

OLYMPIC SHOOTING EVENTS

THE OLYMPIC SHOOTING EVENTS:

An explanation of what they are and why they are so prestigious and difficult to win

By Gary Anderson, DCM Emeritus



One of the great moments in Olympic shooting history occurred during the 2012 London Olympics when the USA's Kim Rhode won the **Skeet Women** gold medal with a score 99 x 100 (74 qualification + 25 final). Her amazing score established Olympic and World Records and was eight points ahead second place as she won her fifth consecutive Olympic medal. This photo shows Rhode scoring her 99th hit on her last target (upper right).

The world's most prestigious shooting title is to be an Olympic gold medalist. Olympic Games Shooting events are also the most difficult competitions in the world to win. Every four years 15 new Olympic Shooting gold medalists are crowned. The last time this happened was in the 2016 Rio de Janeiro Olympic Games. It should have happened again in the 2020 Tokyo Olympic Games, but those Games were postponed to 2021, due to the covid pandemic. The next Olympic Games Shooting competitions are now scheduled to take place in the summer of 2021.

WHY OLYMPIC SHOOTING IS SO PRESTIGIOUS AND DIFFICULT

There are at least seven unique factors that make winning Olympic Shooting medals so difficult and prestigious:

1. **Universality.** In the Olympics, athletes truly are competing against the best athletes from the whole world. There are more than 150 countries in the world with organized target shooting competitions and all of

them practice the Olympic Shooting events. No other shooting sports activity boasts such universal, worldwide participation.

2. **Tradition.** Olympic Shooting events trace their history back to the late 19th century and the first Modern Olympic Games in 1896. Thanks to the connection modern Olympics founder Baron Pierre de Coubertin had with shooting (he was a seven-time French national pistol champion), Shooting became a founding sport in the modern Olympic Games. Shooting has been in every Olympic Games except two, 1904 and 1928.

3. **Gender Equality.** Olympic Shooting is fully gender equal. Everyone in the world, woman or man, has an equal chance to become an Olympic medalist. In Tokyo, six gold medals will be awarded for women's events, six gold medals for men's events and six gold medals for three mixed team events (teams consist of one woman and one man). Moreover, women and men both have the same number of Olympic participation quotas. Starting in 2018, Shooting event courses of fire were changed so that women and men now fire the same numbers of shots in all Olympic events.

4. **Difficulty.** Olympic Shooting events are renowned for their difficulty. Rifle and pistol targets are extremely demanding. For example, a 7.7 (decimal score) on the 50m international rifle target is proportionately equal to the 10-ring on the 200-yard USA highpower rifle target. An international trap target has to launch fast enough to fly 83 yards, an American trap clay target only has to fly 50 yards. Since Olympic events are more difficult and the level of competition higher, the training demands for athletes who pursue the Olympic dream are much greater. The development of an Olympic medal contender typically takes eight to 12 years of daily training, with multiple hours each day devoted to shooting, physical and mental training.

5. **National Support.** A growing list of nations regard sports participation as essential to public well-being and health. Many nations also see sports victories, especially in the Olympics, as a measure of national prestige. Nations like China, India, Russia, Korea, Germany, Italy and many others allocate significant national resources to developing Olympic shooting athletes through government, sports ministry, National Olympic Committee or private funding.

6. **Television.** Olympic Shooting *finals* are televised live all over the world. During the 2016 Olympics, Shooting finals amassed 312M (M = million) total viewer hours with the two most popular events being 10m Air Rifle Women and 10m Air Pistol Women. Shooting finals had an average worldwide TV audience of 48.1M; this ranked above the



Universality. The flags of 108 participating nations flew over the London 2012 Olympic shooting venue.

average Olympic sport (40.9M) and compared favorably to the sport with the highest average audience (62.4M). The countries with the highest TV viewer audiences for Shooting were, in this order, China, Germany, Great Britain, Italy, Brazil, USA and Korea.

OLYMPIC SHOOTING TRIVIA...

Which nation's Queen met her future husband, who is now that nation's King, at an Olympic shooting venue?

Answer on page 10

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One of the realities athletes who compete in international shooting championships must cope with is the close presence of TV cameras, cameramen and the knowledge that they are performing on live television productions that are viewed all over the world.

It was also interesting to note that Shooting also attracts huge worldwide audiences through internet searches and social media. No shooting sports activity comes even remotely close to the television and electronic media audience numbers that Shooting attracts through the Olympic Games.

7. **Spectators.** Some people who don't know much about Shooting claim it is not a spectator sport, but Olympic Shooting absolutely renders that assertion false. Modern Olympic Shooting ranges must have spectator seating. The 1996 Atlanta Games rifle-pistol finals range had a seating capacity of 2,466 spectators. The 2012 London Games Finals Hall had 2,000 seats. In each recent Games, Shooting tickets were sold out and spectators were NOISY



A small part of the spectators who watched one of the 2012 Olympic finals. Their enthusiasm is clearly obvious. The TV network commentator position (purple table coverings) is in the left center.

and enthusiastic. Spectators at the 2016 10m Air Pistol Men final will never forget how loud the crowd's "WU!! WU!! WU!!" cheers were for Brazil's Felipe Wu as he fought his way to a silver medal. Shooters who think they have to have a quiet range to concentrate and perform their best will never become Olympic champions.

THE OLYMPIC SHOOTING EVENTS

Shooting is one of 48 Summer Olympic sports recognized by the International Olympic Committee, the governing body of the Olympics. Shooting's 15 gold medal events are divided into three different **disciplines** according to the type of gun used: Rifle, Pistol and Shotgun.

Qualifying. Participating in the Olympic Games is strictly limited to nations and athletes that qualify to participate. A complex qualifying system allocates **quota places** among the 15 events that must be won in Olympic qualifying competitions during the two years before each Games. A quota place is an authorization for a nation to enter one athlete in an Olympic event. Shooting has 360 quota places that are divided equally between women and men. Qualifying for the 2020 (now 2021) Games started at the 2018 World Shooting Championship. Shooting qualifying competitions also take place in World Cups and Continental Championships. Nations may earn a maximum of two quota places per event. Plus, all athletes who are entered must demonstrate that they are international-class athletes by firing a minimum qualifying score (**MQS**) in an Olympic qualifying competition.

Olympic Shooting Terms in this article...

- | | |
|----------------|-------------------|
| • finals | • qualification |
| • disciplines | • eliminations |
| • quota places | • decimal scoring |
| • MQS | • hit zone |

The first time the term appears it is shown in ***bold italics***

Qualifications and Finals. Olympic shooting events are structured to have a qualification, for all athletes entered in the event, and a final. After all athletes complete the **qualification**, the top eight or six qualifiers advance to a final. Scores in the qualification do not carry forward; finalists start from zero. Individual event finals have progressive **eliminations** that end with two athletes remaining to fire the last shot or shots to decide the gold and silver medal winners.

Targets. Rifle and pistol targets are stationary targets with concentric scoring rings that score each shot. Since 1992, Olympic rifle and pistol events have been fired on electronic targets that score shots instantly and display them on competitor monitors, on electronic scoreboards for spectators and for television graphics. Three kinds of scoring are used in rifle and pistol events. Integer or whole ring scoring is used in most qualification stages. **Decimal scoring** where each scoring ring is broken down into 10 sub-rings is used for most finals. Hit/miss scoring where shots must be within a defined **hit zone** to score a point is used in the 25m pistol finals. Hit/miss scoring is, of course, also used for all clay target events.

Doping and Equipment Control. One of the biggest threats to the integrity of Olympic sports is cheating. When winning an Olympic shooting gold medal can be worth \$1 or \$2 million dollars in some countries, the incentive to cheat is high. There are two primary ways to cheat in shooting, by doping or by using illegal equipment. Beta-blocker drugs are the primary means of boosting shooting scores through doping, but a rigorous anti-doping testing program now ensures that all athletes in the Olympics and Games qualifying competitions are subject to testing.

Shooting is a sport where equipment design and quality can boost scores so there are many possibilities to cheat by using illegal equipment. Prior to the 2008 Games, rifle athletes tried to have the stiffest possible jackets and trousers



All Olympic shooting events conclude with start-from-zero finals that decide the final rankings for the top eight or six athletes. This photo shows the start of the 2018 World Championship 50m 3x40 Rifle Women's final.

to gain more support for their firing positions. However, strict no tolerance post-competition equipment testing now limits how stiff rifle clothing can be. Similarly, pistol athletes can expect to have pistol trigger pull weights checked after competitions while shotgun athletes will have shotshells randomly selected and tested for over-weight shot charges.



The 10m Range at the start of the 2016 Games 10m Air Rifle Men qualification. The LCD panel (lower right) is one of five that displayed individual shots and scores for spectators. The screen (upper left) displayed ranked average per-shot scores of all athletes throughout the 60-shot course of fire.

OLYMPIC SHOOTING EVENTS

OLYMPIC RIFLE AND PISTOL EVENTS

10m AIR PISTOL M&W



Top left: 10m Air Pistol M & W. These events are fired with air pistols powered by compressed air (note the cylinder below the athlete's pistol barrel). In pistol events, athletes must stand and hold the pistol with one outstretched arm. The athlete in this photo is **Sevval Tarhan, Turkey**. She was the 2018 World Champion in the 10m Air Pistol Women Junior event.

10m AIR RIFLE M&W



Top right: 10m Air Rifle M & W. These events are fired with precision air rifles like the one shown here. Athletes in rifle events are allowed to wear stiff, supportive jackets, trousers and boots that increase their stability. The athlete in this photo is **Virginia Thrasher, USA**, 2016 Olympic Gold Medalist in the 10m Air Rifle Women event.



Lower left: 50m 3-Position Rifle M & W. In this event, athletes fire 22 rimfire single shot target rifles in a qualification competition consisting of 40 shots each in three different positions: kneeling (shown here), prone and standing. The final for the top eight "qualifiers" consists of 15 shots in each position with eliminations starting after finalists have fired 10 shots standing. The athlete in this photo is **Nicco Campriani, Italy**. Campriani has won three individual Olympic gold medals, more than any other rifle athlete in history.

OLYMPIC SHOOTING TRIVIA Answer:

Silvia Renate Sommerlath was working as an Olympic Organizing Committee Hostess during the 1972 Munich Olympics when the Chief Range Officer of the 25m Pistol Range asked her to escort a young Swedish Prince who was visiting the shooting venue. In 1973, the Prince became King Carl XVI Gustaf of Sweden. They were married in 1976 when she became Queen Sylvia of Sweden.

50m 3x40 RIFLE M&W

OLYMPIC RIFLE AND PISTOL EVENTS

RAPID-FIRE PISTOL MEN



SKEET MEN & WOMEN



TRAP WOMEN & TRAP MEN



Top left: Rapid-Fire Pistol Men. Athletes in this event use semi-automatic pistols to shoot five shots at five different targets in 8, 6 or 4 seconds. The visible black area of the target is 500 mm (19.7"), but the hit zone finalists' shots must strike is only 124 mm (4.9"). The athlete is **Christian Reitz, Germany**, shown here shooting in the 2016 Olympic final where he won the gold medal. Note the TV cameraman behind him and the two overhead cameras in front of him.

Top right: Skeet M & W. In SKEET events, athletes fire 12 gauge shotguns at targets thrown from "high" and "low" houses on the sides of a shooting range that is arrayed in a semi-circle. Athletes rotate through eight shooting stations while shooting at single targets thrown from one of the houses or doubles thrown simultaneously from both houses. Athletes start from a ready position (top photo) to call for their targets. The athlete in these photos is **Vincent Hancock, USA**, Olympic gold medalist in 2008 and 2012.

Bottom left: Trap M & W. In TRAP events, athletes fire 12 gauge shotguns at clay targets launched from one of three traps in a pit 15m in front of the athlete's shooting station. In each 25 target series, athletes rotate through a succession of five shooting stations, each with different trap settings for target throwing angles and heights. The athlete in this photo, **Catherine Skinner, Australia**, is shown breaking a "straightaway" target. She won the 2016 Olympic gold medal in the Trap Women event.

OLYMPIC SHOOTING EVENTS

OLYMPIC RIFLE EVENTS

There are five Olympic rifle events, 10m Air Rifle, with separate events for women and men: 50m Three-Position Rifle, with events for women and men, and a 10m Air Rifle Mixed Team event. The 4.5mm air rifles used in 10m events cannot exceed 5.5 kg in weight. The .22 rimfire rifles used in 50m events cannot exceed 8.0 kg. Rifle athletes are allowed to wear special shooting jackets, trousers and boots that contribute significantly to the high scores now fired in these events, but their thickness, stiffness and designs are controlled by testing. In contrast with the 3-position air rifle events that now dominate junior rifle shooting in the USA, international air rifle events are fired exclusively in the standing position. Shooting in the 50m rifle events is done in the same three positions used in 3-position air rifle, except that the international firing order is kneeling, prone, standing. The chart to the right explains the rifle event courses of fire.

OLYMPIC PISTOL EVENTS

The five Olympic pistol events are 10m Air Pistol, with separate events for women and men, 25m Pistol Women, 25m Rapid-Fire Pistol Men, and a 10m Air Pistol Mixed Team event. 4.5mm air pistols used in the Air Pistol events must have 500 g minimum trigger pulls and a maximum weight of 1,500 g. .22 rimfire semi-automatic pistols used in 25m events have a maximum weight of 1,400 g and a minimum trigger pull of 1,000 g. Athletes shoot while standing and holding their pistols with one outstretched arm. Athletes in the 25m events must start rapid-fire shots or series from a ready position where the pistol is held down at a 45-degree angle. The pistol cannot be raised until firing times start. The chart to the right explains pistol event courses of fire.

OLYMPIC RIFLE COURSES OF FIRE

Event	Qualification	Final
10m Air Rifle	60 shots standing 75 min. time limit Decimal scoring	2 5-shot series, 250 seconds per series. 14 single shots, 50 seconds per shot. Eliminations start after shot #12 (8 th place) and continue after every 2 shots until 1 st and 2 nd places are decided after shot #24.
50m 3x40 Rifle	40 shots kneeling 40 shots prone 40 shots standing 2 hours, 45 min. time limit Integer scoring	3 5-shot series, kneeling, 200 sec. per series. 3 5-shot series, prone, 150 sec. per series. 2 5-shot series, standing, 250 sec. per series. 5 single shots, standing, 50 sec. per shot. Eliminations start after the 2 nd 5-shot standing series and continue after each single shot until 1 st and 2 nd are decided after shot #45.
10 Air Rifle Mixed Teams	Stage 1: All teams 30 shots standing per team member 30 min. time limit Decimal scoring Stage 2: Top 8 teams in Stage 1 20 shots standing per team member 20 min. time limit	Teams ranked 3 rd and 4 th in Stage 2 compete for the bronze medal. Teams ranked 1 st and 2 nd in Stage 2 compete for gold and silver medals. The two members of each team shoot single shots within a 50 sec. time limit; decimal scoring is used; the team with the highest two-person score receives 2 points (1 point each if there is a tie). The first team to reach 16 points wins.

OLYMPIC PISTOL COURSES OF FIRE

Event	Qualification	Final
10m Air Pistol	60 shots 75 min. time limit Integer scoring	2 5-shot series, 250 seconds per series 14 single shots, 50 seconds per shot Eliminations start with shot #12 (8 th place) and continue after every 2 shots until 1 st and 2 nd places are decided after shot #24.
25m Pistol Women	Precision Stage: 30 shots on 25m precision target; 5 shot series, 5 min. time limit Rapid-Fire Stage: 30 shots on 25m rapid-fire target (for each shot, 7 sec. with the pistol down, 3 sec. to lift the pistol and fire the shot)	10 5-shot rapid-fire series (7 sec. down/3 sec. to lift the pistol and fire each shot). Eliminations start after the 4 th series (8 th place) and continue until the 10 th series when 1 st and 2 nd places are decided.
25m Rapid-Fire Pistol Men	4 5-shot series in 8 sec. 4 5-shot series in 6 sec. 4 5-shot series in 4 sec.	8 5-shot 4 sec. series Eliminations start after the 4 th series (6 th place) and continue until the 8 th series when 1 st and 2 nd places are decided.
10m Air Pistol Mixed Teams	Stage 1: All teams 30 shots per team member 30 min. time limit Integer scoring Stage 2: Top 8 teams in Stage 1 20 shots standing per team member 20 min. time limit Integer scoring	Teams ranked 3 rd and 4 th in Stage 2 compete for the bronze medal. Teams ranked 1 st and 2 nd in Stage 2 compete for the gold and silver medals. The two members of each team shoot single shots within a 50 sec. time limit; decimal scoring is used; the team with the highest two-person score receives 2 points (1 point each if there is a tie). The first team to reach 16 points wins.

OLYMPIC SHOTGUN EVENTS

The five Olympic shotgun events are Skeet, with separate events for women and men, Trap, also with events for women and men, and a Trap Mixed Team event. Only over-under, two-barreled, 12-gauge shotguns are used because only over-under shotguns are sufficiently robust to keep performing through the tens of thousands of shots these athletes fire in training and competition. Shotshells are limited to relatively light 24.0 g lead shot charges. Modern shotgun ranges must have lead shot recovery systems to prevent depositing lead in the environment (*note the green netting in the foreground of the first photo in this article*). In the Skeet events, athletes must call for their targets with the shotgun held down

SKEET RANGE LAYOUT

The diagram illustrates the layout of a Skeet Range, showing a semi-circular arrangement of 8 stations (H, 1-8, L) and two target areas (Target 1 and Target 2). The layout is defined by a Base Chord of $r = 19.2 \text{ m} \pm 0.10 \text{ m}$ and a radius of $19.2 \text{ m} \pm 0.10 \text{ m}$. The stations are numbered 1 through 8, with H and L representing the starting and ending positions. The diagram includes various dimensions and target distances.

Target Distances:

- Target distance: $68.0 \text{ m} \pm 1.0 \text{ m}$
- Shooting-boundary: $40.3 \pm 0.1 \text{ m}$

Station Dimensions and Positions:

- Station H: 2.0 m width, $0.26 \pm 0.09 \text{ m}$ offset.
- Station 1: $0.26 \pm 0.09 \text{ m}$ offset.
- Station 2: $8.13 \pm 0.05 \text{ m}$ offset.
- Station 3: 0.9 m offset.
- Station 4: $0.9 \text{ m} \pm 0.05 \text{ m}$ offset.
- Station 5: $0.9 \text{ m} \pm 0.05 \text{ m}$ offset.
- Station 6: $0.9 \text{ m} \pm 0.05 \text{ m}$ offset.
- Station 7: $0.9 \text{ m} \pm 0.05 \text{ m}$ offset.
- Station L: $0.9 \text{ m} \pm 0.05 \text{ m}$ offset.

Other Dimensions:

- Base Chord: $r = 19.2 \text{ m} \pm 0.10 \text{ m}$
- Radius: $19.2 \text{ m} \pm 0.10 \text{ m}$
- Center Point = Target Crossing Point
- Station 1: $0.26 \pm 0.09 \text{ m}$
- Station 2: $8.13 \pm 0.05 \text{ m}$
- Station 3: 0.9 m
- Station 4: $0.9 \text{ m} \pm 0.05 \text{ m}$
- Station 5: $0.9 \text{ m} \pm 0.05 \text{ m}$
- Station 6: $0.9 \text{ m} \pm 0.05 \text{ m}$
- Station 7: $0.9 \text{ m} \pm 0.05 \text{ m}$
- Station L: $0.9 \text{ m} \pm 0.05 \text{ m}$

Skeet Range Layout
(all measurements in meters)

[illegible]

Gary Anderson is the Director of Civilian Marksmanship, Emeritus, and is the holder of two Olympic gold medals, seven World Championships and 16 National Championships. Mr.

In 2012, the International Olympic Committee awarded Gary Anderson with the Olympic Order, its highest honor "for outstanding services to the Olympic Movement."

