Preliminary Marksmanship Instruction and Evaluation

Rifle and Carbine - M16/M4 Series

TC 3-22.9

Safe Weapons Handling

Rules of Firearms Safety

Standardized for any weapon a Soldier may employ

- Rule 1: Treat every weapon as if it is loaded
- Rule 2: Never point the weapon at anything you do not intend to destroy
- Rule 3: Keep finger straight and off the trigger until ready to fire
- Rule 4: Ensure positive identification of the target and its surroundings

Safe Weapons Handling

"The Army has built an enormous safety edifice to ensure that we train safely but we have missed the essential point - we must design our procedures and train our Soldiers to be safe.

"Many of today's safety programs promote peacetime risk avoidance, not safety. They either prohibit critical training or add an artificial step such as rodding weapons on live fire ranges that doesn't make sense for combat. We must change this.

"Army weapon safety procedures are designed to avoid accidents on highly controlled ranges. They are not designed to teach safe use of weapons. Where does a Soldier develop the proper reflexes with his weapon to ensure others are not endangered?"

- Lt. Col. Robert J. Greenwalt, Jr.

Safe Weapons Handling

Rodding Weapons is Unsafe

- Rodding is not mentioned in AR 385-63, ***Range Safety***
- Rodding weapons on ranges is an artificial procedure that prevents teaching proper safe handling
- Rodding has destroyed weapons
- Rodding causes permanent damage to weapons
- Rodding forces unsafe weapon handling procedures

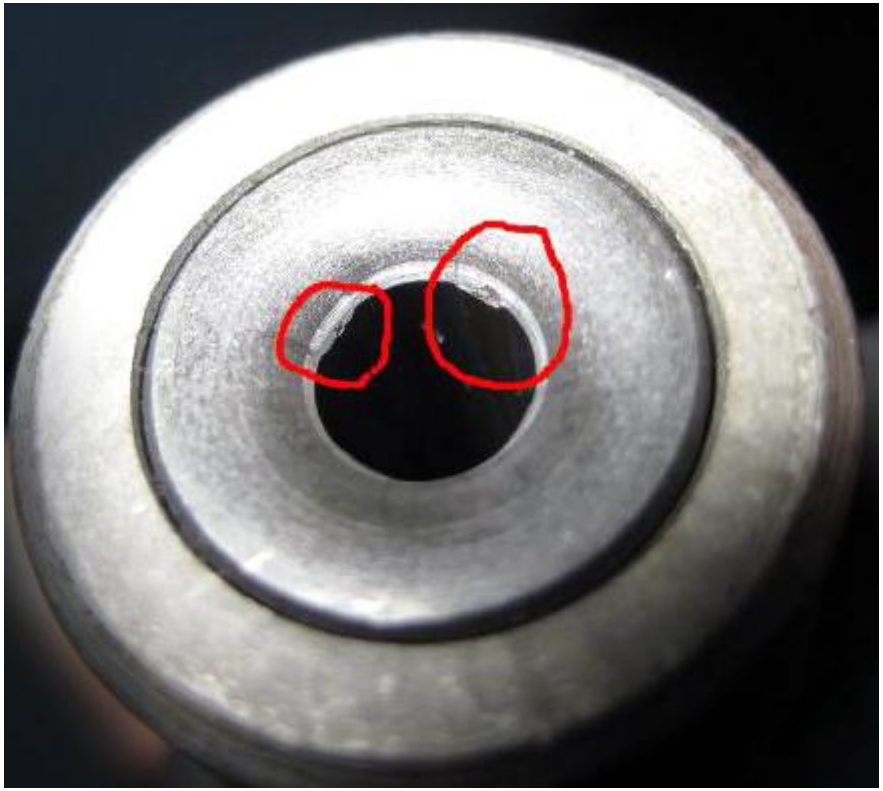
- Visual check (clear, remove bolt carrier or barrel) from the breech is a safe procedure that won't cause damage

Safe Weapons Handling

Rodding has Destroyed Weapons

Safe Weapons Handling

Metal Rods in Barrels Cause Accuracy Loss and Permanent Damage



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Rodding forces Rule 2 violation

Preliminary Marksmanship Instruction and Evaluation

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TC 3-22.9

Rodding forces Rule 2 violation

Safe Weapons Handling

Weapon Safety Status

Standard code using common colors to represent level of readiness. Represents specific series of actions applied.

- Green: Magazine removed, chamber empty, bolt open or forward, selector on SAFE. “Green and Clear.”
- Amber: Filled magazine in well, bolt forward on EMPTY chamber, selector on SAFE. “Go Amber.”
- Red: Filled magazine in well, chamber loaded, bolt forward, selector on SAFE. ray, bolt open and locked rearward, fire/safe selector on SAFE. “Go Red.”
  Semi or Burst/Auto only when ready to engage. Follow unit ROE and/or SOP.

Safe Weapons Handling

Weapons Control Status

Tactical method of fire control given by a leader incorporating the situation, ROE, and anticipated enemy contact.

- Weapons Hold: Engage only if engaged or ordered to engage.
- Weapons Tight: Engage only if target is positively identified as enemy.
- Weapons Free: Engage targets not positively identified as friendly.

Principles of Operation

Army Standard Service Rifle

- 5.56-mm, magazine-fed, gas-operated, air-cooled, shoulder-fired rifle/carbine semiautomatic (single-shot) or three-round burst/automatic mode

- Components: Uniquely identifiable group of fitted parts, pieces, assemblies or subassemblies required to perform a distinctive function. Usually removable in one piece.

- Assemblies: Group of subassemblies and parts that are fitted to perform specific set of functions during operation. Cannot be used independently for any other purpose.

- Subassemblies: Group of parts fitted to perform a specific set of functions during operation. Compartmentalized to complete a single specific task. May be grouped with other assemblies, subassemblies, and parts to create a component.

- Parts: Individual items that perform a function when attached to a subassembly, assembly, or component that serves a specific purpose.

Principles of Operation

Technical Data

Cycle of Function

Mechanical process a weapon follows during operation

Starts with the bolt locked to the rear, chamber cleared, and magazine inserted into the well with at least one cartridge.

Executes the sequential phases of the cycle of functioning to fire a round and prepare the weapon for the next round.

- Feeding.
- Chambering.
- Locking.
- Firing.
- Unlocking.
- Extracting.
- Ejecting.
- Cocking

TM 9-1005-319-10

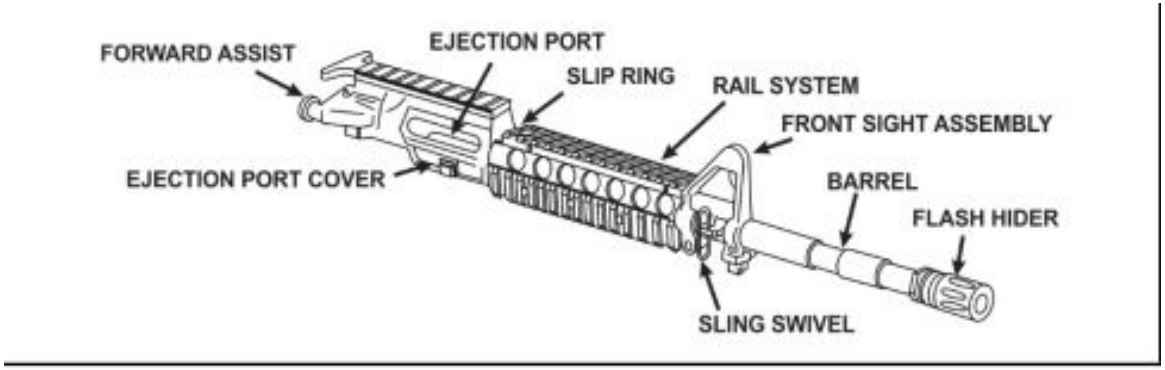


Figure 2-1. Upper receiver

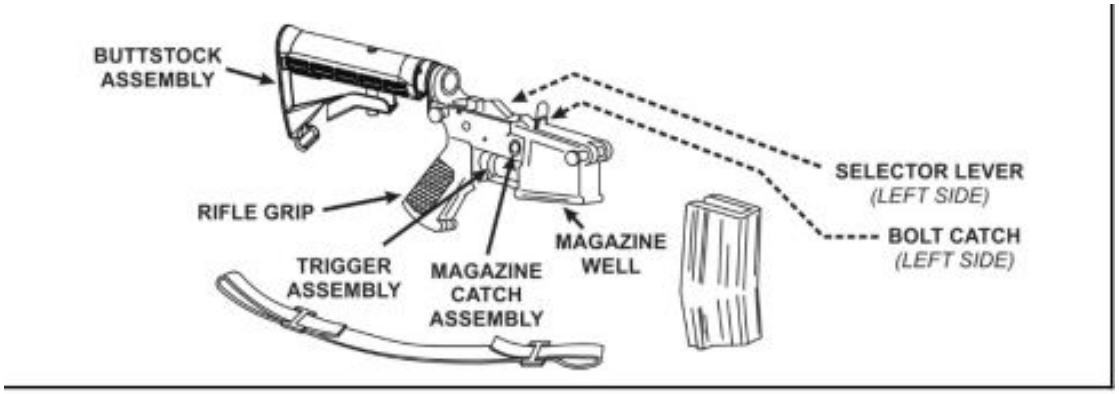
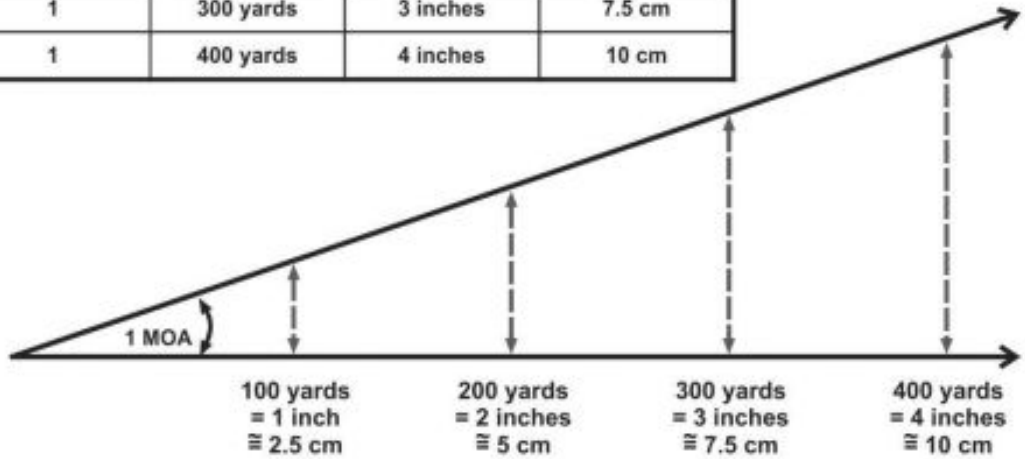


Figure 2-2. Lower receiver

Aiming Devices

Units of Angular Measurement - MOA

MOA	At Distance	Equals	
1	100 yards	1 inch	2.5 cm
1	200 yards	2 inches	5 cm
1	300 yards	3 inches	7.5 cm
1	400 yards	4 inches	10 cm



Angle dimension exaggerated for clarity. Examples are not to scale. Centimeter (cm) conversions are approximate.

MINUTE OF ANGLE (MOA) Unit of Measeurement	
There are 360 degrees in a circle.	There are 60 MOA in a degree.
There are 21,600 MOA in a circle.	1 MOA at 100 yards ≈ 1 inch.
Smaller measurements of an MOA are described in fractions, not seconds (i.e., 1/2 MOA).	

Aiming Devices

Units of Angular Measurement - MOA

Rifle shooting is often measured in Minutes of Angle

60 Minutes of Angle per degree

21,600 Minutes of Angle per circle/revolution

1 MoA at 300 yards = π inches

Simplify this by rounding off:

100 yards: 1 MoA ≈ 1 inch (1.0471)

200 yards: 1 MoA ≈ 2 inches (2.0943)

300 yards: 1 MoA ≈ 3 inches (3.14159)

1000 yards: 1 MoA ≈ 10 inches(10.471)

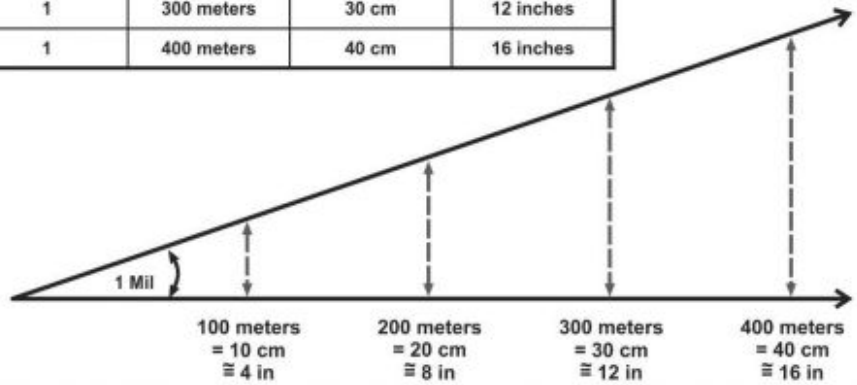
Aiming Devices

Units of Angular Measurement - Mils (milliradians)

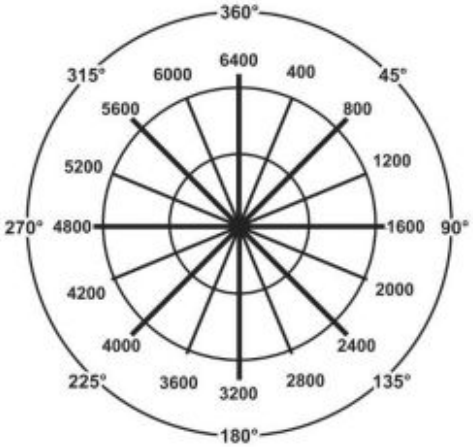
The mil is a common unit of angular measurement that is used in direct fire and indirect fire applications.

Check Technical Manual for your sight to know adjustments

Mil	At Distance	Equals	
1	100 meters	10 cm	4 inches
1	200 meters	20 cm	8 inches
1	300 meters	30 cm	12 inches
1	400 meters	40 cm	16 inches



MILS Unit of Measurement	
There are 360 degrees in a circle.	There are 17.78 mils in a degree.
There are 6400 mils in a circle	1 mil at 100 meters = 10 cm.



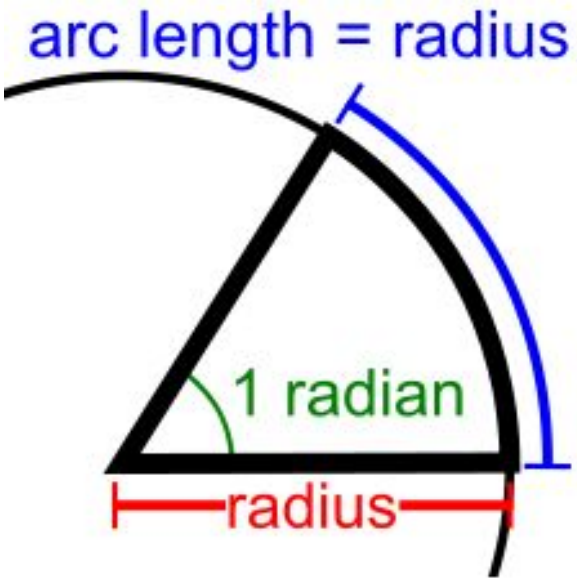
Aiming Devices

Units of Angular Measurement - Mils

Gunnery is often measured in Mils, increasingly popular for precision rifle

Mil (mrad) is short for milliradian

A circle (360 degrees) is 2 π radians



Aiming Devices

Units of Angular Measurement - Mils

"Milli-" prefix is 1/1000

Shortened to Mil, mil, or mrad

2000π milliradians = 2π radians

360 degrees = 6.283 radians = 6283 mils

1 Mil = 3.43 MoA (≈ 3.5 MoA ≈≈ 4 MoA)

Aiming Devices

Units of Angular Measurement - Mils

6283 mils are the true unit of angular measurement

1 mil subtends 1/1000 of the distance (radius)

Telescopic sight manufacturers using rangefinding reticles (e.g., mil dots) use this

There is NO difference between Army and Marine mils

6400 mils in NATO countries (“artillery mils”)

6000 mils in the former Soviet Union and Finland

6300 mils in Sweden (streck, or “line")

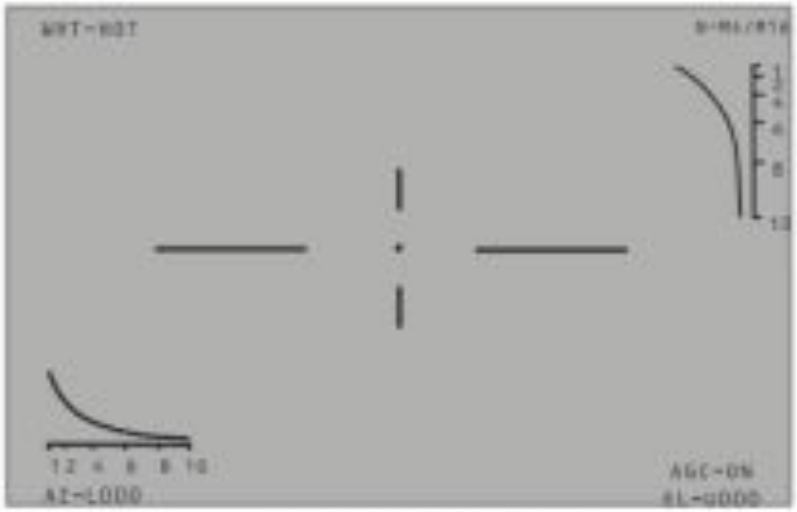
Aiming Devices

Reticle

A series of fine lines or dot(s) in the eyepiece used for aiming at varying distances and measuring for range estimation. Can be MOA or mils.

CCO, M68 Reticle

RCO, M150 Reticle

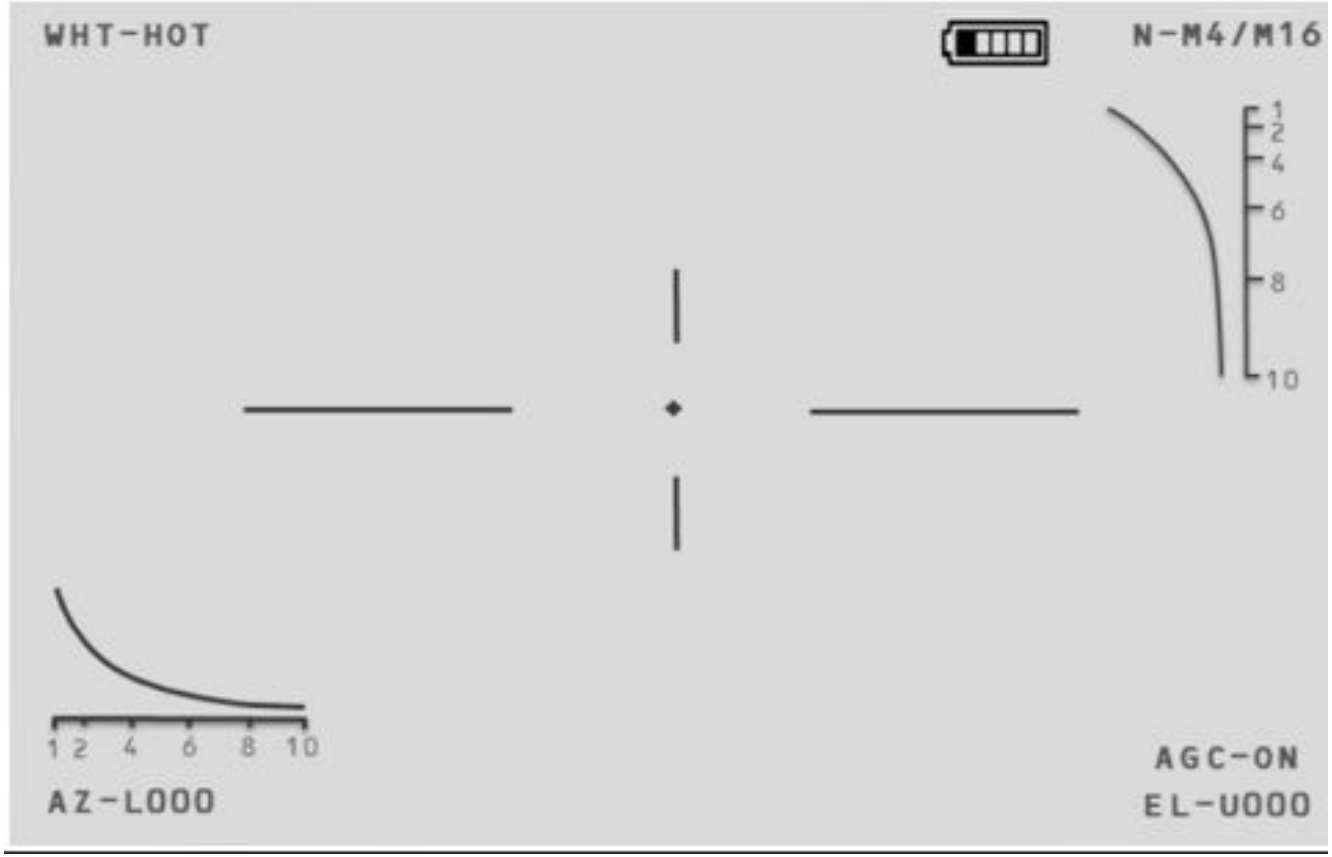


AN/PAS-13 Reticle

Aiming Devices

Stadia Reticles

"Stadiametric" or "choke sight" has vertical and horizontal lines to reflect size of vehicles, personnel, etc. at distance. Placed next to a series of aim points (a dot here) for aiming.



Aiming Devices

Iron Sights

- Front sight: elevation (zero)
- Rear sight: Windage and elevation (distance)
- Set rear sight elevation to have 4 MOA of clicks below 300 meter mark
- 200 meter: ~2MOA below 300 meter mark
- 0-2 (large) aperture (0.200” vs. 0.070”) ~2.5MOA below

FUNCTION	RIFLE	ADJUSTMENTS
ZERO WINDAGE	M16A2	Center rear sight aperture for mechanical zero windage
	M16A4	
	M4	
	M4A1	
ZERO ELEVATION	M16A2	300 meter mark +1 click up for 25 m zeroing Once zeroing is complete, rotate elevation knob -1 click down to apply 300 m zero
	M16A4	
	M4	
	M4A1	
WINDAGE	M16A2	1/2 MOA
	M16A4	1/2 MOA
	M4	1 MOA
	M4A1	1 MOA
ELEVATION (RANGE) FRONT SIGHT POST	M16A2	1 1/2 MOA
	M16A4	1 1/2 MOA
	M4	1 7/8 MOA
	M4A1	1 7/8 MOA

Aiming Devices

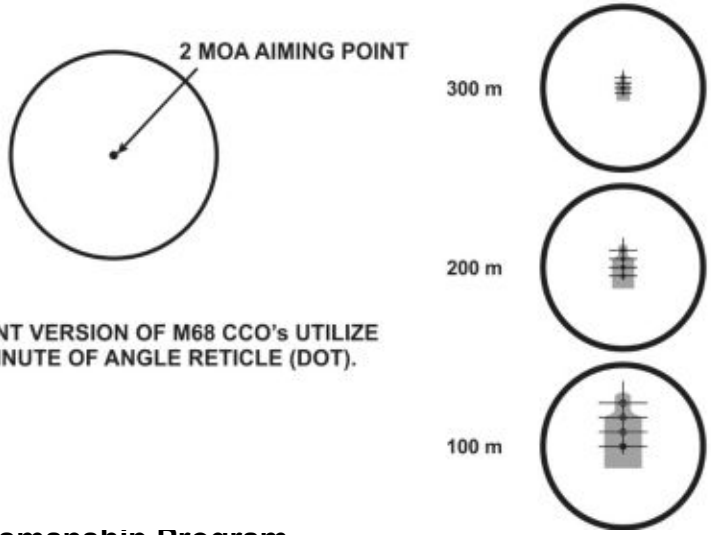
M68 CCO

- 2 MOA dot (older versions 4 MOA dot)
- Clicks: 0.5 MOA
- Use both eyes open
- Can be used with front cap on (occluded eye aiming)
- Aimpoint (Sweden) first made in 1975

TM 9-1240-413-13&P		
DIMENSIONS		
LENGTH	4.0 in	10 cm
WIDTH	2.3 in	5.8 cm
HEIGHT	2.7 in	6.8 cm
WEIGHT	15.0 oz	425 g

FUNCTION	SINGLE CLICK
ZERO WINDAGE	0.5 MOA
ZERO ELEVATION	0.5 MOA
WINDAGE	0.5 MOA
ELEVATION (RANGE)	0.5 MOA

RETICLE



CURRENT VERSION OF M68 CCO's UTILIZE A 2 MINUTE OF ANGLE RETICLE (DOT).

Aiming Devices

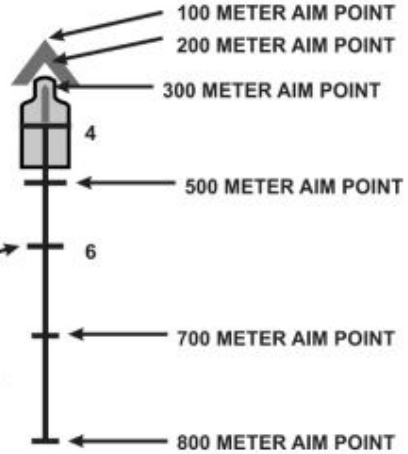
Rifle Combat Optic

- ACOG (Advanced Combat Optical Gunsight
- 6 MOA chevron (TA31)
- Fiber optic increases reticle illumination in bright light (cover with tape as needed)
- Tritium illuminates in dark
- Other reticles exist
- Trijicon (Michigan/Sweden) first made in 1981

TM 9-1240-416-13&P		
DIMENSIONS		
LENGTH	4.0 in	10 cm
WIDTH	2.3 in	5.8 cm
HEIGHT	2.7 in	6.8 cm
WEIGHT	15.0 oz	425 g

FUNCTION	SINGLE CLICK	
	BLADE / COIN SLOT	KNOB
ZERO WINDAGE	1/3 MOA	1/2 MOA
ZERO ELEVATION	1/3 MOA	1/2 MOA
WINDAGE	1/3 MOA	1/2 MOA
ELEVATION (RANGE)	1/3 MOA	1/2 MOA

RETICLE



NOTE: Depending on the variant, windage and elevation adjustment controls are either knife blade / coin slot, or a knob.

Employment

Shot Process

Basic outline of an individual engagement sequence

- Pre-shot
- Shot
- Post-shot

Pre-shot	Position
	Natural Point of Aim
	Sight Alignment / Picture
	Hold
Shot	Refine Aim
	Breathing Control
	Trigger Control
Post-shot	Follow-through
	Recoil management
	Call the Shot
	Evaluate

Employment

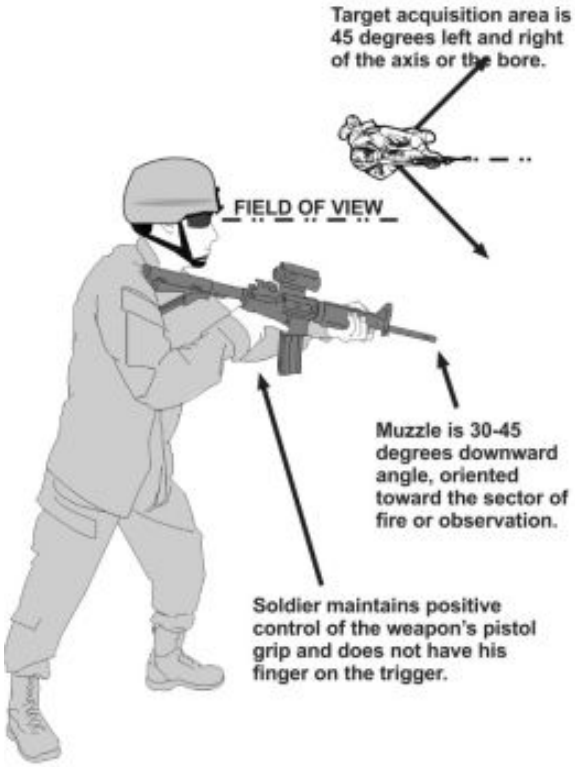
Functional Elements

- **Stability**: Provide a consistent base to fire from and maintain through the Shot Process until the recoil pulse has ceased. Includes hold/position.
- **Aim**: Continuous process of orienting the weapon, aligning the sights, using appropriate lead and elevation during engagement.
- **Control**: All conscious actions before, during, and after the Shot Process. Trigger control is of primary importance, along with whether, when, and how to engage. Incorporates the Soldier as a function of safety and responsibility.
- **Movement**: The process of moving during the engagement process. Into and out of position, moving laterally, forward, diagonally, and in a retrograde manner while maintaining stabilization, appropriate aim, and control

Employment

Carry Positions

Safe Hang



Low Ready

Ready/Ready Up

Employment

Stability

The object is to create solid, consistent platform

- **Support**: Use support and bone structure primarily.
- **Muscle relaxation**: Use good positioning (cheek weld, body straight behind line of recoil, etc.) to enhance support.
- **Natural Point of Aim**: Where barrel naturally orients when position is solid, muscles relaxed and support is achieved. Should be **on target**.
- **Recoil management**: Maintain stable firing position and followthrough the recoil pulse to mitigate movement during the cycle of function,

Note. The steadier the position, the smaller the wobble area. The smaller the wobble area, the more precise the shot(s).

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Rifle and Carbine - M16/M4 Series

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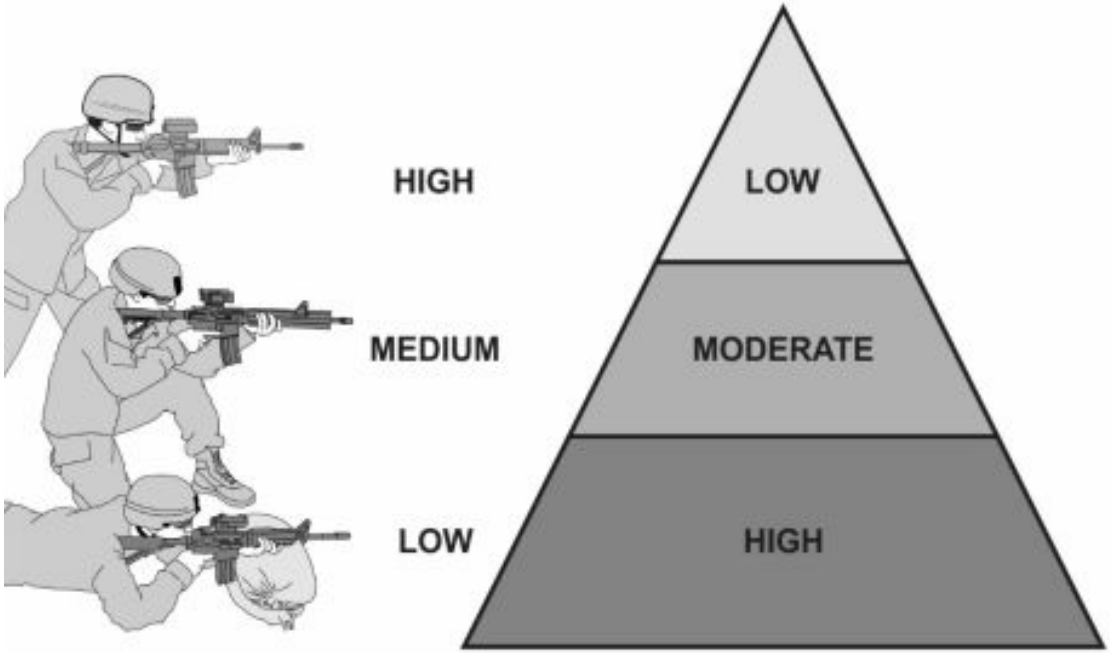
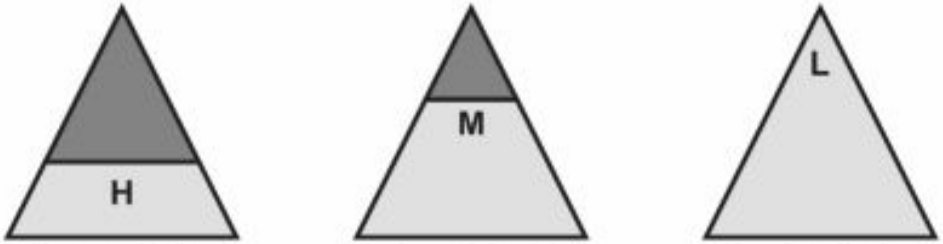


As the center of Gravity (CoG) increases, the level of stability decreases.

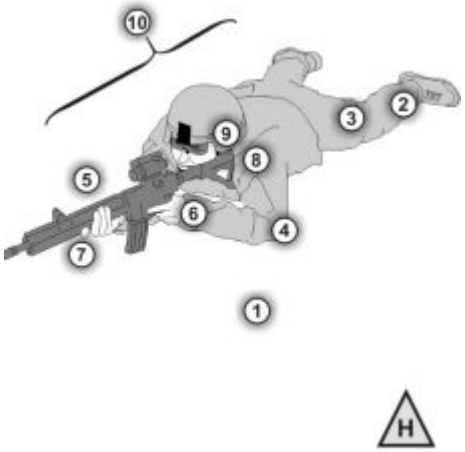


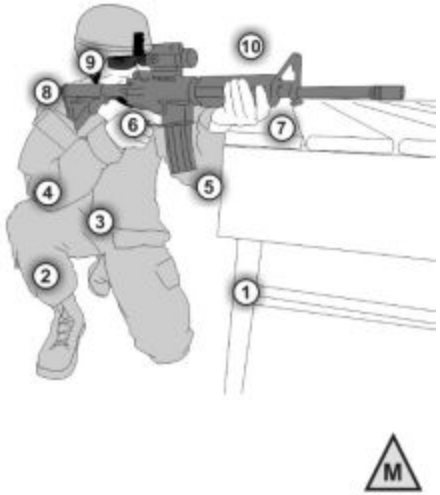
High Stability | Moderate Stability | Low Stability

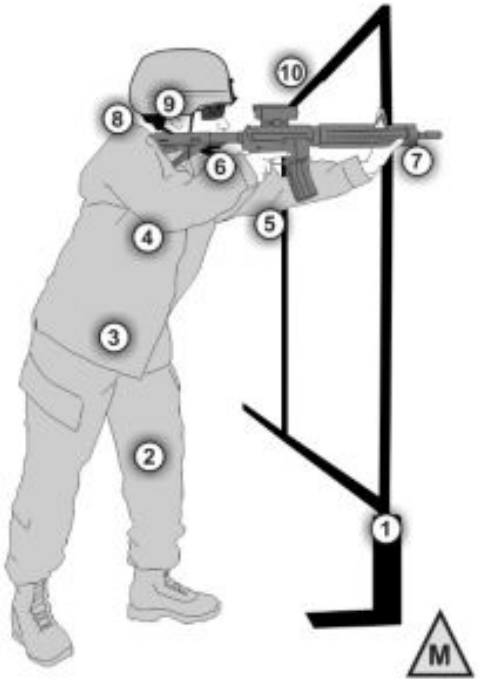
Employment

Firing Positions

A position is good *ONLY* if it consistently produces accurate shots!







Prone

- Magazine can rest on ground during prone unsupported
- Will NOT induce a malfunction

Kneeling Supported

- Shooting arm on knee
- Support arm on barricade
- Firm cheek weld

Employment

Aim

Sight Alignment: Relationship between the aiming device and the firer's eye. Maintain by using **consistent cheek weld and head placement**.

- **Iron sight**. Relationship of front sight, rear sight, and firer's eye. Maintain by keeping focus on the top of the front sight.
- **Optics/Thermal**. Relationship between the reticle and the firer's eye. Maintain by ensuring full, centered field of view (no shadow in magnified optics)
- **Pointers/Illuminators/Lasers**. Relationship between the firer's eye, the night vision device placement and focus, and the laser aiming point on the target.

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Rifle and Carbine - M16/M4 Series

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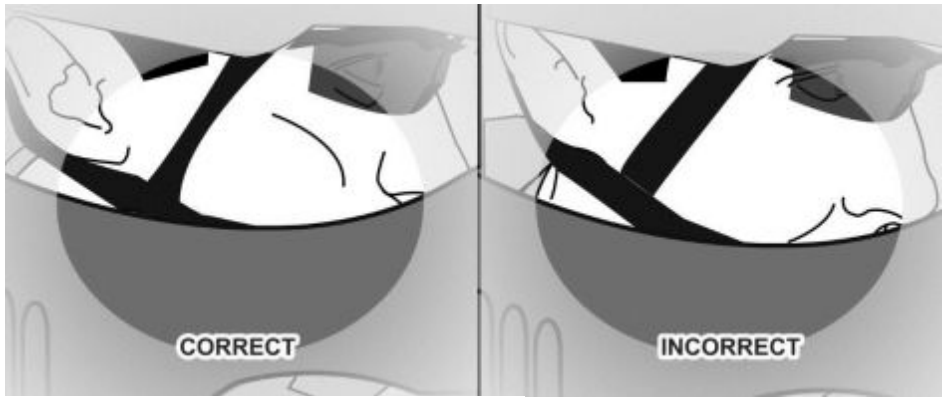
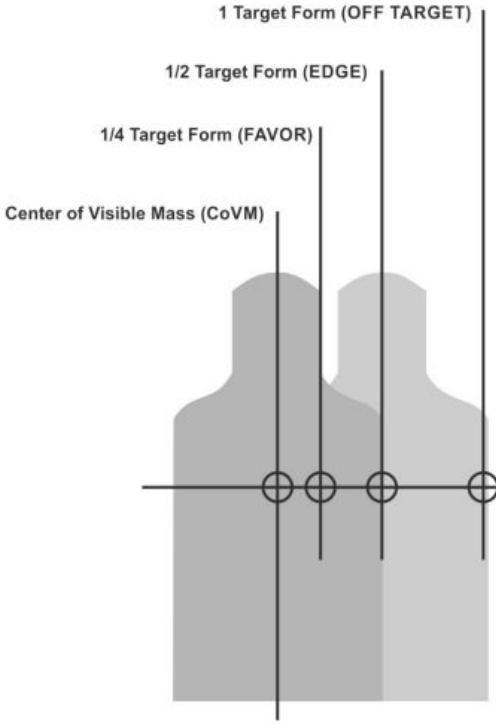


Focus on the front sight post, not the target itself.

Focus on the CCO aim point, not the target itself.

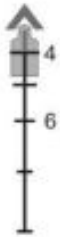


Windage or Lead

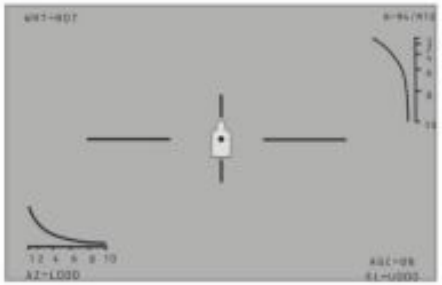
Hold Points:

1. ¼ or Favor
2. ½ or Edge
3. ½ + ¼
4. 1 or Off Target
5. 1 + ¼
6. 1 + ½

Focus on the correct aim point along the bullet drop compensator.



There is no difference in focal viewing when using thermal optics. Align the reticle at the desired point of aim.



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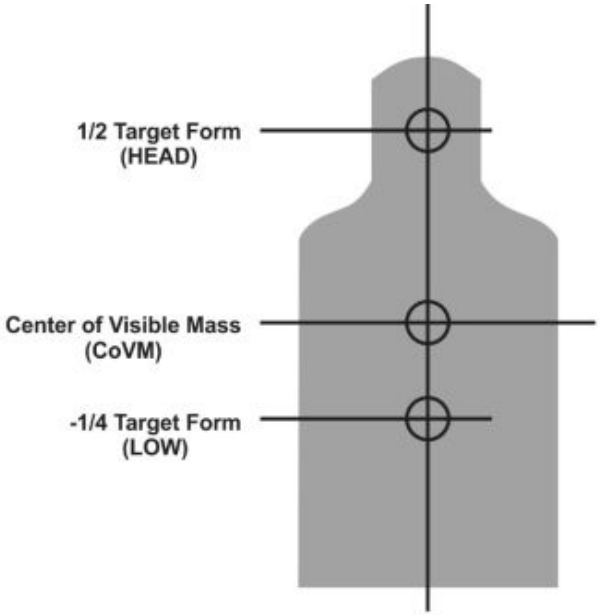


TARGETS WIDER THAN THE FRONT SIGHT POST ARE TYPICALLY LESS THAN 300 METERS.

TARGETS THAT ARE COVERED BY THE FRONT SIGHT POST ARE TYPICALLY GREATER THAN 300 METERS.

Range Estimation

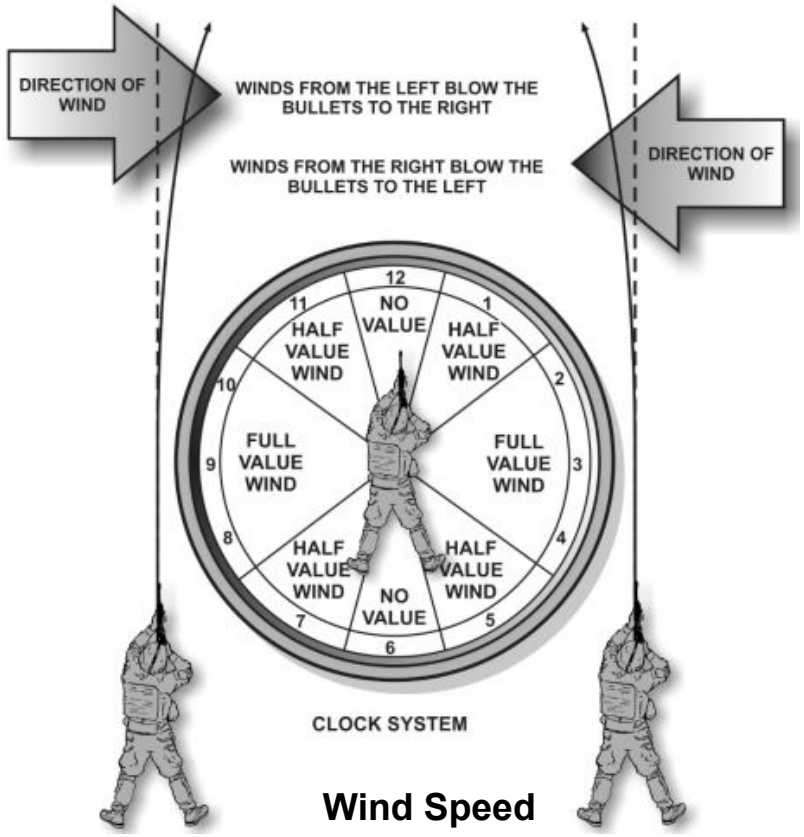
100 meters: Target clearly observed in detail, facial features distinguished

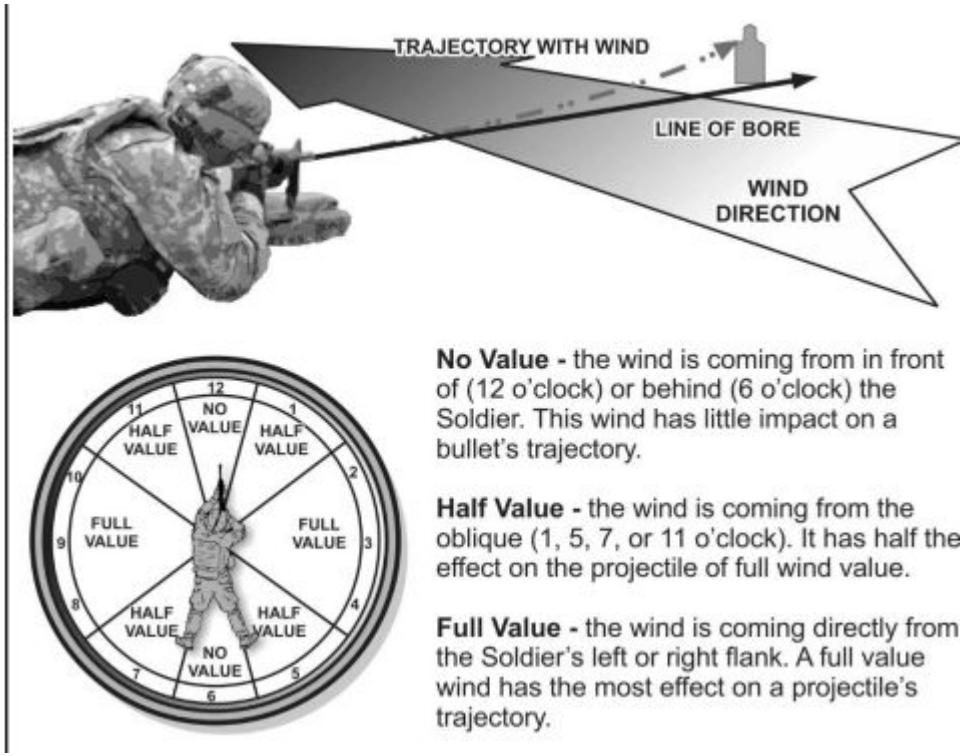
200 meters: Target can be clearly observed, loss of facial detail. Skin and equipment color identifiable

300 meters: Target has a clear body outline, face color remains accurate, remaining details blurred

400 meters: Body outline clear, remaining detail is blurred

500 meters: Body shape begins to taper at the ends. Head becomes indistinct from the shoulders





Wind Speed

- 0 to 3 mph = Hardly felt, but smoke drifts
- 3 to 5 mph = Felt lightly on the face
- 5 to 8 mph = Leaves in constant movement
- 8 to 12 mph = Raises dust and loose paper
- 12 to 15 mph = Causes small trees to sway

Windage Estimate

10 mph full value = 1 MOA/100 meters

- 10mph full = 1/2/3/4MOA at 100/200/300/400
- Half value wind = half adjustment
- Half speed (5mph) = half adjustment

Easy Elevation (Come Up/Hold Over) Estimate

- Work in 100 meter/yard increments
- Add 1 MOA per meter/yard line to estimate hold over/come up for every next increment
- Start with current **elevation zero** on weapon
  - Standard BZO is 300

Example:

- At 100 zero, add 1 MOA up for 200
- At 300 zero, add 3 MOA up for 400
- At 400 zero, add 4 MOA up for 500

- At 100 zero, add 10 MOA (1+2+3+4=10) for 500
- At 300 zero, add 7 MOA (3+4=7) for 500

Easy Windage Estimate

10 mph full value = 1 MOA for every 100 meter/yard

- 10mph full = 1/2/3/4MOA at 100/200/300/400
  - 100: 10mph full value ~ 1MOA wind
  - 500: 10mph full value ~ 5MOA

- Half speed (5mph) = half adjustment
  - Work in 5mph increments
  - 15mph is 1.5MOA/100 meter/yard

- Half value wind = half adjustment

Employment

Control

- All conscious actions before, during, and after the shot process
- Includes safety and decision to shoot (when/if based on ROE)
- Proper trigger control without disturbing the sights is a critical aspect of Control and the most difficult to master
- Shot anticipation (flinch, pre-ignition push) disrupts Control
- Reducing or eliminating shot anticipation with good trigger control is often most effective way to improve shooting results

Employment

Control

- Trigger finger placement lays naturally across the trigger after achieving a proper, high grip. **No specified point must be used**.
- Trigger squeeze/press. Pull in a smooth, consistent manner. Add steady pressure until the weapon fires. Move straight rearward.
- Trigger reset. Retain sight focus while resetting the trigger
- Follow-through and Call your shot

Employment

Control

Follow-through: Continued mental and physical application of the shot process' functional elements

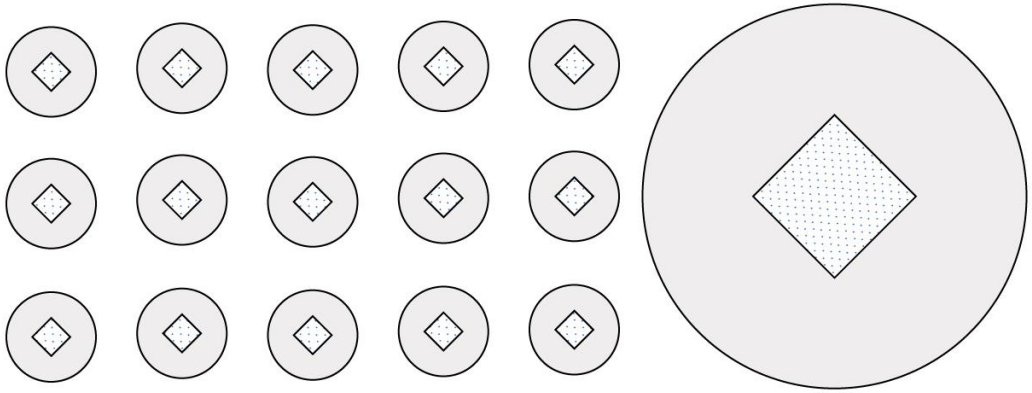
- Firer's head stays in contact with the stock, the firing eye remains open, and the trigger finger holds the trigger back through recoil before resetting trigger for next shot.

Employment

Control

- **Calling The Shot**: State where you think the shot/burst went based on where the sights were when the shot/burst was released
  - Call is expressed in clock direction and amount from point of aim
  - Peer coach or Experienced coach verifies actual location with optics
  - Poor/inconsistent shot call is a poor application of Control

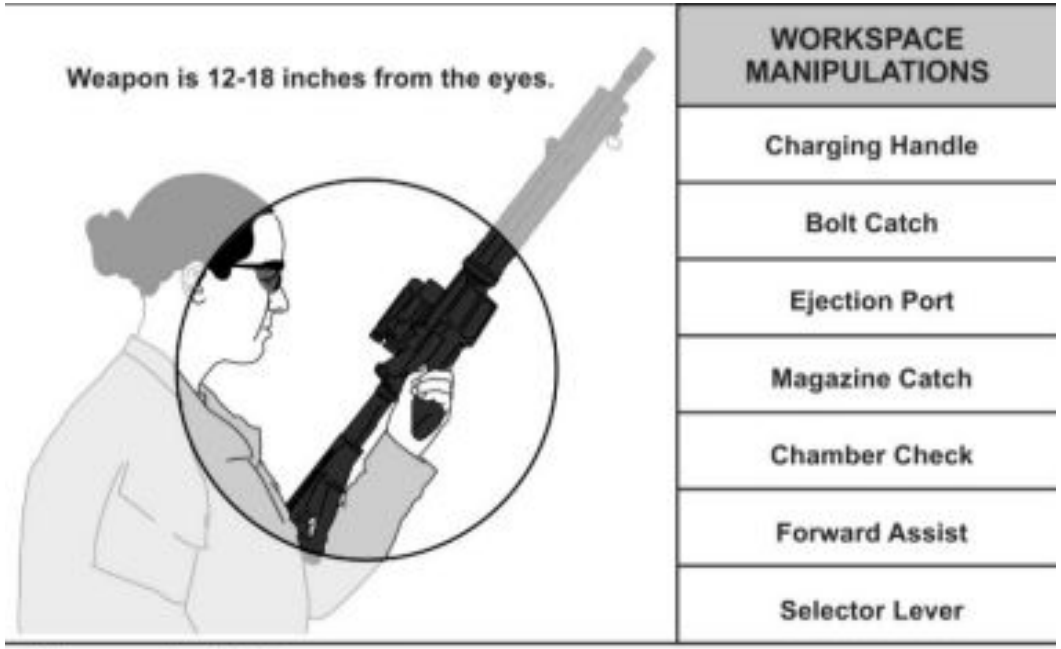
  - Suggested exercise: Plot Call and hit on a sheet



Employment

Workspace Management

- Spherical area 12 to 18 inch diameter, centered on chin
- Where majority of weapons manipulations take place
- Need access/use of:
  - Selector
  - Charging handle
  - Bolt catch
  - Ejection port
  - Magazine catch



Weapon oriented downrange.
Buttstock seated at inner elbow.
Weapon elevated to approximately 45 degrees.
Weapon is rotated as necessary to complete required manipulations.

Employment

Control: Rate of Fire

- **Slow Semiautomatic**: Moderate pace. Training or secure defensive position. 12-15 rounds per minute.
- **Rapid Semiautomatic**: Multiple targets or combat scenarios shooting where Soldiers don't have overmatch. ~45 rounds per minute. Effective only after skill with slow semiautomatic is obtained.
- **Automatic/Burst**: Provide highest possible rate of fire. Can be useful for suppression **only if** accurately directed. Learn Slow and Rapid first.
- **Suppressive Fire**: Fires that degrades the performance of an enemy force below the level needed to fulfill its mission. Must either hit directly or land close enough to convince the enemy fires ***could*** have hit.
  - Volume does NOT equal suppressive fire unless directly accurately enough that it ***could*** hit on purpose

Drills

Drill structure is standardized for all weapons to reinforce common actions

A: Weapon Check-Condition Green, serial numbers, function check

B: Sling/Unsling. Go between Safe Hang, Low Ready, Ready, and other positions

C: Equipment Check/PCC

D: Load

E: Carry (5/3) Move between 5 methods of carry 3 times.

F: Fight Down. Start in the standing/offhand position and assume the kneeling, sitting, and prone (or variations) in order.

G: Fight Up. Start prone and assume positions up to standing in order.

H: Go-To-Prone. Rapidly drop from standing/crouching low ready into prone. Do while stationary, walking, or during a tactical rush.

I: Reload. Completely reload from load bearing equipment. Standing, Kneeling, Squatting, Prone

J: Clear Malfunction. Reduce the most common malfunctions.

K: Unload/Show Clear

Drill A: Weapon/Function Check

Go to Condition Green

- Bolt forward, on SAFE, pull trigger. Nothing should happen.
- On Semi, pull trigger and hold back. Hammer should fall.
- Pull charging handle and release with trigger back. Release to reset (“click”), then pull trigger. Hammer should fall.
- Auto: Hold trigger back, pull and release charging handle. Hammer down.
- Burst: Hold trigger back, pull and release charging handle three times, release and pull trigger. Hammer should fall.
- Charge bolt, move selector to Semi, then move the selector between Semi and Auto/Burst, pull trigger. Hammer should drop.
- **TACOM SOU Message 18-005**: If the hammer drops, repeat by slightly repositioning selector between Semi and Auto/Burst.
  - If the hammer does not drop when the trigger is squeezed, this is a failure.
  - If hammer does not drop, move the selector in either direction. If the hammer drops without squeezing the trigger, this is a failure.

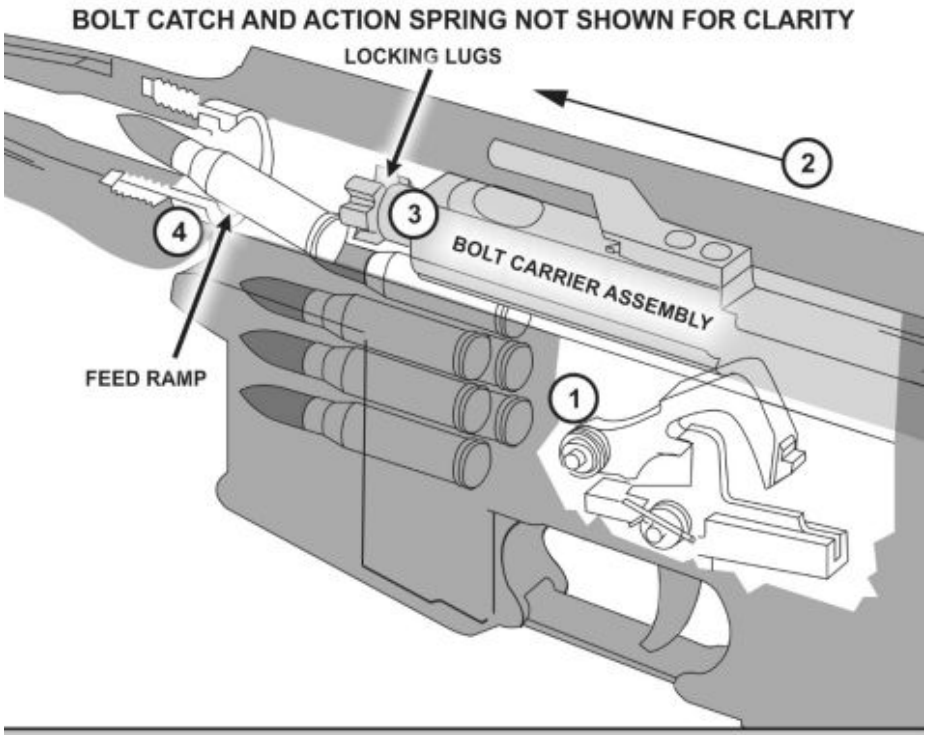
Drill D: Load

Condition Amber

- Bolt forward, on Safe
- Insert filled magazine

Condition Red

- Insert filled magazine
- Load chamber
  - Bolt back: Press bolt release
  - Bolt forward: Pull charging handle and release
- On Safe



FEEDING

1. Bolt catch is released, either physically by the firer or automatically during operation.
2. The action spring exerts its force, pushing the bolt carrier assembly forward.
3. One of the two bottom locking lugs on the bolt face strike the uppermost round in the magazine, pushing it by the cartridge case head.
4. The front bottom edge of the bullet (projectile) is guided to the chamber area by following the corresponding feed ramp.

Drill I: Reload

- Reload from load bearing equipment
- From Standing, Kneeling,Prone, etc.
- While changing positions. Drill F, G, H (Fight down/Up, Go-To-Prone)

- Speed/Emergency: Drop empty magazine with release button, insert new magazine, go to Condition Red
- Tactical/Retention: Swap old mag (partial or empty) with a new magazine, go to Condition Red

Drill J: Clear Malfunctions

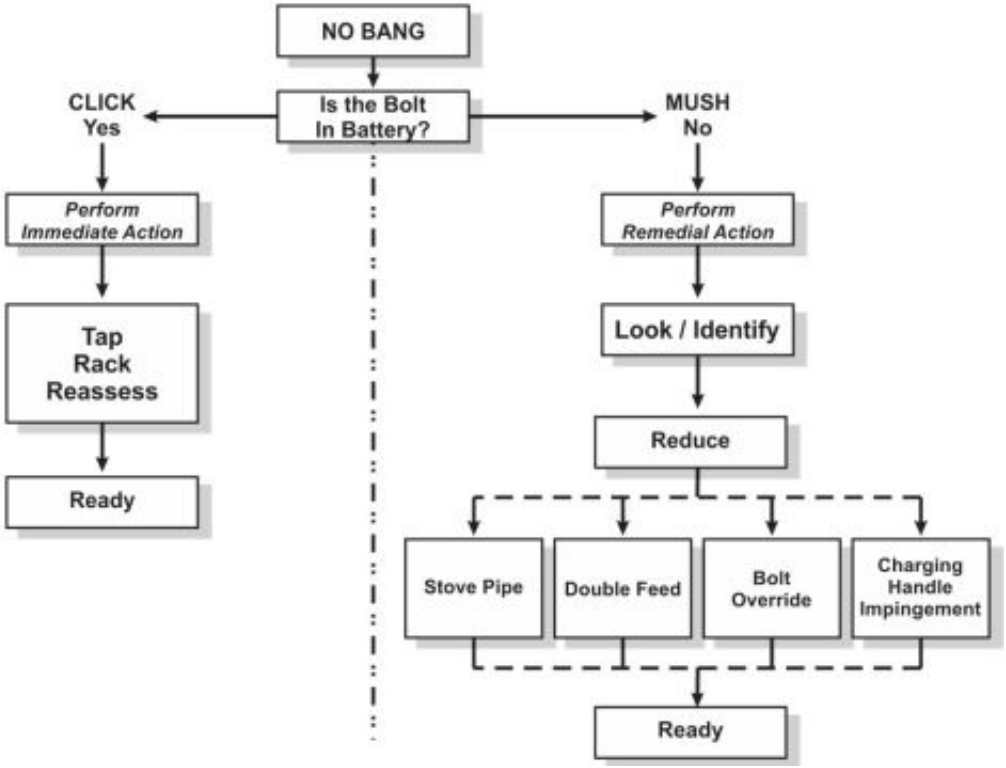
Any failure of the weapon to complete normal cycle of function. Correct by:

- Use secondary weapon (if available and appropriate)
- Apply Corrective Action
  - **Immediate action**. Simple, rapid action to correct basic disruptions
  - Commonly fix simple failures to fire, especially ammunition related
    - Failure to fire: Hammer falls (audible click)
    - Failure to feed: Bolt carrier prevented from moving all the way forward
    - Failure to chamber: Round is being fed into the chamber doesn't go into battery
    - Failure to extract: Extractor loses grip on cartridge case or bolt seizes movement
    - Failure to eject: Cartridge case extracted but fails to leave ejection port
  - Overly simple, single methods ("SPORTS") fail to address a number of issues while adding useless steps ("Observe") to simple fixes
  - Treat the symptom while maintaining focus downrange/on threat
  - **No single corrective resolves all malfunctions.**

Drill J: Clear Malfunctions

- Tap, Rack, Reassess for ammo related ("click") failures

- **Remedial action**
  Skilled/thorough response to specific problem or issue that simple Immediate action cannot correct
  - Typically requires unload/show clear to correct



No single corrective resolves all malfunctions.

Drill K: Unload/Show Clear

- Place selector on Safe
- Remove magazine
- Lock bolt to the rear
- Check chamber and magazine well is empty
- Weapon is now Green

Zeroing

A specific process should be followed when zeroing. The process is designed to be time-efficient.

- **Use peer coaches**
- Experienced coach when available
- Use optics to observe targets
- Conduct range in open block times
  - 10-15 minute blocks
- Grouping: Consistently place shots in the same place. 3-5 rounds
  - Call each shot!
  - 4MOA best (6MOA is acceptable)
- Zeroing: After Grouping
  - Can start with singles, then triples
  - Confirm with a five round group **on a fresh target**.

Zeroing

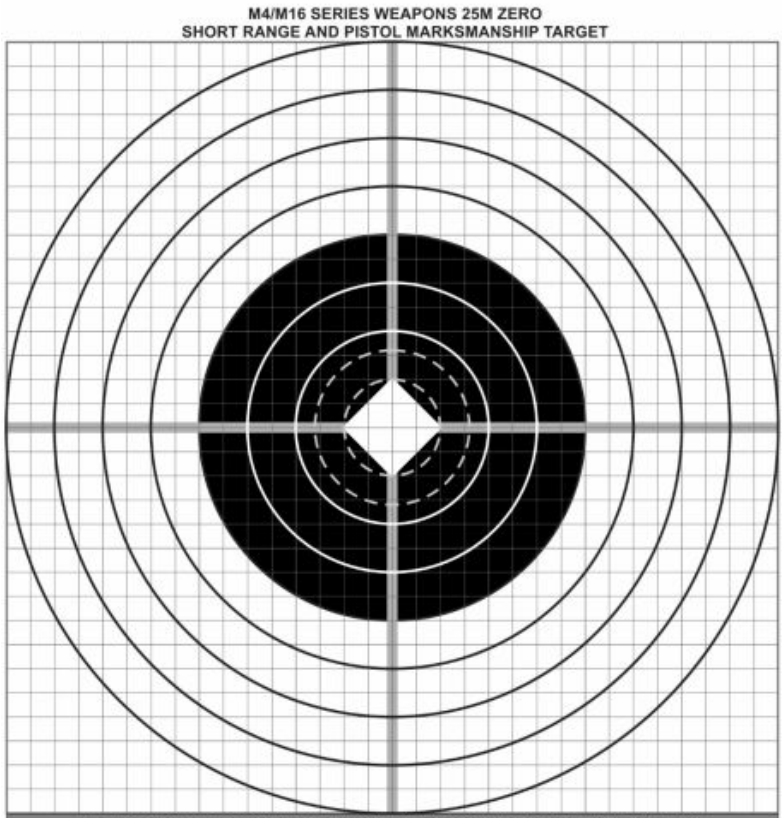
At 25 meters:

- 4 MOA diamond and dashed circle
- 6 MOA (4cm) dashed circle
- 8, 12, MOA rings
- 16 MOA bull (4-inch black circle)
  - B-6 NRA at 50 yards
- 20, 24, 28, 32 MOA circles
  - 5, 6, 7, 8 inch, respectively
- 1 MOA grid
- Can be done “slick” (no field gear)

Many weapons/sights need offset

- Use Canebrake 25 Meter Zeroing Tool
- Reference TM or SAIB

Always use Peer or Experienced coaches!



WEAPON IS NOT CONSIDERED ZEROED UNTIL CONFIRMED AT TRUE DISTANCE

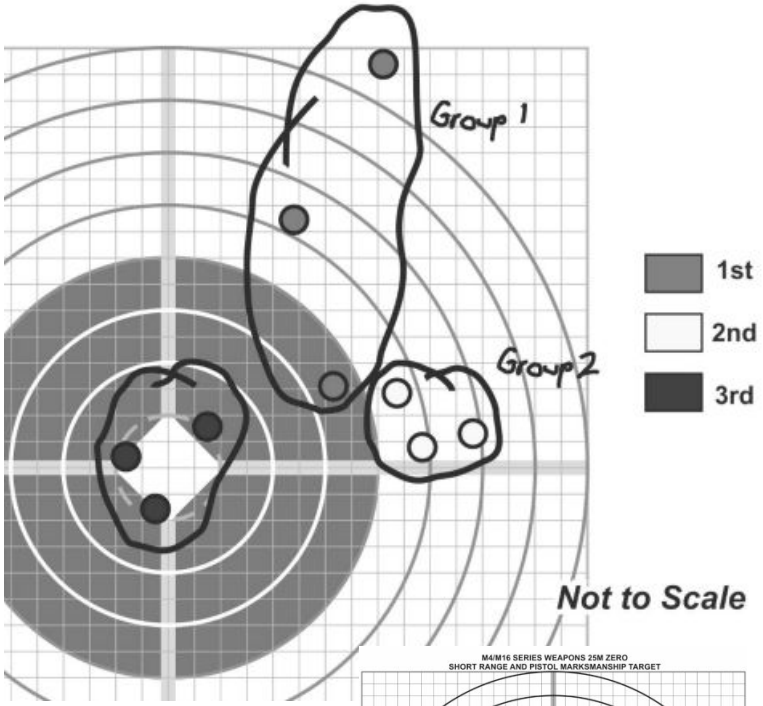
EACH BLOCK REPRESENTS 1 MOA AT 25M

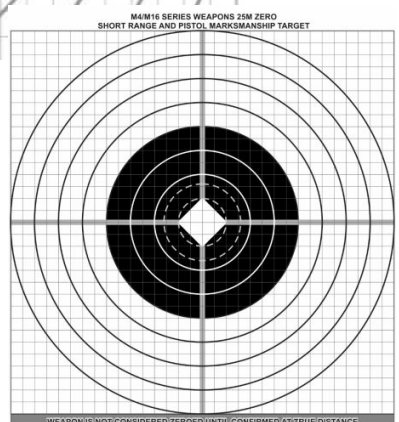
SIGHTING SYSTEM	ELEVATION in MOA	WINDAGE in MOA
CCO	0.5	0.5
M150 RCO/TA-01*	0.5	0.5
M4/M4A1 REAR SIGHT (BUIS)	0	0.75
M4/M4A1 FRONT SIGHT	1.75	0
M16A2/A3/A4 REAR SIGHT (BUIS)	0	0.5
M16A2/A3/A4 FRONT SIGHT	1.25	0

* Internal knobs .333 MOA

Zeroing

1. 25 Meter, A8 rifle zero target
   - Observe with optics
   - Don't walk downrange after each group
   - Can be done "slick" (no field gear)
2. Zero at 25 meters
   - Center groups with center hold
   - Groups should be 6 MOA (threshold) or 4MOA (objective). Four rounds of five rounds centered in target
3. Confirmation at distance
   - After completion of 25-meter zero, hit a properly presented E-type target with a minimum of four of five (80-percent) hits at full distance





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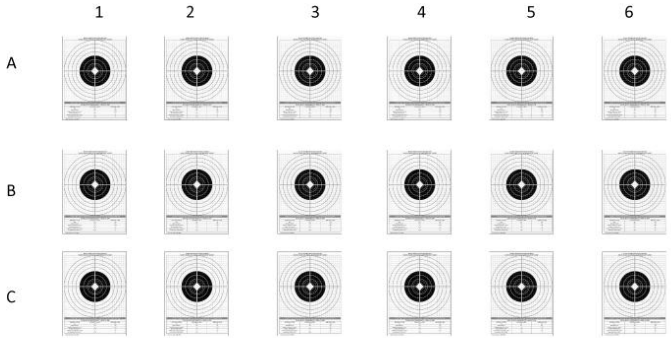
M4/M4A1 FRONT SIGHT	1.75	0
M16A2/A3/A4 REAR SIGHT (BUIS)	0	0.5
M16A2/A3/A4 FRONT SIGHT	1.25	0

* Internal knobs .333 MOA

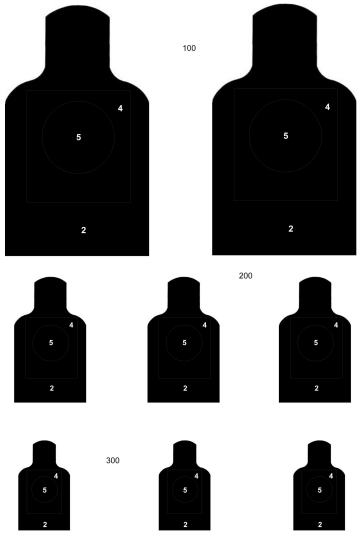
Zeroing: Validate

Conduct 25 meter range in block times of 10-15 minutes. Use optics to observe.

Arrange targets in grid to identify



1. Confirm zero with 5 rounds
   - 4-6 MOA on **fresh target**
   -
2. Use USAR **Postal Match** (25 meters)
   - Event uses same timing as qualification
   - Use practice run(s) (dry and live) to learn course
   - Serves as Validation for Table IV and V
   - See USAR Course of Fire Book
3. Validate zero at actual distance
   - LOMAH or Known Distance range is preferred
     - Alternatively, set RETS targets to “bob” mode
   - Don’t allow qualification until hits confirm zero



Support Barricade

- Basic frame for kneeling supported and standing supported. Design can vary.
- Used for Primary and Alternate Qualification
- Use Drills and Postal Match to practice
- RETS/ARF “pop up” ranges and 25 meter ranges

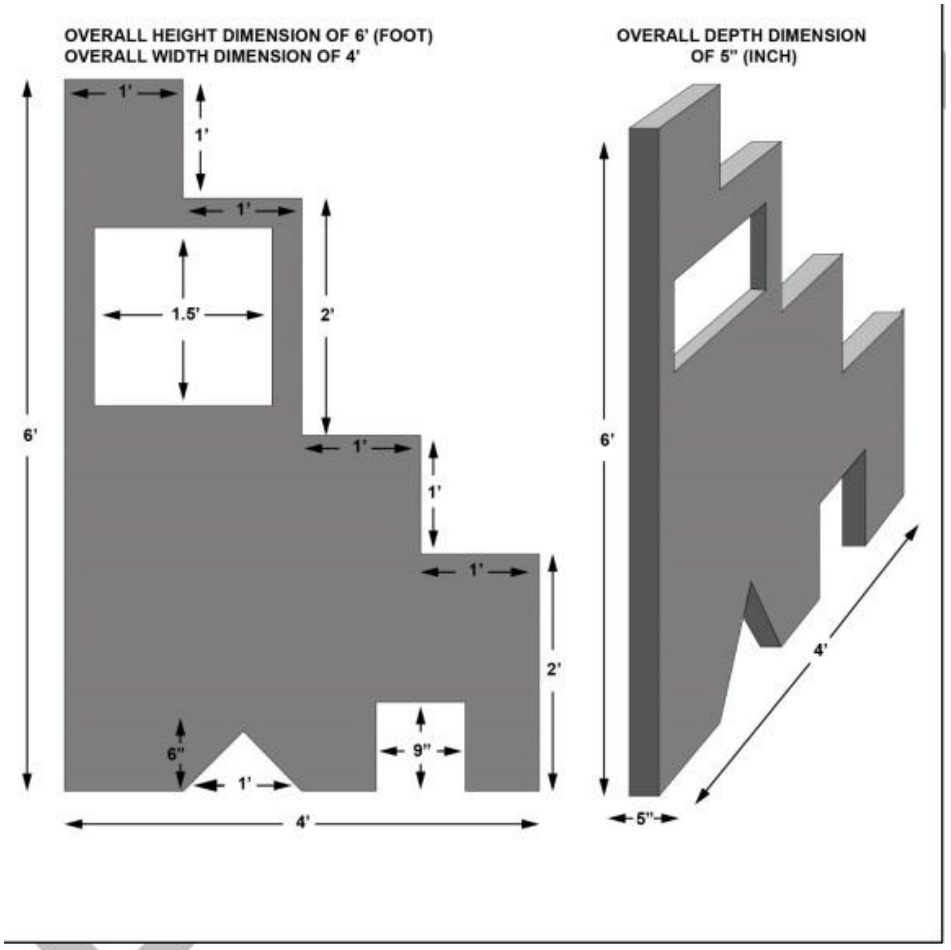


Figure 3-2. Example of the Army standard barricade for live-fire

Support Barricade

- Basic frame for kneeling supported and standing supported. Design can vary.
- Used for Primary and Alternate Qualification and Postal Match.
- RETS/ARF “pop up” ranges and 25 meter ranges

Primary Qualification

- Run as four continuous phases (no stopping)
- 4 10 round mags in LBE/pouches
- Reload and change positions between phases without command

Table V Practice "Fast Run"

- Single target engagements are exposed for 3 seconds.
- Double target engagements are exposed for 5 seconds.
- Triple target engagements are exposed for 12 seconds.
- Quadruple target engagements are exposed for 16 seconds.
- 2-second delay between each engagement.
  - 5-second delay between the first (offhand) and second engagement to allow Go To Prone
- 8-second transition delay (reload/change position) between phases
- Submit first attempt scores as a Postal Match

Primary Qualification

- Run as four continuous phases (no stopping)
- 4 10 round mags in LBE/pouches
- Reload and change positions between phases without command

Table VI Qualification

- Single target engagements are exposed for 5 seconds.
- Double target engagements are exposed for 8 seconds.
- Triple target engagements are exposed for 12 seconds.
- Quadruple target engagements are exposed for 16 seconds.
- 3-second delay between each engagement.
  - 5-second delay between the first (offhand) and second engagement to allow Go To Prone
- 10-second transition delay (reload/change position) between phases
- Only the first attempt for record counts
- Submit first attempt scores as a Postal Match

Preliminary Marksmanship Instruction and Evaluation

Rifle and Carbine - M16/M4 Series

TC 3-22.9

Primary Qualification

Engagement 1 offhand,
Go To Prone for Engagement 2

Table VI, Qualification, Engagements 1 through 5, React to Contact, Transition to Prone, Unsupported

Engagement	Target Type	Range	Exposure Time
1	F-type	50 m RIGHT	5 sec
2	E-type	100 m	5 sec
3	E-type	150 m	5 sec
4	E-type	50 m LEFT	12 sec
	E-type	150 m	
	E-type	200 m	
5	E-type	150 m	16 sec
	E-type	200 m	
	E-type	250 m	
	E-type	300 m	

Table VI, Qualification, Engagements 6 through 10, Prone, Supported

Engagement	Target Type	Range	Exposure Time
6	E-type	100 m	5 sec
7	E-type	150 m	8 sec
	E-type	300 m	
8	E-type	200 m	8 sec
	E-type	300 m	
9	E-type	250 m	8 sec
	E-type	300 m	
10	E-type	150 m	12 sec
	E-type	250 m	
	E-type	300 m	

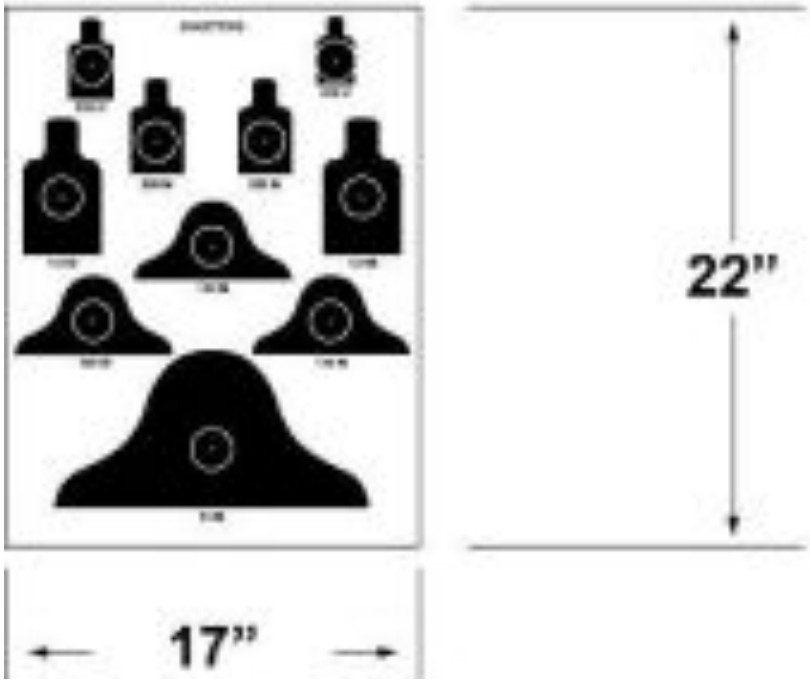
Primary Qualification

Table VI, Qualification, Engagements 11 through 14, Kneeling, Supported			
Engagement	Target Type	Range	Exposure Time
11	E-type	50 m LEFT	12 sec
	E-type	100 m	
	E-type	200 m	
12	F-type	50 m RIGHT	8 sec
	E-type	200 m	
13	E-type	150 m	8 sec
	E-type	250 m	
14	E-type	100 m	12 sec
	E-type	150 m	
	E-type	200 m	

Table VI, Qualification, Engagements 15 through 18, Standing, Supported			
Engagement	Target Type	Range	Exposure Time
15	E-type	50 m LEFT	8 sec
	E-type	100 m	
16	E-type	200 m	8 sec
	E-type	250 m	
17	F-type	50 m RIGHT	12 sec
	E-type	100 m	
	E-type	150 m	
18	E-type	100 m	12 sec
	E-type	200 m	
	E-type	250 m	

Alternate Course: Validate Qualification

- Units must attempt to properly resource Primary Qualification through RFMSS first or they're not authorized to conduct the Alternate Course
- **KD Qualification is no longer authorized**
- Two phases: Basic (slow) and Intermediate (fast)



- Basic Phase: Achieve 75% hits in the 4-centimeter circle on each silhouette
- Intermediate Phase: 75% on silhouettes
- GO validate: extends existing by 6 months.
- Go/No Go only
- C-4 paper silhouette target

  (NSN 6920-01-167-1398)

Alternate Course: Validate Qualification

Sequence	Engagement	Magazine	Time Per Target	Time Per Sequence	Transition Time
	BASIC PHASE MAKE READY				10 sec
1	Prone, Unsupported	10-round	6 sec	1 minute	10 sec
2	Prone, Supported	11-round	6 sec	1 minute	10 sec
3	Kneeling, Supported	10-round	6 sec	1 minute	10 sec
4	Standing, Supported	10-round	6 sec	1 minute	10 sec
	INTERMEDIATE PHASE MAKE READY				10 sec
5	Prone, Unsupported	10-round	3 sec	30 sec	6 sec
6	Prone, Supported	11-round	3 sec	30 sec	6 sec
7	Kneeling, supported	10-round	3 sec	30 sec	6 sec
8	Standing, Supported	10-round	3 sec	30 sec	6 sec