

## INTRODUCTION TO TARGET RIFLE MARKSMANSHIP

By Gary Anderson, Director of Civilian Marksmanship-Emeritus

*Note: This article is one of a series of On the Mark articles on Teaching Rifle Marksmanship to Young Shooters. This article examines the very first things about this sport that someone new to shooting should learn. It is designed to give new shooting coaches basic information about the sport. It can be helpful to all coaches by highlighting the qualities of shooting to be taught to new shooters or their parents. Coaches are encouraged to make copies of this “Introduction to Target Rifle Marksmanship” for distribution to new shooters as part of an orientation program or to parents as part of their parent education program.*

All participants in target rifle shooting need to understand its objectives, basic rules, opportunities and benefits in order to better appreciate its appeal and challenges. This article seeks to answer basic questions about rifle marksmanship and therefore to serve as an “Introduction to Target Rifle Marksmanship.” To do this, it asks and answers a series of questions about this great sport discipline.

**RIFLES USED  
IN TARGET  
COMPETITIONS ARE  
NEVER CALLED  
WEAPONS!**

### WHAT IS RIFLE MARKSMANSHIP?

The first question that must be answered when introducing rifle marksmanship to new shooters and their parents is “what is it?” Rifle Marksmanship has been defined as a sports skill where competitors apply visual, mental and physiological control to fire a rifle at a distant, difficult target. The essential elements of this definition of rifle marksmanship are:

**RIFLE  
MARKSMANSHIP IS A  
SPORTS SKILL  
INVOLVING AN  
ATHLETE, A RIFLE AND  
A TARGET**

1. Rifle marksmanship is a sports skill involving an athlete, a rifle and a target.
2. The rifle, when used in a sport, is a piece of sports equipment. It is never a weapon.
3. Target shooting is a sport of extreme precision where the athlete’s skill is measured by how close to the center and how often the athlete’s shots hit the target.



*This tomb art, dated about 1450 BC from ancient Middle Kingdom Egypt, is one of the world’s oldest records of a target shooting activity. This image shows a target with a grouping of arrows that were shot at it, as well as two archery students and their instructors.*

### WHAT IS THE AIM OF RIFLE MARKSMANSHIP?

The aim or objective of rifle target shooting is to achieve extreme precision in consistently hitting the target over an established course of fire. If all shooters fired just one shot, every competitor would have the possibility of firing the best shot. If all competitors fire a longer series of shots in an extended course of fire, it becomes more and more likely that the best rifle shooter will have the highest score.

### HOW DID RIFLE MARKSMANSHIP GET STARTED?

One of the most fascinating aspects of the sport of shooting is its history. Target marksmanship traces its history back at least 3,500 years when Ancient Egyptian Pharaohs made lasting records of their prowess in shooting bows and arrows at targets.

Throughout its history, marksmanship evolved from being a key element in man’s survival and preparation for war to becoming an important basis for social and cultural interaction and today to being one of the world’s great sports. During the Middle Ages, the citizens of cities organized shooting clubs where they could practice shooting crossbows or bows at targets to be better prepared to defend their cities. These shooting clubs started to organize shooting festivals with competitions for valued prizes.

Starting in the 19th century, rifle target shooting developed both as a military training activity and as a civilian sports activity. Rifle and pistol competitions were included in the first modern Olympic Games in 1896 and have been in every Olympic Games since then except in

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1904 and 1928. The first World Shooting Championships were held in 1897. National shooting federations began to emerge in the late 18th century.

Today there are more than 150 nations with organized target shooting programs. Shooting clubs and national federations have taken the lead in developing junior rifle marksmanship programs in order to promote youth participation in this popular sport.

### WHAT RIFLES ARE USED IN JUNIOR TARGET SHOOTING?

Rifles used in target shooting are items of sports equipment and have specialized features to adapt them to the challenges of the sport. Target rifle features that must be available on rifles used by junior shooters are:

1. Accuracy. Target rifles must be capable of greater accuracy than most other rifles in order to consistently shoot tens on difficult competition targets.

2. Adjustable Aperture Sights. Rifle target shooting generally requires non-optical or aperture sights. These sights must have precise adjustments for windage and elevation.

3. Front Sights with Interchangeable Inserts. Target rifles typically have hooded front sights and a selection of inserts that can be changed as shooter skill increases.

4. Sling Attachment Capability. Good shooting in the prone and kneeling positions is impossible without a sling. Sling swivels to which to attach slings may be fixed or adjustable.

5. Stock Length Adjustment. Matching rifle size and butt-stock length to the size of the shooter is critical. Most rifles used by juniors have some means of adjusting stock length to achieve this.

6. Trigger. Triggers on target rifles may be single or two-stage. Target triggers must be consistent, safe, break cleanly and meet legal trigger weight requirements.

7. Legal. Almost all rifle events have weight limits and rifle configuration limitations with which target rifles must comply.

There are five different types of rifles typically used in junior rifle marksmanship. They are identified in the chart at the right.

Note: The weight limit given for smallbore rifles is the weight limit for rifles used in USA Shooting competition. Typical junior smallbore target rifles like the one illustrated in the chart should weigh between 5.0 and 8.0 lbs.

Sporter Air Rifle    Caliber .177

Wt. 7.5 lbs



Precision Air Rifle    Caliber .177    Wt. 12.125 lbs



Smallbore Target Rifle    Caliber .22 Rimfire

Wt. 14.3 or 17.6 lbs



Rimfire Sporter Rifle    Caliber .22 Rimfire

Wt. 7.5 lbs



BB Gun    Caliber .177

Wt. 6.0 lbs



### HOW ARE RIFLE TARGETS CONFIGURED AND SCORED?

Every sport must have a means of measuring athlete performances or of keeping score. In target shooting keeping score is done by using targets with concentric scoring rings with values from ten points for shots in the center of the target to one or zero points for shots away from the target center. Shots hitting the target are scored according to the highest value scoring ring that the shot hole hits or touches.

Targets originally were made of wood or metal, but today most targets are printed on paper and scored by human visual evaluation and the use of a scoring gauge (plug) when necessary. It is now also possible to score

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paper targets electronically using a scanner and computer evaluation. Electronic scoring targets have been available for the last 25 years and are in use in the very best ranges where they have done much to make shooting a spectator sport.

Targets used in junior rifle shooting vary in difficulty. The BB gun target is proportionately the largest since it is used with the youngest shooters and the least accurate rifles. The most difficult target is the 50-meter smallbore rifle target and its reduced 50-foot version. The chart at the bottom of the page compares their relative sizes.



*The 10-meter air rifle target. To score a ten, the shot must hit or touch the 0.5mm ten dot in the center of the target.*

### WHAT FIRING POSITIONS ARE USED?

Three-position target rifle events require shooters to fire equal numbers of shots in the following three positions:

**Prone.** The shooter lies on the floor while holding the rifle with both hands and shoulder. A sling is used on the arm that supports the rifle to steady the rifle. Since it has the lowest center of gravity and the largest base of support, prone is the steadiest position and generally produces the highest scores. Many competitions also have special



prone only events in addition to the standard three-position events.

**Standing.** The shooter stands on both feet while holding the rifle with both hands and the shoulder. The arm that supports the rifle is allowed to rest on the left side or hip. A sling cannot be used in this position. Standing has the highest center of gravity and the smallest base of support so scores produced in standing are generally lower than scores fired in the other positions. As a result, most target shooters spend more time practicing standing.



**Kneeling.** The shooter establishes a foundation for this position by placing a cylindrical kneeling roll on the floor and then kneeling so that the ankle rests on the kneeling roll and the body sits on the heel that is supported by the kneeling roll. The other leg is bent so that the knee is elevated to provide a support surface for the arm that supports the rifle. The shooter holds the rifle with both hands and shoulder just as in the other positions, but this time the elbow of the support arm for the rifle rests on the knee.



Kneeling scores generally fall between prone and standing scores. It is often regarded as the most complicated of the firing positions.

RIFLE EVENT	DISTANCE	SIZE OF 10 RING	TARGET IS SAME SIZE AS:	RELATIVE SIZE: MINUTES OF ANGLE
Air Rifle	10 meters	0.5 mm	Touch this dot: •	1.80 moa
Smallbore Rifle	USAS 50 feet	-0.38 mm	Cover this dot: •	1.14 moa
Smallbore Rifle	50 meters	10.4 mm	.41 caliber bullet	1.15 moa
Rimfire Sporter	50 & 25 yards	50 mm	Silver dollar	4.37 moa
BB Gun	5 meters	.125 inches	This symbol: ®	5.01 moa



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**Sitting.** One additional position, sitting, is used in two events that juniors often fire, four-position BB Gun shooting and Rimfire Sporter shooting where the positions are prone, sitting or kneeling and standing. In the sitting position, the shooter sits on the buttocks, holds the rifle



with both hands and the shoulder and then leans forward to rest both elbows on the legs. The legs may be either crossed and drawn back or crossed and extended. When shooters have a choice between sitting and kneeling, sitting is usually preferred because it is lower and somewhat steadier.

### WHAT ARE THE MOST IMPORTANT COURSES OF FIRE AND RULES?

Every sport has rules to describe the event or game that is played by participants. In target rifle shooting, the game played by participants is defined by its course of fire. The most common shooting events in junior target rifle shooting are:

- **Three-Position Air Rifle.** Competitors are divided into Sporter and Precision Classes. Standard courses of fire are the 3x10 consisting of 10 record shots each in the prone, standing and kneeling positions or the 3x20 consisting of 20 shots in each position. Positions must be fired in that order and are timed separately. Competitors may fire sighting or practice shots in each position before starting record shots, but must complete all sighting and record shots within the time limit. In precision class shooting, competitors may wear special shooting jackets, trousers and boots (see the kneeling and standing position illustrations above). In sporter class competition, only ordinary clothing may be worn (see the prone and sitting position illustrations).

- **Air Rifle Standing.** In international competitions, air rifles are fired only in the standing position. The standard courses of fire, which also are used for junior competitions, are 40 shots standing for women and 60 shots standing for men. Air rifle standing events are normally fired with precision air rifles and rules that permit special shooting jackets, trousers and boots.

- **Smallbore Rifle Three-Position.** Smallbore three-position events are designed for firing at a distance of 50 meters, but junior events are often fired in indoor ranges on proportionately reduced targets placed at a distance of 50 feet. Junior smallbore three-position courses of fire also are 3x10 and 3x20 courses. In international-type competitions, women fire a 3x20 course while men fire a 3x40 course. Special shooting clothing and a wide variety of accessories are permitted in these events.

- **Finals.** In air rifle standing and three-position and in smallbore three-position events, many individual competitions end with a final round or stage for the top eight competitors after all competitors have completed the basic course of fire. The finalists shoot an additional ten shots, one-shot-at-a-time, with separate 75-second time periods for each shot. Final round scores are added to the scores those shooters fired in the regular course of fire. When electronic targets or electronic scoring is



*Finals for the top eight shooters are often used to conclude three-position competition events. Successful firing in a final requires shooters to have good, well-practiced shot plans and the discipline to follow them.*

available, the ten final round shots are scored in tenth ring values where each scoring ring is divided into ten sub-rings. For example, a shot that just touches the ten ring would score 10.0 while a perfect center shot would score 10.9. Finals were developed to give a more spectacular ending to shooting competitions and to appeal to spectators and the media.

- **Rimfire Sporter.** Competitors are divided into two classes according to the type of sights on their rifles. T-class shooters use rifles equipped with telescopic sights (6X max.) while O-class shooters must have traditional open sights on their rifles. The course of fire is 60 shots

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with 10 shots slow fire and 10 shots rapid-fire being fired in each of three positions, prone, sitting or kneeling and standing. Prone and sitting are fired at 50 yards; standing is fired at 25 yards. Only ordinary clothing may be worn.



*Shooting is an Olympic Sport. The 2008 Olympic 50-meter men's rifle prone medalists included Matt Emmons, USA (left), who won the silver medal.*

- **BB Gun.** The standard BB Gun course of fire is a 4x10 event with sighters and 10 record shots fired in prone, standing, sitting and kneeling positions, in that order. The maximum age for BB Gun shooters is 15. Since BB Gun competitors are younger, they are permitted to have a coach with them on the firing line. The coach also serves as a loader.

### WHAT ARE THE GOVERNING ORGANIZATIONS?

Several different organizations govern or control important aspects of target rifle shooting. Rulebooks governing different shooting events can be downloaded from the websites of the governing organization. These organizations are:

- **International Shooting Sport Federation.** <http://www.issf-sports.org>. The ISSF is the shooting world's primary governing body. ISSF rules and supervision govern shooting in the Olympic Games and many other international championships.

- **USA Shooting.** <http://www.usashooting.org>. USAS is the national governing body in the U.S. for Olympic and international style shooting. USAS provides rules and competition sanctioning for the Air Rifle Standing and Smallbore Three-Position events.

- **National Three-Position Air Rifle Council.** <http://www.odcmp.com/3P/Council.htm>. The

NP3ARC is a consortium of U. S. organizations that promote three-position air rifle shooting, including USA Shooting and the CMP. The Council's National Standard Three-Position Air Rifle Rules govern most junior three-position air rifle competitions in the U. S.

- **National Rifle Association.** <https://www.nrahq.org/compete>. The NRA governs a wide array of shooting sports disciplines including BB Gun, some three-position smallbore and air rifle events.

- **Civilian Marksmanship Program.** <http://www.odcmp.com>. CMP governs Rimfire Sporter shooting. It's the national governing body for service rifle and pistol shooting.

### WHAT OPPORTUNITIES ARE AVAILABLE TO JUNIOR TARGET RIFLE SHOOTERS?

For young people who become active in target rifle shooting there is a wide range of opportunities available:

- **Club Activity.** Almost all youth are attracted to the fun and camaraderie that comes from participating in club activities.

- **Learning a New Sport.** Target rifle shooting is a challenging and fulfilling sport. Youth who participate in organized shooting programs will learn and practice the skills of this sport in safe, structured settings.

- **Competition Sport.** The test of trying to perform your best in a competition is appealing to most young people. Goals for competitions can be anything from competing against yourself and having fun to striving to win.

- **High School Sport.** In many areas of the country rifle is a high school varsity or club sport where youth who are motivated by the idea of working hard to make the rifle team can experience the rewards of representing their school or club in team competitions.

- **College Sport.** The NCAA recognizes rifle as an intercollegiate varsity sport. College rifle offers scholarships for the best shooters and prestigious competitions to determine annual NCAA Rifle Champions. There are also many collegiate rifle and pistol clubs that welcome students interested in pursuing regular practice and enjoying club membership.

- **Olympic Sport.** For some special junior shooters who decide to work incredibly hard at becoming the

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very best, their goals become focused on making the USA Shooting Team so they can represent their country and win medals in ISSF World Cups, World Shooting Championships and the pinnacle of sports competition, the Olympic Games.



*Shooting is a lifetime sport. Youth who enjoy target rifle shooting can look forward to a lifetime of shooting sports fun and fulfillment.*

- **Lifetime Sport.** For many junior shooters, the skills they learn and the fun they have in junior club and competition activities leads them to seek ways to continue participating in target shooting as adults. Many adults compete in smallbore position, air rifle and Rimfire Sporter shooting. Many others transfer their skills to service rifle, pistol or other shooting sports disciplines. In target shooting, participation from ages eight to eighty is possible.

### WHAT ARE THE BENEFITS OF TARGET RIFLE SHOOTING?

One of the great things about youth sports in general and youth shooting in particular is that when winning and losing is kept in perspective, the efforts youth make to improve and perform their skills in practice and competition can be very beneficial to their development as persons. There are many life skills

that target shooting does an especially good job of developing:

- **Concentration Skills.**

The heart and soul of firing consistent series of accurate shots is concentration. Learning the skills of properly firing shots develops concentration skills to a high degree. Many young shooters and their parents also discovered that these skills transfer over to schoolwork.

- **Self Control and Emotional Control.** Good shooters learn to control themselves and their emotions exceptionally well. In shooting, competitive energies are directed towards an inanimate object, the target, and never towards an opponent. Target shooting is the antithesis of violence.

- **Self Discipline.** Self discipline is emphasized in target shooting from the first safety lessons to disciplining oneself to get the most out of every practice to the self-discipline that determines how hard and how often one practices.

- **Responsibility.** Gun safety begins with accepting full responsibility for handling the guns used in shooting safely. Progress in shooting depends upon accepting full responsibility for both good scores and bad scores.

- **Fair Play and Sportsmanship.** In shooting, the ideals of fair play and good sportsmanship lead to a commitment to always follow the rules and respect other competitors as well as coaches and competition officials.

- **Rewards of Hard Work.** Shooting is a sport where strength, size or speed make no difference in how well one can shoot. Instead, shooting is a sport where how hard

one works makes all the difference. This can be a vivid and long-lasting lesson.

- **Self-Image Enhancement.** Participating in target shooting where progress is almost solely dependent upon how hard one works has helped many young people learn to believe in themselves and to understand that they can realize goals and meet difficult challenges.

In addition to the great opportunities and personal benefits that come from target rifle shooting, young shooters, coaches and parents must know that their sport is **1)** one of the safest of all youth sports, **2)** a sport where how hard one works and not so-called natural ability determines success and **3)** one of the most popular participation sports in the world. Whether you are involved as a shooter, a coach or parent, the sport of target rifle shooting welcomes you.

### About the Author

*Gary Anderson, Director of Civilian Marksmanship-Emeritus, is a regular contributor to On The Mark. He served as DCM for 10 years and remains an effective advocate for firearms safety training and rifle practice. Gary's primary role at CMP has been to develop and sustain successful youth shooting programs at both regional and national levels.*

