

Special Rifle - Pistol Edition

(The volume of material submitted could not be included in the most recent edition of the regular newsletter due to space constraints)



2012 - Seneca Valley HP Rifle Polar Bear's Team

CRO, Mike Gugulis started the Seneca Valley HP Polar Bear rifle match with a big smile and the snowflakes slowly covering the Polar bear paw. It was cool having the feeling that you don't have to wait until the next shooting season begins to enjoy the outdoors and have a good time; that was nice. It was the perfect day; and, shooting was fun - as always!





Reminder on March 31, Saturday 9:00 AM ET – 1:00 PM ET, Seneca Valley HP Rifle Match



Thank you to photographer - Paolo Amedeo

by: Jesse-Thomas Lim

How to properly sight-in a rifle at 50-yards

1. This first thing to know about rifle sight-in: All rifle sighting systems give you a point of aim on any target.

2. The second thing to know about rifle sight-in: All rifle sighting systems compensate for bullet or projectile drop.

3. The third thing to know in rifle sight-in: A bullet constantly drops once leaving the rifle barrel; the arc-in which it drops-is the bullet trajectory.

Four terms to know when properly sighting-in a rifle.

1. Point-Blank-Range: Point-blank-range, when sighting-in a rifle, is the first point at which the line of sight intersects with the bullets path in the bullets trajectory arc.

2. Mid-Range-Rise: Mid-range-rise, when sighting-in a rifle, is the highest point in the bullets trajectory between the point-blank-range and the true-zero point.

3. True-Zero: True-zero, when sighting-in a rifle, is the second point at which the line of sight intersects with the bullets path in the bullets trajectory arc.

4. Maximum-Point-Blank-Range: Maximum-point-blank-range, when sighting in a rifle, is the height of the mid-range rise and the bullet drop beyond true-zero, both are equal in measure.



This method of rifle sight-in is universal for any rifle type, sighting system, caliber and or cartridge. I will explain why at each step of the rifle sighting-in process.

1. At exactly 50-yards, put-up a target that you can clearly see with your sight system.

a. For an air-rifle of reasonable power, 50-yards will most likely be the furthest maximum point-blank-range in the trajectory path for sighting-in purposes.

b. For a rim fire rifle, 50-yards will most likely be the true-zero point in the trajectory path for sighting-in purposes.

c. For a muzzle loading rifle, 50-yards will most likely be the mid-range-rise in the trajectory path for sighting-in purposes.

d. For a center fire rifle, 50 yards will most likely be the point-blank-range in the trajectory path for sighting-in purposes.

2. Now, with your rifle properly rested in a rifle rest and on top of a solid shooting bench, slowly and methodically fire three precise rounds.

3. Make an exact measurement from the center of your group to the center of your target and, make your windage adjustment accordingly. If you need to go left or right and you have windage adjustable scope bases, use the windage screws on the base, **not the scope**; rule of thumb for windage adjustment, if your bullet impact

is to the left side of target loosen the right rear windage screw on the base and tighten the windage screw on the left rear side of the base.

4. Fire three more rounds to confirm your setting. If all is well and you have centered your group, move on to Step 5. If you are not satisfied with the accuracy of your ammunition at this point, go no further until you are happy with the ammunition results.

5. Depending on your rifle scope, this is all you will be able to accurately do for this range outing. There are a lot of rifle scopes that do not respond well to elevation and windage adjustments at the same time. Any attempt to keep shooting with one of these scopes will only waste your ammo and aggravate you to the point of despair.

6. Establishing a reference zero. (Basic rim fire)

a. Low powered air-rifles and small .22 rim fires, at exactly 50-yards zero your rifle.

b. More powerful rim fires move out to exactly 75-yards and zero your rifle.

c. 30/30 trajectory class center fire rifles and muzzle loading rifles move out to exactly 100-yards and zero your rifle.

d. High powered rifles move out to 100-yards and make sure your rifle is still center and a little high; then, (optional step that is not available at WAC) move on out to 200-yards and zero your rifle.

7. <u>Trajectory plotting your rifle and ammunition combination for proper sight-in</u>.

Class 6a and 6b rifles (as above), take your target and move it closer to you, firing 3-shot groups in 10-yard increments, and mark the range on the target at each shot group.

Class 6c and 6d rifles (as above), take your target and move it closer to you, firing 3-shot groups in 25-yard increments, and mark the range on the target at each shot group.

a. Continue moving the target closer to you until one group of shots emerges as the highest; this is confirmed when the next target moved closer to you—in the grouping—is lower.

b. Congratulations riflemen! At this point of the rifle sighting-in procedure, you have now established a true-zero point; and, more importantly, you have found the mid-range-rise for your rifle, scope mounting, and ammunition selection.

c. Now measure the center of your highest group on your target to your zero-point, this is your true-mid-range-rise.

d. Is this acceptable or does it need to be adjusted for more or less rise?

Part 1d. If the mid-range-rise is too much, class 6a and 6b rifles (as above) move your target 10yards closer, class 6c and 6d rifles (as above) move your target 25-yards closer to you from your original zero-yardage and re-zero your rifle. Then, once again, repeat step 7 of the rifle sight-in procedure.

Part 2d. If the mid-range-rise is not enough, class 6a and 6b rifles (as above) move your target 10-yards further, class 6c and 6d rifles (as above) move your target 25-yards further from your original zero-yardage and re-zero your rifle. Then, once again, repeat step 7 of the rifle sight-in procedure.

Note: Repeat this procedure until you have exactly what you want.

8. <u>Establishing your rifles maximum-point-blank-range</u>. Now that you have established your mid-range-rise and your true-zero, it's time for the final step in properly sighting-in your rifle (M.P.B.R.).

Class 6a and 6b rifles (as above), take your target and move it from your true-zero point, further from you, firing 3-shot groups in 10-yard increments, mark the range on the target at each shot group.

Class 6c and 6d rifles (as above) take your target and move it from your true-zero point, further from you, firing 3-shot groups in 25-yard increments, mark the range on the target at each shot group. (**Please Note**: WAC does not allow for targets to be placed any further out than the 100-yard line, located on the Rifle Range.)

a. Continue moving the target further from you until one group of shots emerges as the same distance low as your mid-range high. <u>Note:</u> Example 2" high, 2" low.

b. <u>**Congratulations**</u> riflemen! At this point of the rifle sighting-in procedure, you have now established a true-zero point; you have found the mid-range-rise and you have found your true maximum-point-blank-range for your rifle, scope mounting, and ammunition selection.

Your Rifle Is Now Properly Sighted-In.

REF: http://www.gunnersden.com/index.htm.sightin.html