The Rifleman's Quarter Mile

The gray haired man followed their trail from Concord. He would ride his white mare toward the column until he was within range, then turn his horse, throw himself off, and aim with his long gun resting on the saddle. The aim was said to mean sure death and the Redcoats came to dread him. Whenever he was sighted, a warning cry went up: "Look out for the man on the white horse!"

*The man was **Hezekiah Wyman**, age 55, and a true **Rifleman**.*

Target Detection

The first and hardest task of the Rifleman is target detection. Simple tricks include:

- **Color/Shine**- Hezekiah's task was made easy by those bright red coats. Deer don't wear coats so the hunter looks for the shine from antler tips and hooves.
- **Shape/Outline**- Look for distinct outlines.
- **Movement**- The human eye is drawn to movement and is especially sensitive at the edges of the field of vision; this is why a deer's natural immediate defense is to freeze and cease all movement.
- **Sound**- Narrows the search for target indicators from 360º down to 15º.
- **Smell**- Identifying smell narrows your search for other target indicators.

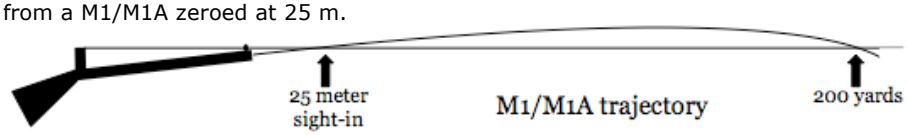
Range Estimation

Range estimation also takes a lot of practice. You can estimate the range by:

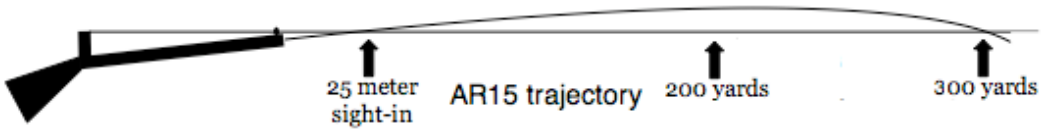
- **Front Sight Method** –Let's say that your front sight is roughly 7 MOA wide. So, if you're looking at a square that is 20" wide and it appears to be the same width as your front sight, then the square is about 300 yds. away. Why? Because 20" at 300 yds. is about 7 MOA, just like your front sight. If the 20" square is half the size of your front sight, you know the target is 600 yds. away because 20" at 600 yds. is about 3.5 MOA.
- **Scopes**- You will need to determine how many MOA your scope subtends. One way to do this is to put a yardstick at 100 yds. and look at it through your scope using the lowest, the highest, and the mid-range magnification. At 100 yds. the yardstick is 36 MOA. This will give you an estimate of the angle(s) that your scope covers, which you can then use for range estimation just as you would a front sight. Make sure you record this information!

The Rifleman's Trajectory: 3, 3, 3, 4

The Rifleman has a simple tool for dealing with bullet drop; it is as easy to remember as "3, 3, 3, 4". These numbers reflect bullet drop out to 500 yds. From 100-200 yds. your bullet will drop 3 MOA, from 200-300 yds. it will drop another 3 MOA, etc. The diagram below illustrates the trajectory of a bullet fired from a M1/M1A zeroed at 25 m.



Since the AR-15's sights sit so much higher than sights of a M1/M1A, the trajectory is changed a little.



Sight Adjustments or "Come Ups"

As you can see, your rifle is zeroed at 25 m *and* 200 yds. (or to 300 yds. for an AR-15).To hit the target at either distance you aim as you would at 25 m. To hit a target at 300, 400 or 500 yds. you will have to adjust your sights if you want to use the same aiming point. For a rifle zeroed at 25/200, a sight adjustment or "come up" of 3 MOA is needed to make hits at 300 yds. Another 3 MOA come up is needed to get from 300 to 400 and finally, a come up of 4 MOA is needed to make hits at 500. So, if your rifle has been zeroed at 25 m and you want to hit a target at 500 yds. you need to come up 3 MOA + 3 MOA + 4 MOA = 10 MOA.

What About My Rifle?

The M1/M1A and AR15 examples are used here merely as examples. Your centerfire rifle will be different, but these numbers are close enough to begin your KD practice regardless of your particular rifle.

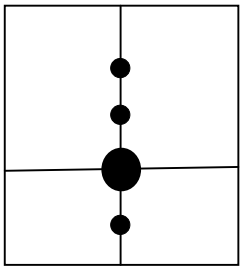
Come Ups in MOA

100-200 = 3
200-300 = 3
300–400 = 3
400–500= 4

Battle Sight Zero

Riflemen take advantage of the flat trajectory of modern centerfire rifle cartridges to hit targets rapidly and with reasonable accuracy. If you have set your sights so they are zeroed for about 300 yds., you will not have to adjust either your sights or your point of aim to strike targets out to 400 yds. The point of impact will be high at ranges less than 300 yds. and low beyond that, but it is accurate enough. In traditional military terms, this sight setting is called the "battle sight zero," but that expression is merely a name for what every Rifleman already realizes: if you know the trajectory of your bullet you can strike your target with great haste and adequate accuracy.

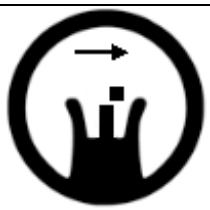
To set your M14/M1A to a BSZ - Zero at 25 m then come up 2 MOA. This will effectively set your BSZ at 275 yds. **(Always check your zero at the farthest range you can obtain)**
To set your M16A2/AR15 to a BSZ – Zero at 25 m with the elevation knob set to 300 plus 1 MOA (2 clicks for 16" barrel); after zeroing, return to 300. This will set your BSZ to 330 yds.



Target Square

Adjusting for Wind or "Wind Doping"

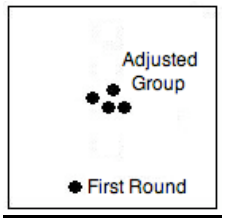
A wind coming from directly behind you (6 o'clock) or in front of you (12 o'clock) can be ignored but a Rifleman must compensate, or "dope," for cross winds. Winds that are perpendicular to the trajectory must have the most doping, while those at other angles have less. A basic formula is 1 MOA per 10 mph of wind per 100 yds. So for a 10 mph wind across the path to a 300 yd. target, the wind doping is 3 MOA. You make your adjustment by moving your sights 3 MOA into the wind, so that it is on the upwind side of the target. Likewise, for a 10 mph wind across the path to a 500 yd. target, you put your sights 5 MOA on the upwind side of the target, and so on.



500 Yards

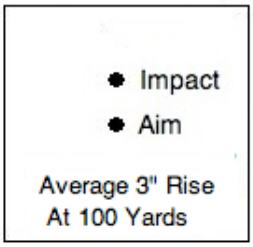
The Rifleman's Dance

A while back at the home range in Ramseur, NC, a corporal was handed a thirty-round magazine and directed to hit a target at 300 yds. After taking up a good position, he fired the shot and hit six inches low in the dirt. He then put the next twenty-nine rounds into the same spot. He was a good shot, that is, he put all the rounds into the same place, but he was no Rifleman. A Rifleman would have called the first shot **and** observed the target for information to improve the next shot. Seeing the bullet hit low, a Rifleman would have instantly corrected his sight picture and scored a solid hit on the second and every following shot. This interaction between a Rifleman and the target is called the Rifleman's Dance.



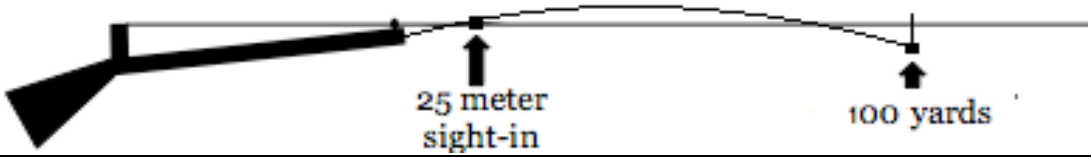
Alternate KD: Centerfire at 100-200 Yards

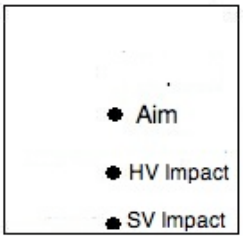
If a range of 100 or 200 yds. is available you can practice KD shooting by using an adjusted aiming point. Because your bullet is rising in an arc, it impacts higher than the point of aim. The general rule is roughly 3" at 100 yds. This varies by rifle, but start with 3". Holding low will allow you to hit the target.



Alternate KD: .22lr at 100-200 Yards

If centerfire ammo is too expensive or impractical, you can use your LTR or .22lr to practice KD. Because your bullet is rising in the arc of its flight it impacts dead on at 25 m, arcs up then down, striking lower than the point of aim at 100 yds. The point of impact can be adjusted by aiming high or moving your sights. A general rule is 4" low for high velocity ammunition and 8" low for standard velocity ammunition at 100 yds.





For more information about shooting Known Distance, sign up for a Rifleman Boot Camp today at www.appleseedinfo.org.