

COLORADO DIVISION OF WILDLIFE

# Hunter Sight In and Practice Tips



**Tips for Sighting In  
and Getting Ready  
for Hunting Season**



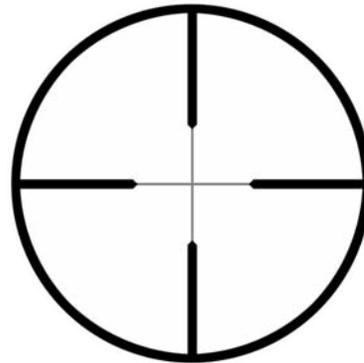
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# Fundamental Rules of Firearms Safety:

1. **Treat every firearm as if it is loaded.**
2. **Keep your finger outside the trigger guard until you are ready to shoot.**
3. **Do not point the firearm at anything you do not intend to shoot.**
4. **Be absolutely sure of your target and what is beyond the target.**

## Check the Following Items Before You Shoot or Hunt:

- Are all screws tight?
- Scope bases and base screws?
- Scope ring screws?
- Are the crosshairs level?
- Action screws or bolts?
- Sling swivel bases?
- Is the bore clear of obstructions?



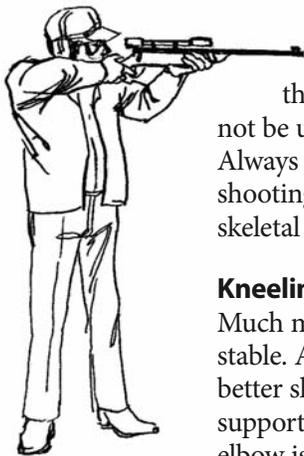
***If you are not certain on how to mount, center and boresight a scope, you should take your rifle and scope to a professional gunsmith to have the scope installed. This will save you time, ammunition and frustration!***

# Fundamentals of Marksmanship

- **Sight picture**—be sure your scope is focused and the crosshairs appear sharp and clear.
- **Sight alignment**—be sure the crosshairs are in the center of the field of view (parallax).
- **Proper breathing**—it's best to shoot during the “natural respiratory pause,” the 2 to 5-second pause after a breath.
- **Trigger press**—be sure to press the trigger straight to the rear with even pressure. Do not jerk or slap the trigger.

## Shooting Positions

Hunters should always try to use a solid, braced shooting position to ensure good shot placement. Good shooting positions use **skeletal support** since bones don't get tired and shaky like muscles do. Shooting aids such as bipods and shooting sticks are also very useful.



### Offhand or Standing

Offhand is the least stable of the shooting positions and should not be used for shooting at big game. Always try to use a braced or supported shooting position. Note the lack of skeletal support.

### Kneeling

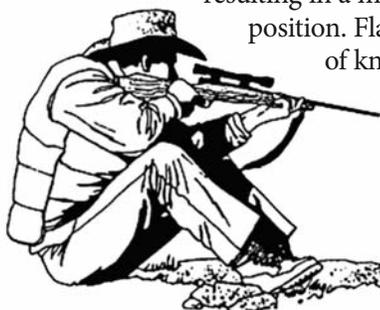
Much more stable. Allows better skeletal support and elbow is

supported by knee. Put the flat of the elbow on the flat of the knee, high enough to shoot over brush.



### Sitting

Sitting allows both elbows to be supported by the knees, resulting in a much more stable shooting position. Flats of elbows on the flats of knees for most stable



position. Great position for hunting shots!

### Prone

Prone is the most stable position and provides maximum support for the shooter. Prone may not allow shooting over obstacles, brush or snow.



## Shooting Sticks and Bipods

Shooting sticks and bipods are useful tools for the hunter. Shooting sticks and bipods provide excellent support for the rifle, give a solid rest and help hunters make good shots. Like all equipment, hunters must practice with shooting sticks or bipods before they attempt to use them in the field. Both bipods and shooting sticks are available in several lengths that work from prone to standing.



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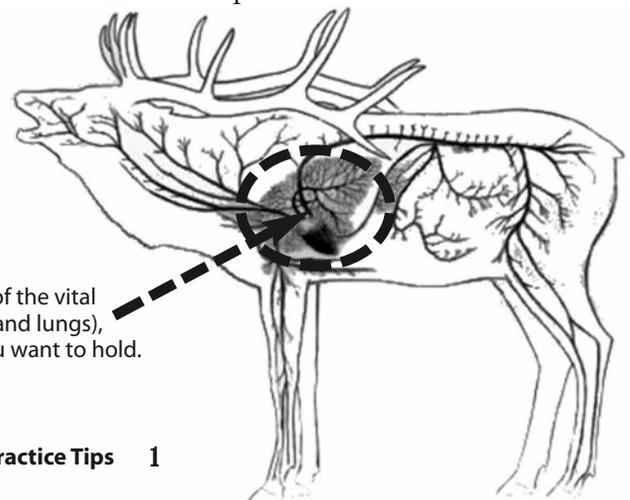
### Hunting Tip:

*Always carry a personal survival kit that contains the three “must have” elements:*

- 1) Signal, 2) Shelter, 3) Fire

## Shot Placement

Shot placement is very important to ensure a clean, humane kill on big game. The best place to shoot a big game animal is the center of the chest or vital zone where the heart, lungs and major blood vessels are located. The illustration below helps show the vital zone of elk.



The center of the vital area (heart and lungs), is where you want to hold.

# Shot Selection

Proper shot selection is important when hunting. Care must be taken to be sure that there are no other animals behind the one that will be shot and that the animal offers a broadside shot so that the bullet will pass through the vital zone. All shots taken must be followed up on—animals usually do not drop on the spot when they are shot. A big game animal can cover considerable distance in only a few seconds and just because it runs off does not mean the shot missed. After shooting at a big game animal, the hunter must immediately go to where the animal was standing and look for evidence of a hit. Follow up on all shots.



No!  
Animal is running.



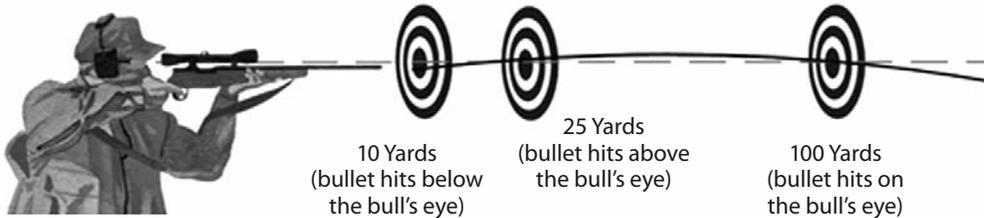
No!  
Animal is sky-lined.



Yes!  
This is a good shot.

Shots should **not** be taken at running game or animals that are sky-lined.

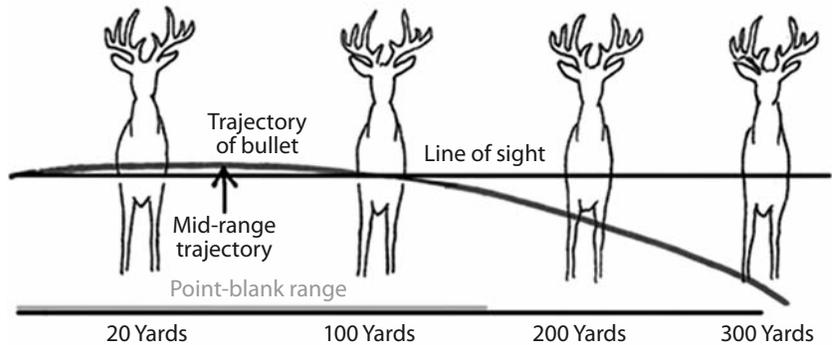
Be patient and wait for a broadside shot with a good backstop.



# Ballistics

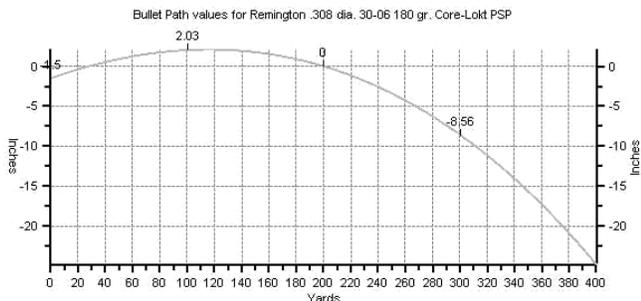
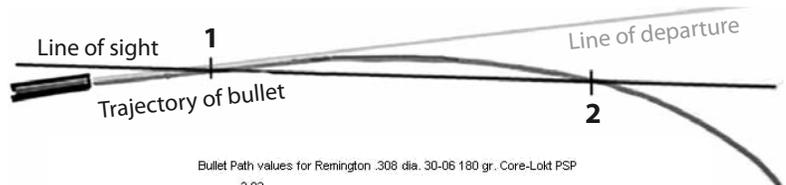
The line of sight from the scope to the target is straight and the bullet path is an arc. The muzzle actually points up slightly to help the bullet fight gravity. The bullet will cross the line of sight while rising and then again as it drops or descends. The point where the bullet crosses back through the line of sight is called the “zero” or distance the gun is sighted in for. In the illustrations shown above and to the right, the gun is sighted in for 100 yards.

## Trajectory of a Typical Hunting Caliber Bullet



# Trajectory or Bullet Path

Trajectory is the term that describes the bullet's path or flight. The bullet's path is an arc, with the bullet climbing and then dropping while it travels towards the target, crossing the line of sight two times. For most big game hunting, a “zero” or “dead-on” range of 200 yards will work well. This means that the bullet will be slightly high at 100 yards, dead-on at 200 yards and low at 300 yards. For most big game calibers, the bullet will be between 1½” and 2½” high at 100 yards, dead-on or “zeroed” at 200 yards and 7” to 9” low at 300 yards. The illustrations to the right will help explain this.

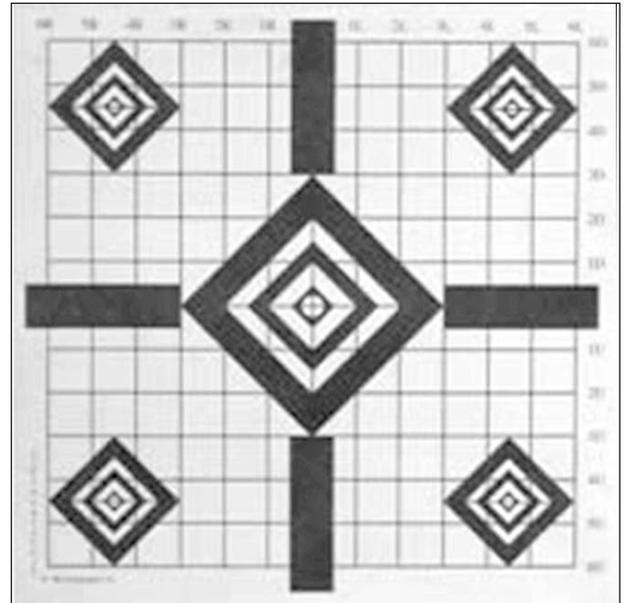
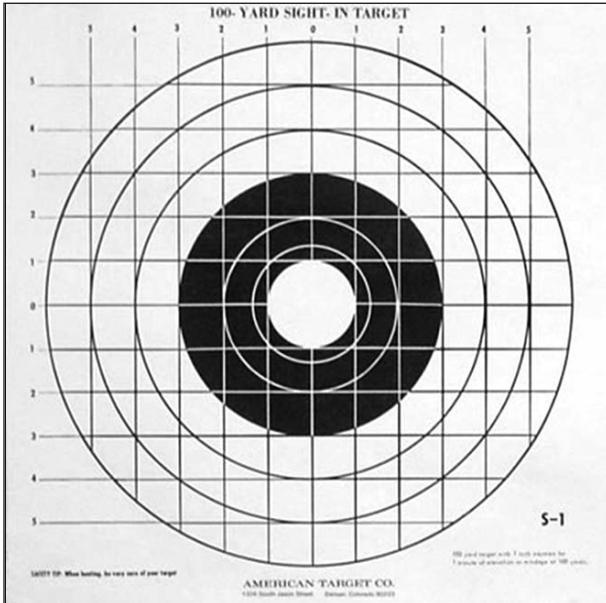


Remington .308 dia. 30-06 180 gr. Core-Lokt PSP

© SIERRA BALLISTICS

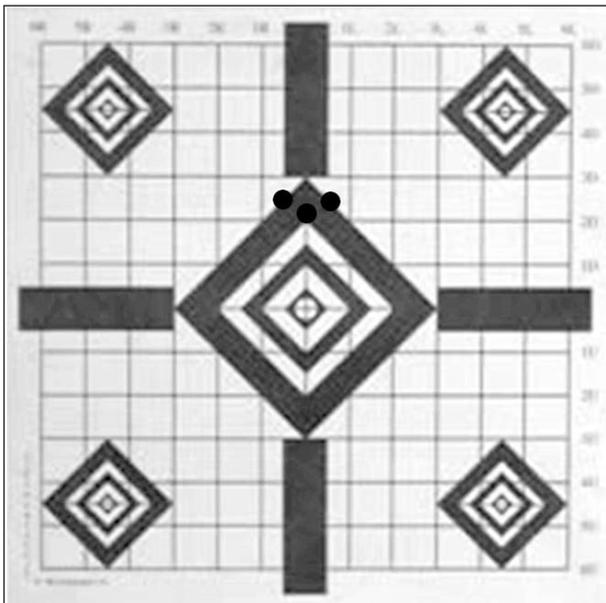
# Sighting In/Targets

When sighting in or checking to be sure that your rifle is sighted in and ready to go, it is important to use a target that provides a good aiming point as it makes it much easier to make scope adjustments. Here are some typical examples:



These targets have 1” (one inch) squares which help when making scope adjustments.

Here's what properly sighted in targets look like:



**At 100 Yards, 2” to 2½” High**



**At 200 Yards, “Dead-on”**

# How to Estimate Range for Proper Hold

It is important for hunters to be able to estimate range in order to make a good shot on game. It can be difficult to estimate range, especially longer distances, due to terrain, vegetation and light conditions. Range finders are a handy and valuable tool that lets hunters know what the distance is to the target, often within one yard. Range finders are also a great training tool that can be used on hikes and scouting trips to help hunters learn to better judge distance. Take a range finder with you and guess the distance to an object and then confirm it with the range finder. Range finders will help hunters avoid taking shots that are outside of their effective range.



## Binoculars

Binoculars are an absolute **MUST** for hunters! Never use a rifle scope in place of binoculars to look at game, scan the area, and especially, look at other hunters. Quality binoculars make it much easier to find game and determine the animal you want to hunt.



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### Hunting Tip:

*Only Perfect Practice can make Perfect! Proper shooting practice can make the difference between an elk in the freezer and buying burgers.*

## Some Tips for Proper Hunter Practice

It is important to use a stable, solid rest for the initial sight in from a shooting bench. Be sure to keep the shooting rest in the same place on the rifle's forearm so that the shots will be consistent. Do not put the barrel on the rest as it can have a negative effect on accuracy. When shooting from the bench, a shooting shoulder pad can greatly reduce the felt recoil and help the rifle fit more like it will in the field when you



will be wearing a coat or have a pack shoulder strap between you and the rifle.

After getting the rifle sighted in from a bench rest, hunters should do some shooting



from hunting positions using the gear, clothing and type of rest they will have in the field. Many shooters hold the rifle loosely on the bench and then find it shoots to a different point of impact when they shoot in the field. Some simple practice at the range will really help. Hunters should practice wearing the gear they hunt in—coats, hats, packs and gloves. All of these can affect how the gun feels and fits.

Practice must include shooting off of shooting sticks or bipods, if used in the field. Animal targets, available at most sporting goods and archery shops, are also good practice as they don't give a small aiming point and require the hunter to know where to hold. Practice should be done at various ranges so that hunters can determine their effective range and really see how their rifle and ammunition will perform in the field.



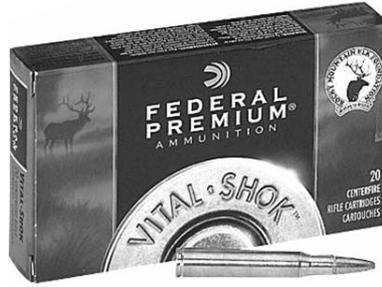
Sitting and prone practice using the bipod. Note the shoulder pad—makes time at the range more pleasant.

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## Ammunition

It is very important to sight in and practice with the same ammunition that you will be hunting with. Different brands and different bullet weights will not shoot the same. When buying ammunition, it is best to pick up at least two boxes—one to use for sighting in and some practice and the other



to be sure you have enough left for the hunting trip. Whenever you switch ammunition, be sure to check how it shoots—**never hunt without being sure your rifle is sighted in!**



## Some Final Thoughts:

- **Be sure to sight in your rifle(s) and practice shooting from hunting positions with hunting or field rests.**
- **Clean and inspect your gear before you hunt.**
- **Identify your target and what is beyond.**
- **Think! Always load your brain before you load your rifle.**
- **Use the same ammo to hunt with that you used to sight in.**
- **Good luck this hunting season.**
- **Be safe.**

### Notes:

Brand: \_\_\_\_\_

Bullet Weight: \_\_\_\_\_

Zero Range:

\_\_\_ 100 yds. \_\_\_ 200 yds. \_\_\_ Other



***SAFE HUNTING  
IS NO ACCIDENT!***

# Colorado Division of Wildlife Offices

## **DOW Headquarters:**

6060 Broadway, Denver, CO 80216, (303) 297-1192

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### **Brush**

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### **Colorado Springs and Southeast Region**

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### **Steamboat Springs**

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## **DOW Web Site**

[www.wildlife.state.co.us](http://www.wildlife.state.co.us)

## **Shooting Ranges**

[www.wildlife.state.co.us/Hunting/ShootingRanges](http://www.wildlife.state.co.us/Hunting/ShootingRanges)



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