The future of our sport

The CPSA Clay Target Shooter's Handbook

The Official Guide

Compiled and Edited

by

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Introduction

Clay target shooting, in common with other pastimes, has a unique culture and language. Shooters seem to talk in what sounds like a secret code - often forgetting that newcomers are not conversant with the terminology. Books and magazines provide useful information, but such statements as “The Sear should engage snugly in the Bent” with no explanation of what a sear or bent is, may confuse rather than educate the newcomer. Their early months will be full of questions, like: what are Sporting, Trap, Trench, DTL, ABT, Skeet; English, Olympic, and American disciplines; what are the differences between them and how does one participate? There are many books and videos about shooting, but it is rare to find a single publication that answers the majority of questions. In particular, inexperienced shooters can be discouraged from trying a new discipline by unfamiliarity and the fear of embarrassment if they get it wrong. Experienced shooters are usually very friendly and helpful, but often don’t appreciate that it would be helpful to explain procedures before, rather than after a mistake has been made. Not knowing the difference between a double and a report pair is apt to make you miss the second target!

When I started shooting, nobody suggested that I should take some lessons from a CPSA qualified Coach; therefore, I found myself bumbling around trying to figure out how to shoot the various clay target disciplines as I encountered them. My own experience began with English Sporting; I then became interested in shooting Down The Line (DTL). Slowly my scores improved until I was shooting in the low 20’s (out of 25). At this point some of my friends invited me to shoot Automatic Ball Trap; “Its just like DTL” they said, “just a bit faster”. I spent the next 30 minutes in total confusion being shunted from stand to stand, shooting one target on each, when I’d become used to shooting five before moving, also someone kept blowing a horn at me when I missed! Somehow, I managed to hit seventeen of these fast, random targets but I don’t know how. Oh yes, and why was there a sixth man without a stand?

By contrast with their enigmatic Trap cousins, after a miss, my Sporting acquaintances, couldn’t wait to tell me what I’d done wrong; those behind me, waiting to shoot, would assail me with different ways of standing, swinging, applying lead and what chokes and cartridges to use. The majority of them didn’t even notice that I’m left handed, so after taking their advice, I’d find out later that I was doing it all wrong!

As experience grows you may come to the realisation, as I did, that some of this unsolicited advice was very good, but at the time, it was too much and too confusing to make use of. I now wish that I had started shooting under the guidance of a CPSA Instructor or Coach.

Many shooters concentrate on a single discipline, rarely participating in others, and even experienced shooters can find more than twenty clay target disciplines bewildering. It is common for shooters to be deterred from trying a new discipline, by unfamiliarity and a lack of introductory information.

Newcomers to the sport often look at a new discipline, especially the non affiliated ones, then decide not to try it because they are not sure what it’s all about - which is a tremendous shame - trying a new discipline is both challenging and great fun.

The best person to help a beginner to get started and the more experienced to improve is a CPSA Instructor or Coach. New and improving shooters face a steep learning curve; the primary purpose of The CPSA Clay Target Shooter’s Handbook is to answer your questions and to introduce you to the rules and procedures for the numerous clay target disciplines. We hope you find it useful.

C. Stewart Meinert - Editor

A Brief History of the CPSA

On April 27th 1928, Nobel Industries called a meeting at the Holborn Stadium of "persons interested in clay pigeon shooting". Eleven persons attended and Charles Lucas was voted in as chairman. A general discussion took place about forming a body to control clay pigeon shooting. It was generally agreed that such an organisation was necessary.

Following the ban on live pigeon shooting and the impracticality of shooting glass target balls (the forerunner of the modern clay target), "clay pigeon" shooting has, since its emergence in the 1880's, become popular both as a means of teaching shotgun skills in shooting schools and as a sport in its own right. An organisation called The British Trap Shooting Association had been formed and folded, and the first British Open (clay pigeon) Sporting Championship had been held in 1925.

At the meeting, it was intimated that Nobel Industries (manufacturers of Eley cartridges) would provide a donation to meet the immediate expenses of a new association and it was decided that a small committee be formed. None of the members of the committee who would bring the new organisation into being were to be connected with either the gun or ammunition manufacturing trade. The working title for the new organisation was the Amateur United Clay Pigeon Association of Great Britain and Ireland. The minutes of the first meeting were signed on May 4th 1928 and on July 31st that year the committee decided that the initial title was to long and clumsy and settled on the Clay Pigeon Shooting Association.

For some years, CPSA staff were on the Eley payroll via its parent company. The person that became the first director, Peter Page, joined Eley just before the Second World War to work with Charles Coles at their game advisory office in Millbank. Peter was given the responsibility of looking after "clay pigeon work" while the association treasurer was Harry Rogers who worked from home in Edgeware.

In 1952, the association was given its own office at the Edmonton shot tower, where it remained until 1973, when dedicated premises were acquired at Buckhurst Hill, Essex. It was at this point that Eley severed its ties and the CPSA was to stand on its own feet.

By then Peter Page had been joined by Michael Alldis and Secretary Betty Elms, forming the nucleus of a team, which efficiently and enthusiastically grew the association from its small beginnings into the thriving organisation that it is today.

Peter Page retired in 1985 after nearly fifty years of loyal service, Michael Alldis moved on to start his own shooting school and Keith Murray was appointed the new director. During the mid 80's, the sport saw unprecedented growth and the CPSA launched Pull! magazine in 1988. This wasn't the Associations first magazine – several issues of CPS News were published in the early 50's.

Keith Murray in turn moved on in 1992 and a restructured CPSA saw Brian Carter take over as director for eighteen months, until Emilio Orduna took over in 1994. The decision was taken to sell the premises at Buckhurst Hill to realise its hugely appreciated value and move to offices at Corby, Northants. The Chairman was now Geoff Taylor who worked closely with Emilio Orduna, who was joined by technical officer Phil Boakes and together they updated all the office systems.

The final major change, that brings us up to date, was the move to the current CPSA HQ in 2000 when the association acquired premises at Bisley Camp. The refurbished premises, christened Edmonton House, provide ample space for CPSA staff to handle the needs of an ever-growing membership; facilities include a modern IT department to handle the regular updating of members classification. Phil Boakes, who had by then become deputy director, moved into the director's chair on the retirement of Emilio Orduna in May 2002 - and after ten fruitful years, Geoff Taylor stepped down in November 2002 to be replaced by Tony Brazier. Tony Brazier resigned early in 2005, and his position was filled by the Vice-Chairman (Tony Heeks) who is the acting Chairman until the 2006 AGM.

Internationally, Clay Target Shooting has collected many medals in Olympic and Commonwealth games and at other European and International competitions. In May 2004, the CPSA began a three-year project to upgrade and expand its coaching scheme in order to address the challenges presented by the growing interest in the sport and the task of keeping our international competitors at the forefront.

This project became even more relevant, when, in 2005, it was announced that the 2012 Olympics would be held in the UK.

Out sport is growing and changing, we are seeing an upsurge in interest similar to, if not greater than, the 1980's. The CPSA as National governing body for the sport in England will continue to evolve in order to meet the challenges no matter what the future may bring.

Editors Notes

For simplicity, the masculine is used throughout. All references apply equally to male and female shooters.

This text is intended to provide basic information for those who are thinking about, or just getting started in clay target shooting, and for more experienced shooters who are thinking about trying a new discipline. This guide provides need-to-know information and is the course handbook for CPSA Discover Clay Target Shooting™, Shotgun Skills™ and Competency Courses™; additionally, it is intended to be a resource for candidate instructors and coaches. Complex principles and techniques have been simplified in favour of clarity to ensure understanding of essentials. For those who wish to read further about shooting technique, there are some suggested books in Appendix 3.

Limit of Liability

Nothing contained herein shall be construed to supersede or replace the relevant safety standards, competition rules or manufacturers' recommendations, manuals and data. No advice given or statements made are a substitute for specific training from a CPSA Instructor or Coach.

The contents are believed to be correct to the best of our knowledge and are offered in good faith. No warranty is expressed or implied. The Editor and the Clay Pigeon Shooting Association Ltd accept no liability for any loss, damage or injury however caused resulting from information in this handbook. It is the responsibility of the reader to verify information, practices and procedures prior to shooting.

1. Getting Started and Buying a Shotgun

Start Right with a CPSA Instructor or Coach

Shooters are friendly and enthusiastic people who will offer you endless and sometimes conflicting advice, about everything from buying guns to why you missed the target. The advice of too many people can leave you confused and frustrated. Before this happens and you get into bad habits, take a few lessons with a CPSA Instructor or Coach. The CPSA Coaching Scheme offers training in the use of a shotgun including "Discover Clay Target Shooting", "Shotgun Skills" and "Competency" courses. Theses courses can only be offered by CPSA qualified Instructors and Coaches; successful participants are awarded a CPSA Certificate. Visit the CPSA website for a list of CPSA Instructors and Coaches in your area. Listen to your CPSA Instructor or Coach and the expert shooters that you trust; others who try to be helpful may not understand the subject sufficiently or give good but conflicting advice. If you're left handed, beware of right-handers who try to give advice, without realising that there are differences to be considered. Remember, instructing is a separate skill; good shooters are not necessarily good instructors.

The Legal and Security Issues of Owning a Shotgun

It is wrong to assume that one person may use a shotgun in the presence of a second person who holds a shotgun certificate. Under the Firearms Acts, a person of any age may shoot without a shotgun certificate under two circumstances, under section 11(5), on an occupiers land in his/her presence with the occupiers gun, or at a shooting ground that has obtained a section 11(6) Exemption Permit. In order to buy a shotgun or cartridges, or to own a shotgun, you must have a current shotgun certificate.

Shotgun Certificates are granted by your local Chief Officer of Police. A person under 15 years of age can hold a shotgun certificate, however, a person under 15 may not be given or lent a shotgun or ammunition and may not be in possession of either, unless supervised by a person of over 21. A person between 15 and 17 may be given or lent a shotgun or cartridges but may not purchase them. A person between 15 and 17 may use a shotgun unsupervised, providing they hold a shogun certificate. A person of 17 or over and in possession of a shotgun certificate may purchase a shotgun or ammunition.

Almost anyone with a permanent address and no criminal record, or who can demonstrate that his or her possession of a shotgun would not compromise public safety, can apply for a shotgun certificate. An application for a shotgun certificates is made to the Chief Constable of the area in which the applicant resides. Contact your local constabulary firearms licensing department to obtain the necessary form. Once the form is completed, it should be submitted together with four passport photographs. It is necessary to have a professional person who has known the applicant for at least two years countersign the application form and the reverse side of each photograph. On receipt, the applicant will be contacted to arrange a mutually acceptable time for an interview/security visit by either a police officer or civilian firearms enquiry officer. The speed and ease with which certificates are granted may vary from one area to another.

SECURE STORAGE

One of the main conditions of the shotgun certificate is "secure storage"; the law doesn't define secure storage, but the police prefer, and common sense dictates, a locked steel cabinet. Although the police have no right to demand an inspection of security arrangements before issuing a certificate, it is best to arrange these beforehand. The cabinet should be manufactured to BS 7558 (1992) from 2mm/14SWG steel. It should be installed out of sight, for example under the stairs, in a walk-in cupboard or in a loft. It may be installed in other places, including an internally bolted garage providing they are away from casual view. Special cabinets are available that look like a piece of ordinary furniture. The cabinet should be securely fixed to the fabric of the building. If possible, mount it in a left hand corner, which makes it harder for a thief to attack the lock side of the door. Fixing should be by "Rawl-bolts" to a solid wall, coach screws to wooden joists or chemical anchors to a breezeblock wall.

INSURANCE

Common law or tort, places a duty of care owned by one person to another. You could be held liable in common law for injuries you inflict on another person, it is therefore sensible for shooters to insure against third party liability. A valuable benefit of CPSA membership is cover against civil liability. Additionally, the CPSA has negotiated professional indemnity insurance for Instructors, Coaches, Referees and Safety Officers. See Section 8 for details. It also makes sense to cover the theft or damage of your shotguns and accessories. You may be able to cover your guns as an extension to your home contents policy; the CPSA can also provide advice on suitable personal damage/loss insurance.

Shotguns

The choice of new and used guns can be bewildering; many will be unsuitable for your purpose. There are four main types of shotgun "Side-by-Side", "Over-and-Under", "Semi-Automatic" and "Pump-Action".

SIDE-BY-SIDE

This is the traditional layout, favoured by many game shooters. "Side-by-side" shotguns are generally lighter than other types, making them more suitable for carrying long distances across country. These guns are of the **"Break Action"** type, are available in both single and double trigger versions, and usually have fixed chokes although multi-choke versions are available. This type is seldom seen at formal clay shooting events (although there are a few competitions for them), the reason most often given being the width of the sighting plane; at nearly 50mm it is said to be less accurate to point at a target. See fig. 1-1.

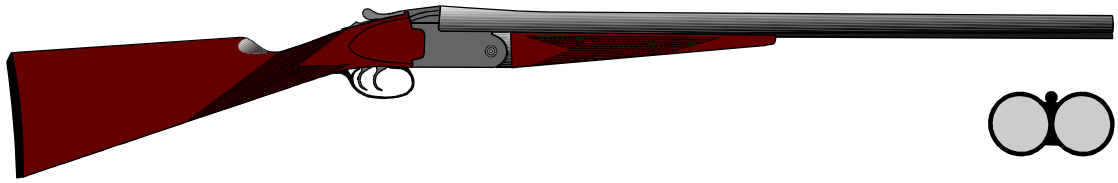


Figure 1-1 – Side-by-Side Shotgun

OVER-AND-UNDER

An "over-and-under" shotgun has two barrels like the traditional side-by-side and operates in a similar **"Break Action"** manner. They are usually heavier than the "side-by-side" type, although lightweight "game" models are available. The "over-and-under" design is said to be more "pointable" because the sighting plane is narrower and therefore better for target shooting. These guns are available with both fixed and multi-chokes and are the most popular type for clay target shooting. See fig. 1-2.

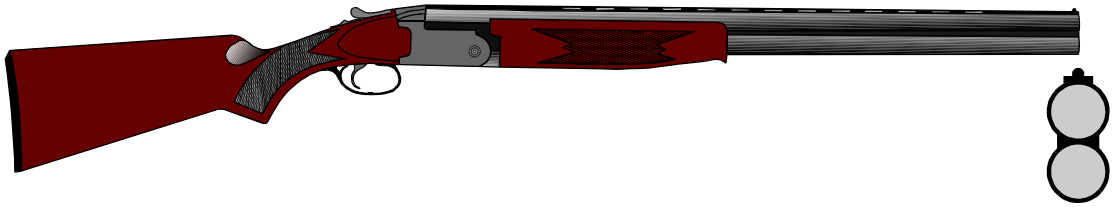


Figure 1-2 – Over-and-under Shotgun

SEMI-AUTOMATIC

A single barrel, semi-automatic, self-loading shotgun with a capacity of not more than three cartridges (one in the breech and two in the magazine) can be held on a shotgun licence in the UK. If the capacity is greater than three cartridges, a Class 1 Firearms Certificate will be required. Semi-automatics are relatively cheap and light. Less recoil is felt because much of the energy that normally causes recoil is used to eject and load the cartridges. For this reason, semi-automatic shotguns are popular with slightly built shooters and those who are sensitive to recoil. Some Skeet shooters use semi-automatics for their light, responsive handling. Semi-automatic shotguns usually have a set of spacers used to adjust the stock to individual requirements and usually have multi-chokes. See fig 1-3.

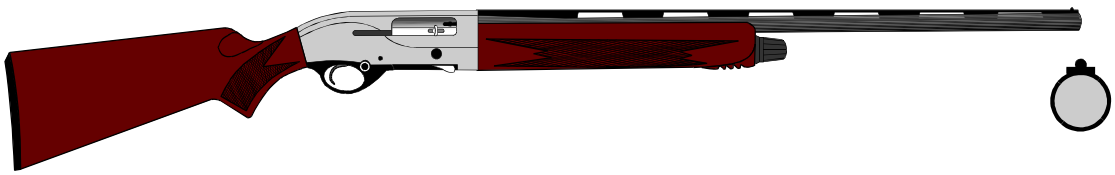


Figure 1-3 – Semi-automatic Shotgun

PUMP-ACTION

A pump-action shotgun, with a capacity of not more than three cartridges, can be held on a shotgun licence. If the capacity is greater than three cartridges, a Section 1 Firearms Certificate will be required. The pump-action shotgun is visually similar to a semi-automatic, however, instead of using inertia or gas pressure to eject the cartridge, reload and re-cock it, the Pump-action shotgun must be manually cycled by pulling back on the fore-end then pushing it back to its original position. Pump-action shotguns are not popular with clay target shooters because they are difficult to cycle and re-aim, particularly when two shots are required, or a pair of targets is thrown simultaneously. The CPSA does not recommend the use of pump action shotguns for clay target shooting. See fig 1-4.

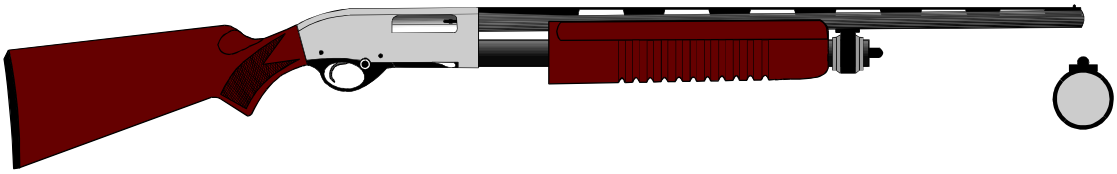
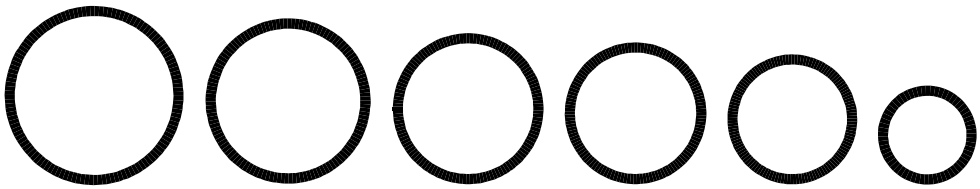


Figure 1-4 – Pump-action Shotgun

SHOTGUN BORE DIAMETER

Shotguns are manufactured in a variety of bore sizes or gauges, some of which are not used for clay target shooting are virtually obsolete. Figure 1-5 illustrates a range of sizes. The bore or gauge of a shotgun is based upon the diameter of a single lead ball, the number of which make up a pound of lead. Therefore a 12 bore is the diameter of a single lead ball weighing $^{1}/_{12}$ of a pound; a 20 bore is the diameter of a lead ball weighing $^{1}/_{20}$ of a pound etc. 67 gauge, is traditionally referred to as a four-ten (0.410").



(Subject to slight variation due to manufacturing tolerance)

Figure 1-5 – Bore Diameters

SIGHTING RIB

The most common sighting rib fitted to a clay target shotgun is the flat rib, although concave and "Churchill" ribs may be found particularly on side-by-side types. The sighting rib on an "over-and-under" shotgun is parallel and approximately 8mm wide, although in practice this varies. Some ribs taper slightly towards the foresight, which is intended to make the gun more "pointable". The rib is machined with a diamond or hatched pattern to reduce glare. Trap guns tend to get quite hot due to rapid and repetitive shooting; in hot weather, this can cause a heat haze to hang over the top rib, obscuring the view of the target. A broad rib, as wide as 11mm on some shotguns, acts as a heat shunt, which dissipates heat and deflects the heat haze. Some trap guns have an extra high rib, which provides extra heat dissipation and a higher view over the barrels. See fig 1-6.

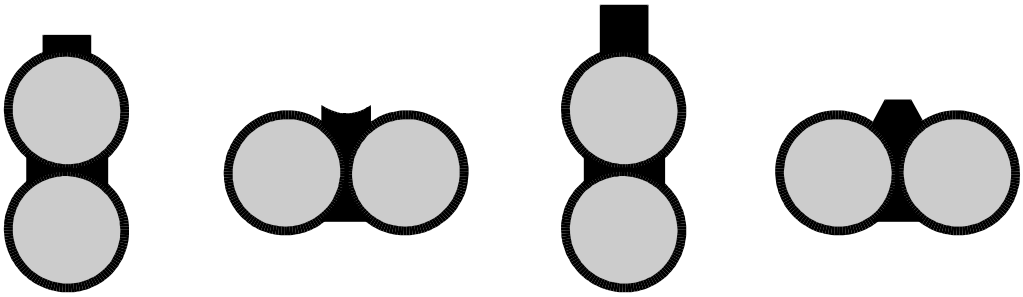


Figure 1-6 – Rib Styles

STOCKS, GRIPS AND FORE-ENDS

Side-by-side guns are most commonly fitted with a straight hand or "English" stock and a wedge shaped "splinter" fore-end; however, they can be fitted with other styles. Over-and-under shotguns have the widest range of stock and fore-end styles. The "pistol grip" stock is popular on modern sporting and trap guns, with the semi pistol grip as a slimmer alternative. Some trap shooters favour the "Monte Carlo" stock, with its parallel comb. Sporting guns may be fitted with a variety of fore-ends, the slim "Schnabel" being favoured by many, while others prefer the broader "beavertail" arrangement. Many trap shooters favour the "beavertail" fore-end. See fig 1-7.

Figure 1-7 – Stocks, grips and fore-ends

When a new shooter has decided on the discipline he will follow, he would be well advised to try as many makes and models of gun as his coach and fellow shooters can provide. Many gun shops can arrange a "try before you buy". Shooting and getting the feel of various styles of shotgun will make it more likely that your final choice will be the right one. See also Section 4 Gun Fit.

MAIN COMPONENTS

Figure 1-8 illustrates the main components of a typical over-and-under shotgun; note the break action and ejectors that automatically eject spent cartridges from the chambers. See also Appendix 1 and Figure 9-1.

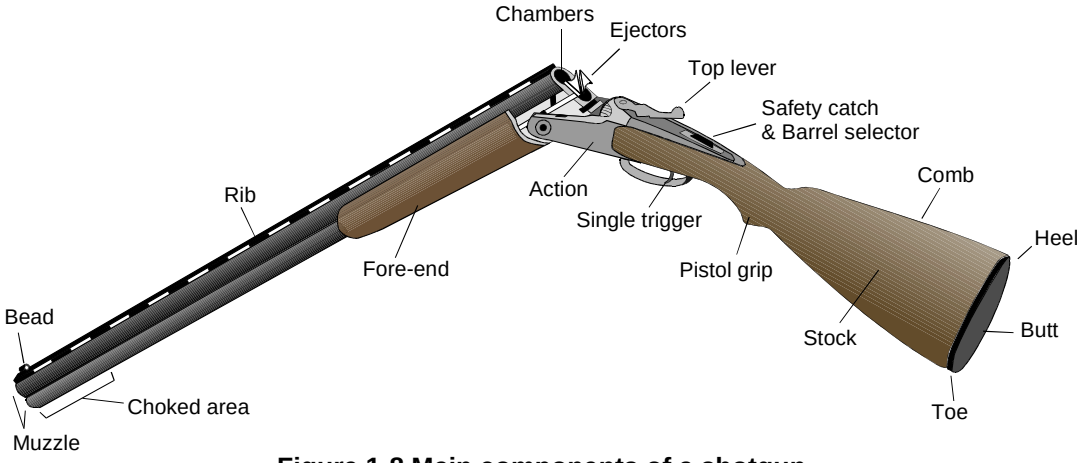


Figure 1-8 Main components of a shotgun

BARREL CONFIGURATION

Shotgun barrels are not a parallel tube from end to end. Firstly, and starting at the breach end, there is the chamber where the cartridge is placed; most modern guns are chambered to accept the 70mm cartridge, older guns may only take the shorter 65mm cartridge. Next, there is a tapered transitional zone between the chamber and the narrower parallel portion of the barrel called the "forcing cone". Finally, at the muzzle end there is the choke, which may be fixed or removable. See fig 1-9 and Section 2 Chokes.

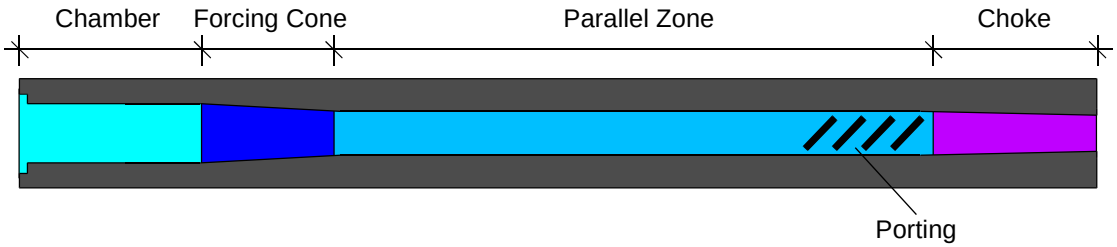


Figure 1-9 – Barrel configuration

RECOIL

To every action there is an equal oposite reaction. Recoil is the rearward motion of the gun that occurs as a direct result of a cartridge being fired. Recoil can be reduced by using a heavier gun; a heavy gun takes more energy to move it backward, therefore, a light gun "kicks" more than a heavy one. A 12 bore Shotgun normally has an internal diameter of 18.5mm (0.729"), recoil can be reduced by overboring the barrel slightly to say 18.6mm (0.734") and lengthening the forcing cone, which reduces the energy required to drive the wad up the barrel. These modifications have been made possible by the modern cartridge with its sophisticated wad design. However, not all guns are modified in this manner. Some people feel the effects of recoil more than others do and over time, permanent damage can occur. A "recoil pad" can be fitted in place of the standard butt plate. These soft pads are made of a synthetic rubber such as "Sorbothane"® and are designed to absorb and dissipate some of the energy from the recoil. A more sophisticated recoil device can be fitted that contains a miniature shock absorber, or a heavy weight in a tube that moves backwards against a spring, or some other similar device. All of these delay the rearward motion of the gun and dissipate some of the energy from the recoil. Many trap shooters expose themselves to unnecessary additional recoil by taking a second shot at targets they have already broken. If the shooter takes an unnecessary second shot at just 25% of his targets in a 100 target competition, this is the equivalent in terms of impact and fatigue on the shoulder of shooting an extra round.

BARREL PORTING

When the trigger is pulled and the Shotgun recoils backwards, the barrels rotate upwards, pivoting about the butt plate. This movement is called "muzzle jump" or "muzzle flip". Muzzle flip causes the sight picture to be lost momentarily, causing a need to reacquire the target. Muzzle flip is manageable with practice and proper gun fit, however, a series of holes called "ports" can be drilled and angled upwards at the muzzle end of the barrels. See Fig 1-9. The ports direct some of the combustion gasses upwards, counteracting the movement of the barrels. Porting is a job for a specialist gunsmith. Alternatively, extended and ported chokes are available that give a similar effect. Before you have your gun modified, check the rules for your chosen discipline, as barrel porting may not be permitted.

TRIGGER PULL

The effort required to pull the trigger and activate the firing mechanism is called "trigger pull"; too light and the gun may fire inadvertently when the trigger is touched, too heavy and it may cause the gun to fire later than intended, causing the target to be missed. A typical trigger pull is around 1.6kg (3.5 lb). Additionally a good trigger pull will be smooth with no obvious drag or notch as the trigger is pulled. The triggers on semi-auto's are seldom as good as those on break action types.

CHOOSING A SHOTGUN

Before investing a significant amount of money in a shotgun, there are three things that you should do. Firstly, take some lessons from a CPSA Instructor or Coach, who will teach you all the basics and discuss your requirements with you, the second is to decide what you want it for.

It is possible to shoot both clays and game with any shotgun; however, over the years shotguns have been developed to suit the requirements of individual disciplines.

Shotgun use can be split into four main categories: Sporting, Trap, Skeet and Game. As stated previously, the majority of shotguns used for Sporting, Trap and Skeet are of the "over-and-under" type. Semi-automatic shotguns are more popular with rough shooters than with Game and Target shooters, but may be used as an alternative. The most popular gauge by far is 12 bore, however, smaller gauge, 16, 20, 28 bore and 0.410" shotguns are available. Smaller gauge guns are lighter and may suit some young shooters or small adults. Shotguns of larger than 12 bore cannot be used in competition; no allowance is made in the competition rules for shooting smaller gauge guns. 12 bore cartridges are cheaper due to the economy of mass production. Shotguns can have barrels of 71, 76 or 81cm (28, 30 or 32 inches). 81cm (32 inches) may be too long for a beginner or a person of smaller stature.

A Game gun will usually have an automatic safety catch. A manual safety catch is advisable for clay target competition in order to prevent lost points should the shooter forget to release it.

The third thing is to make sure that the gun fits adequately, before parting with your money. See also Section 4, Gun fit.

THE SPORTING GUN

In this context, "sporting," means English or International sporting clays not game shooting. Probably the best choice for a beginner, especially if you don't have a specific discipline in mind, and want to try all disciplines. The Sporting gun although not ideally balanced for every discipline, can be thought of as multi purpose because it is designed to shoot the endless variety of Sporting targets. They will also have interchangeable or "multi" chokes that can be changed to provide the optimum distribution of shot, no matter how near or distant the target. Open chokes, used for near targets can also be used for Skeet shooting and the tighter chokes used for distant targets can be used for shooting Trap. See also Section 2 Chokes.

If you decide to specialise later and buy a dedicated gun, a Sporting gun will be easy to sell, or can be kept for general or sporting use.

THE TRAP GUN

Trap guns are used for shooting "Trap" disciplines such as ABT and DTL, in which the targets are all going away from the shooter and initially rising. The similarity of Trap targets makes it possible to set up a shotgun to shoot these specific targets. If a Sporting gun is used for Trap shooting, the requirement to apply a forward allowance or "lead" may cause the barrels to obscure rising targets. Therefore, a Trap gun is set up to permit the shooter to see the target as the trigger is pulled. See fig 7-17. Trap guns usually have a stock with a higher comb like the "Monte Carlo", which is popular on trap guns, set parallel to the sighting rib; they are usually a little heavier than other types, and have barrels of 76 or 81cm (30 or 32 inches). Trap targets are shot between 30 and 40m away, making multi-chokes unnecessary. Hence, the majority of Trap guns have fixed, tight chokes of ½ and ¾ or ¾ and Full. See also Section 2 Chokes.

THE SKEET GUN

Skeet targets are fast, rising, then descending at close range. A Skeet gun needs to be quick to swing onto the target. 81cm (28 inch) or shorter barrels with fixed, open, Cylinder and Skeet chokes are popular for this discipline. Skeet guns are usually lighter than Trap guns but similar in weight to a Sporting gun. Skeet guns are set up to shoot straight at a target seen just above the foresight.

THE GAME GUN

Game shooters generally carry their shotguns long distances whilst stalking their quarry; a light gun is therefore an advantage. Lightweight game guns can be bought in "over-and-under" format whilst the traditional side-by-side shotguns are naturally of lighter construction. Game guns can have fixed or multi-chokes. Fixed ¼ and ½ chokes are common.

Note 1: The Glossary contains a list of clay target shooting and shotgun terminology, together with drawings of a typical over-and-under break action.

Note 2: For more information about clay target disciplines, see section 7.

BALANCE

A typical Sporting shotgun will balance around its hinge or "cross-pin", Trap shooters may prefer their gun set up to be a little heavier in the fore-end, this is said to aid swinging the barrels through the target. See section 4 Shooting Technique.

The Gun Shop

A gun shop, like any other business, can vary in their commitment to customer care and after sales service. A good gun shop is worth its weight in gold. No matter whether the gun is new or second hand, budget or expensive, the staff will spend time helping the beginner choose the right gun for his purpose and will make sure that the gun is a good fit.

You are spending a significant amount of money; shotguns can cost from a few hundred pounds second hand, to many thousands of pounds for a top of the range new one, so expect service. Beware of those who seem to be pushing you quickly towards one particular gun, or spend little time discussing your needs or checking gun fit. If possible, take an experienced shooter with you whose opinion you trust. Your CPSA Instructor or Coach will be happy to advise you. Second-hand guns may have been altered to fit a previous owner. It is therefore likely that a proportion of guns that you will be offered won't fit properly without further alteration. A few will have been altered to such an extent that only major alteration(s) or a new stock will put them right.

Before you buy a shotgun, ask what service the gun dealer has for adjusting the fit and how much it will cost. Consider buying a gun with an adjustable comb. When you've bought your gun, it is a good idea to get a CPSA Instructor or Coach to check you out with it. If it doesn't fit reasonably, it will not shoot where you're looking. If the gun proves to be a poor fit, take it back and get something done about it. See also Section 4 for more information about Gun Fit.

Shotgun Cleaning and Maintenance

The modern shotgun requires little maintenance in order to keep it in working order. However, moisture and combustion products must be removed. Cleaning protects your investment, promotes safety and reliability and minimises corrosion. The shotgun must also be lubricated to minimise wear and seizure.

Additionally, the action, which is mainly hidden within the breach block and stock, should be dismantled, inspected and cleaned from time to time by a gunsmith who is familiar with your make and model. This should prevent unforeseen problems from developing.

Clean and lubricate your shotgun after each day's shooting; wipe off any sweat and moisture with a clean cloth. Do not leave it in the gun slip overnight, even if the slip appears to be dry. Moisture can do more damage to a gun, particularly the barrels, than firing thousands of cartridges. The cleaning process is straightforward and takes about twenty minutes. You will need the following tools and materials:

- A cleaning rod(s) with bronze brush, jag and wool mop.
- Some cleaning patches (four by two) or kitchen towel.
- Bore solvent, gun oil and gun grease.
- Lint free duster, toothbrush and cotton buds.
- Oily lint free cloth in a sealed bag.
- Storage box

Figure 1-10 – Cleaning equipment

Do not try to economize by using household or motor lubricants. These may be OK in an emergency, but certain well-known spray lubricants can attack the silver-soldered barrel joints. The best modern gun lubricants contain moisture repellents, corrosion inhibitors and conditioning agents that may save expensive repairs in the long term.

Check that the shotgun is unloaded and then break it down into its three major components, stock and action, barrels and fore-end. Then proceed as follows:

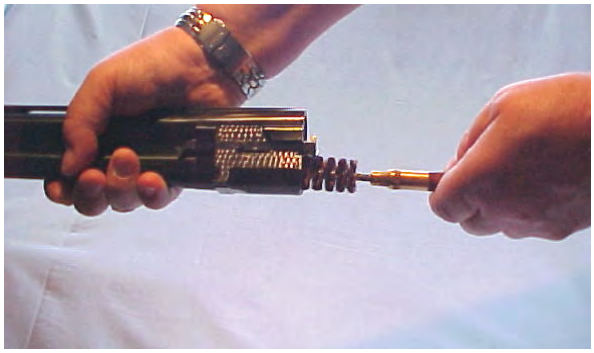


Figure 1-11 – Bronze brush

Barrels and ejectors

If the gun has removable chokes, leave them in for the moment. If there is a significant amount of loose debris in the barrels, push a jag and dry patch, attached to a cleaning rod, through first to remove the particles. See fig 1-12. Then push a dry bronze brush through the barrels once or twice, in order to loosen any fouling. Apply bore solvent down the barrels from the breach end, using just enough to coat the surfaces; leave this for a few minutes to break down the fouling, then push the bronze brush through the barrels using a clockwise screwing action. See fig 1-11.

Repeat the process using the jag and a cleaning patch, pushing the fouling through in one direction only. Repeat until the bores are mirror clean and free of any sign of deposits. See fig 1-12. Use the solvent and brush again if the bores do not come clean at the first attempt. Finally, pass a lightly lubricated wool mop through the barrels. Wipe the outside of the barrels with an oily and preferably lint free cloth, so that no particles are left behind (some modern barrel lubricants will leave a moisture-excluding protective film). Pay particular attention to the deposits that form around the muzzles.

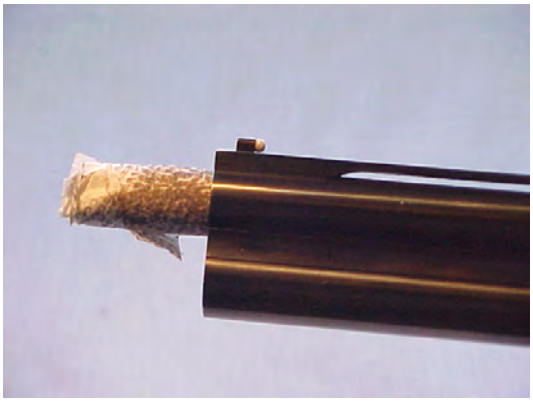


Figure 1-12 – Jag and Patch

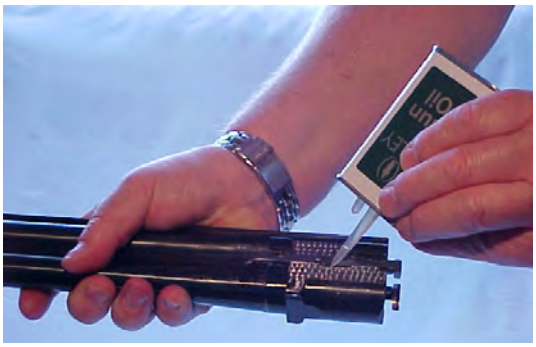


Figure 1-13 – Oil the Ejectors

Clean around the ejectors, barrel-hook and bearing surfaces. Every two or three months, remove the ejectors and clean behind them, this prevents jamming and excessive wear. Use a soft toothbrush and cotton buds to get into any awkward places. Lightly lubricate moving parts and sliding surfaces, wiping off any excess. See fig 1-13.

Removable chokes

The chokes should be removed with the special tool supplied with the gun, then cleaned internally in the same way as the barrels.

Combustion deposits should be wiped from the external surfaces with an oily rag and the threads cleaned with a toothbrush.

Some guns are supplied with a thread-cleaning tool to clean the threads in the muzzle. Smear a small amount of oil on the surface of the chokes and a little gun grease into the threads to inhibit seizing. Reinstall them into the barrels, tightening firmly, not tightly with the choke key.

Action and stock

Wipe any dirt from the action chair, the knuckle and cross pin or trunnions. Resist the temptation to spray oil or solvent into the striker holes, this can make them stick and cause a misfire. A squirt of gun cleaner will flush dirt from inaccessible places. A toothbrush and cotton bud can be used to clean around the ejectors. Apply a light coat of oil to sliding surface and the cocking rods. Wipe the outside surfaces with a lint free oily cloth to remove any excess.

Figure 1-14 – Clean the chequering

Clean the stock with a dry cloth; use a bristle (not wire) brush to clean out the chequering. See fig 1-14. Varnished stocks need no additional treatment. Oiled stocks can be polished with a little wax polish, and occasionally should have some stock oil rubbed into them.

Fore-end

Clean all the metal parts, removing dirt, old oil and grease. Lubricate all the bearing surfaces where the fore-end contacts the action. See fig 1-15. Clean the wooden part the same as the stock above.

Finally, reassemble the shotgun and polish any fingerprints from the metalwork, after which the gun should only be handled by its woodwork. The shotgun can now be stored away in the gun cabinet.

An excellent product is available, comprising a sachet of "vapour phase" corrosion inhibitor; this can be affixed inside the gun cabinet to provide protection during storage. A single sachet should last approximately nine months.

Figure 1-15 – Grease bearing surfaces

Figure 1-16 – Grease the barrel hooks

To grease or not to grease

There are two schools of thought about the use of grease for lubricating shotguns. One view is that grease should not be used because it can attract grit, thus causing wear. Game guns may be used in an environment where the gun can get mud and dirt on and into it. However, the other school is of the opinion that the majority of Trap and Sporting guns stay relatively grit free. Furthermore, the shotgun should be thoroughly cleaned after use, which should remove any grit. Therefore, on balance a little grease used sparingly at the points of greatest wear, such as the bearing surfaces and barrel hook(s), is of benefit. See figs 1-15 and 1-16.

The inside of the action should not be lubricated on a regular basis. Excessive oil will attract dirt and dust, eventually causing a malfunction. Oil will eventually soak into the stock denaturing the wood.

If you have been shooting in the rain and believe water has entered the action, remove the stock retaining bolt and let the action dry out thoroughly. For Shotgun terminology, see Appendix 1.

Clothing and Accessories

In addition to a shotgun and cleaning equipment, suitable clothing and accessories will be required. For clay target shooting, the most popular garment is the "Skeet" or shooting vest. The vest will have two or more large pockets that will hold sufficient cartridges for a round. They are available in both heavy and lightweight versions and with mesh panels for summer use. See figure 1-17.

The Game shooter will prefer hardwearing clothing that fits readily into the countryside; Tweed cloth for jackets and shooting vests are very popular in shades of brown and green.

Figure 1-17 – Shooting vest

A waterproof jacket version with long sleeves is also available for use in cold or wet weather. See figure 1-18. For those who prefer not to wear a shooting vest in summer, a belt mounted cartridge pouch can be used as an alternative to putting cartridges into pockets.

Due to falling fragments of clay and spent shot, it is advisable that shooters and bystanders wear something on their heads. A simple baseball type cap will provide reasonable protection.

See also Section 3 for Ear and Eye Protection.

Figure 1-18 – Waterproof jacket

CPSA CASUAL WEAR

The CPSA produces an attractive and competitively priced range of casual wear including baseball hats and polo, tee and rugby shirts. For the full range, prices and an order form, see the advertisement in "Pull!" Magazine or visit the CPSA Shop at: www.cpsa.co.uk. See figure 1-19,

Figure 1-19 – CPSA Clothing

ACCESSORIES

A visit to your local gun shop will reveal the vast array of accessories available for shooting, some more useful than others. Of these, a gun slip and cartridge bag or box are most useful first purchases. Cartridge bags and boxes are available with shoulder straps or carrying handles, allow a significant quantity of cartridges to be carried instead of having all the weight in your pockets. See figure 1-20.

Figure 1-20 – Slip Bags and boxes

Cartridges

There is a bewildering choice of cartridges available for the shotgun. There are numerous makes, loads and sizes of shot, high antimony shot, plastic or fibre wads, high velocity, Sporting, Skeet, Trap and "Magnum" loads and so on. As the performance and sophistication of cartridges increases, so does the price. Modern cartridges are reliable, so from an average shooter's perspective, almost any reasonable make and load will do. After all, you're still trying to hit targets rather than improve performance at competition level, which is the main reason for using more expensive, high performance loads. It is worth noting that a high velocity cartridge gives the equivalent of only 10 – 15cm less lead at a range of 30m.

CARTRIDGE CONSTRUCTION

A cartridge is a container that comprises a plastic tube or "cartridge case", reinforced at its base, with a brass plated steel "head", a primer cap fitted into the base, a propellant powder, a wad or wads and a quantity of shot. See fig 2-1. The purpose of the primer is to ignite the main powder charge. This is achieved by an impact sensitive "fulminate" contained in the primer cap, which is detonated, when the cap is struck, by the gun's firing pin. Propellant powders come in a variety of grades, which for simplicity can be divided into two types; those used for standard cartridges producing nominal shot velocities of approximately 325m/sec; and high velocity cartridges producing nominal shot velocities of approximately 340 m/sec or higher. The wad acts as a gas seal and as a piston to drive the shot along the barrel.

Plastic wads (or plas-wads) improve gas seal in the barrel, and contain the shot within a cup, reducing distortion, and improving the distribution of the shot within the pattern. Fibre wads, the traditional wadding material of the game shooter, are making a comeback, as more target shooting grounds insist on biodegradable wads, which most plas-wads are not, (photo-degradable plas-wads are available).

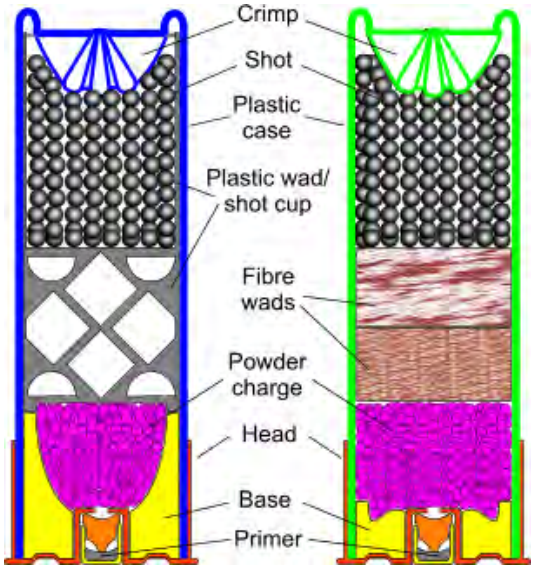


Figure 2-1 – Cartridge construction

The shot used in target shooting cartridges is usually made from a lead alloy. However, non-toxic steel and bismuth shot is compulsory for game shooting in wetland areas. Ordinary lead shot is soft and may become deformed by friction as it passes along the barrel wall. This deformity can affect the shot string and pattern consistency. See Effective Patterns.

Manufacturers add between 1 and 8% antimony to the lead to make it harder, which reduces the tendency for the shot to deform as it is driven along the barrel, thus improving pattern consistency.

The maximum loads for each discipline are: Domestic Sporting and Trap 28grams (1oz), Olympic Skeet, Olympic Trap and Double Trap, 24grams, FITASC Sporting 28grams and Helice 36grams. All competition rules forbid the use of "Black Powder", "Tracer" and "Reloaded" cartridges. The size of shot in the cartridge is indicated by a number; for clay target shooting the most commonly used sizes are UK 6, 7, 7½, 8, 9 and 12; six being the largest and twelve the smallest.

The larger the shot, the more energy it will impart when it hits the target, so at extreme distance a larger shot stands more chance of breaking the target. For near targets, small shot have sufficient energy, so, the shooter can take advantage of an open choke and small shot to create a large dense pattern. The following table provides a comparison of the most common systems of sizing shot, together with an approximation of effective distance and use.

	Nominal Shot Size				Pellets			
Smaller	**mm**	**UK***	**Italy**	**USA**	**24g**	**28g**	**Typical use**	
	2.6	6	6	-	228	270	Distant Sporting + Game	50m
	2.4	7	7 ½	7 ½	288	340	Distant Sporting + Trap + Game	40m
	2.3	7 ½	8	8	336	400	Distant Sporting + Trap	35m
	2.2	8	-	-	384	450	Medium distance Sporting	30m
	2.0	9	9	9 ½	502	580	Close Sporting + Skeet	25m
	1.3	Dust	-	12	1972	2300	Stand 8 NSSA + Olympic Skeet	15m

Ensure that you carry sufficient cartridges with you onto the stand or layout; you will need to allow for "no targets". For a typical round of 50 Sporting targets, carry at least 60 cartridges; for a typical round of 25 trap targets, where two barrels are allowed, carry 40 – 50 cartridges.

* The Belgian, Dutch and French use the same system as the UK, except that the French have no size 6.

Choke

A choke is a constriction in the muzzle of a shotgun that modifies the size of the cloud of shot as it flies towards a target. The more open the choke, the larger the diameter of the cloud of shot or "pattern" at a given distance, the tighter the choke the smaller the pattern. As the shot leaves the muzzle, the pattern expands in size and reduces in density. See figs 2-2 and 2-3. The pattern also becomes elongated into a "shot string". This elongation is approximately 3.5 – 4.5m at a range of 30.0m.

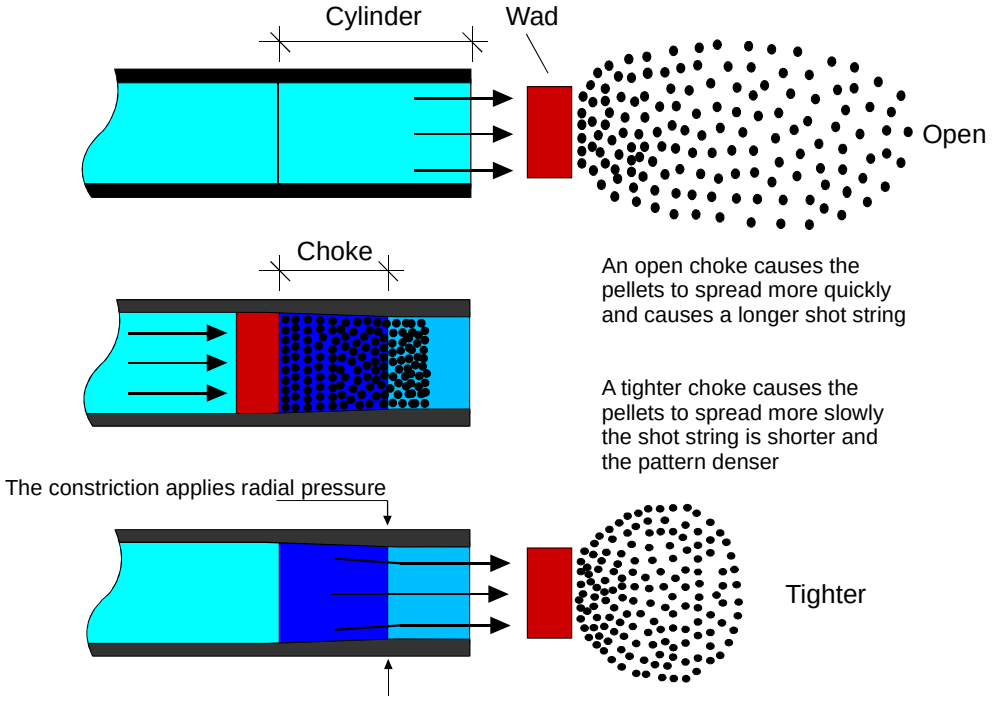


Figure 2-2 The effect of choke

Chokes have markings that indicate the degree of constriction. Choke markings can be confusing because there are a number of systems in use. The two main systems of designating choke constriction are English and American. The choke may also be identified by a series of notches cut into the end that are visible when the choke is tightened into the barrel.

The closer the target is to the shooter the more open the chokes need to be in order to create a satisfactory pattern. The further away the target, the tighter the choke needs to be so that the pattern is sufficiently dense. The largest possible pattern is desirable in order to give the greatest chance of breaking the target. However, there are practical limits to the size of the pattern. If the pattern is not sufficiently dense, the target may pass through gaps in the pattern without being hit by any shot. Hence, there will be an optimum choke/cartridge combination at a given distance. See Effective Patterns and fig 2-3. The table below provides a comparison of the various methods of identifying the most popular choke sizes.

"Multi-choke" marking systems					
More open ↓	**English**	**American**	**Letter**	**Notch**	**Beretta Colours**
	Full	Full	F	1	White
	3/4	Improved modified	IM	11	Black
	1/2	Modified	M	111	Green
	1/4	Improved cylinder	IC	1111	Yellow
	Skeet	Skeet	SK	None	Red
	Cylinder	Cylinder	CL	11111	Blue

You will recall that shotguns can have fixed or interchangeable or "multi-chokes". The above choke sizes are those commonly supplied and should be adequate for the average shooter. They are usually supplied as a set with multi-choke shotguns. However, specialist choke manufacturers can supply these and other sizes. Additionally fixed choke guns can be modified to take removable chokes.

Note: Extended chokes with vents or ports are not permitted for CPSA registered DTL & ABT events.

EFFECTIVE PATTERNS

The advantage of the multi-choke shotgun is that the chokes can be changed to suit a particular type of target and distance. For a choke and cartridge combination to effectively break a target, a number of factors must be taken into consideration:

1. The presentation of the target, e.g. an edge on target, takes more energy to break than the same target shot on its underside.
2. The impact energy of the shot diminishes with size and increased distance, i.e. the smaller the shot and greater the distance, the less likely that an impact on a target will break it.
3. If the choke is too tight then the diameter of the pattern will be very small, particularly at close range, reducing the chance of hitting the target.
4. The largest practical pattern diameter is desirable to give the greatest chance of hitting a target.
5. If the choke is too open for the distance to the target then the shot distribution will not be dense enough and the target may pass unscathed through gaps in the pattern.

At close range an open choke and small shot will usually be the best option, whilst at distance, a tight choke and heavier shot will be required. Therefore, the optimum pattern at a given distance will be the largest practicable diameter within which there is sufficient shot density and striking power to consistently break a target. With an open choke at distance, the overall diameter of the pattern may be large but the shot in the outer fringe may not be dense enough to guarantee the target will be broken.

Figure 2-3 illustrates the relative pattern spread and density for cylinder and full choke at 20m (22yds).

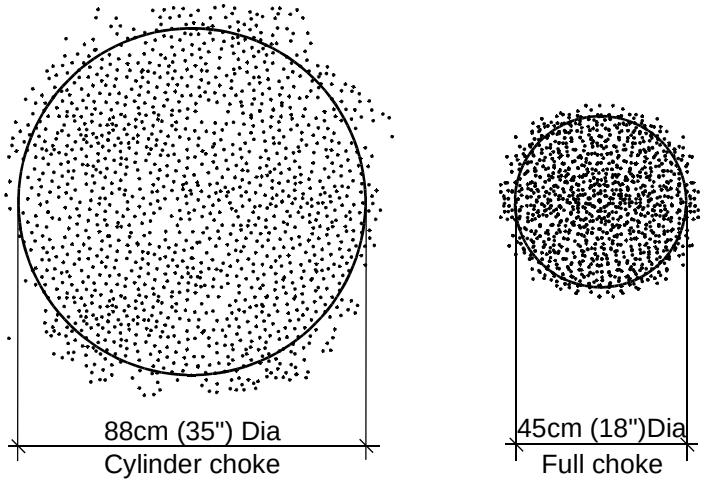


Figure 2-3 Pattern for Cylinder and Full chokes at 20m

Tests have shown that given the correct size and weight of shot (load), each of the standard choke sizes will produce an effective pattern of approximately 60 – 70cm diameter at a given distance. The actual pattern will vary considerably depending on the gun/choke/cartridge combination. For those unfamiliar with the concept, the following table provides an approximation of the relationship between choke, load, distance and effective pattern.

	Choke/load combinations (28g) that provide the optimum pattern at these distances											
Dist	**0 – 20m**			**20 – 30m**			**30 – 40m**			**40m +**		
Size	**9**	**8**	**7**	**9**	**8**	**7**	**9**	**8**	**7**	**9**	**8**	**7**
Choke	-	-	-	-	-	-	-	-	-	-	-	**F**
	-	-	-	-	-	-	-	**3/4**	**3/4**	-	-	**3/4**
	-	-	-	-	-	-	-	**1/2**	**1/2**	-	-	-
	-	-	-	**1/4**	**1/4**	-	-	**1/4**	**1/4**	-	-	-
	SK	**SK**	-	**SK**	**SK**	-	-	-	-	-	-	-
	CL	**CL**	-	**CL**	**CL**	-	-	-	-	-	-	-

A dash (-) means choke/load combination is not ideal at this distance

This doesn't mean that other choke and load combinations won't break targets at other than ideal distances. It is all too easy to become paranoid and start blaming choke and cartridge combinations for a missed target, when in reality a miss is usually the result of misjudging the speed and line or shooting in front or behind the target. The correct choke and cartridge combination may give those vital extra targets in competition, it won't compensate for poor technique. See also Section 5, Shooting Technique.

Every gun, choke and load will give slightly different results, therefore, a visit to the pattern plate will reveal the optimum choke and load combinations for your gun. See Section 4, Using a Pattern Plate.

Targets

One of the earliest substitutes for live game, and to facilitate practice in the off-season, were glass balls filled with feathers. These were thrown from a suitable "trap" machine, these were later replaced by targets made of clay; it is this name that has stuck. The modern target, "Clay" or "Clay Pigeon" are no longer made from clay but compressed chalk and pitch, and come in two main colours, black and high-visibility orange, (high-visibility yellow more popular outside UK) although other colours are available.

Different sizes of target are thrown to increase the difficulty of the shot. A mini at 20m looks like a standard target much further away; you will have lots of fun missing the majority of small targets by misreading the speed and distance until you gain experience. If you're having particular problems with any size, trajectory or speed of target, see a CPSA Instructor or Coach before frustration sets in.

When you visit a shooting ground, you may see large quantities of target fragments and plastic wads on the ground. Despite being available, the majority of targets and wads used are not biodegradable. Undoubtedly biodegradable targets and wads will become compulsory in the rural environment at some time in the future.

STANDARD

Standard clay targets are 110mm in diameter, slightly domed and are most commonly encountered.

BATTUE

Battues are the same diameter as a standard target but very flat. These targets tend to fly further and faster than standards. They are often thrown so that they initially appear edge on and then roll sideways as they fall to the ground.

MIDI

Midi targets are 90mm in diameter, and fly faster and further than a standard target. Their smaller size can create the illusion of distance; the target may be 30m away but appear to be 40m, thereby causing the shooter to misread and miss the target.

MINI

Smaller again than a midi at 60mm diameter, the mini also creates the illusion of greater speed and distance. The majority of misses, as with the midi are caused by misreading the target.

RABBIT

A rabbit target is the same diameter as a standard but as the name implies, simulates a running rabbit. The target is rolled along the ground, bucking and bouncing as it goes. In order to take this punishment the rabbit target has a thick rim.

ROCKET

A heavy, thick-rimmed target of 110 mm diameter that tends to slow down in flight less quickly than a standard. These targets are not common and are normally only found on FITASC Sporting layouts.

ZZ

The discipline of Helice employs a special plastic target commonly known as a" ZZ". The centre part is the diameter of a standard target the outer part is a propeller. When launched from a special trap, that both spins and oscillates, these targets fly with an inconsistent trajectory. These targets are mainly used in the discipline known as "Helice" but may be included on a FITASC sporting layout.

Traps

Traps take their name from the cages that live pigeons were released from for live quarry shooting. In time, glass balls then clay targets were thrown as a substitute from a machine that became known as a "trap". Modern Traps are either manually or electrically operated traps. Some modern traps will throw all sizes of target by fitting adaptors, whereas others would need some modification. See fig 2-4 and 2-5.

Figure 2-4 – Manual Trap

Figure 2-5 – Automatic Trap

A manual trap, such as the one in fig 2-4, will be cocked and loaded by a "trapper" who releases the throwing arm on the command "Pull". Electrically operated traps have a carousel like magazine on top containing hundreds of targets and can be released by the push of a button or by a "Sonic Release", activated by the sound of the shooter's voice. See fig 2-6. For non-competition practice sessions, some shooting grounds have push button releases so that a group of shooters can operate the traps for each other, some have foot-operated releases so that a lone shooter can operate the traps for him/herself. See fig 2-7.

Figure 2-6 – Sonic Trap Release

Figure 2-7 – Trap Release Buttons

3. Shotgun Etiquette and Range Safety

Clay Target Shooting enjoys an excellent safety record and accidents are few. Our sport is growing and with more participants, the potential for accidents could grow. Vigilance by all of us is the key to safe shooting. The chances of an accident involving a shotgun is minimised by sound gun handling technique, "Muzzle Awareness" and applying the CPSA's 10 key points of safety. "Think Safe be Safe".

The CPSA, as National governing body for the sport, has set out a number of safety initiatives, which include safety guidelines, leaflets, handbooks and courses such as the CPSA Club Safety Officers course that members can attend. "The CPSA Code of Practice" is available from CPSA HQ. The following section covers safety issues and includes gun handling and safety "aides memoires" for the individual shooter:

CPSA's Ten Key Safety Points for Clay Target Shooters

1. RESPECT

Treat all guns as though they are loaded – an accident could be fatal.

2. SAFE AND SOUND

All guns must be in proof and in good order. Do not use a faulty or doubtful gun.

3. OPEN AND EMPTY

Carry guns open and empty, semi-autos bolt back and flagged. Never rely on a safety catch.

4. CORRECT CARTRIDGES

Only carry the correct cartridges for the gauge and chamber of the gun you are using. **Never mix gauges in your pockets or bag.**

5. BARRELS CLEAR

Check the barrels are free from obstructions before every loading. Check for light.

6. POINT DOWN THE RANGE

Keep barrels pointing down the range at all times when loaded. Open and empty immediately after firing.

7. ONLY SHOOT CLAYS

Only point or shoot at whole targets thrown for you on your command – not other objects, live or inanimate.

8. MISFIRES

Keep gun closed for 20 seconds, barrels pointing down the range. Check the barrels are clear after a soft or unusual discharge.

9. DO NOT MIX

Alcohol, drugs and horseplay – with guns.

10. REMEMBER

When shooting, you are responsible for the safe handling of your gun(s) and the behaviour and safety of your guests, family and animals.

Safety is in the hands of the shooter

Range Safety

GENERAL

- A shotgun is dangerous, unless handled and loaded with safety in mind:
- Always treat a shotgun as loaded until proven otherwise; forgetfulness, assumption and miscommunication can result in a fatality.
- Always carry shotguns empty and open, preferably, over the arm. A gun carried over the shoulder has the potential of hitting people when you turn around.
- Semi-automatic and pump-action shotguns should be carried with the bolt locked back, so that the open breach can be seen by others and with the barrel pointing skyward.
- An empty shotgun should only be closed when putting it in a cabinet, rack or slip. These are the only times when even an unloaded shotgun should be closed.
- Muzzle awareness – never point a shotgun, not even an unloaded one, towards another person. Other people have no way of knowing if the gun is loaded or not. Your fellow shooters should not be subjected to the potential of having an accidentally loaded gun pointed towards them.
- Never mix different gauge cartridges in your pockets or cartridge bag. See also Cartridge Safety.
- Before you load a shotgun, look through the barrels and check that they are unobstructed.
- If the shotgun misfires, point the muzzle down the range and wait 20 seconds before opening it.
- Always check that barrels are clear after a soft or unusual discharge. See also Cartridge Safety.
- Never leave a shotgun leaning against a tree, wall or fence.
- Never leave a shotgun unattended, or in a car boot except when travelling to and from the shooting ground.

CLAY TARGET SHOOTING

- Never load a shotgun until you're on the stand or in the safety cage, an obvious safety requirement to prevent danger to bystanders and accidental discharge in the direction of others.
- Never close a shotgun until it's your turn to shoot and you are ready.
- Close a shotgun by turning the grip hand outwards, controlling the stock between the forearm and body; push up with the forehand on the fore-end while pushing down with the grip hand. Keep the barrels pointing approximately 45º downwards and down range. See also Loading and Closing.
- Never turn towards other people with a loaded shotgun or when closing the shotgun.
- Always point a loaded shotgun down the range. Should it accidentally discharge, the shot will go in a safe direction.
- If the stand has no shooting enclosure, take care not to swing the shotgun around towards people. In FITASC Sporting and trap disciplines, there are no shooting enclosures.
- In single stand disciplines such as Sporting and Skeet, the gun must be opened and emptied before stepping off the stand.
- In disciplines where shooters stand in a line with other shooters e.g. DTL, ABT etc., cartridges are loaded on the referees command, e.g. "line ready" however, your gun must not be closed until it is your turn to shoot and the previous shooter has fired and opened theirs.
- If there is a problem (other than a misfire), or if a "No Target" is called, open the shotgun.
- If you have to clear a shotgun, shoot down range, not at the ground or near the trap house.
- Open and unload the shotgun before leaving the stand or when moving between stands.

- Shooters and bystanders should wear ear and eye protection when on or around a shooting stand.

Note: For safety reasons, the CPSA does not recommend the practice of individuals closing and mounting their guns anywhere except on a shooting stand. At registered events, an infraction will result in a warning; any repetition would result in disqualification from the event.

Remember

Your shotgun is your responsibility.

Your right to possess it may be taken away if you do not use it safely and sensibly!

Proof of Shotguns and Small Arms

"Small arms" covers a wide range of guns that use an explosive charge to fire a projectile(s). Such arms include smoothbore shotguns that fire cartridges containing pellets of lead or other materials.

PURPOSE AND HISTORY

In the UK, "proof" is the statutory (i.e. required by law) testing of every new shotgun prior to sale, to ensure so far as is practical, it is safe in the hands of the user.

Reproof is the similar retesting of a shotgun, which has previously been proved.

Proof and reproof involve the firing of a charge approximately 1½ times the maximum normally associated with the shotgun in question. The overpressure generated by this test puts the barrels under stresses not produced by firing standard cartridges. The proof test is intended to find any weakness in the barrels. This is preferable to a failure in use where personal injury may result.

Proof in the UK dates back to 1637, when the Gunmakers Company of London was granted its Royal Charter. Proof was necessary to protect the public from the many substandard and potentially dangerous guns being produced at that time. These poor quality guns not only endangered the public but, indirectly brought discredit on reputable gun makers.

In 1670, the Gunmakers Company secured its authority to enforce proof among the gun makers in and around London. The original proof marks are still in use today.

The Birmingham Proof House was established in 1813 by an act of parliament, at the request of the Birmingham gun trade, which at the time was very large (by comparison with only a few specialist manufacturers today). Prior to this date, private Proof Houses were in use. Marks used at the Proof House controlled by the Gunmaker "Ketland", became the first proof marks used by the Birmingham Proof House.

Since 1813, it has been an offence to sell or offer for sale an unproven gun anywhere in the UK.

See appendix 4 for addresses of the London and Birmingham Proof Houses.

REPROOF

Reproof or the retest of a shotgun is required under the following circumstances

- Indication of weakness in the action or barrel including cracks, pitting, bulges, dents or failure of the brazing of the lump.
- Potential weakness where the shotgun has been modified, or had major repairs or welding, or chroming.
- Enlargement of the internal diameter of the barrel or lengthening of the chamber

- Having multi-chokes fitted to a gun that was previously fixed choke or having existing chokes modified.
- Inadequacy of an earlier proof, e.g. an old gun proved for black powder may not be safe with modern cartridges.
- Other technical reasons.

Shotguns intended for clay target shooting must be "nitro proofed" and preferably chambered for 70mm (2¾ inch) cartridges.

RECIPROCAL ARRANGEMENTS WITH FOREIGN PROOF HOUSES

Many of the guns that you may buy will not bear British proof marks (unless they have been reproved); this is because in 1980 the UK became a member of the International Proof Commission (CIP). The CIP members agree to accept each others proof marks; therefore, a gun proved in one country will be legal in other member countries. Therefore, your Italian, Spanish or German gun may bear the proof marks of those countries.

Figure 3-1 shows a typical group of proof marks as applied to a shotgun by the Birmingham Proof House under the current rules of proof (1989), dimensions are given in millimetres, one Bar is approximately 14.5 pounds per square inch.

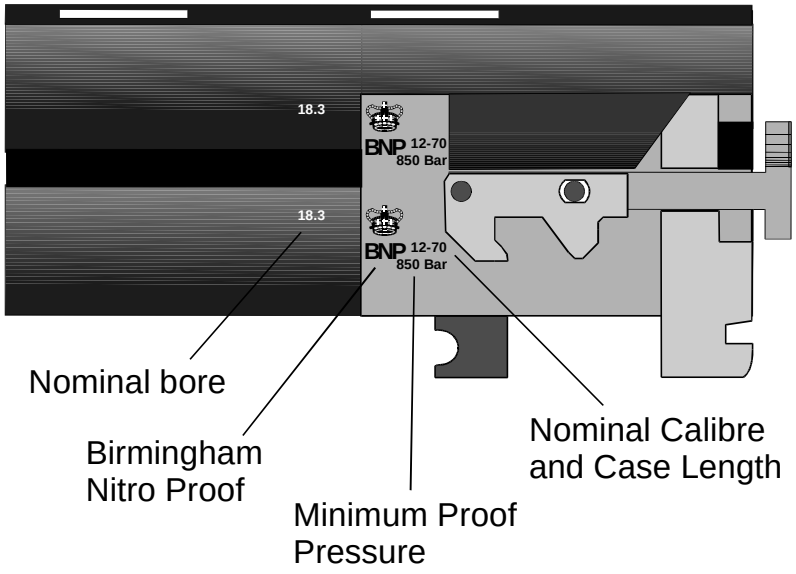


Figure 3-1 – Typical proof marks on over-and-under barrels

There are many different proof marks, old and new, British and foreign. A shotgun may bear a combination of any of these. Proof marks can be confusing and difficult to decipher.

The issues surrounding general condition, fitting chokes, barrel condition, repair and any associated proof marks are complex. It is illegal to sell an unsafe or out of proof gun and where second hand guns are concerned, the presence of proof marks do not guarantee its safety. If you have any doubt about the proof or safety of a shotgun don't use it, take it to a Gunsmith and get a professional opinion.

The British Proof Houses produce an excellent booklet "Notes on the Proof of Shotguns and Other Small Arms", which explains the rules of proof in detail and lists the proof marks of CIP members. Copies can be obtained for a small fee from one of the addresses in Appendix 4.

Shotgun Handling and Safety

There are three types of shotgun commonly used for clay target shooting. Side-by-Side, Over-and-Under and Semi-Automatic. Both Side-by-Side and Over-and-Under shotguns must be carried open and empty preferably over the forearm. Carrying in the "T" hold position provides both support for the gun and comfort for the shooter. See fig 3-2. Carrying over the shoulder is not preferred as there is a potential for hitting bystanders as you turn, this is a particular problem at busy shoots or in crowded clubhouses.

Figure 3-2 Carrying in the "T" position

Figure 3-3 Carrying a Semi-Auto

Semi-Automatic and Pump-Action shotguns cannot be broken; therefore, the safety requirements are somewhat different. With a break-action shotgun, it is obvious that the broken gun is safe; it is also easy to see if it is unloaded by looking at the chambers.

With the Semi-Auto and Pump-Action, safety is ensured by locking the bolt back and carrying it with either the barrel pointing up (See fig 3-3) or at a forward angle to the ground and in such a way that others can see that the breach is open. One thing that this procedure doesn't guarantee is that the magazine is empty. Before leaving the stand or lowering the barrel, users of Semi-Automatic and Pump-Action shotguns should keep the muzzle pointing down range and then manually cycle the action two or three times to make sure that the magazine is empty.

Figure 3-4 A semi-auto with a safety flag

A safety flag that fits in the chamber can be used to show that the chamber is empty and safe. See fig 3-4.

PUTTING SHOTGUNS INTO SLIPS AND RACKS

Visit the average shooting ground or club and you will see reasonably good gun handling practice, until shooters attempt to put their shotgun into a slip or rack. At this point safety often goes out of the window as guns are closed and pointed hither and thither on the way to the slip or rack!

Gun Slip

The correct method of removing a shotgun from a slip is: hold the slip with the stock end uppermost, open the zip approximately 45cm (18 inches), reach into the slip, hold the shotgun at the grip and press the release lever. Break the action and withdraw the broken shotgun from the slip. See fig 3-5

Figure 3-5 Removing a shotgun from a slip

To replace a break-action shotgun into a slip; hold the slip with the stock end uppermost, open the zip approximately 45cm (18 inches), push the barrels of the open and empty gun deep into the slip, raise the grip to close the gun then finally close the zip.

Rack

The correct method for placing a break-action shotgun into a rack is: starting from the "T" position, stand facing the rack, bring the grip hand to the action leaving the forehand free.

With the free hand take hold of the fore-end and rotate the barrels through 180º until they are pointing up. Lower the stock to close the action then place into the rack. See fig 3-6.

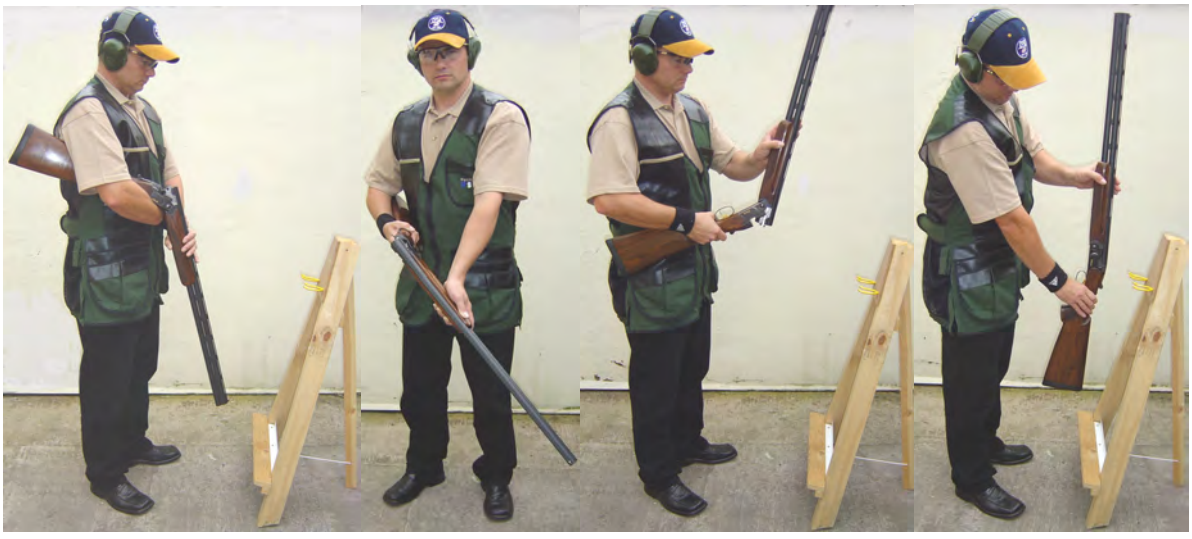


Figure 3-6 Putting a gun into a rack

To remove the shotgun from the rack, face the rack, lift the gun vertically, keeping the barrels pointing up break the action, hold the grip and draw the stock towards you while keeping the barrels pointing up. Take hold of the fore-end with the free hand and rotate the barrels through 180º until they are pointing down. Finally, place the broken gun over the forearm and return to the "T" hold. See fig 3-7.

Figure 3-7 Removing a gun from a rack

SAFETY CATCHES

All shotguns are equipped with a "safety catch"; this is a misnomer because a safety catch doesn't make a shotgun safe! The safety catch is just a trigger lock; even with the catch set to "safe" an impact on a loaded gun can cause it to fire. The only way to make a shotgun safe is to open and unload it.

There are two types of safety catch, manual and automatic. The automatic safety catch engages each time the shotgun is opened; and must be released before the shotgun can be fired. The manual type is always off unless selected manually. The safety catch on a Semi-Automatic shotgun is usually in the trigger guard.

Clay target shooters generally prefer manual safety catches, so there is no chance of lost points caused by forgetting to release the safety. Conversely, Game guns are normally fitted with an automatic safety. It is usually a simple job for a gunsmith to change an automatic safety to manual. Safety catches often incorporate a barrel selector that allows the shooter to have a different choke in each barrel and select which barrel will fire first. See fig 3-8.

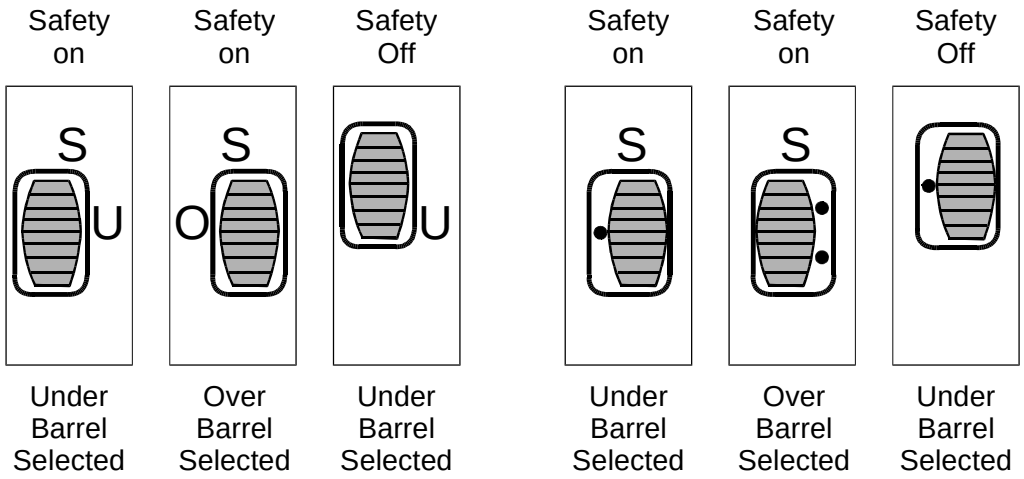


Figure 3-8 Safety catches with barrel selector markings

LOADING AND CLOSING A GUN

Shotguns should be opened and closed in a safe, smooth manner.

The over-and-under

Starting from the "T" position and facing down range, return the grip hand to the grip and the forehand to the fore-end, keep the finger away from the trigger throughout, with the other hand load one or two cartridges. Turn the grip hand outwards, controlling the stock between the forearm and body; push the fore-end with the forehand (moving the hand further along the fore-end increases leverage) while pushing down with the grip hand. Close the gun firmly but do not slam it shut. Keep the barrels pointing down range, approximately 45º downward, 1m in front towards the ground. See fig 3-9.

The semi-auto

Starting with the barrel pointing down range, 1m in front and down towards the ground. Hold the fore-end with the forehand and lock the stock against the hip, rotate the wrist outwards to present the open breech upwards.

Fig 3-9 – Closing a gun

Load one cartridge into the breech with the grip hand, then press the bolt release button to close the breach.

Rotate the forehand further (if required) to present the magazine opening, then with the grip hand, insert a second cartridge (if required) into the magazine, pushing it all the way home with the thumb. Finally, rotate the forehand inwards and return the grip hand to the grip.

OPENING, UNLOADING AND RELOADING A GUN

The gun should also be opened and unloaded in a smooth controlled manner. The technique should include catching and binning spent cartridges rather than ejecting them onto the ground.

From the mounted position, without changing hand position but with the finger off the trigger, bring the gun down to waist level. Lock the stock against the hip with elbow and forearm. With the grip hand, work the top lever to unlock the breech. Before it opens, move the grip hand to cover the breech. Control the opening with forehand (which is still holding the fore-end*). As the cartridge(s) eject, either catch them or stop them ejecting then pull them out manually. Put the spent cartridges into the bin. See fig 3-10

Fig 3-10 Catch the spent cartridges

* Note: controlling the fore-end, rather than letting the breach drop open, reduces wear and tear on the hinge mechanism thus delaying the need for an expensive repair.

Reloading

With the grip hand holding the grip and with the finger off the trigger, load from the opposite hand vest pocket, then proceed as described in "Loading and Closing a Gun" above.

Cartridge Safety and Barrel Blockages

Cartridges come in a variety of types with different forms of case construction, pellet size and loads, for more information about cartridge construction, see Section 2.

From a safety perspective, the following are the most important points:

If there is a misfire, keep the gun pointing down range, wait 20 seconds before opening the gun, in case the cartridge detonates. Check the barrels for blockage or debris if there is a soft or unusual discharge.

Do not mix different gauges of cartridge in your pockets or bag. A 20 bore cartridge will slide down the chamber of a 12 bore shotgun and lodge in the forcing cone in front of a 12 bore cartridge. Similarly, a 28 Bore cartridge will lodge in front of a 20 bore cartridge. When the gun is fired, a catastrophic barrel failure will result. The potential for injury to you and to bystanders is great.

Figure 3-11 shows a catastrophic chamber failure caused by putting a 20 bore cartridge in front of a 12 bore cartridge, the 20 bore cartridge can still be seen in the barrel. Figure 3-12 shows a barrel failure caused by firing a gun with a wad from a previous firing left in the barrel. Figure 3-13 shows a burst muzzle caused by getting mud or snow into the end of the barrel.

Figure 3-11 – A 20 bore cartridge in a 12 bore barrel

Check the barrels after each shot, for debris, wads, snow and mud in the barrels. There have been instances of blocked barrels bursting when the shotgun was fired. Do not load more than two cartridges in a Semi-Automatic shotgun.

Figure 3-12 – Barrel blocked by a wad

Figure 3-13 – Barrel blocked by mud

All barrels are marked with the chamber length, and cartridges are marked with their fully opened length. Therefore, cartridge length includes the length of the crimp and the dynamics of the cartridge when it is fired. See Fig 3-14.

Standard chamber lengths are 63mm (2½ inches), 70mm (2¾ inches), and 76mm (3 inches). Use only the correct length of cartridges for the chamber length marked on your gun. Use only No 6 – No 12 shot for clay target shooting.

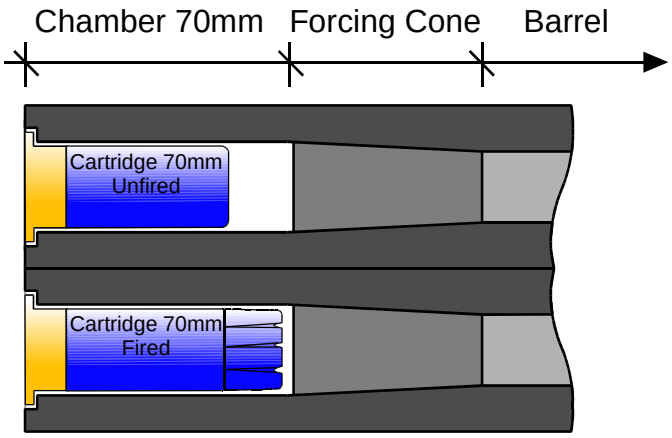


Figure 3-14 Cartridge/chamber length

SHOT FALLOUT

The absolute minimum safe shot fallout distance is 275m (300yds) in every direction from the shooting position. Figure 3-15 illustrates recent tests of the fallout distance for different sizes of shot fired at a 24º angle. Even allowing a 275m (300yd) **"exclusion zone"**, with the right angle and a tailwind of 10m/sec (22mph), 69m can be added to these distances; **larger shot could fall outside the exclusion zone**. A side wind can cause the shot to drift as much as 56m; whatever the reason do not use larger than No 6 shot on a clay shooting ground.

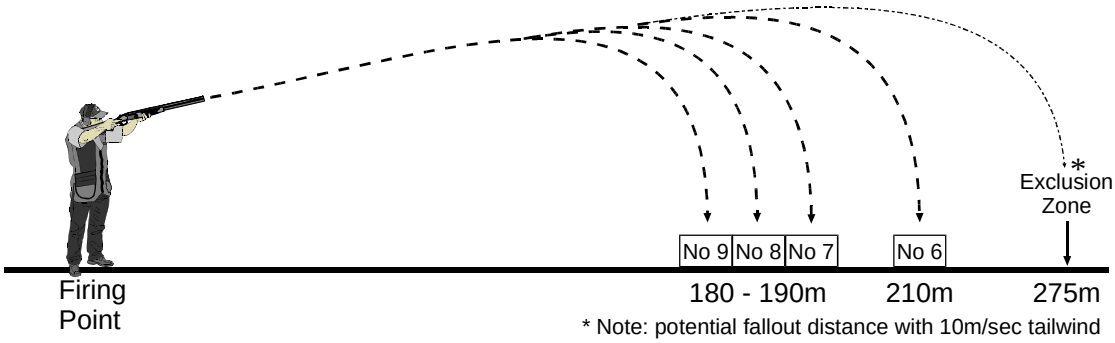


Figure 3-15 Typical shot fallout range

Personal Safety Equipment

HEARING PROTECTION

Since 1994, visible hearing protection has been compulsory **for all persons** involved in CPSA registered shoots and competitions in **all** disciplines.

The human ear is a very delicate mechanism that evolved long before the advent of modern noise pollution, therefore, the ear's built in defence mechanisms are inadequate in the presence of the noises generated by the modern world. Continuous exposure to loud noise can do permanent and virtually irreparable damage to the ears.

In the past, in industries such as weaving, where noise levels were high and continuous, people suffered severe and permanent damage due to lack of hearing protection. For over thirty years in the work place, there has been Health and Safety Law that obliges employers to provide suitable hearing protection at noise levels exceeding 80 decibels (dB) and requires that their wearing be enforced above 85dB.

A shotgun can produce noise levels in excess of 120dB, which is very loud and potentially injurious. Therefore, it is important that we and our fellow shooters, visitors, bystanders and ground staff wear adequate hearing protection to avoid permanent hearing damage. See also CPSA Safety Rules.

The effects

The initial effect of hearing damage is to lose acuity in the high frequency range. The sufferer can have difficulty hearing conversation when there is background noise; this is sometimes referred to as "cocktail party deafness" due to the need to strain to hear in a roomful of talking people. A hearing test will usually reveal difficulty to distinguish sounds like as "s", "f" and th"; in advanced cases speech will appear muffled. In some cases, in addition to loss of acuity, the individual can suffer "tinnitus", a permanent ringing, buzzing or whistling in the ears, which can be debilitating. Hearing loss can be made worse, it never gets better; the only way to cure it is to prevent its loss in the first place!

Prevention

By reducing noise exposure to less harmful levels, the risk of hearing damage is reduced. Basic hearing protection can be bought very cheaply, but the trick is to ensure the type you buy is comfortable to wear all day so that you are not tempted to remove it when on or around the range.

TYPES OF HEARING PROTECTION

There are two categories of hearing protection: those worn on a headband, and "ear plugs" that fit into the ear canal. These are then subdivided into "passive" types that reduce the noise by blocking the sound waves as they travel towards the ears and "active" that allow reception of normal sound levels so that the wearer can hear a normal conversation, but reduce loud noises to an acceptable level. See figure 3-16.

Passive Headband Type

Compared with industrial "ear defenders" that block out almost all noise, those specially designed for shooting, reduce noise adequately but allow the wearer to hear the calls of referees. Additionally the shooting types are usually slim-line so that they do not interfere with the gun mount.

This type of protection comprises a moulded plastic cup filled with foam sound absorbing material. The outer edge seals to the head by means of a soft foam filled vinyl cushion. Both ear cups are assembled onto an adjustable headband.

Active Headband Type

Originally developed for military use, these electronic "ear defenders" allow the reception of normal speech, the volume of which can be adjusted. For shooting these have the advantage that volume can be adjusted to cut out unwanted noise and the chatter of bystanders but allowing the shooter to hear the trap(s) cycling and referee calls, whilst attenuating the noise of shotguns.

Figure 3-16 Ear protection

Consider buying a Slim-line stereophonic model with separate amplifiers and volume controls for each ear. Prices vary depending on quality, and whether battery operated or rechargeable. Those rechargeable through a car cigarette lighter are worth considering.

Note: When wearing headband type ear protection, ensure that the seals are not cracked or split and are sitting against the skin. Wear, damage trapped hair, hats and clothing can reduce their effectiveness.

Disposable Ear Plugs

Made from compressible plastic foam, silicone rubber or wax this type is cheap, relatively effective and widely used. They work by filling the outer part of the ear canal, thus attenuating the noise level.

Reusable Ear Plugs

Similar to the disposable type, but more robust, they are usually made from soft plastic or silicone rubber; they are available in a variety of sizes. Ensure you buy the correct size to fit both your ears. Like the disposable type, they work by filling the outer part of the ear canal, attenuating the noise level.

Reusable Ear Plugs with Filters

Similar to the reusable type but contain an arrangement that allows better hearing of normal conversation but attenuates loud noise.

Custom Moulded (passive) Ear plugs

These close the ear canal and block sound like the previous types. However, custom moulded earplugs are made by injecting a liquid silicone rubber into the ear canal and allowing it to set. In the cheaper type the moulds are trimmed and are then used as earplugs. In the more expensive type, the ear moulds are sent to a specialist manufacturer who produces a better quality, moulded earplug. The injection of the liquid silicone into the ear canal must be carried out by a specially trained person.

Custom Moulded (active) Ear plugs

These look like in-ear hearing aids, but work in the same way as the active headband type described above. Moulds are taken of the ears as described previously, these are then sent to a specialist who moulds a pair of plugs containing electronic units powered by hearing aid batteries.

In-ear hearing protection has the slight disadvantage that they don't keep your ears warm in winter!

Note: 1 All types of custom moulded plugs are very comfortable and unobtrusive to wear. These and the other in-ear types have the advantage that they cannot foul the comb during gun mounting.

Note: 2 Hygiene is a concern with all reusable in ear types. To prevent ear infection, keep in-ear protection clean in accordance with the makers instructions.

Note: 3 Current ISSF competition rules preclude the use of any form of electronic ear protectors.

How much protection

Eventually all hearing protection will be subject to a European Standard for noise reduction. Some manufacturers quote a "noise reduction rating" (NNR), this is normally between 4 and 20, the higher the number, the better the protection. However, it may be better to look for products with a stated minimum attenuation of 25dB. Coaches and referees who must endure many hundreds of shots per day in close proximity to guns should pay particular attention to the performance of their hearing protection. Wearing both headband and in ear protection together should give a total attenuation of around 31dB bringing the 155 – 160dB peak of a shotgun to a more acceptable level.

EYE PROTECTION

Since 1st January 2005 eye protection has been compulsory **for all persons** involved in CPSA registered shoots and competitions in **all** disciplines. See fig 3-17. At a shooting ground, particularly on and around Skeet and Sporting layouts, there is a potential for being showered with spent shot and clay fragments.

There is also a potential, however remote, for eye injury caused by a malfunctioning gun. Therefore, eye protection is essential; safety glasses should be worn at all times. A peaked hat is also advisable; it will prevent debris finding its way between safety glasses and forehead.

Safety Glasses

Safety glasses have impact resistant lenses and frames that will give adequate support if struck by and object. The minimum recommended standard for safety glasses is BS EN 166f.

Figure 3-15 Eye protection

Spectacles and Sunglasses

Better than no protection, but unless made of an impact resistant material and supported in a suitable frame, ordinary spectacles may offer insufficient protection.

Field of View

In addition to poor protection, fashion spectacles can be so small that when the shotgun is mounted the view of the rib and target is obscured by the edge of the glass or the frame. Cheap safety glasses can provide protection and are adequate for DIY but may not be optically correct causing distortion of the field of view.

Lens Colour

Coloured lenses can be used to improve the contrast between the target and the background in difficult light conditions; smoke, or brown lenses for bright sunshine, persimmon, dark yellow or red for bright overcast and light yellow or sodium for low light conditions.

CPSA Safety Rules

It is a condition of registration that CPSA safety rules must be applied by ground owners to their staff and officials during CPSA registered events. How are they enforced? Simply by exclusion, any person failing to comply with any CPSA safety rule during a CPSA registered shoot or competition will be prevented from shooting by the referee or other officials.

The rules also apply to any spectators or family members that you bring with you. To prevent the embarrassment of being excluded from the shoot, make sure that you have enough safety equipment for all members of your party.

The CPSA safety rules apply equally to shoot officials, jury members, referees, scorers and others officiating at a registered shoot or competition.

In addition to CPSA safety rules, Health and Safety Law applies to any person at work. The Health and Safety Executive consider ground staff, trappers, referees and other officials who are paid in cash or in kind, to be at work. Therefore, shoot operators owe a "duty of care" to their employees and are breaking the law if they do not supply and enforce the wearing of adequate safety equipment by their employees.

Common law (Torts) also applies. For example, coaches who fail to ensure that their students wear adequate safety equipment could be sued for damages if they are injured. Instructors, even if they are not being paid, owe a duty of care to those in their charge; they would be liable for any consequence resulting from any failure to exercise that duty. See also Section 1 Insurance.

4. Gun fit and Master Eye

Gun fit

Modern mass production has made the relatively complex process of shotgun manufacture relatively cheap; today you get a lot of shotgun for a reasonable price. However, mass produced shotguns are manufactured to fit the average right handed male, which one could argue few people are. Left handed, female and young shooters together with men of small or very large stature may find that an off the shelf gun doesn't fit very well.

If a gun does not fit properly, it will be difficult to mount consistently (See "Gun Mount") and will shoot somewhere other than where you are looking. Off the shelf guns are made to fit an "average" right-handed male shooter, however, many of us aren't average sized men. For example, 10 – 15% of shooters are female, and approximately 20% of all shooters are left-handed. Therefore, although many of us can shoot adequately with an off the shelf model, there will be those that need the stock adjusting in order to attain the correct fit. If you are left handed, the stock of a right-handed gun will be "cast" the wrong way for you see figure 4-2; note also, that many stocks have a "palm swell"; if a right handed gun is adjusted to left handed, the palm swell will be on the wrong side. Left-handed guns are available off the shelf or to order, which will save the additional cost and inconvenience of conversion from right to left-handed.

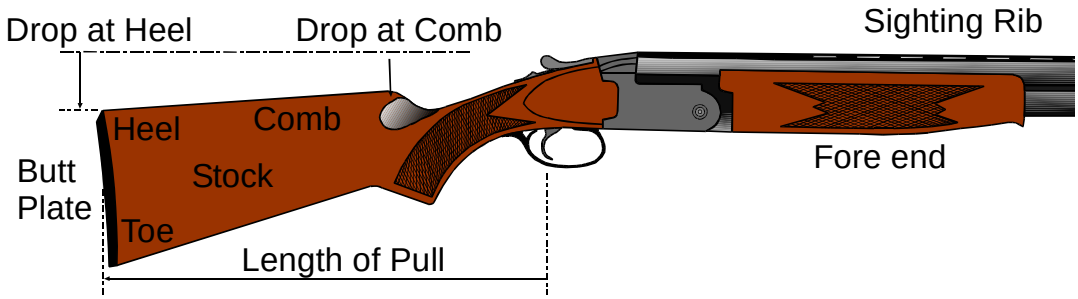


Figure 4-1 – The main dimensions of a stock

Figure 4-1 illustrates the main dimensions of a shotgun; the stock can be adjusted in order to ensure the correct fit. The main purpose of adjustment, and therefore correct fit, is to ensure that the shooters eye forms the correct relationship with the sighting rib, i.e. in the centre and at the correct height above it. Additionally, if the stock is too long, it will tend to snag on clothing as it is mounted, in addition to making the shotgun difficult to swing.

The length of pull is about right when there is two or three fingers' width between the first joint of the thumb on the hand gripping the stock and the nose when the gun is correctly mounted. Raising or lowering the comb will raise the eye in relationship to the rib, causing the gun to shoot higher or lower than where the eye is looking. "Cast" is an offset in the stock which accommodates the width of the face; a right-handed shooter will need the stock to be "cast off" the left handed "cast on". A person with a broad face will need a little more cast than one with narrow features. If the barrels fall at an angle when the butt is nestled in the shoulder pocket, the vertical angle of the toe and heel can be adjusted. See figure4-2.

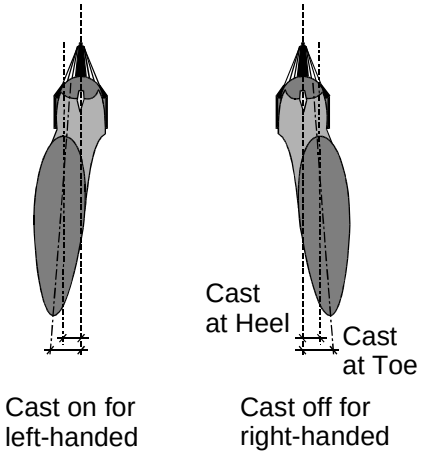


Figure 4-2 – Cast

Gun fit is best checked by a competent gun fitter or a CPSA Instructor or Coach. However, there are checks that you can make to determine if your gun fit is adequate.

Firstly, ensure that you have the butt of the stock correctly placed in your shoulder. It should be placed in the soft depression between the shoulder and collarbone, the "shoulder pocket", with the heel level with the top of the shoulder, see figure 4-3.

Figure 4-3 – Gun placement

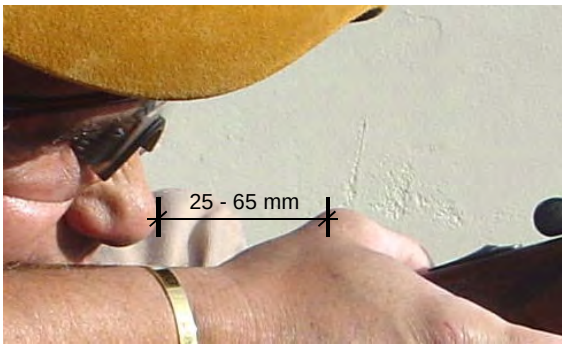


Figure 4-4 – Length of pull

Check the distance between the tip of your nose and the lower knuckle of the thumb on your grip hand. The distance should be 25 – 40mm (two fingers width) for a sporting or skeet gun and 40 – 65mm (two to three fingers width) for a trap gun. Less than 25mm can cause the thumb to hit the nose under recoil, more than 65mm may cause the gun to catch in clothing as it is mounted.

For a sporting gun, the pupil of the eye over the rib should form a figure 8 with the fore-sight bead, a little higher for a trap gun. Figure 4-5 shows the relationship between the pupil and the fore-sight bead.

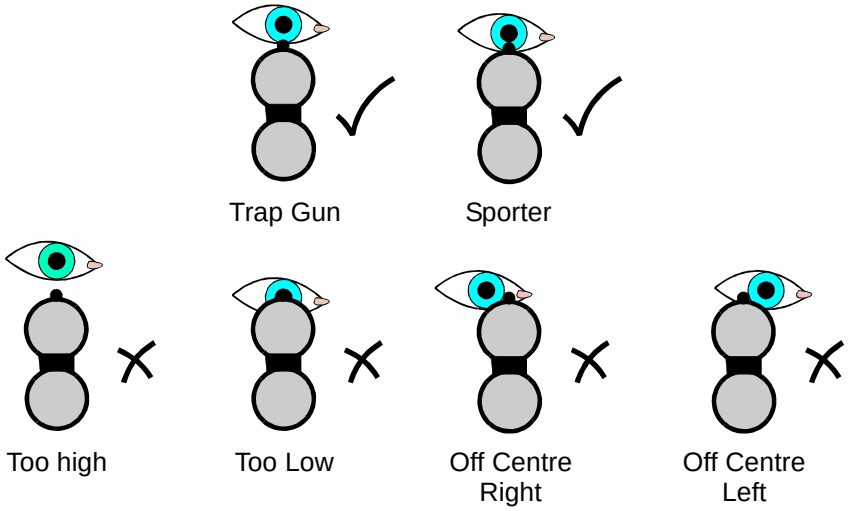


Figure 4-5 – Eye/Rib relationship

The height of the eye above the sighting rib can be checked by placing a pound coin on the sighting rib 20cm in front of the standing breach (a little "Blue Tack" will help keep it in place). Mount the gun normally; the height of eye for a sporting gun is approximately correct if the middle of the fore-sight can just be seen above the coin; for a trap gun, the bottom of the fore-sight should be visible. See figure 4-6.

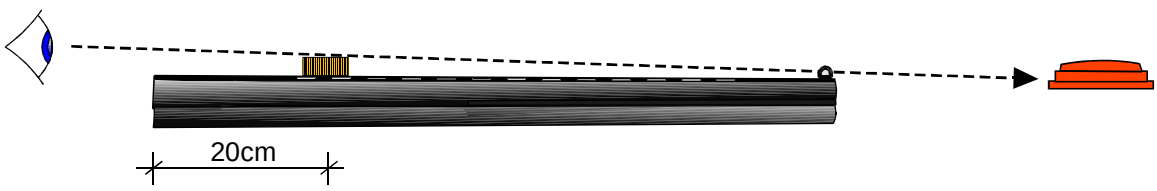


Figure 4-6 – Checking height of eye with £1 coin 20cm from breech

The height of the eye is adjusted by raising or lowering the comb, planting an extension on the comb or by bending the stock up or down. An adjustable comb is a distinct advantage because it requires no physical alteration of the stock, and can be adjusted by the shooter or coach.

Take up your normal stance, mount the gun, and point it at a fixed spot on a wall, say 5m away. Dismount the gun, keep looking at the same spot, close your eyes, re-mount the gun, and then open your eyes. If the gun isn't pointing at the same spot when the exercise is carried out repeatedly, the gun probably doesn't fit, get it checked out.

Eye Dominance

Unlike shooting a rifle where one eye is always closed, when shooting a shotgun both eyes are normally left open. With both eyes open, the shooter can take advantage of binocular vision, which allows the speed, distance and trajectory of the target to be judged more accurately. The majority of adult males have a dominant eye. The dominant or "master" eye will take precedent when looking at the target and ideally should be the eye looking down the rib, i.e. the "shooting eye".

If the shooting eye is 100% dominant, the sight picture will be true and the shot will go where you are looking. However, if the other or "off eye" is interfering, it will affect the sight picture, you will not be looking straight down the sighting rib at the target and this will cause the shot to be sent off course. Figure 4-7 illustrates the effect on a right-handed shooter who will shoot tend to shoot behind a left to right target. If the target is from right to left, the tendency would be to shoot in front of it.

If you are lucky, you will be fully right eye dominant and right handed or fully left eye dominant and left handed. However many females, youths, left-handers and a proportion of right-handed men are not 100% dominant in either eye.

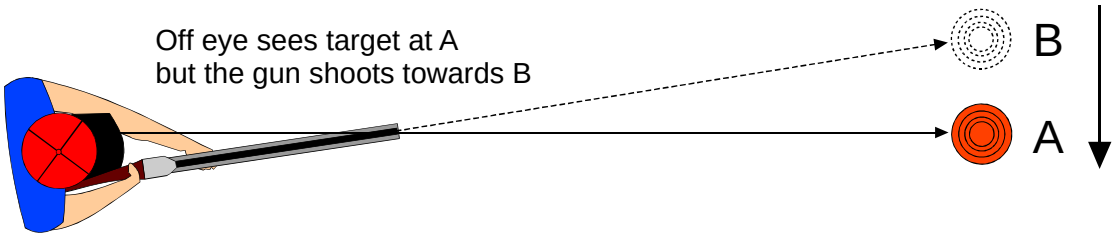


Figure 4-7 – Off eye interfering

To check your own eye dominance, focus on an object in the distance then point at it with a finger and outstretched arm. Close each eye alternately; the open eye that causes the finger to line up on the object is the master. If the finger does not line up on the object with either eye, then neither eye is fully dominant.

If the finger and object lines up with the opposite eye to the one you normally shoot with, you are "cross dominant". Repeat this exercise a number of times to be certain of the result. See figure 4-8.

If you are cross dominant or not fully dominant in the shooting eye, you have a number of options. You can change shoulders, put an opaque patch on your shooting glasses the patch will obscure the view of the eye not looking down the sighting rib, alternatively close that eye just before pulling the trigger.

One advantage of taking some initial lessons from a CPSA Instructor or Coach is that they will check your eye dominance; if you are cross dominant or there is any other more subtle sight problem, he will suggest a strategy to compensate.

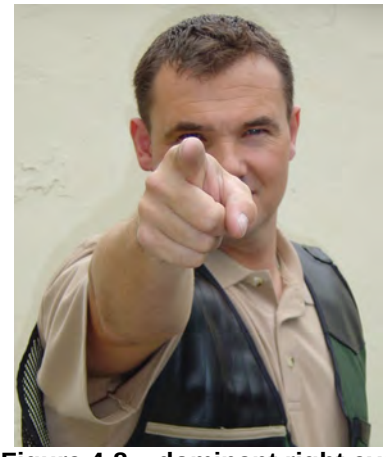


Figure 4-8 – dominant right eye

Don't worry about this too much, some world class shooters are partially or completely cross dominant e.g. right handed with left eye partially or fully dominant. Some wear a patch on their glasses; some close or dim the off eye just before pulling the trigger. You must know your eye dominance and compensate for any anomalies, or face the frustration of missing some targets for no apparent reason.

EYE FITNESS

Good eyesight is essential to shooting sports; if you have not had an eye test recently you should have one. We all tend to take our eyes for granted, but just as our muscles improve with exercise and practice so does our ability to see and track a target if we exercise and strengthen our eyes. Simple focussing and rotation exercises can be of benefit; ask your optician to suggest some.

Using a Pattern Plate

Gun fit and choke/cartridge performance can be checked by shooting at a "Pattern Plate". A pattern plate is a metal square approximately 1m x 1m, painted white and mounted with its centre approximately 1.5m high. For gun fit, mark an aiming point in the centre of the plate, stand 15m (16yds) away, load then mount the gun above the centre mark; lower the barrels 50cm below centre, then bring them up smoothly, pulling the trigger as the fore-sight passes through the centre mark. Repeat this process four or five times, then check the point of impact on the plate, ignoring any hits outside the main grouping. Sporting, Skeet and Game guns should have a point of impact centred on, or slightly above, the aiming point; a trap gun should have a point of impact where approximately $^{2}/_{3}$ of the pattern is above the aiming point. At 15m, a 1.5mm change in the height of the comb makes approximately 25mm difference to the point of impact.

For patterning chokes and cartridge loads, the same procedure is used. Now, however, the pattern diameter, density and consistency of shot distribution within a given diameter circle are checked. This test should be carried out at 10, 20, 30 and 40m for each cartridge and choke combination. The table on page 2-4 gives an approximation of satisfactory choke and load combinations at these distances. Every shooter should spend some time at the pattern plate to determine where his gun is shooting and the exact performance of his gun, with different choke and cartridge combinations.

Figure 4-9 Using a pattern plate

Set-up

Occasionally, you will witness a fellow shooter standing, feet wide apart, with his rear foot placed well behind him. He will hit targets, but will be frustrated at inexplicable misses particularly on crossing targets. What this shooter is inadvertently doing is reducing the angle through which the gun can be swung causing him to stop the gun on extreme left or right targets, resulting in a miss behind the target. Consistent shooting requires that the shooter stands correctly and mounts the gun in a consistent manner. Additionally, the shooter must have time to see, judge and track the target visually and to be able to mount the gun and break the target without rushing or leaving it until the target is out of range. The "set-up" should be a ritual, carried out before each shot and comprises: Stance (a combination of foot positioning and body posture), gun mount a visual pickup point, and gun hold point, a target pick up point and a target break zone.

STANCE

Poor foot positioning can cause a target to be missed for no apparent reason. If the feet are not positioned so that the gun can be swung through the "break zone", the gun will be slowed or stopped as the shooter swings across his body in one direction or drops a shoulder as the hips and torso can't pivot any further in the other. An open stance allows you to swing further without stopping the gun. Similarly, if the feet are too far apart, or at too wide an angle to each other, then the range of swing will be affected.

Foot Position Sporting

The recommended foot position is: with the middle of the break zone at twelve o'clock, the feet should be placed as shown in figure 5-1 so that, for a left-handed shooter, the front (right) foot is placed at eleven o'clock and the rear foot between nine and ten o'clock. For a right-handed shooter the front (left) foot is placed at one o'clock and the rear foot between two and three o'clock. The heels should be 20 – 25cm apart

For a quick foot position (e.g. when taken by surprise): point the front foot towards the middle of the break zone.

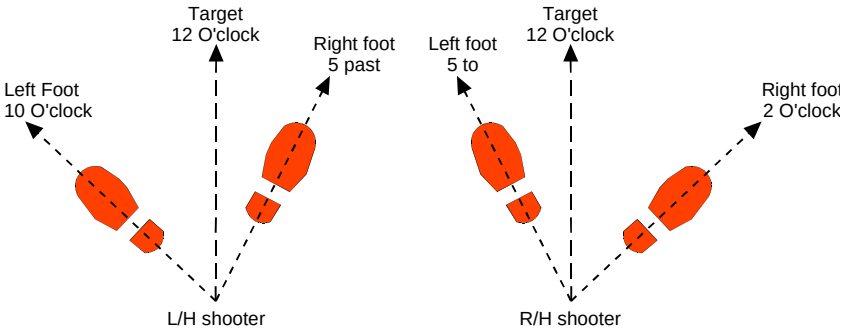


Figure 5-1 – Foot positioning – Sporting

Foot Positioning for Trap Disciplines

The recommended foot position for trap disciplines is to stand so that an imaginary line running through the toes of both feet is parallel to the path of an extreme right hand target for a left-handed shooter or an extreme left hand target for a right-handed shooter. This foot position has the advantage of being easy to remember and easy to align with the known extreme target angles when moving from one discipline to another. The heels should be approximately shoulder width (30 – 40cm) apart. See fig 5-2. If the position or angle doesn't feel comfortable, adjust this width and the angle of the rear foot a little.

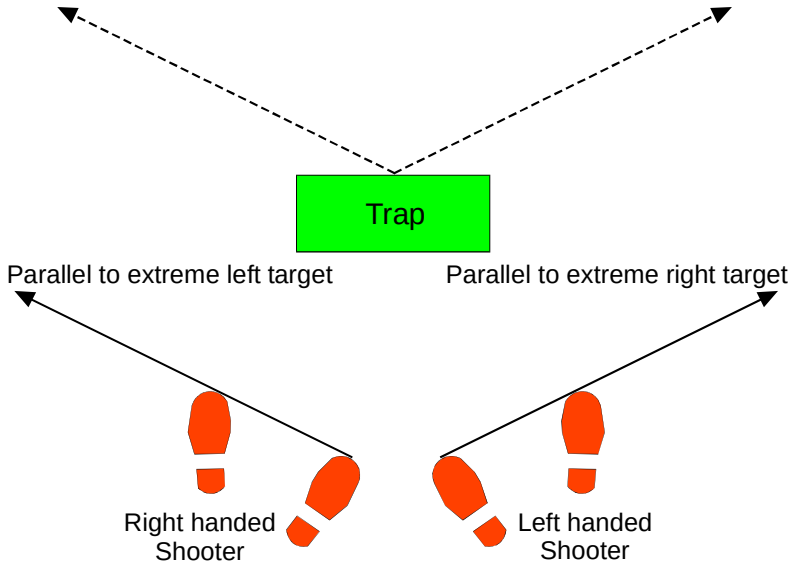


Figure 5-2 – Foot positioning – Trap

A quick foot position for DTL and particularly easy for a beginner to remember is: stand with the heels shoulder width apart and the toes placed on an imaginary line that passes at 45° through the corners of the stand. This gives an approximate adjustment for the feet/target relationship on each stand.

BODY POSTURE

In addition to correct foot positioning, the shooter's posture has considerable bearing on the placement and consistency of the shot, not to mention the shooter's comfort and fatigue levels. Therefore, the second component of "stance" is posture, or how the shooter holds his body when the gun is mounted and he is ready to pull the trigger. Since the earliest days of shooting, there have been a number of stances developed and taught. Both Churchill and Stanbury, (the fathers of shotgun technique) wrote at length and had definite and differing views on the subject. From their early (and still valid) work, more relaxed and flexible postures have evolved. The first involves placing the feet as previously suggested then bending the front knee slightly whilst keeping the rear leg straight but relaxed; then lean forward slightly putting 60% of your weight over the front foot, "nose over toes" – don't lift the rear heel. Head lifting as the shot is taken, is a common mistake, causing a miss over the top of the target. This leaning forward posture has the advantage of encouraging the shooter to keep his head down and the cheek firmly on the stock. Some shooters, particularly Trap shooters, prefer an upright posture with the weight evenly distributed. Additionally some Skeet shooters prefer to have both knees slightly bent, particularly for Olympic skeet, where the gun must be held low on the hip. See figs 5-3 and 7-5.

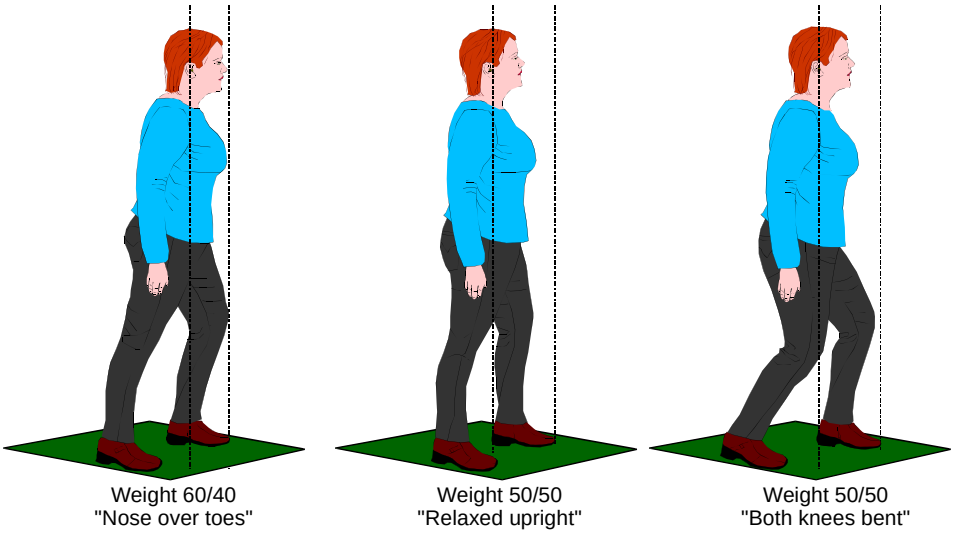


Figure 5-3 – Body Posture

GUN MOUNT

Regardless of the discipline, the beginner will initially be more comfortable with a pre-mounted gun, whilst the majority of Trap shooters pre-mount their guns. As experience is gained and a reasonable number of targets are being broken, the Sporting shooter will want to learn to "pick up" or track the target with the gun dismounted, mounting the gun into the shoulder pocket in one smooth movement; pulling the trigger as the correct sight picture is perceived. Although shooting gun down takes practice to master, it has a number of advantages. The arms are free to assist the swing, instead of the swing being generated by the torso alone; the tendency to focus on the end of the barrels or to aim (like a rifle) is reduced; high targets can be easier to address with a dismounted gun.

Poor gun mounting is a major cause of missed targets. Consistent mounting is achieved by practicing regularly in order to develop "muscle memory"; this can be done at home in front of a mirror. Stand as described previously, look into the mirror and hold the gun horizontal with the butt just under the armpit. Push forward and up with both hands raising the stock to the cheek then pull the gun firmly into the shoulder pocket. The hand movements should be simultaneous in order to avoid a see saw action.

Some international disciplines require the shooter to call for the target with the gun dismounted (see 7-4 and 7-5). However, where the gun can be pre-mounted, there is time to get the gun mount right. Don't be intimidated by other shooters, and don't call for the target until the gun is properly mounted and you're ready.

FORWARD ALLOWANCE

If you point a shotgun at a crossing or quartering target and then pull the trigger, you will miss behind the target. Instead, the shotgun must be swung with the moving target, tracking its path. However, if you shoot straight at the target, by the time the shot has reached the point of aim, the target will have moved forward, leaving the shot to pass harmlessly behind it.

It is therefore necessary to apply a degree of forward allowance or "lead" (pronounced leed) in order to have the shot string and target coincide at the same point in space, causing the target to be broken. In order to achieve a degree of lead, the gun barrels must appear in front of the target and be moving when the trigger is pulled. How much lead should you give? How long do you have? For the beginner, this is the most confusing and frustrating topic of all to understand and judge.

The problem is that everyone, including the experienced shot, sees a different amount of lead. One shooter will say that he gave the target no lead at all, whilst another will say he gave it 1.5m, yet both shooters hit the same target.

It all comes down to what the shooter perceives as he pulls the trigger. This is affected by shooting style, barrel length and the speed that the barrels are moving. This is particularly true on Sporting targets where trajectories, distances and speeds can vary enormously.

The shooter will need to build up some experience in order to make the judgment of forward allowance easier. Inexperienced shooters tend to underestimate lead and tend to miss behind the target, because to them, the amount of lead required, particularly for fast, crossing targets will look like too much. Experienced shooters, however tend to miss in front by overestimating the required lead.

It is most frustrating to miss a target repeatedly no matter what you try. A CPSA Instructor/Coach will work with the shooter to determine how they perceive lead and give advice accordingly. However, when an experienced shot (that you trust) says give it 2m lead, this may seem extreme, but try it and you may find you hit the target.

The lead required for Trap disciplines is not as variable as for Sporting targets; Trap disciplines have targets that leave the trap within a prescribed angle, speed and trajectory and are therefore easier to judge, catalogue and memorise. See also Section 7 "Sight Pictures" and figs 7-6, 7-7, 7-17 and 7-18.

Technique

We will discuss three methods of applying lead to a target, the CPSA Method, Maintained Lead and Swing Through. Regardless of the method employed, they have some common elements; these are:

THE VISUAL PICK UP POINT

The **"visual pick up point"** is the point where the eyes will pick up the target after it is released. The target should be in focus and the end of the barrels should not. Focussing on the end of the barrels will result in the target whizzing by out of focus, resulting in a miss. The visual pick up point for Sporting targets will be somewhere back between the "gun hold point" and the trap. Don't look directly at the trap, focus one or two metres further out. If the trap cannot be seen, focus towards the first point where the target will be clearly visible. See fig 5-4. In Trap disciplines, the gun is usually pre-mounted, making it too easy to focus on the end of the gun. Instead, focus somewhere out in front of the trap house with a wide field of view. Once the target is picked up, the field of view should be narrowed to fully focus on the target.

THE GUN HOLD POINT

It takes a little time for the rest of the body to react to what the eyes see (reaction time), if the muzzle of the gun is held too near to the visual pick up point, the target will whiz by the muzzle before the gun can be moved, causing the muzzle to chase after the target. Additionally, if the barrels are held too high they will obscure the target causing momentary loss of visual contact. Choose a **"gun hold point"** just below the flight line of the target, that allows a clear field of view and sufficient reaction time for the muzzle to keep pace with the target. For Sporting targets, the hold point will be somewhere between the break zone and the visual pick up point. See fig 5-4. The endless variety of Sporting targets makes a simple hold point strategy difficult to set out. However, the hold point should be as far back towards the trap so that the speed, line and lead can be judged, but not so far back towards the trap that the target passes the gun as a blur, making it hard to pick up the line, causing the shooter to rush after it. If in doubt, try a hold point half way between the visual pick up point and the break zone. The gun should be held so that the target will be visible just above the barrels and not obscured by them.

For Skeet and Trap disciplines, the hold point is easier to define in relation to the trap house. Suggested hold points for the inexperienced shooter are listed with each of these disciplines in Section 7 chapters.

TARGET PICK UP POINT

As the target is seen (visual pick up) the shooter begins to move the muzzle up onto the target flight line to coincide with the movement of the target, depending on the method of shooting adopted, the shooter may pick up on, ahead or behind the target, this is the **"target pick up point"**. See fig 5-4.

CREATE SUFFICIENT LEAD AND SHOOT

As we have discussed, shooting straight at a crossing or quartering target will result in a miss behind. Once the speed and line of the target has been established, it is only necessary to create sufficient lead so that when the gun is fired the shot and target coincide in space. See also Lead and Sight Picture.

SWING ON

Should the shooter stop swinging the gun as they pull the trigger, the lead will be lost resulting in a miss behind the target. Therefore, the shooter must **"swing on"** to maintain momentum and to prevent them from inadvertently slowing or "stopping the gun" as the trigger is pulled.

GUN DOWN AND UNLOAD

Finally, the gun is dismounted, opened and made safe.

BREAK ZONE

This is where you will break the target. Your stance will be set-up to point towards this position. Choosing a break zone for Sporting targets requires (the) angle, speed, trajectory, wind and obstacles to be considered.

It's important not to rush the shot, so try to choose a break zone that gives sufficient time to see the target, read the line, mount the gun and pull the trigger. See fig 5-4.

The majority of Trap disciplines have targets that are thrown randomly but within prescribed angles and distances. The Trap shooter cannot anticipate a single break zone but must anticipate breaking the target within the designated zone inside which the target will be thrown.

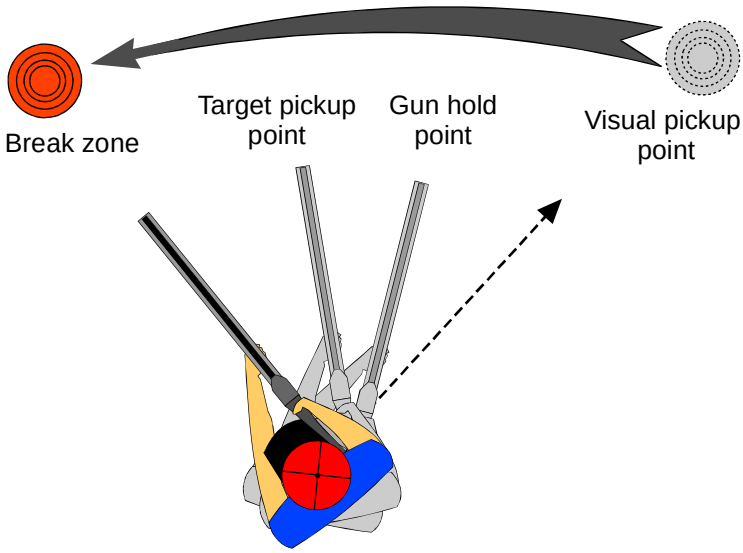


Figure 5-4 – Visual pick up, Gun hold and Break zone

Methods of Applying Forward Allowance

Detailed descriptions about shooting techniques are beyond the scope of this book; however, there are excellent books and videos that describe shooting technique in detail. Some suggested titles are listed in Appendix 2. However, a brief description of the three principle methods of achieving forward allowance, or lead will assist you to recognise the technique(s) that other shooters use, and CPSA Instructors and Coaches teach. See figs 5-5 to 5-7.

The CPSA Method

In this method, the barrels pick up and lock on to the target, moving with it to establish speed and line, and then pulled in front to create the required lead before the trigger is pulled. See Fig 5-5.

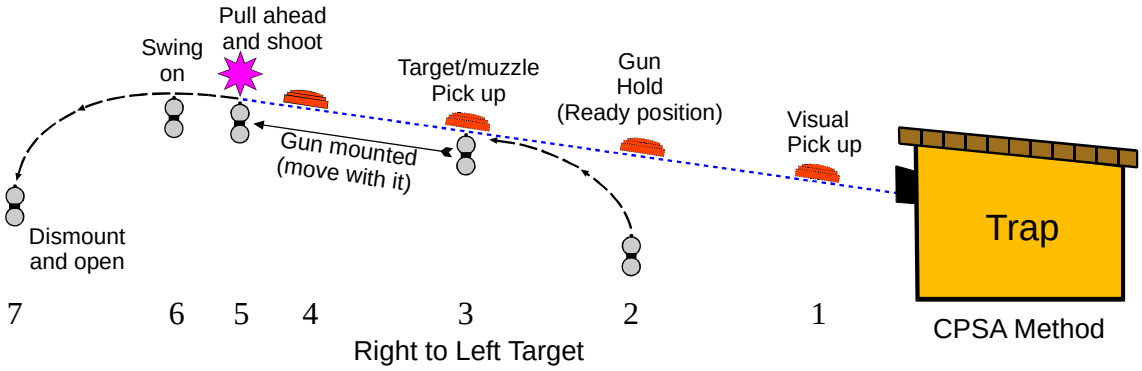


Figure 5-5

Maintained lead

In this method, the barrels start in front of the target with the correct lead and stay in front as the gun is swung; the trigger is pulled almost immediately because the lead has already been judged. When the gun is held in the ready but dismounted position, the barrels start in front of the target with the correct lead and stay in front as before; now as the gun is mounted the trigger is pulled almost immediately the stock is into the shoulder.

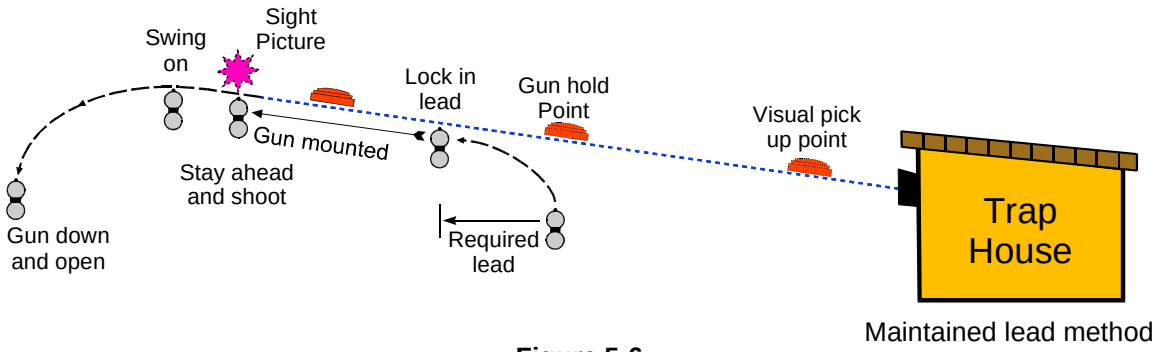


Figure 5-6

Swing through

With this method, the gun is mounted and barrels start behind the target, are then swung smoothly through and in front of the target; as the desired lead is seen the trigger is pulled.

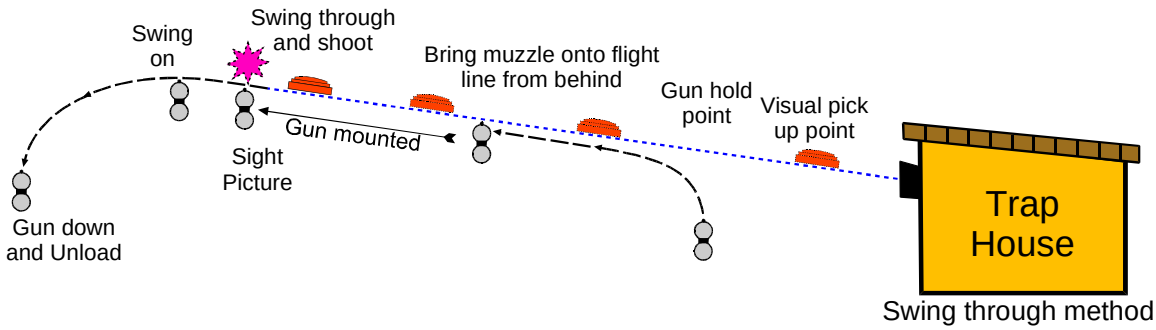


Figure 5-7

For Sporting targets the CPSA Method is the most consistent and reliable, particularly for the beginner to use, because it automatically causes the gun to move at the same speed and follows the same line as the target; no other method does this. The other methods have their uses, for example, Trap targets are shot using the "swing through method". The swing through method is used because each target is thrown at random; therefore, the shooter has to wait to see the trajectory of the target, causing the barrels to begin moving from behind the target. Therefore, the barrels have to accelerate, from behind, overtake the target and provide the desired lead before the target can be shot.

CPSA Instructors and Coaches are required to be proficient in teaching the CPSA method. CPSA Coaches are required to be capable of coaching all three methods. Your CPSA Coach will demonstrate and have you practice an appropriate technique for each discipline or target presentation.

Putting it together

Many experienced shooters have a ritual that they follow before each shot. They first decide where they will break the target. They then place their feet so that they have an unrestricted swing through the "break zone". They then wind the body back to the "hold point", and finally they look towards the "visual pick up point" before calling for the target. When the target appears, they track the target with their eyes, swinging the body and gun as one unit, following the target's trajectory. The gun is then mounted (if not pre-mounted), the correct lead given; then the trigger is pulled and the gun kept moving until after the trigger is pulled.

Shooting Errors

Targets may be missed due to under/over estimating lead or errors in technique. The following provides an overview of the technical errors that shooters make. It is difficult to diagnose your own shooting technique; if you are having problems with a particular type of target, contact a CPSA Instructor or Coach, who will be happy to help.

STANCE

Placing the lead foot too far in front of the other, so that hip rotation is reduced, can cause the gun swing to slow down or stop. Standing with the feet at too narrow an angle to the hit-zone, also reduces the swing and can also cause the gun to slow down or stop. Standing too square to the hit-zone brings the rear foot too far forward, reducing stability and causes a tendency to overbalance. Leaning too far forward can cause the shooter to over balance. Standing too upright can cause the head to lift off the stock or the barrels to rise excessively on firing, making it difficult to acquire the second target. Rear foot, weight on toes only, poor balance – causing general misses.

MOUNT

Gun too high in the shoulder lowers eye position causes head lifting and shooting over the target. Gun too low in the shoulder raises eye position causes shooting over the target and cheekbone bruising. Gun too high/low in the shoulder can also increase felt recoil. Holding the gun out of the shoulder in anticipation of recoil, results in bruising. Gun not mounted in shoulder pocket can increases felt recoil, cause possible bruising of the cheek, misalignment of the shooting eye with the rib and canting of the gun. Bringing the gun up vertically instead of horizontally when mounting or a seesaw action while attempting to pick up the target when shooting "gun down" can also cause problems.

SWING

When shooting the CPSA Method, holding the gun too far back towards the trap reduces reaction time, results in barrels starting from behind and being swung too fast to catch up with the target and induces an attempt at swing through method. Holding too far out from the trap reduces swing, and pick up encroaches into the break-zone. Starting to move too early creates too much lead or slows the gun to allow the target to catch up and can induce an attempt at maintained lead. Stopping the gun on firing, if not caused by incorrect stance, may be due to failing to "swing on" after firing, resulting in a miss behind the target.

TARGET/BARREL ALIGNMENT

Muzzle held too high at the hold point obscures the target; the shooter loses sight of and has to chase after it. Muzzle too low at hold point can create too much momentum from vertical movement causing muzzle to rise above the flight line and can also result in swing through being applied.

Assuming an incoming or going away target, **a right-handed shooter** who is consistently shooting to the left or **a left handed shooter** who is consistently shooting to the right of the target, can be caused by eye dominance changing from shooting eye or closing the shooting eye, or the comb being too low so that the off-eye takes over.

Assuming a crossing target, a **right handed shooter** who consistently shoots in front of right to left, and behind left to right targets, or a **left handed shooter** who consistently shoots in front of left to right, and behind right to left targets, can be caused by dominance changing from the shooting eye, or closing shooting eye or the comb being too low so that off eye takes over.

Intermittent effects can be caused by alternately focussing on the barrel and the target, or seeing around opaque tape for certain target presentations, or occasionally failing to close the "off eye" (when the eye is being closed as an alternative to opaque tape on the shooting glasses) or by closing both eyes in anticipation of noise and recoil, flinching as the gun is fired, or by eye dominance varying during the course of the day.

Shooting over the top of targets can be caused by the gun being mounted too low in the shoulder pocket, the comb being too high or the gun shoots too high, covering target with the barrel or rib rather than viewing it over the bead alternatively, lifting head off the stock prior to pulling trigger (possibly caused by the comb being too low or the butt too high in shoulder)

Shooting underneath targets can be caused by the gun being too heavy or the forehand grip too far back toward the action or the comb set too low.

Shooting behind the target can be caused by shooting **at** the target instead of applying lead, not enough lead, or stopping the gun as the trigger is pulled, or incorrect cast, or an eye dominance problem.

Shooting in front of the target can be caused by applying too much lead or miscalculating lead, or incorrect cast, or an eye dominance problem.

If you are having such difficulties, consult a CPSA Coach who will diagnose and assist you to correct the problem.

6. Classification and Shooting Procedures

Classification

As you gain experience and your scores improve, you will begin to compare your performance with those of other shooters. There is a formal system of classification for each discipline, based upon average scores and operated by the CPSA. In order to obtain a personal classification you must be a full CPSA member. You will then need to shoot at least 100 "Registered" or competition targets in your chosen discipline(s) to obtain a classification. Over 100 organised shooting grounds in the UK hold regular CPSA "registered shoots" where your scores will be submitted to CPSA HQ and entered onto the classification database, which is accessible to members via the CPSA Website.

For the majority of English disciplines, the highest class is AA, followed by A, B and C (although for ESP and STR at National Championships there is an AAA class) for ABT, FITASC and ISSF disciplines, the classes are A, B, C and D. The higher your registered average, the higher your classification will be. You can be classified in more than one discipline, but you will need to shoot at least 100 registered targets per discipline (40 pairs in double rise) in order to obtain a classification.

In addition to personal satisfaction, classifications are used at formal competitions to categorise shooters, set handicaps and distribute prizes according to class. This system gives all shooters a chance of winning a prize in their class, not just the top guns who are likely to be in the higher classes.

CALCULATING A CLASSIFICATION

The CPSA updates members classifications every six months on a rolling average, using results received from registered shoots during the previous 12 months. These are used to determine a shooter's classification for the following period. The classification is determined as follows:

1. The "Raw average" for the shooter is calculated. For example, a shooter completes five registered shoots with scores of 65, 57, 68, 75 and 70 out of 100. The Raw average is 67.
2. Discard any score of more than 10% below the raw average.
3. 10% of the example raw average = 6.7. Therefore 67 - 6.7 = 60.3.
4. Any score less than 60.3 is now discarded (in this example the 57).
5. The remaining scores are added and divided to arrive at an "adjusted average".
6. 65+68+75+70 = 278 ÷ 4 Adjusted average = 69.5%.

Once all shooters' adjusted averages are calculated, they are listed in descending order and the lists for each discipline are divided into 4 (or 5) groups, then the classifications are worked out as follows:

1. For English Sporting and Sportrap the top 5% = AAA class the next 10% = AA Class.
2. For all other disciplines, the top 15% will be in AA Class (or A Class depending on the discipline).
3. The next 30% will be in A (or B) Class.
4. The next 30% will be in B (or C) Class.
5. The bottom 25% will be in C (or D) Class.

See CPSA booklet No 5 for more information on the classification system. To see your own classification log on to www.cpsa.co.uk

Practice

All informal shooting is categorised as "practice". At some shooting grounds, the procedures for shooting are very informal, with the shooters "buttoning" the traps and marking their own scorecards. At others, the traps may always be operated by a "trapper" or "buttoner" who supervises the squad, acts as safety officer, operates the electrical trap releases and keeps score. Regardless of how it is organised and supervised, practice shooting does not count towards an individual's classification.

Registered Shoots

Registered shoots are similar to well organised practice, with the exception that the verification and collation of scores will be carried out under CPSA rules. Additionally, there is an element of competition, usually resulting in a small cash prize or trophy. Scores are submitted to the CPSA for classification purposes by the shoot organiser. The main tools used to ensure that scores are a true record are either a dedicated scorer or referee at each stand or Trap layout, or the squad system, where each member of the squad witnesses the scores and the majority will ensure that the scorecard is handed in. The squad system minimises the disreputable practise of a small minority of individuals who destroy scorecards, in order to artificially adjust their average. At major competitions and many fully supervised Trap shoots, the referee scores and hands in a master scorecard, thus preventing this problem. There is usually a small additional charge for a registered round, to cover the prizes, additional labour and administration costs.

Major Competitions or Championships

A major competition or championship such as the Dougall Memorial DTL or English Open Sporting, to name just two, is an event held over one or more days between individuals or teams of shooters and will often attract large numbers of competitors in all classes. These major events are held in accordance with rules set out by the CPSA. The scores from these events count towards the shooters classification in the same manner as any other registered shoot.

Such major events are well organised, they need to be to cope with the large number of participants.

A major competition will be staffed by a number of experienced officials that will include "trappers" or "buttoners" who operate the traps, and "referees" and their assistants who score, ensure that the rules are enforced and targets are correctly called. At large events there may be safety officers and a number of marshals for crowd control. Any complaints and protests will be dealt with by a "jury".

For a first time participant these large events can be very daunting, mainly due to the large numbers involved and the hectic activity. The best way to take part for the first time is to go with a group of more experienced shooters who can provide guidance.

The CPSA publishes rules for all major disciplines; all registered events will be run according to these. If you intend to compete seriously, you will need to obtain a copy and become familiar with the rules for your chosen discipline. CPSA booklets No 5 "General Rules and Regulations" and No 7 "General Technical Rules" are the best places to begin; ensure that you have an up to date copy, they can be downloaded as pdf files from www.cpsa.co.uk, or purchased as a booklet from CPSA HQ, for a small fee.

THE JURY

A "jury" is (usually) a group of five experienced officials whose job during a competition is to ensure that the competition proceeds according to the rules, settle protests and impose penalties; a minimum of three jury members are required for all decisions.

THE REFEREE

A "referee" is a competent official who supervises at the stand or firing line and whose job it is to control the squad(s), score (or supervise the scorer), declare targets hit or lost and to deal with malfunctions, misfires, protests etc. The referee has the authority to warn shooters about breaches of the rules and safety violations and to disallow targets for repeated breaches. The referee refers protests that cannot be settled on the firing line to the jury. However, the referee's decision about "hit", "lost" or "no" targets, is final.

Control, Calls and Scoring

These are the first formal procedures with which an inexperienced shooter will need to become familiar even if only shooting informally or in practice.

The majority of registered and other competitions events are shot in "squads" although an individual may shoot. The shooting positions or "Stands" from which the shooter fires will be marked, and the stands for English Sporting must have safety enclosures so that guns cannot be swung towards bystanders.

Sporting targets may be released or "buttoned" by a competition official or released manually by a "trapper" when called for. For Trap disciplines, particularly at major competitions, the traps will usually be acoustically (voice) activated. The squad will be supervised and scored by an official(s) who may be the referee or another person(s) supervised by the referee. Guns should not be loaded until the referee indicates. In Trap disciplines where the shooters are standing side-by-side with no safety enclosures, guns should not be loaded until the referee calls "line ready", other instructions may be given. The main purpose of these and other procedures are to provide control, ensure safety, prevent shooters from being balked and to eliminate disagreement about scores at the end of the round. See also Safety.

Viewing point

In Sporting competition, the "viewing points" are positions from which shooters are permitted to view targets.

The Squad

A "squad" is a number of shooters, usually 5 or 6, whose names are on the same scorecard, and who shoot a round of the same discipline at the same time on the same layout.

A Stand

A "Stand" is a designated position (usually 91cm x 91cm or 1m x 1m) where a shooter stands to shoot at a target. The stand may also be referred to as a "shooting station", "shooting position" or "firing mark".

A Round

A round, or stage, is a complete section of a competition, e.g. a 100 target DTL competition consists of 4 x 25 target "rounds".

The Trapper

The "trapper" may be the person who loads the trap(s) and releases the targets however, with electrical activation; the trapper may only be loading them, the targets being released acoustically or by a "buttoner".

CALLING FOR A TARGET

The usual call in English is "pull" although many shooters, particularly on voice-activated traps, substitute other words or unintelligible grunts. In International competition, foreign competitors will of course call in their own language. Do not call for the target(s) if you are not ready or are being distracted by onlookers or other shooters. See "balk".

CALLS BY THE REFEREE

During a round, various calls are made by the referee (or trapper if not a competition) in order to provide control and give information. These may vary according to the discipline, and the following are the most common.

Note: In international competition, although English is used, calls will have the same intent but may differ slightly, e.g. In FITASC and ISSF Trap events "line ready" becomes "start".

"Does anybody wish to clear their gun?"

In all disciplines, prior to starting the first round, the referee may offer the competitors the opportunity to test that their guns are functioning satisfactorily, in which case the shooter(s) may, if they wish, load two cartridges and fire them down the range.

"Line ready"

For Trap disciplines such as DTL, where shooters stand side-by-side and there are no safety enclosures, guns must not be loaded until all shooters are on their stands, facing forward and the referee calls "line ready".

"Number one, you can see a target"

This call, or something similar, will be given to the first shooter at the beginning of each round of some Trap disciplines, or to the first shooter of a squad on each stand in Sporting, where it is squaded, to allow the squad to see the target(s) before they are attempted.

"Unload and change"

This call will be given in DTL, Double Rise, Single Barrel and Handicap by Distance when the shooter on stand five has completed his last shot or last pair. No one should move until the call is given. Each shooter then unloads and moves one stand to the right whilst the shooter on stand five goes to stand one. (For other stand change procedures, see Section 7 Disciplines.)

"Unload and stand down"

This call will be given in Trap disciplines, when the last shooter has completed the total number of targets for the round. All shooters should open and unload their guns before leaving their stand. This call may also be given if there is some technical difficulty that interrupts the round.

"Hit"

A declaration that a target has been broken by the shooter.

"Lost" (or buzzer)

A target is declared "lost" or a buzzer is sounded, if it has been missed or disallowed. In FITASC disciplines, a lost target is called "zero". For some Trap disciplines, e.g. Olympic Trap, a horn may be sounded to indicate a miss.

"Second"

In DTL only, a "Second" is declared if a target is missed with the first barrel but hit with the second because in this discipline, three points are scored for a first barrel hit, but only two points for a second barrel hit.

"No target"

If a target fails to emerge from the trap, or breaks upon being launched, or is launched from the wrong trap or is irregular, a "no target" will be called, and replacement target(s) thrown. A "no target" may also be declared under other circumstances as defined in competition rules. (See also "malfunction", "misfire" and "balk"). The shooter has the right to refuse a target and take a replacement if he considers the target "irregular". However, if the referee disagrees, the refused target(s) may be declared "lost".

"Repeat"

When shooting single targets, and a "no target" has been declared, an instruction to shoot at a replacement target.

"Pair again"

When shooting simultaneous pairs and the second target is a "no target", the shooter nothing will be scored for the first target, regardless of whether it is a "hit" or "loss", and the shooter will be instructed to shoot a replacement pair.

"First target established"

Where on report pairs of targets are being shot and the second target is declared a "no target", the result of the first shot will be counted regardless of whether it is a "hit" or "loss".

"Nothing established"

In ESP when shooting simultaneous pairs, if there is a "no target" called regardless if one or other target is hit, no score is recorded and the pair must be taken again.

PROBLEMS DURING COMPETITION

Malfunction

A "malfunction" is a permanent or transitory defect in a shotgun that prevents it from firing a cartridge (for example a jammed cartridge in a semi-automatic). An error by the shooter is not classed as a malfunction. If a malfunction is genuine, the referee will declare a "no target", and the shooter will be allowed to attempt the target(s) again. Individual competition rules may limit what constitutes a malfunction, how long the shooter has to rectify the problem, and the number of malfunctions allowed during a round or competition before any missed target is declared lost. If the malfunction cannot be repaired, then depending on the rules for that discipline, the shooter may be allowed a substitute gun or to continue later in another squad.

Misfire

A "misfire" is the failure of a cartridge to fire, or failure to discharge adequately. If a misfire is genuine, the referee will declare a "no target", and the shooter will be allowed to attempt the target(s) again. Individual competition rules may limit what constitutes a misfire, and the number allowed during a round or competition before the missed target is declared lost.

Note: a "no target" will not be allowed for a "malfunction" or "misfire" unless the shotgun is handed to the referee unopened and without touching the safety catch, so that it can be inspected. See also Safety.

Gun Handling Errors

If after calling for a target the shooter cannot fire one or more barrels because he has failed to load them, or fails to release the safety catch or forgets to cock the gun or to release the pressure from a single trigger, a "no target" will not be allowed and the missed targets will be declared lost.

Foot Fault

In competition, a "foot fault" occurs when a shooter steps outside the marked stand whilst shooting at a target. Normally the referee will give a warning for the first foot fault and apply a penalty for subsequent infractions.

Ready Position errors

In FITASC Sporting and ISSF Olympic Skeet, a target will be declared "lost" if the shooter fails to hold the stock in the correct position before calling for the target, or moves the stock from the ready position before the target is released. See Figs 7-4 and 7-5.

Balk

A "balk" is a visual or physical distraction or interruption of a shooter who is in the process of shooting at a target. The shooter may protest by immediately raising their hand and the referee may declare a "no target". (You should not call for a target or fire if you're being distracted or interrupted in any way.)

Irregular Targets

In Trap and Skeet disciplines, an irregular target is defined as one that is thrown outside the boundaries set out in the rules for that particular discipline. In other disciplines, irregular targets are those that deviate substantially from the expected flight path. The referee will normally call a "no target" but if he doesn't, the shooter has a right to refuse such targets by lowering and breaking his gun. However, should the referee disagree, the target will be declared "lost". In order to assist with the recognition of "irregular targets", the illustrations of layouts in section 7 indicate the maximum/minimum boundaries for the majority of disciplines and include any tolerance allowed in the rules, e.g. a height of 1.5 to 3.5m ± 0.5m is given as 1.0 to 4.0m.

PENALTIES

In competition, penalties may be imposed by the referee or the jury. Penalties include warnings, loss of points or disqualification. Penalties can be imposed for foot faults, shooting at someone else's targets, shooting at birds or animals, undue delays in calling for targets, having insufficient cartridges on the stand, being absent when it is the shooters turn to shoot, breaches of safety, shouldering or shooting a gun outside the designated stand, sighting practice when not allowed by competition rules, arriving late, being disorderly or being intoxicated, or any other infraction mentioned in the specific competition rules.

SHOOT-OFF

In the event of a tied competition, the "High Gun" and major places are normally decided by a "shoot-off". The rules for shoot-offs vary from discipline to discipline, however, typical procedures include shooting elimination rounds, where round by round the shooters with the lowest scores are eliminated, until only the high Gun is left, or by Single Barrel, "miss and out", where a shooter may only load one barrel and is eliminated if he misses a target. Another method that can be used at Trap events is to shoot at increasing distance from the trap house, thus increasing the difficulty until shooters begin to miss targets.

An alternative to a shoot-off is "counting back". This system is unpopular with the majority of shooters who consider a shoot-off more equitable. CPSA rules preclude the use of the count back system at CPSA registered events and only in special circumstances at International events. Count-back would only be employed when failing light, deteriorating weather or other unforeseen circumstance prevents a shoot-off. For example, in Double Trap, a tie between two shooters with equal scores would be decided by examining the shooters' scorecards; the shooter with the most pairs hits would be declared the winner.

ETIQUETTE

While spectating or waiting to shoot, it is easy to disturb or "balk" other shooters. Talking and moving about within the shooters peripheral vision are common distractions; these should be avoided.

In Trap disciplines, talking, giving advice (whether solicited or not) or attempting to teach an individual in the squad is distracting, annoying and potentially dangerous. Throwing spent cartridges into the bin as the next shooter is about to call for a target is bad manners.

In ABT and Olympic Trap, the shooter on stand five must move to stand one while other squad members are taking their shots. Move in such a way so as not to disturb them. In all Trap disciplines, when the shooter on stand five moves to stand one, they should always turn around to their right in order to avoid clashing guns with the shooter coming from stand four.

Mobile phones are very distracting and should be switched off when shooting or when within earshot of others that are shooting.

There are plenty of books and videos that deal in detail with shooting technique, however, more than detail, those new to a discipline, need an overview, so that they do not feel intimidated or put off. Too much detail can be confusing; a newcomer wants to know where to stand, how many shots to take, when to move, an overview of target trajectories and an outline of the rules and scoring procedures. Once they have tried the discipline, shot a few practice rounds, and have decided that they want to do more, they can then investigate the rules, regulations and techniques in more detail. Rulebooks for the majority of disciplines are available from the CPSA, and a CPSA Instructor or Coach can provide discipline specific training that will improve technique. Therefore, the following is a simplified guide, designed to get you started and help you become familiar with a new discipline.

Trap Disciplines

The term "Trap" covers a number of related disciplines where the targets are thrown by one or more traps from a trap house or trench built at or near ground level and in front of the shooting position. "Down The Line", "Automatic Ball Trap", "Double Rise" and Handicap by Distance employ a single trap machine, whereas "Universal Trench", "Olympic Trap" and "Double Trap" have multiple trap machines. Trap disciplines are normally shot in "squads", with a maximum of five or six shooters. The shooting positions or stands are located behind the trap house. Traps may be manually released or acoustic. See figs 2-4 to 2-7. At organised shooting grounds, the squad will often be supervised and marked by a "scorer/referee" who will control and supervise the squad and mark the scorecard. Guns should not be loaded until the scorer/referee calls "line ready" or "Start". Trap targets are all going away from the shooter and initially rising and their trajectories are relatively predictable; a target leaves the trap on a random trajectory within a prescribed maximum angle to the left, right and vertical. See the figures for each discipline.

CPSA DOWN THE LINE (DTL)

"Down The Line" is the most popular Trap and second most popular discipline shot in the UK and is similar to Automatic Ball Trap. A squad consists of five shooters. Targets are thrown from a single trap 14.63m in front of the centre stand and 71 – 91cm above stand level; see the illustration below for the field layout and target presentation. In DTL a first barrel hit scores three points, a second barrel "hit" scores one less point than a first barrel hit, therefore, if the target is broken with the second barrel the scorer/referee will call "two". As with other disciplines the scorer/referee will call a missed target "lost".

Shooting DTL

1. Each of five shooters is allocated a stand in the order that their names appear on the scorecard.
2. Each shooter shoots 25 targets with full use of gun (two shots at each target).
3. The referee will call "line ready"; on this command, guns may be loaded.
4. When all five shooters are ready, shooter number one on stand one calls for a target for the squad to view, before he takes his first shot.
5. The gun is pre-mounted.
6. Each shooter has ten seconds to call for a target after the last person has finished shooting, after which a time penalty may be imposed resulting in the loss of one target.
7. Starting with shooter number one, they each shoot one target in turn. This is repeated five times until every shooter has completed the five targets per stand.
8. In order to prevent premature movement and balking of other shooters, no one should move off their stand until the referee calls "unload and change please".
9. On this call, each shooter unloads and moves one stand to the right. The shooter on stand five unloads, turns right and walks to stand one.
10. The procedures from 6 to 8 above are repeated four more times, starting each time with shooter number one, until each shooter has shot all of the targets (10, 15, 20 or 25).

11. When the last shooter on stand five has completed all targets, the referee will call "unload your guns please".

Three points are scored for each "hit" with the first barrel and two points for a "hit" with a second. A missed target results in no score and will be declared "lost".

A practice round or shoot off may comprise 10, 15, 20 or 25 targets with 2, 3, 4 or 5 targets shot from each stand. A competition round will normally comprise 25 targets.

For a 25 target round, the maximum score is 25/75 i.e. twenty-five first barrel "hits" three points each. A typical competition would be four rounds of 25 targets, with a maximum possible score of 100/300, sometimes written 100 ex 300.

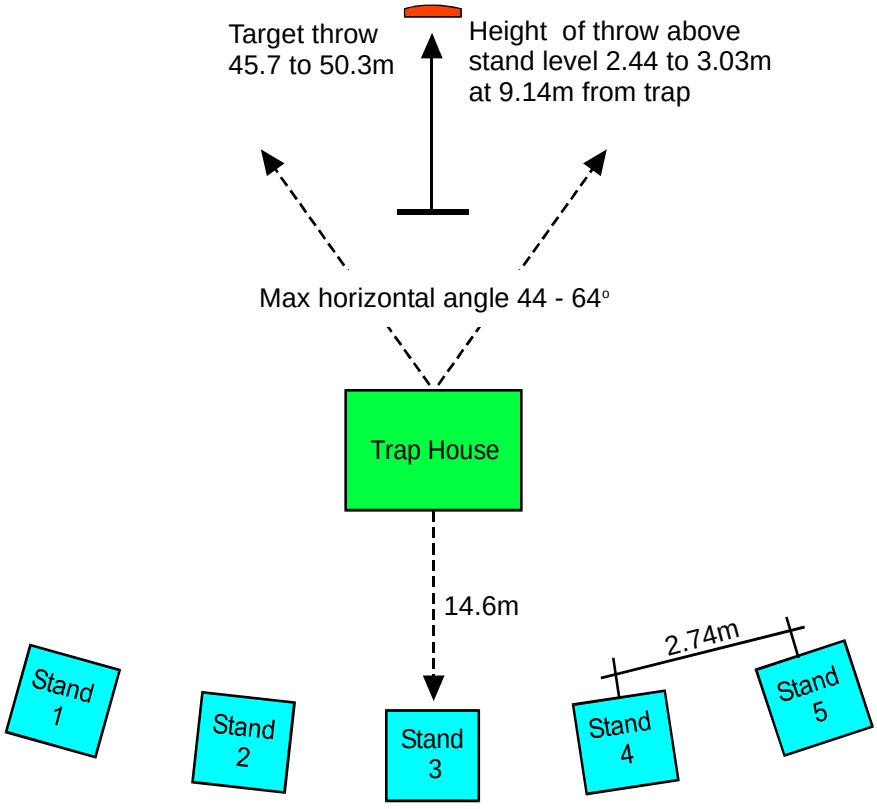


Figure 7-1 – Down the Line layout

CPSA SINGLE BARREL (S/B)

"Single Barrel" events are shot on a DTL layout and all rules and procedures are the same, with the following exceptions:

- Only one barrel may be loaded and only one shot taken at a target.
- A spent cartridge or "snap cap" may not be used to guard the unused barrel.
- Scoring is a "hit" or "lost", one point for a hit, and no points for a loss.

CPSA DOUBLE RISE (D/R)

The procedures and layout are the same as those for DTL. "Double Rise" as the name implies, involves two separate targets thrown simultaneously on separate trajectories. Unlike DTL where the trap is set to a random pattern, the traps for Double Rise are fixed to throw one target to the left and the other to the right. See Fig 7-2. Each shooter fires one shot at each target. Because there are five stands and two targets per stand, rounds are shot in multiples of five doubles, i.e. ten targets, so a twenty target round would consist of shooting two doubles per stand before moving to the next stand on the right. The following procedure describes a twenty target round

Shooting Double Rise

1. Each of five shooters is allocated a stand.
2. Each shooter shoots 10 doubles, shooting 2 doubles from each stand before moving.
3. When all shooters are ready, shooter number one calls to see a double, before he takes his first shot.
4. Starting with the shooter number one on stand one, they each shoot a double in turn, taking one shot at each target.
5. After each shooter has shot 2 doubles, they unload and move one stand to the right. At the same time, the shooter on stand five unloads and turns to his right and walks to stand one.
6. Starting with shooter number one, this is repeated until every shooter has shot 10 doubles i.e. 20 targets.
7. Other procedures are the same as for DTL.

5 points are scored for a pair hit 2 points for a single and 0 points if both are missed. A typical competition would be 5 rounds of 10 pairs i.e. 100 targets, with a maximum possible score of 250 points.

"No targets" in Double Rise

Because two targets are thrown simultaneously, the "No target" rule is different from DTL. A no target will be called and a repeat pair will be thrown if:

- Only one target is thrown.
- Two targets are hit with one shot.
- Either or both targets are thrown broken.
- If there is a delay before the second target is thrown.
- If either the first or the second targets are "irregular" and the shooter refuses one or both of them.
- If the shooter refuses a second target, which is irregular, he must shoot at both of the repeat pair but only the second target counts.

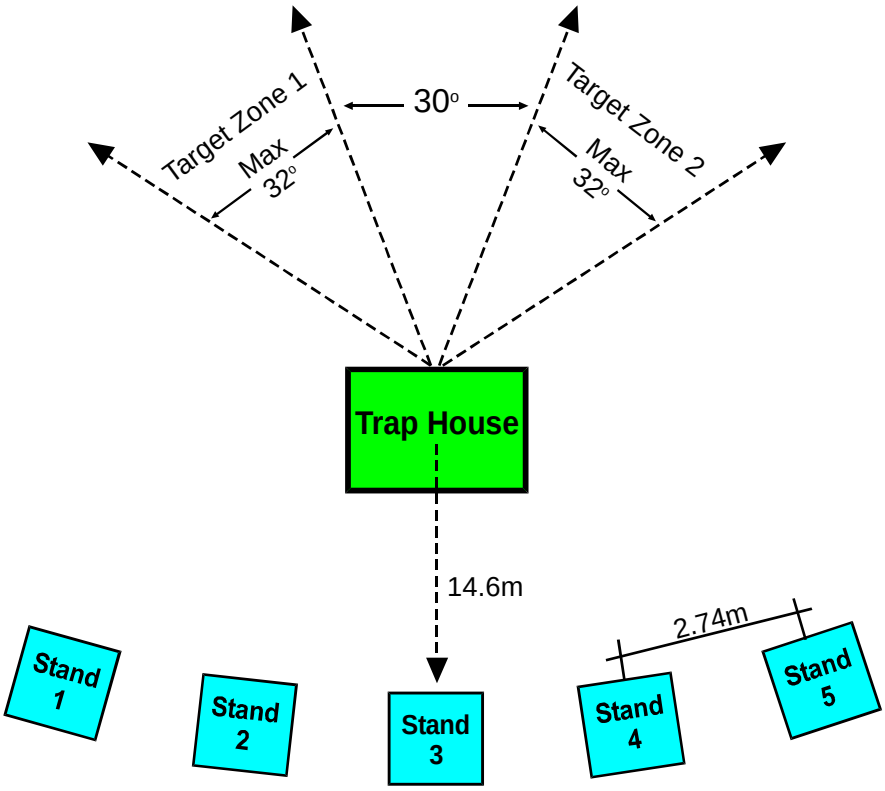


Figure 7-2 – Double Rise layout

CPSA HANDICAP BY DISTANCE (H/D)

In DTL and Single Barrel events, a handicapping system may be used for different classes of shooter. "C" class shooters stand at 17yds (15.5m), "B" at 19yds (17.4m), "A" at 21yds (19.2m) and "AA" class at 23yds (21.0m). For safety reasons only shooters of the same class are squadded together. Unclassified shooters start at the 21yd (19.2m) mark, and are then reclassified and re-squadded according to scores attained in the first round.

CPSA AUTOMATIC BALL TRAP (ABT)

"Automatic Ball Trap" is the second most popular Trap discipline shot in the UK next to "Down The Line". An ABT squad consists of six shooters. Only one target is taken at each stand before moving to the right for the next target. Two shots are allowed at each target but unlike DTL, either shot scores equally. There are five stands with a waiting position for the sixth shooter behind and to the left of stand one. ABT targets are faster and have a greater range of angles and heights than DTL. They are thrown on random trajectories from a single trap in front of the centre stand. See Fig 7-3. The referee's calls are similar to DTL except that the shooters move individually between the stands so there is no "unload and change" call. Therefore, the shooters must be mindful to have their guns open before moving, whilst the shooter on stand five should open and unload his gun before moving to stand one. The shooter should not move until the shooter to the right has completed his shot so as not to balk him.

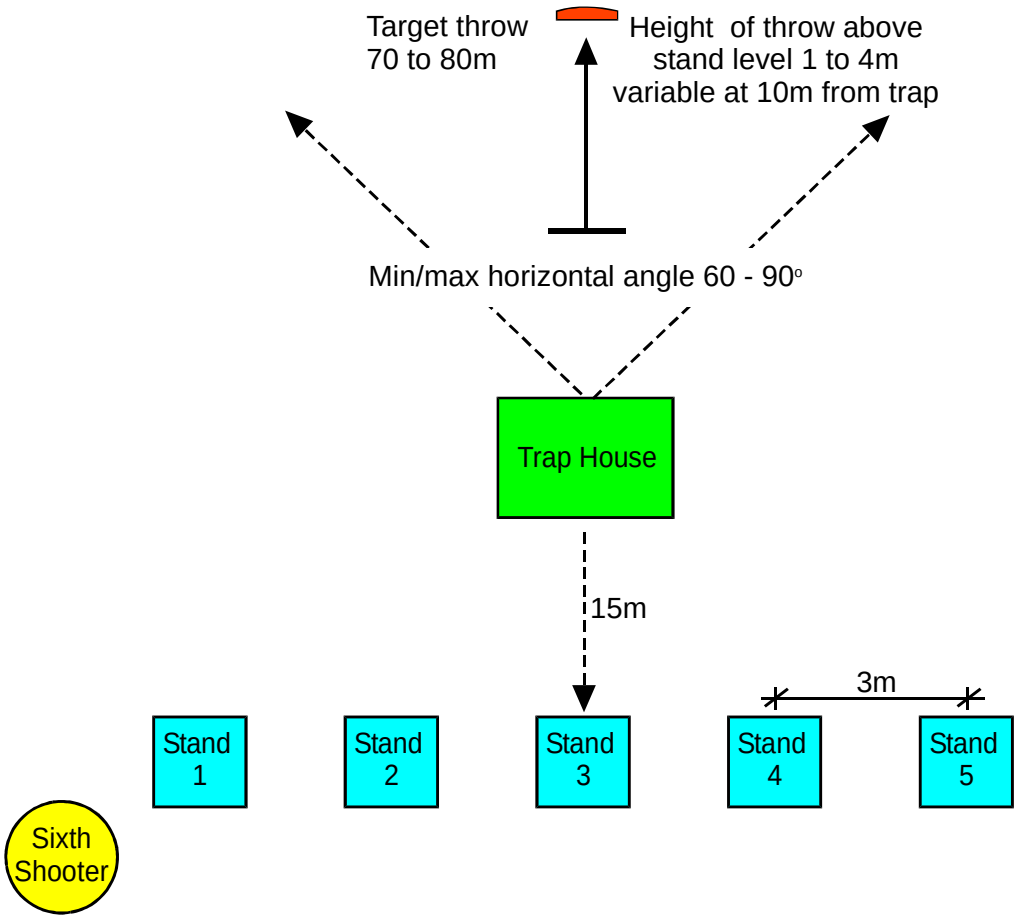


Figure 7-3 – Automatic Ball Trap layout

Note: in January 2004 ABT rules were harmonised with those of ISSF Automatic Trap, making the two disciplines virtually identical

1. Each of five shooters is allocated a stand.
2. A sixth shooter stands behind and to the left of shooter No 1.
3. Each shooter shoots 25 targets and may take two shots at each.
4. The referee will call "line ready". On this command, guns may be loaded.

5. When all shooters are ready, the shooter on stand one calls for a target for the squad to view, before he takes his first shot.
6. Starting with the shooter on stand one, they each shoot one target.
7. After each shooter has taken his shot(s), he breaks his gun and waits until the shooter on his right has taken their shot(s). He then moves to the stand on the right, only stepping onto the stand when the next shooter moves off it.
8. In competition, the shooter has 10 seconds to take up his next stand and call for a target after the shooter on his left has completed his shot(s).
9. As soon as the shooter on stand one moves, the sixth shooter moves to stand one and then shoots immediately after the shooter on stand five has taken his shot.
10. After taking his shot, the shooter on stand five breaks and unloads his gun, turns around to his right and walks to stand one, taking care not to balk the other shooters.
11. The procedures in 6 to 10 are repeated until every shooter has shot 25 targets.
12. At this point, the referee will call "unload your guns please".

Each of the two shots allowed per target count equally, therefore the score will be out of 25. A typical competition would be four rounds of 25, with a maximum possible score of 100.

Gun Hold Points – DTL, ABT and A/T

The gun hold points for these disciplines use the trap house as a guide. See Fig 7-4. Looking towards the trap house, the gun should be held between on or just above the top front edge. Some shooters prefer to hold higher than this. A person that shoots with one eye closed will need to hold pointing the gun at the front edge of the trap so as not to have the target obscured by the barrels as it leaves the trap. The hold points favour the wide-angle target.

1. On stand one, the gun is pointed above the left front corner.
2. On stand two, the gun is pointed half way between the left front corner and centre.
3. On stand three, the gun is pointed slightly to the right of centre of the trap house for a left-hander and slightly to the left of centre for a right-hander (to avoid the barrel obscuring a straightaway target)
4. On stand four, the gun is pointed half way between the right front corner and centre.
5. On stand five, the gun is pointed above the right front corner.

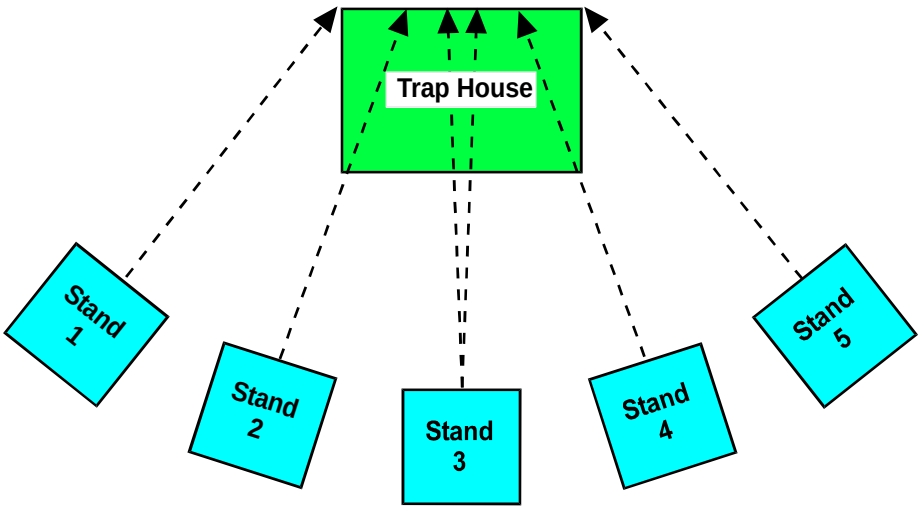


Figure 7-4 – DTL/ABT hold point

(Note: ABT Stands are in a straight-line see fig 7-3)

Gun Hold Point - Double Rise

The newcomer should use the ABT hold points until experience or a CPSA coach suggests otherwise.

As experience grows, the shooter may wish to adjust the hold point to suit the differences in speed and trajectory of the specific discipline and personal shooting style. Many experienced Trap shooters point the muzzle down towards the front edge of the trap house, a method favoured for Universal Trench, Double and Olympic Trap.

CPSA ALL ROUND (A/R)

"All Round" is a competition comprising 25 ABT, 25 Skeet, 25 Sportrap and 25 Single Barrel targets. The rules are those of the individual disciplines. Scores are added to a total out of 100.

Gun Hold Point - All Round

Gun hold points are those for the individual discipline.

ISSF Trap Disciplines

There are three ISSF trap disciplines, two of which are shot at the Olympic games. Although each of the three involves different combinations and trajectories of targets, the procedures for shooting (each) are virtually the same. A number of UK shooting grounds cater for Olympic disciplines.

ISSF AUTOMATIC TRAP (A/T)

Like ABT, single targets are thrown randomly. The trap cover is level with the stands. The shooting procedures and squad size are the same as Olympic Trap. (Since January 2004, ABT layouts have been set up to ISSF rules, making ABT and "Automatic Trap" virtually identical).

ISSF (OLYMPIC) TRAP (OTR)

"Olympic Trap" is also known as "15 Trap". The squad size and stand layout is very similar to ABT, D/T and UT with five stands set in a straight line and a squad of six. The sixth shooter stands behind and to the left of stand one. Targets are thrown from one of three traps in front of each stand, fifteen traps in all. See Fig 7-5. The trap house roof is at stand level. The shooting procedures are also similar to ABT. Olympic Trap has nine "trap setting tables" to provide a variety of target trajectories, an example of which is included below.

Shooting Olympic Trap

1. Each of five shooters is allocated a stand.
2. A sixth shooter stands behind and to the left of shooter No 1 (as in ABT and U/T).
3. Each shooter shoots 25 targets and may take two shots at each.
4. When all shooters are ready, the first squad of the day squad will be presented with one target to view from each trap in sequence from 1 to 15 before the first shot is taken.
5. The referee will call "start" (meaning line ready). On this command, guns may be loaded and the first shooter may close his gun.
6. Starting with shooter number one, each shooter shoots one target.
7. No gun may be closed until the previous shooter has taken his shot(s).
8. After each shooter has taken his shot(s), he breaks his gun and waits until the shooter on his right has taken their shot(s) before moving to the stand on the right.
9. In competition, the shooter has 10 seconds to take up his next stand and call for a target after the shooter on his left has completed his shot(s).
10. As soon as the shooter on stand one moves, the sixth shooter moves onto stand one who then shoots immediately after the shooter on stand five has taken his shot(s).
11. After taking his shot(s), the shooter on stand five breaks and unloads his gun, turns around to his right and walks to stand one, taking care not to balk the other shooters.
12. This process is repeated until every shooter has shot 25 targets.

13. At this point, the referee will call "unload please". All guns must be opened and unloaded before the shooters leave their stand.

Both the first and second shots count equally; therefore, the score will be out of 25. If the shooter misses with both shots, then the referee will call the target "lost". A horn may also be sounded, the purpose of which is to ensure that there is no argument later about an individuals' score.

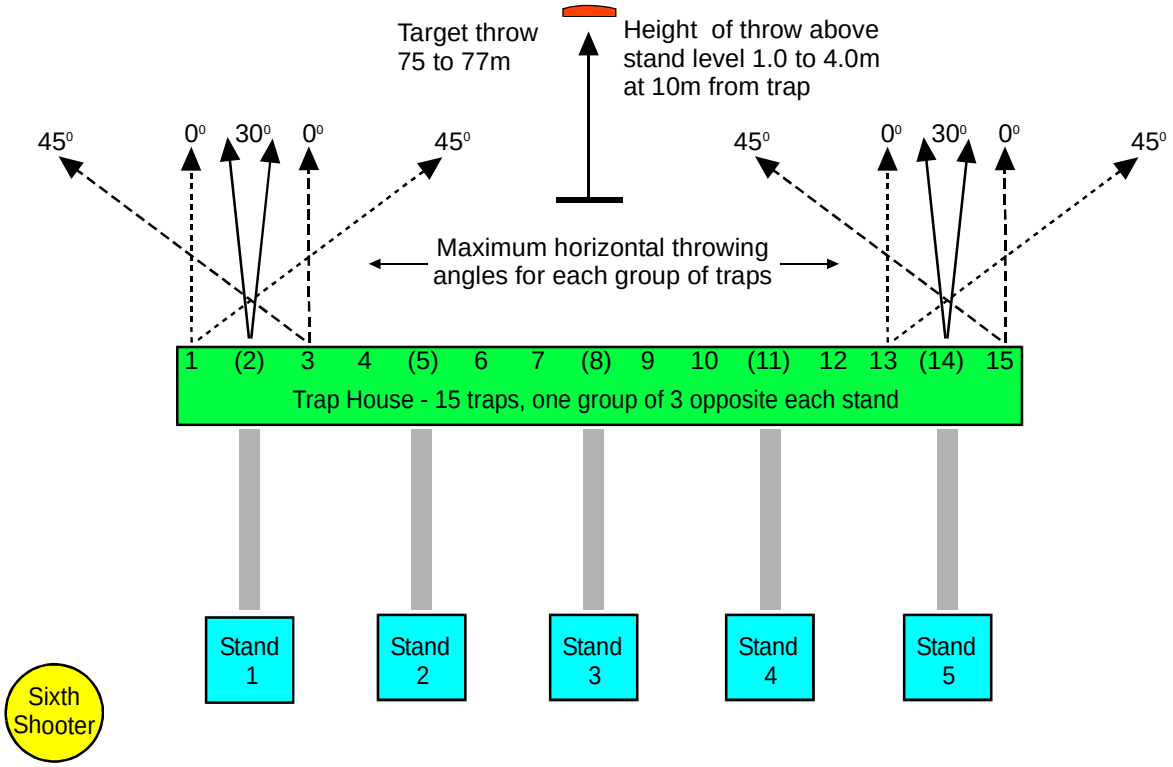


Figure 7-5 – Olympic Trap layout

A CPSA registered competition for this discipline would consist of four rounds of 25 (each) with a maximum score of 100. However, an Olympic competition would be five rounds with a maximum possible score of 125. The ladies competition will be three rounds of 25 (each), with a maximum possible score of 75. In both cases, these are qualifying rounds, the top six going forward to the final.

Example trap setting table Olympic Trap (Table 1)

Group	Trap	Angle		Height at 10m from trap	Throwing Distance
		L	R		
1	1		25º	2.0m	75 – 77m
	2	5º		3.0m	
	3	35º		1.5m	
2	4		20º	2.5m	
	5		10º	1.8m	
	6	35º		3.0m	
3	7		33º	3.2m	
	8	5º		1.5m	
	9	45º		1.6m	
4	10		45º	1.5m	
	11	0º	0º	3.3m	
	12	25º		2.6m	
5	13		45º	2.4m	
	14		5º	1.9m	
	15	35º		3.5m	

Gun Hold Point - Olympic Trap

The hold point for this discipline is straight ahead with the barrels pointing down towards the front edge of the trap house.

ISSF (OLYMPIC) DOUBLE TRAP (D/T)

"Double Trap" is an Olympic discipline similar to "Double Rise". Instead of a single trap throwing two fixed trajectory targets, three trap machines alternate to throw simultaneous "doubles" from any two traps. The stands are in a straight line and the trap cover is level with the stands. See Fig 7-6. The procedures and layout are the same as Olympic Trap. Double Trap has a "trap setting table" to provide a variety of target trajectories, which is shown below.

Shooting Double Trap

1. Each of five shooters is allocated a stand.
2. A sixth shooter stands behind and to the left of shooter No 1 (as in ABT).
3. Each shooter shoots 25 targets and may take two shots at each.
4. When all shooters are ready, the squad will be presented with one double from each pair of traps in sequence to view before the first shot is taken.
5. The referee will call "start" (meaning line ready); on this command, guns may be loaded and the first shooter may close his gun.
6. Starting with shooter number one, they each shoot one double.
7. On calling "Pull", there will be a random 0 – 1 second delay before a target is released.
8. No gun may be closed until the previous shooter has taken his shots.
9. After each shooter has taken his shots, he breaks his gun and waits until the shooter on his right has taken his shots he then moves to the stand on the right.
10. In competition, the shooter has 10 seconds to take up his next stand and call for a target after the shooter on his left has completed his shots.
11. As soon as the shooter on stand one moves, the sixth shooter moves onto stand one who then shoots immediately after the shooter on stand five has taken his shots.
12. After taking his shots, the shooter on stand five breaks and unloads his gun, turns to his right and walks to stand one, taking care not to balk the other shooters.
13. The process is repeated until every shooter has shot 25 double targets.
14. At this point, the referee will call "unload please". All guns must be opened and unloaded before the shooters leave their stands.

Both the first or second targets count equally, so the score will be out of 50. If the shooter misses one or both targets, then the referee will call the target(s) "lost" and no point will be scored.

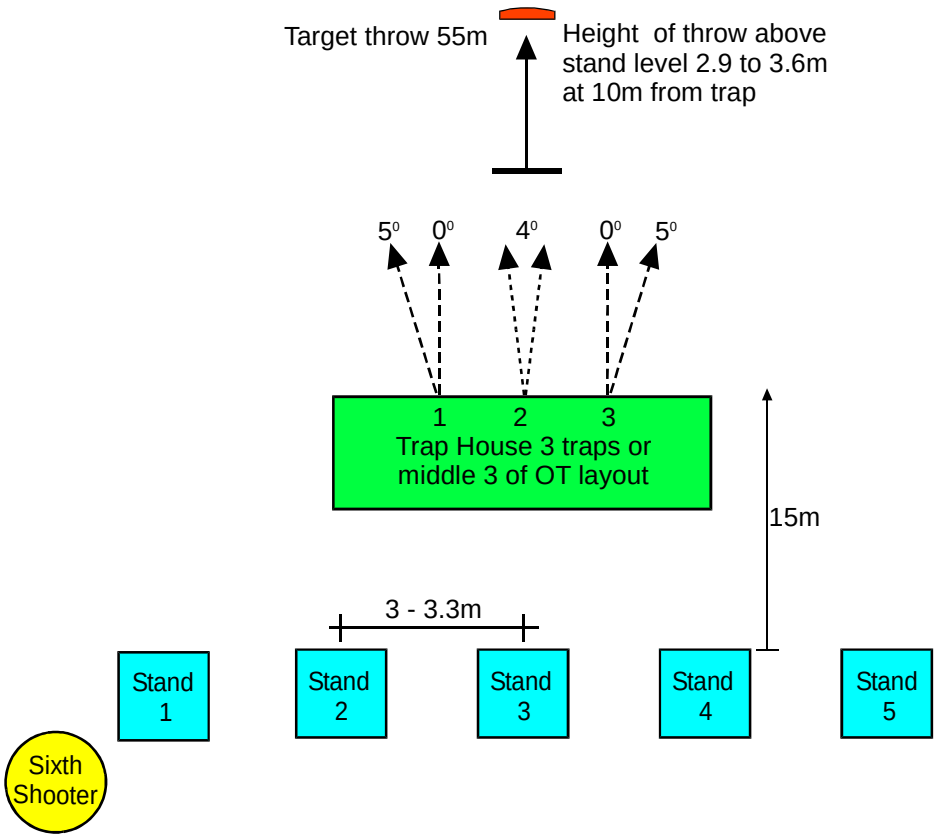


Figure 7-6 – Double Trap layout

A typical competition consists of three rounds of 25 doubles each, with a maximum possible score of 150. The Ladies event is three rounds of 20 doubles with a maximum possible score of 120.

"No targets" in Double Trap

Like Double Rise, because two targets are thrown simultaneously, the "no target" rule is different from Automatic Trap. A no target will be called and a repeat pair will be thrown if:

- Either or both targets are thrown broken.
- Only one target is thrown.
- Two targets are hit with one shot.
- Pieces from the first target break the second target.
- The targets are thrown before the shooter calls.
- Either the first or the second targets are "irregular" providing that the shooter refuses one or both of them.
- If the shooter refuses a second target, which is irregular, he must shoot at both of the repeat pair but only the second target counts, the first being established.

Trap setting table Double Trap					
Table	Trap	Angle		Height	Distance
		L	R		
A	1 (7)*	5º		3.0m	55m
	2 (8)*	0º	0º	3.5m	55m
B	2 (8)*	0º	0º	3.5m	55m
	3 (9)*		5º	3.0m	55m
C	1 (7)*	5º		3.0m	55m
	3 (9)*		5º	3.0m	55m

* Number of Trap when an Olympic Trap layout is used for Double Trap

Gun Hold Point - Double Trap

Since the double trap house is larger than that for ABT, and the middle three traps of an Olympic Trap layout may be used instead of a dedicated Double Trap house, the beginner should start with his gun held down towards the front edge of the trap house over trap 3 (9). The gun should be held slightly to the right for a left-hander and slightly to the left for a right-hander until experience or a CPSA Coach suggests otherwise.

FITASC UNIVERSAL TRENCH (UTR)

"Universal Trench" (sometimes called 5 Trap) is similar to ABT except that in place of a single trap there are five. The stand layout is also similar to ABT with five stands and six shooters in a straight line. A number of UK shooting grounds cater for Universal Trench. Targets are thrown from five traps, set 1.0 – 1.25m apart in a trap house centred in front of stand three. The trap house roof is at the same level as the stands. Each trap throws a target, of fixed height and trajectory and will be adjusted to one of the ten "throwing schemes" set out in the rules. This means that you could visit ten different shooting grounds and although the boundaries, height and throwing distances will be the same, the combination of trajectories may be different at each. In competition, the squads will shoot different layouts set to different throwing schemes. A typical throwing scheme is set out below; each shooter may be presented with a target from any of the five traps on any stand but the trap releases will be set so that each shooter in the squad will be presented with the same combination of targets. See Fig 7-7.

Shooting Universal Trench

1. Each of five shooters is allocated a stand.
2. A sixth shooter stands behind and to the left of shooter No 1 (as in ABT).
3. Each shooter shoots 25 targets and may take two shots at each.
4. When all shooters are ready, they will be presented with all five targets to view before the first shot is taken (in competition only the first squad of the day is shown the targets).
5. The referee will call "Start" (meaning line ready). On this command, guns may be loaded and the first shooter may close his gun.
6. Starting with shooter number one, they each shoot one target in turn.
7. No Gun may be closed until the previous shooter has taken his shot(s).
8. After each shooter has taken his shot(s), he breaks his gun and waits until the shooter on his right has taken his shot(s) he then moves to the stand on the right.
9. In competition, the shooter has 10 seconds to take up his next stand and call for a target after the shooter on his left has completed his shot(s).
10. As soon as the shooter on stand one moves, the sixth shooter moves onto stand one who then shoots immediately after the shooter on stand five has taken his shot.
11. After taking his shot, the shooter on stand five breaks and unloads his gun, turns around to his right and walks to stand one, taking care not to balk the other shooters.
12. This process continues until every shooter has shot 25 targets.
13. At this point, the referee will call "shoot is over". All guns must be opened and unloaded before the shooters leave the stand.

Both the first or second shots count equally, so the score will be out of 25. If the shooter misses with both shots, then the referee will sound a horn and the target will be called "zero". The purpose of this audible indicator is to ensure that there is no argument later about an individual's score. A typical UT competition would be four rounds of 25 each, with a maximum possible score of 100.

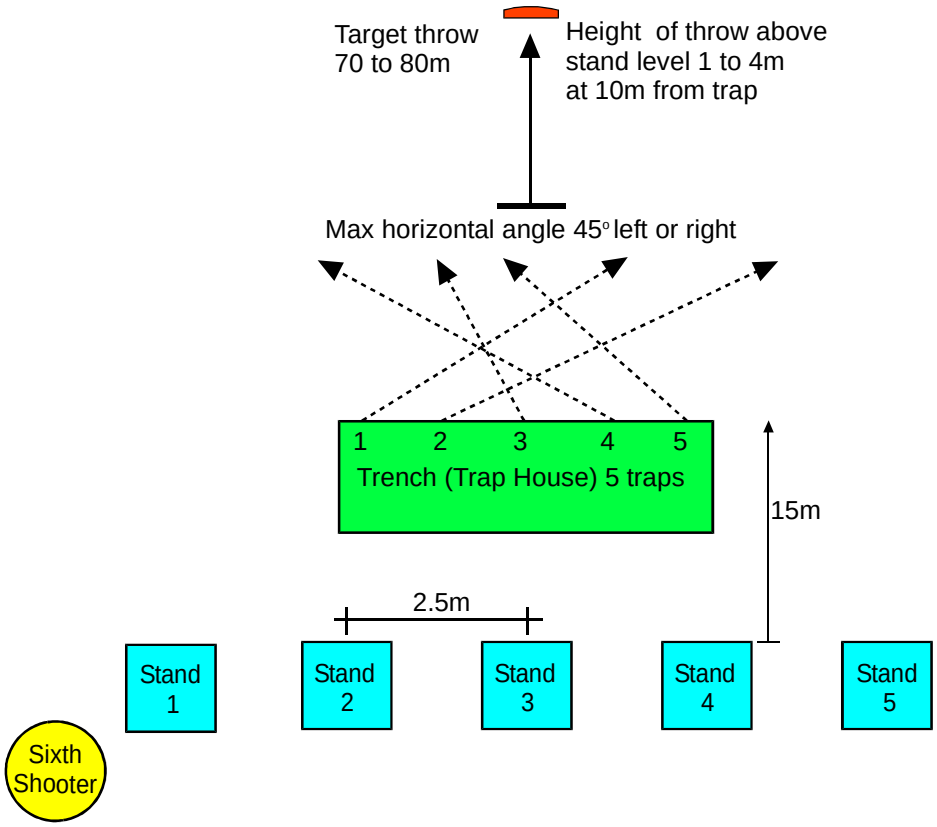


Figure 7-7 – Universal Trench layout

Typical Throwing Scheme Universal Trench					
Scheme	**Trap**	**Angle**		**Height**	**Distance**
		L	**R**		
1	1		35º	1.5m	70m
	2		20º	2.0m	60m
	3	10º		1.5m	75m
	4	30º		3.0m	65m
	5	45º		1.5m	60m

Gun Hold Point - Universal Trench

The Universal Trench trap house is wider than for DTL/ABT and with five traps, the target may be thrown to the left or right of any hold point. In order to simplify the initial experience, the beginner should use the DTL/ABT hold points but with the barrels pointed down towards the front edge of the trap house. The low barrel angle prevents the barrels from obscuring the target should it leave to the right or to the left of them. This method may be modified with experience and coaching.

Sight Picture, Trap Targets

The sight picture is the visual relationship between the (sighting rib) barrels and the target as observed by the shooter. All Trap layouts throw rising targets that fly away from the trap house in front of the shooter. Because of this, the shot string must be placed higher and in front of the current target position along the target trajectory, so that the two coincide in space. The difference between the observed position and the point of aim is the lead. See Fig 7-8.

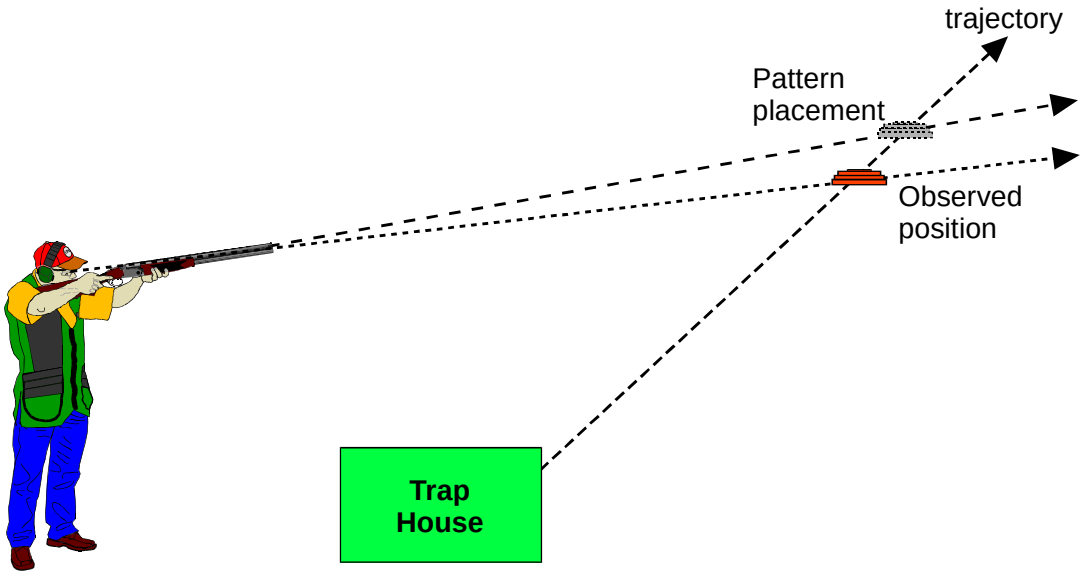


Figure 7-8 – Trap – Gun/Eye/Shot/Target relationship

The relatively consistent and predictable nature of Trap targets makes it possible to set up a "Trap gun" so that the targets can still be seen as the trigger is pulled without being obscured by the barrels. See fig 7-8. Figure 7-9 illustrated the approximate relationship that the shooter sees between the target and the trap gun's foresight. If a Sporting gun is used to shoot a Trap target, the target will often be obscured by the barrels, as lead is applied, resulting in difficulty seeing and reading the target.

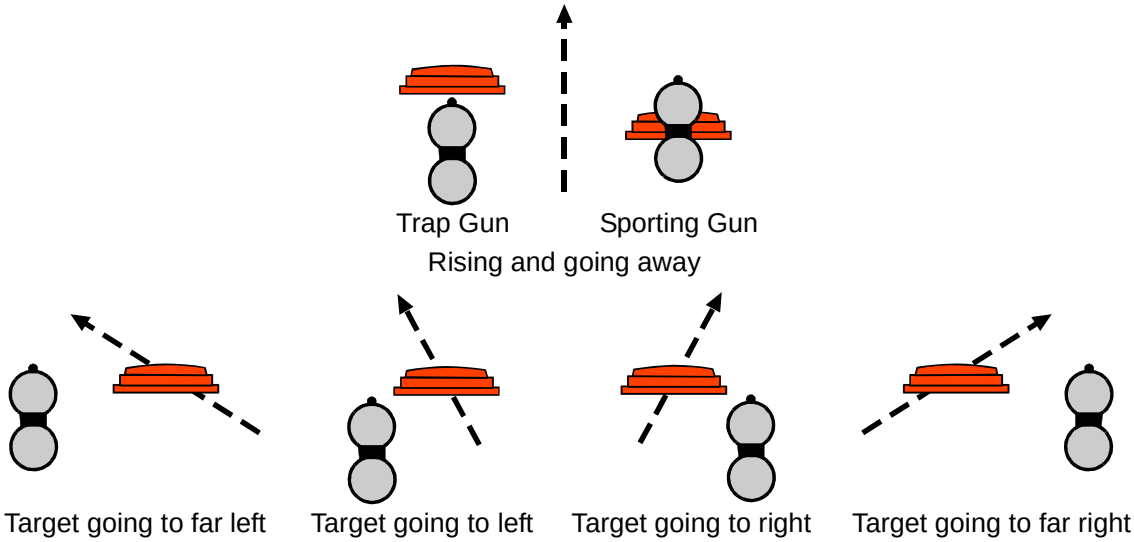


Figure 7-9 – Typical Sight Pictures, Trap targets

ABT targets are wider angle, faster and steeper angle than DTL. Olympic Trap targets are even faster with yet wider angle, which requires more lead.

Skeet Disciplines

"Skeet" or "Skeet shooting" was developed as a compact method of practicing game shooting in the off-season. An early form of Skeet developed in America, was called "around the clock" because it was shot from shooting stations set in a circle. The modern name "Skeet" comes from the Scandinavian "to shoot". All modern versions of Skeet are shot from shooting stations set in a semi-circle. Skeet can be shot reasonably successfully with a Sporting shotgun fitted with open (Skeet or Cylinder) chokes and No 9 shot.

Skeet employs two trap houses; one throws a high target, the other a low target. Standing on station four looking towards the centre stake, the high house is on your left. The centre stake marks the crossing point of the high and low targets. There are three main forms of Skeet shooting; English, ISSF (Olympic) and NSSA (American), which is similar to ISSF. The main difference between them is the number of stations and the order of shooting on each station. It is common for shooters to call "pull" for the high target and "mark" for the low target, the "mark" call dates back to when traps were manually operated so that the trappers weren't confused into releasing the wrong target.

CPSA ENGLISH SKEET (ESK)

English Skeet has seven stations set in a semi-circle. See Fig 7-10. A round consists of 25 targets, 24 of which are distributed between the stations, with the 25th shot as an "optional" or "repeat" target. If the shooter completes 24 targets without a miss, he has the choice of shooting either the high or the low target from station seven to complete 25 targets. Alternatively, if the shooter misses a target he must use the spare and repeat the first target that he misses.

Shooting English Skeet

1. The recommended squad size is five.
2. There is a right to test the gun prior to competition starting.
3. The squad shoots in the same order on each Station.
4. A round consists of 25 targets.
5. When the squad is ready, the referee shall indicate that it is ok to start.
6. The first shooter on Station one calls to see both targets, so that the squad can observe them (traditionally these are shown in reverse order).
7. The gun may be pre-mounted.
8. Starting with the first shooter on Station 1, they each shoot a high single, then a low single and then a double (i.e. a high/low simultaneous pair), shooting the high first.
9. If at any time a shooter misses a target, the first missed target only must be taken again and in effect becomes the 25th target, known as the "repeat".
10. When all the shooters have completed Station 1, they move to Station 2 where they shoot a high single then a low single then a double, shooting the high first.
11. On Station three, a high single then a low single. (No double on this Station).
12. On Station four, a high single, then a low single and then a double. Because they have the option, the shooter must nominate which of the double targets they will shoot first.
13. On Station five, a high single then a low single. (No double on this Station).
14. On Station 6, a high single, then a low single, and then a double, shooting the low first.
15. On Station seven, a low single, and then a high single, then a double, shooting the low first.
16. Any shooter that has shot a clear round now shoots the 25th (known as the "option"), nominating his preference of a high or low single, loading only one cartridge.

A point is scored for every target broken. The score will be out of 25. A typical competition would be four rounds of 25 each with a maximum possible score of 100.

Note: Only one shot may be taken at each target; second barrel hits are not permitted and will not be counted.

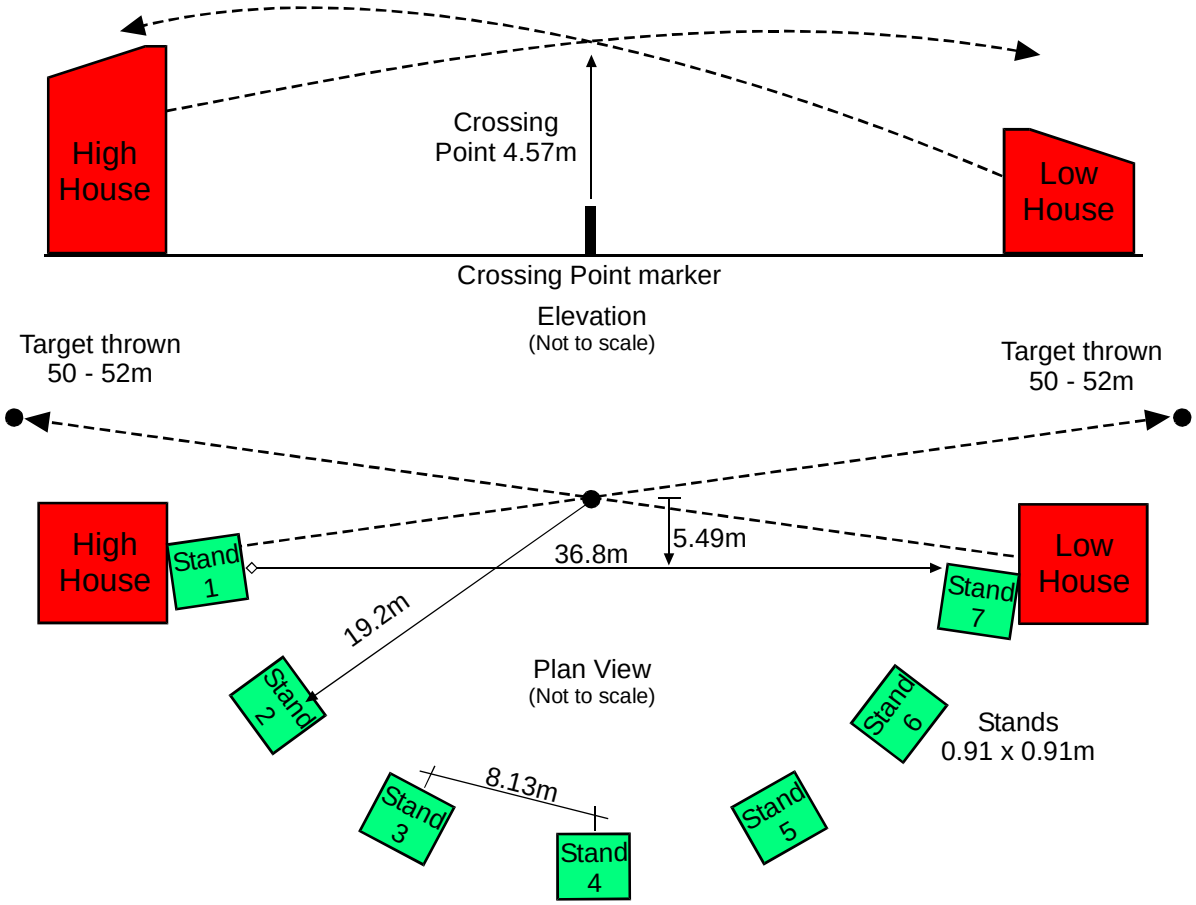


Figure 7-10 – English Skeet layout

Gun Hold Point - English Skeet

Because Skeet targets are predictable, approximate hold point, visual pick up, lead and break zone can be listed and memorised. The following table provides a beginners guide to these. With specific coaching and as experience increases, the shooter will modify them to his own style of shooting.

English Skeet				
Station	**Target**	**Gun hold point**	**Visual pick up**	**Break zone**
One	High	$^{2}/_{3}$ way from H/house to crossing point	Roll the eyes up high but don't lift the head	Over or just before crossing point
	Low	$^{2}/_{3}$ way from L/house to crossing point	Just left of L/house opening	2m after crossing point towards H/house
	Double	Shoot as two singles, High first. (Initially a beginner can break Low slightly later)		
Two	High	⅓ way from H/house to crossing point	¼ way from H/house to crossing point	0.6m before crossing point
	Low	½ way from L/house to crossing point	⅓ way from L/house to crossing point	4.5m from crossing point to H/house
	Double	Shoot as two singles, High first. (Initially a beginner may break Low slightly later)		

Three	High	1/3 way from H/house to crossing point	¼ way from H/house to crossing point	0.6m before crossing point
	Low	½ way between L/house and crossing point	⅓ way from L/house to crossing point	2.0m from crossing point to H/house
Four	High	⅓ way from H/house to crossing point	¼ way from H/house to crossing point	2.0m before crossing point
	Low	⅓ way from L/house to crossing point	¼ way from L/house to crossing point	2.0m before crossing point
	Double	Nominate your preference as first; shoot first as single, second broken ½ way after crossing point		
Five	High	⅔ way from H/house to crossing point	½ way from H/house to crossing point	4.5m after crossing point
	Low	⅓ way from L/house to crossing point	¼ way from L/house to crossing point	1.0m before the crossing point
Six	High	⅔ way from H/house to crossing point	½ way from H/house to crossing point	4.5m after crossing point
	Low	⅔ way from L/house to crossing point	½ way from L/house to crossing point	1.0m before the crossing point
	Double	Shoot as two singles, Low first. (Initially a beginner may break High slightly later)		
Seven	Low	⅔ way from L/house to crossing point	½ way from L/house to crossing point	2.0m before crossing point
	High	⅔ way from H/house to crossing point	½ way from H/house to crossing point	6.0m after crossing point
	Double	Shoot as two singles, Low first. (Initially a beginner may break High slightly later)		

Notes:

1. Hold gun below target's line of flight.
2. Foot position on doubles should favour the more difficult target.
3. Keep the face firmly on stock at all times.
4. Keep weight over front foot "nose over toes" front knee slightly bent.

CPSA SKEET DOUBLES (SKD)

The layout is the same as English Skeet; a 50-target competition shot in two rounds. Instead of singles and doubles, only doubles are shot on each station.

The first Round will comprise 24 targets shooting one double from each of twelve stations as follows:

1. Stations 1, 2, 3 and 4, one double, shooting high target first.
2. Stations 5, 6, 7, 6, 5 and 4, one double, shooting the low target first.
3. Stations 3 and 2, one double shooting, the high target first.

The second Round will comprise 26 targets, shooting one double each from thirteen stations as follows:

1. Stations 1, 2, 3 and 4, one double, shooting high target first.
2. Stations 5, 6, 7, 6, 5 and 4, one double, shooting the low target first.
3. Stations 3, 2 and 1, one double, shooting the high target first.

Note: There are no optional or nominated targets in Skeet Doubles.

ISSF OLYMPIC SKEET (OSK)

Olympic Skeet is the Olympic shooting discipline. Olympic Skeet has seven stations set in a semi-circle with an eighth station mid-way between stations one and seven. See Fig 7-11. Olympic Skeet is very similar to English Skeet, but differs in a number of ways:

1. The targets are shot in a different order.
2. The targets are arranged to eliminate the optional 25th target.
3. There is a random, 0-3 second delay between the target being called and the trap releasing it.
4. The gun cannot be pre-mounted and must be held in the "ready position" with the toe of the stock on or below the crest of the hip. See fig 7-12.
5. The gun may not be mounted until a target is seen.
6. The targets are faster and fly further (66m).
7. Only one cartridge may be loaded when shooting the high or low house single.
8. Only on stations 1 and 8 may the shooter raise his gun and sight for a few seconds before returning to the ready position.

Station 8 is particularly challenging, the targets are very close to the shooter and must be broken before crossing the centre stake; focal and hold points are critical on this station. Olympic Skeet is very challenging; if you attempt this discipline, for the first time, with a very long or heavy gun, you may be frustrated by the result. These targets require particularly smooth and efficient gun movement; the "maintained lead" method is probably the best option. See section 5 Shooting Technique.

Shooting Olympic Skeet

1. The maximum squad size is 6.
2. Starting with shooter no 1, the squad shoots in the same order on each station.
3. Those not shooting should stand behind the referee, particularly on station 8 where the shooters should line up behind the referee at station 4.
4. Each shooter shoots 25 targets.
5. When all shooters are ready, the first shooter on station one calls to see a high target and a double, before he takes his first shot. (In competition, only the first squad of the day are shown the targets)
6. Starting with the first shooter on station one, they each shoot a high single, followed by a double (i.e. high and low simultaneously), shooting the high first.
7. When all the shooters have completed station one, they move to station two where they shoot a high single then a double, shooting the high first.
8. On station three, a high single then a double, shooting the high first.
9. On station four, a high single then a low single then a double shooting the high first, then a second double shooting the low first.
10. On station five, a low single, then a double, shooting the low first.
11. On station six, a low single and then a double, shooting the low first.
12. On station seven, a double only, shooting the low first. (No singles on this station.)
13. On station eight, a high single, then a low single (No double on this station). Position yourself well to the rear of this station for each of these targets.
14. The score will be out of 25.
15. A typical competition would be five rounds of 25 each with a maximum possible score of 125; the Ladies event is three rounds of 25.

Olympic Skeet targets are predictable and like English Skeet above, the method of dealing with them can be listed.

Note: Each target must be shot within the marked boundary; targets shot beyond the boundary will not be counted.

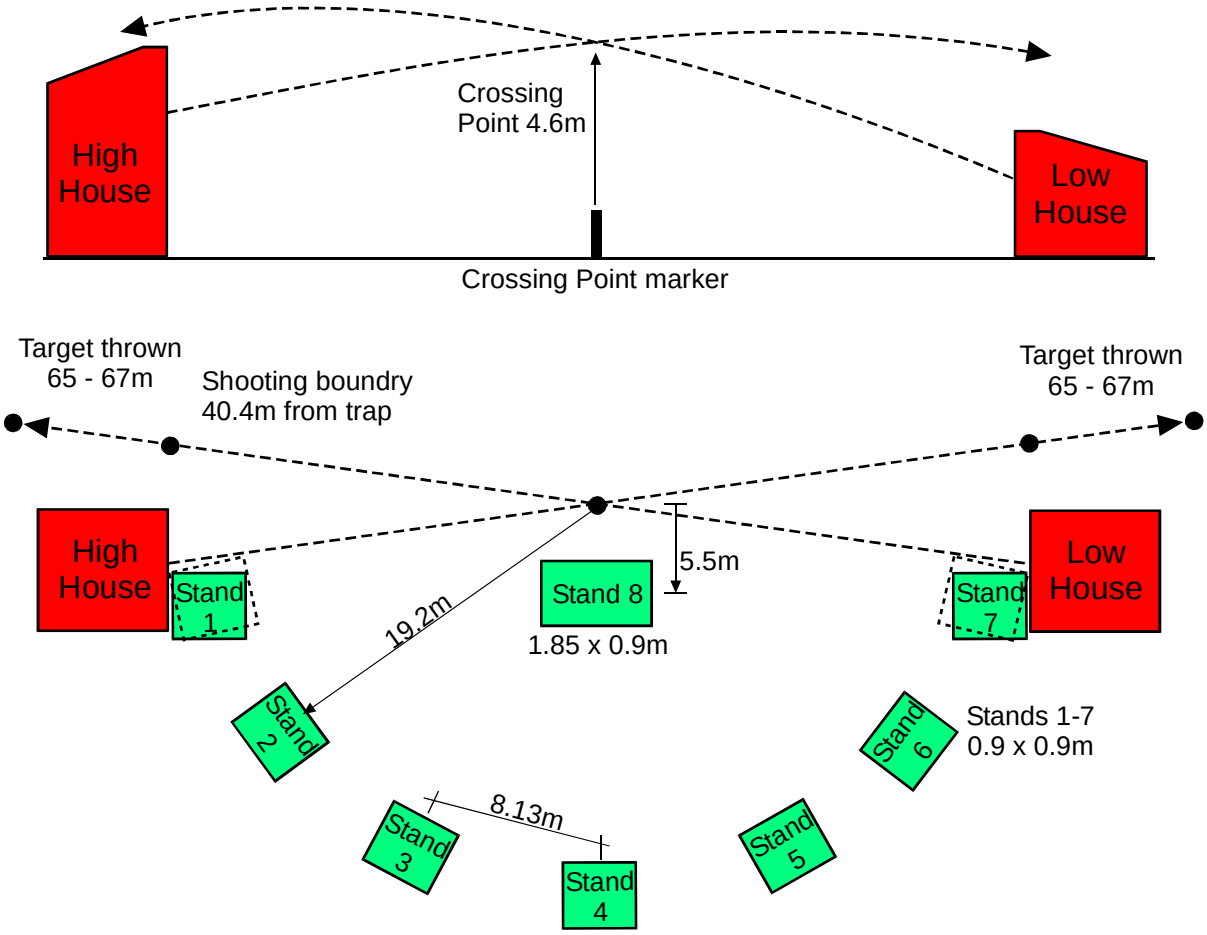


Figure 7-11 – Olympic Skeet layout

Gun Hold Point - Olympic Skeet

As with English Skeet, these targets are predictable, therefore gun hold point, visual pick up, lead and break zone can all be listed and memorised. Olympic Skeet targets are faster and the sequence is different, so the following table should be used in the same way as that for English Skeet. As with other disciplines, specific coaching and experience will result in the shooter modifying these to his personal shooting style.

Figure 7-12 – Ready Position Olympic Skeet. Toe on or below crest of hip

Station	Target	Gun hold point	Visual pick up	Break zone
One	High	4m above centre stake	As high as possible	Over or just after centre stake
	Double	Shoot High first like a single; Low requires 40 – 50cm lead		
Two	High	Parallel to H/house	1.5m out from H/house opening	As soon as lead is seen
	Double	Shoot High first like a single, then swing through the Low and pull the trigger as you pass the target		
Three	High	⅓ way from H/house – centre stake	1.5m out from H/house opening	Around the centre stake
	Double	Shoot High first like a single, then swing through the Low and pull the trigger as you pass the target and see a gap begin to open		
Four	High	½ way from H/house – centre stake	1.5 – 2.0m out from H/house opening	Around the centre stake
	Low	½ way between L/house – centre stake	1.5 – 2.0m out from L/house opening	Around the centre stake
	Double	Shoot High first like a single, then swing through the Low and pull the trigger as you pass the target and see a gap begin to open		
	Double	Shoot Low first like a single, then swing through the High and pull the trigger as you pass the target and see a gap begin to open		
Five	High	½ way from H/house – centre stake	1.5m out from H/house opening	Just after centre stake
	Low	½ way from L/house – centre stake	1.5m out from L/house opening	Around the centre stake
	Double	Shoot Low first like a single, then swing through the High and pull the trigger as you pass the target and see a gap begin to open.		
Six	Low	Just a little further out than Parallel to L/house	2.0n out from L/house opening	Around the centre stake
	Double	Shoot Low first like a single, then swing through the High and pull the trigger as you pass the target and see a gap begin to open		
Seven	Double	Shoot Low first, no lead; just before the centre stake Swing through High; pull the trigger as a gap opens up.		
Eight	High	1m right of bottom of H/house opening	Just left of the barrels	Straight at it
	Low	1m up and 1m right of L/house opening	Just right of the barrels	Straight at it

Notes:

1. When setting up the hold point, it is essential to keep the barrels slightly below the target's line of flight.
2. These fast targets need a focus further out from the trap house than English Skeet.
3. Foot position on doubles should favour the more difficult target.

NSSA (AMERICAN) SKEET

The layout, order of targets and procedures for NSSA Skeet are similar to Olympic Skeet except that the targets are slower, there is no delay on calling for the target and the gun can be held in any position.

Sporting Disciplines

CPSA ENGLISH SPORTING (ESP)

Sporting layouts were originally designed to simulate the behaviour of game birds, therefore, many targets in this discipline will be named for the behaviour that they exhibit, e.g. "Springing Teal", "Dropping Crow", "Quartering Pigeon", etc. Modern Sporting targets have limitless variety in terms of height, speed and trajectory.

To increase the challenge, layout designers may use trees, terrain, speed and target size to deceive the eye as to the distance and amount of lead required. English Sporting targets are usually thrown in pairs, in one of three ways. As a "simultaneous pair", where both targets are launched from the same or separate traps at the same moment; as an "on report pair", where the second target isn't thrown until the gun is fired at the first target, or as a "following pair" where the second target is launched from the same trap without delay following the trajectory of the first target. Single targets may also be thrown with full use of gun. A typical ESP layout will comprise 50 targets shot from five or six stands, with four or five pairs shot on each. Alternatively, a 100 targets comprising ten to fourteen stands with three to five pairs shot on each. Stands will have safety enclosures within which the shooter stands to take his shots. See fig 7-13.

Figure 7-13 – Safety enclosure

Figure 7-14 – Target information

Shooting English Sporting

1. There will normally be a sign or chalkboard indicating the number and type of targets, e.g. "rabbit from right plus quartering pigeon on report – midi". See fig 7-14.
2. Shooters must not load until they are on the stand and inside the safety enclosure, with the gun pointing down range and the referee indicates it is safe to do so.
3. Guns must not be closed until the shooter is ready to call for a target.
4. Before he takes his first shot, the first shooter of a squad will call for a pair* so all shooters can see their speed and trajectory. (*Singles, though rare, are allowed)
5. The gun can be pre-mounted if the shooter wishes.
6. On calling "pull", the target(s) will be thrown (a delay of three seconds is allowed).
7. The shooter then shoots the allotted number of targets.
8. When the shooter has shot the allotted number of targets, the gun must be opened and unloaded before leaving the stand.
9. When each shooter has completed the allotted number of targets, the squad or individual moves to another stand.
10. If shooting in a squad, on the second stand the second shooter shoots first, on the third stand the third shooter and so on.
11. Procedures in 5 to 11 above are repeated until all stands/targets have been shot.
12. Except for formal competition, the stands may be completed in any order.
13. Scoring is straightforward, each "hit" scores one point, a miss scores zero.
14. If a pair of targets is thrown and both are broken by the first shot, both are scored.
15. If on a simultaneous or following pair the one target is hit and the other is a "no target", nothing is scored and the pair is repeated.

The score will be out of 50, 100, 200 or 300 depending on the layout or competition.

Gun Hold Point - Sporting

Unlike Trap targets, Sporting targets are so varied and unpredictable that a simple strategy or rule for visual pick up, gun hold, lead and break zone is difficult to state. The best technique, is to employ the finger pointing technique on each target, as taught by CPSA Instructors and Coaches to establish visual pick up, gun hold and hit points. The visual pick up point, should be where the target is first clearly seen. The gun hold point, should not be so close to the trap that the clay whizzes past the barrels, causing difficulty catching up, and a miss behind, or so far out that the barrels swing through the intended hit point and the gun stops due to lack of space. With Sporting targets, there is no substitute for a few lessons from a CPSA Instructor or coach, augmented by practice and experience. See Section 5, Shooting Technique.

CPSA SPORTRAP (STR)

"Sportrap" looks like a miniature English sporting layout, indeed the targets will be similar. Sportrap is similar to "Compak Sporting" – both are a Sporting layout fitted into a limited space and are often set up temporarily on a Skeet or Trap layout. There will be five safety enclosures, 1.2m square, set side-by-side, 3m apart. Five targets will be thrown on each stand: consisting of a single target, a simultaneous pair and a report pair. Four or five traps are used to provide a variety of angles and trajectories; existing DTL, ABT or Skeet traps may be utilised, augmented by additional mobile traps that can be moved to provide variety. See fig 7-15. The traps will be labelled A to E from left to right. A sign in front of each stand will inform the shooter of the order and combination of shots. These boards will contain a sort of shorthand, for example, "C - FUOG, D+E O/R, A+B Sim," This means first target C is a single with full use of gun, then targets D+E on report, finally targets A+B Simultaneously. Any type of target may be used. Safety requirements are similar to English Sporting.

Shooting Sportrap

1. Each of five shooters is allocated a stand.
2. Each shooter shoots 25 targets, 5 on each stand.
3. Each stand will present the shooter with a different combination of targets.
4. When all shooters are ready, they will be shown one target from each trap.
5. The referee will call "line ready", guns may be loaded but only the shooter about to shoot may close his.
6. The gun may be pre-mounted.
7. Starting with the shooter on stand one, each shooter in turn shoots a single target. Two shots may be taken at this target. This is called "full use of gun" or FUOG for short.
8. After the fifth shooter has shot the single, starting again with the shooter on stand one, they each shoot the report pair.
9. After the fifth shooter has shot the report pair, starting again with the shooter on stand one, they each shoot the simultaneous pair.
10. When the fifth shooter has shot the simultaneous pair, the referee will call "unload and change". Each shooter unloads and moves one stand to the right and the shooter on stand five moves to stand one.
11. Beginning again, but this time with the shooter on stand two, and ending with the shooter on stand one, procedures 7 to10 above are repeated.
12. Beginning again, but this time with the shooter on stand three, and ending with the shooter on stand two, the procedures from 7 to 10 are repeated.
13. Beginning again, but this time with the shooter on stand four, and ending with the shooter on stand three, the procedures from 7 to 10 are repeated.
14. Finally, beginning with the shooter on stand five, and ending with the shooter on stand four, the procedures from 7 to 10 are repeated.
15. When the shooter on stand four has completed, the referee will call "unload". All shooters must unload before leaving the safety enclosures.

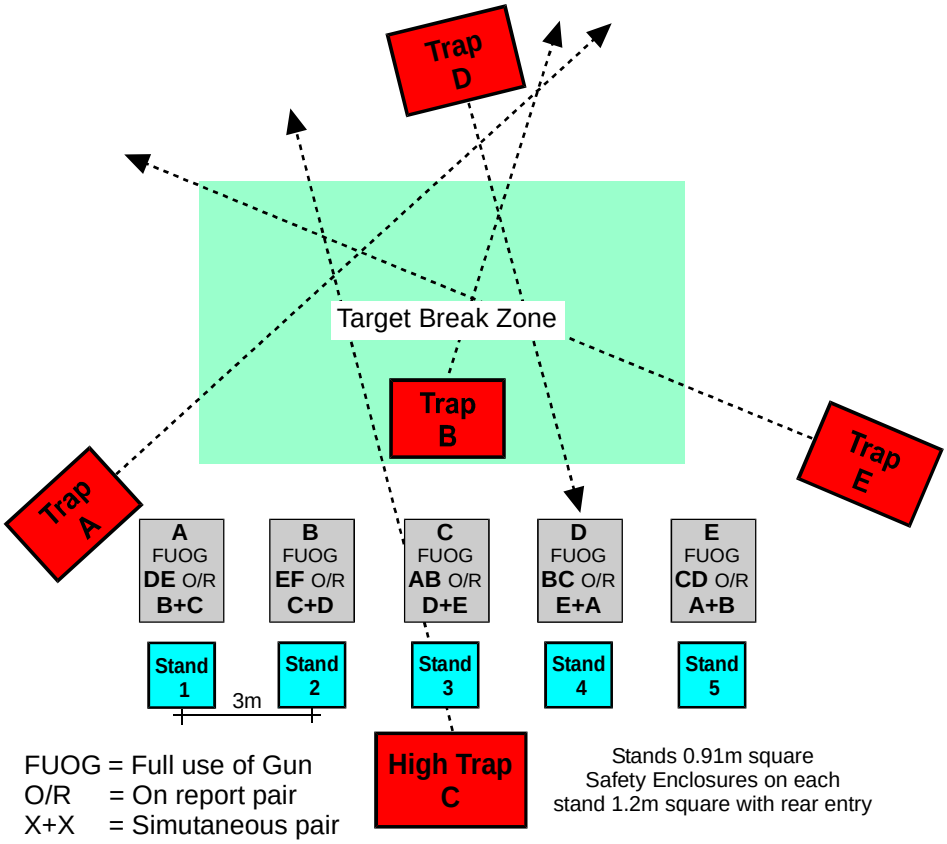


Figure 7-15 – A typical Sportrap layout

A typical Sportrap competition would be four rounds of 25 targets, each round scoring a maximum of 25 points, with a maximum possible score of 100.

Note: the targets must be different for each round (stage), therefore, different layouts must be used or the target must be changed between rounds.

Gun Hold Point - Sportrap

Due to the "compact" nature of the Sportrap layout, the angles between the visual pick up, gun hold, and break zone are rather narrower and often the targets are closer than on a typical English Sporting layout. Therefore, some practice on Skeet range may assist with gun movement and practice shooting sporting targets that are in view for a short time may help a Sporting shooter prepare for Sportrap. See figures 7-17, 7-18, and "English Sporting".

FITASC SPORTING (FSP)

"FITASC" or "International Sporting" is generally similar to English Sporting but differs in a number of areas. A major difference from English Sporting is that in FITASC the gun cannot be pre mounted and the heel of the stock must be held 25cm below the top of the shoulder and against the body until a target appears. Shooters wear a vest with a line marked on them at this position, so that the referee can see if the shooter is breaking this rule. See fig 7-15. Additionally, unlike English Sporting where all targets will be pairs (doubles), in FITASC single targets may be presented. FITASC targets are some of the most challenging you will encounter, fast and varied, including the aptly named "Rocket" target. Target presentation is the same as English Sporting except for the singles previously mentioned. Doubles include simultaneous and on report pairs. A pair thrown from the same trap arm, either simultaneously or after a delay, is called a "Rafale Double"(often misspelled as "Rafael"). Anyone contemplating shooting FITASC should gain some experience at English Sporting first.

Note: FITASC stands may not have safety enclosures, in which case extra vigilance will be required to ensure adequate safety.

Shooting FITASC Sporting

1. A squad will normally comprise up to a maximum of six shooters.
2. A Round will consist of 25 targets.
3. The stand will be a 1m circle or square.
4. The traps will be marked by letters, A, B, C etc. from left to right, looking down the range.
5. There will be a sign or chalkboard indicating a target type and order e.g. C Single, A/B Simultaneous, C Rafale, A/D On Report etc.
6. Each shooter will shoot the singles first.
7. When all shooters have completed the singles, they then shoot the doubles.
8. Two shots are allowed at each single target.
9. All trajectories plus simultaneous and Rafale targets will be presented to the first shooter at each stand for the squad to observe. Only on report pairs will not be shown.
10. No aiming or shooting at the presentation targets is allowed.
11. Shooters must not load or close their guns until they are on the stand with the barrels pointing down range and have indicated that they are ready and the referee has indicated to start.
12. The gun cannot be pre-mounted and must be held in the "ready position" as explained above. See fig 7-16.
13. The shooter has 20 seconds between targets to get ready.
14. If in a double both targets are broken by a single shot, two hits will be scored.
15. The shooter shoots the allotted number of targets.
16. When the shooter has shot the allotted number of targets, the gun is opened and unloaded before leaving the stand.
17. Each shooter takes his turn until the whole squad has completed, the referee will call "unload please" and then the squad moves to the next stand.
18. This procedure is repeated until all stand/targets have been shot.

Scoring is straightforward; each "hit" scores one point a miss scores zero. The score for a round will be out of 25. Competitions may comprise 50, 100, 200 or 300 targets.

Gun Hold Point – FITASC Sporting

The hold point for this discipline will be similar to English Sporting. However, due to the speed and difficulty of some of these targets, the visual pick up, gun hold, lead break zone and foot positioning must be carefully considered.

Figure 7-16 – Ready Position FITASC Sporting. Heel 25cm below top of shoulder

FITASC COMPAK SPORTING (CSP)

Because they look very similar, "Sportrap" and "Compak Sporting" are easily confused. However, the FITASC discipline of "Compak" has one less stand and a different order of shooting. As with Sportrap the Compak layout can be fitted into a limited space of a Trap or Skeet range. There will be four stands with safety enclosures, in a straight line, 3 – 5m apart. There are three compulsory target trajectories, right to left, left to right and straight on with two other additional trajectories at the designers discretion. The layout will look similar to the "Sportrap" layout in fig 7-15. In competition, two targets must be rabbits, and three types of double must be included: on report, simultaneous and double blast. Other doubles e.g. "Rafale" may also be included. Targets may be of any type or size. Sound activated trap release may be set on a 0 – 3s delay. Five traps marked A, B, C, D and E from left to right, will be used to provide a variety of targets, angles and trajectories. A sign in front of each enclosure will inform the shooter of the combination of shots. Safety requirements and referee calls are similar to English Sporting.

Shooting Compak

1. Each shooter in a squad of four shooters is allocated a stand.
2. The gun may be pre-mounted if the shooter wishes.
3. Each shooter shoots 25 targets, distributed between the four stands.
4. Five singles and a double are shot on stand 1. Four singles and a double are shot on stands 2 to 4.
5. The shooters will be shown the targets in the order that they will be thrown.
6. Starting with the shooter on stand one, each shooter shoots four single targets in turn ending with the shooter on stand one who shoots the fifth single on that stand. Two shots may be taken at the singles, the same as in Sportrap.
7. Each shooter has 12 seconds to call for a target after the last shooter has shot.
8. When the first shooter has shot the last single, starting with the shooter on stand two, the doubles are shot in turn.
9. When the shooter on stand one has shot the double, the referee will call "unload and change".
10. The shooter on stand one moves to stand four, the other shooters move one stand to their left.
11. Procedures 6 to 9 above are repeated.
12. When the shooters have unloaded, they repeat the order of change in 10 above.
13. Procedures from 6 to 10 are repeated, until each shooter has shot all four stands and 25 targets.
14. When the shooter on stand one has completed the last double, the referee will call "unload please"; all shooters unload and leave the stands.

A typical Compak competition would be four rounds of 25 targets, each round scoring a maximum of 25 points, with a maximum possible score of 100.

Gun Hold Point - Compak Sporting

See "Sportrap"

Sight Picture, Sporting Targets

The "sight picture", is the view that the shooter sees when looking over the barrels at the target. The sight picture by its very nature includes a perception of lead, although this perception will vary from person to person, and will be affected by a number of factors. These include: length of barrels, speed and trajectory of the target, speed of swing and the method by which lead is achieved.

A Sporting shotgun shoots slightly high so that crossing targets can be seen just above the barrels as they are tracked. However, Sporting target layouts throw such varied targets that this sight picture cannot be maintained on all targets. For example, in order to achieve sufficient lead on a rising, springing teal, the barrels must be in front and therefore, above the target when the trigger is pulled, causing the target to be obscured. Therefore, it is not possible to set up the gun so that the target is always visible.

It is not possible in a book of this type to fully discuss all possible Sporting target presentations, however, the illustrations in figs 7-17 and 7-18, (where "L" is lead) provide a simple visual reference of barrel to target relationship for some typical Sporting targets that you will encounter. Your CPSA Instructor or Coach will be happy to assist you with any targets that you find difficult to master. See also section 5 Shooting Technique.

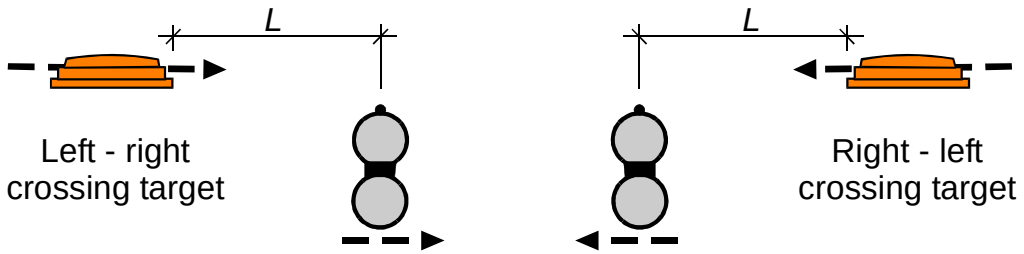


Figure 7-17a – Sight picture/Lead/Gun movement – Crossing targets

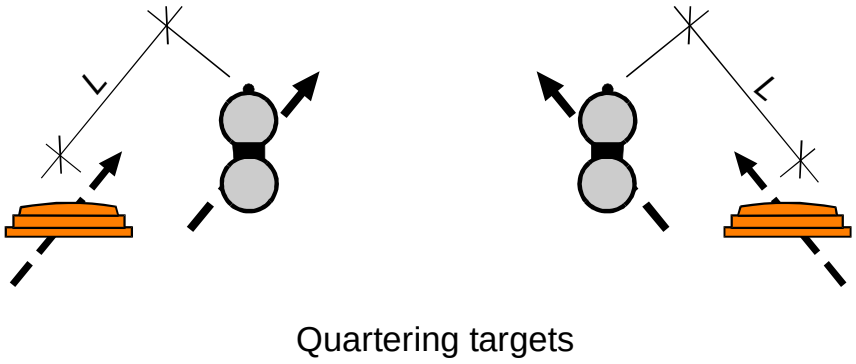


Figure 7-17b – Sight picture/Lead/Gun movement – Quartering targets

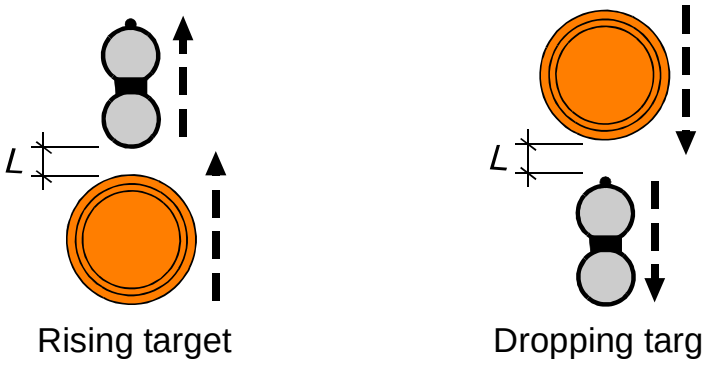


Figure 7-17c – Sight picture/Lead/Gun movement – Rising/Dropping targets

Driven targets both incoming and going away, will require that the shot pattern be placed in front of the line of flight of the target in order to intercept it. Therefore, an outgoing target must appear above the barrels, and incoming below them. See fig 7-18.

Many shooters have difficulty with overhead, incoming driven targets, yet they are reasonably easy to shoot. Stand with your front foot pointing towards the direction of flight. Mount high into the break zone. Shorten the fore-end grip, to ensure that swing on after the shot can be achieved. Bring the gun down the flightpath, dropping the butt out of the shoulder into a "short mount" (the heel just under the arm pit). Look past the gun for the target and mount the gun on the leading edge of the target, with a good upward swinging movement. Add forward allowance and fire before the gun reaches the end of your ability to continue the swing.

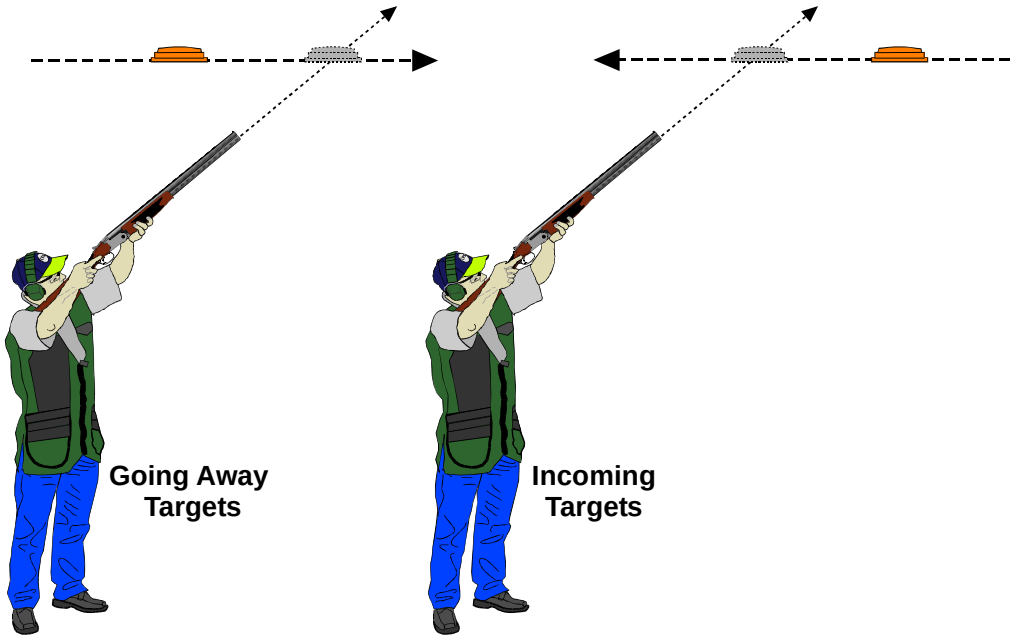


Figure 7-18 – Incoming (driven) and going away targets

FITASC Helice (HEL)

"Helice" is unlike other disciplines in that it uses the unique ZZ target (after which the discipline is often called). The target has two propeller blades made from orange plastic, of 28.0cm wingspan, and is thrown by a special trap or "launcher" that spins the target causing it to fly like a helicopter. The central, detachable and unbreakable portion of the target is called the "witness", which is 10.5cm diameter and is made from white plastic. The maximum cartridge load is 36 gram of No 6 shot. The principle of this discipline is to knock the "witness" portion out of the target during the initial acceleration phase of the target's flight.

Five launchers are set on a semi-circle of 25.0m radius and spaced 4.5m apart. The launchers spin the targets variably, between 3500 and 8000 rpm. The launcher oscillates the target through a forward horizontal angle of 90 – 120º on a two-minute cycle. The launcher also incorporates a "flight deviator" that causes the target to tilt slightly as it is released. The variable spin speed, oscillation and deviator combine to cause a target to be thrown randomly in speed, height and direction. When the shooter calls for a target, the "puller" initiates a launch and an electronic controller releases a target at random from any of the five launchers. Just prior to launch, an indicator flap on the selected launcher drops down, giving the shooter a momentary warning of the target's release.

The launchers will be adjusted so that an estimated average of 70% will be scored by competitors. The distance from launcher No.3 to the first shooting position is 24.0m, with handicap shooting positions at 1.0m increments up to 32.0m. In competition, the distance to the shooting position is 27.0m. The distance from the launchers to the boundary is 21.0m. See fig 7-19.

If the witness does not detach when fired at, the target will be declared lost. In addition, in order to be declared a good hit, the witness must fall to the ground within the shooting boundary. If a target that has been hit breaks and falls within the boundary but the witness does not separate, it will be declared a "no target" and the shooter may take the shot again. The target(s) may only be fired on as they accelerate from the launcher. If the shooter intentionally delays his shot until after the acceleration phase, the target will be declared, "lost".

The witness may only be retrieved by an official; if the shooter retrieves his own witness, it will be declared "lost".

A shooter will receive a handicap by distance, based upon performance, at the end of the shooting season. When a competition is based upon handicap, the shooters will stand at 24.0, 27.0 or 30.0m according to their handicap. A shooter, new to the discipline, who enters a handicapped event, will normally start at the 24.0m mark and will subsequently be moved backwards or forwards according to their performance. For National and International events, the shooting distance is fixed at 27.0m. In such events, a shoot off will take place over increasing distances not exceeding 32.0m. A shoot off if required, will be: by shooting 5 targets - highest score wins, or sudden death.

Shooting Helice

1. This is not a squadded discipline; therefore, any reasonable number may participate.
2. A round may comprise 10 or 20 targets.
3. There is a single stand or "shooting square" (with handicap distances, if used).
4. Shooters waiting to take their turn must stand a safe distance behind the shooting line as indicated by the referee.
5. The shooter must stand within the square, behind the indicated distance mark.
6. Shooters will shoot in the order indicated on the scorecard.
7. Each shooter shoots two targets and has "full use of gun" on each.
8. When all shooters are ready, the shooters will be presented with a target to view before the first shot is taken.
9. Gun mount is optional and guns may be pre-mounted.
10. No gun may be loaded until the shooter is on the stand facing forwards.
11. As soon as the shooter has loaded, the "puller" will activate the launchers.
12. When the shooter calls "ready", the "puller" will reply, "ready", after which the shooter may call "pull".
13. Two shots are permitted at each target but only during the target acceleration phase.
14. After each shooter has taken his shots, he must break and unload his gun before leaving the stand.
15. Each shooter shoots three targets in rotation until each has attempted 10 (or 20) targets.

Both the first or second shots count equally so the score will be out of 10 (or 20). If the shooter misses with both shots, the target will be declared "lost" and no points will be scored.

A typical Helice (ZZ) competition would be 20 targets, but may be increased in units of 10 targets according to the competition organisers' requirements.

Gun Hold Point - Helice

The beginner should start with the barrels pointing down towards the flap on launcher number three. The row of launchers is approximately 17.0m long so the eyes must focus widely and scan for the flap that will drop a moment before the target is released. The low barrel angle prevents the target from being obscured. This method may be modified with experience and coaching.

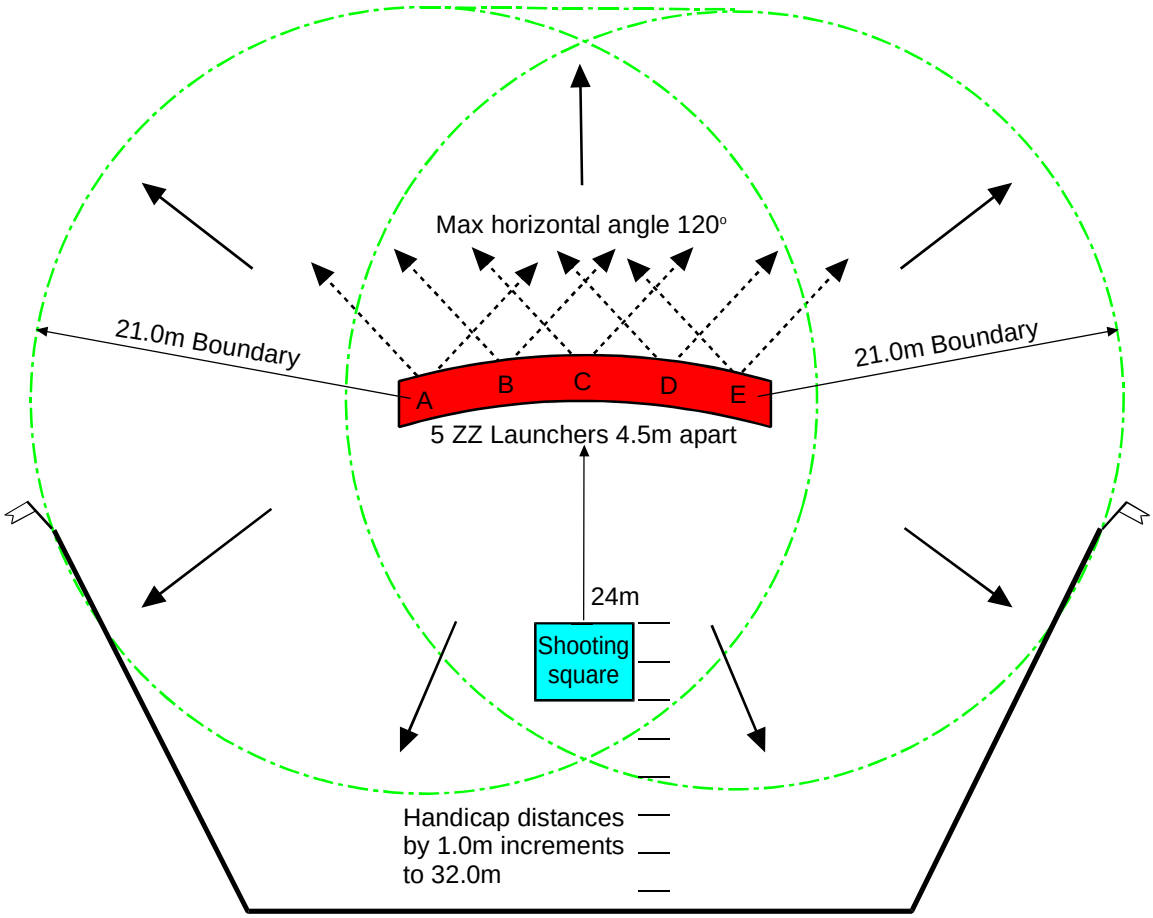


Figure 7-19 – Helice layout

No Target Rules in Helice

There are some additional "no target" and other rules specific for Helice. A no target will be called and a repeat target thrown if:

- The target release is delayed.
- If the target is irregular.
- If the shooter inadvertently discharges his gun before calling for a target.
- If a target is released before the shooter calls for it.

Other Rules Helice

- Another target may be claimed if the second barrel misfires after a miss with the first shot. The gun will be reloaded with two cartridges, after calling for the target, the first shot must be discharged to the ground, the second at the target.
- If the shooter delays his shot until after the acceleration phase of the target, it will be declared lost.
- The shooter may decline to fire if two targets are released, but if he fires, he must abide by the result.
- If the shooter shoots at a target outside the flags it will be declared lost and a fine imposed.
- If a target is hit but does not separate and falls within the shooting boundary, it will be declared lost.
- If a target is hit with the first shot and falls unbroken to the ground before a second shot can be fired, the target will be given again but only one cartridge is loaded. If two shots are taken, the target will be declared lost.

- Similarly, if the target flies into the ground after the first shot, the target will be given again but only one cartridge is loaded. If two shots are taken, the target will be declared lost.

Other rules general

The three main governing bodies, CPSA, ISSF and FITASC have set various limits for cartridges and modifications to shotguns. The following table and notes provide details of the restrictions/limits for each discipline. The notes below apply to all.

TECHNICAL DATA FOR GUNS AND CARTRIDGES USED IN CLAY TARGET SHOOTING

(From the CPSA General Rules and Regulations)

Discipline	CPSA No / Abbr		Max Shot Size	Min Shot Size	Max Load	Max Case Length	Gun/Barrel Restrictions	Governing Body
Down the Line	10	DTL	2.6 mm	Unspecified	28 gm	Unspecified	No barrels with attached ventilated recoil eliminators	CPSA
Single Barrel	11	S/B	"	"	"	"	"	"
Double Rise	12	D/R	"	"	"	"	"	"
Handicap by Distance	13	H/D	"	"	"	"	"	"
English Skeet	20	ESK	"	"	"	70 mm	None	"
Skeet Doubles	21	SKD	"	"	"	"	"	"
English Sporting	30	ESP	"	2.0 mm	"	Unspecified	No straps allowed	"
Sportrap	31	STR	"	"	"	"	"	"
Automatic Ball Trap & ISSF Automatic Trap	40	ABT	2.5 + 0.1 mm	Unspecified	"	70 mm	No added barrel compensators. No straps/slings. Magazine limited to one shell.	"
All Round	50	A/R	As per individual discipline					"
Olympic Trap	60	OTR	2.5 + 0.1 mm	Unspecified	24 + 0.5 gm	70 mm	No added barrel compensators. No straps/slings. Magazine limited to one shell.	ISSF
Olympic Skeet	70	OSK	"	"	"	"	No straps/slings. Magazine limited to one shell. Barrel compensators are allowed.	"
Double Trap	80	D/T	"	"	"	"	No added barrel compensators. No straps/slings. Magazine limited to one shell.	"
Universal Trench	90	UTR	"	"	28 gm	"	No compensators or similar devices	FITASC
FITASC Sporting	100	FSP	"	2.0 mm	28 gm	Unspecified	Minimum barrel length 66 cm. No straps or slings	"
Compak Sporting	101	CSP	"	Unspecified	28 gm	"	"	"
Helice (ZZ)	110	HEL	2.75 mm	2.2 mm	36 gm	"	None	"

Note 1: Cartridges must be of standard factory loading with no internal changes.

Note 2: All shot must be spherical and of normal production. Plated shot may be used.

Note 3: Home loads, black powder, tracer and incendiary cartridges are prohibited.

Note 4: All types of shotgun may be used providing their calibre does not exceed 12 bore.

Note 5: Shotguns must never be loaded with more than two cartridges.

Non Affiliated Disciplines

Over the years, a few entrepreneurs have developed popular and successful clay target disciplines that do not conform to any national or international association rules. Back in the 1980's, "Starshot" was very popular and was even featured on television. Today, "Eurotrap"™, "Clay Snooker"™ and "Marxman-Challenge"™ are popular and in addition to affiliated disciplines, they can be found at game fairs, country shows and other venues where clay target shooters gather. The success and popularity that these disciplines enjoy undoubtedly stems from the fun and challenge that attempting something different provides. They are also a great leveller, because unlike DTL, ABT etc., they can't be practiced week in week out to perfection. There is something quite satisfying about watching the AA class shot, who won last week's club competition with yet another 100/300, miss a few.

EUROTRAP™

"Eurotrap™" is fast, furious and great fun to shoot. As with all trap disciplines, the targets are rising and going away. "Eurotrap™" is shot by a two-man team who must shoot a series of targets in co-operation with each other in order to attain the highest possible score. The shooters stand on a raised platform, below which are a number of traps. See Fig 7-20. The shooters will not know from which trap(s) the targets will be thrown. The two stands are next to each other with the scorer/referee between them. The left stand is coloured red and the right coloured white. Three targets are thrown, coloured red, white and blue. Only the shooter on the red stand may shoot at the red targets and the white shooter the white targets; either shooter may shoot at the blue targets. The red and white targets have a value of one point the blue targets have a value of six points. Additionally during the round, one "flash" type blue target will be introduced at random which is worth 16 points. The maximum possible score for breaking all the targets is 110 points.

Shooting Eurotrap™

The procedures are as follows:

1. The two shooters decide which of them will shoot as red or white.
2. The red shooter stands on the left, the white shooter on the right.
3. On calling "pull", up to four targets will be thrown simultaneously, consisting of not more than two reds or whites, the remainder being blue.
4. Both shooters shoot simultaneously.
5. The shooters may only shoot their allocated colour and any blue(s), shooting their allocated colour first. For example:
   - If one white, one red and two blues are thrown, then each shooter must shoot his colour first then a blue.
   - If one red (or one white) and three blues are thrown, the red (or white) shooter must shoot at the red (or white) target first and then one blue, while at the same time the other shooter will deal with the other two blue targets.
   - If four blues are thrown, the shooters will shoot two each.
6. If a shooter shoots his team mate's colour, a point is deducted for each infraction.
7. If either shooter shoots a blue before his colour, six points are deducted for each infraction.
8. Red and white targets are worth one point; blues are worth six points.
9. A single, bonus "flash" or smoking blue target, worth sixteen points, will be introduced at random during the round.
10. The round is complete when targets totalling 110 points have been attempted.

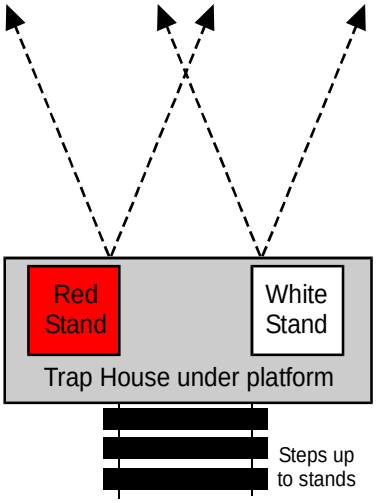


Figure 7-20 – Eurotrap™ layout

Gun Hold Point - Eurotrap™

Treat this discipline like Double Trap. However, there is no trap house in front to provide a hold point so hold the gun pointing down approximately 15 – 20º from the horizontal and straight in front of the stand. As the targets pass your muzzle pick up your target colour, swing through, shooting at the straightest if there are two, then cut your eyes towards the second or the nearest blue if there is no second colour. Be ready to anticipate your team mate's reactions, he may hit the blue you were about to shoot at. It might be best to discuss a strategy before the round, e.g. the red shooter takes on the blue targets to the left of centre and the white shooter the blue targets to the right.

Note: This is a fast discipline requiring quick reactions and teamwork, therefore, before you and your team mate shoot it for the first time, it is advisable to watch others shoot first, to gain a feel for the speed line and trajectory of the targets.

Note: Unlike traditional trap targets, the elevated shooting position may cause you to miss over the top of these targets, so make sure you put 60% of your weight over the front foot as if you were shooting at a quartering rabbit target.

CLAY SNOOKER™

"Clay Snooker" is a non-affiliated "fun" discipline that at first glance looks like "Sportrap" but instead of the usual alpha/numeric marking of the traps, "Clay Snooker" traps and targets are colour coded as in the table game. See Fig 7-21. There are seven traps, the layout of which may vary from shoot to shoot. The targets are shot in the same order as they are "potted" in table snooker. A random red (ABT like) target is attempted first, followed by a nominated colour and so on. However there are only six reds, compared with 15 in table snooker. A red is worth one point, the yellow two, the green three, the brown four, the blue five, the pink six and the black seven points. The targets increase in difficulty with their value, with the black being the hardest. This discipline can be shot by two shooters at a time on an elimination basis until a final pair shoot off for first prize or on a highest score basis where the shooters shoot as individuals and the high gun takes the first prize. Additionally clearing all the reds followed by a black, then all the colours in order without a miss results in a "75 break" for which there is an individual prize. There is an annual "Pot Black Challenge", where any shooter who has achieved more than 66 points during that years competitions is invited to compete. At this event, fifteen reds are used, and the maximum break is 147 as in the table game.

Shooting Clay Snooker™

The procedures are as follows:

1. Two shooters are allocated a stand each.
2. When both shooters are ready, the shooter on stand one nominates a colour. He then shoots a red target.
3. If the red target is hit with the first barrel, then the nominated colour will be thrown "on report".
4. If the colour is hit then the shooter re-loads, nominates another colour then attempts a red followed by the colour.
5. If the red target is missed, the second barrel may be used and if hit, the red is scored, but the colour may not be taken.
6. Shooter number one continues to shoot until he misses a target.
7. When shooter number one misses a target, shooter number two takes his turn as in points 2-6 above.
8. When 6 reds have been shot then the shooter who hit the last red and a colour begins to shoot the colours in order i.e. yellow, green, brown, blue, pink, black and continues to shoot until he misses, when the other shooter will take over.
9. When shooting colours two shots may be taken but one point will be deducted for a second barrel hit.
10. Unlike the table game, only one attempt is allowed at a colour by each shooter.
11. The round is over when a shooter hits the black target, or both shooters have missed the black target.

The shooter with the highest total wins the round.

The maximum possible score is normally six reds (6 points) plus six blacks (42 points) plus all the colours (27 points) resulting in a total of 75.

At the "Pot Black Challenge", 15 reds are used, so the maximum possible score is fifteen reds (15 points) plus fifteen blacks (105 points) plus all the colours (27 points) resulting in a total of 147; there is a special prize for a 147 break.

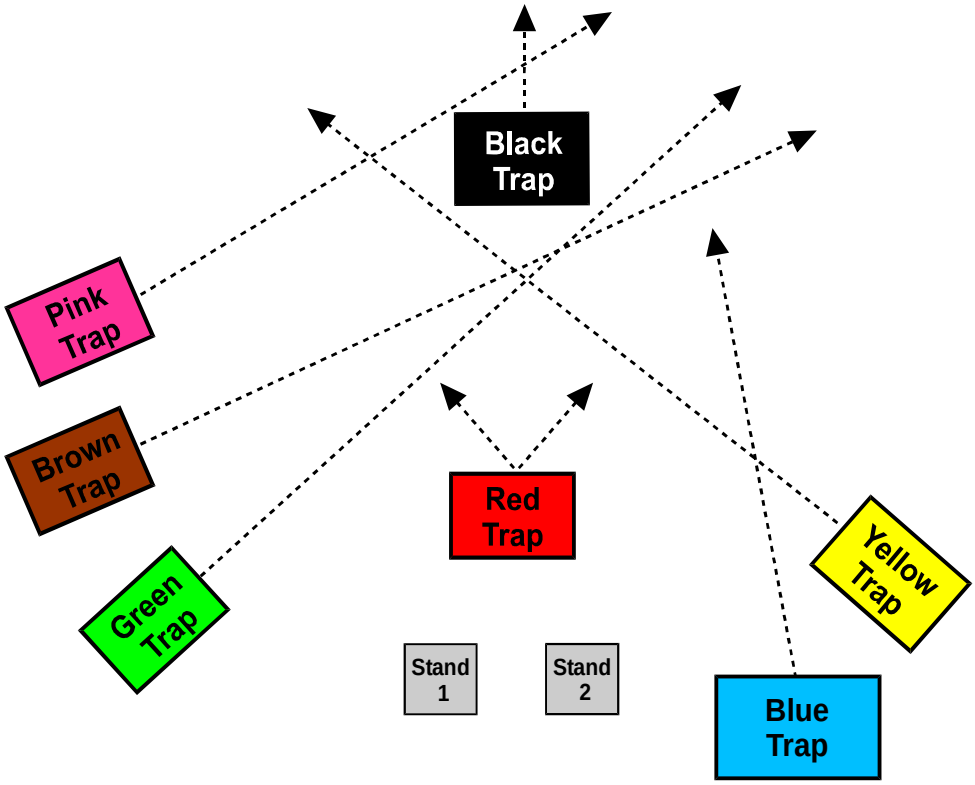


Figure 7-21 – A typical Clay Snooker™ layout

Gun Hold Point - Clay Snooker

Treat this discipline like fast Sportrap. The layout for Clay Snooker will differ from venue to venue. Therefore, make sure that you study the speed, line and trajectory of the targets from each trap before attempting this discipline for the first time.

Note: Unlike the mainstream disciplines that the CPSA and the international bodies are keen to promote, Eurotrap™ and Clay Snooker™ disciplines are registered by their respective proprietors under the copyrights and patents act 1988. Any attempt to use the names, designs and logos or to offer a facsimile of these disciplines at your club or shooting ground without the expressed permission of the copyright holders may result in legal action.

MARXMAN-CHALLENGE™

The MARXMAN™ clay target trap is a very sophisticated design that is fully automatic and capable of throwing one or two targets at widely varying angles, elevations, speeds and trajectories from two separate throwing arms. The Marxman trap is one of the most versatile machines available; it can be set to throw fixed, ABT, DTL or random targets, with ten switchable levels of difficulty. Additionally, the speed can be set to fixed or random. The Marxman can throw targets from 0 - 70º vertically and 160º horizontally. See Fig 7-22.

The MARXMAN-Challenge™, is a non-affiliated discipline, developed to utilize the versatility of the Marxman trap and has been described as "manic, double ABT with wider angles", not a bad description! The Marxman-Challenge uses the full vertical, horizontal and speed capability of the Marxman trap, but the trap spring tension will be pre-set at the beginning of the competition. The aim is to shoot five singles without a miss, then shoot five simultaneous pairs. If all five pairs are hit, then continue shooting pairs to build up more points, until a target is missed. One point is scored for each target broken.

Shooting the MARXMAN-Challenge™

The procedures are as follows:

1. The trap will be obscured by a screen.
2. Shooters may re-enter the challenge as many times as they wish.
3. Each of a maximum of three shooters shoots the targets in sequence.
4. A or AA Class shooters or those who have won a major county, national or international competition, may take part but are not eligible to win a prize.
5. Five singles will always be thrown for each shooter before any simultaneous pairs.
6. The referee will call "line ready". On this command, guns may be loaded.
7. When all three shooters are ready, shooter number one on stand one calls for a target for the squad to view, before he takes his first shot.
8. The gun may be pre-mounted.
9. The target(s) will be thrown on the shooters command.
10. Starting with the shooter number one, they each shoot one target in turn. This is repeated five times, until every shooter has completed the singles.
11. Only a single barrel may be used per target.
12. When the five singles have been attempted by each shooter, five doubles will be thrown only to those shooters who have hit five singles.
13. The round is over (for the individual) when the shooter misses a target.
14. A missed target results in no score and will be declared "lost".
15. Any regular target not attempted will be declared "lost".
16. In the event of a "no target", the shooter may attempt the target again.
17. In the event of a no target in a pair, the pair must be attempted again.
18. One point is scored for each target "hit", the object being to achieve more than 10 points.
19. Score 10 points to qualify for the Grand Final.
20. In order to prevent balking of other shooters, no one should move off their stand until the referee calls "unload please".
21. Any target that leaves the trap unbroken will be considered a regular target.
22. A Round will comprise five singles followed by five doubles.
23. The referee's decision is final.

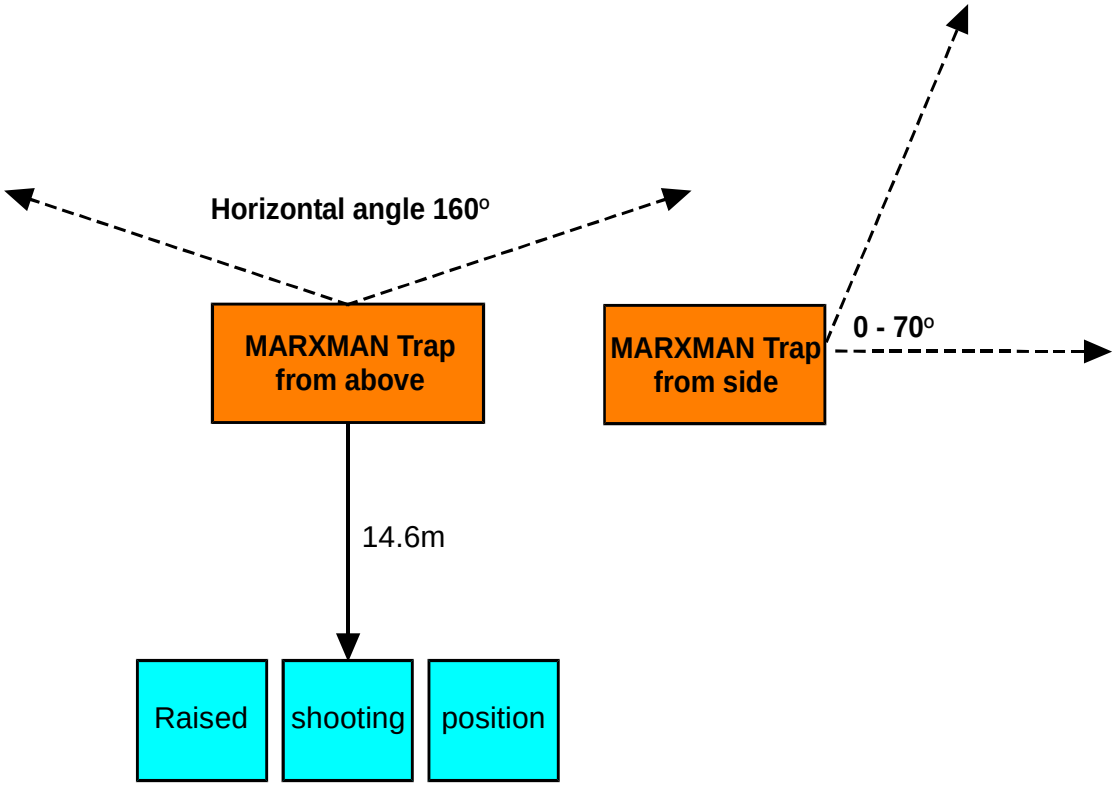


Figure 7-22 – Marxman-Challenge™ trap layout

Gun Hold Point - MARXMAN-Challenge™

Treat this discipline like a cross between ABT and Double Rise, but with wider angles. The trap house is in front hidden behind a screen, so that the direction and elevation of the targets can't be anticipated. The gun hold point is similar to ABT; hold low on the trap screen, wait until the target is released, and then swing through the target before pulling the trigger. On simultaneous pairs go for the straightest first, then cut your eyes to the second target, get onto the line, swing through and pull the trigger. Shoot the first target as early as possible to give as much time as possible for the second, but avoid snatching at it.

Note: If you're using a trap gun it is very easy to shoot over the top of the horizontal targets. Keeping your weight slightly over the front foot may help.

Note: This is a fast discipline requiring quick reactions, therefore, before you shoot it for the first time, it is advisable to watch others shoot first, to gain a feel for the speed, line and trajectory of the targets.

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8. Qualified Instruction

Instruction

You may have occasion to witness the attempts at the instruction of inexperienced shooters by their well-meaning relations, friends and acquaintances. These can vary from the adequate, to verging on the dangerous. Seldom does one see good instruction from untrained persons. Teaching requires specific knowledge, skill and experience that the average shooter does not possess. It is far more difficult for a CPSA Instructor or Coach to undo poor skills and bad habits, than to teach them properly in the first place. Ideally, novice shooters should be introduced to the sport by a CPSA Instructor or Coach. "If this is not possible, then book a course of lessons as soon as possible before bad habits set in. From 2006, through the CPSA Academy, CPSA Instructors and Coaches will be able to offer a range of Modular "Shotgun Skills™" courses including "Discover Clay Target Shooting™, a course for those who want to try the sport for the first time. The "Shotgun Skills Course™" is ideal for those who want to learn to handle a gun correctly and learn sound shooting technique. The "Discipline Skills Course" is in fact a series of courses, ideal for those who wish to learn how to shoot a new discipline or to improve their shooting ability in a specific discipline. Initially ESK, ABT, DTL and ESP will be available with others to follow in the next year. For the improving shooter, there is no substitute for plenty of planned practice together with the guidance of a CPSA Coach. If you encounter recurring problems with a specific type of target get some advice and guidance from a CPSA Coach, it will pay dividends. Visit the CPSA website for a list of CPSA Instructors and Coaches in your area.

The CPSA Academy

The CPSA Academy produces Instructors and Coaches of a high standard. For those shooters interested in becoming a CPSA Instructor, the first step is to attend a one day CPSA Instructor Development Workshop (IDW). The IDW is designed to check and improve general shooting technique and to introduce instructing using the CPSA Method. The four-day CPSA Instructor Course develops instructional skill to a high standard. Instructor candidates must also have attended a CPSA safety Officer course. Via a range of more advanced courses, CPSA Coaches gain skills prepare them for coaching top class shooters.

Some final thoughts

Even the best shots occasionally suffer a drop in performance. There can be many causes including: changes in eyesight or health, pressure at work, tiredness, etc. In turn, these can cause tension and a loss of concentration resulting in missed targets. The important thing is to realise that this can happen and not to become despondent if you have a bad day.

The majority of shooters pay little attention to the mental side of the game, but if your gun fits, eye dominance is understood and basic technique is sound, inconsistent performance is probably the result of poor concentration or an inability to relax. Some of our top shooters use sports science to help with their performance and consistency. However, even simple relaxation and concentration techniques are not widely used by competitive shooters. Having tried and found these techniques to work, we recommend that anyone interested in improving their competition scores read some of the excellent books available on the subject, one of which is mentioned in the bibliography.

Clay target shooting is an enthralling sport, once tried you will find yourself wanting to improve your scores at every opportunity. There are numerous clay target competitions, held at club, national and international level. Whatever your aspirations we hope this handbook has helped you to get started, answered some of your questions and contributed to your comfort in unfamiliar surroundings.

Shooter's Excuses

It is only human nature to seek to explain why a target has been missed; the best person to make an accurate determination is a CPSA Coach. However, shooters naturally offer reasons for their poor performance and mistakes, so here, tongue in cheek, are some favourites. If all else fails use one of these!

GUNS

- I must get something done about this automatic safety catch!
- No wonder I couldn't hit anything, I had the wrong choke in! Or…
- I was using the wrong load!
- This new gun just doesn't shoot like my old one! (Usually followed by "I wish I hadn't sold it"!).
- I pulled the trigger before I was ready! Alternatively…
- I called pull before I was ready!
- I really must get this stock adjusted!
- I think it's shooting a bit high (or low if you prefer)!
- I'm sure this trigger has become too sensitive (or stiff if you prefer)!
- My comb raiser has slipped!
- I don't usually use this gun

TARGETS

- Wasn't that a no target?
- I just can't read (crossers, teals etc.) targets!
- The wind caught it (the target) just as I pulled the trigger!
- I'm sure I saw a thumbnail break off that target; are you certain it was the wad?
- Damned (battues, minis, rabbits etc)!
- All these no targets are putting me off!
- Who set up that trap?

SOMEBODY ELSE'S FAULT

- Surely, that was an irregular target ref!
- I'm sure that referee is blind!
- Is that trapper deaf?
- Are you sure that release isn't set on delay?
- Did you hear that (other shooter's) call? It put me off!
- These floodlights are useless! (Shooting at night).
- Couldn't they have used orange clays against that background!

MISCELLANEOUS

- I'm not buying any more of these cartridges, I can't hit a thing with them!
- I've lost weight and my gun doesn't fit anymore!
- I forgot to pack my sodium lenses!
- My glasses keep steaming up!
- I can't believe that I was shooting at a falling leaf! (An autumnal excuse).
- I hadn't realised that I'd closed the wrong eye! (A one eyed shooter).
- The sun was in my eyes!
- I caught the comb on my ear defenders as I mounted!
- I got cramp in my trigger finger
- These attractive female (or male) referees are so distracting

Appendix 1 – Glossary

Listed here are terms gathered from general usage within the sport and those to be found in CPSA FITASC and ISSF rulebooks.

Shooting Terminology

ACOUSTIC TRAP RELEASE

A sound (voice) activated target release system as opposed to a manually operated release. See also “Sonic Trap Release”.

BALK

A distraction or interruption of a shooter who is in the process of shooting a target.

BATTUE

A thin Target of 110mm in diameter.

BIRD

An historical reference to a “Clay Target” derived from live game shooting. See also “Clay Pigeon”

BLACK POWDER

The powder charge in a modern cartridge is based upon nitro-cellulose, whereas traditional “gun powder” or “black powder” is a mixture of charcoal, sulphur and potassium nitrate. Black Powder is “illegal” for most clay target disciplines, but is still used in “Muzzle Loading” guns for which there are separate competitions.

BREAK ZONE

The area within which a shooter plans to shoot at and break a target.

BUTTONER

A person who operates the target release mechanism. See also “Trapper” and “Puller”.

CALL (FOR TARGET)

The usual call in English is “Pull” although many shooters, particularly on voice-activated traps, substitute various unintelligible grunts and other guttural sounds; See “Pull” and “Hack”. In addition, there are some specialised calls used in certain disciplines. See “Mark”, “Pair” and “Ready”

CALLS (BY A REFEREE)

During a Round various calls are made by the Referee to give information, these will include: “Hit”, “Lost”, “Second”, “No target” etc. No call by a referee denotes a target scored in some disciplines.

CATEGORY

As opposed to classification, a category is defined by age or sex e.g. Junior, Senior, Veteran, Ladies etc.

CHONDELLE

A Chondelle target is a standard target thrown edge on, usually in a high arc, by a trap specially designed for the purpose.

CLASSIFICATION

A grading system based on shooting performance achieved by shooting “Registered” and competition targets.

CLAY

A target, no longer made from clay, but from compressed chalk and pitch. See also "Bird", "Clay Target", "Clay Pigeon" and "Target".

CLAY PIGEON

The original name for a Clay Target, when its purpose was a substitute for shooting live birds. See also "Clay", "Bird" and "Target".

CLAY TARGET

See "Clay".

COMPACT SPORTING

A Sporting Targets discipline that is often, but not necessarily, set out within the confines of a "Skeet" or "Trap" layout. See "Compak" and "Sportrap".

COMPAK

The International version of Compact Sporting. See "Compact Sporting" and Sportrap".

COUNT-BACK

A method used to decide on final placing in a competition, when a shoot-off is impractical. See also "Shoot-off".

DOMINANCE

See Eye Dominance

DOUBLE

Two targets thrown simultaneously (usually from two separate traps). See also "Simultaneous Pair".

DOUBLE BLAST

In FITASC Compak, two targets thrown simultaneously (usually) from two separate traps. See also "Double" and "Simultaneous Pair".

EYE DOMINANCE

The natural condition in which one eye dominates the brains interpretation of the sight picture. See also "Master Eye".

EXCLUSION ZONE

The area surrounding a shooting range that is not safe to enter when shooting is in progress.

FELT WAD

A natural fibre wadding material. See Wad.

FIBRE WAD

A natural fibre wadding material. See Wad.

FIRING MARK

A designated position from which a shooter stands to shoot at a target. See also "Shooting Station", "Shooting Position" and "Stand".

FLASH TARGET

A "Flash Target" is specially treated to enhance the visual effect of the target being hit at large or televised events.

FOLLOWING PAIR

A pair of targets where the second is thrown as soon as possible from the same Trap after the first target is released. See also "Rafale Pair".

FOOT FAULT

In competition, a "Foot Fault" occurs when a shooter steps outside the marked stand whilst shooting at a target.

FORWARD ALLOWANCE

"Forward Allowance" is the distance that the shotgun muzzle must appear to be ahead of the target in order to avoid missing behind the target when the trigger is pulled. See also "Lead".

GUN HOLD POINT

A position on the trajectory of a target at which the gun is pointed.

HANG FIRE

When a cartridge is hit by the firing pin but fails to discharge immediately or after a delay. See also "Misfire".

HELICE

A Clay Target discipline that involves shooting special "ZZ" Targets only.

HIGH GUN

In a competition, the shooter with the highest score is called the "High Gun" and for which there is usually an individual prize. See "Top Gun".

HIT

A declaration that a target has been broken as a result of being hit by shot. See also "Kill".

ILLEGAL TARGET

See "Irregular Target".

IRREGULAR TARGET

A target that deviates from the bounds set out in the rules for a particular discipline. See also "Regular Target".

JAG

A split and ridged tool that screws into a cleaning rod, designed to hold a cleaning patch for cleaning and polishing shotgun barrels.

JURY

A group (usually five or more) of experienced officials, whose job during a competition is to settle protests and if necessary to impose penalties.

KILL

Archaic terminology derived from live game shooting. See "Hit".

LAUNCHER

A special form of Trap designed specifically for throwing "ZZ" targets. See also "Helice".

LEAD

(Pronounced: leed) See "Forward Allowance".

LOOPER

A looper is a standard target thrown in a wide crossing arc resulting in a dropping target. See also "Chondelle".

LOSS

See "Lost".

LOST

A declaration that a target has been missed or disallowed.

MALFUNCTION

A permanent or transitory defect in a shotgun that prevents it from firing a cartridge.

MARK

In Skeet shooting, an alternative to calling "Pull" for the Low House so as not to confuse the trappers into releasing the wrong target when traps were manually released, i.e. Call "Pull" for the High target and "Mark" for the Low target.

MASTER EYE

The predominant eye, which should (ideally) be looking down the sighting rib. See also "Eye Dominance" and "Shooting Eye".

MIDI

A Target of 90mm diameter.

MINI

A Target of 60mm in diameter.

MISFIRE

The failure of a cartridge to fire or failure to discharge adequately, a misfire may be the result of a fault in the gun or cartridge. See also "Hang-Fire".

MISS

See "Lost".

MOUNT

When the gun is positioned and held correctly into the shoulder, it is mounted.

NO BIRD

Obsolete term. See "No Target" and "Bird".

NO TARGET

"No Target" is called when a target fails to release from the trap, breaks up on being launched or is disallowed for some technical reason within the rules for that discipline. See also "No Bird".

ON REPORT

In Sporting disciplines, where a second target is launched on the sound of the first barrel being fired.

PAIR

Two targets launched on a single call of "Pull". See also "Double", "Following Pair", "Rafale", "Report Pair" and "Simultaneous Pair".

PATTERN

The circular distribution that shot creates, as a result of load, shot size, choke and distance. See also "Pattern Plate".

PATTERN PLATE

A metal, paper or cardboard plate approximately 1m x 1m used to test cartridge/choke combinations and gun fit. See "Pattern".

PENALTY

In competition, a penalty may be imposed by a jury (or organising committee if there is no jury) for an infraction of the rules. Penalties include warnings, loss of points or disqualification.

PLAS-WAD

A wad made from plastic. Plastic wads are usually more efficient than the felt or fibre variety. See "Wad".

POOL SHOOT

A re-entry competition (in any discipline), where the shooter may re-enter as many time as he wishes in an attempt to improve his score and win the "pool". Pool shoots are usually open competitions, where the shooter's classification is not considered. See also "Re-entry" and "Classification".

POSTURE

The way a shooter holds their body, leans forward and distributes their weight to take a shot. See Also "Stance".

PULL

The standard call for a target to be released.

PULLER

Relates to a type of manual trap (now obsolete) where a lever was pulled to release the target. FITASC rules still refer to the French for Puller, "Pulluer". See "Buttoner" and "Trapper".

RAFALE

In FITASC disciplines, a pair of targets thrown on the same trajectory from the same trap arm, the second target is thrown simultaneously or after a delay; the timing will be established and given in advance. See also "Following pair".

RE-ENTRY

During certain competitions, the shooter is allowed to pay again and "re-enter" the competition, in an attempt to improve his score. Some competition rules do not allow "re-entry".

RE-LOAD

A spent cartridge that has been reloaded with shot, powder, wad and primer.

REFEREE

A Competition official who officiates at the stand or firing line whose job is to score and apply the competition rules.

REGISTERED SHOOT

A "Registered Shoot" is where the shooters' scores are submitted to the governing body for the purpose of classification.

REGISTERED TARGETS

Targets shot at a "Registered Shoot" that count towards a classification.

REGULAR TARGET

A target that is thrown at the correct height, angle and speed as defined in the rules for the specific discipline. See also "Irregular Target".

REPORT PAIR

See "On Report".

ROCKET

A thick heavy target of 110mm in diameter.

ROUND

A complete section of a competition e.g. a 100 bird competition consisting of 4 x 25 bird "Rounds". See also "Stage".

SAFETY ENCLOSURE

A wooden or metal frame within which the shooter stands, designed to prevent the gun being swung towards bystanders or to prevent shot fallout beyond the safety zone.

SECOND

In DTL, a declaration that a target was hit by a second shot resulting in two points scored.

SHOOTING EYE

The eye that is looking down the shotgun rib (regardless of dominance). See also "Master Eye" and Eye Dominance".

SHOOTING SQUARE

See "Firing Mark".

SHOOTING STATION

See "Firing Mark".

SHOT STRING

The elongation of the shot pattern as it travels from the shotgun muzzle towards the target.

SIMULTANEOUS PAIR

A pair of targets thrown simultaneously from one or more traps. See also "Double".

SKEET

A shooting discipline, where the stands are set in a semi-circle, with two traps set at either end of the diameter.

SKEET DOUBLES

A form of Skeet shooting where only "simultaneous pairs" are shot.

SNAP CAP

A blank cartridge with a spring loaded centre, used to release the spring tension from the firing mechanism and to reduce the shock load from the firing pins before putting the shotgun into storage.

Note: these are not recommended by CPSA for general use, only for coaching.

SONIC TRAP RELEASE

A sound (voice) activated trap release mechanism. A microphone is mounted in front of the stand. See also "Acoustic Trap Release".

SPORTRAP

See "Compact Sporting".

STAGE

See "Round".

STANCE

The way a shooter stands to take a shot and comprises a foot position and body posture. See "Posture".

STAND

See "Firing Mark".

STANDARD

A Target of 110mm in diameter.

SUB-SONIC

Low velocity cartridges for use in noise sensitive locations.

TARGET

See "Bird", "Clay" and "Clay Pigeon".

TARGET MISSED

See "No Target", "No Bird", "Loss" and "Lost".

TARGET PICK UP POINT

The point on the trajectory of a target where the muzzle and target coincide and in the CPSA Method where the muzzle locks on to the target.

TOP GUN

In a competition, the shooter with the highest score (more commonly used in USA). See "High Gun".

TRACER

A type of cartridge, that when fired, provides a visual indication of the shot's trajectory.

TRAINER

A light load, low recoil, cartridge for introducing beginners to the sport.

TRAP

A spring-loaded device for launching targets, which may be operated electrically, pneumatically or manually.

TRAPPER

The person who loads and maintains a trap and who may also release the target. See also "Buttoner" and "Puller".

VIEWING POINT

In Sporting competition, a position from which the shooter is allowed to view a target.

VISUAL PICK UP POINT

The position where a target can be clearly seen after it leaves the trap.

WAD

A cylindrical plastic or fibre device in a cartridge that expands to create a gas seal in the barrel. This acts like a piston to impart the maximum possible thrust from the explosive charge to the shot.

WITNESS

The central part of a Helice (ZZ) target that detaches when hit by shot. See also "Helice".

Shotgun Terminology

Shooting publications tend to use the technical terms for shotgun components as if all shooters will understand them. However, although shooters are familiar with the use of shotguns, few would be able to point out the major internal components and describe what they do. The drawings in fig 9-1, which have been simplified for clarity, detail the names and location of the major components on popular types of "over-and-under" shotgun. Note: the action is shown with the stock removed.

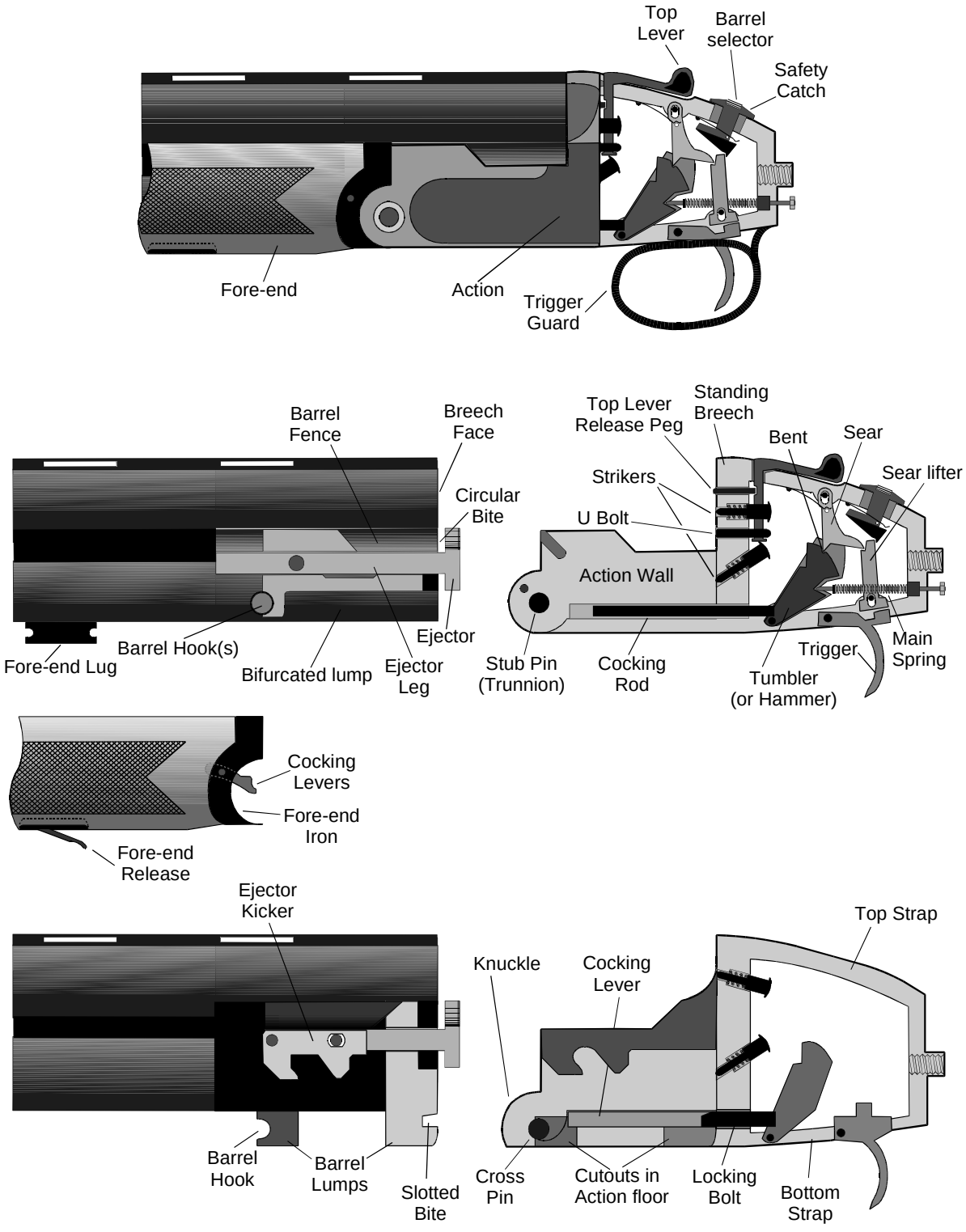

Figure 9-1 – Shotgun Terminology

There will of course be differences in construction depending on make and model, however, the majority of over-and-under shotgun will be similar to this and the major components will have the same or similar functions. The most obvious and visible differences between one shotgun design and another will lie in the means of cocking the action, controlling the ejectors, the design of the barrel hinge and locking arrangements and whether the barrels are placed side-by-side or over-and-under; these in turn determine the depth of the action. There are numerous internal differences relating to the way in which the lock-work is arranged, sprung and released that are beyond the scope of this handbook.

The following list includes the most commonly encountered terms and the names of the components together with a simple description of their function. We hope that these help you to understand what they're talking about in the next gun review that you read. (See also figs 2 – 4.)

ACTION

The general term for the cocking firing and triggering mechanisms in a shotgun. See also "Receiver".

ACTION FACE

The vertical (horizontal in a side-by-side) surface through which the firing pins protrude and which closes up to the breech face. See also "Standing Breech".

ACTION FLOOR

The bottom horizontal surface of the action that houses the cocking lever(s) and cut-outs for the barrel lumps.

ACTION WALL

The vertical walls that rise from the action floor and combine with action face to form a housing for the breech.

ADJUSTABLE COMB

The upper edge of a stock that can be raised or lowered and (usually) cast on or off. See also "Comb" and "Cast".

AUTOMATIC SAFETY

A safety catch, particularly common on game guns that defaults to the "safe" position when the breach is opened and must be released before the gun can be fired.

AUTOMATIC (SHOTGUN)

A single barrel self loading shotgun holding two or more cartridges (ISSF rules limit such shotguns to one cartridge only in the magazine). Note: a fully automatic shotgun would fire, eject and reload continuously if the trigger is pulled and held. See also "Semi-automatic (Shotgun)" and "Repeater (Shotgun)".

BACK ACTION

In a back action, the springs that drive the tumblers forward onto the strikers are mounted behind the tumblers. See also "Action", "Tumbler" and "Striker".

BAR ACTION

In a bar action, the springs that drive the tumblers forward onto the strikers are mounted in front of the tumblers. See also "Action", "Tumbler" and "Striker".

BEAVER TAIL

A broad shotgun fore-end, popular on trap guns, that takes its name from the shape of its cross section.

BENT

A bent is a notch in the "Tumbler" with which the "Sear" engages. When the trigger is pulled, either the "Sear" is lifted (as in fig 1) or the "Tumbler" is depressed so that the "Sear" is disengaged from the "Bent" thus releasing the "Tumbler". See "Sear" and "Tumbler".

BIFURCATED LUMP

A Barrel Lump that has two separate hooks, one either side of the mono-block; these hinge on two stub pins or trunnions in the action walls. This method of construction is common in Berretta, Monza, and shotguns of similar construction. See also "Hook" and "Lump".

BITE(S)

The bites are recesses into which the "Bolt" or "U Bolt" engages or the protrusions against which the "Cross Bolt" bears in order to lock the action closed. See "Bolt", "Cross Bolt" and "U Bolt".

BOLT

A bolt is a device in the action that engages in a "Bite" in the "Barrel Lump" in order to lock the action closed. See "Bite", "Lump", "Cross Bolt" and "U Bolt".

BORE

The internal diameter of shotgun barrels e.g. 12, 20 or 28 bore is based upon the old method of sizing a single ball in a smooth bore gun. A ball made from one pound of pure lead would be used in a gun sized as a Number 1 Bore, a ball made from half a pound of lead would be used in a No 2 bore and so on. Therefore, a 12 Bore gun is sized to fire a ball weighing one twelfth of a pound and a 28 Bore one twenty eighth of a pound of pure lead. See also "Calibre" and "Gauge".

BOX LOCK

A box lock is a shotgun action in which the tumblers, sears and other components are contained within the action frame, as opposed to being mounted on a separate plate. See "Side Lock" and "Trigger Plate Action".

BREECH

The enclosure that opens, into which a shotgun cartridge is placed.

BREECH FACE

The vertical surface of the barrel mono-block, within which are contained the chambers.

BRIDLE

A support and/or pivot point for a number of components in a "side lock" action. See "Side lock".

BUTT

The end of a stock that goes against the shoulder.

BUTT PLATE

A rubber, wooden or plastic plate that covers the butt on a shotgun's stock.

CALIBRE

A method of sizing a gun barrel as an alternative to the bore method, for example a 410 shotgun has a bore diameter and therefore calibre of 0.41 of an inch. See also "Bore" and "Gauge".

CAST

The lateral displacement of the stock that allows the shooters eye to line up with the sighting rib; a right-handed shooter will require a degree of "Cast Off" and a left-handed shooter a degree of "Cast On". No Cast is described as "neutral".

CHAMBER

The chamber is the portion of the barrels at the breech end into which a cartridge is placed.

CHOKE

A constriction in the end of a Barrel that affects the distribution of the shot as it leaves the barrel. See Chapter 2.

CIRCULAR BITE

See "Bite".

COCKING LEVER

The cocking lever extends forward from the bottom or sides of the action floor. When the action is opened, the lever is pushed backwards and in the majority of shotguns the "Hammers are "Cocked" and the "Sears" engage in the "Bents". In some designs, the hammers are not cocked until the action is closed. See "Hammers", "Sears" and "Bents".

COMB

The top edge of a shotgun stock that contacts the shooters cheek. Some guns are fitted with an adjustable comb.

CROSS-BOLT

A cross-bolt is a very strong method of locking a shotgun breach closed. It consists of a bite(s) protruding from the upper breech face, locating into a cut-out(s) at the top of the standing breech. When closed, the cross-bolt slides at right angles to the standing breech locking the bites into place. See "Bite".

CROSS PIN

The cross or stub pins pass through the action wall near the knuckle and on which the "Barrel Hook" hinges. See also "Stub Pins".

DROP

The distance measured from the sighting rib to the comb or heel of a shotgun i.e. "drop at the heel" or "drop at the comb". See "Heel" and "Comb".

EJECTOR

A spring-loaded device, that on opening the action, ejects a spent cartridge from the chamber. See also "Extractor".

EJECTOR KICKER

The ejector kicker engages with lugs in the action wall, pushing the ejector into position as the action is closed.

EJECTOR LEG

The ejector leg is the flat extension of the ejector that is set into the side of the barrel lump and engages with the kicker.

EXTRACTOR

This term may be used as an alternative to "Ejector", however an extractor may be arranged to lift the cartridge from the chamber but not eject it. Some shotguns have this device arranged so that "Extract" or "Eject" can be selected. See "Ejector".

FENCE

The "Barrel Fence" extends out from the side of barrel lump to mate with the top face of the action wall. In some makes, like Beretta, the fence engages into a cutout in the action wall, thus improving the strength of the action when it is closed.

FIRING PIN

See "Striker".

FORCING CONE

The transition from the cartridge chamber to the parallel section of the barrel. See fig 2.

FORE-END

The front grip on a shotgun.

FORE-END IRON

The metal insert in the fore-end that bears against the action knuckle.

GAPE

The distance that the action opens to allow cartridges to be loaded. A side-by-side shotgun normally "gapes" more than an over-and under.

GAUGE

The same as "Bore". In USA, they tend to say, "twelve gauge" rather than "twelve bore".

HAMMER

Prior to the introduction of the "hammerless" gun, shotguns had external, manually cocked hammers. In the hammerless gun the hammers are replaced by "tumblers". See "Tumbler".

HEEL

The top corner of a shotgun's butt.

HOOK

The semi-circular cut-out(s) in the barrel lump that hooks over the cross pin or stub pins, thus allowing the barrels to hinge downwards from the action.

INERTIA COCKING

A shotgun action, in which the second barrel is cocked by the recoil from the first shot.

KNUCKLE

The knuckle is the rounded part of the action that bears on the fore-end iron.

LOCKING BOLT

See "Bolt".

LUMPS

The protrusions from the bottom of the barrel block that form the "Hook" and the "Bite".

MAIN SPRING

The main spring powers the "Hammers", a main spring may be a coil spring as in the above drawing, alternatively a flat or "v" shaped spring.

MONO-BLOCK

The barrels terminate in a block of metal at the breech end; this "Lump" of metal is usually made in one piece, hence "mono-block". See also "Lumps".

MOBIL-CHOKE

See "Multi-Choke".

MONTE CARLO

A shotgun stock with a comb, higher than standard, parallel to the rib, popular with some trap shooters. See also "Stock".

MULTI-CHOKE

A shotgun that is provided with and has had the muzzles bored to accept a set of interchangeable chokes. See also "Choke".

MUZZLE

The open end of the barrels from where the shot emerges.

MUZZLE FLIP

The upward motion of barrels as recoil causes the barrels pivot about the shooters shoulder. See also "Muzzle Jump".

MUZZLE JUMP

See "Muzzle Flip".

OVER-AND-UNDER

A type of shotgun where the two barrels are set vertically, one above the other.

PORTING

A modification to a shotgun's barrels that reduces "muzzle flip". See "Muzzle Flip".

PROOF

A test and certification of a barrel that demonstrates that it is safe to use with a given charge. Early guns were only proofed for "black powder" whereas, modern guns are "Nitro-Proofed", meaning that they can withstand the additional pressures created by modern powders. "Magnum Proofing" denotes a barrel capable of the most powerful cartridges currently available.

PROOF MARK

Barrels will be marked with a mark that identifies the "Proof House" and the date of proofing. Barrels must be re-proofed if they are modified e.g. being bored to accept multi-chokes or repaired.

PUMP-ACTION

A type of shotgun that contains a magazine and in which the cartridges are loaded and ejected by pulling and returning the fore-end.

RECEIVER

American term for "Action". See also "Action".

RECOIL

The rearward motion of the shotgun, in reaction to the wad and shot being propelled up the barrel.

RECOIL PAD

A shock-absorbing pad that replaces the butt plate, fitted to reduce the effects of recoil. See "Recoil".

REPEATER (SHOTGUN)

See "Semi-automatic Shotgun".

RIB

The sighting device running along the top barrel of an "over-and-under" or between the barrels of a "side-by-side" shotgun.

ROACH-BELLY

A stock with a deep, curving lower edge and with no pistol grip, found on some game guns.

SAFETY CATCH

A device, manual or automatic, that prevents a gun from being fired until released. In figure 9-1 the Safety Catch is shown in the safe position locking the "Sear" into the "Bent" preventing the "Tumbler" from being released. See "Bent", "Sear", "Tumbler" and "Automatic Safety".

SCHNABEL

A slim tapered fore-end, popular on Sporting Shotguns.

SEAR

The sear is the device that retains the "Tumbler" in the "Cocked" position. The tip of the sear engages in a notch in the "Tumbler" called a "Bent". See "Hammer".

SEMI-AUTOMATIC (SHOTGUN)

A self-loading shotgun that ejects the spent cartridge and reloads itself once with each pull of the trigger. See also "Repeater (Shotgun)" and "Automatic (Shotgun)".

SIDE-BY-SIDE

A type of shotgun on which the two barrels are set horizontally.

SIDE LOCK

A side lock is a shotgun action in which the hammers, tumblers, sears and other components are mounted on two plates set one each of the action body. See also "Box Lock" and "Trigger Plate Action".

SIDE WALL

See "Action Wall".

SINGLE BARREL

A shotgun with only one barrel, also a form of DTL where only a single barrel may be fired at the target.

SLOTTED BITE

See "Bite".

STANDING BREECH

See "Action Face".

STOCK

The part of the shotgun that rests against the shoulder.

STRAP

In the majority of shotguns, two metal protrusions, called the top and bottom straps extend backwards from the top and bottom of the standing breech. These straps meet to form a housing that contains the majority of the firing mechanism. They also provide a means of attaching the stock.

STRIKER

A rounded hardened steel pin that when struck by the "Tumbler" is driven forward to protrude from the standing breech to fire the cartridge. See also "Firing Pin".

STUB PINS

Where a barrel has a "Bifurcated Lump" the "Hooks" will be set either side of the Lump. Instead of a full width pin, the "Hooks" will hinge on two short pins or "Stub Pins" also known as "Trunnions".

TOE

The bottom corner of a shotgun's butt.

TOP LEVER

The lever that releases the action lock, allowing the cartridges to be ejected and the gun re-loaded.

TRIGGER PLATE ACTION

A trigger plate action has the main components of the firing mechanism built onto the plate that houses the trigger. This plate is fitted into the "bottom strap".

TRIGGER PULL

The force required on the trigger to release the firing mechanism.

TRUNNION

The term "Trunnion" describes the two cylindrical protrusions on a cannon that allow the barrel to swivel up and down. In a shotgun, trunnion is another name for the stub pins in the action wall, on which the barrel hooks hinge. See "Barrel Hook" and "Stub Pin".

TUMBLER

Tumbler is the name given to the action component that when released and powered forward by a spring, falls against the striker that fires the cartridge. See also "Striker".

U BOLT

The "U Bolt", is used on Berretta and similar actions as a means of locking the action closed. The U Bolt engages in two circular bites in the breech face. See "Bite" and "Breech Face".

VENTILATED

Rib or barrels, where gaps or slots allow air to circulate, thus dissipating heat from the barrel and/or rib.

Abbreviations

The majority of the following abbreviations are as they appear in CPSA Rulebooks, however, the reader should be aware that they might appear differently elsewhere, e.g. OSK may be written O/SK.

ABT

Automatic Ball Trap.

A/R

All Round.

A/T

Automatic Trap.

BICTSF

British International Clay Target Shooting Federation.

BSSC

British Shooting Sports Council

CPSA

Clay Pigeon Shooting Association.

CSP

Compak Sporting.

D/R

Double Rise.

D/T

Double Trap.

DTL

Down The Line.

ESK

English Skeet.

ESP

English Sporting.

ETSF

English Target Shooting Federation.

FITASC

Fédération Internationale de Tire aux Armes Sportives de Chasse (International Federation for Sporting Shooting Competitions).

FSP

FITASC Sporting.

FUOG

Full Use Of Gun, in disciplines e.g. Sportrap, where two shots may be taken at single targets.

GBTSF

Great Britain Target Shooting Federation.

H/D

Handicap by Distance.

HEL

Helice.

ICPSA

Irish Clay Pigeon Shooting Association (Eire).

ICTSC

International Clay Target Shooting Council (Members: England, Eire, Scotland, Northern Ireland and Wales).

ISSF

International Shooting Sports Federation. (The body recognised by the International Olympic Committee as the controlling body for shooting sports.)

ISU

International Shooting Union became the ISSF.

MLAGB

Muzzle Loaders Association Great Britain.

NITSF

Northern Ireland Target Shooting Federation.

NRA

National Rifle Association.

NSRA

National Small bore Rifle Association.

NSSA

National Skeet Shooting Association (USA).

OSK

Olympic Skeet.

O/T

Olympic Trap or Trench.

OTR

Olympic Trap.

O/R

On Report.

S/B

Single-Barrel.

SKD

Skeet Doubles.

SCTA

Scottish Clay Target Association

STR

Sportrap.

STSF

Scottish Target Shooting Federation.

UCPSA

Ulster Clay Pigeon Shooting Association.

UIT

International Shooting Union, (Became the ISSF).

UTR

Universal Trench.

WCTSA

Welsh Clay Target Shooting Association.

WTSF

Welsh Target Shooting Federation.

ZZ

In the FITASC discipline Helice, ZZ means Zinc-Zuritos. The original targets were made from Zinc and Zurito is the name of a breed of pigeon.

Appendix 2 – Member Services

CPSA Membership Information and Benefits

CPSA Members enjoy a number of benefits, including a web site through which many member services can be accessed, civil liability insurance details can be viewed, and rules and regulations for the various disciplines downloaded. See the CPSA website at: www.cpsa.co.uk

PUBLICATIONS

The following publications are available in booklet or ring binder form, some of which are free to members. Phone for current prices.

CPSA BOOKLETS

Clay Target Shooting – *It's a sport for everyone*
How do I form *a Clay Club?*
How do I run *a Small Clay Shoot?*
Our Competition Rules – *for the domestic disciplines*
Our General Rules *and Regulation*
Safety: it's our first priority…make sure it's yours (Our Code of Practice)

CPSA MANUALS

Club Safety Officer's Manual
Coaching Manual – Including Level 1 inserts
Coaching Manual – Level 2 inserts only
Health & Safety Manual

LAYOUTS FOR DOMESTIC DISCIPLINES

Plans for layouts for CPSA Skeet
Plans for layouts for CPSA DTL
Plans for layouts for CPSA ABT

INTERNATIONAL DISCIPLINES

Rules and Regulations for Olympic Trap, Olympic Skeet and Double Trap (ISSF)
Rules and Regulations for Compak Sporting (FITASC)
Rules and Regulations for Universal Trench (FITASC)
Rules and Regulations for International Sporting (FITASC)
Rules for Helice (ZZ)

CPSA Products

The CPSA has a product range that includes clothing, eyewear, hearing protection, umbrellas etc. For further information and details of the full product range, visit the CPSA website or phone us on 01483 485400.

Members' Civil Liability and Personal Accident Insurances

Introduction

All those involved in sport must ensure that their actions do not cause injury or loss to other people or damage to property. If they do, they could be legally liable to pay damages, as awarded in a civil court. Shooting is no exception. The Clay Pigeon Shooting Association (CPSA) has a 'duty of care' to protect both the sport and all its participants.

In order to safeguard the sport the CPSA has instructed their insurance broker Perkins Slade Ltd to organise 'Civil Liability' Insurance, which is automatically extended to all affiliated members. This vital Insurance Protection is included as part of you membership to the CPSA and extends to cover counties, regional committees and members whilst engaged in CPSA recognised activities.

LIABILITY

This is a unique CIVIL LIABILITY Policy which embraces Public and Products Liability, Libel and Slander, Professional Indemnity and Directors' and Officers' Liability Insurances.

It is one of the widest available Liability Insurance for Sport.

PERSONAL ACCIDENT

Through membership, you are also automatically entitled to benefit if you have a serious accident whilst participating in the sport.

1. Civil Liability Protection

COVER:

Civil Liability to pay legal costs and damages in respect of claims made against the Insured, arising out of:

All shotgun sport including clay shooting, game shooting, rough shooting and wild fowling. All Rifle shooting including stalking. Falconry, Coursing, Hunting (other than mounted hunting). Fishing.

LIMITS OF INDEMNITY:

Civil Liability £5,000,000 any one occurrence

(In the aggregate in respect of Products Liability)

For example, the policy includes indemnity for:

A club member who causes injury or financial loss to another person, or accidental damage to property, whilst taking part in a club activity.

There is no Policy excess.

Cover is worldwide.

PRINCIPAL EXCLUSIONS

Liability arising out of:

Criminal Acts of the Insured

Ownership or use of any vehicle, aircraft, hovercraft or water-borne craft

Loss of or damage to your own property

Product Guarantee or recall, repair or replacement

Medical malpractice

Please note:

The Civil Liability Policy is written on a claims made basis. This means the policy, which responds is the one that is in place when a claim is actually made, not the one in place when the incident occurred.

2. Personal Accident

COVER:

There is a 'no fault' compensation for members (10-75 inclusive) who are injured whilst participating in all shotgun sport including clay shooting, game shooting, wild fowling, rough shooting and other field sports except mounted hunting.

Cover is worldwide.

BENEFITS:

Death	£20,000
Loss of two or more limbs/both eyes or one of each	£20,000
Permanent and total loss of speech	£20,000
Permanent and total loss of hearing in both ears	£20,000
Permanent and total loss of hearing in one ear	£20,000
Loss of one limb or eye	£20,000
Permanent total disablement from any gainful employment or gainful occupation for which the Insured Person is fitted by education training or knowledge	£20,000

Note: - one benefit payable per accident

PRINCIPAL EXCLUSIONS

Taking a drug unless it is taken on proper medical advice

War or Terrorism

Illness or disease not resulting from bodily injury or bodily injury due to any gradually operating cause

Any physical or mental defect of any sort, which was known to the Insured Person when the policy was taken out or at renewal

Important Notes – Civil Liability

1. The Civil Liability policy is written on a claims made basis. This means that the policy, which responds, is the one that is in place when a claim is actually made, not the one in place when the incident occurred.
2. It is essential that a representative of a club reports every incident that could give rise to a possible claim to the CPSA's insurance brokers, Perkins Slade Ltd. In addition an Accident Record Book should be maintained keeping accurate records of the date and time any incident occurs, along with details of all relevant circumstances and the full name and address of any parties involved, including any witnesses.
3. Any letter, claim, writ, summons or process in connection with an incident must be forwarded to Perkins Slade Ltd without delay.
4. It should be noted that it is a condition of the Civil Liability policy that under no circumstances should any offer or promise of payment be made by, or on behalf of, an insured person.

Both the Members Civil Liability and Personal Accident Policies are underwritten by Royal & Sun Alliance.

This document only provides a summary of the CPSA Members Insurance cover and benefits. It is not a definite version of the terms and conditions for which master policy documents are available. A full copy of each policy wording is available on request from Perkins Slade.

CPSA Professional Indemnity Insurance Information

As part of CPSA's continuing drive to enhance member benefits, we are delighted to advise that a new coach's and official's insurance scheme is in place through our insurance brokers Perkins Slade Limited. This scheme replaces the previously recommended Sportscoach U.K scheme.

We recognise that insurance costs continue to rise; however the need for insurance has never been greater – especially for CPSA professionals i.e. coaches, referees and safety officers. If an individual has an accident whilst under their guidance or control, they could sue the instructor/coach or official for compensation, claiming that they had been negligent in the instruction, guidance or control provided. Without insurance, all the legal costs of fighting such claims and any resultant damages that are awarded to the third party would have to be met out of the individuals own pocket.

For referees, safety officers, instructors and coaches that are CPSA qualified, we are now able to offer the following:

1. **Civil Liability – Insurer Royal & Sun Alliance**

The policy includes Public Liability as well as Professional Indemnity (errors & omissions insurance, which protects against advice given)

The policy limit is £5,000,000 each occurrence (except for Products Liability which is in the aggregate).

The policy is written on a claim made basis.

2. **Legal Advice – Insurer DAS**

All coaches will also be entitled to use a free Legal Advice line, which is available 24 hours a day. You can contact it as many times as you wish – it is completely confidential. With the increasing amount of legislation directing sport such as the Disability Discrimination Act, Human Rights Act, Data Protection Act, we believe this is an excellent addition to your membership.

The insurance covers CPSA qualified coaches, instructors, referees and safety officers, when acting within the authority of their CPSA qualification. For those with more than one CPSA qualification, all are covered for a single premium.

For your convenience, the insurance is added to your annual membership renewal fee.

If you wish to take out the insurance before your renewal is due, the fee will be charged pro rata.

If you choose to take out the insurance, an individual certificate will be issued to you, together with an assistance card, with the Legal Helpline number on it.

At the time of writing the insurance premium is £40.00 p.a. (including 5% Insurance premium tax) An application form can be found in section 7 of this manual.

Note: The figures quoted are for the period 1st September 2005 to 31st August 2006.

This document only provides a summary of the CPSA Professional Insurance cover. It is not a definite version of the terms and conditions for which master policy documents are available. A full copy of the policy wording is available on request from:

Perkins Slade Ltd, 3 Broadway, Broad St.,

Birmingham B15 1BQ

Telephone: 0121 698 8050

Facsimile: 0121 625 9000

E-mail:: info@perkins-slade.com

Perkins Slade and Royal & Sun Alliance are authorised and regulated by the Financial Services Authority.

Perkins Slade is a member of UNITAS.

Appendix 3 - Bibliography

BOOKS

If you wish to advance in the sport, the following would make an excellent reference library.

"An Insight to Sports" by Dr Wayne F Martin OD. *Sports Vision Inc.*

"Clay Pigeon Shooting – A History" by Michael Yardley. *Blaze Publishing Ltd.*

"Coaching for Performance 3rd Edition" by John Whitmore. *NB Publishing Ltd.*

"Finding the Extra Target" by John R Linn and Stephen A Blumenthal. *Shotgun Sports Inc.*

"Mental Training For Shotgun Sports" by Michael J Keyes MD. *Further Adventures Inc.*

"Notes on the Proof of Shotguns and Other Small Arms" Anon. *The British Proof Authorities.*

"The Coaching Manual" by Julie Star. *Pearson Education Ltd.*

"With Winning in Mind" by Lanny Bassham. *Mentalmanagement Inc.*

Although strictly speaking it is not a book, the **"Eley Shooter's Diary"** is an excellent source of information and is available from most gun shops.

SHOOTING MAGAZINES

For news, views and competition results, the following magazines are popular.

"Pull! Magazine" Roebuck House, 33 Broad Street, Stamford Lincolnshire. 01780 754900

Note: "Pull! Magazine" is the official magazine of the CPSA and a benefit of CPSA membership; Members receive 10 issues per year although it is also available on subscription.

"Clay Shooting" Thruxton Down House, Andover, Hampshire 01264 889533.

"Sporting Gun" PO Box 157, Stamford, Lincolnshire. 01622 778778.

"Sporting Shooter" Jubilee House, 2 Jubilee Place, London. 07850 195353.

Appendix 4 Useful Contacts

CPSA Clubs and Grounds

The following list was correct at 01 January 2006.

Avon

FARLEIGH WOOD LTD
Affiliated
01373 831495
Mr M C Gingell

MONUMENT SPORTING GUN CLUB
Affiliated
Mr P Clarke

YATE & DISTRICT GUN CLUB
Affiliated
01179 697152
Mr R Davey

Bedfordshire

SPORTING TARGETS LTD
Premier Plus
01234 708893
Andrew Clifton

TYTHE FARM GUN CLUB
Registered
01234 376375
Mr Ivor Seabrook

Berkshire

BCA CPC
Affiliated
01628 824444
Mr C Ricketts

FOUR COUNTIES CLAY TARGET CLUB
Registered
01635 201657
Mr B Claridge

Buckinghamshire

BELL CLANGERS GUN CLUB
Affiliated
01908 562132
Mrs G D Beer

COLD COMFORT GUN CLUB
Affiliated
01525 270353
Mr S Pratt

E.J.CHURCHILL GROUP LTD
Premier plus
01494 883227
Matthew Hunt

HICKNAHAM FARM
Registered
Mr K Gray

HORNET SHOOTING GROUND
Registered
01494 883715
Mr Kevin Gray

KINGSWOOD CLAY & ROUGHSHOOT C.
Affiliated
01280 815864
Ms J Mcdermott

NORTH CRAWLEY & DISTRICT G.C.
Affiliated
01908 618498
Mr I McGregor

RUSHINGTON GUN & ROD CLUB
Affiliated
01753 892727
Mr T J Murphy

THE EMBERTON CLAY PIGEON CLUB
Affiliated
01234 712123
Mr D G Knight

UPPER WINCHENDON GUN CLUB
Affiliated
01296 655092
Mr G Mendicino

Cambridgeshire

BLACK SWAN GUN CLUB
Affiliated
01733 240896
Mr G Piccaver

COUNTRY PURSUITS
Registered
01353 669300
Mr G Kirby

HADDON LODGE SHOOTING GROUND
Affiliated
01733 240119
Mrs M E Thory

HIGH HARTHAY SHOOTING GROUND
Registered
01480 810242
Mr D Harris

MEADOW LAND CPC
Affiliated
01223 872965
Mark Cameron

WARESLEY & DISTRICT GUN CLUB
Affiliated
Mr R A Bygraves

Channel Islands

GUERNSEY CTSC
Registered
01481 252212
Mr A Carre

JACKSON'S C.S.C.
Associated
01481 832033
Mr J H Jackson

Cheshire

CATTON HALL SHOOTING GROUND
Registered
01928 788295
Mrs K N Mann

HOLMES CHAPEL SHOOTING GROUND
Registered
01477 532165
Mrs Jane Norbury

WILD BOAR CLAY PIGEON CLUB
Affiliated
01260 276882
Mrs C Lawrence

Cornwall

CARNEWAS CLAY SHOOT
Registered
01208 75860
MR T H YEO

CART RIDGE SHOOTING CLUB
Registered
01752 851262
Mr D Dingle

COUNTY GUN CLUB
Registered
01579 363301
Mr B A Moussalli

NORTH CORNWALL GUN CLUB
Registered
01566 785550
Mr W Murton

ST MARY'S C.P.S.C.
Associated
Mr S P Smirke

Cumbria

CARLISLE SMALL ARMS CLUB
Associated
01228 402959
Mrs B Bellas

GREENQUARRIES SHOOTING GROUND
Affiliated
01697 476392
Mr P Hetherington

PENRITH & DISTRICT GC LTD
Registered
01539 624402
Mrs J A Carson

Derbyshire

AMBER VALLEY SHOOTING CLUB
Affiliated
01246 233683
Mr A Barratt

BAKEWELL & WIRKSWORTH CPC
Affiliated
01629 814395
Mr S W Hunt

COLD SPRINGS GUN CLUB
Affiliated
01298 25584
Mr J Morten

DARLEY DALE CPSC
Affiliated
01629 733161
Mr C Taylor

DOVERIDGE CLAY SPORTS CENTRE
Premier plus
01889 565986
Mr C Bramley

OCKBROOK GUN CLUB
Affiliated
01773 714731
Mr F Woodward

THE GROUSE SHOOTING GROUND LTD
Registered
0161 366 1997
Mr D Batty

YEAVELEY SG
Affiliated
01335 330247
Mrs L Field

Devon

AXMINSTER GUN CLUB
Registered
01404 881588
Mr D R Trenchard

BRADFORD SHOOTING GROUND
Registered
01409 281341
Matthew Gill

BROADMOOR SHOOTING GROUND
Registered
01769 540501
Mr K Duglan

CREDITON GUN CLUB
Affiliated
01363 773537
Mr A J Webb

CULM VALE GUN CLUB
Affiliated
01460 234245
Mrs F Alford

FOUR SEASONS GUN CLUB
Affiliated
01395 278862
Mr C Spiller

NEWNHAM PARK SHOOTING GROUND
Premier
01752 348066
Graham Lapthorn

SID VALE GUN CLUB
Affiliated
01395 579659
Mr T Parsons

SOUTH WEST SHOOTING SCHOOL
Premier
01271 815006
Mr C I Cawthorne

TAVISTOCK CLAY PIGEON CLUB
Affiliated
01822 853377
Mr D Hunter

Dorset

GORCOMBE SIMULATED GAME SHOOT
Associated
01258 452219
Mr P R Meaden

PURBECK SHOOTING SCHOOL
Registered
01929 405101
Mr Graham Brown

SOUTHERN COUNTIES SHOOTING LTD
Premier Plus
01935 83625
Mr Kevin Newton

Durham

LEAMSIDE CLAY & GAME CLUB
Affiliated
0191 528 8196
Mr V W Austin

SPENNYMOOR & DISTRICT C.P.C
Registered
0191 377 2412
Mr G Jones

THE TRAVELLERS GUN CLUB
Affiliated
0191 488 7984
Mr M Raistrick

WOODLANDS CLOSE GUN CLUB
Affiliated
07879 473575
Mr P R Todd

Essex

ARNOLDS FARM SPORTING CLAYS
Affiliated
01708 688486
Mr G Defreitas

BISHOPS STORTFORD (1944) RIFLE
Associated
01279 833370
Mrs G Slater

BP GUN CLUB
Affiliated
01268 681243
Mrs L D Champion

BUSH HILL CLAY CLUB
Affiliated
01277 220974
Mr A J Wapling

CLACTON GUN CLUB
Registered
01255 673146
Miss Tracey Riva

CLAYHOUSE SHOOTING SCHOOLS LTD
Affiliated
01376 343900
Mr R Bryan

COGGLESHALL CLAY PIGEON CLUB
Affiliated
01206 574709
Steve Carter

COLCHESTER GARRISON CPC
Affiliated
01206 576756
Mrs M Cansdale

COLCHESTER GUN CLUB
Affiliated
01206 735503
Mr D Ponsford

COLCHESTER WILD & CON.
Affiliated
01206 525669
Mr S A Wright

FENLANDS GUN CLUB
Affiliated
01375 851986
Mr A J Salton

FINCHINGFIELD GUN CLUB
Affiliated
01371 872813
Mr David Low

FOULNESS CLAY CLUB
Affiliated
01702 218644
Mr T J Gilmour

GREAT WAKERING & DISTRICT G.C.
Affiliated
01702 219146
R G Rae

HEPWORTH HALL SHOOTING GROUND
Registered
01842 815238
Mr M T Hunnable

MAYLAND & DISTRICT GUN CLUB
Registered
01268 470323
Mr B Logan Jnr

OLD PARK BORES S.C.
Affiliated
01279 503141
Mr W Sloan

PARKFORD SHOOTING CENTRE
Premier
01255 820230
A W Ford

PHOENIX GUN CLUB
Affiliated
01702 217327
Mr P Ellingworth

SOUTHEND GUN CLUB
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01702 332060
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ST OSYTH VILLAGE GUN CLUB
Affiliated
01206 302848
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TERLING CLAY PIGEON CLUB
Affiliated
01376 347192
Mrs D S Webb

THREE ACRES SPORTING CLAYS
Affiliated
077 68 742117
Mr O Searl

WALTHAM ABBEY SHOOTING GROUND
Affiliated
077 68 742117
Mr O Searl

Gloucestershire

BRIDGE FARM SHOOTING GROUND
Affiliated
01452 790278
Linda Rondeau

CHATCOMBE ESTATE S.S.
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01242 870391
Mr I Hayward

CORINIUM C.P.S.C.
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01453 884268
Eliot Walker

GLOUCESTER CLAY SHOOTING CLUB
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01452 750466
J F Payne

LONGRIDGE SHOOTING GROUND
Registered
07971 447138
Mr S Nutbeam

MORK CLAY CLUB
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01594 530102
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WESTFIELD SHOOTING GROUND
Registered
0870 6091751
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A1 SHOOTING GROUND
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WEST LONDON SHOOTING SCHOOL
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020 8845 1377
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ALDERMOOR FARM CPSC
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01189 326261
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FAREHAM CLAY TARGET CLUB
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01329 315185
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LAINS SHOOTING SCHOOL
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01264 889467
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MEON VALLEY SPORTING CLAYS
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01489 893865
Mr J Fynan

SOMERLEY CLAY SHOOT
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01425 473621
Miss L Burtenshaw

SPARSHOLT COLLEGE HAMPSHIRE
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01962 776441
Mr Martin Edwards

Hereford & Worcester

KIDDERMINSTER GUN CLUB
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01299 405634
Mr R Willetts

LENCHES GUN CLUB
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01386 871550
Mr C J Churchill

SHERWOOD SHOOTING GROUND
Affiliated
Mrs E Davies

WORCESTERSHIRE GUN CLUB
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07836 225580
Mr J Timmins

Hertfordshire

BROOMHILLS SHOOTING GROUND LTD
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01582 842280
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CODDICOTE BOTTOM CTC
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01438 814749
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EASTWICK VALLEY GUN CLUB
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08707 605057
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MELBOUR
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MORETON MASSEY GUN CLUB
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01279 323195
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NUTHAMPSTEAD SHOOTING GROUND
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01763 848172
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PARK STREET & DISTRICT G.C.
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01923 677294
Mrs A M Hawkes

SEARCHES SHOOTING GROUND
Affiliated
01707 850375
Mr A Field

WALKERN CLAY PIGEON CLUB
Affiliated
01438 869404
Mrs E Draper

Isle of Wight

ISLE OF WIGHT GUN CLUB
Registered
01983 298562
Mr I Green

Kent

BIGGIN HILL CPSC
Affiliated
01959 573089
Mr H M Smith

BLACK HORSE GUN CLUB
Affiliated
01233 631025
Mrs J P Hogben

DARTFORD CLAY SPORTS CLUB
Registered
01322 311001
Mr Gwy Williams

DOVER CLAY PIGEON CLUB
Affiliated
01303 894611
Mr J Bridges

HEADCORN CLAY PIGEON CLUB
Affiliated
01580 892249
Mr R F Salt

HIGHWAYMEN CPSC
Affiliated
01892 722215
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