

Shooting

- *a beginner's*
guide

Inside

- **SSAA contacts** • **SSAA history**
- **SSAA shooting disciplines**
- **Firearm safety** • **Shooting accessories**
- **Hunting** • **Choosing the right cartridge**
- **Glossary of shooting terms**
- **Know your firearm**



2 Beginner's guide

Welcome to the Sporting Shooters' Association of Australia (SSAA)

If you are a new shooter or just a new member to the Sporting Shooters' Association of Australia (SSAA), welcome to a very exciting and influential organisation. The information contained in this insert will introduce you to the largest shooting organisation in Australia and help you become more familiar with the sport of shooting.

Before delving into the basics of shooting and hunting on the following pages, take a quick look at the SSAA and see what we are about and what we offer.

SSAA contacts

Each state and territory has a state office with many clubs and ranges to attend. By calling one of the following state head offices, you will be able to find the nearest SSAA range and just about any Association information that you need.

Australian Capital Territory	02 6299 7438
New South Wales	02 8889 0400
Northern Territory	0407 270 357
Queensland	07 4695 4267
South Australia	0419 849 452
Tasmania	0447 658 048
Victoria	03 8892 2777
Western Australia	08 9295 3318

Membership information

If you are not already a SSAA member, but you would like to be, please contact the SSAA Membership office:

Postal: PO Box 282, Plumpton, NSW 2761

Phone: 02 8805 3900

Fax: 02 9832 9377

Email: mem@ssaa.org.au

SSAA history

On April 15, 1948, about 100 shooters met in the Railway Institute Building in Elizabeth Street in Sydney to form the SSAA. Since that time, many changes have taken place.

One of the most notable changes is the number of members in the Association, which continues to increase each year. In 1959, it had a mere but mighty 250 members - a drop in the bucket by today's 120,000 members.

Membership fees, unfortunately, have also increased since the Association first formed. Back in 1948, city members paid 10 shillings and country members paid 7/6.

The SSAA began in New South Wales because of the government's increasing involvement in firearms legislation. In 1950, NSW adopted the title of The Sporting Shooters' Association of Australia so everyone was clear that it was not just a 'one state organisation'.

State branches came into being at different times. Victoria formed in 1951, Queensland in 1957, South Australian in 1964, the Northern Territory in 1965-66, the ACT in 1965, Western Australia in 1967 and Tasmania in 1969.

In 1962, SSAA National came to life as a result of a meeting consisting of 12 people. The group agreed that there was a need for a federal body, whose purpose would be to assist and advise state bodies.

At that time, the Association had no official magazine, but rather a quarterly newsletter titled the *Report*, which was first printed in 1959. The first *Australian Shooters Journal* appeared in 1968 and has since gone through a number of changes and improvements. In 1999, the *Journal's* name was changed to *Australian Shooter*. A monthly magazine, it quickly became the main publication for recreational shooters, competitors and hunters in Australia and in 2008, it had an audited circulation of more than 100,000 readers.



For more information about the SSAA, visit the SSAA National website at www.ssaa.org.au

For more information about the *Australian Shooter* magazine or the SSAA's other publications, visit the *Australian Shooter* website at www.australianshooter.com.au

SSAA shooting disciplines

If you have never tried shooting, you may be thinking that it doesn't offer that much variety. There's a firearm and a target, so how different can that get? Actually, shooting offers a great deal of variety.

The SSAA is the largest and most active shooting organisation in the country. Without including hunting, it offers shotgun, rifle and handgun target shooting disciplines, as well as disciplines combining several types of firearm categories.

Shotgun

There are a number of disciplines that cater to shotgun enthusiasts. To the uninitiated, the following may all seem relatively the same, but to dedicated shotgunners, each of the events provide targets with their own special challenges to the shooter.

Website: www.ssaa.org.au/shotgun

Sporting Clays

Clay targets are thrown in a way that simulates hunting in the field. A squad of five or six shooters move through six or seven 'stations', which are usually set up in bushland, shooting clay targets of various sizes and colors. Most courses consist of 25 targets, singles or doubles, thrown at a variety of trajectories, angles, speeds, elevations and distances. The degree of difficulty ranges between easy to extremely difficult.

Sporting Clays is best shot with a sporting or field shotgun in 12-gauge.

Trap

Trap shooting was the earliest form of organised clay target shooting. It is generally regarded as the easiest of the clay target events and is therefore ideal for beginner shotgun shooters.

Shooters shoot at single or double targets at varying distances from behind a trap building (house). The rising clay target is thrown away from the shooter, with the angle of the target randomly changing from left to right. While it may seem easy, it is also easy to miss a target.

The most common firearm used in Trap is a 12-gauge shotgun, but other gauges can be used. Trap guns usually have a higher stock to cater for the fast-rising target.

Skeet

Like Sporting Clays, Skeet simulates field shooting. Skeet involves breaking close- to medium-range clay targets thrown at fixed angles from a high and a low house. There are eight stations arranged in a semicircular pattern between the two houses. Though the target's trajectory and speed are constant, the target angle and distance changes as shooters work their way around the various stations.

While Skeet can be shot with most shotguns, it is best shot with a gun with open chokes and cartridges with No. 9 shot.

5-Stand

5-Stand is a clever way of achieving much the same as a traditional Sporting Clays course offers, but in a smaller space. Five shooting stands are separated by a couple of metres each and surrounded by up to eight target traps in different positions that throw single or double clay targets in every possible direction in front of the five stands. In front of each stand is a menu board that lists the targets thrown at that stand. Some versions of 5-Stand are run with a computer that throws the clays in a random order. Each course of fire is different and can be as easy or difficult as the course setter wants to make it. Shooting 5-Stand also provides a real test of a shooter's ability to read a wide variety of targets before they get beyond the effective range of a shotgun.

Firearms similar to those used for Sporting Clays can be used for 5-Stand.

Benchrest

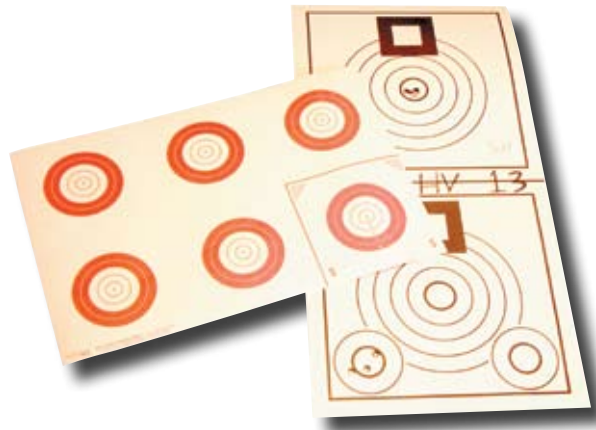
Benchrest is a rifle shooting discipline that requires shooters to place five or 10 shots into the smallest possible group at distances of 50m, 100, 200 and 300 yards. Group sizes are determined by measuring from the centre to the centre of the two widest shots in a group. While the sport has been around since 1948, the ultimate group of 0.000" has never been achieved.

Rifles are fired from portable rests, which comprise of an adjustable front rest to support the fore-end of the rifle and a rear sandbag to support the butt.

There are six classes for group shooting: Experimental/Unlimited Benchrest Rifle, Heavy Varmint, Light Varmint, Sporter, .22LR Rimfire Benchrest Rifle and Custom .22LR Rimfire Benchrest Rifle. There are four classes for score shooting: Centrefire Hunter, Custom Centrefire Hunter, .22LR Rimfire Hunter and Custom .22LR Rimfire Hunter Class. The differences in classes are determined by the weight of the rifle, with some other restrictions in the Rimfire and Hunter Class.

The rifles used in Benchrest are custom-built from the finest available components. Stocks, barrels, actions and triggers are all obtained from the best in the business and assembled by expert gunsmiths who specialise in supreme accuracy.

Website: www.ssaa.org.au/benchrest



4 Beginner's guide

Big Game Rifle

Big Game Rifle shooters use large-calibre rifles to shoot at targets. This discipline commenced in Melbourne, Victoria, in 1983, with the aim of fostering the collection, preservation and use of classic big-game rifles, particularly those of British origin, including black powder and early Nitro cartridge firearms.

Big Game Rifle includes seven general categories. Group One is for sporting (non-military) rifles only, from .330 to .375 calibres. Group Two covers the various .400 to .450 to .475 calibres. Group Three is the largest of the big-game-stopping rifles and begins at the .500 calibres. Black Powder Express ranges from .400 to .577 calibres. Bore Guns and Rifles are the real big-game and dangerous-game-stopping rifles of their day, including 12-, 10- and 8-bores firing large charges of black powder and using a round ball or conical lead projectile. Double Rifle covers all centrefire double rifles of side-by-side or over-and-under configuration. The Charging Animal and Special Snap category are rapid-fire events and require Group One as a minimum.

Website: www.ssaa.org.au/biggame rifle

Field Rifle and 3-Positional

Field Rifle is designed around the four commonly used field positions, over various distances for both rimfire and centrefire rifles. Participation in this discipline will improve the marksmanship skills of a hunter under rifle range conditions while also teaching the shooter the capabilities and limitations of their equipment.

The Rimfire and Centrefire Field Rifle matches comprise four positions and requires 42 rounds of ammunition. Rapid Fire is the first position where 12 rounds are fired in four bursts of three shots in 15 seconds in the standing unsupported position at 25m for both Rimfire and Centrefire. Offhand, or the Standing unsupported position is the second position where 10 rounds are fired slow fire at 25m for Rimfire and 50m for Centrefire. Standing Post Rest is the third position where 10 rounds are fired slow fire from the standing position while using a post rest position at 50m for Rimfire and 100m for Centrefire. Sitting or Kneeling Post Rest is the final position where 10 rounds are fired slow fire from the sitting or kneeling position with a post rest at 50m for Rimfire and 200m for Centrefire.

The rifles used can be bolt-, lever-, pump- or slide-action. They must be .22LR for Rimfire and can be any factory or wildcat cartridge for Centrefire. Magnum rimfire rifles are also catered for (subject to local rules). The rifles have a maximum 4kg weight for Rimfire and maximum 5kg weight for Centrefire. Unlimited scope power or type can be used. Slings may be used, added to or removed from the rifles and a magazine may be used in other positions apart from Rapid Fire (subject to local rules).

SSAA Scoped 3-Positional is a sporting rifle event using the same rifles that are used in Field Rifle. The course of fire is 20 shots in 30 minutes at 50m for Rimfire and 100m for Centrefire and must be shot in the following order: prone, standing, sitting and kneeling.

Scoped Air Rifle is a new event in the Field Rifle/3-Positional discipline. It involves using .177-calibre air rifles with telescopic sights to shoot in two events. Precision 10m Scoped Air Rifle is 40 shots in 15 minutes from the standing unsupported position at 10m. 10m 3-Positional Scoped Air Rifle is 60 shots in 30 minutes from the prone, kneeling and standing positions at 10m.

NRA 3-Positional Anysight is the ultimate rimfire match in regards to rifles and equipment. It permits the use of any rifle in .22LR, any sight, telescope or aperture, as well as the use of palm rests and hook buttplates. The course of fire is 20 shots prone in 20 minutes, 20 shots standing in 40 minutes and 20 shots kneeling in 30 minutes.

Website: www.ssaa.org.au/fieldrifle3p



Running Target

Running Target was an Olympic event from the early 1900s until 2000 in one form or another. Initially, it was called Running Roebuck and involved using centrefire rifles to shoot a deer-shaped target at 100m. It was then scaled-down to Running Boar, which involved using a rimfire rifle to shoot a pig-shaped target from 50m. These days, Running Target involves shooting at targets with dedicated air rifles and 4x scopes from 10m.

The match consists of 30-shot 'slow runs' and 30-shot 'fast runs'. Slow runs mean the target takes five seconds to pass across a 2m gap, while fast runs mean the target passes the same gap in 2.5 seconds. The target starts from the right, allowing the first shot. There is a 10- to 20-second break before the target is returned for the next shot. This process continues until the 30-shot string is completed.

At the club level, any target air rifle weighing up to 5.5kg can be used. Most shooters prefer a double-acting spring gun to a single-acting gun due to recoil differences. Any 4x scope can be used.

Most indoor target air rifle manufacturers make a Running Target rifle and several manufacturers make Running Target scopes and mounts. The cost of owning the same type of rifle, scope and jacket used by Olympic medallists would be in the order of \$5000. However, high-cost equipment is not necessary to participate in the discipline.

Website: www.ssaa.org.au/runningtarget

Lever Action

Lever-action rifles are used exclusively in this discipline. Apart from the historical and traditional intentions, lever-action rifles provide rapid cycling for the timed events. The events provide a variety of target types, shooting positions and distances and time limits. The discipline is hunting orientated with similar aspects to SSAA Field Rifle and Rifle Metallic Silhouette disciplines.

There are two basic events in this discipline. Class Calibre event is for centrefire lever-action rifles chambered in any centrefire cartridge produced prior to 1939 and is shot from 25, 50 and 100m in any field position, including prone, standing unsupported, sitting unsupported, kneeling unsupported, standing post rest, sitting post rest and kneeling post rest. The lever-action rifles used in this event must have blade and buckhorn sights. The Open Calibre event is divided into Rimfire and Centrefire and at national level, two different firearms are required. At the club or state level, only one event is shot and either a rimfire (.22LR, .22 Magnum or .17HMR) or centrefire (any calibre, including the same rifle used in the Class Calibre event) lever-action rifle may be used. The lever-action rifles used in the Open Calibre events can have either peep sights or blade and buckhorn sights.

Targets used in the Classic Calibre are all contour targets (animal profiles) with score zones marked on vital areas from 10 to 5. Targets in the Open Calibre are a combination of the 50m ISSF Precision Slow Fire Pistol target and a number of contour targets.

Website: www.ssa.org.au/leveraction

Rifle Metallic Silhouette

Rifle Metallic Silhouette is a sport in which rifles are used to knock down metal targets at a variety of distances. The discipline caters for centrefire and rimfire rifles, but air rifle, service and black powder rifles can be used in some competitions.

There are two classes of centrefire rifle shooting. Centrefire Silhouette Rifle has fairly liberal rules governing weight and dimensions and allows shooters to use custom rifles based on a wide choice of calibres, actions, barrels, triggers and stocks. Centrefire Hunting Rifle only allows for commercially available sporting and hunting rifles without modification. The minimum calibre is .243 (6mm).

There are also two classes of rimfire (.22) matches. Rimfire Silhouette Rifle uses a target-style rifle, while Rimfire Hunting Rifle allows commercially available rimfire hunting rifles.

The targets used in this discipline are metal cut-outs in the shape of animals and are made of varying thicknesses depending on the distances and calibres being used. A steel stand is set into the ground and the targets are placed on it. There are 10 targets at each distance in two banks of five.

In the centrefire matches, the chicken targets are placed at 200m, pigs at 300m, turkeys at 385m and rams at 500m. In the rimfire matches, the targets are scaled-down to one-fifth of the size. The

chicken targets are placed at 40m, pigs at 60m, turkeys at 77m and rams at 100m. Air rifle targets are one-tenth of the centrefire size and shot at one-tenth of the range. Chicken targets are shot at 20 yards (not metres this time), pigs at 30 yards, turkeys at 36 yards and rams at 45 yards.

Website: www.ssa.org.au/riflesilhouette

Cowboy Lever Action Silhouette Rifle

Cowboy Lever Action Silhouette Rifle also requires shooters to knock down metal animal-shaped targets at a variety of distances. However, the discipline can be contested on the 100 and 200m Handgun Metallic Silhouette ranges, thus opening up Rifle Silhouette to a larger number of shooters who don't normally have access to the 500m range required for the Centrefire Rifle Silhouette match.

There are three classes of rifles used in this discipline. Cowboy Lever Action Silhouette allows any lever-action .25-calibre or larger centrefire rifle with a tubular magazine of original manufacture or replica thereof to be used to shoot targets at 50, 100, 150 and 200m. Pistol Cartridge Cowboy Lever Action Silhouette allows any lever-action centrefire rifle with a tubular magazine and rimmed pistol cartridges to be used to shoot targets at 25, 50, 75 and 100m. Smallbore Cowboy Rifle Silhouette allows any lever-action, pump-action or self-loading rimfire rifle in .22LR only with a tubular magazine to shoot targets at 25, 50, 75 and 100m.

Website: www.ssa.org.au/cowboysilhouette

Working Gundogs

Working Gundogs was established to promote the use of trained gundogs in the field. Responsible hunters ensure that game is quickly despatched and retrieved over land or water. The gundog has been fulfilling this role for centuries.

All gundogs require training and the Working Gundog Association of Australia (WGAA) is committed to providing gundog owners with training opportunities. Field and retrieving trials are conducted by WGAA in order to provide gundog owners with a guide as to the abilities of their own dogs and an indication of the ability of various bloodlines. Currently, WGAA conducts activities in four major disciplines, including Retrieving; Hunt, Point and Retrieve (HPR); Spaniel; and Pointer and Setter.

Website: www.ssa.org.au/workinggundogs



6 Beginner's guide

Handgun Metallic Silhouette

Handgun Metallic Silhouette is a sport in which handguns are used to knock down metal targets at a variety of distances. It offers a variety of calibres, firearms, distances and shooting positions, depending on the firearm calibre, category and competition.

Several categories of firearms may be used. Revolver category allows only commercially available revolvers. Production category allows any handgun weighing no more than 1.8kg and with a barrel length of no more than 273mm. Standing category allows any handgun from the Revolver or Production category, but is fired from the standing position only. Unlimited category allows any handgun weighing no more than 2.7kg and with a barrel length no more than 381mm.

Handgun Metallic Silhouette is one of only two competitions in Australia which allows the use of calibres greater than .38. Shooters are permitted to use custom-built firearms in some categories and while many shooters choose this option, commercially available handguns are very competitive too.

There are three official Handgun Metallic Silhouette competitions. Smallbore allows .22 rimfire pistols. Big Bore allows centrefire pistols. Field Pistol is similar to Big Bore, but only allows firearms to be shot from the standing position.

The targets used in this discipline are metal cut-outs in the shape of animals and are made of varying thicknesses depending on the distances and calibres being used. A steel stand is set into the ground and the targets are placed on it. The targets are set out in banks of five. In Big Bore, the chicken-shaped targets are placed at 50m, pigs at 100m, turkeys at 150m and rams at 200m. In Smallbore, the targets are scaled-down. Chicken-shaped targets are placed at 25m, pigs at 50m, turkeys at 75m and rams at 100m.

Website: www.ssa.org.au/handgunsilhouette



NRA Action Match

NRA Action Match is one of the most demanding handgun disciplines. It consists of four events. Practical has four stages from 10, 15, 25 and 50 yards and with two targets facing downrange, the shooter engages the targets with various time limitations. Barricade is similar, but the shooter may use a barricade at 10, 15, 25 and 35 yards. Moving Target has the shooter facing targets at 10,

15, 20 and 25 yards with each target moving from behind cover and travelling 60ft in six seconds before again being covered from fire. Falling Plate is the most recognisable stage with the shooter engaging 6x8"-diameter metal plates in various time-frames from 10, 15, 20 and 25 yards. 48 rounds are fired for a possible of 480 points on each event. The total match score is 1920 with the winner often decided by the number of bullseye or 'X-ring' hits obtained in the 10-ring.

The firearms used in this discipline can be self-loading pistols or revolvers and fall into three categories of competition. Open class includes highly modified firearms with optical sights and other major changes to the handgun allowed. Metallic Sight class disallows peep, optic or electronic sights, orthopaedic grips, thumb rests or compensators or ported barrels. Production class is any commercially available handgun with metallic sights.

International rules dictate that the calibre must be 9mm or higher, although recent changes to Australian firearm laws restrict Australian sporting shooters from owning handguns higher than .38 Special/9mm in calibre, so Australians must use 9mm Parabellum, .38 Special, .38 Super, .357 SIG or .38-45.

Website: www.ssa.org.au/actionmatch

Target Pistol

Target Pistol is an international discipline in which handguns of various calibres and categories are used in a variety of matches to hit paper targets placed at 25 and 50m with varying time restrictions.

There are six main events in Target Pistol, all based around the class of the handguns used. Any .22-calibre Pistol or Revolver allows any .22-calibre handgun with a barrel length no more than 10" and any sights using any .22 rimfire cartridge having an overall length no more than 1.1" or a projectile heavier than 40 grains. Standard Smallbore Pistol .22-calibre Rimfire allows any .22 rimfire pistol with metallic sights. International Mayleigh allows any .22 rimfire pistol with metallic sights. Distinguished Revolver allows the use of any commercially available .38-calibre revolver with no external modifications with a barrel length no more than 6.5" and no adjustable fore-sights. Any Centrefire Pistol or Revolver allows any centrefire pistol of .32-calibre (7.65mm) or larger with any sights and a barrel length including cylinder no more than 10". M9 allows a Beretta 92 9mm pistol of US-issue type or a commercial pistol of the same type and calibre with a barrel between 4.9 and 5".

There are three types of matches shot at the national level. The National Match Course requires 10 shots slow fire at 50 yards in 10 minutes, two strings of five shots timed fire at 25 yards with 20 seconds per string and two strings of five shots rapid fire at 25 yards with 10 seconds per string. The 900 Match Course requires two strings of 10 shots slow fire at 50 yards with 10 minutes per string, the 30 shots from the National Match Course, four strings of five shots timed fire at 25 yards with 20 seconds per string and

four strings of five shots rapid fire at 25 yards with 10 seconds per string. The International Mayleigh Match requires three strings of 10 shots slow fire at 50m with 10 minutes per string using the Standard .22 pistol only. The National Match Course and 900 Course are shot on the NRA B6/8 target, while International Mayleigh is shot on the International Slow Fire target.

Website: www.ssaa.org.au/targetpistol

Combined Services

Combined Services encourages competitive shooting with a view towards a better knowledge of the safe handling and proper care of military or service firearms. The discipline evolved into the Combined Services after initially starting out as Military Rifle and Military Pistol.

Combined Services caters for either original or faithful reproduction military firearms, both rifle and pistol.

In Combined Services Rifle, the classes are Standard, Modified/Accurised and Sniper, which is broken into four divisions: F1 division is Military Sniper Rifle and faithful reproductions as before January 1, 1946; F2 division is Military Sniper Rifles and faithful reproductions as after January 2, 1946; Tactical division is a specialised rifle equipped with telescopic sights; and J division is a Modified/Accurised rifle fitted with telescopic sights.

Combined Services Pistol is also broken into classes, which are Class 1 Military, Class 2 Para-Military Special Forces/Police and Class 3 Accurised/Modified/Target Military.

Matches are shot in standing, sitting and prone positions. The rifle events use standard 1200x1200mm SSAA Military/Service Rifle targets or a mini 600x600mm Core Target for specified events. The pistol events use a SSAA Military Pistol Target 2001.

Matches range in distance from 50m, with distances in between, out to 500m, all with varying times and different shooting positions. There are matches for rapid and deliberate and specialist-type matches catering for the classes used within the discipline. Ladies and juniors are catered for and can compete with smaller-calibre rifles, rather than those with heavy recoil.

Website: www.ssaa.org.au/combinedservices

Muzzleloading

Muzzleloading involves shooting with original and replica rifles, muskets, handguns and shotguns that were used during Australia's colonial days. Many of the replicas are exact in every detail and the firearms are surprisingly accurate.

The range of longarms used in Muzzleloading include: Smoothbore matchlock muskets circa 1600 to 1650; Smoothbore flintlock muskets circa 1700 to 1800; Smoothbore percussion muskets circa 1830 to 1860; Flintlock rifles circa 1750 to 1830; Percussion rifles circa 1830 to 1860; and Percussion shotguns circa 1830 to 1860. These are then further divided into the three classes of Military,

Traditional and Open, all three of which are shot from the offhand, cross-sticks/prone and bench-rest positions. Sometimes, the kneeling or sitting positions are used.

There are three classes of handguns including Revolvers, Pistols and Open.

All shooting is done at the International 50m Slow Pistol target, with the exception of the Smoothbore flintlock musket and matchlock events and the 200m Open event, which are shot at the French 200m targets placed at 50m and 200m. All offhand events are shot at 50m and the prone/cross-sticks and bench-rest events are shot at 100m. Some clubs with the appropriate facilities have long-range shoots.

Muzzleloading percussion shotgun and black powder cartridge shotgun is shot from five stations 8m from the thrower, while flintlock shotgun is shot from three stations 5m from the thrower. Each course of fire is 25 shots.

Website: www.ssaa.org.au/muzzleloading

Single Action

Single Action involves shooting with firearms that were commonly in use from 1800 to 1896. The firearms are single-action revolvers, lever-action rifles, lever-action, pump-action (though not at present) and side-by-side shotguns without automatic ejectors.

The matches in Single Action may be as few as four stages; however, most major club matches are 10 to 12 stages, with each being a match in itself.

The targets are generally specifically designed reactive plates. They can be square, round or playing card suit shapes and are often based on a 400x400mm size. Multiple targets are used on each match stage. Clay targets may be used in some shotgunning matches.

Scoring is generally the rank scoring system based on elapsed time plus penalties for missed targets. The aggregate rank points over the match determine the winners in each category.

Single Action is one of only two competitions in Australia which allows the use of handgun calibres greater than .38. The majority of the calibres used in Single Action are either obsolete or nearly obsolete, having existed for more than 130 years. However, there is still interest in using .44-40, .45 Long Colt, .45 Schofield, .357 and .38 Specials and early cap and ball revolvers in .36 Navy and .44 calibres.

The shooters themselves preserve, promote and respect the skills, traditions and the pioneering spirit of the historic American Old West. They live to preserve the spirit of the game, which means competitors fully compete in what the competition asks. They dress the part, use appropriate tools and respect the traditions of the Old West and they often adopt a shooting alias appropriate to the late 19th century.

Website: www.ssaa.org.au/singleaction

8 Beginner's guide

Firearm safety

No matter what situation you are in, safety is of the utmost importance and the only way to ensure safety is to follow the rules. Shooting is one of the safest sports to participate in. Studies have shown that it is even safer than horse-riding, football, basketball, water sports and table tennis.

Observe the following firearm safety rules and insist that others do the same.

Basic firearm safety

1. Treat every firearm with the respect due to a loaded firearm.
2. Carry only empty or taken down firearms or those with the action open into your car, camp and home.
3. Always be sure that the barrel and action are clear of obstructions.
4. Always carry your firearm so that you can control the direction of the muzzle.
5. Be sure of your target before you pull the trigger.
6. Never point a firearm at anything you do not wish to shoot.
7. Never leave your firearm unattended unless you unload it first.
8. Never climb a tree or fence with a loaded firearm.
9. Never shoot at a flat, hard surface or the surface of water.
10. Do not mix firearms and alcohol.

Basic range rules

While out at the shooting range, certain rules must be obeyed if you want to enjoy a day of shooting. The following rules are general; range rules may vary according to the discipline being shot. If you are ever unsure about something at the range, ask the range officer.

1. The range officer (RO) is in charge of everybody and must be obeyed immediately.
2. Under no circumstances may firearms be loaded except when on the firing line and by command of the RO.
3. Firearms that are not in bags or cases must be carried with the muzzles pointed safely and with the actions open.
4. Firearms that are not in bags or cases must have the bolts and magazines removed, where possible.
5. Self-loading firearms with actions that do not remain open must be held open either with a breech safety plug or with an object (such as an ice-cream stick or piece of cardboard) so it is clearly visible that they are not loaded.
6. All persons have an obligation to report any potentially dangerous situation to the RO immediately.

7. Firearms may not be handled behind the firing line. Persons wishing to examine, adjust, clean or otherwise handle firearms must only do so in a designated safe area or on the actual firing line.

8. No-one is permitted to approach the firing line until the RO issues the command (eg, 'Shooters to the line').

9. You may not touch any firearm until the RO issue the appropriate command.

10. On the command 'Cease fire', all shooters must immediately open the action, put their firearm down (with the muzzle pointed downrange) and stand immediately behind the firing line to await the RO who will issue further instruction or clear each firearm in turn.

11. No-one is permitted to go downrange until the RO has cleared all firearms and issued the command 'The range is now clear to go forward'. Once the range is clear, the RO's duty is to ensure no-one approaches the firing line.

12. Firing may not commence until the appropriate warning flags have been erected in accordance with the club's rulings.

13. Shooting may only be at the proper targets. All fauna is protected on the range and persons who deliberately shoot at non-standard targets will be expelled from the range.

14. Hearing and eye protection is to be worn by all personnel, at all times, when firing is taking place. Refer to your local range rules for more information about this.

Trigger control for rifles and handguns

The trigger should be squeezed using a gradually increasing pressure so the exact instant of firing is not predictable to the shooter. There needs to be a kind of feedback between the sight-picture and the trigger finger so the perfect sight-picture coincides with the instant of firing. This only happens with continuing practice. Hair triggers (those with a very light pull weight) are very dangerous in the field and should not be used. If your rifle has an adjustable trigger, do not lighten it for field use.

This information was taken from the *Firearms Safety Source Work Book*, Regency Publishing, Regency Institute of TAFE, South Australia.

Shooting accessories

Shooting, while a gun sport, is not necessarily an inexpensive sport. You will need more than a basic firearm, but for those who are willing to do a little work, there are plenty of bargains to be had. The shooting fraternity has a large secondhand market and the notice board in just about every shooting clubroom in the country holds details of bargains. Often, other club members can loan or sell good used equipment to the newcomer. Most clubs have firearms that beginners can use to try out a match too.

What you will need

Ammunition

Ammunition should be kept in its original package in a cool, dry place. It should be secured from theft or interference and out of the reach of children. It is important to keep ammunition away from sources of heat, oil and moisture and you should never store it in the same cupboard as oxidising agents.

When considering ammunition, ask your dealer for advice, collect any free information available and read the information provided on the ammunition package.

Secure storage container

In all states and territories, firearms must be securely stored in a lockable compartment or safe that meets your state's legal requirements.

You will also need a carry-bag or case in which to transport your firearm. Travelling with an exposed firearm in most states is illegal. (There are exceptions on private property.) Bags or cases protect your expensive firearm from scratches and nicks that are inevitable when transporting.

Cleaning equipment

Ask any shooter about the importance of cleaning and you will quickly find that cleaning is one thing that most shooters agree on - the method of cleaning is a different story! All shooters know that a clean firearm shoots far better than a dirty one.

Some basic cleaning tools that every shooter should have are plenty of clean rags, a cleaning rod suitable for your firearm calibre or size, cleaning solvent and/or cleaning paste, a bronze brush and a bristle brush suitable for your firearm calibre, gun oil and basic tools such as screwdrivers, Allen keys, etc.

Ear protection

On many ranges, ear protection is compulsory. There are many options, including disposable soft plugs, silicon ear moulds, earmuffs and electronic earmuffs. Refer to your local range rules for more information about this.

Eye protection

Eye protection is essential. There is a wide variety of safety glasses available to protect your eyesight.

Targets

Targets are available from SSAA clubs for purchase.

Rule book

It is a good idea to purchase a rule book for the match you are shooting so you can fully understand the rules and regulations.

What you might want

A telescopic sight (scope)

Sights bring the target into focus and let you know where the barrel is pointed and where your bullets will potentially go, therefore improving accuracy.

Bench rest, sandbag or tripod

These pieces of equipment help make shooting accuracy a little easier. They may also be helpful or even essential, depending on the discipline or event you are shooting or if you are shooting in the field.

Spotting scope or binoculars

If you plan to target shoot a fair bit at far distances, you might want to invest in a good spotting scope or a pair of binoculars. Aside from being very tiring, running back and forth to the target after each shot is usually not an option.

Reloading equipment

Many shooters prefer to reload their own ammunition. Not only is this a good way to save money, but it is also an enjoyable pastime. Get yourself a good reloading book, so you can understand the process of reloading and the safe limits for reloading ammunition for your particular firearm.

Camouflage gear

This can be very helpful when hunting, but it is not very practical while at the range. In fact, camouflage gear is not allowed at many ranges for safety reasons.

Collimator

Collimators are used to align telescopic sights.

Chronograph

A chronograph measures projectile velocity, which can be useful information for testing reloaded ammunition.

Shooting apparel

Each discipline has its own style of clothing. From gloves, jackets, shirts, pads, leather blast patches to slow covers, the list of clothing accessories is endless.

Range box or tool-box

Save yourself many trips to the boot of your car by organising everything you will need in a proper range bag. Many shooters have a shooting tool-box too.

This list is certainly not complete. As you learn more about shooting and increase your skills, there will no doubt be a number of other items that you might wish to purchase.

10 Beginner's guide

Hunting

Many SSAA members are hunters. They vary in age and travel throughout the country and even overseas to participate in hunting activities.

While hunting may be a controversial issue, in reality, it has done much to save Australia's endangered species from extinction. It is also instrumental in the control of feral animals and the overpopulation of non-endangered native species.

The SSAA promotes ethical hunting and supports safe and sustainable hunting habits and ethics. It encourages all hunters to display appropriate firearm-handling skills, acceptable conduct and responsibility to themselves and others, an understanding of targeted species, an appreciation of environmental care and the ability to participate with and be mindful of the welfare of others. Hunters are also encouraged to fully understand the rules of ethical hunting and exhibit an appreciation and adherence to sustainable wildlife management practices and game laws.

The SSAA's policy is to promote the one-shot kill. Second shots are only to be taken as a backup to ensure the kill is complete.

Hunting & Conservation

Within the SSAA, there is a group of shooters dedicated to the preservation of native Australian species. The group, loosely called Hunting & Conservation (H&C), sees shooters using their skills to assist in the conservation of native animals and the management or eradication of feral species.

In order to participate in this activity, certain skills, such as shot accuracy, must be demonstrated. An accreditation program consisting of map reading, navigation, firearm safety and handling, wildlife appreciation and management, living-in-the-field, ethical hunting and first-aid courses must also be passed.

Organised culls on feral cats, donkeys, foxes, goats, rabbits and pigs have taken place in the Simpson Desert, the Flinders and Gammon Ranges in South Australia, Gregory National Park in the Northern Territory and Pilliga, Wagga, Hillston and Ivanhoe in New South Wales.

H&C provides vital services that help maintain the fragile balance of the Australian ecosystem. Members perform a variety of tasks including feral animal control, data collection, assisting landholders in checking fences, dams and stock, vegetation management, assisting with native animal surveys and counts and maintaining ecological communities.

Members of the state groups are SSAA members from all walks of life who want to actively contribute to conservation. They are volunteers who hold the appropriate firearms licences and are willing to undergo training and accreditation in firearm safety, marksmanship, animal control, and welfare, and field operations concerning safety, navigation and teamwork. SSAA H&C members use their own equipment and support the program by fundraising. They are also insured for up to \$10 million.

The Hunters' Code

Hunters are encouraged to live by the SSAA Hunters' Code, which promotes safe and ethical hunting practices to ensure a future for the sport: The Hunters' Code states:

1. I will consider myself an invited guest of the landowner, seeking his permission and so conducting myself that I may be welcome in the future.
2. I will obey the rules of safe gun handling and will courteously but firmly insist that others who hunt with me do the same.
3. I will obey all game laws and regulations and will insist that my companions do likewise.
4. I will do my best to acquire those marksmanship and hunting skills that assure clean, sportsmanlike kills.
5. I will support conservation efforts that can support sustainability for future generations of Australians.
6. I will pass along attitudes and skills essential to ensuring long-term sustainability of Australia's natural and cultural heritage.

Recoil

Recoil occurs because the forward momentum of the bullet is equally matched by the rearwards momentum of the firearm. Where calibres having heavy projectiles or high velocities are used, recoil will be the highest.

The effects of recoil can be reduced by ensuring that the firearm is held firmly with both hands and that the body is free to move backwards in such a way that the momentum of the firearm is absorbed as slowly as possible.

Firing high-recoil firearms from rested positions while seated or from the prone position causes maximum recoil problems. Beginners should avoid the purchase of large-calibre firearms until shooting skills are learned and developed. Very powerful large-calibre firearms should only be used where there is a real need to do so.

Apart from inflicting varying degrees of unpleasantness, recoil impedes accuracy.

This information was taken from the *Firearms Safety Source Work Book*, Regency Publishing, Regency Institute of TAFE, South Australia.

Choosing the right cartridge

Whether you are going to shoot clay targets, hunt rabbits or take up target shooter, using the right firearm and cartridge is vital. The following details what type of firearm/cartridge to use in a variety of situations. Of course, these are just general suggestions. With experience, you may develop your own preference.

When just starting out as a shooter, trying to figure out all the nuances of the different cartridges can be very confusing, especially if you are thinking about hunting different animals.

As an ethical hunter, you want to be sure that the cartridge you are using is powerful enough to produce a clean and quick kill. There are certain rules governing the size of cartridge used when hunting certain species, so this information should be used only as a general guide.

Rabbits and hares

The suggested minimum calibre cartridge for shooting rabbits and hares is the .22 rimfire (RF) at ranges out to 100m.

If using a shotgun, the range is about 50m. Shot sizes between No. 4 and No. 6 are heavy enough to give you a clean kill at moderate ranges without too much damage to the meat.

If you are shooting for meat, the placement of the shot is important. Head shots are the best, but chest shots are also acceptable for producing clean kills.

Foxes and feral cats

Foxes and feral cats can be shot using the .22RF or .22 Magnum Rimfire at ranges out to about 100m. Most shooters agree that using a centrefire rifle provides the advantages of a flatter trajectory and a higher projectile energy. The .17 Remington, .22 Hornet and .222, .230 and .22-250 Remington are all ideal cartridges where clean kills are required along with minimal pelt damage.

Shotguns are also useful for taking foxes and cats at closer range. The 12-gauge shotgun with 1.15oz loads of between BB and No. 2 size shot at ranges probably no further than about 40m are the most popular.



Dingoes and wild dogs

Dingoes and wild dogs, which are heavier than foxes, should not be shot with anything smaller than a .222 Remington, except perhaps at very close range. The .22-250 Remington and .243 Winchester are widely considered ideal for dingoes.

If shooting at close ranges, about 30m, the 12-gauge shotgun loaded with BB or SG shot will also be sufficient.

Feral goats and small deer

Goats and deer weighing less than about 50kg (about 120lb) can be taken with a .22RF. However, it is recommended that something having similar muzzle velocity and energy to the .243 Winchester be used. The .243 Winchester has a sufficiently flat trajectory, which allows for accuracy at reasonably far distances. 'Brush' cartridges such as the .30-30 are sufficient for shooting these species at close ranges.

Minimum recommended rifle cartridges for hunting game animals

Game animal	Minimum recommended cartridge	Maximum range
Rabbits and hares	.22RF	100m
Foxes and feral cats	.22RF	100m
Small kangaroos	.22 Hornet	150m
Large kangaroos	.222 Remington	150m
Dingoes and wild dogs	.222 Remington	200m
Feral goats and small deer	.222 Remington	100m
Feral pigs	.243 Winchester	150m
Buffalo and large deer	.270 Winchester	200m

12 Beginner's guide

Feral pigs

Pigs are dangerous and shooters should use a 12-gauge loaded with rifle slugs or buckshot. Lever-action cartridges of .30-30, .44-40 and .44 Magnum from Ruger's carbine are effective on these species at close ranges. If a shot is to be taken at a longer range, the .243 Winchester, .25-06 Remington and other similar cartridges are good for taking feral pigs in a humane manner.

Buffalo, large deer, feral donkeys, horses and camels

Some of these larger species can weigh up to 1 ton and require cartridges significantly larger than those previously mentioned. Cartridges such as the .270 Winchester, 7mm Remington Magnum and .30-06 Springfield are commonly used for these large animals. A .300 Winchester Magnum and a .375 Holland & Holland Magnum are common for big-game use.

Waterfowl

Hunting species of duck and geese, which are permitted as game, is done solely with shotguns. The loads used vary depending on the species being shot and the range from which it is shot. Typically, 1.125 to 1.25oz loads of No. 4 shot are used for hunting black duck. No. 6 shot is recommended for smaller species such as teal. The velocity of the load should be as high as possible to give as much energy as possible for shots at maximum range. Guns typically require at least one barrel with a full choke to take ducks adequately at maximum range. Some states require the use of lead alternative shot. Be sure to check your state's requirements. Before going bird hunting, it is recommended that you get as much practice as possible with clay targets to ensure clean kills.

Quail, pigeons and pheasant

These birds can be taken with a smaller shot size in shotguns of all gauges. The most commonly used cartridge is a 12-gauge shotgun loaded with 1.125oz of No. 6 to No. 9 size shot, depending on the game bird. Remember, the smaller the shot size, the less energy is retained by each pellet in flight, decreasing the effective range at which it can be shot. The choke level is just as important as shot charge and size when hunting these birds. The level of the choke should be determined with the assistance of an expert hunter or gunsmith.

The 'Minimum recommended rifle cartridges for hunting game animals' table summarises the aforementioned information. However, remember, there are a number of other factors to consider when choosing a firearm and cartridge. To ensure that you are using the appropriate firearm, consider what other shooters are using and give yourself a wide range of options if possible.

One important thing to remember is that there is no substitute for correct shot placement. The table is intended as a guide. Its applicability will be greatly influenced by prevailing conditions, precise species and so forth. The shooter should always remember that on humanitarian grounds, it is better to be 'overgunned' than to hunt with an inadequate calibre.

This information was taken from Geoff Smith's 1999 *A Guide To Hunting & Shooting in Australia*, Regency Publishing, Regency Institute of TAFE, South Australia.

Shot sizes

Lead shot sizes	12	9	8.5	8	7.5	6	5	4	2	BB
Pellet diameter (")	.05	.08	.085	.09	.095	.11	.12	.13	.15	.18
Pellet diameter (mm)	1.27	2.3	2.16	2.29	2.41	2.79	3.05	3.3	3.81	4.57

Buckshot sizes	No. 4	No. 3	No. 2	No. 1	No. 0	No. 00	No. 000
Pellet diameter (")	.24	.25	.27	.30	.32	.33	.36
Pellet diameter (mm)	6.1	6.35	6.86	7.62	8.13	8.38	9.14

Steel shot sizes	6	5	4	3	2	1	Air Rifle	BB	BBB	T	F
Pellet diameter (")	.11	.12	.13	.14	.15	.16	.177	.18	.19	.2	.22
Pellet diameter (mm)	2.79	3.05	.33	.356	3.81	4.06	4.49	4.57	.483	.508	5.59

Note: The size of shot, whether lead or steel, is based on American Standard shot size. Thus, a steel No. 4 pellet and a lead No. 4 pellet are both .13" (3.33mm) in diameter.

This information was taken from the NRA Fact Book.

Glossary of shooting terms

As a new shooter, you may find yourself out at the range and thinking that you are the only one speaking English. The sport of shooting has a language all of its own. In order to help you understand what's being said, here are some of the most commonly used terms and their definitions.

Action: The combined parts of a firearm that determine how a firearm is loaded, discharged and unloaded. Most handguns are referred to as 'single-action' or 'double-action'. A single-action firearm requires the user to manually pull back the hammer before the firearm can be discharged (like the old Western revolvers). A double-action firearm allows the user to either manually cock the hammer or simply pull the trigger and allow the firearm to cock and release the hammer on its own.

Action, Bolt: A firearm, typically a rifle, that is manually loaded, cocked and unloaded by pulling a bolt mechanism up and back to eject a spent cartridge and load another. Bolt-action firearms are popular for hunting, target shooting and biathlon events. A bolt-action rifle allows the shooter maximum accuracy, but may be too slow or cumbersome for some shooting sports.

Action, Lever: A firearm, typically a rifle, that is loaded, cocked and unloaded by an external lever usually located below the receiver.

Action, Pump: A firearm that features a movable forearm that is manually actuated to chamber a round, eject the casing and put another round in position to fire.

Action, Automatic: A firearm that loads then fires and ejects cartridges as long as the trigger is depressed and there are cartridges available in the feeding system (ie, magazine or other such mechanism). Note: this type of firearm is rarely owned privately with the exception of museums and collectors. This is commonly confused with the term 'semi-automatic' or 'self-loading'.

Action, Self-loading: A firearm in which each pull of the trigger results in a complete firing cycle, from discharge through to reloading. It is necessary that the trigger be released and pulled for each cycle. These firearms are also called 'auto-loaders' or 'self-loaders'. The discharge and chambering of a round is either recoil operated or gas operated.

Ballistics: The science of studying projectiles. Ballistics can be 'interior' (inside the gun), 'exterior' (in the air) or 'terminal' (at the point of impact). Toolmark investigation is the attempt to microscopically match a bullet or fired cartridge case to a particular firearm.

Ballistic coefficient (BC): A relative measure of how well a projectile may be expected to perform in flight, in overcoming air resistance and thus retaining its initial velocity. Mathematically, it is calculated as the ratio of sectional density to coefficient of form (known alternatively as 'form factor') or alternatively, the ratio of bullet weight to diameter squared times form factor I.

Barrel: That part of the firearm through which a projectile travels. The barrel may be rifled (with spiral grooves on the interior of the barrel) or smoothbore (a smooth interior barrel with no grooves).

BB: Spherical shot having a diameter of .180" used in shotshell loads. The term is also used to designate steel or lead air rifle shot of .175" diameter.

Bench rest: A table specifically designed to eliminate as much human error as possible by supporting a rifle for competitive shooting or sighting-in purposes.

Birdshot: Small lead or steel pellets used in shotshells ranging in size from No. 12 (less than the diameter of a pencil point) to No. 4 (about .1" in diameter) used for short-range bird and small-game hunting.

Black powder: The original propellant made from charcoal, saltpetre and sulphur and used up until just prior to the turn of the 20th century in all firearms.

Boat-tail: A projectile type having a tapered heel or base to improve ballistic efficiency.

Bore: The interior barrel forward of the chamber.

Bore diameter: On rifled barrels, the interior diameter of the barrel from the tops of the lands (the highest point of the grooves). On a smooth barrel, the interior dimension of the barrel forward of the chamber (not including the choke on shotgun barrels).

Bullet: A non-spherical projectile for use in a rifled barrel.

Bullet, Hollow-point: A bullet with a cavity in the nose exposing the lead core to facilitate expansion upon impact. Hollow-point cartridges are used for hunting, police use and other situations to avoid overpenetration.

Bullet, Wadcutter: A generally cylindrical bullet design having a sharp-shouldered nose intended to cut paper targets cleanly to facilitate easy and accurate scoring.

Butt: On handguns, it is the bottom part of the grip. On longarms, it is the rear or shoulder end of the stock.

Calibre: A term used to designate the specific cartridges for which a firearm is chambered. It is the approximate diameter of the circle formed by the tops of the lands of a rifled barrel. It is the numerical term included in the cartridge name to indicate a rough approximation of the bullet diameter (ie, .30-calibre is .308"-diameter bullet).

Carbine: A rifle of short length and light weight originally designed for horse-mounted troops.

Cartridge: A single round of ammunition consisting of the case, primer, propellant, powder and one or more projectiles.

Cartridge case: The container of brass, plastic or other materials, which houses the primer at the rear, contains the propellant and holds the projectiles at the front. It also functions as a gas seal during firing. >

14 Beginner's guide

Cartridge, Centrefire: Any cartridge intended for use in rifles, pistols and revolvers that has its primer central to the axis at the head of the case. Most cartridges, including shotshells, are centrefire with the exception of .22-calibre rimfire ammunition. If you were to look at the bottom of a centrefire cartridge, you would see a small circle in the middle of the base, hence, 'centrefire'.

Cartridge, Magnum: Any cartridge or shotshell that is larger, contains more shot or produces a higher velocity than standard cartridges or shotshells of a given calibre or gauge.

Cartridge, Rimfire: A cartridge containing the priming mixture in the rim of the base. There are a few rimfire ammunition calibres besides the .22, but they are rare and not widely available.

Cartridge, Smallbore: A general term that refers to rimfire cartridges, normally of .22-calibre. This ammunition is used for target shooting, plinking and small-game hunting.

Chamber: In a rifle, pistol or shotgun, it is the part of the barrel that accepts the ammunition. A revolver has multiple chambers in the cylinder.

Choke: The degree to which a shotgun barrel constricts the shot column, thus affecting the spread of the shot or 'pattern' produced. Chokes may be modified, cylinder bored, improved cylinder, full-choke, etc.

Chronograph: An instrument used to measure the velocity of a projectile.

Cock: To place the hammer or striker in position for firing by pulling it back fully.

Cock, Full: The position of the hammer when the firearm is ready to fire.

Cock, Half: The position of the hammer about half retracted and intended to prevent release of the hammer by a normal pull of the trigger.

Cylinder: The round, rotatable part of a revolver that contains the chambers.

Deringer: A generic term referring to many variations of pocket-sized pistols. The name comes from the pistol's original designer, Henry Deringer.

Discharge: To cause a firearm to fire.

Double barrel: Two barrels on a firearm mounted to one frame. The barrels can be vertically (over-and-under) or horizontally (side-by-side) aligned.

Firearm: The legal definition of a firearm in your state/territory will be one that you need to know. Contact your firearms registry.

Firing pin: The part of a firearm that strikes the primer of a cartridge to start the ignition of the primer.

Flash suppressor: An attachment to the muzzle designed to reduce muzzle flash. A flash suppressor is not a silencer.

Gauge: A term used to identify most shotgun bores, with the exception of the .410 shotgun. It relates to the number of bore diameter lead balls weighing 1lb. The .410 shotgun is a calibre. The .410 refers to the diameter of the barrel.

Grain: The unit of weight used for specifying propellant charges and projectile weights. It is often abbreviated to 'gr'. The grain was derived from the weight of a grain of wheat and is now taken as 1/7000 of 1lb.

Grooves: Twisted depressions that are cut or swaged into a rifle or pistol barrel to form the rifling (opposite of lands).

Hammer: The part of the firing mechanism that strikes the firing pin, which, in turn, strikes the primer.

Hammerless: A firearm having an internal hammer or striker.

Jacket: The envelope enclosing the lead core of a bullet.

Jam: A malfunction that prevents the action from operating. Jams may be caused by faulty or altered parts, ammunition, poor maintenance of the firearm or improper use of the firearm.

Load: The combination of components used to assemble a cartridge or shotshell. The term also refers to the act of putting ammunition into a firearm.

Magazine: A receptacle on a firearm that holds several cartridges or shells for feeding into the chamber. Magazines take many forms, such as box, drum, rotary or tubular and may be fixed or removable.

Misfeed: Any malfunction during the feeding cycle of a repeating firearm that results in the failure of a cartridge to enter the chamber completely.

Misfire: A failure of the cartridge to fire after the primer has been struck by the firing pin. A hangfire, which is when the cartridge is delayed from firing, is a type of misfire. If the cartridge fails to fire, you should keep the firearm aimed at the target for at least one minute.

Muzzle: The front end of a firearm barrel from which the bullet or shot emerges.

Muzzle flash: The illumination (flash) resulting from the expanding gases from the burning propellant particles emerging from the barrel behind the projectile and uniting with oxygen in the air.

Muzzleloader: Any firearm loaded through the muzzle. Muzzleloader firearms are called 'black powder' firearms. They may be antique, replica or of modified design.

Nose: The point or tip of a bullet.

Over-and-under: A firearm with two barrels, one above the other.

Pattern: The distribution of shot fired from a shotgun.

Pistol: A term for a one-hand held firearm with a single chamber. A revolver, on the other hand, has at least five chambers.

Pistol, Automatic: The common but improperly used term to describe semi-automatic or self-loading pistols. See **Action, Self-loading** for a description of how these pistols operate.

Pistol, Double-action: A pistol mechanism in which a single pull of the trigger cocks and releases the firing mechanism.

Plinking: The informal shooting at inanimate objects at indefinite points. Plinking typically refers to casual shooting at pine cones, tin cans or other such objects for fun and practice.

Powder: A commonly used term for the propellant in a cartridge or shotshell.

Pressure: The force exerted over the surface of the chamber developed by the expanding gases generated by the combustion of the propellant.

Primer: An ignition component consisting of brass or gilding metal cup, priming mixture, anvil and foiling disc. It creates an explosion when hit by a firing pin, igniting the propellant powder. It is the most dangerous component of the cartridge.

Propellant: The chemical composition, which, when ignited by a primer, generates gas. The gas propels the projectile.

Receiver: The basic unit of a firearm, which houses the firing mechanism and to which the barrel and stock are assembled. In revolvers, pistols and break-open firearms, it is called the frame.

Recoil: The rearward movement of a firearm resulting from firing a cartridge or shotshell.

Recoil pad: A buttplate, usually made of rubber, to reduce the recoil or 'kick' from shouldered firearms.

Reload: A round of ammunition that has been assembled using fired cases.

Revolver: A firearm with a cylinder having several chambers so arranged as to rotate around an axis and be discharged successively by the same firing mechanism. A self-loading pistol is not a revolver because it does not have a revolving cylinder.

Rifle: A firearm having spiral grooves in the bore and designed to be fired from the shoulder.

Rifling: Grooves formed in the bore of a firearm barrel to impart rotary motion to a projectile.

Round: One complete small arms cartridge.

Safety catch: A device on a firearm designed to provide protection against accidental or unintentional discharge under normal usage when properly engaged.

Semi-automatic: Firearm which fires, extracts, ejects and reloads only once for each pull and release of the trigger.

Shotgun: A smoothbore shoulder firearm designed to fire shells containing many pellets or a single slug.

Shotshell: A round of ammunition containing multiple pellets for use in a shotgun. The multiple pellets in a shotshell are called 'shot'.

Silencer: A device used as an expansion chamber about the muzzle of a firearm, to contain the gases discharged during firing and thus reduce some of the noise produced. Silencers are illegal or restricted in all states and territories within Australia.

Small arms: Any firearm capable of being carried by a person and fired without additional mechanical support.

Stock: The wood, fibreglass, wood laminate or plastic component to which the barrel and receiver are attached.

Trajectory: The path of a bullet through the air.

Trigger, Hair: A slang term for a trigger requiring very low force to actuate.

Trigger lock: An accessory for blocking a firearm from unauthorised use. Most trigger lock manufacturers advise against the use of a trigger lock on a loaded firearm, as shifting the lock against the trigger could fire the gun.

Trigger pull: The average force which must be applied to the trigger to cause the firearm to fire.

Unload: The complete removal of all unfired ammunition from a firearm.

Velocity: The speed of a projectile at any point along its trajectory, usually listed in feet per second (fps).

Wad: A space device in a shotshell, usually a cup-form plastic or paper discs, which separates the propellant powder from the shot.

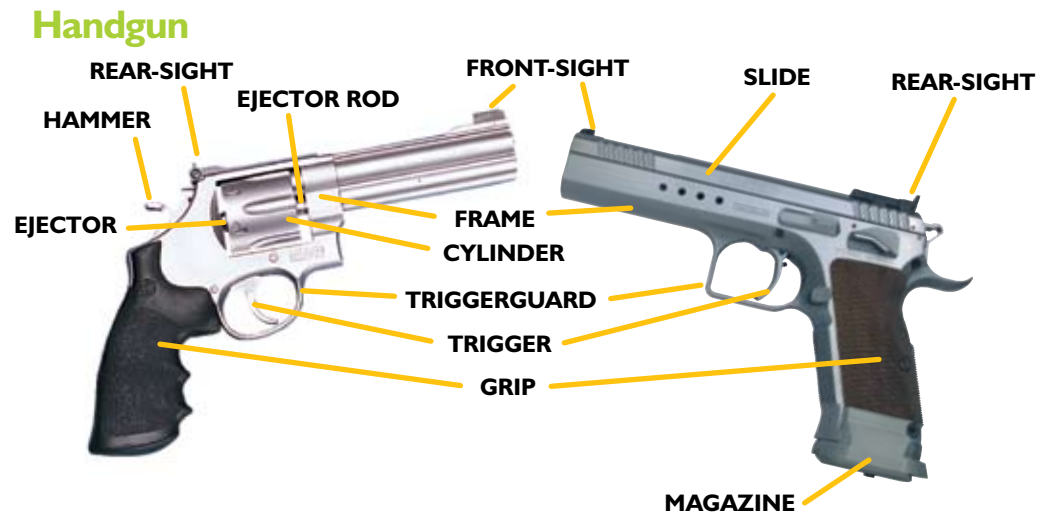
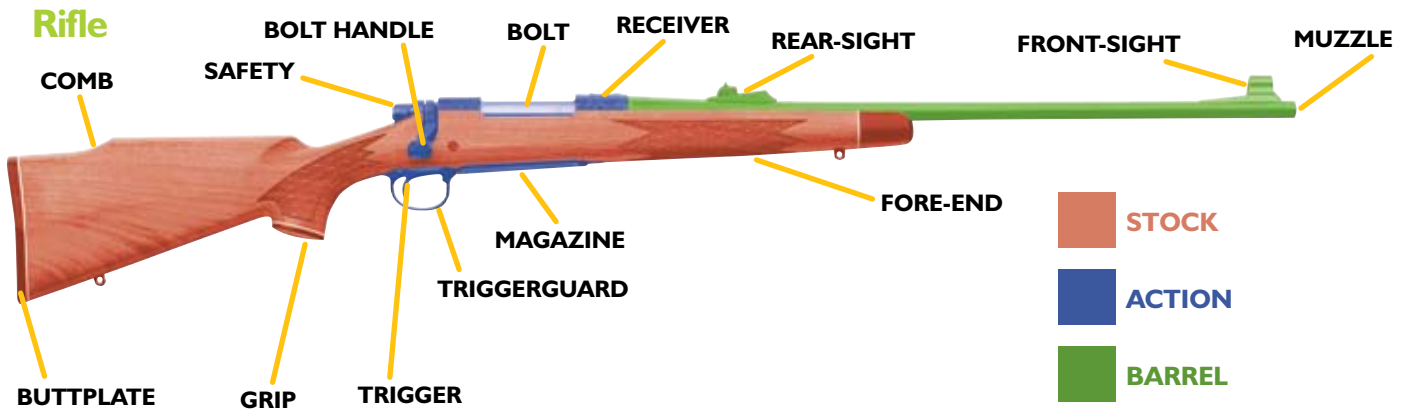
Weapon: An instrument used in combat. The term is never used in referring to sporting firearms.

This information was taken from Geoff Smith's 1999 *A Guide To Hunting & Shooting in Australia*, Regency Publishing, Regency Institute of TAFE, South Australia, and *Non-Fiction Writer's Guide: A Writer's Resource to Firearms and Ammunition*, Sporting Arms and Ammunition Manufacturer's Institute, Newtown, Connecticut.

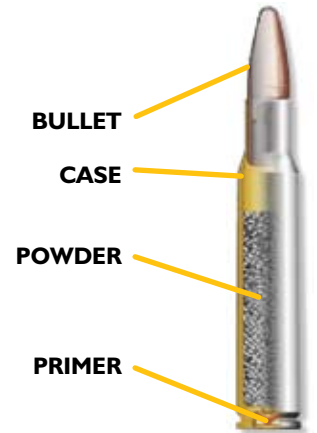


Know your firearm

Familiarise yourself with the various parts of a firearm.



Cross-section of a centrefire cartridge



Cross-section of a shotshell

