answering phones that aren't ringing. Protect yourself - you're one of the good guys.

Section C

EQUIPMENT AND MODIFICATIONS (K.I.S.S.)

Most military-style rifles, as issued, are acceptable as patrol rifles. Their sights are robust and acceptably accurate, the finish is durable, and the parts are designed to survive on the battlefield.

There is a vast array of after-market equipment that can be added to service rifles. Some are excellent, some are ridiculous, and some fall in between.

Keep it Simple! Murphy's Law will prevail! **Batteries** will be dead, **scopes** will be out of alignment, or **screws** will come loose when it's most critical.

SLINGS

The **standard** nylon sling is the most common. It is a simple nylon strap one inch wide that attaches to the front and rear sling swivels. This simple, inexpensive sling allows use in the "American," "African," and "scramble" modes.

The **tactical** sling allows hands-free carry and use of the rifle. The sling is worn over the shoulder and across the back and chest with the muzzle down. The weapon is carried in a natural position that allows rapid deployment of the rifle. It also allows the rifle to be "dropped" for transition, climbing, or handcuffing.

BIPODS

Bipods are useless on a patrol rifle. They add weight, are cumbersome, and can change bullet placement. They are designed for infantry squads and fully-automatic fire, and have no place on a police patrol rifle.

AMMUNITION

Approved ammunition will be designated by the department. Full metal jacket (FMJ) ammunition is appropriate for most applications. Hollow-point or soft-point ammunition is also acceptable; it fragments more easily, which may be appropriate for urban/suburban environments.

SIGHTS

The factory sights are excellent for most applications. One possible modification would be a tritium front post for low-light conditions. The sights are designed to survive continuous abuse and are difficult to improve upon.

SCOPES

Scopes do not help you **shoot** better; they help you **see** better. If authorized, they should be low powered (2 to 3), compact, with a wide field of view. They are faster to acquire than iron sights.

This is a **patrol** rifle, not a **sniper** rifle. Scopes fog, get wet, and get knocked out of alignment. On the M-16A1, they must be mounted on top of the carrying handle, which makes a proper stock weld difficult. The scope also **blocks the iron sights**. If used, scopes should be mounted low, be detachable, and have back-up iron sights.

FLASHLIGHTS

Most serious police work is done at night; a weapon-mounted flashlight is a good accessory. The light must have a pressure switch attached to the forearm, such as the Sure-Fire. The light must be lightweight, compact, and powerful.

If a light is used, proper training is critical. The light should be used for very brief scans followed by immediate movement laterally. Don't leave it on long - it's a bullet magnet. The officer must also train with hand-held light techniques.

LASERS

Patrol rifles are left in trunks for long periods, affecting the batteries that power the laser. Lasers can also pinpoint your position and draw fire. Lasers are often used in place of sights rather than in conjunction with them. If the laser fails, the officer's poor shooting habits cannot be overcome. Lasers may assist in shooting from unusual positions, or when injured.

ILLUMINATED SIGHTS

Illuminated sights include the Single Point, Pro Point, Armson O.E.G., the Colt C-more, ACOG, Leupold CQT, and others.

Each of these sights offers advantages and disadvantages. The operator must consider size, weight, bulk, battery life, cost and other factors. If used, these sights must allow the use of iron sights as well. The fundamentals of marksmanship must be continually emphasized. The sighting system must not be allowed to become a crutch. No mechanical device is a substitute for proper training.

MAGAZINE CLAMPS

There are several devices designed to attach two magazines together or to the gun. They add weight and bulk and slightly affect balance. They also can block the bolt release. However, they do allow an additional magazine to be immediately available. If used, the shooter must practice indexing the bolt release with the thumb.

STOCK POUCHES

Stock pouches are available from several manufacturers. They allow a spare magazine to be carried at all times. However, they interfere if the weapon is fired from the support-side shoulder.

BELT POUCHES

If the officer has room on the duty belt, a dedicated magazine pouch should be worn. Most manufacturers make a compatible rifle magazine pouch. Another option is a Kydex pouch that can be quickly attached to the belt. Some manufacturers use a “paddle” device that slips over the belt, or a simple lock that snaps closed over the belt. If kept with the rifle, the spare magazine can be acquired whenever the rifle is deployed.



Section D

RIFLE DESCRIPTION & NOMENCLATURE

The patrol rifle is usually a semi-automatic, gas or recoil operated, magazine fed, shoulder weapon chambered in 5.56 mm (a.k.a. .223 caliber). The Colt AR-15/M-16 and Ruger Mini-14 are the most popular choices for a patrol rifles. However, to adequately prepare for range instruction, patrol rifle instructors should become familiar with other makes and models common to police use.

The average patrol rifle is made up of over 150 separate parts. Many of these parts are assembled into components at the factory and for practical purposes are one piece. An example of this is the bolt carrier assembly of the AR-15. It is actually four separate parts that look to the shooter as if it is one piece.

THE CYCLE OF OPERATION OF THE RIFLE IS:

- | | |
|---------------|---|
| 1. Feeding | A round is stripped of the top of the magazine. |
| 2. Chambering | The round is placed into the chamber by the bolt carrier. |
| 3. Locking | The bolt rotates to align its locking lugs with the chamber's. |
| 4. Firing | The trigger is depressed, the firing pin strikes the cartridge. |
| 5. Unlocking | The bolt rotates to permit the bolt carrier to move rearward. |
| 6. Extracting | The expended brass is pulled from the chamber. |
| 7. Ejecting | The expended brass is ejected from the upper receiver. |
| 8. Cocking | The bolt carrier moves backward over the hammer, cocking it. |

MAIN GROUPS OF THE RIFLE:

1. Upper receiver group
2. Lower receiver group
3. Bolt group

NOMENCLATURE

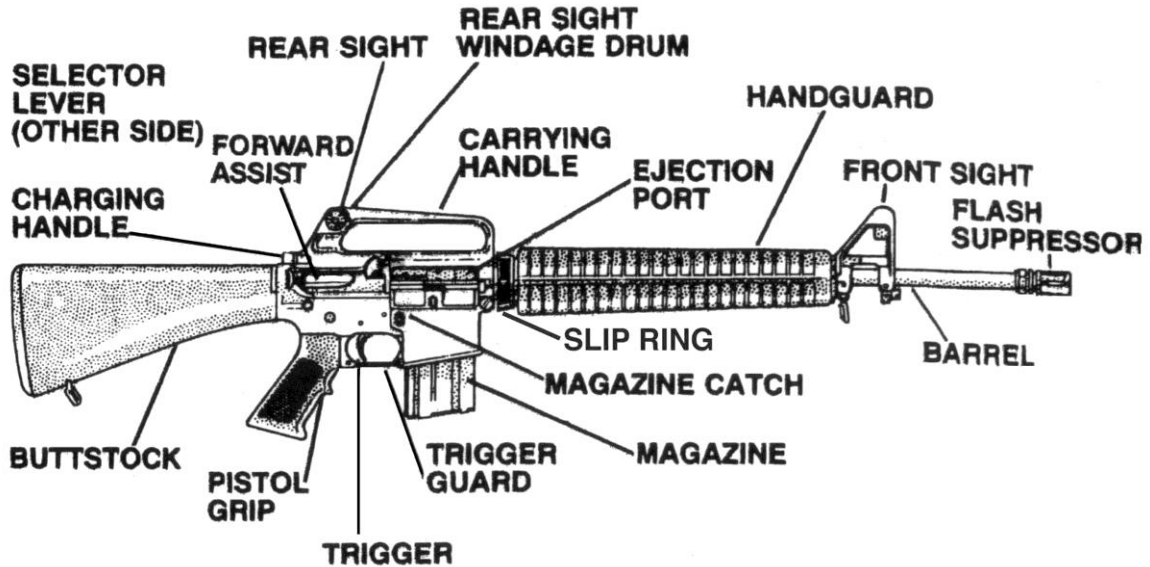


Figure 1

- | | |
|-------------------------------|-----------------------------|
| 1. Barrel | 18. Front Sight |
| 2. Bolt | 19. Hand Guard Assembly (2) |
| 3. Bolt Carrier | 20. Key |
| 4. Bolt Locking Lugs | 21. Magazine Assembly |
| 5. Buffer | 22. Magazine Base Plate |
| 6. Buffer Spring | 23. Magazine Follower |
| 7. Buttstock | 24. Magazine Spring |
| 8. Cam Pin | 25. Pistol Grip |
| 9. Carrying Handle | 26. Pivot Screw |
| 10. Charging Handle | 27. Rear Sight Assembly |
| 11. Charging Handle Latch | 28. Sling Swivel |
| 12. Extractor | 29. Spacer |
| 13. Extractor Pin | 30. Slip Ring |
| 14. Extractor Spring Assembly | 31. Takedown Pin |
| 15. Firing Pin | 32. Trigger |
| 16. Firing Pin Retaining Pin | 33. Trigger Guard |
| 17. Flash Suppressor | |

AR-15/M-16 NOMENCLATURE (by Group)

UPPER RECEIVER GROUP

Barrel
Flash Suppressor
Front sight
Rear sight
Handguards
Upper receiver
Carrying handle
Slip ring
Charging handle

BOLT GROUP

Bolt cam pin
Bolt
Bolt carrier
Bolt carrier key
Gas rings
Extractor
Firing pin
Firing pin retaining pin
Ejector

LOWER RECEIVER GROUP

Buffer spring
Trigger
Pistol grip
Trigger guard
Hammer
Takedown pin
Stock
Buffer
Magazine release

UNLOADING

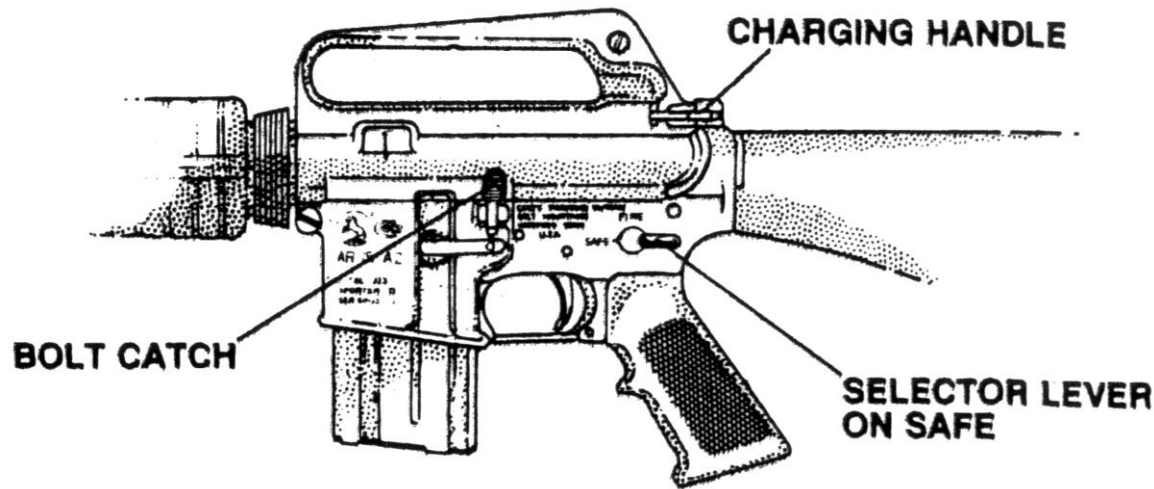


Figure 2

1. Place selector lever on SAFE. If rifle is not cocked, selector lever cannot be pointed toward safe.
2. Point rifle in a SAFE DIRECTION !! (Precinct Loading Barrel, Downrange).
3. Remove magazine by pressing magazine catch and pulling downward on magazine.
4. Pull charging handle to rear and lock bolt open by pressing bottom of bolt catch. Allow bolt to move forward until it engages bolt catch.
5. Return charging handle forward. If you haven't before, place selector lever on SAFE.
6. Check the chamber and the magazine well visually by looking through the ejection port and magazine insert area to ensure these areas contain no ammunition.
7. Physically check the chamber through the magazine well to ensure the rifle is unloaded.
8. When magazine is removed and chamber is empty, press upper portion of bolt catch to allow bolt to go forward.

Note: This rifle can be fired without a magazine in place!!

DISASSEMBLY

1. Unload rifle. See Unloading procedure.
2. Remove sling.
3. Remove *handguards* by pressing down on *slip ring* with rifle on *buttstock*. See Figure 3.
4. Push on *takedown pin* from left of lower receiver and pull *takedown pin* out on right of receiver until it comes to a positive stop.
5. Pivot lower receiver down and away from upper receiver. See Figure 4.
6. Using a screwdriver, remove *pivot screw*.
7. Separate upper and lower receiver.

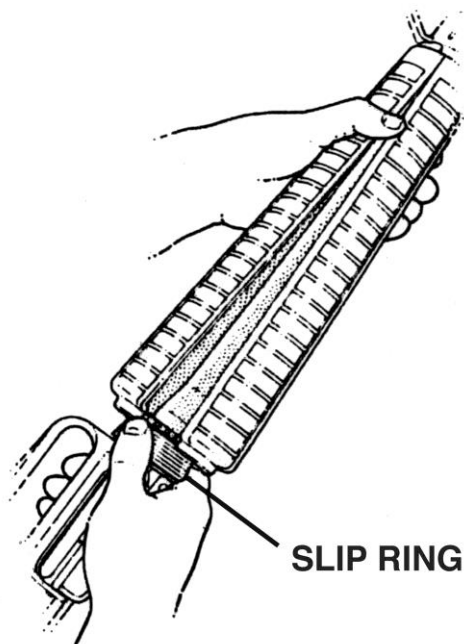


Figure 3

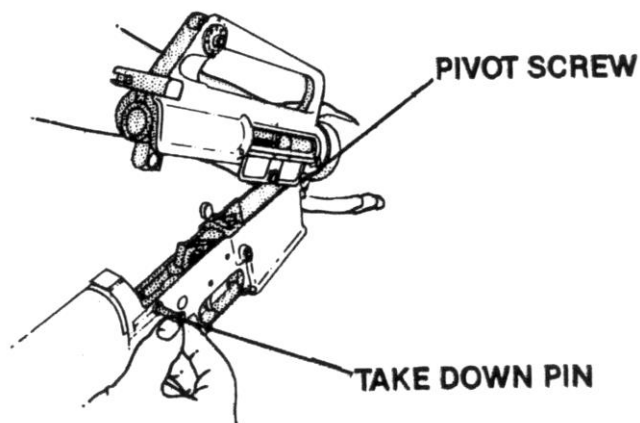


Figure 4

UPPER RECEIVER DISASSEMBLY

1. Pull *charging handle* to rear and remove *bolt carrier assembly* by pulling it to the rear. See Figure 5.
2. Remove *charging handle* by pulling it back to keyway and then down, out of the upper receiver.

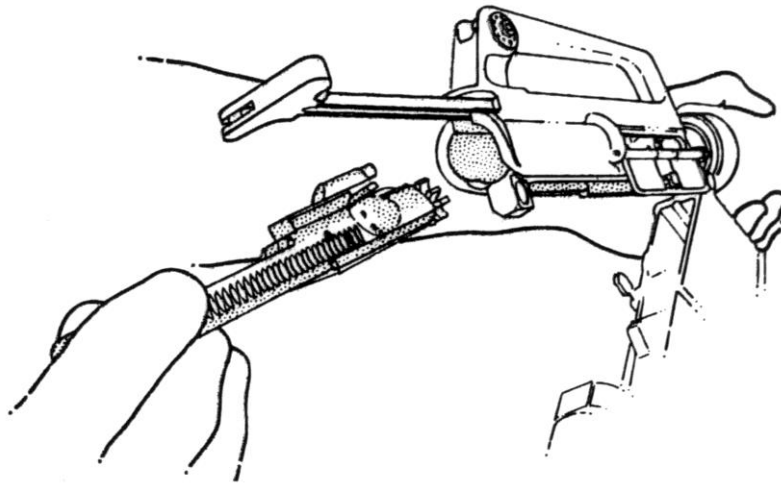


Figure 5

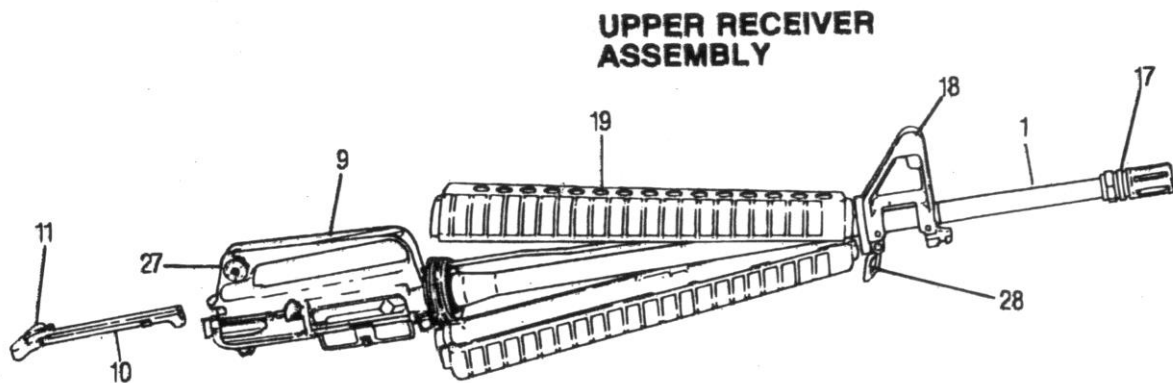


Figure 6

BOLT CARRIER ASSEMBLY / DISASSEMBLY

1. Remove *firing pin retaining pin* by pushing in from right to left of *bolt carrier assembly*.
2. Put *bolt* assembly in locked position by pushing *bolt* assembly in toward *bolt carrier*.
3. Drop *firing pin* out rear of *bolt carrier*.
4. Give *cam pin* a 1/4 turn and lift out to remove *cam pin*.
5. Remove *bolt* assembly from *bolt carrier*.
6. Remove *extractor pin* by pushing *extractor pin* from either side.
7. Remove extractor keeping extractor spring assembly attached.

See Figure 7 and Figure 8.

Note: Extractor spring has a rubber insert within the spring. Be sure not to lose it. If spring comes loose, put the large end of the spring in the extractor and seat it.

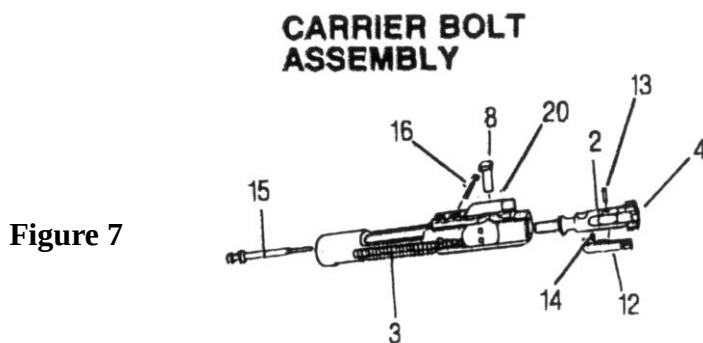


Figure 7

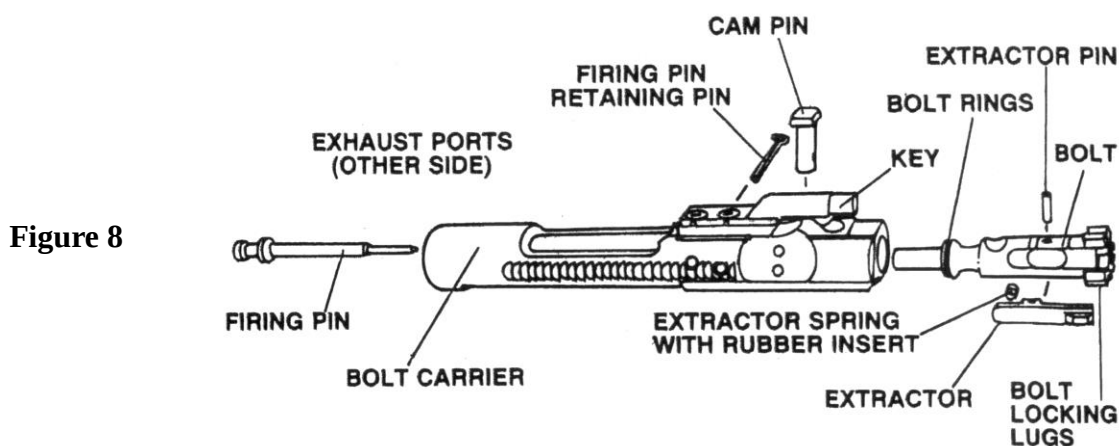


Figure 8

LOWER RECEIVER DISASSEMBLY

1. Remove *buffer* by pressing in on and keeping a constant pressure on *buffer* while depressing the *buffer retainer* and slowly releasing pressure on *buffer*.

See Figure 9, Figure 10, and Figure 11.

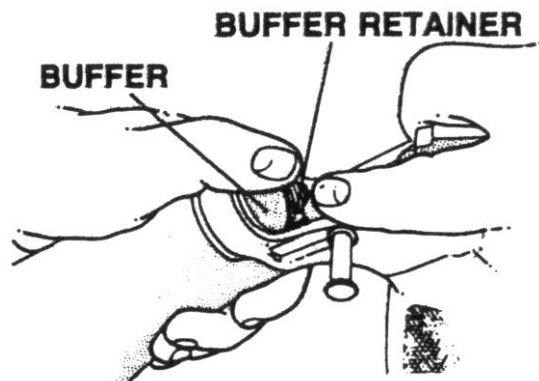


Figure 9

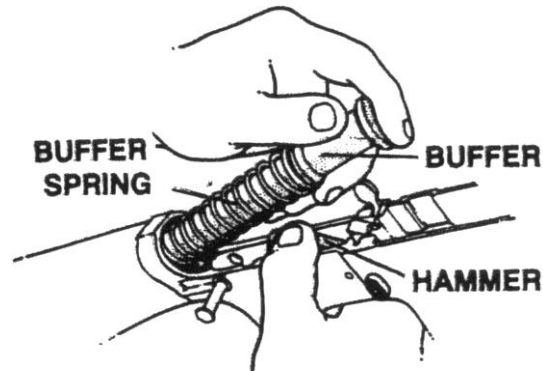


Figure 10

LOWER RECEIVER ASSEMBLY

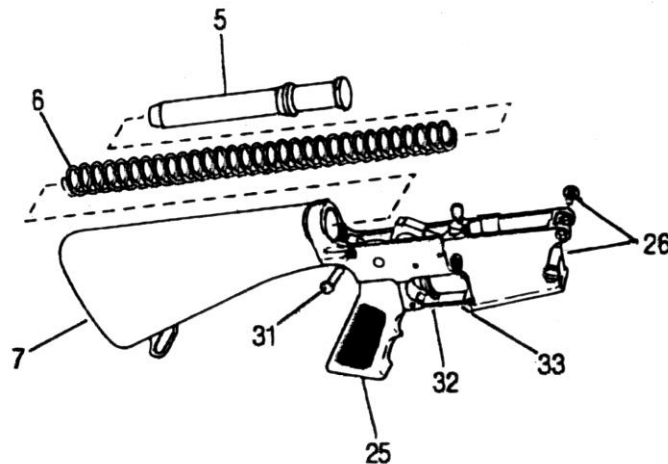


Figure 11

STOP - NO FURTHER DISASSEMBLY ALLOWED

FIELD STRIPPING OF THE AR-15/M-16 RIFLE

It is important to wear safety glasses while field stripping, cleaning, and reassembling the rifle. Caustic solvents don't belong in the eyes, and some of the parts you will remove are under spring tension. Take care that you don't 'launch' anything at the people around you.

Depress the magazine catch and remove the magazine.

Press backward on the charging handle latch and pull the charging handle backwards.

Visually and physically check the chamber and magazine well to ensure that the rifle is unloaded. Do not skip this step.

Release the charging handle.

If the sling is dirty remove it now.

Hold the upper receiver in a fashion so that you can pull down on the slip ring so that you can pull the handguards out one at a time. (The handguards come free from the end near the receiver and then pivot out from the handguard cap that is behind the front sight.) Do not bend, twist, or pull on the gas tube that runs the length of the barrel.

Press the takedown pin from left to right so that the pin sticks out the right side of the receiver.

Pivot the rifle open the way that you would with a breech-loading shotgun.

Carefully press down on the buffer retaining pin, and slide out the buffer and buffer spring. (Watch as you wiggle these parts over the top of the hammer.)

Do not remove either the selector lever blocking device, the pistol arm, or the hammer and associated springs!

Grasp the charging handle again and press reward on the charging handle latch. Pull the charging handle backwards so that the bolt carrier group comes out, too.

Hold the bolt carrier in your hand and press out the firing pin retaining pin.

Remove the firing pin from the back of the bolt carrier.

Rotate the bolt until the bolt cam pin comes out from underneath the bolt carrier key. Then lift the bolt cam pin free of the bolt carrier.

Grasp the bolt while holding the bolt carrier and use a twisting motion to pull the two apart.

As a matter of routine maintenance, removal of the extractor and ejector are not needed. Do not remove the gas rings from the bolt!

Do not remove the barrel from the upper receiver. Do not remove the compensator from the barrel. These are only to be done by armorers. Serious damage to the rifle may result from tampering.

REASSEMBLY OF THE AR-15/M-16 RIFLE:

The rifle may be reassembled by reversing the above sequence with the following cautions:

Make sure that the gaps in the gas rings are not aligned with one another when you reinsert the bolt into the bolt carrier. They should have a staggered appearance. If the gaps in the rings are lined up, malfunctions will occur.

The bolt must go into the bolt carrier a particular way: When you are looking at the face of the bolt, the extractor must be at the 10 o'clock position as you insert the bolt into the bolt carrier.

Once you have put the bolt in, the bolt cam pin must be inserted. It also will want to go in a particular way. If it doesn't fit, rotate it 180 degrees and try again.

Handguards usually are easiest to reinstall if you pull the slip ring down on one side, instead of straight back.

WHEN TO CLEAN AND LUBRICATE THE AR-15/M-16 RIFLE:

You should clean and inspect your rifle:

Before firing - see that the barrel is clear and unobstructed, and that the rifle is lubricated properly.

After firing - clean the rifle immediately after firing. This will reduce the chances that corrosion will set in, and the carbon deposits are easier to remove if they haven't had a chance to set in. (Recheck a day or so later. The metal in the rifle will 'sweat' out carbon to a greater degree than you have seen with your pistols.)

Periodically - depending on the environment (salty air, dusty, humid, etc.) your rifle will need care from once per week to once every half year. Of course, if the rifle gets wet at all, clean and lubricate it immediately.

MATERIALS FOR CLEANING AND LUBRICATION

- A one-piece or segmented cleaning rod
- Cotton flannel patches (cut to fit snugly into the bore)
- A small toothbrush or nylon bristled gun cleaning brush
- High quality gun lubricant (synthetics like Break Free work better in the cold)
- Gun cleaning solution (Hoppes, etc.)
- Brass wire bore cleaning brush and brass wire chamber cleaning brush
- Slotted tip for attaching patches

CLEANING PROCEDURES

Unload the rifle and remove the magazine.

Field strip the rifle.

If the rifle has been fired, attach a wet patch to the cleaning rod and insert it into the chamber end of the barrel. (Never put anything into the muzzle end since this may affect accuracy.)

Use the wire bore brush to clean the barrel. Be sure to push the brush all the way through the barrel before reversing it. If you change directions with the brush in the bore, you may get it stuck.

Take the chamber brush and insert it into the chamber. Colt recommends that you push the chamber brush in and out at least five times, and use rotating motion for at least three complete revolutions.

As a rule, do not insert cotton swabs into the gas tube or bolt carrier key. It is easy to break off the tip and disable the rifle. Pipe cleaners are good for hard to reach areas.

Use a clean dry patch and cotton swabs to remove foul solution from the bore and chamber. Repeat this until the patch and swab come out dry. If there is still carbon in the bore or chamber, repeat steps and

With the cleaning solution and a bristle brush, remove the carbon and powder buildup from the bolt, bolt carrier group, firing pin and all parts of the upper receiver group. Don't use a wire brush on any aluminum parts.

Thoroughly wipe off all parts of the now clean weapon. Inspect them for wear or damage.

LUBRICATION OF THE RIFLE

Lightly moisten a flannel patch with high quality gun oil. Run the patch through the bore. If the rifle isn't likely to be used soon, leave the oil film inside. If the rifle is to be used, then run a dry patch through to remove the oil.

With a clean cotton patch apply a light film of oil to the following areas prior to reassembly:

- Outsides of the bolt carrier
- Outside surface of the bolt
- Top of the bolt carrier key
- Buffer assembly
- Forward assist
- Charging handle catch
- Front and rear sights
- Underside of the charging handle
- Outer surfaces including sling swivels, compensator, and butt plate

FUNCTION TEST

(Conducted only after rifle has been administratively unloaded)

1. Check to ensure the selector lever is on "safe."
2. Point the muzzle in a safe direction. Make sure trigger finger is indexed.
3. Pull the trigger. The hammer should not fall. This is a test of the safety.
4. Place selector lever on "fire."
5. Pull the trigger and hold it to the rear. You should hear the hammer fall.
6. Pull charging handle to the rear and release it to let the bolt go forward.
7. Release trigger. A distinct metallic click should be heard when releasing the trigger.
8. Switch selector lever back on "safe."

Section E

WEAPON FEATURES — RUGER MINI-14 RIFLE



- I.** The Ruger mini-14 rifle is a gas operated, box magazine fed, semiautomatic rifle.
 - A.** Ruger mini-14 rifles are chambered for the .223 Remington (5.56mm) cartridge and are designed to use either standardized U.S. Military or factory loaded sporting .223 cartridges.
 - 1. Caliber: .223 Remington (5.56 mm)
 - 2. Bullet: Federal Tactical 55 grain soft point
 - 3. Velocity: 3212 +/- 50 feet per second
 - 4. Muzzle energy 1270 foot pounds
 - 5. Chamber pressure: 55,000 pounds per square inch
 - B.** The only ammunition authorized for use in the Ruger mini-14 rifle is that ammunition issued by the department.
- II.** Nomenclature:
 - A.** Flash suppressor: Reduces muzzle flash
 - B.** Barrel
 - 1. **CAUTION:** Rapid firing will cause the barrel to quickly heat to very high temperatures.
 - a. Could burn exposed skin
 - b. Could cause a “cook off.” A “cook off” occurs when a round is left in an extremely hot chamber, which causes the round to reach a temperature that ignites the powder. The round goes off as if you pulled the trigger. This can occur sometime after firing has been ceased.
 - 2. The .223 Remington (5.56mm) cartridge is a high velocity round that makes the Ruger mini-14 particularly susceptible to damage from firing when the bore is obstructed. Excess oil, grease, raindrops, or other foreign matter may cause a bore obstruction that could cause damage to the weapon or injury to the operator.

C. Front sight and bayonet lug assembly

1. The front sight is a blade style sight. It consists of a center blade sight with two blades set at angles to the front sight. Only the center blade is used in the sighting process.
2. The two blades set at angles to the center blade serve merely to protect the front sight from damage and are not to be used in the sighting process.

D. Front sling swivel

E. Hand guard

F. Forearm (stock)

G. Receiver

H. Bolt handle

1. Used to manually operate the bolt.
2. Caution: Keep your hand away from the bolt handle while firing the weapon. Injury could occur if your hand gets in between the slide handle and the handguard.
3. Do not manually allow the bolt to go forward while holding the bolt lock plunger down. This will cause a malfunction that may require the weapon to be disassembled before it can be corrected and returned to service.
4. To release the bolt, which allows the bolt to go forward
 - a. Remove magazine, draw the bolt handle to the rear and release.
 - b. Insert a loaded magazine and draw the bolt handle to the rear and release.

I. Bolt

1. The bolt will be locked back, remaining open, under the following conditions.
 - a. The bolt should lock back and remain open when the last round from a magazine is fired.
 - b. When the bolt is manually locked to the rear using the bolt lock plunger.
2. **Warning:** The bolt lock is not a safety device. It should not be used to hold the bolt back when there are cartridges in the magazine.
 - a. A slight jar to the butt could cause the bolt to close, chambering a round.

- b. The purpose for the bolt lock is for convenience in the rapid changing of magazines and for holding the bolt to the rear when the rifle is unloaded for the purpose of cleaning or inspection.

J. Bolt lock plunger

- 1. Located on the top left side of the receiver.
- 2. Pull the slide handle all the way to the rear, holding in place while you depress the bolt lock plunger and allow the slide to move forward until it stops.

K. Rear sight assembly

- 1. The rear sight is adjustable for both windage and elevation.
- 2. A small punch, nail, or other similar item can be used to depress the plunger and allow the sight to move by one-quarter turn in either direction.
 - a. One-quarter turn will move the point of impact one (1) inch at 100 yards.
 - b. Windage adjustment is located on the left side of the rear sight. To move the point of impact to the right, turn adjustment counterclockwise. To move the point of impact to the left, turn the adjustment clockwise.
 - c. Elevation adjustment is located on the top of the rear sight, behind the sight aperture. To raise the point of impact turn the adjustment counterclockwise. To lower the point of impact turn adjustment clockwise.

L. Magazine 20 round capacity

M. Magazine well

N. Front magazine catch

- 1. This is located at the top front of the magazine well. It is a small metal stud that protrudes from the receiver.
- 2. The magazine has a hole in the top front that mates with the stud in the magazine well.
- 3. Inserting the magazine in the rifle.
 - a. Hold the magazine at an angle as shown and insert it all the way up into the magazine well. *Note; the hole in the top of the magazine must mate with the stud in the receiver.*

- b. Pull the bottom of the magazine towards the trigger guard until the magazine latch at the rear of the magazine well engages. Check to be sure that the magazine is securely seated by pulling down.

O. Magazine latch (release)

- 1. Located at the rear of the magazine well. Push forward, towards the magazine to release the magazine.
- 2. If the magazine is empty and the rifle is held at a horizontal level the magazine should fall free of the magazine well when the magazine is released.

P. Trigger

Q. Trigger guard

R. Safety

- 1. The manual safety is located forward of the trigger and is “on” when in the rearward position and intruding into the trigger guard.
 - a. The safety can be moved to the “on” position only when the hammer is cocked.
 - b. When the safety is “on” it blocks both the hammer and sear.
- 2. Never depend on the safety or any other mechanical device to justify careless handling of the rifle.

S. Stock

T. Sling swivel – rear

U. Butt plate

AK - 47



AK-74 Assault rifle

Developed: 1974

: 5.45mm

Cartridge: 5.45x39

Magazine capacity: 30

Loaded weight: 3,600g

Killing range: 1,350m

Loaded weight: 3,600g

Killing range: 1,350m

AK - 46



When Mikhail Kalashnikov developed the AK-47 Rifle, he couldn't have realized the impact it would have on the world. However, the AK-47 Rifle is now, arguably, the most recognizable firearm in the world.

The **AK-47** is a selective fire, gas operated 7.62mm assault rifle developed in the Soviet Union by Mikhail Kalashnikov. Six decades later, the AK-47 and its variants and derivatives remain in service throughout the

world. It has been manufactured in many countries and has seen service with regular armed forces as well as irregular, revolutionary and terrorist organizations worldwide.

Design work on the AK began in 1944. In 1946 the rifle was presented for official military trials, and a year later the fixed stock version was introduced into service with select units of the Red Army (the folding stock model was developed later). The AK-47 was officially accepted by the Soviet Armed Forces in 1949. An early development of the design was the **AKS-47** (S—*Skladnoy priklad*), which differed in being equipped with an underfolding metal shoulder stock.

The AK-47 was one of the first true assault rifles and, due to its durability, low production cost and ease of use, the weapon and its numerous variants remain the most widely used assault rifles in the world — so much so that more AK-type rifles have been produced than all other assault rifles combined.^{[2][3]} It was also used by the majority of the member states of the former Warsaw Pact. The AK-47 was also used as a basis for the development of many other types of individual and crew-served firearms.

Wikipedia AK-47

Section F

CONDITIONS OF CARRY

Three things are constant for all conditions of carry:

1. Muzzle in a safe direction
2. Finger off of the trigger
3. Safety **ON** if allowed

CONDITION 1 ACTION CARRY

High or unknown level of call. A fight may be imminent. If the risk level of a call is high enough for the rifle to be out of the car, then it should be in this condition.

To load the rifle into this condition:

1. Shell in the chamber
2. Magazine is full minus 2 rounds
3. Safety is ON
4. Dust cover is closed if applicable.

CONDITION 2 TRANSPORT CARRY

Also known as “patrol car ready” or “cruiser ready.” This is how the rifle should be configured when in the vehicle rack, or when using the Scramble method of carry with a sling. Magazine is full minus 2 rounds and hammer is down. The safety is on if allowed and the dust cover is closed.

To load the rifle into this condition:

1. Muzzle direction / backdrop
2. Remove the magazine.
3. Run the action to clear the chamber.
4. Press check, chamber clear, visually inspected.
5. Muzzle in a safe direction
6. Safety off - Hammer down (press trigger)
7. Safety **OFF**, if applicable
8. Close the dust cover.

Four checks confirm a proper transport condition of carry:

1. Chamber is empty (press check)
2. Safety is OFF, if applicable
3. Full Magazine is seated (minus 2 rounds)
4. Dust cover is closed.

CONDITION 3 SAFE CARRY

The rifle is prepared for storage. For long term storage, action may be closed, and the hammer dropped on an empty chamber. This allows the hammer spring to rest in the position of least strain.

1. Magazine is removed and Chamber is **EMPTY**.
2. Action is **OPEN**.
3. Press check. (Hammer dropped on empty chamber for long-term storage)
4. Safety is **ON** or **OFF**, as appropriate to the weapon.

METHODS OF CARRY

There are many different methods for carrying a rifle; some are widely accepted throughout the law enforcement community, while others are not tactically sound, and considered dangerous. The following methods of carry are recommended for police officers carrying a patrol rifle.

Sling Carry / Muzzle Up (“American”)

This is the least preferred of the carry methods. The weapon is slow to bring to bear, the visibility is higher, and the handgun interferes with the firing hand.

To deploy the weapon, grasp the sling with the thumb of the firing hand; reach across the body with the support hand, grasping the rifle above the magazine well on the forearm; rotate the rifle outward while drawing the firing arm back through the sling; rotate the muzzle downward while establishing a firing grip on the pistol grip; mount the weapon into the shoulder pocket, and assume a firing position.

- Rifle sling over strong shoulder
- Muzzle pointed upward
- Sling held by strong hand

This method of carry is used when moving around on a firing range or walking to and from a patrol car. It is not used in a tactical situation. **This carry position interferes with drawing the service pistol.**



METHODS OF CARRY

Sling Carry / Muzzle Down (“African”)

This method of carry allows the rifle to be carried on the support (weak) side of the body with the muzzle pointed downward. This is a low-profile method of carry, keeping the weapon less visible but ready for rapid deployment. It keeps rain, snow, sleet, and debris from falling into the muzzle of the weapon. Care must be taken to avoid grounding the muzzle into the dirt if a kneeling position is assumed or the officer bends over.

To deploy the weapon from this carry position, grasp the forearm with the support hand, index finger pointing downward; while stepping forward with the support leg, rotate the rifle outward; push the rifle forward, pointing the muzzle toward the target; rotate the sight upward, while grasping the pistol grip with the firing hand; mount the rifle into the shoulder pocket while assuming an aggressive offhand position; disengage the safety, assess the threat, acquire sight alignment, sight picture, and begin the trigger press.

This method of carry is used in the same situations as the Muzzle Up carry.



METHODS OF CARRY

Sling Carry / Across the Back – Muzzle Down

- Rifle is across Officer's back with sling over a shoulder.
- Muzzle is pointed downward or upward.
- This carry is slower to deploy.

This method is used when the officer needs both hands free (e.g., climbing a fence). This is more administrative than tactical.



METHODS OF CARRY

Sling Carry / Across the Back – Muzzle Up

- Rifle is across Officer's back with sling over a shoulder.
- Muzzle is pointed upward.

This method is used when the officer needs both hands free (e.g., climbing a fence).



METHODS OF CARRY

“Pocket Carry”

The pocket carry is an administrative carry mode to be used when the weapon is not slung. To utilize the pocket carry, the weapon is held in the firing hand. The four fingers of the firing hand are cupped at the base of the pistol grip, where the pistol grip joins the frame. The thumb of the firing hand is laid alongside the fingers, with the thumb pointing forward or downward.

With the fingers supporting the pistol grip, the front sight of the weapon rests against the firing side shoulder junction. The muzzle of the weapon should be in the shoulder pocket, where the butt of the weapon rests during the firing phase. The muzzle of the weapon is parallel to the center line of the body, with the muzzle clear of the side of the head.

Carried in this manner, the weapon can be safely carried forward and backward on the range without the muzzle covering another person. When the pocket carry is utilized, the weapon should be on **safe**.



METHODS OF CARRY

“Scrambler”

The “scrambler” mode is utilized when both hands need to be free, and a tactical sling is not available. The scrambler position is used when the weapon must be slung rapidly, and when a traditional African or American sling mode will not adequately secure the weapon.

In order to assume a “scrambler” carry, the sling of the weapon is simply draped around the neck; the weapon itself lies directly across the chest, leaving both arms free for climbing, rappelling, running, or whatever activity is required.

The “scrambler” carry is utilized for short periods of time when both hands need to be free. It is generally less preferable than utilizing the weapon slung in the African or tactical manner.

The weapon should be placed in condition 3, storage, when using this position. Muzzle control is limited and difficult when using this carry mode.



METHODS OF CARRY

Tactical Sling

This is an excellent method of carry when used with an appropriate sling. This carry method flows easily into the unsighted fire position, allows instant access to the weapon, allows easy transition of the rifle for use of the handgun, OC, baton, or for handcuffing the suspect. It allows the rifle to be carried while maintaining a firing grip on the pistol grip of the weapon.

To deploy, the rifle is simply brought upward, the butt placed in the shoulder pocket while a firing position is assumed.



METHODS OF CARRY

High Guard (Outdoor Ready)

The high guard position is utilized when the weapon is held for extended periods of time. This may include extended range firing drills or extended searches through open or wooded terrain, in deep snow, or in thick brush. In the high guard position, the butt of the weapon rests on the belt line. The firing hand has acquired a firing grip on the pistol grip, and the trigger finger is straight outside the trigger guard, or on the safety. The firing thumb rests on the selector if using an AR-15.

In the high guard position, the muzzle of the weapon is held upward across the body as in a port arms position. As the officer searches, he keeps the muzzle of the weapon in front of his eyes. As the officer tracks left and right, the muzzle of the weapon tracks with him. The shooter should think in terms of eyes-muzzle-target all being in a straight line; look directly across the top of the muzzle of the weapon toward your target when assuming a high guard position.

If necessary to fire from a high guard position, the shooter will step forward with the support leg and tuck the butt of the weapon into the shoulder. The muzzle of the weapon points directly toward the target from its high guard position; the muzzle tucks into the pocket of the shoulder and the shooter obtains cheek weld, sight alignment, and sight picture.

This position is comfortable for long periods of carry, but is slower to assume a proper firing stance and complete the firing stroke than the standard guard position.



METHODS OF CARRY

Guard (Low Ready)

The guard position is utilized in a similar manner to the shotgun or service pistol. The firing hand has acquired a firing grip on the pistol grip of the weapon; the trigger finger is straight and lying alongside the trigger guard, or on the safety. The firing side elbow is parallel to the ground unless an indoor search mode is used. The support hand is at the base of the forearm with all four fingers open, not tightly gripping the fore-end of the weapon. The thumb lies alongside the fore-end of the weapon.

The front leg is bent forward and the rear leg is locked; this should be a fairly aggressive forward stance. The upper body is bent forward at the waist to control the recoil of the weapon in a firing stroke.

Should the shooter have to fire from the guard stance, the weapon is simply raised, sight alignment is acquired and the firing stroke is completed.

- Muzzle of rifle pointed downward at a 45° angle in front of Officer
- Buttstock held in pocket of shoulder
- Handguard held by support hand
- Safety is ON.

Pistol grip held by strong hand with trigger finger indexed straight or on the safety.



METHODS OF CARRY

LOW GUARD (Indoor Ready/Variation of Safety Circle)

The low guard position begins in the same manner as the guard position. The butt of the weapon is tucked into the shoulder, the firing hand has a firing grip on the pistol grip, and the support hand supports the fore-end of the weapon.

The low guard is used in circumstances where the muzzle of the weapon must be depressed close to the body. This could occur while searching dense vegetation, searching indoor, in a vehicle, or other situations where there is not sufficient room to assume a standard guard position.

In the low guard position, the muzzle of the weapon is simply depressed across the support side leg. From the guard position, simply depress the muzzle down across the front of the thigh. The muzzle of the weapon is outside the leg, pointed to the ground, and clear to the feet. Use caution when assuming this position, as with all other carry modes, that the muzzle does not cover any portion of your body or anything else that you are not willing to destroy.

When the muzzle of the weapon is depressed in this manner, it is safe to approach doors and open them, and do other things that require close contact with persons or objects.

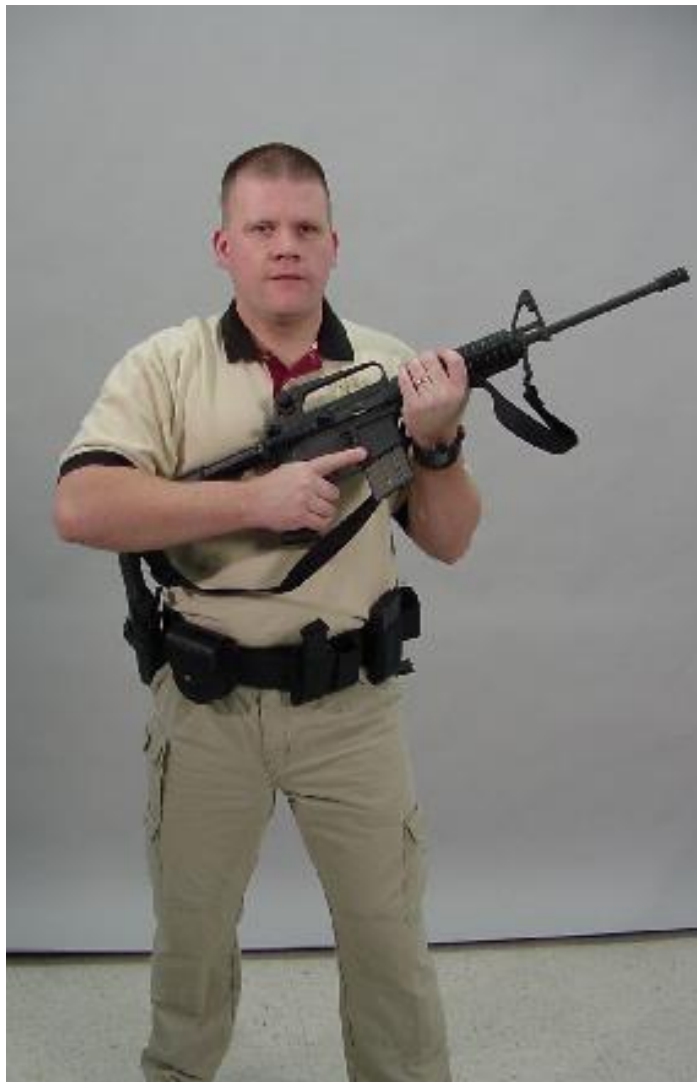


METHODS OF CARRY

Port Arms Position

- Rifle held in front of Officer with muzzle pointed upward
- Handguard held by support hand at shoulder level
- Pistol grip held by strong hand at about waist level with trigger finger indexed, on “safe”

This method of carry is used in same situation as the low ready position.



Section G

FIRING PLATFORMS

PRIMARY FIRING POSITIONS

Off hand (Mobility)

Standing, aggressive forward lean

Prone (Get down or get hit)

Kneeling

- Speed (immediate response drill); no support
- Braced
- Double (both knees); shoot up or down easily.

SECONDARY FIRING POSITIONS

Olympic Offhand - Gives some elevation over obstacles.

Squat - Very fast, lowers profile.

Sitting - Best on downslope.

SPECIAL POSITIONS

Un sighted Fire (Under-Arm) - Immediate action, close threat.

UNUSUAL POSITIONS

Position based on conditions – Seated, prone on side, fetal both sides, ...

LAW ENFORCEMENT PATROL RIFLE SHOOTING POSITIONS

It is a relatively easy task to teach law enforcement students to shoot tight groups with a rifle. Indeed, it is a commonly held opinion that teaching rifle marksmanship is easier than teaching handgun marksmanship. The main reasons for this opinion are the increased sight radius of the rifle over the handgun and the reduced arc of movement (wobble area) that can be achieved by resting the rifle against the student's shoulder.

The greater challenge for the law enforcement firearms instructor will be teaching the students to repeat the point of impact from group to group. This phenomenon of groups wandering around the target is caused primarily by the student's inability to exactly repeat any of the shooting positions. It is necessary that each shooting position is practiced until it can be repeated without any deviation. This is the only way to ensure that the point of impact remains the same each time the student shoots from a given position.

Rather than trying to force all students into the same "picture perfect" position, a more individual approach will be found to be beneficial by the law enforcement firearms instructor. In the same way that not all students are built alike, not all students can get into exactly the same position and achieve satisfactory results. It is therefore necessary to build the student's position based on the three elements that make up a good shooting position and the physical attributes of the student. However, only minimum modifications should be made to the shooting positions and then only those that are necessary to accommodate the physical makeup of the student.

The three elements of a good shooting position are bone support, muscular relaxation and natural point of aim.

Bone Support

Shooting positions may be thought of as foundations to support the rifle and that support should be built using the bones of the body. An easel supporting a chalkboard or a tripod supporting a camera are good analogies. Students using muscles for support not only tire very quickly but the rifle will also be subject to the natural elasticity of the muscles, which causes the sights to be constantly pulled (muscled) away from the intended point of aim.

Muscular Relaxation

For ultimate precision, the student must learn to relax into the shooting position as much as possible. Undue strain and tension will cause muscle tremor and trembling that will be transmitted to the rifle. A position built with muscle tension will not return the rifle to the same point of aim after each shot. The law enforcement officer may have to remain in position for extended periods of time. Any position that does not employ the elements of bone support and muscular relaxation will cause the officer to quickly become fatigued.

Natural Point of Aim

The natural point of aim can be defined as that point to which the sights naturally align without muscular interference on the part of the student. Since the rifle is locked to the body and becomes an extension of the body, it is necessary for the student to adjust the body position until the rifle points naturally at the target. When the student adopts a shooting position and then makes a conscious effort to relax all of the muscles the sights should not move away from the chosen point of aim. Given that the rifle is level, when the student breathes the sights should move vertically down from, and back up to, the point of aim. Once natural point of aim is achieved, the rifle will return to that point of aim after each shot has been fired without need for any correction by the student between shots.

THE STANDING POSITION CHECKLIST

Bone Support - Muscular Relaxation - Natural Point of Aim

The student's normal handgun shooting stance will probably serve well as the basis for a practical law enforcement patrol rifle standing shooting position. **The feet are approximately shoulder width apart with the shooting side foot dropped back six to twelve inches. Both knees are slightly bent and the body weight is forward.**

The toe of the rifle butt is in the shoulder pocket. On most students the heel of the butt will be visible above the shoulder when looking from behind. **Both shoulders are hunched (or rolled) forward. The support hand is centered on the fore-end with the fingers together and the hand grips the fore-end.**

The shooting elbow stays parallel to the ground to assist the student in finding the shoulder pocket. As soon as the student can consistently place the butt in the correct place, the firing elbow is held at a relaxed angle.

This position gives up the element of "natural point of aim" in the interests of practicality. It is necessary to "muscle" the rifle upwards and towards the shooting side to get the sights on target. This is an acceptable compromise when one considers the tactically undesirable, competition-type, standing, positions that are the alternatives and given the standards of marksmanship that are reasonably expected of the law enforcement officer employing the patrol rifle.

The toe of the rifle butt is in the shoulder pocket to aid in preventing the butt from slipping down while shooting. **The butt is close to the neck** to help position the head correctly behind the sights.

The head is placed naturally on the stock, not being pulled back or pushed forward. **The cheek is pressed firmly on the stock** so that stock weld/spot weld is maintained throughout recoil and recovery. The head must stay down until all shots have been fired.

The pad of the trigger finger is placed on the trigger to ensure pressure is straight to the rear. **There is daylight between the trigger finger and the stock/pistol grip** ensuring no frame contact.

This stance is not intended for long range precision shooting. It is a solid platform from which the law enforcement officer can quickly and accurately engage multiple moving threats at realistic ranges.

OLYMPIC OFFHAND

This position may be applicable in limited circumstances, as when shooting over an obstacle or utilizing narrow cover (telephone pole, ETC.). It can be maintained for extended periods.

The body is bladed 90° to the target. The back is straight, body erect. The support side elbow is tucked close to the ribs. The support hand is at the rear of the for-end, and is open and relaxed.



Standing Off Hand Position

- Stand at a 45° angle to target
- Leading leg slightly bent at knee with shooter leaning into rifle
- Feet shoulder width apart
- Handguard held by support hand with elbow pointed downward, fingers open
- Pistol grip held by strong hand with trigger finger on trigger, safety “off.”
- Cheek firmly placed to stock
- Buttstock held in pocket of shoulder
- Firing elbow at relaxed angle
- Sling “trapped”



THE KNEELING POSITIONS CHECKLIST

Bone Support - Muscular Relaxation - Natural Point of Aim

In all kneeling positions both knees are always pointed towards the threat (target). To use a competition rounds and allowing a student to adopt this position in a law enforcement context is senseless in the extreme.

In the high (or unsupported) kneeling position the student takes a step forward with the support side foot and places the shooting side knee on the ground (with knee facing the target). The step forward must be large enough so that **the front foot remains flat on the ground and is not up on the toes. From the waist upwards, the student maintains their normal standing shooting position.**

In the low (or supported) kneeling position the student first adopts the high kneeling position and then sits down on the rear foot. **The rear foot may have the toe of the boot, the boot laces, or the side of the foot in contact with the ground. The flat part of the forward (support) arm above/behind the elbow (NOT the point of the elbow) is now placed over the front knee. The front foot (kept flat on the ground) will need to be extended forward.**

The shooting elbow stays parallel to the ground to assist the student in finding the shoulder pocket. As soon as the student can consistently place the butt in the correct place this elbow **is tucked down against the side of the body** or held in a relaxed position..

In the low (or supported) kneeling position the support hand is as far forward as possible. This hand may have to be pulled back to raise the muzzle for a natural point of aim. For precision shooting, the fore-end is rested in the “V: formed between the thumb and forefinger of the support hand with the support hand open/relaxed - do not grip the fore-end tightly.

The toe of the rifle butt is in the shoulder pocket to aid in preventing the butt from slipping down while shooting. **The butt is close to the neck** to help position the head correctly behind the sights.

The head is placed naturally on the stock, not being pulled back or pushed forward. **The cheek is pressed firmly on the stock** so that stock weld/spot weld is maintained throughout recoil and recovery. The head must stay down until all shots have been fired.

The pad of the trigger finger is placed on the trigger to ensure pressure is straight to the rear. **There is daylight between the trigger finger and the stock/pistol grip** ensuring no frame contact.

NOW CHECK NATURAL POINT OF AIM: (Remember trigger squeeze will be accomplished during the natural respiratory pause so be sure to check the intended shooting position without air in the lungs)

1. Close the eyes for a few seconds and relax the body. Open the eyes and if the sights are not lined up on the point of aim move the body - do not muscle the rifle. Repeat this check a few times.
2. Breathe deeply while watching the sights. The front sight should move vertically down as the student inhales and back up to the point of aim when the student exhales back to the natural respiratory pause.

NOTE: To shoot the tightest possible group the student must be in a position from which all the shots can be fired without movement before starting to shoot. Changing the position between shots will increase the size of the group.

Braced Kneeling Position

- Drop down onto strong knee and sit back on the strong side heel or side of foot.
- Brace support elbow on or ahead of other knee.
- Handguard held by support hand, fingers open or relaxed.
- Pistol grip held by strong hand with trigger finger on trigger, safety “off.”
- Cheek firmly placed to stock.
- Adjust body to acquire natural point of aim.
- Proper position acquired when rifle held by bone support, not muscle tension.



Speed Kneeling Position

- Drop down onto strong knee and keep upper body erect.
- Upper body resembles offhand position.
- Handguard held by support hand with elbow pointed downward, fingers open or relaxed.
- Pistol grip held by strong hand with trigger finger on trigger, safety “off.”
- Cheek firmly placed to stock.
- Sights brought to target as you kneel.



Double Kneeling Position

- Drop down onto both knees and sit back on both heels.
- Upper body resembles offhand position.
- Handguard held by support hand with elbow pointed downward, fingers open or relaxed.
- Pistol grip held by strong hand with trigger finger on trigger, safety “off.”
- Cheek firmly placed to stock.
- Sights brought to target as you sit back on heels.
- Recover to speed kneel, standing.



THE SITTING POSITIONS CHECKLIST

Bone Support - Muscular Relaxation - Natural Point of Aim

Crossed legs, crossed ankles or open leg. **If the legs or ankles are crossed the support side leg is over, or in front of, the shooting side leg. Leg muscles relaxed as much as possible. The torso is bent forward at the waist with as much of the body behind the rifle as possible.**

The support elbow is under the rifle, for bone support, as much as possible without magazine contact. Ideally both elbows are blocked in front of or inside the knees (not on top of the knees) to prevent the elbows from being dislodged during recoil.

Adjustment of the elbow and/or knee positions will allow the shoulders to be kept level that will prevent the rifle from canting. **The rifle and sights are vertical/upright.**

The support hand is as far forward as possible. This hand may have to be pulled back in order to raise the muzzle for a natural point of aim. For precision shooting, the fore-end is rested in the “V” formed between the thumb and forefinger of the support hand with the support hand open/relaxed - do not grip the fore-end tightly.

The toe of the rifle butt is in the shoulder pocket to aid in preventing the butt from slipping down while shooting. **The butt is close to the neck** to help position the head correctly behind the sights.

The head is placed naturally on the stock, not being pulled back or pushed forward. **The cheek is pressed firmly on the stock** so that stock weld/spot weld is maintained throughout recoil and recovery. The head must stay down until all shots have been fired.

The pad of the trigger finger is placed on the trigger to ensure pressure is straight to the rear. **There is daylight between the trigger finger and the stock/pistol grip** ensuring no frame contact.

NOW CHECK THE NATURAL POINT OF AIM: (Remember: Trigger squeeze will be accomplished during the natural respiratory pause so be sure to check the intended shooting position without air in the lungs)

1. Close the eyes for a few seconds and relax the body. Open the eyes and if the sights are not lined up on the point of aim move the body - do not muscle the rifle. Repeat this check a few times.
2. Breathe deeply while watching the sights. The front sight should move vertically down as the student inhales and back up to the point of aim when the student exhales back to the natural respiratory pause.

NOTE: To shoot the tightest possible group the student must be in a position from which all the shots can be fired without movement before starting to shoot. Changing the position between shots will increase the size of the group.

Sitting Position, Crossed Legged

- Shooter crosses feet and lowers to sitting position.
- Shooter may break the fall with support hand.
- Shooter rests cross-legged.
- Handguard held by support hand with support elbow on support knee, fingers open or relaxed.
- Pistol grip held by strong hand with trigger finger on trigger, safety “off.”
- Strong elbow on strong knee.
- Cheek firmly held to stock.
- Buttstock held to strong shoulder.
- Recover to speed kneel, standing.



Sitting Position, Crossed Ankle

- Shooter lowers to sitting position and extends legs crossing ankles.
- Shooter may break the fall with support hand.
- Shooter rests with ankles crossed.
- Handguard held by support hand with support elbow locked inside support knee.
- Strong side elbow locked inside strong knee.
- Pistol grip held by strong hand with trigger finger on trigger, safety “off.”
- Cheek firmly held to stock.
- Buttstock held to strong shoulder.



Sitting Position, Open

- Shooter lowers to sitting position and extends legs
- Shooter bends knees keeping feet about shoulder width apart
- Shooter may break the fall with support hand
- Handguard held by support hand with support elbow locked inside support knee, fingers open or relaxed.
- Strong side elbow locked inside strong knee
- Pistol grip held by strong hand with trigger finger on trigger, safety “off.”
- Cheek firmly held to stock
- Buttstock held to strong shoulder
- Recover to speed kneel, standing.



THE PRONE POSITIONS CHECKLIST

Bone Support - Muscular Relaxation - Natural Point of Aim

The body is well behind the rifle. (Presents a smaller target / absorbs recoil resulting in a more consistent position) **The legs are open and flat with toes pointed out** (lower position) **or the shooting side knee is drawn up with both feet pointed towards the shooting side** (upper body off the ground is more comfortable). **The feet (ankles) are as flat on the ground as possible - not up on the toes.**

The flat part of the forward (support) arm above/behind the elbow (NOT the point of the elbow) **is in contact with the ground.** (This is the same part of the arm that goes over the knee in a kneeling supported position) **The support elbow is as far under the rifle (sideways) as possible for bone support without putting pressure on the magazine.**

The shooting side elbow is placed naturally on the ground. Moving this elbow sideways will allow the student to level the shoulders and prevent the rifle from canting. **The rifle and sights are vertical/upright.**

The support hand is as far forward as possible. This hand may have to be pulled back in order to raise the muzzle for a natural point of aim. For precision shooting, the fore-end is rested in the “V” formed between the thumb and forefinger of the support hand with the support hand open/relaxed - do not grip the fore-end tightly.

The toe of the rifle butt is in the shoulder pocket to aid in preventing the butt from slipping down while shooting. **The butt is close to the neck** to help position the head correctly behind the sights.

The head is placed naturally on the stock, not being pulled back or pushed forward. **The cheek is pressed firmly on the stock** so that stock weld/spot weld is maintained throughout recoil and recovery. The head must stay down until all shots have been fired.

The pad of the trigger ringer is placed on the trigger to ensure pressure is straight to the rear. **There is daylight between the trigger finger and the stock/pistol grip** ensuring no frame contact.

NOW CHECK THE NATURAL POINT OF AIM: (Remember: Trigger squeeze will be accomplished during the natural respiratory pause, so be sure to check the intended shooting position without air in the lungs.)

1. Close the eyes for a few seconds and relax the body. Open the eyes and if the sights are not lined up on the point of aim move the body - do not muscle the rifle. Repeat this check a few times.
2. Breathe deeply while watching the sights. The front sight should move vertically down as the student inhales and back up to the point of aim when the student exhales back to the natural respiratory pause.

NOTE: To shoot the tightest possible group the student must be in a position from which all the shots can be fired without movement before starting to shoot. Changing the position between shots will increase the size of the group.

Prone Position

Straight or Roll Over

- Align body in boxer stance to target.
- Lower onto both knees (don't drop down hard as injury can occur).
- Weapon pointed down range at all times.
- Support hand out in front of shooter to brace fall forward until prone.
- Handguard held by support hand with elbow pointed downward.
- Pistol grip held by strong hand with trigger finger on trigger, safety "off."
- Both legs can be extended to rear with feet spread comfortably apart or strong leg can be bent at knee to aid in breathing.
- Cheek held firmly to stock.
- Stock held firmly to shoulder by strong hand.
- Recover to speed kneel, standing.



Squat Position

The Squat Position is a hasty field position that can be quickly gotten into and out of. It can add great stability for those shooters who can use it.

To assume, keep both feet flat on the ground and lower the butt toward the heels. Both elbows are supported by the knees. The support hand is open or relaxed on the fore-end.

- Body bladed
- Lower Butt
- Feet flat on the ground
- Elbows rest on knees



Unsighted Fire (Underarm Assault)

The unsighted fire position is used during a searching mode through open areas and over an extended period of time. This mode of carry and fire is less reliably accurate than a shoulder mounted, aimed firing drill; however, in actual practice police officers frequently dismount the weapon from the shoulder and carry it in the underarm assault position.

In utilizing the unsighted fire, the weapon is held with the firing hand on the pistol grip and the support hand on the forearm. The butt of the weapon is tucked tightly up into the armpit. The muzzle of the weapon is tracked from left to right in conjunction with the visual searching utilized by the officer. When in the underarm assault mode, the weapon is charged, the dust cover is open, the trigger finger is straight alongside the trigger guard, and the thumb is on the selector. If applicable the selector should be set in the safe position, ready to be instantly moved to the fire mode.

If it should be necessary to fire from the unsighted fire position, the shooter assumes an aggressive forward stance. The butt is tucked tightly into the shoulder and the muzzle is aimed directly at the target. The shooter fires a minimum standard response, immediately **moves** a step to the rear or laterally, **shoulders the weapon**, and scans and assesses.

The unsighted fire carry/firing mode should be utilized only on targets at close quarters (within 5 to 7 meters, and in a surprise situation). When at all practicable, the shooter should shoulder the weapon properly and achieve correct sight alignment and trigger press prior to firing. However, at close-quarter battle ranges and in extremely compressed times, the underarm assault position can deliver accurate fire in an extremely short period of time.



Patrol Car

Over the hood position:

When firing over the hood of the patrol car remember the following; the mechanical offset will cause the bullet to strike 2” or more below the line of sight. Remind students that this firing position potentially exposes the top of the shooter’s head.

The position is obtained by securing the sling to the fore-end of the stock with the support hand, placing the butt of the weapon in to the shoulder pocket and maintaining a good cheek weld on the stock. The shooter can then choose either single kneeling supported, single kneeling unsupported, or double kneeling positions. Once in position, be sure not to allow the barrel to contact the hood of the vehicle; place the back of the support hand against the hood or ball the support hand in to a fist and rest the fore-end of the weapon on top of the fist. **Check for mechanical offset to make sure the barrel does not cover the hood of the patrol car.** If necessary, the shooter may have to use a blanket or jacket to elevate the barrel. This shooting position is generally more suited to shooting at an upward angle because of the mechanical offset.

DIRECTIONAL COMMANDS

There are a multitude of situations an officer may respond to which present a number of variables. One such variable is the availability of cover or concealment, and should be an initial consideration when responding to a high-risk situation. Because of the reactionary nature of law enforcement, officers are automatically at a disadvantage upon arrival at a scene. It is very important for an officer to immediately assess the availability of cover and/or concealment and use it, as necessary. Moving to cover or concealment must be done quickly and safely.

Additionally, the officer may need to move before or after a shot, or after using a light. Muzzle flash and a flashlight are both bullet magnets. The officer may also need to advance or withdraw tactically. The directional command drills listed below will train the officer to move directionally in a safe and tactical manner.

LEFT - Starting from the Interview stance, and on the command “left”, the shooter takes a large step to the left, and slightly forward, with the left foot, (shifting his/her weight to the right leg), while properly mounting the rifle in the pocket of the shoulder. The shooter then completes the presentation while shifting his/her weight to the left leg and drags the right foot towards the left foot, assuming a proper Interview stance. The sights of the rifle should come up on target simultaneous with the right foot being planted; then the shooter fires his/her shots.

RIGHT - Starting from the Interview stance, and on the command “right” the shooter takes a large step to the right, and slightly to the rear with the right foot, (shifting his/her weight to the left leg), while properly mounting the rifle in the pocket of the shoulder. The shooter then completes the presentation while shifting his/her weight to the right leg and drags the left foot toward the right foot, assuming a proper Interview stance. The sights of the rifle should come up on target simultaneous with the left foot being planted; then the shooter fires his/her shots.

BACK - Starting from the Interview stance, and on the command “back” the shooter takes a large step to the rear and out with the strong side foot, being careful to maintain the body weight on the support side leg. Simultaneous with this step, the shooter properly mounts the rifle in the pocket of the shoulder. The shooter then completes the presentation while shifting his/her weight to the strong side leg and drags the support side foot toward the strong side foot, assuming the proper Interview stance. The sights of the rifle should come up on target simultaneous with the support side foot being planted; then the shooter fires his/her shots.

SHOOTING ON THE MOVE

In rare cases, the shooter may need to engage a target while actually moving. It is generally preferable to stop, acquire the front sight and a stable firing platform, and deliver effective fire; however, the shooter needs to practice shooting while moving.

Regardless of the direction moved, the shooter lowers his body and spreads his feet apart. He lowers his center of gravity and makes the most stable firing platform possible. The shooter walks like Groucho Marx; short, squatty steps where the upper body remains motionless. This position is difficult to describe and must be demonstrated.

It is important that the shooter **does not stop**, but continues his directional movement. This technique is intended to move quickly, dominate the gunfight, and either subdue the opponent or get to a position of safety.

FORWARD – The shooter starts from the Interview stance with the weapon at guard and mounted securely to the shoulder. On the command “forward” the shooter bends slightly at the knees and steps forward with the support-side leg. The shooter then steps forward with the weapon-side leg, returning to the original Interview stance. The shooter continues to move towards the target in this manner, while keeping his/her eyes on the target. On the command of “fire,” the shooter aims in at the target and fires and continues to move forward until instructed to stop or change directions.

Note: Left handed shooters step out and back with the left foot on the “left” command, and out and forward with the right foot on the “right” command.

Section H

THE FUNDAMENTALS OF MARKSMANSHIP

There is no secret to rifle marksmanship. The key is to practice regularly, practice properly, and have an understanding of basic principles of marksmanship. The fundamentals of rifle marksmanship is essentially the same as handgun marksmanship.

EFFECTIVE FIRING POSITIONS

Factors that affect efficiency of firing platforms:

- **Opposite hand** and elbow under gun, hand open, or lightly gripped.
- **Strong hand** - place and pressure high under gun.
- Strong elbow - “**Maintain pocket**” with elbow high.
- **Butt** placement - always in pocket.
- **Stock weld** - sights and eye.
- **Trigger** Control
- **Breathing** - fire during the “respiratory pause”
- **Relaxed** body.
- **Natural Point of Aim**
- **Follow-through**
- **Skeletal Support**

GRIP AND STANCE

Buttstock in Pocket of Shoulder - Find the pocket of the shoulder by using the following drill: Place the support hand thumb on the strong side collarbone. Raise the strong hand straight above the head. Place the support hand fingertips in the strong side armpit and squeeze. The muscle group in the support hand is a built-in recoil pad. The pocket formed by the medial side of this muscle is the proper location of the butt of any shoulder-fired weapon. If the buttstock is too low or below the pocket, the head will have to be lowered to see the front sight through the rear sight. Therefore, a portion of the buttstock will be above the shoulder line.

Position of Firing Hand and Elbow - The firing hand will be in a firm firing grip on the grip of the rifle, with the strong thumb or finger on the safety. To enhance a proper pocket, the strong side elbow must be held at least horizontal; and, the higher up it is held, the better the pocket.

Position of Support Hand and Elbow - The support hand must be on the handguard, not gripping it, but have the fingers of the hand relaxed and the fingers open so they are not tightly gripping the handguard. The elbow is straight down from the hand. The more the elbow points out from a 6 o'clock position the greater the likelihood that the rifle will be displaced laterally during recoil (instead of straight up and back). This will cause reduced accuracy and/or greater recovery time.

Position of Head and Proper Cheek/Stock Weld - The head must be kept upright during all phases of manipulation or fight. Whether searching for or engaging a target, the head must maintain an upright alignment. If the head is tilted, (especially during low light shooting), balance is impaired and the shooter must depend more on visual cues to maintain stability. This distracts from the task of target identification. The buttstock must be pushed up into the cheek to "weld" the head onto the stock. Bring the sights up to the eyes - don't take the eyes to the sights. "Weld" to the same spot each time!

Position of Support-side Knee - The support side foot should be forward of the strong side leg. The knee should be bent so that the center of gravity is moved forward. The feet should be flat on the ground. Lean into the gun.

Overall Stance and Center of Gravity - Both feet must be flat on the ground. The center of gravity should be shifted forward to increase recoil control and a strong shooting platform. There should be a straight line from the weapon shoulder, through the hip, to the weapon side foot. After the shooter depresses the muzzle to the guard, the stance can be modified so that the shooter stands more upright. There is a tendency to rise up onto the ball of the strong side foot or lunge forward rather than lean forward. The center of gravity should be moved forward to increase the control over the natural tendency for the muzzle to rise during recoil.

Dry Mounting Drills and Simulated Combat Loading - Shooters should practice dry mounting and simulated loading. Place the rifle into Condition 3 (Safe), and in a proper method of carry. Shooters should practice putting the rifle into a proper "pointed in" shoulder mount. By learning to properly mount and manipulate the rifle the shooter will reduce the possibility of injury, increase accuracy, and obtain a higher level of confidence in deploying the rifle. Remember to scan.

SIGHTS AND SIGHT PICTURE

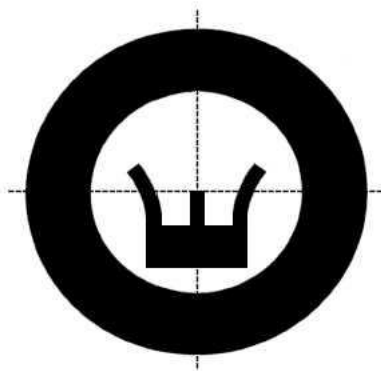
Sight alignment is the relationship of the front and rear sights. It is a matter of getting the rear sight aperture in the correct position in relation to the front sight.

Ghost Ring sights - the fastest of the iron sights. The top of the front sight is placed on the point of impact. The top of the front sight is held in the center of the hole of the rear peep. The term “ghost ring” implies that the rear peep aperture is at least one-quarter (1/4) inch in diameter. The enlarged opening allows more light to enter the pupil, enabling use of the rifle in dimmer light situations. The enlarged opening also allows greater view of the target to assist in the firing decision. The front post will naturally center in the ring.

Sight picture is what you see through the sights. For the patrol rifle, the correct sight picture should have the top of the front sight post as your point of impact on target at the sight-in range. This should be with the sights held in proper alignment. Your rear aperture will be blurry and the target will be slightly out of focus. Your front sight should be in sharp focus.

Flash sight picture - The shooter relies on the front sight to make a fast shot at close range. Normally, a shooter doesn't fire until the front sight and rear sights are aligned and the sights are on target. When using flash sight picture, the shooter fires when the front sight is on target and generally aligned with the rear sight. This reduces the amount of time needed to complete the shot. It is best facilitated by the acquisition of a good stock weld. Use of a consistent stock weld, in conjunction with the flash sight picture ensures a fast, accurate shot. We use this to make subsequent shots, where the use of the rear sight would delay the follow-up shot.

Aiming is simply a matter of pointing the rifle in the direction of the target until the desired sight picture is obtained while maintaining correct sight alignment. Your sight picture should be the same from shot to shot. Aiming correctly is a matter of getting four things lined up: the target, the front sight, the rear sight, and your eye.



Correct Sight Alignment



Correct Sight Picture

TRIGGER CONTROL

Single Action Trigger Manipulation – This trigger manipulation is due to the consistent trigger weight and length of travel. The trigger finger will be placed on the trigger at the center of the pad of the fingertip, on the center of the trigger.

Press – The shooter must insure that the trigger is pressed directly and steadily to the rear of the rifle, with no sideways application of force. It is as if the shooter is pulling the front sight through the rear sight by straight back pressure on the trigger.

Surprise-Break – The most important aspect of trigger control is the surprise break of the shot. The hammer should fall as a response to pressure added to the trigger. The shooter must not know the instant of ignition. This helps the shooter to pay attention to the front sight, and prevents the shooter from anticipating the recoil of the rifle (which degrades accuracy). If the shooter attempts to “catch” a good sight picture by snapping the trigger as the sights move past the aiming point, the shot will be inaccurate. This is referred to as a pre-ignition push, or a “Kodak moment,” and usually results in a shot low on or below the target.

The fall of the hammer must be a surprise whether the shot is to be taken in 10 seconds or 1/2 of a second. A “**compressed surprise break**” refers to a shortened time span between beginning to press the trigger and the hammer fall.

TRIGGER FINGER LOCATION

The trigger finger will be placed in one of only two places when manipulating the rifle:

1. On the trigger when the sights are on the target, and the decision has been made to fire.
2. On the side of the receiver after a shot or shots have been fired, and the shooter has “come down to look around” or to clear a malfunction.

TRIGGER FINGER CONTACT

The officer only goes “on threat” once the decision has been made to fire. Therefore, once on threat, the safety is off and the finger is on the trigger. When firing, the finger maintains contact with the trigger throughout the firing sequence and during follow through. Do not jump off the trigger after shooting!

Maintaining contact allows for faster, more accurate follow-up shots with minimum finger and muzzle movement. If it’s ok to shoot the subject, it’s ok to keep your finger on the trigger before, during, and after each shot.

SYMPATHETIC CONTRACTIONS AND THE TRIGGER FINGER

This is the contraction of the muscles of the hand or fingers under high-stress situations. Sympathetic Contractions can occur as a result of three uncontrollable distinct stimuli:

- Startle Response
- Postural Instability
- Overflow Effect

Startle Response – When you are startled by a loud noise, or a sudden appearance of someone unexpected, it immediately shocks or disrupts the nervous system causing you to flinch, clutch and jump.

Postural Instability – A big term for simply losing your balance. If there is something in your hand (Gun) or near your hand when you lose your balance, you will clutch it or grab for it.

Overflow Effect – This is the relationship between your muscles and nerves under high stress. If you exert maximum force with one hand, the nerves of the opposite hand will cause that hand to exert up to 25% of the force at the same time. The more stress, the more force exerted.

CONSEQUENCES OF THE THREE SYMPATHETIC CONTRACTIONS

The strength that can be exerted by involuntary muscular contractions is one of the above three circumstances may be enough to cause an Unintentional Discharge. If your trigger finger isn't indexed properly and you get **startled** the resulting flinch or clutch may cause an Unintentional Discharge. If your trigger finger isn't indexed properly and you lose your **balance** the resulting clutch or grab may cause an Unintentional Discharge. Under stress the average adult male can **exert** 100 pounds of pressure with the strong hand, and may exert up to 25% of his hand strength to his support hand. If your trigger finger isn't indexed properly it only takes 5 to 8 pounds to pull the trigger. The legal consequences can be devastating to the involved officer and his agency if the muzzle isn't pointed in a safe direction.

Prevention

Training won't prevent involuntary muscle contractions from occurring, but it can prevent Unintentional Discharges. Training officers' to keep their trigger fingers properly indexed outside and above the trigger guard until they are on target and have decided to fire will help prevent Unintentional Discharges from happening!

* Dr. Roger Enoka did an extensive study on this problem. Subsequent studies have validated his findings.

PRINCIPLES

Breath Control - Improper breathing techniques can affect accuracy. The preferred method is to fire during the “natural respiratory pause.” Breathe naturally and prepare to shoot after you exhale. When your breathing is at a state of natural pause and your body is still, at the end of exhaling, press the trigger. The shot should be fired within 6 to 8 seconds. Breath control becomes critical as distance increases.

Natural Point of Aim - This involves adjusting the body to bring the rifle in line with the desired aiming point. When first assuming a firing position, aim the rifle at the target. Close your eyes, take three deep breaths, and then open your eyes. Adjust your body - not the rifle - to line up your sights exactly as you want them on the target. By doing this, the marksman is relying on bone structure and not muscle to hold the firing position. Muscles will fatigue or twitch over time under the weight of the rifle. Bone structure is capable of providing constant support, and allows the marksman to relax.

Follow Through - The continued application of all fundamentals until the bullet has left the barrel. Many shooters, especially those in training, will fire the rifle, allow it to go into recoil, and either immediately look for the hit on the target, sling it, or lower the rifle to guard or lower, letting the muzzle cover their feet. It is common for the shooter to move the rifle while it is being fired, causing an inaccurate shot.

A complete follow-through consists of the front sight being the last thing in sharp focus when the rifle discharges, and the first thing back into the shooter’s focus immediately after the shot is fired and before the next shot. This will ensure proper follow- through.

Section I

LOADING AND MALFUNCTIONS

ADMINISTRATIVE LOADING

1. Point the muzzle in a safe direction. Make sure trigger finger is indexed.
2. Insert loaded magazine into the magazine well. Push up and pull down on the magazine to ensure it is securely seated.
3. Pull the charging handle or bolt handle to the rear and release, chambering a round.
4. Conduct a press check (pull charging handle or bolt handle to the rear slightly until round can be seen through the ejection port).

ADMINISTRATIVE UNLOADING

1. Ensure the weapon is on "safe."
2. Point the muzzle in a safe direction. Make sure trigger finger is indexed
3. Press magazine release and remove magazine from the magazine well.
4. Pull the charging handle or bolt to the rear, and lock the bolt open.
5. Visually inspect the chamber through the ejection port and physically check the chamber through the magazine well to ensure the weapon is unloaded.
6. Close the bolt, close dust cover if applicable.

PRESS CHECK – Maintain a firing grip; support hand pinches the charging handle (on m-16 type weapons) and pulls the bolt 1/2 inch to the rear; roll the weapon slightly to the left and visually inspect the chamber; release the bolt and allow it to slam forward. If still in doubt, run the bolt again, ejecting the cartridge and loading a new one.



SPEED RELOAD

The bolt locks back on empty magazine or is mostly empty. Index fresh magazine, release the empty magazine (which drops to the ground), insert the new magazine, release the bolt, assess.

- Is usually performed when the magazine is empty, and the bolt locked open.
- The reload will occur with the butt of the rifle in the pocket of the shoulder.
- Some magazines, such as with the Mini-14 and H&K, must be rocked forward and stripped from the gun.
- The trigger finger will be indexed.
- The bolt is release to chamber a fresh round.

SKILL STEPS: With the magazine empty and the bolt locked to the rear, or mostly empty:

1. Push the magazine release button (strip the magazine from the magazine well if the magazine does not immediately fall free from the magazine well.)
2. Immediately grab the spare loaded magazine from its carry position.
3. Insert the loaded magazine into the rifle by pushing the magazine up into the magazine well and then pulling down on the magazine to ensure that the magazine is locked into place.
4. The support hand then manually slaps the bolt catch or retracts the bolt handle, which allows the bolt to move forward into battery chambering the top round.
5. Evaluate threat/shoot if necessary.

TACTICAL RELOAD (Retain partially spent magazine) **Lull in the fight.**

The purpose of the tactical reload is to load a full magazine into the rifle, if and when there is a break in the confrontation, and to save the replaced magazine on your person.

- This reload will be done from a position of cover, whenever possible.
- This reload will be done when there is time to complete the reload.
- This reload will be done with the butt of the rifle in the pocket of the shoulder.
- With the trigger finger indexed.

Option 1 – Shooters with small hands often have difficulty holding two magazines in one hand. After confirming the shooter has a spare magazine, release the partial magazine into the support hand, retain the partial magazine in a pocket or behind the belt, bring the new magazine up with the same motion and insert with a push/pull motion.

Option 2 - Index fresh magazine and move near magazine well; release partial magazine into palm, insert fresh magazine, tap and pull, retain partial magazine (pocket or belt). This is done the same as the handgun tactical reload.

Option 3 – Obtain a grip on the new magazine with all four fingers around front; bring to magazine well. “Slap” the new magazine against the magazine well, with the new magazine slightly higher, gripping both magazines. Release the old magazine, move the new magazine to the magazine well, insert with push/pull motion. Retain the partial magazine.

SKILL STEPS: If and when there is a break in the confrontation, you will:

1. Take cover, if possible.
2. With the support hand, grab a fully loaded magazine from the magazine pouch.
3. Hold the magazine between the thumb and index finger.

4. Place the palm of the support hand under the magazine you are about to reload, while still holding onto the loaded magazine.
5. Press the magazine catch, retaining the used magazine between ring and middle fingers.
6. Then while still holding onto the old magazine, insert the new magazine by pushing it into the magazine well and then pulling down to ensure the magazine is fully seated.
7. Then put the used magazine in a pocket somewhere on your person, so you can use it if you need it later in the confrontation.
8. Evaluate threat/shoot if necessary.

MALFUNCTIONS

A malfunction with an assault rifle can be defined as an interruption in its cycle of operation that can be cured by some type of immediate action drill. A jam is an interruption in the cycle of operation that requires tools or the intervention of an armorer to clear. A correct malfunction clearance should always include the shooter moving to cover while correcting the problem. Correct malfunction clearances can be as simple as a transition to an auxiliary firearm. Most malfunctions are preventable through good maintenance, proper ammunition and proper technique. Like the auto-pistol, there are three types of malfunctions that may occur with the assault rifle.

Definition - A **malfunction** is a stoppage that can be reduced by an immediate action drill. A “**jam**” needs an armorer and tools to clear. Most problems are malfunctions.

Type 1 Empty Chamber (Fail to fire)

Indicator: Hammer fall with a click, failure to fire

Response: Tap the magazine, pull down, rack and roll to right, assess.

Type 2 “Stovepipe” - Casing in ejection port. (Fail to eject)

Response: Tap the magazine, pull down, rack and roll to right, assess.

Type 3 Feedway Stoppage or “Double Feed”

Indicator: Press trigger, no click, no bang, failure to fire; double feed.

Response: Look, lock bolt to rear, magazine out, sweep magazine well, rack 2-3 times to clear, insert new magazine and pull down, rack to load, assess.

TEACHING MALFUNCTIONS AND CLEARANCES

A. Type 1 - Misfire; Fail to Fire - “Push-Pull, Rack-Roll, Assess/Fire”

Identification: The malfunction is identified by the shooter hearing a “click” when the trigger is pressed and the hammer falls.

Clearance:

1. **“Push-Pull”** - This is the equivalent of the “Tap” step in the type 1 clearance for auto-pistols. Because of the type of magazine and catch for the assault rifle, a simple “tap” would not be adequate to ensure the magazine is fully seated in the magazine well. Consequently, the “tap” or push must be followed by a slight pull. Performed by using the support hand while maintaining a firing grip with the strong hand, buttstock in the shoulder pocket and, eyes focused on the threat area.



2. **“Rack and Roll”**- The charging handle or bolt handle is run aggressively and completely to the rear and allowed to fall forward with its own energy. This step clears the chamber and chambers a fresh round. The rack step is performed using the support hand while maintaining a firing grip with the strong hand and “rolling” the weapon over to the right 90 degrees so that the ejection port is perpendicular to the ground.



3. **“Assess/Fire”** - Finish the drill by assessing the threat area, including firing the weapon if the threat dictates the necessity.



B. Type 2 - Failure to Eject; Stovepipe - “Push-Pull, Rack-Roll, Assess/Fire”

Identification: The malfunction is identified by the trigger being “mushy” and a spent casing protruding partially from the ejection port.



Clearance:

1. **“Push-Pull”**- This is the equivalent of the “Tap” step in the type 1 clearance for auto-pistols. Because of the type of magazine and catch for the assault rifle, a simple “tap” would not be adequate to ensure the magazine is fully seated in the magazine well. Consequently, the “tap” or push must be followed by a slight pull. This is performed using the support hand while maintaining a firing grip with the strong hand, keeping the buttstock in the shoulder pocket and eyes focused on the threat area.

2. **“Rack and Roll”** - The charging handle or bolt handle is run aggressively and completely to the rear and allowed to fall forward with its own energy. This step clears the ejection port and chambers a fresh round. The rack step is performed using the support hand while maintaining a firing grip with the strong hand and “rolling” the weapon over to the right 90 degrees so that the ejection port is perpendicular to the ground. The buttstock is held against the shoulder and eyes are focused on the threat area.
3. **“Assess/Fire”** - Finish the drill by assessing the threat area, including firing the weapon if the threat dictates the necessity.

C. Type 3 - Double Feed; Feedway Malfunction; Buried Stovepipe

Identification: The malfunction is identified by the trigger being “mushy.”



Clearance:

1. **“Look”** - This confirms to the shooter that the malfunction is a Type 3. This step is performed by the shooter “rolling” the weapon to the left just far enough to look into the ejection port while keeping the buttstock against the shoulder.



2. **“Lock”** - This step consists of the shooter pulling the charging handle or bolt handle and locking it to the rear.



Right-handed shooters - Using the support hand, the shooter supports the weapon by cradling it immediately in front of the magazine well while pressing the buttstock into the belt and using the support hand thumb to depress the bolt catch. With the strong hand the shooter grips the charging handle or bolt handle with the forefinger and middle finger in a hooking fashion and pulls the charging handle to the rear.

Left-handed shooters - Option 1: Using the trigger finger or thumb, the shooter depresses the bolt catch. The charging handle or bolt handle is pulled to the rear using the support hand in the same hooking fashion as described for right-handed shooters. Option 2: This is the same as the method described for right-handed shooters, with the exception that the bolt catch is depressed using the middle finger of the support hand.

3. **“Strip”** - This step clears the magazine well.



Right-handed shooters - The shooter depresses the magazine release button and aggressively strips the magazine from the magazine well with the support hand and lets it fall to the ground. (Retain if no spare magazine is available.)

Left-handed shooters - Using the support hand, the shooter grips the magazine while simultaneously depressing the magazine release button with the support hand thumb and aggressively strips the magazine from the magazine well and lets it fall to the ground. (Retain if no spare magazine is available.)

4. **“Sweep”** – On some systems, notably the AR-15 types, the casing will fail to eject. The shooter releases the support hand grip, and pushes the straight fingers into the magazine well. This will dislodge the case.



5. **“Rack and Roll”** - The charging handle is run aggressively through full cycle 3 times and allowed to fall forward with its own energy. This step clears the chamber and ejection port. The rack step is performed using the support hand while maintaining a firing grip with the strong hand and “rolling” the weapon over to the right 90 degrees so that the ejection port is perpendicular to the ground. The buttstock is held against the shoulder and eyes are focused on the threat area.



6. **“Feed; Seat”; “Tap” (Push-Pull)** - Maintaining a firing grip with the strong hand and using the support hand, the shooter extracts a fresh magazine from its carrier, being sure to grip the magazine properly with the index finger touching the tip of the top round. The shooter then inserts the magazine into the magazine well and briskly seats it; follow up with a slight downward pull to ensure the magazine is fully seated. This is performed keeping the buttstock in the shoulder pocket and eyes focused on the threat area.



7. **“Rack”** - The charging or bolt handle is run aggressively and completely to the rear and allowed to fall forward with its own energy. This step chambers a fresh round. The rack step is performed using the support hand while maintaining a firing grip with the strong hand. The buttstock is held against the shoulder and eyes are focused on the threat area.



8. **“Assess/Fire”** - Finish the drill by assessing the threat area, including firing the weapon if the threat dictates the necessity.



The value of this malfunction clearance drill lies in its ability clear all three of the above malfunctions. If the shooter is in a situation that does not allow him/her to see the weapon, a complete Type 3 malfunction clearance drill will usually get the rifle back into the fight.

D. Run Dry Drill - Empty Chamber-Empty Magazine

Identification: The malfunction is identified by the trigger being “mushy”, the bolt locked to the rear and the magazine empty

Clearance:

1. **“Strip”** – Remove the magazine. This step clears the magazine well.

Right-handed shooters - The shooter depresses the magazine release and aggressively strips the magazine from the magazine well with the support hand and lets it fall to the ground.

Left-handed shooters - Using the support hand, the shooter grips the magazine while simultaneously depressing the magazine release button with the support hand and aggressively strips the magazine from the magazine well and lets it fall to the ground.

2. **“Feed”; Seat; “Tap” (Push-Pull)** - Maintaining a firing grip with the strong hand and using the support hand, the shooter extracts a fresh magazine from its carrier, being sure to grip the magazine properly with the index finger touching the tip of the top round. The shooter then inserts the magazine into the magazine well and briskly seats it, following up with a slight downward pull to ensure the magazine is fully seated. This is performed keeping the buttstock in the shoulder pocket and eyes focused on the threat area. If necessary, the shooter may tuck the buttstock under the firing arm for support and leverage.
3. **“Smack”** - The Smack step in this clearance differs from the other malfunction clearances. Because the bolt is locked to the rear it must simply be allowed to fall forward with its own energy. This step chambers a fresh round and is performed by using the heel of the support hand to smack the top of the bolt catch. Left-handed shooters must “roll” the weapon to the right 90 degrees before smacking the bolt catch. The rack step is performed while maintaining a firing grip with the strong hand. The buttstock is held against the shoulder and eyes are focused on the threat area.

It is important for shooters to remember that a simple Transition Drill to another available weapon, such as the pistol, is also an acceptable malfunction clearance depending on the range, circumstances, and weapon. However, the shooter has selected the rifle as the most appropriate weapon for the mission; **every effort should be made to get the rifle operational.**

Section J

SIGHTS AND SIGHT ADJUSTMENTS

The sights on the rifle are very basic. They generally include a post front sight and aperture (a.k.a. 'peep') rear sight.

The rear sight is adjusted by means of a windage drum on the side of the sight. There are holes in the rear sight that we use to count clicks of windage.

Due to the wide variety of ammunition that we find in use today for the rifle, it is impossible to say exactly how many clicks of windage or elevation are necessary to move the bullet a certain number of inches. However, some basic things to keep in mind are:

FOLLOW THE ARROW! (AR-15/M-16 Type Rifles)

- *Adjust windage on the rear sight.*
Turn drum clockwise to move bullet impact point to the right.
Turn drum counterclockwise to move bullet impact point to the left.
- *Adjust elevation on the front sight*
Screw the post downward (clockwise) to move the impact point up.
Unscrew the post upward (counterclockwise) to move impact down.
- *The rear sight has a flip-style sight for different conditions.*
Turn the sight so the 'L' is showing for ranges over 300 meters.
Flip the sight backward and cover the 'L' for closer ranges.
- As a rule, one click of windage or elevation equals one inch of impact movement at one hundred yards (using the short range sight). Since one minute of angle equals one inch at one hundred yards, we say these are one MOA sights.
- For most rifles, it is easy to start zeroing by setting the sights at 'mechanical zero.' This is when the front sight is 'flush' (bottom of post is even with the base of the sight), and the rear sight centered left to right.
- On all rifles, move the rear sight the same direction as the desired change in the point of impact; move the front sight in the opposite direction of the desired change in the point of impact.

ZEROING THE AR-15 RIFLE

The rifle is a very accurate weapon once it is properly sighted in for the individual carrying it. To sight in the rifle, it must first be set at mechanical zero; then the shooter can fire the rifle and adjust the sights to zero it to their individual settings. Follow the directions below to mechanically zero the rifle and make the necessary sight adjustments for an individual zero.

Mechanical Zero

1. On the front sight, depress the detent with a pointed object. Rotate the sight post either up or down until the base is flush with the surrounding housing. This is the front sight mechanical zero.
2. Set the rear sight aperture 0-2 in the down position with the unmarked aperture up. It should be the small aperture in the up position that will be looked through.
3. Rotate the windage knob either right or left until the windage index line is aligned with the center of the windage index scale. This is windage mechanical zero.
4. Rotate the rear sight elevation knob in the down direction (counterclockwise) until it will not go down any farther. The rear sight should be all the way down and on the last whole “click”, before it bottoms out. The elevation scale should be on the 8/3 setting. This is the rear sight elevation mechanical zero.

Acquiring Individual Zero

1. With sights set at mechanical zero, obtain a stable prone firing position at the 50-yard line. Aim at the center of a zeroing target.
2. Fire a three round group.
3. Adjust your sights as follows. For elevation, rotate the front sight post as indicated by the arrow to move the center of the shot group to the center of the zeroing target. For windage, rotate the windage knob either right or left as indicated by the arrows to move the center of the shot group to the center of the zeroing target.
4. Repeat the above steps until the shot groups are hitting at the point of aim.
5. Record sight settings for future reference.

Note: When making adjustments to front sight and windage knob, refer to the following guidelines.

- Front sight: each notch moves point of impact approximately 1/2 inch at 50 yards.
- Windage knob: each click moves point of impact approximately 1/2 inch at 50 yards.

ZEROING THE MINI-14 RIFLE

The front sight of the Mini-14 is not adjustable, so all elevation changes are done with the rear sight.

Adjusting Windage

The windage adjustment is located on the left side of the rear sight. There are four positions, or detents, for adjustment, held by positive “clicks”. One-quarter turn, or one “click”, changes the point of impact 1/2 inch at 50 yards.

- To move the point of impact to the right, turn counter-clockwise.
- To move the point of impact to the left, turn clockwise.

Adjusting Elevation

The elevation adjustment is located on top, in front of the rear sight aperture. It also has four positions, and each “click” equals 1/2 inch change in point of impact at 50 yards.

- To raise the point of impact, turn the adjustment counter-clockwise.
- To lower the point of impact, turn the adjustment clockwise.

Section K

TARGET ANALYSIS

Target analysis is the process of observing the results of the marksmanship performance on the target and interpreting the probable causes, or confirming the actual causes, by the size and location of the group and by the pattern of the shot holes.

Although shooter error will be the primary cause of unexpected results on the target, it is possible that the equipment being used is in need of attention. Rifles and ammunition should always be checked for accuracy before attempting target analysis with a view to shooter correction.

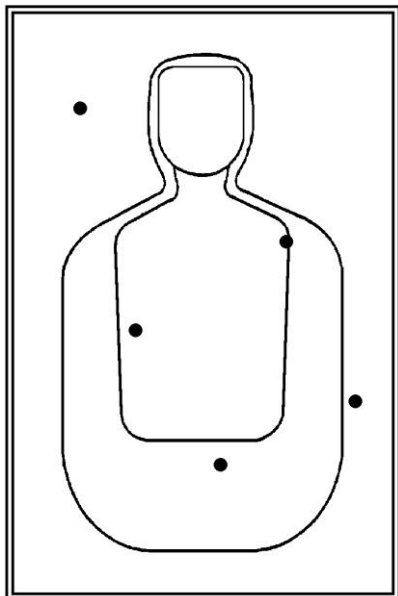
It is very difficult to analyze a target until the student has demonstrated the ability to consistently shoot an acceptably sized group. What constitutes an acceptable group will depend on the level of training of the student and the distance from the target. For practical -purposes, for a new student shooting prone at 100 yards, any group that measures less than five to six inches across would be acceptable.

It is also pointless to make sight adjustments with a view to zeroing the rifle if the student is not consistently shooting acceptable groups. The only exception to this would be sight adjustments to bring the shots on to paper.

Before attempting to analyze the target the coach should have carefully monitored the student's execution of the marksmanship fundamentals while that target is being shot. Observed errors in the application of marksmanship fundamentals will be confirmed to both coach and student by the target. Some unobserved errors may become apparent.

There is nearly always more than one reason for any shot, group of shots, or pattern of shots, that do not impact where the shooter intended. The following examples will serve as a guide to rifle target analysis but must be used with caution.

SEEMINGLY RANDOM SHOTS SCATTERED AROUND THE TARGET

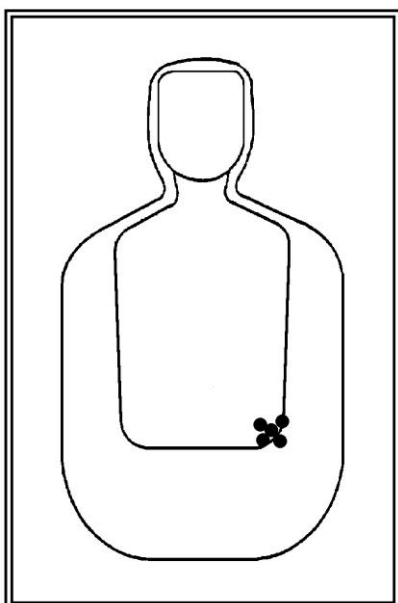


Inconsistency is probably this shooter's primary problem. This is a typical target shot by an inexperienced rifleman. All the fundamentals need to be closely observed. The coach should specifically watch for the shooter moving the body around between each shot (inconsistent shooting position), lifting the head up off the stock between shots (inconsistent stock weld / lack of follow through), an unnatural point of aim, inconsistent sight alignment/sight picture, inconsistent trigger manipulation, flinching.

This target may also be an indication that the rifle barrel is becoming shot out, that the rifle badly needs cleaning, that there may be a problem with the ammunition or that the sights may be loose.

QUICK CHECK: TRIGGER CONTROL - SIGHT ALIGNMENT - FOLLOW THROUGH - NATURAL POINT OF AIM - POSITION - RIFLE - AMMUNITION

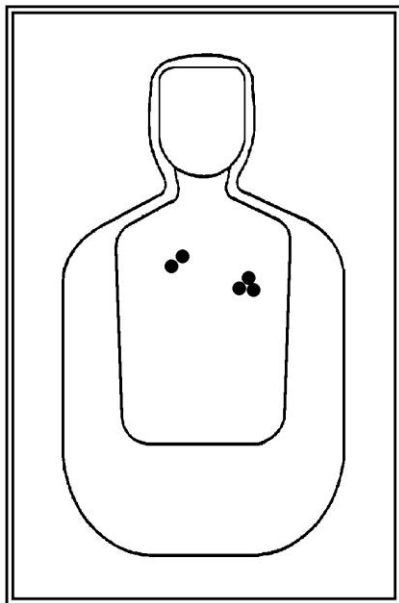
AN ACCEPTABLE GROUP IMPACTED AWAY FROM THE POINT OF AIM



This target will often be incorrectly analyzed as a basic marksmanship fundamental error. However, it is highly unlikely that a shooter will be able to shoot a group that is this tight while consistently repeating some major error in marksmanship fundamentals. The most likely analysis of this target is that the sights are incorrectly adjusted. It could be that the rifle is just not zeroed or the shooter has failed to compensate for wind, light, range change, or a different ammunition lot. It may also be worth checking the shooter's firing position and natural point of aim.

QUICK CHECK: SIGHT SETTINGS – AMMUNITION

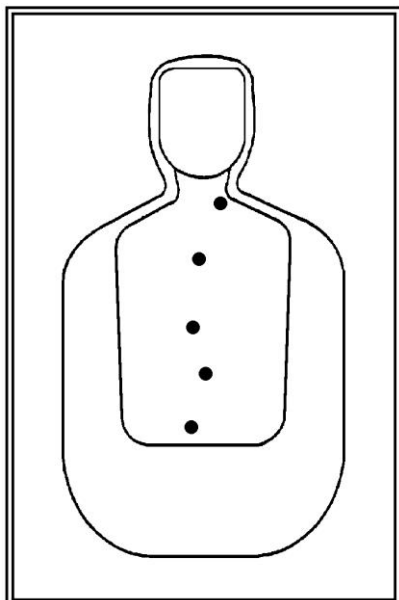
TWO DISTINCTLY SEPARATE GROUPS ON THE TARGET



This shooter has changed position or natural point of aim during the string of fire. This is most often seen after reloading or clearing a malfunction, especially when the shooter takes the butt of the rifle out of the shoulder or moves out of position to accomplish manipulation of the rifle. This may also be an indication that the shooter was in a bad position when starting to shoot and made a major position change after two or three shots.

QUICK CHECK: POSITION - NATURAL POINT OF AIM

SHOTS STRUNG VERTICALLY UP AND DOWN ON THE TARGET

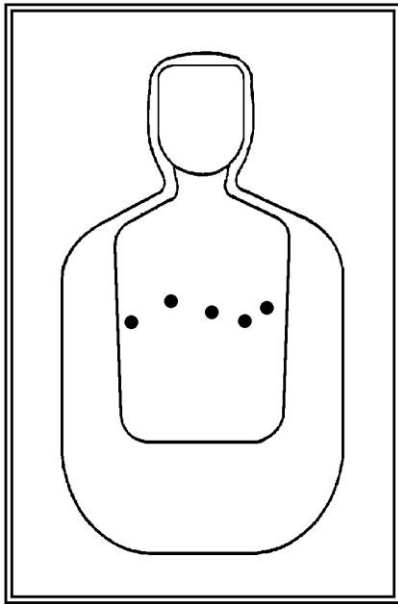


This may have been caused by the shooter breathing while shooting or holding different amounts of air in the lungs for each shot. A different stock weld for each shot, the butt slipping progressively further down in the shoulder or the elbows sliding outward in the prone and sitting positions may account for this. It is also possible that the sights were improperly aligned vertically from shot-to-shot.

If none of the above seem to apply, it would be worth checking the tension of the elevation sight adjustment knob to be sure that the rear sight is not loose and running up and down under recoil.

QUICK CHECK: BREATHING - LOOSE POSITION - LOOSE SIGHT ASSEMBLY

SHOT GROUP STRUNG OUT HORIZONTALLY ON THE TARGET

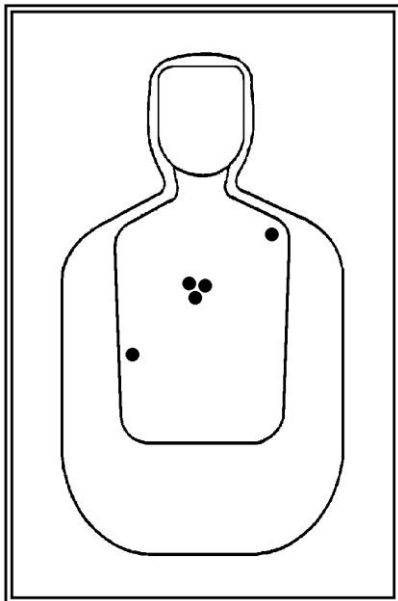


This is probably the result of the shooter muscling the rifle on to the target because of poor natural point of aim. It could also be caused by canting the rifle differently from shot-to-shot. Possibly the shooter was using an incorrect, and different, alignment of the front sight post (from left to right) in the rear sight aperture from shot-to-shot.

If either the front or rear sights have a dovetail fitting, that sight could be loose in the dovetail and be slipping sideways to a different position during recoil.

**QUICK CHECK: NATURAL POINT OF AIM -
CANTING - LOOSE SIGHT ASSEMBLY**

AN ACCEPTABLE GROUP BUT WITH ONE OR MORE FLYERS



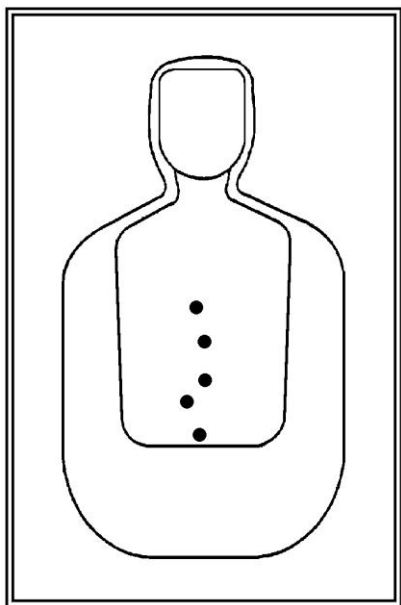
This shooter may be flinching or jerking the trigger intermittently and the resultant shots could go anywhere. This lack of consistent concentration and mental discipline may be caused by an outside source such as hot flying brass or muzzle blast from another shooter.

The shooter may be bucking some of the shots. Bucked shots (right handed shooter) will normally appear on the target from around seven to ten o'clock.

Intermittent binding in the rifle action can also cause the occasional erratic flyer. Check this by benching the rifle.

**QUICK CHECK: INTERMITTENT FLINCHING -
JERKING - BUCKING - BINDING RIFLE ACTION**

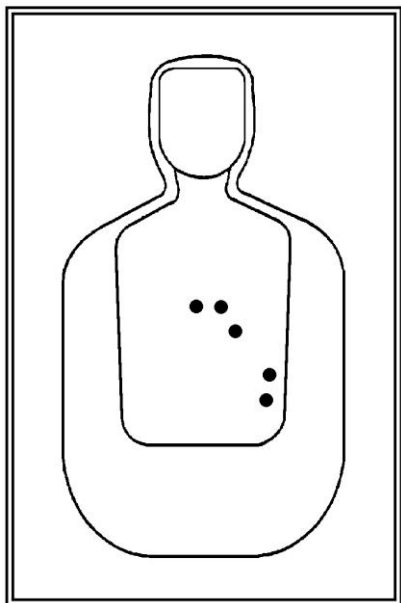
SHOTS STRUNG FROM CENTER TO THE BOTTOM OF THE TARGET



The shooting position has probably changed, shot to, shot, during the string of fire. Check for a loose sling that has slid down the arm while firing or the rifle butt slipping in the shoulder after each shot. Look also for the elbows moving out under recoil in prone and sitting which will change the shooting position shot to shot.

QUICK CHECK: LOOSE SLING - POSITION MOVING UNDER RECOIL

SHOTS STRUNG OUT LOW AND RIGHT ON THE TARGET



Prone position:

Left elbow may not have been under rifle causing muscle tension rather than solid bone support. The sling may have been loose or the right elbow may have slipped as the string of shots was fired.

Sitting position:

The elbows may be incorrectly placed. Under recoil the left elbow may be slipping down the left leg or the right elbow may be slipping.

Prone or sitting position.

Improper trigger control in either of these positions.

QUICK CHECK: BONE SUPPORT - TRIGGER CONTROL - POSITION MOVING UNDER RECOIL

Section L

WEAPON RETENTION

INTRODUCTION:

- I.** Anytime a suspect uses physical force against you to arm himself / herself with your rifle, you should consider yourself in a fight for your life. If the suspect takes your rifle from you, would you be in reasonable fear for your life? Would there be a risk of death or serious bodily harm to you or others?

II. Performance Objectives:

Each student will be required to demonstrate the following rifle retention methods:

- A. Tuck, Pull, Aim, and Fire
- B. Transition to Handgun
- C. Level II Defensive Techniques
- D. Push Down and Rotate (a.k.a. “d” Method)

PRESENTATION:

“NECESSARY” as related to use of force, means that no reasonable effective alternative to the use of force appeared to exist and that the amount of force was reasonable to effect the lawful purpose intended. (RCW 9A.16.010)

I. Tuck, Pull, Aim and Fire Method:

- A. Used when a suspect is using physical force against you, to take your rifle from you, arming himself / herself with your rifle in a manner which leads you to believe that the suspect is intent on killing you and deadly force becomes “necessary”!
 - 1. The suspect grabs the muzzle of the rifle.
 - 2. A round is chambered **–or–** the charging handle is not impeded by the suspect and you have the ability to chamber a round, by pulling and releasing the charging handle.
- B. SKILL STEPS:
 - 1. The firing hand holds onto the pistol grip, while the non-firing hand holds onto fore stock.
 - 2. The officer **‘tucks’** the butt of the rifle into shoulder pocket, or under his / her arm and **‘pulls’** the rifle away from the suspect.

3. If the suspect continues to hold onto the rifle, the officer must be able to **'pull'** with sufficient force, to **'aim'** the rifle muzzle at the suspect.
4. With the safety 'off', and if necessary, the officer may then **'fire'** the rifle at the suspect to stop the imminent deadly threat to the officer's life*.

* Give verbal commands if possible

II. Transition from the Rifle to the Handgun:

- A. Used when a suspect is using physical force against you, to take your rifle from you, arming himself / herself with your rifle in a manner which leads you to believe that the suspect is intent on killing you and deadly force becomes "necessary"!

A life and death struggle for the rifle ensues and you have been unable to control the rifle.

B. SKILL STEPS:

1. Hold your rifle with your non-firing hand, while you employ your duty weapon with your firing hand.
 - a. Ensure you hold onto your rifle until:
 - (1) Your duty weapon has cleared your holster.
 - (2) Unless you are utilizing a tactical sling, you are prepared to release your rifle and IMMEDIATELY step back to avoid being struck with the rifle.
 - b. Use your handgun and shoot suspect if 'necessary', to eliminate imminent deadly threat to your life.

III. Level II Defensive Tactics:

- A. Used when a suspect is using physical force against you, to take your rifle from you, arming himself / herself with your rifle in a manner which leads you to believe that the suspect is intent on killing you and deadly force becomes "necessary"!
- B. The officer holds onto the rifle with one or both hands and uses his / her knees, elbows, feet, and / or hand to deliver punches and/or kicks; until the suspect releases the rifle, or another option is used by the officer.

IV. “d” Method (a.k.a. Baton Retention Technique):

- A. Used when a suspect is using physical force against you, to take your rifle from you, arming himself / herself with your rifle in a manner which leads you to believe that the suspect is intent on killing you and deadly force becomes “necessary”!
- B. ‘Push Down and Rotate’ (“d”) Method; used when the suspect takes a hold of the muzzle end of the rifle barrel.
 - 1. The officer retains hold on pistol grip with firing hand.
 - 2. The non-firing hand goes over the top of the barrel as close to the suspect’s hand(s) as practical, controlling most of the rifle.
 - 3. The officer locks his / her arms straight down and bends at the knees, dropping his / her weight over the rifle.
 - 4. The officer keeps his /her firing hand and arm locked and braced against leg.
 - 5. The non-firing hand and arm moves the barrel in a circular motion, so that the barrel rotates over the suspect’s thumb, breaking the suspect’s grip.

IV. Butt Strike:

- 1. The shooter maintains hold with both hands.
- 2. The shooter steps aggressively into the subject, rotating the buttstock forward, and assuming a parallel or “horse” stance.
- 3. The shooter moves the buttstock forward with pressure from firing elbow, breaking the subject’s grip.
- 4. The shooter strikes the subject with the buttplate of the weapon. Since deadly force may be appropriate, strikes to the head / throat / groin are appropriate.
- 5. Create distance and go to guard.

APPLICATION:

- I. Students form pairs and practice each of the four retention techniques. Muzzle/chamber blocks will be inserted.
- II. Instructors coach student in the proper technique.

PERFORMANCE MEASURE:

Each student will properly demonstrate each of the four retention techniques, when another person attempts to take the rifle from the student.

Section M

RIFLE QUALIFICATION COURSE

<u>Distance</u>	<u>Position</u>	<u>No. of rounds</u>	<u>Time</u>
50 Yards	Prone	10	1 minute
50 Yards	Shooters choice	5	20 seconds
25 Yards	Shooters choice	10	20 seconds
15 Yards	Standing	10	15 seconds
7 yards	Standing	5 pairs (10 rounds)	2 seconds/pair x 5 reps
5 Yards	Standing	5 single head shots	2 seconds/each x 5 reps

A score of 213 points (85%) must be obtained to successfully pass this course of fire. All of the rounds must be in the silhouette. **Any rounds not accounted for on the target (in the black) will constitute an automatic failure of this course of fire.**

The target to be used will be the current P.O.S.T. Handgun qualification target the TQ21 with the square drawn in on the head for the eye region shots. The target that already has the zones drawn in can be substituted but will be a form of the TQ21.

If a bullet hole should touch a line, it gets counted as the higher of the two possible scores.

Shooters will be provided with 15 seconds of “preparation” time before each stage to get in their positions.

MALFUNCTIONS / ALIBIS

Malfunctions are not an excuse or alibi to stop the qualification procedure. If a malfunction occurs, the shooter must correctly clear the malfunction. He/she may then - and only then - continue qualification after the end of the specified time.

Section N

RANGE DRILLS

VARIOUS DISTANCES

Controlled Pairs

The shooter faces the target with the weapon in condition one, safety on. On command, the shooter fires a controlled pair to the body. The shooter should be acquiring front sight picture before and after each shot. Ammunition management is the shooter's responsibility. The shooter should scan after each controlled pair.

DRILL 1:

Distance - 3 yards

Time - 1.0 second

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, fire 2 to the body.

DRILL 2:

Distance - 10 yards

Time - 1.75 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, fire 2 to the body.

DRILL 3:

Distance - 10 yards

Time - 1.75 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, fire 2 to the body.

DRILL 4:

Distance - 15 yards

Time - 2.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, fire 2 to the body.

DRILL 5:

Distance - 15 yards

Time - 2.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, fire 2 to the body.

DRILL 6:

Distance -25 yards

Time - 3.25 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, fire 2 to the body.

DRILL 7:

Distance -25 yards

Time - 3.25 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, fire 2 to the body.

DRILL 8:

Distance -50 yards

Time - 4.00 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, fire 2 to the body.

DRILL 9:

Distance -50 yards

Time - 4.00 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, fire 2 to the body.

CONTROLLED PAIRS FROM PRIMARY FIRING POSITIONS 10 YARDS

Controlled Pairs

The shooter faces the target with the weapon in condition one, safety on. On command, the shooter will assume a firing position and fires a controlled pair to the body. The position can be utilized to change the trajectory of the bullet or to acquire a more stable firing platform. The firing position will provide a lower profile for the shooter making him a smaller target. The shooter should be acquiring front sight picture before and after each shot. Ammunition management is the shooters responsibility. The shooter should load from the lowest position and scan on the way up.

DRILL 1:

Distance - 10 yards

Time - 3.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from LOW guard, assume a **speed kneeling** position and fire 2 to the body.

DRILL 2:

Distance - 10 yards

Time - 3.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from LOW guard, assume a **double kneeling** position and fire 2 to the body.

DRILL 3:

Distance - 10 yards

Time - 4.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from LOW guard, assume a **braced kneeling** position and fire 2 to the body.

DRILL 4:

Distance - 10 yards

Time - 4.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from LOW guard, assume a **speed sitting** position and fire 2 to the body.

Note- Shooters unable to assume these positions may shot from any kneeling position.

DRILL 5:

Distance - 10 yards

Time - 3.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from LOW guard, assume a **squat position** and fire 2 to the body

Note: Shooters unable to assume these positions may shot from any kneeling position.

CONTROLLED PAIRS FROM PRIMARY FIRING POSITIONS 15 YARDS

Controlled Pairs

The shooter faces the target with the weapon in condition one, safety on. On command, the shooter will assume a firing position and fires a controlled pair to the body. The position can be utilized to change the trajectory of the bullet or to acquire a more stable firing platform. The firing position will provide a lower profile for the shooter making him a smaller target. The shooter should be acquiring front sight picture before and after each shot. Ammunition management is the shooters responsibility. The shooter should **load from the lowest position and scan on the way up.**

DRILL 1:

Distance - 15 yards

Time - 3.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a speed kneeling position and fire 2 to the body.

DRILL 2:

Distance - 15 yards

Time - 4.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **double kneeling** position and fire 2 to the body.

DRILL 3:

Distance - 15 yards

Time -4.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **braced kneeling** position and fire 2 to the body.

DRILL 4:

Distance - 15 yards

Time - 4.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **speed sitting** and fire 2 to the body.

Note: Shooters unable to assume these positions may shot from any kneeling position.

DRILL 5:

Distance - 15 yards

Time - 3.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **squat position** and fire 2 to the body.

Note: Shooters unable to assume these positions may shot from any kneeling position.

CONTROLLED PAIRS FROM PRIMARY FIRING POSITIONS 25 YARDS

Controlled Pairs

The shooter faces the target with the weapon in condition one, safety on. On command, the shooter will assume a firing position and fires a controlled pair to the body. The position can be utilized to change the trajectory of the bullet or to acquire a more stable firing platform. The firing position will provide a lower profile for the shooter making him a smaller target. The shooter should be acquiring front sight picture before and after each shot. Ammunition management is the shooters responsibility. The shooter should load from the lowest position and scan on the way up.

DRILL 1:

Distance - 25 yards

Time - 5.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume an **offhand** position and fire 2 to the body.

DRILL 2:

Distance - 25 yards

Time - 5.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **speed kneeling** position and fire 2 to the body.

DRILL 3:

Distance - 25 yards

Time - 5.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **double kneeling** and fire 2 to the body.

DRILL 4:

Distance - 25 yards

Time - 5.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **braced kneeling** and fire 2 to the body.

Note: Shooters unable to assume these positions may shot from any kneeling position.

DRILL 5:

Distance - 25 yards

Time - 5.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **squat position** and fire 2 to the body.

DRILL 6:

Distance - 25 yards

Time - 4.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard assume a **speed sitting** and fire 2 to the body.

DRILL 7:

Distance - 25 yards

Time - 6.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard assume a **sitting position** and fire 2 to the body.

DRILL 8:

Distance - 25 yards

Time - 6.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard assume a **prone position** and fire 2 to the body.

DRILL 9:

Distance - 25 yards

Time - 6.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start guard assume, a roll **urban prone** position and fire 2 to the body.

Note: Shooters unable to assume these positions may shot from any kneeling position.

CONTROLLED PAIRS FROM PRIMARY FIRING POSITIONS 50 YARDS

Controlled Pairs

The shooter faces the target with the weapon in condition one, safety on. On command, the shooter will assume a firing position and fires a controlled pair to the body. The position can be utilized to change the trajectory of the bullet or to acquire a more stable firing platform. The firing position will provide a lower profile for the shooter making him a smaller target. The shooter should be acquiring front sight picture before and after each shot. Ammunition management is the shooters responsibility. The shooter should load from the lowest position and scan on the way up.

DRILL 1:

Distance - 50 yards

Time - 5.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume an **offhand** position and fire 2 to the body.

DRILL 2:

Distance - 50 yards

Time - 6.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **speed kneeling** position and fire 2 to the body.

DRILL 3:

Distance - 50 yards

Time - 6.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **double kneeling** and fire 2 to the body.

DRILL 4:

Distance - 50 yards

Time - 6.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **braced kneeling** and fire 2 to the body.

Note: Shooters unable to assume these positions may shot from any kneeling position.

DRILL 5:

Distance - 50 yards

Time - 5.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **squat position** and fire 2 to the body.

DRILL 6:

Distance - 50 yards

Time - 5.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **speed sitting** and fire 2 to the body.

DRILL 7:

Distance - 50 yards

Time - 8.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **sitting position** and fire 2 to the body.

DRILL 8:

Distance - 50 yards

Time - 7.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **prone position** and fire 2 to the body.

Note: Shooters unable to assume these positions may shot from any kneeling position.

CONTROLLED PAIRS FROM PRIMARY FIRING POSITIONS 75 YARDS

Controlled Pairs

The shooter faces the target with the weapon in condition one, safety on. On command, the shooter will assume a firing position and fires a controlled pair to the body. The position can be utilized to change the trajectory of the bullet or to acquire a more stable firing platform. The firing position will provide a lower profile for the shooter making him a smaller target. The shooter should be acquiring front sight picture before and after each shot. Ammunition management is the shooters responsibility. The shooter should load from the lowest position and scan on the way up.

DRILL 1:

Distance - 75 yards

Time - 5.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume an **Olympic offhand** position and fire 2 to the body.

DRILL 2:

Distance - 75 yards

Time - 6.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **speed kneeling** position and fire 2 to the body.

DRILL 3:

Distance - 75 yards

Time - 6.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **double kneeling** and fire 2 to the body.

DRILL 4:

Distance - 75 yards

Time - 6.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **braced kneeling** and fire 2 to the body.

Note: Shooters unable to assume these positions may shot from any kneeling position.

DRILL 5:

Distance - 75 yards

Time - 6.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **squat position** and fire 2 to the body.

DRILL 6:

Distance - 75 yards

Time - 5.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **speed sitting** and fire 2 to the body.

DRILL 7:

Distance - 75 yards

Time - 10 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **sitting position** and fire 2 to the body.

DRILL 8:

Distance - 75 yards

Time - 7.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **prone position** and fire 2 to the body.

Note: Shooters unable to assume these positions may shot from any kneeling position.

CONTROLLED PAIRS FROM PRIMARY FIRING POSITIONS 100 YARDS

Controlled Pairs

The shooter faces the target with the weapon in condition one, safety on. On command, the shooter will assume a firing position and fires a controlled pair to the body. The position can be utilized to change the trajectory of the bullet or to acquire a more stable firing platform. The firing position will provide a lower profile for the shooter making him a smaller target. The shooter should be acquiring front sight picture before and after each shot. Ammunition management is the shooters responsibility. The shooter should load from the lowest position and scan on the way up.

DRILL 1:

Distance - 100 yards

Time - 7.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume an **Olympic offhand** position and fire 2 to the body.

DRILL 2:

Distance - 100 yards

Time - 7.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **speed kneeling** position and fire 2 to the body.

DRILL 3:

Distance - 100 yards

Time - 7.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **double kneeling** and fire 2 to the body.

DRILL 4:

Distance - 100 yards

Time - 7.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **braced kneeling** and fire 2 to the body.

Note: Shooters unable to assume these positions may shot from any kneeling position.

DRILL 5:

Distance - 100 yards

Time - 7.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **squat position** and fire 2 to the body.

DRILL 6:

Distance - 100 yards

Time - 7.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **speed sitting** and fire 2 to the body.

DRILL 7:

Distance - 100 yards

Time - 10 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard assume a **sitting position** and fire 2 to the body.

DRILL 8:

Distance - 100 yards

Time - 8.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **prone position** and fire 2 to the body.

Note: Shooters unable to assume these positions may shot from any kneeling position.

CONTROLLED PAIRS FROM DIRECTIONAL COMMANDS FORWARD AND BACKWARDS

Controlled Pairs

The shooter faces the target with the weapon in condition one, safety on. On command, the shooter will proceed to walk forward while keep the rifle in a guard position. On the fire command the shooter will move the selector switch to the fire position while acquiring front sight picture and fire a controlled pair to the body. The shooter should be acquiring front sight picture before and after each shot. Ammunition management is the shooters responsibility. Remember to **scan**.

DRILL 1:

Distance - 25 yards

Time - N/A 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard assume an offhand position and fire 2 to the body.

GROUPING AND SKILL BUILDER FROM PRIMARY FIRING POSITIONS 100 YARDS

Controlled Pairs

The shooter faces the target with the weapon in condition one, safety on. On command, the shooter will assume a firing position and fire 5 rounds to the body. The position can be utilized to change the trajectory of the bullet or to acquire a more stable firing platform. The firing position will provide a lower profile for the shooter making him a smaller target. The shooter should be acquiring front sight picture before and after each shot. Ammunition management is the shooter's responsibility. The shooter should **load from the lowest position and scan on the way up.**

Note: Emphasis is placed on **precision and basics**. Shooter is encouraged to concentrate on sight alignment, breath control, and trigger press.

DRILL 1:

Distance - 100 yards

Time - No Limit

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume an **Olympic offhand** position and fire 5 rounds to the body.

DRILL 2:

Distance - 100 yards

Time - No Limit

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **speed kneeling** position and fire 5 rounds to the body.

DRILL 3:

Distance - 100 yards

Time - No Limit

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **double kneeling** and fire 5 rounds to the body.

Note: Shooters unable to assume these positions may shoot from any kneeling position.

DRILL 4:

Distance - 100 yards

Time - No Limit

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **braced kneeling** and fire 5 rounds to the body.

DRILL 5:

Distance - 100 yards

Time - No Limit

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard assume a **squat position** and fire 5 rounds to the body.

DRILL 6:

Distance - 100 yards

Time - No Limit

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **speed sitting** and fire 5 rounds to the body.

DRILL 7:

Distance - 100 yards

Time - No Limit

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **sitting position** and fire 5 rounds to the body.

DRILL 8:

Distance - 100 yards

Time - No Limit

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard, assume a **prone position** and fire 5 rounds to the body.

Note: Shooters unable to assume these positions may shot from any kneeling position.

HAMMERS

The shooter faces the target with the weapon in condition one, safety on. This drill is similar to controlled pairs, but the time is compressed. On command, the shooter will fire a hammer (2 rounds) to the body. The shooter should be acquiring front sight picture before the first round and after the last round. Ammunition management is the shooters responsibility. The shooter should **load and continue to scan**.

DRILL 1:

Distance - 3 yards

Time - 1.0 second

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from LOW guard and fire a hammer (2 rounds) to the body.

DRILL 2:

Distance - 5 yards

Time - 1.50 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from LOW guard and fire a hammer (2 rounds) to the body.

FAIL TO STOP

The shooter faces the target with the weapon in condition one, safety on. This drill is designed to stop a subject who fails to stop his assaultive behavior. On command, the shooter will fire (2 rounds) to the body, and one marksmanship shot to the “A” zone of the head. The shooter should be acquiring front sight picture before and after each round. Ammunition management is the shooters responsibility. The shooter should **scan** after completing the drill.

DRILL 1:

Distance - 5 yards

Time - 2.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard and fire a fail to stop (2 rounds) to the body, one to the “A” zone of the head.

DRILL 2:

Distance - 7 yards

Time - 3.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - - Start from guard and fire a fail to stop (2 rounds) to the body, one to the “A” zone of the head.

DRILL 3:

Distance - 10 yards

Time - 3.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - - Start from guard and fire a fail to stop (2 rounds) to the body, one to the “A” zone of the head.

A, B, C DRILL

The shooter faces the target with the weapon in condition one, safety on. This drill is designed to stop a subject who is wearing armor and moving. On command, the shooter will fire (2 rounds) to the center of the body “A” zone, one marksmanship shot to the “A” zone of the head, then (2 rounds) to the pelvic girdle. The head is a small, mobile target, and is difficult to hit. If the center mass shots fail, and the head shot misses, the pelvic shot should stop the opponent. The rounds should break the pelvic or hip-bones, dropping the opponent to the ground. The shooter should be acquiring front sight picture before and after each round. Ammunition management is the shooters responsibility. The shooter should assess the situation after completing the drill. **Just because he is down does NOT mean the fight is over; it just means you’ve had your turn!** Scan and assess carefully.

DRILL 1:

Distance - 5 yards

Time – 3.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from LOW guard and fire an A, B, C, drill; 2 rounds to the body one to the “A” zone of the head, 2 rounds to the pelvic girdle.

DRILL 2:

Distance - 7 yards

Time - 3.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from guard and fire an A, B, C, drill; 2 rounds to the body, one round to the “A” zone of the head, 2 rounds to the pelvic girdle.

DRILL 3:

Distance - 10 yards

Time - 4.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from LOW guard and fire an A, B, C drill; 2 rounds to the body, one round to the “A” zone of the head, 2 rounds to the pelvic girdle.

UNDERARM ASSAULT

The shooter faces the target with the weapon in condition one, safety on. This drill is designed when engaging an opponent at contact range, similar to the “rock and lock” position with the pistol. As with the pistol, a controlled pair is fired, the shooter withdraws 2-3 feet, and the target is assessed. If required, an additional head shot is fired. On command, the shooter will fire (2 rounds) to the center of the body “A” zone, one on the command “head.”

Underarm assault requires that the butt of the weapon be tucked tightly into the armpit. An aggressive forward stance is assumed, with the muzzle centered on the target, safety on. The shooter aims over the front sight, using his body position to align the muzzle onto the target. Ammunition management is the shooters responsibility. The shooter should assess the situation after completing the drill. Just because he is down does NOT mean the fight is over! **Scan and assess** carefully.

DRILL 1:

Distance - 5 yards

Time - 1.50 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from pointed in and fire an underarm assault (2 rounds) to the body.

DRILL 2:

Distance - 7 yards

Time - 2.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from pointed in and fire an underarm assault (2 rounds) to the body.

SUPPORT SIDE 90 DEGREE PIVOTS

The shooter stands on the firing line with the support side facing down range, the weapon side shoulder facing up range. (Right hand shooters face right / left hand shooters face left). Shooters begin with feet shoulder width apart. The muzzle is up in an exaggerated position. The back is straight and the knees slightly bent. On a firing command, the shooter looks over his shoulder visually acquire the target. The shooter then takes one step forward with the weapon side leg. He plants his feet and simultaneously pivots 90 degrees on both feet, turning the reaction side to the target. (Right handed shooters pivot counter clockwise / left-handed shooters pivot clockwise). When the pivot is complete the shooter is facing the target. The shooter mounts the rifle to the shoulder and obtains a good cheek weld. He acquires a sight picture and fires two rounds to the center of the body, scoring two "A" hits.

DRILL 1:

Distance - 10 yards

Time - 3.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, with the shooter's support side shoulder facing down range. The shooter pivots 90 degrees and fires 2 to the body.

DRILL 2:

Distance - 25 yards

Time - 4.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, with the shooter's support side shoulder facing down range. The shooter pivots 90 degrees and fires 2 to the body.

DRILL 3:

Distance - 50 yards

Time - 5.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, with the shooter's support side shoulder facing down range. The shooter pivots 90 degrees and fires 2 to the body.

DRILL 4:

Distance - 75 yards

Time - 5.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, with the shooter's support side shoulder facing down range. The shooter pivots 90 degrees and fires 2 to the body.

DRILL 5:

Distance - 100 yards

Time - 6.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, with the shooter's support side shoulder facing down range. The shooter pivots 90 degrees and fires 2 to the body.

WEAPON SIDE 90 DEGREE PIVOTS

The shooter stands on the firing line with the support side facing up range, the weapons side shoulder facing down range (right hand shooters face right / left hand shooters face left). Shooters begin with feet shoulder width apart. The muzzle is up in an exaggerated position. The back is straight and the knees slightly bent. On a firing command, the shooter looks over his shoulder acquiring the target visually. The shooter then steps across the body at a 45-degree angle with the reaction side foot. The shooter pivots towards the target (Right handed shooters pivot clockwise / left handed shooters pivot counter clockwise). When the pivot is complete the shooter is facing the target. The shooter mounts the rifle to the shoulder and obtains a good checkweld. He acquires a sight picture and fires two rounds to center mass of the body, scoring two "A" hits.

NOTE: Right handed shooters should be located on the left side of the firing range and right handed shooters on the left. This will aid in not having muzzles track someone on your firing line.

DRILL 1:

Distance - 10 yards

Time - 3.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, with the shooter's weapon side shoulder facing down range. The shooter pivots 90 degrees and fires 2 to the body.

DRILL 2:

Distance - 25 yards

Time - 4.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, with the shooter's weapon side shoulder facing down range. The shooter pivots 90 degrees and fires 2 to the body.

DRILL 3:

Distance - 50 yards

Time - 5.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, with the shooter's weapon side shoulder facing down range. The shooter pivots 90 degrees and fires 2 to the body.

DRILL 4:

Distance - 75 yards

Time - 5.5 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, with the shooter's weapon side shoulder facing down range. The shooter pivots 90 degrees and fires 2 to the body.

DRILL 5:

Distance - 100 yards

Time - 6.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, with the shooter's weapon side shoulder facing down range. The shooter pivots 90 degrees and fires 2 to the body.

180 DEGREE PIVOTS

Began with The shooter's back facing down range. The in an exaggerated high ready position, feet shoulder width apart and knees slightly bent. The back should be straight. On the firing command, the shooter steps across the body in a 45 degree angle with the weapon side leg. The shooter turns his head and looks down range to acquire a visual target. The shooter pivots on both feet toward the support side, making a 180 degree turn in that direction. Once the turn is complete, the shooter mounts the weapon and acquires a proper cheek weld. The sights interrupt the line of sight between the target and the shooters eye. It is important that the trigger finger stay straight along side of the receiver until the pivot is complete and the sight are on the target.

DRILL 1:

Distance - 10 yards

Time - 3.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - Start from HIGH guard, with the shooters facing up range. The shooter pivots 180 degrees and fires 2 to the body.

DRILL 2:

Distance - 25 yards

Time - 4.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - - Start from HIGH guard, with the shooters facing up range. The shooter pivots 180 degrees and fires 2 to the body.

DRILL 3:

Distance - 50 yards

Time -5.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill -- Start from HIGH guard, with the shooters facing up range. The shooter pivots 180 degrees and fire 2 to the body.

DRILL 4:

Distance - 75 yards

Time – 6.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - - Start from HIGH guard, with the shooters facing up range. The shooter pivots 180 degrees and fires 2 to the body.

DRILL 5:

Distance - 100 yards

Time - 8.0 seconds

Load - 1 in chamber, full magazine

Weapon: C-1, Selector on SAFE

Drill - - Start from HIGH guard, with the shooters facing up range. The shooter pivots 180 degrees and fire 2 to the body.

VEHICLE SHOOTING DRILL

Start from a standing position beside the driver's door of the patrol car, with the weapon at the ready position. On the sound of the whistle, the shooter moves in to either a single kneeling supported, single kneeling unsupported, or a double kneeling shooting position across the front hood of the patrol car. In 10 seconds, the shooter fires two shots center mass of the target from a distance of 25 yards.

TRANSITION DRILLS

Introduction

In the event the rifle malfunctions or is out of ammunition (and no more magazines), transition from the rifle to the handgun might be necessary. It is important for the student to develop a habit of transition in the event of such an occurrence. Studies have indicated that the transition takes less time than clearing a malfunction.

The transition is only necessary for close quarter combat. If the shooter is behind cover and/or a long distance away, consider clearing the malfunction or acquiring more ammunition.

I. Standard Sling

- A. Place your off hand through the sling while holding the rifle with your strong hand. Turn the weapon to “safe.”
- B. Support the rifle with your off hand forearm and grab the butt end of the sling.
- C. Push the butt of the rifle over your left shoulder and let go. The rifle will fall in the “muzzle down” position.
- D. If the rifle falls to your off hand forearm or if you hold the sling with your off hand, it will compromise your shooting platform. You must operate your firearm with one hand only.
- E. Draw, evaluate, and fire with your handgun if necessary.

II. Tactical Carry Sling (Team Sling)

- A. Let go of the rifle with your strong hand, pulling the muzzle down with your off hand.
- B. Draw your handgun with your strong hand.
- C. Evaluate and fire if necessary.

Application

Separately, instruct the shooter coaches to load one magazine for the shooter with five rounds. The last round to be fired will be a “dummy” round. This should be done without the shooter knowing. From the 15-yard line, have the shooters fire five rounds at the target.

Show the class how many of the shooters attempted to clear their weapons instead of transitioning, and complete the following course of fire:

From the 15-yard line, students will load magazines with five rounds. On command, the student will fire five rounds and transition safely to the handgun and fire two shots at the target.

The instructor will conduct the drill until students demonstrate they are comfortable with the drill.

15 yards

Fire five rounds (one inert)

Transition to sidearm

Fire two rounds to center of mass

Section P

REFERENCE MATERIALS

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.223 Ammo Performance

Rifle-Caliber Cartridges

Except where noted, all of the following rifle cartridges should easily penetrate concealable body armor (threat levels IIA, II, and IIIA). Only military armor-piercing rifle ammunition will reliably penetrate hard armor (level III), and the strongest hard armor (level IV) will stop at least one round of armor-piercing ammunition. I am unaware of any police shooting in which a felon was equipped with “hard” body armor (levels III or IV).

.223 Remington 5.56mm x 45mm NATO

This cartridge, used in the AR-15/M-16 and Ruger Mini-14 carbines, is the most common one seen in police rifles. While designed as a military cartridge for the Eugene Stoner designed AR-15, it would be classified as a varmint cartridge when compared to similar civilian designs. This cartridge operates at high velocities, about 3,200 fps for the original 55 grain load, so bullet design is very critical.

A couple of years ago I was forced to produce a paper to answer the many police requests for information on this round’s terminal performance. That paper is reproduced here in its entirety in the hopes that its volume of information and accompanying footnotes will reduce the misinformation about this caliber’s performance. The growing popularity of the pistol-caliber carbines (9mm and .45 Auto) is a direct result of the incorrect assumption that the .223 rifles produce excessive penetration and are too dangerous for use in heavily populated areas.

Discussion of Current Ammunition for .223 Remington (5.56mm x 45mm) Police Rifles by Richard E. Fairburn

The author has chosen to use this format to reply to numerous requests from law enforcement agencies for information concerning the terminal performance of ammunition available for their .223 caliber rifles.

The recently increased awareness of U.S. police officers about the terminal effectiveness of the bullets they send toward felons has brought about much discussion concerning the effectiveness of the ammunition they use in their .223 Remington caliber rifles. Anyone that doubts the widespread use of this cartridge by U.S. police agencies need only take a quick and informal poll in his locale. This round is used in both the precision mode as a light sniper round and, more commonly, as a general-purpose rifle by both patrol officers and members of special units, often called SWAT teams. The majority of these rifles are of the M-16/AR-15 series, with Ruger’s Mini-14 series and the Steyr Aug also widely used in the U.S.

Military units are restricted to the use of nonexpanding bullets, such as the M193 and M855, by their choice to live within the boundaries of the Hague Peace Conference of 1899. Police agencies are under no such bullet restrictions. When the M-16 gained widespread use during the Vietnam conflict, reports of vicious wounds began to appear, with the “high velocity” of the round being blamed for the damage. In fact, the Swedish government began a program to have the M-16 declared “inhumane.”^[1] Reality showed that the M-16 caused no more severe

wounds than other similar rifles. The velocity of the M-16 round is only about 11 percent higher than the round fired by its predecessor, the M-14.

Pointed firearms projectiles stay point forward during flight only because they have gyroscopic stability imparted by the rifling of a handgun or rifle. Since a pointed bullet's center of gravity is toward the base, it would invert in flight if not for the rifling-induced spin. When this same bullet enters a medium more dense than air, like tissue, no amount of spin will keep the center of gravity to the rear. If a bullet expands, its center of gravity moves forward and the bullet will remain point forward. If the bullet does not deform, it will turn over during its passage through tissue and end up with its base forward.

In the case of the full-metal jacket (FMJ) bullets used in the .223 Remington cartridge, these bullets tend to break at the crimp groove when the bullet is sideways at its point of maximum stress.^[2] When the projectile breaks, the rear section will usually disintegrate into several fragments while the forward portion of the bullet will continue to penetrate in a base-forward attitude. The bullet break-up occurs at an average depth of about 13 cm. (5.1 inches). This fragmentation greatly increases the volume of the permanent wound cavity caused by the bullet, and severely limits the bullet's potential penetration^[1, 2, 6] This phenomenon occurs in these rounds at velocities as low as 2,500 feet/second, which corresponds to a range of about 200 meters when fired from the 20-inch barrel of the M-16. At ranges beyond 200 meters, the bullet will normally remain intact. The fragmentation of the projectile and the attendant wounding are virtually identical in both FMJ versions of the .223 Remington (M193 and M855).^[2, 6] The average depth of penetration of these rounds from the M-16 or similar rifles is about 14 inches. Unfortunately, this 14-inch figure is an average. The bullet can react somewhat erratically and gives less consistent terminal performance than those bullets that are designed to expand. Other military-style bullets are known to fragment in this fashion, including some from .30 caliber rounds.^[2]

The discovery and recording of the fragmentation and wounding effects of the M193 and M855 bullets resulted from their being fired into a 10-percent formulation of ballistic gelatin. This tissue simulant, when properly mixed and handled, has been shown to give expansion and penetration results that correlate almost exactly to the wounds observed in living tissue.^[8] At least one scouting study by the man who verified the 10-percent gelatin formula, Dr. Martin Fackler (USA, Ret.), suggests that the skin on the far side of a creature can decrease the overall penetration of a projectile by 10 cm (3.9 inches) or more.^[3] When the fragmenting behavior of the .223 Remington FMJ bullet is coupled with the skin's ability to "catch" a bullet, it is easy to understand why these bullets commonly remain within the torso of a human.

Having verified that ballistic gelatin results are directly correlated to the results in living creatures,^[8] all types of bullets can be fired into the 10 percent gelatin and predictions can be made about their performance. While the FMJ bullets give an average penetration depth of about 14 inches, the various expanding bullets loaded in this cartridge give penetration depths ranging in 6 to 15 inches, with most loads showing only 7 to 9 inches of penetration.^[6] After input from medical experts, the Federal Bureau of Investigation set a minimum penetration standard for its handgun ammunition of 12 inches. This value was chosen to insure that the

bullet would penetrate deeply enough to reach and disrupt vital organs from almost any angle.^[7] We can safely apply a similar minimum penetration standard to bullets fired from rifles. No bullet yet tested from the .223 Remington reaches the FBI maximum penetration standard of 18 inches. These standards suggest that the performance of a FMJ bullet fired from a .223 Remington-caliber rifle is almost ideal, while the

performance of most expanding bullets is substandard in this regard. Dr. Fackler has stated that the permanent wound cavities of the M193 bullet and many softpoint bullets are very similar except that the wound of the softpoints will be at a more shallow location. ^[4]

The research indicates that FMJ ammunition will not generally over-penetrate in human targets due to the fragmentation of the bullets upon impact. While the more shallow penetration of expanding bullets will further insure that they do not exit the torso, their level of penetration cannot insure disruption of vital organs unless they are placed with a degree of care that is rarely available in actual shooting situations.

This writer has used the .223 Remington round on live targets as fired from the 20-inch barrel of a Colt AR-15 SP1 (1/12 rifling twist). These animals range from 30-pound dogs to 100-pound deer and antelope. These animals were destroyed in the line of duty as a peace officer at ranges from several feet to approximately 150 yards. All shootings, about 12 incidents as memory serves, involved the use of 55-grain FMJ bullets (M193), usually as loaded by the Federal Cartridge Company in its American Eagle line of ammunition. Except on two occasions in which the bullets were deliberately fired into the head of the animal, none of the bullets exited the animals. The results of the body shots were uniformly effective, with the animals falling at or shortly after the shot. These events, except the head shots, did not result in the immediate death of the animal, and some animals were shot again to effect a more humane death. I am satisfied that the M193 round for the .223 Remington rifles does not show evidence that it will “over-penetrate” on a torso hit to a human target, though such an exit wound is certainly possible under some circumstances.

The development of the second-generation military bullet for the M16 rifles (M855 and SS109) required that these rifles be given the faster 1/9 or 1/7-inch rate of rifling twists. When light, frangible bullets are fired from these barrels, the extreme rate of spin can cause the bullet to disintegrate in flight. While this does not occur on every shot, it has been known to occur as often as 5- to 10-percent of the time with some bullets. ^[5] This problem seems to be rare with expanding bullets weighing 55 grains or more. I recently observed this disintegration phenomenon during a shooting demonstration at the Wyoming Law Enforcement Academy. In that case, a Federal “Blitz” round was fired from my AR-15 SP1 (1/12 barrel), and the bullet struck a water jug in at least three separate fragments from a distance of about 10 feet. The estimated penetration of that shot was 3.8 inches, and the only major fragment recovered was a copper disk that had been the base of the bullet jacket. The highly frangible 40-grain bullet of the Federal Hollow Point Varmint load (commonly called the “Blitz” load) cannot be recommended since it has been known to disintegrate in flight, especially from the 1/7 barrels. This load is also unlikely to reach and disrupt vital organs with its estimated 5 to 6 inches of penetration. ^[6]

The above research and experience show that the .223 Remington cartridge can serve as an excellent cartridge for police use. Perhaps the best all-around load for this cartridge uses the M193 (55-grain FMJ) bullet. While the newer M855 load (62-grain FMJ) gives almost identical wound effectiveness and somewhat better penetration through intervening cover, it cannot be used in older rifles having a 1/12-inch rifling twist rate. Since the M193 load shoots well in any barrel, it prevents any confusion about what bullet can or cannot be used in which barrel. Most expanding bullet loads for this round give shallow penetration that cannot be expected to give reliable wounds except when the shooter can place his shots with care.

There are currently three possible exceptions to the rule of inadequate penetration from the expanding bullets.

The first exception is the 64-grain Power Point as loaded by Winchester Ammunition, load X223R2. This bullet shows good expansion and keeps a high percentage of its original mass to also give useable penetration, on the order of 10 to 14 inches. Unfortunately, this bullet is on the borderline of instability when fired from a rifle with a 1/12 barrel, causing very poor accuracy in these rifles. It can be predicted to give good service from the 1/7-inch barrels.

The second exception is the 69-grain Match load by Federal. This bullet shows break-up and fragmentation rather than progressive expansion like the Winchester 64-grain bullet. This bullet, made by Sierra, is designed primarily for accuracy, so its terminal performance is a matter of chance. In gelatin testing it sheds a great deal of its mass through fragmentation but still gives penetration ranging from 11 to 13.4 inches, the greatest penetration from the M16A2, and less from the 24-inch barrel of a sniper rifle. Due to its length, this bullet cannot be used from the older 1/12-inch barrels. To properly handle this load, the rifle must have a twist rate of 1/9 or faster.

The third exception uses the Hornady 60-grain spire point bullet as loaded by both Hornady (load #8028), and Black Hills Ammunition. This bullet performs considerably better than others in its weight range. Penetration is about 11.5 inches in 10-percent gelatin, showing about 44-percent fragmentation. This bullet has been used for hunting deer and pronghorn antelope in South Dakota, and anecdotal evidence suggests acceptable performance for this use when the shots are chosen with care.^[5]

Research and development is currently under way to develop an expanding-bullet duty load for police use in .223 Remington rifles. Design criteria call for the bullet to expand to about two calibers while consistently giving 12 to 15 inches of penetration. With luck, this load may be fully tested and available by 1995.

It is hoped that this discussion of the terminal performance of the various loadings for this caliber will help police agencies to choose their ammunition based upon verified terminal performance rather than myths or advertising hype. In the overall picture of performance by centerfire rifle rounds, the .223 Remington is a lightweight contender. The larger rounds like the .308 Winchester (7.62mm x 51mm NATO) are more powerful and more reliable performers, making bullet selection far less critical. With the .223 caliber rifles we must choose our loads carefully to maximize the effect of this lesser round.

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DATA FOR: .223 REM 55 HPBT

BC'S: .195(H), .198(M), .201(L)

COMPANY: Federal

TEMP: 59

PRESSURE: 29.53 IN.

HUMIDITY: 78%

ZERO: 50 yards

CROSSWIND: -10.00 mph

TAIL WIND: +0.0 mph

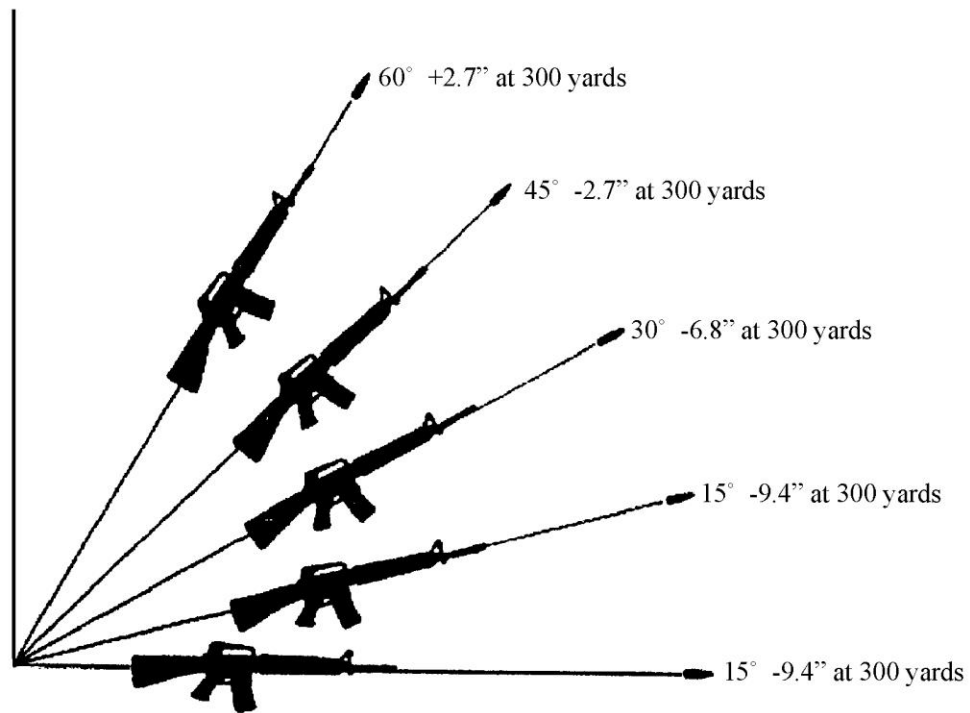
ELEVATION ANGLE: 0 degs

ALTITUDE: 0 feet

SIGHT HGT. 2.5 IN

RANGE YARDS	VELOCITY (FPS)	ENERGY (FT-LB)	BULLET PATH(IN)	DRIFT (INCH)
0	3,000	1,099	-2.5	0.0
25	2,875	1,010	-1.1	0.1
50	2,754	926	-0.0	0.4
75	2,634	847	+0.8	0.9
100	2,518	774	+1.3	1.6
125	2,404	706	+1.5	2.6
150	2,292	642	+1.3	3.8
175	2,184	582	+0.7	5.3
200	2,078	527	-0.4	7.1
225	1,974	476	-1.9	9.2
250	1,873	429	-4.1	11.7
275	1,775	385	-6.8	14.5
300	1,680	345	-10.2	17.8

Diagram showing trajectory variation caused by up/down angled shooting.



BALLISTICS

Sergeant Don L. Ellis

The study of ballistics can be broken down into three parts: *Internal ballistics*, *External ballistics*, and *Terminal ballistics*. Internal ballistics encompasses what occurs inside the rifle barrel from the time the primer ignites until the bullet leaves the barrel. External ballistics is the study of what happens to the bullet while it is in flight. Terminal ballistics is what occurs to a target, in this case a human being, when struck by a bullet. This section will also address what a .223 round will or won't do when fired at a barricade.

INTERNAL BALLISTICS

Internal ballistics starts with the ignition of the primer at the base of the rifle cartridge. This ignition causes the gunpowder inside the cartridge to explode, building up internal pressure. As the internal pressure within the cartridge increases, the cartridge case expands until it comes in contact with the chamber walls and the bolt face, causing a tight seal, which doesn't allow gas to escape. When the cartridge case can expand no further, the increasing gas pressure within the cartridge finds the path of least resistance. The gases escape by forcing the bullet out of the cartridge case and down the barrel. As the pressure increases, the bullet accelerates to higher velocities. The speed of a bullet is referred to as *Muzzle Velocity* and is measured in *Feet Per Second (fps)*. A Federal brand, Match .223 BTHP bullet has a muzzle velocity of +/- 3000 fps as it leaves the muzzle of the rifle with a 20-inch barrel. 50,000 pounds per square inch (psi) of pressure, created by the exploding gunpowder in the cartridge case accelerates the bullet to this speed.

A bullet is larger in diameter than the rifle bore. When the bullet impacts the rifling (*Lands and Grooves*) inside the rifle barrel, a series of vibrations begin. The bullet initially strikes the rifling causing a *Longitudinal Vibration* or end-to-end vibration within the barrel. This is when the rifle recoils, moving backward into the marksman's shoulder. When the rifle can't move any farther to the rear, the barrel will start to rise upward, bowing in the middle of the barrel causing an up-and-down movement of the barrel. This whipping motion is known as *Vertical Vibration*. A marksman's positioning behind the rifle, improper grip, or a bedding problem of the rifle action causes a *Lateral Vibration*, or side-to-side movement, of the rifle barrel. As the bullet is forced down the barrel, the rifling imparts a spin to the bullet causing a *Torsional Vibration* to the barrel. All four of these vibrations occur at the same time and are referred to as *Barrel Whip*.

In order to ensure accuracy, the barrel must vibrate in the same fashion every time the rifle is shot. This accuracy can be accomplished by using good quality, heavy rifle barrels, quality ammunition, consistency in the marksman's shooting position, and by having a barrel which is not touching the stock or any other external objects. A barrel which is not touching the stock is referred to as *Floating*. If a marksman is consistent in his/her shooting and there are no problems associated with the rifle bedding, a floating barrel, or external influences on the barrel, the bullet will strike the target at the same location every time. If there are inconsistencies in any of these factors, the bullet strike will be different each time.

A bullet's movement through the barrel is included in the study of internal ballistics. To stabilize during flight and travel in a predictable path, the bullet must have a spin to it. The rifling of the barrel creates this spin. The barrel is manufactured with the lands and grooves running from one end of the barrel to the other. These lands and grooves don't run down the barrel in a straight line. They have a *Twist* to them. The lands and grooves rotate clockwise or counter-clockwise as they move down the length of the barrel. As the bullet

is forced down the barrel, it follows the rifling and begins to spin. A barrel twist is measured in inches. A rifle barrel that has one complete twist every 12 inches is referred to as a 12-inch twist. A Colt AR-15 has a 1:12, 1:9, or a 1:7 twist depending on the barrel length. The shorter the twist the faster the bullet will rotate. The barrel twist is what gives a bullet its accuracy. Different bullet calibers and weights require different twists and velocities to perform at the maximum capability. It is well documented that a 1:12 twist barrel will not stabilize bullets heavier than 55 grains. The bullets will fail to stabilize and can deviate up to 70 degrees from the trajectory, making them inaccurate.

EXTERNAL BALLISTICS

The study of external ballistics begins when the bullet leaves the muzzle of the rifle barrel and becomes a projectile traveling towards a target. There are two forces that influence a bullet's flight. These are *Gravity* and *Air Resistance* or *Drag*. Of the two forces, air resistance is the most influential on the bullet's flight.

Gravity is a constant force that draws all objects toward the center of the earth. Gravity acts on the bullet only when the bullet is traveling horizontally. As soon as the bullet leaves the rifle muzzle it starts dropping toward the earth. When marksmen speak of vertical drop, they're referring to the amount of drop, in inches, that the bullet has due to gravitational pull. So, the longer the time of flight, the greater the amount of vertical drop, because gravity has more time to influence the bullet. The velocity of a bullet can minimize the affects of gravity. The faster a bullet can travel the distance to a target, the less time that gravity can act upon it. One component of the ballistic charts that marksmen refer to shows how much vertical drop a bullet will have, at a specific velocity and distance, because of the effects of gravitational pull on the bullet.

Air resistance or drag is the force that slows the bullet down. Drag varies because of the bullet's velocity, shape, weight, and surface area. As the bullet travels, it has to push air out of the way. This air is compressed in front of the bullet and then forced out of the way, sliding down the sides of the bullet. The movement of air down the sides of the bullet creates drag because of friction. The air moves from the sides of the bullet to the bullet's rear. This causes a vacuum to form, slowing the bullet even more. The shape and design of a bullet can reduce this drag. The environmental factors of altitude, temperature, and humidity also create drag. Again as with gravity, the longer a bullet is in flight, the more time air resistance has to affect the flight of the bullet.

Bullets are manufactured in a variety of shapes, sizes, calibers, and materials. Some designs are more efficient than others and are affected by drag in varying degrees. The efficiency of a bullet is referred to as the *Ballistic Coefficient (BC)*. The ballistic coefficient or BC is expressed as a three-digit number, which is always less than one. (e.g., .250, .530) The higher the number, the more efficient the bullet is in overcoming drag. A bullet's specific BC is found in ballistic charts. Police marksmen need to keep in mind that the higher the ballistic coefficient, the flatter the bullet trajectory. The less a bullet is influenced by the air and wind, the more energy it will have at the target. Therefore, BC will influence *Terminal Ballistics*.

External ballistics is a better understood if a marksman is familiar with some basic terminology and physical principals of a bullet in flight. If a rifle is held parallel to the surface of the earth and a bullet is then fired from it, the bullet will start to drop toward the surface of the earth immediately upon leaving the rifle barrel, because gravity is pulling it toward the earth surface. This is called the *Vertical Drop*. The horizontal line between the target and the rifle barrel is referred to as the *Base of Trajectory*. If a 6' tall marksman fired a rifle from a standing offhand position with the rifle being held approximately 5' from the ground, a .223 bullet traveling at 3000 feet per second (fps) would, unimpeded, fall to the ground at about a distance of 500 yards. In order to overcome or compensate for this vertical drop, a skilled marksman will intentionally aim a specific distance above the target. The target is referred to as the *Desired Point of Impact*. Where the bullet actually hits is referred to as the *Point of Impact*. Using either their own data or the commercially available

ballistic charts, marksmen will know how much a bullet will drop at a variety of distances. The angle that is created between the base of trajectory and how far the rifle barrel is pointed above the desired point of impact is called the *Angle of Departure*. There are two other terms used in association with the rifle barrel and where it is pointed. The *Line of Elevation* is a straight line running down the bore of the rifle and going off into infinity. The *Line of Departure* is a straight line running down the bore of the rifle at the specific moment the bullet is fired. An unimpeded rifle bullet will never rise above the line of departure. A .223 bullet fired from a gun that has a 33-degree up angle will travel approximately 3 miles before striking the earth.

A marksman knows that at 100 yards a .223 BTHP bullet with a muzzle velocity of 3000 fps has a 4" vertical drop (this information is found on ballistic charts). The marksman will want to aim 4" above the desired point of impact prior to shooting at the target. This is a hard thing to do with any accuracy time and time again. To assist the marksman, adjustable front and rear sights are used. Where the rifle barrel is pointed, so are the sights. In order to shoot with accuracy, a marksman will want to center the front and rear sight on the desired point of impact, without having to estimate distances high or low. To facilitate this, the front and rear sights are moved up or down, left or right to compensate for the 4" at the *Origin of Trajectory* or the muzzle face, instead of trying to estimate the distance at the target. The marksman adjusts sights up, down, left, or right. This creates a *Line of Sight* that is a straight line drawn between the marksman's eye, through the front and rear sights, and to the desired point of impact. The bullet crosses the line of sight twice: once just after firing, and a second time at the point of impact. After the rifle is fired, the bullet doesn't follow a straight line between the rifle barrel and the target. The actual path that the bullet follows is a curve and is known as the *Arc of Trajectory* or simply the *Trajectory*. The "arc" is caused by gravity pulling the bullet toward the ground. The bullet is spinning when leaves the rifle bore it. The bullet can spin either clockwise or counter clockwise depending on the barrel rifling. At longer distances this spin or rotation will pull the bullet away from the original line of departure in the direction of the rotation, either left or right. This is called *Drift*. The natural drift of a specific bullet is found on the ballistic charts. Drift can also be caused by the wind.

There are a few other terms that are used in conjunction with external ballistics. The *Zero Distance* is the distance in which the rifle sights are adjusted so that the point of aim and the point of impact are the same. The most common zeroing distance used by police marksmen is 50 yards compared to the military zeroing distance of 300 yards.

TERMINAL BALLISTICS

Terminal Ballistics is the study of a bullet from the moment it impacts a target until it stops. This study is often referred to as *Wound Ballistics* when it is used in conjunction with a human as the target. Police marksmen differ from military marksmen in several aspects. The biggest aspect being that we, the police, shoot to immediately stop any further actions by a suspect. That is, the police marksman must immediately incapacitate a suspect. A military marksman is often satisfied with a shot that only wounds an enemy. The immediate incapacitation is brought on by a proper shot placement using a bullet capable of stopping the suspect.

The most effective way to incapacitate a person immediately is to severely damage or destroy the central nervous system. A shot to the brain usually stops all central nervous system activities immediately. A well-placed shot to the spinal column will stop all activities below the damaged area immediately. A shot to other portions of the human body, such as the chest, may not affect the suspect immediately. Even with the heart being destroyed and death inevitable a suspect can still function long enough to react in an adverse fashion.

The most important criterion for a bullet is its ability to penetrate a target so that it can damage the organs and tissue. Bullets entering the human body create two different types of wound channels. One channel is a

Temporary Cavity created by the tissue moving rapidly outward away from the bullet's path and then returning to its original position. This generally doesn't cause much damage except to delicate tissue such as the brain or inelastic tissue such as the liver, kidney, or bone, as well as liquid filled organs such as the bladder. The other channel is called a *Permanent Cavity* and is the path created by movement of the bullet through the tissue. The permanent cavity is inside the temporary cavity. The permanent cavity is created by the bullet destroying tissue, organs, and bone that are directly in the path of the bullet or fragmented parts of the bullet.

A bullet entering a human body can do several things. The bullet can stay in one solid piece and just destroy the tissue that it collides with. Or the bullet may *Fragment*, breaking up into many smaller pieces. Each of these pieces can create its own permanent and temporary cavity as it moves through the tissue and away from the bullet. A bullet can also *Tumble* inside the body. Tumbling is when a bullet starts to rotate end over end, causing a larger permanent wound channel and more damage.

A police marksman must use a bullet that has sufficient mass or weight and velocity to have enough *Kinetic Energy* to penetrate the human body upward of twelve to sixteen inches. A bullet's kinetic energy is expressed in foot-pounds. This information is found in the ballistic tables.

Shot placement is very important to a police marksman. The primary reason that marksmen train is to make precision shots into targets the size of a human head. And in fact, it is a target about one inch in diameter *within* the head that we are training for. A police marksman must destroy a suspect's cranial cavity in order to immediately incapacitate a suspect.

BARRICADE PENETRATION

One of the common misconceptions among people that are not familiar with firearms is that rifle rounds will travel farther and penetrate targets more so than bullets fired from handguns. This is not necessarily true. A bullet's construction, type, and caliber will determine the penetration and potential for ricochet. The .223 caliber bullet is a small, high velocity round. When fired from an AR-15, the bullet is traveling at about 3,000 feet per second. When this bullet strikes a hard object, it fragments or breaks apart. This will limit the depth of penetration and the potential for the bullet to ricochet. Bullets fired from handguns and shotguns are larger and travel slower, yet studies consistently show that these rounds will penetrate farther and ricochet more violently than a .223 round.

Over the years, several agencies have conducted tests to determine how well a .223 round will travel through a barrier and then penetrate a target with sufficient energy left over to stop a suspect. These studies have included shooting through tires, car bodies, common auto and window glass, and residential construction walls. The bottom line is that the .223 round that our department issues - the Federal 55-grain boattail hollow point - isn't the best choice for shooting through a barrier in order to stop a suspect. The test results discussed below were using a distance of 50 yards between the rifle and the target.

When fired through an automobile door, the .223 round will very likely penetrate the door and enter the vehicle interior. However, the bullet will tend to fragment and won't inflict serious injury to a suspect.

Tests conducted using inflated car tires show that using the .223 round will not create enough damage to the car tire to immediately stop the movement of the car. When shooting through the sidewall of the tire, through and thorough penetration will likely occur. However, the holes are small and the tires may immediately self-seal, limiting the air loss to a gradual deflation. Shooting through the tire rim immediately adjacent to the tire had more success. If the rim was penetrated, the tire immediately deflates. Hitting the portion of the rim that allows the tire to deflate is a very difficult tactic to use in the field. This tactic by no means will stop the movement of the car.

It is possible to shoot through a vehicle windshield or side window and strike a suspect inside the car. Success is dependent on the angle to the windshield that the shot is fired from, and how far from the glass that the suspect is seated. A straight-on shot is better than a shot fired at a 45-degree angle to the window. The closer the suspect is to the glass, the more effective the shot will be.

Tests conducted using a variety of commonly found glass showed a wide range of results. The results varied a great deal. Some shots went from completely ineffective, the bullet fragmenting and deflecting, and missing the target completely to striking the target with good penetration and results. The results are dependent on several factors: the distance from the rifle to the glass (the closer the better); the glass thickness and composition (the thinner the glass, the better); and the distance between the glass and the target (the closer the better). The angle of the rifle to the glass is also a factor: the smaller the angle, the better.

Test results indicate that an attempt to shoot through the exterior walls of a common house has a high rate of failure. The bullet will travel through the first wall and fragment. These fragments may or may not penetrate the interior wall. If they do, injury to a suspect is very limited.

Using Murphy's Law as a guideline, no matter how positive the test results are, count on your round to not strike the target when fired through any type of a barrier. Count on the bullet deflecting or ricocheting and striking a target that you had not intent on hitting in the first place.

MARKSMANSHIP

The following information was taken from a small book written by Gary Anderson, Olympic Gold Medallist Rifle Shooter. When someone of this caliber gives out advice in an area that you are attempting to learn, it is wise to listen. He knows of what he speaks! He went to the Olympics and out-shot the best the world had to offer. Naturally, these techniques are intended for precision marksmanship and will not work for some of the close range fast shooting required with a patrol rifle in some situations. His teachings will assist you with the slower pace long range shooting you may be required to do.

TRIGGER CONTROL

The easiest way to fire a bad shot is to pull the trigger incorrectly. In importance to the expert rifleman, proper trigger control is second only to holding the rifle still.

The grasp of the right hand on the pistol grip is the first detail to work out in learning trigger control. This hand does all the work of pulling the trigger. Its grasp on the pistol grip should be firm but not strained. The thumb is extended forward but not curled over the stock. Your whole hand should feel comfortable. The index finger should not touch the stock at any point. In this way, the pressure of the finger on the trigger will be straight back and not to the side. The index finger should contact the trigger at the first joint or just ahead of the first joint.

The action of the index finger on the trigger should be independent of all other parts of the body except the brain, which is receiving the images of the sight picture. The best method of trigger control for the beginner is the simplest one. This method calls for a gradual and continuous increase of pressure on the trigger. This pressure should start as soon as a good sight picture is seen and should 'continue until the shot is fired. Only four to six seconds should be needed for this. With a two-stage trigger, the initial stage can be taken up before the front sight is aligned with the bull. With both the two-stage and the single-stage trigger, the final pressure on the trigger must start as soon as the front sight and bull are properly aligned.

Only after many months of experience should other methods of pulling the trigger be tried. The method most commonly used by advanced shooters is the graduated pull, in which pressure is applied to the trigger in short segments. That is, applications of pressure are made only when the sight picture looks good. This pressure that has already been applied is held constant whenever the front sight moves from the bull. Before attempting this method of trigger pull, it is important for the beginner to master the smooth pull and its gradual increase of pressure.

When pulling the trigger, the trained rifleman concentrates so much on holding the rifle still that the action of the index finger becomes nearly automatic in firing the rifle when the best sight picture is achieved. Especially for the beginner, the shot should not be fired at an exact moment of the shooter's choice. The squeeze on the trigger should be so gradual that when the shot is fired, it is a surprise. This eliminates the danger of flinching or jerking in anticipation of the shot.

There is always a strong temptation to snap the trigger quickly when the front sight approaches the bull, in the thought that a good shot can be made. This action of trying to “grab a ten” is called jerking. Usually the result is a shot that is far from where you thought it would be. Another common error in trigger control is flinching. This comes from the shooter’s fear of the noise or recoil of the rifle and is usually characterized by his tightening up the shoulder, pulling the shoulder away from the rifle, or closing his eyes before the shot is fired. The best way to cure either of these errors is to make up your mind that you will not flinch or jerk and that you are not afraid of the rifle. If you are able to convince yourself that jerking the trigger will always produce poor shots, then there will be no reason to do it. If you are able to realize that the recoil or noise of the rifle will not hurt you, then there will be no reason to flinch. These examples help to explain why shooting is called a sport of the will.

A training exercise used by many expert riflemen to correct defects in trigger control is “dry firing.” You can do this in your own home by placing a small black bull at one end of a room and then firing at this target without using cartridges and noting exactly how the sight picture appeared at the instant the firing pin fell. By dry firing, it is possible to develop a smooth trigger pull and to note the mistakes that you made in pulling the trigger. Whether by dry shooting or by live firing, it does take a considerable amount of training to perfect your trigger control.

BREATH CONTROL

If you continue to breathe while pulling the trigger, the rifle will remain in constant motion and you will never be able to hold the rifle still enough to hit the bull’s-eye. It is thus necessary to hold your breath while the shot is being fired, in order to make the body as motionless as possible. Breath control is required also to ensure the continued proper functioning of the body during the shooting competition.

During the normal respiratory cycle, there is a natural pause between exhalation and inhalation. During this pause, or right after exhaling, you should begin to hold your breath to fire the shot. At this point the breathing muscles are most relaxed and the lungs are under the least strain. Even though exhalation has been made, there is still plenty of oxygen left in the lungs so that there is no danger of oxygen starvation of the body.

The breath should be held for no longer than ten to twelve seconds, because after this the eyes will begin to blur slightly and the lungs will be straining to resume breathing. If the shot is not fired in this length of time, then stop, take a few new breaths, and start the shot over. Breath control, then, simply refers to holding the breath by extending the normal respiratory pause while the shot is being fired.

USING THE SLING

The importance of the sling is emphasized by the fact that expert riflemen make every attempt to relax the left arm -the arm that supports the rifle -as much as possible. They attempt to see that the muscles of this arm exert no effort at all in holding the rifle. The sling thus serves as a kind of anchor cable that holds up the left forearm and rifle.

The first thing to be considered in using the sling is the placement of the loop on the arm. Some shooters place the loop low, near the elbow, and some place it as high as possible. It is best for the beginning shooter to keep the sling high enough to go around the arm above the biceps muscle. This generally provides the

best position for support. The shooter must next adjust the length of the sling and the location of the fore-end stop or sling swivel to which the sling is attached. Some fore-end stops do not move to the rear. In this case, you must not be afraid to move your hand to the rear, leaving the fore-end stop where it is. With most rifles, the fore-end stops are placed too far forward to encourage good positions, and the right hand must be moved to the rear to raise the rifle high enough to keep the head in a good erect position. If the fore-end stop will move to the rear, then it is placed against the right hand between the thumb and index finger after it has been properly located to give the hand something to relax against. Following this, the length of the sling is adjusted so that it is tight enough to take the entire load of the rifle's weight off the left arm.

One of the vital keys to good shooting in the prone, sitting, and kneeling positions is the use of the sling. The easiest way to check if the sling is used right is to note the feeling of the left arm. If your arm is straining to hold up the rifle, then the sling is not tight enough. It is certainly obvious that anyone who desires to become a good shooter must learn how to use the sling to best advantage.

BONE SUPPORT

As has been stated, the best way to shoot a high score is to hold the rifle still; and the best way to hold the rifle still is to develop a position that is based on bone support. It is possible in all four positions, and with the aid of a sling in prone, sitting, and kneeling, to support the rifle entirely upon the bone structure of the body. One of the cardinal rules of shooting is to use bones and ligaments to support the rifle whenever this is possible- since muscles will tire and develop tremors, while bones are capable of constant and unchanging support.

There are numerous examples of how this principle can be applied in the perfection of the four shooting positions. An obvious one deals with the left arm in standing. In this position, it is possible to hold the left arm and elbow free of the body. In the preferred standing position, however, it is necessary to keep the arm resting on the body, for then the rib cage provides bone support for the left arm while the left forearm, in turn, furnishes bone support for the rifle. It is this position, in which the left arm rests on the side that is used by all of the current world champions.

There is another good illustration of this principle in the standing position. The recommended way to shoot standing is to bend the torso to the right and to the rear in supporting the rifle. The need for doing this can readily be seen if you will hold your rifle in position while standing erect and note the strain that the weight of the rifle places on your back. By simply leaning back and bending to the right, you transfer the weight of the rifle onto the spinal column and a system of bone support is developed, where before the rifle was held up by the efforts of the muscles in the back and shoulders.

Other examples of this principle include: in the standing position, the use of both legs to support the body; in the kneeling position, the vertical placement of the left leg or shin, so

that the weight of the rifle falls onto the left knee and consequently directly onto the foot; and in prone position, the placement of the left elbow slightly to the left of the rifle so that it can give maximum support to the rifle and upper torso.

Whenever any doubt arises about the placement of any element of the body in any position, it is best to use the principle of bone support. Each phase of the position should be carefully checked to determine if the legs, the arms, and the torso are positioned to give maximum bone support to the body and rifle. Each

position must be carefully adjusted so that this fundamental rule for developing the four positions is closely followed.

RELAXATION

To name the seventh principle “relaxation” is somewhat misleading. Actually, it is impossible to completely relax the body, and for a shooter to do so would mean that his position would collapse! Even in the ideal state of near perfect balance, the bones of the body must be held in position by some degree of muscle tension. Relaxation, then, refers to reducing this muscle tension to the necessary minimum.

If a shooter builds his position on the principles of bone support and balance, he must still learn how tight he should hold his muscles. Because a good position is based on balance, only a small degree of muscle tension should be needed to keep this position stable. If we assumed that a muscle exerting maximum force was at 100% tension, and a totally relaxed muscle was at 0%, then we could describe a muscle used in shooting as needing to be at only 5% to 10% tension. Muscles used in shooting that are contracted beyond this point will eventually develop tremors and encourage poor holds as they tire, which they will do faster when they are more tense. Every shooter must make a conscious effort to relax the muscles of his body so that the tension is reduced to the minimum degree necessary to maintain the position.

There is a second way in which the principle of relaxation is applied in shooting. An experienced shooter will tell you that muscles must never be used to make the rifle point at the target. The best way to check this is to get into position and then let the rifle move to its natural aiming point by letting the whole body relax. This can be done with the eyes closed if this will help the rifle settle to its natural position. If the rifle points high or low, then it is necessary to shift the left arm forward or to the rear and adjust the sling in prone, sitting, or kneeling position. In standing position, the butt of the rifle must be shifted up or down on the shoulder to compensate for the difference at the target. If the rifle points to either side, then it is necessary to turn the entire position so that the rifle points naturally at the target. The rifle should never be forced into position by the use of muscle tension. Each time you shoot, you should check to see that the body is relaxed and that the rifle does have its natural point of aim on the target. You can see now that the principle of relaxation complements the principles of bone support and balance and leads to improved results.

USE OF COVER

1. Think cover in Condition Orange - don't wait until the shooting starts. Take cover into consideration in planning your actions, movements, and tactics.
2. Use cover whenever possible. Skillful use of cover may be more important to your survival than your shooting ability.
3. If you are within 2-3 steps of cover, you can get to cover as fast or faster than you can draw and fire. While moving to cover, you can be drawing your gun, and you will be harder to hit while moving.
4. Cover will stop or deflect bullets from the weapon being fired at you, while concealment only hides you from view but will not stop bullets. Choose cover over concealment whenever possible, but remember that even concealment is better than nothing. Darkness and shadow are forms of concealment, while body armor is cover you carry with you.
5. Reload and clear malfunctions behind cover.
6. Do not leave cover unless you must.
7. Reload before leaving cover - don't get caught out in the open with an empty gun.
8. Move from cover to cover. Have your move planned (two moves in advance if possible) before you leave cover - don't get out in the open and then try to decide where to go. A quick peek may help you determine that your intended path is clear before you expose yourself from cover. Cover open ground quickly but under control, ready to fire if necessary.
9. When firing from cover, expose as little of yourself as possible, and remain exposed for the shortest possible time. Stay far enough back from cover so that you can have your weapon extended, ready to fire, before you roll out. Then roll out quickly, fire one or two accurate shots, and roll back.
10. Don't extend your weapon, hands, or arms beyond your cover into areas you have not yet cleared.
11. Don't keep firing from the same position. Try to appear in a different spot each time, maximizing the time it will take your opponent to fire an accurate shot at you.
12. Stay behind cover until you are certain the danger has passed. There is no need to rush up to a fallen adversary - he may still be capable of doing you harm, or he may have a partner you haven't seen.

STATE LAW

TITLE 18

CRIMES AND PUNISHMENTS

CHAPTER 40

HOMICIDE

18-4011. JUSTIFIABLE HOMICIDE BY OFFICER. Homicide is justifiable when committed by public officers and those acting by their command in their aid and assistance, either:

1. In obedience to any judgment of a competent court; or
2. When reasonably necessary in overcoming actual resistance to the execution of some legal process, or in the discharge of any other legal duty including suppression of riot or keeping and preserving the peace. Use of deadly force shall not be justified in overcoming actual resistance unless the officer has probable cause to believe that the resistance poses a threat of death or serious physical injury to the officer or to other persons; or
3. When reasonably necessary in preventing rescue or escape or in retaking inmates who have been rescued or have escaped from any jail, or when reasonably necessary in order to prevent the escape of any person charged with or suspected of having committed a felony, provided the officer has probable cause to believe that the inmate, or persons assisting his escape, or the person suspected of or charged with the commission of a felony poses a threat of death or serious physical injury to the officer or other persons.

FIREARMS DRY-FIRE PRACTICE RITUAL

While dry-fire practice is one of the best ways to develop and maintain proficiency with any firearm, it poses a risk of accidental discharge. Because dry-firing has so many advantages - no cost, no noise, flinch reduction, and the teaching of proper trigger pull, sight alignment and grip - it would be a mistake to not use this time-proven training technique.

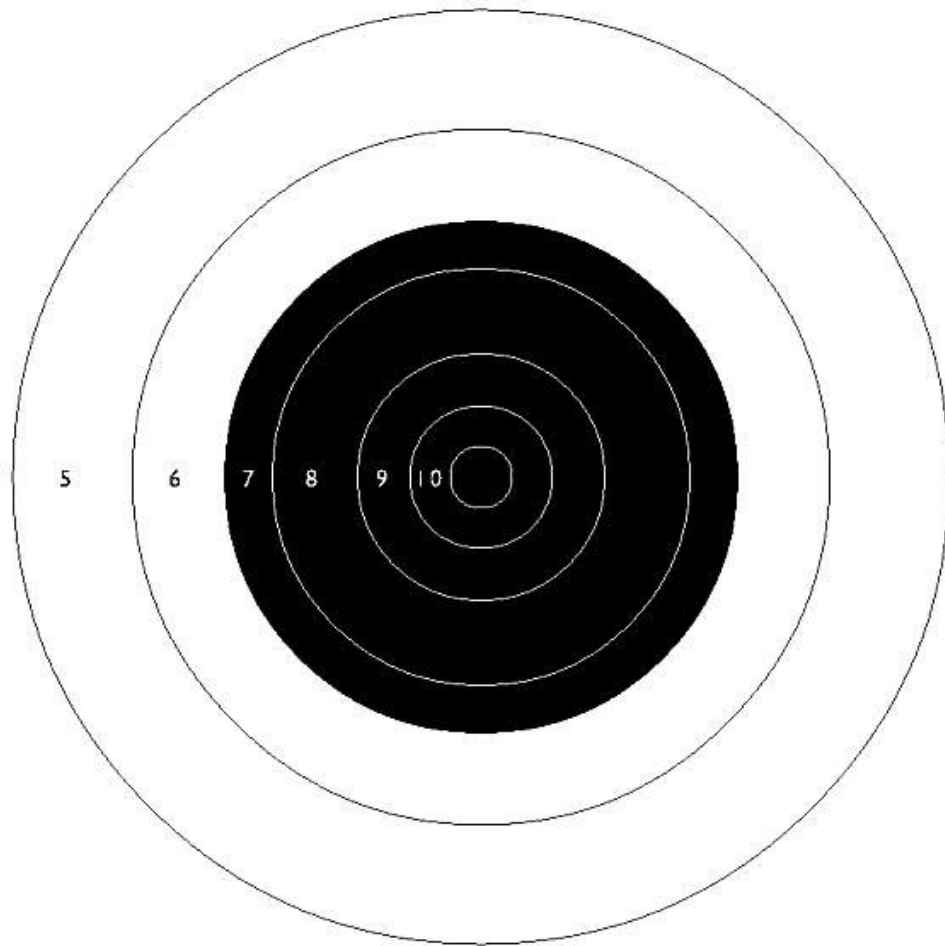
Dry-fire practice can be safe if a certain set of procedures (a ritual) is adhered to. The dry-fire ritual is set forth as follows:

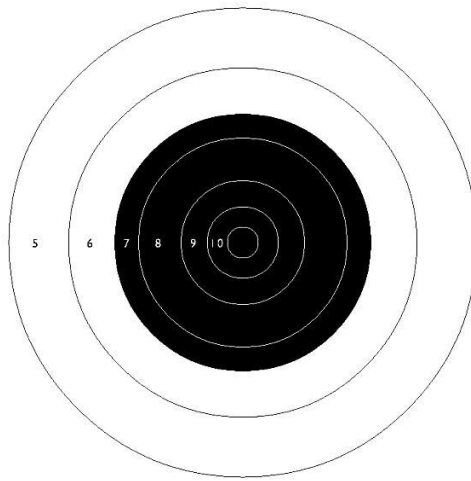
1. No interruptions or distractions are permitted. The officer should be completely alone and expecting no visitors (door should be locked so that friends or children do not wander in). TV or radio can cause an officer to temporarily shift focus to the entertainment, forgetting whether or not the gun is loaded.
2. All ammunition must be removed from the room in which the officer is practicing. 'The gun is unloaded; chamber, cylinders, actually be placed in a box and then put in a closet - out of sight and immediate reach. If the duty gun belt is used, it too must be stripped of ammo. Many think this "ammo, into the box" step is extreme, but it is the ritual nature of this step which makes it valuable.
3. The officer must make a mental shift to the practice mode. This is done by actually saying, "This is practice, the gun is unloaded."
4. A safe aim point is essential. The aiming area must be solid enough to stop the bullets normally carried. A concrete wall (e.g., basement), or fireplace are good examples. To focus dry-firing on the safe area, it is a good idea to tape a target or aim point to the area.
5. Once the above preliminaries are completed it is safe to dry-fire practice.
6. When dry-fire practice is completed, the officer must make the mental shift to "reality." This is done by actually saying, "The gun is loaded and will fire if I pull the trigger."
7. To prevent an unthinking return to "practice mode" the gun must finally be placed out of sight and out of immediate reach.

These steps must all be performed in order, each time, if accidents are to be avoided. There are no shortcuts.









ZEROING THE LAW ENFORCEMENT RIFLE

Before starting to zero it is necessary to determine and mark mechanical zero on the rifle sights. This may be done expediently with nail polish and the procedure will be explained on following pages. Mechanical zero may be marked more permanently with a metal scribe, or fine file, using a straight edge and backing up with paint marks. It is also necessary to be familiar with the following terms and definitions.

MECHANICAL ZERO (MZ)

“MECHANICAL ZERO” can be defined as a marked sight setting that can be easily returned to without the possibility of error.

Unless MECHANICAL ZERO has been established and marked, ZERO sight settings cannot be easily and accurately set on the rifle.

MECHANICAL ZERO is recorded as “MZ”.

ZERO

“ZERO” can be defined as the sight settings required on the rifle to shoot point of aim = point of impact under a given set of conditions.

(NOTE: Changing any one of these conditions will result in changing the point of impact.)

ZERO sight settings are always recorded as clicks from MECHANICAL ZERO.

INITIAL SIGHT SETTINGS

The “INITIAL SIGHT SETTINGS” can be defined as the recommended sight settings from which to start the zeroing procedure. If the rifle, and particularly the sighting system, is in good mechanical condition the RECOMMENDED INITIAL SIGHT SETTINGS will result in the shots being “on paper” (law enforcement silhouette type target) at 100 yards.

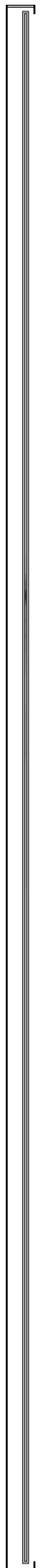
NOTE:

GENERIC SIGHT ADJUSTMENT

Any movement of the rear sight moves the group in the same direction.

Any movement of the front sight moves the group in the opposite direction.

MINUTE OF ANGLE (MOA)



There are 360 degrees in a circle, and one minute of angle is 1/60 of one degree. One minute of angle is equal to 1.0472" at 100 yards, but for all practical purposes it is generally accepted that one minute of angle

is equal to one inch at 100 yards. This equates to 1/2 inch at 50 yards, 2 inches at 200 yards, 3 inches at 300 yards, etc.

Minute of angle is easily translated to rifle sight "clicks."

Minutes of Angle (MOA) for Each "Click" on the Rifle Sights				
TYPE OF RIFLE	Front Windage	Front Elevation	Rear Windage	Rear Elevation
Colt AR-15A1	N/A	1 MOA	1 MOA	N/A
Colt AR-15A2	N/A	1.25 MOA	0.5 MOA	1 MOA
Colt short sight radius	N/A	1.875 MOA	0.75 MOA	1.5 MOA
MI & M14 Service	DRIFT	N/A	1 MOA	1 MOA
M1 & M14 Match	DRIFT	N/A	0.5 MOA	1 MOA *
Ruger Mini-14	N/A	N/A	1 MOA	1 MOA
H&K 91	N/A	N/A	1.25 MOA **	1.25 MOA **
H&K 93	N/A	N/A	1.6 MOA **	1.6 MOA **
Steyr A.U.G.	N/A	N/A	1.5 MOA	1.5 MOA

* Plus or Minus 1/2 MOA Is Achieved by Rotating the Hood

** Refers to 1/4 Turn of the Sight Drum (Note: May or May Not "Click")

INDIVIDUAL ZEROING PROCEDURE

The INITIAL SIGHT SETTINGS that will be used to fire the first group of shots are set on the sights and are recorded (as MZ or as clicks from MZ).

The shooter fires a group of at least five rounds, attempting to fire each shot from exactly the same position and at exactly the same point of aim.

After firing the first group of shots the target is inspected. The location of the center of the group in relationship to the point of aim is determined. If the center of the group does not coincide with the point of aim, the required group movement (IN MINUTES OF ANGLE) is recorded. If the target is to be re-used all shot holes must be patched or clearly marked.

Sight adjustments are made to the rifle and the new sight settings are recorded (AS CLICKS FROM MZ).

Another group is fired to check where the group impacts on the target with the new sight settings.

This procedure is repeated until the center of the group is the same as the point of aim.

When the center of the group coincides with the point of aim, the rifle now has a ZERO for all the conditions under which the group was shot.

It is then recommended that at least three or four more groups are fired for confirmation. The ZERO sight settings are now recorded as clicks from mechanical zero.

AGENCY ZEROING PROCEDURE

In law enforcement agencies where rifles are not issued on an individual basis, but rather may have to be shared by more than one officer, it is recommended that the agency firearms instructor zero all of the guns.

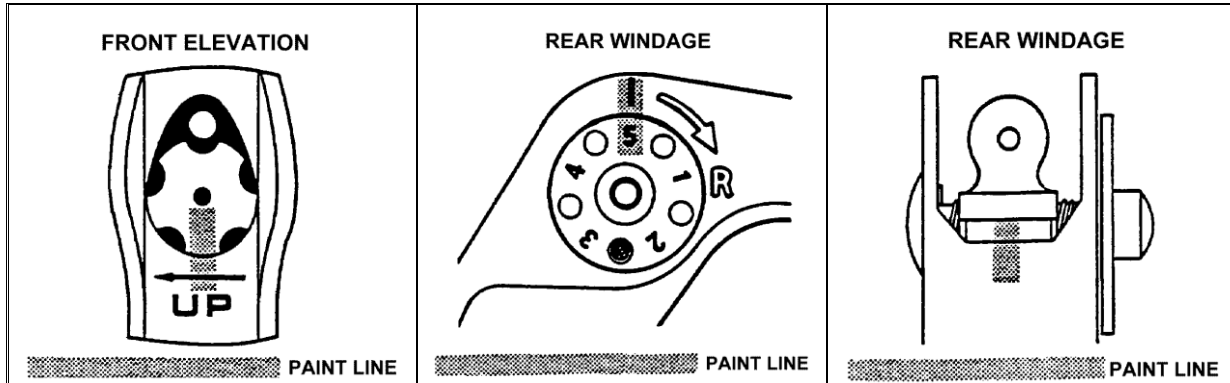
The instructor starts by setting the sights and marking mechanical zero on the guns as described in "MARKING SIGHTS FOR MECHANICAL ZERO". Starting with the "RECOMMENDED INITIAL SIGHT SETTINGS", the instructor now zeros the guns as described in "INDIVIDUAL ZEROING PROCEDURES". Once each gun is zeroed (for the instructor) the sights are marked for ZERO (in a different color - there are now two sets of marks) and a waterproof label is attached to the gun recording the ZERO sight settings (as clicks from mechanical zero).

With this procedure, any officer is able to employ any agency gun - because all the guns shoot to the same point of impact (providing the ZERO sight marks are lined up).

In theory, an officer may have to "hold off" to hit the intended target. If this is the case, the individual officer's hold off will be the same for every agency gun. In practice, the officer's hold off is unlikely to be significant at patrol rifle distances and with patrol rifle shooting proficiency standards.

MARKING MECHANICAL ZERO

COLT AR15A1

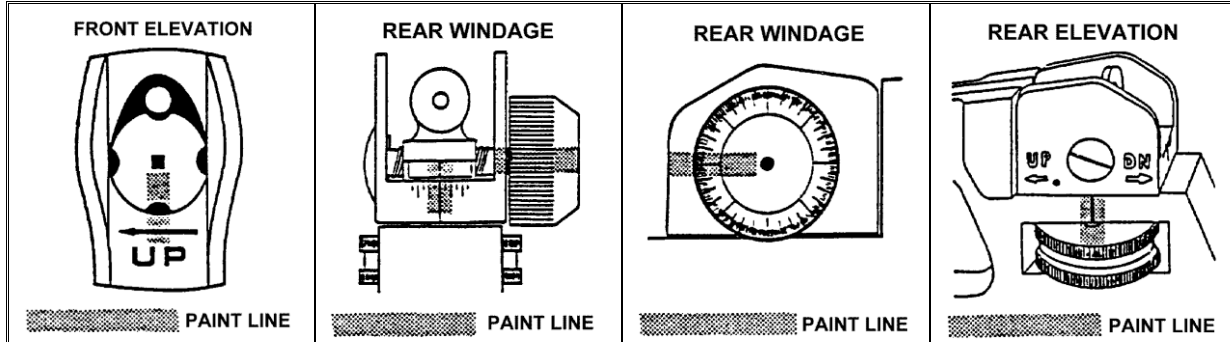


FRONT ELEVATION: Turn the front sight up or down until post shoulders are flush, or level, with the sight base. Mark **MECHANICAL ZERO** as shown.

REAR WINDAGE: Center rear aperture by counting the number of clicks from far left to far right and turning back halfway. Mark **MECHANICAL ZERO** as shown. Always use the same aperture.

INITIAL SIGHT SETTINGS: Front elevation = MZ, Rear windage = MZ.

COLT AR15A2



FRONT ELEVATION: Turn the front sight up or down until post shoulders are flush, or level, with sight base. Mark **MECHANICAL ZERO** as shown.

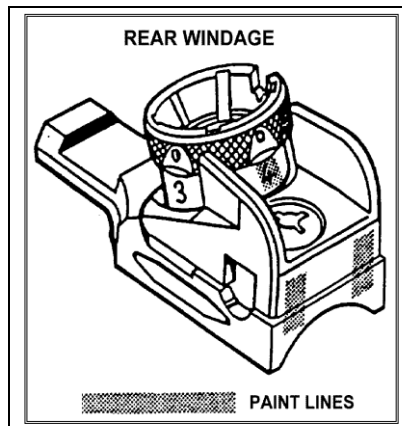
REAR WINDAGE: Lay short-range aperture down. (Marking "0-2" not visible) Center (sideways) by eye using center index line on sight base and single index line on top of short-range aperture. Mark **MECHANICAL ZERO** as shown. Always use the same (long-range) aperture.

REAR ELEVATION: Turn sight all the way down as far as possible (until bottomed out). Be sure the sight is in a notch. Mark **MECHANICAL ZERO** as shown.

INITIAL SIGHT SETTINGS: Front elevation = MZ, Rear windage = MZ, Rear elevation = MZ. **NOTE:** Use front elevation adjustment for initial zero. Thereafter use rear elevation adjustment.

MARKING MECHANICAL ZERO

H&K 91 & 93

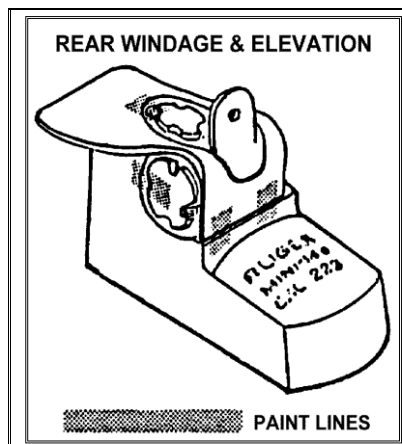


REAR WINDAGE: Center sight block (sideways) by eye. Mark MECHANICAL ZERO as shown.

REAR ELEVATION: Turn all the way down (counter-clockwise) until the sight drum is bottomed. Consider this MECHANICAL ZERO. Marking is impractical. Pick one of the three numbered apertures, mark as shown, **always use the same aperture** (apertures change point of impact).

INITIAL SIGHT SETTINGS: Rear windage = MZ, Rear elevation = 12U (12 x 1/4 turns or 3 full turns).

RUGER MINI-14



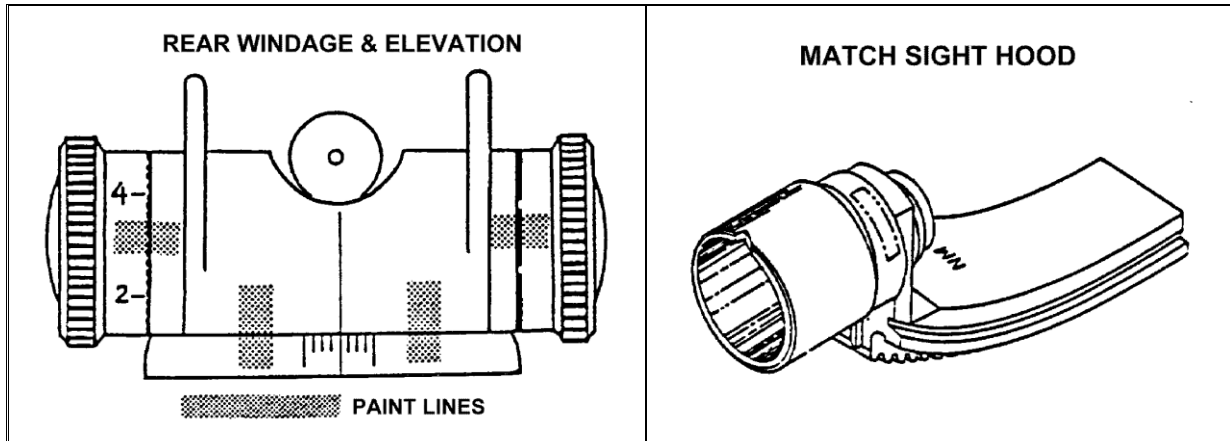
REAR WINDAGE: Using rear sight windage screw, center (sideways) rear peep sight by eye. Mark MECHANICAL ZERO as shown.

REAR ELEVATION: Turn rear sight elevation screw until rear peep sight is as far down as possible (bottomed out). Mark MECHANICAL ZERO as shown.

INITIAL SIGHT SETTINGS: Rear windage = MZ, Rear elevation = 12U.

MARKING MECHANICAL ZERO

M1 & M14 SERVICE & MATCH



M1 & M14 SERVICE

REAR WINDAGE: Center (sideways) by eye using single index line on sight body and center index line on sight base. Mark **MECHANICAL ZERO** as shown.

REAR ELEVATION: Turn elevation drum until rear sight aperture is as far down as possible (bottomed out). Mark **MECHANICAL ZERO** as shown.

INITIAL SIGHT SETTINGS: Rear windage = MZ, Rear elevation = MZ.

M1 & M14 MATCH

Marked as for M1 & M14 service. While the thread pitch of the windage screw is different, giving, 1/2 M.O.A. increments, the hood is the only visible difference in the sights. The hood may be rotated with the notch facing up (+ 1/2 M.O.A.) or down (- 1/2 M.O.A.).

INITIAL SIGHT SETTINGS: Rear windage = MZ, Rear elevation = MZ, notch in hood must be turned down.

NOTE: Under ideal circumstances, when zeroing M1 & M14 service & match rifles, center the rear aperture for windage (MZ) and move the front sight as required until true zero is achieved with rear windage at MZ. This makes available the greatest number of rear windage adjustment clicks on either side of **MECHANICAL ZERO**.

ZEROING CHART			
<i>Name:</i>	<i>Location:</i>	<i>Date:</i>	
<i>Rifle:</i>	<i>Serial #.</i>	<i>Ammunition:</i>	
<i>Distance:</i>	<i>Position:</i>	<i>Support.</i>	
On this Rifle, the Minute of Angle Change for Each "Click" on the Sights Is:			
<i>Front Windage</i>	<i>Front Elevation</i>	<i>Rear Windage</i>	<i>Rear Elevation</i>
On this Rifle the Recommended Initial Sight Settings to Fire the First Group Are:			
<i>Front Windage</i>	<i>Front Elevation</i>	<i>Rear Windage</i>	<i>Rear Elevation</i>

1. FIRE THE FIRST GROUP

1A. The group needs to move (in MOA):	<i>up</i>	<i>down</i>	<i>left</i>	<i>right</i>
1B. The required sight adjustment in clicks is:	<i>F/R</i>	<i>U/D</i>	<i>F/R</i>	<i>L/R</i>
1C. Adjust the Sights and Then Record the Sight Settings on the Rifle as Clicks from MZ				
<i>Front Windage</i>	<i>Front Elevation</i>	<i>Rear Windage</i>	<i>Rear Elevation</i>	

2. FIRE THE SECOND GROUP

1A. The group needs to move (in MOA):	<i>up</i>	<i>down</i>	<i>left</i>	<i>right</i>
1B. The required sight adjustment in clicks is:	<i>F/R</i>	<i>U/D</i>	<i>F/R</i>	<i>L/R</i>
1C. Adjust the Sights and Then Record the Sight Settings on the Rifle as Clicks from MZ				
<i>Front Windage</i>	<i>Front Elevation</i>	<i>Rear Windage</i>	<i>Rear Elevation</i>	

3. FIRE THE THIRD GROUP

1A. The group needs to move (in MOA):	<i>up</i>	<i>down</i>	<i>left</i>	<i>right</i>
1B. The required sight adjustment in clicks is:	<i>F/R</i>	<i>U/D</i>	<i>F/R</i>	<i>L/R</i>
1C. Adjust the Sights and Then Record the Sight Settings on the Rifle as Clicks from MZ				
<i>Front Windage</i>	<i>Front Elevation</i>	<i>Rear Windage</i>	<i>Rear Elevation</i>	

ZERO SIGHT SETTINGS AS CLICKS FROM MECHANICAL ZERO			
<i>Front Windage</i>	<i>Front Elevation</i>	<i>Rear Windage</i>	<i>Rear Elevation</i>

Minutes of Angle (MOA) for Each "Click" on the Rifle Sights				
TYPE OF RIFLE	Front Windage	Front Elevation	Rear Windage	Rear Elevation
Colt AR-15A1	N/A	1 MOA	1 MOA	N/A
A1 - short sight radius	N/A	1.5 MOA	1.5 MOA	N/A
Colt AR-15A2	N/A	1.25 MOA	0.5 MOA	1 MOA
A2 - short sight radius	N/A	1.875 MOA	0.75 MOA	1.5 MOA
M1 & M14 Service	DRIFT	N/A	1 MOA	1 MOA
M1 & M14 Match	DRIFT	N/A	0.5 MOA	1 MOA *
Ruger Mini-14	N/A	N/A	1 MOA	1 MOA
H&K 91	N/A	N/A	1.25 MOA **	1.25 MOA **
H&K 93	N/A	N/A	1.6 MOA **	1.6 MOA **
Steyr A.U.G.	N/A	N/A	1.5 MOA	1.5 MOA

* Plus or Minus 1/2 MOA Is Achieved by Rotating the Hood

** Refers to 1/4 Turn of the Sight Drum (Note: May or May Not "Click")

Recommended Initial Sight Settings	
Colt AR15A1	Front Elevation = MZ Rear Windage = MZ Always use the same (long-range) aperture.
Colt AR15A2	Front Elevation = MZ Rear Windage = MZ Rear Elevation = MZ Always use the small aperture. Use front elevation adjustment for initial zeroing.
M1 / M14	Rear Elevation = MZ Rear Windage = MZ
Ruger Mini-14	Rear Windage = MZ Rear Elevation = 12U
H&K 91 & 93	Rear Windage = MZ Rear Elevation = 12U (12 "clicks" or 3 full turns) Pick ONE aperture; always use the same aperture.
Steyr A.U.G.	Elevation = MZ Windage = MZ Do NOT adjust the sights before marking MZ. Consider whatever setting is on the gun as MZ.

CONTINUING EDUCATION

The following are suggested reading to enhance your knowledge of riflecraft.

Books

Cooper, Jeff. (August 1997). *The Art of the Rifle*. Paladin Press. ISBN: 0873649311

Fairburn, Richard. (1994). *Police Rifles - Selecting the Right Rifle for Street Patrol and Special Tactical Situations*. Boulder, Colorado: Paladin Press Book.

Farnam, John S. (January 1, 1998). *The Farnam Method of Defensive Shotgun and Rifle Shooting*. Defense Training International Publications, Inc. ISBN: 0965942201

Felter, Brian A. (1991). *Police Shotguns And Carbines*. Englewood Cliffs, New Jersey: Prentice-Hall.

Lauck, Dave M. (May 1996) *The Tactical Marksman*. Paladin Press. ISBN: 0873648811

Plaster, Maj. John L. (January 1993). *The Ultimate Sniper: An Advanced Training Manual for Military and Police Snipers*. Paladin Press. ISBN: 0873647041

Suarez, Gabriel (November 1999). *The Tactical Rifle*. Paladin Press. ISBN: 1581600496

Manuals

Paladin Press. (1996). *How To Shoot Your M16 / AR-15 In Training And Combat*. Boulder, Colorado: Paladin Press.

U.S. Army / U.S. Marine. *Operator's Manual w/components list, Rifle 5.56mm -M16A2*.

Colt Safety and Instruction Manual. *Colt AR-15 Semi-Automatic Rifles*.

Articles

Roberts, Gary K. (D.D.S.) and Bullian, Michael E. (Special Agent, Calif. Dept. of Justice)

Comparison of the Wound Ballistic Potential of 9mm vs. 5.56mm (.223) Cartridges for Law Enforcement Entry Applications.

Other Police Department Sources

Denver, Colorado Police Department. Urban Rifle Program-Instructor Notebook.

King County Sheriff's Department. Patrol rifle Program.

Olympia Police Department. Patrol Rifle Basic Training Lesson Plan.

Kirkland Police Department. AR-15 Carbine Lesson Plan. Nick Seibert (1997).

Alaska highway patrol qualification

107-24 Use Of Force

Alaska Department of Public Safety Operating Procedures Manual
Revised 08/01/2002

107.170 PATROL RIFLE QUALIFICATION

A. **Requisites.** 1. Target - IPSC "Brussels" 2. 50 rounds of authorized ammunition . 3. Department issued or authorized personal patrol rifle that is suitable for the intended use. It must be equipped in a manner that allows it to be used in accordance with Department training.

B. **Instruction to shooters.** 1. Shooters will go from CRUISER CARRY (Condition 2) to ACTION CARRY (Condition 1) upon the command to "**MAKE READY**"

2. With one exception, all stages of fire will start from the guard, ACTION CARRY (Condition 1), safety on.

3. Shooters will combat load and keep the weapon in ACTION CARRY (Condition 1) throughout the duration of the course.

4. Shooters will be evaluated to determine compliance with the Department's weapons training material. Those not complying will not be considered qualified and will be entered into remedial training.

C. **Course of fire.**

Stage 1 -- 100 yards -- 2 rounds -- 8 seconds - PERFORM THREE TIMES
From the guard, drop to prone and fire 2 rounds center mass.

Stage 2 -- 50 yards -- 2 rounds -- 6 seconds - PERFORM THREE TIMES
From the guard, drop to prone and fire 2 rounds center mass.

Stage 3 -- 25 yards -- 4 rounds -- 18 seconds - PERFORM TWICE
From the guard, while standing, fire 2 rounds center mass. Drop to kneeling, speed reload and fire 2 rounds center mass.

Stage 4 -- 15 yards -- 2 rounds -- 5 seconds - PERFORM THREE TIMES
From a slung position (African or team), and on command, point in and fire 2 rounds center mass.

Stage 5 -- 15 yards -- 2 rounds -- 3.5 seconds - PERFORM THREE TIMES
From the guard, drop to kneeling and fire 2 rounds center mass

Stage 6 -- 7 yards -- 2 rounds -- 2 seconds - PERFORM THREE TIMES
From the guard, while standing, fire two rounds center mass.

Stage 7 -- 5 yards -- 3 rounds -- 3.5 seconds - PERFORM TWICE
From the guard, while standing, fire 2 rounds center mass, one round to the head.

Stage 8 -- 3 yards -- 2 rounds -- 1.5 seconds - PERFORM THREE TIMES
From the guard, while standing, fire 2 rounds center mass.

D. **Scoring.** Maximum 250 - Minimum 200

Body:

A Zone	5
B/C Zones	4
D	1

Head:

A zone	5 points (Stage 7 only)
B zone	1 point (Stage 7 only)

Overtime: Minus 5 points
Excessive hits: Minus 5 points for each hit.

107-25 **Use Of Force**

Alaska Department of Public Safety Operating Procedures Manual

Revised 08/01/2004

107.180 BOLT-ACTION RIFLE QUALIFICATION

A. Requisites.

1. Target - IPSC "Brussels"
2. 20 rounds of authorized ammunition.

B. Instruction to shooters.

1. Shooters will go from CRUISER CARRY (Condition 2) to ACTION CARRY (Condition 1) upon the command to "**MAKE READY**".
2. All stages of fire will start from the guard, ACTION CARRY (Condition 1), SAFETY ON.
3. Shooters will load the weapon as needed and keep the weapon in ACTION CARRY (Condition 1) throughout the duration of the course.
4. Shooters will be evaluated to determine overall compliance with the Department's weapons training material. Those not complying will not be considered qualified.

C. Course of fire.

Stage 1 -- 100 yards -- 5 rounds -- 45 seconds
From the guard, assume a prone position and fire five rounds center mass.

Stage 2 -- 50 yards - 5 rounds -- 30 seconds
From the guard, assume a kneeling position and fire five rounds center mass.

Stage 3 -- 15 yards -- 1 round -- 2.5 seconds - PERFORM FIVE TIMES
From the guard, fire one round center mass.

Stage 4 -- 7 yards -- 1 round -- 2.5 seconds - PERFORM FIVE TIMES
From the guard, fire one round to the head "A" zone

D. Scoring. Maximum 100 - Minimum 75

Point Values:

A Zone	5 points
B/C Zone	4 points
B Zone	1 points (Stage 4, head shots)
D Zone	3 points

Overtime: Minus 5 points for each overtime.

IDAHO P.O.S.T PATROL RIFLE QUALIFICATION

<u>Distance</u>	<u>Position</u>	<u>No. of rounds</u>	<u>Time</u>
50 Yards	Prone	10	1 minute
50 Yards	Shooters choice	5	20 seconds
25 Yards	Shooters choice	10	20 seconds
15 Yards	Standing	10	15 seconds
7 yards	Standing	5 pairs (10 rounds)	2 seconds/pair x 5 reps
5 Yards	Standing	5 single head shots	2 seconds/each x 5 reps

A score of 213 points (85%) must be obtained to successfully pass this course of fire. All of the rounds must be in the silhouette. **Any rounds not accounted for on the target (in the black) will constitute an automatic failure of this course of fire.**

The target to be used will be the current P.O.S.T. Handgun qualification target the TQ21 with the square drawn in on the head for the eye region shots. The target that already has the zones drawn in can be substituted but will be a form of the TQ21.

If a bullet hole should touch a line, it gets counted as the higher of the two possible scores.

Shooters will be provided with 15 seconds of “preparation” time before each stage to get in their positions.

MALFUNCTIONS / ALIBIS

Malfunctions are not an excuse or alibi to stop the qualification procedure. If a malfunction occurs, the shooter must correctly clear the malfunction. He/she may then - and only then - continue qualification after the end of the specified time.

**AUBURN POLICE DEPARTMENT
RIFLE (.223) QUALIFICATION
COURSE OF FIRE**

Officers start at the 50 yd. with the rifle loaded and wearing their appropriate team gear.

First stage of fire: Officers will start at the low ready position and fire two rounds to the body in 6 seconds from the prone position. They fire this drill three times for a total of six rounds. Time limit for the two shot stages is 6 seconds.

- Sequence:**
- 1. Low ready to prone.**
 - 2. Fire two rounds to body.**
 - 3. Repeat**
 - 4. Repeat.**

Second stage of fire: Officers will start at the low ready position and fire two rounds to the body in 6 seconds from the squat or sitting position. They fire this drill three times for a total of six rounds. Time limit for the two shot stages is 6 seconds.

- Sequence:**
- 1. Low ready to squat or sitting position.**
 - 2. Fire two rounds to body.**
 - 3. Repeat.**
 - 4. Repeat.**

Third stage of fire: Officers will start at the low ready position and fire two rounds to the body in 5 seconds from the kneeling position. They fire this drill three times for a total of six rounds. Time limit for the two shot stages is 5 seconds.

- Sequence:**
- 1. Low ready to squat or sitting position.**
 - 2. Fire two rounds to body.**
 - 3. Repeat.**
 - 4. Repeat.**

Fourth stage of fire: Officers move forward to the 25 yard line. Officers will start at the low ready position and fire two rounds to the body from standing off hand, speed kneel, reload, fire two rounds to the body in 8 seconds. They fire this drill two times for a total of four rounds. Time limit for the four rounds is 8 seconds.

- Sequence:**
- 1. Low ready to standing oft hand-semi.**
 - 2. Fire two rounds to body.**
 - 3. Repeat.**

AUBURN POLICE DEPARTMENT

**RIFLE (.223) QUALIFICATION
COURSE OF FIRE**

Fifth stage of fire: Officers move forward to the 15 yard line. Officers will start at the low ready position and fire two rounds to the body in 3.5 seconds from standing off hand position. They fire this drill three times for a total of six rounds. Time limit for the two shot stages is 3.5 seconds.

- Sequence:**
- 1. Low ready to standing off hand.**
 - 2. Fire two rounds to body.**
 - 3. Repeat.**
 - 4. Repeat.**

Score and mark target holes: There should be 32 holes max points **(160)**.

Sixth stage of fire: Officers move forward to the 10 yard line. Officers will start at the low ready position and fire two rounds to the body from standing off hand and fire one round to the head in 3 seconds. Repeat this drill one time. The time limit for each sequence is 3 seconds.

- Sequence:**
- 1. Low ready to standing off.**
 - 2. Fire two rounds to body.**
 - 3. Fire one round to head.**
 - 4. Repeat.**

Seventh stage of fire: Officers move forward to the 7 yard line. Officers will start at the low ready position and fire two rounds to the body from the speed kneeling position in 3 seconds. They will repeat this drill one time. Time limit for the two rounds is 3 seconds.

- Sequence:**
- 1. Low ready to speed kneeling.**
 - 2. Fire two rounds to body.**
 - 3. Repeat.**

Eighth stage of fire: Officers stay at the 7 yard line. Officers will start at the low ready position and fire two rounds to the body from the speed kneeling position and one round to the head in 3 seconds. They will repeat this drill one time. Time limit for the two rounds is 3 seconds.

- Sequence:**
- 1. Low ready to speed kneeling.**
 - 2. Fire two rounds to body.**
 - 3. One round to the head.**
 - 4. Repeat.**

**AUBURN POLICE DEPARTMENT
RIFLE (.223) QUALIFICATION
COURSE OF FIRE**

Ninth stage of fire: Officers move forward to the 5 yard line. Officers will start at the low ready position and fire three rounds to the body in 2 seconds from the standing off hand. Repeat the course of fire for a total of six rounds. Time limit for the three rounds is 2 seconds.

Sequence:

1. **Low ready to standing off hand.**
2. **Fire three rounds to body.**
3. **Repeat.**

Tenth stage of fire: Officers stay at the 5 yard line. Officers will start at the low ready position and fire two rounds to the body from the standing off hand position and one round to the head in 2 seconds. They will repeat this drill one time. Time limit for the three rounds is 2 seconds.

Sequence:

1. **Low ready to standing off hand.**
2. **Fire two rounds to body.**
3. **One round to the head.**
4. **Repeat.**

Score and mark target holes: There should be 60 holes max points **(300)**.

SCORING SYSTEM:

Sixty shots with a maximum score of 5 points per round = 300

Point values:

5 Points Body hits inside the eight ring₁ or any hit in head scoring zone.

4 Points Body hits in the seven ring.

1 Points Any other hit on the silhouette including hits on the head outside of head scoring zone.

All shots must hit silhouette any misses are a DNQ.

Minimum Qualifying score is 255 points or 85%.

**30 RD. QUALIFICATION COURSE FOR SEMI-AUTO RIFLE
MILL CREEK P.D.**

This course is designed to utilize the B-21 style target. The course is scored as follows:

All hits designated to the body will be scored only if they are in the maximum scoring area (the 5 zone). All

hits designated as head shots will be scored only if they are in the designated scoring area of the head. Any shots fired after the designated maximum time will not be scored. The shooter needs 100% to qualify. This course is meant to emphasize accuracy, changing shooting platforms, failure of body shots and tactical reload of the semi-automatic carbine rifle. Each shooter will be allowed only two attempts at qualification. Shooters failing to qualify will be scheduled for remedial training and requalification.

Stage 1

Prior to starting the stage, the rifle will be in the car carry condition, stock collapsed. Chamber empty, magazine inserted, safety on. Upon command the shooter will load and make ready the weapon then commence firing to the body of target. Stage 1 has 90 seconds maximum time allowed.

From the 25 yard line.

- 1) 6 rounds standing right barricade; tactical reload
- 2) 6 rounds kneeling; tactical reload
- 3) 6 rounds prone.

Stage 2

Starting from the low ready (round is chambered, safety on, muzzle slightly depressed and eyes on target). Four separate strings to be fired on separate command, 5 seconds maximum time allowed per string.

From the 15 yard line.

- 1) Two rounds to the body and one to the head.
- 2) Two rounds to the body and one to the head.
- 3) Two rounds to the body and one to the head.
- 4) Two rounds to the body and one to the head.

Scoring and evaluation.

T.P.D. RIFLE QUALS COURSE

(RIFQUAL2)

(Computer program line number)

Using the 6-step barricade. 50 yard line

- (2) **Level #1**
Standing muzzle up, 2 rounds.
- (3) **Level #2**
Standing muzzle down, 3 rounds.
- (4) **Level #3**
Standing muzzle up, 2 rounds.
- (5) **Level #4**
Standing muzzle down, 3 rounds.
- (6) **Level #5**
Standing muzzle up, 3 rounds.
- (7) **Level #6**
Standing muzzle down, 3 rounds.
- (8) **Stand in front of the barricade, gun ready position. On command, move out. When the target turns, stop, fire 2 rounds. (near the 40-yard line) Dress line to the right.**
- (9) **On command, move out at gun ready position. When the target turns, stop, fire 2 rounds. (near the 30-yard line) Immediate reload, safety on.**

Move barricade to the 25-yard line.

T.P.D. RIFLE QUALS COURSE

(RIFQUAL2)

25 yard line

- (10) **Level #1**

Standing rifle shouldered your choice, 2 rounds.

(11) **Level #2**
Standing rifle shouldered your choice, 3 rounds.

(12) **Level #3**
Standing rifle shouldered your choice, 2 rounds.

(13) **Level #4**
Standing rifle shouldered your choice, 3 rounds.

(14) **Level #5**
Standing rifle shouldered your choice, 3 rounds.

(15) **Level #6**
Standing rifle shouldered your choice, 3 rounds.

(16) **Stand in front of the barricade, gun ready position. On command, move out. When the target turns, stop, fire 2 rounds. (near the 20-yard line) Dress line to the right.**

(17) **On command, move out at gun ready position. When the target turns, stop, fire 2 rounds. (near the 10-yard line)**

(18) **Transition to your pistol, but do not fire your pistol. Challenge!**
Return target(s) to the range house for scoring.

**Aberdeen Police Department
Firearms Training Unit**

Course title or number: Rifle Qualification Course for Patrol Rifle.

Course designed by: FTU

Primary Objectives: Demonstration of appropriate marksmanship.

Secondary Objectives: Demonstration of safe weapon handling and operation skills. Proper use of cover, combat reloading and moving with the weapon.

Explanation of Objectives: The primary and secondary objectives are designed to insure the safe and proficient handling of the patrol rifle. They allow the demonstration of the basic skills needed by the officer to operate the rifle in an effective manner while at the same time promoting confidence by the officer in his/her operating and marksmanship skills. These objectives also assist the FTU to identify areas of needed training on a personal level for each officer.

Course Overview: The annual patrol rifle qualification is a 30 round course shot from the 100-yard line, 50-yard line and the 25-yard line.

The **100-yard** line course of fire is a ten (10) round course in 60 seconds. The officer will load and make ready and on the command, "threat," will choose a shooting position and fire ten (10) rounds in 60 seconds with a mandatory tactical reload prior to the last shot being fired.

The **50-yard** line course of fire is a ten (10) round course in 60 seconds. The officer will load and make ready and on the command, "threat," will fire three (3) rounds standing on the right side of the barricade, three (3) rounds while standing on the left side of the barricade and four (4) rounds while prone on either side of the barricade. A mandatory tactical reload is required prior to the last shot being fired.

The **25-yard** line course of fire is a ten (10) round course in 40 seconds. The officer will load and make ready and on the command of "threat," fire three (3) rounds standing on the right side of the barricade, three (3) rounds standing on the left side of the barricade and four (4) rounds kneeling on either side of the barricade. A mandatory tactical reload is required before the last shot is fired.

Verification of Objectives: Visual observation of the shooters weapon handling and operation skills, use of cover, and movement with the weapon by FTU instructors.

100 percent of the rounds fired from the 100-yard line must be on the body of the Caudle II target.

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100 percent of the rounds fired from the 50-yard line must be within the scoring circle of the Caudle II target.

100 percent of the rounds fired from the 25-yard line must be within the "9" ring or better on the Caudle II target.

A FTU member will score the target and the score will be recorded on the officers training sheet for that day.

