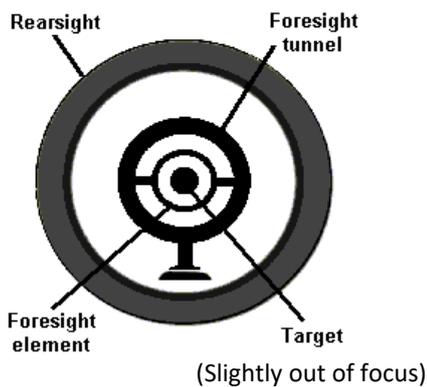


Zeroing your prone rifle

The rear sight block on a prone rifle is also called a dioptre sight. A dioptre sight has a tiny peep-hole in the centre of a disc through which you look. The peep-hole increases what is known as the depth of field. This lets you see the front sight in focus as well as a reasonably in-focus target 25 yards away. Lenses are not allowed in this sight block. This could turn the sight into a telescope which is not permitted in prone competition shooting. The rear sight works in conjunction with the front sight (also called the foresight). The elements of the rear sight and front sight have to be aligned with the target as shown in the diagram below.



However, correct alignment of foresight and the rear sight does not guarantee you will hit the centre of the target. It will guarantee that with the right technique, you shoot tight groups, but that is all. To shoot tight groups *and* to hit the middle will necessitate moving internal components of the rear sight, up, down, left and right. **This is known as zeroing the rifle.**

Just so we know what we are talking about, here is a picture of a rear sight block with some labels on it.





The process of zeroing:

Set yourself up for shooting as usual.

1. Put a prone target card on the target board
2. Set up a scope so that you can view the results from your firing point
3. Have plenty of ammunition available
4. Attach your sling and get into your shooting position. Remember to find your natural point of aim
5. Put 5 rounds into the top left target.
6. If they are scattered all over the target, repeat number 5 on a different target.
7. If your shots are still scattered over a wide area, it would suggest that **zeroing your rifle at this stage should wait until your shooting technique has improved.**



If your groups are like this, go back to work on your technique.



If your groups are like this, start to zero your rifle

8. If your group falls with each shot within about a 2 cm diameter, you are ready to zero your rifle.
9. Start by correcting the windage error. Windage is the term used to describe horizontal movement across a target. For this you will need to use the windage knob on your foresight block (see picture on first page).
If your group is to the left of centre, wind the knob 10 clicks towards you.
If your group is to the right of centre, wind the knob 10 clicks away from you.
10. Put 5 rounds onto **the same target you have just used.** Take a look at your target. Which way has your group moved?
11. Repeat this process until the centre of your group is aligned with the centre of your target. You can use fewer clicks backwards and forwards to finely adjust the position of your group.



The second group is now aligned with the centre of the target.

Second group

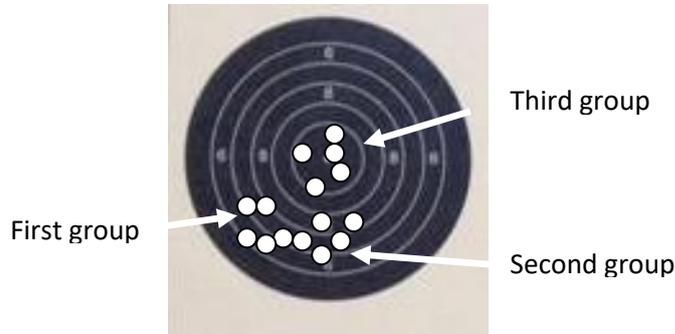


12. You can now deal with any errors in elevation.

If your group is too high, wind the elevation knob 10 clicks to your right.

If your group is too low, wind the elevation knob 10 clicks to your left.

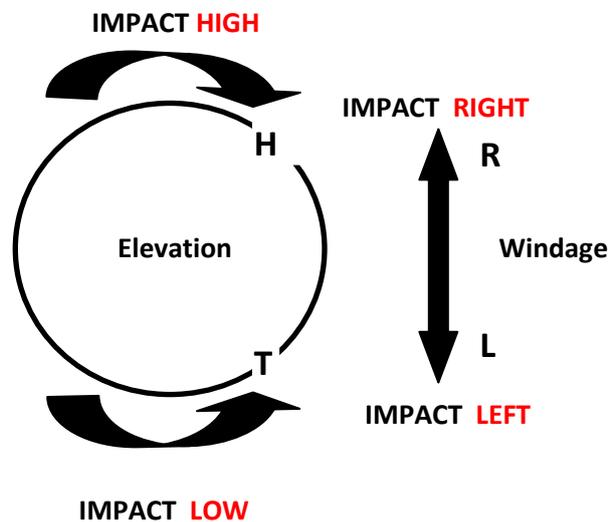
13. Repeat this process until the centre of your group is aligned with the centre of your target. You can use fewer clicks left or right to finely adjust the position of your group.



The third group is now aligned with the centre of the target.

You have now zeroed your rifle!

All European made sights use the same turning directions for vertical and horizontal adjustments. American sights use the complete opposite. If you are in any doubt (which includes many of us!), you can **copy this diagram and keep it in your ammo box** for reference.



In case you are wondering, H, T, R, and L stand for the German High, Low, Right and Left respectively.

When should I zero my rifle?

Every time you shoot conditions will have changed from the last time; the range temperature, your body position, your body shape, the type of ammunition you are using and air movements to name but a few. This is why **you should re-zero your rifle each time you shoot**. This is what your sighter cards are for. Most often, only a few clicks are necessary to re-sight your rifle.



Don't be tempted to move to the main target card until you are satisfied that your rifle is properly zeroed. Most shooters use their scope to see where their first shot or two have landed on the 10 target card, then possibly tweek the zeroing accordingly. However, you should try to avoid chasing the centre by constant changes to windage and elevation. This will make matters worse not better! The problem is most likely to be your technique rather than zeroing.

But my rifle is shared between different members!

If you are in your early weeks of club shooting it is unlikely that you will have invested in your own rifle. If you are practicing to get your groups tighter, it does not matter about zeroing your rifle. It's the group size that matters not where the shots are falling on the target. If you are competition shooting or practicing in competition conditions, then you will need to zero your rifle. Once you get used to the process, it does not take very long to do. If you want to reduce the time it takes to zero a rifle each time you use it, then, eventually, you may wish to consider purchasing your own.

