

# Shotgun Instructions & Information

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## 1 Safety

This is a 12 gauge shotgun and must be respected and handle as a lethal weapon at ALL times. Although we use blank shells, the black powder and resulting smoke coming out of the gun when fired, can be Very Dangerous if it hits someone or something close (within a few hundred feet) to the end of the barrel. The cork material, smoke, gases, etc. are moving at over 2000ft/sec. besides being Hot.

- ALWAYS assume that it is loaded.
- NEVER point it at anyone or anything other than the sky or ground.
- ALWAYS have the safety ON until ready to fire the gun.
- DO NOT allow anyone to operate the gun unless they have read these guidelines, you believe they will handle the gun as if it were shooting live ammunition and are mature enough to respect these directions and can operate the weapon safely. Children under 18 should not operate the gun unless very closely supervised. The RC is responsible for anyone under 18 operating the gun.

## 2 RC's Responsibilities (From NRA Website)

Most states impose some form of legal duty on adults to take reasonable steps to deny access by children to dangerous substances or instruments. It is the individual gun owner's responsibility to understand and follow all laws regarding gun purchase, ownership, storage, transport, etc. Contact your state police and/or local police for information regarding such laws. If you own a gun and do not know how to operate it, do not experiment with it. Point it in a safe direction, keep your finger off the trigger, and store it securely. Seek competent assistance and instruction at once. An untrained adult can be as dangerous as a curious child.

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Store guns so that they are inaccessible to children and other unauthorized users. Gun shops sell a wide variety of safes, cases, and other security devices. While specific security measures may vary, a parent must, in every case, assess the exposure of the firearm and absolutely ensure that it is inaccessible to a child.

This webpage is not intended as a complete course in gun safety and is not a substitute for formal, qualified instruction in the handling, use, or storage of firearms. The guidelines herein should be considered options to minimize the chance of an accident occurring in the home.

### 3 Before the Race

Keep in mind that we use only ONE shell at a time in the gun. This is to avoid the possibility of a second accidental firing of the gun in an unknown direction.

1. Check the gun to assure it is clean and clean if necessary (see Gun Cleaning Rules & instructions later in this document).
2. Check the operation of the gun as follows:
  - Review the Attachments: Introduction to Firearms, NRA Fundamental Rules of Safety and Description of Pump Action Shotgun to assure you are familiar with this information
  - Check the operation of the safety, a button in front of the trigger that moves back and forth, left and right.
    1. When the safety is SET/ON, the button is pushed to the RIGHT as you look down from the top of the gun and sticks out on the right side in front of the trigger. Also, if you look at the gun from the bottom, the side of the safety button that is out will be BLACK.
    2. When safety button is sticking out to the left as you look down from the top of the gun, the safety is NOT SET/ON and the gun is READY TO FIRE. Also, if you look at the gun from the bottom, the side of the safety button that is out will be RED.
  - WITHOUT pulling the trigger, check to see if there are any shells in the firing chamber by eject them if necessary as follows:
    3. Open the chamber by using the release button, a small button behind and above the trigger on the left side. Push this up and the pump will move back and eject a shell if it is in the firing chamber. Pump back quickly and hard to get the shell to eject properly.
    4. Look in the firing chamber and up into the barrel from the firing chamber (not the end of the barrel), there should be no shells in the chamber at this point.
3. Load One already used & empty shells by:
  1. Point the gun in a safe direction, up or down and away from anyone/anything in the area
  2. Opening the chamber (breech) by pumping back
  3. Put one empty shell in the firing chamber (breech), push it all the way forward until it stops
  4. Close the chamber by pumping forward
  5. You now have an empty shell in the gun and ready for use
4. Check the gun's operation by:
  1. Point the gun in a safe direction, up or straight down and away from anyone in the area
  2. Move the safety button to the left, the gun is now ready to fire using the empty shell put in the gun during the previous directions above

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3. Pull the trigger, you should hear a click
4. Pump back hard, the shell casing should pop out or be in a position that you can take it out with your fingers or turn the gun on its side and let the casing fall out.
5. Before moving the pump forward, check the firing chamber to make sure the shell has been ejected and no shells are in the firing chamber.
6. The gun is now empty.
7. Put the safety back on by moving the safety button to the left. The gun is now safe.
8. Repeat steps 1 to 7 several times to get a good feel for loading and firing the gun.
9. Place the gun in the case and keep a few empty shells in the case so the next RC can practice.

### **4 Prior to the Race on Race Day (Or Sooner)**

1. Make certain that no live shells are in the gun per the “Before the Race” instructions above.
2. Review the SAFETY operation of the gun with whoever will be the shooter and will be firing the gun.
3. Have the person review this entire document and then go over them with the shooter to make sure the shooter understands everything.
4. Remind the shooter that he/she will only put ONE shell in the gun at a time. He may want to have additional shells in a pocket, etc. for quick access to load the gun quickly for a second shot in case of an over early or other reasons.
5. Make sure the shooter follows the instructions as stated in the “Before the Race” instructions above to become familiar with the gun’s operation while using an empty shell casing.
6. Make sure you have enough shells for the race, you will need at least one full box so have two full boxes.
7. Review with the shooter where he/she will stand (virtually always on the foredeck) and where to point the gun (up and away/forward from the crew, other boats and the boat rigging).
8. Have a bag to put the empty shells into and have the shooter pick up the shells quickly by the non metal part of the shell casing, they are hot and can discolor the deck.
9. Check to make sure you have the eye and ear protectors for the shooter.

### **5 During the Race**

1. Make sure the shooter is wearing the eye and ear protectors
2. Make sure the shooter is aiming the gun in a SAFE direction AT ALL TIMES
3. Make sure the shooter is collecting the shells quickly
4. Coordinate with the shooter on the countdown sequence and when he/she will shoot and what command you will give.

### **6 On Race Day, After the Race is Finished**

1. Collect all empty shells and put in a bag, they can be discarded later
2. Check the gun for any damage, dry it off if needed, etc., to prepare to put it into the case, and then put the shotgun in the case
3. Note any concerns that the shooter had with the operation of the gun so that you can report the concerns to the Gear Chairperson

### **7 After the Race**

1. Clean the shotgun prior to giving to the next RC using the tips noted in the Cleaning section later.

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2. Check the operation of the gun and note any concerns with its operation
3. Let the Gear Chairperson know of any concerns with the gun as soon as possible.

## 8 Shotgun Information

### **8.1 The Fundamental NRA Rules for safe gun handling are:**

#### **1. Always keep the gun pointed in a safe direction.**

This is the primary rule of gun safety. A safe direction means that the gun is pointed so that even if it were to go off it would not cause injury or damage. The key to this rule is to control where the muzzle or front end of the barrel is pointed at all times. Common sense dictates the safest direction, depending on different circumstances.

#### **2. Always keep your finger off the trigger until ready to shoot.**

When holding a gun, rest your finger on the trigger guard or along the side of the gun. Until you are actually ready to fire, do not touch the trigger.

#### **3. Always keep the gun unloaded until ready to use.**

Whenever you pick up a gun, immediately engage the safety device if possible, and, if the gun has a magazine, remove it before opening the action and looking into the chamber(s) which should be clear of ammunition. If you do not know how to open the action or inspect the chamber(s), leave the gun alone and get help from someone who does.

#### ***When using or storing a gun, always follow these NRA rules:***

- **Know your target and what is beyond.**  
Be absolutely sure you have identified your target beyond any doubt. Equally important, be aware of the area beyond your target. This means observing your prospective area of fire before you shoot. Never fire in a direction in which there are people or any other potential for mishap. Think first. Shoot second.
- **Know how to use the gun safely.**  
Before handling a gun, learn how it operates. Know its basic parts, how to safely open and close the action and remove any ammunition from the gun or magazine. Remember, a gun's mechanical safety device is never foolproof. Nothing can ever replace safe gun handling.
- **Be sure the gun is safe to operate.**  
Just like other tools, guns need regular maintenance to remain operable. Regular cleaning and proper storage are a part of the gun's general upkeep. If there is any question concerning a gun's ability to function, a knowledgeable gunsmith should look at it.
- **Use only the correct ammunition for your gun.**  
Only BBs, pellets, cartridges or shells designed for a particular gun can be fired safely in that gun. Most guns have the ammunition type stamped on the barrel. Ammunition can be identified by information printed on the box and sometimes stamped on the cartridge. Do not shoot the gun unless you know you have the proper ammunition.
- **Wear eye and ear protection as appropriate.**  
Guns are loud and the noise can cause hearing damage. They can also emit debris

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and hot gas that could cause eye injury. For these reasons, shooting glasses and hearing protectors should be worn by shooters and spectators.

- **Never use alcohol or over-the-counter, prescription or other drugs before or while shooting.**  
Alcohol, as well as any other substance likely to impair normal mental or physical bodily functions, must not be used before or while handling or shooting guns.
- **Store guns so they are not accessible to unauthorized persons.**  
Many factors must be considered when deciding where and how to store guns. A person's particular situation will be a major part of the consideration. Dozens of gun storage devices, as well as locking devices that attach directly to the gun, are available. However, mechanical locking devices, like the mechanical safeties built into guns, can fail and should not be used as a substitute for safe gun handling and the observance of all gun safety rules.
- **Be aware that certain types of guns and many shooting activities require additional safety precautions.**
- **Cleaning**  
Regular cleaning is important in order for your gun to operate correctly and safely. Taking proper care of it will also maintain its value and extend its life. Your gun should be cleaned every time that it is used.

A gun brought out of prolonged storage should also be cleaned before shooting. Accumulated moisture and dirt, or solidified grease and oil, can prevent the gun from operating properly.

Before cleaning your gun, **make absolutely sure that it is unloaded.** The gun's action should be open during the cleaning process. Also, be sure that no ammunition is present in the cleaning area.

## **8.2 Introduction to Firearms**

The seven steps of operation of any firearm (rifle, shotgun, or pistol) are the same. The purpose of the action (mechanism) of any gun is to perform these seven steps. All actions accomplish the following steps of operation either mechanically or by hand, although not necessarily in this order:

1. FIRING--pulling the trigger releases the hammer or striker and fires the shell in the chamber.

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2. UNLOCKING & PRIMARY EXTRACTION--the breech is securely locked closed during firing; after firing, the first operation is to unlock it. Autoloaders do this by means of gas pressure and an operating rod, other actions do this by manual movement of a bolt handle, slide handle (pump), etc. In addition, the case left behind after the shot charge, wad, and powder are gone must be loosened from the chamber walls--this is called primary extraction, and it is accomplished mechanically as the action is unlocked.
3. EXTRACTION--the case is partially or fully removed from the chamber.
4. EJECTION--after extraction the case is removed from the gun; it is either lifted out by hand or thrown out by the ejector.
5. COCKING--The hammer or striker spring is compressed as the hammer/striker is drawn back, and then held back by the sear; it is now cocked.
6. FEEDING--a fresh cartridge is chambered, either by hand, or by the forward travel of the breech-block (bolt).
7. LOCKING--The breech-block is locked closed, and the gun is ready to fire again.

Specifically how these seven steps of operation are accomplished, and in what order, depends upon the type of action. I am not going to attempt to detail how each action accomplishes these steps; it is sufficient to understand that it does. If you carefully watch a shotgun mechanism operate, you will see how it performs the seven steps.

### **8.3 This is a Description of a Pump Action Shotgun**

The pump action is cycled by "pumping" the forearm after a shot is fired. The forearm is connected to the breech-bolt by rods called "action bars." These cause the bolt to move with the forearm, performing the seven steps of operation. There are two motions to pumping a shotgun. First the forearm is pulled straight to the rear. This initially unlocks the bolt, then extracts and ejects the fired shell as the bolt moves rearward. When the forearm reaches the end of its rearward stroke, it is then pushed in the opposite direction, straight forward. This forward direction pulls the bolt with it, until the bolt once again locks in the fully forward position. During its forward motion the bolt picks up a fresh shell from the magazine, pushes it into the chamber, and locks into place. The gun is then ready for another shot.

Pump guns handle virtually identically to gas operated autoloaders. Because of their long receiver, they tend to be muzzle heavy if equipped with a barrel the same length as typically found on a break action gun. A pump gun with a 24" barrel is about the same overall length as a double with 28" barrels, and handles well, but the short barrel increases muzzle blast. A 26" barrel gives a pump about the same overall length as a double with a 30" barrel. Repeaters like

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pumps and autoloaders usually handle best with 26" barrels, and a 28" barrel is a practical maximum for field use. A pump with a 30" barrel is about the same length as a double with a 34" barrel--which is pretty clumsy for most purposes.

The principal advantages of the pump gun are its relatively economical price, 3+ shot capacity, reliability, and fast manually operated action. Although it is not as popular in competition as the over/under or autoloader, many trap and skeet shooters use pump guns, and a quick second shot for "doubles" can be achieved with some practice. Reloaders who favor repeaters like pump guns because, with a little practice, a fired shell can be ejected into the hand rather than onto the ground. Pumps are particularly useful as field guns. They are not sensitive to ammunition, and can be used with light or heavy loads, including reloads. A second barrel (longer or shorter) can be purchased to increase the versatility of the gun at modest cost. A pump gun is usually the cheapest, and often the best, way for the occasional shotgun shooter to get into a repeater that is suitable for fast follow-up shots in the field.

## 9 Cleaning

Regular cleaning is important in order for your gun to operate correctly and safely. Taking proper care of it will also maintain its value and extend its life. Your gun should be cleaned every time that it is used.

A gun brought out of prolonged storage should also be cleaned before shooting. Accumulated moisture and dirt, or solidified grease and oil, can prevent the gun from operating properly.

Before cleaning your gun, **make absolutely sure that it is unloaded.** The gun's action should be open during the cleaning process. Also, be sure that no ammunition is present in the cleaning area.

### 9.1 Gun Cleaning Rules (From Otis Website <http://www.otisgun.com/>)

- 1. ALWAYS CLEAN FROM BREECH TO MUZZLE IN THE NATURAL DIRECTION OF THE BULLET.**

When you fire your gun, the powder residue and dirt are in the barrel. The chamber and receiver are clean. If you run a brush or patch from the muzzle end you will push this dirt, residue, and moisture into the chamber and receiver. This is a major cause of stuck cases or problems with lever actions and auto-loading rifles and shotguns. If you push or pull a brush back toward the chamber, you will notice the brush will throw the debris from the bore back into the chamber and locking lugs.
- 2. CENTER THE TIP AND ROD. BE CAREFUL NOT TO LET EITHER RUB THE BORE.**

All firearms record their history. This is the reason most people look down the barrel of a firearm. An experienced eye can tell the method of cleaning, the number of shots, and the gun maintenance applied to the firearm. Many marks are caused by people who carelessly let the tip or rod rub the inside the barrel.

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3. ***USE A CLEAN PATCH SURFACE EACH TIME YOU GO DOWN THE BARREL.*** This is similar to mopping a floor and rinsing the mop out. When you are using your firearm you will get abrasive dirt in the muzzle. The patch with solvent will flush this dirt out in the shortest distance. If you use this patch surface again, the dirt will be deposited in the chamber and neck. The next bullet down the barrel picks up this dirt and erodes the throat. This is the exact equivalent of cleaning in the wrong direction.
4. ***NEVER RUN A BRUSH IN THE BARREL FIRST.*** This will damage the firearm. The brush will pick up dirt, moisture or powder residue and deposit it into the chamber or receiver. Never dip a brush in solvent. The solvent at the brush core will collect dirt and drop it into the receiver and chamber.
5. ***NEVER GO BACK AND FORTH REVERSING THE BRUSH.*** This will bend the bristles on the brush. This is the equivalent of bending a wire back and forth until it breaks. You will always ruin a brush if you reverse it while in the bore.
6. ***USE ONLY A FEW DROPS OF SOLVENT / LUBRICANT.*** Many people think the more solvent the better. However, this will damage the firearm. Use only the solvent that the patch will absorb. If you see too much, the solvent or oil will drip down into the trigger mechanism. This will cause a gummy trigger. If you use too much oil, it will drain back toward the stock and cause premature failure of the wood.