



QSC OIC / RSO Certification Course





Administrative Information

- ***No Live Ammunition in the Classroom***
- Restrooms
- Emergency Exits
- Refreshments/Snacks
- Smoking permitted outside away from the doors
- Breaks
- Cell Phones
- Ensure you Sign-In
- Ask Questions
- *Some NRA RSO Courseware is legally used with NRA Chief RSO credentials*

NO LIVE AMMUNITION IN THE CLASSROOM!



Why Are We Here?

- Per Marine Corps Order (MCO) 3550.9 (*Marine Corps Ground Range Certification and Recertification Program*), Commanders are required to appoint their Range Officers in Charge (OIC) and Range Safety Officers (RSO) in writing. This is to certify that the OIC is knowledgeable in the weapon systems and ammunition for which they are responsible and the RSO is weapon system qualified
- Per MCO 3570.1C (*Range Safety*) and MCBO (Marine Corps Base Order) 3570.1B (*MCBQ Range Regulations*) individuals appointed to OIC and RSO duties must be qualified and certified and to perform those duties
- Per Department of the Army (DA) Pam 385-63 (*Range Safety*), personnel in non-military organizations designated as OICs and RSOs will complete a pistol and rifle course approved by the National Rifle Association, or equivalent



Course Goals

- To meet MCO mandates for familiarizing Quantico Shooting Club (QSC) members to become MCBQ Range Safety Officers who possess the **knowledge**, **skills**, and **attitude** essential to organizing, conducting, and supervising safe shooting activities and range operations



Course Outline

- **Subjects Include:**

- Defining the roles of the range OIC and RSO
- The purpose of range Standard Operating Procedures (SOP)
- Procedures for opening, operating, and closing a range
- Conducting a range safety briefing
- Required communications
- Emergency procedures / First Aid (cursory, not all inclusive)
- QSC Lessons from the Calvin A. Lloyd Range / WTBn complex operations
- Understanding the types of different firearms
- How to safely unload weapons and correct stoppages and malfunctions
- Practical Exercise w/Skip and Kevin



NRA Gun Safety Rules / USMC Gun Safety Rules

- ***NRA Gun Safety Rules:***

- Always Keep The Gun Pointed In A Safe Direction
- Always Keep Your Finger Off The Trigger Until Ready To Shoot
- Always Keep The Gun Unloaded Until Ready To Use

- ***USMC Weapons Safety Rules – Sign You See on Every MCBQ Range:***

- Treat every weapon as if it were loaded
- Never point a weapon at anything you do not intend to shoot
- Keep your finger straight and off the trigger until you're ready to fire
- Keep the weapon on "safe" until you intend to fire





Section I: Duties of the OIC / RSO



Range Safety: OIC/RSO

- ***OIC and RSO MUST:***

- Have read and understand MCO 3570.1C (Range Safety)
- Have read and understand MCBO 3570.1B (MCBQ Range Regulations)
- Have read and understood the QSC Range Safety SOP
- Have read and understand the specific Weapons Training Battalion (WTBN) Range SOPs for ranges for which they are responsible
- Minimum Service Rank: RSO = E5 (Sergeant), OIC = E6 (Staff Sergeant)
- ***Be able to fully influence the safe conduct of those range and events to which they have been assigned***

- ***OIC and RSO WILL NOT:***

- Participate in LIVE FIRE events, unless there are enough RSOs to roll over (3 Minimum - OIC/RSO/RSO)
- Relinquish OIC or RSO responsibilities (rollover) to another without prior approval from the Fire Desk



Range Safety: OIC/RSO

- ***OIC and RSO MUST:***
 - Maintain positive communication with Range Control:
 - Two forms of communications: Primary Radio / Secondary Cell Phone
 - Cell phone MUST reach either the OIC or RSO on the range
 - If either form of communications is lost, CEASE FIRE immediately and re-establish comms
 - OIC and RSO “on duty” must always have a radio in their possession
 - Required for the immediate response to emergency situations
- ***Failure to respond will result in an immediate cease fire***
 - Continued failure to maintain communications will result in notification of the Base Commander and would likely adversely impact on the QSC as a whole
 - May result in suspension of OIC/RSO certifications



Role Of The Officer in Charge

- The OIC is the ultimate safety authority on a range, supported by the RSO(s)
- The OIC generally conducts the Safety Briefings, but can delegate to an RSO(s)
- The OIC is responsible for coordinating the Range Schedule, course of fire, range checkout, equipment and range calendar notes with the Chief RSO and the RSO(s) team
- The OIC directs all shooting activities as prescribed by the QSC and Range Specific Standard Operating Procedures (SOP)
- ***Be able to fully influence the safe conduct of those range and events to which they have been assigned***



Role Of The Range Safety Officer

- The RSO(s) supports the OIC
- The RSO supervises shooting activities as prescribed by the QSC and Range Specific Standard Operating Procedures (SOP)
- Ensures all personnel wear the appropriate Personal Protective Equipment (PPE), which at the minimum includes eye protection and hearing protection
- Ensures proper supervision of personnel performing misfire procedures – Firearms do not leave the range with a round in the chamber
- Ensures control of target areas to prohibit entry by unauthorized personnel
- ***Be able to fully influence the safe conduct of those range and events to which they have been assigned***



Section II: Range Standard Operating Procedures



Range SOPs

- ***Purpose***

- Standardize processes
 - Organizational Information
 - Range Capabilities
 - Range Operations
 - Range Rules and Regulations
 - Range Conflicts and Restrictions
 - Emergency Response Plans

- ***WTBN Range SOPs (Available on QSC Website – RSO Documents)***

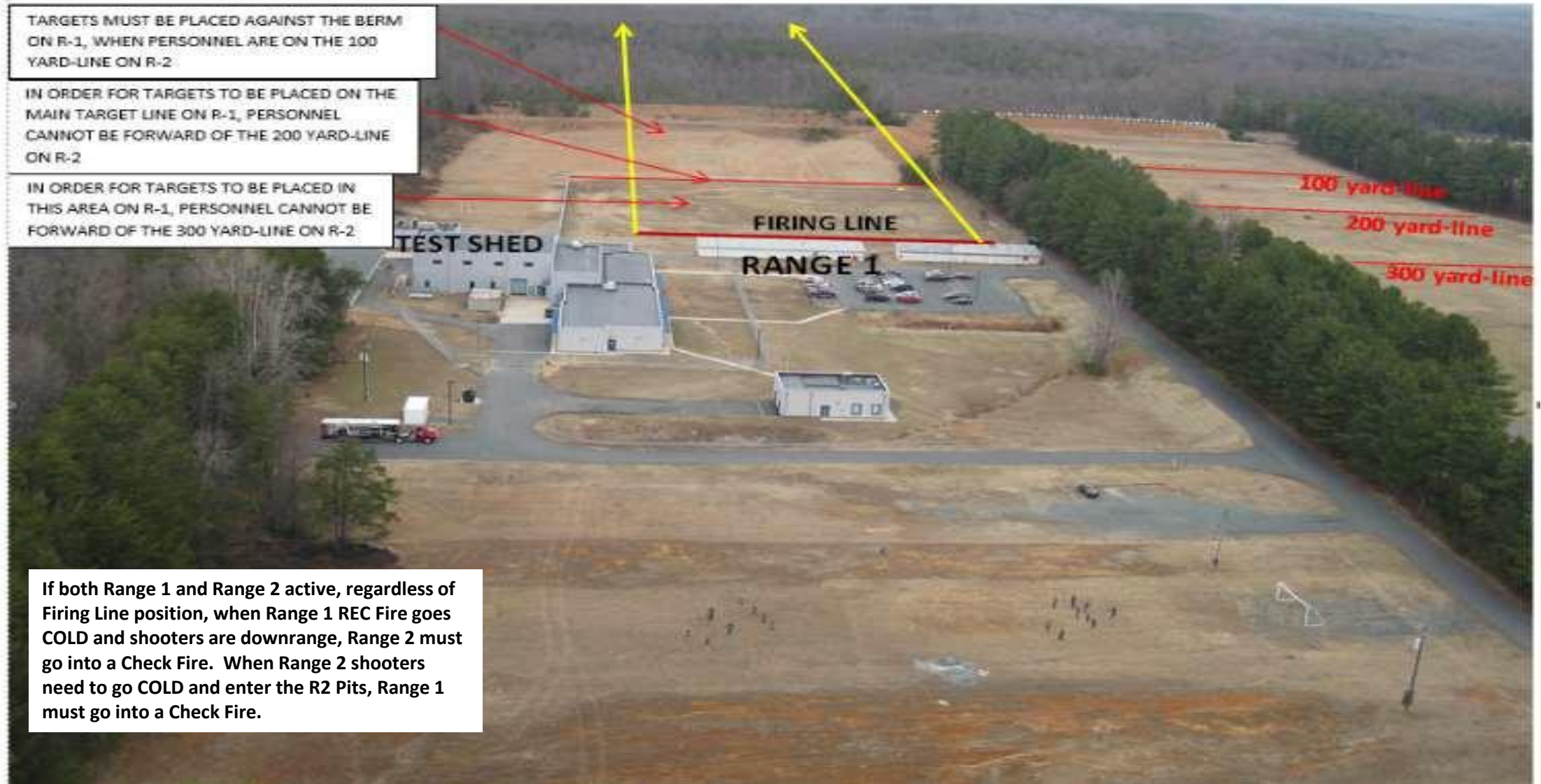
- Specific to each range
- Must have electronic or paper copies while on range

- ***QSC Range SOP (Available on QSC Website – RSO Documents)***

- QSC Specific procedures
- Appends QSC procedures to WTBN Range SOPs



Ex: Surface Danger Zone Conflicts (Ranges 1 and 2)





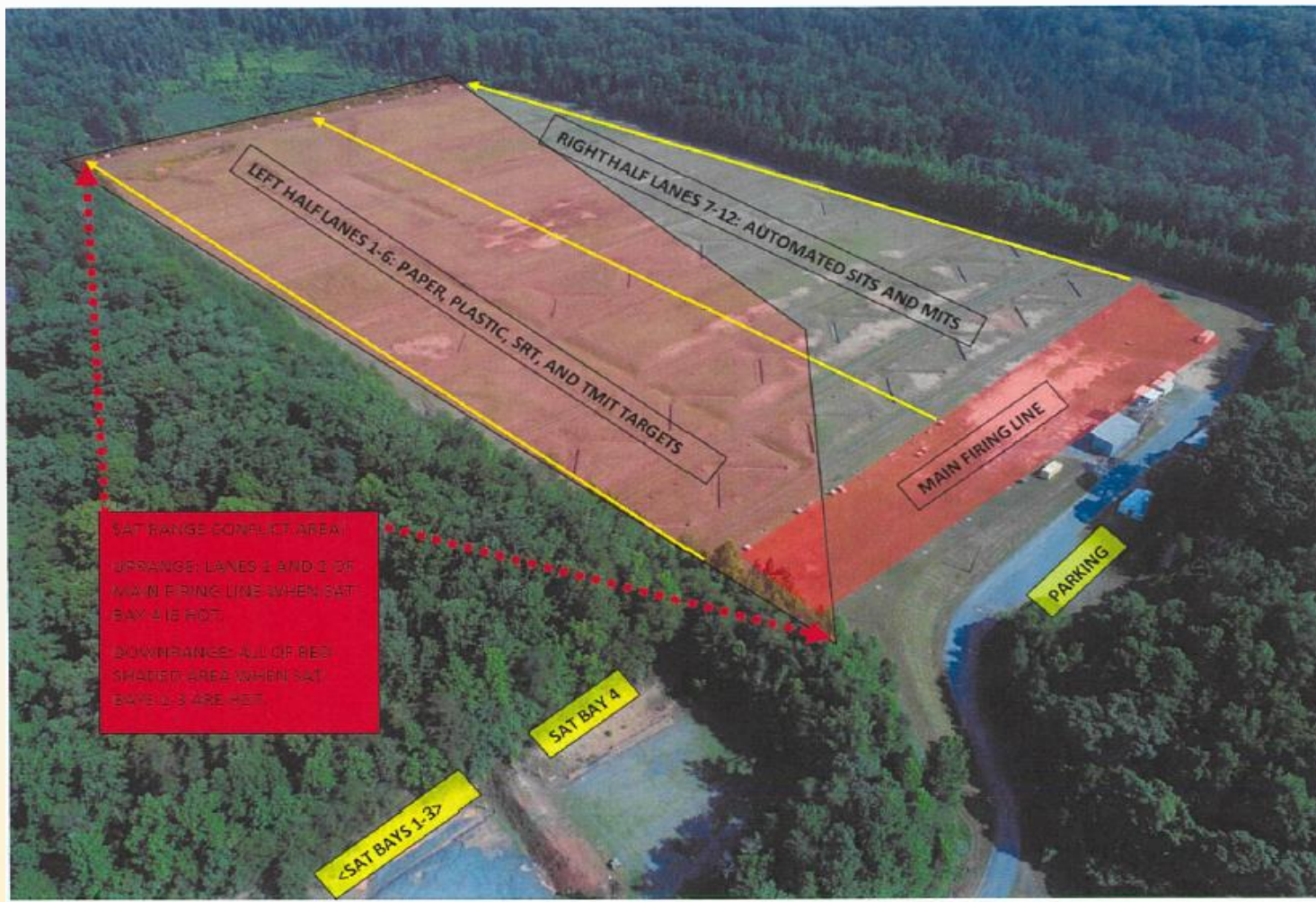
Ex: Surface Danger Zone Conflicts (Ranges 1 and 2)

- Overhead representation of previous slide's SDZs





Ex: Surface Danger Zone Conflicts (Ironman and SAT Ranges)



- **When any SAT Range Bays are “HOT”**
 - There can be no one forward of the Firing Line on Ironman!
 - No Ironman downrange movement!
- **When SAT Range Bay 4 Firing Line is “HOT”**
 - There can be no one on Lanes 1 & 2 of Ironman!

Coordination

Cooperation

Communication



Section III: Range Operations



MULTI-RANGE RSO REC FIRE GUIDE

QSC RANGE SAFETY OFFICER (RSO) – REC FIRE FIELD GUIDE

1. **Go to QSC Clubhouse** and Pick Up Range Box and all gear needed (sign-in sheets, cones, bull horn, water, trash bag(s))
2. **Go to WTBN / OOD** and Check out the Range gear (box/bag, radios, flags, keys, etc.)
 - Provide your name.
 - Provide Secondary Comms Mobile #
 - Perform "RC Safety" and "WTBN Safety" Radio Checks (from WTBN Parking Lot)
3. **Request Occupy Time** – Contact Range Control
 - *"Range Control, this is Range X, requesting an Occupy Time."*
 - After acknowledgement, RC will request and you **Provide OIC Name, RSO Name, Secondary Comms, Estimated number of shooters, and DODICS** (or inform RC that you will call them in after registration), Receive Occupy Time, **Mark down the Occupy Time on Sign-in Sheet!**
 - Raise all Range flag(s), Unlock gate(s) if needed, and INSPECT Range.
4. **Set Up Registration Area - Check / drive or walk the range to check safety!**
 - Allow shooters to set up targets upon arrival, and bring cased weapons to the firing line, prior to Safety Briefing. Range is Cold.
5. **Register / Check-in Shooters**
 - Check Guest passes and Member ID cards. Make sure they mark #1 - #4 Service
 - Make sure they mark calibers / DODICS and estimated round counts
 - Radio Range Control and update DODICS, as new people arrive, if necessary
6. **Provide Safety Briefing** to all shooters (See Safety Briefing Sheet)
7. **Review Live Fire Brief and validate all items are complete (i.e., QSC EMT is Available)**
8. **Request Hot Time** – Contact Range Control
 - *"Range Control, this is Range X, requesting Hot Time."*
 - RC will ask and *The OIC and RSO have read and understand the contents of the Live Fire Brief including Items 1-10 and will comply, over."*
 - RC will provide you with a Hot Time, Mark down Hot Time!
9. **Notify OOD of Hot Time** – Radio S3/OOD/WTBN
 - *"OOD, this is Range X, we have a Hot Time of 0000 hours."*
10. **Going Hot**
 - Drive or walk the Range and make sure all shooters have returned to firing line.
 - *"Eyes and Ears On, Firing Line is now HOT, Fire when ready."*

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QSC RANGE SAFETY OFFICER (RSO) – REC FIRE FIELD GUIDE

11. **Going Cold**
 - Provide *"15 Minute warning, then at time call "Cease Fire!"*
 - *"Clear all weapons and make safe, insert ECIs, for RSO inspection and step back from firing line."*
 - *After RSO Inspection, "FIRING LINE IS COLD! ABSOLUTELY NO HANDLING OF UNCASSED FIREARMS WHEN THE FIRING LINE IS COLD! You may now cross the firing line to maintain targets."*
12. **RSO Radio Checks** – Contact Range Control every 30 mins, at bottom and top of hour
 - *"Range Control, this is Range X, radio check."*
13. **OOD/WTBN Radio Checks** – Contact OOD/WTBN every hour, at the top of the hour.
 - *"OOD, this is Range X, radio check."*
14. **RSO Rollovers** – Contact Range Control
 - *"Range Control, this is Range X Requesting OIC or RSO Rollover."*
 - Range Control will ask who the new OIC is or who the new RSO is. *"Range Control, the new OIC OR RSO is NAME. They have read and understand the Live Fire Brief including items 1-10 and will comply. Secondary comms remains the same. (or provide change to active RSO number)"*
15. **Range Closing** – Going Cold for the day – Contact Range Control
 - **Contact Range Control!** – *"Range Control, this is Range X Requesting a Cold Time, over."* Acknowledge Cold Time.
 - **Contact OOD** – *"OOD, this is Range X, we are Cold at 0000 hours, over."*
 - **Mark down Cold Time!**
16. **End of Day Training Report** – Prep DODICS and Round Counts
 - Contact Range Control by Mobile Phone at 703-784-5321 / 5322 and provide all DODICS and Round Counts.
17. **Range Departure** – After Closing and locking gates and removing flags.
 - **Contact Range Control!** – *"Range Control, this is Range X, we are departed at 0000 hours, over."* Mark Down Departure Time!
18. **Return WTBN Range Box**, including flags, keys, radios to WTBN, Report Problems
19. **Return QSC Range Box** and supplies to QSC Clubhouse, Report Problems
 - Refresh Range Box if needed, Complete and Turn in Range forms at RSO Desk

Range Control	703-784-5321 / 5322
S3 / OOD (WTBN)	703-784-5095
QSC Clubhouse	703-463-8214

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Sequence of Range Operations

- ***Before Operations***

- Pick up Range Box & additional gear from QSC Clubhouse (QSC Range Safety Box & Range Flags)
 - Additional gear: Orange cones, Trash Bag(s), Sign-in / DODIC sheets, checkout Rangefinder (optional)
- Pick up Gate Keys, Radios (2), and Range flags from WTBN Officer of the Day (OOD), also called the “S3”
- Verify Communications with Range Control (RC) and WTBN OOD
 - “Range Control, this is Ironman Range, initial radio check”
- **Contact RC and Request an “Occupy” time, record time**
- Inspect range and ensure flags are up and barriers closed
- Ensure all participants sign in and check membership cards / guest pass (This is for liability / compliance). Guest **MUST** have a guest pass for that day. If not, send them and member back to QSC office to sign waiver and pay \$10
- Communicate DODICs to RC during Occupy Request, or before Hot Request
 - The Fire Desk will approve or disapprove DODICs based upon down or cross range use
 - They may approve a caliber (50 BMG) but not another (300WM) which seem in conflict
 - It’s their call and we do not argue with the Fire Desk/ Range Control – Contact the Board to discuss
- Conduct Safety Briefing
- **Verify an EMT is on site by calling the QSC Office.**
- **Contact RC and Request to go “Hot”, Confirm OIC and RSO have read MCBQ Live Fire Brief, record Hot time and Inform OOD**



Sequence of Range Operations

- ***During Operations***

- Once approved to go Hot, you must conduct radio checks every 30 minutes with RC and every 60 minutes with OOD (at the top and bottom of the hour regardless of when you went Hot)
- Contact RC with requests to roll over OIC or RSO and request new DODICs as needed. Know who is OIC On Duty and RSO On Duty and therefore who is recorded at RC.
- Supervise participants to ensure safe firearms handling practices
 - Pay particular attention to people who may be new shooters. They tend to be unfamiliar with their weapon's traits or function, or how to clear the weapon
 - Pay particular attention to first time range visitors, active military, and those groups with a large number of firearms. Active military train differently and may not understand QSC REC FIRE safety differences.
- Inspect range, and ensure participants pack out their debris
 - If they don't police their brass/cases, the RSOs will have to do it!
- Reissue Safety Briefing to new participants (NOT optional!)



Sequence of Range Operations

- ***After Operations***

- Contact RC and Request a “Cold” time, record time on sign-in sheet, and Inform OOD
- Inspect range, and ensure participants pack out their debris, pick up brass remaining, pick up trash remaining
- Lower flags, return barriers to their proper state
- Use cell phone to provide “End of Training Report” to RC
 - Count the number of rounds for each DODIC and report the totals to RC
- Contact RC and notify time of departure from range, record time
- Return gear to OOD. Report any issues with the range (i.e., tree down, etc.)
- Return gear to QSC Clubhouse (i.e., Range Box), Staple and turn-in sign-in sheets to RSO Desk In Box, Refill the QSC Range Box and **report any issues** with the range and/or participants to QSC BOD



Section IV: Range Communications



Communications

- **Means of Communication:** Primary: Radio / Secondary: Cell Phone
- **Call signs**
 - **Range Control Facility:** *Range Control / You:* Specific Range Name (Ironman, Shotgun Range, SAT Range).
 - Please make sure you identify as the proper range.
- **Proper radio procedures – Professional – Not CB Radio “Good Buddy”**
 - The OIC holds/uses the RC radio. (**CHANNEL – RC Safety**). **All radio and telephone comms with the RC are recorded**
 - The RSO holds/uses the Weapons Training Battalion (WTBn) (S-3/OOD) radio. (**CHANNEL - WTBN Safety**)
 - Non-essential admin comms prohibited on the RC Safety Channel
 - Admin comms permitted on the WTBN Safety Channel ONLY
 - Fire Desk Operators do not make decisions, they execute procedures
 - For Inter-range communications, you can use WTBN Safety Channel, OR Mobile phones, OR QSC Pit Radios
- **In Case of Emergencies – Keep all Radio Channels Clear**
 - If not involved directly in the emergency, cease all radio transmissions. Range Control has not forgotten about you
- **If there are issues, call the clubhouse and speak to a QSC Board Member**



Communications

- ***Required Communications***

- All Medical Emergencies
- All Fires
- Missing Personnel
- Any incident involving ammunition (i.e., negligent discharge, rounds out of impact)
- Requesting change in range status (i.e., "Occupy", "Hot", "Cold", "Departure")
- Requesting to switch / "rollover" the On Duty OIC or the On Duty RSO
- Requesting to add new DODICs
- Radio Checks
 - Range Control - Every 3 hours on the hour for a non-firing status
 - Range Control - Every 30 minutes on the hour and half hour for live fire
 - OOD - Every 60 minutes on the hour for live fire
- End of Training Report



RADIO FUNDAMENTALS FOR QSC RANGE PROCEDURES

Clarity and Brevity

✓ The Military Alphabet

A = ALPHA	F = FOXTROT	K = KILO	P = PAPA	U - UNIFORM
B = BRAVO	G = GOLF	L = LIMA	Q - QUEBEC	V - VICTOR
C = CHARLIE	H = HOTEL	M = MIKE	R - ROMEO	W - WHISKEY
D = DELTA	I = INDIA	N = NOVEMBER	S - SIERRA	X - X-RAY
E = ECHO	J = JULIET	O = OSCAR	T - TANGO	Y - YANKEE
				Z - ZULU



RADIO FUNDAMENTALS FOR QSC RANGE PROCEDURES

Clarity and Brevity

Other **words for QSC radio operations** are:

- **AFFIRMATIVE / NEGATIVE.** Although they are not pro-words, they are Operating Words used in the same context as pro-words.
- **ACKNOWLEDGE** = An instruction to the addressee that the message must be acknowledged.
- **SAY AGAIN** = Repeat all of your last transmission.
- **I SAY AGAIN** = I am repeating the entire transmission.
- **OVER** = This is the end of my transmission to you.
- **OUT** = This is the end-of my transmission to you and no answer is required. "Out" is only used by the operator who originated the transmission.



RADIO FUNDAMENTALS FOR QSC RANGE PROCEDURES

Other RULES for QSC radio operations :

Never do the following:

- Never use **“Repeat”**. This has a different meaning WRT fire. Use “Say Again” versus “Repeat”. They are NOT interchangeable, as the meanings are specific and clear to the receiver. "Say Again" means to repeat the last transmission. "Repeat" refers to fire support and means to fire the last mission again.

QSC NEVER USES THE WORD “REPEAT”.

- Make unnecessary or unduly long transmissions.
- Engage in unofficial conversation or operator’s chat.
- Speak faster than the station experiencing the worst reception conditions can be expected to receive, thus avoiding needless repetition.
- Show loss of temper or use profane language.



SAMPLE TRANSMISSIONS

QSC Radio Call Requesting to Occupy Range 1.

Note: This sample is provided as a general example using best practices. The actual words may vary as the radio operator at RC or the OOD may vary based on personal style and their own level of experience.

OIC : “Range Control, this is Range 1, Requesting an Occupy Time. Over.

RC: “Range 1, this is Range Control, Roger, Provide the names of the OIC, RSO, Number of persons training, secondary means of communication, and DODICS being used.

OIC: “Range Control, this is Range 1. The OIC is Sammy Cigars, Last name CHARLIE, INDIA, GOLF, ALPHA, ROMEO, SIERRA. (Pause while RC writes the name), Number of personnel training is 21, Secondary means of communications is telephone number “5 (FIFE) 4 (FOWEr) 0 (ZERO) 5 (FIFE) 8 = (AIT) 9 (NIN-er) 1 (WUN) 2 (TOO) 3 (TREE) 4 (FOWEr); Will call land line with DODIC request when available. “Charlie India 45, Charlie India 01.....”.

RC: “Range 1, this is Range Control, Roger, I have you occupied at 0900, maintain radio checks on every 30 minutes when Hot and every 3 hour when Cold.



Additional Sample Transmission

QSC Radio Call Requesting to go “HOT”.

Note: If an occupy time has not been requested earlier, be prepared to add in the information from slide 17, such as names, DODIICS, secondary communications, etc.

OIC : “Range Control, this is Range 1, Requesting a “HOT” time, over”.

RC: “Range 1, this is Range Control, Roger. Are the OIC and RSO remaining the same?”

OIC: “Range Control, this is Range 1. Affirmative. The OIC and RSO remain the same.”

RC: “Range 1, this is Range Control, Has the OIC and RSO read and understand the Live Fire Brief.”

OIC: Range Control, this is Range 1. The OIC and RSO have read the Live Fire Brief and will comply; Over.

RC: “Range 1, this is Range Control, Roger, I have you “Hot” at 0910. Conduct Radio Checks every 30 minutes. Yellow Flag heat conditions in effect.”



Section V: Range Safety Briefing



Range Safety Briefing

- ***WHAT***

- Prepares shooters to safely and efficiently participate in shooting events

- ***WHEN***

- Conducted before Requesting a Hot Time and commencing Live Fire

- ***WHERE***

- Conducted within view of the range & shooters, varies by Range



Range Safety Briefing Topics

- ***Standard Range Safety Briefing Steps***

- Introduce RSO Team
- Purpose of the Shooting Event, i.e., “This is a REC FIRE”
- Range Layout and Limits
- Range Safety Rules
- Firing Line Commands
- Emergency Procedures

- ***Example provided in the QSC Range SOP***



General Range Safety Rules

- Know and obey all range rules
- Know where others are at all times
- Shoot only at authorized targets
 - Do not shoot the wildlife – Call a ceasefire until they depart the range
- Malfunctions
 - Gun malfunction
 - Ammunition malfunction
- All firearms must be brought to the firing line cased, and only uncased or re-cased when the firing line is Hot
- Do not handle a firearm or stand at the firing line where firearms are present while firing line is Cold and others are downrange!
- Stop shooting immediately upon the command “**Cease Firing**”



Steel Targets

- **Ballistic Steel Targets**

- 3/8" thickness
- AR 500

- **Minimum engagement distances for portable ballistic steel targets:**

- Pistol - 10 yards (No pistol magnum calibers, FN 5.7 or +P ammo on steel)
- Magnum Caliber Pistols (.357mag, .44mag, +P) – 25 yards
- Pistol (Braced) / PCC / Rimfire Rifle - 25 yards
- Shotgun (Buck / Bird Shot) - 11 yards
- Shotgun (Slug) - 55 yards
- 5.56mm / .223 Ball - 110 yards
- 7.62mm / .308 Ball - 110 yards
- .300 Win Mag - 320 yards
- Steel shooters may be segregated to one side of the firing line or other, and with a minimum lateral distance of 6 feet between steel shooters.
- PLEASE NOTE - No dueling trees, Texas Stars, or other gimmick-like targets.
- If you feel a target system is unsafe (i.e, spalling, bullet splash), you have the authority to remove that system or move it to greater distance!



Section VI: Emergency Procedures



Purpose Of Emergency Procedures

- Take control of the situation
- Minimize confusion during an emergency
- Save time responding to an emergency



MCBQ Medical Evacuation Procedures

- OIC or RSO immediately contacts RC
- Fires Desk Operator will immediately contact emergency dispatch
- All details and requests from OIC/RSO are relayed in REAL TIME
- OIC or RSO will be the on-scene commander and will initiate action for the MEDEVAC until first responders arrive
- The RCF will relay the direct steps to take to accomplish the MEDEVAC
- A Range Management Branch Patrolman (and possibly a Provost Marshall Office Officer) will be immediately dispatched to the scene to assist the OIC/RSO in any way necessary and provide additional information to/from the scene
- Additional RMB personnel will be dispatched to open any gates to facilitate the MEDEVAC in the most direct and expeditious manner



MCBQ Medical Evacuation Procedures

- Range Control will command a complex-wide “Cease Fire” and verify all ranges have stopped firing and the airspace is clear
- OIC and RSO MUST maintain radio contact with Range Control at ALL times
- If not directly involved, follow the Check or Cease Fire commands, stay off the radio, and await instructions
- *Range 4 should immediately open gates at checkpoints 8 and 9*



Emergency Categories

- Injuries are classified into the following categories in order to aid in casualty evacuation from the RTA.
 - **ROUTINE.** Routine injuries are those injuries that are not threatening to life, limb or eyesight, and conditions or illnesses treatable by medication or procedures available at the base medical facilities.
 - **PRIORITY.** Priority injuries are those injuries that require immediate medical attention but are not threatening to life, limb, or eyesight if treated promptly.
 - **URGENT.** Urgent injuries are severe injuries that are threatening to life, limb, or eyesight and require immediate medical attention.
 - **MASS CASUALTY.** A mass casualty is a series of injuries with multiple priority and urgent medical patients.

General Rule: LIFE, LIMB, or SIGHT



Emergency Procedures

- ***Standardize steps and the sequence in which they are performed***
 - Take charge of the situation
 - Call for help, if required
 - Render aid, within scope of training
 - Direct medical help to location
 - Take detailed notes (Reports)



Step #1: Take Charge Of The Situation

- ***Command: Cease firing, unload and show clear, and stay in place***
- ***Have an RSO ensure firearms are clear***
- ***Evaluate the situation***
 - Routine, Priority, Urgent?
 - ***If Priority or Urgent, radio Range Control immediately, our QSC EMT monitors Range Control Safety channel***
- ***Designate helpers if necessary***
 - To call for help, if required
 - To render aid, within scope of training
 - To guide medical help to location
 - To take notes (reports)



Step #2: Call for Help

- ***In the event of a Priority or Urgent emergency, contact Range Control Immediately!***
 - The radio is the primary means of communications
 - Cell phones are secondary
 - Have radio / phone numbers handy (RCF, OOD, QSC clubhouse – Also printed on the back of your Range Sign-In Sheet)
- ***QSC EMT is monitoring the Range Control Safety channel***
- ***Provide the RCF the required information in the Initial Report***
 - Location of Emergency
 - Is the victim conscious or unconscious
 - Number and types of victim(s) (i.e. Urgent, Priority, Routine)
 - Type(s) of injury(ies), victim(s) present condition, if a medical professional is on-scene, and what medical aid has been provided
 - HEAT CASE: Body Core Temp and mental status
- ***Additional information:***
 - Victim(s) name
 - Victim(s) known medical (blood type, medical allergies)
 - Source of injury/illness (i.e. snake bite, gun shot, shrapnel, etc.)
 - Hazards to aircraft, vehicle at the casualty collection site



Step #3: Render Aid

- **Training and Equipment**

- Check range for medical professionals on site
- QSC Range Box has a Bleeding Control Kit and various First Aid Items
- WTBN Range Box has additional Bleeding Control Kit

- **Good Samaritan Law**

- Reasonable and Prudent

- **Aid**

- Determine level of care - Call for help, self-treat or have EMT treat?
- Club has EMT on-site

- **Gather additional medical information**



Step #4: Direct Medical Help To Location

- ***Position one or more persons to direct the emergency vehicle:***
 - On main road to entrance of the facility
 - On road to range
 - Outside the building
 - Anywhere necessary to reduce confusion and speed the arrival of medical assistance to the victim



Step #5: Take Notes (Reports)

- Take notes on the times different actions were taken
- Get statements from witnesses
- Complete required QSC Injury Report form
- Notify authorities if necessary



Range Operations

Special QSC Range Lessons



QSC Range Operations – Lessons

- **Some Lessons that May Not be in the SOPs but Learned Over Time and Through Experience**
 - There is no concealed carry on MCBQ except for active federal LEOs – Federal rules – Violation is a **Felony** offense***
 - Clearing the Range – Call RC and ask for an inspection so QSC is not blamed for range trash from other agencies
 - NFA weapons and suppressors are allowed – However, no automatic fire or simulated auto fire – Per MCBQ
 - No binary triggers or bump stocks per MCBQ
 - Rec Fire – Ensure you call in new arriving shooter DODICS for clearance - If RC finds we are shooting a non-approved DODIC it's trouble
 - Don't argue with the Fire Desk staff – Even if you know there may be an error (338 Lapua Okay but 300WM Not) they are in control
 - Always request an occupy time before entering a range so the Fire Desk can deconflict access in RFMSS
 - There is generally no driving on the ranges



QSC Range Operations – Lessons

- **Range 1:**

- PWS operates a 300m range and the range flag is always up as the range is always considered Hot. You may have to coordinate through the OOD when transiting Gate 1 to ensure you do not enter a HOT SDZ
- No drawing from the holster when in the covered pavilion – A ricochet off the concrete could be a fatal event
- Do not allow people to exit the Port-a-John to the left and in front of the firing line – they have to exit to the right and rear to re-enter through the door for their safety
- Make sure you place the Orange Safety Cone when people are downrange to remind you there could be people placing targets as there is undulating terrain and a deep defilade that hides their presence



QSC Range Operations – Lessons

- **Range 2 & 3:**

- Ensure you maintain coordination between adjacent ranges so you do not end up shooting behind others or going into the pits when other ranges are firing
- There is a tunnel between the ranges to enter the pits, this is the safest way to enter and exit the pits for these ranges
- The ranges are usually reserved for CMP Rifle Team practice or matches so they are not always used – This could breed complacency – Always update yourself on the SOPs

- **Range 4:**

- Maintain observation of the entire line to the berm for wildlife and rouge runners who will cross the barriers and disregard the ranges flags at Checkpoints 8 & 9 to continue their route – Call a Cease Fire – Remember to not shoot anything that is moving!
- Ensure you maintain coordination with Range 3 so you do not go on the berm or in the pits when they are firing. If you do, the overhead concrete roof structure is the safe haven



QSC Range Operations – Lessons

- **SAT Range:**

- Ensure you deconflict firing schedule with Ironman Range if they are also shooting to include what Bays are active
 - If Bay 4 is active, shooters on Ironman cannot occupy Lanes 1 & 2
- No vehicles inside SAT except for OIC, RSO, Match Director or EMT
- As a reminder, some shooters will want to practice with steel and a PCC – Ensure you follow the minimum safe distances for steel by caliber requirements

- **Ironman Range:**

- Ensure you deconflict firing schedule with SAT Range if they are also shooting to include what Bays are active
 - If any SAT Range Bays are Hot, NO Downrange movement is allowed on ironman Range
 - If Bay 4 is active, shooters on Ironman cannot occupy Lanes 1 & 2
- Shooters can use the driving lanes to go downrange to place targets
- Ensure all shooters have cleared downrange before going Hot as there are small berms and undulating terrain that could hide people



QSC Range Safety Officer Certification Course



10 Min BREAK





Section VII: Gun Stoppages & Malfunctions

“Unload and show Clear”



Learning Objectives

- ***Learning Objectives***

- Upon completion of this lesson, you should be able to:
 - Demonstrate how to safely fill a magazine, load & unload a gun
 - Demonstrate how to safely take a gun from a shooter
 - Explain the difference between a stoppage and a malfunction
 - Demonstrate how to clear common stoppages & malfunctions



Loading a Gun

- Always point the gun in a safe direction
- Always keep your finger off the trigger until ready to shoot
- Engage the mechanical safety (if possible)
- Insert ammunition (magazine) into gun
- Open the action and chamber a cartridge
- Close the action and engage the mechanical safety

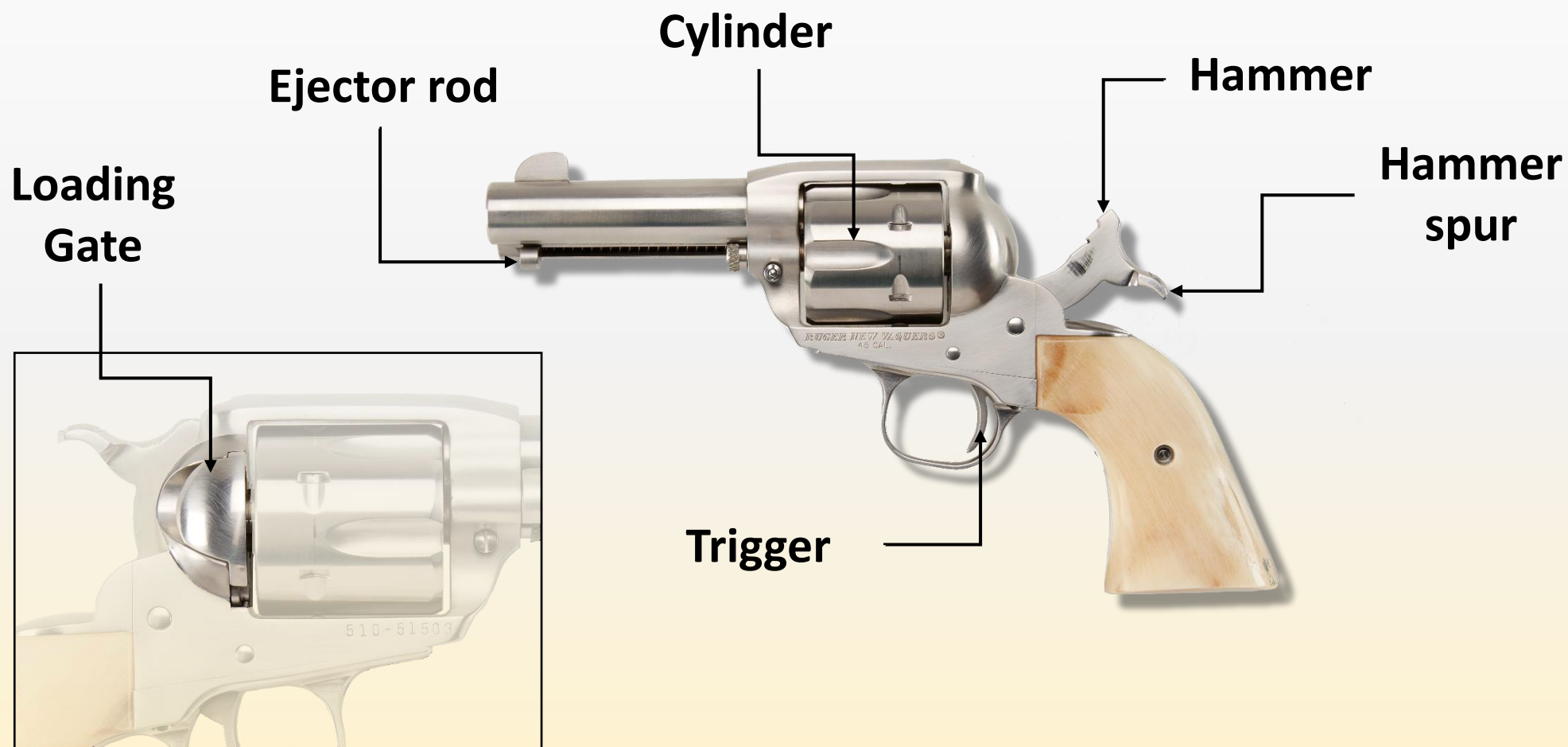


Unloading a Gun

- Always keep the gun pointed in a safe direction
- Always keep your finger off the trigger until ready to shoot
- Engage the mechanical safety (if possible)
- Open the action
- Remove the ammunition source (magazine or ammunition from tube)
- Physically and visually inspect the chamber and magazine areas
- Leave the action open if possible & insert an Empty Chamber Indicator(ECI)
- Engage the mechanical safety

**** Always follow the gun manufacturer's instructions for loading and unloading.**

Single-Action Revolvers



Loading a Gun

Cylinders (Single Action) (Demonstration)

1. Open the loading gate.
2. Rotate the cylinder to align an empty chamber with the loading port.
3. Insert a cartridge into a chamber.
4. Repeat, until loaded.



Loading a Gun

Cylinders (Single Action) (Demonstration)

1. Open the loading gate.
2. Rotate the cylinder to align an empty chamber with the loading port.
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Loading a Gun

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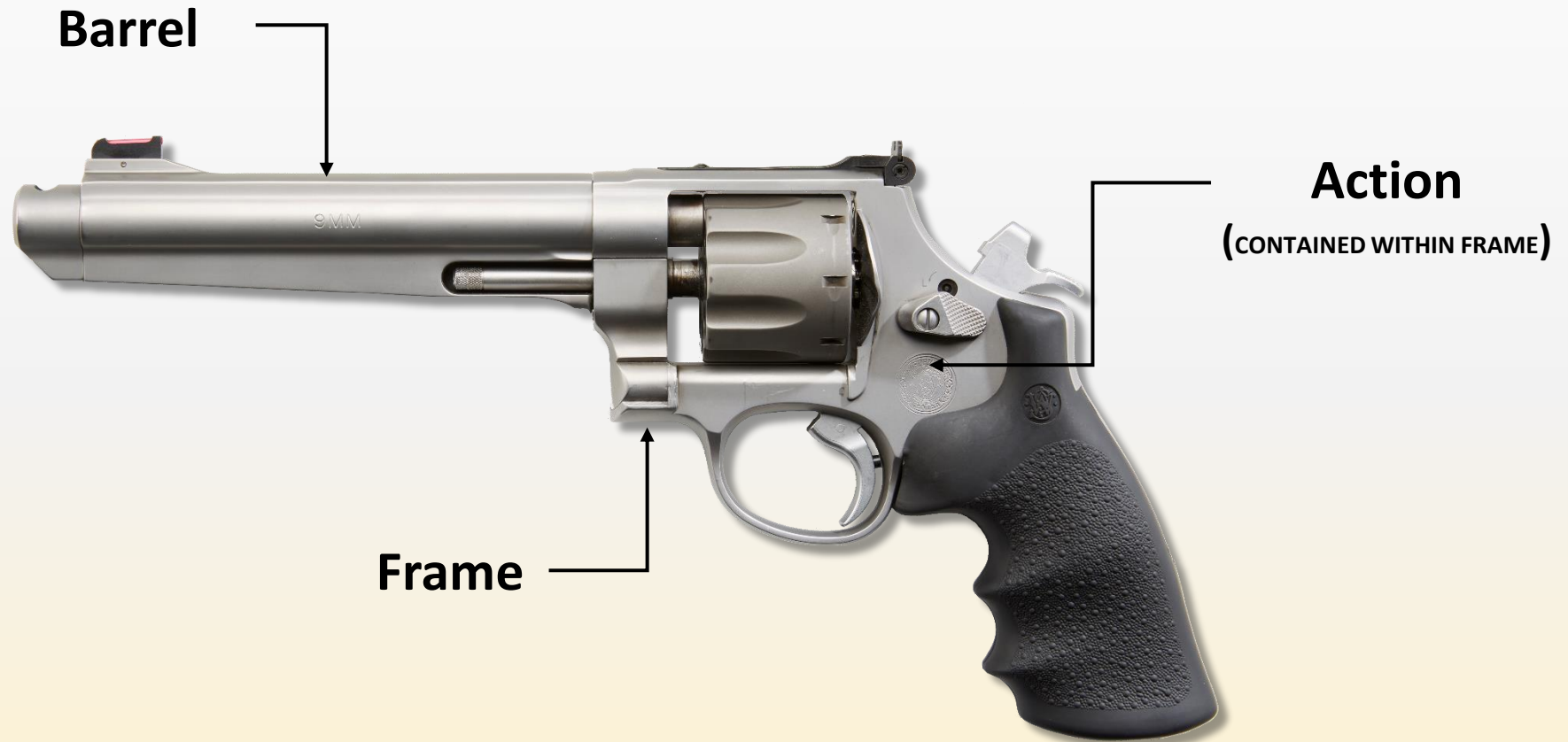
Unloading a Gun & Stoppages

Cylinders (Single-Action)

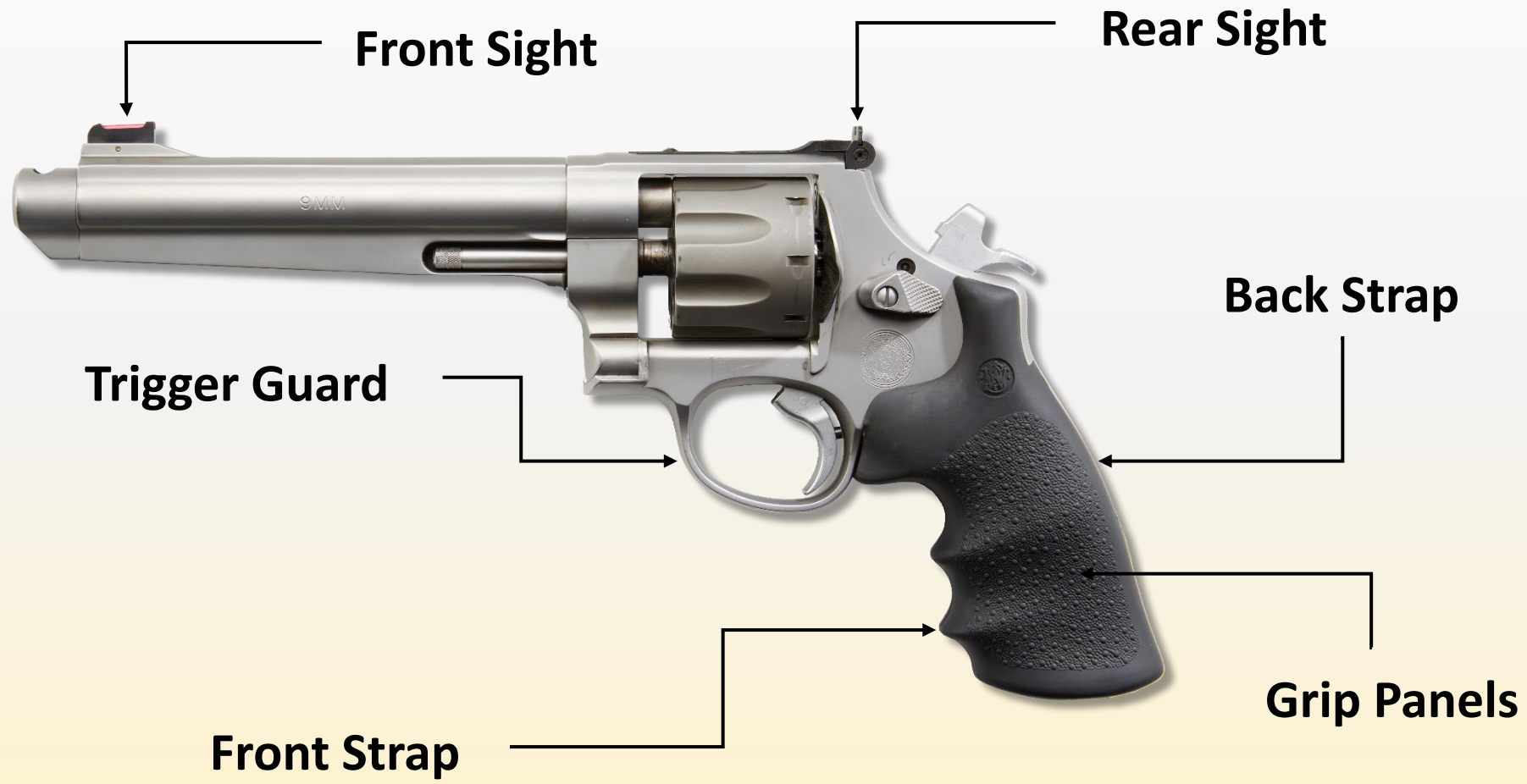
- **Cylinders (Revolvers)**
 - Open the Loading gate
 - Remove Cartridges



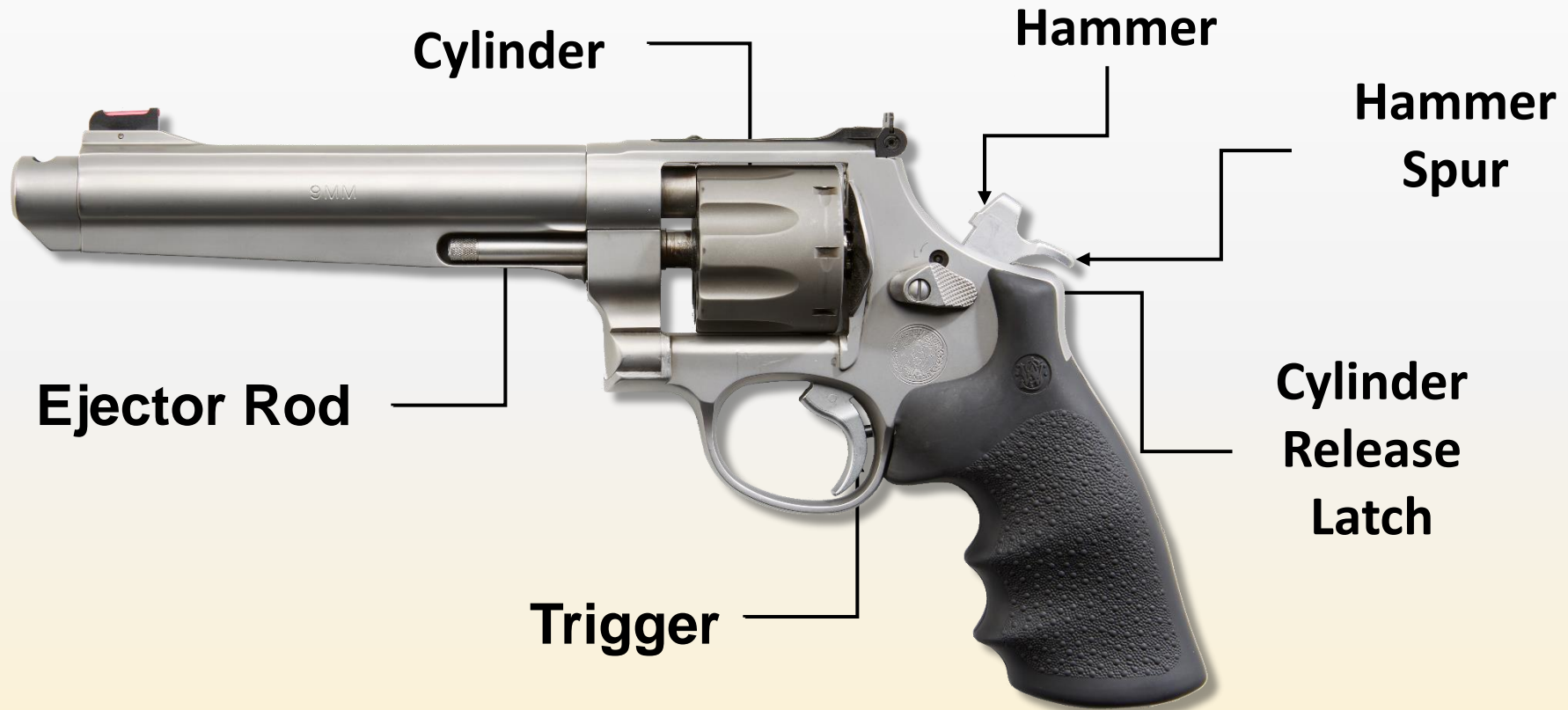
Double-Action Revolvers



Double-Action Revolvers



Double-Action Revolvers



Loading a Gun

Cylinders (Double Action) (Demonstration)

1. Activate the cylinder release.
2. Swing the cylinder out of the frame.
3. Insert a cartridges into chambers.
4. Swing the cylinder back into the frame.



Loading a Gun

Cylinders (Double Action) (Demonstration)

1. Activate the cylinder release.
2. Swing the cylinder out of the frame.
3. Insert a cartridges into chambers.
4. Swing the cylinder back into the frame.



Loading a Gun

Cylinders (Double Action) (Demonstration)

1. Activate the cylinder release.
2. Swing the cylinder out of the frame.
3. **Insert cartridges into chambers.**
4. Swing the cylinder back into the frame.



Loading a Gun

Cylinders (Double Action) (Demonstration)

1. Activate the cylinder release.
2. Swing the cylinder out of the frame.
3. Insert a cartridges into chambers.
4. Swing the cylinder back into the frame.





Emptying Magazines, Cylinders And Guns

Cylinders (Thumb Press)

Cylinders (Revolvers)

- Swing Out the Cylinder
- Remove Cartridges





Emptying Magazines, Cylinders And Guns

Cylinders (Palm Strike)

Cylinders (Revolvers)

- Swing Out the Cylinder
- Remove Cartridges



Semi-Auto Pistol



Semi-Auto Pistol



Loading a gun

Semi-Automatic



Loading a gun

Semi-Automatic



Loading a gun

Hinge Action



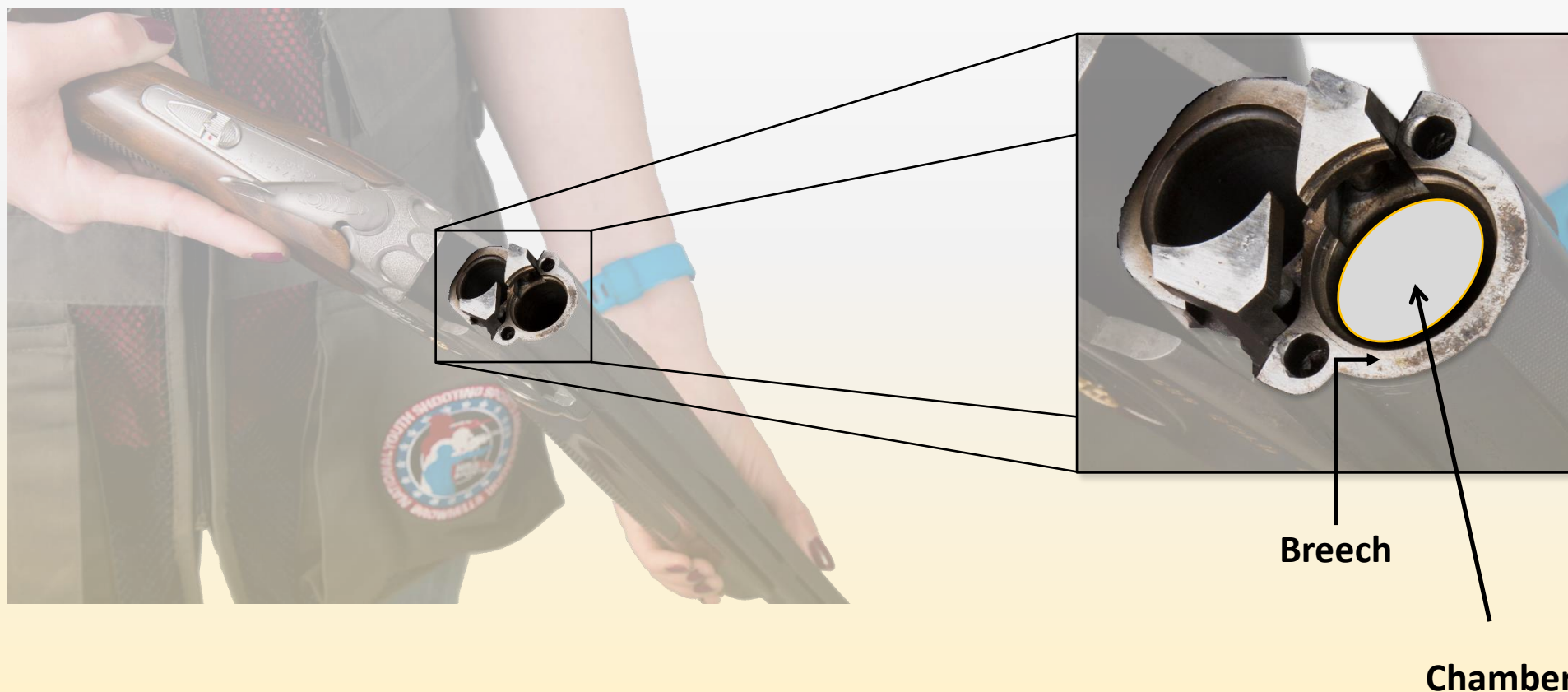
Loading a gun

Hinge Action



Loading a gun

Hinge Action



Loading a gun

Hinge Action



Loading



Emptying Magazines, Cylinders, And Guns

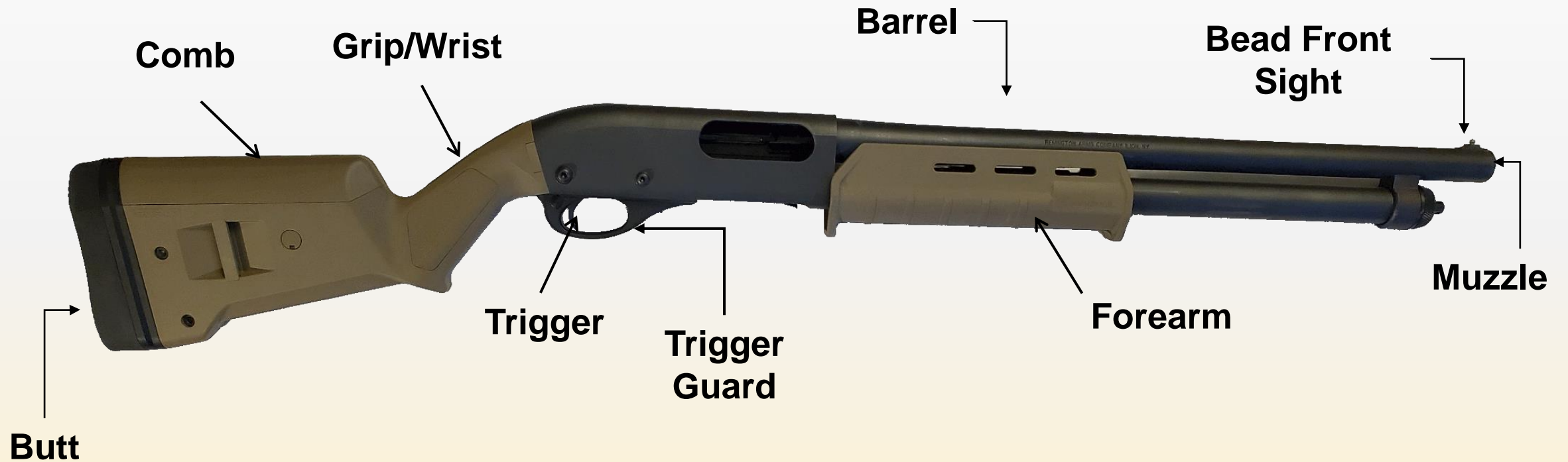
Hinge Action



Unloading

Loading a gun

Slide/Pump Action



Loading a Gun

Slide/Pump Action



NRA



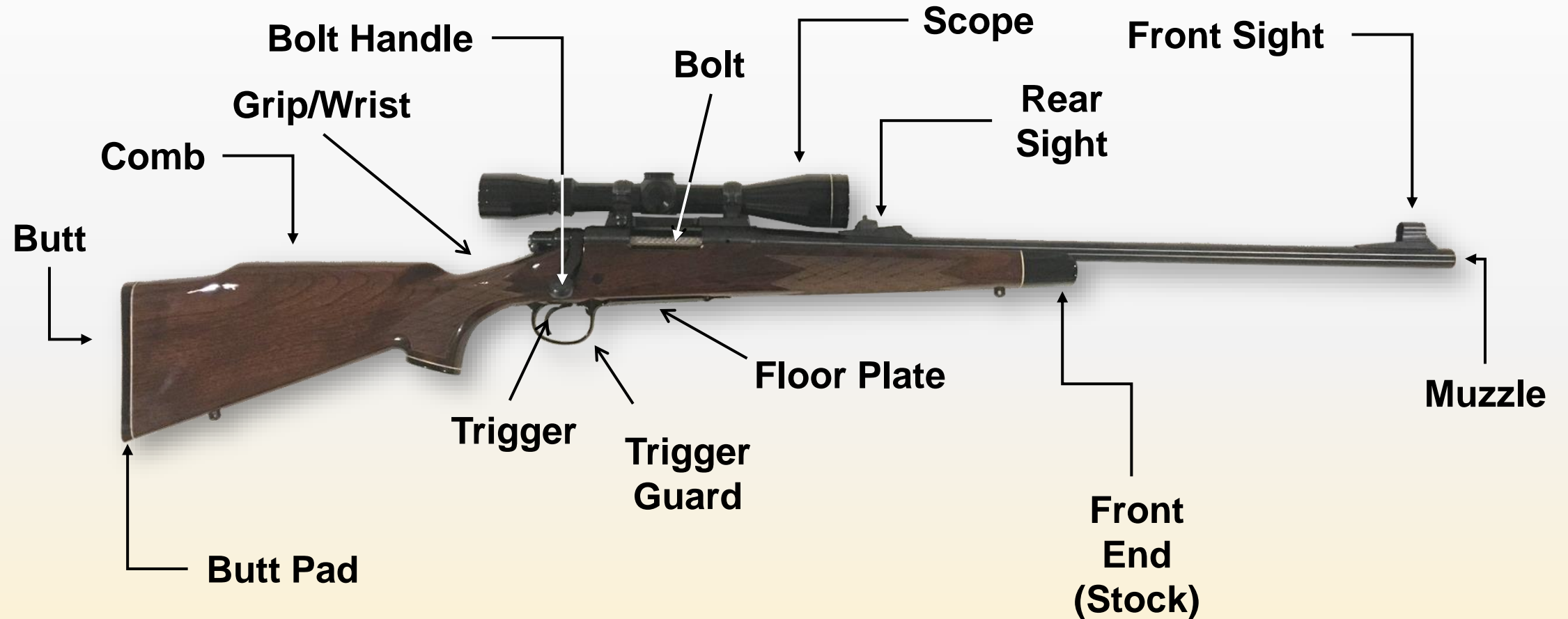
Emptying Magazines, Cylinders, And Guns

Pump/Slide Action



Loading a gun

Bolt Action



Loading a gun

Bolt Action



Emptying Magazines, Cylinders, And Guns

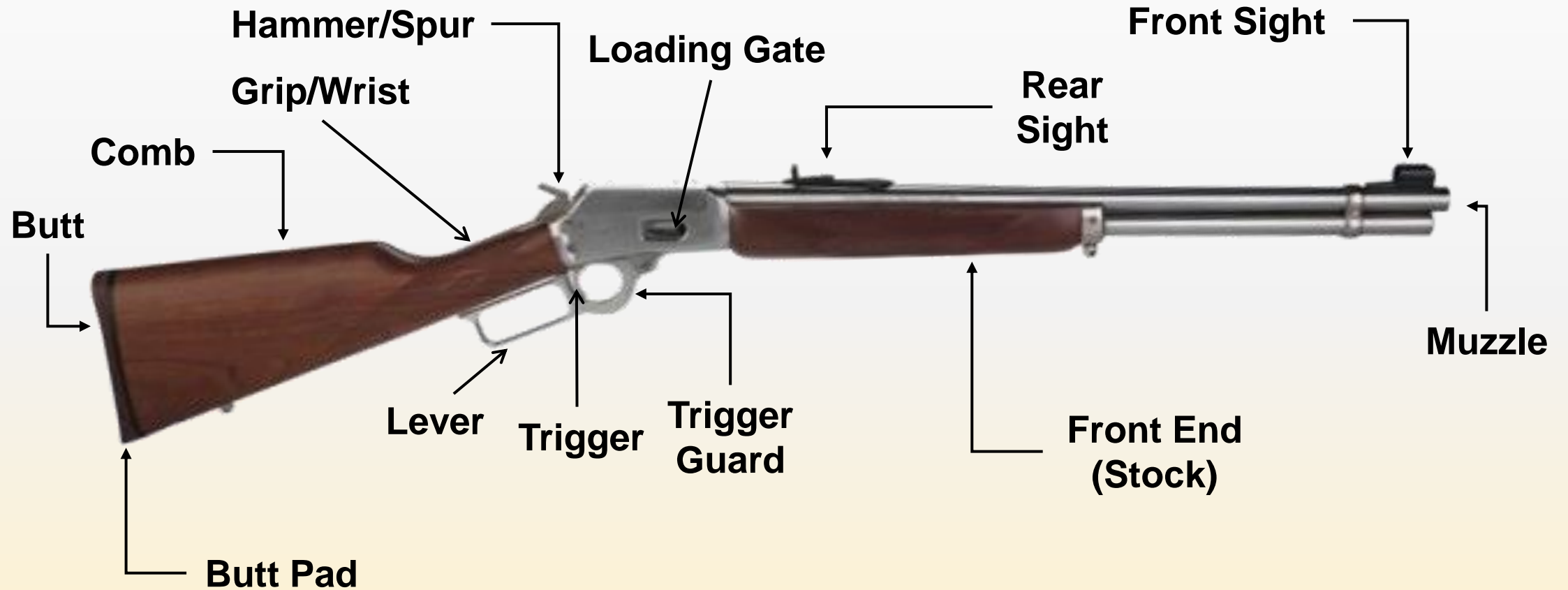
Hinged Floor Plates

- **Hinged Floor Plates**
 - Open bolt to the rear
 - Drop the floorplate



Loading a gun

Lever Action



Loading a gun

Lever Action



Loading a gun

Lever Action





Emptying Magazines, Cylinders, and Guns with Built-in(Blind) Magazines

- **Built-In Magazines**

- Lever Action
- Pump/Slide Action
- Work the action until empty



Loading a gun

Box Magazines

- Insert the magazine into the magazine well
- Pull on the magazine to ensure it is locked in place



Loading/Unloading & Malfunctions

Semi-Automatic Action

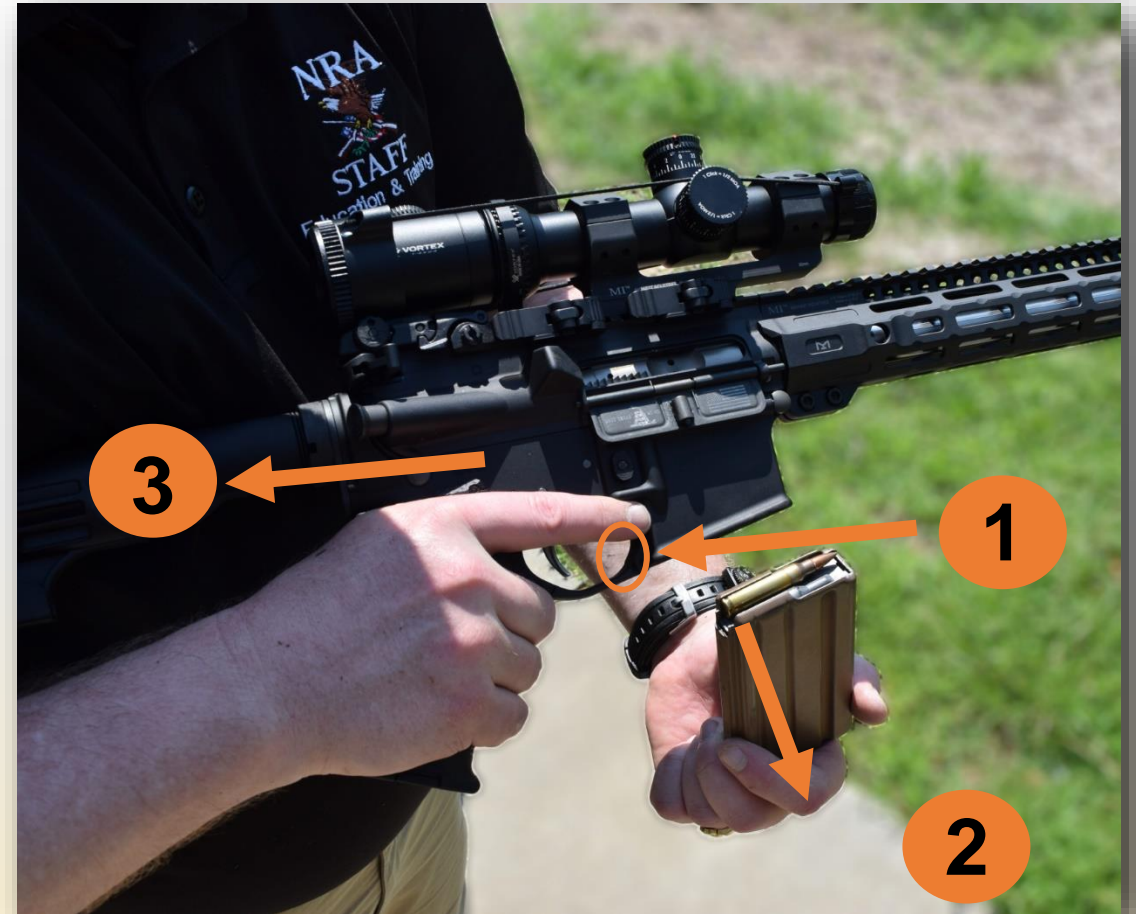


Emptying Magazines, Cylinders, And Guns

Removable Box magazines

- **Box Magazines**

- Press magazine release
- Pull magazine free of rifle
- Lock the bolt to the rear



Loading / Unloading (AK-47)



Loading / Unloading (AK-47)



Loading a gun

Muzzleloading Guns

- Check the bore for a load



Loading a gun

Muzzleloading Guns

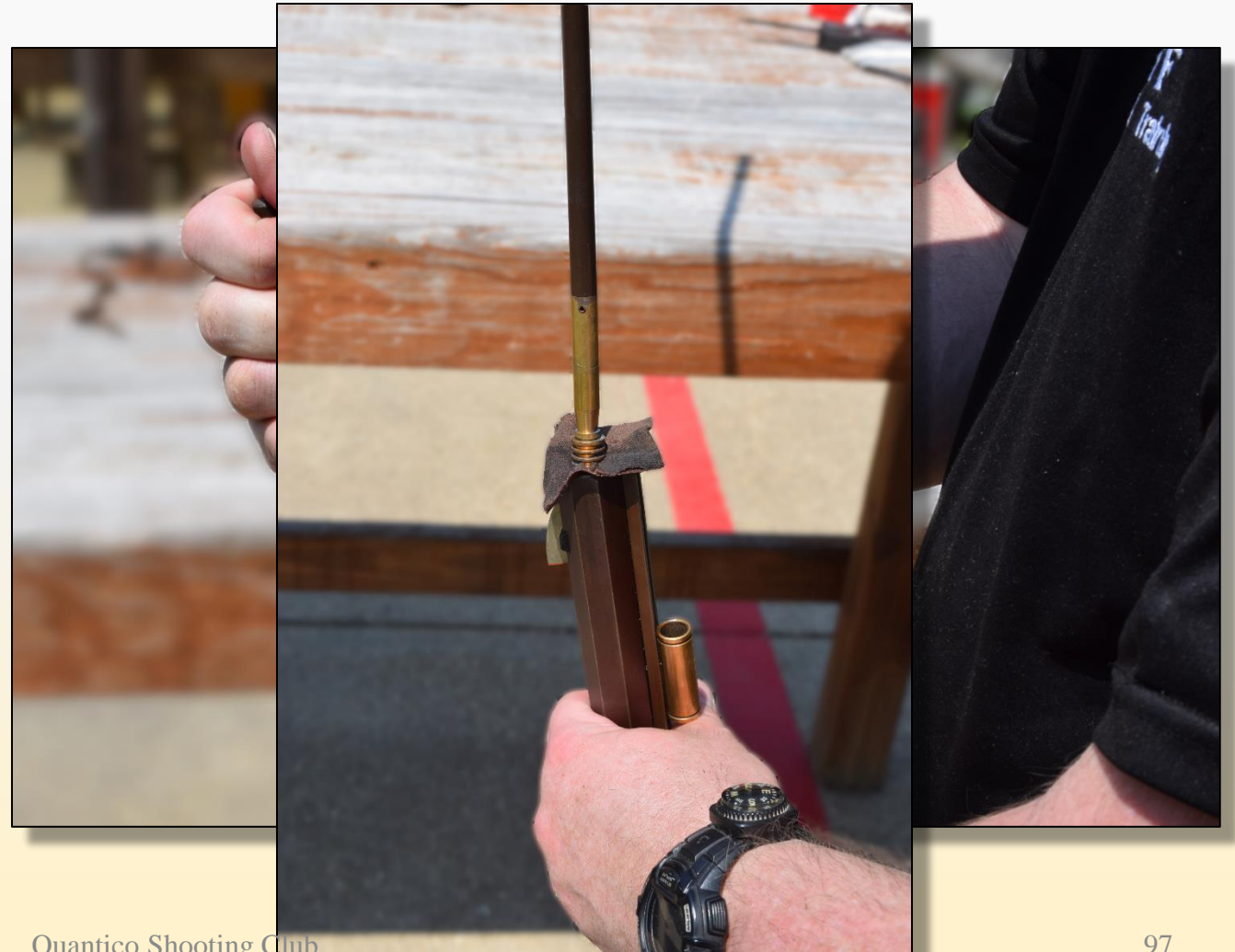
2. Half-cock and position the gun for loading.



Loading a gun

Muzzleloading Guns

3. Wipe and clear the barrel.



4. Measure the powder charge.



5. Charge the barrel with powder.



**Use Only Black Powder Or An Approved
Substitute In Muzzleloading Firearms.**

Loading a gun

Muzzleloading Guns

6. Prepare the patch (lubricate).



7. Patch the ball.



Loading a gun

Muzzleloading Guns

8. "Start" the ball
and patch.



9. Trim the patch.



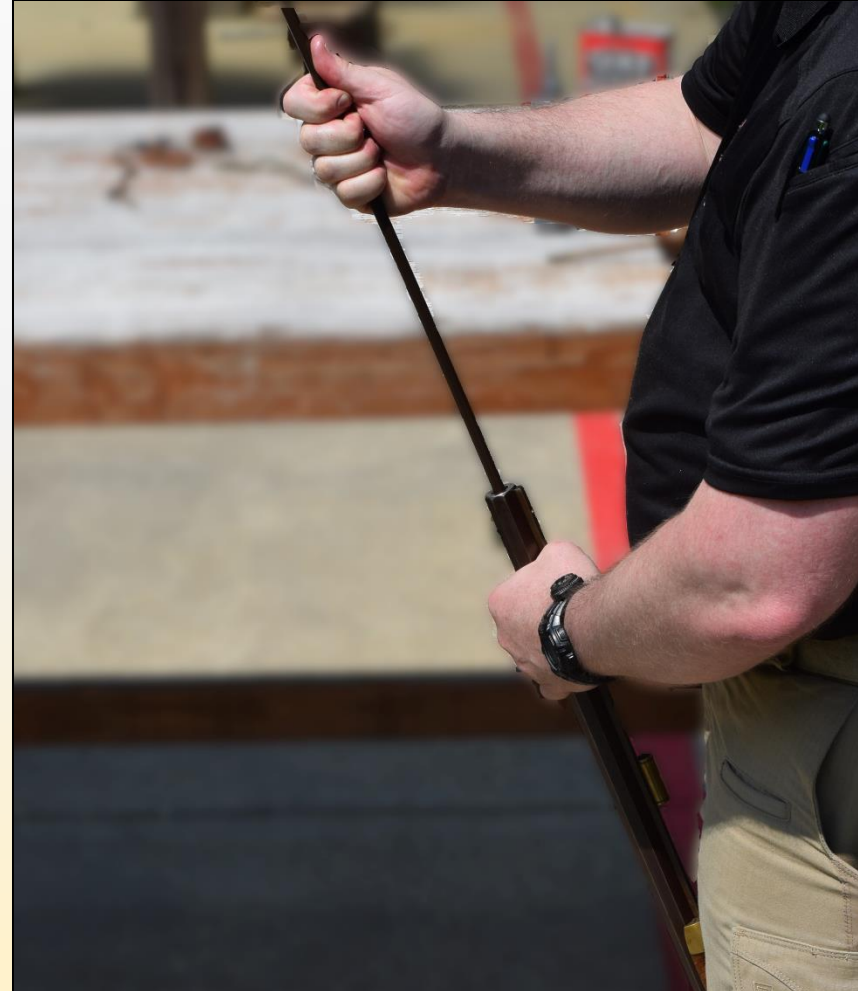
10. "Short start" the ball.



Loading a gun

Muzzleloading Guns

11. "Seat" the ball.



Muzzleloading Guns

Shoot the ball.



Unloading a Gun & Stoppages

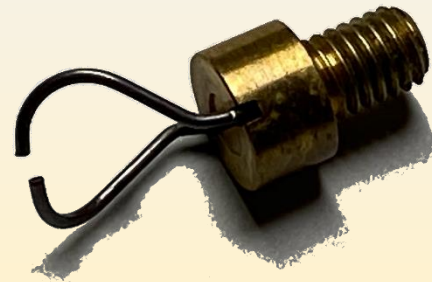
Muzzleloading Guns



Ball Puller



CO2 Ball
Discharger



Patch worm



Action Types You May Have To Clear

- ***Rifles***

- Bolt action
- Lever action
- Falling block action
- Semi-Automatic action

- ***Pistols***

- Single action
- Double action
- Semi-Automatic action

- ***Shotguns***

- Break action
- Pump action
- Semi-Automatic action
- Bolt action

- ***Muzzleloading guns (pistols, rifles and shotguns)***

- Flintlocks
- Percussion locks



Magazine Types You May Have to Clear / Remove

- Built-in magazines
- Box magazines
- Tubular magazines
- Cylinders (Revolvers)



What Is A Stoppage ?

- A ***stoppage*** is an unintentional interruption in the operational cycle of a gun, which stops the gun from operating properly
- Stoppages can be cleared quickly, which returns the gun back to operational condition
- **Examples of stoppages:**
 - The bolt fails to lock a cartridge into position
 - A stove-pipe in a semi-automatic pistol
 - Double-feed



8 Steps of a Firearm Cycle of Operation

- | | |
|---------------|---------------|
| 1. Feeding | 5. Unlocking |
| 2. Chambering | 6. Extracting |
| 3. Locking | 7. Ejecting |
| 4. Firing | 8. Cocking |



What Is A Malfunction?

- ***Malfunction*** = Failure of a gun or ammunition to function as designed or fire satisfactorily
 - Two categories of malfunctions:
 - ***Gun Malfunction***
 - *Require the gun to be repaired/maintenance to make it function properly*
 - Example: A broken sear that causes the pistol to fire all rounds in the magazine
 - ***Ammunition malfunction***
 - Example: A misfire
- ***What should the shooter do?***
 - Keep the gun pointed downrange and wait the required time
 - 60 seconds for modern cartridges
 - 2 minutes for muzzleloaders
 - Clear the malfunction
 - OR, Raise the non-shooting hand for assistance



Malfunctions

- ***What should the shooter do?***

- Keep the gun pointed downrange and wait the required time
 - 60 seconds for modern cartridges
 - 2 minutes for muzzleloaders
- Clear the malfunction
- OR, Raise the non-shooting hand for assistance



Types Of Cartridge Malfunctions

What types of ammunition malfunctions are there?

- ***MISFIRE***
- ***HANGFIRE***
- ***SQUIB LOAD***
- ***OVER PRESSURE / RELOADING****

** Relevant to QSC Range Operations*

- ***A Misfire is the failure of a cartridge to ignite when the primer or case rim is struck by the firing pin***
 - *What are some causes?*
 - Defect In The Cartridge
 - Defect In The Firearm
- ***What should the shooter do?***
 - ***STOP FIRING IMMEDIATELY!!***
 - Keep the gun pointed downrange and wait the required time
 - 60 seconds for cartridges
 - 2 minutes for muzzleloaders
 - Clear the malfunction
 - Safely open the action
 - Check the bore for obstructions
 - Raise the non-shooting hand for assistance

- A **Hangfire** is a perceptible delay in the ignition of a cartridge after the primer or case rim has been struck by the firing pin. This delay may last several seconds
- *When a cartridge fails to fire immediately, it will not be known if the problem is a misfire or hangfire. Because a hangfire condition can cause the firearm to fire after a substantial delay, the firearm should be kept pointed in a safe direction for at least 60 seconds before the action is opened to remove the cartridge*

- A ***Squib Load*** is a shell developing less than normal pressure or velocity upon ignition of the cartridge. A squib load can cause a projectile or wad (for shotguns) to fail to exit the muzzle and lodge in the bore of the barrel
- ***Signs of a Squib Load:***
 - Reduced Noise
 - Reduced Muzzle Flash
 - Reduced Recoil
- ***What Happens When You Shoot after a Squib load?***





Overpressure / Reloading

- **Overpressure and reloading** refers to members who are firing their constructed rounds, e.g., reloaded. Less or no skilled people, trying to economize, and not knowing the procedures/intricacies required to make a safe round are simply a danger to themselves and others.
- **Some Common Symptoms – If You Encounter These, You need to Stop the Shooter and Inquire:**
 - Blown primers – Indicates excessive pressure
 - Cases stuck in chamber – Indicates excessive pressure
 - Bolt stuck closed – Indicates excessive pressure
 - Bolt won't close on round – Indicates the round was loaded too long and will cause overpressure
 - Ejector marks on the case head – Indicates excessive pressure pushing the round back into the ejector
 - Cracked brass or case head separation – Indicates excessive pressure or brass reloaded too many times
 - Magazine blown out of rifle – Indicates excessive pressure
- **Some Common Causes – Individually or in Combination:**
 - Too high a powder charge for the caliber or bullet weight OR using a faster burning powder that raises pressure to fast
 - Bullet loaded too long and / or jammed into the barrel's rifling – Creates additional pressure
 - Too heavy a bullet for powder charge – Safe for a 168gr bullet but unsafe for a 190gr bullet with same charge
 - Loading for a low ambient temp and shooting at a higher temp day - Produces more pressure
 - Gun fires out-of-battery – Bolt / slide is still open but gun fires



Overpressure / Reloading

- ***Signs of Excessive Pressure***

- Blown Primers
- Flattened / Pierced Primers
- Primer Flow
- Ejector Swipe
- Case Head Separation

- ***Not Shown but Indicators***

- Bolt won't close – Loaded too long
- Bolt won't open – Case stuck



AMU 600 yard brass.

Example over pressure loads

Version - February 5, 2025



Overpressure / Reloading

- *Results – Which One Happened at QSC?*





Clear A Stoppage

- ***What do we need to know in order to clear a stoppage?***
 - The parts of the gun
 - How to SAFELY operate the gun
 - Loading
 - Firing
 - Unloading

Clear A Stoppage (Stovepipe)



1. Remove the source of the ammunition
2. Lock the slide to the rear
3. Remove the casing/cartridge

Clear A Stoppage *(Double Feed)*



Clear A Stoppage

(Double Feed)



1. Lock the slide to the rear
2. Remove the source of the ammunition
3. Remove the casing/cartridge



How To Take Control Of A Loaded Gun

- **To take control of a loaded gun from a shooter, the RSO should approach from the side in which:**
 - Will provide the most control; announce presence to the shooter and ask shooter the nature of the problem
 - Grasp the barrel of the gun (*Be VERY careful, the barrel may be hot!*) behind muzzle and control the direction of the muzzle (*Safe Gun Handling Rule #1*), gain control of the gun, and have the shooter step back
 - Control and reposition the gun if necessary (keep muzzle pointed in a safe direction)
 - Determine the stoppage, clear it, and unload the gun
 - Tell the shooter what went wrong and how to prevent it from happening again



Questions?

Make certain you signed in to get credit for this instruction!



Loading/Unloading & Malfunctions

Practical Exercise *(w/Skip and Kevin)*