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Shooting

Tip of the Month: When focusing a scope's reticle, use a gray sky for the backdrop and adjust until the crosshairs are sharp.

John Giustina/Getty Images

INNOVATION

Varmint Beware!

A new take on prairie dog rifles

BY JIM CARMICHEL

THE GROUP WAS WELL UNDER a half-inch—.404 inches, to be exact, as measured between the centers of the two widest shots in the five-shot group I'd fired at 100 yards. This is pretty good accuracy, even though we've learned on the Internet that even halfway-decent rifles of any and all makes are expected to shoot one-hole groups "all day long." But even if my group is deemed mediocre by such gilded standards, what might make it forgivable is the fact that the rifle's barrel had been removed between each shot.

So what's the big deal?, you're wondering. Who wants to screw a barrel in and out between shots? And for what logical reason would I contrive to pull such a stunt in the first place?

There actually was a good reason, but to better explain, let's go back a year or so, when I started planning my all-time ultimate varmint rifle.

The most difficult decision when buying a varmint rifle is deciding on the caliber. There are so many to choose from, every one offering uniquely beguiling features. So why not, I asked myself, build a varmint rifle that fires any cartridge of my choosing? Think how convenient it would be to have a rifle that fires, say, the sweet and petite .222 Remington

when you're in a tranquil mood, then scorches the atmosphere with a .220 Swift after you swap barrels. Sounds good, but there's a catch: If such a rifle is to be practical, each barrel will have hit close to the same point of aim, with little or no change in the scope setting.

A NEW TWIST

There's nothing new, of course, about rifles that can switch calibers. In my bookcase is a 1915 gun catalog listing a Winchester Model '94 that could be either a .30/30 or .25/35 by swapping barrels. The way it worked was pretty simple: With the magazine tube slipped out of the receiver, a quarter turn of the barrel released the works from the action.

With a bolt rifle, the idea of a switch-caliber gun goes sour when a scope is mounted on the receiver. That's because barrels tend to be independent-minded about which way they want to toss bullets. If you have, say, a scoped bolt action .30/06-.375 H&H combo sighted in for the '06 barrel, the .375 barrel is more likely than not going to hit wide of your aim. Some switch-caliber rifles currently dodge the problem by mounting scopes on the barrel. This means you get to buy a scope for every barrel, a notion enthusiastically endorsed by optics makers.

The Stolle action's left-side loading port, left-hand bolt and right-side eject make rapid, well-aimed fire possible.

But neither concept suited the rifle I wanted to build. Instead, I opted for a trick I'd picked up while hanging out with benchrest shooters. An unconventional habit of this peculiar tribe is the propensity for swapping barrels as readily, and with as little apparent provocation, as Liz Taylor swaps husbands. What makes these relatively quick barrel changes possible are simple little hand wrenches that fit inside the receiver. With the barrel firmly held in a portable vise that's clamped onto a shooting bench, picnic table or even a truck's trailer hitch, the action is twisted off the barrel with stock and scope still attached. Switching from one barrel to another this way takes only a few minutes. (See illustrations, opposite.)

What makes these speedy barrel changes all the more remarkable is that the newly fitted barrels almost invariably hit the target within a few inches of their predecessors. It was this observation, in fact, that gave me the notion that a switch-caliber varmint rifle might very well be possible. Why wouldn't barrels in other calibers similarly hold true to point of aim, provided they were pre-fitted to a specific rifle? Would accuracy be compromised by repeatedly removing and re-installing such barrels? Ah, there's the rub: If accuracy decayed, my project would be pointless, hence the point of my tests at the beginning of the article.

THE SUM OF THE PARTS

Lock, stock and barrel, the accuracy of a rifle is the sum of its parts. Put good parts together and you get good accuracy, provided they are assembled the way they should be. There are no shortcuts, especially when it comes to actions, the platform from which a rifle's accuracy flows. A couple of my most accurate varmint rifles were built on solid-bottomed Stolle actions, which are among the most successful and widely used actions in benchrest competition, and I planned to use one for my ultimate varminter.

Another reason I chose the Stolle action is because it can be ordered with both the loading port and bolt handle on the left side of the receiver and the ejection port on the right. This sounds like an awkward configuration for a right-handed shooter—until you try it. It is actually faster for getting off well-aimed shots at the bench or prairie dog patch.

Why the need for speed? Isn't varmint shooting, by its very nature, a contemplative sport, a solitary launching of bullets across uncountable yards of green meadows or dusty prairies? To be honest, it has been my lamentable luck to have fallen in with a bunch of sharks who glory in their talent for finding the very prairie dog I'm aiming at and reducing it to vapors just as my finger

Peter Montanti/Mountain Photographics

The lines of this Fajen-style varminter stock are aesthetically pleasing, and the wide forend settles easily into sandbags.

is tickling the trigger. Why they do this is incomprehensible, and my repaying them in kind is, of course, unthinkable, so the only gentlemanly defense is to speedily pick off my allotted targets before the pirates encroach.

Stolle actions can be ordered with additional bolts with face sizes to fit various cartridge case rims. By ordering two bolts—one in the basic .222 Rem. face size and another in the standard '06 size—a single rifle is adaptable to well over a dozen popular calibers, plus scores of wildcats.

Another major factor would be the quality of the barrels and the precision with which they are threaded, fit and chambered. This is the challenge I offered to Wade Hull, the youngish owner of Shilen Barrels, a legendary name in the accuracy game. Though Shilen is known mainly as a maker of barrels for the worldwide trade, it will also fit-and-finish its barrels to a customer's rifle. So off to Shilen went my action and two bolts, with an order for fitted barrels in .22/250 Rem. and .204 Ruger.

Being an old-fashioned guy, I have a fondness for wood, and one of my favorite stock styles is the Fajen Varminter design of many years past. Among the reasons I like it so well is the way the extra-high rollover comb comfortably aligns my eye with a high mounted scope. I'm also in favor of the way the wide forend snuggles into sandbags or other rests and the way the gracefully curved, hand-filling grip aids one-hand control of the rifle. Fred Wenig, a longtime associate of Fajen, now owns his own stock company and continues his version of the original Varminter stock in a variety of colorful laminated hardwoods, of which my choice was black and silver.

My first trip to the bench with the finished rifle was one of those make-or-break moments. The pretty little group fired with the .22/250 barrel removed between shots was encouraging, but the real test would come when I replaced it with the .204 Ruger. If it hit within 3 inches of that first group, I figured I'd have a winner, because a dozen or so clicks of the Leupold scope's quarter-minute adjustments would bring it on target, with no need to re-zero.

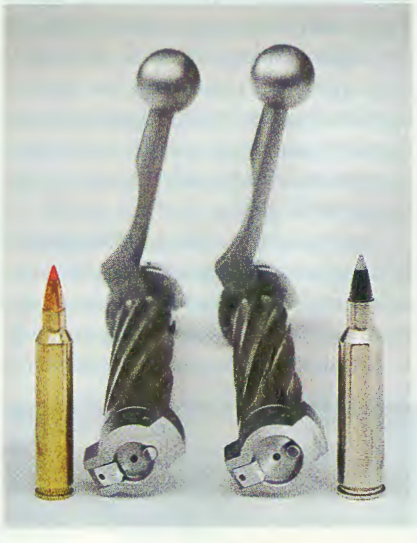


Photo: Peter Montanti/Mountain Photographics; Illustrations: Colin Hayes

PROOF OF CONCEPT

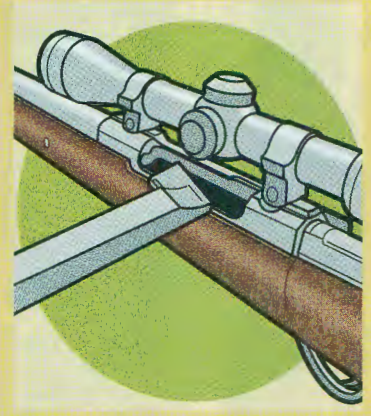
Even in my most optimistic imaginings, I could scarcely believe the little .20-caliber hole that appeared barely more than an inch above and a quarter-inch to the left of the group made by the first barrel! Not only could this scant difference of impact be corrected by a half-dozen clicks of the scope, but for practical use, the zero with both barrels was virtually the same, either barrel hitting a target the size of a prairie dog with no scope readjustment whatever.

Despite this first-time success, I still consider the project a work in progress. Will additional barrels in even more calibers deliver such nearly overlapping groups? Already the guys at Shilen are fitting a fast-twist .22/250 barrel for far-reaching shots with heavy bullets, and a .223 barrel will follow. The bottom line, however, is whether it will work as well for everyone. With precision barrel fitting, I'm pretty certain it will. Perhaps one of these days, the one-hole groups we're told about on the Internet won't be just boastful fantasy.

By ordering two bolts with different face sizes, Carmichel made his rifle compatible with dozens of varmint cartridges.

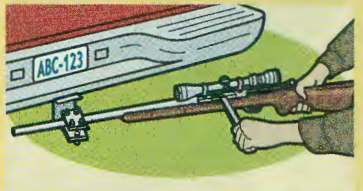
Switching Made Easy

The traditional action wrenches used to remove barrels encompass the receiver and require that the stock, scope and rings be removed. Not so with these handy wrenches, used by benchrest shooters.



Action Wrench

The head of the wrench snugs into the cutouts for the bolt lugs in the front of the receiver. Because of the precision with which the barrel is fitted to the action, there is no need for the barrel to be torqued down ultra-tight.



Barrel Vise

To keep the barrel secure while the action wrench is used, you can clamp it into a portable vise that readily attaches to a picnic table, shooting bench or even the trailer hitch of a truck or SUV, as pictured here. With one hand on the stock and the other applying force on the wrench, you can swap barrels in a matter of minutes to change calibers while prairie dog shooting.