



Technical Newsletter From  
Your Ballistic Technicians  
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## Zeroing in on Zeros

*by Rich Machholz*

We get many calls about how a rifle should be zeroed. Here is an approach that works for me. I like to have my rifles zeroed before I get to the prairie dog fields. But I learned a good lesson from a friend on our first trip. Don't zero too high at 100 yards. We were both zeroed very carefully at 3 inches high at 100 yards. When we got to the field we overshot everything. I readjusted to a guesstimated 1 1/2 inches high at a paced 'hundred' and had a great shoot. He didn't and complained the whole trip. I found that inside what I thought was 200 yards, all I had to do was hold on the body and shade the wind slightly.

Beyond that, but inside 250 yards or so, just hold on his nose. From there to 300, bounce the dot off his head and it was still good bye dog. A varmint rifle shooting at about 3400 fps and 1.5 inches high at 100 yards will be dead on at about 200 and about 6 inches low at 300. The point is, give yourself a good working zero and hold for the other ranges. Of course you would zero a 220 Swift differently than a 223 Remington in order to take advantage of the velocity difference. The same holds true for a big game rifle. Most hunting rifles that shoot between 2700 and 3100 fps at the muzzle will be about 2 inches high at a 100 yards if they are zeroed at 200 yards and will be 6 to 10 inches low at 300. That way if the trophy of a life time jumps up right in front of you at short range you won't have to worry about shooting over it, just put the cross hairs on the vital zone and get out your knife.

## Sportsman Team Challenge

Over 60 three person teams competed in the 10th Annual Sportsman Team Challenge held in Fort Lauderdale, Florida in April. The STC is a combination of 6 separate events; 3 shotgun events, rimfire rifle, combo (rimfire rifle and rimfire pistol) and handgun (rimfire and centerfire pistol). Teams consist of 3 shooters. Categories are Open, Sportsman, and Industry with other categories within those categories. The STC will be aired on ESPN this fall. For more information on where you can shoot one of the STC Regionals which are held across the country, call or write the NSSF at 11 Mile Hill Road, Newtown, Ct. 06470-2359. Phone is 203-426-2359. When the smoke cleared and the shot had settled, Sierra/Starline had two teams in the winners circle. For the 4th year in a row, the top Open Team was Sierra/Starline. This team consists of David Tubb, Doug Koenig, and Michael Plaxco. The top Junior Team for two years running was Sierra/Starline-The Next Generation. This team consists of Hunter Pilant (16), Cory Galloway (15), and Eric Bowling (14). Congratulations to both teams.

## Need a Ruler Man?

*by Tommy Todd*

The technicians at Sierra are called upon occasionally to answer the question (and sometimes settle a bet among friends) on how to properly measure a group size. The most widely used method is to measure the outside diameter of your group and subtract one bullet diameter. This will give you the group size based upon your two widest shots. You can utilize a set of vernier calipers or get elaborate and use one of the overlay templates that the Benchrest fraternity utilizes to ensure accuracy to the thousandth of an inch. If you do need a ruler to measure your groups give us a call, maybe we can help!



Sierra Bullets technician, Tommy Todd, with his 1997 Missouri Whitetail taken with .308 Winchester 150 gr. SBT GameKing.

## Bianchi Cup

The 20th Annual Bianchi Cup match was held in May at the Green Valley Rifle and Pistol Club in Hallsville, Missouri. This prestigious match attracts shooters from all over the world. The match consists of 4 stages; mover, falling plates, practical, and barricade plus several side events.

## I Can't Get That Velocity

*by Carroll Pilant*

We often get calls from shooters concerned because their firearms velocities don't match our manual. Quite often they are wondering if they should keep increasing their powder charge until

This year Doug Koenig won it with a score of 1920 with 180 x's. A perfect score is 1920 with 192x's. Doug is not a newcomer to this match, having won it in 1990 and 1992. Doug used the Sierra 9mm 115 gr. JHP bullets. The Bianchi Cup will be aired on American Shooter on August 15. Congratulations Doug for some superb shooting.

the velocities match our manuals. NO! Each gun is an individual, Many will never get that velocity safely due to several reasons, including: barrel length, case used, seating depth, throat length, primers, powder, actual bore dimensions, neck tension and other reasons. Any one or a combination of these factors can make a difference. The velocity we have listed is for that individual rifle with those components. If your rifle is 100 fps slower or faster, it is not necessarily a problem. Do not try to work up a load by velocity only. Velocity may be something you are having to look at, (such as making sure your bullet will be super sonic at 1000 yards or make major), but make sure you are within safe pressure limits first. If you need to, try a different combination, like a slower powder or a different bullet. Accept the fact that you may have a slow firearm, that doesn't mean it will not shoot well. (Who knows, you may have a fast one.)

### BlitzKing Footnote:

The BlitzKing bullets have been very successful during the short time they have been produced and we predict continued success. The ballistic coefficient for the 50 grain is .238, and the 55 grain is .263. A ballistic coefficient for the 40 grain will be announced in the next X-Ring. Ballistic coefficients that are velocity specific will follow as soon as we can obtain them. Loading data for the BlitzKings will be the same as shown in our manual for the other lines of bullets of the same weight. We anticipate that the 40 grain will be an exceptional varmint bullet due to a higher than normal ballistic coefficient/velocity combination. Reports from the field are showing exceptional accuracy along with predictable fragmentation always needed by varmint hunters.

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