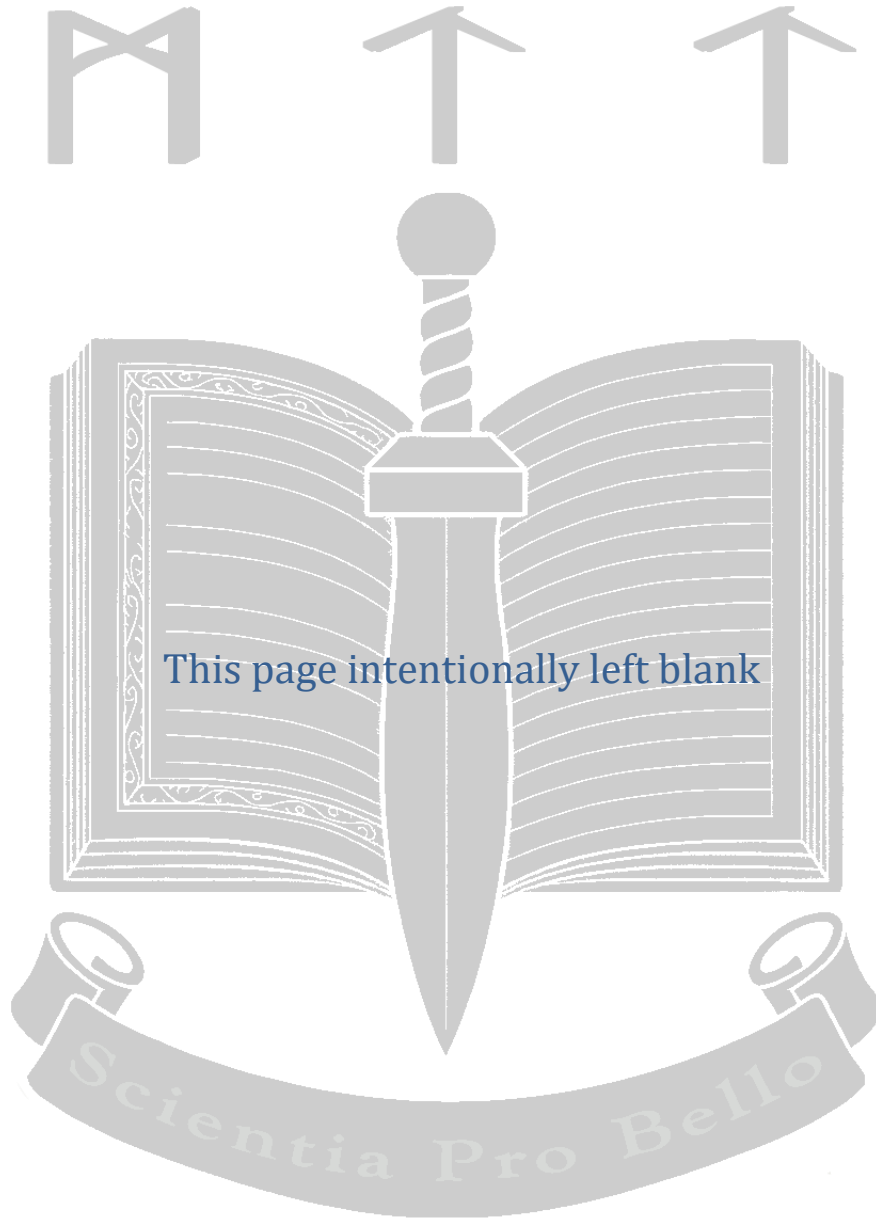




IWQ & PMI MOD PROJECT

A new method of IWTS



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The “Mod” project is short for module/modular/modification. It was conceived of and designed after identifying several shortcomings in the way in which the Army currently conducts training specifically on basic warrior skills and tasks (level 1). Oftentimes, non-fulltime components such as the National Guard and Reserves find themselves with annual training requirements the same as the “big army” with only one weekend and two weeks a year to work with to achieve the same proficiency. Typically how this is handled and plays out at the unit level is these subjects are either treated as “check boxes” with mandatory slide presentations in traditional classroom settings or are conducted out of order and in non-consecutive sequence that do not lend well to increasing soldier performance on any one given topic, or even sometimes neglecting the subject all together/outright skipped for that training year due to this intrinsic lack of time, coupled with an overwhelming task load. This lack of training continuity leads to systemic failures that compound of several years and training cycles. All too often the approach has been to satisfy the training requirements by stripping all the extraneous information out of these trainings, trimming them down to only necessary information. In some ways this short changes the soldier and does not lend well to down range outcomes. Thus a significantly different, radical approach has to be taken to allow soldiers to get more repetitions out of these topics that fit into a typically unaccommodating schedule. Drill schedules do not allow for army standard time allotments on table 1 of the IWTS (PMI) for example and thus the average soldier will often miss out on it all together or have it incongruous with the way in which their unit elects to conduct the remainder of the tables. The following is a framework and methodology applicable to any subject (land nav, commo, night vision, etc.) which not only seeks to better prepare and align subject matter to that of a part-time soldier’s disposition, but also to ensure they gain more frequent exposure and repetition to such subject matter than they typically do given it is dynamically flexible in delivery, aligns the content to more appropriate stages of knowledge building/pedagogy and digitally tracks the results and outcomes for forensic analysis to further refine the overall fighting force and readiness induced by this system.

In the folder structure you will find three “modules”, mod zero is for digital input and tracking of all students throughout the program stages. Module 1 is the academic portion and module 2 and 3 are practical application of increasing performance. All modules are designed to support each other and are built upon a “crawl, walk, run” approach. In terms of IWTS, the traditional table model is often too overbroad to be reliably administered, thus identification and narrowing of the information was performed here based on years of intimate involvement in all phases of IWTS failure stacking to prioritize information in a way for the typical student to get more value out of it at each step; while ensuring the NCO core can more effectively apply each module on a regular basis.

The overarching teaching methodology that should be employed for each module is the **EDIS** method. This simply stands for **Explain, Demonstrate, Imitate, Slow for form**. All modules have been carefully curated to minimize reliance on any single method of conveying information, intentionally integrating far more hands-on and practical classes than is typical, specifically addressing both the needs of auditory and visual learners.

Explain:

Clearly articulate the concept or skill to be learned, outlining important steps and key points, often using visuals or diagrams to support understanding.

Demonstrate:

Actively show the learner how to perform the task, going through each step slowly and deliberately, ensuring they can see the correct execution.

Imitate & Practice (slowly for form): Allow the learner to attempt the skill themselves, mimicking the teacher's demonstration, providing feedback and guidance as needed. Imitation tempo and speed is predicate on audience proficiency, ratcheting up speed as needed.

File and folder structure itinerary:

Mod 0 (tracking)

In this folder you will find print outs of the digital student enrollment form in instances where austere conditions preclude access to the online version, which may be manually input at a later date. You will also find a QR code to allow anyone, anywhere to access the online version of the enrollment form. You will also find a shortcut to the online form. Lastly you will find more detailed instructor 'Q' cards with instructions on how to properly execute this module.

Mod 1 ("zero theory")

The content in this folder most closely mirror that of a traditional table 1 (PMI) course. The classroom presentations are offered in several versions to allow small file size and transportability, you have the "no videos" file. There is also a PDF version for those without access to powerpoint. Then you have the full length class presentation complete with inline videos. You will also find instructor 'Q' cards, as well as a whitepaper detailing the intent behind this module and lastly a printable student handout to take with them. Lastly, there is folder titled "FULL PMI", this contains a full 2-4 hour traditional PMI presentation.

Mod 2 (dry fire)

This folder contains instructor 'Q' cards, and mirrors closely that of table 3 ("drills") from the Army IWTS but with a focus on practical modern skillsets of today's soldier.

Mod 3 (practical)

Shared Resources

This folder contains various educational reference material and supportive content related to the subject matter. It also contains a suggested visual aids and classroom equipment necessary to successfully conduct each module or the entire course.

All aforementioned resources are obtainable from here or on the website course:

https://drive.google.com/drive/folders/1_yZ3p7C0A_IZRHHjhXvFcuj9w08EDe3i?usp=sharing

Website course(s) are accessed here: <https://www.mttschoolhouse.com/courses/>

On the next page you will see a flowchart. This tells you how this course is to be conducted, as you have two options, in person and distance/self-led learning. We of course suggest in-person for the best outcome but we understand the flexible needs aspect of the modern armed services which is why we provide an alternative. The website will put the students through the same curriculum in module 1 and provide them a certificate after course completion to share with their command but it does not afford them the physical reps with oversight as an in-person approach would provide on module 2 and 3

Presenting in Person

Take the instructors course [here](#) if you haven't already, after completion, you will be invited to our residency course.

[Print out and distribute handout for students](#)

[Use this presentation file](#) (powerpoint)
Or [PDF version](#)

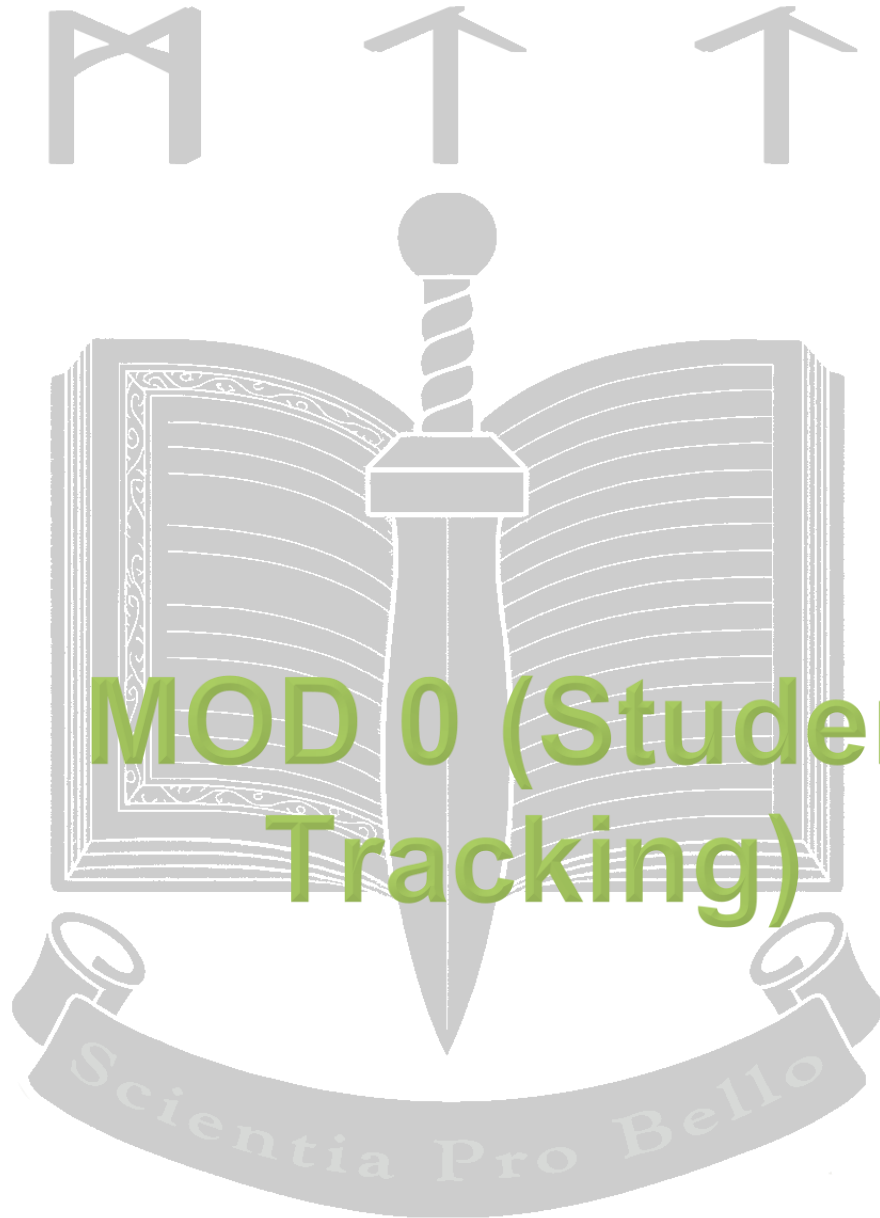
[Register and log each student here if you have internet access](#) or [print and fill this out](#) and manually input it later

Distance Learning/Self-Led

Have students go [here](#) and register for an account

Students enroll and complete intended course

Students will either automatically receive a certification of completion to retain and share with command OR we can give you access to see completions and results for each student



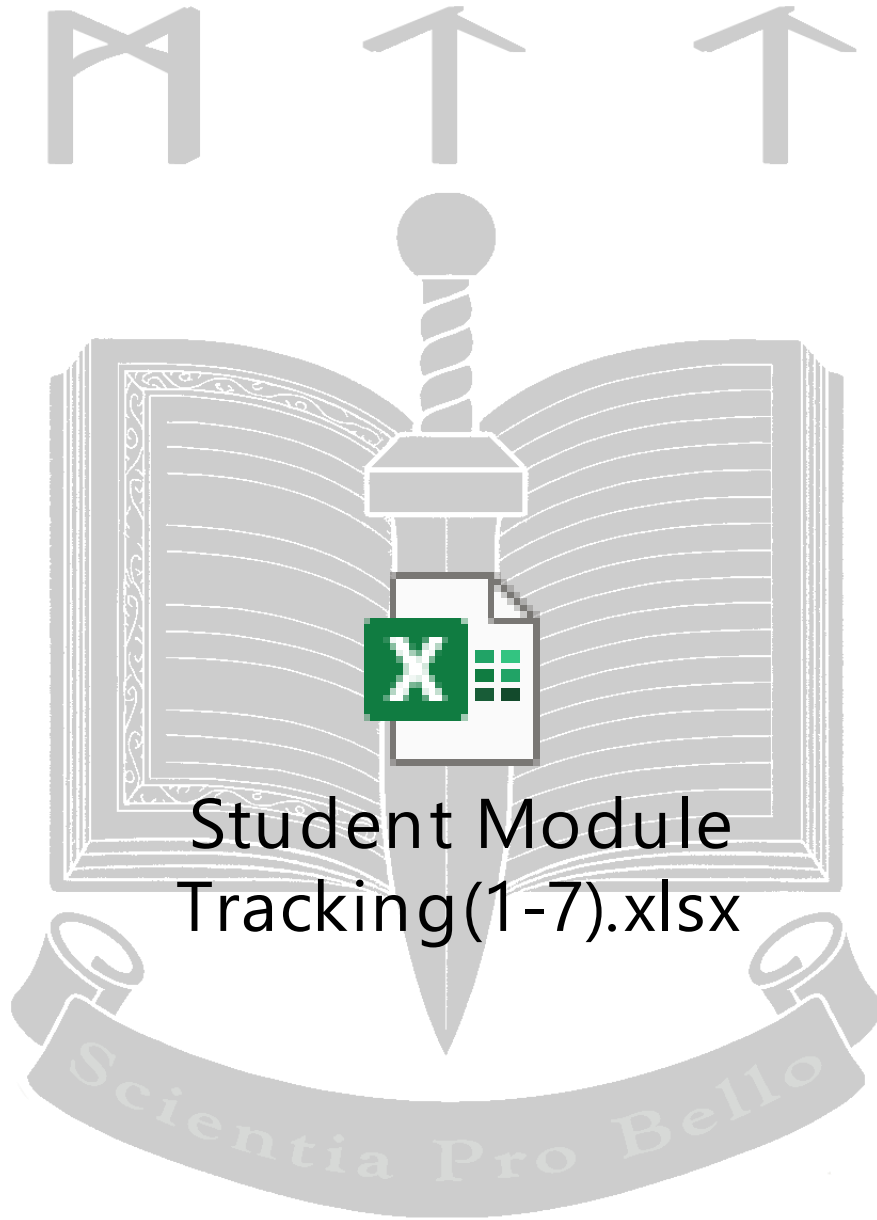
MOD 0 (Student Tracking)



MTT 1-18 CAV SQDN SPT DET MTT ADMIN			
TIME	BLOCK OF INSTRUCTION	LOCATION	RDS
1 MIN	Introduction We have developed a dynamic system that is efficient and capable of providing relevant data This data can be used to evaluate a unit's readiness state.	LECTURE	0
1 MIN	Enrollment We are able to enroll soldiers using a QR Code that they can scan on their devices. We can also input hand filled documents when necessary, This step captures pertinent data such as name, rank, unit, troop, and company.	LECTURE	0
1 MIN	Tests We have generated written tests for the PMI instruction. We can also incorporate the unit Commander's specific tests upon request.	LECTURE	0
1 MIN	GO / NO GO Sheets We have generated simple GO/NO GO sheets that test the soldier's knowledge and skills covered during the PMI course of instruction.	LECTURE	0
2 MIN	Data Reporting We incorporate captured data into various spread sheets. From these spread sheets we can deliver various statistical analysis and generate graphs, pie charts and tables for use by the unit's command.	LECTURE	0
	The instructor is advised to use lesson plans as reference and adhere to that controlling document		

7 | Page





Student Module Tracking(1-7).xlsx

IWTS Module Tracking



* Required

STUDENT NAME *



Grade *

☐ E1

☐ E2

☐ E3

☐ E4

☐ E5

☐ E6

☐ E7

☐ E8

☐ E9

☐ O1

☐ O2

☐ O3

☐ O4

☐ O5

☐ O6

UNIT *

Company *

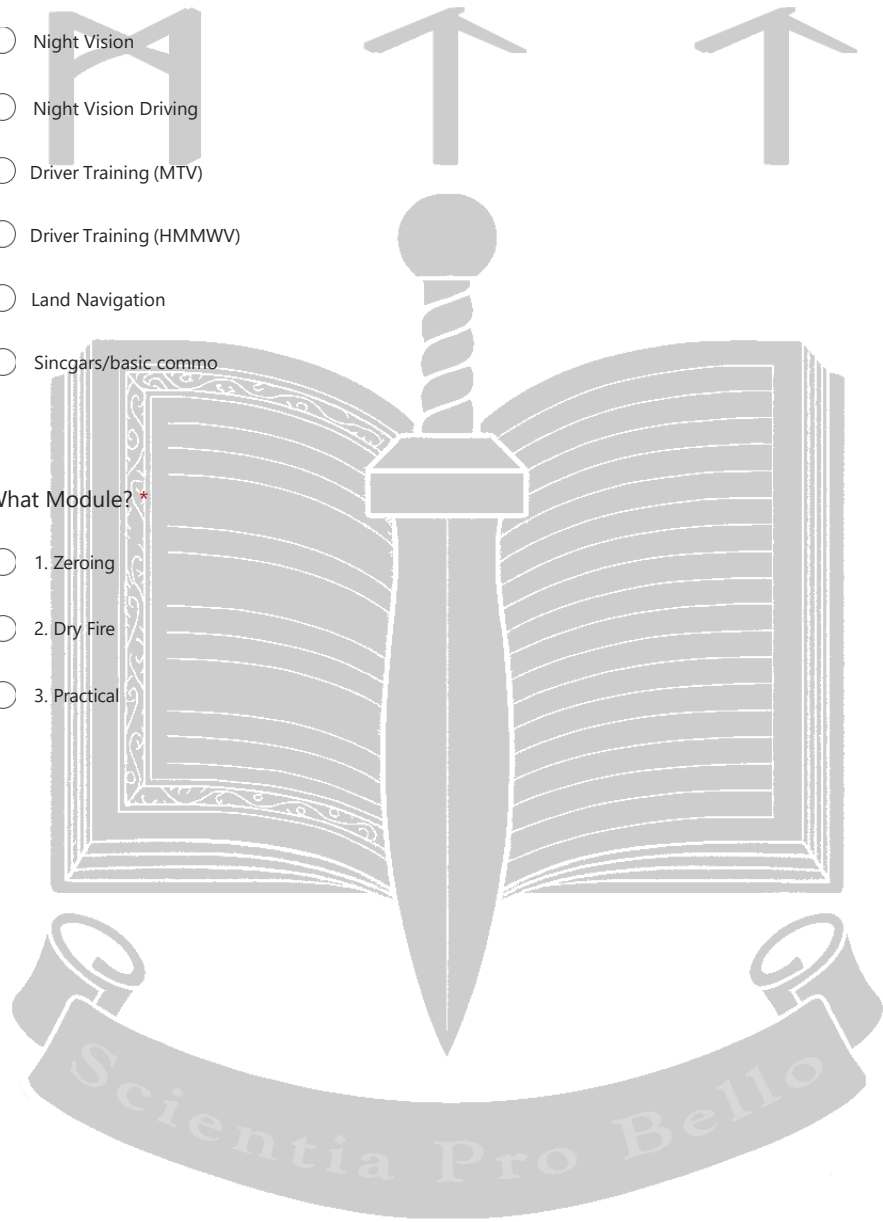
*Students last known qualification score (if known or applicable)

Course/Topic *

- ☐ M4
- ☐ M249/240
- ☐ Night Vision
- ☐ Night Vision Driving
- ☐ Driver Training (MTV)
- ☐ Driver Training (HMMWV)
- ☐ Land Navigation
- ☐ Singgars/basic commo

What Module? *

- ☐ 1. Zeroing
- ☐ 2. Dry Fire
- ☐ 3. Practical



1. Zeroing

MOD 1

Demonstrate how to change the battery on a CCO *

- ☐ GO
- ☐ NO GO

Demonstrate how to change the brightness on a CCO *

- ☐ GO
- ☐ NO GO

Demonstrate how to adjust the windage, correctly identifies which turret *

- ☐ GO
- ☐ NO GO

Demonstrate how to adjust the elevation, correctly identifies which turret *

- ☐ GO
- ☐ NO GO

Demonstrate where and how to properly install CCO on upper receiver *

- ☐ GO
- ☐ NO GO

Correctly demonstrates how many clicks and MOA an example shot group needs to be moved to reach standard *

- ☐ GO
- ☐ NO GO

Correctly determines if a shot group is within standard or not *

☐ GO

☐ NO GO

Correctly identifies an M855A1 from picture assortment *

☐ GO

☐ NO GO

Correctly identifies and understands the concept of 1st and 2nd intersection as well as max ordinate/apogee *

☐ GO

☐ NO GO

Can calculate approximate group size in MOA using an example *

☐ GO

☐ NO GO

Can convert instructor specified MOA to approximate inches at instructor specified yards and vice versa *

☐ GO

☐ NO GO

Understands the limitations of their rifle and ammo as issued and how that translates downrange *

☐ GO

☐ NO GO

2. Dry Fire

Mod 2

Can correctly demonstrate both military and olympic prone positions *

☐ GO

☐ NO GO

Can correctly demonstrate standing position *

☐ GO

☐ NO GO

Can correctly demonstrate Kneeling position *

☐ GO

☐ NO GO

Can properly conduct speed reload in 6 seconds or less *

☐ GO

☐ NO GO

Can demonstrate tactical reload *

☐ GO

☐ NO GO

Can demonstrate and explain fundamentals of marksmanship *

☐ GO

☐ NO GO

Can explain and demonstrate the four basic rules of firearms safety *

☐ GO

☐ NO GO

Demonstrates proper usage of barricade *

☐ GO

☐ NO GO

Can properly demonstrate load and make ready and make safe and show clear procedures *

☐ GO

☐ NO GO

Can demonstrate high vs low ready *

☐ GO

☐ NO GO

Can demonstrate immediate action *

☐ GO

☐ NO GO

Can demonstrate/understands how to conduct laser boresighting *

☐ GO

☐ NO GO

Can do basic field breakdown of service weapon and re-assembly in four minutes or less *

☐ GO

☐ NO GO

3. Practical

Mod 3

Controller Pair (3 seconds) *

☐ GO

☐ NO GO

Hammered pair (2 seconds) *

☐ GO

☐ NO GO

Failure drill (3 seconds) *

☐ GO

☐ NO GO

1R1 drill (6 seconds) *

☐ GO

☐ NO GO

Malfunction *

☐ GO

☐ NO GO

Box drill (6 seconds) *

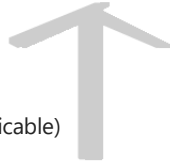
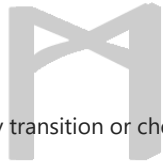
☐ GO

☐ NO GO

Bill drill (3 seconds) *

☐ GO

☐ NO GO



*primary to secondary transition or check drill (if applicable)

☐ GO

☐ NO GO





MOD 1 (“Zero Theory”)

Intent and Mandate:

“Mod #1 “zero theory” This is lecture that introduces students to evolving Army doctrine, what a Zero is, the importance of the zero to overall qualification, and at what distances the zero is established. This should include power point, example targets, practical exercises for them to evaluate zero targets and make corrections correctly based on the example targets they are provided. This must be testable with feedback from students for understanding. Teach backs are recommended for NCOs for highest comprehension of the skills to be understood and passed on by them. This should also cover mounting of scopes individually to weapons and how they work. An optics lecture and mechanical sight lecture should be included. Numerous rifles arrived at the range with optics spinning free, soldiers not understanding how they work and how to ensure they are mounted correctly.” -SSG (CA) Monte Gould, 1/18th CAV SPT DET, MTT

Proposed Course Overview/Syllabus:

1. **What** is a zero? **When** and **Why** we zero?
2. Basic Ballistics, intro to MOA
3. Field expedient and laser bore sighting, understanding mechanical height over bore/offset
4. The Army zero target
5. RCO and CCO indoc, proper installation, functionality, components, operation, and turret adjustment
6. **How** we zero, army standards and grouping, intro to 50/200m zero (necessary offset)

GO/NOGO Criteria:

- Demonstrate how to change the battery on a CCO
- Demonstrate how to change the brightness on a CCO
- Demonstrate how to adjust the windage on applicable/assigned optic system
- Demonstrate how to adjust the elevation on applicable/assigned optic system
- Demonstrate where and how to properly install a CCO on an upper receiver
- Correctly demonstrate how many “clicks” and MOA an example shot group needs to be “moved” to reach standard
- Correctly determines if a shot group is within standard or not
- Correctly identifies M855A1 cartridge
- Correctly identifies and understands the concept of 1st and 2nd intersection as well as max ordinate/apogee
- Can calculate approximate group size in MOA using an example
- Can convert X MOA to approximate inches at X yards and vice versa
- Understands the limitations of their rifle and ammo as issued and how that translates downrange

Time and Resources Required:

This lecture requires 1-1.5 hours of classroom instruction involving visual aids and interactive media techniques. To successfully complete this module, I require not only the aforementioned time block, classroom, projector and laptop but also several Army standard 25m zero targets, canebrake tools, a laser bore sighting device, student provided m4 rifles with their assigned optic system, as well as two assistants.

Deliverables:

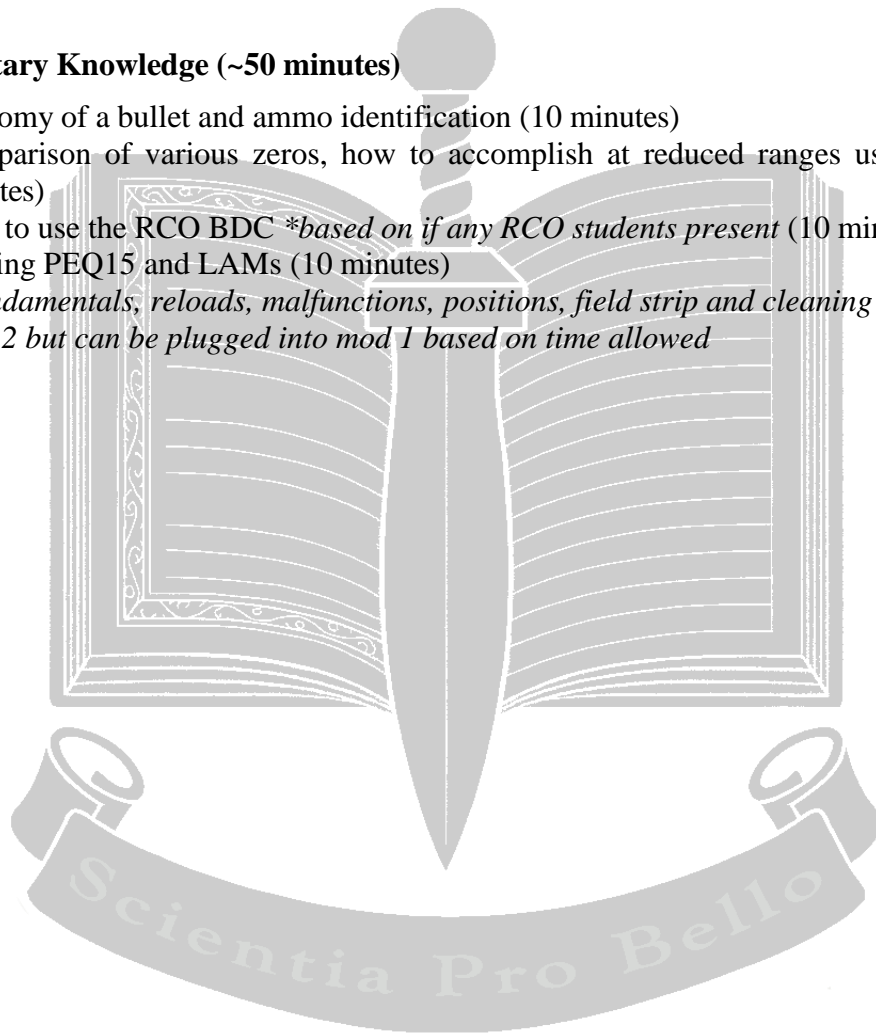
My intent is to introduce students to the basis of table IV within the IWTS. This foundational/fundamental step would engage students in a critical knowledge segment that sets them up for success as they progress forward into other modules and tables. My goal is to empower students to be able to troubleshoot both their optic and zero while at the range. Through a series of impactful discussion, an interactive and collaborative approach to imparting knowledge on this dense subject matter will be utilized, engaging the end-user and imbuing a baseline of proficiency in identifying proper groups, zero standards, and adjustments necessary to be successful at the range during live fire. Several MTT personnel as well as integrated NCO's from aligned units will be invited to not only teach the material but test students on overall aptitude to their target audience. Conceptually I want this product to take on legs of its own and be self-sustaining yet constantly involving to include/integrate any changes to doctrine and standard. I want to promulgate a sense of self-ownership over their own optic systems, catalyzing an environment of responsibility for its basic maintenance with a parallel understanding of how sight picture, point of aim, and point of impact all relate in terms of ballistics downrange. Through my time teaching the guard on PMI, I find the most difficult hurdles are committing to adequate blocks of time, continuity of training in a proper "crawl, walk, run" topology/schema, and keeping them engaged divulging the "why" behind what we do. I find significant returns in explaining the why behind methodology, thus this class will be seek to address this aspect at each academic topic/milestone. I hope to first lay the groundwork with speaking about the importance of taking zeroing and grouping seriously and how it pays off down the road in follow on tables. Then I will transition to a broad overview of ballistics and MOA concepts. Thereafter, I will speak to laser bore sighting prior to going hot and show students the target they will expect to see on the day, its various features and layout. From there students will learn more about their optic systems, how to install and use them and how to adjust them given various example groups on the previously introduced 25m zero target. Finally, I want the class to understand the grouping standards and importance of adherence, what a proper group and zero looks like and ultimately test the students on GO, NOGO standards for submission to our database at the conclusion; including but not limited to understanding the expected capability of their M4 and issued ammo as well. At the outset of this class, students should be able to make a seamless transition to module two.

Mandatory Knowledge (80 minutes)

1. MOA (10 minutes)
2. Basic flightpath of bullets (10 minutes)
3. Optic installation, maintenance, adjustment of CCO (10 minutes)
4. Iron Sights (10 minutes)
5. Army “improved” A8 zero target (20 minutes)
6. Test (20 minutes)

Supplementary Knowledge (~50 minutes)

1. Anatomy of a bullet and ammo identification (10 minutes)
2. Comparison of various zeros, how to accomplish at reduced ranges using offsets (20 minutes)
3. How to use the RCO BDC **based on if any RCO students present* (10 minutes)
4. Zeroing PEQ15 and LAMs (10 minutes)
5. **Fundamentals, reloads, malfunctions, positions, field strip and cleaning all reserved for Mod 2 but can be plugged into mod 1 based on time allowed*





PMI INSTRUCTOR Q-CARD 2025 MTT

US Army PMI Table 1

TIME	BLOCK OF INSTRUCTION	LOCATION	RDS
5 MIN	INTRO	LECTURE	0
10 MIN	Anatomy of a bullet and ammo identification	LEC	0
10 MIN	MOA (Minutes of Angle)	LEC	0
10 MIN	Ballistics	LEC	0
10 MIN	CCO	LEC/ HO	0
10 min	Iron Sights	LEC/ HO	0
15 min	RCO	LEC/ HO	0
10 min	Bore sighting	LEC/ HO	0
20 min	Zeroing	LEC/ HO	0
20 min	Zero comparison and theory	LEC	0
20 min	Test	LEC/ HO	0
	The instructor is advised to use lesson plans as reference and adhere to that controlling document	LEC/ HO	0

This is a basic down and dirty course and should be executed over 1 half day. You can extend it, flex it for your time frames and adjust according to group. You can also run them through everything above and just evaluate them for these skills. This course outline is a guide not an absolute. These are the minimum requirements of the course. These are minimums the students should / must know. Be imaginative and flexible!

_ = Omit if necessary for time

_ = Mandatory knowledge

* “LEC/ HO” (Lecture and Hands on)

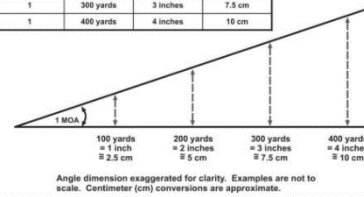
Remember EDIS

Explain, Demonstrate, Imitate and Slow for form

Why do we fail at qualifying?

1. Bad zero
2. Optics issues
3. Bad grouping/fundamentals
4. Target/range technical issues

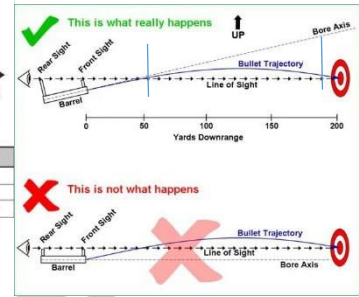
MOA	At Distance	Equals	
1	100 yards	1 inch	2.5 cm
1	200 yards	2 inches	5 cm
1	300 yards	3 inches	7.5 cm
1	400 yards	4 inches	10 cm



What is a minute of angle?

1 MOA is approximately 1" at 100 yards, 2" at 200 yards, 3" at 300 yards, 4" at 400 yards, etc.

Bullet trajectory and ballistics entails understanding the flight path of the bullet, you are literally "lobbing" bullets on a curve to the target.

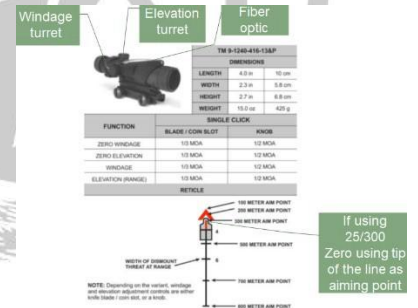


Two main optics besides traditional iron sights, CCO and RCO.

CCO stands for close combat optic, has no magnification, and uses an AA battery. Do not store the AA battery with the optic unless it is a lithium one. Mount the CCO on the front edge of the upper receiver rail. The CCO has a 2 moa dot, during zeroing, dim this out. During qualification, get a sight picture prior to the course of fire and adjust for current lighting conditions to a reasonable level where you can quickly acquire it but also doesn't bloom and fill the entire far target silhouette. Ensure while mounting any optic you place forward pressure on it *while* tightening it down to the rail. CCO and RCO should be tight and if you have the old style CCO, it should NOT spin freely in the turret mount. You should have both eyes open when shooting with the CCO. Each "click" of the turret adjusts the reticle ½ (0.5 MOA) or half a box on the A8 zeroing target. Your optical focus using the CCO should not be on the dot, but on the target.



RCO should be mounted as rear most on the upper receiver rail as possible to achieve good eye relief. Tape should be used on the fiber element to control reticle brightness based on changing environmental conditions. If you are zeroing at 25m (25/300), you zero to the red tip on the top of the line just under the chevron (triangle). The RCO has a BDC (bullet drop compensating reticle), each number and corresponding hash line or "stadia" should be used to range based on the average width of a man sized target (18") and is also where you holdover to shoot at those given distances given a typical M4 barrel length and ammo.



The top turret adjusts up and down (elevation), the side turret adjusts the left and right (windage).

If using iron sights, before zeroing, set the rear sight to use the smaller aperture if available, to the white line between the 300 and 400 marks, then when zeroing is completed, move it to the 300 mark. Average man sized targets smaller than the front sight post are further than 300m away from you, and if they are wider than your front sight post, are closer than 300m. Front sight post should be in focus, NOT the target. Front sight post should be center in the rear circular aperture.

Backup Iron Site (BUIS)

3-22. The BUIS is a semi-permanent flip-up sight equipped with a rail-grabbing base. The BUIS provides a backup capability effective out to 600 meters and can be installed on M16A1 rifles and M4-series carbines. (See figure 3-7.)

3-23. The BUIS on the first notch of the integrated rail, nearest to the charging handle. The BUIS remains on the modular magazines system (MPS) unless the carrying handle/sight is installed. The following information is extracted from the weapon's technical manual.

For M4
Zero Elevation - 300 m setting
Zero Windage - White Line



Before **Zeroing**, ensure you have conducted laser or manual bore sighting.

You will engage three A8 targets in table IV ("grouping and zeroing"). Starting from left to right, each target you will shoot five rounds at a time for a total of ten rounds on each target. The first shot group of five you do not make any adjustments, it is purely for grouping. The second shot group if you get **CONSISTENT** results and a "good group", you may start making optic adjustments from there on out. Take your time, this is an untimed event. Lubricate your weapon/action prior to all events if possible. This is your time to work on fundamentals of marksmanship. There is a legend at the bottom of the modern A8 target version, which based on the optic you are using, which tells you how to adjust the turrets and what effect each click has. As a reminder, for each box on the A8 you want to move, you will need to "dial" two clicks on a CCO and most RCO's. Pay attention that you are moving the turret the correct direction and amount you intend as well as the correct turret depending on if you are trying to move left/right or up/down. Support your weapon when possible even if only have the magazine as a connection point to the ground. Zeroing and grouping is conducted from the prone supported position.

Circle each shot group of five, write your name on each target and keep the target with you when you come off the range for the remainder of the weekend and have completed zeroing. Using M855A1, your goal is to have 8 out of 10 shots within a 4-6 MOA sized circle (4-6 boxes wide/diameter on the A8 target), **averaged around the bottom tip of the center diamond (1.5 MOA or boxes below absolute center)**. If your shot groups are too large or inconsistent, you need to work on fundamentals and **WILL** have trouble passing when you go to qualify if you deem something outside the standard as acceptable because you will likely miss the further silhouette pop-up targets.

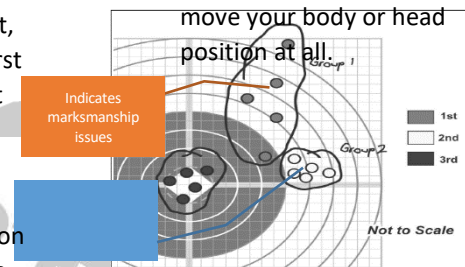


Table IV, Zeroing Standard Template/Example

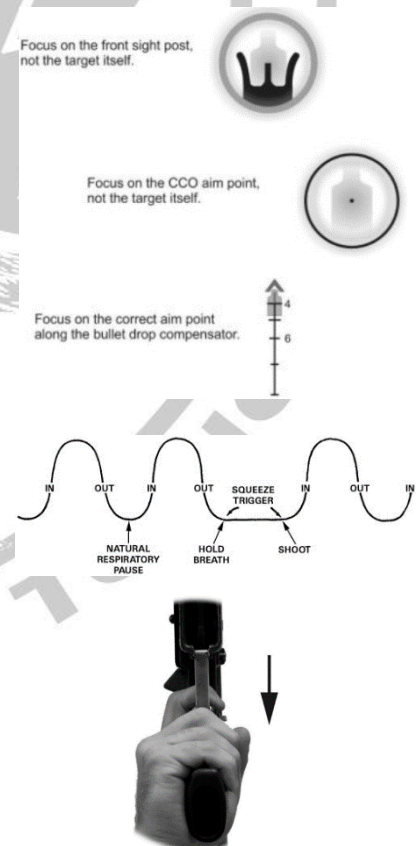


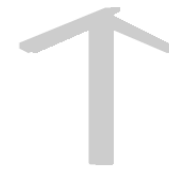
The shot process is:

1. **Pre-shot:**
 - a. Position, natural point of aim, sight picture, hold
2. **Shot:**
 - a. Refine aim, breathing control, trigger control
3. **Post-shot:**
 - a. Follow-through, recoil management, call the shot, evaluate the shot

The fundamentals of marksmanship are:

1. **Natural point of aim**, the point where the barrel naturally orients when the shooter's muscles are relaxed and support is achieved
2. **Sight picture**, relationship between the aiming device and the firer's eye, consistent cheek weld and head placement is key here
3. **Breathing control**, breath in, breath out, and at the bottom of breathing out "natural respiratory pause", begin trigger squeeze, do not hold your breath or stay in this pause for longer than eight seconds, otherwise begin breathing cycle again before
4. **Trigger control and follow through**, the act of firing the weapon while not disturbing it until the bullet has left the muzzle. Good trigger control involves a smooth, consistent/steady application of pressure straight to the rear of the weapon, such that your sight picture remains undisturbed. Assume a high grip on the pistol grip at all times, relax your firing hand to isolate your trigger finger from the rest of your hand/fingers. After the shot breaks, keep the trigger pinned to the rear until the bullet has completely left the muzzle, return to the audible and tactile "reset", do not adjust or





MOD 1 (ZERO THEORY)

Rev 04 FEB 2025
SGT (CA) NYDEN18th CAV SPT DET. MTT



Full powerpoint with videos accessible here:

https://docs.google.com/presentation/d/18QIlvG3cgEAG6t1hzzAvsw7hlvJ_H7LS?rtpof=true&usp=drive_fs



Table of Contents

- *Understanding Ammunition**
- MOA
- Ballistics
- Optics & Reticles
- Bore Sighting
- Zeroing
- Kahoot/Test

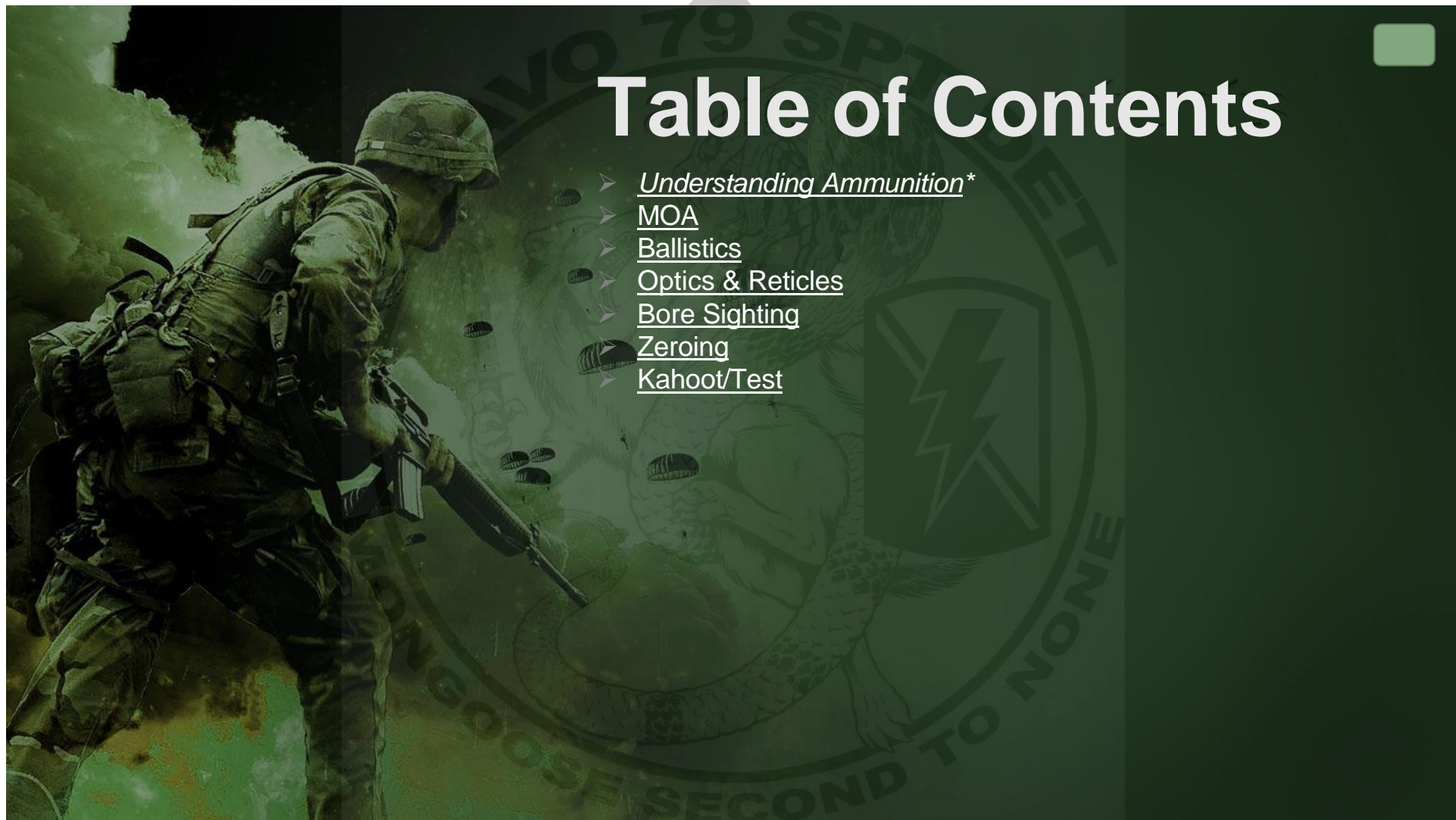




Table I, Preliminary Marksmanship Instruction and Evaluation

“Crawl” phase

Instruction to correctly learn Army small arms doctrine.

Gate: Quiz for a Check on Learning

Table II, Preliminary Live-Fire Simulations

Hands-on application of skills

Old School: Shadow Box, Dime/Washer

New School: LMTS, EST, laser simulators, MantisX, SCATT, Noptel, VR

Live Fire can be used as a Table II Preliminary exercise

Table III, Drills

Appendix D in Training Circular

Hands-on application of small arms skills that aren't pure shooting.

Get into/out of position, reloading, malfunction clearance, etc.

Table IV, Basic Live Fire

Grouping and Zeroing

By TC 3-20.40, this should be completed with five five-round groups

Table II is where practice and remedial should be done

Table V, Practice

Practice is a live fire course reinforcing skills with an increased tempo.

Table V should be as or more difficult than the qualification course

Table VI, Qualification

Only **ONE** attempt on a qualification for record is allowed

Soldiers and units may shoot as many exercises and Validation courses prior as they like.

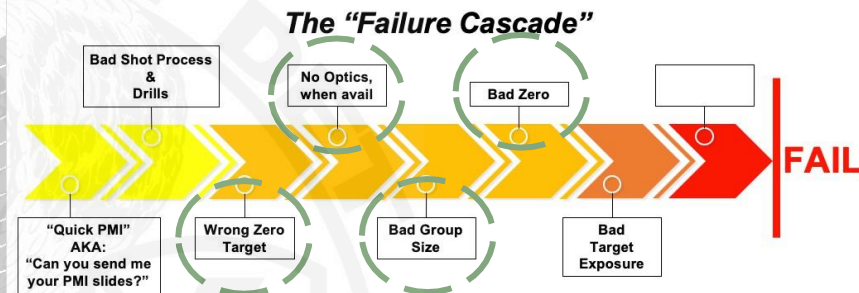
Validation/practice can include a full run on the qualification

Gate: Pass qualification with a first-time Go

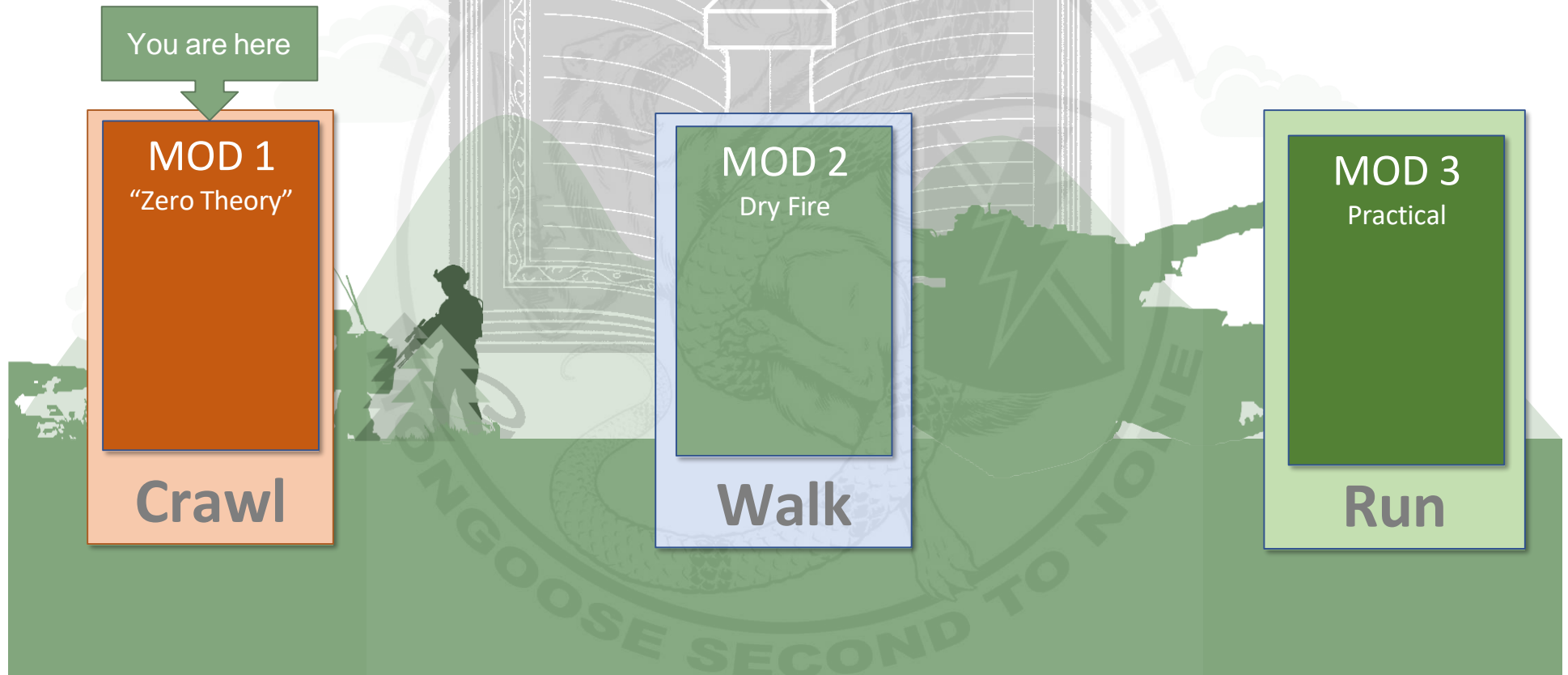


IWQ & Training: Why we Fail and How to Succeed

Problem: Tolerance Stacking

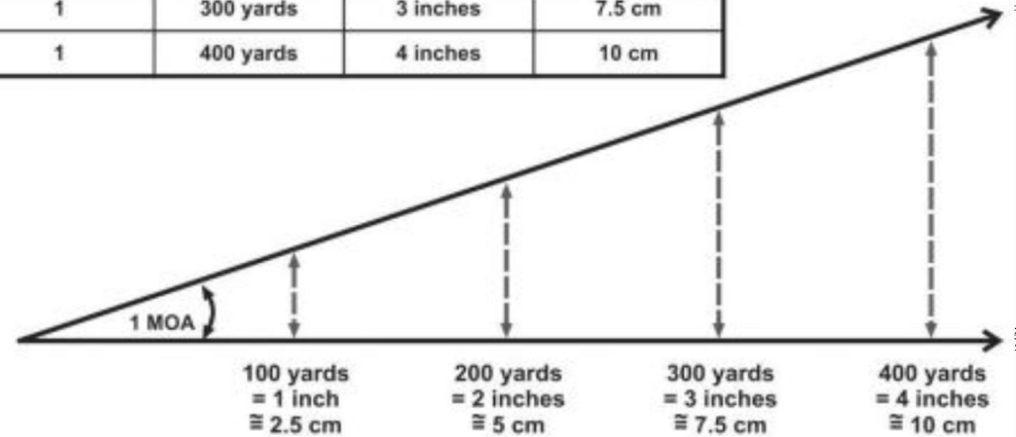


Understanding the Individual Weapons Training Strategy



MOA/Minute of Angle

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 Measurement

There are 360 degrees in a circle.

There are 60 MOA in a degree.

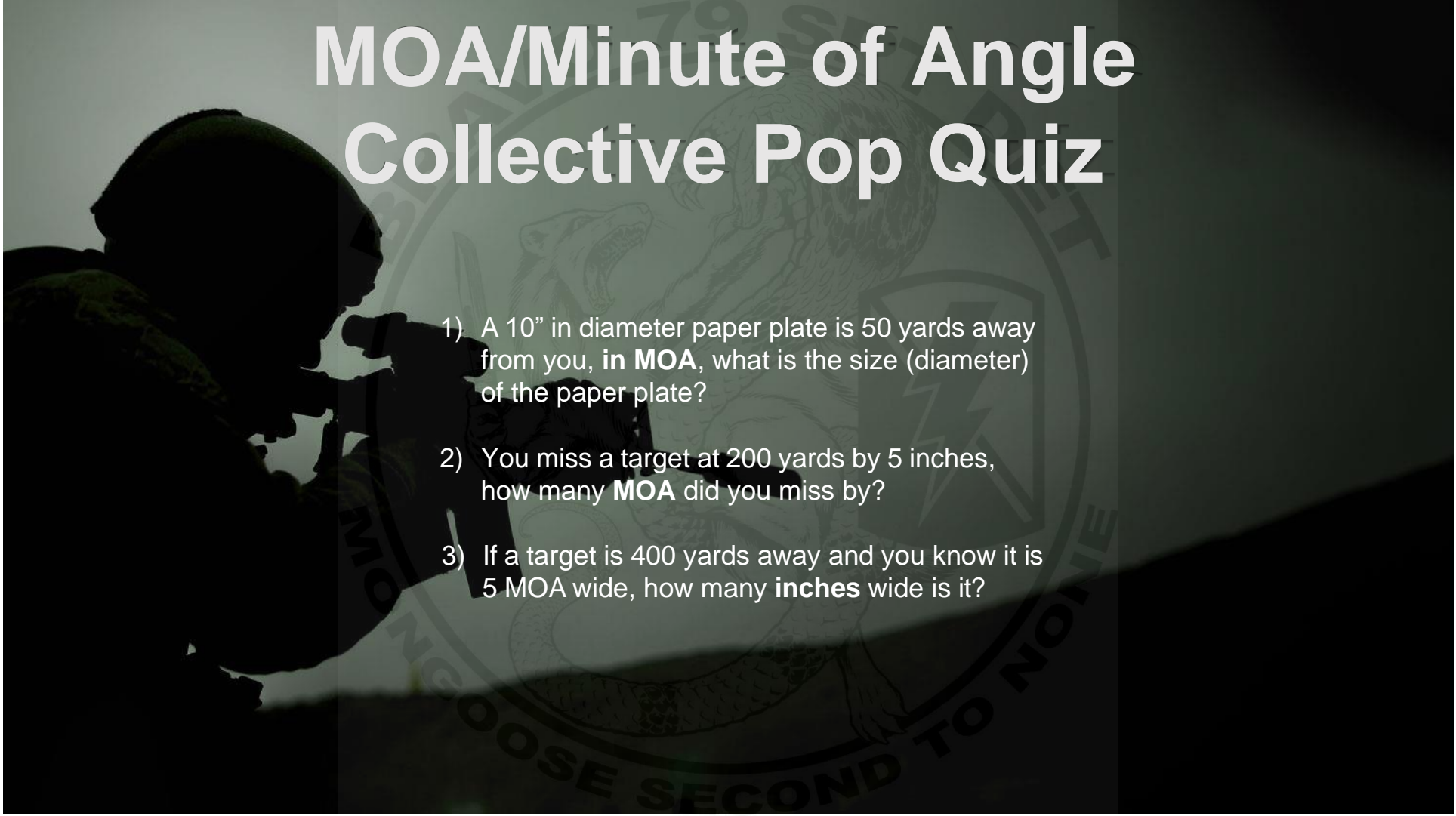
There are 21,600 MOA in a circle.

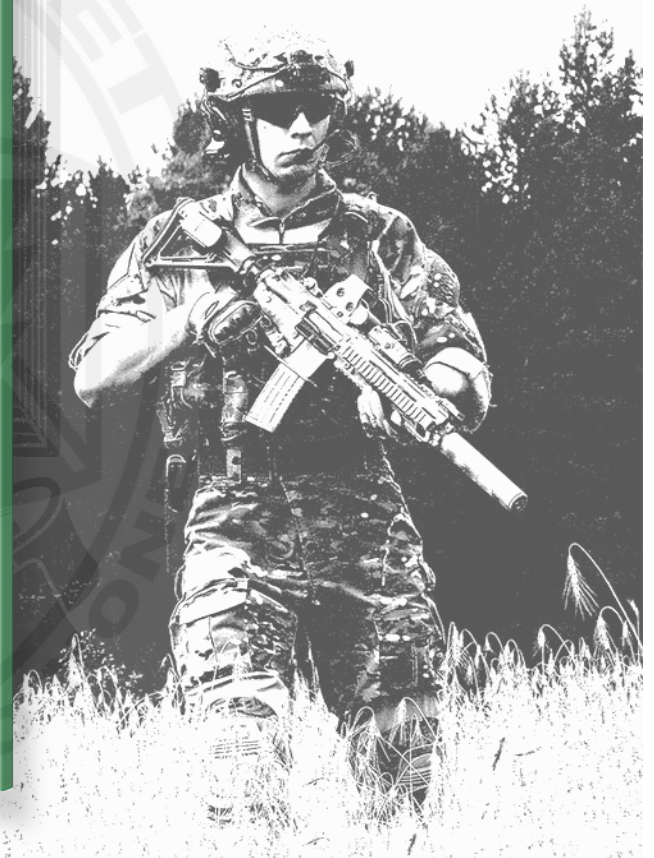
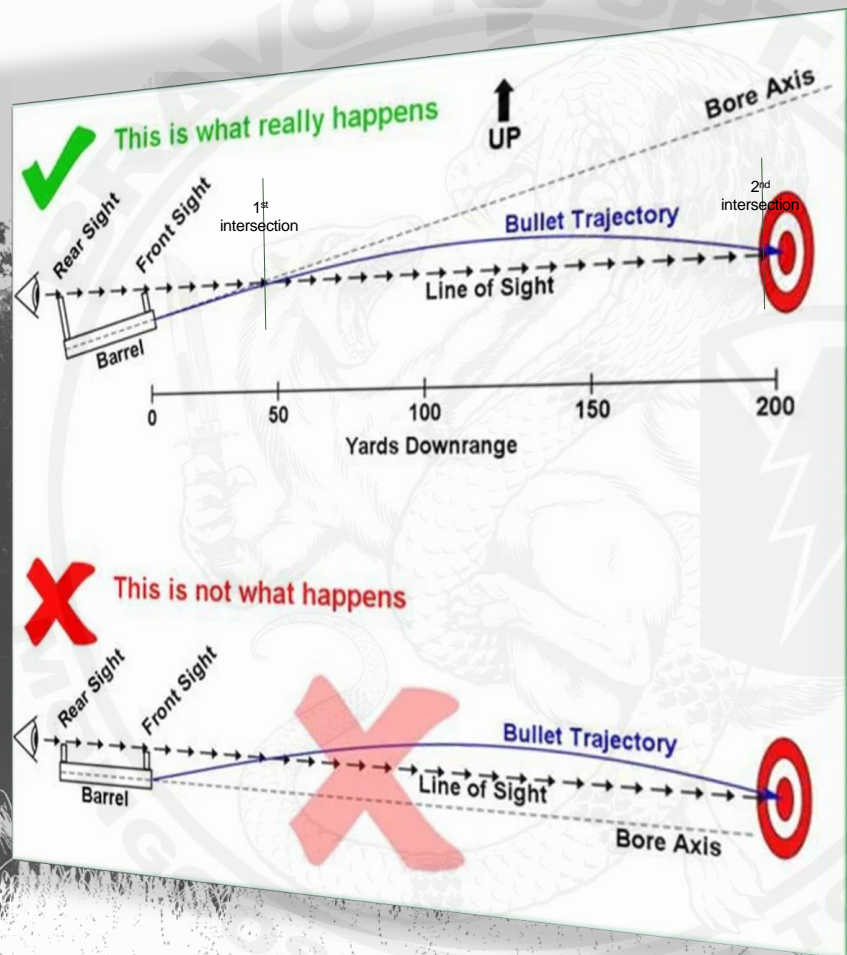
1 MOA at 100 yards ≈ 1 inch.

Smaller measurements of an MOA are described in fractions, not seconds (i.e., 1/2 MOA).



MOA/Minute of Angle Collective Pop Quiz

- 
- 1) A 10" in diameter paper plate is 50 yards away from you, **in MOA**, what is the size (diameter) of the paper plate?
 - 2) You miss a target at 200 yards by 5 inches, how many **MOA** did you miss by?
 - 3) If a target is 400 yards away and you know it is 5 MOA wide, how many **inches** wide is it?



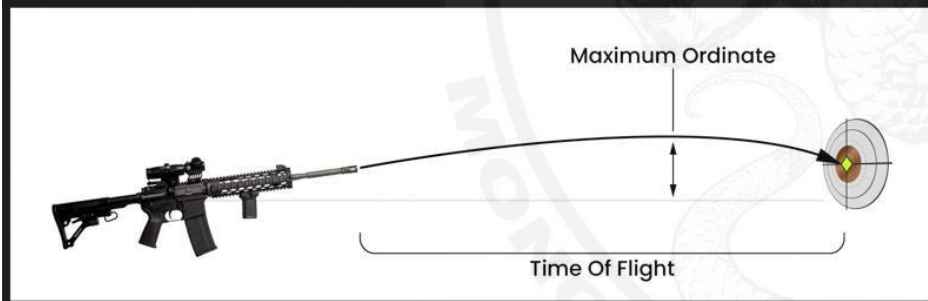


Factors affecting bullet flight:

- **Velocity**
- **Ballistic coefficient** (bullet shape and design)
- Barrel harmonics and twist rate
- **Gravity**
- **Wind**
- Air resistance and Drag (see BC)
- Temperature, air density/barometric pressure, humidity
- “Coriolis effect” (earth rotation)
- Earth surface curvature
- Shooting angle

Mastering External Ballistics for Precision Shooting

BALLISTIC TRAJECTORY



Maximum Ordinate: This represents the peak of the bullet's curved trajectory—the highest point the bullet reaches above the line of sight. When a bullet is fired, it first rises above the line of sight, achieves the maximum ordinate, and then starts descending towards the target.



Optics & Reticles

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.





Backup Iron Sight (BUIIS)

Backup Iron Site (BUIIS)

3-22. The BUIIS is a semi-permanent flip-up sight equipped with a rail-grabbing base. The BUIIS provides a backup capability effective out to 600 meters and can be installed on M16A4 rifles and M4-series carbines. (See figure 3-7.)

3-23. The BUIIS on the first notch of the integrated rail, nearest to the charging handle. The BUIIS remains on the modular weapon system (MWS) unless the carrying handle/sight is installed. The following information is extracted from the weapon's technical manual.

For M4

Zero Elevation – 300 m setting

Zero Windage – White Line

**If your rear sight has
two apertures, use the
smaller one for zeroing*



Targets wider
than the front
sight post are
typically closer
than 300m



Targets that are
covered by the
front sight post
are typically
further than 300m

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
FRONT SIGHT POST ELEVATION (RANGE)	M4A1	1 1/8 MOA
	M4	1 1/8 MOA
	M16A4	1 1/3 MOA
	M16A2	1 1/3 MOA

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

Windage
turret

Brightness
control

Elevation
turret

Battery
Size AA



TM 9-1240-413-13&P

DIMENSIONS

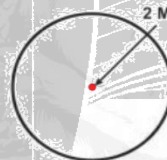
LENGTH	4.0 in	10 cm
WIDTH	2.3 in	5.8 cm
HEIGHT	2.7 in	6.8 cm
WEIGHT	15.0 oz	425 g

FUNCTION

SINGLE CLICK

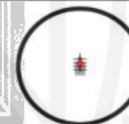
ZERO WINDAGE	0.5 MOA
ZERO ELEVATION	0.5 MOA
WINDAGE	0.5 MOA
ELEVATION (RANGE)	0.5 MOA

RETICLE



2 MOA AIMING POINT

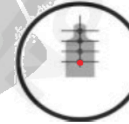
300 m



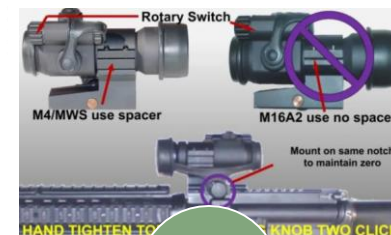
200 m



100 m



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



Click here
for
mounting
procedures

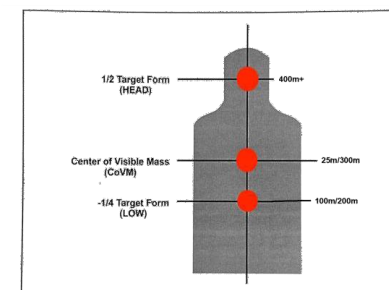


Figure 7-5. Immediate hold locations for elevation (range) example



CCO Collective Pop Quiz

- 1) What battery does the current model CCO take?
- 2) What size in MOA is the reticle on the CCO?
- 3) What does CCO stand for?
- 4) True or False, should you dim your CCO reticle during zeroing?
- 5) Where is the ideal location to mount the CCO on your upper receiver?
- 6) Should you always strive to have an SOP or TACSOP on where to mount your CCO on all rifles unit wide?
- 7) True or False, on the old style CCO mount, the optic should spin freely in the mount?
- 8) How much in MOA does each “click” of an adjustment turret on the CCO move the reticle?
- 9) True or False, the adjustment turret on the top of the CCO is for adjusting windage (left to right)?
- 10) True or False, while shooting with the CCO you should have both eyes open?



Windage
turret

Elevation
turret

Fiber
optic



Click here
for
mounting
procedures

Aiming Devices

Rifle Combat Optic

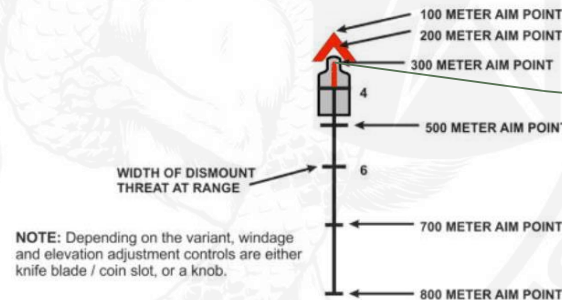
- ACOG (Advanced Combat Optical Gunsight)
- 6 MOA chevron (TA31)
- Fiber optic increases reticle illumination in bright light (cover with tape as needed)
- Tritium illuminates in dark
- Other reticles exist
- Trijicon (Michigan/Sweden) first made in 1981



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



If using
25/300
Zero using tip
of the line as
aiming point





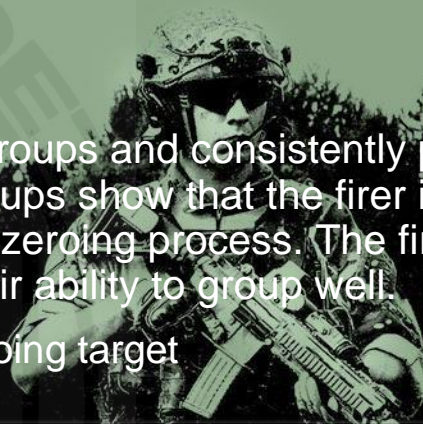
Zeroing Process

- Why do we zero?
 - The zeroing process ensures the Soldier, weapon, aiming device, and ammunition are performing as expected at a specific range to the target with the least amount of induced errors.
- How do we zero?
 - The zero process includes mechanical zero, laser boresight, 25-m grouping and zeroing, and zero confirmation out to 300 meters.
- When is zeroing necessary?
- Tips for zeroing: place targets level with shooter, shoot from **supported** prone, take your time, dim your optic reticle! Lubricate all weapons prior to going hot and ensure optics are mounted properly!

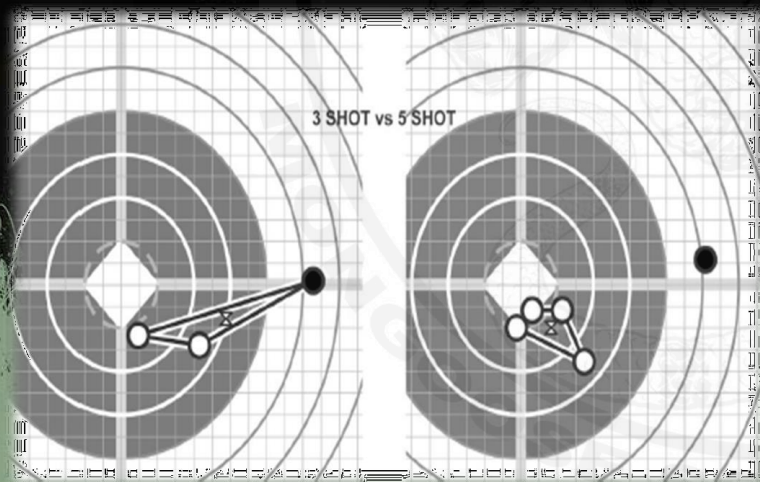


How do we zero?

- The goal of the grouping exercise is for the shooter to fire tight shot groups and consistently place those groups in the same location. Tight, consistently placed shot groups show that the firer is applying proper aiming and smooth trigger control before starting the zeroing process. The firer should not start the zeroing process until they have demonstrated their ability to group well.
- Standard is 8 out of 10 shots are within 4-6 moa sized circle on final zeroing target



Old way →



New way →

Indicates
marksmanship
issues

Indicates optics
need
adjustment





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- Once the firer has shown their ability to accurately group, they should begin adjusting the aiming device to move the groups to the center of the target.
- During the zeroing process, the firer should attempt to center their groups as much as possible.
- Depending on the aiming device used, there may be a zero offset that needs to be used at 25 meters. During the zeroing process it is important that the firer adjusts their groups as close to the offset mark as possible.
- Standard is 8 out of 10 shots are within 4-6 moa circle on final zeroing target.



Zeroing Targets

Using M855A1 Group should be centered around bottom of middle diamond, 1.5MOA from true center





What does a good group and zero look like?

Table IV, Zeroing Standard Template/Example



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 RCOTA-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

Tools you can use to make zero day easier:



Canebrake
25 meter shot
group gauge

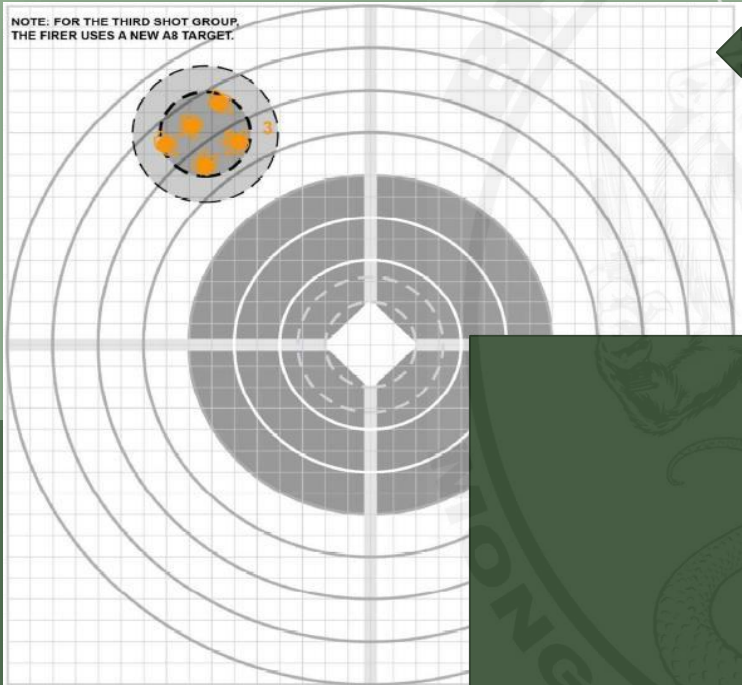


Canebrake
25 meter zero
offset tool



Zeroing & Grouping Collective Pop Quiz

NOTE: FOR THE THIRD SHOT GROUP, THE FIRER USES A NEW A8 TARGET.



Which of the following is **TRUE** about the this target:

- a) Group size is within standard
- b) Rifle and optic are zeroed



Given this group, an M4, CCO, M855A1 ammo and the fact that you are 6 MOA left and 13 MOA high, how many physical clicks of both windage and elevation should you adjust your optic?

INTRO

Task, Condition, Standard see 23-9:

TLO-

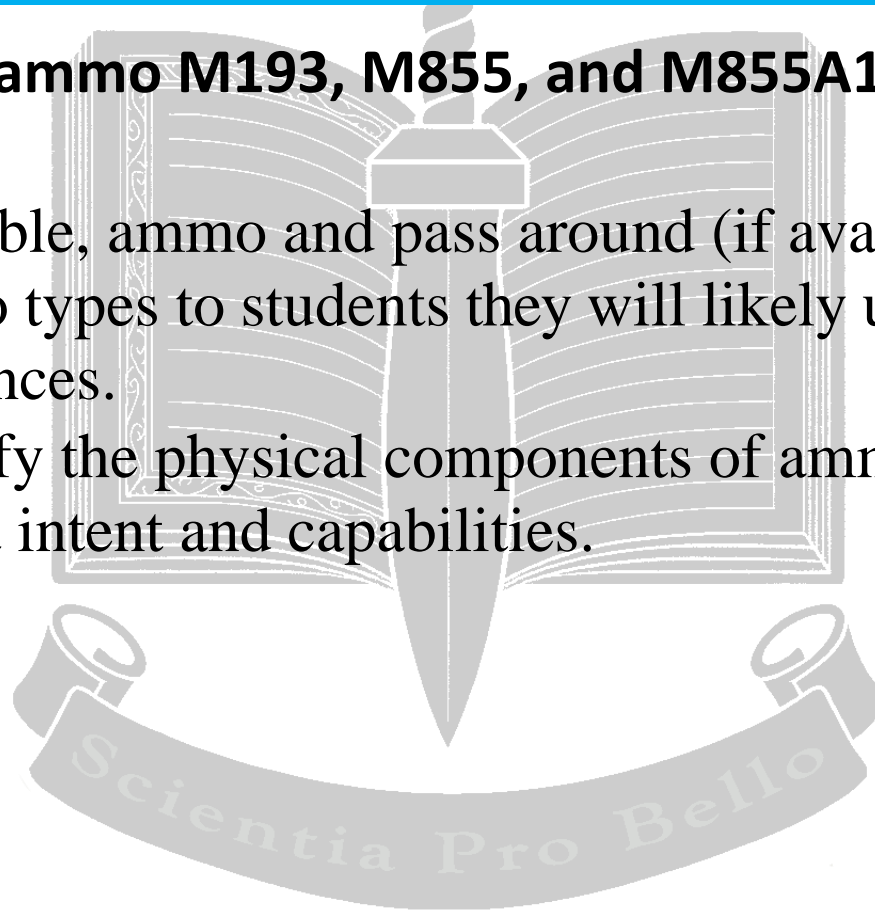
- Mount, and zero the issue optic.

Instructor note: Failure to qualify can often result from a bad zero. “Bad zeroes” often come from complacency or not understanding and properly manipulating your sighting system, as well as not understanding the zero target and goal/standard.

Anatomy of ammunition

Describe issue ammo M193, M855, and M855A1

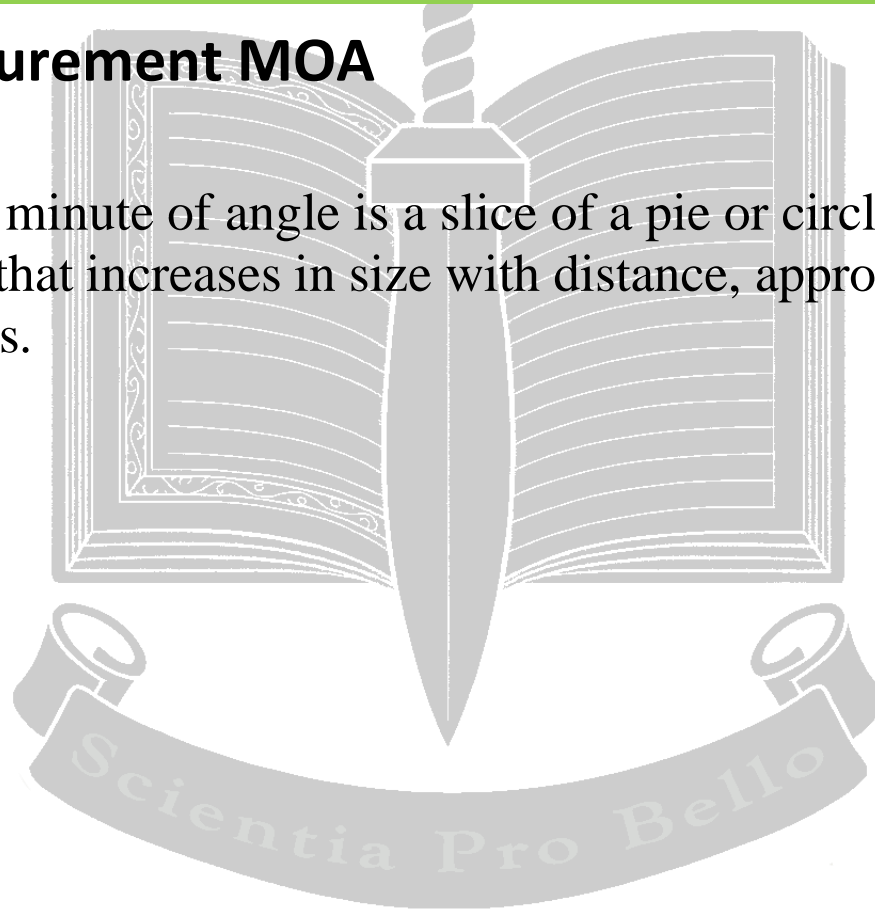
- Show if possible, ammo and pass around (if available) and display ammo types to students they will likely use; highlight visual differences.
- Briefly identify the physical components of ammo, how it works, their different intent and capabilities.



MOA Minute of Angle

Angular measurement MOA

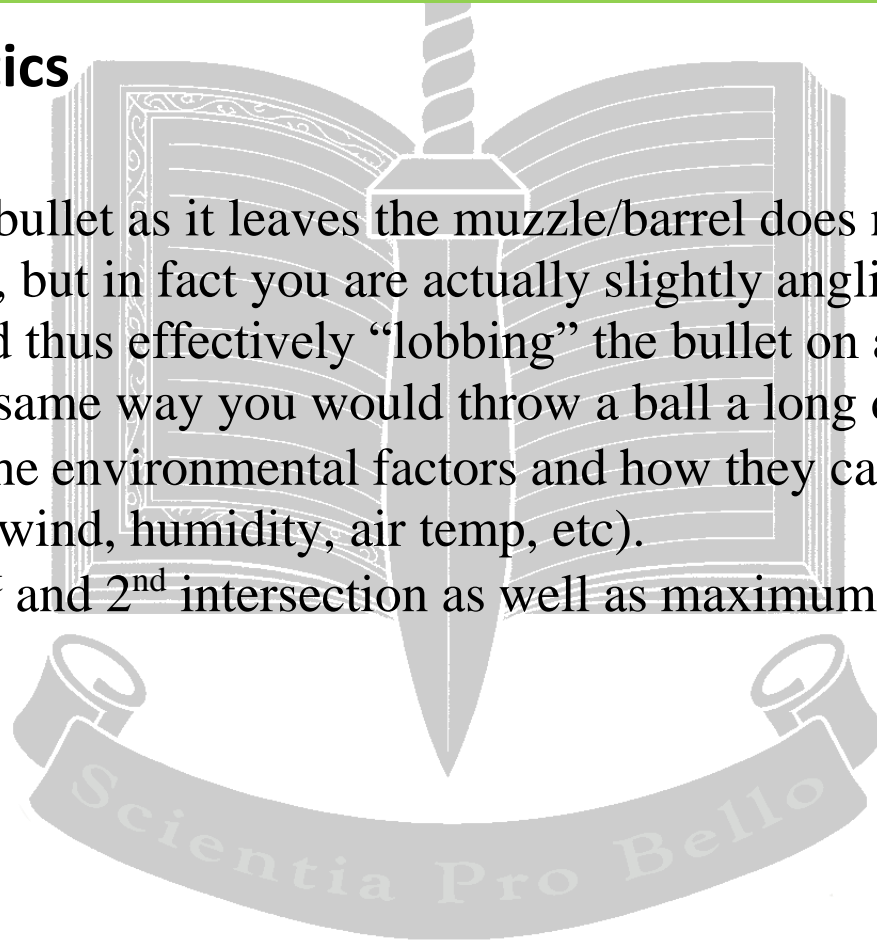
- Explain that a minute of angle is a slice of a pie or circle, it's an angular measurement that increases in size with distance, approximately equal to 1" at 100 yards.



Ballistics

Exterior Ballistics

- The path of a bullet as it leaves the muzzle/barrel does not rise contrary to popular belief, but in fact you are actually slightly angling the entire firearm slightly up and thus effectively “lobbing” the bullet on an arced or parabolic trajectory the same way you would throw a ball a long distance.
- List some of the environmental factors and how they can affect a bullet's trajectory (ie. wind, humidity, air temp, etc).
- Explain the 1st and 2nd intersection as well as maximum ordinate.



CCO

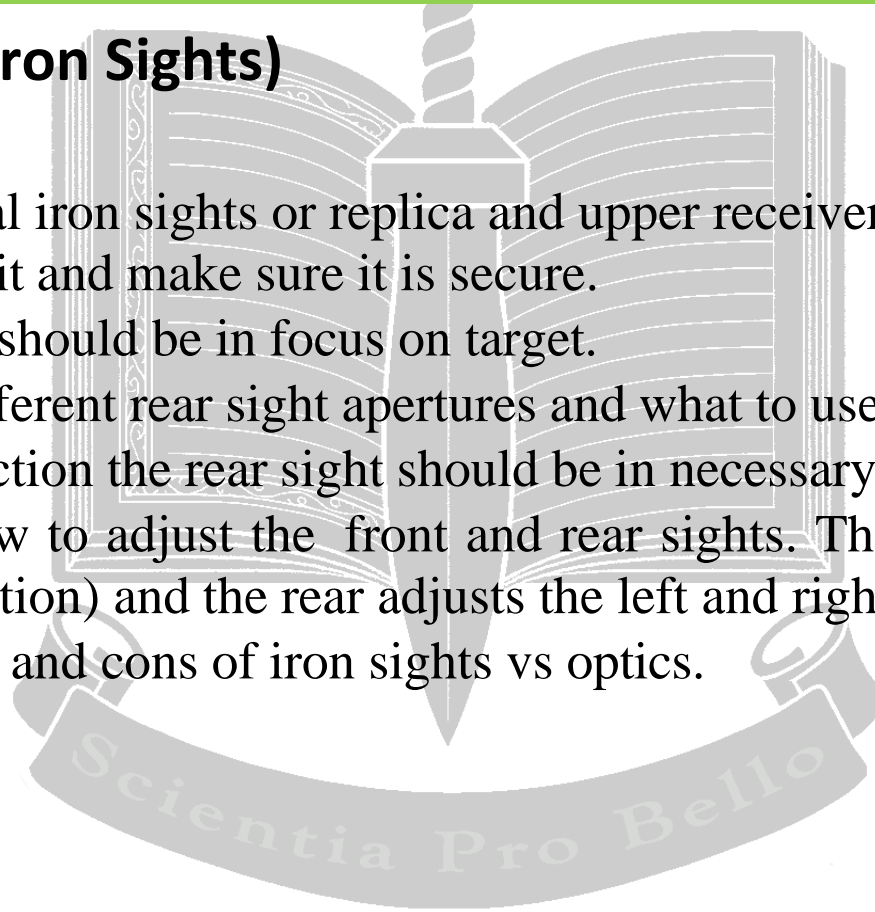
Close Combat Optic M68

- Ideally use actual CCO or replica and upper receiver to explain how and where to mount it and make sure it is secure.
- Explain dot size, how to target focus and where battery, adjustment turrets and brightness features
- It is important to dim out the optic when zeroing and to avoid blooming.
- Takes an AA battery that is not to be stored in the optic unless it's a lithium type battery.
- Side turret is for adjusting left and right (windage), top turret is for adjusting up and down (elevation), each “click” is 0.5 (1/2) MOA of adjustment.

Iron Sights

BUIS (Back up Iron Sights)

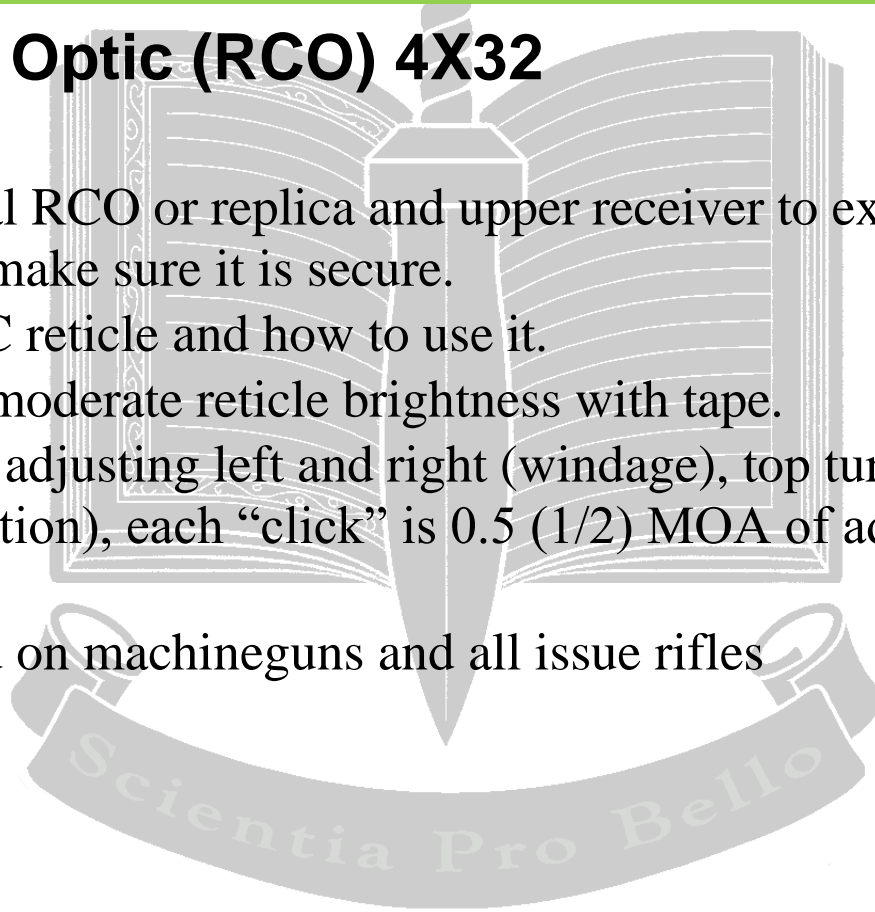
- Ideally use actual iron sights or replica and upper receiver to explain how and where to mount it and make sure it is secure.
- Front sight post should be in focus on target.
- Demonstrate different rear sight apertures and what to use and why.
- Explain the selection the rear sight should be in necessary for zeroing.
- Demonstrate how to adjust the front and rear sights. The front adjusts the up and down (elevation) and the rear adjusts the left and right (windage).
- Explain the pros and cons of iron sights vs optics.



RCO

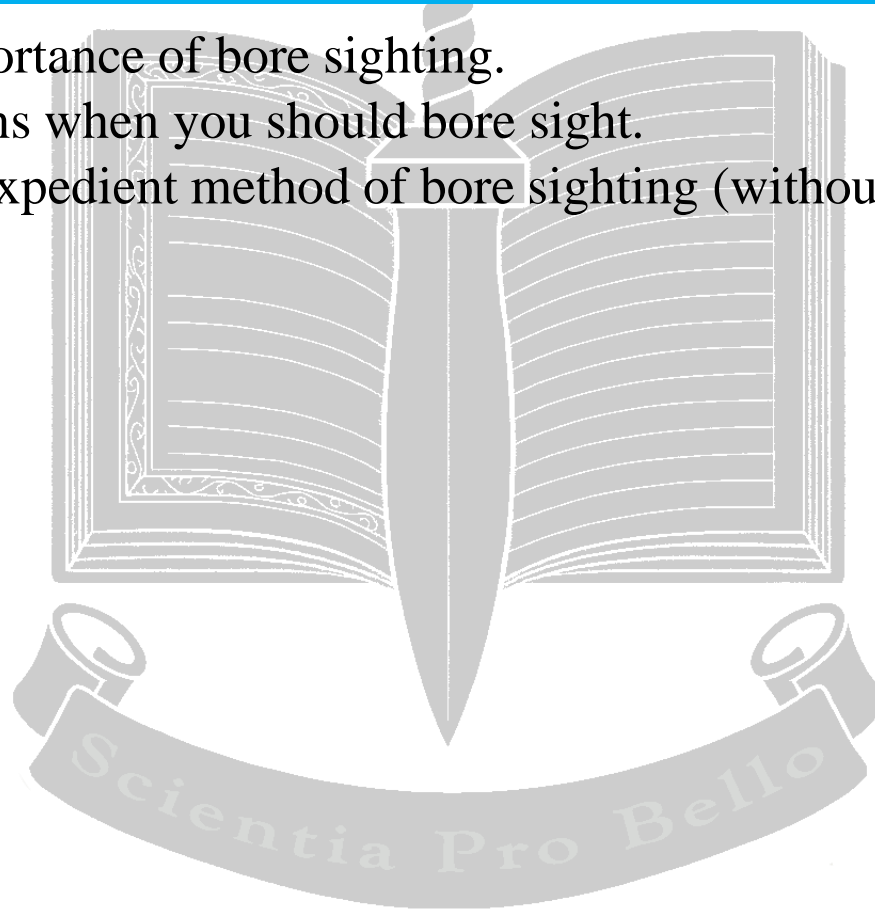
Rifle Combat Optic (RCO) 4X32

- Ideally use actual RCO or replica and upper receiver to explain how and where to mount it and make sure it is secure.
- Explain the BDC reticle and how to use it.
- Explain how to moderate reticle brightness with tape.
- Side turret is for adjusting left and right (windage), top turret is for adjusting up and down (elevation), each “click” is 0.5 (1/2) MOA of adjustment *ON MOST MODELS*.
- This can be used on machineguns and all issue rifles



Bore Sighting

- Explain the importance of bore sighting.
- Explain situations when you should bore sight.
- Show the field expedient method of bore sighting (without access to a laser).



Zeroing

- Show army A8 target and pass them around, describe the legend at the bottom and the size of each square.
- Explain the zero process (procedure, round count, etc), involving grouping first, then making adjustments after shooter has proven sound fundamentals.
- Provide additional tips for grouping and zeroing, taking your time, circling your groups after each iteration, etc.
- Show and work through several examples of what a good and bad group looks like, have students understand the adjustments necessary given an example to get the group to where we want it within 4-6 moa standard.

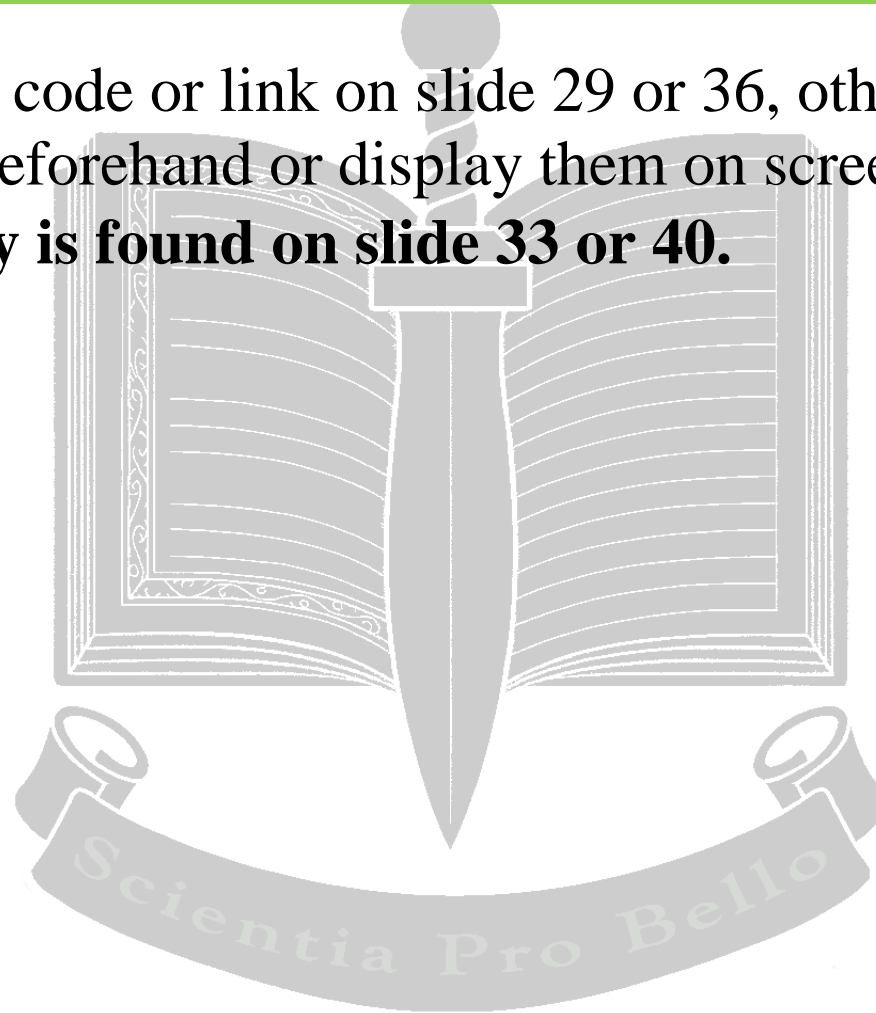


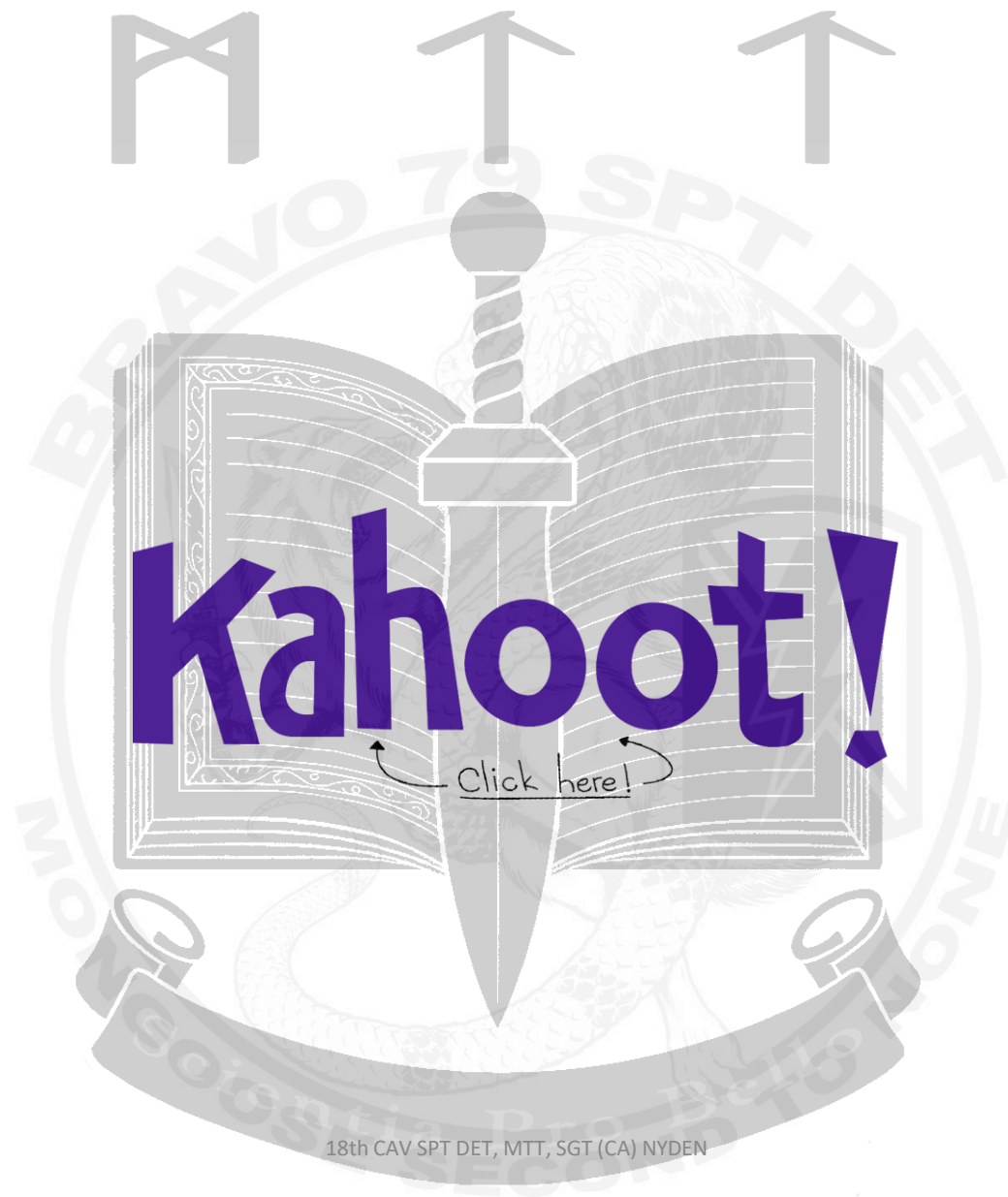
Provide additional methods of dryfire and practice at home methods

- legend at the bottom and the size of each square.
- Explain the zero process (procedure, round count, etc),
- Slide 34 or 41
- Emphasize the importance of engaging in means of “extra-curricular” practice!
- Show army A8 target and pass them around, describe the legend at the bottom and the size of each square.
- Explain the zero process (procedure, round count, etc),

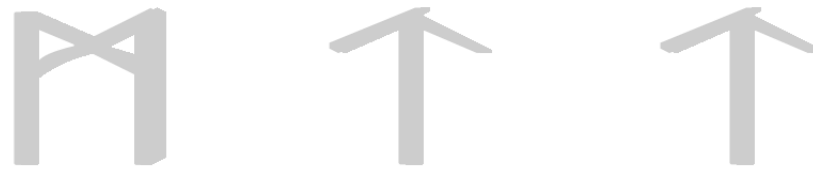
Administer Test

- Use the QR code or link on slide 29 or 36, otherwise print out the test slides beforehand or display them on screen
- **Answer key is found on slide 33 or 40.**





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1. Select all the components of a round of ammo

- a) Primer
- b) Case
- c) Propellant
- d) Bullet

2. True or False, the primer is responsible for igniting the propellant

- a) True
- b) False

3. Identify the ammo in the following photo

- a) M855
- b) M855A1
- c) M193 ball
- d) M200 blank



4. Approximately how many inches at 100 yards is 1 MOA?

- a) 1"
- b) 0.5"
- c) 2"
- d) 0.25"

5. At 1000 yards, 1 MOA is approximately 8 inches

- a) True
- b) False

6. You shoot a group from 25m that measures 2" in size, what is the size of the group in MOA?

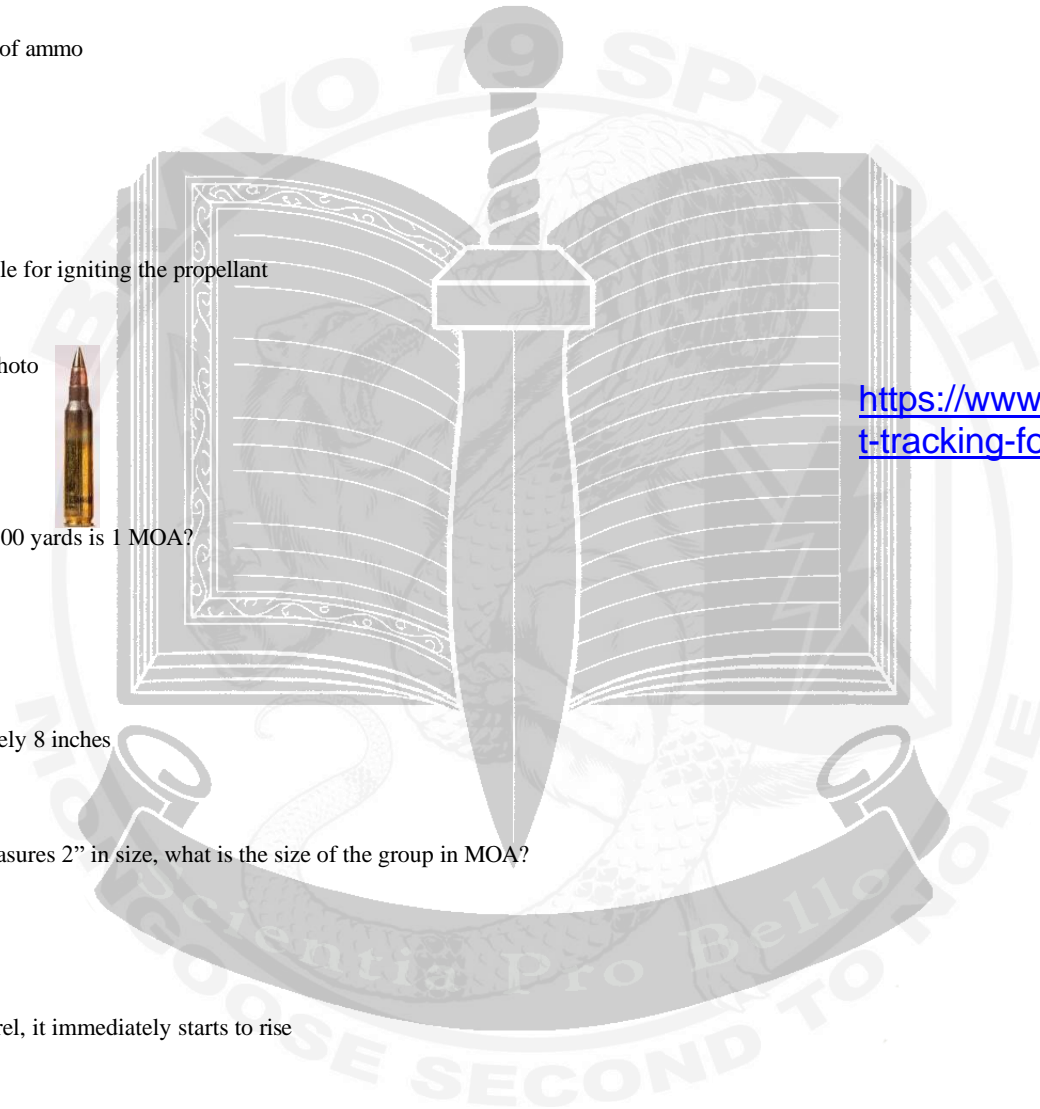
- a) 12 MOA
- b) 6 MOA
- c) 8 MOA
- d) 2 MOA

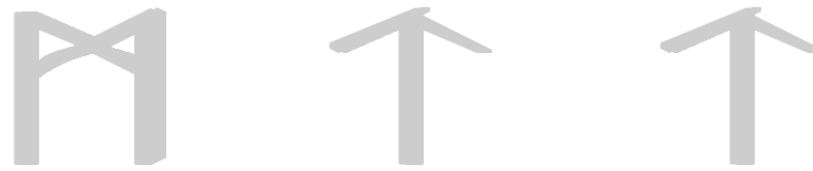
7. When a bullet initially leaves the barrel, it immediately starts to rise

- a) True
- b) False



<https://www.mttschoolhouse.com/student-tracking-form/>





8. The first intersection in a 300m zero is

- a) 50m
- b) 36m
- c) 100m
- d) 25m

9. Max ordinate is the highest peak of a bullets trajectory

- a) True
- b) False

10. The modern CCO takes AAA batteries

- a) True
- b) False

11. The size of the red dot on the CCO is

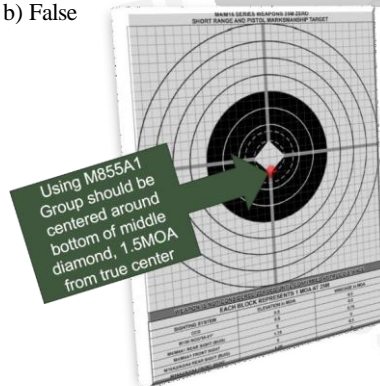
- a) 1 MOA
- b) 2 MOA
- c) 3 MOA
- d) 4 MOA

12. You should dim your reticle on your optic when zeroing

- a) True
- b) False

13. Is the following statement in the picture TRUE or FALSE?

- a) TRUE
- b) False



14. True or False, on the old style mount CCO, it should spin freely in it's mounting rings after mounting to the receiver

- a) True
- b) False

15. What is the ideal position on the upper receiver for the CCO to be mounted?

- a) Front overlapping the barrel/foregrip/handguard
- b) Rear most position
- c) Middle of the receiver
- d) Front most but not overlapping on the barrel/foregrip/handguard section

16. What does RCO stand for?

- a) Rebel Counter Optic
- b) Rifle Combat Optic
- c) Really Consistent Optic

17. Which turret is this?

?

- a) Windage
- b) Elevation
- c) Neither windage or elevation
- d) Both windage and elevation

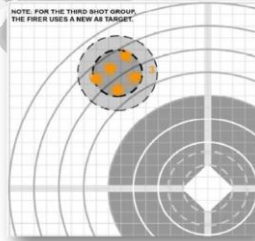


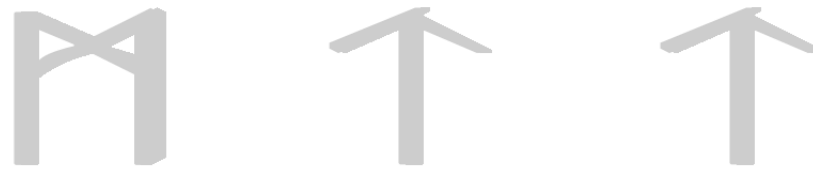
18. Each click of adjustment on the CCO results in how much of a shift in the reticle?

- a) 0.5 MOA
- b) 1 MOA
- c) 0.25 MOA
- d) 0.1 MOA

19. True or False, this rifle and optic is both grouped to standard **AND** zeroed

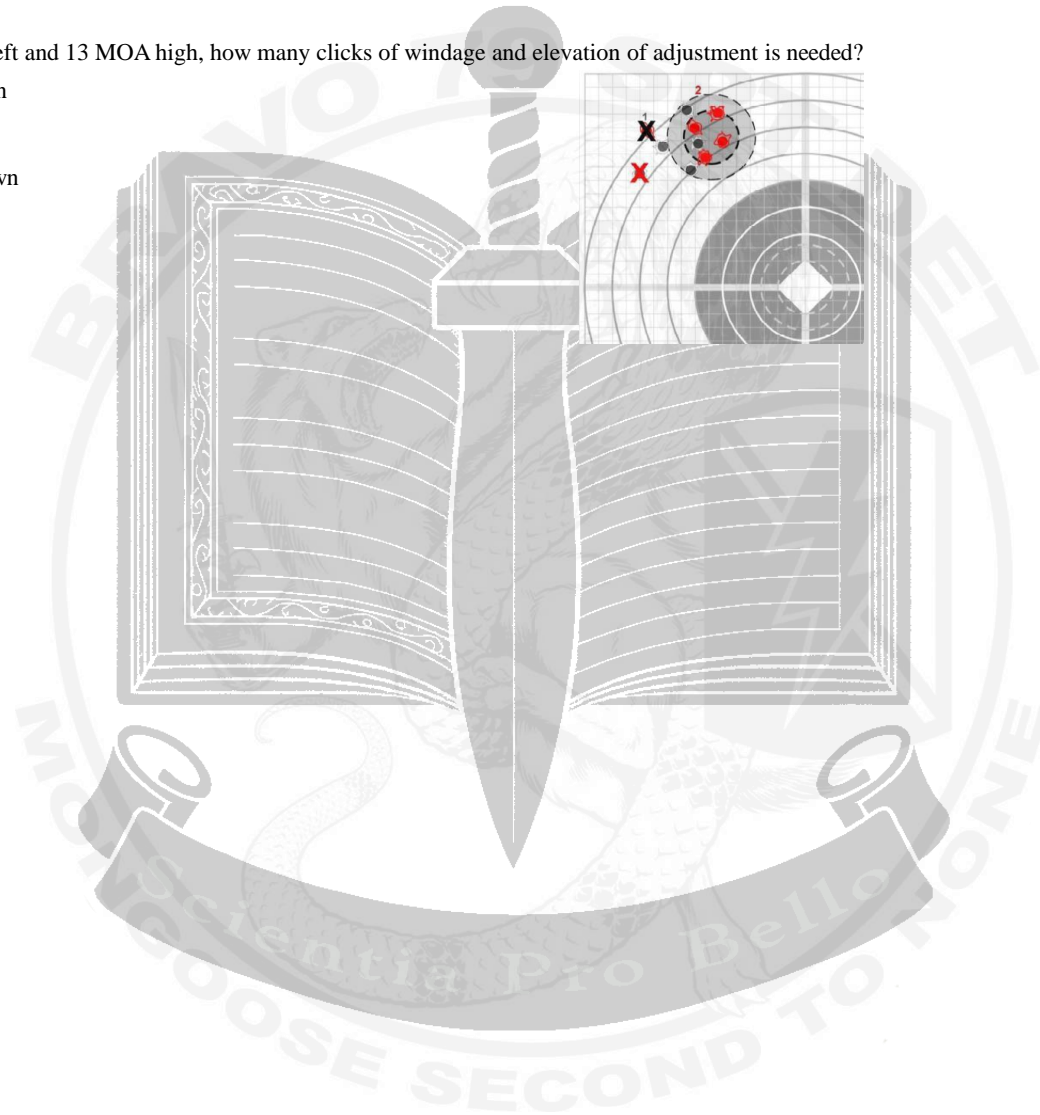
- a) True
- b) False



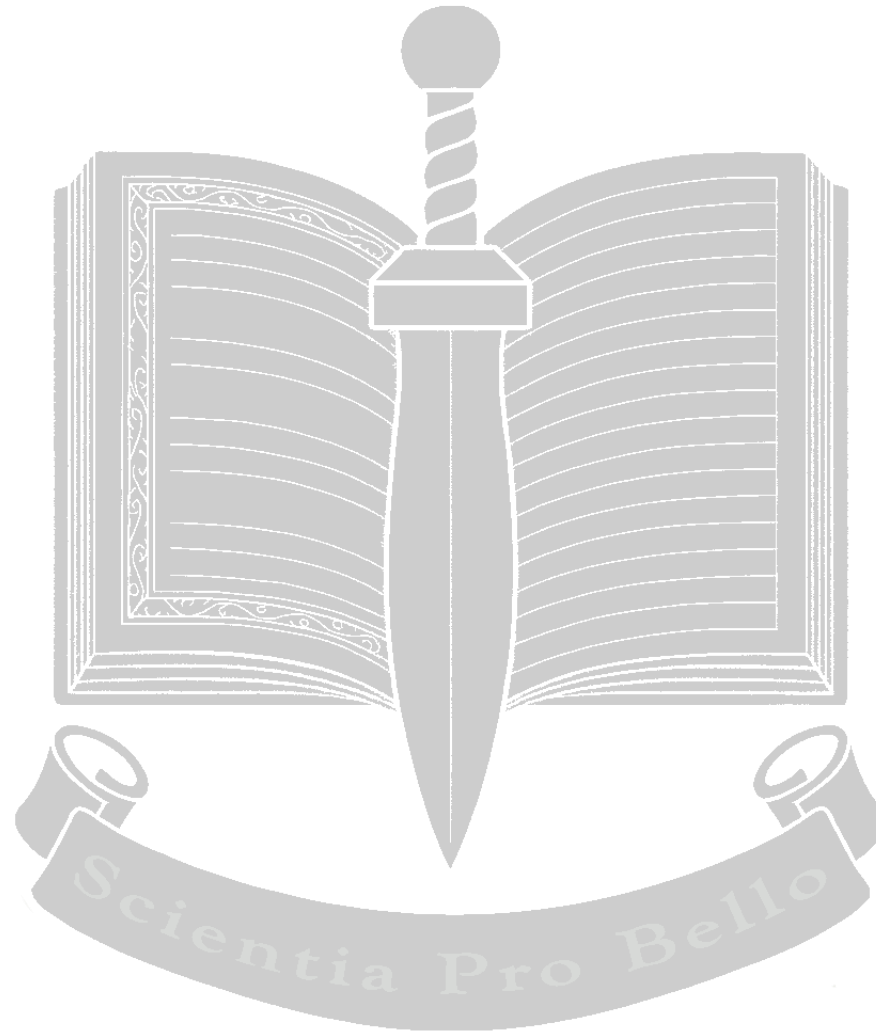


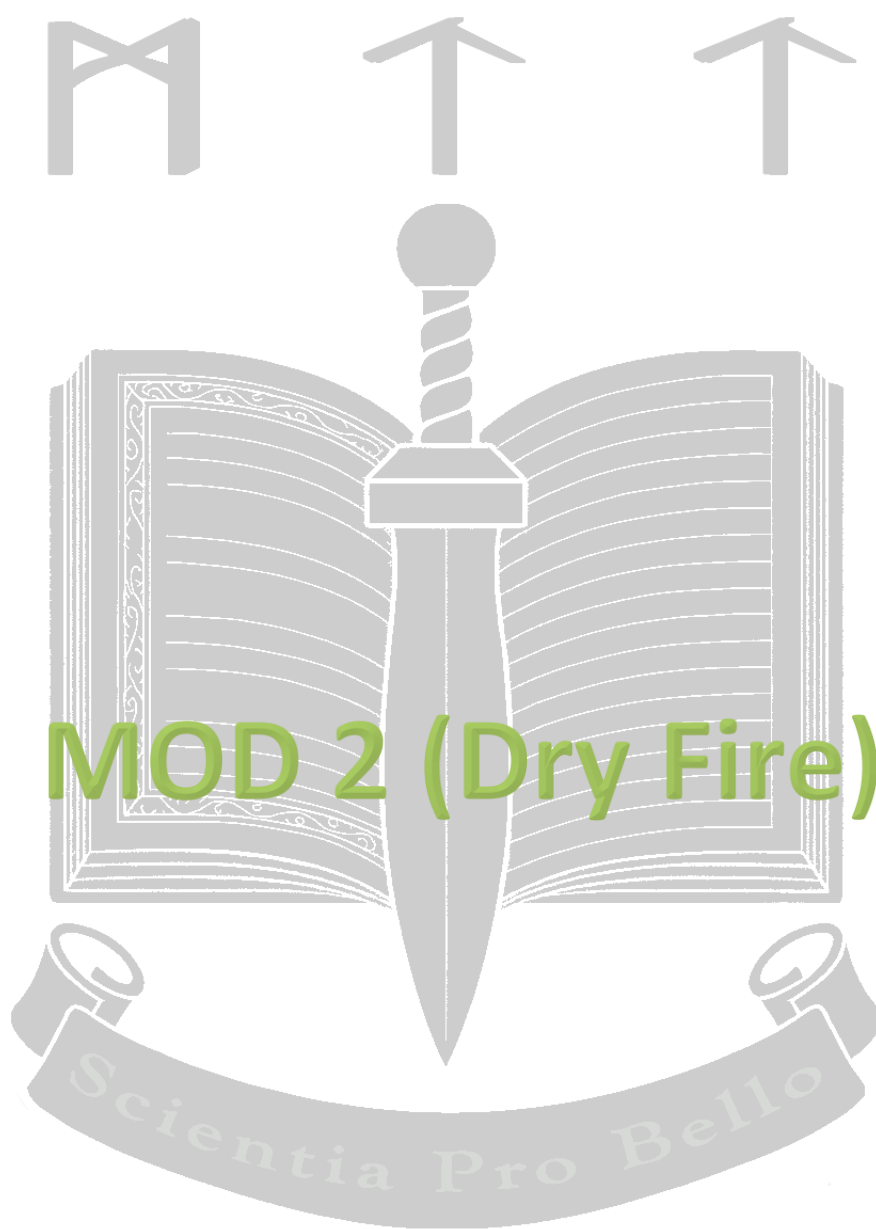
20. Given a CCO and you are 6 MOA left and 13 MOA high, how many clicks of windage and elevation of adjustment is needed?

- a) 6 clicks right, 13 clicks down
- b) 3 clicks right, 6 clicks down
- c) 12 clicks right, 26 clicks down
- d) 12 clicks left, 26 clicks up



1. A, B, C, D
2. True
3. B
4. A
5. False
6. C
7. False
8. D
9. True
10. False
11. B
12. True
13. True
14. False
15. D
16. B
17. A
18. A
19. False
20. C





MOD 2 (Dry Fire)

Mod #2 “dry fire”, this should happen in the drill hall or large classroom environment. Confidence with weapons manipulation (in the proper workspace) is the key takeaway here. This should involve all manipulation skills, organized in the following "stations":

1. Prone position (supported and unsupported) Olympic and military, standing and kneeling position, use of barricade
2. Tactical and speed reloads, load and make ready, make safe and show clear
3. Fundamentals of marksmanship, understanding of safety rules
4. Ready positions (high and low ready)
5. Malfunctions and clearance
6. Laser boresighting, takedown (assembly/disassembly) and cleaning

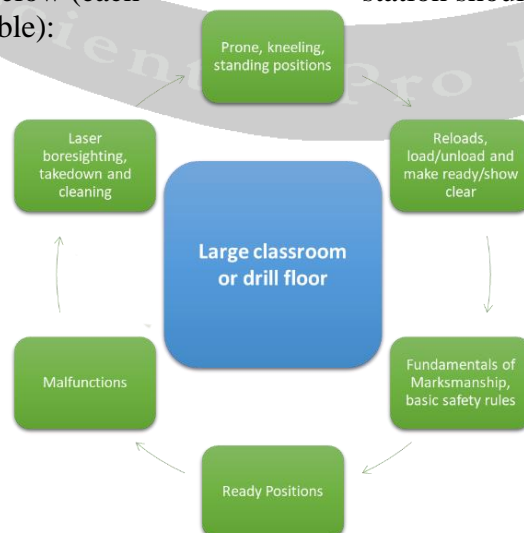
Recommended Resources:

Two to Four barricades based on the amount of students attending the course at the barricades skill station (see below diagram). One rifle per student or at least two at each station, two mags per student or eight mags total at "reload" skill station. Table, two chairs, two blocks or rests and two laser boresighting tools, highly visible large target "pasters" at the "boresighting" station. Dummy rounds at the malfunction skill station. Videos supporting this course are available in the "students" version of this course on this site OR via [this youtube channel playlist](#).

Time Required:

6 total stations, 15-20 minutes per station, students at each station progress to next station with the expectation that all groups have visited each station once totaling 1.5-2hrs for the entire evolution. Station evaluators may remain with each student group but should ideally stay at each station, necessitating six evaluators in total to complete this module. ***Students should receive no less than five reps on each covered topic at each station before an evaluation is made.***

For the sake of efficiency, you should setup “stations” in a rotational topology as per the suggested example below (each station should run simultaneously if enough evaluators are available):





PMI INSTRUCTOR Q-CARD 2025 MTT

US Army PMI Table 3

TIME	BLOCK OF INSTRUCTION	LOCATIO N	RDS
5 MIN	INTRO	LECTURE	0
15 MIN	Prone Position, standing and kneeling	LEC/ HO	0
15 MIN	Tactical and speed reloads, load/unload and make ready/show clear	LEC/ HO	0
15 MIN	Fundamentals of Marksmanship, basic safety rules	LEC/ HO	0
15 MIN	Ready Positions	LEC/ HO	0
15 MIN	Malfunctions and clearance	LEC/ HO	0
15 MIN	Laser Boresighting and cleaning (assembly and disassembly)	LEC/ HO	0
15 MIN	Transition to 2 nd weapon (handgun) regular troops don't have handguns so don't waste time on this for normal line personnel	LEC/ HO	0
	The instructor is advised to use lesson plans as reference and adhere to that controlling document. It is advisable to have access to standard qual barricade along with running the student through the qual course of fire dry several times if time permits.	LEC/ HO	0

This is a basic down and dirty course. You can extend it, flex it for your time frames and adjust according to group. You can also run them through everything above and just evaluate them for these skills. This course outline is a guide not an absolute. These are the minimum requirements of the course. You may add drills and practice more as required if you deem necessary. These are minimums the students should / must know. You can do all this with ammo on a live fire range, or dry at home station as required. Be imaginative and flexible!

_ = Omit if necessary for time

_ = Mandatory knowledge

* “LEC/ HO” (Lecture and Hands on)

Remember EDIS

Explain, Demonstrate, Imitate and Slow for form



Module 2 MTT/S

US Army M4 Rifle Skill Check sheet

Each student will demonstrate to the instructor the proper methods in the following areas.

Failure to demonstrate the techniques as per the lesson plan and the exact doctrine will result in a -0-score for that area. There are 12 testable skills and 10 points possible in every area. The student will be allowed to retest the skill they fail. Conclude the entire test, no tutoring; assist them and demonstrate the correct method as per table 3 in those areas failed tutor them and now retest only the area failed

SKILL	SCORE			
1. Prone Position	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO
2. Standing	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO
3. Kneeling	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO
4. Speed Reload	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO
5. Tactical Reload	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO
6. Fundamentals of Marksmanship	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO
7. Proper use of Barricade	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO
8. Load/Unload and make ready/safe	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO
9. High and Low Ready	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO
10. Immediate Action	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO
11. Breakdown (disassembly and assembly)	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO
12. Laser boresighting	<input type="checkbox"/> 0	NO-GO	<input type="checkbox"/> 10	GO

Check the appropriate box to note the score. Total all points, score sheets will be filled out and score recorded on data base for record scores on file.

Student name: _____

Date _____

Total score: _____

Pass

☐

Fail

☐

120 PASSING Remediate all sections failed

Instructor name: _____



MOD 3 (Practical Application)

**The content for this lesson is not yet complete.*

Concept: Students will use a laser emitting M4 platform of some type if live fire evolution is unavailable. The purpose of this module is to inculcate the shooter/student into the world of performance based shooting using typical and widely accepted standards to give a student a baseline to aspire to and achieve. The intent is to dramatically increase the confidence of the shooter on their weapon system, students will be introduced to the concept of both "reactive" and "predictive" shooting. This is an entirely hands on course. Students should receive no less than five repetitions of each GO/NO GO criteria below prior to being evaluated.

Required resources: See next lesson regarding visual aids and necessary equipment for proper execution of this module. Shot timer readily available on Amazon or app from app store.

Required Time: ?

Curriculum (all drills to be conducted at X distance or scaled target equivalent):

Controlled Pair Drill (3 seconds par time)

Hammered Pair Drill (2 seconds par time)

Failure Drill (3 seconds par time)

1R1 Drill (6 seconds par time)

Malfunction Drill

Box Drill (6 seconds par time)

Bill Drill (3 seconds par time)

**Primary to secondary transition or check drill (if applicable)*

**Videos will be added to this course to assist the instructor on proper execution.*



PMI INSTRUCTOR Q-CARD 2025 MTT

US Army PMI Table 3			
TIME	BLOCK OF INSTRUCTION	LOCATIO N	RDS
5 MIN	INTRO	LECTURE	0
5 MIN	Controlled Pair (3 seconds)	LEC/ HO	0
5 MIN	Hammered Pair (2 seconds)	LEC/ HO	0
5 MIN	Failure drill (3 seconds)	LEC/ HO	0
5 MIN	1R1 drill (6 seconds)	LEC/ HO	0
5 MIN	Malfunction	LEC/ HO	0
5 MIN	Box drill (6 seconds)	LEC/ HO	0
5 MIN	Bill drill (3 seconds)	LEC/ HO	0
5 MIN	Transition to 2 nd weapon (handgun) regular troops don't have handguns so don't waste time on this for normal line personnel	LEC/ HO	0
	The instructor is advised to use lesson plans as reference and adhere to that controlling document. It is advisable to have access to standard qual barricade along with running the student through the qual course of fire dry several times if time permits.	LEC/ HO	0

This is a basic down and dirty course. You can extend it, flex it for your time frames and adjust according to group. You can also run them through everything above and just evaluate them for these skills. This course outline is a guide not an absolute. These are the minimum requirements of the course. You may add drills and practice more as required if you deem necessary. These are minimums the students should / must know. You can do all this with ammo on a live fire range, or dry at home station as required. Be imaginative and flexible!

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* “LEC/ HO” (Lecture and Hands on)

Remember EDIS

Explain, Demonstrate, Imitate and Slow for form

For module 1, if electing to teach this course in person, it is advisable to have a minimum of one rifle, one acog/rco and one cco. Alternatively, very authentic, affordable replica "airsoft" equivalents are widely available from evike.com. If a rifle is not procured and no airsoft or SIRT equivalent is available, purchasing at the very least a upper receiver (airsoft or real) is advisable to show student proper mounting of optics on the rail and is a very useful and compact visual aid addition (also available cheaply from evike.com).

A8 target(s), an example of an ideally grouped and zeroed A8 target and canebrake or similar tools that assist in determining proper grouping and zeroing is also highly advisable. If your unit does not have easy access to them, they may also be ordered commercially via amazon ([A8 Targets on Amazon](#)) along with the canebrake tools ([Canebrake tool on Amazon](#))

Visually engaging videos are included on the "video inclusive" version of the powerpoint slide deck for module 1. For module 2, examples of each skill are also provided via videos in this course material and in the student version of this course or are accessible via [this youtube channel playlist](#)

All instructors and presenters are encouraged to look into world of guns as a powerful interactive presentation

tool: https://store.steampowered.com/app/262410/World_of_Guns_Gun_Disassembly/

Demonstration of ballistics for module 1 including greater understanding of the BDC reticle found in the Acog/RCO can be addressed interactively via this software: <https://store.steampowered.com/app/393380/Squad/>. Failing this, besides the course material that shows the reticle in great detail, it is advisable to obtain qualification pop up targets and an enlarged reticle mockup print out visual/training aid for instructional purposes.

For Module 2, laser boresighting tools such as the army standard one or the various commercial ones are easily obtainable from Amazon as well for very little money. It is important to keep extra batteries and do not store the batteries inside the boresighter when not in use.

For Module 3, "beamhit" and other commercially available products are available including but not limited to Quest 3 or Quest 3S VR headsets with various apps. Laser converted airsoft M4's and [SIRT products](#) or [mantis blackbeard devices](#) can be used with the help of laserammo.com, which provide several systems and software pieces, catering specifically to the military crowd, including replicating the EST and actual qual course at a fraction of the price and complexity of those systems: <https://www.laserammo.com/professional-groups/military>



Congratulations on completing this course. Please reach out here to be invited to our follow-on residency course required to be fully certified to teach this course: [contact us page](#)

If you have any questions about the execution, content of this course, other courses we offer or regarding our mobile training services, please do not hesitate to reach out via the contact us page above.



References and Controlling Documents:

1. TC 3-22.9 (May 2016)
2. TC 3-20.40 (July 2019)

