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MATCH AND STAGE DESIGN

The SASS Match Director’s Guide is designed to provide guidance in the production and execution of a responsible and safe Cowboy Action Shooting Match. The guide draws on many years of experience in stage design and safety procedures and stresses the elimination of stage design pitfalls.

A Match Director is an individual or group of individuals appointed by a club and given the task of running the match. Match Directors should be knowledgeable of all aspects necessary to design a fun, safe match and be able to enforce the rules and regulations according to the SASS Shooter’s Handbook.

Responsibilities of a Match Director

Be trained in all areas of:

- Stage Design
- Safety
- Equipment
- Range Officer Activities and Duties
- Arbitration
- SASS Rules and Policies

Safety

Range safety shall be a high priority to the entire range staff. When setting up the range, pay careful attention to bullet impact areas. An inspection of any berms or impact areas shall identify any potential weaknesses or areas to avoid in the backstops. Watch for rocks or other debris that might cause a bullet to ricochet in an undesirable direction. Also, give some thought to the angles of the targets that might create lead splatter somewhere other than into the ground directly beneath the target.

All props shall also be inspected for potential hazards. Once the buzzer sounds, most shooters aren’t very concerned with treating a prop gently. Strong, sturdy props are vital to prevent malfunctions during an event. Be prepared to provide steps, platforms, handrails, and anything else needed as assistance for a wide variety of shooters to complete the event. Pay especially close attention to situations where the shooter must get in and out of or climb on or off of any props.

Accidents can and will happen. It is the responsibility of the event staff to minimize the opportunity for such occurrences and be prepared to handle them without creating havoc when they happen.

Stage Design

Much has changed during the past ten years regarding stage design. Stage Conventions have been introduced so stage writers need not provide redundant shooter instructions. For example, “make the shotgun safe” provides no additional information to the shooter that is not already covered in the Conventions. On the other hand, if the shooter will next go down range and it’s important the shotgun be disposed of in a particular manner (e.g., restage shotgun vertically in the adjacent corner of the building), then, by all means, add the verbiage and be specific. Additionally, there has been a movement in the past several years to eliminate as many procedural penalties as possible. Highly choreographed stages are prime candidates for procedural penalties. Define the shooting positions and the shooting problem the competitor must negotiate at each position … and KEEP IT SIMPLE. This is not a memory contest, it’s a shooting competition! The rifle and revolver sequences should normally be the same. The order the firearms are used to work the stage scenario can often be unstated and left to the shooter to work out. Allow stages to be shot ambidextrously (left to right or right to left). If the stage designer wants the shooter to start at a particular position, then, by all means, say so. Yes, there are often many ways to shoot a stage … and some ways are better than others. When possible, let the shooter decide how he/she wishes to engage the targets. See the sample stages in the Appendix for examples of recent END of TRAIL stages.
Tools

Microsoft PowerPoint is a great tool for documenting stage scenarios. Integrating verbal descriptions and graphics is easy and greatly expands your ability to create a complete picture for the competitors. A standard page set-up is a great reminder of the minimum requirements for every stage description. Here’s a few suggestions:

- Somewhere in the field, show the ammo requirements in the sequence used. Example: 10 revolver, 4+ shotgun, 10 rifle.
- Create icons of all targets, tables, and props you use at your range.
- Using color in your graphics can be effective in helping to get your message across.

Do’s and Don’ts

Starting and Stopping

1. Detail exactly how the shooter will start the stage: where the hands, guns, and props are to be located. Go to the extreme in detailing how a shooter will start leave nothing to interpretation. “Relaxing in a chair” means exactly that … not on the edge, “ready to go.” The SASS default starting position can also be specified.

2. If verbal cue’s or prop manipulation is required to begin a stage, have this activity take place off the clock (prior to the timer being started).

3. Always end the shooting string with a shotgun or revolver, so the time can reliably be recorded. No main stage scenario should ever be designed to end with a rifle.

Movement

1. Never have the shooter move with a live round under a cocked hammer. Once a live round is placed under the hammer of a revolver, the round must be shot. If this causes the revolver to be shot out of sequence or in the wrong position, the shooter will be awarded a single procedural penalty with hits counted in the usual manner. If the target is not available from the shooter’s position, or the target angles are such that they may cause a safety issue, the shooter can discharge the round into the dirt and then move (with hammer down on the spent round) to the correct position, shoot the revolver dry, and then reload one round to engage the last target in that string. If the revolver was shot out of sequence, it can be staged with the hammer down on the empty cartridge, retrieved at the appropriate time, and shot as described above. Shotguns and rifles may be opened and rounds removed or replaced without penalty.

A Gunfighter may not holster pistols until all rounds are expended unless the pistols were drawn (but not cocked) at the wrong time.

2. Drawing pistols on the move is an acceptable procedure although some shooters and clubs do not like it. It is better to stop the shooter from holstering or drawing on the move by requiring the shooter to carry a prop (money bag, other long guns, or something that uses both hands) to the next shooting position prior to using the next gun rather than giving the shooter a penalty for doing something that is an accepted procedure. Make sure the intent of occupying both of the shooter’s hands is clearly understood. Don’t try to write an exercise into a stage that might cause discretionary calls or are simply designed to trip up a shooter. Remember, “fun” is the idea and a “hard ass” is not in the spirit of the game.

3. Moving parallel to the firing line can create pitfalls for shooters. It is very easy for a shooter to break the 170º safety rule moving parallel to the firing line. It is better to arrange the stage to be moving forward, but with common firing lines this is practically impossible. If moving parallel to the firing line is necessary, it is best to have all long guns staged at the appropriate shooting positions and not in the path of the moving shooter (e.g., stage the long guns
horizontally on a table or shelf rather than vertically on the boardwalk).

4. Do not move up/down or over/under props, stairs, or obstacles with anything in the shooter’s hands. All folks will not be able to negotiate props in the same manner. It is a good idea to leave the shooter’s hands free of guns and ammunition to grab onto a handrail or other means of assistance, if necessary.

5. Design a flow from left to right, right to left or up range to down range. Shooters should not move back and forth or from down range to up range (toward the crowd).

6. Whenever possible, design the stage “ambidextrous” – that is allow movement right to left or left to right depending upon whether the shooter is left-handed or right-handed.

Props

1. If you’re using a prop with windows/door openings or such, and you want to have movement, stage the guns at those positions in such a way as to avoid causing a trip hazard for the shooter or the timer.

2. If long guns are staged against the prop, ensure they do not break the 170º safety rule. **Avoid staging the guns leaning against the prop on the down range side.**

3. Design your props to be stable, and ensure if guns are to be staged, reliable gun holders, or placement location is incorporated. Pre-located holsters, straw bales, and tables work better than wood peg type gun holders. At window and door openings most inexperienced shooters will tend to lean on the prop to steady themselves … make sure the prop will support their weight. Note where brass is likely to fall. Avoid those conditions where the brass will be difficult to reach and increase recovery time or where brass will fall in the path of the shooter on his or her way to another shooting position.

4. Always have extra supplies of expendable prop media at the stages where they are used. Keep spare targets where they are readily available in the event of failure, and make sure someone knows where they are located and/or how to access them. Avoid special mechanical targets, where only one is available. If it can break, it will.

5. If props such as aprons, overalls, and the like are required, make sure there are several sets available, so the next shooter is fully prepared to engage the stage as soon as the prior shooter is finished, and this shooter leaves the loading table.

Time Balance

1. When reviewing the stages for time balance (stages should all take about the same time for the average shooter to complete) consider set-up time between shooters. If pre-staging guns or incidental prop media is used (e.g., re-setting clay birds, manual target setting down range, bows/arrows, aprons/hats, shot glasses/bottles, playing cards), include that time in the total elapsed time estimate. Twenty-five to thirty seconds per stage for resetting is a good average for large matches.

2. Be familiar with the layout of your range. Calculate travel time between stages and consider the terrain (hills, bridges, and other bottlenecks) that may impede the shooters between stages, and schedule accordingly. For example, if the range is large or there are multiple “natural” shooting areas (e.g., a set of “upper” shooting bays and a set of “lower” bays), establish a shooting schedule that allows all the stages in one area to be shot before moving to another area. Similarly, for large shooting facilities, don’t schedule the shooters for bay “1” immediately after competing on bay “12.” Set the schedule for an “off stage.” There is never any reason a competitor should have to hustle from one end of the range to the other to accommodate posse shooting schedules.
Consider rotating shooters through stages 1–6 and stages 7–12 … or for large three-day matches, 1–4, 5–8, and 9–12. When the shooting schedule demands several stages be shot back to back, the competitors should never have to move very far between stages.

**Targets**

1. Regarding target size and placement, the bigger and closer the targets, the better. Shotgun knockdowns leave no doubt and are undisputed. All pistol and rifle knockdowns should be pre-set so something less than a factory 158 grain .38 Special round will trip it. Adding a heavy knockdown pistol target to defeat the gamesman usually will not work, so don’t do it. SASS target guidelines are clear, and provide excellent guidelines for minimum sizes and placement.

2. Design stages that promote action and quicker (rather than slower) target engagement. Smaller targets of reasonable size mixed with larger targets (set at the appropriate minimum size/maximum distance requirements) can be used to challenge the shooters.

3. Don’t “choreograph” the stage with complex target sequences. Stay away from complex target engagement sequences. Basic sweeps from left or right, single, double, or triple taps, a “Nevada Sweep” (left, center, right, center, left, or the opposite) orders are acceptable. Target order consistency within a stage will ease procedural and spotting problems. Varying target order from stage to stage is acceptable, will add to the personality of each stage, and still demands the shooter pay attention and think about what he/she is doing.

**General Guidelines**

1. Avoid designing a stage that brings “luck of the draw” into the outcome. Rolling the dice, cutting the cards, spinning the wheel are all excellent means of providing a more interesting scenario, but should not attach a particular benefit for one shooter over another by the outcome. For example, cutting the cards to determine which gun is to be shot first is acceptable while cutting the cards to determine the number of shots to be fired is not.

2. Design your stages for ALL SASS categories. Don’t forget the Frontiersman (reloads), Frontier Cartridge (excessive [over 6 rounds/stage] shotgun usage), or Junior categories (tall props).

3. Do not design stages that require shooters to perform out of the ordinary tasks such as moving a heavy object or extraordinary athletic feats. The shooting skill of the competitor should be the deciding factor, not their overall athletic ability. In staging long guns, give the shooter a substantial place to stage the gun. Tables or hay bales are better than leaning against buildings. If using pegs or blocks, the design should accommodate varied lengths of long guns, the shortest being a double barrel coach gun with the action open. Make sure the long guns lean down range.

4. Shotgun knockdowns are encouraged for good reason. Calls on shotgun hits can be speculative at times, with the “golden BB” rule too often used. Re-settable targets of some kind that go down with a good hit leave no doubt and are undisputed. Allowing shooters to “shoot until the shotgun popper is down” rather than taking a miss is in the “Spirit of the Game.” The penalty then becomes the additional time it takes to bring the target down rather than a five-second-miss penalty.

5. Designs that offer a small bonus (say 2-5 seconds) for a bird hit or a small target, and no penalty for a miss are viewed more favorably by competitors than designs that are scored as a miss and no bonus. (Make up targets are an excellent way to allow the...
7. The responsibility of the Timer Operator (TO) is to watch the shooter at all times, ensuring safety on the line. Do not design stages that could possibly require a TO to become a target spotter.

8. Be careful to avoid designs that take shooters to the edge of safe firearm handling, promoting the chances of awarding these shooters a penalty or DQ for something that you (the designer) could have eliminated with a little more thought. Be careful of designs that find shooters operating close to or on top of the 170º safety rule.

9. Do not design a stage that requires the shooters engage from a prone position or other unnatural shooting position. Not only is it uncomfortable for many shooters, it can be immodest for ladies with hoop skirts, and darn near impossible for older or heavier people, especially if they have to get up to complete the shooting sequence. Getting off a horse may be doable (but time consuming) under the clock, but getting on under the clock is a definite “no-no.”

10. Pistol or rifle reloading should not be used in big matches. The time for a one shot reload can vary from 3 to 15 seconds per shooter.

11. It is recommended stages be designed to contain no more than 10 rifle, 10 pistol, and 4 to 6 (only) shotgun rounds per engagement. Designing a match that is well-rounded in terms of round expenditure and firearm use is advised.

12. Make the match interesting for as many competitors as possible. I

In Summary

The bottom line for stage design is keep it safe, interesting, have some action, but not strenuous or athletic. A good stage is a balance of action and shooting, with the action well within the range of all shooting categories. Design stages with the average shooter in mind – the top shooters will be competing at another level, so don’t try to design the perfect stage that makes the average shooter equal to the legends of the game. It takes greater skill to design a simple, challenging stage than a complicated one. Complicated and highly “choreographed” scenarios are not fun for most average shooters, and being complicated can lead to unsafe situations for some. Most of us are just average folks, so never turn your stages into an intelligence test – you shouldn’t have to have a photographic memory to enjoy COWBOY ACTION SHOOTING™. And, after all, that’s what we’re here for – to be safe and have a good time.

Targets

Things to Consider

All targets to be used should be of a safe design and capable of handling lead bullets for a long time. Inspect all targets for deformation, such as cupping or craters. Never use targets that could possibly cause ricochet problems. Targets generally don’t last forever. Over a period of time, targets will become cratered or dimpled due to the target material, heavy loads, or just the sheer number of rounds placed on them. Softer metals will tend to bend or cup in the center over time. Most targets have two useable sides. Try reversing the sides from match to match to prolong the use period.

Materials

Targets are one of the most costly items a club will encounter. There are several target materials that are available from mild steel to armored plate. These materials can get expensive, so give some thought to how much you can afford. But remember, the life of the target is usually proportional to the price. For larger matches, steel targets are most efficient due to the lack of necessary re-set-up time. The use of clay shotgun targets, paper targets, or any other “disposable” type of target should be discouraged for large matches. They are certainly useful and fun at club matches and the like.
Target Stands
Always use target stands or hangers that cause the bottom of the targets to hang vertically or with the bottom slanted down range. This causes the bullets to impact into the ground close to the base of the stand or hanger. Some target stands require the use of a bolt to attach to the stand. The bolt head can become a cause of ricochet or splatter. The use of springs or spacers on the bolts between the target and the stand help absorb bullet impact and direct lead splatter to the ground. The stands should also be capable of handling fairly heavy loads without falling or turning to an unsafe angle.

Target Angles
Be cautious of angles at which targets are placed, again due to ricochet or splatter. Lead tends to splatter parallel to the target face if the target face is clean and straight. Never place a target at an angle where its edge points toward the spectators, loading, or unloading areas. It is best to always face the targets parallel to the firing line. Placing targets close to the sides and ends of bermed areas will also reduce the distance lead splatter can travel. Targets should be placed near the back berm, if there is one. Targets too far forward can allow misses to ricochet over the back berm.

Be prepared
It is good practice to have extra targets available on each stage just in case one breaks or malfunctions unexpectedly. This is especially true for large matches where a broken target can create a huge backup of shooters.

Recommended Sizes & Distances
Listed below are the minimum target size and distance standards. Designers are encouraged to use larger targets at the distances indicated whenever possible for main stage scenarios. Measurements of targets do not include appendages and must offer continuous steel for compliance. Special care should be taken when using paper targets, stop plates, fixed or flying clay birds, and other non-conforming targets due to the additional time necessary to reset them after each shooter.

Revolver targets
- Minimum distance is 7 yards; maximum distance is 10 yards.
- Minimum pistol target size is 16” x 16”.

Shotgun targets
- Minimum distance is 8 yards; maximum distance is 16 yards.
- Minimum shotgun target size for 8 yards is 8” x 8” (MGM size poppers allowable)
- Minimum shotgun target size for over 8 yards is 16” x 16” average.

Rifle targets
- Minimum distance is 13 yards; maximum distance is 50 yards.
- Minimum rifle target size is 16” x 16”.

The sizes and distances listed above are recommendations. Targets can and will send lead splash and “bounce back” toward the firing line. This is the reason SASS insists on liability waivers, glasses, and (highly recommended) earing protection. Steel target manufacturers all recommend steel targets be placed 8 – 20 yards from the firing line … and most recommend 10 yards. When setting targets closer than the recommended distances, extreme caution must be used. Targets must have smooth faces, hang at an angle that deflects bullets into the dirt, and be set at a height tall enough that a miss cannot impact the dirt within 10’. Larger targets can give the illusion of being closer and are recommended as well.

Please note … it is a Stage DQ if a round hits the dirt or a prop within 10 feet of the shooter. Don’t set your shooters up for a DQ. Targets too close and too low can be grounds for a SDQ if the shot is pulled low off the target. Similarly, a target on top of the back berm can lead to a MDQ if the target is missed!
Appendix

Stage Descriptions
STAGE 7, BAY 7
10 PISTOL, 10 RIFLE, 6+ SHOTGUN

From EoT 2015

STAGING: One long gun staged at Position 2, the other long gun staged at Position 4. Pistols holstered.

STARTING POSITION: Start standing at any position with hands on hat. When ready say "Let me go to Hell by my own route!".

PROCEDURE: At buzzer, guns may be shot in any order, so long as the rifle is not last. Shooter must engage the targets from at least four of the five shooting positions.

SHOTGUN: May engage targets from one or two shooting positions (make ups can be shot from any position). At least two targets must be engaged from any position used.

RIFLE: With the first five rounds, engage each target at least once, with the second five rounds, repeat the instructions.

PISTOLS: May use five rounds at each of two positions, or ten rounds from one position. Targets are engaged using the same instructions as the rifle. Pistols may be split. Pistols may only be shot from Positions 1, 3, or 5.
STAGE 4, BAY 4
10 PISTOL, 10 RIFLE, 4+ SHOTGUN

STAGING: Shotgun on left shelf, pistols holstered.
STARTING POSITION: At right shelf, rifle in hand. Shooter hollers, “Let’s go, Bo!”
PROCEDURE: At buzzer from right shelf, engage knock down rifle targets with one round each
and stationary rifle target with two rounds in any order. From left shelf with pistols
engage the pistol targets using same instructions as rifle. Shoot the four shotgun targets.
NOTE: Any pistol or rifle knockdown target left standing can be made up with shotgun on the
stationary target.

Since Pa always said, “Mind your Ma”, I did what Ma said. I rode. I figured there was a passel of
Fulfords right on my tail, so I didn’t waste time on the trail. Bo was a dern good horse and would go
sun up to sun down. We passed right thru St. Joe and hit the wagon trail west. We were moving
along right smart, when I heard gunfire. I gave Bo the spurs and topped a ridge. Just below a
wagon train was being attacked by Indians. We can’t have that, so I pulled my long gun and headed
down to lend a hand. LET’S GO, BO!
SASS® Match Directors Guide

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