

# Gaining and Maintaining a Zero

If you walk the firing line at Nationals or any other match for that matter, you will see that many of the shooters either do not understand how to achieve a zero or do not realize the importance in keeping their zero. So, what exactly is a zero? When your coach talks about being “zeroed,” they are actually referring to getting the center of your group in the center of the target. This is critical as no one, not even a member of the United States Army Marksmanship Unit, has a rifle that consistently shoots one-hole groups. Most guns generally shoot in a round, but random pattern. Depending on how small that pattern is will determine how critical it is to be zeroed.

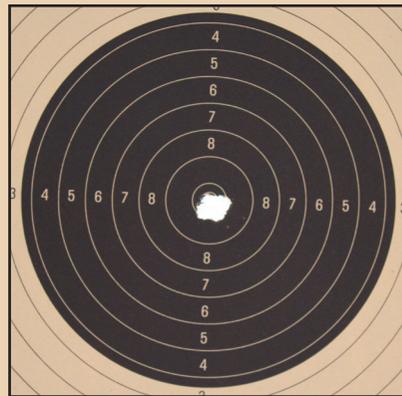
If your rifle shoots very small groups, and you have an outstanding hold, you may be able to get away with your group slightly off to one side. Yet, if you watch some of the top level shooters competing outdoors you may notice that their groups

are not centered. More than likely, they had trouble identifying a particular wind condition and did not think it would affect their ability to shoot tens unless the condition drastically changed. However, I would not recommend this for anyone unless he or she is a world class shooter with an accurate rifle. If you watch that same shooter competing indoors nine times out of ten, he or she will be at, or very close, to being perfectly zeroed.

In order to properly zero in, it is wise to know how your equipment works. Your sights should be in good working condition, and don't forget to check to make sure they are tightly secured to your rifle (front and rear). How many clicks is it to move the center of your group from one side of the ten-ring to the other? If you do not know that, take

the time to figure it out. With a twenty click sight and an average length sight radius (distance from rear sight to the front sight) it should take about ten clicks to move from a 10.0 on one side to a 10.0 on the other side. Mathematically, this logic is sound but your rifle does not shoot one-hole groups; you need to look at and possibly move the center of the group. For this reason you can not make an accurate sight correction after only one or two shots.

Once you have taken the time to identify the zero, be aware that it isn't permanent. A zero can change when the conditions, such as wind speed or direction, differ from the time you initially zeroed



your group. Moreover, a zero can vary when your position changes during a match. Another possibility is that your position changed during the match. This happens because your body stretches out more the longer you are in position, which causes you to look through the sights differently. A third reason that you may experience a zero change is that you are not positioning your head back in the same location each time. In order to correct or prevent the possibility of a zero change, try to shoot in the same wind conditions, stretch before settling into position, and try not to lift your head off the stock if shooting either of the two sling positions (unless you are taking a break).

Yet, even if you faithfully accomplish all of the above suggestions, you will

probably notice that the center of your group is not in the center of the ten-ring. Don't panic, it is a common occurrence, and that is why the sight comes with two knobs: one adjusts for wind, the other for elevation. To change where your bullet impacts, turn the knob on the side to the left (clockwise) or right (counter-clockwise). The knob on top will change the elevation and this can be similarly adjusted by for higher (clockwise) and lower (counter-clockwise) elevation.

Therefore, knowing how to adjust your sights is obviously very important. For example, at 2004 Olympic tryouts I shot the first final of my career. I was so nervous that in the final, not only was

I not zeroed, I also clicked my sights the wrong way. Needless to say, I did not have a good final. Learning from that mistake, at the 2009 World Cup Final I was struggling to shoot tens; however, I was able to keep the center of my group in the center of the ten-ring and gave myself the best

chance to shoot a ten. At the end of the match, the box (marking the center of the group on the electronic target monitor) was dead center in the x-ring. I would not have won silver at that match if I had zeroed slightly off center.

I hope this gives you an idea of the importance of maintaining your zero throughout the match. Keep in mind that if two equally talented shooters are on the line, the one that is constantly checking and correcting their zero will most likely have a better score than the one who is either unwilling, or does not know how to make the correction. Always remember to stay zeroed in and I will see you in the finals. ■ SGT Michael McPhail

RIFLE