

A Short History of United States Target Development and Evolution  
by  
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The first competitive shooting target in the United States was probably little more than a black circle drawn on a blazed tree trunk with a piece of charcoal pulled from a campfire. Frontiersmen would pace off a distance, perhaps eight, nine, or ten rods, shoot three or five shots at the mark, insert pegs into the holes, and stretch a string around them. The rifleman with the shortest string was the winner.

With the formation of the National Rifle Association (NRA) in 1871, formal long range target shooting became all the rage and the target and distance shot changed remarkably. Riflemen would assemble at the NRA Range at Creedmoor, Long Island, just a short train ride east of New York City, and launch massive 45 caliber 530 grain soft lead bullets, propelled by 90 grains of black powder at a stately 1400 feet per second, towards iron plates set up at 200, 300, 400, 800, 900, and 1,000 yards. Even before the smoke cleared, the clanging of the lead slug against the metal target gave a satisfying, and gratifying feeling to the rifleman on the firing line as he waited for the target marker to signal the location and value of the shot.

At 200 and 300 yards they shot at the "third class" target, a six foot by four foot cast iron slab with an eight inch black bullseye worth five points, four points were earned by hitting the 26 inch "center" ring. A hit inside a 46 inch circle was an "inner" or "magpie", worth three points, while any shot outside of the rings, but still on the target face, was worth two points and called an "outer."

The "second class" target was used at 400 to 600 yards. Painted on a six foot by six foot plate was a 22 inch bullseye which was surrounded by a 38 inch "center", a 54 inch "inner" and, a 70 inch "outer." Anything outside of the rings was a miss,

Beyond 600 yards, they aimed at a "first class" target; a six foot tall 12 foot wide rectangle of cast iron. The 36 inch bullseye was surrounded by a 54 inch concentric "center" circle. A six foot square surrounded the circles and formed the "inner". The "outer" was a three foot by six foot wing on each end.

A deep pit, from which comes our modern term for the area in which targets are serviced, was dug in front of the target. In it crouched, according to A.H. Gildersleeve, one of the Gilded Age's prominent long range shots and an NRA President, an "intelligent country boy" working as a target marker. For as much as 25¢ a session, a princely sum at the time, the lad would mark the shot location and value with a paddle and then, with a brush attached to a long stick, dab a little paint over the pockmark to offer a clean target for the marksman's next shot.

The paddle code for scoring was simple. A white disc for a bull's-eye, a red disc for a "center", a black and white disc-reminiscent of the black and white Eurasian Magpie and

hence its nickname, for an "inner", a black disc for an "outer", and for a miss, the dreaded Maggie's Drawers, the red danger flag waved vigorously across the target face.

With the advent of printed paper targets, the iron target faded away and the more familiar window sash target frame became popular for its practicality and economy. The Sliding, or Brinton Target, so called because it was first employed on the Brinton Rifle Range, near Elizabeth, N. J., is a familiar piece of range equipment, virtually unchanged for six generations, to military and civilian riflemen alike.

Paper target were fixed to a heavy muslin, called target cloth, with wheat paste glue. Pastors were patches of black or buff colored paper used to cover shot holes. so called because they were pasted to the target to cover shot holes by the pit crew which used a brush to apply glue from a small pot to the paper patch. Charles Finney, in *The Old China Hands*, his delightful tale of a private soldier's service in China with the storied 15th Infantry in the late 1920s, remembers it was a messy task. He tells of pleasant relaxed summer days on the range when only one thing counted; rifle shooting. He recalls that being in the pits was fun and of then being released from pit duty to "rush down to the beach and wash our pasty hands in the water of the Gulf" followed by a midmorning break.

Later some unknown innovator developed the "Paster, Target, Gummed," a 42 foot coil of black or buff colored paper, one inch wide with perforations every inch, packed into a 1 $\frac{3}{4}$  square pasteboard box. One side was covered with a rather peculiar tasting mucilage that hinted of horse hoof and abattoir with a rough tannic finish. One simply tore off a one inch square, moistened it with the tongue, and patched the hole with what generations of riflemen came to know as "Lick 'em and Stick 'em" pasters. Self adhesive pasters became common in the early 80s.

Some of the early paper targets were not circular but elliptical. As stated in the 1889 edition of *Firing Regulations For Small Arms For The United States Army*, "The variations incident to the arm and ammunition cause a dispersement of the shots upon the target which is beyond the control of the firer..." and to offer, "the expert shot an object which he may have a reasonable expectation of hitting. ...the shape of the bull's-eye must be an ellipse, with its transverse axis vertical, since that is the form of every group consisting of a large number of shots, fired when all influences, except those due to the arm and ammunition, have as far as possible been eliminated."

In other words it was easier for the military to redesign the target than to address the real problem: poor quality control at the ammunition plant. From 1885 through 1903 the rifle target looked as if Salvador Dali had a hand in its design. The short range target, for example, was a modification of the Class Three target: a ten inch by eight inch ellipse for the bullseye, a 30 by 23 inch four ring, a 50 by 38 inch three ring with the rest of the frame worth two points. This is reflected in the earliest Distinguished Marksman Badges which display the elliptical target, common at the time, rather than the modern circular target.

With the advent of the Model 1903 Springfield rifle, ammunition quality was improved and targets were again concentric circles. Concurrently the Target "A", for 200 and 300 yards, replaced the third class target with a black center, 12 inches in diameter, worth five points, a 24 inch four ring, and a 36 inch three ring. Shooters were soon racking up perfect scores and a method to break ties was required so, in 1922, a six inch scoring ring was inserted into the target's center to solve the problem. Some classically trained soldier, familiar with both the five ring target and Latin, recalled that five in the ancient tongue was represented by a V and that would be a good designation for the new ring. It was but a short step for shooters to begin to referring to it as the 5V target.

At 600 yards riflemen now took aim at a 20 inch five, 37 inch four and 53 inch three ring Target "B" mounted on a six foot square frame. The 1000 yard Target "C" retained the same appearance as the old Class One target but with a 36 inch bullseye, 54 inch four ring, six foot square three rectangle, with two by six feet wings worth two points.

September 2, 1958 was a watershed day in high power history when Marine Corps Technical Sergeant Michael Pietroforte shot the first possible, 250X250, over the National Match Course. The icing on the cake was that he did it in the premier high power match, the National Trophy Individual Match (NTI) at the National Matches. It was the first sign that the target was being overtaken by advances in firearm and ammunition technology and improved training techniques. By the early 1960s perfect scores on the 5V target at all distances, if not always in the aggregate, became a regular enough occurrence to warrant designing a more discriminating target. As a matter of fact the winning score for the NTI from 1963 through 1966 was a 250. Pietroforte, now a Warrant Officer, became the only person to clean the NTI twice when he notched his second 250 in, fittingly enough, 1966, the last year the 5V appeared in competition.

The "5V" target was military in origin and design and so a committee of anonymous soldiers, perhaps from the Army Marksmanship Unit or the Infantry School, met and came up with the "Military Target, Rifle, Competition, Short Range" designated the SR, for short range. In keeping with classical tradition the tie breaking ring inside of the ten ring was designated the X ring.

The new target used the Minute of Angle (MOA) as its base of measurement. A MOA is a unit of angular measurement equal to 1/60th of a degree. At one hundred yards, a minute of angle subtends 1.047 inches. Shooters commonly round this distance to one inch, calling it "one minute," and use it as the standard for measuring the accuracy of a firearm. The quest for the Holy Grail of shooting, a rifle and ammunition combination that will shoot a group of less than one minute, seems never ending.

Rounding the MOA to one inch makes it easy to calculate the necessary adjustments to the sights at the various distances commonly used in outdoor competitive shooting, 50 through 1,000 yards. A MOA is equal to the distance in yards divided by 100, i.e. one MOA at 100 yards is 1 inch, at 200 yards it is 200 inches and so forth. Sights are

calibrated so that a given number of "clicks" will move the strike of the bullet one minute.

The SR target, with its six scoring rings, three inch X through 37 inch five ring, made its first appearance in competition in 1967. As originally designed the SR target had a 13 inch/6.5 minute MOA aiming black, X through nine ring, at 200 yards but it was also used for 300 yard rapid fire where it had a four MOA aiming black. The MR1 target, MR stands for Mid Range, used at 600 yards, had an aiming black of 24 inches/four MOA from the X through eight ring.

About 1980 it was determined that the aiming black at 300 and 600 yards was too small. In response, the SR target's aiming black was expanded to the eight ring for, creating a new target for 300 yards-the SR3. The MR1's black was expanded to cover the X ring to the seven ring. These revisions made the target easier to see and brought the three targets used in National Match competition into alignment, each having a nominal six MOA aiming black.

The 1,000 yard 5V target "C" eventually went the way of the "A" and "B" as a domestic competition target in 1974. It was replaced by the NRA Experimental 1000 yard target center which debuted in the 1975 Leech and Wimbledon matches. However, the 5V is not gone nor forgotten. It has stubbornly hung on and can be found at the Marine Corps Recruit Depot ranges at San Diego and Parris Island where it is used in primary marksmanship training and qualification. It is also one of the official targets for competition sponsored by the International Confederation of Fullbore Rifle Associations

The original LR target has a six foot by six foot buff background upon which appears a ten inch/one MOA X ring, a 20 inch/two MOA ten ring, a 30 inch/three MOA nine ring, and a 44 inch/4.4 MOA eight ring. All hits outside of the eight ring hitting the background paper were scored a seven. In 1979 "Experimental" was dropped from the target's nomenclature and a 60 inches/six MOA seven ring added. Hits on the remaining target face are worth six points. The Palma Council adopted the LR target in 1992 for all future Palma competition.

There seems to have been no negative comments concerning the size of the aiming black of the LR target at the time and so it was left as it is. Perhaps the expense of creating new Target Masters required for the production of official NRA targets might have also played a small part in the decision. Should the NRA High Power Committee choose to make it's aiming black six minutes, to conform with the other high power targets, all they need do is make all scoring rings black.

The 1933 *NRA Shooting Rules* was a 6¼ by 4¼ inch 24 page pamphlet that contained the rules for all three shooting disciplines. In the intervening years the number of shooting sports and targets has grown. Today the little booklet has been replaced by 15 standardized NRA Rule Books each covering a specific discipline and running to more than 60 pages of small type on 8½ by 4 inch pages. To simplify selecting, identifying,

and ordering targets the NRA instituted a numbering and nomenclature system in 1961 which can be found in Section Four of any of the Rule Books.

The two most common smallbore outdoor competitive rifle targets, the fifty yard A-23 and the 100 yard A-25 are currently proportional with a four MOA aiming point. Such was not always the case. Taking his lead from Great Britain's Society of Miniature Rifle Clubs (SMRC) National Match Director Ned Crossman used the SMRC's "Roberts" targets at the first United States National Smallbore Championship held at Caldwell, NJ in 1919. The use of the SMRC's rules and targets by the United States was more than a matter of convenience. Crossman was also the Dewar Team Captain and wanted the United States team to be familiar with the target used in the prestigious international prone postal match sponsored by the SMRC. The only difference between the targets was the size of the aiming black. The English target's aiming black only went out to the nine ring while the US target's black encompassed the eight ring.

The scoring rings, originally called counting rings, for the 100 yard target, were the same in 1919 as they are today with a two inch ten ring, called a 'carton' by the British. There was no X ring to break ties at the time but the one inch X circle, or "inner carton", would be introduced in 1933 by British and would be a regular feature on US targets by 1938. The 50 yard target's dimensions were exactly one half of the 100 yard target and would remain so until 1927 when the dimensions, again following the SMRC lead, were reduced by 0.11 inches-half of the diameter of a bullet, which made the targets proportional.

The X ring of the A-21 is one inch in diameter, one MOA. However, NRA Smallbore Rule 14.3(a) states that, "A shot hole, the leaded edge of which comes in contact with the outside of the bullseye or scoring ring of a target, is giving the higher value." This means that in edge scoring a shot scored as an X can have its center as far as 0.11 inches away from the edge of the ring. If you have two such shots, one at three o'clock and one at nine o'clock the X ring dimension is actually 1.22 inches. This explains why the 50 yard X ring is 0.39 inches in diameter for 0.39 inches plus 0.22 inches is 0.61 inches; one half of the 100 yard nominal X ring diameter.

The A-26 smallbore target is a 1/6th reduction of the ISSF 300 meter target used at 50 meters in conventional prone shooting. It came to the United States in 1933 as the required target for the Rheinische-Westfalischen-Sprengstoff Challenge Trophy sponsored by the German ammunition company of the same name. Originally produced without an X ring it had one added in 1946 when a tie breaking mechanism was needed as shooters began to clean it regularly. Its black was expanded to the six ring in 1948.

Not all ranges are equipped with target stands at all distances or even have full distances. To meet that need the NRA began introducing reduced distance targets in 1953 starting with a 100 meter target reduced to 100 yards. The A-27, the NRA 50 meter target reduced to 50 yards for conventional prone competition soon followed as did others.

The rifle target used in 50 meter International Sports Shooting Federations (ISSF) and NRA Metric competition was originally, like the A-26, a scaled down version of the 300 meter target. However, over the years equipment, ammunition, and training made perfect scores, particularly prone, a more common occurrence. To counter this uptick in scores the ISSF has reduced the target's dimensions twice since 1954. The aiming black on the NRA A-50 target used at 50 meters is 4.43 inches, a larger aiming point than found on NRA conventional smallbore targets.

The most ubiquitous of all smallbore rifle targets is the NRA 50 Foot A-17, the "Bucket Bull." There is probably not a rifle shooter in the United States who has not shot at least one match on this venerable icon of smallbore competition. It has been around in various forms since the birth of modern gallery shooting. Originally it was called the "50-Foot Slow-Fire" target and its dimensions have never varied, although in its early days the aiming black only extended to the 1.150 inch seven ring as opposed to the current 2.483 inch six ring.

Prior to the familiar format of a center sighting bull surrounded by a guard ring and ten record bulls arranged in three columns, the bulls were arranged in alternating rows of three and two with no sighting bull. The A-17 also exists in two training and qualification formats as the A-1/TQ-1, which is a single bull out to a two ring on a seven by nine inch card, and the five bull A-5/TQ-5 on the same size card.

The now obsolete A-36 "Dot" target, used for international gallery competition for so many years, was replaced in 2006 by the USA/NRA 50, a scaled down version of the current ISSF 50 meter target containing ten record bulls. Two sighting bull's-eyes surrounded by a guard boxes with black triangles in the upper right corner of the guard box, to prevent confusion with record bulls, fill the center of the target. In the center of the bullseye is a barely visible dot representing the ten ring but the dimensions are such that edge scoring is impossible. The only accurate way to score tens is to use an outward scoring plug. The outward plug has a large flange around the 22 caliber plug and if the outer edge of the flange does not exceed the outside edge of the seven ring the shot is scored a ten.

Even though they carried sabers and carbines, revolvers and pistols were the primary arm of the cavalry. It is tough enough to control a half of a ton of charging wild eyed steed with both hands, so a small compact firearm easily used by one hand fit the bill. Just as foretop men aloft in the rigging during the days of sail was admonished, "One hand for yourself and one for the ship" so it was with the cavalryman, one hand for the horse and one for the pistol and that is why conventional pistol shooting is a one handed affair.

There were exceptions: Union General Phil Kearney, who lost his arm during the Mexican War at the Battle of Churubusco also fought during the Civil War. He led his troops into the Battle of Williamsburg aboard his charger, reins held in his clenched teeth, pistol in hand shouting, "I'm a one-armed Jersey son-of-a-gun, follow me."

As late as World War II US Cavalry troopers were required to shoot dismounted, single handed, slow and rapid fire, at 15 and 20 yards on the Army Target "L" as well as a bobbing target. Qualified on foot they would then repeat the course of fire, this time astride a horse at the gallop.

Army Target "L" was pretty big, six feet tall and four feet wide. A five inch aiming black, worth ten points was surrounded by seven concentric circles at intervals of 8 1/2, 12 inches, 15 1/2 inches, 19 inches, 22 1/2 inches, 26 inches, and 46 inches and of descending value nine through three points. Any hits on the remainder of the frame were worth two points. On the left side were large numbers, five through two, from top to bottom, and six through nine on the right for scoring purposes.

For gallery practice there was a one-fourth sized version for 25 yards and a one-sixth size for 50 feet. The 25 yard Target "L" still exists. It is the required target for qualifying for a carry permit in Rhode Island, but was always a military target and not used in NRA competition.

Conventional pistol is fired both outdoors, at 25 and 50 yards, and in the gallery, at 50 feet, using 22 caliber, centerfire-usually a 38 caliber pistol but the use of a 45 caliber is also quite common, and 45 caliber handguns. The pistol National Match Course (NMC) is the fundamental match from which all others are derived. The NMC features a slow fire stage-ten shots in ten minutes, followed by a timed fire stage-ten shots in two strings of five shots each in 20 seconds, and a final rapid fire stage shot like the timed fire stage but with just ten seconds for each string

The slow fire pistol gallery target, the B-2, fired at 50 feet is a reduction of the 50 yard Standard American Target, the B-6, with a three inch black aiming point. Fifty foot timed and rapid fire is shot on the same target, the B-3, which is slightly larger than the B-2 with the aiming black extending to the nine ring.

The 25 yard targets are all the same with the one exception being the size of the aiming black. For slow fire the B-16 has a black 5.32 inches in diameter while the timed and rapid fire B-8 has a smaller, 2.6 inch aiming black. The 50 yard Standard American Target, B-6, used for slow fire has black filling all rings through the eight. Outdoor pistol targets, like high power, also have replacement centers and can be had printed on paper or tagboard, a light cardboard.

The evolution of the NRA Target system continues, as it always will, to meet the needs of the competitor to measure his skill. Double Distinguished smallbore rifleman and noted shooting historian Paul Nordquist mused that, "The target is a measuring device-one used to measure the abilities of a shooter. As with all measuring devices you pick the one most suitable to the task. No matter which one you pick there is an element of arbitrariness involved."

With that in mind, and with all of what has been said about target development and evolution, there is one constant through all the years of organized competitive

marksmanship in the United States. The object of the game has always been to hit the center of the circle. Dimensions of the target and aiming black, width of the rings, or the distance at which the target is engaged matters not. What is important to remember is that the target has almost always been a circle and, no matter what size the circle, the center is still the center.