

THE .17 HORNADY MAGNUM RIMFIRE

(WITH THE RUGER 77/17 AND THE MARLIN 17VS RIFLES)

By Norman E. Johnson

Just when we hunters and shooters thought there wasn't anything really new and exciting in rimfire cartridges — enter the all new .17 Hornady Magnum Rimfire cartridge. Then to complement the new cartridge there are new rifles chambered for it. In this article I will endeavor to cover this new cartridge and two new bolt action rifles built around it: Ruger's Model 77/17 and Marlin's 17VS. I am pleased to have the opportunity to write about this trio of shooting innovations.

Not long after the announcement of this new cartridge, I received several boxes of ammunition from Hornady. Immediately after, I requested rifles from Ruger and Marlin for testing. This writing assignment is quite unusual in that it covers three exciting entities ... all presented to us within a short period of time.

As the small-hole barrels were introduced there was a stir among shooters. Some varmint hunters touted the .17 bore as the greatest, while others gave it less favorable recommendation. There were barrels available as small as .14 caliber, but problems manufacturing bores of such minuscule diameter were many. Then in 1971 Remington introduced the .17 Remington cartridge, which was essentially a necked-down .223 Remington case. Sev-



Cartridge comparison — from left: .22 Long Rifle, .22 WMR, .17 HMR. Note: New HMR is a necked-down version of the older Winchester Magnum Rimfire.

eral other wildcat versions followed, and many have caught on.

It took me awhile but I finally got my first .17 Remington rifle in the year 2001, and with moderate handloads it became a fine performer. I have complete cleaning and reloading equipment for the rifle. So it was with some experience with

the tiny bore that I took on the .17 Hornady Magnum Rimfire project.

A CLOSE LOOK AT THE .17 HMR

Few shooters haven't heard of the .22 Winchester Magnum Rimfire, introduced by Winchester in 1959. It has found its niche among shooters, moving a 40-grain bullet along at 2,000 fps. Varmint and small game hunters loved it then and they still do. But the folks at Hornady, in collaboration with gun makers who would chamber rifles for it, decided it was time for an all-new cartridge ... the .17 Hornady Magnum Rimfire. In a way it's a little wildcat inasmuch as it has a parent cartridge — the .22 Winchester Magnum Rimfire. What an idea: neck down the hot little .22 Magnum case to .17 caliber, load it with a bullet of proven performance along with an equally proven propellant, and what could stop it!

Anyway, this is precisely what the .17 HMR cartridge is ... a necked down version of the .22 WMR with a 17-grain Hornady V-Max Spitzer boat-tail bullet and a charge of Hodgdon's Lil' Gun powder. The little case has a neat 25-degree shoulder, very much resembling a miniature high-power cartridge. Actually, that's what it is. The advertised velocity of the 17-grain bullet is an impressive 2,550 fps.

But the innovative minds at Hornady



Disassembled views of both .17 HMR rifles. Top rifle is Ruger Model 77/17 with sporter barrel. Bottom rifle is Marlin Model 17VS stainless with 22" varmint barrel.

had a broader perspective as the new cartridge was conceived. The cartridge must produce good accuracy with good remaining velocity at respectable varmint shooting distances. The bullet must produce an acceptably flat trajectory and the bullet must be frangible enough at such remaining velocity to prevent a high percentage of ricochets. You will see, as you read on, the innovative little round accomplishes these expectations quite well.

REVIEWING THE RIFLES IN DETAIL

Before I concentrate on individual rifle characteristics and specifications, I'll do an overview of these two rifles together. As stamped on the receiver we see Ruger 77/17 as it appears on their parent rifles — the Model 77 and the 77/22. The Marlin rifle is stamped *****Model 17VS CAL. .17 H.M.R.*****.

Both are bolt action rifles resembling their high power cousins in many ways. Each has a full-sized stock, complete with rubber butt plate, sling swivel studs, trigger guard, and integral scope mounting features. Both rifles include 1-inch scope rings. The Ruger rings are identical to those fitted to their full-sized high power rifles, which have built-in bases. Marlin

offers Weaver 1-inch rings fitted to the milled dovetail slots atop the receiver. With the expectation these rifles — chambered to the lively little HMR cartridge — would be reaching out a good distance, neither rifle is equipped with iron sights. Scoped, the rifles are indeed handsome in every respect. If only I could have had such a rifle as I was growing up...

Looking more closely at each rifle, we will begin with the Ruger. As I examine firearms in detail I would be lost without my vernier caliper, rule, and scale.

The overall length of the Ruger Model 77/17, with its lightweight, 22" sporter contoured barrel, is 41¹/₄ inches. The barrel is 0.545" at the muzzle, tapered down from 0.920" at the chamber section. Just like its cousin, the Model 77/22, the barrel is held into the receiver by a v-block retainer and actually is easily removable.

The action sets into the stock on flat surfaces, making a solid bedding support, and is pulled into the stock exactly the same way as the 77/22 model. The trigger guard unit cams into the action and swings into position pulling the action into the stock as the rear action screw snugs it into place. The action is then drawn firmly into the stock by the second front screw and clip. The rotary type magazine is slipped into the recess formed by the parts just mentioned. Few stronger, and better designed, actions you will not find on rimfire rifles.

The 77/17 bolt is of two-piece construction. The front part measuring 2.12" does not rotate as it slides forward into the receiver guided by the races milled into the inner receiver walls. The bolt locking lugs are positioned on the rotating rear part of the bolt, and are locked into place as the bolt handle is turned downward.

The rifle has a three-position safety — safe in two positions with "fire" position to the front. With the safety positioned at center, the bolt can be removed. In the extreme rearward position the safety serves as a deadbolt lock which positively locks the firing pin mechanism.

The Ruger 77/17 trigger is the same as that found on the Model 77/22. Right out of the box, its pull was around 5 pounds and I did nothing to change this as I tested the rifle. However, were I to keep such a rifle for my own serious shooting and personal use, there would be some changes in arriving at a still

safe, more manageable trigger action. There are two ways in which this could be accomplished, but I would direct the gun owner to a reliable gunsmith.

In **The VARMINT HUNTER Magazine®**, July 2000, I described how I converted the 77/22 trigger from its firm, 4-pound pull down to a safe, crisp 2-pound pull. This was accomplished by carefully honing the sear engagement surfaces and replacing the factory spring with a lighter one. Resultant sear engagement and trigger over-travel remained unchanged from factory installation.

In the same article I described the installation of an after-market trigger by Spec-Tech Industries Inc., 1225 E. Sunset Dr., Bellingham, WA 98226. While such a trigger may be installed by a qualified person, the folks at Spec-Tech state in their instructions that this work should be completed by a qualified gunsmith. I can highly recommend this trigger conversion for a really serious shooter.

There was little question in my mind the new Ruger 77/17 would shoot, and it did; but more on that after I cover the Marlin 17VS rifle chambered for the Hornady Magnum Rimfire.

Marlin chose to chamber the new Hornady Magnum Rimfire in a pair of bolt action rifles. These are their Models 17 and 17VS. Both are under-stock, clip-fed bolt actions with varying features. The Model 17V rifle has a carbon steel barrel with birch stock, whereas the Model 17VS features a heavier stainless steel barrel and action with a laminated wood stock. This is the same rifle I have tested and will describe here.

These rifles do not have the traditional Marlin Micro-Groove barrels, but rather, a standard, six-groove rifling. The barrel is 22 inches in length, and 0.800" diameter without taper, and pinned into the receiver. The rifle has a single diameter cylindrical receiver with milled slots for the magazine and trigger assembly. The takedown screw stud (which serves as a recoil lug) is milled into a dovetail slot on the underside of the barrel. This provides a very rigid means of drawing the barrel and receiver into the stock. Marlin used a seven-shot box type magazine, which appears to stagger the bullets as the cartridges are inserted into it.

The bolt is of two-piece construction, with the front body measuring 1.9" long, without separate locking lugs. The for-

ward part of the bolt does not rotate as it is guided by the upward protruding ejector extending up into a recess in the forward bolt body. The actual locking lug action takes place as a single recoil lug attached to the side of the bolt cams into the receiver body. The bolt handle also is attached at the recoil lug body. The extractor and spring-like cartridge rim retainer are fitted in a recess near the end of the forward bolt body formed of spring steel. A magazine latch and release extends downward from mid underside of the receiver, providing a neat system of guiding and firmly holding the magazine in position. The magazine body also is made of stainless steel.

A single-stage trigger is attached to a very sturdy, round slotted post protruding from beneath the back of the receiver. A very positive and strong safety mechanism prevents any trigger movement as the side lever is moved to the rearward position. This also restricts the sear from any downward movement. Trigger travel approached 1/8" but was smooth and crisp with about 4-pounds pull. I believe the trigger function could be improved with a little polishing, but it functioned well just as I found it. Both rifles have ample room for a gloved finger while firing with both triggers positioned rearward where they belong. The Marlin trigger guard is a separate unit, while the Ruger trigger guard is a more complex assembly. Both units are neatly mortised into the stock and serve to support the rear action screw.

The Marlin 17VS rifle has a gray/black laminate Monte Carlo stock with a 3/8" thick, black rubber recoil pad. This is a class stock. The barrel is bedded firmly into the stock on both rifles.

Overall, the rifle measures 41 1/4 inches in length, the same as the Ruger. Each stock is equipped with studs for sling swivels. These too are made of stainless steel on the Marlin rifle.

PREPARING AND TESTING THE RIFLES

For examination purposes, each rifle's barreled action was removed from its stock. Both showed good, clean wood-to-metal bedding support, and after close inspection and photography, were returned to their stocks. I was quite impressed with the overall appearance and obvious quality of these rifle stocks. They are extremely well designed and finished comparable to those of most quality high power rifles.

After assembling the rifles, I mounted scopes on them

SPECIFICATIONS

Model / Manufacturer	Ruger 77/17	Marlin 17VS
Caliber	.17 HMR	.17 HMR
Action	Bolt Action	Bolt Action
Receiver	Investment Cast/Blued Steel	Cylindrical Stainless
Magazine	Rotary/Detachable Nine-shot	Box type seven-round
Barrel	22" Sporter 1:9 twist	22" Varmint stainless 1:9 twist
Sights/scope base	Integral bases/Ruger 1" rings	Grooved receiver/dovetail
Stock	Walnut, oil finished	Laminated wood/grey
Stock Drop/LOP	LOP 13 ¹ / ₂ ", DAH 1 ¹ / ₁₆ ", DAC 1 ¹ / ₁₆ "	LOP 13 ³ / ₄ ", DAH 2", DAC 1 ¹ / ₈ "
Trigger	Single Stage/Bolt Safety	Single Stage/Side Safety
Length Overall	41 ¹ / ₄ "	41 ¹ / ₄ "
Accessories	Ruger 1" scope rings, gun lock	Weaver 1" scope rings, gun lock
Suggested Retail	\$565.00	\$392.00

using the aforementioned mounting systems provided. I mounted a Sightron II 4-16x42 on the Ruger rifle. The rings permitted the use of this larger objective lens, which complemented the rifle very well. On the Marlin I mounted a Weaver K8 scope, which is a time proven target/varmint scope. Each scope has adjustable objective lens for parallax for my plans to shoot closer in at 50 yards as well as 100 yards or beyond. My testing was done from benchrest, the same as I would test any high power rifle. Each rifle bore-sighted with the scope reticles well within the adjustment range of each scope.

I waited for quite favorable shooting conditions to conduct the accuracy tests of each rifle. The Ruger rifle arrived about a month before the Marlin, and I did have some of the testing completed on this rifle prior to receiving the Marlin.

Loading and firing these rifles came off smoothly and safely. Each respective magazine was easy to load, but very different by comparison. The Ruger rifle has a nine-shot detachable rotary magazine permitting the cartridges to be inserted from the top, while the Marlin has a seven-round, detachable

box-type magazine, also loaded from the top. Both magazines are pushed into place from the bottom side of the rifle. The Ruger magazine fits flush with the underside of the stock when in place, whereas the Marlin magazine extends downward about 1¹/₈ inches as is seen in many semiautomatic rifles. The magazine is not in the way for shooting and is positioned just rearward of the balance point as the rifle is carried by one hand.

As the rifles are loaded and cocked, this is readily determined by the extended cocking piece on both rifles, as well as a "red" mark on the cocking piece on the Marlin. Both safeties worked smoothly and positively.

During firing of several hundred rounds of Hornady loaded ammunition there were no misfires or extraction and ejection problems. Each rifle displayed a well-indented firing pin mark on the fired case.

It is noted here that the .17 Hornady Magnum Rimfire cartridge can be chambered into a rifle chambered for the Winchester Magnum cartridge. There are many such interchangeable loading possibilities among rifles and alert shooters must

be aware of this. However, I did verify the result of such a firing in a .22 WMR chamber using a Savage Model 24. The .17 HMR chambered easily, and as expected the bullet harmlessly exited the bore, keyholing the .17 caliber bullet on target. The cartridge case was expanded fully at the mouth with minor cracking of one case. There is no apparent safety problem presented here.

Of course, not being able to test my favorite handloads in a rifle sometimes leaves me with the feeling something is missing. This was particularly true with the little Hornady round resembling a miniature high power case. But this feeling didn't persist as I began to see some pretty impressive performance. I have tested scores of rimfire rifles and cartridges over the years and do have a pretty good idea of what to expect from these guns and ammunition.

Back in my early days when squirrels, gophers, crows, and a few other varmints were among my targets with my favorite .22, I didn't have much to choose from in a rifle. First of all, there weren't so many rifles around and any decent ones were held onto for dear life. I eventually acquired a couple of good .22 rifles and learned the limitations of these guns in a hurry. Scopes weren't in vogue yet, so if I could shoot groups in the neighborhood of 2 inches at 50 yards, I really showed these targets off. Instead of meat-saving head shots on squirrels and rabbits, the whole animal was fair game. All in all, this was a far cry from today's rimfire rifle performance.

My accuracy expectation for these two new rifles was high. I set up some targets at my 50-yard backstop to sight-in and get a general idea of accuracy at this distance. Both rifles displayed superb 50-yard accuracy ... well under half an inch, which included five-shot groups from a good rest. I cleaned the rifles after each 25 shots using Shooters Choice #7. I have no wire brush for this bore but do have a good .17 caliber rod with a jag. The bores cleaned up well and were left dry in preparation for each succeeding series of groups.

Switching to 100 yards, groups around minute-of-angle were common. There was some wind during most of the testing, and I believe this prevented me from shooting even better groups. I think performance was excellent and very well may be improved by working with some trigger adjustment and stock

bedding. I also would consider lap-polishing the bores, which I did not do. Nevertheless, performance of both rifles was most excellent and very similar to one another.

I didn't chronograph the guns, and perhaps should have, but I have no reason to doubt the advertised velocity of 2,550 fps. Water-filled aluminum pop cans were totally burst at 25 yards and sent rearward more than 6 feet. Penetration of 2 inches of pine lumber resulted in a complete hole through the board with the little 17-grain Hornady V-Max bullet. This test was performed at 25 yards using both the .17 HMR and the .22 Winchester Magnum. Both these bullets are highly frangible and will destroy edible meat without question. I don't doubt that this little cartridge will be tried on close-in coyotes and smaller sized varmints, and reports will be coming in on the results. I believe the .17 grain Hornady V-Max bullet will do its job on well-placed coyote shots. Attempting shots at too long a range may result in a less favorable outcome, however.

Along with the penetration test on pine lumber I included a Full-Metal-Case Winchester bullet in the Winchester Magnum. This resulted in a very neat hole the size of the .224 bullet. I've shot hundreds of squirrels with this fine FMC case bullet and they truly are meat savers. Not to take anything away from the .17 HMR as a varmint cartridge, with its fine 17-grain Hornady V-Max bullet, I would like to see a Full-Metal-Case bullet loaded in this super little case. What a dream of a cartridge this would be for edible small game. It wouldn't have to be traveling at 2,550 fps either, and could be even heavier than 17 grains. The Wisconsin crow season was on while I was testing the Ruger rifle. A few crows discovered it truly is a little stinger. The cartridge did a good job out to a little beyond 150 yards. I didn't have any shots beyond this. With a scope well above bore center, the bullet impact is the same at 50 and 100 yards. Trajectory is very flat for a rimfire, and longer shots will present no problem. The combination should be a lot of fun on prairie dogs at reasonable ranges.

What I am seeing here are two really fine rifles, built for a cartridge with a great deal of potential. If only I could have had this when I was growing up ... but, I'm hoping I'll still have lots of pleasure from it down the line. 🐿️