



It's Only a .22 By Dean Grua aka "IHMSA80x80"

<http://www.specialtypistols.us>

Article #27 – October 5, 2005



How many times have you heard someone say that, or, perhaps even said it yourself? No doubt many times. In my early days of silhouette competition, I used to think the same thing but not any more.

I started silhouette shooting 14 years ago, with a 6 and 7/8" barreled Ruger MKII. I was using any ammo I could get at the discount department stores, usually whenever they had a brick on sale. I noticed some of the International class shooters using foreign ammo, but I thought that was too expensive...after all it was only a .22 and all .22 ammo is the same. Just load and shoot. After two seasons, I reached AAA class. Then I just stagnated there, usually shooting 36-38, with an occasional 39.

A forced job change and relocation left me without a shooting partner and spotter; so, I had to fend for myself, sometimes picking up a spotter here and there. There weren't many weekends off at first, so I had a lot of time to practice, mostly with a 10" AMT. Nagging thoughts kept tugging at me...why can't I shoot a 40x40? After all, I was close on many occasions and if I could hit 38 targets, I should be able to hit 40, right? I won't go into the details of how I became a consistent International class shooter, but one of the things I knew I needed was more practice...and serious practice. I bought a Contender for production and started shooting.



While practicing groups on swingers, I kept noticing flyers that I didn't think I caused and the occasional dud round. I was still using Federal Lightning, Remington and CCI ammo. Deciding that perhaps it might be the ammo, I decided to start testing it again. Was I shocked! The ammo wouldn't group at all. When I first tested it, it shot pretty well. What happened? After cleaning the guns thoroughly, I tried it again with the same results. That's when I decided to try foreign ammo...boy what a difference!

Groups were substantially better with Eley, RWS and Lapua ammo with not nearly as many flyers, most of them about a quarter inch at 25 yards. Some of the American-made ammo would also shoot the same, but when I started shooting them at 100 yards, the difference was amazing. The foreign stuff was hands-down superior. Many groups were about 1 1/4 to 1 1/2". The best I could get with Federal, Remington or CCI ammo was 2". Most were around 3" or more. Throughout the years, I've done a lot of experimenting with .22 ammo and have come to several conclusions. The most important thing is that you have to test many brands of ammo in each gun. What works in one barrel may be terrible in another, even with identical guns. How do we do this? Don't just test it at 25 yards, do it at 50 yards and then at 100 yards; that's what separates the good stuff from the bad. Use a heavy front benchrest and rear sandbag setup. The lightweight Midway-type rests just won't work well. I use a Hart front pedestal with Ron Hoehn windage-adjustable top and Protector mini-brick bag. The forend should be supported on the sides to help prevent canting and misalignment. The scope should be a high-quality, minimum 20X tube with adjustable parallax. Mine is a Leupold 24X; no handgun scopes for this test, as the magnification is too low. There's no recoil to worry about on a .22, so the riflescopes are the way to go here.

Absolutely without exception, use good wind flags whenever you are testing. There is no way to get a valid test without them, even when you think the wind is calm. Mirage and unseen wind eddies can wreck havoc on your groups. It may not feel like the wind is blowing where you are, but without flags, you have no idea of the conditions all the way out to the target. If you've ever been to a BR-50 match, you'll see an ocean of flags all over the range. The benchrest guys won't shoot without them and you shouldn't either. Any groups you get otherwise are invalid...without knowing what the wind is doing, you may think a particular brand of ammo is better than another, when, in fact, maybe the wind blew the shots closer. Or you could give up on a great combo that the wind affected adversely.

Why should you go through all this trouble? After all, it's only a .22. Think about it for a few minutes. Look at your targets downrange. Notice the size of the Big Bore pig at 100M. It's about 10" tall by 20" wide, roughly, not counting legs and noses. Now look over at your .22 ram at 100 yards, measuring about 5" tall by 10" wide. Half the size, but only one fourth the target area. Obviously, the .22 ram is more difficult to hit.

When we test Big Bore ammo, we spend countless hours trying various combinations of powder, primers and bullets, searching for the most accurate load. This usually involves match grade bullets, hoping to get that magical 1/2" load at 100 meters, even though that pig is huge out there. Shouldn't we demand equal, if not better accuracy from our .22s? After all, the target is so much smaller and harder to hit. I realize we will never get 1/2" accuracy at 100 yards with rimfire ammo, but isn't it important to get every last bit of accuracy from them? Most definitely!

How do we go about improving our rimfire's accuracy then? Group shooting as many different brands at 100 yards is a good start, as described above. Personally, I would stay away from the U.S. made ammo, with the exception of Federal. The American manufacturers gave up years ago on making quality rimfire ammo...it just wasn't cost effective anymore. That leaves the rest of the world, of which Eley, Lapua, RWS and SK Jagd are the leaders. Eley has won more gold in Olympic shooting competitions than all the rest. The reason is in tighter tolerances and better quality control of components and manufacturing processes. I've used all the European made ammo and it is outstanding...even their less expensive types will out-shoot most American made ammo. For RWS, try their Target Rifle, Rifle Match or the top of the line R-50. Lapua brands include Master, Super Club and Midas. SK Jagd has Standard Plus, Match, Rifle Match and Match Gold. Eley has a huge lineup, including Standard, Silhouette, Club Extra, Match EPS, Match Semi-Auto, Tenex Ultimate SA and Tenex Ultimate EPS.

Why don't I like American made ammo? It's not that I don't, just that there is so much better, more consistent ammo from across the pond, and that's the key. Consistency. There just isn't much of that in our ammo from one lot to the next, due to the relative lack of quality control. With over 3 billion rounds produced yearly, the vast majority of it is perfectly satisfactory for most of the shooters...it goes bang when you want it to...mostly. When you test all your ammo, you may find some of the cheaper brands of U.S. ammo seem to shoot well in one of your guns. Note the lot number and then go purchase a trainload of the exact same lot number. The problem with most U.S. stuff is that it is wildly inconsistent from one lot to the next. Lot X may shoot great...when that brick is gone, the next one you buy is Lot Y, and without testing, may not shoot anywhere near as well. That's why, should you find a particular lot of, say, CCI Mini-Mags that is acceptably good, you need to buy as much as you possibly can of that same lot. I've had subsequent lots of ammo that shot poorly and exhibited more flyers and duds, whereas the original good lot didn't have any of those characteristics. With the European ammo, the lot-to-lot consistency is much better. I haven't had any problems changing lot numbers with their stuff.



I mentioned Federal as the exception. They have spent a tremendous amount of money trying to make Olympic-quality ammo over the past years and it is good stuff. The Target, Match and Ultra Match shoot very well. It shoots very well in most of my guns. However, Match (Federal 900A and 900B, 1000A and 1000B) and Gold Medal Ultra Match leave a lot of lead in the barrels that needs to be cleaned out on a regular basis. The Federal Gold Medal Target, 711B, does not lead the barrels like its more expensive types, since it uses a different, greased bullet. It seems the dry-lube on the Match ammo may be the cause here. You get what you pay for as Ultra Match is some of the most expensive rimfire ammo. Currently the Ultra Match is discontinued, but you may find some here and there.

What kind of groups are you looking for when you're testing? Hopefully round ones, with no flyers. Sure there will be some, but make doubly sure that you called them, or can attribute them to changing conditions. When in doubt, shoot a few more 5-shot groups just to be sure. Personally, I am happy with groups about 1 1/2" at 100 yards, preferably 1 1/4". Those targets are small and the better the ammo groups, the more targets I will get. That extra 1/2" difference between 2" groups and 1 1/2" groups is important...when you break a shot that isn't quite perfect, which we all do on occasion, it just might prevent you from missing the target. It becomes even more critical for shootoff targets or Runts.

Now that you've picked out some good ammo for each gun, you're not quite through yet. There are some more things to consider. Some people sort rimfire ammo according to weight, rim

thickness or both. I've done both and am convinced that weighing ammo is a waste of time and that sorting by rim thickness can be very beneficial with the less expensive ammo. Shooters have spent hours weighing .22s to the nearest 0.10 grain and then sorting them by weight group. They'll have several piles of ammo, each 0.10 grains more than the previous one. Let's say one group weighs 51.5 gr. and the next weighs 51.6 gr. (of course, use a digital scale...the old balance beam scale will drive you crazy doing this!). What caused this weight difference? It could be many things...case weight, brass thickness during the draw process, amount of priming compound, powder weight variations, bullet weight variations, amount of lube on the bullet, etc. How do you know which one item caused the difference? It could be several variables that canceled out each other. Then how do you know that the different ammo in each weight pile all had the same component weights? You don't...plain and simple. Those that are convinced weighing makes a difference may have just discovered better shooting conditions that day of testing, or they shot better that day.

Sorting by rim thickness is another matter. Rim thickness controls the headspace on a .22, which in turn controls accuracy. Variations in headspace caused by variations in rim thickness result in loss of ignition uniformity and loss of accuracy. Several years ago Bill Calfee...perhaps the best rimfire gunsmith around...built several rifles and pistols with adjustable headspace. Using the same lots of Eley, there was a noticeable difference in group size by varying the headspace. By sorting the ammo according to rim thickness, group sizes tightened up considerably and flyers were virtually eliminated. There are several tools to do this. The one I like is a Neil Jones .22 Rimfire Accuracy Gauge that's simple and fast to use. There is a cartridge holder with a sliding bar, graduated in thousands of an inch. Drop the cartridge in, slide the bar until it stops and place the round in a box marked with that number. I use Eley Standard, brown box, and after sorting a case of 5000, usually most will end up as 4's and 5's with a small amount of 3's. All the rest of them that are outside this range are relegated to plinking, usually about 100 rounds or so. By sorting ammo this way, all the ammo of the same number has the same rim thickness, therefore the same headspace in the gun, causing much greater consistency. Those 100 plus extra rounds are most likely what caused your flyers and unexplained misses on the target. This process takes time, but can be done over a few nights of watching TV and is well worth the time it takes. With the top of the line ammo, such as Eley Tenex, Lapua Midas and RWS R-50, sorting by rim thickness isn't necessary. I've done it and they all measure the same...due to much improved quality control in the manufacturing process. That's why this stuff costs \$10.00 per box of 50.



Is it worth all this trouble? I mean...it's only a .22. You bet it is! We already know that the targets are a lot harder to hit, but isn't it too expensive shooting that foreign ammo? Through bulk purchases, you can get Tenex EPS for about \$10 per box or so, that's \$20 per hundred rounds. Wow...I can get Remington's for about \$2-3 for a hundred rounds. I'll save a bunch and I can buy more ammo to practice with. Well, the savings aren't really there. You won't shoot as well and your practice won't be quality practice. You won't know what to blame your misses and uncalled shots on...was it the ammo, or did you do something wrong? How much money do you spend on Big Bore ammo? Let's see. For 100 rounds in my 6.5BR, after I've already paid for the brass, 100 Sierra 140 gr. MatchKings cost \$19.00, primers are \$2.60, the powder costs \$8.50. Add it all up and you've spent \$30.10 for those 100 rounds. Buying in bulk quantities can get the price down to no less than \$26 per 100 rounds. Now that \$20 for Eley Tenex doesn't sound so bad does it?

What are my recommendations for the best ammo? Whatever works in your gun, as long as it isn't high velocity ammo. Why? Because the high velocity ammo has a much greater wind drift than standard, or target ammo. In a 10 mph crosswind, standard velocity ammo drifts about 4" at 100 yards, compared to 6.5" for the high velocity and 10" for the Stinger types! This is partly due to the high velocity ammo starting out above the speed of sound, then slowing below the speed of sound prior to reaching the target...somewhere past 50 yards. Going through this transonic range is quite turbulent and disrupts the bullets' flight. The standard velocity ammo stays subsonic all the way to the target, thereby avoiding that turbulent region. It also retains its velocity better than the high speed types. If you want to try hi-velocity ammo, I've found Winchester Super-X to be pretty consistent in just about every .22 I've tried it in. Accuracy was fairly good, around 2-3 inches at 100M. Super-X can perform well on calm wind days, but your groups will really open up when the wind blows and a lot of targets will be windage misses. Minnesota shooter Chrissy LeMay won the 1995 Internationals .22 4-Gun Championship using Winchester Super-X in all her guns. It was a tremendous accomplishment. In her attempt to repeat at Ft. Stockton the following year, the strong Texas winds played havoc on her scores. Had she been using standard velocity ammo, no doubt her scores would have been much better.

What is my favorite ammo? Eley Standard and Match Semi Auto. All the Eley varieties are loaded to the exact same velocity, about 1050 fps, so that the ballistics are identical. This allows me to use the less expensive Standard, sorted by rim thickness, for practice and switch to Benchrest Gold (now discontinued) or Tenex EPS for match shooting without having any change in sight settings. My overall costs for 100 rounds of .22 shooting is now about \$6.50...far less than the cheapest Big Bore shooting I could do. Truthfully, the Standard, when sorted, shoots almost as well as Tenex, and I've shot many 40's using Standard all the way through, saving the Tenex for shootoffs or important matches.

I hope I've enlightened you a little about rimfire ammo. Test lots of ammo at 100 yards, use wind flags, sort by rim thickness and practice. You should see some improvement in your scores and it just might get you that elusive rimfire 40x40.