

A Shotgun Primer

Old Colony Shotgun

The following is intended to provide those inexperienced in the handling of shotguns with basic information regarding safety, shotgun actions, ammunition, shooting fundamentals, targets and games. It is not a substitute for hands-on instruction by a qualified instructor.

Our goal on the shotgun fields is to provide you with a safe, enjoyable, and fun experience. New shooters are welcome.

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Safety

1. Always Keep the Muzzle Pointed in a Safe Direction. Never point your gun at anything you do not intend to shoot.
2. Firearms Must Be kept Unloaded When Not in Use. Firearms should be loaded only when you are in the field or on the target range or shooting area, ready to shoot.
3. Never pick up a firearm without checking to see if it is loaded. If you do not know how to check if a firearm is loaded, don't pick it up. Always keep actions open when not in use. Never assume a gun is unloaded — check for yourself!
4. Don't Rely on Your Gun's "Safety". **Never touch the trigger on a firearm until you intend to shoot.** Keep your fingers away from the trigger while loading or unloading. Never pull the trigger on any firearm with the safety on the "safe" position or anywhere in between "safe" and "fire." It is possible that the gun can fire at any time, or even later when you release the safety, without you ever touching the trigger again.
5. Be Sure of Your Target and What's Beyond It. Know how far the projectiles in your gun will travel. Shotgun pellets used for clay target shooting can travel up to 200 yards.
6. Use Correct Ammunition. Never ever carry different gauge shotgun shells on your person. Placing a smaller gauge or caliber cartridge into a gun (such as a 20-gauge shell in a 12-gauge shotgun) can result in the smaller cartridge falling into the barrel and acting as a bore obstruction when a cartridge of proper size is fired. This can cause a burst barrel and personal injury.
7. If Your Gun Fails to Fire When the Trigger is Pulled, Handle with Care! Occasionally, a cartridge may not fire when the trigger is pulled. If this occurs, keep the muzzle pointed in a safe direction. Keep your face away from the breech. Then after 30 seconds carefully open the action, unload the firearm and dispose of the cartridge in a safe way.
8. Always Wear Eye and Ear Protection When Shooting.
9. Be Sure the Barrel is Clear of Obstructions Before Shooting.
10. Know the Mechanical and Handling Characteristics of the Firearm You are Using.

The Shotgun

Over/Under (O/U) - a break action firearm with vertically stacked barrels. Their trim sighting plain, weight and balance make them a very popular gun for the clay target sports. The O/U design attributes lends it to activities where it is carried little and shot a lot.



Side by Side (SXS) – a break action firearm with horizontally positioned barrels. These guns are typically lighter than over/under shotguns. Their light weight and wider receivers make them easy to carry in the field. They are intended to be carried a lot and shot little.

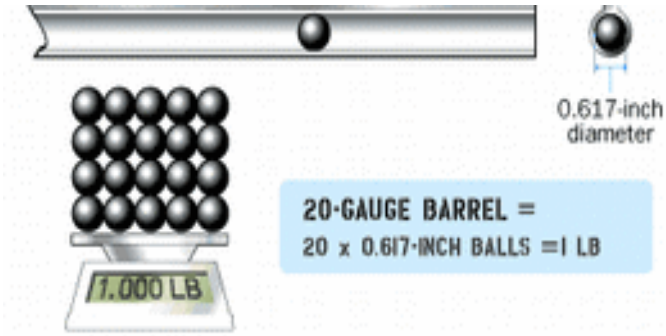


Semi-Automatic Shotgun - This type of shotgun is ideal for someone who shoots a lot; for someone of a slight build or for a young person.



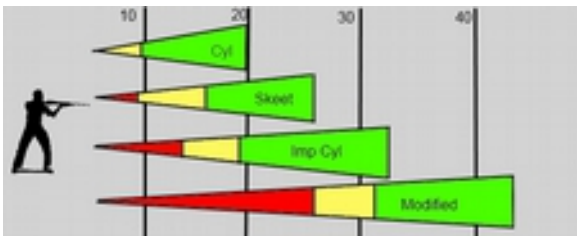
The reason being is that the movement of the action on firing delivers less felt recoil to the shooter. It is a single-barreled shotgun where you can insert one cartridge into the chamber and two or more into the magazine. The recoil from the firing of the first cartridge loads the second cartridge. It is very important for the shooter to adhere to the safe carrying of this type of shotgun. The semi-auto should be carried with the barrel pointing upwards, breech open and facing forwards and the shotgun unloaded otherwise it can be safely carried unloaded in a normal gun bag.

Gauge -- is determined by the number of lead balls of size equal to the approximate diameter of the bore that it takes to weigh one pound. Common shotgun gauges and diameters are 12 (0.729"), 16 (0.662"), 20 (0.617"), 28 (0.550") and 410 (0.410"). The larger the bore the more shot typically held in its cartridge. The 12 (1½ oz.) and 20 (7⁄8 oz) gauges are the most common shotguns. Sixteen (1 oz.) gauge shotguns carry like a 20 and shoot like a 12.

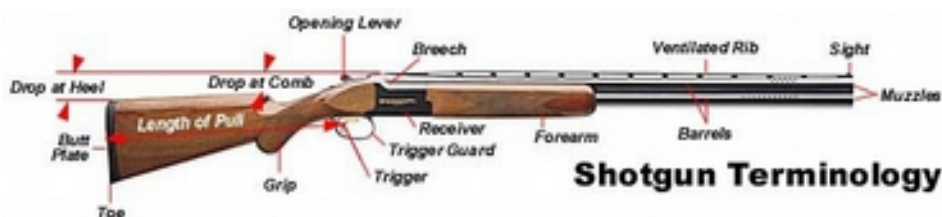


The 28 (¾ oz.) gauge recoils little and hits hard. The 410 (½ oz) has limited hunting applications but is frequently used in the clay target game skeet.

Choke – a constriction at the end of a shotgun barrel that imparts inward movement of pellets exiting the muzzle increasing down range pattern density. Chokes can be an integral part of the barrel (fixed) or variable. Screw-in chokes are the most common type of variable choke. Common names and constrictions for chokes are cylinder (0.000"), skeet (0.005"), improved cylinder (0.010"), modified (0.020") and full (0.040"). Improved cylinder and modified chokes are effective choices for most applications on the range and in the field.



Gun Fit – adjustments to the stock of a shotgun to position the shooter's eye above the rib of the guns so that it shoots where you **point** it. Most mass-produced guns are stocked to fit the average 5'10", 180 lb. male. Gun fitting is an art as well as a science and is best done by a professional. Beginners should learn to shoot using an off the shelf gun from a well-known



Shotgun Terminology

manufacturer that fits reasonably well. Only once you have some experience and developed your gun mount should you consider being fitted by a professional.

Cast – Deviation of the comb from centerline of rib. A stock with cast off has the comb moved to away from a right-handed shooter's face. Stocks with cast on push the comb towards the face of a right-handed shooter.

Comb – Upper portion of stock that the shooter's cheek rests on.

Drop – vertical distance between top of comb and a straight line running along the center of the rib. Usually taken at three places: at the peak, at the face and at the heel.

Pitch – angle of the butt pad in relation to the rib.

Ammunition

The major components of a shotgun shell are the hull, primer (ignition device), powder, wad (shot cup and cushion), and shot (round pellets). The shot in a "shotgun shell" consists of 300-450 small spheres. Shotgun shells are allowed a maximum payload weight of 1½ oz (32g) of shot. Velocity may vary, but is limited based upon shot mass:

Shot size – #8 and #7½ lead shot is the most commonly use shot size for target shooting. A 1oz 12ga load with a muzzle velocity of 1200 ft/second is very effective.



Lead shot sizes:	12	9	8½	8	7½	6	5	4	2	BB
Pellet diameter (inches)	.05	.080	.085	.090	.095	.110	.120	.130	.150	.180
(mm)	1.27	2.30	2.16	2.29	2.41	2.79	3.05	3.30	3.81	4.57

Lead shot is easily deformed as it passes down the barrel of a shotgun do to the forces generated by the explosion of gunpowder. The flight of deformed lead pellets can be quite erratic. Antimony up to 6% is added to lead to increase its hardness which reduces deformation. The addition of antimony increases the cost of shotgun ammunition and is found in premium loads such as Remington’s STS.

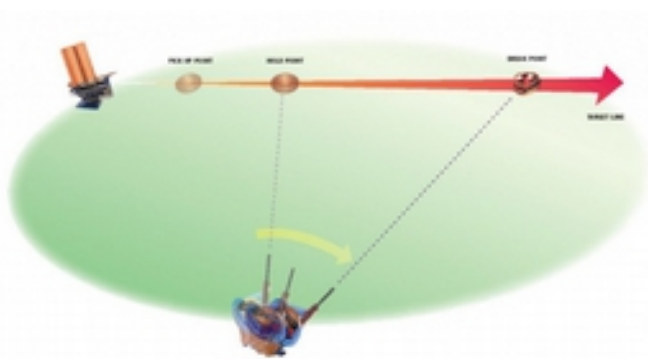
Make sure ammunition purchased is of the proper gauge and length for your gun. Do not insert 3-inch shells in a gun chambered for 2¾ inches, however, 2¾ inch shells can be fired in 3 inch chambers.

Shooting Fundamentals

Pointing is a non-verbal communication skill that develops by the time a child is 8 months old. By 18 months a child will use an index finger to point. You are a skilled and accurate pointer and have been so for many years. That is a great skill to have for a shotgunner because unlike other shooting sports (rifle or pistol) you don’t aim a shotgun, you point it. Although there is a bead or sight at the end of the barrel of a shotgun, it is just there for esthetics. It is almost never used during in the execution of breaking a target with a shotgun.

When you purposefully point your index finger at an object it automatically aligns with your dominate eye. It is very important to know which is your dominate eye so that it can be aligned with the rib of the shotgun you are pointing. Shooting a moving target is a dynamic process in which the shooters eyes, hands, gun and target all

are in motion. The space needed between the shotgun barrel and a moving target to hit the target is called lead or forward allowance. The process of learning how to generate the forward allowance needed to consistently break different target presentations is what shotgunning and clay target sports is all about. New shooters are encouraged to engage a certified shooting instructor to help with the learning process. In doing so the new shooter will build a solid skills-based foundation and avoid developing bad habits that can take great effort to correct. Here is some terminology to help you through the process.



Visual pickup point – is your eye position prior to calling pull. The visual pickup should be between the

trap and your hold point at a spot where you can clearly see and track the target. **Hold point** – position of the gun prior to calling pull. It should be slightly below the flight path of the target.

Break point – the point in flight where the shooter intends to break the target. This is usually where the target can be most clearly seen.

Spoiling the line – when the gun gets between the shooters eye and blocks or occludes the target, usually results in a missed target.

Daniel Schindler is the dean of shotgun writers. He has written three excellent books: *Take Your Best Shot*, *To the Target* and *Beyond the Target*. They are a worthwhile read for shotgunners of all levels.

Games

“Those that shoot to win often lose, those that shoot for fun always win,” Geoff Gaebe, 1950-2010, Addieville East Farms, RI.

Skeet shooting is a recreational and competitive activity where participants attempt to break clay targets mechanically flung into the air from two fixed stations at high speed (50 mph) from a variety of angles.

The event is in part meant to simulate the

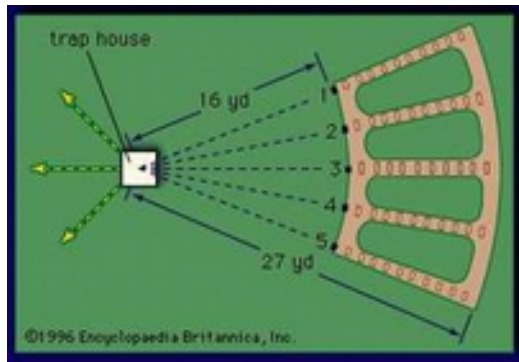
action of bird hunting. The shooter shoots from seven positions on a semicircle with a radius of 21 yards (19 m), and an eighth position halfway between stations 1 and 7. There are two houses that hold "traps" that launch the targets, one at each corner of the semicircle. The traps launch the targets to a point 15 feet above ground and 18 feet outside of station 8. One trap launches targets from 10 feet above the ground ("high" house) and the other launches it from 3 feet above ground ("low" house).



Skeet is one of the three major disciplines of competitive clay pigeon shooting. There are several types of skeet, including one with Olympic status (often called Olympic skeet or international skeet) and many with only national recognition.

Trap - Trapshooting has been a sport since the late 18th century.

American trap may be the most popular form of clay target shooting in North America. The targets are thrown by a machine located at approximately ground level and covered by a "trap house." For singles and doubles, there are five "stations", each 16 yards



behind the trap house. In singles, each competitor shoots at five targets from each station. The trap machine oscillates left to right within a 54-degree arc (up to 27 degrees right and left of center), and at least a 34-degree arc (up to 17 degrees right and left of center), and the competitor does not know where in that arc the target will emerge. In doubles, the machine does not oscillate, but throws two targets simultaneously.

Sporting clays is a [clay target](#) sport, often described as "golf with a shotgun" because a typical course includes from 10 to 15 different shooting stations laid out over natural terrain. For safety, the course size is often no smaller than 35 acres. Unlike [trap](#) and [skeet](#), which are games of repeatable target presentations, sporting clays simulates the unpredictability of live-quarry shooting, offering a great variety of trajectories, angles, speeds, elevations, distances, and target sizes.



Sporting clays targets are typically shot in pairs. Pairs can be either "report pairs," in which the second bird will be launched after the shooter fires at the first; or "true pairs" (sometimes called "simo")

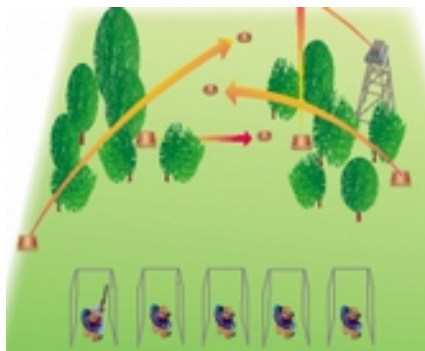
when both birds launch at the same time. On a sporting clay course, the shooter will be presented with incoming, going away, crossing and quartering targets. Quartering targets move away or towards the shooter at a shallow angle while crossing targets move across the shooter's field of view either from left-to-right or right-to-left. Other unique target presentations using the standard 110 mm domed clay target are the chandelle and teal. The chandelle is a target presentation with an exaggerated arch that is thrown vertically off a trap's arm, usually showing full face or full belly to the shooter. The teal presentation springs vertically up into the air, on its edge, showing the whole face of the target. Specialty targets thrown on the sporting clays course are the rabbit and battue. The rabbit target is a thick flat disc that runs along the ground. The battue is a wafer thin, flat target that as a result of its design becomes aerodynamically unstable in flight and quickly rolls into a vertical position showing full face that rapidly falls to the ground.

Clay targets come in a variety of colors and sizes from orange to lime green, orange and black are the most popular.



Five Stand - is a type of [shotgun sport shooting](#) similar to [sporting clays](#), [trap](#) and [skeet](#). There are five stations or *stands* and six to eighteen strategically placed traps. Shooters shoot in turn at various combinations of clay birds. Each station will have a menu card that lets the shooter know the sequence of clay birds he or she will be shooting at (i.e., which trap the clay bird will be coming from). The shooter is presented with 5 targets at each station, first a single bird

followed by two pairs. After shooting at the 5 birds on the menu at that station, the shooter proceeds to the next stand, where they find a new menu of 5 target





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