

# Single Action Shooting Society®

## Range Operations Basic Safety Course



# Student Handbook

VERSION 28.3

MAY 2025

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## **UNIT 1: Introduction & Course Goals**

Let us Introduce Ourselves!

- Instructor Welcome and Introductions
- Student Introductions:  
Include Name, SASS Alias, location, and experience with SASS

### **Course Goal**

To develop members who possess the knowledge, skills, and attitude essential to ensure safety and consistency at all SASS Shooting Sports matches and events.

This course is a SASS range operations and safety course designed for all SASS matches, regardless of the shooting discipline.

This course is a pre-requisite for attending a Cowboy Action Shooting Course and/or a Wild Bunch Action Shooting Course.

Further details and discipline specific rules and regulations are outlined in the standalone courses for each discipline.

### **Course Expectations**

- Breaks will be given throughout the course
- Please silence your cell phones, step outside if you need to use your phone
- The contents of the student course book contain the information in the slide presentation

### **Course Certification**

- Attend the entire course
- Participate in discussions and practical exercises
- Demonstrate knowledge, skill, and attitude necessary
- Commit to know and understand the most recent version of the SASS Shooters Handbook and strive to stay informed.
- Achieve a minimum examination score of 80%
- Have fun!

Students are expected to attend the entire course and to participate in discussions and activities designed to increase and reinforce learning.

An examination score of 80% (24/30) or higher is required for certification. \*A passing score (even a 100%) does not guarantee certification if a student displays a careless, negative attitude or a disregard for safety. Determination is up to the Course Instructor.

Students who receive and successfully complete this training course will receive a SASS RO Pin.

## **Purpose of SASS Range Operations (RO) Training**

### **Consistency.**

A standardized set of rules for all to follow eliminates “grey areas” that can lead to arguments, misunderstandings, and most importantly – ensures a safe environment for the enjoyment of the sport- no matter where you travel to shoot.

**The SASS Shooters Handbook** is the greatest resource available to all SASS Shooters, members, & Range Officers.

Sections of Content relating to the rules and regulations of SASS, as well as both sports of Cowboy Action Shooting and Wild Bunch Action Shooting are found in each of the disciplines Shooters Handbooks.

Become familiar with the Handbook and reference it when enforcing the rules – it is your back up!

## **UNIT 2: Match Positions & Roles**

All match positions covered in this lesson are considered Range Officers.

Each position serves a critical function to the fair, efficient, and SAFE execution of a match.

**Match Director** is in charge of the overall match and is required to ensure qualified officials are in place in all competition areas. The match director is typically the stage writer/designer of the match.

**Range Master** is in charge of and oversees all stages and ensures qualified officials are in place in all stages. He reviews all stages and ensures they are designed and constructed to operate in a safe manner for both competitors and officials.

**Match RO** acts as an intermediary between the Posse Marshals and the Range Master in resolving issues regarding application of rules/penalties.

**Posse Marshal** Is in charge of a posse and is required to ensure all positions are manned to run the posse safely and efficiently through each course of fire. The Posse Marshal ensures all rules and regulations are being followed, and must understand all stages, conduct a walk-through, and answer all questions before each stage. The Posse Marshall will appoint at least one Deputy Posse Marshal to assist if one is not assigned.

**DEPUTY Posse Marshal** acts on behalf of the Posse Marshal when the Marshal is shooting or otherwise unavailable. The Marshal & Deputy should be separated in the shooting order for adequate Posse coverage. It is highly recommended that anyone serving in a Posse Marshal or Deputy Posse Marshal capacity be trained in this RO-I Course.

## **Expeditor Officer (XPO)**

The Expeditor Officer (XPO) facilitates and speeds up the progress of the shooters in line for the firing line.

In large matches, the XPO is in charge of making sure the posse stays on time and on task during their assigned time on each stage.

The XPO asks the shooter if they understand the stage or have any questions and escorts the shooter to the stage as it is being cleared.

Not all matches will benefit from an XPO, but most of the time lost in a match is in getting the next shooter to the line and staging their firearms. Used correctly, the XPO can shave up to 30 seconds per shooter in contestant transitioning.

## **Spotters**

- Spotters have the responsibility to count shots and misses and to verify the targets were engaged in the correct order for the required number of shots.
- Spotters assist the TO by watching for violations when the competitor retrieves staged firearms and draws revolvers since it is impossible for the TO to have an unobstructed view of both sides of the competitor's body.
- Spotters are obligated to stop a shooter from attempting an unsafe action if the TO is not in position to see it or react quickly enough.
- Determine misses by both visual and audible means, when possible.
- Should always be in a position to see all the targets in the course of fire. At least one spotter should be positioned on each side of the competitor.
- There should always be 3 spotters. The majority (2 out of 3) breaks the tie in regard to misses.
- Spotters should be easily identifiable by holding a baton, wearing a bandana, etc.
- The TO is not relied upon to count shots and misses.
- Spotters declare any misses and procedural at the conclusion of the stage
- Spotters never spot for a family member.
- Always give the shooter the benefit of any doubt.

If you know it's a HIT.....

IT'S a HIT!

If you think it's a HIT.....

IT'S a HIT!

If you think it's a MISS....

IT's a HIT!

If you know it's a MISS....

IT's a MISS!

## **Score Keeper**

It is good practice for the Score Keeper to repeat the times and penalties back to the TO in a loud, clear voice for confirmation.

- The Score Keeper records the times and penalties appropriately for each contestant on the provided score sheets for each stage.
- The Score Keeper should total the times and penalties to calculate the shooter's score – if the scoring instructions dictate.
- The Score Keeper can also be a Spotter.

- When possible, a Score Keeper should not record the score of a family member.
- The shooter should be made aware of any misses or penalties as they are leaving the line. Especially since once they leave the line and unload, miss penalties should not be questioned.

### Scoring Methods

SASS matches are scored using total time.

### Sample Common Score Sheets

SHOOTER NAME	RAW TIME	MISSES	PENALTY	TOTAL TIME
<i>Fast Shooter</i>	19.3	1/5		24.3
<i>Sassy Shooter</i>	37.6		1 P/10	47.6
<i>Wild Shooter</i>				
<i>Sweet Shooter</i>				

### Loading Table Officer

The loading table officer is responsible for visually checking to ensure all firearms are loaded with only the correct number of rounds required in a course of fire, to verify that no round is ever under the firing pin of any firearm, and that all loaded firearms' hammers are fully down on an empty chamber.

\*At the loading table, Shooters are allowed to make corrections as necessary without penalty. The loading officer observes and enforces safe muzzle direction during the course of loading, as well as movement to and from the loading area.

- Discharging a round at the loading table results in a Match DQ penalty assessment.
- The loading table is a good place for the Loading Officer to observe the shooters equipment, especially firearms- inspecting for illegal modifications.
- Corrections should be made at the loading table, if possible.
- It is good practice for the Loading Officer to ask the shooter if he/she understands the stage.
- Explanations at the Loading area/table help to avoid these questions being addressed at the line by the TO and can help to prevent delays.
- A stage/scenario description posted on the loading table assists shooters in making a final review of the scenario prior to advancing to the firing line.
- The Loading Officer should avoid unnecessary conversation with the next shooter in line- allowing the shooter to mentally prepare for the course of fire.

## **Unloading Table Officer**

Unloading Table Officers are responsible for visually checking to ensure all firearms are UNLOADED after the completion of the shooting stage.

- Competitors shall unload each of their firearms in a manner that the Unloading Officer can visually check & confirm that each firearm is empty.
- Rifles and Shotguns are to be cycled to verify their magazines are empty.
- The Unloading Table Officer should observe the magazine follower if possible.
- All firearms taken to the firing line must be checked and “shown clear”- whether or not they were used in the course of fire.

The primary responsibility always rests with the competitor. Shooters should always know the condition of their firearms and should never depend upon the Loading and Unloading Officers to ensure their firearms are correctly loaded or unloaded.

- The Loading & Unloading Officers are an added measure of safety.
- The competitor may never blame the Loading officer for an incorrectly loaded firearm – or an Unloading officer for a firearm not unloaded.

\*At no time will this claim be grounds for dismissal of penalties.

“Failure to adhere to loading/unloading procedure”, resulting in a Stage Disqualification penalty, is assessed at the following point: Once control of the firearm(s) is relinquished; be it in a rack on the stage or at the shooter’s gun cart. (i.e., leaves the shooter’s hand(s), having bypassed the unloading table.

## **Berm Marshal (aka: Stage Driver or Stage Marshal)**

The role of Berm Marshal has mostly been eliminated in matches. The Posse Marshal walk-through process and the role of the Posse Marshal has eliminated the need for Berm Marshals.

While the role has been mostly eliminated, some Match Directors MAY still enlist the role of Berm Marshal in their matches. Berm Marshals are charged with ensuring the stages are uniformly engaged by every posse and can assist in getting any behind schedule posses back on schedule.

The primary responsibility of a Berm Marshal is to ensure consistency between posses and to keep posses running on time.

## **The Timer Operator (the TO)**

The role of the Timer Operator is to safely assist a shooter through the course of fire. Because the role of the TO is critical and involved, this role will be covered in its own unit later in the course.

### **UNIT 3: Range Commands**

Standard Range Commands are the most efficient way to run a shooting line and are used in almost every established shooting sport.

Standard Commands allow shooters from all over the world to understand range procedures – even if they do not speak English fluently.

**SPEAK UP** when giving Range Commands!

Range Commands do not have to be recited word-for-word, but the closer the better. Adding a little fun and western flavor associated with our game allows for colorful individuality.

\*For example: “Is the shooter ready?” can also be “Is the cowboy/cowgirl ready?”

Safety, Efficiency, and **HAVING FUN** can all co-exist!

#### **Common Verbal Range Commands:**

“Do you understand the course of fire?” A customary initial query to the shooter by a Range Officer; either at the loading table or XP position prior to the stage. A negative response requires additional explanation of the course of fire. Answer any shooter’s questions in a clear and consistent manner. Remember, never make a shooter feel as though he/she is being rushed.

“Is the Shooter Ready” query OR “Shooter Ready” Depending on the established cadence and the initiation of the stage by the shooter, both of these commands are used in varying situations. This should be said just before the “Standby” command. Most of the time, a nod from the shooter indicates ready- when a starting line to indicate ready doesn’t exist (and sometimes even if it does).

“Standby” Should always be the last words spoken with a 1-3 second pause before the start of the timer signal (the beep).

“Muzzle up, please move to the Unloading Table” Should be stated at the end of a shooting sequence/stage to guide the shooter. Often the competitor stops thinking. (Adrenaline!)

“Range Clear” This command is given only after the shooter has completed their run, the revolvers are holstered, the long guns are picked up and pointed in a safe direction with the actions open, and the shooter is on the way to the unloading area. It is now safe to gather brass and prepare for the next shooter in line.

“Down Range” Is announced prior to anyone proceeding down range for any reason- including to reset or repair targets. When a “Down Range” command is announced- all participants at both the loading and unloading areas should cease firearm loading/unloading. Best practice is to raise hands in the air as a visual confirmation that no firearm is being handled while someone is downrange. (This applies primarily when the loading tables and/or the unloading tables are oriented facing down range.)



**“Unload and Show Clear”** The command given by the unloading officer when a shooter comes to the unloading area/table. (Applies to all guns taken to the firing line)

**“Gun Clear”** Is appropriate Unloading Officer response as each firearm is successfully inspected at the unloading table/area.

**“Action Open”** The command given by the TO to the shooter at the conclusion of a stage when a competitor has discarded a long gun with the action closed. The TO must witness the shooter opening the action and showing the firearm as empty/clear.

**“Muzzle!”** This command quickly and efficiently warns the shooter that their muzzle is getting close to the 170° limit and should be pointed in a safe direction (back down range).

**“Finger!”** This command is primarily used in Wild Bunch Action Shooting and quickly and efficiently warns the shooter their finger is inside the trigger guard and must immediately remove their finger from inside the trigger guard.

**“Cease Fire!”** or **“STOP!”** The command called out by the TO or any witnessing Range Officer/Match Official at any time an unsafe condition develops. The shooter must stop shooting and stop moving immediately.

\*Willful failure to comply with a Cease Fire or Stop command given by, and while under the control of the TO will result in a Match Disqualification.

## **Range Commands – The Flag System**

On ranges where multiple stages are run in parallel using a common firing line with no separating side berms, *Visual cues* aid in the quick communication of Range Safety statuses between shooting posses.

Flags are often used in conjunction with a horn or whistle to increase notification awareness.

### **Yellow Flag**

Once the “Yellow Flag” command has been given, each stage affected will allow any shooter already engaged in that stage to complete the course of fire. As shooting finishes on each stage, all in-use guns are laid down at the loading and/or unloading areas, and the competitors “stand back.”

Once the firearms are secure, each stage will signal compliance by raising its own yellow flag.

When all affected stages are displaying their yellow flag, the initiating RO can advance down range. When the down range work is completed, an “ALL CLEAR” command will be given, the Yellow flags withdrawn, and normal range operations can resume.

### **Red Flag**

“RED FLAG” means “CEASE FIRE!”

All shooting must IMMEDIATELY stop; all firearms must be laid down or otherwise made safe.

Once the Cease Fire condition is resolved, an “ALL CLEAR” command is given, the Red Flags are withdrawn, and normal range operations are resumed.

\*Any shooter stopped while shooting a stage is given a reshoot.

## **COURSE BREAK TIME**

### **UNIT 4: Range Safety Rules & Conventions**

#### **What is a Convention?**

Conventions refer to *standard range behaviors, rules, and expectations*.

- SASS Safety Conventions are *not negotiable and shall never be overruled by match design or shooting course descriptions*.
- Stage Conventions are standard default rules *unless otherwise directed by stage design/description. (example: Knockdown targets must go down to count, etc.)*

#### **Range Safety Rules**

Everyone is a safety officer; however, it is the ultimate responsibility of the Range Officers to ensure the safety rules are consistently followed.

#### **Enforcing all Safety Rules is not negotiable.**

SASS Rules supersede any Range specific safety rules that do not meet the minimum SASS Safety rules. If the Range rules are more stringent than the SASS rules or differ in disallowing an action that is allowed under SASS rules, the Range rules are to be followed. (Above and beyond set SASS rules)

A Range Officer electing to not penalize a match participant that has not complied with a safety rule has a detrimental effect on the sport as a whole and ultimately results in penalizing all other match participants who did comply.

### **SAFETY CONVENTIONS – PARTICIPANT PERFORMANCE & CONDUCT**

Good sportsmanship best defines the “Spirit of the Game.” Be a good sport. Have fun- SASS events are solely for the safe enjoyment of the participants.

- Interpersonal conflicts will not be tolerated.
- Any shooter, guest, or match official who uses foul language, is disrespectful, offensive, rude, or becomes belligerent or threatening in any manner will be disqualified from the event, and, at the Match Directors discretion, may be required to leave the property.
- Alcoholic beverages are prohibited in the shooting area for all persons; shooters, guests, range officers, and others until all shooting is over for the day and firearms have been stored. \*Site specific range rules must be taken into account. A violation of this rule results in a Match Disqualification penalty.
- No participant may ingest any substance that may affect his or her ability to participate with a maximum state of awareness and in a completely safe manner. This includes prescription and non-prescription drugs that may cause drowsiness or any other physical or mental impairment. A violation results in a Match Disqualification penalty.
- The shooter must obey all range commands given by the RO/TO.
- Safe gun handling is the shooters responsibility.
- Once a shooter is committed to the stage (first round goes down range) the shooter must remain on the stage until it is completed, and the shooter has moved to the unloading area to clear all firearms.

- Firearm and ammunition staging is the sole responsibility of the shooter.
- Understanding the course of fire is the sole responsibility of the shooter.
- All participants must demonstrate rudimentary familiarity and proficiency with the firearms being used.
- All shooters are responsible for knowing the condition of their firearms, their safe operation, and the correct loading and unloading procedures.

## **SAFETY CONVENTIONS – BASIC SAFETY RULES**

**Eye protection is mandatory.**

**Ear protection is highly recommended.**

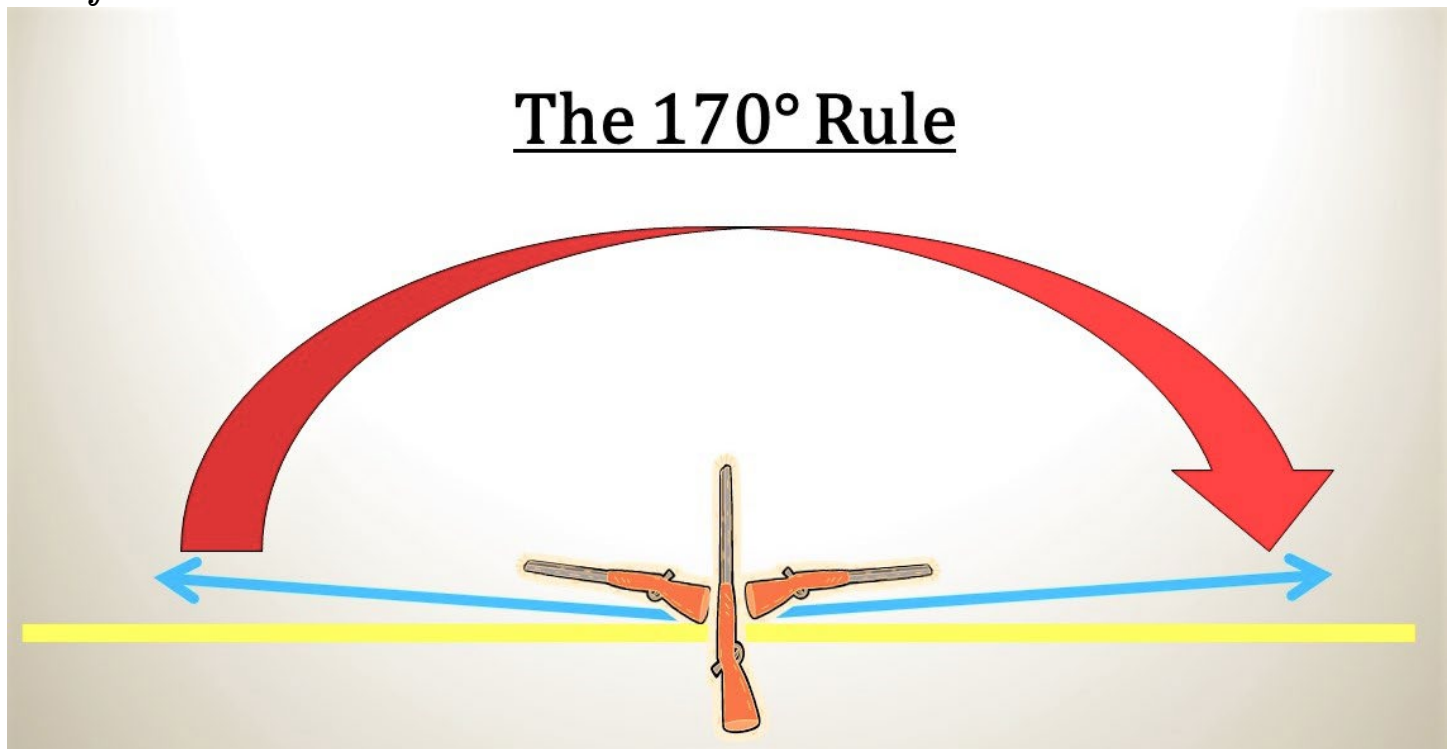
### **The Magnificent Seven – Basic Safety Rules**

These 7 rules must be followed by all shooters, Range Officers, directors, personnel, and anyone in the area at all times.

1. Always treat every firearm as if it is loaded
2. Never let the muzzle of a firearm break the 170° rule
3. Be sure of your target – and what is beyond
4. Keep your finger off the trigger until ready to fire
5. Firearms remain unloaded away from the firing line – loading table to unloading table (Cold range)
6. Treat all firearms with respect
7. Speak up

### **The 170° Rule**

170° Rule means that the muzzle of the firearm must always be straight down range +/- 85° in any direction.



### **Breaking the 170°**

The TO shall make a good faith effort to prevent the shooter from breaking the 170° safety rule by verbal command or physical touch, if necessary.

Think of the 170° rule as a “cone of safety”. The 170° isn’t limited to the left and right of the shooter/firearm. Be aware when raising a long gun too high. This is most commonly seen when shucking shotgun shells out of a double barrel shotgun, watch that the muzzle doesn’t break the 170° above/behind your head.

If a shooter breaks the 170°, an RO/TO shall make an immediate “Cease-Fire” call if any gun breaks the 170° safety rule. This call will result in a Stage DQ – or a Match DQ for the shooter.

Exception\* to the 170°: The shooter must be given the ability to draw and holster firearms from approved/legal holsters and the ability to retrieve and return vertically staged firearms without penalty.

### **SAFETY CONVENTIONS – FIREARM STAGING**

- All staged guns shall have their barrels pointed safely down range.
  - Unless vertical staging is used by stage description and an appropriately SAFE vertical staging area is provided.
- All long guns initially staged on a horizontal surface shall be staged lying flat where at least the rear of the trigger guard is on the staging area.
- All handguns initially staged on a horizontal flat surface must be staged with the entire handgun on the staging surface.

### **SAFETY CONVENTIONS – FIREARM HANDLING**

- The muzzles of all long guns must be maintained in a safe direction (generally “up” and, if on a common firing line, slightly down range) at all times.
- All firearms will remain unloaded except while under the direct observation of a designated person on the firing line or in the designated loading and unloading areas.
- As long as the shooter has contact with the firearm, it is considered as still in their control.
- Any unloaded firearm dropped during a stage will result in a stage disqualification.
- Any loaded firearm dropped anywhere will result in a match disqualification.

A shooter is forbidden from picking up a dropped firearm. The Range Officer will recover the firearm, examine it, clear it (if necessary), return it to the shooter, and assess the appropriate penalty.

### **STAGE CONVENTIONS**

The following stage conventions (stage defaults) should be followed in all SASS matches-unless otherwise directed in the stage descriptions.

- All knockdown shotgun targets may be reengaged until down. (CAS only)
- All knockdown targets (shotgun, rifle, or revolver) must go down to count.
- Any knockdown target still standing once the shooter has engaged the next sequence of the stage will be counted as a miss.

## **SAFETY CONVENTIONS – LOADING & UNLOADING TABLE**

The primary responsibility always rests with the competitor. Shooters should always know the condition of their firearms and be competent in loading and unloading correctly and safely.

All firearms will remain unloaded except while under the direct observation of a designated person on the firing line or in the designated loading and unloading areas.

- Maintain safe muzzle direction during loading and unloading
- Discharging a round at the loading or unloading area results in a Match Disqualification.
- Any competitor's failure to adhere to loading and unloading procedures will result in a Stage Disqualification.
- Dry firing at the loading or unloading table is not allowed and will result in a Stage Disqualification.

### **Loading area/Table**

- Competitors shall not leave the designated loading area with a loaded firearm unless they are called to the stage as the next competitor to begin the stage by the TO or XPO.
- It is generally best to avoid unnecessary conversation with the other shooters at the loading table to allow them to mentally prepare for the course of fire.
- At the loading table, shooters are allowed to make corrections as necessary without penalty.

### **Unloading area/Table**

- All firearms taken to the firing line must be checked and "shown clear" – whether or not they were used in the course of fire. (Exception: in WBAS the 1911 pistol is cleared and holstered on the line by the TO)
- Competitors shall unload each of their firearms in a manner that the Unloading Officer can visually check and confirm that each firearm is empty.
- Long guns should be cycled to verify their magazines are empty.
- Leaving the unloading area without clearing all firearms will result in the penalty being assessed on the stage where the infraction was committed.

## **SAFETY CONVENTIONS - AMMUNITION**

The following are SASS Conventions for Ammunition

- Shooters may not start a stage with ammunition in hand(s) unless otherwise directed by stage design/description
- Any ammunition dropped by a shooter in the course of reloading any firearm during a stage or ejected from any firearm may be retrieved and replaced, or, alternatively, be replaced from the shooters person or other area as allowed by stage description.
- Dropped rounds or rounds placed on a prop may be recovered and used.

\*In both cases above, the recovery of a dropped or safely placed round must be performed carefully to avoid loss of muzzle control. Breaking the 170° safety rule carries a stage DQ.

- Illegally acquired ammunition – any ammunition not carried to the stage and/or staged by the shooter in an approved manner.

- Failure to bring enough ammunition to the line to complete a stage is scored the same as misses for any un-fired rounds.
  - Unfired, ejected rifle rounds may be replaced (reloaded) on the clock during a stage.
- \*Malfunctioning firearms still containing rounds will not warrant penalties (except misses for unfired rounds) so long as the malfunction is *declared*, and the firearm is made safe.

### Uncontrolled Discharge

*Uncontrolled Discharge – the discharge of a firearm that was not controlled by the shooter – either by accidental discharge or by shooting a round in an unsafe manner (e.g., over the berm).*

- A round over the berm
  - \*Site specific match & range rules establish the penalty, up to and possibly including a Match Disqualification.
- Uncontrolled discharges have penalties:
  - Within 5-10 feet from the shooter while on the stage: *Stage Disqualification*
  - Less than 5 feet from the shooter while on the stage, any discharge at the loading or unloading areas, any discharge off the firing line, or any discharge that is deemed unsafe: *Match Disqualification*
  - Any discharge at the loading or unloading areas
  - Any discharge off the firing line
  - Any discharge that is deemed unsafe

Note: Match Directors have the latitude to place props so shooters must negotiate them. In doing so, Match Directors may declare props as expendable (shootable) without penalty.

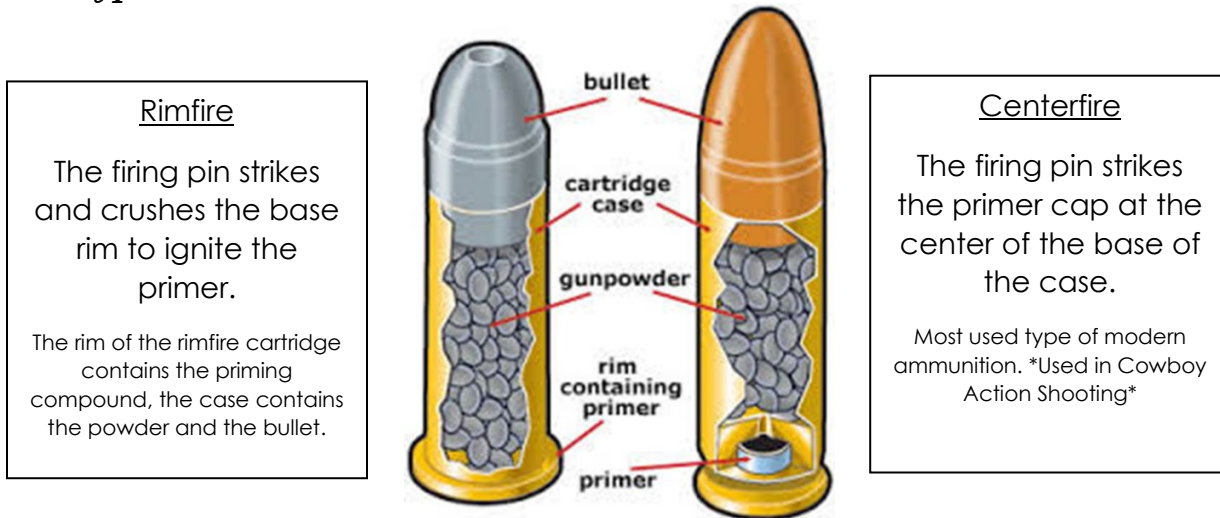
An “uncontrolled discharge” is also known as an “accidental discharge” or an “AD”. These terms are interchangeable and should be interpreted as one in the same in terms of occurrence.

### **COURSE BREAK TIME**

## **UNIT 5: Ammunition Components, Common Stoppages & Malfunctions**

### **Ammunition Basics**

#### ***Two types of Modern Ammunition***



### **Cap & Ball Blackpowder Ammunition**

#### ***Understanding the basics of loading a Percussion revolver***

Due to the common use of Blackpowder (Cap & Ball) percussion firearms in Cowboy Action Shooting, It is important for Range Officers to have a basic understanding of the ammunition and functioning of these firearms.

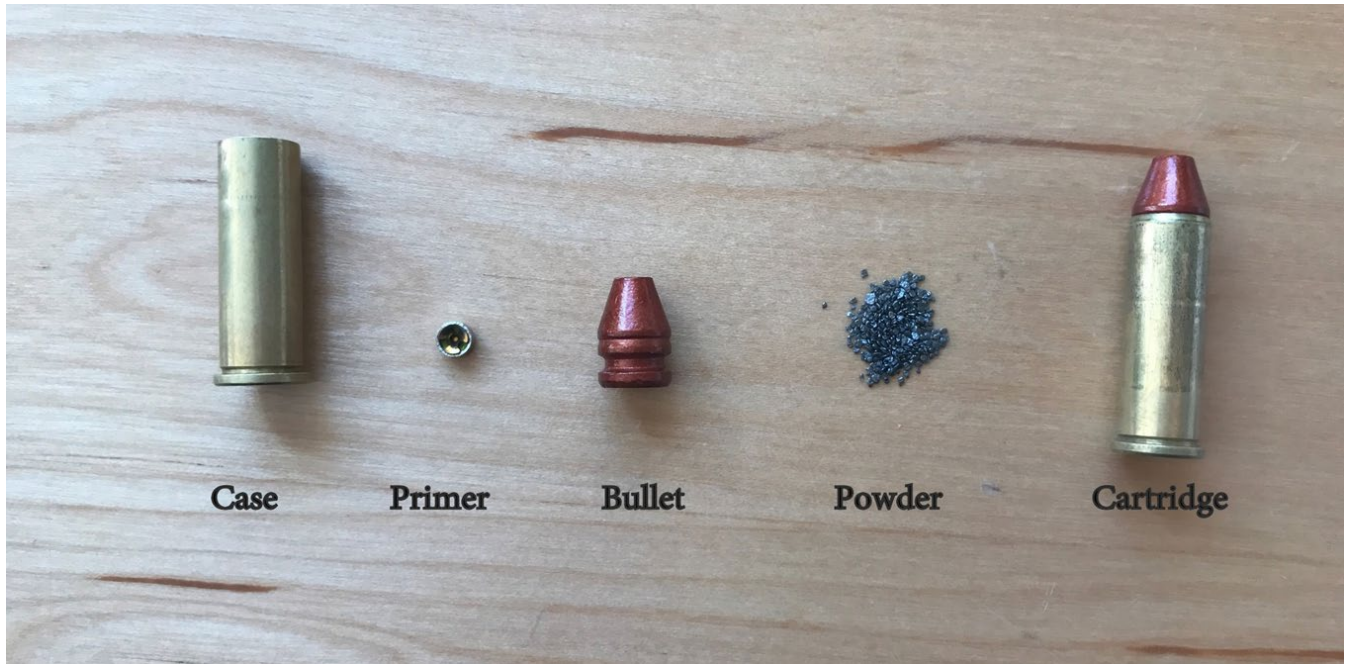
#### **Steps to loading a Percussion Revolver**

1. Step 1: Pour a measured charge (powder) into the chamber
2. Step 2: Place the wad and then the ball over the chamber opening
3. Step 3: Seat the ball using the loading lever
4. Step 4: Repeat with the remaining chambers
5. Step 5: Apply additional grease
6. Step 6: Place a percussion cap on each loaded chamber



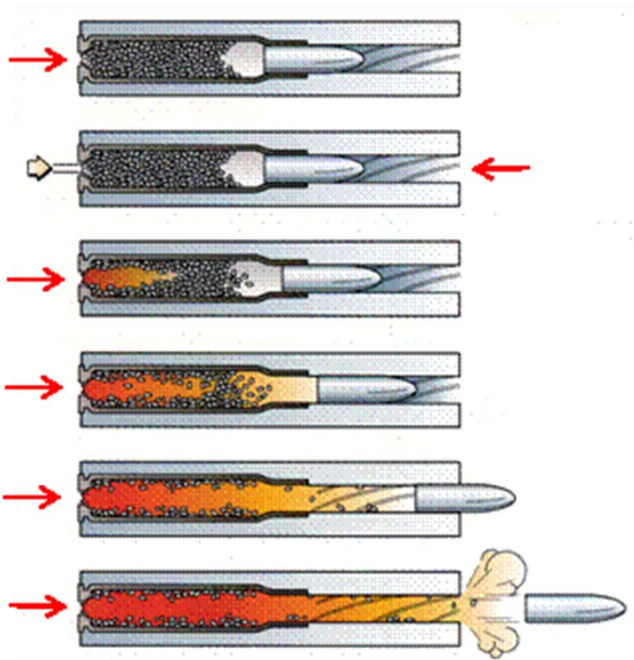
## Cartridge Ammunition

### Basic Components & Function of Ammunition



### Ammunition Firing Sequence

#### Centerfire Ammunition



### CARTRIDGE FIRING SEQUENCE

CARTRIDGE IN CHAMBER

FIRING PIN STRIKES PRIMER OR CASE RIM AND IGNITES THE PRIMING COMPOUND

FLAME GENERATED BY PRIMING COMPOUND IGNITES POWDER CHARGE

POWDER BURNS RAPIDLY, GENERATING A VOLUME OF HOT, HIGH-PRESSURE GAS

GAS PUSHES BULLET THROUGH BORE AT HIGH SPEED

BULLET EXITS MUZZLE, HOT GAS MAKES "BANG"



## COMMON STOPPAGES & MALFUNCTIONS

### Malfunctions

*Malfunction – Failure of a firearm or ammunition to function as designed or to fire satisfactorily.*

Two types of malfunctions:

- Gun malfunction
- Ammunition malfunction

### Firearm Malfunctions

*Note: A gun malfunction is different from a gun stoppage.*

**Gun Stoppage** – *a stoppage is an unintentional interruption in the operation cycle of the gun. Stoppages can typically be cleared quickly, returning the gun back to operational condition.*

**Malfunction** - *Failure of a gun or ammunition to function as designed or to fire satisfactorily.*

Firearm malfunctions require the gun to be repaired by a qualified gunsmith or reasonably competent person to return it to a correctly functioning state.

### Ammunition Malfunctions

*There are four types of ammunition malfunctions we will discuss today.*

- Misfire
- Squib load
- Hangfire
- Chainfire

### Misfire

A misfire is when a cartridge does not fire after the primer has been struck by the firing pin.

Misfires typically do not require any handling. Understanding the occurrence of the misfire is key.

### Squib Load

A squib load is when there is less than normal pressure or bullet velocity after ignition of the cartridge.

- The bullet may or may not exit the barrel
- Squib loads are usually identified by a difference in recoil or noise

### Procedure for handling a squib load ammunition malfunction:

- Stop firing immediately
- Keep the gun pointed down range, in a safe direction, or safely transport to the unloading table
- Unload the gun, make sure the chamber is empty
- Insert a rod down the barrel from the chamber end (if possible) to make sure the bullet is not lodged in the barrel of the firearm

## **Hangfire**

A perceptible delay in the ignition of a cartridge after the primer has been struck by the firing pin. *A Hangfire malfunction is most common with percussion firearms.*

There is no immediate method of differentiating a hangfire from a misfire, except in percussion revolvers the hangfire generally last far shorter than one second.

### **Procedure for handling a possible Hangfire:**

- Keep the gun pointed downrange (in a safe direction)
- Wait at least 30 seconds in case it is a hangfire

## **Chain Fire**

Also known as Cross-firing- references when multiple chambers discharge at the same time. *Chain firing is exclusive to Percussion firearms.*

Chain firing has several causes, most commonly, the powder can get between the ball and the chamber wall and without adequate grease, the flash can travel up and around the ball, into the neighboring chamber- creating a powder flash chain through multiple chambers. The result is the discharge of multiple chambers at the same time.

## **Lead Precautions**

An often-overlooked aspect of shooter safety is exposure to lead.

Lead exposure concerns are not limited to the reloading process. Shooters handle lead ammunition while loading their firearms and may be exposed to lead dust in the air on or near the firing line.

Over time, lead exposure can result in lead levels that are higher than most Doctors recommend.

Simple precautions can help lessen and/or eliminate high lead levels. After shooting, handling ammunition, or reloading- always wash your hands thoroughly- especially before eating. Hand wipes will help at the range where water may be spares, and there are specialized wipes and hand soaps on the market designed to clean lead from the skin.

Due to the risk of overexposure, TO duties should be shared with other qualified shooters to limit exposure.

## **UNIT 6: The Role of the Timer Operator**

The purpose of trained Range Officers is to provide the SASS Shooting sports with competent, firm, and fair officials in all levels of competition and to educate and empower certified Range officers to perform any duty on the posse.

**Timer Operator's:** *SAFELY ASSIST the Shooter through the course of fire.*

Two words are *paramount* in the Range Officer's motto: *SAFELY ASSIST*.

### **What is the Timer Officer/Timer Operator (TO) vs. a Range Officer?**

The Range Officer serving as the Timer Operator (TO) during any course of fire for any competitor, becomes the Range Officer in charge for the Posse & Shooter if he/she is operating the timer.

The Timer Operator (TO) serves as THE Range Officer for the shooter(s) they are timing....  
*The motto, again: ...to SAFELY ASSIST the shooter through the course of fire.*

The term Timer Operator (TO) is utilized most frequently. Accordingly, to avoid confusion, this course will further direct all references utilizing the term Timer Operator (TO).

The TO, during any course of fire, becomes the Range Officer in Charge if he/she is operating the timer. The timer operator (TO) is the lead RO in charge of the firing line during that time.

### **SAFELY ASSIST**

The 2 paramount words in the RO Motto are SAFELY ASSIST.

### **ASSIST.**

Keys to a great ASSIST:

1. Consistent information & communication
2. Assessment of the shooter
3. Shooter inventory
4. Anticipate
5. Attitude
6. Coaching

In the upcoming sections, we will review each of the 6 keys to assisting a shooter.

#### **#1 – Consistent information & communication**

Always give consistent, complete information about the stage and its navigation, and always read provided stage descriptions word for word.

Be consistent in WHAT you say and HOW you say it.

Established cadences help to alleviate misunderstandings and false starts and can also help to calm a shooter's nerves if they are clear on what to expect from their TO.

*Common cadence: (after the shooter has indicated ready)*

*“Shooter Ready.....pause.....Standby.....pause.....beep”*

## **#2 - Assessment of the shooter**

### *Assess the condition of the shooter*

We have all seen (or been) a shooter suffering from a case of nerves. Regardless of the experience level of the shooter, adrenaline is very powerful and can have adverse effects that can pose a danger. Violent shaking, trouble talking, and seeming “lost” about the stage requirements have all been reported.

Some cases warrant gently suggesting the shooter leave the shooting line, sit down, and wait a little longer before shooting the stage.

Additional Assessments of the Shooters condition includes staying alert for any signs of the use of any substance that may affect his or her ability to participate with a maximum state of awareness and in a completely safe manner.

Safety is ALWAYS the #1 priority.

Additional assessments of the shooter’s condition include staying alert for any signs of the use of any substance that may affect his or her ability to participate with a maximum state of awareness and in a completely safe manner.

## **#3 – Shooter Inventory**

Visually inventory each shooter at the line before you start your Range Commands.

Do they have everything they need to complete the course of fire?

- √ Shotgun shells
- √ Eye Protection
- √ Ear Protection
- √ Required firearms
- √ Ammo needed for reloads

## **#4 – Anticipate**

### *Anticipate the shooter’s next move.*

With time and experience, you will be able to anticipate the shooter’s next move. In doing so, you may prevent him or her from acquiring penalties or performing an unsafe act.

## **#5 – Attitude**

### *Attitude is everything.*

The best Range Officers have the best attitude. If you can do your job well and have fun too, then you will find the posse and your fellow shooters will too. Your attitude sets the tone and the mood for the entire match!

### **Attitude**

- √ Be courteous, considerate, and respectful
- √ Treat everyone equally.
- √ Always be firm, but fair
- √ Always give the shooter the benefit of the doubt
- √ Do not be over-zealous and don’t be harshly tough
- √ Be helpful to the competitor
- √ Coach when needed
- √ Keep it simple.
- √ Be positive, encouraging, and HAVE FUN

- ✓ Safety FIRST.
- ✓ Don't be intimidated.
- ✓ Make the call and call them as you see them.
- ✓ Always refer to the SASS Shooters Handbook when stating the rules.
- ✓ Never allow a shooter to badger, abuse, or argue with you or any other match official. Bring this sort of behavior immediately to the Match Director or Range Master.
- ✓ Keep the stage moving. If a problem arises, move it to the side.

## **#6 – Coaching**

### ***What is Coaching?***

Coaching is the most direct way to assist the shooter after the course of fire has begun. The TO should coach only when someone looks like they need it – are they momentarily confused or lost, or if are they attempting to address the wrong target?

It is not your job to “shoot the stage” for the shooter, coaching him or her in every action. Some shooters do not like to be coached at all. New shooters might require more coaching at first.

It is prudent to determine those shooters on the posse who may require a little more coaching and those who prefer no coaching at all.

### **Proper Coaching vs. Improper Coaching**

- Proper coaching is not considered RO Interference and will never be grounds for a reshoot.
- Improper coaching that either impedes the shooters progress or results in a procedural penalty may be grounds for a reshoot.
- Any Procedural penalties are the responsibility of the shooter; an RO/TO who does NOT provide coaching, is not responsible for a shooter's procedural penalties. NOT coaching does not waive any procedural penalties.

## **SAFELY.**

***Safely assisting the shooter through a course of fire means “without incident.”***

- ***Course Design*** – Do not be afraid to refuse to allow your posse to shoot an unsafe stage. Insist the stage be made safe before proceeding.
- ***Stay within Arm's reach*** – In order to stop an unsafe act, the TO must be within arm's length of the shooter. The TO should be positioned behind and off to the strong side of the shooter. Never let the shooter get away from you.
- ***Watch the Gun*** – As a TO, to make exact calls and anticipate the shooter's next move, watch the gun! By looking at the gun, you can identify target engagement, squib loads, warn the shooter if he or she is getting close to breaking the 170°, and stop the shooter if there is a problem.

## **Reshoots/Restarts**

*SASS matches above the club level are “no alibi” matches.*

Once the first round goes down range, the competitor is committed to the stage and must finish the stage to the best of his or her ability.

Reshoots or Restarts are not given for ammunition or firearm malfunctions. However, if there is a range failure (props, timer, RO's) that is *beyond the competitor's control*, a reshoot may be granted.

The competitor starts over clean – carrying only accrued safety penalties forward.

Restarts shall be allowed for a competitor to achieve a “Clean” start, up to the point at which the first round goes down range.

Multiple restarts by the same shooter, that in the judgement of the TO, are seen to be taking advantage will not be entertained or allowed- this behavior is in contradiction of the *spirit of the game*.

No reshoots/restarts will be given after the first shot goes downrange as determined by the TO and Match Director – EXCEPT for:

- Prop or match equipment failure
- A Range Officer impeded the progress of the shooter (RO Interference)
- Timer failure or unrecorded time

Example: An RO stops a shooter from completing a shooting sequence due to a suspected squib load, but the firearm turns out to be clear. The RO has impeded the progress of the shooter and a restart/reshoot is in order. The shooter starts over with no misses or penalties (except safety infractions).

The Match Director has the authority to override an RO assisted MSV penalty for a reshoot.

## **UNIT 7: Timer Operator – Practices**

The TO operates the timer... and so much more!

- The TO should be aware of the skill level of the competitors. Be attentive to new shooters, helping and coaching them through the course of fire, as needed. Always be ready to control the newer shooter.
- The TO also gives seasoned shooters a little more room since they tend to move fast. Don't let them run over you because you're crowding them.
- While the TO should do his/her best to not start a competitor in a faulted position or location, the ultimate responsibility of starting position lies with the shooter. A shooter who starts in a faulted position will be assessed a Procedural penalty.
- The TO watches the shooter – and the shooters guns- for unsafe acts, correct target engagement, and stage procedures.
- The TO should count shots fired, if possible.
- The TO should stay within arm's reach of the shooter at all times through the course of fire.

## **Timer Operator (TO) Duties**

*The Timer Operator is IN CHARGE of the Firing Line.*

- The TO identifies and assigns 3 Spotters.
- The TO does not spot or count misses – but can provide insight if there is a question due to the vantage point of the TO to the shooter.
- The TO immediately announces the stage time to the shooter at the completion of the stage.
- The TO polls the 3 spotters to determine the number of misses and can consider their input regarding any penalties, as well as any personal observations during the stage.
- The TO does not have the authority to overrule the spotters regarding misses but can question spotters as to the location of misses. (The TO is often in the best position to see the direction of the muzzle, which is helpful in determining edge hits.
- The TO calls those numbers to the Score keeper and Competitor in a loud, clear voice.
- Final assessment of penalties (not misses) is made by the TO.

## **Timer Operator – Standard Firing Line Order**

1. TO assigns 3 spotters
2. TO ensures the firing line is ready for the next shooter; targets are reset, etc.
3. The TO calls the next Shooter to the line – Assess the Shooter
4. The TO watches, guiding, if necessary, the gun staging process
5. The TO ensures the shooter is starting in the correct position
6. Upon the ready indication by the Shooter, the TO says: “Shooter ready.....Standby..... beep”
7. At the conclusion of the stage, the TO immediately calls out the time to the shooter
8. The TO directs the Shooter to the unloading area. Upon the shooter’s departure from the line (with all firearms), the TO declares the “All clear,” indicating the line is safe to reset targets, pick brass, etc.
9. The TO polls the Spotters regarding misses
- 10 The TO announces the time and any misses/penalties to the Score Keeper and the shooter
- 11 The TO ensures the firing line is ready for the next shooter; targets are reset, etc...

**AND THE CYCLE CONTINUES**

## **TIMER OPERATIONS**

Although most timers have the same basic functionality, it is important to familiarize yourself with the model of timing device you’ll be using. Ensure you are comfortable with its operation prior to taking on TO duties.

A “Shot Timer” (Timer) records the competitors time electronically by detecting the sound of each shot, together with the time from the start signal. (the “BEEP”)

When the competitor is finished, the timer will show the time from the start signal until the last shot.

- Familiarize yourself with the model of timing device you’ll be using
- Ensure you are comfortable with its operation prior to taking on TO duties
- Make sure the timer has fresh batteries & that the timer is turned ON!

## **TIMER OPERATIONS – BEST PRACTICES**

- Verify that the timer picks up the first and last shots, especially
- Keep your finger(s) off the buttons while shooting is taking place
- Point the mic of the timer in the direction of the shooting to help pick up every shot

## **TO DON'TS**

- Don't stand behind - and hold the timer behind- the shooter
- Don't point the mic of the timer away from the shooting firearm
- Don't impede the shooter. Anticipate (or ask!) the shooter's planned movement through a stage. Don't stand in the way.

## **TO BURNOUT**

As reflected in this course, the Timer Operator carries a great responsibility to SAFELY ASSIST shooters through the course of fire.

Burnout is common. It is critical to identify when you need a break – BEFORE it becomes a problem.

It is imperative to have several folks on a posse to take turns in the TO role to avoid TO burnout.

Commonly, additional shooters can switch out TO duties, allowing everyone a chance to collect themselves and take their turn shooting the stage(s).

## **UNIT 8: Penalty Assessments**

### **Types of Penalties**

- 5-second penalties
- 10-second penalties
- Stage Disqualification (SDQ)
- Match Disqualification (MDQ)
- Failure to Engage / Spirit of the Game

### **5-Second Penalties- MISSES**

A miss is a 5-second penalty. Pistol, Rifle, and Shotgun targets must be engaged with the appropriate type of firearm. A MISS is defined as a failure to hit the appropriate target type using the appropriate type of firearm.

- Each missed target
- Each target hit with an incorrect firearm, either intentionally or by mistake.
- Each target hit with “illegally acquired” ammunition
- Each unfired round (CAS)
- Inadvertently left rounds in a revolver (CAS) are misses – unless the unfired round is under the hammer, then it is a Stage DQ. (CAS)

### **10-second Penalties – Procedural Penalties (& Other)**

Procedural Penalties (P) are any unintentional procedural error caused by “brain fade”, confusion, ignorance, or mistakes. Procedural errors carry a 10 second penalty and cannot exceed one for any given stage. Each of these penalties stand alone and cannot be added one on top of the other.



**\*DOUBLE JEOPARDY: A MISS CANNOT CAUSE A PROCEDURAL.**

**((VIDEO)))** *Credit: Branchwater Jack, SASS #88854, SASS Certified RO Instructor*

**10-second Penalties – Procedural Penalties (& Other)**

- Failure to attempt to fire a firearm
- Failure to attempt a prop or stage maneuver
- Shooting targets in any order other than as required by stage description
- Engaging the stage (firearms, targets, or maneuvers) in an order other than as required by stage description
- Firing any firearm from a position or location other than as required by the stage description
- Use of “illegally acquired” ammunition
- First offense, in the same match, for failure to adhere to the guidelines of the category in which the shooter is competing.

**10-second Penalties – Minor Safety Violation (MSV)**

Actions that result in a MSV Penalty include:

- Leaving empty or live rounds in magazine, action, or carrier of the long gun in which it was loaded
- Leaving an empty in the chamber of a long gun
- Open, empty long guns that slip and fall but do not break the 170° safety rule or sweep anyone
- Cocking a revolver before it reaches 45° down range (CAS)

**\*SEE CAS and WBAS specific penalty definitions in their separate discipline course trainings and shooter handbooks.**

**Stage Disqualification (SDQ) Penalty**

Stage Disqualification (Stage DQ or SDQ): the competitors time and performance on the course of fire is disqualified as a result of the violating action by the shooter.

*For a SDQ penalty when using total time scoring, the shooter receives a score/time of maximum penalty time (five seconds for each target to be engaged on the stage) plus 30 seconds.*

- Any dropped unloaded firearm on the firing line (from the loading table to the unloading table)
- Unsafe firearm handling
- Use of an illegal equipment or outlawed items
- Failure to adhere to loading/unloading procedures

Please refer to the full listing of Stage DQ violations specific for each shooting discipline in their respective Shooters Handbooks.

## **Failure to Engage/Spirit of the Game Violation**

### **(30 second Penalty)**

- Willfully shooting a stage other than the way it was intended to gain a competitive advantage.
- Shooting ammunition that does not meet the power factor/minimum velocity. The penalty is applied for each stage a competitor is checked and their ammunition is found not to meet the power factor or minimum velocity.
- Willfully refusing to try to complete any non-shooting procedure written within the stage instructions (e.g., rope a steer, throw a stick of dynamite).

\*The accumulation of 2 Spirit of the Game Violation/Failure to Engage penalties result in a Match Disqualification.

### **Match Disqualification (MDQ) Penalty**

A MDQ means the shooter puts his/her firearms away and is done shooting for the duration of the match.

- Belligerent attitude or unsportsmanlike conduct
- Willful failure to comply with a "Cease Fire" or "Stop" command given by, and while under the positive control of, the TO
- Shooting under the influence of alcohol, prescription drugs, or any substance or medication that may impair the shooters physical or mental abilities
- Shooting illegal ammunition
- Dropping a loaded firearm
- Any discharge that hits the ground or non-expendable stage prop less than 5 feet from the shooter
- Any discharge at the loading or unloading areas
- Any discharge that is deemed unsafe
- Sweeping anyone with a loaded firearm
- Third offense, in the same match, for failure to adhere to the guidelines of the category in which the shooter is competing.
- Interpersonal conflicts

## **QUESTION & ANSWER PERIOD – EXAM**

It is test time!

SASS Range Operations Basic Safety Course

EXAM

Date: \_\_\_\_\_

Name/Alias: \_\_\_\_\_ SASS # \_\_\_\_\_

Instructor Alias(es): \_\_\_\_\_

Please circle your answer to each question. 80% (24/30) is required to pass.

1. The purpose of Range Operations training is:
  - a. To provide a consistent set of rules
  - b. To ensure a safe environment
  - c. Both a and b are correct
2. Who is considered a safety officer?
  - a. The TO
  - b. The Spotters
  - c. The Match Director
  - d. Everyone
3. A new shooter under the supervision of an inexperienced TO makes 3 procedural errors in one stage. The correct penalty in this situation is:
  - a. 10 seconds
  - b. 30 seconds
  - c. A Stage DQ
4. What is the motto and chief purpose of the Range Officer / Timer Operator?
  - a. To coach the shooter through the course of fire
  - b. To safely assist the shooter through the course of fire
  - c. To stand back and stay out of the shooters way during the course of fire
5. The TO should attempt to:
  - a. Not allow the shooter to start in a faulted position
  - b. Assess the shooter's emotional state and level of experience
  - c. Both a and b are correct
6. Proper coaching is not considered RO interference and will never be grounds for a reshoot.
  - a. True
  - b. False
7. If a squib is detected during the shooting string, the TO should:
  - a. Stop the shooter from firing the next round
  - b. Allow the shooter to continue the stage
  - c. Clear the firearm while the shooter waits, then have the shooter continue

8. A reshoot may be granted if:
  - a. There is a prop failure that prevented the shooter from continuing
  - b. The TO impeded the progress of the shooter
  - c. The timer didn't record the time
  - d. All of the above
9. SASS Range Safety Conventions are:
  - a. Standard range behaviors, rules, and expectations
  - b. Not negotiable
  - c. Can be overruled by match design
  - d. Both a and b
10. When the TO/RO calls a "Cease Fire":
  - a. Shooters at the loading table must stop and step away from the table
  - b. The shooter must stop shooting and moving immediately
  - c. Shooters at the unloading table must stop and step away from the table
11. Final assessment of penalties on a stage is made by the:
  - a. Match Director
  - b. Timer Operator
  - c. Score keeper
12. Spotters are:
  - a. TO Assistants
  - b. Safety officers
  - c. Responsible for counting shots and misses
  - d. All of the above
13. How many procedural penalties can a shooter receive per stage?
  - a. One
  - b. Two
  - c. Three
  - d. One per gun
14. 10-second procedural penalties are assessed in which of the following situations?
  - a. Failure to attempt to fire a firearm
  - b. Firing any firearm from a position other than required by the stage description
  - c. Shooting targets out of the order specified in the stage directions
  - d. Using illegally acquired ammunition
  - e. All of the above

15. A shooter may be assessed a miss and a procedural in the same stage if he/she:
- Misses a rifle target and shoots the rifle out of the order specified
  - Shoots the pistol targets out of order
  - Uses illegally acquired ammunition in the rifle
  - Both A & C
16. The Timer Operator should:
- Watch the firearm
  - Count misses
  - Watch the targets
17. The greatest resource a SASS competitor has is:
- YouTube
  - The SASS Shooter's Handbook
  - Yer shootin' pards
  - Facebook
18. The reason the TO watches the gun is:
- To identify target engagement
  - To identify squib loads
  - To warn the shooter of the 170°
  - All of the above
19. A shooter who starts in a faulted position will be assessed a Procedural penalty.
- True
  - False
20. A rifle or pistol round fired over the berm carries a penalty of:
- A Stage DQ
  - A Match DQ
  - Individual ranges determine the penalty for this situation
21. An uncontrolled discharge will result in a Match DQ if it strikes the ground or prop within:
- 20 feet of the shooter
  - 5 feet of the shooter
  - 10 feet of the shooter
22. Ammunition dropped during the course of fire:
- Is considered a dead round
  - May be safely retrieved at any time by the shooter
  - Both a and b are correct
23. In which case would a shooter receive a 5 second penalty?
- Shooting a rifle target with a pistol
  - Dropping a loaded firearm
  - Breaking the 170°
  - None of the above

24. At the loading table, you should always:
- Ask for advice from other shooters on how to shoot the upcoming stage
  - Sing the song of your people
  - Respect others by keeping quiet, allowing your fellow shooters to focus on loading and preparing for the upcoming stage
25. Spotters should:
- Count misses
  - Count shots fired
  - Both A & B
26. You are a spotter. A pesky wasp swoops in and divebombs your face, causing you to flail your arms and attention to survival. As a result, you miss the shooter's rifle string. At the end, your fellow spotters are reporting one miss. You should:
- Put a finger up too, call the miss your fellow spotters saw since you were distracted
  - Call the shooter clean (no misses) since you didn't actually see the shooting string
27. Which of the following is key to a great "ASSIST"?
- Assess the shooter
  - Coach the shooter
  - Give a hug for good luck
  - Both a and b
28. The use of an illegal firearm carries a penalty of:
- 10 second safety penalty
  - Stage DQ
  - Match DQ
29. Reshoots are awarded for ammunition or firearm malfunctions.
- True
  - False
30. A TO who does NOT provide coaching is NOT responsible for a shooter's procedural penalties.
- True
  - False

## **EXAM REVIEW**

**Congratulations, Course Complete!**

**Thank You for taking the SASS Range Operations Basic Safety Course.**