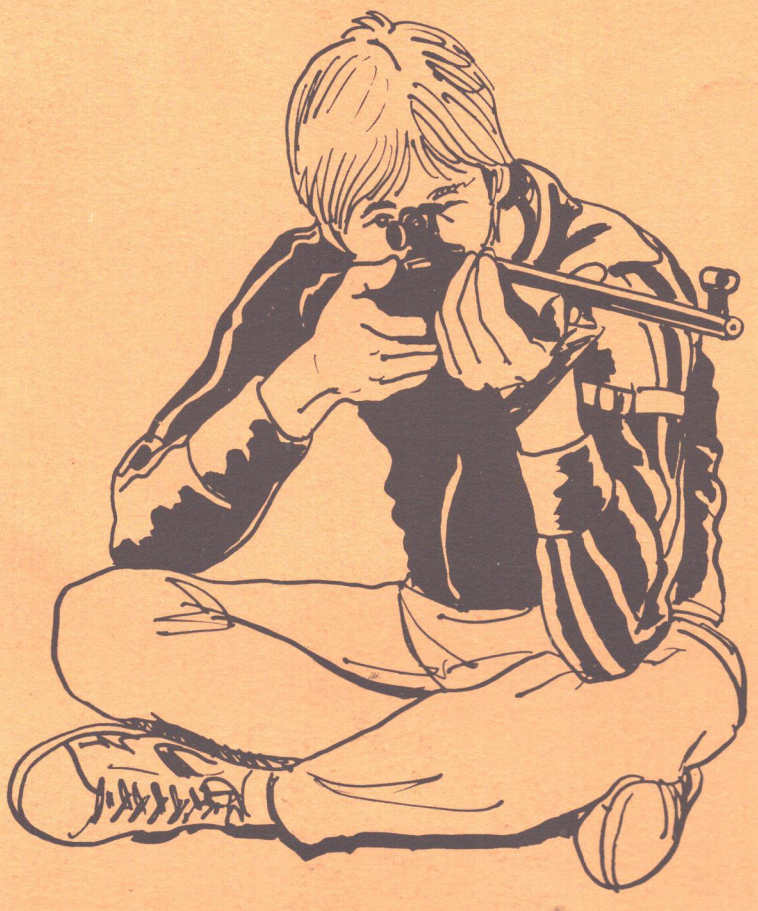
SHOOTER'S GUIDE
TO
FOUR-POSITION AIR RIFLE

Student's Name _____



Fourth Edition

A NATIONAL GUARD MARKSMANSHIP PUBLICATION

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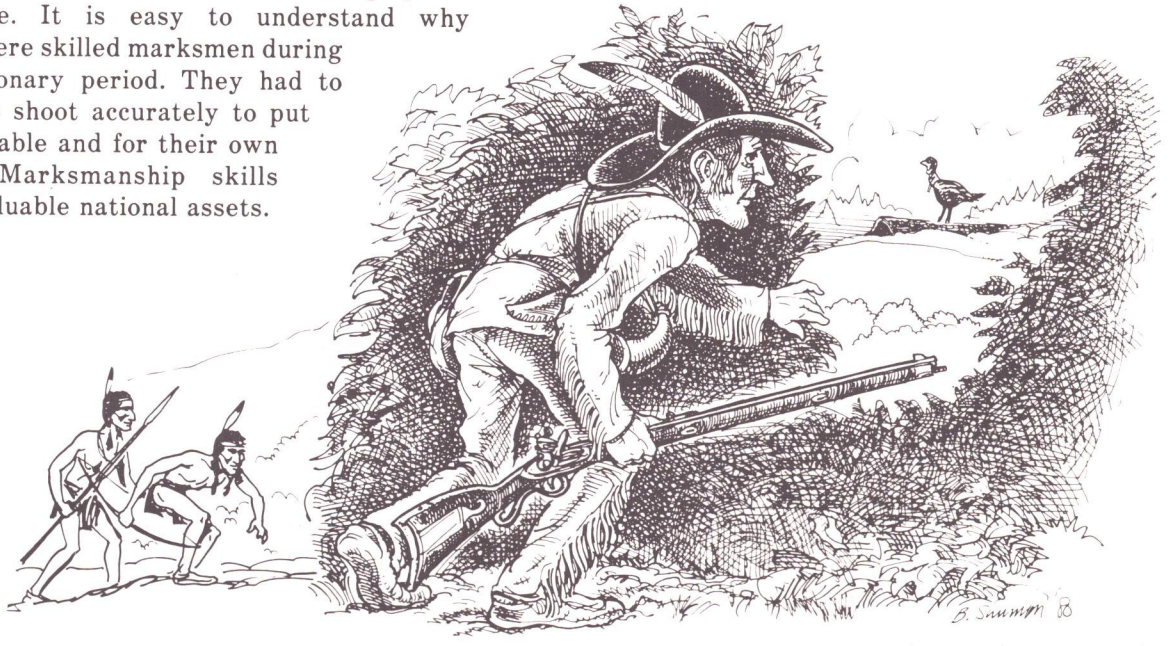
This guide is written for the beginning shooter who has no previous competitive experience. Our purpose is to provide the foundation skills for success in competition.

Recommended changes or comments to improve the Shooter's Guide should be sent to:

Unit Marksmanship Support Center (UMSC)
Attn: Training Operations Branch
P.O. Box 17267
Metropolitan Airport
Nashville, TN 37217

Chapter I
INTRODUCTION

Our forefathers fought the Revolutionary War to gain their freedom as individuals and independence as a nation. Just a few years later the United States of America was called upon to defend this newly won independence in the War of 1812. In both of these wars, the skill of American riflemen played a deciding role. It is easy to understand why Americans were skilled marksmen during the Revolutionary period. They had to know how to shoot accurately to put food on the table and for their own protection. Marksmanship skills have been valuable national assets.



There is still a use for these skills. Today there is another call for expert marksmen in the exciting sport of competitive shooting. In recent years, the United States has been a dominant force in international shooting competition. This includes such events as the World Shooting Championships, the Pan American Games and the Olympic Games.

You are starting to learn a sport that could, with study, practice and hard work on your part, lead you all the way to the Olympics.

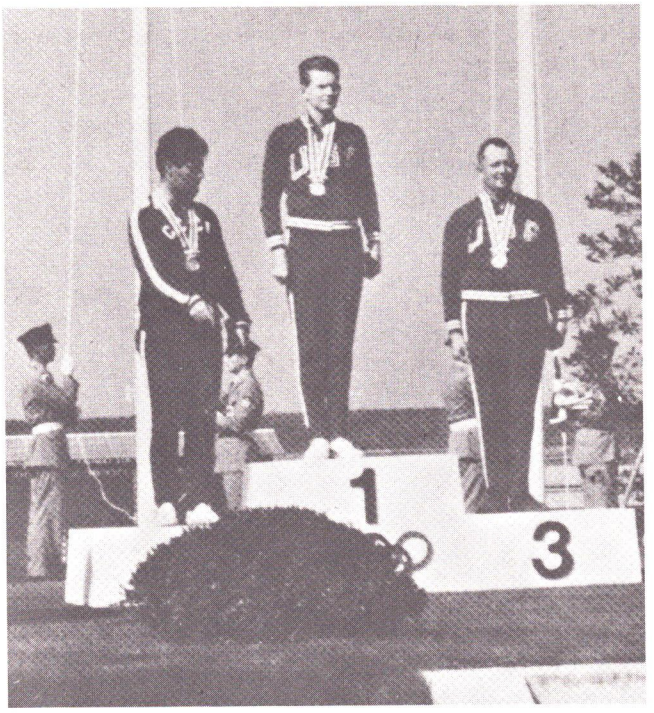


Shooting can be a family affair.

Competitive marksmanship does not require great physical size or strength. Even though physical fitness and stamina are important, mental qualities determine whether a shooter will ever become a champion. Being able to concentrate completely and being able to relax under pressure are just two of the mental keys to success.

Determination is another key to success. Gary Anderson, one of America's greatest marksmen has much to offer as an example. He recollects, "When I began target shooting as a teenager back in Nebraska, I had to teach myself how to shoot. At the time, there were no study materials available and what little I could learn had to be learned from photographs of the few top shooters that appeared in the *"American Rifleman."*

The two time Olympic champion goes on to say, "Young people today are so much more fortunate because of the wealth of good shooting material and programs that are now available. It is worth noting that shooting is one sport where natural ability plays a much smaller role and where effort and initiative applied by an individual shooter are without question the biggest components in determining success."



TOKYO 1964: Gary Anderson fired a world record score to win his first Olympic Gold Medal for the 300 Meter Free Rifle. On the winners stand with Anderson are Shuta Kueliashvili, U.S.S.R, and Martin Gunnerson, U.S.A.

A former National Guardsman, Anderson developed many of the techniques used by world class rifle shooters today. He won two Olympic Gold Medals, seven World Championships, 14 National Championships, and set six world records using these training techniques.

Shooting is one of the few sports where men and women compete against each other as equals. Being male or female has no bearing on who is most likely to win in a shooting match. Women can and often do outshoot the men. Let's look at just two of the many examples. In the 1976 Olympic rifle competition, Margaret Murdock, a 38-year-old woman, won a Silver Medal for the U.S. competing against a nearly all-male field of the world's best shooters.

At the national level, SP5 Mary Stidworthy, a member of the Arizona National Guard in her early twenties, won both the 1977 and 1978 U.S. National Smallbore Prone Championships. She regained the title in 1981 during a week of intense competition at Camp Perry, Ohio.

As more women enter the sport, you can expect them to be winning more matches at all levels of competition.



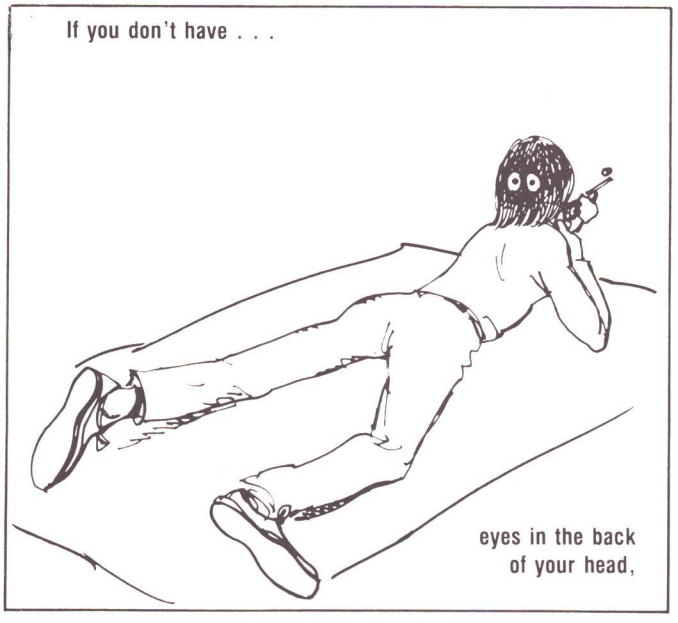
MEXICO CITY 1968: Mexican children admire Gary Anderson's second Gold Medal after he broke his own Olympic and world records in the 300 Meter Free Rifle.

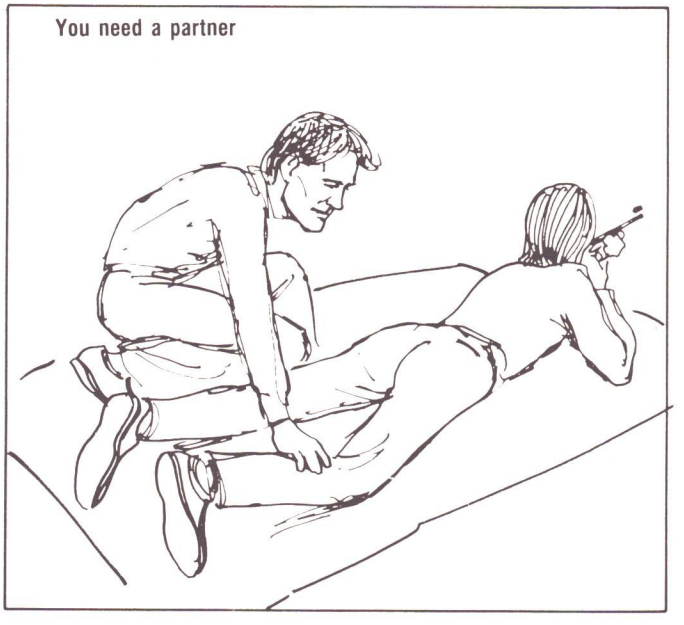


CAMP PERRY, OHIO 1981: Mary Stidworthy takes aim on her third National Championship. The 24 year old collegian has a reputation as one of the best wind shooters in the U.S. When the weather gets rough, she is sure to be gaining points over her competition.

The first step to becoming a skilled shooter is to learn the fundamentals — these are the foundation skills that every future champion must build upon. *"The Shooter's Guide"* provides a detailed explanation of four-position rifle fundamentals. The *Guide* is written for beginning shooters and is intended to be used as a reference text during the first year or two of skill development.

PARTNERS



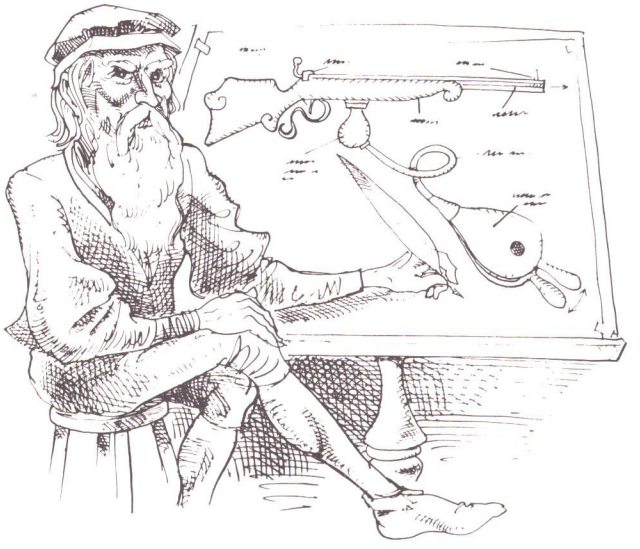


To learn to apply the fundamentals of position shooting without the help of another shooter is nearly impossible. As a beginning shooter, it is essential that you have someone watch you while you shoot and critique your performance. For this reason, we suggest that you form a partnership with another shooter and agree to help each other. When working with a partner, you must not be shy either about offering suggestions or accepting them. Working together for success will enable you both to make quicker progress and have more fun in the process.

Chapter II
A BRIEF HISTORY

Air guns are not a new invention, nor are they simply sophisticated "toys" for those who enjoy recreational marksmanship. Air guns, in existence since the 1500's, have played an important role in the history of shooting.

Leonardo da Vinci, the famous Italian artist and scientist, is thought to have invented the first air



gun. Unlike today's modern pneumatic air guns, these ancient models were powered by a bellows and a strong spring which were housed in the rifle stock. The next models developed were powered by detachable flasks that had to be charged full of air with a separate pump. Some of these air guns were extremely powerful even by today's standards. Because they were practically noise-free, they became popular with poachers who could afford them.



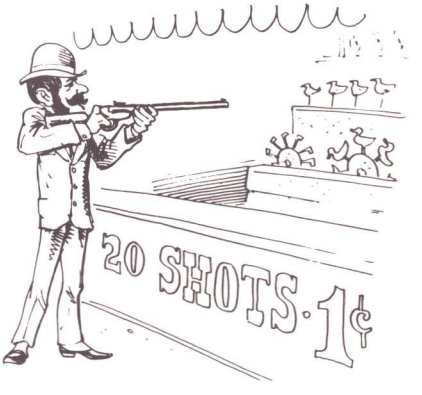
Richard I. Daniel, President of Daisy Manufacturing Co., shows a spring powered bellows type air gun to Lt. Col. Leo Lujan, Director, UMSC. This extremely accurate Austrian "Schutzen" target rifle was built about 1800.

Air guns were even used in battle by the Austrian Army in the late 1700's and early 1800's against the French leader, Napoleon Bonaparte. Because they were quiet, smokeless and more rapidly loaded and fired, soldiers preferred them over the typical muzzle-loading rifles of that era. Bonaparte, Austria's enemy, was so distressed by the air gun's qualities that he ordered on-the-spot execution of any Austrian captured with an air rifle. After 1810, the air rifle was phased out of military use.



Four of the rarest rifles in the Daisy Air Gun Museum are shown above. From the bottom up, they are a 1770 repeating pneumatic rifle built to look like a flint lock; a bellows rifle; a 1830 combination air and percussion rifle; and a 1825 spring wound air rifle that was popular at shooting galleries.

By the mid-1800's, air rifles had become popular at shooting galleries, but were too expensive for most people to purchase. $15 to $30 was a lot of money in those days. The basic design was much the same as one of those still in use today — a spring-driven plunger compresses air which propels a BB or pellet out of the barrel.



In the late 1860's an American, Henry Quackenbush, developed a simple, affordable ($4.50) air rifle that could be mass produced. The public then began accepting and buying air guns for recreational shooting.



Above are just a few of the air rifles types which were mass produced in the United States from 1866 (top) to 1890 (bottom).

Meanwhile, a French inventor was experimenting with a new type of air gun that could be powered by carbon dioxide gas (CO_2). This method wasn't perfected, however, until 1940. Today's CO_2-powered air guns use a small cartridge of compressed gas that delivers about 40 shots. While CO_2 eliminates the need to pump an air rifle, they are considerably more expensive to shoot and less suitable for competition than pump-up models.

After World War I, many European countries banned the use of firearms. Since the air gun is not classified as a firearm it survived the ban and became extremely popular among individuals who still wanted to enjoy target shooting. With the continued growth of interest in air guns since the 1920's, Europeans strove to develop a precision air rifle that could be shot indoors at 10 meters and would perform as accurately as the best smallbore rifles.

Germany has led the way in developing precision air guns and promoting competition. Today nearly every German town has its own air rifle club. Much of Europe and the British Isles have followed suit, with air rifle competition being a formally recognized and highly respected sport. With air rifle competition added to the 1984 Olympics, it is now fully recognized as one of the most prestigious of international sports.

Although the sport is now growing rapidly, air rifle competition in the U.S. has been slower to catch on. The cost of equipment has caused many Americans to shy away from the sport. The very best German made precision air rifles may cost $800 or more, and there has been no American made equivalent in terms of accuracy. Yankee technology, however, is coming to the rescue. American manufacturers are currently working to develop and produce moderately priced, precision air guns that will be comparable to the German made models.

The German made Feinwerkbau was the most popular air rifle on the firing line of the 1981 NRA/Daisy Air Gun Championships held at the Olympic Training Center in Colorado Springs, Colo.



Chapter III
EQUIPMENT, CLOTHING AND SUPPLIES

A principle objective of the National Guard air gun program is to provide a doorway into the exciting sport of competitive shooting for anyone who is interested. To make this possible, we have set out to:

- Keep the cost of equipment low so that new shooters can afford to buy their own rifle, sling, and pellet trap.

- Make the competition a test of an individual's marksmanship skill rather than a test of the shooter's equipment.

POSITION AIR RIFLE KIT

Position Air Rifle Kits are available from the Daisy Manufacturing Co. (Attn: Mr. Tom Louks, P.O. Box 220, Rogers, AR 72756) and from Crosman Airguns (Attn: Mr. Frank Briggs, 980 Turk Hill Road, Fairport, NY 14450) at a very reasonable price.





The kit includes a Daisy Target Model 977 or a Crosman Target Model 2180 pellet rifle, an adjustable web sling, and a pellet trap. These very accurate rifles are ideal for the beginning shooter during the first few years of skill development and competitive shooting.*

***NOTE:** In 1979, all U.S. air rifle manufacturers were invited to submit rifles for evaluation and test for use in the NG Youth Marksmanship Program. The Daisy 977 was selected as the best available rifle for accuracy, utility and price. Today, the Crosman 2180 has also been approved for use.

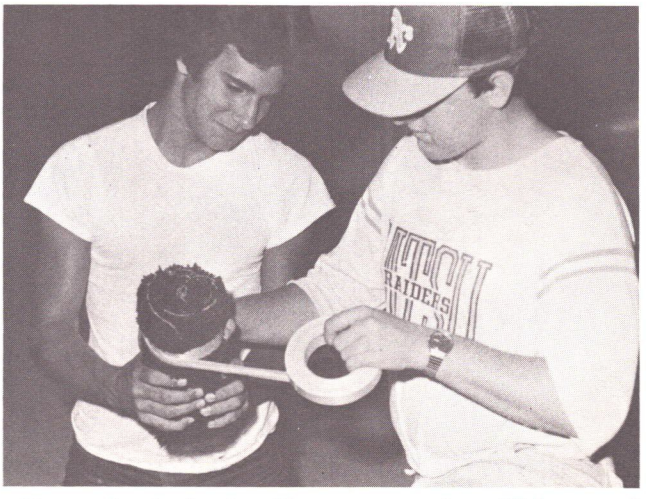
SHOOTING MAT AND KNEELING ROLL

A mat to lie upon when shooting from the prone position will keep your clothes clean and protect the elbows. You can make your own shooting mat and kneeling roll out of carpet scraps which are readily available at no cost from most carpet stores. Making a shooting mat is simply a matter of cutting a piece of carpet 30" wide and 60" long. Use the rubber surface of indoor-outdoor carpeting to prevent the elbows from slipping.

A kneeling roll is used to support your instep in the kneeling position. It can be made out of strips of scrap carpet 8" wide.

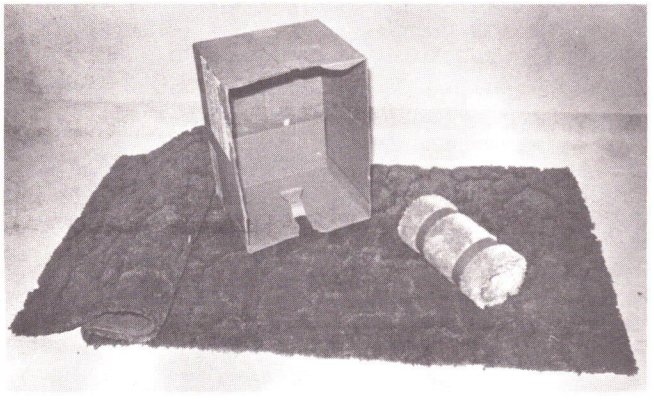


The carpet strips should be rolled loosely with the nap to the outside until they form a roll 4" to 6" thick.



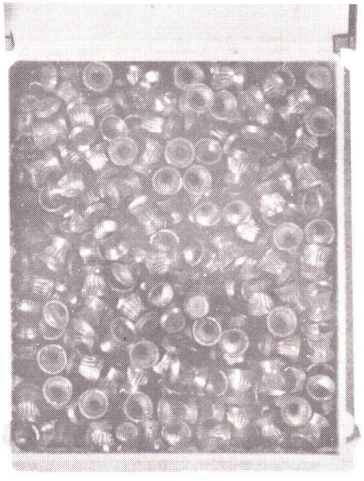
Wrap a band of nylon filament tape about 2" from each end to hold the roll together. Carpet can be added to or taken out of the roll until you find the thickness that is most comfortable for your kneeling position.





CLOTHING

No special shooting coats are allowed. One or more sweat shirts may be worn at the option of the shooter. This will help absorb any pulse beat that may be transferred from the body to the rifle; it will also help keep a tight sling from becoming uncomfortable on the arm. No boots higher than the ankle are permitted.



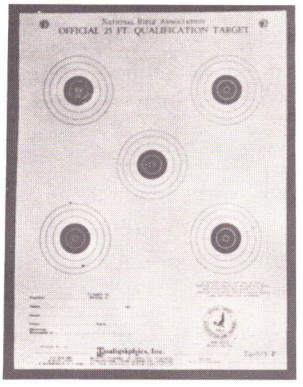
PELLETS

The Daisy 977 and the Crosman 2180 rifles use a .177 caliber pellet available at nearly any sporting goods or hardware store. One of the many advantages of air gun shooting is the low cost of pellets; one penny may buy several pellets.

TARGETS

The targets used in our program may not be available locally. If not, they can be obtained for about a penny a piece from:

Qualigraphics, Inc.
40 Rockwood Place
Englewood, NJ 07631



The designation of the 25-foot target is "Five Bull TQ 5 / 5 - P ' '

MISCELLANEOUS ITEMS

You should get a three-ring notebook binder to hold your *Shooter's Guide* and for recording your scores fired in practice and competition. A stout cardboard box (approximately 15" high and 22" wide) is needed to set your pellet trap upon and to carry your loose shooting gear. You will also need a roll of 1" masking tape to hang your targets to the front of the pellet trap.



Chapter IV
HOME AND RANGE GUN SAFETY

Shooting accidents can be prevented by educating your family in gun safety and by treating all guns with respect and concern. Safety is and must be the number one concern of all those who take part in this program. You must learn how to shoot **safely** before going on to learn how to shoot **accurately.**

Accidents with guns are nearly all caused by:

- Lack of concern for the potential danger involved in the careless handling of a gun.

(or)

- Ignorance about how a gun is operated.

GUN SAFETY IN THE HOME

The most common refrain following a gun accident is, "I didn't know the gun was loaded," said with remorse and stunned disbelief. You can help your family and yourself by making sure that the following safety rules are understood and practiced by all family members.

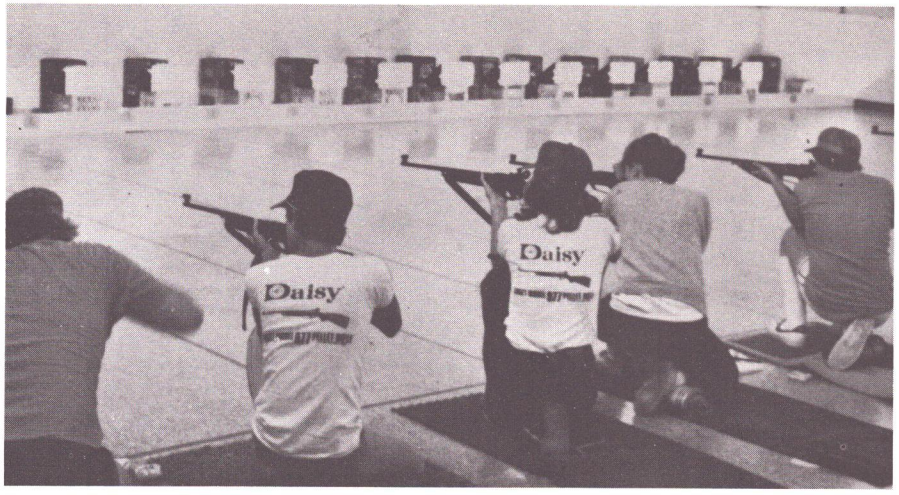
Rule 1. ***When handling a gun, always point the barrel in a safe direction.*** *This is usually down range or up toward the sky or ceiling.*

Rule 2. ***Treat every gun as if it were loaded.*** *When picking up or accepting a gun, check to see if it is loaded.* ***Take no one's word for this;*** *always check yourself.*

Rule 3. ***Know the gun before you handle it.*** *Get expert instructions before you handle a gun that is new to you. Don't investigate the operation of a gun with others who are also unfamiliar with its operation.*

Rule 4. ***Store guns where they cannot be reached by children too young to understand and practice gun safety.*** *Remember that young children are very resourceful at devising ways to get things they want (cookies and candy) or things that arouse their curiosity.*

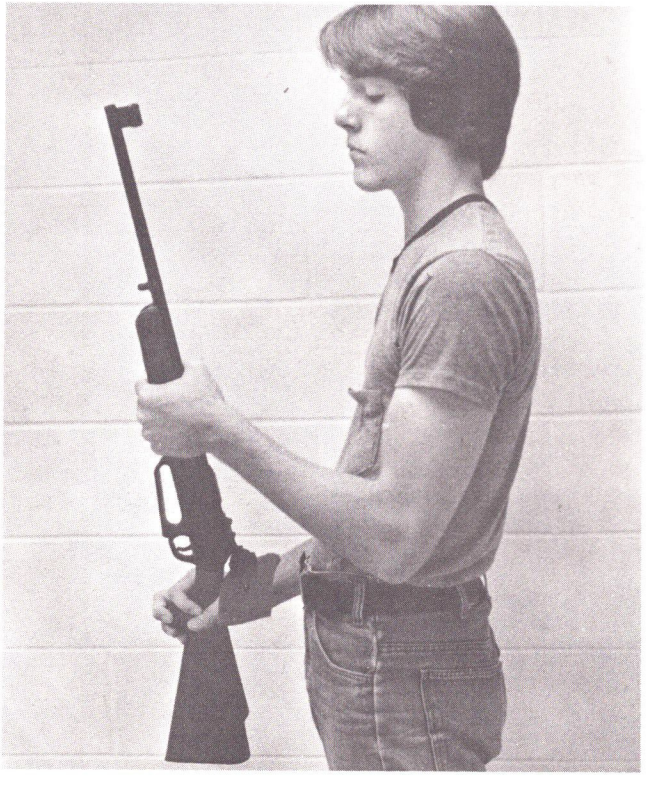
Remember shooting accidents can be prevented, and that SAFETY FIRST is the Number 1 concern of all individuals involved with the sport of shooting, whether you are at HOME, on the RANGE, or in the FIELD.



RANGE SAFETY

Competitive shooting has one of the best safety records of any sport. This is because each shooter is expected to know and practice the safety rules and because range safety is strictly enforced. Any safety violation is grounds for immediate expulsion from a range and could result in the loss of your membership in a shooting post/club. The following indoor safety rules are strictly enforced on all properly managed ranges:

Rule 1. *Treat every gun as if it were loaded.*

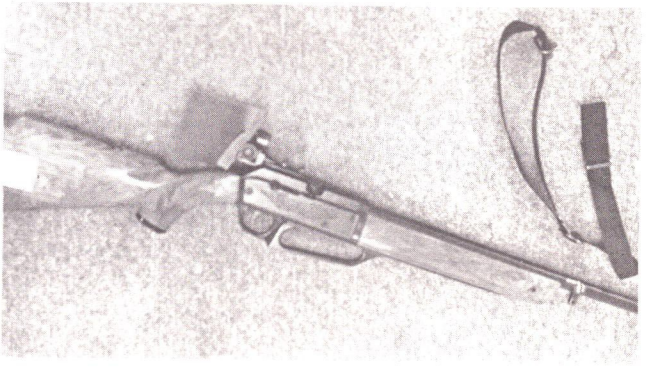


Rule 2. *Always keep the muzzle of a gun pointed in a safe direction; this is usually down range or up toward the ceiling.*

Rule 3. *Be sure that the bolt is open and to the rear when not actually firing a shot.*

Rule 4. *Follow all commands given by the range officer.*

Rule 5. *Never handle a weapon when someone is downrange.*



Rule 6. *When anyone gives the command "cease fire," immediately open the bolt of your rifle and place the rifle on your shooting mat so that the open bolt is visible.*

Rule 7. *Never horseplay in or near the range.*

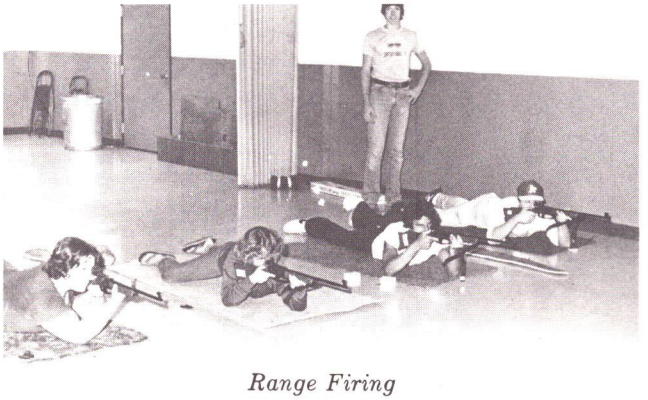
Rule 8. *Use your common sense; be careful.*

Remember that an air rifle is not a toy; it could easily cause serious injury if not handled properly. Think and practice safety at all times.



Range commands are given by the range officer to all people on the range.

To insure that the range is operated safely at all times, it is essential that shooters understand and obey commands **immediately** when they are given. The shooter must also know the range commands so that his or her activity (preparation to shoot and shooting) can be properly paced. Lastly, the shooter must know the range commands because every shooter can expect one day to be a range officer giving commands.



Range Firing

The following commands are typical of those a range officer would give during a match.

"RELAY NUMBER ONE TO THE FIRING LINE."

Once shooters have been given enough time to get to their firing points, the range officer will state,

"GO FORWARD AND HANG YOUR TARGETS."

When all shooters have returned from down range, the range officer commands,

"THE PREPARATION PERIOD STARTS NOW."

Shooters will have three minutes to make their last-minute preparations and then the range officer states,

"THE PREPARATION PERIOD HAS ENDED."

After making sure the range is clear, he proceeds with the range firing commands by stating,

"LOAD YOUR RIFLES."

Shooters may insert clips into their rifles or load a pellet and push the bolts forward. The rifle **may not be** pumped until the command "commence fire" is given. Next the range officer asks the question,

"IS THE LINE READY?"

A competitor who is not ready will immediately raise his arm and call, **"NOT READY ON TARGET__?!"** The range officer will immediately state,

"THE LINE IS NOT READY."

and proceed to investigate the difficulty and assist in correcting it. When this has been corrected, the range officer calls,

"THE LINE IS READY. COMMENCE FIRING. YOU HAVE TEN MINUTES."

After this command, firing commences and shooters have the stated time to complete their firing. At the end of the firing period, the range officer commands,

"CEASE FIRE. MAKE THE LINE SAFE."

Each shooter must stop firing **immediately,** pull the rifle's bolt to the rear, remove the clip (if you use one), and place the rifle on the shooting mat with the open bolt visible. If you have not fired the last pellet in the clip before this command you will still have a pellet in the barrel. Immediately inform the range officer by saying, "PELLET STILL IN THE BARREL." He will command,

'UNLOAD THROUGH THE BARREL."

"IS THE LINE SAFE?"

If the range officer did not observe all rifles grounded and safe he would say,

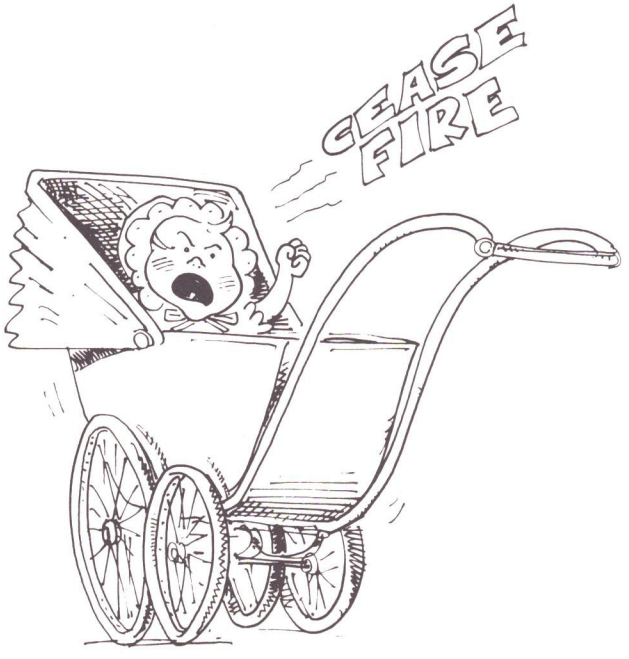
"THE LINE IS NOT SAFE, STAND EASY."

He will then assist in making the line safe. When he can observe that the line is safe, he will say,

"THE LINE IS SAFE. GO FORWARD AND REPLACE (or REMOVE) YOUR TARGETS."

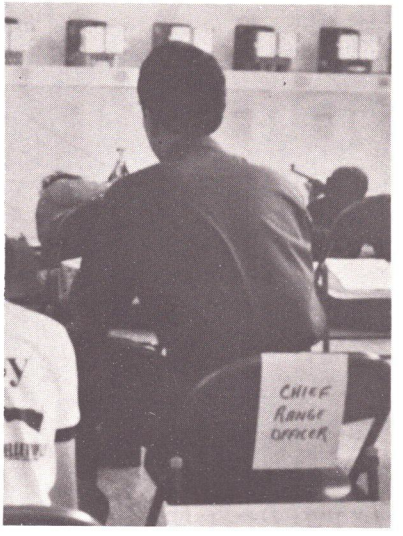
No one may touch or handle a rifle while there is someone down range.

SAFETY IS EVERYONE'S RESPONSIBILITY

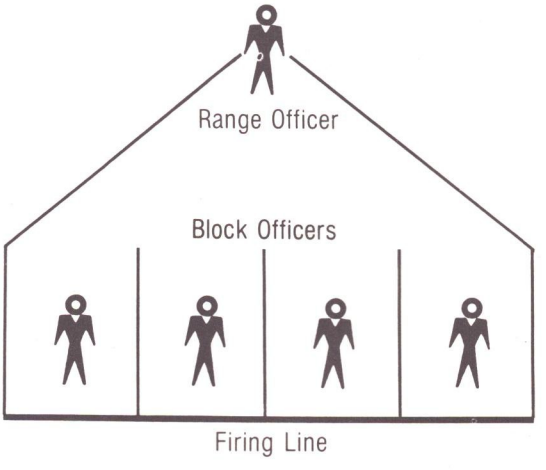


Anyone on a range who observes a dangerous situation has a responsibility to give the command "CEASE FIRE!"

RANGE OFFICIALS



The Range Officer is in charge of the entire range and will run the matches. He is responsible for range safety and for enforcing all rules. The Block Officer is an assistant to the Range Officer. He is responsible for the safety and discipline of range personnel, competitors and spectators in the section of the range to which he has been assigned. There is only one Range Officer at any match but there may be two or more Block Officers depending on the number of competitors.



Chapter V
AIR RIFLE OPERATION

This chapter explains the basic operation of the Daisy Target Model 977 and the Crosman 2180 pellet rifles. The specifications and operation of the Daisy 977 air rifle is contained in Section I and similiar information for the Crosman 2180 is in Section II. Please study the section for the type of gun you are using.

SECTION I
Daisy Target Model 977

This section illustrates the basic specifications, parts and operation of the Daisy Model 977 pellet rifle:

SPECIFICATIONS:

Action:

Pneumatic pump-up. Straight pull bolt. Five shot positive index clip.

Ammunition:

.177 caliber (4.5mm) pellet.

Barrel:

Rifled steel.

Safety:

Manual. (Some rifles have had the safety removed to enchance trigger feel.)

* Feet per second

Sights:

Hooded front sight with aperture inserts. Fully adjustable precision rear peep sight with micrometer calibrations.

Weight:

5 lbs.

Length:

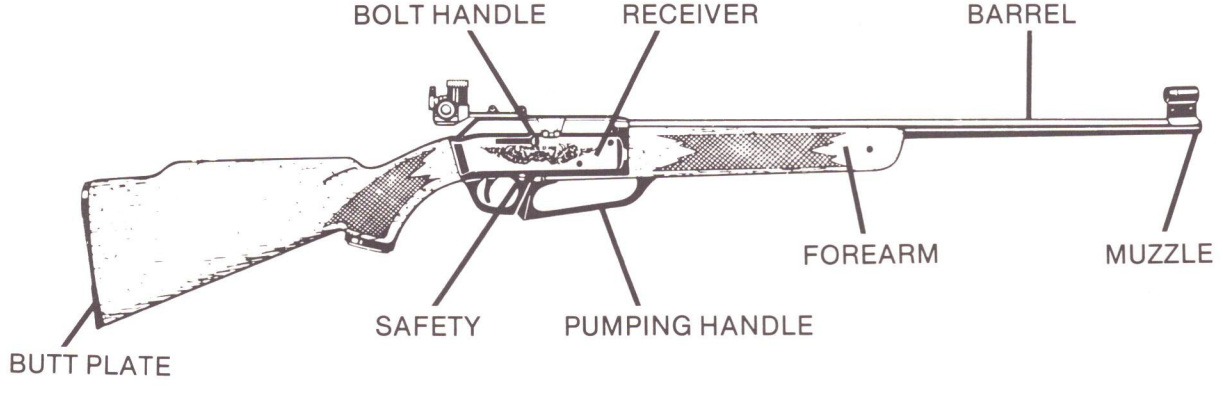
37 3/4".

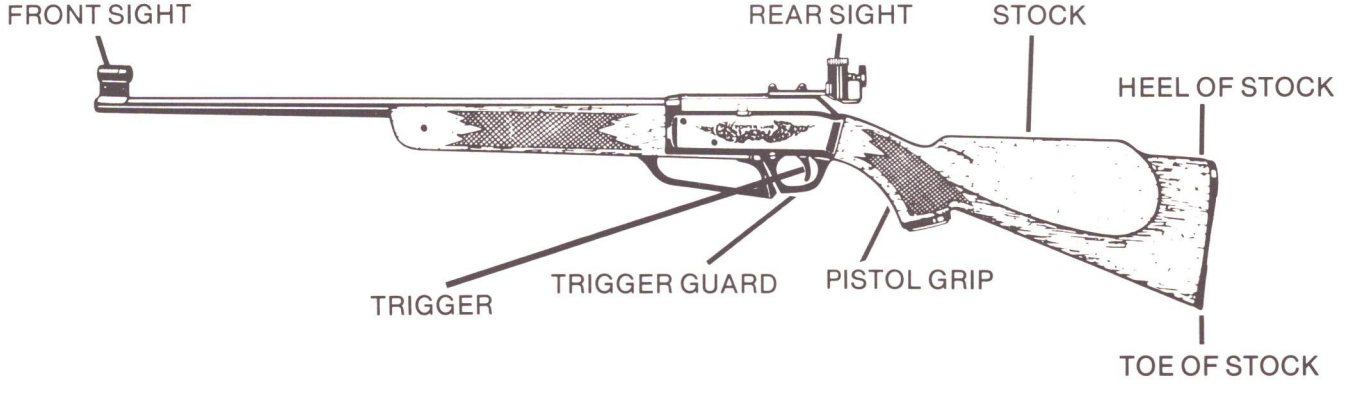
Muzzle Velocity:

Four pumps - approximately 480 FPS*

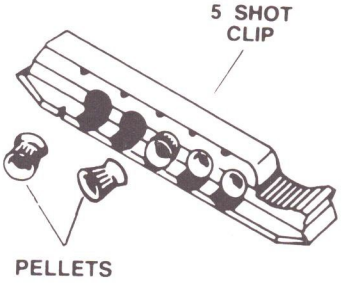
Five pumps - approximately 510 FPS*

The parts of the rifle that you should know are shown below:





LOADING THE CLIP



To load the rifle you must first load the clip. Hold the clip with the notches on the bottom edge facing you. Insert one pellet (solid tip first) in each of the five holes, gently pushing each pellet into the clip until it is firmly seated.



The bolt of the rifle must be left open at all times when you are not actually firing or preparing to fire the rifle. The bolt is opened by pulling the bolt handle straight to the rear until it stops.



The rifle will not fire, however, when the bolt is open. To close the bolt push the bolt handle fully forward.

HOW TO OPERATE THE AIR RIFLE

The following operating sequence should be used to fire the rifle. Start with an open bolt.

Step 1. **INSERT/ADVANCE CLIP**

Grasp the clip in your right hand and insert the clip into the slot in front of the bolt handle on the right side of the rifle. Push the clip until it is flush with the left side of the rifle and you feel the first notch in the clip engage a detent (an internal stopping device).



To advance the clip after firing, push it to the left until the detent engages the next notch.

Step 2. **PUMP**

The bolt must be open when the rifle is pumped. With the muzzle pointed in a safe direction, pump the rifle (see illustration) four times when firing at 25 feet, or five times when firing at 10 meters (33 feet). More than five pumps is unnecessary and may reduce accuracy. **More than 10 pumps will damage the rifle!** To get the same amount of pressure and FPS for each shot, you should pump the rifle at the same pace for each shot. Pumping faster or slower from shot to shot will change the pressure build-up and the FPS. This will affect accuracy.

Step 3. **CLOSE BOLT**

Step 4. **AIM**

Step 5. **FIRE**

} Explained in detail in Chapters VI and VII.

Step 6. **OPEN BOLT**

Step 7. **ADVANCE/REMOVE CLIP**

On the fifth shot, the clip will be flush with the right side of the rifle. After opening the bolt, the empty clip can be pulled out of the slot from the left side of the rifle.

CLEANING

Because there is no powder fouling, air rifles do not need frequent cleaning. A cleaning rod should not be used on the Daisy 977 as it must be inserted from the muzzle and this could destroy the crown (critical to accuracy) of the barrel. Felt cleaning pellets fired through the barrel after every thousand shots is all the cleaning that is ever necessary.



"Keep muzzle pointing in a safe direction when pumping rifle."

SAFETY

The safety is usually not used on the rifle range unless the range officer commands that rifles be put **"ON SAFE."** To do this, open the bolt and push the safety from left to right so that no red is showing. To disengage the safety, push it from right to left so that the red is showing. Remember: Red means danger; the rifle is capable of being fired.

Some versions of the Daisy Model 977 **are not equipped with a safety.** In those cases, it is very important that you **handle your air rifle carefully** and that you **pay special attention** to the range officer.

SUMMARY
OPERATING SEQUENCE

Steps	1st shot	2nd to 4th shot	5th shot
1	Insert clip	Advance the clip	Advance the clip
2	Pump	Pump	Pump
3	Close bolt	Close bolt	Close bolt
4	Aim	Aim	Aim
5	Fire	Fire	Fire
6	Open bolt	Open bolt	Open bolt
7			Remove clip

SECTION II
Crosman Target Model 2180

This section illustrates the basic specifications, parts and operation of the Crosman 2180 pellet rifle:

SPECIFICATIONS:

Action:

Pneumatic pump-up. Straight pull bolt. Single pellet loading.

Ammunition:

.177 caliber (4.5mm) pellet.

Barrel:

Rifled brass.

Safety:

Manual.

* Feet per second

Sights:

Globe front sight with aperture inserts. Fully adjustable precision rear peep sight with micro-click calibrations.

Weight:

5 lbs.

Length:

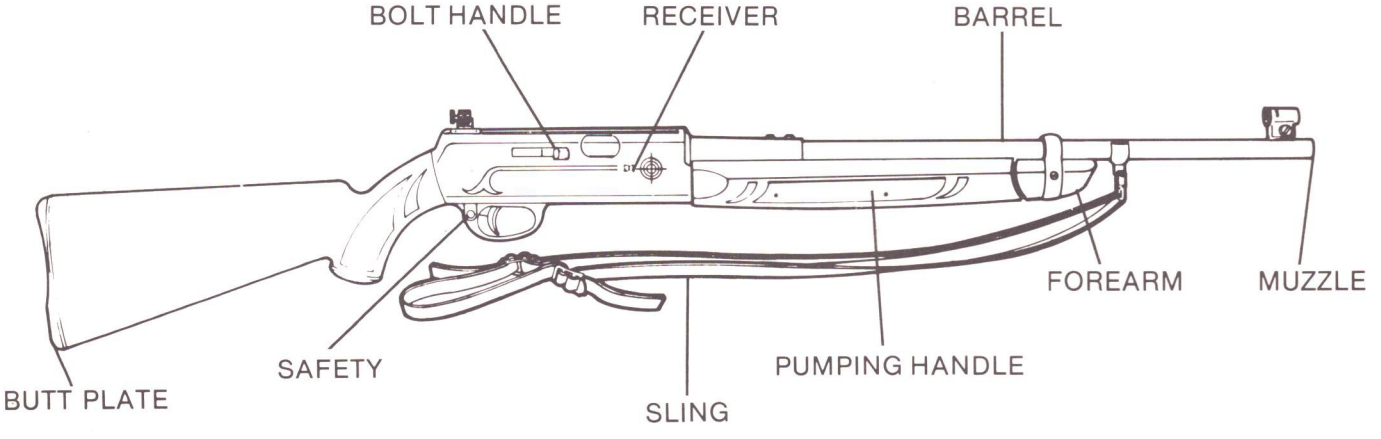
39 3/4".

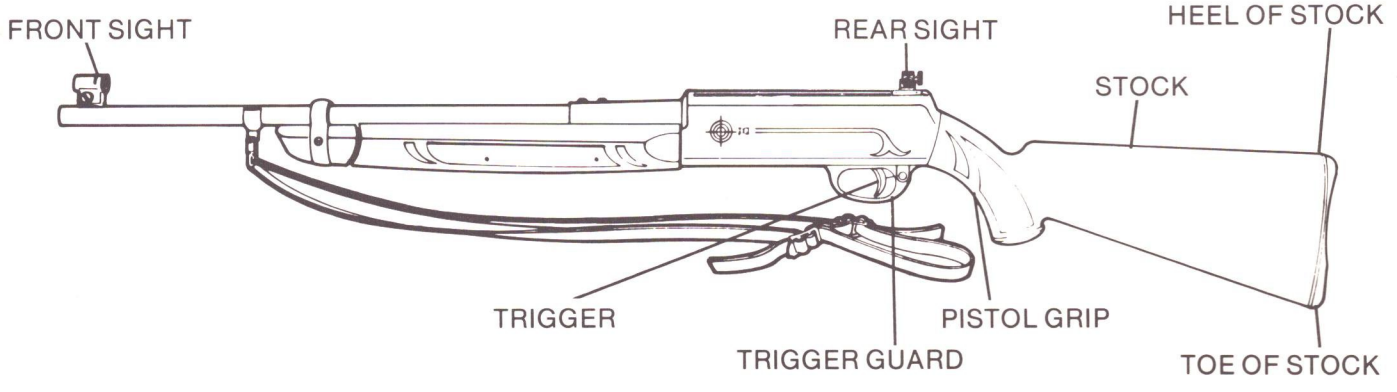
Muzzle Velocity:

Four pumps - approximately 525 FPS*

Five pumps - approximately 575 FPS*

The parts of the rifle that you should know are shown below:





HOW TO OPERATE THE AIR RIFLE

The following operating sequence should be used to fire the rifle.

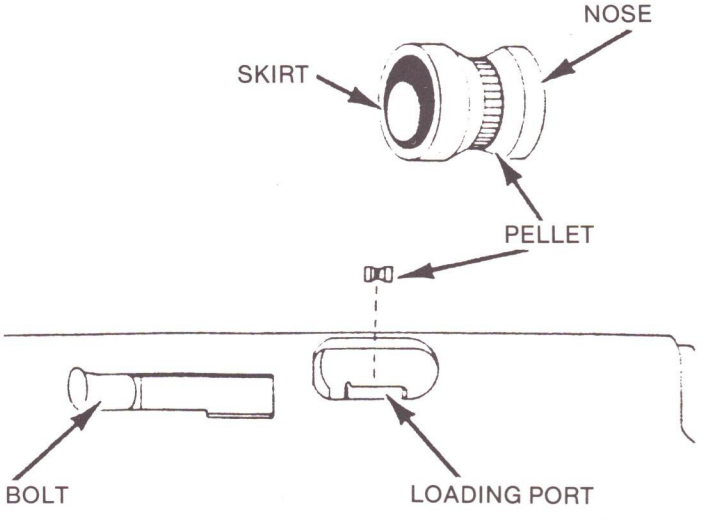
Start with an open bolt.

The bolt of the rifle must be left open at all times when you are not actually firing or preparing to fire the rifle. The bolt is opened by pulling the bolt handle straight to the rear until it stops.

The rifle will not fire, however, when the bolt is open. To close the bolt push the bolt handle fully forward.

Step 1. **LOAD THE RIFLE**

Grasp the rifle with your left hand and place one pellet in the loading port. The nose (solid tip) of the pellet must point toward the muzzle.



Step 2. **CLOSE BOLT**

Step 3. **PUMP**

With the muzzle pointed in a safe direction, pump the rifle (see drawing) by opening the forearm all the way until it stops. Then, close it with a smooth stroke. Use at least 2 pumps to avoid jamming the barrel; four or five pumps is recommended. More than five pumps is unnesary and may reduce accuracy. **More than 10 pumps will damage the rifle!** To get the same amount of pressure and FPS for each shot, you should pump the rifle at the same pace for each shot. Pumping faster or slower from shot to shot will change the pressure build-up and the FPS. This will affect accuracy.

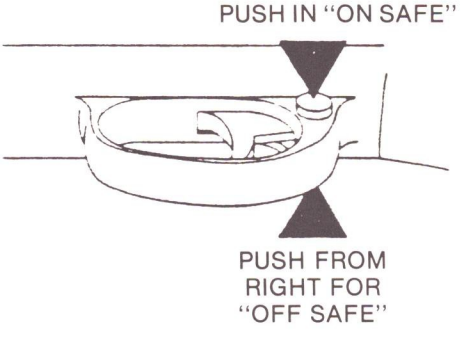
CAUTION: Don't pinch your hands or fingers when the forearm closes.

Step 4. **AIM**
Step 5. **FIRE**
} Explained in detail in Chapters VI and VII.

Step 6. **OPEN BOLT**

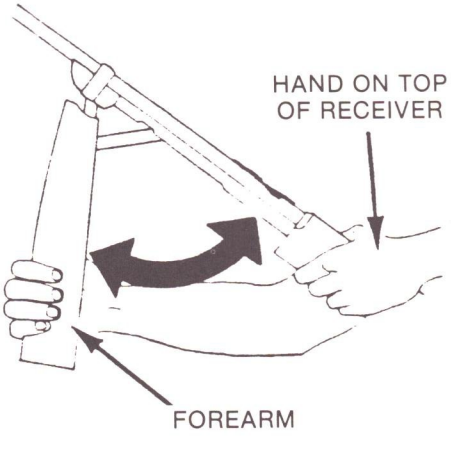
SAFETY

The safety is usually not used on the rifle range unless the range officer commands that rifles be put **"ON SAFE."** To do this, open the bolt and push the safety from left to right so that no red is showing. To disengage the safety, push it from right to left so that the red is showing. Remember: Red means danger; the rifle is capable of being fired.



CLEANING

Because there is no powder fouling, air rifles do not need frequent cleaning. A cleaning rod should not be used on the Crosman 2180 as it must be inserted from the muzzle and this could destroy the crown (critical to accuracy) of the barrel. Felt cleaning pellets fired through the barrel after every thousand shots is all the cleaning that is ever necessary.



Pumping the Crosman 2180

SUMMARY
OPERATING SEQUENCE

Steps	
1	Load pellet
2	Close bolt
3	Pump
4	Aim
5	Fire
6	Open bolt

Chapter VI
AIMING

Aiming is the most important of the basic rifle fundamentals. Without proper and consistent aiming, it is impossible to achieve consistently good shooting scores.

YOUR VISION

There is no such thing as "perfect vision." The term "20/20 vision" means only that a person can read the alphabet letters 8.7 millimeters high from a distance of 20 feet. Anyone without serious eye defects can usually have 20/20 vision, either naturally or with the help of prescription lenses. If you need glasses, get them. Wearing glasses **does not** impair your shooting ability. In fact, some of the world's best shooters wear corrective lenses. With or without glasses, you must have good vision and your eyes must be used correctly if you are to aim each shot to the best of your ability.

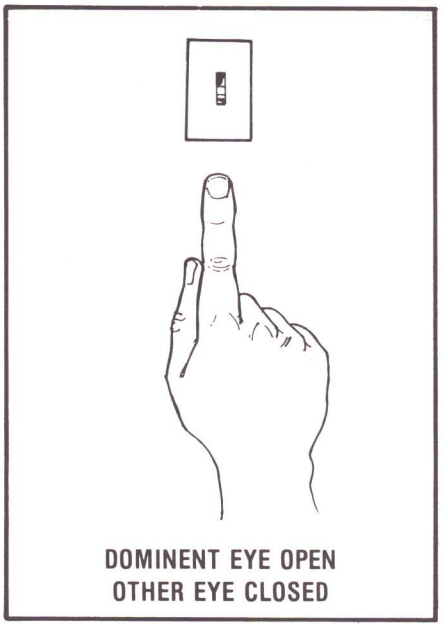
DOMINANT EYE

People are called right or left handed, depending on which hand they use most frequently. You also have one eye that does most of the work. It is called the dominant eye. Shooters should be aware of which eye is dominant since it may affect the way they aim and hold the rifle.

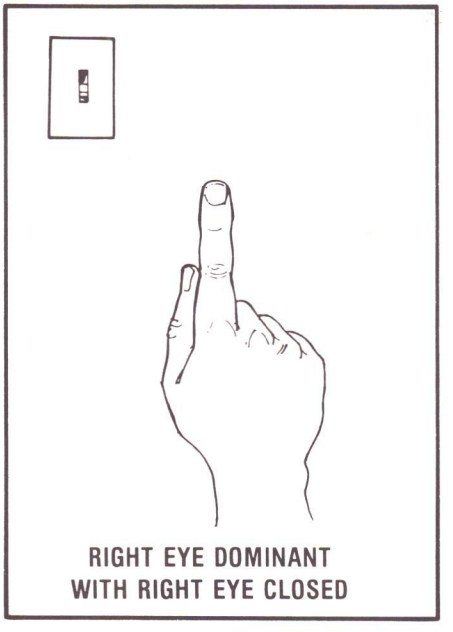
To determine your dominant eye, use this simple test: With both eyes open, extend your arm and point at a small object, such as a light switch, on the wall across the room. Without moving your arm, close your left eye. If your finger is still pointing directly at the switch, your right eye is dominant. If this is the case, close your right eye and you will notice that the switch seems to have moved to the left of your pointed finger. If your left eye is dominant, the reverse is true.

The dominant eye is the brain's primary source for the visual image of what we see. The non-dominant eye is used primarily for depth perception or our sense of distance.

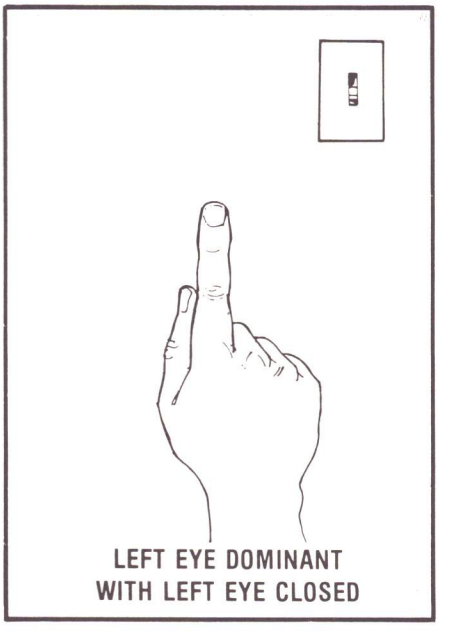
Before proceeding with the text, make sure you understand eye dominance and know whether you are right or left eyed. The illustration below may help you:



DOMINENT EYE OPEN
OTHER EYE CLOSED



RIGHT EYE DOMINANT
WITH RIGHT EYE CLOSED



LEFT EYE DOMINANT
WITH LEFT EYE CLOSED

Check for Eye Dominance
With both eyes open, point your finger at a small object 10-20 feet from you.

Right Eye Dominance
Close your left eye and the object will not move.

Close your right eye and the object will appear to jump to the left of your finger.

Left Eye Dominance
Close your right eye and the object will not move.

Close your left eye and the object will appear to jump to the right of your finger.

If possible all beginning shooters should learn to shoot a rifle with the stock in their right shoulder and aim with their right eye. Rifles are designed and manufactured for right handed shooters. There is little apparent concern for the left handed shooter. Converting a rifle for left handed use is often expensive and not always satisfactory. Therefore, it is easier in the long run for individuals with left hand and/or eye dominance to learn to shoot from the right handed position. Left eyed shooters who aim with the right eye must wear a blinder (explained later).

GET THE MOST FROM YOUR EYES

By learning how to use your eyes properly, you can see better and work them longer. To do so, practice the techniques outlined below.

Proper Head Position. Keep your head as close as possible to a position which allows your eyes to look forward from the eye socket. Try moving your eyes as far in one direction as you can (up, down, right or left) in the eye socket. Almost instantly you will feel the strain on the eyes. The closer you can position your head so that your eyes are looking straight from the eye socket, the more relaxed your eye muscles will be.

Both Eyes Open. Your eyes were designed to work together as a team. Close one eye and you'll have to strain to keep the other eye open. Close one eye and its pupil will dilate (become larger), causing the other eye to strain. Your eyes work best when they are both open, but this may cause you to see double when you are sighting the rifle. To solve the problem of double vision, you may wish to wear a blinder over your non-shooting eye. It can be attached to your glasses, hat brim, or the preferred location which is on the rifle's rear sight. A blinder will enable you to keep both eyes open, preventing eye strain which can hinder your perception of the sights and target.

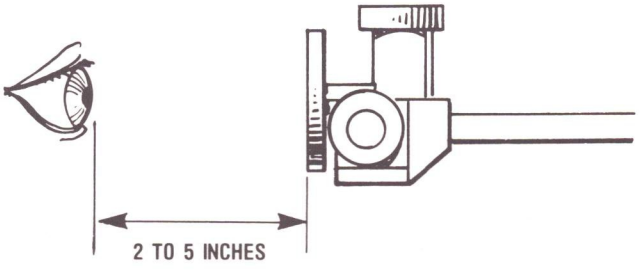


Shooter using a blinder.

Avoid Fixed Vision. If you fix your vision on one object, such as a target bullseye, for more than a few seconds, you will burn the image of the bull into your eye and see a "ghost" image of the bull when you glance to the side. It is especially important for shooters to avoid this fixed vision, because it results in a loss of visual perception and can greatly hinder your shooting performance. To avoid fixed vision, you need only to blink or slightly shift your vision every four or five seconds.

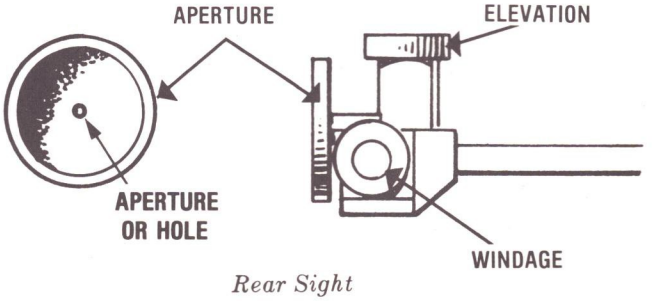
EYE RELIEF

Eye relief is the distance between the eye and the rear sight. Depending on a shooter's individual build and position, this distance is usually two to five inches. Strive to achieve an eye relief that is comfortable, natural, and allows you to see a circle of light around the front sight as you look through the rear sight. It is important to maintain the same eye relief from shot to shot and to find an eye relief that allows you to keep your head as erect as possible during the shooting process.



Eye Relief Illustration

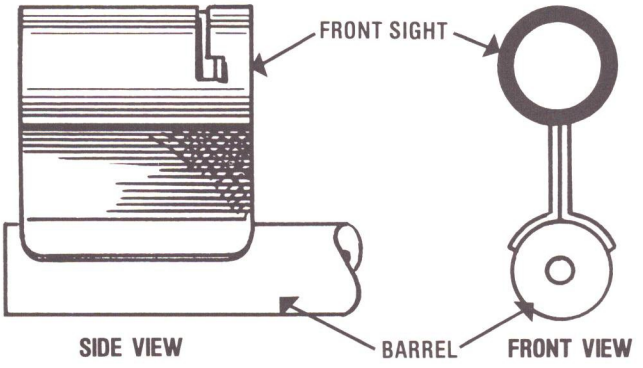
Rear Sight. The part of the rear sight which you look through is the aperture. It is a small disk shaped like a frisbee with a very small hole in it.



Rear Sight

From a distance the aperture looks like the above illustration.

Front Sight. The front sight on the Daisy 977 or the Crosman 2180 is hooded. This feature, found on most competition rifles, is to shield the sight from overhead or side light. The hood, formed by a short tube, is supported by a slender base which is attached to the rifle barrel. The hooded front sight without aperture insert will look like this:

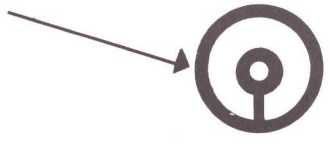


There are several inserts which can be used with the front sight, but only the aperture insert favored by most competitive shooters is discussed here.



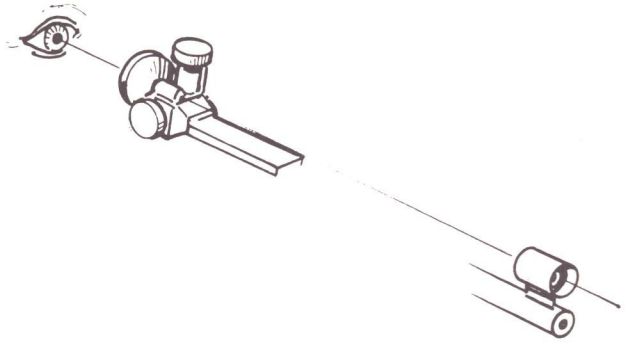
APERTURE INSERT

The insert slips into a slot in the hood. With the aperture insert installed, the front sight looks like this:



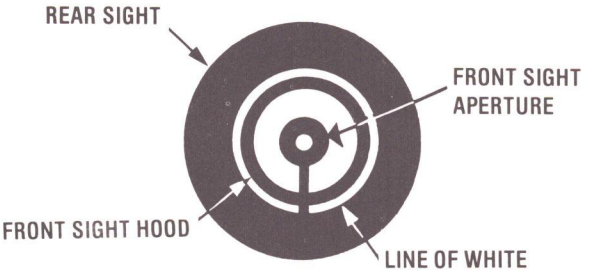
SIGHT ALIGNMENT

Sight alignment is the most critical element of the aiming process.



Sight alignment is simply the relationship between the front sight and the rear sight with respect to your eye.

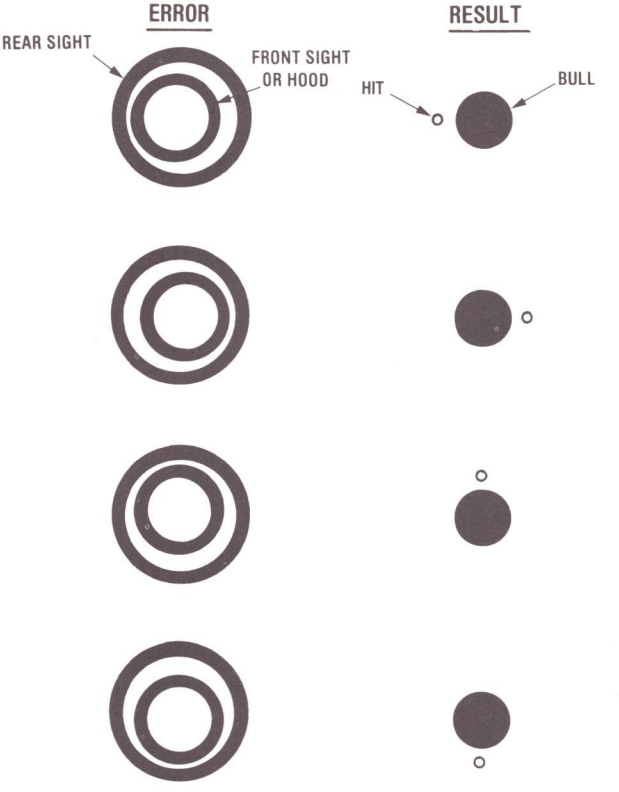
When you bring your eye up close (2" to 5") to the rear sight you will find that the small hole is large enough to look through and see all of the front sight. Proper sight alignment is a matter of centering the front sight hood in the rear sight aperture. The hood will not quite fill the rear sight and you will be able to see light around the outside of the hood. We call this a "line of white." To keep your sights properly aligned, the line of white must be equal on all sides.



The view from the rear sight should look like the above illustration for perfect sight alignment.

SIGHT PICTURE WITH ALIGNMENT ERRORS

A very small error in sight alignment will cause a dramatic change in the placement of a shot on the target. With the bull properly centered in the front sight, sight alignment errors will result as follows:

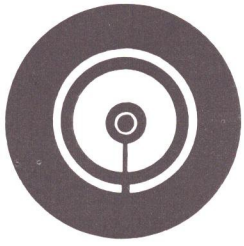


Sight Alignment Error and Results.

Only the rear sight aperture and front sight hood are represented.

You must constantly strive to maintain proper sight alignment. It is the most critical element of the aiming process.

Sight picture includes the same two elements involved in sight alignment — the rear and front sight — plus a third element, the target bull.



Center the bullseye within the front sight aperture, while maintaining sight alignment, and you now have sight picture.



To the shooter who is concentrating on sight alignment, any movement of the rifle while aiming will make it appear as though the bull is moving around within the front sight aperture. This apparent movement of the bull should not overly concern the beginning shooter.

As long as your sights are aligned properly, you will have a fairly good hit, even if the bullseye is slightly off center in the front aperture when the shot is fired.

SHOOTING TERMS

The following terms are used extensively in the balance of the ***Guide*** and must be understood before going on.

Hold. This is a term frequently used by shooters in describing the process of firing an accurate shot. "Hold" refers to the steadiness with which the shooter can maintain the rifle while aiming and firing. Perfect hold would mean that the shooter was able to aim and fire the rifle without any movement; only the most advanced marksmen are able to achieve this in all four positions. Beginning shooters must learn to accept movement of the rifle and try to fire each shot while the rifle is steadiest or their "hold" is at its best.

Group. Being able to "group" three shots on a target with some degree of closeness is the first goal a new shooter must accomplish.

Group size indicates how well and with what consistency a shooter can aim and fire a rifle. The smaller the group, the better. The best group one could achieve is to fire three or more shots through the same hole, but even champions seldom do this.

Beginning shooters should be pleased when they can, after some practice, fire three-shot groups that can be covered by a quarter.

Once a shooter is able to consistently group on the target, the task of skill development can proceed.

Kentucky Windage. Sometimes a hunter, knowing his rifle's sights are off in one direction, will aim at a point in the other direction from his target to compensate; this is called "taking Kentucky windage." It is a very imprecise field expedient which is not appropriate for indoor competitive shooting.

When you are able to start grouping your shots consistently, it is very likely that the center of your shot group will not be in or near the 10 ring. Resist the temptation to take Kentucky windage to bring your shot group into the middle of the bull. Score has no importance at this point and you must concentrate all your effort on firing the tightest groups possible. You will learn how to adjust your sights and score in a later chapter.

Chapter VII
FIRING A SHOT

To someone observing a champion shooter firing a rifle, the process of firing a dead center shot looks deceptively easy. The shooter shoulders the rifle. Moments later, the rifle fires and a hole appears in the middle of the bullseye. "Nothing to it!" the observer might think. It is not quite that simple for the shooter.

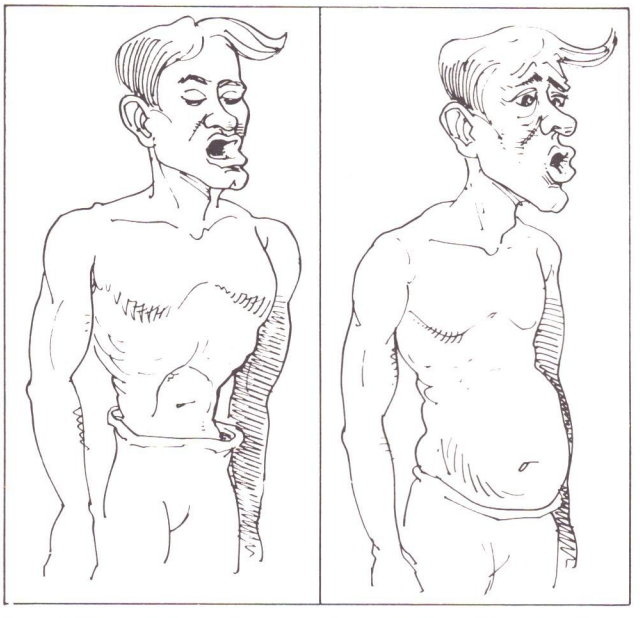
There are three fundamental activities which have to be coordinated while firing a shot. The first fundamental, aiming, we have already discussed; the other two are breath control and trigger control.

Even after the shot is fired, the shooter must follow through properly. All of this we call the coordinated act of firing a shot.

You may be wondering if you can master all these different factors, but take heart! It is not as difficult as it sounds. Think back to the time you first tried to ride a bicycle. You were probably pretty awkward and embarrassed at the start but with practice you were able to master and coordinate each of the required skills. You will find the same is true of shooting.

BREATH CONTROL

To demonstrate the upper body bone and muscle movement involved in breathing, quickly take in a big full breath of air — hold it a moment — now let it out quickly. This movement, even if done slowly, will disturb your aim. As a result, you must learn to shoot during a brief pause in your breathing; we call this technique "breath control."

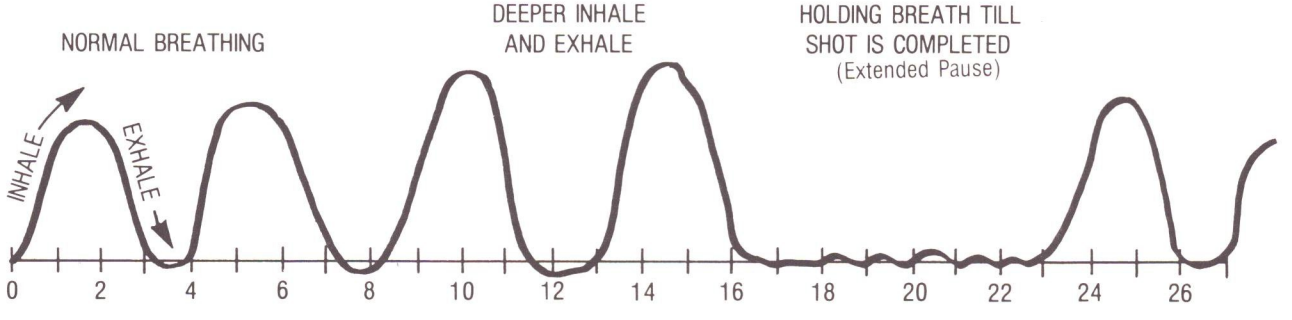


DO NOT — Inhale Completely or Exhale Completely

Your typical respiratory cycle (inhale, exhale and pause) lasts about five seconds when you are not exercising. Inhaling and exhaling take about three seconds followed by a pause of about two seconds. This pause can usually be extended to 10-12 seconds without discomfort or negative effects. It is during such a pause that you should aim and fire a shot. Never feel you must fire the shot before breathing again.

The time graph below illustrates the respiratory cycle while firing a shot. Inhaling is indicated by the rise of the heavy line and exhaling by the fall of the line. Pause is indicated by flat lateral movement of the line. During the extended pause in your breathing, you strive to perfect your aim and coordinate it with your pressure on the trigger so that the shot breaks at the best possible time.

If the pause in your breathing is extended too long, however, your body will suffer from oxygen deficiency which will set up involuntary muscle



Respiratory Cycle Time Graph

movements. When oxygen deficiency affects your ability to hold, you should stop the firing sequence.

One of the most frequent causes of bad shots is holding the breath too long. If the shot does not break in 12-14 seconds begin breathing and start all over again.

The steps in the breath control sequence are as follows:

- Shoulder your rifle and breathe normally until your sight picture begins to settle.
- Take a slightly deeper breath, exhale and pause. During this extended pause, you should not trap any extra air in your lungs and your chest diaphragm should be comfortably relaxed.
- Refine your aim and fire the shot during the extended pause.

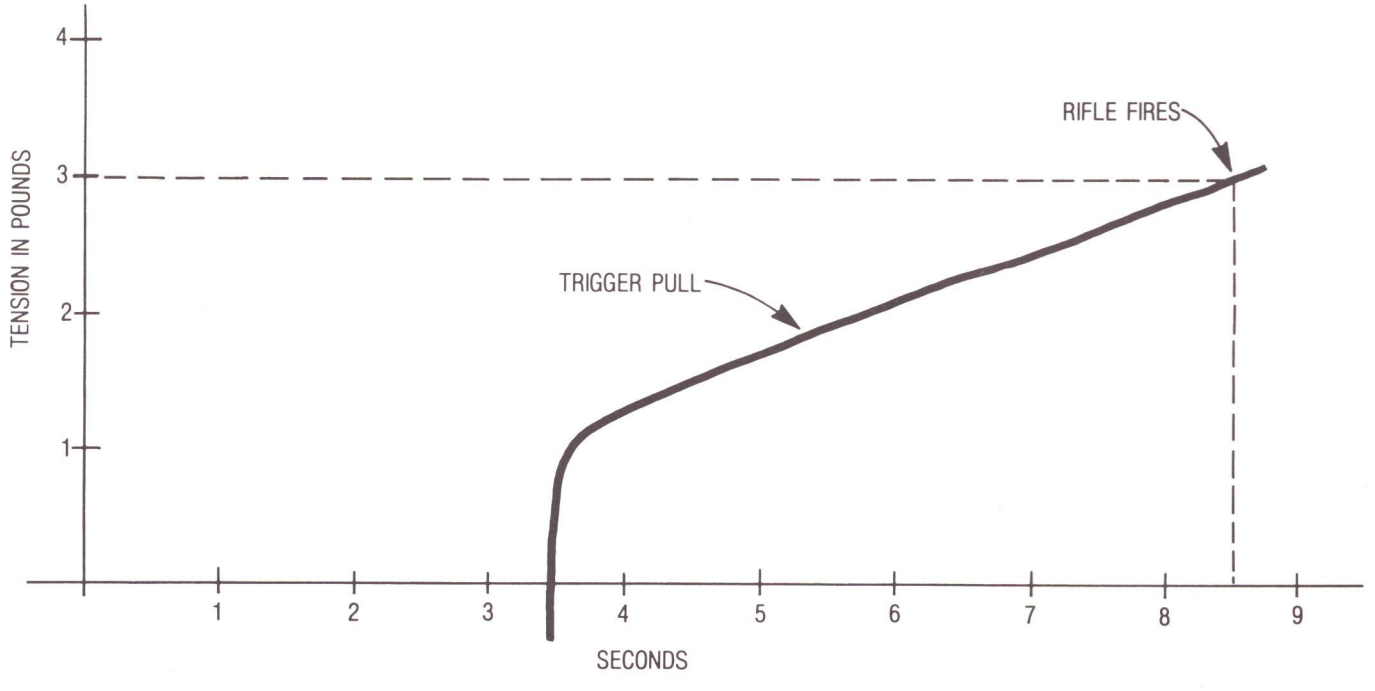
TRIGGER CONTROL

Trigger control is the act of causing the rifle to fire without disturbing the aim. In time, it will become a reflex action which you don't consciously think about as you are shooting. In the beginning, you will need to think about each one of the following steps in the trigger control sequence.

- Shoulder your rifle and when the bull is in your front sight, place your finger very lightly on the trigger. This very light pressure will take up any slack (initial looseness) in the trigger.
- When your sight picture begins to settle (as a result of improving hold), take up about 1/3 of the trigger weight (total pressure required to fire).
- When your sight picture is acceptable (the movement of the bull is at its minimum and your hold is at its best), steadily increase trigger pull until the shot breaks. This steady increase in pressure will take from three to five seconds to complete and the exact timing of the shot should be a surprise.

The time graph below illustrates the relationship of trigger pull and sight picture. When sight picture settles, the shooter places about a pound of initial pressure on the trigger and starts a steady increase in pressure until the gun fires.

You can easily ruin your aim with your trigger finger. Be sure that your trigger finger **does not** contact the stock of the rifle at any point and that your pressure on the trigger is applied straight to the



Steady Trigger Pull

rear of the rifle. When the trigger finger touches the stock or trigger pressure is not straight to the rear, the rifle may be pushed to the right or to the left. This affects aiming.

There are circumstances when it is better to stop the firing sequence than to push on:

- Running out of breath.
- Mental distraction.
- A deterioration of your hold.

All of these are good reasons to stop the firing sequence, relax and start over.

Stopping the firing sequence can be costly if it is not done properly. It is a two step process where pressure on the trigger must be released first, then you relax your hold. Should you ignore this sequence and relax your hold just as the rifle fires, you are likely to have a bad shot.

You should understand the following terms which are common to the sport of shooting:

Creep. Any trigger movement from the point after the slack is taken up to the point where the rifle fires is called creep. There is about 1/4 inch of creep in the Daisy 977 or the Crosman 2180 trigger. As you are steadily increasing trigger pressure, the trigger will be moving to the rear.



THE JERK

Jerk. The "jerk" is the most common trigger control mistake made by new shooters. A jerk is when a shooter momentarily sees perfect sight picture and applies immediate trigger pressure causing it to fire an instant after the pressure is applied. This sudden pressure will pull the rifle down before the pellet clears the barrel; it happens so quickly that the shooter may not realize that aim has been radically disturbed. The result is usually a shot outside the scoring rings.

Follow Through. This is a concept you hear a lot about in pitching a baseball or driving a golf ball — it is also an essential part of firing a good shot. After a shot breaks, you must hold your position and maintain the alignment of your sights on the bull. This is "follow through" and it assures that you will provide a steady hold for the rifle until the pellet has left the barrel.

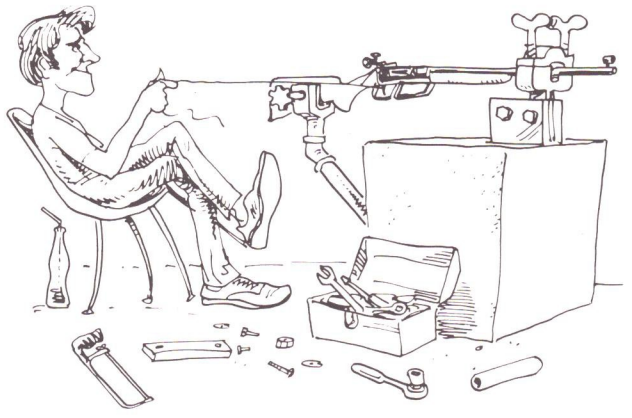
Without proper follow through, a shooter is likely to relax his hold before the pellet leaves the barrel and there is no telling where the shot will go. Follow through may add an extra second or two to each shot but it pays off big when you start scoring your target.

PUTTING IT ALL TOGETHER

In time you will be able to coordinate all the factors we have discussed into one smoothly executed act which will place shot after shot in the middle of the bull. Proper breathing, trigger control and follow through will become reflex actions which you do without thinking; this allows you to concentrate on aiming. Until then you have to think about each step in the process and practice these steps regularly. It won't come overnight or without work, but that is the challenge of any sport.

Chapter VIII
BUILDING A POSITION

In building a position, your goal is to construct a device which will allow you to hold, aim and fire the rifle with the highest degree of accuracy possible. If you were free to select your materials to build the position, you would probably choose steel and concrete. This, however, is not within the rules.



To build your position you are limited to the use of bones, muscles and a sling as your primary materials. Actually you are going to learn how to build four different positions; they are the prone, standing, kneeling and sitting positions.

Before going any further let's take a look at what you are going to demand of your positions once they are built:

Stability of Hold. Hold was defined in Chapter VI as how still or nearly still a shooter can maintain the rifle while aiming and firing. This is the most important requirement of any position.



Proper Body Functioning. The position should provide for free and easy breathing and not restrict the flow of blood in the body. Wearing loose fitting clothing will help here.

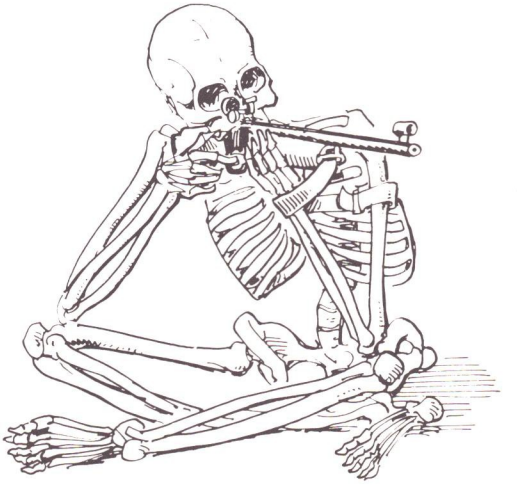
Legal Position. Finally, a position must meet the restrictions specified in the National Rifle Association Rules.



NOT LEGAL

To get the best results from your position, each of the following elements must be included in your building plans.

Bone Support. Make maximum use of the bone structure of the body to support the weight of the rifle and body. This helps to relieve much of the work your muscles would otherwise have to do.



Muscle Relaxation. Using the muscles to support a position accelerates fatigue and causes trembling. To reduce muscle strain and fatigue, you must work

for a position which allows your muscles to be completely relaxed.

Proper use of the sling. You should rely on the sling to help you transfer support of the rifle from the muscles to the bones.

The sling helps provide a more stable platform for the rifle in the prone, kneeling and sitting positions. Bone structure and the sling rather than muscle should support the weight of the rifle. This support aids overall control and slows muscle fatigue.

Natural Point of Aim. Once you are in position, the rifle and body should point toward the target naturally without using muscles to pull the rifle onto the target. To find your natural point of aim get into position, close your eyes, relax and allow your body to settle itself. After you have settled open your eyes and see where the rifle is pointing. If the rifle is pointing either to the right or to the left of the target, move your entire position around so that the rifle points naturally at the target.

Upright Head Position. Keeping your head upright allows you to look straight forward and results in minimum eye strain.

No two shooters will build their positions in exactly the same way because no two people have exactly the same body build. The individual who does the best job of building a position will be the one with the best hold, which is the final product desired in any position.

ADJUSTING THE WEB SLING

The length of the sling and placement on the arm should be determined by what gives the best support, steadiness and comfort. Sling length must be adjusted for each position.

By experimenting, you will be able to determine your proper sling length for each position. Once the proper length for prone is determined, you can mark your sling by:

- Pulling the tab end of the web sling back along the tension strand of the sling.
- At the spot where the tab end stops, wrap a narrow piece of adhesive tape around the tension strand.

This will give you a quick check on whether the sling needs to be shortened or lenghtened. You can also mark the sling length for sitting and kneeling but most shooters will just commit to memory the distance they must adjust the sling from the prone length.

Most shooters will put the sling on their arm when they start shooting and detach it from the rifle when necessary rather than taking the arm out of the sling each time they have to leave the rifle.

Before we start explaining each position, you need to know how to use the web sling on your rifle.

The sling is attached to the rifle by a detachable sling swivel which connects to the barrel band. With the sling attached to the swivel and then pulled back along the underside of the rifle, the tab end of the sling should be hanging down. This will be important when adjusting the length of the sling.

Putting the Sling on the Arm. To put your arm in the sling take the following steps:

- Open the arm loop.
- Turn the arm loop one quarter turn in the direction of the sling arm (i.e. one quarter turn to the left if the sling is going on the left arm) and slip your arm into the loop.



Placing sling loop on upper arm.

- Place the sling loop on your upper arm — either above the bicep near the shoulder or below the bicep. This will minimize the pulse beat effect.

- Tighten the sling loop until it is snug enough to remain in place on your arm. It should not be so tight that it restricts the flow of blood in your arm.

Lengthening the Sling. To lengthen the sling when it is on your arm, grasp the tab end of the keeper with your trigger hand and lift it up while pulling on the top strand (not the tab end) of the sling.



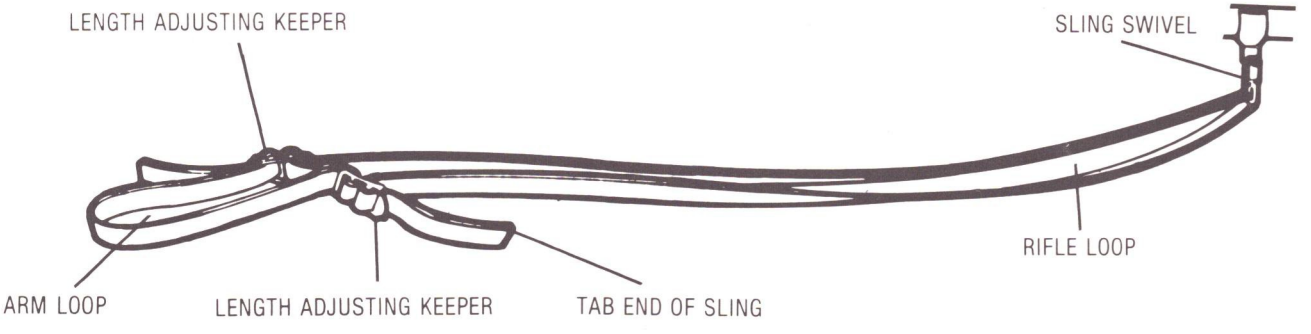
Lengthening sling.

Shortening the Sling. To shorten the sling when it is on your arm, pull the tab end of the sling away from you.



Shortening sling

You are now ready to start building your shooting positions. Each of the next four chapters is devoted to one of the positions. The instructions on position are written for a right handed shooter. If you fire left handed, you will have to reverse the right and left directions given in the instructions. You can do this mentally or go through your *Shooter's Guide* and make pencil changes wherever there is a reference to right or left. The chapters on position are, for simplicity, written in the masculine gender.



SIDE VIEW OF SLING



TOP VIEW OF KEEPER

Chapter IX

PRONE POSITION

The most important time for a beginning shooter to have a coaching partner is while learning the positions. You and your partner can be a great help to each other. Until you have mastered the position, you need the extra set of hands and eyes to get into the correct position. Conversely, as you help your partner, you get a chance to see and help solve the problems of getting into position from a different perspective.

We will deal with each of the positions in the following steps:

- Preparation.
- Getting into position.
- Checking your position.

Let's get started on the prone position.

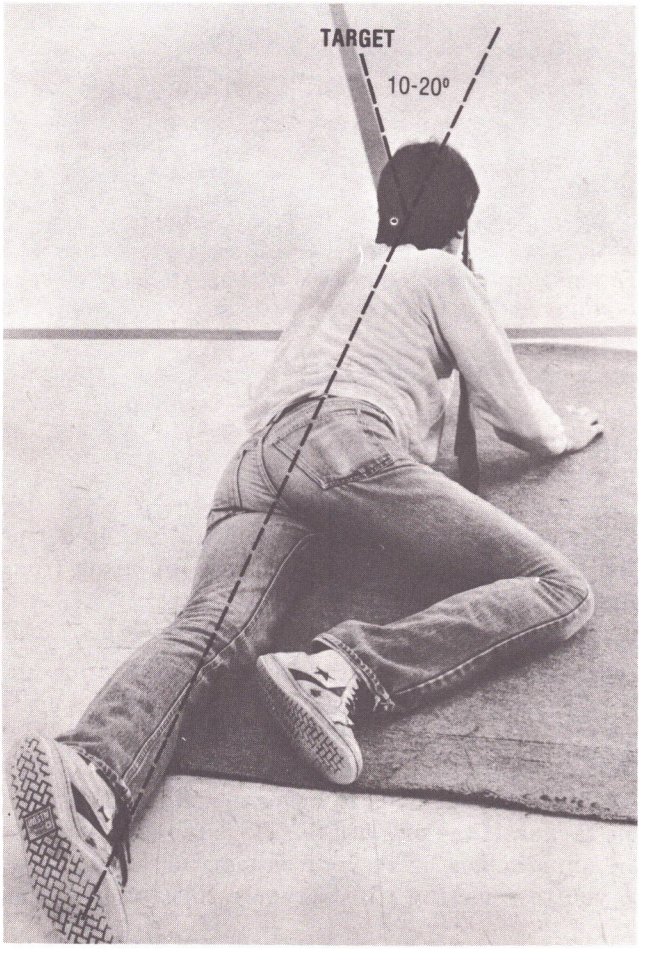
Prone is the most stable of the positions. This is because body and elbow contact with the ground provide the largest possible area of support.

Preparation.

Place your shooting mat on the firing line at a 10-20° angle to the right of the target. Put the sling on your arm and adjust it to the proper length, (see page 8-). Remember that the sling loop should always be above or below the bicep.

Bring your left hand over the sling to grasp the forearm of the rifle. The sling should pass smoothly along the right side of your wrist; it should not be twisted as it crosses the wrist or forearm.

Getting into Position.



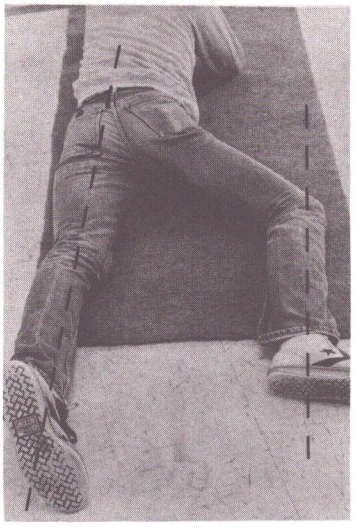
Stretch out on your shooting mat at an angle of 10-20 ° to the right of the target.



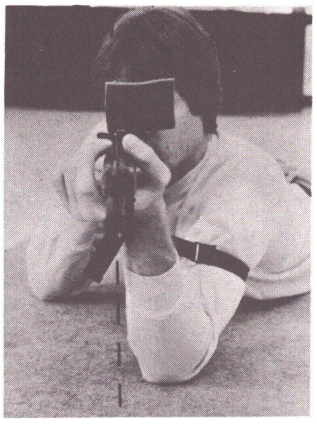
According to the rules, your body and the rifle may extend out over the firing line but no portion of your body may touch the floor or ground beyond the firing line. This applies to all positions.



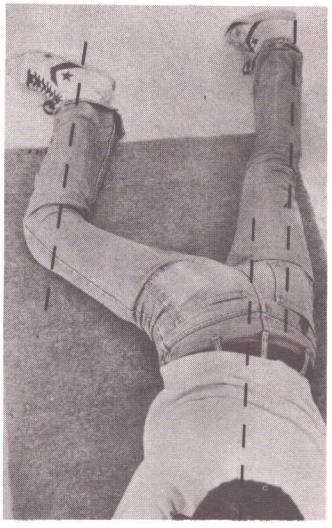
Place your left elbow near the front of the shooting mat.



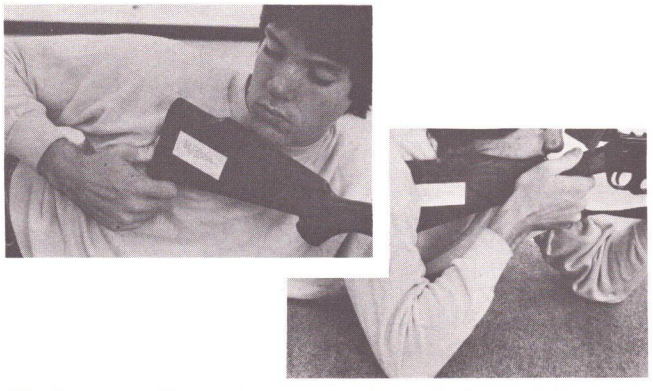
Keep the left leg straight to the rear and draw the right leg out to the side taking some of the weight off the chest and diaphragm. The lower portion of the right leg should be roughly parallel with the left leg and both feet are comfortably pointed to the right.



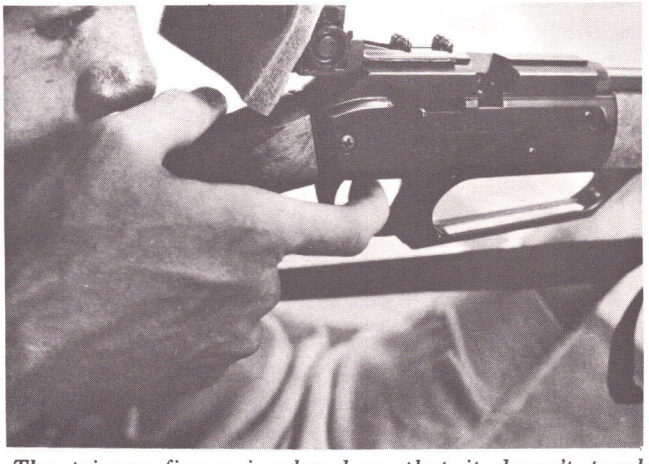
The left elbow should be **almost** *directly under the rifle.*



The left leg and the lower right leg and the spine are all roughly parallel.

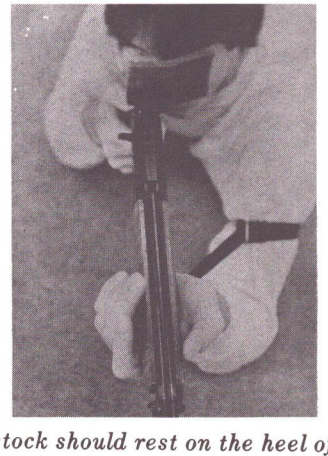


With your right hand, place the heel of the stock into the right shoulder. Then, grasp the pistol grip with the right hand and pull the rifle firmly into your shoulder. Place the right elbow on the mat just slightly to the right of your body.



The trigger finger is placed so that it doesn't touch anything but the trigger.

Checking the Position.



The forearm stock should rest on the heel of the left hand with the fingers and thumb relaxed (they should not grip the rifle).

The rifle should be vertical. If the rifle is canted (tipped to the right or to the left), it will detract from aiming.

Lastly, check your natural point of aim. Close your eyes, relax and let the rifle move to its natural position without using muscles to support it. Then open your eyes. If the rifle is to the right or left of the target, shift your body to bring the rifle in line with the target. If the aim of the rifle is too low, shorten the sling and/or bring your supporting hand closer to you to raise the rifle. Reverse this to lower the rifle.

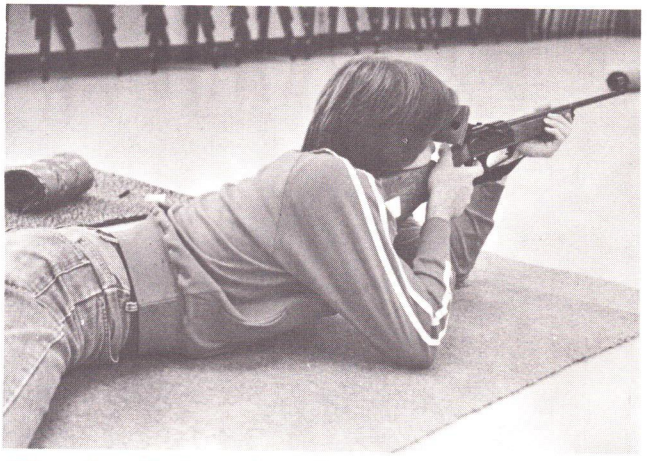
LOADING AND PUMPING THE RIFLE

While loading and pumping the rifle is a rather simple matter in the other positions, it presents special problems in prone. For that reason, we suggest the following:



Let the rifle rotate in your left hand and use the right hand to open the bolt, to advance the clip or load the rifle, and to pump the rifle.

To load and pump your rifle for the next shot, roll to the left onto your left shoulder and side. This procedure allows you to relax somewhat and rest while you are loading and pumping. **Try to keep your left elbow in place so you can resume your original position when finished.**



When the rifle is ready to fire again roll back onto your elbow and snug the butt of the rifle into your right shoulder. Strive to regain exactly the same position you started with.

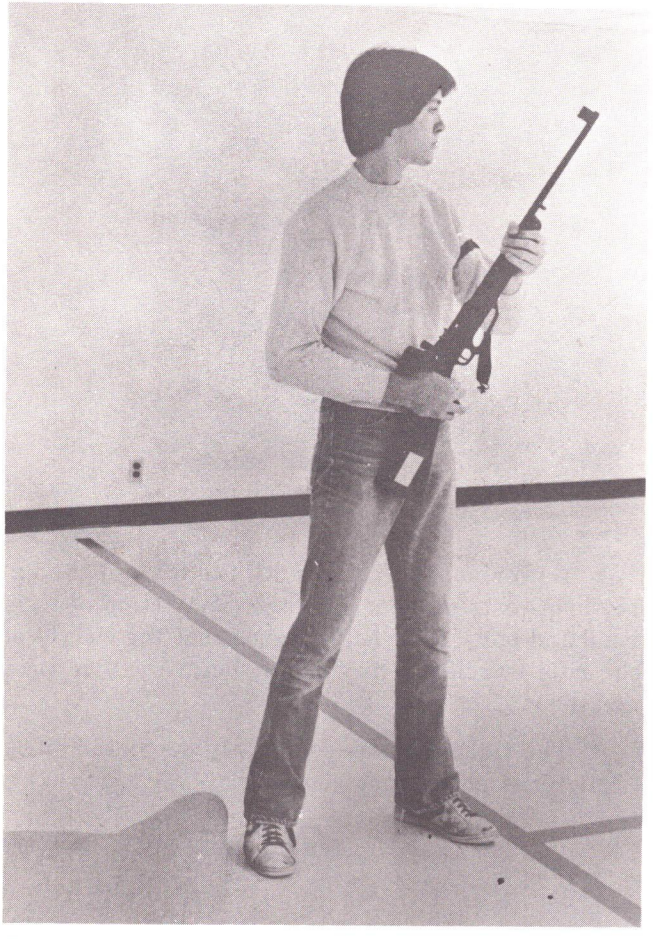
Chapter X

STANDING POSITION

We now move from the most stable to the least stable position. Of all the positions, standing has the smallest area of support. It may seem odd, but the shooter is looking for the same elements from a good standing position as he was in the prone position. Admittedly, these will be more difficult to attain in standing than in any other position. This position relies on the bones and skeleton of the body for support, while using the muscles and ligaments to bind them together. How you use this support will depend to a large extent upon your own particular body build.

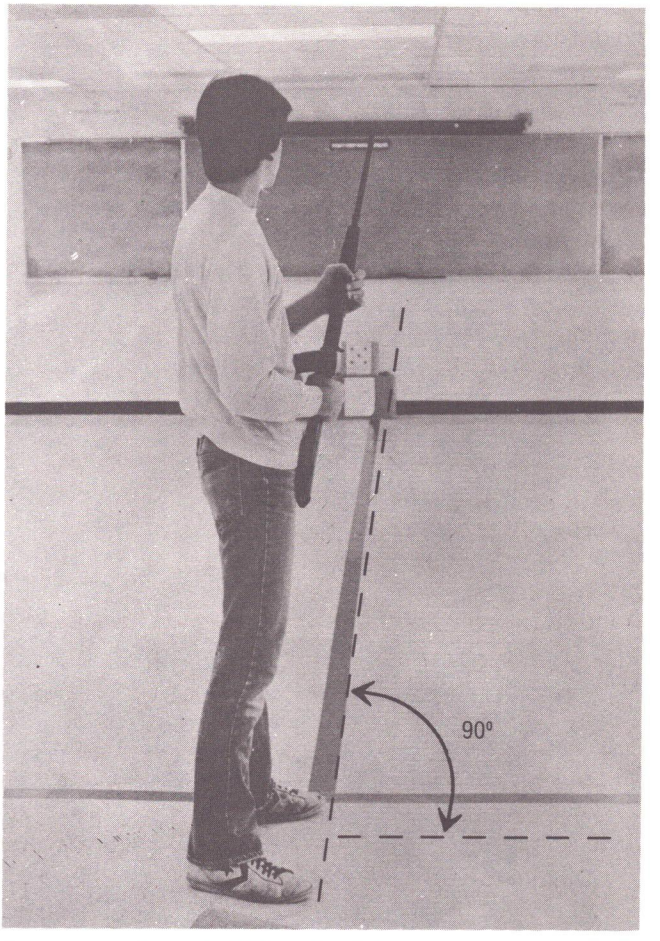
Preparation.

Fold your shooting mat back so that you can stand on the floor rather than on your mat. Remove the sling from the rifle and from your arm. Lay it aside.



In the standing position you should never let the sling dangle from the rifle as this would be very distracting.

Getting into Position.



Face approximately 90° to the right of the target. Assume a comfortable stance with you feet approximately shoulder width apart. The knees should be straight but not locked and the toes may be pointed slightly outward.

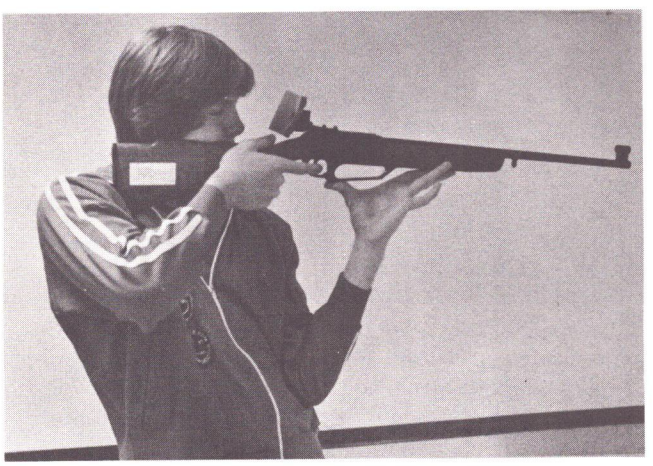


With the right hand, grasp the pistol grip of the stock, elevate the rifle to eye level in a direction about 30° to the right of the target, and snug the toe of the stock into your right shoulder.

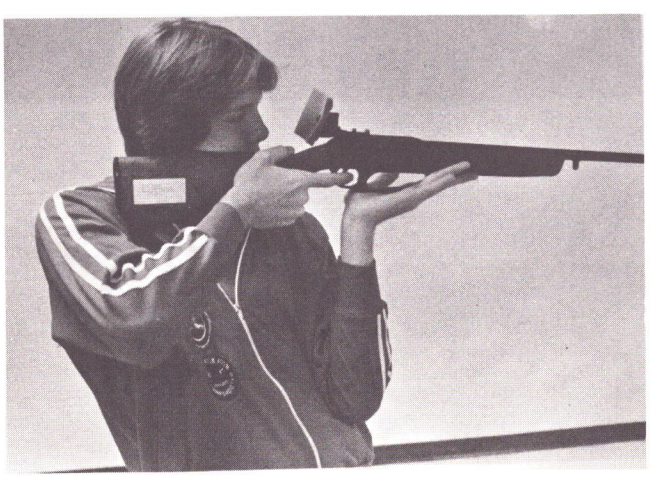
With the left hand, support the rifle just forward of the trigger guard. Take care that the hand is not too far forward or it will shift the support of the rifle from bone to muscles. This must be avoided. Left hand support of the rifle may take any one of several forms depending on the amount of elevation you wish to achieve.



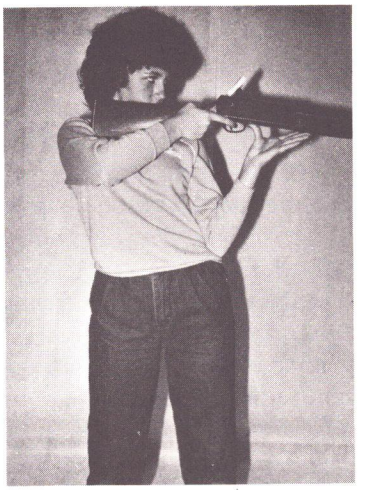
You may support the rifle with a clenched fist.



A "V" formed by your thumb and fingers,

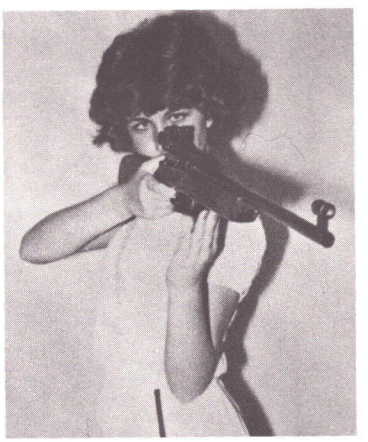


Or over the heel of your hand.



Back Bend and Body Twist

● *Bend backwards* **at the waist.** This counterbalances the weight of the extended rifle. Then twist **at the waist** to bring the rifle around to the target.



Left Arm Placement

● Lower your left arm until the back of the upper arm rests on your rib cage. The action of back bend and body twist helps insure that the weight of the rifle is held up by bone structure rather than muscles.

● The right arm raised slightly keeps the stock firmly pressed into the shoulder.

Checking Your Position.

● You should be balanced and supporting the rifle with bone rather than muscle.

● Be sure your weight is distributed evenly on both feet and your knees are not locked.

● Your elbow and left hip should be directly under the rifle.

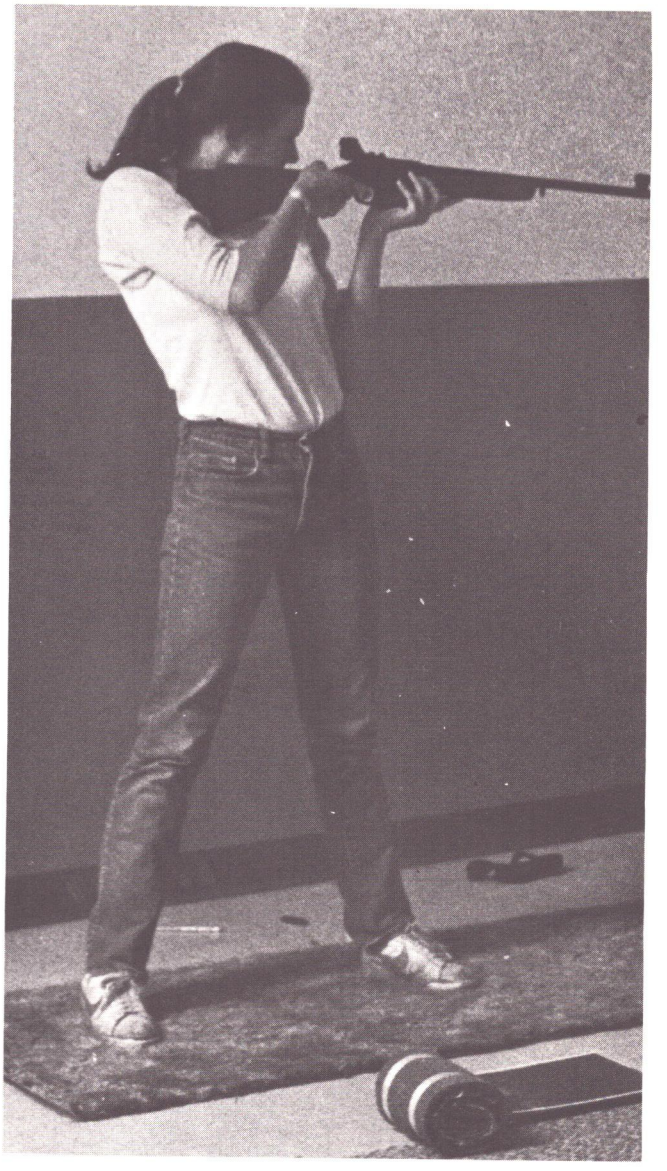
- The rifle should be vertical (no right or left cant).
- The trigger finger should not touch the stock.
- Your head should be erect or tipped forward only slightly.



Side veiw of Left Arm Placement

- Lastly check your natural point of aim. Close your eyes and let your position settle. If you are not pointing at the target when you open your eyes you must adjust your position. If the aim is to the right or left, move your entire body as though you were moving a statue. Minor changes in elevation can be accomplished by moving your left hand forward or back. Major changes will require a different method of left hand support for the rifle.

As a beginning shooter, you must accept a certain amount of instability in the standing position and learn to cope with it. You must recognize when your hold is at its best and press on with the act of firing the shot. With practice you will be able to fire good scores from the standing position even though you have to contend with movement of the rifle. Your hold will also improve with practice. Remember that every shooter on the line has to face the same problems in standing. Some shooters mentally give up in the standing position and lose points before they start while others refuse to be intimidated by the position. This latter group will master standing and go on to win.



Example of correct standing position

Chapter XI

KNEELING POSITION

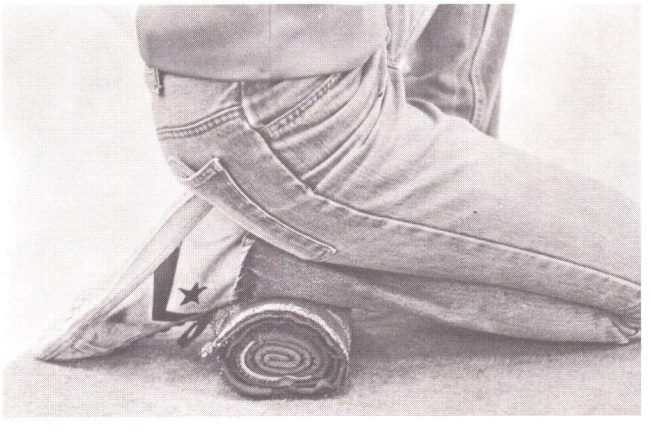
The kneeling position has a larger area of support than standing and with practice it can become a very steady position for you. The key is getting your body into the correct position and then developing your ability to maintain it.

Preparation.



Unfold your mat and place your kneeling roll within reach. Attach the sling to your rifle. Put the sling loop on your arm and adjust it to the proper length (determined through experiment).

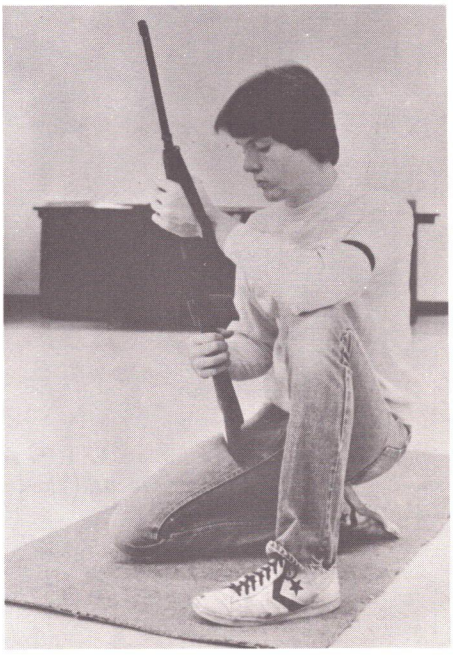
Getting into Position.



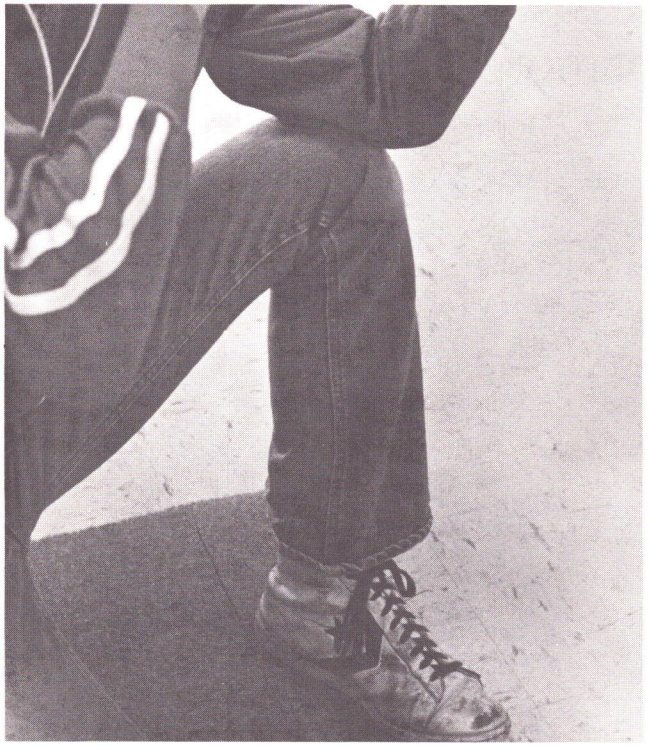
Kneel down so that your right knee is pointed about 45° to the right of the target. At the same time slip the kneeling roll under your right instep with the toes of the right foot extended (not curled up under the foot).



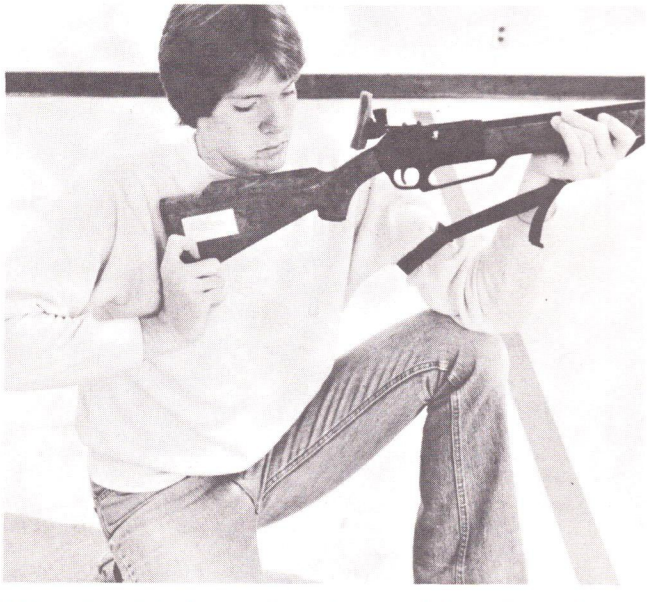
Place your left foot so that your left knee almost points at the target and your lower leg is vertical. Now sit down on the heel of your right foot. Let the weight of your body rest on your right heel just as though it were a small stool.



Pull the toe of your left foot around so that the left foot is parallel with the right leg. This will steady the left leg.



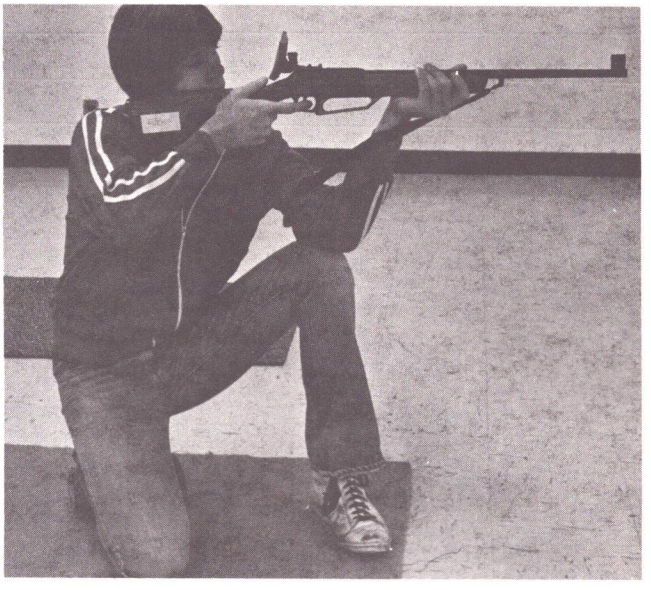
Let your body and shoulders slouch forward as you place your left elbow on your left knee (just forward of the knee cap so the flat spot at the back of the elbow fits against the flat portion of the knee cap).



Using the right hand, place the toe of the rifle stock into the right shoulder. The forearm of the rifle should rest on the heel of the left hand.

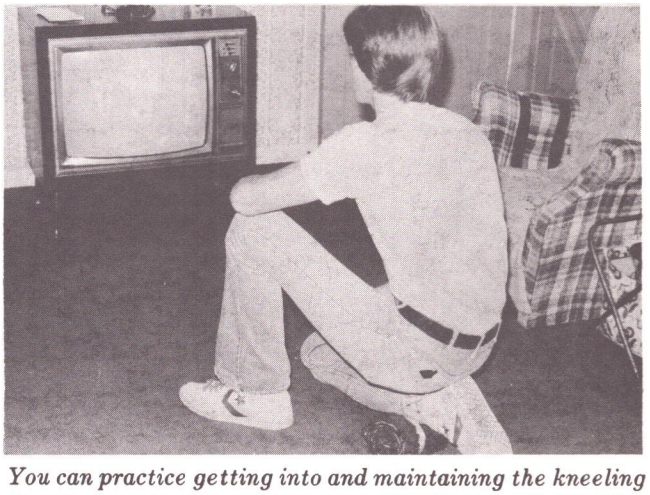
Checking Your Position.

- The weight of the body should rest mostly on the heel of the right foot. Back and shoulders should be slouched forward.
- The sling pulls the rifle back into the shoulder. If it does not, shorten the sling. Fingers and thumb of the left hand are relaxed and the rifle rests on the heel of the left hand.



- The rifle should not be canted.
- The trigger finger does not touch the stock.
- Lastly check your natural point of aim and make necessary adjustments. If you have to move to the right or left, use your kneeling roll as a pivot point for your whole body. To raise your point of aim bring your left hand back on the forearm and shorten the sling. The reverse will lower your point of aim.

In the kneeling position you will discover some muscles that you had not been aware of before and the position may even be uncomfortable for a while. Practice will enable you to strengthen and stretch the muscles used in this position and it should become a strong position for you.



You can practice getting into and maintaining the kneeling position on the living room floor while watching TV. You don't even need a rifle. Your body will soon become accustomed to kneeling.

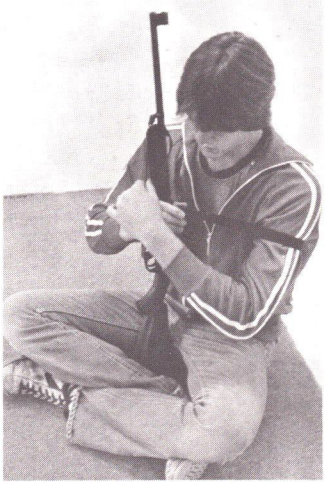
Chapter XII

SITTING POSITION

Sitting is a very stable position and most shooters find it much easier to maintain than kneeling. There are three variations of the sitting position-all having to do with how you place your legs. The one which best suits you will depend upon the length of your torso and arms.

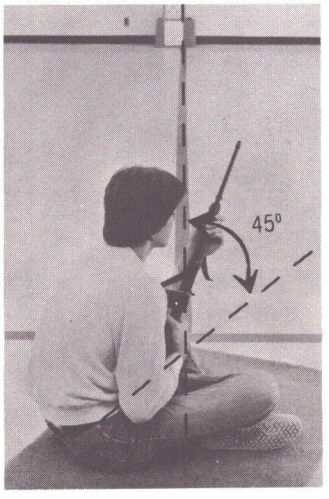
The most stable of the three sitting positions is the crossed leg position. You should try to adopt this position first. We will fully describe it before going into the other variations.

Preparation.



Sit down on your mat near the firing line and adjust your sling (usually much shorter than prone and very high on the arm).

Getting into Position.



Sit so that you are facing about 45° to the right of the target. Your legs should be crossed close to the body with the left lower leg in front of the right lower leg. The side of each foot should provide support for a knee.

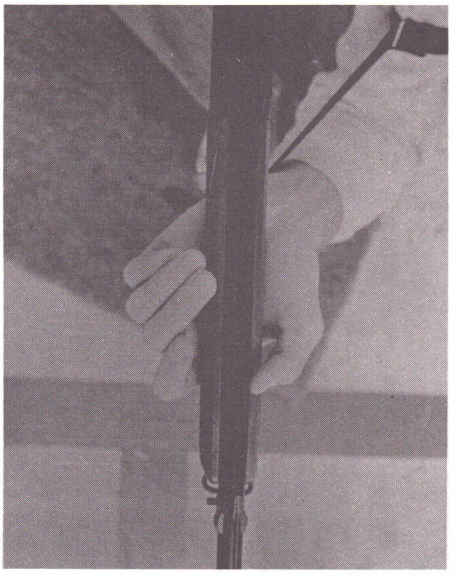


Lean forward and rest your left elbow in the "V" formed by your left knee. Support the rifle with the heel of your left hand just forward of the trigger guard.



With the right hand place the stock high enough in the right shoulder to allow for a comfortable and erect head position. Grasp the pistol grip with the right hand and place the right elbow in the "V" formed by the right knee.

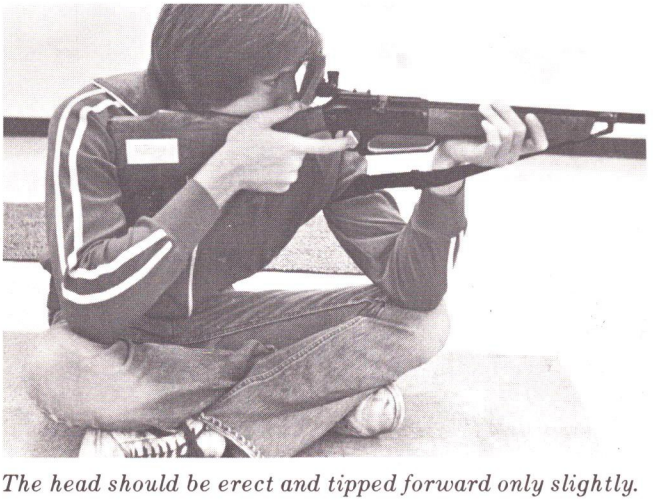
Checking your Position.



The sling should hold the rifle in position. The fingers and thumb of the left hand should be relaxed.



The trigger finger does not touch the stock.



The head should be erect and tipped forward only slightly.



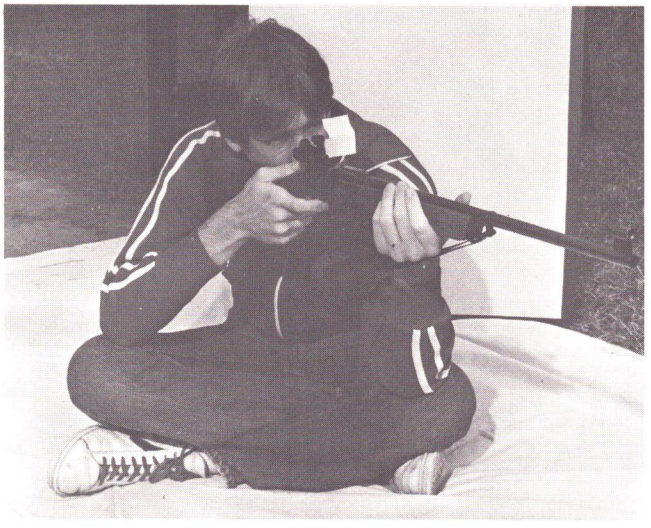
*The rifle should not be canted. Shooters have the greatest tendencey to cant (tip to the right or left) the rifle in the sitting position. The photo above shows an exaggerated cant - **take care to avoid this.***



A good sitting position should allow you to relax without your position falling apart. Your legs should be relaxed and not feel as though they have to hold the rifle up. Your back should also be relaxed. Let the tendons of the legs and joints do the work.

Check for a natural point of aim and make adjustments to achieve it as in other positions.

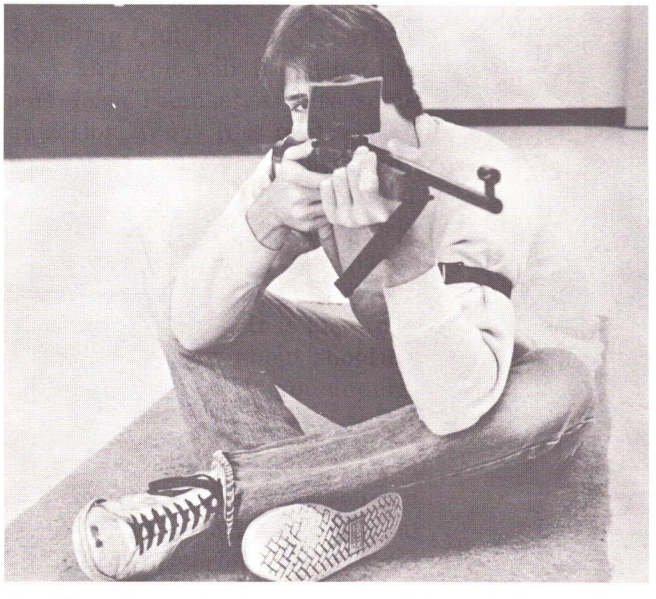
Crossed Leg Position



This position, just described in this chapter, is the position the majority of shooters use and is recommended over other variations.

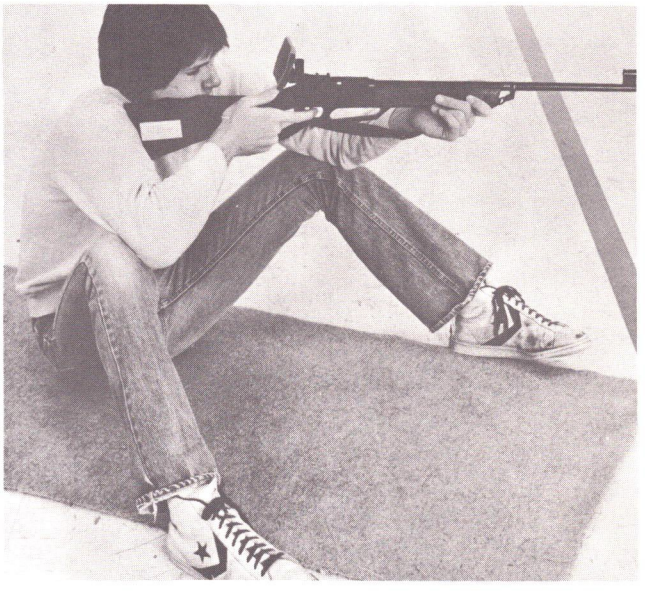
In the crossed leg postion some shooters can't keep their head fairly upright. Others, with short arms, can't reach the trigger. These individuals may want to try either one of the following:

Crossed Ankle Position.



In this position, the legs are extended out in front of you and crossed at the ankles. Your elbows rest on the legs forward of your knees. You must start with a loose sling and tighten it in increments until you find the proper length.

Open Leg Postion.



In this third variation of the sitting position, the feet are spread a comfortable distance apart in front of the shooter. The toes are pointed inward to prevent the knees from spreading. The shooter leans forward into the gun, places the left elbow on the left leg, and places the butt of the rifle into the hollow of the shoulder. He then brings the right elbow down into place on the right leg.

The exact position of the elbows on the legs will depend upon your own body configuration and how far forward you lean into the gun. This particular sitting position is not very stable because the foundation is so spread out that the shooter must use his leg muscles to hold the position.

Chapter XIII
SIGHT ADJUSTMENT/SCORING

Up to this point we have only been concerned with firing groups. The location of a group in relation to the bull did not matter; our only concern was to make the group as small as possible. Now we will learn how to move a group to the center of the bull and to give each shot its best numeric value.

SIGHT ADJUSTMENT

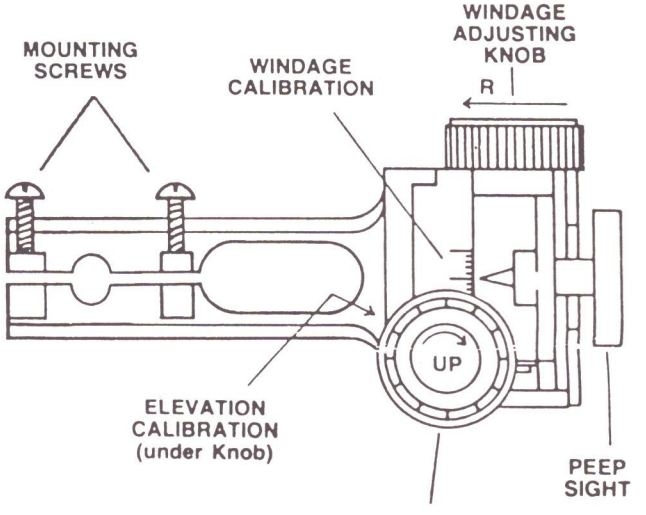
The sights on the Daisy 977 or the Crosman 2180 rifle can be adjusted or "zeroed" so that the center of your shot group will be in the 10 ring of the bull. This will allow you to achieve the highest possible score for those shots.

The term "zero" is used in shooting to describe the point at which a shooter has perfect sight adjustment. To do your best in competition, you must learn how and when to adjust or "zero" your sights. Let's start by learning how the rear sight operates.

Both the Daisy 977 and the Crosman 2180 have two knobs which are used to adjust the point of impact for an aimed shot. The **elevation** knob (on top) moves the shot up or down on the target. The **windage** knob (on the side) moves the shot to the right or left. The adjustment of the knobs is measured in clicks which can be felt as the knob is turned. It takes four clicks to move the strike of the pellet the width of one scoring ring on the 25-foot target we are using.

ADJUSTING YOUR SIGHTS

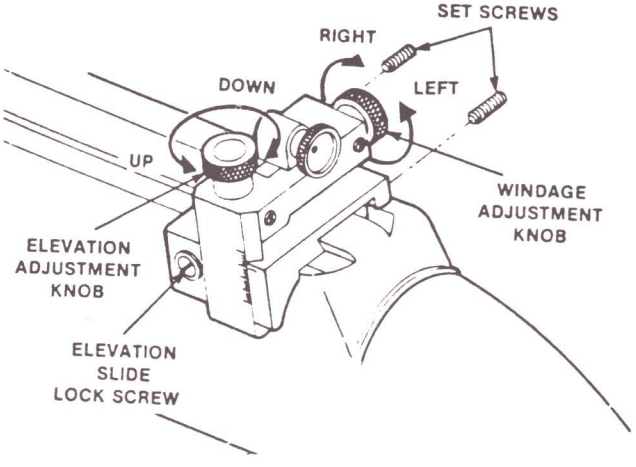
DAISY 977



The table below shows which direction the Daisy sight knobs must be turned to move a shot.

	Clockwise	Counter clockwise
Elevation Knob	Up	Down
Windage Knob	Right	Left

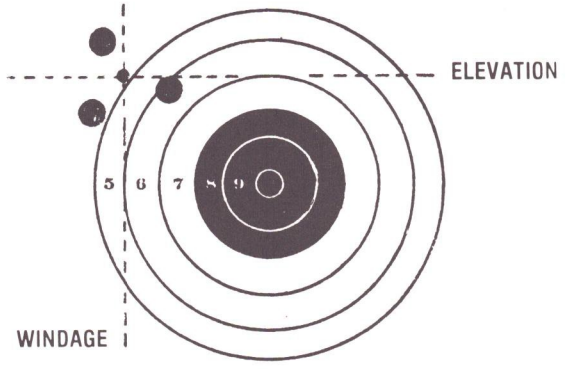
CROSMAN 2180



The table below shows which direction the Crosman sight knobs must be turned to move a shot.

	Clockwise	Counter clockwise
Elevation Knob	Down	Up
Windage Knob	Left	Right

The first step in adjusting your sights is to fire a three-shot group. Estimate the center point of the shot group and then using that point determine how many clicks windage and elevation are required to move the center of your group into the 10 ring. Let's use the example shown below to calculate the required sight adjustment for a three-shot group.



The approximate center point of the shot group (small dot) shown is about three scoring rings high so we must come down 12 clicks (three rings times four clicks per ring = 12 clicks). That will require a counter clockwise turn of the elevation knob.

The center point of the group is also about four rings to the left so we must move the group to the right by 16 clicks (four rings times four clicks per ring = 16 clicks). That will require a clockwise turn of the windage knob.

Be bold in moving your sights. Think of it as better to move the sights a little too far than not far enough. If possible, you should always try to fire a second three-shot group to check your sight adjustment.

Earlier we referred to zero as the point at which a shooter has perfect sight adjustment. This is only a temporary condition. There are many things which affect your zero such as light conditions, position, eye relief, etc. So if one of these things changes your zero is likely to change.

You should adjust your sights at the start of each new shooting session and be continually on the look out for zero changes as you are shooting.

When you start firing just one or two shots at each bull on a target, it is more difficult to see the need for a sight adjustment when your zero changes. If your shots on several bulls are out in the same general direction, mentally picture how they would appear if all shots were fired on the same bull and make your sight adjustment accordingly.

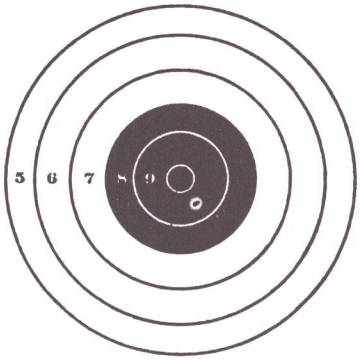
SCORING

Scores measure performance. They determine who wins. More importantly for the beginning shooter, they provide a means of charting progress in skill development. The criteria applied in scoring a target must be the same today as next year if scores are to be fairly compared.

Scoring calls for a precise set of rules and the application of honest judgment where the calls are close. In match situations a competitor or a scoring official will score your target. As a beginning shooter you will usually do the initial scoring of your own target and then an impartial individual will check your score. This speeds scoring and quickly lets the shooter know the results.

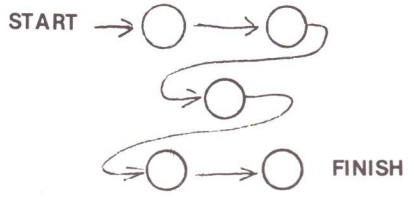


When you start firing for record, you will be shooting on a five-bull target; two shots will be fired at each bull. Each shot counts a maximum of 10 points and this gives you a possible score of 100 points per target (10 shots times 10 points per shot). When shooters talk about a "possible," they refer to the highest score which could be achieved on a target or in a match.

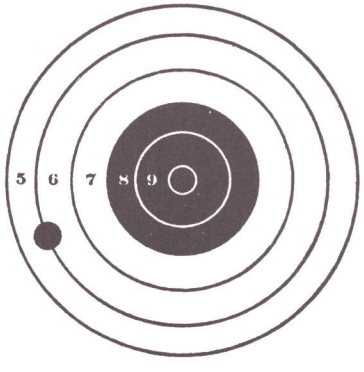


The scoring rings on the target you will be firing at start with a 10-point ring in the middle and go down to five on the outside. Shots outside the scoring rings count as misses.

If you have an extra shot in a bull, you will also be charged with a penalty point. For example if you were supposed to fire two shots at each bull but you fired three shots at one bull and only one at another bull you would be given a penalty point. For this reason it is important that you decide upon a routine sequence to score the bulls on a target and follow that sequence regularly. One possible sequence is to shoot the bulls as you would read a page. Start at the top left and move to the right, then move down a row, start at the left and move to the right etc. until you have finished the target. If you are firing two shots in each bull, complete both shots before moving on to the next bull.

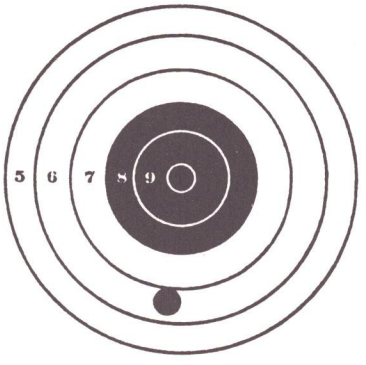


The "as you read" sequence is diagramed here on a five-bull target.



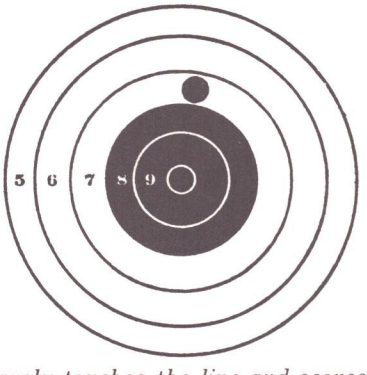
A shot which cuts into two scoring rings will be awarded the point value of the higher ring. For example, the above shot cuts into both the five and six areas so it will be scored a six.

A shot which cuts or touches the outside line of a higher ring will be awarded the point value of the higher ring. This is easy to call if it actually cuts the line as shown below.



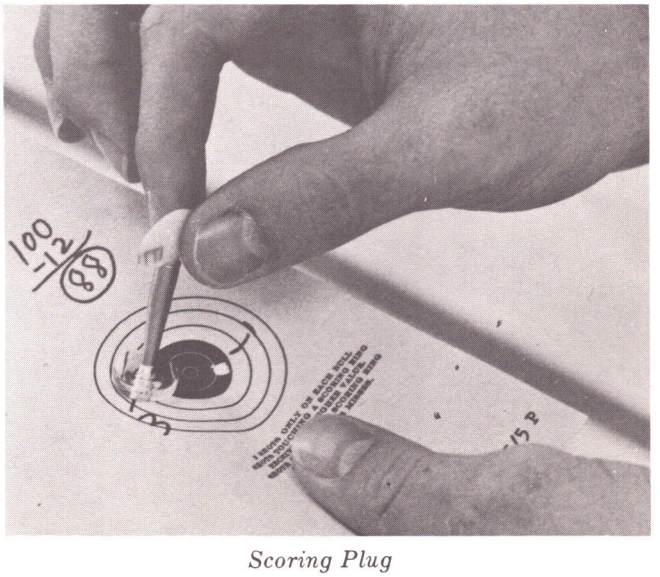
This shot would be a seven.

It is much more difficult to call a shot which merely touches the line because the paper has a tendency to leave a slightly smaller hole than the actual size of the pellet. In this situation you must make your call using your own best judgment and leave the final decision to the individual who checks how you scored a target.



This shot barely touches the line and scores as an eight after it has been plugged.

Plug. The person checking a score may use a scoring plug in making decisions on the close calls. This is a

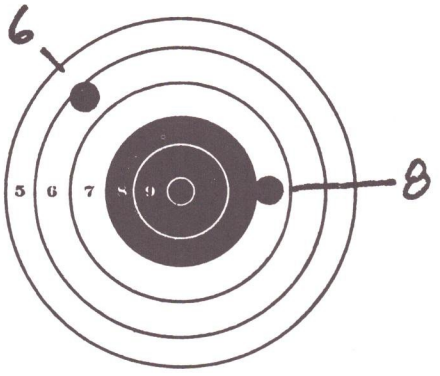


Scoring Plug

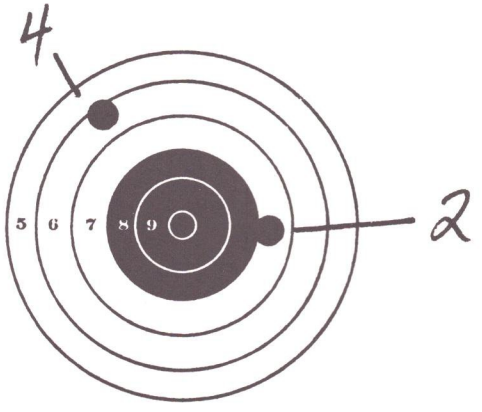
piece of metal with a diameter of .177 inches which is inserted into a shot hole. If the plug touches the line, the higher value is awarded. A shot hole may be plugged only once. Once inserted the plug cannot be removed until a final decision is made on a shot. For this reason a shooter never inserts a plug into his own target when someone else must verify the score of the target.

Penalty Points. When more than two shots are fired at one bull, one penalty point is assessed for each extra shot on the bull (see last illustration in this chapter for example).

Lost Points Scoring Method. As the shooter becomes more skilled and the total scores rise above the 50% of possible, it is easier and quicker to subtract the value lost by each shot rather than to add the value gained by each shot. For example, a bullseye with two shots valued as a six and an eight add up to a total of 14 out of a possible 20 points. However, when we subtract the difference between 6 and 10, we get 4 and when we subtract 8 from 10, we get 2. Two plus 4 equals 6 subtracted from 20 possible gives 14 points also. To see how this method speeds scoring let's look at a complete target. Here you can see how much easier it is to subtract 17 points from 100 than it would be to add the ten shots together to total 83.



Actual Points Method

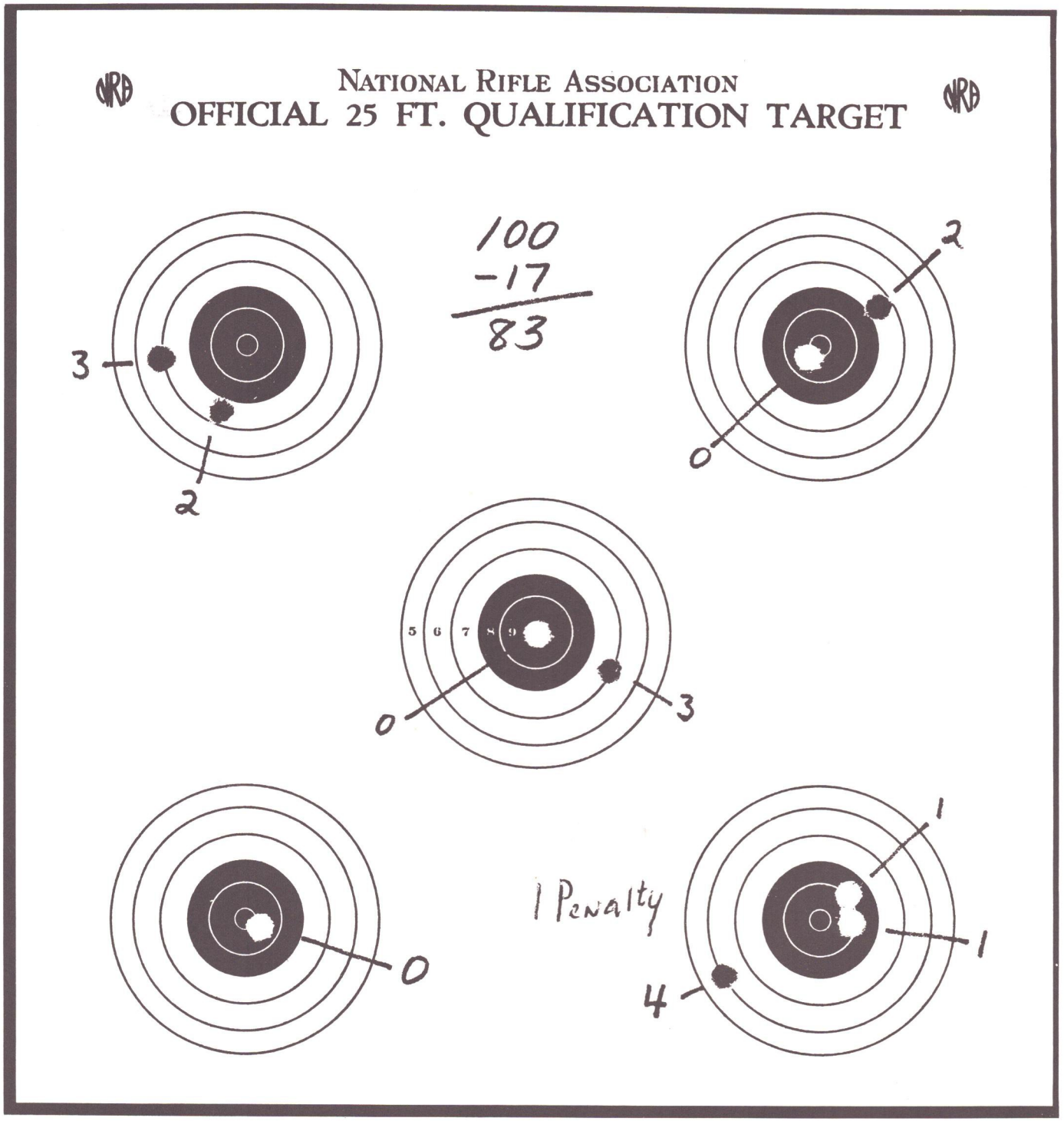


Lost Points Method

Using the lost points method on the target below, the eight would have an inverse value of two (10 – 8 = 2) and the six would have an inverse value of four (10 – 6 = 4).



When you have determined the inverse value of a shot, draw a line from near the shot hole beyond the outer ring and write the value at the end of the line. To get the total score for a target, add the inverse values for all shots plus any penalty points, then subtract this amount from 100. The better your target, the easier it is to score. Below is an actual target scored by the inverse method.



If you can't find a shot which should be on the target, it should be scored as a miss. Be sure to assign a value to each individual shot. Do not write any additional numbers on the target as this will confuse the individual verifying the score.

Chapter XIV
CONCLUSION

You can't expect to remember and be able to apply everything you have read or studied the first time through the *Shooter's Guide.* It should be reviewed periodically until you are ready for a more advanced guide.

If you are using the guide as part of a Basic Marksmanship Course, you will soon be taking a final exam and shooting a four-position course for record. Your exam grade and fired scores will measure how much you know and how well you can shoot at just one point in time. They give you a benchmark to measure the development of your skills.

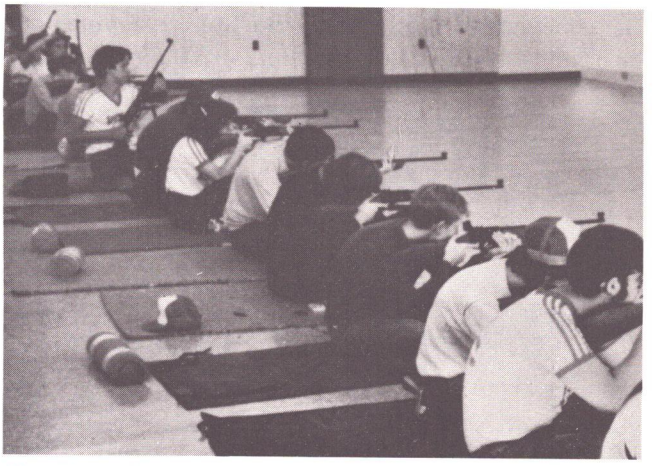
If you don't use your shooting skills, they will waste away. Progress, however, will depend upon putting your knowledge and skills to work. Here are some action steps you can take to accelerate your skill development.

Practice. Every sport requires a certain amount of practice and training. Practice allows you to try new techniques and work out problems. With air guns you are able to practice many places that might not be safe for a firearm. Air guns are also quiet so you can shoot without disturbing others. An important type of practice that is unique to shooting is called "dry fire." In dry fire the shooter carefully goes through all the steps of shooting, but the gun is never loaded.



Dry firing can be done anywhere.

Compete. At least once a month and more often if possible, you should fire in a match against other shooters. This helps you develop the nerves and mental discipline required to be a competitive shooter. It also gives you a new benchmark by which you can measure your progress.



Practice allows you to train at your own speed and concentrate on positions that need the most refinement.

Keep Records. By recording your scores, you can measure your improvement and determine what position needs the most practice. Beginning shooters should expect rather wide swings up and down in their day to day scores but the average trend will be for an upward trend.

Get Your Own Equipment. If you are to practice and compete when and where you want, you need to have your own equipment.

Join an Organized Shooting Club. Pick any sport — individual or team — and you will find that the athletes of that sport form themselves into some sort of club or organization. Why? It is pretty hard to be a team or host a competitive event all by yourself. You need the encouragement and support that you can get from other athletes who are working to overcome some of the same problems or toward the same goals. Shooting is a sport where you need the help of other shooters. It is also true that trying to teach what you know about shooting to another less skilled shooter will help you understand it better.

Start a Qualification Program. Another benefit of being in an organized shooting club is that you can start a qualification program. Both the National Guard and the National Rifle Association have Four Position Air Rifle Qualification Programs which challenge new shooters to develop their marksmanship skills. Shooters progress through self-paced ratings of increasing difficulty. After fulfilling the requirements of each rating, a distinctive recognition patch is presented to the shooter. Beginning ratings are rather easy so that everyone who tries can earn a recognition award, but they become progressively more demanding as the shooter advances. By the time shooters reach the final rating,

they will have become accomplished marksmen. A qualification program is challenging, but allows each shooter to work and develop at his or her own pace.

In conclusion, we would like to ask you, our customers so to speak, to help us. We have tried to include in this guide all you need to know to become a proficient marksman. An additional goal has been to make it interesting and understandable for the beginning shooter. If you have any suggestions for improving this guide, we would appreciate hearing from you.



Colors
Red, silver and black.



Colors
Light blue, dark blue and white.



Colors
Bronze, green and white.



Colors
Silver, blue and brown.



Colors
Gold, red and blue.

The five ratings patches in the National Guard Qualification program are shown above.

INFORMATION

For more information about the National Guard Youth Marksmanship programs , contact Captain D. M. Pufpaff at the address or telephone number listed below:

Unit Marksmanship Support Center
ATTN: Youth Programs
P.O. Box 17267
Nashville, TN 37217
Commercial: (615) 741-5029
Autovon: 446-5029



For more information about the National Guard and how it is serving your community contact your local National Guard Recruiter.

A BRIEF HISTORY OF THE NATIONAL GUARD

As its new recruiting theme for the 1980s states: "The Guard is America at its Best." That point has been vividly pointed out by Guard members during service to their state and nation for the past 347 years. Each year, on Oct. 7, Army and Air Guard units in all 50 states, the District of Columbia, Puerto Rico, Guam and the Virgin Islands join together in celebrating the Guard's official founding, which occurred in the Massachusetts Bay Colony in 1636.

The origins of the Guard's 347 years of proud military service can be traced to two Massachusetts Army National Guard units located in the Boston area. This distinction, of being the oldest military unit in the history of our nation, is shared by the Massachusetts ARNG's 101st Engineer Battalion and the 182nd Infantry. Both units were organized on 13 December 1636 (OS), by authority of the General Court at Boston, which issued an order on that date stating that all military men within the jurisdiction of the Court were to be ranked into three regiments: the North Regiment (included the existing train bands in the towns of Charlestown, Newton, Watertown, Concord and Dedham); the East Regiment (Consisting of train bands from the towns of Saugust (Lynn), Salem, Ipswitch and Newbury); and the South Regiment (which included train bands in the towns of Boston, Roxbury, Dorchester, Weymouth and Highham). Later, in 1643, the Massachusetts Bay Colony was divided into four counties, with the East Regiment becoming the Regiment of Essex, and the North Regiment becoming the Regiment of Middlesex, in what was probably the Guard's first major reorganization! The history of the South Regiment was not perpetuated, but the histories and battle honors of the Middlesex (North) and Essex (East) Regiments now belong to the 182nd Infantry and the 101st Engineer Battalion, Massachusetts ARNG.

As other colonies were settled, other militia regiments, which still exist today, were organized. In 1672, Connecticut formally organized its militia into county regiments. These units are perpetuated today by the 102nd Infantry, 169th Infantry and the 192nd Field Artillery.

As settlers moved west and south other country militia regiments were organized: 104th Infantry (1662, Massachusetts), 201st Field Artillery (1735, West Virginia), 111th Infantry (1747, Pennsylvania), 263rd Air Defense Artillery (1756, South Carolina). Puerto Rico, with a long and colorful military history, has two units that date back to 1765: the 295th Infantry and the 296th Infantry.

Militia units provided the bulk of manpower for the British forces during the various colonial wars with France. Many militiamen who later served in the Continential Army fought alongside British regulars during the French and Indian War.

During the eight-year period that began at Lexington and Concord on April 19, 1775, more than 164,000 militiamen from the 13 colonies served under the command of the former Virginia militia colonel, George Washington. Without the militia, American independence could not have been won. While the Continental Army, with militia support, fought the main battles of the Revolutionary War, other militia regiments kept British forces in check by harrassing foraging and raiding parties and limiting royal troops to the cities.

The battles of Bunker Hill, King's Mountain, Cowpens and Guilford Court House were fought primarily by the militia. The American militia won grudging respect from the British regulars. As Lord Cornwallis officially reported in 1781, "I will not say much in praise of the Militia of the Southern colonies, but the list of British Officers & Soldiers killed & wounded by them since last June proves but too fatally that they are not wholly contemptible."

On Oct. 19, 1781, when Lord Cornwallis surrendered at Yorktown, former militiamen of the Maryland and Delaware Lines and Virginia militiamen of the Augusta County Regiment were there. Today, these regiments are perpetuated by the 116th Infantry, Virginia ARNG; 175th Infantry, Maryland ARNG; and the 198th Signal Battalion, Delaware ARNG. Twenty-eight of today's Army National Guard units carry battle streamers on their colors embroidered with the names of the battles of the Revolutionary War: Lexington, Concord, Bunker Hill, Trenton, Princeton, Brandywine, Cowpens, Monmouth, Guilford Court House and Yorktown.

After the war, the militia was governed by the Militia Act of 1792. States wre required to enroll men between the ages of 18 and 44 into companies, regiments and brigades of militia. Each state was to appoint an adjutant general and brigade inspectors. As the enrolled or common militia declined in importance, the volunteer companies of the organized militia grew in strength. These units, which were uniformed, trained and equipped, grew to a strength of 25,000 by 1804.

The term "National Guard" was first used in America by a New York militia unit Aug. 25, 1824. The name came about as the result of a visit to New York by the famous veteran of the Continental Army, Marquis de Lafayette. The honor guard for the French hero, who had made great contributions to America's winning her independence, was made up of men from the 2nd Battalion, 11th Regiment, New York State Artillery. The battalion had voted to rename itself the "Battalion of National Guards"

in tribute to Lafayette's command of the Paris militia "Garde Nationale." The Battalion of National Guards later became the famous 7th Regiment, one of the nation's most distinguished militia organizations.

With the start of the War of 1812, the U.S. Army consisted of only 10,000 men. The militia of the states was called into federal service with more than 116,000 militiamen responding. Probably the most famous Guard commander during the War of 1812 was Maj. Gen. Andrew Jackson, whose backwoods sharpshooters defeated the British Regulars in the Battle of New Orleans in 1815.

Following the admission of Texas into the Union in December 1845, a dispute rose between Texas and Mexico over the southern border of the new state. The conflict resulted in the Mexican War of 1846-1848, with more than 73,000 Guardsmen being called into federal service. On Feb. 23, 1847, a regiment of Mississippi militiamen, the famed "Mississippi Rifles," (today the 155th Infantry, Mississippi ARNG) led by their commander, Col. Jefferson Davis, defeated a much larger Mexican force in hand-to-hand combat in the mountains near Buena Vista, Mexico. The defeat of the Mexicans at Buena Vista enabled the U.S. forces to continue their assault, resulting in the capture of Vera Cruz in March 1847 by General Winfield Scott and his 12,000 troops, two-thirds of whom were Guardsmen.

By 1850, the common militia, composed of all males between the ages of 18 and 44, had been allowed to lapse. Most states recognized the volunteer militia companies — uniformed units that drilled on a regular basis — as the State Organized Militia. These units responded to President Lincoln's call in April 1861 for 75,000 militia to form the bulk of the Union Army for the first several months of the Civil War.

No accurate figure can be determined as to the number of militiamen who fought in the Civil War. The figure of 1,933,779 is used for the number of all volunteers who served in the Union Army. Many militia regiments which responded to the call of 1861 remained in service for the duration of the war. Other regiments returned to state status and served as cadres for the many volunteer regiments that the states furnished to the federal forces. Likewise, the initial bulk of the Confederate Army was made up of volunteer militia regiments.

After the Civil War, the National Guard — a term first adopted by New York in 1862 in place of the term Organized Militia — reorganized and grew to 90,000 men largely commanded by officers who were Civil War veterans. Summer encampments became a regular feature while the Regular Army began assigning advisors to each state.

With the outbreak of the Spanish-American War in 1898, close to 165,000 Guardsmen volunteered for active duty. Although only a few National Guard regiments were sent to Cuba, many Guardsmen were shipped to the Philippines to fight in the Philippine Insurrection. One of the most famous regiments of the war was the Rough Riders who, under the command of Lt. Col Theodore Roosevelt, assaulted San Juan Hill. The 2nd Squadron was formerly the 1st New Mexico Cavalry which today is the 200th Air Defense Artillery, New Mexico ARNG.

The modern image of today's National Guard began to emerge in 1903, when congressional legislation (the Dick Act) thrust the federal government into the picture by establishing procedures for a more direct and active role in organizing, training and equipping the National Guard in line with the standards established for the Regular Army.

The Guard's involvement in aviation began in 1911, when New York's First Company, Signal Corps, became the first Guard unit to get a plane off the ground. Soon thereafter, Guardsmen in Missouri and California established flying units of their own. But it was not until 1915 that the Army Guard's first federally recognized aviation unit, the 1st Aero Company of New York, came into being. A year later, the new aviation unit was ordered to active duty during the Mexican Border Campaign.

As a result of raids by Pancho Villa on Columbus, N.M., and two other towns in Texas in 1916, President Wilson called the Guard into service to patrol the Mexican-American border. More than 158,000 Guardsmen served in the Mexican Border Campaign. Although the National Guard did not see any combat action, the training that the Guard received was invaluable when the U.S. entered World War I.

Many of the Guardsmen returned from their Mexican Border duty only to be called again into federal service in 1917, for World War 1, with more than 433,000 Guardsmen being ordered to active duty. For the war, National Guard unit throughout the country were organized into combat divisions of the American Expeditionary Forces (AEF), and soon afterwards departed for France to enter combat during World War I.

During World War I, the National Guard supplied 17 combat divisions, or about 40% of the entire American Expeditionary Forces. The Guard also provided three black infantry regiments, the 369th, 370th, and 372nd to the all-black 93rd Division. National Guardsmen from the 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 38th 39th, 40th, 41st and 42nd Divisions saw World War I service. Eleven of these divisions were noted to have spent more days in actual combat than did either the Regular Army or the National Army divisions.

And the World War I accomplishments of the Guard units were highly lauded. National Guardsmen were credited with piercing the Hindenburg line, for helping crush the St. Mihiel salient, and for smashing to victory through the Meuse-Argonne. The best known of the Guard units during World

War I was the 42nd (Rainbow) Division. One of the brigade commanders of this distinguished division was a young brigadier general named Douglas MacArthur.

The records of the German High Command, which were released after the war, noted that of the eight American divisions considered excellent or superior by the High Command, six were National Guard divisions.

After the end of World War I, following a rapid and haphazard demobilization, it was necessary for many states to rebuild their National Guard units from scratch. As a result of several postwar amendments to the National Defense Act of 1916, the Guard was reorganized to consist of the same numbered divisions that had served during the war.

The amended National Defense Act of 1920 established the Army of the United States, to consist of the Regular Army, the Organized Reserve Corps and the National Guard, when called into federal service. Under this defense act, the Guard remained a state force, and was commanded by state authorities. However, the new act also provided for increased federal assistance for the Guard, meaning that when the units reached established Army standards with relation to strength, equipment and skill, they were then federally recognized and thus eligible for federal support.

The Congressional Act of June 15, 1933, created a new Army component, the National Guard of the United States. This new component, while identical in personnel and organization to the National Guard of the several States, was a part of the Army at all times, and as such could be ordered into active federal service by the president wherever congress declared a national emergency. Thus it became possible for the National Guard to be given an Army mission without having to wait for a "call" to be issued through the various state governors.

In August 1940, President Roosevelt ordered the National Guard of the United States into active federal service. Between Sept. 16, 1940, and Oct. 6, 1941, the National Guard brought into federal service more than 300,000 men, in 18 combat divisions, as well as numerous non-divisional units, including 4,800 men from the 20 National Guard observation squadrons. The number of Guardsmen federalized doubled the strength of the active Army, and the Guard observation squadrons, due to their high state of training, helped to form the nucleus of what became the greatest aerial power then know, the Army Air Force.

Not only did the Guard provide the Army with an experienced source of manpower, it also provide the expanding Army with leaders as over 75,000 National Guard enlisted men became commissioned officers during World War II, either through OCS programs or by battle field commissions.

During World War II, National Guard units participated in 34 separate campaigns and numerous assault landings in both the European and Pacific Theaters of Operation. And again the Guard units served well, with 148 presidential citations awarded to National Guard units for outstanding performance of duty in action, or for conspicuous valor or heroism. Individual Guardsmen received 20 Medals of Honor, 50 Distinguished Service Crosses, 48 Distinguished Flying Crosses and more than 500 Silver Star Medals. World War II casualties for National Guard divisions totaled about 185,561.

With the end of World War II in 1945, Guard units were demobilized and personnel were returned directly to civilian life through Army separation centers. Thus, for a short period during the winter of 1945-46, there actually was no National Guard.

The Secretary of War approved plans on Oct. 13, 1945, calling for the reorganization of the National Guard. Under those "approved policies" the Guard was established with dual status and mission. The *National Guard of the United States (NGUS)*, as a reserve component of the Army of the United States (AUS), was to be an "M-day" (Mobilization Day) force, thoroughly trained and equipped and ready for immediate service to the nation in case of enemy aggression or a national emergency. The *National Guard of the several states* was to provide organizations and personnel for the Reserve (federal) component, and to preserve peace, order and public safety in their respective states and during local emergencies. The Secretary of War's approved policies also provided that the federal government was to supervise military instruction, furnish field training facilities, pay, uniforms, equipment, and ammunition, and contribute a fair portion of the expenses for the construction of National Guard armories. The federal assistance in armory construction marked an entirely new development in the history of the Guard.

The first four post-World War II Guard units were granted federal recognition on June 30, 1946. Also granted federal recognition on that date was the nation's first Air National Guard unit, the 120th Fighter Squadron of Colorado. On July 26, 1947, with the adoption of the National Security Act, the name Air National Guard came into being, and since that date the National Guard structure has consisted of both the Army and the Air National Guard.

With the outbreak of the Korean War, more than 183,000 Army and Air Guardsmen were called to active duty. Army Guard units included eight infantry divisions and three regimental combat teams. The Air Guard units called up included 22 wings and 66 tactical squadrons. Of the 22 wings activated, 19 were fighter wings, two were light bomber and one was a tactical reconnaissance wing.

During the Korean War, two Army Guard infantry divisions, the 28th of Pa., and the 43rd of Conn., RI., and Vt., and four Air Guard wings were sent to Europe; four divisions and 17 wings remained in the United States; and two infantry divisions, the 40th of Calif. and the 45th of Okla., and two wings, the 116th, and the 136th, fought in Korea. Each of the Guard divisions were credited with four campaigns, and four of the 36 jet aces of the Korea War were Air Guard pilots.

In 1956, the various federal laws relating to the Armed Forces and the National Guard, to include the National Defense Act of 1916, were codified in Title 10 and Title 32 of the United States Code (USC). As a result, all members of the Army National Guard of the United States (ARNGUS) and the Air National Guard of the the United States (ANGUS) are members of the Ready Reserve.

During the Berlin Crisis of 1961-62, two Army Guard Divisions, the 32nd Infantry Division of Wisconsin, and the 49th Armored Division of Texas, were mobilized on Oct. 15, 1961, along with 104 other non-divisional units, for a total ARNG call-up of more than 45,115. However, none of the Army Guard units were sent overseas. With the Air Guard call-up for the Berlin Crisis on Oct. 1, 1961, units activated included 17 TAC fighter squadrons, four TAC recon squadrons, six C-97 air transport squadrons, one TAC control group and several supporting elements. On Nov. 1, 1961, three Air Guard fighter-interceptor units were mobilized as TAC fighter units, bringing the total number of Air Guardsmen mobilized to about 22,000.

Within one month after mobilization, 216 Air National Guard jet fighters with supporting elements were deployed to Europe, and assumed operational missions immediately upon arrival.

During the Vietnam War, no massive call-ups of Guard and reserve units were made in order to raise military manpower. However, on Jan. 26, 1968, 11 Air National Guard units, comprising eight F-100 TAC fighters and three RF-101 recon units, were ordered to active duty following the seizure of the Pueblo and the Lunar New Year (Tet) communist attacks on South Vietnam. The call-up involved 10,511 Air Guardsmen, including 560 pilots. The Air Guardsmen were given only 36 hours to report for active duty, and of the 9,178, only 34 Guardsmen, who, because of extenuating circumstances, were unable to report within the 36-hour alert period. On May 13, 1968, two additional TAC fighter units and one aeromedical airlift unit, involving an additional 1,333 Air Guardsmen, were mobilized.

Also ordered to active duty on May 13, 1968 were 20 units of the Army National Guard, to include the Hawaii Army National Guard's 29th Infantry Brigade (Separate) and its brigade aviation company in the California Guard; the Kansas Army Guard's 69th Infantry Brigade, which also included the 2nd Battalion, 133rd Infantry, Iowa ARNG; 1st Battalion, 211th Artillery, Massachusetts ARNG; 2nd Battalion, 138th Artillery, Kentucky ARNN; 3rd Battalion, 197th Artillery, New Hampshire ARNG; 116th Engineer Battalion, Idaho ARNG; Company D (Ranger), 151st Infantry, Indiana ARNG; and an additional 12 combat support and combat service support units.

Of the 10,511 Air Guardsmen activated for the Vietnam War, more than 2,000 were deployed to the combat zone, providing four of the Air Force's 13 F-100 TAC fighter squadrons. Flying nearly 30,000 combat sorties and completing 50,000 hours of combat flying in Vietnam, they became the first Air Guardsmen involved in combat in 16 years. An additional 4,000 Air Guardsmen were deployed to Korea and Japan, providing 60% of the total air power in Korea. All Air Guard units were demobilized by June 18, 1969.

In the Army Guard, of the 12,234 mobilized, 2,729 reported to Vietnam with their units. Of the 9,505 initially remaining in the states, 4,311 subsequently were assigned to Vietnam, bringing the total number of mobilized Army Guardsmen in the Republic of Vietnam to 7,040. All Army Guard units were released from Active duty by Dec. 12, 1969. Included among the 4,000 awards earned by Army Guardsmen in Vietnam were: 55 Silver Stars; 681 Purple Hearts, one Distinguished Flying Cross, 16 Distinguished Service Medals, six Legions of Merit and over 1,000 Bronze Stars.

During the 1970's, as America entered the "all-volunteer era," and the Total Force Policy came into being, the Army and Air National Guard began to receive more modern equipment and in larger quantities than it had in decades. Following the Army's "Steadfast" reorganization in 1972-73, nine Army Readiness Regions were set up throughout the United States, with Readiness Groups and subgroups established for each region. Under this program the Army greatly increased the manpower available to assist the Army Guard in advisory and training missions. The Army's "affiliation" program also came into being, whereby some Army Guard battalions and brigades were affiliated with active Army combat units whom they would mobilize and deploy with. Newer helicopters and fixed wing aircraft were received by the Army Guard in addition to upgraded tanks and artillery pieces. And, Army Guard infantry units replaced their recoilless rifles with TOW and Dragon anti-tank missiles.

During the 1970s the Air National Guard also underwent major changes in missions and aircraft. Phased out of the Air Guard inventory during the 1970s were the C-124 "Globemaster" and C-121 "Constellation" cargo aircraft, the KC-97 aerial refuelers and numerous F-100 fighter units. Replacing these aircraft were first-line C-130 "Hercules"

cargo aircraft, KC-135 jet tankers and A-7D and A-10 tactical fighter units. Upon being assigned the KC-135 jet tankers, Air Guard aerial refueling units were assigned the mission of supporting year-round aerial refueling missions.

With more modern equipment and communications capabilities, the Guard was utilized more for State Active Duty missions in the 1970s than ever before in the Guard's history. Floods, forest fires, tornadoes, snow emergencies and energy shortages resulted in hundreds of call-ups during the 70s. Civil disturbances, police and firemen's strikes and walkouts by state prison employees resulted in other call-ups for domestic emergencies and to maintain safety and law and order.

As the Army and Air National Guard enter into the 1980s they are better trained and equipped to respond to a state or national emergency than at any time in their more than 344 years of service to our nation. The Guard is indeed, "America at its best."

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