



PROOF HOUSE

AMT BARRELS FOR THE RUGER .22 AUTO

By Dr. Ralph C. Glaze

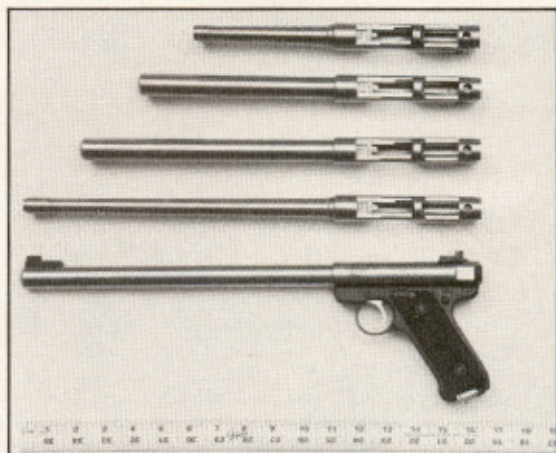
Increased interest in handgun hunting and silhouette target shooting has spurred development of extra-long barrels for installation on many popular makes of pistols. Longer barrels produce higher velocities, of course, as well as adding weight that improves holding on target and reduces recoil. When using open sights, the longer sight radius is also beneficial to many shooters.

Manufacturing a barrel unit that is quickly and easily interchangeable is relatively simple for pistols such as the High Standard or Contender, but the Ruger .22 Rimfire autoloader presents a bit of a challenge. The breech end of a Ruger barrel attaches firmly to a barrel extension that is actually the receiver, in which the bolt assembly is contained. To be readily interchangeable, a Ruger barrel must be made in a unit with a receiver. AMT now offers a selection of seven different barrel lengths and styles of the Ruger .22 Auto that are handily installed and superbly accurate.

Bull barrels are made in 6-, 8- and 12-inch lengths, while tapered units are available in 6-, 8-, 10- and 12-inch models. Listed barrel lengths are nominal, as all barrels actually measure about 1/2 inch longer than their stated dimensions.

AMT barrels and extensions are made of stainless steel. Bores are button rifled, and barrels are diamond finished. All machine work is of the highest order, with virtually no tool marks visible on external surfaces. Finish is a bright satin that is not as shiny as a smooth polish, but with a luster much richer looking than the sandblasted sur-

AMT offers 6-, 8-, 10- and 12-inch stainless barrels for the Ruger .22 auto. The barrel units function well and offer superior accuracy. Longer barrels allow for steady hold.



faces seen on many stainless steel firearms. When an AMT unit is mounted on a standard blued Ruger frame, overall appearance is indeed quite handsome.

Fixed sights are standard, with adjustable rear sights offered as an option. All barrel extensions are grooved for scope mounts. Front sights on tapered barrels are under-cut Patridge type, 1/8-inch wide, and are similar in design to factory Ruger sights. Tapered barrels have an integral sight mounting ring near the muzzle to which sights are attached by a pin. Front sights on bull barrels are square-cut Patridge, held in place by a screw. Fixed rear sights are retained by a set-screw, and are adjustable for windage only. Adjustable rear sights supplied by AMT are made by Micro, and provide click compensation for both windage and elevation.

A Redfield 2 1/2X pistol scope was chosen for our tests of AMT barrels. Held by individual rings that grip the receiver mounting grooves, this little Redfield scope proved to be more than satisfactory. Of course higher power pistol scopes are available as well.

Removing and replacing a Ruger barrel/receiver unit poses quite a problem for many shooters, apparently, but this should not be the case if directions are carefully

followed. Readers who have mastered the technique of fieldstripping the Ruger .22 Auto may skip the next couple of paragraphs. For the benefit of those who might be reluctant to try AMT's interchangeable units because of prior difficulties in reassembling a Ruger, take heart. We're going to tell you how to do it the easy way.

The takedown latch for disassembling the Ruger .22 Auto is located in the backstrap of the grip frame. With the chamber empty, the hammer in the fired position and the magazine removed, pull the latch lever to the rear. (A paper clip is the ideal tool to use for this purpose.) The main-spring housing may now be rotated upward as far as it will go. A downward pull will withdraw the bolt-stop pin from the frame and barrel extension. Remove the bolt from the rear of the barrel extension. The barrel unit may now be moved for-

INSTRUMENTAL VELOCITIES OF RUGER .22 AUTO WITH AMT BARRELS

AMMUNITION	BARREL LENGTH			
	6-INCH (FPS)	8-INCH (FPS)	10-INCH (FPS)	12-INCH (FPS)
Remington Target	1,031	1,057	1,084	1,118
Federal Champion	998	1,022	1,048	1,082
Federal Hi-Power	1,095	1,136	1,175	1,216
Federal Silhouette	1,007	1,039	1,076	1,120
Federal Spitfire	1,277	1,305	1,388	1,379
Eley Pistol Match	999	1,013	1,032	1,054

ward about 1/8 inch, at which point it will clear the hook in the frame that holds the barrel extension in place. It may be necessary to tap the back of the barrel extension with a soft hammer to move it forward. When the receiver is all the way forward, it may be lifted off the frame.

Reassembly is a trifle more difficult, but is basically a straightforward task. Slide the barrel extension onto the frame, making sure that the hook on the frame engages the barrel unit. Again, a light tap with a hammer may be needed to force the barrel extension into proper position. Holes for the bolt-stop pin in both barrel extension and frame must line up. Replace the bolt, and insert the bolt-stop pin. Next comes the only really tricky part—mating the mainspring with the hammer strut. The hammer must be in the fired position, and the hammer strut parallel to the magazine well. Rotate the mainspring housing back into its normal position, making sure that the hammer strut engages the mainspring. Holding the frame upside down with the muzzle tilted up will make this step much easier. After the mainspring housing is in place, press the takedown latch forward to lock things together. Always check for proper functioning after performing these operations to be sure that reassembly was done correctly. With a little practice, it should take only a minute or two to swap barrel units.

Accuracy of all AMT barrels tested was nothing short of superb. Results with all barrel lengths were remarkably consistent, indicating that manufacturing tolerances are quite close to optimum dimensions.

All test firing for accuracy was done from a sandbag rest at 25 yards. Six brands of ammunition were used: Remington Target, Federal Champion, Federal Hi-Power, Federal Silhouette, Federal Spitfire and Eley Pistol Match. The best five-shot group was fired from the AMT 12-inch bull barrel equipped with Redfield's 2 1/2X scope. Using Remington Target ammo, this group measured just under 3/4 inch. Our largest test group opened up to 1 1/4 inches, fired from the six-inch tapered barrel, using Federal Spitfire cartridges.

Every 25-yard group fired from each available barrel, using all six types of ammo, measured between 3/4 inch and 1 1/4 inches. Even the largest group would fit comfortably inside the X-ring of a standard 25-yard bullseye pistol target, which is about as accurate as one needs to get.

Unfortunately, we didn't have sufficient time to use a Ransom Rest for our tests, but experience has shown that machine rest groups usually measure just about half the size of our hand-held groups. Based on test results, AMT's claim of precision match accuracy from their barrels is most certainly justified.

Having four different barrel lengths at hand offered a singular opportunity to determine precisely how much barrel length

affects muzzle velocity. All six brands of ammo previously mentioned were carefully chronographed in each barrel. Velocity figures are instrumental, not true muzzle velocity, since chronograph screens were set some ten feet from the muzzle. Even though the bullet speeds noted are a little less than maximum, these comparisons are still valid.

Doubling barrel length from six to 12 inches increased velocity by an average of only 94 feet per second (fps). The greatest velocity gain was found in high speed ammunition, while standard velocity bullets showed considerably smaller increases in the longer barrel. The obvious conclusion is that standard velocity powder charges have more or less stopped burning by the time the bullet has traveled 12 inches. High velocity loads burn longer, producing a larger incremental change in velocity. Eley Pistol Match ammo clocked a difference of only 55 fps, while Federal Hi-Power rounds showed an average improvement of 121 fps.

An overall difference of 94 fps translates to less than nine percent increase in velocity for a 12-inch barrel over a six-inch tube. Down range, the percentage difference shrinks as aerodynamic forces exert their influence. Faster bullets lose speed more rapidly than slower ones, so that at maximum effective range, with a given brand of

ammunition, there is practically no significant difference in velocities from a six-inch or 12-inch barrel.

Are longer barrels more accurate? Our tests indicate that they are—marginally. How much accuracy is improved by increased barrel length, and how much is due to added weight is a moot question.

In any event, AMT barrels shoot extremely well, regardless of length. If long, heavy tubes do a better job for an individual shooter there is no finer choice than AMT. For ease of carrying in the field, one might select a shorter six- or eight-inch barrel with little, if any, apparent loss of accuracy.

AMT will soon introduce their own version of the Ruger-type frame. Made of stainless steel, it will be known as the "Lightning." The Lightning will have an improved trigger with an adjustable stop, and a squared-off triggerguard. Ruger's patents have expired, so anyone is free to copy the design. The Lightning model will be stiff competition for the original maker of this long-time favorite .22 auto.

AMT barrels in six- and eight-inch lengths list for \$110, while 10- and 12-inch models are priced at \$120. Adjustable sights are an additional \$25. Further information may be obtained from Arcadia Machine and Tool, Dept. GA, 536 N. Vincent Ave., Covina, CA 91722.

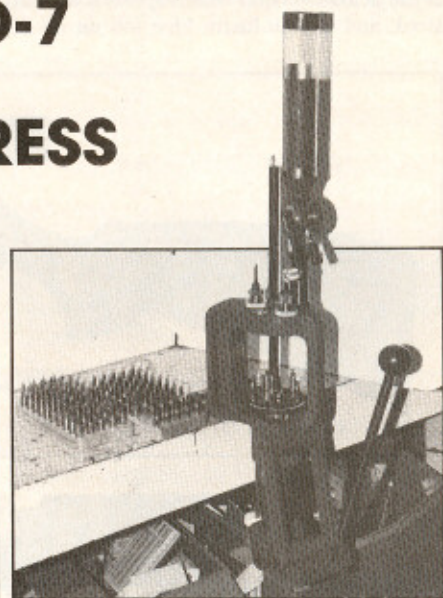
HORNADY PRO-7 PROGRESSIVE RELOADING PRESS

By Dave Hetzler

■ With the rapid growth in IPSC and silhouette target shooting, and the increased interest in varminting, reloading is growing in leaps and bounds. These three sports eat up enormous amounts of ammunition in a short period of time, and the need for time-cutting devices is becoming greater and greater. Many companies have answered the call and introduced progressive reloading tools, and of these new machines perhaps the most impressive is Hornady's all new Pro-7.

When I first saw the prototype Pro-7 progressive tool about 1 1/2 years ago, I mentioned to Steve Hornady, the dynamic president of Hornady Manufacturing Co. (which includes Frontier/Hornady ammunition, Hornady bullets and Pacific reloading equipment), that I wanted to test his new brainchild. It's taken this long to settle on the final configuration... but it's been worth the wait.

Although I don't load metallic cartridges in the thousands, I do a bit of long-range handgunning for varmints and being able to load 300 or 400 .223s, 6 mm BR Remingtons, 7 mm BR Remingtons and .300



The Hornady Pro-7 press is capable of loading over 300 rounds an hour of most rifle and pistol calibers.

Herretts in a short period of time appeals to me. Reloading this many rounds in a single-station press takes a long time, and anything I can do to shorten the hours at the reloading bench strikes me as a good idea. The enjoyment of "bulk" reloading wore off for me a long time ago.

Upon receiving the press, the first item
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