

An Improved Battlesight Zero for the M4 Carbine and M16A2 Rifle

1. Current Army/Marine Corps battlesight zero and its procedures are well described in TM9-1005-319-10, the M16/M4 operator's manual.
2. The current 300 meter battlesight zero is a function of the sights on the rifle and I personally find it shoots too high for the vast majority of combat targets, including the Army's qualification ranges. The procedure listed here takes better advantage of the flat trajectory of these rifles as well as the use of civilian ranges, which are seldom surveyed in meters.
3. When zeroed at 200 meters, a distance twice that of normal combat engagements, these rifles have a very flat trajectory that is less than 2" from line of sight at all intermediate distances; a distance that's smaller than the normal dispersion of arsenal or factory loaded ammunition. This tiny trajectory arc allows very precise shooting out to 250 meters where the bullet is only 2" below line of sight.
4. A 200 meter zero has the happy coincidence of an initial trajectory cross-over at 50 yards, a distance available on almost all civilian ranges including many indoor ranges. This makes it easy to achieve a 200 meter battlesight zero without recourse to surveying your own range. If 200 meters is available you can fine-tune the zero at the real distance. And should when you get the chance.
5. The lowest sight setting, however, on these sights is 300 meters so the sight needs to be modified to preserve the markings on the sight (despite the fact that no one ever sets a range on these in the real world other than a USMC range). The sight needs to be set to bottom out at 8/3 -2 clicks. This will be the new 200-meter setting.
 - a) Flip the rear sight back to the unmarked aperture. This will reveal a hole in the top of the handle.
 - b) Rotate the sight wheel all the way down. Will probably be exactly at 8/3 (6/3). Don't force it down.



- c) Using a 1/16" Allen wrench loosen the screw (under the revealed hole) in the sight wheel 3 full turns. Leave the wrench in the screw.



- d) Rotate the bottom half of the sight wheel two clicks clockwise. This will raise the sight body if you look at it while you're turning it.
- e) Tighten the Allen screw, remove the wrench, and confirm the sight bottoms out at 2 clicks BELOW 8/3. If not repeat the procedure until it's right.



6. Battlesight the rifle per the -10 with the following exceptions:
 - a) Sight should be at 8/3 -2 clicks, that is, all the way down, not up a click. Please note removable handle sights are marked 6/3 (rather than 8/3); also some are in 'half-clicks' as well. There should be 3 clicks between 3 and 4 on the knob. If there are 6 clicks then the sight needs to be set at -4 clicks (instead of -2).
 - b) Small aperture, nose to firing handle weld.
 - c) Distance is 50 yards.
 - d) Point of aim should be point of impact of bullet.
 7. Remember you're adjusting the FRONT SIGHT for elevation, not the rear, and that each click is about 1/2" (actually a little more) at 50 yards. You won't get it closer than that. Don't frustrate yourself trying.
 8. You're done. Leave the sight in this position for 99% of your shooting.
 9. If you have to shoot targets you KNOW are 300 meters away or more, just click to the right number on the sight.
 10. If you're patrolling, set the sight to 8/3 and snap the aperture forward to 0-2. This will provide the same trajectory as above but with a larger, easier to see thru rear sight. Use this setting if you also have the M68 mounted as it's quicker to transition to if the sight fails.
- [Editor's Note - there is some variance with the offset of the A2 aperture - they SHOULD be a 2 click difference - however some manufacturers produce them with larger offsets. Setting the sight to 3 then flipping to 0-2 might now work for your AR. Check it at the range, you want the group to be centered at 50y, you might need to set the sight at 3 +2 or even 4 to get the large aperture to be correct]*
11. If you have an M68 CCO (Aimpoint CompM-XD) optical sight battlesight it to 50/200 as well. You can shoot to 300 meters by merely holding "over a dot."
 12. This battlesight zero is valid to 300 meters for both the M16A2 and M4 Carbines and their AR15 sisters. It's valid with any ammunition that approaches the specs for M193 (55gr) or M855 (62g) Ball ammunition. It works for both rifles and carbines due to the offsetting influence of higher muzzle velocity in the rifle being offset by the longer sight radius that moves bullet strike less per click. This is battlesight, not X-ring shooting!