



Comber Rifle Club: Members Handbook

Welcome to Comber Rifle Club. Founded in 1963, CRC is one of Northern Ireland's leading shooting sports clubs, offering indoor and outdoor facilities across multiple locations. We are affiliated with NISSA and the NRA, and operate under the Firearms (Northern Ireland) Order 2004.

This handbook provides a comprehensive guide to help members understand and uphold the standards of safety, competence, and legal compliance required for responsible firearm use. It includes everything you need to know about being an active and safe member of the club. It is a living document and will be updated as required.

What's Inside:

◆ Club Overview & Ranges

Details about CRC's history, range locations (Railway Street, Ballygraffan, Hollow Farm, Bangor Hub, Ballykinlar), and how to book and attend sessions.

◆ Membership Path

Explains the steps from Inductee to Full Shooting Member, including attendance requirements and what each stage allows.

◆ Firearms & Legal Responsibilities

Outlines Northern Ireland-specific firearm laws, PSNI requirements, and your obligations as a member—including how to safely store, transport, and handle firearms.

◆ Range Safety & Protocols

Covers essential range etiquette, muzzle awareness, rules for different range types, and the NRA's Safe Shooting System.

◆ Marksmanship Fundamentals

Offers instruction on position and hold, sight alignment, trigger control, and principles like natural alignment and follow-through.

◆ Firearm & Ammunition Types

Detailed breakdown of rifles, pistols, shotguns, and cartridges (smallbore vs. fullbore), as well as reloading basics and safety notes.

◆ Required Equipment

Guidance on what gear you'll need—from essential protection to optional tools and support accessories.

Whether you're new to the sport or a seasoned shooter, this handbook is designed to support your safety, skill development, and enjoyment of shooting as part of Comber RC.

Stay safe, shoot responsibly, and always follow the four fundamental rules.

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About Comber RC

- Founded in 1963.
- The Club acquired Railway street in 1968 and a 15 yard range/clubhouse was built.
- In 1979, planning permission was obtained for a 60 lane 100m outdoor range at Ballygraffan
- Short Range at Ballygraffan added sometime in 90s
- In 2003 the club built a new indoor range at Railway Street
- Range Separation for independent range usage at Ballygraffan in 2018
- Currently have approx 250 members.
- We currently own two sites, Railway Street and Ballygraffan (Smallbore/Rimfire).
- Use of Hollow Farm once a month (Fullbore/Centrefire).
- Use of Bangor Council Hub Range once per month (Smallbore and Centre fire pistol calibres)
- Use of MOD Ranges at Ballykinlar(Fullbore/Centrefire) throughout the year.
- We are affiliated to the NISSA and the NRA (National Rifle Association)
- We Are Registered as a firearms club under The Firearms (Northern Ireland) Order 2004

Objectives of this Manual

1. Educate members with the fundamental safety, knowledge, good practice and experience required for the safe and competent attendance, participation and practice of shooting on various ranges.
2. Educate members with the fundamental safety, knowledge, good practice and experience required for the safe handling of firearms on and off the range.
3. Inform members of the relevant laws, rules and guidance applicable to firearm ownership, shooting sports, ranges and club operations.
4. Educate members on the essentials of good marksmanship
5. Educate members about the various firearm types and disciplines that are practiced
6. Educate members about the basic equipment and maintenance required for shooting
7. Inform members about the foundations of the club
8. Inform members about the various facilities and privileges of membership

Comber Rifle Club : Membership Details

Junior member – A person under the age of 21

Inductee Member – Someone who has not completed the induction exam. While you are an inductee you may attend RCO'd Sessions (Thursday evenings) and at any other time with your sponsor. The Club cannot act as referee for Firearm Certificate transactions during this time except in exceptional circumstances

Probationary Member – Someone who has completed induction becomes a probationary member for 12 months.

- You can attend and use the ranges unaccompanied and unsupervised (if you possess your own firearms).
- Attend and use the ranges and use club firearms unsupervised on club days. Attend with and use other member's firearms whilst supervised by the member that owns that firearm.
- The Club cannot act as referee for Firearm Certificate transactions during this time except in exceptional circumstances

You must attend regularly during the probationary period in order to become a full member at the end of 12 months. In the event of the Committee having any concerns or a lack of attendance your membership may be ended during this time or probation may be extended.

Full Shooting Member

After a calendar year, providing satisfactory regular attendance and use of the range, you will become a full shooting member.

This will allow you to apply to the club's committee for your firearm certificate initial grant or request the club to act as a referee on FAC variations.

When making requests for the club to act as a referee, you must attend and use the club's facilities for the discipline to be stated on your application

You must use the club's online jotform to request Committee support before purchasing or depositing money on a firearm

Continue to attend and use the club facilities AFTER purchasing the firearm

No matter which class of membership you hold, the membership year runs from 1st September until 31st August the following year. Your membership is viewable / renewable via <https://membermojo.co.uk/combercc/signin>

You will receive an email to remind you to renew. If you wish to discuss any payment issues please get in touch via members@combercc.com or speak to a Committee Member.

Proposing a new Member

To propose someone for membership, you must know them personally and be willing to act as their sponsor. This includes supervising them until they have successfully completed the club induction.

Inductions are held several times throughout the year, typically during the brighter months. If a proposal is made during the winter, there may be a delay of several months before an induction can take place. Please take this into consideration before putting someone forward.

The Jotform link for proposers is provided below. Once you submit the form, the proposed member will receive an email asking them to complete their details and pay the joining fee. After this is completed, the Committee will review the application at their next meeting. If approved, the applicant will be invoiced for pro rata membership fees for the remainder of the membership year.

Once all steps are completed, they will become an inductee member, as outlined above.

Proposal form: <https://form.jotform.com/250424659504356>

Comber Rifle Club Ranges

17 Railway Street, Comber – Open during the winter months, usually two evenings per week under the control of an RCO. Rifle shooting only. Book via the booking system.

15 Ballygraffan Road, Comber – Open 365 days per year 0900 – 2100 (Monday mornings these ranges are closed for maintenance until 1300hrs. Book via booking system. Rifles and Pistols can be used. Booking system terms and conditions provide specific advice on firearm types etc.

Hollow Farm, 35 Drumhirk Road, Comber – Last Wednesday afternoon of each month (except December) running from 1330 until 1700 approx. Fullbore Rifle and Pistol. Rifle details need to be allocated - watch out for the email. Pistol shooting does not need to be booked. £5 fee (correct as at May 2025).

Bangor Hub, Basement, 39 Hamilton Road, Bangor – Last Sunday of each month (as at May 2025 1100 -1400). Fullbore and Smallbore Pistols. Smallbore Rifles, Pistol calibre rifles. Wadcutter & Hollow Point ammunition not permitted. This must be booked and £5 fee paid (as at May 2025)

Ballykinler – Shared with other clubs, occasionally booked by club directly, emails will advise. Fee is £15 (May 2025). Typically Fullbore Rifle. Shooter Certification Card required.

How to shoot at Comber Rifle Club

1. Booking System - <https://comberrifleclub.as.me>

Before you leave your house go to the booking system and book the ranges you intend to use. This ensures that you don't arrive down to the range and find that it is closed! This system also is used to perform other actions:

If the robot lawnmowers are out on the range you intend to use, your booking will park them, leaving the range clear for you to use.

If you are using the air pistol range, the heating will come on if required.

If you are using the electronic target range, it will turn on the power to the targets (try to book at least 2 hours before attending this range)

The purpose of this system is both legal and to assist the club and yourself. What this does:

An easily searchable record to check attendance – required for FAC verification and for annual return required by PSNI on non-attenders

Easy to see how much each range is used.

Easy to schedule range closures as required.

As a club we have an admin inspection every five years, PSNI have seen the booking system and are very content with it, therefore returning to a physical book was ruled out, due to us having multiple ranges and the data that PSNI require us to gather, the electronic method is the best way for us to do this. It also reduces the burden on those volunteers who have to undertake the admin for the club.

2. Attend the range

Travel to the range, go to the particular range you have booked. Put your kit on the firing point and unbox / unslip if safe to do so i.e. no one is forward of the firing point.

3. Place Targets

Ensure that the range is clear, is the lawnmower out? Is it moving – if so have you booked the right range – are you early? If the mower is stationary then move it out of the way to ensure you do not shoot it. Use the correct target frames, attach the target and place in the holders provided.

If using the large 100 yard range, targets can be placed at 50m and 100 yards **only**. Be sure to use the correct frame for the distance you intend to shoot. Use of a 100 yard frame at 50m will result in bullets hitting the ground rather than the sand back stop.

4. Shoot

Shoot your target. Use appropriate ammunition – NO HIGH VELOCITY (i.e. over 1100 feet per second). Do not go forward while shooting is underway, speak to other range users and clear the range before moving forward to change / check targets. Keep talking to a minimum while shooting is underway, others may be shooting

competition cards and if they request quiet this should be respected. Do not shoot any wildlife.

5. Tidy up

Once complete, retrieve your frame and return it to the storage area. Pick up your brass, ensure your firearm is clear and box it up.

6. Leave the range

If you are the last person on site - Ensure all doors and gates are closed and locked including the gate at the end of the driveway

Safety on the range is everyone's responsibility. If you see unsafe behaviour call it out and if necessary contact a committee member to report it if the person ignores you or continues the behaviour. If you are subject to someone advising you of unsafe behaviour deal with this respectfully and do not start an argument.

Zeroing

If you have a new rifle, a new scope on your rifle or you have been maintaining the rifle in a way that the scope may have moved, you must zero before using the 50m or 100yd Range. This is to be carried out on the 30m range and can be booked for this purpose.

To do this:

Book a zeroing session.

Attend the 30m range

Observe normal safety procedures (Unbox on firing point only and when no one is forward)

Place target down range at 20 metres.

Shoot at target observing hits – adjust scope to move impact to target centre. General consideration is that you need to fire at least 3 rounds to form a usable group.

Clear firearm and rebox.

Retrieve target

Move to main range and shoot as normal – small amount of vertical adjustment will be required but impact will be on paper.

How to gain club support for a Firearm Certificate transaction (Grants/Regrants/Variations)

The Club Committee considers applications at their monthly meeting. You should not assume that you will be approved for any firearm simply because you are a member. You need to apply in advance and allow for the committee meeting to take place.

Process:

1. Apply to the committee using electronic form here:
<https://form.jotform.com/220543264319048>
2. The committee will meet and review your application.
PSNI require us to consider a number of items before giving approval:
Attendance – have you been attending regularly (i.e. 3 times per year for renewal or 6 times for a new firearm)
Competence – do we **know** that you have experience with the new firearm type you are requesting?
Concerns – are there any concerns known about your state of health for example.
3. You will be informed of the outcome and given the details of the club referee
4. You will apply to the PSNI.


Key Points:

Disciplines: Target Shooting is our sport – not the discipline. PSNI require us to confirm that you have been taking part in the discipline and that we have records confirming this i.e. from the booking system, can we show that you have been attending and shooting the discipline in question? You should not need to ask what discipline you should use – you should have been shooting it using club / other members firearms before this point. Disciplines are for example Benchrest, Lightweight Sporting Rifle, Precision Pistol etc. Trying to use one discipline for multiple firearms is unlikely to be successful.

Application: Do not bypass the committee authorisation and go straight to the PSNI application simply because you know the Club Referee details, if you do this you are breaking the law! The PSNI application asks you to confirm that you have club approval before continuing – if you haven't applied to the Committee, then you don't have this approval!

Attendance is key! See the Firearms Policy for more detail – this is emailed to you on membership renewal.

See below from PSNI Online Licensing System regarding referees:

Important Referee Information 

You are required to provide details for 2 referees. Referees cannot be a relative, firearms dealer, police officer or police staff and must be resident in the UK. The second referee must be a target club official if this application is for target firearms. (If landowner, target club or other club - have been selected to act as a referee, this information will pre-populate and display as summary and can be edited if required).

- Referees must be of good character and have known you for at least two years or if you are applying for target firearms the club official must have known you for at least one year.
- You must obtain prior permission from your nominated Referees

Shooter Certification Card (SCC)

This certification is required for shooting on **MOD** and **NRA-owned ranges**. It is **not** required for shooting at privately-owned small-bore ranges.

The club's **Responsible Officer (the Chairman)** authorises SCCs for individual members once he is satisfied that, at the time of certification, the shooter is competent to use the relevant classes of firearm and ammunition safely. Evidence of this must be available — for example, records showing that the member has been using the specific type of firearm under CRC supervision.

The only exception is the **Handloading** category, which simply confirms that you have read the **NRA Handloading Manual** and agree to follow it.

If you do **not** intend to shoot on MOD or Bisley ranges **and** you do not handload ammunition, then you **do not need** an SCC.

The Club will notify all members by email when SCC applications are open. The NRA has recently moved to **digital SCC cards** rather than plastic ones; both formats may run in parallel for a period, and we will communicate any updates as they become clear.

If you are applying for any categories beyond *iron-sighted* or *telescopic-sighted* rifle, you should expect to provide the Chairman with evidence that you have the required knowledge, experience, and access to the relevant firearm type (for example, a muzzle-loading rifle).

Vistors and Guests

Under the Firearms Order a visitor is someone who is a member of another club, who holds their own FAC with firearms conditioned for target discipline usage.

A Guest is someone who is not a member of another club.

These two types of person are handled very differently. A Guest can only attend an organised guest day which the PSNI has been informed of and can only shoot club firearms at that event. We are limited to the number of Guest Days we can have per year.

A visitor can attend and use their own firearms – for example at an open competition. At CRC if you wish to bring a visitor (with the exception of the Comber Open) you must request permission from the Secretary via the Committee. If approved your visitor will have to pay a range fee in advance and provide details of their FAC and proof of membership of another club. This is only permitted a maximum of three times.

The Committee are content for members to bring a friend or family member with them to see the range or to provide the member with transport etc on the understanding that they cannot, under any circumstances, shoot any firearms. This may seem odd to the person but as outlined above we are bound by the firearms order. Any breach of this will be dealt with as a disciplinary matter.

Relevant Legal items

CRC is a Firearms club authorised by the Chief Constable of the PSNI

Two Committee Members are elected as the PSNI Liaisons by the management committee

Full Shooting Membership is required before the club can referee any FAC Transactions.

Club Firearms

Schedule 1 Section 7 (page 42) of the Firearms (Northern Ireland) order 2004 states

“A member of a firearms club which is authorized under Article 49 may, without holding a firearm certificate, have in his possession a firearm and ammunition when engaged as a member of the club in, or in connection with, drill or target shooting.”

Member firearms

This is explained in greater detail in the Guidance on Northern Ireland Firearms Controls (page 70)

“Members of a firearms club authorised by the Chief Constable may, without holding firearm certificates, have in their possession firearms and ammunition when engaged as members in, or in connection with, target shooting. The firearms need not be club firearms and it is lawful for a member to possess temporarily a firearm belonging to another person for target shooting as a member of a club. Members may not purchase or acquire firearms or ammunition unless they have been granted firearm certificates and the exemption does not cover the use of firearms for purposes other than target shooting. In the case of *R v Wilson* (1989) the court held that possession of firearms and ammunition must only be in connection with the club’s activities and the Article does not give members a wider authority.”

Article 63

Article 63 (page 32) of the Firearms (Northern Ireland) order 2004 states:

Subject to paragraph (7), a person who has been sentenced to—

(a) imprisonment; or

(b) detention in a young offender’s centre, shall not at any time purchase, acquire or have in his possession a firearm or ammunition unless the term of imprisonment or detention to which he was sentenced was less than three years.

(2) Subject to paragraph (7), a person who has been sentenced to—

(a) imprisonment for a term of three months or more but less than three years; or

(b) detention in a young offender’s centre or a juvenile justice centre for such a term, shall not at any time before the expiration of the period of eight years from the date of his conviction, purchase, acquire or have in his possession a firearm or ammunition.

Summary:

If you have been sentenced to a custodial sentence between 3 months and 3 years (including a suspended sentence) you are prohibited from possessing firearms for at least 8 years.

If you have been sentenced to a custodial sentence longer than 3 years (including a suspended sentence) you will be prohibited from possessing firearms for life

Each time you book in for the range, you are confirming you are not subject to article 63

Rules Regulations Laws and Byelaws

Club rules and standing range orders are available on the website, and when you book a range slot the terms and conditions detail range rules.

Northern Ireland Firearm rules are complex, unforgiving and differ significantly from those in England, Scotland and Wales. You should familiarise yourself with 'GUIDANCE ON NORTHERN IRELAND FIREARMS CONTROLS' as it will contain plain English guidance on the Firearms (Northern Ireland) Order 2004

FAC Summary

New shooters must wait a year (attain full shooting membership)

Members possessing with firearms not conditioned for range use(vermin control) must also wait a year. Zeroing permitted

Changing or leaving clubs

Firearms conditioned for target use are approved "whilst you remain a member of the named (approving) club"

Upon leaving any club, the club is required to inform the PSNI. PSNI will then contact you to potentially seize your target conditioned firearms.

Your new club may not able to authorize ANY transactions until you have attained full shooting membership. Therefore, you should remain a member of your previous club until you attain full shooting membership of your new club.

Only in very rare circumstances can the PSNI request that the above is waived. If you can avoid this circumstance, do.

Safety

NRA Safe Shooting System (SSS)

- Safe People
- Safe Equipment

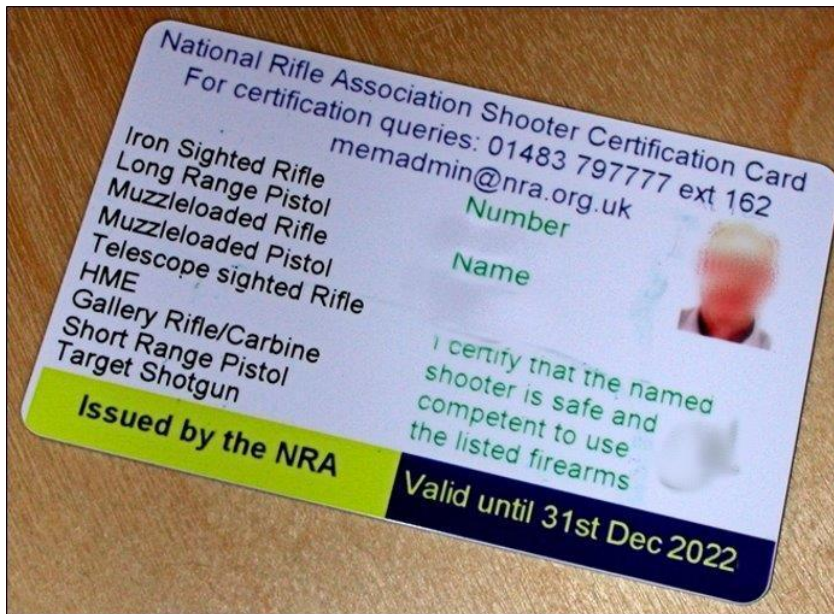
- Safe Practice
- Safe Place

SSS - Safe Person

A safe shooter is someone who:

is competent in the use of firearms and ammunition and demonstrates that capability at all times.

The NRA Shooter Certification Card (SCC) is one example of an auditable record that the responsible officer of the club (Chairman) has satisfied himself that at the time of certification the shooter has the ability to use the classes of firearm and ammunition safely and **has evidence to that effect** i.e. the member has been using the type of firearm with CRC and we have records to prove that. The only exception is the Hand Loading class – this simply means that you have reviewed the NRA Hand Loading manual and will abide by it. If you have no intention of using MOD / Bisley Ranges and don't handload ammunition, then you do not need an SCC.



SSS - Safe Equipment

The Individual firer is responsible for ensuring that their firearm is serviceable and properly maintained that the ammunition in combination with the firearm results in performance within muzzle velocity (MV) and muzzle energy (ME) restrictions for the range and that the combination of firearm and ammunition is safe and suitable for the circumstances in which it is being used.

SSS – Safe Practice

Range Safety Officers (RSO) and Range Conducting Officers (RCO) are responsible for the safe running of ranges. Additional Qualifications are required if pistols, moving targets, target shotgun, muzzle loading firearms or firearm/ammunition combinations developing a ME greater than 4500 joules are being used.

The NRA Rules of Shooting contain detailed regulations concerning the conduct of shooting for all of its disciplines.

SSS - Safe Place

A safe place is one in which the controls necessary to enable shooting to be conducted safely have been identified by a site-specific risk assessment and implemented through Range Standing Orders (RSO). All ranges should have site specific Range Orders(RO) which must be complied with at all times It is one of the responsibilities of the RCO/RSO to ensure compliance by shooters under their control.

Ranges must be maintained regularly and subject to regular inspections.

The Four Rules of Safety

These rules should be memorised

1. Always prove a firearm is unloaded whenever you pick it up, take it from anyone, or hand it to anyone
2. Always point the firearm at your target
3. Do not place your finger on the trigger until you are ready to shoot
4. Never point a firearm at anyone

Detail: The Four Rules of Safety

ALWAYS PROVE A FIREARMS IS UNLOADED WHEN YOU PICK IT UP, TAKE IT FROM, OR HAND IT TO ANYBODY.

It is essential that the condition of a firearm is known when being handled

always assume a firearm is loaded, until proved otherwise

Unless the firearm is being fired on a range, it must never be loaded and must be seen to be unloaded and safe

Limited Exceptions

E.g. an instructor handing over a loaded firearm to a student at the early stages of training, who has not yet been taught to load the firearm themselves.

Always point the firearm at your target

Directional control of a firearm is essential

The only direction acceptable is toward your target from the designated firing point

The design and construction of most ranges is such that the ability of the range is to contain bullets is determined by the fact that they must be fired in a specific direction from any particular firing point

If they are fired at an angle of elevation or azimuth which exceeds these limits the bullet may well travel beyond the range boundaries

Guidance

Only Unbox/Unslip your firearm on the firing point, pointing in the direction of your target (sandbank)

When in position, identify your lane/target and take care to only aim within it's boundaries.

Muzzle awareness

Be aware of what is behind and beyond your target

Limited Exceptions

After proving the firearm is safe/clear and away from the firing point, in a designated set up zone, one may need to examine the firearm/barrel etc. This may be done only with the RCO's permission.

Do not place your finger on the trigger until you are ready to shoot.

When lifting, loading, readying or aiming your firearm, your finger should never be on the trigger.

This doesn't mean that your firearm must be carefully aimed before placing your finger on the trigger.

When your firearm is aligned with your target e.g. in the shooting position, should may place your finger on the trigger.

Exceptions

There are very few...

Never point a firearm at anyone

Literally what it says on the tin.

Horseplay, joking, lack of thought, poor discipline etc

Exceptions

None.

Muzzle Awareness

Remember Rule 2 – “always point the firearm at YOUR target(s)”...

and Rule 4 – “Never point a firearm at anyone”

Muzzle awareness is always being aware of and paying attention to where the barrel is pointing when the firearm is being handled or when set aside. The end of the barrel should always be pointing in a safe direction, always.

The 4 rules of safety all relate to muzzle awareness.

Good handling skills are a bit like learning a new physical activity, you first have to walk through the whole process several times before muscle memory takes over.

Be ultra-aware when handling pistol malfunctions, it's easy to become fixated with the breach and forget where the muzzle is pointed.

Muzzle sweeping etc will likely happen in some part of your career, it's likely you will be picked up on it at some point. Inform the RCO and expect a robust response.

Drink and/or Drugs

Alcohol is incompatible with safe handling of firearms. No one should attend while under the influence.

Illegal Drugs are incompatible with the safe handling of firearms

Prescription drugs – Check with your doctor

Strong painkillers etc

Antihistamines can cause drowsiness

Mental wellbeing

If your mood is likely to impact your ability to safely handle firearms, do not participate

If your mood is likely to impact your enjoyment of the sport. Do not participate

If your mood changes during your participation, just leave.

If you need help, reach out and seek it, no matter what.

General Shooting Information

FIREARMS

What is a firearm

According to the Firearms (Northern Ireland) Order Part 1 introductory, Interpretation section 2.2 “firearm” means a lethal barrelled weapon of any description from which any shot, bullet or other missile can be discharged and includes-

- (a) any prohibited weapon, whether it is such a lethal weapon or not;
- (b) any component part of such a lethal or prohibited weapon; and
- (c) any accessory to any such weapon designed or adapted to diminish the noise or flash caused by firing the weapon;

Main Types

Rifle

Pistol

Shotgun

Firearms Overview

Bolt Action Rifle

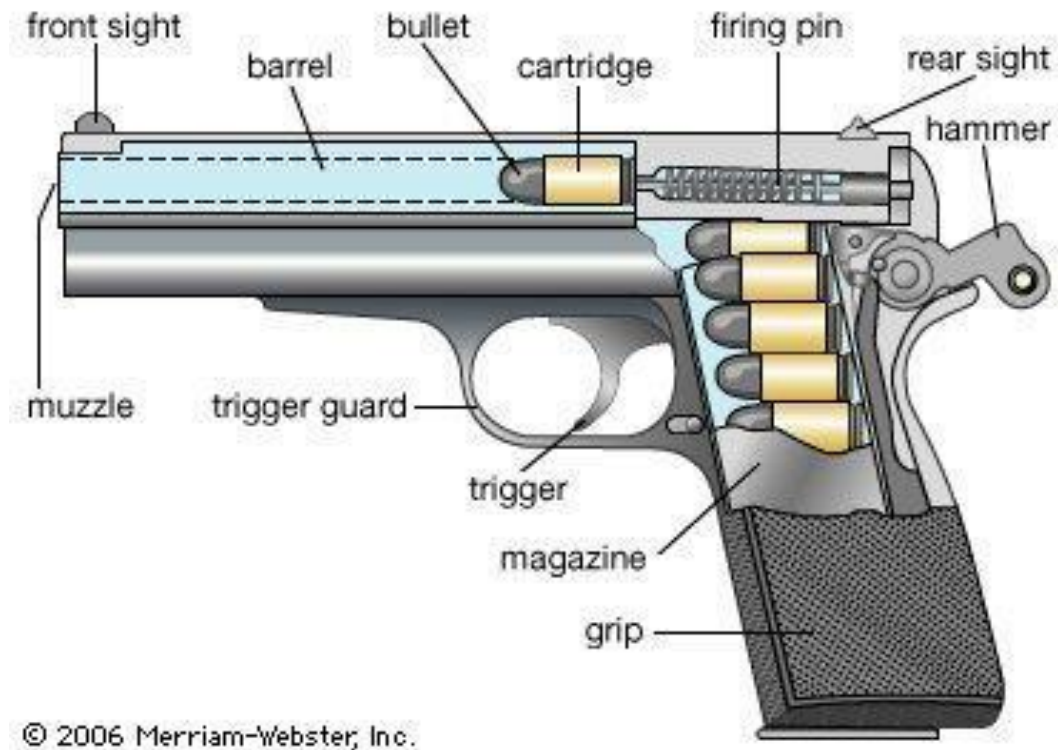
Bolt-Action Rifle



Semi Automatic Rifle

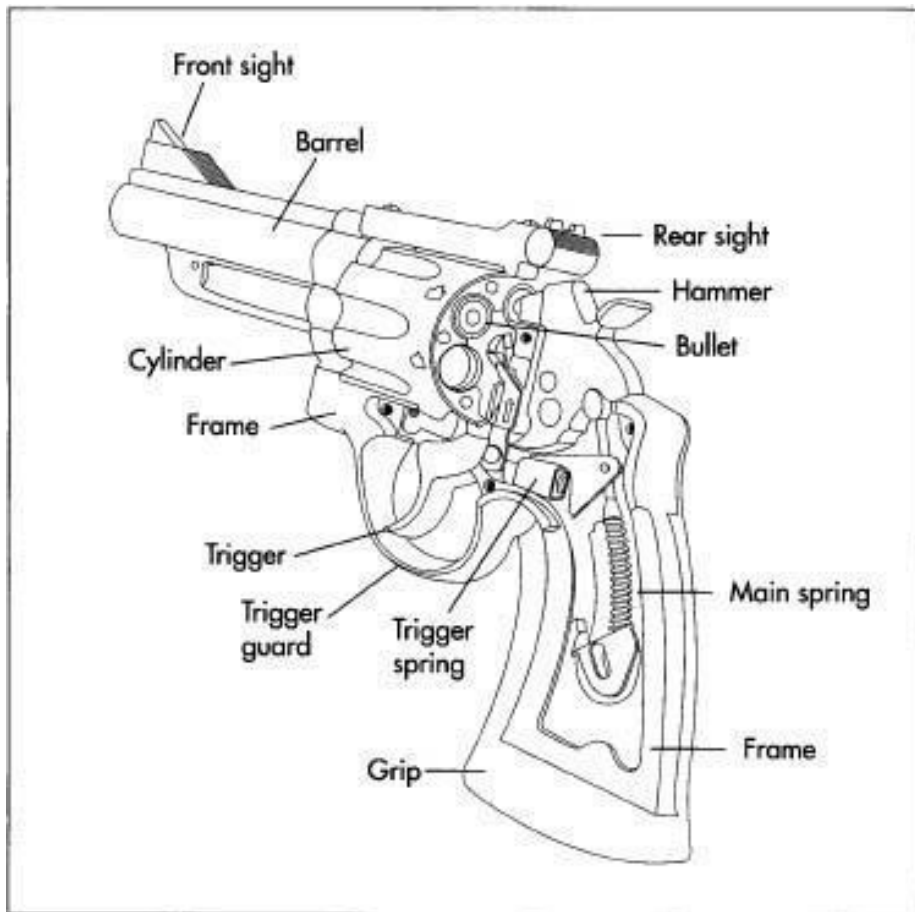


Semi-Automatic Pistol



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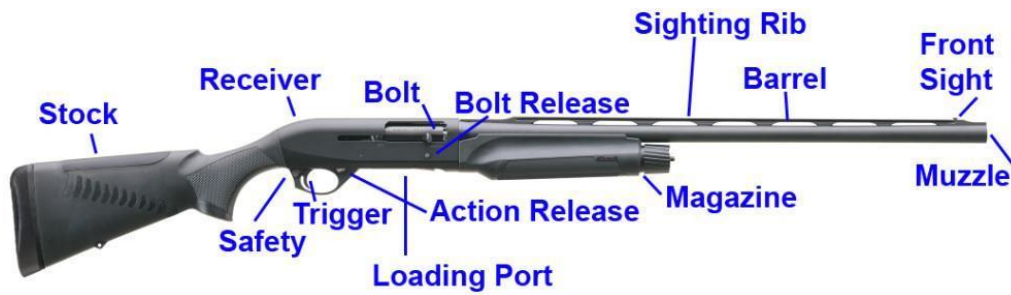
Revolver



Double Barrel Shotgun



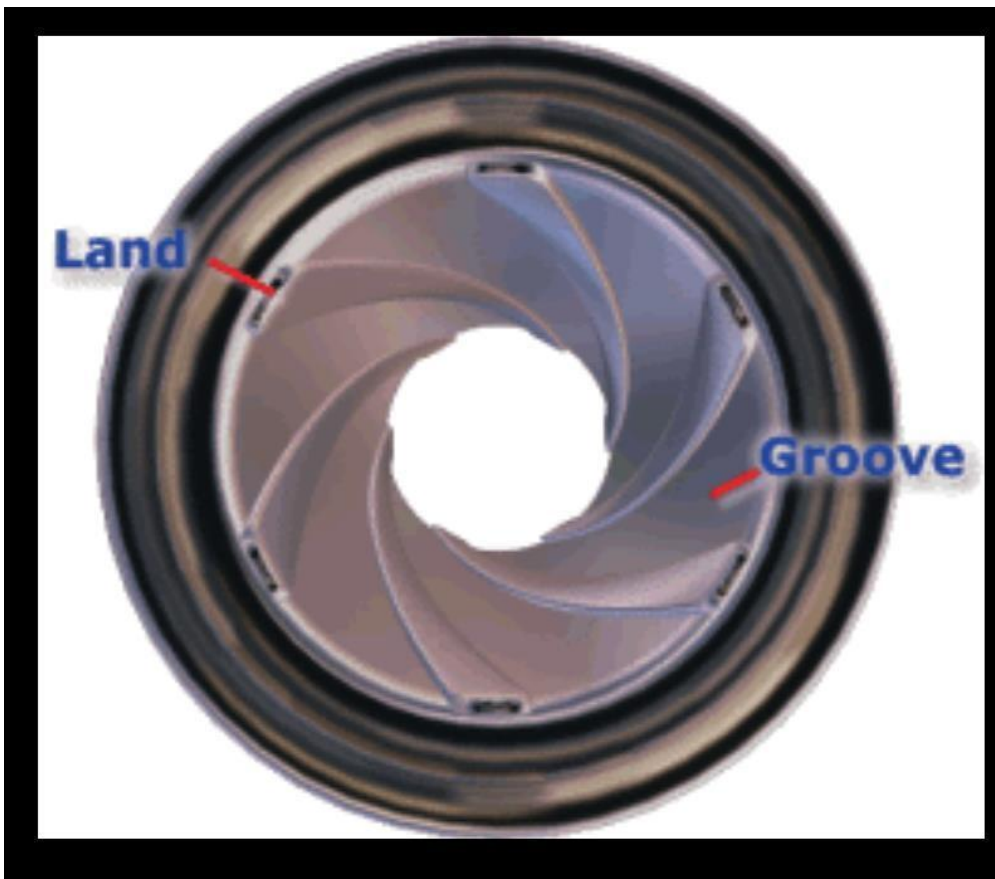
Semi Auto Shotgun



Firearm Mechanics - Rifling

In order to successfully consistently and accurately hit a target at longer ranges, a firearm needs rifling. You need a barrel that has been machined with helical or spiral grooves running down the center of the barrel from one end to the other. This is what is referred to as rifling.

These spirals impart torque and spin on the bullet as it travels down the barrel. The tightness of the spirals dictates the amount of spin measured in complete revolutions per foot of barrel. (twist rate)



As a general rule of thumb, faster twist rates will stabilize heavier bullets. E.g 5.56x45 AR with a 1 in 7 twist will stabilize an 85grain bullet, however with a 1 in 14 twist it would only be able to stabilize a 50grain bullet.

Rifling does wear with each successive shot. Its very difficult to answer how many rounds this will take, as each barrel and type of ammunition is different.

There are different types of rifling. Cut and Broached Cut, Button Rifling, Hammer Forged and Polygonal.

Ammunition

Ammunition is a general term for anything that can be fired, scattered dropped or detonated from any form of weapon.

The projectile is called a bullet, however this is only one part of the whole cartridge. A cartridge is often called 'ammunition' or 'rounds' but often wrongly referred to as a 'bullet'.

Available in a dizzying array of calibers and compositions. You must use the ammunition that your firearm is built to fire.

Comber Rifle Club Smallbore ranges are restricted in use to subsonic ammunition (1100fps)

Reloading/handloading is possible but should only ever be attempted after self study and thorough understanding has been attained. Serious injury to yourself and others can result from improper reloading.

Reloading ammunition can often be more accurate than commercially made and is generally cheaper. It can also be very rewarding to many shooter.

To fire a round of ammunition, the primer has to be struck by the firing pin. There are two types of primer:

Centrefire (CF)

Initiated by a separate primer cap press fitted into the base of a centrefire case

Rimfire (RF)

Initiate by being struck anywhere on the rim of the case

The benefits of CF are that the primer can be pushed out and replaced for reloading the case and it is extremely hard to initiate by accidentally dropping.

RF is somewhat disposable as pressing out a struck casing and repriming is fiddly at best. It is however relatively easy (but very unlucky) to initiate by dropping due to the exposed rim.

Cartridge Components

Here is a pulled round with all four components. You will notice this primer has already been struck.

Bullet

The projectile that leaves the barrel and impacts the target. Constructed of lead, copper and polymers. Construction is often dictated by the use

Case

The bit that holds all of the components together and upon firing the only part left behind

Powder

Mostly smokeless, is a combination of nitrocellulose, nitroglycerine and other trace chemicals plus a coating of inhibitor to control burn rate

Primer

The only explosive component. Contains a shock sensitive compound that when struck will explode to ignite the powder



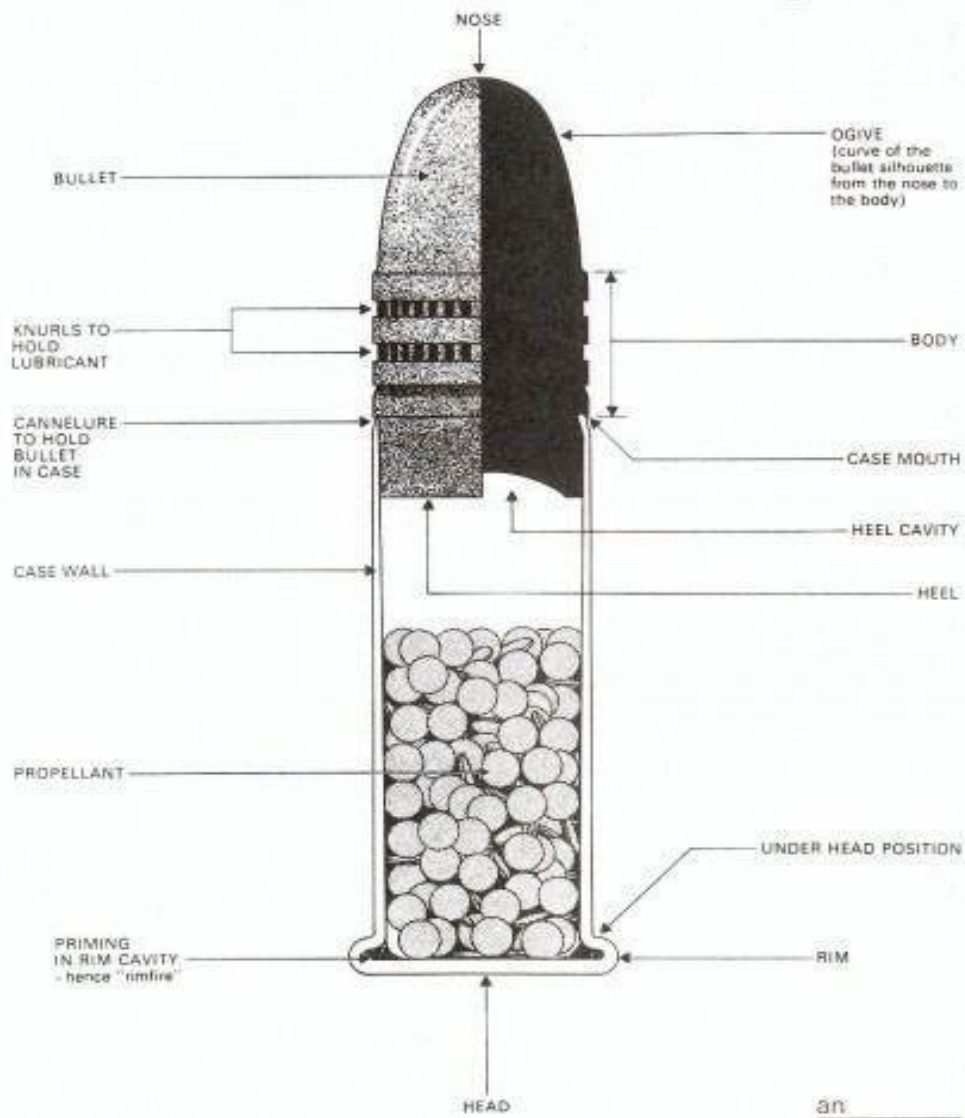
Smallbore Cartridge

Smallbore (sometimes referred to as rimfire) is an ammunition category that is traditionally small, compact and used at shorter ranges (up to 100metres)

Despite its diminutive size it is still lethal and should not be underestimated

It will travel around 1 mile (1.6km) when fired at 30 degrees

Primer located in rim cavity and is activated by the firing pin striking the rim of the cartridge



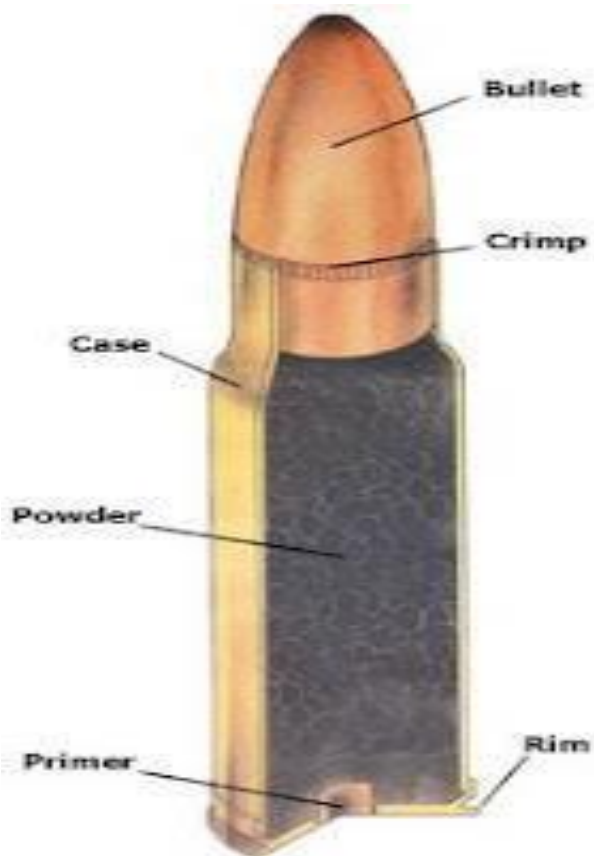
Fullbore Cartridge

Fullbore (sometimes referred to as centrefire) is typically a larger more powerful category of ammunition typically used over larger ranges but can be used in shorter ranges (pistol/carbine)

Within Comber RC, firearms of these types must only be used on approved ranges (Hollow Farm, Ballykinlar, Bangor Hub)

Approximate Speed Centrefire Rifle round 2800fps

Approximate Range 2.5 miles 4km



Breech Flags

Used to indicate that a firearm is safe

They are by no means fool proof



Live Round Hidden by Flag



Load, Unload, Ready procedure

With a Semi-automatic Rifle such as a Ruger 10/22 the firearms handling procedures are as follows:

Load: With the firearm pointing at the sandbank / bullet catcher insert the loaded magazine into the mag well. Push it all the way in and when happy try to pull it out to ensure that it is locked in correctly.

Ready: With the firearm pointing at the sandbank / bullet catcher pull the charging handle all the way to the rear and release – it will then move forward under spring pressure picking up a live round as it closes. The firearm is now live and will fire if the trigger is pulled:

Unload: With the firearm pointing at the sandbank / bullet catcher remove the magazine by pressing the release catch and pulling the magazine from the rifle. Pull the charging handle to the rear and lock open using the hold open device. Check the firearm is clear – mag well has no magazine or rounds present, the chamber is empty and bolt is free of any rounds. Leave the chamber open for inspection or insert a flag

With a bolt action rifle the same procedure should be followed except that the bolt needs to be manually operated each time.

With a semi auto pistol the firearms handling procedures are as follows:

Load: With the firearm pointing at the sandbank / bullet catcher insert the loaded magazine into the mag well. Push it all the way in and when happy try to pull it out to ensure that it is locked in correctly.

Ready: With the firearm pointing at the sandbank / bullet catcher pull the slide all the way to the rear and release – it will then move forward under spring pressure picking up a live round as it closes. The firearm is now live and will fire if the trigger is pulled:

Unload: With the firearm pointing at the sandbank / bullet catcher remove the magazine by pressing the release catch and pulling the magazine from the pistol if it does not drop free of its own accord. Pull the slide to the rear and lock open using the slide lock device. Check the firearm is clear – mag well has no magazine or rounds present, the chamber is empty and bolt is free of any rounds. Leave the chamber open for inspection or insert a flag.

With a revolver the firearms handling procedures are as follows:

Load: With the firearm pointing in a safe direction open the revolver cylinder then insert the rounds into the individual chambers.

Ready: With the firearm pointing at the sandbank / bullet catcher rotate the cylinder back into the firearm and ensure it locks into place. The firearm is now live and will fire if the trigger is pulled:

Unload: With the firearm pointing at the sandbank / bullet catcher swing open the cylinder and use the ejector to push out the empty cases. Check the firearm is clear – i.e. the cylinder is free of any rounds. Leave the cylinder open for inspection or insert a flag.

Principles of Marksmanship

If you are able to apply the following principles every time you fire a shot, you will be able to produce a grouping. This is more important than a score when starting off

The Position and hold must be firm enough to support the firearm

Ensure that the dominant hand has a firm grip on the pistol grip and that the left hand supports the firearm without excessive pressure

The firearm must point naturally at the target, without any undue physical effort

Don't muscle the firearm, adjust your position to ensure natural alignment

Sight alignment and aiming must be correct

For iron sights, the foresight must be in the centre of the rear aperture

For scoped sights the sight picture should be clear and distinct




Aiming breathing and trigger control are all crucial to ensuring consistent results

The shot must be released and followed through without disturbance of the position.

Squeeze the trigger slowly, adding pressure gently, sharp pulling will adjust your aiming point.

Position and Hold

The Firearm should always fit around you, not you around the firearm

	<ul style="list-style-type: none">✓ Good, comfortable position✓ Head midway up butt stock✓ Shoulders relaxed✓ Great sight picture
	<ul style="list-style-type: none">✗ Bad, uncomfortable position✗ Head far back on butt stock✗ Shoulders & driving hand tense✗ Terrible sight picture (especially with a scope)
	<ul style="list-style-type: none">✗ Potential stress in lower back✗ Body support from behind greatly reduced✗ Butt stock re-located close to the bicep which when incorporated with a larger calibre with increased recoil will potentially hurt

Shoulder

As an exercise, put your shooting arm out to the side at 90 degrees from your body and with your other hand in the shape of a blade, place it on your shoulder at the junction of your arm and move your shooting arm around in a small circle. You will feel a distinctive line between two muscle groups and it is here that you want to be placing the buttstock, below your collarbone! This contact point should be good and solid but not so hard that it fatigues you. It is known in the shooting world as a solid weld



Cheek

The next point of contact is your cheek which applies outward pressure from the inside of the buttstock, this pressure is compensated by contact point no 4, the firing hand

Your non-firing hand is employed in positively directing the firearm towards the target. The position of your hand in relation to the stock is purely personal preference but it has to be comfortable. Too far back and you can interfere with the cocking handle on semi auto rifles and too far forward will ultimately fatigue you.

Your firing hand (the one that pulls the trigger) is now wrapped around the neck of the stock and should be applying just enough pressure towards you to compensate for your cheek pressure (# 2)



Consistency

The position and hold you employ has to be consistent.

Adopting the correct, consistent position and hold is key to accurate shooting, irrespective of the shooting position you are in:

Standing

Kneeling

Sitting

Prone

You will very quickly learn muscle memory and automatically adopt the same hold as second nature but if you start to notice your group mean point of impact has shifted, this is an instant tell-tale for inconsistent position & hold of the firearm.

Natural Alignment

You are prone, ready to shoot, but the firearm feels like it wants to settle off the target...
Just move the rifle a bit?

No

The only option is to get up and relocate so the natural alignment is now correct.

With an empty firearm and with your eyes closed, adopt your most comfortable position and hold to where you think the target is

Open your eyes and assess where you're pointing

If you're dead in line with the target, congratulations!

If not, don't be tempted to start bending your torso/hips to accommodate getting on target

Shuffle your entire body until you are aligned

Now you have achieved the correct natural alignment to the target.

Sight Picture

Remember: "Sight alignment and sight picture must be correct"

The Rear sight



The Foresight

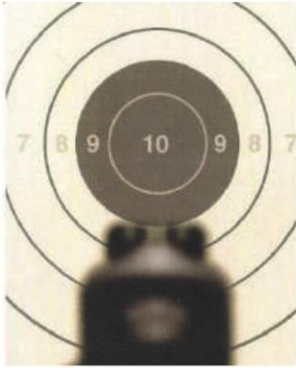


A Target





Your eyes can only focus on one object at a time!



Target
Incorrect : you cannot accurately place the foresight/rear sight combination accurately on the target because you can't see them clearly



Rear Sight
Incorrect : Your depth of perception is too short focusing on the rear sight so it's very easy to stray away from the target



Foresight
Correct : The foresight guides good accuracy, your focus is beyond the rear sight, helping the target to be clearer, and the sight picture, although slightly out of focus is much clearer when it comes to reading all three objects.

Follow Through

The shot must be released and followed through without undue disturbance to the position

Shot Release – a controlled trigger pull is essential to accuracy. Yanking snatching flicking will ensure your grouping suffers

Trigger pull should be slow but measured increase in pressure directly backwards. The contact patch of your finger should be the soft part of the tip of your finger on the trigger just forward of the last joint

When the firearm discharges, it should be a surprise one aspect of this being a surprise is flinch.

All firearms develop recoil, larger calibres substantially more than .22LR

Follow these steps

1. Once the shot is fired, you must not shift your position, move your head, or allow the muzzle to drop until the sight picture is regained and held for a moment.
2. Do not anticipate the shot and move before or during the time the bullet is still in the barrel.
3. Remember what your sight picture looked like when the shot was fired. Was it good or were your sights pointed to one side or high or low? Remembering what your sight picture looked like when the shot was fired will tell you where the shot should have hit the target. It is vital to good shooting.

Point of Aim

It's where your sights are aligned on the target. This could be

Directly zeroed for the centre of the target

Or just below it.

When creating a group always maintain the same point of aim and fire at least 3 shots



Safe Firearm Storage

<https://www.gov.uk/government/publications/firearms-security-handbook/firearms-security-handbook-2020-accessible>

Firearms and magazines must be stored and transported unloaded, with the bolt removed (where applicable) in a storage cabinet built to BS7558 standards securely attached to the fabric of the building.

Rifle/Pistol Ammunition and bolt should be stored in a separate safe or separate compartment

Your main keys should be stored somewhere safe, only accessible by you.

Your Spare keys should be stored separate to your main keys, ideally in another locked location.

Your house should be in all other aspects secure.

The PSNI may request you add additional security to your home if Firearms quantity thresholds are reached (CCTV, Intruder Alarm etc)

You must inform the PSNI of a change of address within 14 days

Safe Firearm Storage - Keys

Only YOU are approved by your FAC to have access to your firearms and ammunition.

That means that NOBODY Else is allowed to know where the keys are kept

Many FAC holders have a small key safe with a unique combination in which they keep their spare keys whilst maintaining control of the main set by simply always having them with them

Do not store your primary keys with your spare keys

Do not hang your keys up in a visible area

Safe Firearms Transport

It is the Firearm Holders responsibility to take all consideration when transporting firearms

They should be:

Hidden from view, preferably in a locked boot and if frequently transported in a hatchback, consideration should be made to secure the firearm to the fabric of the vehicle

Ammunition and bolt should be kept separate and again out of sight/hidden/secure

If the vehicle is to be left unattended:

1. The firearm should be covered and kept out of site
2. Bolt or other vital part removed and carried or securely retained elsewhere in the vehicle

Safe Day Shooting

As far as is possible, check that your car is ready (fuel, oil, air, water, etc)

Book a slot at the range – the range may be closed and you do not know!

Remove your firearm from the safe, (remove the bolt) check it is clear, placing it into a slip/case for transport.

Grab the rest of your gear including ammunition and place it into a discreet transport case

Ensure you lock your safe behind you. Taking the key with you or storing securely

Place the kit into your boot and secure as necessary. Lock doors before setting off

Arrive at the range and transport your kit to the firing point

If no one is forward of the firing point and it is safe to do so then check again that the firearm is clear after removing it from the case to place it on the point.

Load magazines if required (when the RO permits)

Shoot ...

Check firearm is clear before placing it back into the case. Ensure magazines are empty

Place into the vehicle as previous.

Check the firearm is still clear before placing it back into the safe.

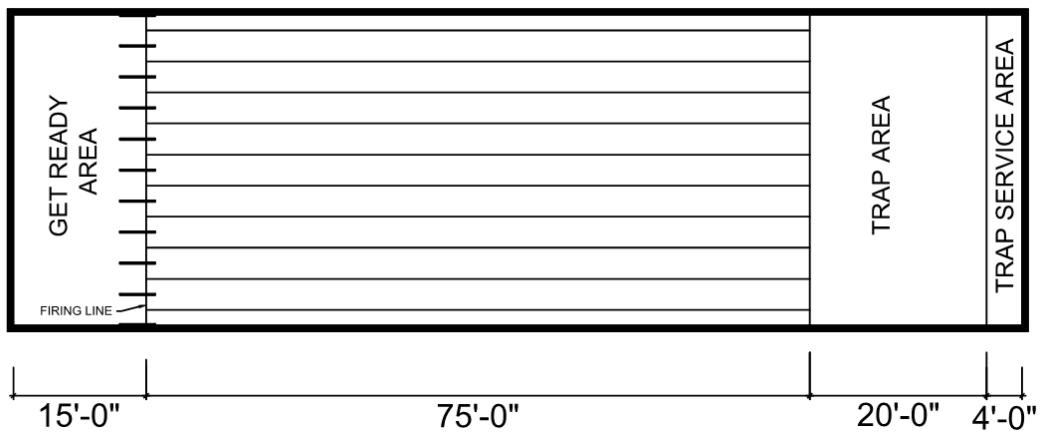
Basic Range Layout

Consisting of:

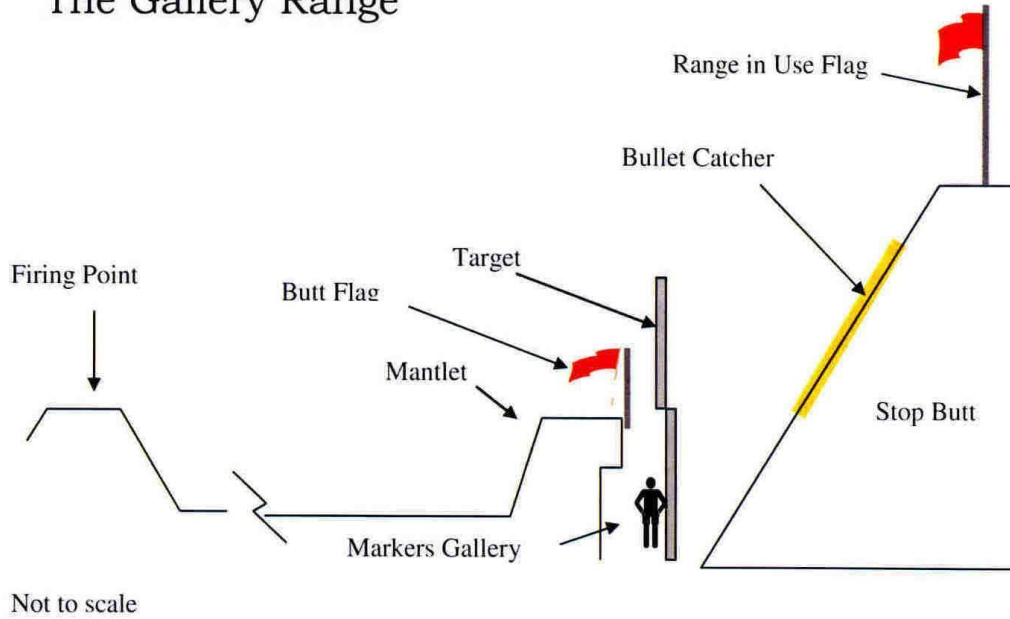
1. Get ready area
2. Firing line
3. Targets
4. Bullet catcher

Stay behind the firing line until all firearms have been checked clear and the RO (Range Officer) has given the clear instruction to move forward.

Do not touch the firearm while anyone is forward of the firing line

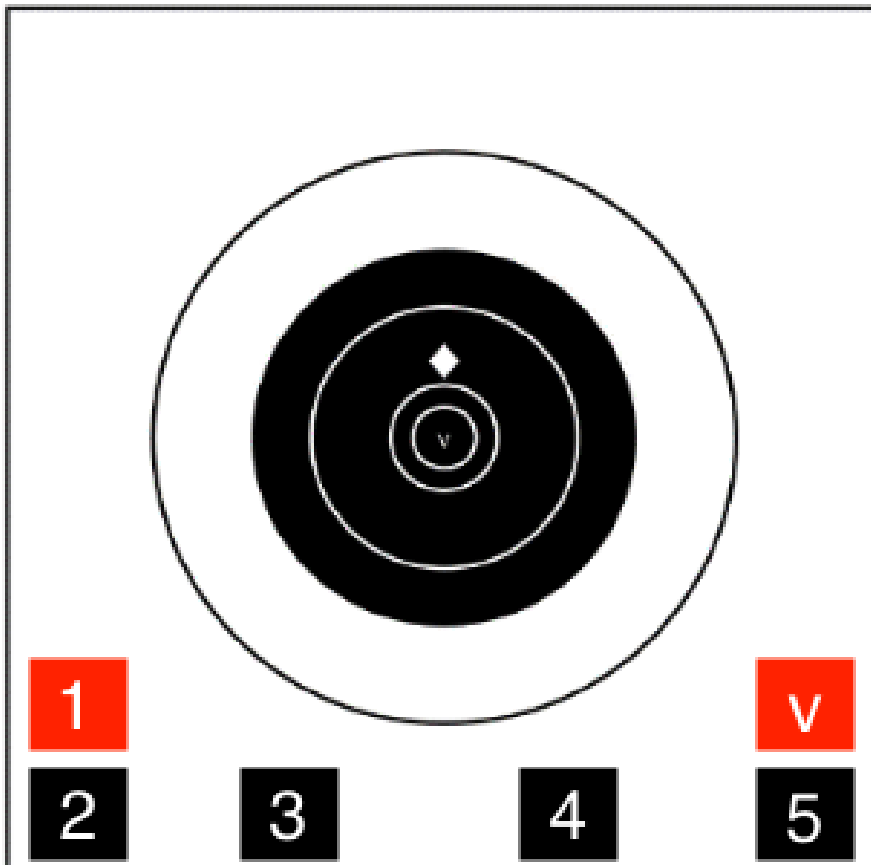


The Gallery Range

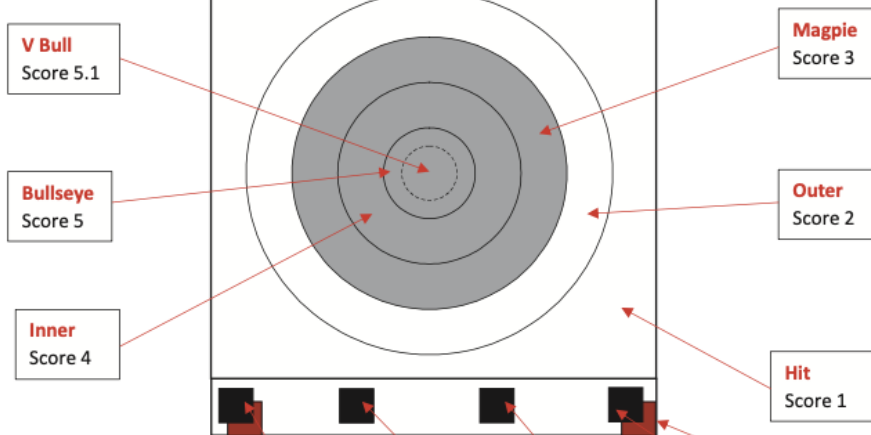


Target Marking (This relates to fullbore rifle shooting on MOD ranges)





Recording the score:



Term	Hit	Outer	Magpie	Inner	Bullseye	V Bull
Shown on bottom of frame as	Orange plate on position 4 – far left	Black plate on position 1 – far left	Black plate on position 2 – centre left	Black plate on position 3 – centre right	Black plate on position 4 – far right	Orange plate on position 4 – far right

Don't worry too much about using terms like "Magpie" etc. We have included them for reference only.

Outdoor/Fullbore Range Additional Safety

Be aware of others on the range

Do not place your shooting kit on to the firing point until the RSO has instructed you to do so

The firearm must be horizontal when being loaded i.e. bolt closed

Anyone may shout STOP STOP STOP if they see anything which is or is about to become a danger.

When you hear the command STOP STOP STOP. Stop firing immediately. Keep your firearm pointed towards the target and wait quietly for the RSO Instructions – DO NOT UNLOAD

Never leave Firearms and Ammunition unattended on the range

Practice Aiming and Dry Firing on the firepoint only and with permission and instruction from the RCO

Iron Sighted Systems

With the exception of a shotgun bead, will come in pairs.

Some are fixed, e.g. revolvers, & pistols

Some have adjustment at one or both sights. Fore and rear.

In general you should only have to change the rear sight, however at extreme distances (>1000yd) large changes can be made to the foresight so that smaller fine tuning can be made to the rear sight

Because there can be two forms of adjustment it is easy to adjust in the wrong direction

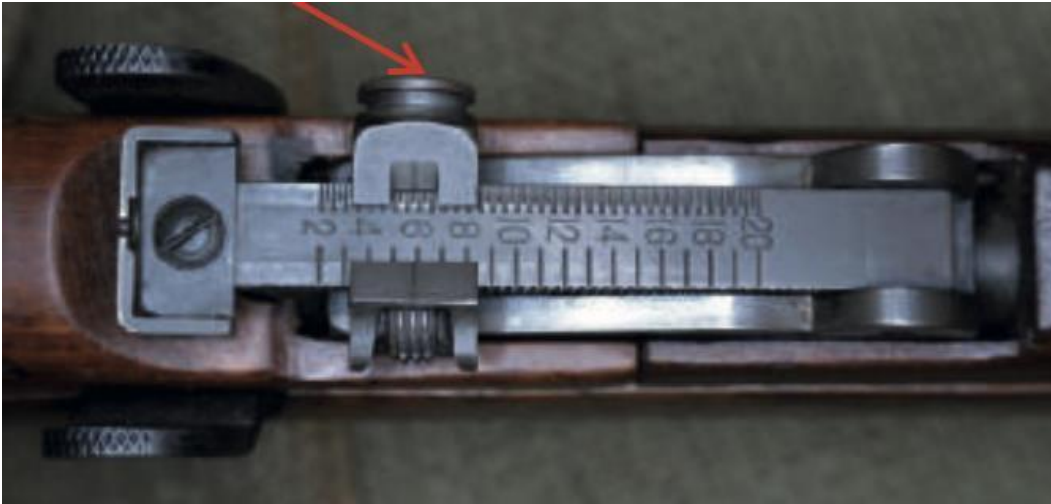
Remember that the rear sight is adjusted in the SAME direction as you wish your MPI to move.

The foresight is always adjusted in the OPPOSITE direction as your wish your MPI to move

Iron Sights – Military Systems

Generally graduated in distance rather than Minute of Angle

Adjustment for windage is “Aim left or right a bit”



Iron Sights – Vernier Sights

Target firearms are normally equipped with more accurate sights

Target rifles are often equipped with aperture sights highly accurate even at 1000yds

Made up of a rear disk up to 1 inch in diameter with a small adjustable hole in the middle

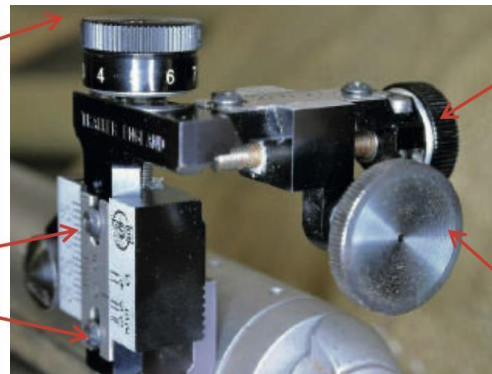
Very sophisticated design and graduated in 'minutes of angle'

Adjustable for windage and elevation

In this picture, you can see the following:

Elevation Adjustment

Zero Screws

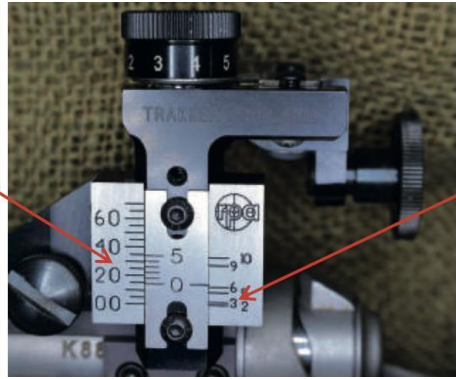


Windage Adjustment

Rear Aperture

Here we can see a side on view of the Vernier Sight system:

The Vernier Scale



To the right of the scale, you will see the numbers rising from "2" to "10". These are approximate ranges engraved on the scale for the shooter's use but if the zero screws are "slipped", the range scale will no longer be useable

The basic concept is concentric rings, your brain will automatically centre them

Make sure your is centred in the rear sight

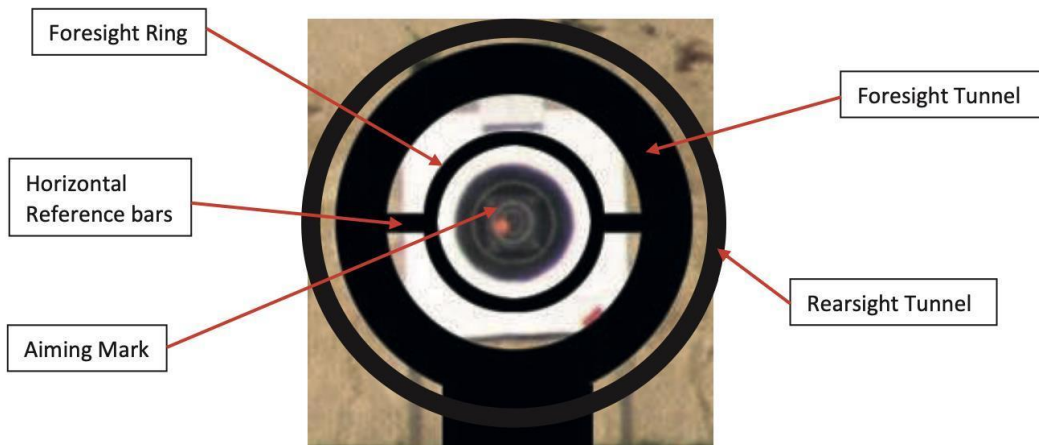
Line up the foresight on the target

Make sure you are on the correct target number

Check the sights are level

Check all three again until they are right

Focus on the foresight



Scope Sighted Systems

A telescopic sight or scope is an optical sighting device based on the overall principles of how a telescope works with a reference point within. (reticle)

Scopes can have a myriad of options

Fixed magnification – set at the factory

Variable magnification – you can adjust magnification between the ranges specified

Reticle – simply cross hair to ballistic drop reticles

Granular measurement Moa or MilRads, sometimes this can be ¼ or 1/8 Moa

Objective Size – front lens size, larger generally allows in more light, but quality also matters.

Larger objectives can also mean larger mounts

Focal plane

1st as you increase magnification, the reticle increases in size

2nd focal plane – reticle remains the same size throughout magnification

Scopes are described in the following terms magnification range X Objective lens size e.g. 4 X 40 would be 4 times magnification with 40mm objective lens. If it has variable magnification this would be 3-9x44 meaning 3 times up to 9 times magnification with a 44mm objective lens



Reticles

Fine Crosshair

Centre Dot

Dupex

German #1

Ballistic Drop compensating BDC

Mil Dot

Parallax error

Parallax error in a telescopic sight is a shift in the apparent position of the reticle relative to the target when your eye moves off-center, caused by a mismatch in the focal planes of the reticle and the target. It can reduce shooting accuracy, especially at longer ranges or with high-magnification scopes.

How to Minimize Parallax Error:

1. Center your eye directly behind the scope.
2. Use a scope with parallax adjustment (also called an adjustable objective or side focus) to match the distance to the target.
3. Some scopes are factory-set to be parallax-free at a certain distance (e.g., 100 yards for hunting scopes, 50 yards for rimfire scopes).

Scope Eye Relief

Eye relief is the optimal distance between your eye and the scope that allows a full, clear image. Choosing the right eye relief is important for safe and effective shooting, especially with powerful rifles.

Key Points:

Measured in inches or millimeters, typical eye relief for most hunting or tactical scopes is about 3 to 4 inches (75–100 mm).

Scopes with long eye relief (over 4 inches) are often used on high-recoil rifles or handguns to prevent the scope from hitting the shooter's eye during recoil — sometimes called “scope bite” or “scope eye.”

If your eye is too close, the image may appear blurry or you risk injury.

If your eye is too far, the image will be small or surrounded by a black ring (also known as vignetting).

Why It Matters:

Proper eye relief is crucial for comfort, safety, and maintaining a clear sight picture.

It also affects how quickly and reliably you can acquire your target, especially in dynamic shooting situations.

Minutes of Angle (MOA)

All sighting systems use some form of angular measurement in order to be adjusted accurately place bullets on targets at different distances

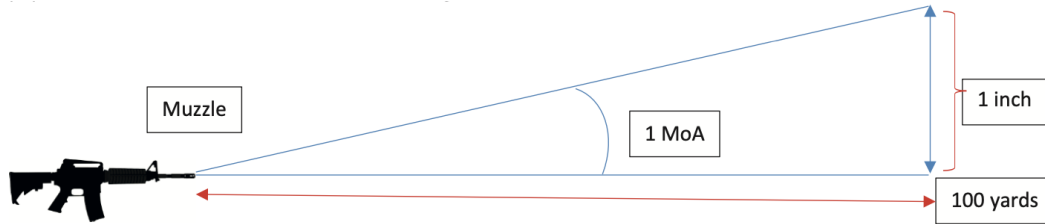
There are two types of angular measure. Minutes of angle and mils. We only cover Minutes of angle today.

By a fluke of nature minute of angle measurement system maps almost perfectly (as far as it matters) with yards.

Take a circle and take out 1 degree of that circle. E.g. 1/360th of that circle

Take that single degree and divide it by 60. e.g. 1/60th of a degree or 1 MINUTE OF ANGLE

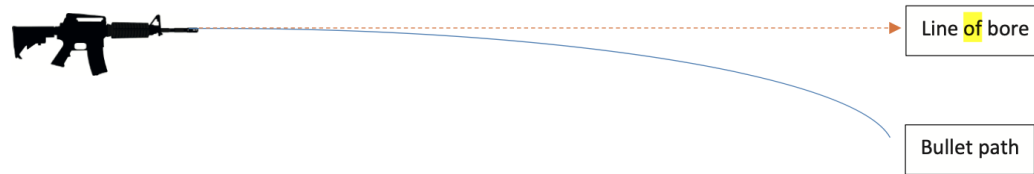
1 minute of angle over a distance of 100yards is is 1inch (1.047") – the thickness of about 8 sheets of paper difference



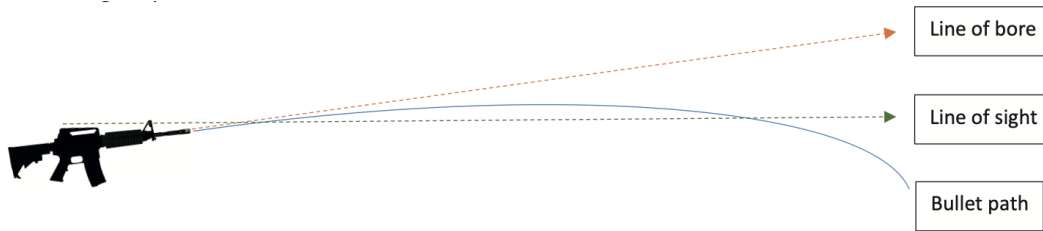
Why do we need to apply elevation in minutes to hit targets further away? GRAVITY

When you fire a bullet, its highest point will always be the line of the bore as it exits the bore.

Immediately upon exit, it's dropping to earth.



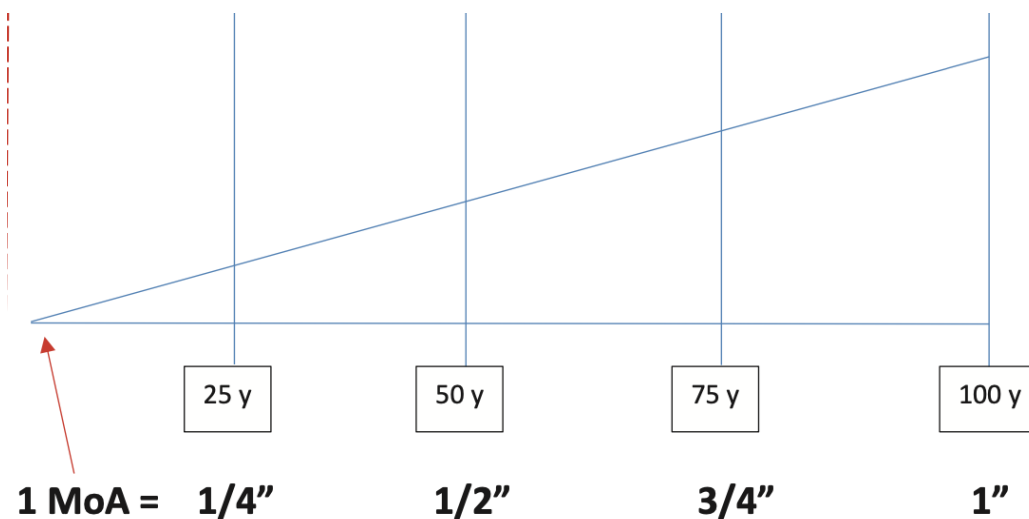
What does this all look like in reality?



Minutes of Angle - Distance

ELEVATION TABLE for GGG 155gr Bisley Ammo									
UP FROM	TO								
	200	300	400	500	600	700	800	900	1000
100	1.25	3.75	6.5	9.5	13	17	21.5	26.5	32
200		2.25	5	8	11.5	15.5	19.75	24.75	30.5
300			2.75	5.75	9.25	13	17.5	22.5	28.25
400				3	6.5	10.5	14.75	19.75	25.5
500					3.5	7.5	11.75	16.75	22.5
600						4	8.25	13.25	19
700							4.5	9.5	15
800								5	10.75
900									5.75

Minutes of Angle – Distance < 100yds





EACH "RUNG" ON THE FIXED VERTICAL LINE REPRESENTS ONE FULL TURN OF THE DIAL, IN THIS CASE 25 MOA



READING 50 MoA



READING 63 MoA



Equipment for Shooting
Essential Equipment

Hearing Protection (Electronic recommended)

Eye Protection

Firearm (club available)

Ammunition (club available)

Optional basic Equipment

Case/Slip (rifle and pistol)

Kit bag

Cleaning kit

Tool kit

Spotting scope (useful even at short
range)

Breech flag

Rest (different for all disciplines)

If shooting prone position (mat)

If pistol (firearm and magazine holster)