

# Now A Total System: The New Thompson/Center Arms Encore Rimfires

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**When doing any sighting-in with either handgun or rifle, it is convenient to have a rest that handles both, like this Shoot'n Buddy rest for handgun and rifle from Coyote Jakes Inc. Here the new rimfire Encore with its Alpen scope is positioned for another shot.**

option. Unlike the Contender, the Encore did not have dual firing pins and a selector switch which made using a rimfire or centerfire on the same frame practical, so the use of rimfire cartridges was not an option with this model. As of 2007, that situation has changed!

#### **A UNIQUE MONO BLOCK DESIGN**

Since the larger Encore has been available, its use of centerfire cartridges was the only option. At the 2007 SHOT Show in Orlando, T/C's Ernie French showed me the new rimfire barrels and explained how this option for the Encore was accomplished. According to Ernie, this was something that was thought about for quite awhile. All along, there was serious engineering being undertaken with the direction of Gregg Ritz, the company's vice president of hunting. Then, in 2007, they put theory into production and now the Encore also is capable of being chambered in rimfire as well as centerfire rounds. Ernie said, "We accomplished this by offsetting the barrel in a mono block, dropping it down to where the firing pin in all current frames would strike the rim of a rimfire cartridge."

I had thought that T/C would chamber the Encore in 2007 only in the 22 Long Rifle and 17 HMR rimfire car-

One gun for all seasons and game is a statement associated with the Thompson/Center Arms Contenders over the years. What made their single-shot an all-around firearm was the following: with a flip of the manual firing pin selector switch, the action will fire a rimfire or a centerfire cartridge. The only stipulation was that the centerfire cartridge had to be one generating only

a moderate pressure, such as a 38 Special or 45-70 Government. Since many hunters wanted the option of using higher pressure rounds, like the 22-250 Remington or even 243 Winchester, Thompson/Center Arms introduced their larger in size, and therefore stronger, Encore. This soon was to become a great handgun, rifle, shotgun, or black powder arm ... but it lacked the rimfire



**This photo shows how T/C adapted a rimfire barrel to the centerfire Encore frame. Note how the rifle barrel insert on the left is offset downward compared with the centerfire barrel in the middle. On the right is a G2 Contender barrel in 17 HMR.**

**The Encore with the new 17 HMR barrel is topped with an Alpen 3.5-10x50 scope. The thumbhole composite butt stock, which is great for offhand shooting, is in Realtree camo. With such a stock on a rifle, a shooter's trigger hand grips it similar to how you would a handgun for a rock solid hold.**



tridges utilizing the new system. After all, the 2007 T/C catalog lists only the 22 LR and 17 HMR in their standard barrel chamberings. Ernie corrected me on this, saying, "We actually can chamber the Encore in the 22 Winchester Magnum Rimfire and 17 Mach 2 now through our custom shop." That covers all four rimfires! As to which cartridges in the future will be standard chamberings, only time and interest by small game and varmint hunters will determine that.

For a complete listing of T/C custom shop models, Ernie suggested that anyone interested should go on the Web to [www.tcarms.com](http://www.tcarms.com) and pick out options by model. As it is now, the new Pro Hunter rimfire rifle barrels are 28 inches in length, fluted, with no sights. The standard rimfire Encore rifle barrel comes with a 24-inch barrel and adjustable sights. If you have an Encore handgun, then options are a Pro Hunter fluted or standard barrel with sights, with both versions being 15 inches long.

#### THE CONTENDER'S OR NEWER G2 CONTENDER'S ROLE

With the Encore now being capable of chambering both rimfire and centerfire cartridges, including those that generate higher pressures, I was curious about the Contender's future. This is a topic that also comes up at gun stores and shooting clubs when someone sees the new Encore rimfire barrel. I mentioned this to Ernie French who told me that there has been no talk, to his knowledge, about phasing out the G2 Contender. One reason he gave, which is obvious to those who prefer the Contender (and there are a lot of them out there), is that many still prefer it over the Encore because of its smaller size and lighter weight. Plus, many shooters have several frames and various barrels, and like what they have, so they have no

**Table 1:**

Accuracy at 50 yards and muzzle velocity of various ammo types vs. barrel lengths.  
 Chronograph: Oehler 35P      Temperature: 78 degrees F      Humidity: 40%  
 Muzzle of firearm was 10 feet from the first screen.  
 When shooting, all optics set to 10 power.

<b>Firearm Key:</b>	<b>Trigger pull in pounds:</b>
Firearm A: Contender handgun, 14" barrel	2.50
Firearm B: G2 Contender rifle, 23" barrel	3.00
Firearm C: Encore rifle, 28" barrel	3.50

<b>Ammo</b>	<b>Firearm</b>	<b>Muzzle velocity In fps</b>	<b>3-shot, 50-yard group in inches</b>
CCI Speer TNT, 17-gr.	A	2,491	0.50
	B	2,606	0.30
	C	2,660	0.70
CCI V-Max, 17-gr.	A	2,511	0.25
	B	2,598	0.50
	C	2,662	0.50
Federal V-Shok, 17-gr. Speer TNT HP	A	2,547	0.60
	B	2,660	0.50
	C	2,686	0.60
Federal V Shok, 17-gr. Hornady V-Max PT	A	2,500	0.60
	B	2,590	0.45
	C	2,652	0.65
Hornady V-Max 17-gr.	A	2,470	0.30
	B	2,561	0.50
	C	2,573	0.90
Hornady XTP 20-gr.	A	2,313	0.50
	B	2,408	0.75
	C	2,416	0.80
Rem. AccuTip-V BT 17-gr.	A	2,521	0.75
	B	2,590	0.60
	C	2,629	0.75
Win. V-Max 17-gr.	A	2,438	0.75
	B	2,496	0.45
	C	2,534	0.45
Win. GamePoint 20-gr.	A	2,358	0.45
	B	2,415	0.25
	C	2,472	0.25

reason to switch. This is the same type of reasoning I got from many shooters who use both frame sizes but prefer the Contender for deer hunting since they walk a lot and weight is a factor.

Although the Encore with its composite stock weighs less than many bolt-action rifles, carrying something weighing even less than that is what many hunters desire. Varmint hunters, though, may follow a different line of reasoning by leaning to the Encore since it is heavier and is chambered in high pressure cartridges like the 22-250 Remington and 243 Winchester. And for even longer-range shooting, many prefer the 308 Winchester. This discussion just goes to reinforce the premise that we all want and need both T/C frame sizes.

#### **2007 FEATURES FOR ALL ENCORES**

To use the new rimfire rifle barrel, any of the stocks work fine and there are a lot of choices. If using a 12 gauge or the newer 20 gauge Hastings custom Encore barrel for its 3 1/2 inch slug, which kicks, or a big bore cartridge like the 375 H&H round, then the Flex Tech stock would be my choice. This stock absorbs recoil by an estimated 43 percent. It does this with four synthetic recoil arches that create a crush zone that allows the stock to compress during the gun's recoil. With compression within the stock, you are not taking that hit on the shoulder. Also, there is the Sims recoil pad attached to this stock, which is a favorite of those who have tried it. This pad softens the blow by using dual compression chambers that displace the shock over a broad spectrum. All of these features in that one high tech stock dampens the recoil to the shooter's shoulder.

Another innovation is what T/C calls the Swing Hammer. When mounting a scope and trying to keep it low over the barrel, the scope's eyepiece sits over the hammer, and that can make it difficult to cock the hammer to fire. Since hammer extensions are not that good of an idea, placing unwanted torque on the hammer, T/C equips their Pro Hunter with a hammer that can be rotated. This adjustable hammer can be offset to allow easy access to the hammer spur by moving it to the side

of the scope. With this new system, which does not add weight or bulk, the hammer now can be centered or placed to the left or right of the scope. Because of its shape, the hammer is not prone to catch on a twig or something that can accidentally cock the hammer, as may happen with hammer extensions. Now the Encore Pro Hunter is even better for either a right- or left-handed shooter.

A safety explanation about hammer spurs is in order. As I visited my good friend J.D. Jones at SSK Industries years ago, I had a few Contender handguns with these attached to the hammer. J.D. said to get them off because they could catch on something and cock the hammer. After listening to what he had to say, that made sense.

A year later a friend and I were bear hunting with Contender handguns when we cut a bear trail through some thick brush. He followed the trail, hoping to jump a bear. I waited on the other side of the thicket and when he emerged with his Contender in hand, I noticed that the hammer was cocked. Upon seeing this I told him not to move because the gun was cocked. What a wakeup call that was! Apparently, while going through the thickets, the hammer extension caught on brush and cocked the gun. Be careful!

#### **17 HMR VELOCITIES**

When I received the 28-inch Encore rifle barrel, a friend who has the 23-inch variety on his Contender carbine asked me how much more muzzle velocity the longer barrel would generate versus his shorter barrel. Since velocities from a particular length barrel have a lot to do with the cartridge being fired, I could not say ... but I thought such a comparison would be interesting. Since I had a Contender with a 14-inch barrel in 17 HMR, I thought that testing a handgun-length barrel along with two different rifle-length barrels would create additional data for those who hunt with a handgun and a rifle. Depending on the cartridge, I have found in previous comparisons that sometimes only a slight increase in velocities is seen with a rifle barrel compared with a handgun-length barrel.

As a handgun hunter, testing these three options (28", 23", and 14"

barrels) sparked my interest even more. In mid-July of 2007, my friend Mike Capps from Howard Communications informed me that the new Winchester 20-grain GamePoint ammo he had told me about at the SHOT Show was on its way. That was the last ammunition I was waiting for. When it arrived I had nine varieties of 17 HMR ammo on hand. The next day, I took all three firearms to the range with my Oehler 35P chronograph to gather velocity data. Then, to see what a 17 HMR bullet's destructive path actually looks like, I fired a round of Hornady 17-grain ammo from my handgun with its 14-inch barrel into a Bullet Test Tube at 25 yards. (See the photo on page 16 for a visual of how that little 17 caliber performed, which is correlated with tissue destruction on game animals.)

Observations: I found it interesting to compare muzzle velocities between the handgun with its 14-inch barrel vs. the Encore with its 28-inch barrel. The longer barrel added from 96 fps to 169 fps, depending on the ammunition. When comparing the 14-inch barrel to the 23-inch barrel, the longer barrel increases muzzle velocity anywhere from 57 fps to 115 fps, which is not a lot. From these data you can see that a handgun hunter with a 14-inch barrel is not at that big of a disadvantage. To continue with statistics, the difference 5 inches of barrel made when comparing the 23-inch barrel with the 28-inch barrel, the longer barrel would increase velocities an average of 8 fps with the Hornady XTP 20-grain ammo to a high of 64 fps with the CCI V-Max 17-grain load.

Based on these data, if you desire top performance, get a 28-inch barrel. Also, with the weight of the Encore and the excellent thumbhole stock, I find this model the easiest of the two rifles for me to fire offhand. If accuracy takes a hit, it's probably because of the shooter.

At 50 yards, the handgun holds its own quite well. However, even though I do a lot of handgun shooting, none of my groups out at 100 yards beat those I got with the rifles. The reason is simple: Rifles are easier to hold steady compared with a handgun. Also, a 10 power handgun scope is not the same as a 10 power setting on a good rifle scope.



**The Bullet Test Tube, once sectioned, demonstrates the bullet's terminal performance. Before being sectioned, the bullet cavity in the wax held exactly 50 milliliters of water. This damage was done from the handgun barrel at 25 yards firing a Hornady 17-grain V-Max bullet, of which parts are visible.**

That is partly because the handgun scope is designed for a long eye relief. However, when it came to clarity, the Burris 3-12x handgun scope, with its unique parallax adjustment (PA), shows the target clear and sharp when the PA is set to the distance of the target. One gripe I have with many handgun scopes is that they do not have this feature, so close-in game is blurred but will be OK out yonder. When shooting close, you cannot make any adjustments to put the target in focus.

#### ELEVATION OBSERVATIONS

For an idea of what to expect for accuracy at 50 and 100 yards, I fired three shots at 50 yards and three at 100. Ammunition used was the new Winchester 20-grain GamePoint. With the handgun, I got a 0.45-inch group at 50 yards and a 1.70-inch group at 100 yards. For all practical purposes, both groups printed about the same place on the targets, demonstrating just how flat shooting the 17 HMR actually is.

Then, using the Contender rifle with its 23-inch barrel, I fired a 0.25-inch group at 50 yards and a 1.20-inch group at 100 yards. The 100-yard group impacted about half an inch higher than the group at 50 yards.

The Encore rifle with the 28-inch barrel turned in a three-shot group at 50 yards that measured 0.25 inch. At 100 yards it fired a 1.20-inch group. For all practical purposes, the three shots on the 50- and 100-yard targets printed at the same elevation. Barrel length did not make a difference with this ammunition regarding where it printed at 50 and 100 yards even though velocities were not the same. Velocities were so close between the rifle barrel lengths that there was little to no noticeable elevation differences in the groups. Even the handgun barrel did not account for much in the way of elevation differences between 50 and 100 yards. Where you aim at 50 or 100 yards on that varmint or small game animal is where that bullet is going ... without any



**These types of 17 HMR ammunition were used by the author to gather ballistic data for this article.**

adjustments by you.

Each one of these firearms has its good points ... and in certain ways are all different. The overall good news is that if you like larger, higher pressure cartridges, the stronger Encore frame is the way to go. Now you can add a rimfire barrel to that same frame to cover everything.

#### Specifications and Data

<b>Manufacturer:</b>	Thompson/Center Arms
<b>Model:</b>	Encore
<b>Action:</b>	Single-shot, break-open
<b>Caliber:</b>	Rimfire, centerfire, shotguns, black powder
<b>Barrel Lengths:</b>	15" standard on handguns 24", 26", or 28" on shotguns and slug guns 26" & 28" on muzzleloaders 24" & 26" on standard rifles 20" & 28" fluted barrels on Pro-Hunter rifles
<b>Metal Finish:</b>	Stainless or blue
<b>Stock:</b>	Wood and various composite models

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