

The Bristol Muzzle and Breech Loading Gun
Club Probationary Hand Book

Introduction

The Bristol Muzzle and Breech Loading gun club is a Home Office approved target rifle and pistol club. We are a large and diverse club with members shooting a range of disciplines including Back Powder Pistol, Full Bore rifle, Muzzle Loading rifle, Gallery rifle, Small Bore rifle and Sporting Shotgun.

We are a general shooting club and offer members the opportunity to shoot in most areas of target shooting.

Membership of the club is by invitation on completion of the probationary course.

The Probationary period is a minimum of 6 months regardless of experience and prospective members must show they are safe and competent in all areas of club activities.

The probationary period will allow the club to get to know and train you, and also for you to get to know the club, having completed your probationary period you will be free to follow those areas of Target Shooting that interest you. However during your probationary period you must prove you are competent in all areas of club activities.

Under Home Office guidelines, Probationary members must complete a course in the safe handling of firearms and shoot regularly under supervision before they can become a full member of a Home Office approved club.

Completion of the probationary course will satisfy the requirements of the Club Chairman's Certificate of Competence under the NRA safe shooting system and allow you to shoot on MOD ranges as a full member.

The probationary course is modular, Assessment for completion of any module is through sign off, by a member of the committee or approved club training officer who must be satisfied that you are safe, competent and knowledgeable in that particular module.

THE CLUB AND YOUR PROBATIONARY PERIOD

The club uses a number of different ranges both military and civilian.

The military often cancel range days due to operational requirements at short notice. You are responsible for checking the club phone line (01179089149) or the club website www.bristolmuzzleloaders.co.uk before you travel to any range.

The club meets regularly during the year this is your chance to meet members you may not come across during your probationary period. It is also the clubs forum to inform members of changes in legislation or club activities.

The clubs AGM is held on the second Thursday in March when we hold the annual prize giving and elect the new committee.

During your probationary period you may not use the club as a referee to obtain a firearm certificate. The police will not issue you a firearm certificate for target shooting until the club informs them that you have been accepted as a full member.

Having completed your probationary period you are encouraged to obtain your own firearms certificate. Although you will still have access to club firearms probationary members have priority on the range. Members of the club or committee will guide you through the application process if you wish to apply for a certificate.

As well as the annual membership fee, a green fee is payable on all ranges, the club carries ammunition for club firearms that you can buy on the day. Having obtained your firearms licence you would be expected to supply your own ammunition.

Having obtained full membership if you wish to shoot Black Powder an additional explosives licence is also required. The club will explain what is required during your training.

You are responsible for supplying yourself with adequate hearing and eye protection and a shooting mat on rifle ranges. Hearing protection should be in the form of a box type that enclose the ears fully or professionally fitted ear plugs. The expanding foam use once and trough away type are not suitable for shooting

You should come suitably dressed; the weather can change rapidly on the Severn foreshore and on top of the Mendip hills.

On rifle ranges you should expect to shoot prone, standing is permitted at 100 yds on some ranges.

During your probationary period you will need to get your training book signed on each range visit by a member of the committee or training officer. This book is the clubs record of your training and attendance, and you will need to produce it when you come before the full committee at the end of your training.

If you are unable to attend the range for a prolonged period during your probationary period due to family or work commitments, it is your responsibility to inform the club secretary, failure to do so will see your membership terminated and the police informed that you have left the club.

The club has a legal obligation to inform the police of any member of the public who applies to join a gun club. The police will then check their records to see if you have any convictions that prohibit you from owning or handling firearms. If you have been convicted of an offence other than minor motoring please discuss it with the club secretary in confidence. If you have more than one conviction for drink driving the police may decline to issue you with a firearms licence.

On completion of your probationary period you will be invited before the full committee. This is your opportunity to let us know what you think about your training and probationary period. It is through feedback that we improve our training, any constructive suggestions or criticism is always appreciated.

The NRA Safe Shooting System

The MOD requires all civilian organisations using military ranges to have an auditable system of training based on a specific risk assessment.

The NRA has developed the safe shooting system of training to satisfy the MOD requirements. All shooters must also have an annual certificate of competence signed by the club chairman.

The NRA safe shooting system is based on four elements Safe Person Safe Equipment Safe Practice and Safe Place.

Safe Person

The shooter is someone who has received the information, training and supervision to enable them to acquire knowledge and develop the skills necessary to demonstrate that they can handle firearms and ammunition safely

Safe Equipment

The individual firer is responsible to the Club Chairman for ensuring that his firearms are properly maintained and that the ammunition used is in every way safe and within the range parameters for muzzle velocity (MV) and muzzle energy (ME)

Safe Practice

Qualified NRA RCO's are responsible for the safe running of the range for civilian shooters. Additional qualifications are required for sporting rifle muzzle loading rifle and ammunition developing muzzle energy greater than 4500 Joules.

Safe Place

A safe place is one in which the controls which are necessary to enable shooting to be conducted safely have been identified by a site specific risk assessment directed through range standing orders.

Security

While you have custody of any firearm, whether your own property or the clubs you have a duty of care to yourself and other people while any firearm is in your possession. You are responsible for the safekeeping and security of firearms in your possession at all times. You may not travel with a loaded firearm even if it is in a gun slip, all magazines and spare cylinders must also be unloaded while in transit.

When at home, firearms by law must be locked away unless you are cleaning or working on them, it is illegal for any person who does not have authority to have access to your firearms, family members must not have knowledge of the whereabouts of the keys to your gun cabinet or have access to your firearms.

No firearm is to be left unattended at any time on the range. When on the firing point and moving forward to check targets someone must always remain behind and in charge of any firearms left on the firing point.

When travelling to or from the range firearms should be out of sight, At the range if firearms are left in a vehicle the vehicle must be locked and firearms must be out of sight, they should be rendered unable to fire as far as is possible by removing the bolt or any component parts that would make it difficult for a thief or unauthorised person to use. Ammunition should be stored separately during transit if possible.

If you have an estate car you should cover the guns with sheeting so casual onlookers will not know you are caring firearms.

Never handle a firearm that belongs to another person unless you have their permission to touch it. And never handle a firearm that you are unfamiliar with.

Security at home, the police will require you to have a Home Office approved gun cabinet to store your firearms. Ammunition will need to be stored separately; some cabinets will have a separate built in ammunition storage cupboard that can be used to store your ammunition. When not in use firearms must be locked away and unauthorised persons must not have access to the cabinet or keys. The cabinet should be located so that casual visitors will not see it, but in a location that can be easily accessed so there will be no temptation not to secure your firearms when you are late home wet and cold.

During your probationary period the club will supply all firearms that you will need. Ammunition can be purchased on the day, any unused ammunition must be returned to the club who will hold it on your behalf until the next time you shoot. It is illegal for you to remove ammunition from the range unless you have it entered onto a valid firearms certificate.

All fired brass is yours unless the club requires its return and you must dispose of it yourself it must not be left on the range.

Safety

<p><u>You must show that you can perform the following</u></p> <p>Prove that you are safe at all times when in possession of a firearm and when moving around the range</p> <p>Be able to show that you can prove safe any firearm you are likely to encounter while on the range with the club when asked to do so.</p>	<p><u>You must understand the following</u></p> <p>What is required of you as a probationary member both from the clubs point of view and the legal requirements</p> <p>Why it is important that you can prove how to clear any firearm that you will encounter on the range with the club</p> <p>You must understand what the law requires of you regarding the security of firearms and ammunition both on the range at home and when travelling to and from the range.</p> <p>Basic range layout e.g. firing point, butt party, gallery target, stop butt, danger area and butt flag procedure</p> <p>The Range Conducting Officer is in overall control of the range.</p> <p>Why the club requires that all firearms are cased at the end of a detail rather than operate a bolt out system.</p> <p>Range etiquette.</p>
--	--

Full Bore Rifle

In this module you will learn to load safely, fire aimed shots and unload a firearm,

You will need to show that you

Know when you may load.

Know when you may fire.

Know when and how to unload and prove clear.

Move a firearm on and off the firing point in accordance with the club rules.

<u>You must show that you can perform the following</u>	<u>You must understand the following</u>
<p>You must</p> <p>Load the rifle correctly</p> <p>Fire the rifle ensuring that you are taking carefully aimed shots at your target</p>	<p>When it is permissible to load a rifle.</p> <p>How to load a rifle safely.</p> <p>Why the barrel must always be horizontal when opening or closing the bolt with a live round in the chamber.</p> <p>How to take carefully aimed shots at your own target.</p> <p>How to operate the trigger.</p> <p>Why the maximum elevation of the barrel above the horizontal must not exceed 70mils (4 degrees) as there is a danger that any shots fired could pass over the stop butt and travel beyond the range danger area.</p> <p>When you should unload.</p> <p>How to unload a rifle safely.</p> <p>How to prove the rifle clear.</p>

Misfire procedure Breech Loading Firearms

You must recognise a misfire

Complete the misfire drill correctly

<p><u>You must show that you can perform the following</u></p> <p>Recognise when a misfire occurs.</p> <p>Inform the RCO that you have a misfire</p> <p>Wait 30 seconds before opening the bolt</p> <p>Check if the primer has been struck.</p> <p>Hand the misfired round to the RCO who will pull the round for you, or return it to you at the end of the detail for you to dispose of.</p>	<p><u>You must understand the following</u></p> <p>A misfire is a round that fails to fire when the trigger is pulled.</p> <p>Misfires can be dangerous.</p> <p>Understand what a hang fire is</p> <p>Remain in the aim for at least 30 seconds in case of a hang fire.</p> <p>Inform the RCO that you have a misfire.</p> <p>Ensure that the area around and behind is clear; tilt the rifle to the side before releasing the bolt, keep your face well clear. Check that the cartridge comes out complete with the bullet. If the bullet is missing check the barrel is clear</p> <p>Check the misfired round to see if the primer has been struck by the firing pin.</p> <p>Do not try and re fire a misfired round as the primer could be weakened which may cause a blow back if fired again.</p> <p>If the primer has not been struck. The firing pin may be damaged the rifle will need to be checked.</p> <p>The misfired round must be disposed of safely.</p>
--	---

Rifle Sights

It is your responsibility to ensure the sights are set correctly for the distance you are shooting at.

If someone has used a club rifle before you at a different distance and you do not check, you could put a round over the butt stop that could leave the Range Danger Area.

<p><u>You must show that you can perform the following</u></p> <p>Read the settings on your rifle sights accurately.</p> <p>Set the sight correctly for elevation for the distance you are shooting</p> <p>Make adjustments for wind on your sights. or how to aim off</p>	<p><u>You must understand the following</u></p> <p>The flight of a bullet to the target is not a straight line because of bullet design the effects of gravity air resistance and wind on the bullet</p> <p>Barrel elevation will increase as the distance to the target increases</p> <p>Sights enable us to changes the elevation as the distance increases</p> <p>When the sight knobs are rotated the movement can often be felt as “clicks”</p> <p>Most target sights of UK, US manufacture and telescopic sights have clicks of quarter minutes i.e. four clicks to one minute European sights will often differ i.e. telescopic sights are often measured in centimetres Military sights are often in Mils.</p>
--	--

Zeroing the Sights

You must show that you know

When you need to check your rifle sights

Understand why it is important to know your elevation settings before going to the range

Know the correct procedure to zero your rifle sights

<u>You must show that you can perform the following</u>	<u>You must understand the following</u>
<p>Explain when you need to check your sights.</p> <p>Explain why it is important to know your elevation settings.</p> <p>Demonstrate that you know how to zero your rifle sights.</p>	<p>Rifle sights will need to be checked and re-zeroed if there has been any change or repair to the sights. If the rifle has been knocked or damaged</p> <p>Different types or batches of ammunition will affect the Zero of a rifle</p> <p>On a gallery range you must zero the rifle at short range and then ensure you apply the correct elevation setting when you change distance.</p>

Gallery Rifle & .22 Rimfire

A gallery rifle is a generally a centre fire rifle that shoots pistol calibre ammunition, often associated with under lever rifles. A .22 rifle is a small calibre round that may be a bolt action rifle under lever rifle or single shot rifle do not confuse a gallery rifle with a military gallery range. Galley rifles are normally shot on a pistol range.

<p><u>You must show that you can perform the following</u></p> <p>Prove that a gallery rifle is clear</p> <p>Load, unload and fire a gallery rifle safely</p> <p>Move on and off the range correctly observing all safety procedures</p>	<p><u>You must understand the following</u></p> <p>Galley rifles may be shot on pistol ranges and rifle ranges</p> <p>Pistol ranges have different procedures to rifle ranges.</p> <p>How to load, unload and fire different gallery rifles.</p>
--	--

Muzzle Loading

In this module you will learn to safely load and shoot a muzzle loading firearm both Pistol and Rife.

Learn the different types of lock mechanism and different types of muzzle loading arms.

Unload a muzzle loading firearm.

Misfire procedure.

Safety and security of Black Powder at home and on the range.

Muzzle loading Pistol

<u>You must show that you can perform the following</u>	<u>You must understand the following</u>
Prove a muzzle loading pistol clear.	The difference types of lock ignition and how to prime them.
Load and shoot a single shot pistol.	Misfire procedure.
Load and shoot a muzzle loading revolver.	How to unload a muzzle loading pistol.
Prime a muzzle loading pistol	Special precautions when priming a pistol
	Special precautions are required when dealing with muzzle loading firearms.
	Pistol ranges have different protocols to rifle ranges.
	The difference between Black Powder and Pyrodex.
	It is illegal for any individual to possess Black powder unless they have an explosives licence entitling them to do so.

Muzzle Loading Rifle

<p><u>You must show that you can perform the following</u></p> <p>Prove a muzzle loading rifle clear.</p> <p>Load and shoot a muzzle loading rifle.</p> <p>Prime a muzzle loading rifle.</p>	<p><u>You must understand the following</u></p> <p>The difference types of lock ignition.</p> <p>How to prime them</p> <p>Misfire procedure.</p> <p>How to unload a muzzle loading rifle.</p> <p>Special precautions when priming a muzzle loading rifle</p> <p>Special precautions are required when dealing with muzzle loading firearms.</p> <p>The difference between Black Powder and Pyrodex.</p> <p>It is illegal for any individual to possess Black powder unless they have an explosives licence entitling them to do so.</p>
--	---

Muzzle Loading general

You Must Know:

Safe Storage of black powder (gun powder) and percussion caps in the home.

Licence requirements for Black Powder.

Monitoring and cleaning of spilled powder at the firing point or the loading table.

Understand and demonstrate how to prime a firearm at the firing point, the use of percussion caps, priming flintlock and matchlock firearms.

Actions when the priming system fails to ignite.

Actions when the main charge fails to ignite, after the priming system has ignited.

Actions when the main charge fails to ignite after repeated priming attempts.

Understand the difference between the types of bullets i.e. round ball bullets and minie.

Understand the different types of ignition.

Understand how to clean a muzzle loading firearm on the range and at home.

Range Safety and Etiquette.

To make the day run smoother and maximise the time on the range all members must observe the following rules.

All shooters must arrive at the range on time, there is work to be done before shooting can start and shooters need to be split into details, late arrivals may not get the opportunity to shoot.

It is a legal requirement that all shooters fill out the clubs range register, entering the type and serial number of all firearms used.

On military rifle ranges you will shoot one detail and then do a butt duty or sentry duty.

Firearms must be carried in a gun slip or case and must be unloaded. You may not arrive on the range with a loaded firearm; firearms must be unloaded between details.

Dress: the Bristol Muzzle and Breech Loading Gun Club is a target shooting club not a Para military force, full military uniform may not be worn on the range. A combat jacket along with civilian trousers is acceptable, Full time serving military personnel may wear uniform.

Range Safety

Your safety and the safety of other range users are of paramount importance. Safety is the responsibility of everyone on the range. If you see anything that you are not happy with or see any breach of safety you must speak out immediately. No one is above reproach.

The range conducting officer (RCO) is in overall control of the range and his orders must be obeyed at all times.

The RCO may appoint range safety officers to help out, but the RCO remains in overall charge of the running of the range and for range safety.

Never aim or point a firearm at another person even if it is unloaded.

Do not place your kit on the firing point until told to do so by the RCO.

No loading or firing may commence until the RCO gives permission.

Due to the diverse nature of firearms within the club we operate a system of always keeping firearms in a gun slip when not in use. Whenever you attend a range firearms must be carried in a gun slip or case, and may not be removed until you are told you may do so by the RCO, and then only on the firing point. At the end of a detail all firearms must be returned to a gun slip or case before any person may move forward to check targets.

Some shooting clubs and the NRA operate a Bolt Out system that is the bolt is removed or left open and a breech flag inserted to show everyone that the rifle is unloaded. The club operates a bolt out system when shooting at Bisley.

You may never leave the firing point with a firearm, or case a firearm, until the RCO has declared it is unloaded and safe.

No firearm or magazine may be loaded or fired other than in the firing position on a recognised firing point and only when the RCO has given his permission

During loading and unloading of breech loading rifles the muzzle must be horizontal towards the target.

Should you need to work on a firearm on the range the RCO will designate a “fumble zone” away from other shooters, no ammunition may be present in the “fumble zone”.

Should you wish to dry fire or adjust a firearm, you must get permission from the RCO who will designate a spare lane should one be available, no ammunition may be present.

It is forbidden to shoot across lanes; if a bullet ricochets it may leave the range danger area.

You must stop firing immediately if you here the emergency words STOP! STOP! STOP! If you see anything that may a danger you must also shout STOP! STOP! STOP! and inform the RCO,

Do not unload your firearm just put the firearm down and dress back from the firing point and follow the RCO’s instructions. It may be dangerous to unload at that time that is why you lay your firearm down and dress back from the point

Do not move in front of the firing point whilst firing is in progress

At the end of a shooting detail you must show the Range Conducting Officer or range safety officer that your firearms are clear, once cleared they must be cased before you start to pack up the remainder of your shooting equipment.

Hearing protection is mandatory on the firing point and is recommended in the butts

Eye protection is mandatory when shooting muzzle loading firearms and is recommended for other types of firearms.

Never leave your firearms and ammunition unattended on the firing point.

If a live round is jammed in the firearm and it cannot be unloaded in the normal manner lay it down pointing towards the target and inform the RCO.

If a misfire occurs wait 30 seconds in the aim then inform the RCO and the person shooting next to you that you have a misfire. Never try and re fire a misfired round.

On no account try and force a live round into the chamber.

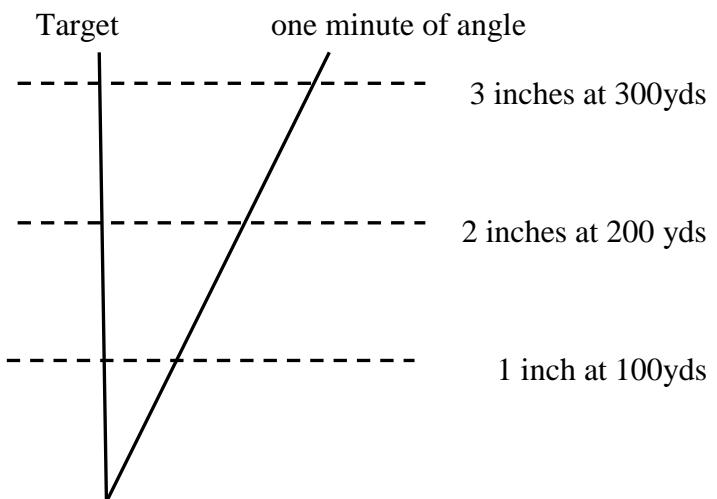
No person may go forward of the firing point or leave the butts until all firearms are removed from the firing point or are placed into a gun slip or case.

The firer is responsible for ensuring that both the firearm and the ammunition is safe to use and they comply with the range safety regulations in respect of muzzle energy and muzzle velocity.

MINUTE OF ANGLE (MOA)

Military and Target sight are made with minute of angle adjustments. There are 360 degrees in a circle and each degree is divided up into 60 minutes. One minute is equal to 1 inch at 100yds (to be exact one minute equals 1.0472 inches) 2 inches at 200 yds and 5 inches at 500yds and so on. Sight adjustment is normally measured in clicks one click equals $\frac{1}{4}$ minute.

At 200yds if we need to move the point of impact of a bullet 4 inches that would equate to 2 minutes of angle or 8 clicks



Minute of angle

Telescopic sights made for the American market are normally Minute of Angle adjustment however European sporting telescopic sights are often adjusted in centimetres per 100 meters.

Rear sight. To adjust the rear sight on a firearm you move the sight in the direction you wish the bullet to travel, if the bullet impact is low on the target you will need to raise the sight so that the bullet impact will rise. If the wind pushes the bullet off to the left you will need to move the point of impact of the bullet to the right so the sight is adjusted to the right.

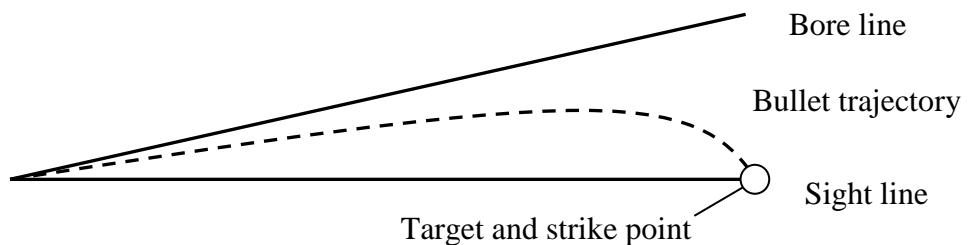
Front sight. To adjust the front sight you need to move the sight in the opposite direction. You wish to move the bullet strike, if the bullet strike is low and you need to move to point of impact up, the front sight is adjusted down. If the wind pushes the bullet off to the left then the point of impact will need to be moved to the right, the front sight is adjusted to the left.

Mil dot sights

Mil dot sights are sometimes found on high power telescopic rifle sights. A liner mil (i.e. straight down the range) is one, one thousandth of the range, in metric that is 100mm at 100 meters 200mm at 200 meters and so on, in imperial it is 3.6 of an inch at 100 yds 7.2 at 200yds and so on.

Trajectory

Bullets do not travel in a straight line when they leave the barrel; they are affected by gravity and air pressure, this makes them fly in a curve.



The bore line is the line the rifle bore is elevated above the target

The sight line is the line of sight, through the sights to the target

The bullet trajectory is the path the bullet takes to the target

The further from the target you are the more you will need to raise the bore of the rifle so that the bullet will hit the target; the bore line is elevated by adjusting the sights on the rifle.

The trajectory of the bullet will be different between batches of the same calibre ammunition as well as different bullet design; it can also be affected by the weather on different days.

Ammunition

Ammunition is made up of the following, a case or cartridge, the primer, powder and a bullet.

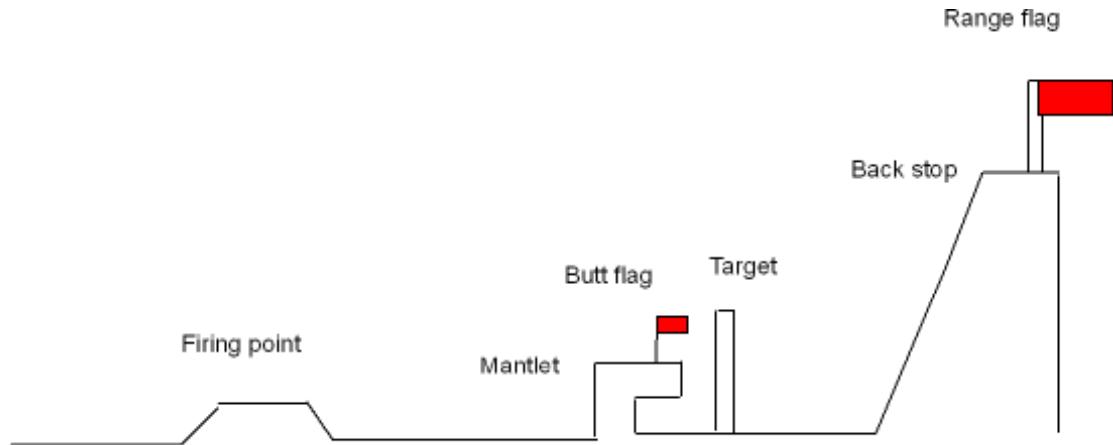
The cartridge is normally made of drawn brass and is often reloadable

The primer sits at the bottom of the case and is struck by the firing pin, it is a small cup filled with a detonating compound that will ignite when struck.

The powder is what generates the gasses that drive the bullet

The bullet is normally made of lead and is covered in a copper coat or “jacketed” in high power rifle ammunition. In sporting ammunition it will be designed to expand on impact, on target or military ammunition it is not designed to expand on impact.

Gallery range



The Gallery range consists of four main parts

The Firing Point. Shooting may only take place from the firing point. Each firing points is numbered, you must not shoot across onto another target.

The Butts. The Butts consist of an earth bund to stop the bullets. The targets and target frames and the mantlet, the low mound of earth in front of the targets that protects the butt party, the mantlet will have a roof for protection all persons in the butt party must remain under the mantlet when shooting is in progress

Range danger area. This is the area beyond the stop butt that will contain any ricochets

Flags You will see a number of red flags on the firing range to indicate that shooting is taking place.

Lookouts

A red flag is flown on or near each look out posts.

Butt Flag

When the butt flag is flying it is unsafe to shoot. The butt flag is controlled by the RCO who will order its lowering when firing is about to start. If communication is lost between the firing point and butt's officer then the butt's officer must lower the targets and raise the butt flag until communication is restored, no one may enter or leave the butt's until the RCO gives the all clear and the butt flag is raised.

Muzzle Loading Rifle

Muzzle loading rifles are single shot firearms, in matchlock, flintlock or percussion lock ignition. They fall broadly into two categories military or civilian and fire either round ball or cylinder conical bullets. The Minie is the most common military bullet used on the range, while round ball or bullets are used in civilian style rifles. The 451 match rifle will shoot to 1000 yds while the smaller calibres firing round ball will shoot from 50 to 100 yds.

Minie

The .577 Enfield Rifled Musket loaded with the hollow based Minie bullet was introduced into the British Army around 1851 and superseded the Brown Bess musket. It is one of the most widespread rifles used in muzzle loading today. Good quality original and reproduction rifles can be found in 3 Band, 2 Band or Carbine versions with either 3 or 5 groove rifling.

Loading

Before you start to load, the barrel and nipple must be dry and clean of any oil or grease. Point the gun in a safe direction down range and fire off one or two percussion caps to ensure the nipple is clear. Lower the hammer down onto the nipple when you have finished (some people prefer to load with the hammer left at half cock either way is correct.)

From a powder file or flask pour a charge of powder down the barrel 2 to 2 1/2 drams (55-60 grains) of medium powder will do for ranges of 100 meters.



Next place a greased Minie bullet in the muzzle and gently seat it on top of the powder with the ramrod, the bullet must be seated on top of the powder with no air gap between powder and bullet, there is no need to ram the bullet hard, just ensure that it is seated all the way down. The gun is now loaded and in a safe condition, and can be moved to the firing point.



At the firing point put the hammer at half cock and place a top hat percussion cap onto the nipple. When you are ready to fire pull the hammer back to full cock and gently squeeze the trigger.



After firing remove the old percussion cap, before reloading some people blow down the barrel to ensure that any glowing embers left in the barrel are extinguished but this is not generally required. Again it's up to the individual there are arguments for and against; neither way is right or wrong.



Round Ball, Single shot Rifle or Musket

To load the single shot rifle first the gun must be clean and free from any oil deposit in the barrel or around the ignition nipple or flash hole.

On percussion rifles a few caps should be fired on an empty gun to ensure the nipple is clean and dry. On a flintlock a small quantity of powder should be poured into the priming pan the frizzen closed and the rifle fired, this will ensure that the flint is sparking and the touch hole is cleared

A fouling shot may be fired if desired. Pour a small quantity of powder down the barrel seat some tissue paper or a screwed up patch on top of the powder, prime the ignition source and fire an aimed shot. This will burn off any oil that might be left in the barrel.

To load the single shot rifle first place the hammer on half cock and pour a measured quantity of powder down the barrel, place a slightly moist patch on top of the muzzle and seat a ball squarely in the middle of the patch, using a mallet tap the ball into the barrel, then first using a starter followed by a ram rod seat the ball firmly on top of the powder. It is very important that the ball sits on top of the powder without any air gap if an air gap is left between the powder and the ball the barrel could bulge or burst. A mark on the ram rod will ensure that you seat the ball all the way home each time.

Next you will need to prime the rifle, with a percussion rifle a cap is placed onto the nipple, with the flintlock a small quantity of powder is poured into the pan and the frizzen closed.

While holding the rifle firmly in one hand pointing down range use the other hand to pull the hammer to full cock. The rifle is now ready to fire.

A matchlock rifle uses a piece of rope or wick dipped in saltpetre lit at one end. The match must be carried separately in a tin and kept away from any black powder it is the last thing to attach to the rifle and the first thing to remove after you have fired a shot.

Muzzle Loading Pistol

The Muzzle loading pistol comes in two types the revolver and the single shot pistol. The revolver will be percussion ignition but the single shot pistol may be Matchlock, Flintlock or Percussion Lock.

Pistols have a short barrel and can be pointed in the wrong direction very easily you must always be very careful of where you point the muzzle of a pistol.

The single shot pistol fires a round ball that is under sized and is wrapped in a cloth patch while the revolver fires a round ball or conical bullet that is over sized.

Powder is normally dispensed from either a flask with a pre measured spout or from glass or plastic phials that have been pre weighed.

Single Shot Pistol

To load the single shot pistol first the gun must be clean and free from any oil deposit in the barrel or around the ignition nipple or flash hole.

On percussion pistols a few caps should be fired on an empty gun to ensure the nipple is clean and dry. On a flintlock a small quantity of powder should be poured into the priming pan the frizzen closed and the pistol fired, this will ensure that the flint is sparking and the touch hole is cleared

A fouling shot may be fired if desired. Pour a small quantity of powder down the barrel seat some tissue paper or a screwed up patch on top of the powder, prime the ignition source and fire an aimed shot. This will burn off any oil that might be left in the barrel.

To load the single shot pistol first place the hammer on half cock and pour a measured quantity of powder down the barrel, place a slightly moist patch on top of the muzzle and seat a ball squarely in the middle of the patch, using a mallet tap the ball into the barrel, then first using a starter followed by a ram rod seat the ball firmly on top of the powder. It is very important that the ball sits on top of the powder without any air gap if an air gap is left between the powder and the ball the barrel could bulge or burst. A mark on the ram rod will ensure that you seat the ball all the way home each time.

Next you will need to prime the pistol, with a percussion pistol a cap is placed onto the nipple, with the flintlock a small quantity of powder is poured into the pan and the frizzen closed.

While holding the pistol firmly in one hand pointing down range use the other hand to pull the hammer to full cock. Avoid cocking the hammer with the thumb of the hand holding the pistol, if your thumb slips off the hammer the pistol may discharge. The pistol is now ready to fire.

A matchlock pistol uses a piece of rope or wick dipped in saltpetre lit at one end. The match must be carried separately in a tin and kept away from any black powder it is the last thing to attach to the pistol and the first thing to remove after you have fired a shot.

Revolver

Loading the revolver is more time consuming than loading the single shot pistol. The gun must be clean and free from any oil. Before you try and load the pistol a percussion cap should be placed onto each nipple and the revolver fired, this will ensure that any oil is burnt off. Remove the fired caps.



Capping off the revolver



It is important that the correct sized ball is used in revolvers, the manufacturer of the gun will say what size ball should be used with their pistol. Two.44 cal revolvers may use different sized balls so be warned.

First put the hammer onto half cock and ensure the chamber will rotate. On some pistols there are three positions first position will allow the chamber to rotate for loading the second position half cock for safety and the third position full cock so you can fire the pistol.

Using a powder flask with the correct size spout, pour a quantity of powder into the chamber. Next place an oversized ball on top of the chamber and seat the ball using the pistols rammer. If you put too much powder into the chamber the ball will not seat below the top of the chamber and the cylinder will not revolve. When you seat the ball a ring of lead should be left around the top of the chamber the reason for using an oversized ball is to help the chamber become gas tight. Repeat the process with the remainder of the chambers



An over sized ball rests on the chamber of the cylinder

When you fire a revolver hot gases and flame are emitted from the fired chamber these flames can ignite the next chamber causing a chain fire i.e. one or more chambers going off at the same time, the consequences of this could be fatal to you or anyone next to you.

To reduce the risk of chain fire, grease is next placed over the top of each loaded chamber. With an oversized bullet and grease on top the risk of a chain fire is substantially reduced.

Next percussion caps are placed onto each nipple.



While holding the pistol firmly in one hand pointing down range use the other hand to pull the hammer to full cock. Avoid cocking the hammer with the thumb of the hand holding the pistol, if your thumb slips off the hammer the pistol may discharge. The pistol is now ready to fire.

Misfire Procedure Muzzle Loading Firearms

Muzzle Loading firearms are prone to misfire, on most occasions dropping the hammer back onto the percussion cap will be all that is required. On flintlock firearms the powder will often ignite but will not fire the main charge (a flash in the pan) more often the flint will fail to spark.

Percussion firearms

If the cap fails remain in the aim for 30 seconds.

Re cock the hammer and try a second time.

If the cap fails to ignite replace with a new cap.

If the cap fires but fails to ignite the charge check the nipple is not blocked.

On a revolver when you have fired the remaining cylinders, remove the cylinder then remove the nipple, empty out the powder and remove the ball with either a worm or a thin rod pushing the ball out from behind.

On a single shot pistol remove the nipple and empty out the powder remove the ball with a worm.

Flintlock firearms

If a flintlock fails to fire remain in the aim for 30 seconds

Check the flint, did it open the frizzen when it fell and did it spark, try again with someone watching to see if you have a good spark.

If no spark or the spark is poor empty out the pan of powder and replace flint. It's possible even with no powder in the pan for a flintlock to discharge when checking to see if a spark is being produced. Always keep the firearm pointing down range in a safe direction.

If the powder in the pan ignites (a flash in the pan) but does not ignite the main charge then check the touch hole, use a pricker to ensure the touch hole is not blocked, re prime the pan tilt the firearm to the side and tap the gun a few time to push some of the powder down the touch hole and re fire.

If the powder in the pan ignites but the main charge fails ensure there is no powder in the pan and pull the ball with a worm.

Most problems with muzzle loading firearms failing to fire is the result of failing to put powder in the barrel before seating the bullet and this is generally caused by people talking while loading. If someone comes for a chat while you are loading ask them to come back when you have finished or stop loading and continue when they have gone.

Range Attendance record

This is a record of your range attendance during your probationary period. Fill in the form below and get a club official to sign it to certify your attendance and include the number of rounds fired for each firearm used

Firearms used and Number of rounds fired

Range Attendance record

This is a record of your range attendance during your probationary period. Fill in the form below and get a club official to sign it to certify your attendance and include the number of rounds fired for each firearm used

Firearms used and Number of rounds fired

TRAINING RECORD

This is a record of the training you have received. You must be signed off as competent in all aspects of club activities before full membership will be granted

	Training given by Name and date	Signed as competent Name and date
Loading and shooting a centre fire rifle		
Loading and shooting a Black powder pistol		
Loading and shooting black powder rifle		
Loading and shooting a .22 rim fire rifle		
Loading and shooting an under leaver rifle		
Pistol range procedure and safety		
Gallery rifle range procedure and safety		
Misfire procedure metallic cartridge firearm		
Misfire procedure Black powder firearm		
Sight setting elevation and wind		
Firearm security at home Travelling and on the range		
Safe storage of Black Powder		