

sharpshooter's dope book, to ensure data are always with the rifle on callouts. The MR-700 Remington upgrade keeps the factory barrel and chamber. Thankfully, Lauck cuts the barrel down to 20 inches and adds an 11-degree crown recessed into the muzzle. A short barrel is typically more accurate than a long barrel because it is stiffer and experiences diminished barrel harmonics. To attach a silencer, have Lauck cut 5/8x24 TPI threads into the muzzle, since these thread specs have become the industry standard for .30 caliber sound suppressors. To optimize accuracy when using a threaded barrel, never shoot unless a thread protector, sound suppressor, or muzzle brake is screwed onto the barrel.

Sharpshooters accustomed to precision rifles with 26-inch barrels may be uncomfortable chopping so much off the barrel. They fear a loss of velocity and accuracy at long range. Mark White of Sound Technology points out that "There is typically very little velocity loss when going from a 26-inch to a 20-inch barrel in a rifle chambered in .308. Results vary with chamber tightness and bore design. Velocity loss by reducing barrel length from 26 to 20 inches typically runs in the neighborhood of 125 to 145 feet per second (fps). Velocity loss is considerably greater when going down to a 16-inch barrel. I base these comments upon my own empirical data," White concludes.

What does shortening do to accuracy in the Real World? A friend who is a US Army sniper instructor successfully engaged ten targets at unknown distances from pistol range out to 1,000 yards using an 18-inch barrel with conventional rifling and Black Hills 168-grain HPBT ammunition. Extensive testing in Finland has shown that an 18-inch barrel is the most accurate from among longer and shorter barrels chambered in .308. Research by Sound Technology has shown that a 20-inch barrel seems to give the best mix of terminal and exterior ballistics, as well as minimal barrel harmonics, especially when using a sound suppressor. Thus based upon a diversity of hands-on testing, shortening a quality barrel to 20 inches can be expected to deliver better accuracy as well as good exterior and terminal ballistics.

Did it in this case? I used Black Hills 168-grain HPBT match ammunition, which has delivered 0.16 MOA in my hands and 0.10 MOA groups in the hands of my friend the Army sniper. Black Hills ammunition is noteworthy for both its consistency as well as accuracy. For those who came in late, individuals and departments can order Black Hills ammunition factory direct if it is not available locally.

While the Remington M700P is normally a 1/2-MOA gun, the one with the trigger that formed the basis of this study delivered 3/4-MOA five-round groups. After D&L's conversion to an MR-700, my three-round groups consistently averaged 0.25 of an inch center-to-center at 100 yards using Black Hills ammunition (see the accompanying table for details). Five-shot groups opened up, with the fifth round always being the flier.

Both the upgraded Remington MR-700 and the top-of-the-line MR-30 Professional Grade rifles come from D&L with the Harris Model LM bipod. Not only is this a very handy, lightweight and robust bipod, I have shot my personal bests in a wide variety of calibers with the Harris Model LM from 50 feet out to 2,000 yards. I recommend it with enthusiasm.

Since Lauck builds the MR-700 system as close as possible to his MR-30 Professional Grade system, the obvious question is "How well does the MR-700 system perform compared to the MR-30 PG rifle of the same caliber?" It is safe to say that the MR-30 PG is a tough act to follow. The MR-700 cured all but two of Remington's potential reliability issues. (1) The MR-700 conversion retains the typical plunger-type ejector, which is subject to fouling. The MR-30 PG uses a fixed ejector, which completely eliminates ejector problems. And (2) the MR-700 still uses Remington's two-piece bolt and handle.