



Technical Newsletter From
Your Ballistic Technicians
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What Is The Palma Bullet by Dave Brown



Sierra was selected by the International Palma Committee to design and build a bullet that could be shot in the Palma competition from .308 Winchester rifles out to 1000 yards and remain supersonic. The Sierra Palma bullet is a 155 grain Hollow Point Boat Tail MatchKing bullet. The Palma bullet actually has a ballistic coefficient higher than our .30 caliber 168 gr MatchKing, and, due to its weight can be shot at higher velocities than the 168.

The combination of these two factors allows the Palma bullet to be ballistically superior to the 168 MatchKing bullets at 1000 yards. Palma match rifles usually use a 1x13" twist, however, the Palma can shoot very well with a wide variety of twist rates, including 1x10".

The first Sierra Palma's were introduced in 1992, and since then, it has been the bullet selected to be loaded into the ammunition used in the International Palma Team Championships. From 1876 through the present, the highly prestigious championship has gone through many changes while bringing together teams of the finest riflemen in the world. Palma competitors must use iron sights, shoot from the prone position, and utilize a rifle that is chambered for the 7.62 NATO cartridge. The match is shot at 800, 900, and 1000 yards.

The 155 grain Palma bullet will appear in the 4th Edition Sierra Reloading Manuals with updated loading information, due out in January 1996. In the meantime, the loading data for the 150 grain MatchKing in our 3rd Edition Manuals provides an excellent reference for loading.

Competitive Shooting: Handgun Silhouette by Carroll Pilant

Are you looking for something exciting to do on weekends that the whole family can participate in? The International Handgun Metallic Silhouette Association (IHMSA) has just the sport for you. If you own a pistol, you can shoot silhouettes. Several varieties of silhouette events are shot with both rimfire and centerfire pistols. Some events are shot from 25 meters to 100 meters and others from 50 meters to 200 meters. Targets shot are steel chickens, pigs, turkeys, and rams. There are events for iron sights and for scopes. Shooters are classified according to their ability and experience. As you improve, you are moved up into a higher class.

Membership in the IHMSA entitles you to a monthly newspaper (bi-monthly in Nov-Dec and Jan-Feb) that is loaded with shooting and reloading information. It also includes a list of matches in your area, in addition to people you can contact for more information. Currently, the IHMSA is running a three month trial membership promotion. For more information, contact IHMSA at 319-752-9623.

Good shooting and I hope to see you on the range.

Competitive Shooting: Highpower Rifle Silhouette

By Tommy Todd

Rifle silhouette is a challenging competitive discipline. It is also a fun sport that is not ruled by the most expensive equipment. An out of the box stock bolt action rifle is capable of a perfect score. 6mm is the minimum bore diameter with 7-08 and .308 Win being the most popular. The targets are life-sized steel silhouettes of chickens, pigs, turkeys, and rams with two banks of five set at 200, 300, 385, and 500 meters respectively. The shooter is allowed two and a half minutes (2:30) per bank of five targets and one round per target. The targets must be shot in order, from left to right, from an unsupported offhand position, scopes are allowed. In order to score a point the appropriate target must be knocked off its stand. A miss or a target hit but not knocked off its stand (known as a "ringing a target") is scored as a zero.

There are two classes of rifles, Hunting Rifle for essentially factory rifles and Heavy Rifle for rifles that have been modified but still meet the dimension and weight requirements set by the National Rifle Association. There are different classifications according to skill level. You compete against those competitors of your class. Give Silhouette a try, it's a satisfying experience to hit the target, hear the clang and see it fall. For more information, call the NRA competitions division at 703-267-1461.

Bullet Seating Depth

By Rich Machholz

What is the best bullet seating depth for my rifle or a specific bullet is an oft asked question. Precise depth measurements are very difficult to obtain because bullets can vary in length. In view of this we often obtain an over all length (O.A.L.) by making external measurements taken from the point of the bullet to the base of the case or from a diameter on the ogive of the chosen bullet to the base of the case using a comparator and a caliper. Both methods can be very precise but technique could influence the result. Both are viable because the bullet seating die contacts the bullet on the ogive, not the point. Stoney Point makes a tool for this purpose called a Chamber-All, and when paired with their or some other company's comparator

makes establishing Maximum O.A.L.'s easy. If you don't have the specific tools for establishing these lengths don't break your piggy bank just yet.

A useful tool can be made from an unsized case that was fired in your rifle by closing the case mouth very slightly thus providing a light slip fit for the chosen bullet. Just start the bullet in the case mouth and carefully insert in the chamber of your rifle. Close the bolt carefully and allow the lands of the rifling to push the bullet back. Carefully open and withdraw the bolt and dummy round, being careful not to disturb the bullet/case relationship. Holding the dummy round by the neck and bullet, measure carefully with calipers. Repeat several times to verify your measurements and be sure to use the same bullet each time for consistency. When satisfied, resize the case and seat the original bullet, making a dummy round to the established length. This will be the absolute maximum O.A.L. for this barrel, for this bullet. Smoke the dummy bullet and chamber the cartridge to make certain you don't have a jamb fit. If you do, adjust the seating depth accordingly until just a slight tick of copper shows through the smoke. Your bullet will be touching the lands very lightly and represents the maximum working O.A.L. for your barrel.

Your magazine may not accept this maximum O.A.L. so you must check your dummy round for function. A simple test is to open the floor plate and check for clearance, the cartridge must pass from top to bottom of the magazine box unimpeded. If it doesn't, adjust the dummy round to compensate for the reduction if you wish to utilize the magazine.

To find the optimum seating depth for a particular rifle, start with a mid-range powder charge and work up to the appropriate maximum charge levels very carefully while utilizing the maximum working O.A.L. to determine the most accurate powder charge. When the most accurate charge is established utilize it and reduce the maximum working O.A.L. by .010" increments looking for accuracy by shooting groups at each increment. A total reduction of .060 of an inch will probably tell you if more reduction is appropriate or necessary. The resultant groups should be a graphic illustration of what really is the best O.A.L. for your rifle with this bullet.

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