



Technical Newsletter From  
Your Ballistic Technicians

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## Sectional Density

*by Robert Treece*

Most shooters have heard about "SD" (Sectional Density), and some talk about it but, very few have any idea just what it is. Usually the higher SD is associated with deeper bullet penetration, however, that is not necessarily true, as you will see in the following example.

Sectional Density is a number calculated from a fairly simple formula: weight of bullet in grains divided by 7000 (# of grains in a pound), then divided by the squared diameter of the bullet. This answer is the sectional density on any bullet of this weight and diameter, regardless of construction!!!!!!

For example: 150 grain .308" diameter - start with 150 divided by 7000 = .0214285

This answer divided by the diameter squared (.308 times .308) = .094864 gives a problem to calculate as thus: .0214285 divided by .094864 solved as .2258865; rounding this answer to 3 digits gives .225 as the sectional density of any .308" 150 grain bullet. The point is that this could be a .30-30 flat nose or FMJ design or a soft point-they will all have the same "SD". So, a projectile having a higher SD may or may not penetrate better-think of construction and application for bullet usage.

### 2000 Bianchi Cup

Held annually in Columbia, Missouri, the Bianchi Cup is one of the most prestigious handgun matches held in the world. This action pistol match draws over 200 competitors worldwide. The match consists of 4 separate stages (falling plates, mover, barricade, and practical.) Each stage is worth 480 points and a possible 48 X counts for a match total of 1920 points and 192 Xs. The top score with the highest X-count is the winner. Doug Koenig, from Albertis, PA, captured his 4th Bianchi Cup with a score of 1920 with 185 Xs. 1999 Champion Bruce Piatt was second with 1920 and 175 Xs and Don Golembieski was third with 1920 and 173 Xs. All three were using Sierra 9mm SportsMaster bullets. Congratulations to these outstanding shooters from Sierra!!



Dr. Charles Jenkins took this Rocky Mountain Goat with Sierra .30 caliber 150 gr. SBT in Baranof Island, AK.



Arthur Rush used Sierra's .338 cal. 250 gr. SBT on this Coastal Brown Bear in Alaska, May 19, 2000.

### Sierra INFINITY Update

Attention Sierra INFINITY Exterior Ballistic Software program and Sierra INFINITY Suite owners!! The newest UPDATE is available in the Software section of our web site ([www.sierrabullets.com](http://www.sierrabullets.com)). Simply follow the prompts to download and install the newest bullet and ammunition databases to your program.



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## Sweet Bliss

*by Duane Siercks*

In the course of a little office discussion, the question was raised as to the reason that reloading is attractive. Savings was mentioned, as also was mentioned the fact that as a hobby the rewards were tremendous. We decided to run a comparison on costs of ammunition, factory vs. reloaded, to see what the savings would be. As can be seen

from the table, savings is considerable, and can also be even increased with the use of fired brass. Talk about bliss, a hobby that saves you money, allows you to enjoy the other benefits of increased accuracy, ammo tailored to the firearm, and the ability to enjoy your sport even more.

### Factory Ammo vs. Reloading

<b>.308 Winchester</b>			
Factory Ammo, 165 grain SBT			\$18.50
20 round box			
<b>Reloaded</b>			
Brass	\$21.00 per 100	\$0.21	
Bullet	\$16.80 per 100	\$0.17	
Primer	\$2.00 per 100	\$0.02	
Powder	\$.0026 per grain	\$0.11	
		\$0.51	
20 loaded cartridges			\$10.25
Cost Savings by Reloading		\$8.25	
			80.52%

<b>.270 Winchester</b>			
Factory Ammo, 130 grain SBT			\$17.00
20 round box			
<b>Reloaded</b>			
Brass	\$25.00 per 100	\$0.25	
Bullet	\$15.20 per 100	\$0.15	
Primer	\$2.00 per 100	\$0.02	
Powder	\$.0026 per grain	\$0.11	
		\$0.54	
20 loaded cartridges			\$10.73
Cost Savings by Reloading		\$6.27	
			58.46%

## Changes in our Ballistic Hot-Line Service

Beginning in July, we installed a new software program for our Ballistic Customer Service. In addition to being able to provide information to you in a more efficient manner, we will gain the ability to send your quarterly X-Ring Ballistic Newsletter by e-mail. This will allow you to receive your newsletter much quicker, and will save Sierra postage and printing cost. If you have an e-mail address, please call us at 800-223-8799. Also, we have added voice mail and call routing to our 800 service. This will eliminate time spent on hold for a Ballistic Technician and allows you to dial directly to your technician and leave a message if he is handling another call.