

# KP1

# Knight's



Best known for its leading role in the "in-line" muzzleloading revolution, Knight Rifles now offers the innovative KP1 that, in minutes, can be either a center-fire rifle, a rimfire rifle, a shotgun or, of course, a muzzleloader.

By BRYCE M. TOWSLEY, Field Editor

# Transforming Rifle



With Tony Knight at the helm, Knight Rifles transitioned the muzzleloader hunter from the sidelock rifle, a relic of the 1800s, to the “modern” in-line rifle that dominates the sport today. Tony is retired now, and Knight Rifles is part of a larger conglomerate, but the Knight name has remained synonymous with in-line muzzleloaders, and throughout its 23-year history Knight’s firearms have always been front-loaders ... until now.

With the introduction of the KP1 rifle, Knight Rifles is officially stepping into the center-fire arena. Actually, with this gun it is pretty much entering all the arenas, center-fire, rimfire and shotgun, simultaneously. The Knight KP1 can metamorphose from a muzzleloader to a center-fire rifle or shotgun simply by changing barrels. With just a bit more time to switch the firing pin location, the KP1 can quickly become a rimfire.

I had an early peek at a non-firing prototype KP1 in December 2006 when I was at the Knight facility in Iowa testing some muzzleloaders in its underground laboratory, but the first time I was able to fire one was on a spring 2007 hunt in Mississippi, where I shot a wild hog with the rifle. In the fall, I used the KP1 while

hunting in south Texas to take a nice pronghorn antelope and a great aoudad. Recently, I tried to wear the gun out at the shooting range.

The KP1 is a single-shot, break-action, switch-barrel design. The concept is that one basic action will accept a wide variety of barrels. Because the sights—or scope—remain with their respective barrels, the zeros remain constant when switching back and forth. The action features an external hammer with a built-in, secondary safety. This double safety concept is a Knight trademark that has appeared in other forms on many of its muzzleloaders. On the KP1, the primary safety is the external hammer, which must be physically cocked before shooting. There is also a transfer bar that blocks the hammer from hitting the firing pin by a protrusion on the top of the hammer that contacts the back of the frame. When the hammer is cocked, the transfer bar rises up to fill the gap between the hammer and the firing pin. If the hammer were to fall without pulling the trigger, the gun will not fire. However, pulling the trigger raises the transfer bar. When the hammer is cocked and the trigger is pulled, the hammer strikes the transfer bar, which then contacts the firing pin.



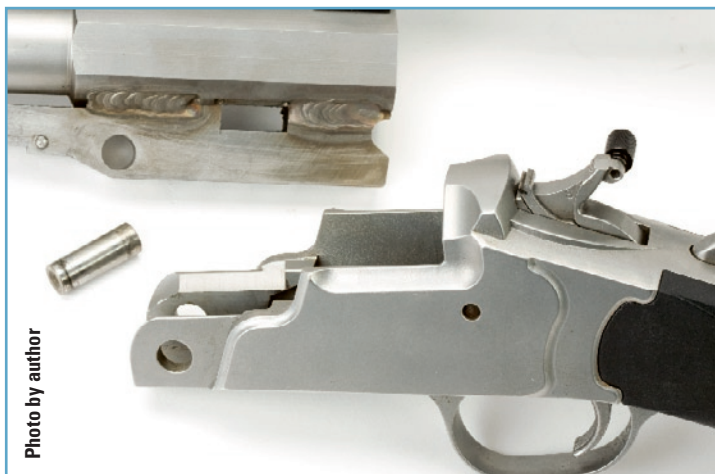
*In minutes the KP1 can be fitted with an in-line muzzleloading barrel, a shotgun barrel or a center-fire barrel. Zero isn't an issue as sights and scopes are barrel-mounted.*



Knight takes the safety concept one step further by adding a secondary manual safety to the hammer. When pushed forward, it withdraws a large pin from the face of the hammer. Without the pin, the hammer is unable to contact the transfer bar. But when the safety is pulled back into the "fire" position, the pin protrudes 0.060" from the face of the hammer. This allows the force of the hammer to strike the transfer bar. The primary reason for this manual safety is that it allows safely decocking a loaded gun.

The hammer is part of a modular "trigger group" assembly that is easily removed from the rifle by pushing forward on the release catch in front of the trigger and pulling down on the trigger guard, allowing for easy cleaning, maintenance or repair. In any muzzle-loader, fouling can accumulate over time in places that are not usually cleaned, like the trigger mechanism. The easy removal of the trigger group aids in and encourages cleaning.

A 0.375"-diameter hinge pin locks the barrel into the frame. This removable pin fits through the frame with holes on each side. It slides through a corresponding hole in the barrel lug and is prevented from sliding out of place by the fore-end. The rear of the locking lug under the barrel has an angled flat that, when closed, mates with a radius on the pivoting locking lug on the



*The barrel mates to the KP1's receiver via an 0.375"-diameter hinge pin that passes through corresponding recesses in the both sides of the frame and the barrel lug.*

frame. This system ensures a tight fit, as the locking mechanism simply rolls on the radius until it holds the barrel lug tight. The more pressure applied to the locking lug, the tighter it holds. There is a button on the top of the frame's top tang, behind the hammer, that opens the gun. Pushing it down actuates a linkage system that pulls back on the pivoting locking lug and releases the barrel so it is free to open.



The frame is a machined casting with two firing pin holes. One, of course, is in the center for any center-fire, including No. 209 primers used with the muzzleloader barrel. The other hole is slightly higher and is for rimfires. Changing the firing pin is simple. Open the gun, pull on the extractor, and it will come free from the barrel. The extractor's end can be used as a driver to loosen the firing pin retaining screw. This screw is in the frame below the firing pin and can be accessed by removing the trigger group. Turn the screw until the firing pin is free, then pull the firing pin back and turn it 180 degrees to align it with the top hole. Push it back in place, tighten the screw, and then replace the extractor and trigger group. The gun is now configured to accept a rimfire barrel.

The button-rifled barrels are made by Green Mountain, a sister company to Knight Rifles. The first 3.6" is octagonal, which then transitions to a tapered round profile. There is a massive lug, about 6¾" long, welded under the barrel. It not only contains the rear locking surface mentioned earlier and the hole for the pivot pin, but it also supports the free-floating fore-end. There is an aluminum channel with a locking mechanism fitted into the fore-end that mates with the lug under the barrel to lock and support the fore-end. Because the fore-end is supported by the lug, rather than attached to the barrel forward of the pivot pin, the result is a completely free-floating barrel.

After the lug is welded to the barrel, final machining is completed for the locking-pin hole, as well as the locking lug and the rear face of the barrel. This ensures that each part of each barrel is compatible with any frame. The rear of the lug, above the locking surface, contains the extractor. The extractor is spring-loaded to allow it to move down for loading rimless

cartridges. The extractor will ride on the body of the case as it is inserted, then click into the extraction groove under spring tension. The extractor is also under spring pressure when the gun is closed and the case moves forward into the chamber and firing position. When the gun is opened, the spring pressure pushes back on the extractor, pulling the case out of the chamber and allowing its removal. Two lugs protrude on each side of the barrel lug as part of the extractor mechanism. They cam off a beveled surface on the frame to add power to initial extraction.

The trigger has a long take-up, almost like a two-stage trigger. This is because of the locking system for the transfer bar. The take-up requires about 1 lb. of pressure. Once that slack is removed, the trigger pull is clean and relatively light. Mine broke at 2 lbs., 12 ozs. total weight, which is outstanding in any factory rifle.

The rifle weighs 7 lbs., 13 ozs. (.223 Rem., composite stock.) The length of pull is 14½" and the overall length with a 24" barrel is 39½". The KP1 is offered in blued steel with a black

## SHOOTING RESULTS (100 YDS.)

.17 HMR CARTRIDGE	VEL. @ 12' (F.P.S.)	ENERGY (FT.-LBS.)	GROUP SIZE IN INCHES SMALLEST LARGEST AVERAGE		
<b>CCI No. 0049</b> 17-GR. V-MAX	2470 Avg. 22 Sd	230	1.25	2.70	1.86
<b>HORNADY No. 8317</b> 17-GR. V-MAX	2462 Avg. 20 Sd	228	1.20	2.31	1.57
<b>REMINGTON No. PR17HM</b> 17-GR. ACCU TIP-V	2458 Avg. Sd 38	228	1.01	3.45	2.19
AVERAGE EXTREME SPREAD					1.87
.223 REM. CARTRIDGE	VEL. @ 12' (F.P.S.)	ENERGY (FT.-LBS.)	GROUP SIZE IN INCHES SMALLEST LARGEST AVERAGE		
<b>HORNADY No. 83278</b> 60-GR. TAP-FPD	3113 Avg. 20 Sd	1,290	0.90	1.80	1.48
<b>FEDERAL P-S No. 223L</b> 64-GR. SP	3070 Avg. 27 Sd	1,339	1.80	3.52	2.51
<b>WINCHESTER SUPREME</b> 40-GR. BST	3669 Avg. 22 Sd	1,193	1.09	1.90	1.48
AVERAGE EXTREME SPREAD					1.82
.45-70 Gov't CARTRIDGE	VEL. @ 12' (F.P.S.)	ENERGY (FT.-LBS.)	GROUP SIZE IN INCHES SMALLEST LARGEST AVERAGE		
<b>HORNADY No. 82747</b> 325-GR. FTX LE	1894 Avg. N/A Sd	2,588	2.50	4.20	3.32
<b>REMINGTON No. 4570L</b> 300-GR. JHP	1561 Avg. 33 Sd	1,622	1.01	5.30	2.82
<b>SPEER HOT CORE</b> 300-GR. HP	1891 Avg. 28 Sd	2,381	4.20	6.90	5.22
AVERAGE EXTREME SPREAD					3.78

MEASURED AVERAGE VELOCITY FOR 10 ROUNDS FROM EACH BARREL (.17 HMR, 24"; .223 Rem., 24"; .45-70 Gov't, 24") RECORDED WITH AN OEHLER 35P CHRONOGRAPH POSITIONED 12 FT. FROM THE MUZZLE. ACCURACY RESULTS FOR FIVE CONSECUTIVE, FIVE-SHOT GROUPS AT 100 YDS. FROM A SANDBAG REST. ABBREVIATIONS: BST (BALLISTIC SILVERTIP), FTX (FLEX TIP), HP (HOLLOW POINT), JHP (JACKETED HOLLOW POINT), LE (LEVER EVOLUTION), P-S (POWER-SHOK), SP (SOFTPOINT), TAP-FPD (TACTICAL APPLICATION POLICE FOR PERSONAL DEFENSE), Sd (STANDARD DEVIATION).



composite stock and fore-end. In stainless steel, it's available in black or Next G-1 camo composite or in brown laminated wood. All the buttstocks are fitted with a Kick-Ees recoil pads. The barrel length is 24", except for magnum cartridges and the .22-250 Rem., which are 26". The muzzleloader rifle barrel is 27" and the muzzleloader shotgun barrel is 26". All barrels come equipped with fiber-optic sights and are drilled and tapped for scope mounting.

The KP1 will be offered initially in two rimfire cartridges, .17 HMR and .22 LR. In center-fires, the KP1 is chambered for .204 Ruger, .223 Rem., .22-250 Rem., .243 Win., .270 Win., .308 Win., .30-'06 Sprg., .300 Win. Mag. and .45-70 Gov't. The .45-70 is currently Knight's bestseller because it has been ruled legal for the Mississippi primitive season in that chambering, due to the rifle's similarity to the W. Wurflein design, which was patented in 1884. Shotgun barrels are available in smoothbore, rifled and muzzleloader in 12 gauge. In 20 gauge, Knight offers a rifled barrel. Muzzleloader barrels are .50 cal. with No. 209 primer ignition.

Knight is packaging the gun with multiple barrels in a couple of configurations. The Varmint Combination is in Stainless/Camo with barrels in .17 HMR and .223 Rem. The Whitetail package is offered with a muzzle-

loader barrel and center-fire barrel in your choice of .243 Win., .270 Win. or .30-'06 Sprg. with blued or stainless metal and wood, black or camo composite for the stock.

Prices start at \$510 for a blued steel center-fire with a black composite stock and go up to \$690 for a muzzleloader in stainless with a laminate wood stock. Barrels start at \$210 for blued and range up to \$310 for shotguns. The Varmint Combo has a suggested retail price of \$789. The Whitetail Combos range from \$679 to \$830.

With the exception of the .45-70 Gov't barrel, the gun was a relatively good shooter. Remember that the standard for testing here at *American Rifleman* is five, five-shot groups at 100 yds., with a minimum of three loads. This is a very tough standard, and with the .223 Rem. and .17 HMR barrels tested the KP1 is close to the average for all the factory rifles I have tested over the years. As can happen with any gun, I suspect the problem is that particular .45-70 barrel, as Knight explained that cartridge is usually one of its best shooters. Knight shipped a replacement, but it arrived too late to test for this article. Most of the group dispersion with this early production rifle is in the form

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## KNIGHT'S KP1

of vertical stringing. Engineers at Knight are working to correct that problem and, once they do, the accuracy should move from good to excellent. I know this to be true because I used an earlier version of this rifle in .270 Win. that was extremely accurate.

The versatility of the KP1 rifle allows one gun to hunt any legal game in North America and most of the rest of the world. This rifle system marks a turning point for Knight, which I suspect we will see grow to be a large presence in the cartridge-fueled hunting firearm market. 🦋

Photos by author



*The frame's pivoting locking lug—below the rimfire and center-fire firing pin holes in the breechface—mates with a flat on the barrel's underside.*