

# Royal Canadian Sea Cadet Corps Centurion Marksmanship



# Marksmanship Manual

Marksmanship training involves learning to fire the cadet air rifle. You will be taught many lessons about marksmanship, but the most important is safety. Before you actually fire a rifle you must have a thorough understanding of how to safely handle firearms.

All firing is done on a range, which is a place designed specifically for marksmanship. It could be in a specific building, outside, or even set up in a classroom. An adult, or officer, who is trained to supervise all firing, runs the range. This person is known as the Range Safety Officer (RSO). You must obey every order that the RSO gives as they ensure that your marksmanship program is safe.

## 10 Safety Rules

You are responsible to know the rules about firing an air rifle. This means following these precautions and procedures to ensure everyone's safety:

- Always treat a rifle as if it is loaded
- Never point a rifle at anyone.
- Always have the safety catch in the "on" position (No Red) until ready to safely fire the rifle.
- Always point a rifle in a safe direction.
- Keep fingers off trigger unless ready to fire the rifle.
- Always wear ear and eye protection.
- Never fire more than one pellet at a time.
- Never run or fool around on the range.
- Always follow the directions of the Range Safety Officer.
- Always read and follow local Range Safety Orders.

Range Safety Orders are usually posted in the range or just outside the door and you must read them prior to participating in any range activity. You may recall from Chapter One that Range Safety Orders can also be found in your corps Standing Orders. The most important thing to remember and put into practice is that SAFETY COMES FIRST.

## Characteristics of the Rifle

When you fire in the Sea Cadet program you will use the Daisy 853C air rifle. We refer to the cadet rifle as a rifle. It is not a pistol, gun, shot gun or assault rifle, it is a rifle. The rifle fires 177 calibre pellets, which are known as ammunition.

The Daisy air rifle is a single pump pneumatic, straight pull-bolt action. This means the rifle is pumped once to compress air and it is this pressure which expels the pellet when the trigger is pulled. Do not pump the rifle more than once per shot. Pumping more than once may damage the pressure chamber and all related seals.

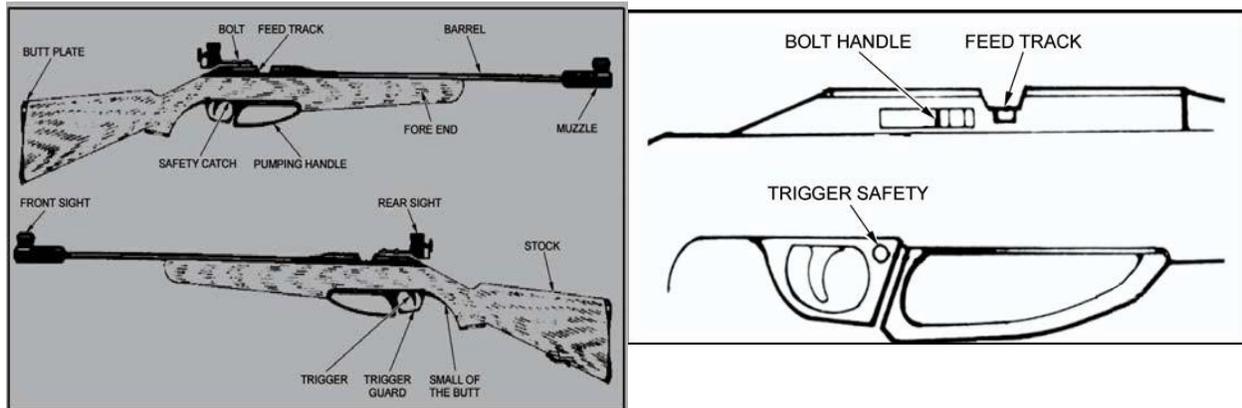
"Did you know that early settlers held marksmanship contests in nearly every settlement in Canada? This makes the sport of marksmanship one of our country's first recreational pursuits."

## Parts of the Rifle

The basic components of the rifle are:

- The Action, which contains the parts that load, fire, and eject the cartridge
- The Stock, that by which the rifle is held
- The Barrel, which is the metal tube the bullet passes through when fired

Look at the following diagrams, they show the parts of the rifle you need to know before you actually fire



## Care and Cleanliness of the Air Rifle

Continuous firing of the air rifle causes a build-up of residue in the barrel. This residue takes two forms: leading and caking. "Leading" residue results from traces of lead pellet that are left inside the bore as the pellet travels down the barrel. "Caking" results when residue from compression chamber air blown into the bore condenses in the barrel.

One way that air rifles are cleaned at the corps is by firing .177 calibre felt cleaning pellets. The natural elasticity of the felt results in compression of the pellet during firing, forcing it to expand in diameter of the barrel, and thus ensuring that the entire bore is cleaned and polished. Felt cleaning pellets are used as part of the regular maintenance of your air rifles at the corps.

## Range Commands

You are now ready to proceed to the range for your first fire. Remember that the Range Safety Officer will lead you through all the steps. Do not talk when you are on the range and obey everything the RSO tells you. If you are not sure about a range command, raise your hand and wait for the RSO to answer your question. Treat all rifles as if they are loaded and NEVER point a rifle at anyone.

The RSO will group you into what is called a relay. When it is time to fire, the RSO or a senior cadet will lead the relay into the range and assign a firing position. The range personnel will ask cadets to stand behind their firing position and wait for help

These are the most common range commands. Remember if you are ever uncertain of what to do, raise your hand and someone will come over and help you.

Command Type	Action
"RELAY #_, COVER OFF FIRING POINT"	Stand up, move behind firing point and await further commands. Put on eye and ear protection.
"ADOPT THE PRONE POSITION"	In accordance with procedures in page 3.
TYPE OF FIRING	This command includes information about the range and type of shoot. i.e., Relay #_, 10 m, five rounds, Grouping, On Your Own Time
RELAY, LOAD COMMENCE FIRING"	Pick up and hold the rifle with your left hand. Ensure the safety catch is in the ON (no red) position. In accordance with safety precautions, rifle should already be in safe status with bolt open fully to the rear and pump lever left partially open. Pump the rifle as indicated. When the pump lever is fully extended, pause about three seconds. Load the pellet or 5-shot pellet clip (the flat end faces forward). Place the safety catch in the OFF (red) position. Aim rifle at the target. Squeeze the trigger. Open the bolt. Repeat sequence for each shot. Place the safety catch in the ON (no red) position and partially open the pump lever immediately after firing the practice. Lay down the rifle.
"RELAY, CEASE FIRE"	Stop firing immediately and put the safety catch in the ON (no red) position. Put the safety in the OFF (red)
"RELAY, UNLOAD"	Pick up the rifle. Remove 5-shot pellet clip. Pump the rifle. Close bolt Place the safety catch in the OFF (red) position. Aim rifle at target. Fire the action. Place safety catch in the ON (no red) position. Open the pump lever 5-8 cm (2-3 inches). Wait to be cleared by range staff. Lay down the rifle Remove eye and ear protection.
"RELAY STAND UP"	Stand up and leave equipment on the ground.
"CHANGE TARGETS"	Move forward, walk down the lane to remove old targets and replace them with new ones. Return to the firing point.
"CHANGE RELAYS"	Shooters who have just fired pick up their personal equipment and move off the firing point. The new relay covers off behind the firing point. Return to the firing point.

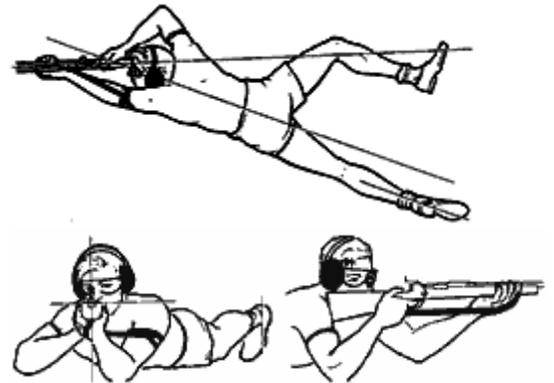
## Firing Essentials

When it is time to fire you will be asked to take the prone position. The prone position allows you to attain the most accurate aim and smallest group size or scores. It provides steadiness and comfort from which to fire, so that your firing will be at its best. With practice, lying down to fire will feel comfortable in no time at all

Speaking of lying down, did you know that Gabriel Dumont, commander of the Metis forces during the North West Rebellion, was buried standing up? Legend has it that Dumont was buried vertically on the banks of the South-Saskatchewan River to allow him to see the enemy coming from the river side

These are the steps to assume the prone position:

- Lie down on the firing mat facing down range.
- Turn your body five to fifteen degrees left from the line of fire.
- Spread your legs apart.
- Keep your right heel on the ground and toes pointed outward.
- Point your left toes out in line with your left leg, heel in the air.
- Bend your right knee and bring it up toward your right elbow.
- Lift your torso off the mat by taking the weight on your elbows.
- Adjust these points until you are comfortable



This position is for a right-handed marksman. If you fire left handed you will have to do the reverse.

As a beginner, your greatest difficulty will be in holding the rifle steady. You will probably use a rifle rest such as a sand bag or pile of books to start and once you perfect marksmanship skills you will replace the rest with a sling. Use of sling:

- Place the sling into bracket.
- Left hand rest in the sling and against bracket.
- Place the left hand around the forestock lightly.
- The sling is run around the back of your left hand.
- Adjust sling to support weight of rifle.
- Left elbow is slightly to the left of the rifle.
- Right elbow is placed a comfortable distance away from the body and supports very little weight.
- Right hand placed around the small of the butt with a light hold.
- Butt plate fits snugly to your shoulder.
- Right eye is approximately 8 cm from the rear sight.
- A triangle is formed with your left arm and the rifle barrel.



## Loading and Unloading a Rifle

When the command to load the Daisy air rifle is given, the following steps should be taken:

1. Pick up and hold the rifle with your left hand.
2. Ensure the safety catch is in the ON position. Following individual safety precautions, the rifle should already be in safe status with bolt open fully to the rear and pump lever partially open. Close the pump lever at this time.
3. Place the sling on the rifle. Establish a good position and correct sight picture.
4. Pump the rifle. This method can be done in three different ways:
  - Option one - Remove the butt from the shoulder and rest it on the mat. Partially open the pump lever with the right hand to the small of the butt. Grasp the pump lever with your left hand halfway up the lever. Lift the rifle upwards until the pump is fully extended while keeping your left elbow stationary. To avoid pinching the left hand, the use of a glove is recommended.
  - Option two - Slightly turn your body on its left side, turn the rifle sideways, grasp the pump handle with your right hand and the forestock with your left hand and open the pump sideways until the pump handle is fully extended while keeping your left elbow still.
  - Option three - Coach Assistance. Remove the right hand from the small of the butt. Hold the rifle loosely in the left hand. The coach should move in and pump the rifle using both hands.
5. When the pump handle is fully extended, pause for about three seconds. (This is very important; if done incorrectly, the rifle will have insufficient air pressure).
6. For option one, bring the rifle down, thereby returning the pump lever to the closed position. For options two and three, bring the pump lever to the closed position.
7. Load the pellet or 5-shot pellet clip (the flat end faces forward).
8. Close the bolt.

When the command to fire the Daisy air rifle is given, the following steps should be taken:

1. Place the safety catch in the OFF position.
2. Aim rifle at the target.
3. Squeeze the trigger.
4. Open the bolt.
5. Repeat parts 3 to 7 of loading the Daisy air rifle and parts 2 to 4 of firing the Daisy air rifle.
6. When firing is complete, place the safety catch in the ON position, and partially open the pump lever.
7. Lay down the rifle.

When the command to unload the Daisy air rifle is given, the following steps should be taken:

1. Pick up the rifle.
2. Remove the 5-shot pellet clip (if used).
3. Pump the rifle.
4. Close bolt.
5. Place the safety catch in the OFF position.
6. Aim rifle at target.
7. Fire the action.
8. Open the bolt.
9. Place safety catch in the ON position.
10. Open the pump lever 5-8 cm.
11. Wait to be cleared by the range staff.
12. Lay down the rifle when ordered to do so

If this all seems confusing, don't worry. Loading and unloading is a simple process that will become second nature after a few practices on the range.

The Canadian Firearms Centre safety training teaches that the vital four “**ACTS**” of firearm safety. The acronym “**ACTS**” stands for:

**A**ssume every firearm is loaded.

**C**ontrol the muzzle direction at all times.

**T**rigger finger must be kept off the trigger and out of the trigger guard.

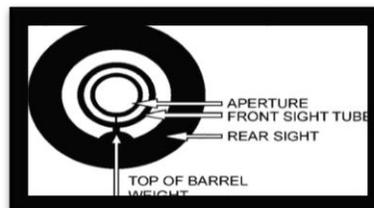
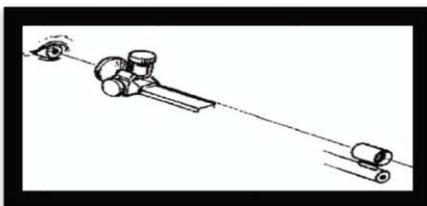
**S**ee that the firearm is unloaded – prove it safe.

## Aiming the Cadet Air Rifle

Cadets must constantly strive to maintain proper sight alignment, while obtaining a sight picture. It is the most critical element of the aiming process.

The **aiming process** consists of: adopting a comfortable position; and ensuring proper body alignment with the target.

**Sight Alignment.** It is the alignment of the eye, the rear sight, and the front sight. When cadets bring their eye 5 to 15 cm from the rear sight, they will find that the small hole is large enough to look through and see all of the front sight. Proper sight alignment is a matter of centering the front sight tube in the rear sight. The tube will not quite fill the rear sight and cadets will be able to see light around the outside of the tube; we call this a “line of white”.



**Sight Picture.** To obtain a proper sight picture, a bull's-eye is simply added to the innermost ring. The goal during the aiming process is to maintain proper sight alignment while keeping the bull centered in the front sight.

**Conclusion**

Many skills must be developed for good marksmanship. It takes time and practice and a great deal of self-discipline. You have learned the basics about firing a rifle and now know that safety is the most important lesson of all. Complete the following quiz to see what you have learned

Answer True or False to the following statements:

A. *The Range Safety Officer is in charge of all personnel on the range.*

*True False*

B. *The stock is the metal tube the pellet passes through when fired.*

*True False*

C. *The prone position is the steadiest position to fire from.*

*True False*

D. *Treat all rifles as if they are loaded.*

*True False*

E. *The Range Safety Officer will divide you into groups for firing, called relays.*

*True False*