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AT THE RANGE

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In the blockbuster film, when a Lstrapping Australian crocodile hunter and a lovely American journalist were getting robbed at knife point by a couple of young thugs in New York, the tough Aussie pulls out his dagger and says "That's not a knife, THIS is a knife!" Of course, the thugs scattered and he continued on to win the reporter's heart.

Our Aussie friend would approve of our rendition of his "knife." Forged of high grade 420 surgical stainless steel, this knife is an impressive 16" from pommel to point. And, the blade is full tang, meaning it runs the entirety of the

knife, even though part of it is under wraps in the natural bone and wood handle. We found full tang, stainless steel blades with bone handles in excess of \$2,000. Well, that won't cut it around here.

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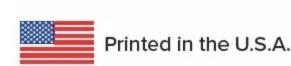
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SUPPRESSED LEVERS

enjoyed the article about the Henry HUSH rifle in the August 2025 issue. I've owned and hunted with a suppressed Henry Big Boy X Model — mine is a .44 Magnum for several years. There are a lot of similarities between the X Model and the HUSH. I think it's important to point out one thing about the rifle that was not addressed in the article. Yes, a great feature of the HUSH is that it can be loaded either through the side gate or the magazine tube. However, this statement is only true until you attach a suppressor to the end of the barrel. So equipped, the HUSH and X Model — or any lever action that can be loaded from the muzzle end of the magazine tube — is limited to loading through the side gate. Suppressors block the removal of the tube insert. This is not a flaw or complaint about the rifle, just a clarification about the design. While the positives of shooting and hunting with suppressors outweigh this one negative, anyone considering this combination should be aware of it.

On a related note: If Henry's Special Products Division (SPD) reads this, please know that I'll be at the front of the line to purchase a threaded barrel, synthetic stocked, Long Ranger in .308 if you choose to make one. You're really onto something with the threaded barrel, synthetic-stocked X Models and HUSH rifles. A Long Ranger version should sell as fast as you can make them!

Jason Potts

Email

ABOUT PRIMERS

Mr. Emary's discussion of primers reminds me of a question about ignition systems and cartridges. With his time as a ballistician, he may be able to provide some information. If a shell were a globe, and the fire from the primer led to the center of

the globe, would the fire front burn evenly, radially, and thus more efficiently? Years ago, I spent time online looking for information and came across a discussion of Department of Defense experiments with ammunition for large field pieces. One article mentioned the use of a tube to carry the primer fire forward into the shell. If he is familiar with this topic, I would be interested in reading how it may apply to rifle and handgun ammunition.

Michael Leake Issaquah, Washington

That's getting to be a complicated subject. I have experimented a lot with ignition in artillery and tank guns. You want as much instantaneous ignition as possible in the center of the charge and the flame front to move radially. — D. Emary

ANTIQUES ONLY

I would like to see Special Interest Publications (SIPs) on military rifles and pistols from all countries and years — excluding the current. I am a collector and shooter of these guns. Please, no more AR-15s. Thank you.

Jim Strade
Email

Guns & Ammo produced the "Surplus Firearms" annual from 1987 to 2012. I was its last editor, though the content was largely managed by author Garry James. Its end coincided with the surplus firearms import ban through Executive Order by the Obama administration on August 29, 2013, which resulted in the loss of advertising business from thenpopular import companies. You may find alternative SIP subjects that interest you at osgnewsstand.com.

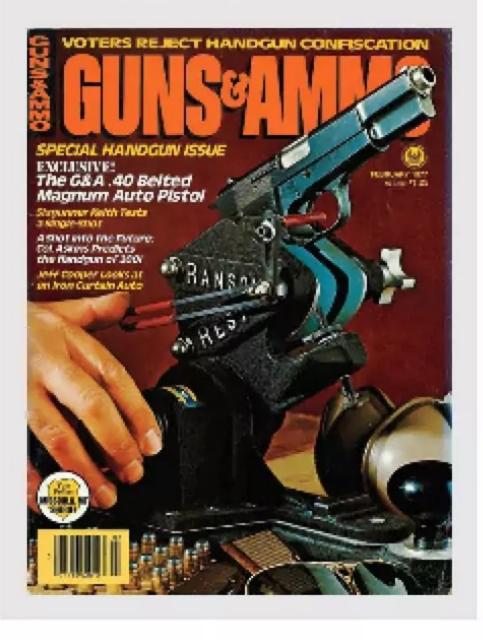
— E. Poole

MAG MALFUNCTIONS

Regarding the discussion

FEBRUARY '77

"Jeff Cooper Looks at an Iron Curtain Auto," read one cover blurb referring to the news of the CZ 75. Also in this issue was an exploratory testfire of the "G&A .40 Belted Magnum Auto," in part later inspiring the 10mm Auto that Cooper would support. The 10mm was first chambered in the Bren Ten, the design of which borrowed from the CZ 75.



on magazines in "Extensions" (August 2025), Mr. Tarr made the statement that "[if] a gun is going to malfunction, the most likely cause will be the magazine." Granted, my experience is limited compared to him, but in the decades I have been shooting — 10s of thousands of rounds with thousands of other shooters — I have never once seen a handgun malfunction due to the magazine. The number one cause is an unloaded gun situation due to technique or training; followed by limpwristing resulting from technique or training; and rarely bad ammo. Once there was a chipped extractor. I'm not suggesting that a bad or broken magazine doesn't cause malfunctions, but they surely are not the "likely cause" of malfunctions in my experience, especially in the



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context of handguns.
Bret P.
Las Vegas, Nevada

You've never seen a handgun malfunction due to the magazine? Never? An unloaded gun creates malfunctions? Blaming jams on limp-wristing in 2025? Ooof. You must have sent me this just to give me a headache.

— J. Tarr

"ADVERTORIAL"

As the former owner of the "NY Daily News," "U.S. News & World Report," and several other magazines, I certainly know the value of advertising. However, we always made a clear distinction between it and editorial. In the August 2025 edition, you ran a full-page ad for candy entitled "Tactical"

Snacks" as editorial without even an advertorial notation. Not that I found it offensive — mainly humorous it does call into question editorial integrity. If a snack food purveyor can buy editorial, why am I to believe that your gun reviews weren't similarly purchased and not objective? I do notice the rarity of constructive criticism of a firearm. I have plenty when using them at the range. Otherwise, I enjoy the publication, particularly the technical articles on ballistics and reloading.

Fred Drasner Palm Beach, Florida

Perhaps it speaks to Guns & Ammo's writing and editing style, but that "Range Bag" column had nothing to do

with advertising. Samples were sent to the office and the staff tried them. We always enjoy the opportunity to call attention to new brands or products that support firearms enthusiasts, so we thought it would be fun to surprise the company with a worthwhile article. Our one-page review was entirely sincere, and no advertising was associated with those gummies. — E. Poole

PULL WEIGHTS

Would you mind asking manufacturers to include the weight of the trigger pull and the force to rack the slides on the websites? I know Guns & Ammo usually includes the trigger weight in reviews, but it would also be nice to find this information on firearm manufactur-

ers' websites. Once I find a lightweight, 10-round, full-grip, red-dot ready 9mm that I like, the deciding factor will be the force to rack a round into the barrel's chamber and the trigger's poundage. Unfortunately, I am sure that it will have to have a ridiculous trigger "safety."

John G. Kozeka
Email

G&A LOYAL

I agree with all four top comments regarding QR codes on page 95 of the August 2025 issue's "Connect" column. I've been reading Guns & Ammo for more than 50 years and have subscribed for at least 40. I miss the old guys like Ross Seyfried and Mike "Duke" Venturino. I feel like I grew up with Garry James,



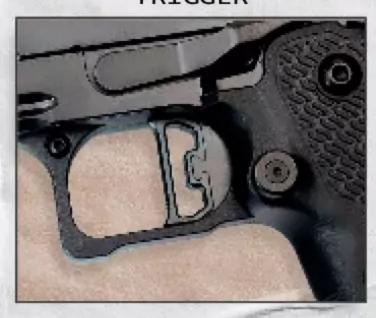


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too, and Dave Emary is a fantastic addition. I'm still getting used to the other new guys. Most of the guns and cartridges are nothing special, but I will always be a subscriber — even if you crap-up the magazine. Ed Fitz Email

TACKDRIVER

Just a few lines concerning scoping a Winchester Model 67 in Mr. Spencer's letter (July 2025). My dad purchased one new during the first year of production, I think. I wound up with it after he passed. I found it to be extremely accurate but thought that a scope could make it even better. I had a local gunsmith drill and tap it to install a Deerfield 4x32mm scope. This gun

became a tackdriver! I've kept a 50-yard smallbore paper target that was a favorite. It has six shots all 9-ring with a 1-inch group. Three of the shots clustered in three-eighths of an inch. This gun is a blast shooting for groups from a bench. I've had no problems with ejected cases, and I shoot standard velocity ammo. Gary Charleville Milford, Ohio

TARR'S MUSINGS

"Musings from the Bunker" (June 2025) was an outstanding column, James Tarr. I loved every word. I always enjoy your stuff. Michael Fitz Email

PAPER FOR ME

Regarding Antonio Acitelli's

column in the May 2025 issue, I respond "Less QR codes, please." Some of us don't want to carry around a large smart toy. Instead, I prefer a compact flip phone. Personally, I prefer reading G&A's content on paper, not a screen.

Randy Entringer Fond du lac, Wisconsin

WWII SNIPER **SCHOOL?**

I read Dave Emary's excellent series on World War Il bolt-action sniper rifles. I've had several of them. They were all fun to shoot and very interesting history. I want to comment on the training part of the history in the article. My father was a U.S. Marine scout/sniper in the Pacific during World War II. From what he told

me, Marine sniper school ended in late 1943 or early '44. He enlisted in mid-'44 and was supposed to go to radar school but found out that the class was full. About a week later, Marines asked if anyone was interested in sniper school. They had started it up again. Of course, my father being a hunter since he was a child stuck his hand up. I have his paperwork, and his spec was for a sniper. So, they did have a school for the Marines. I also contacted the Marine Scout Sniper Association and sent Dad's papers in. They called to talk with him and took him in as a member for the last several years of his life. He was very proud of that. Steven Casper New Philadelphia, Ohio

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EDITORIAL OCTOBER 2025 G&A 13

A letter to Frank Brownell.



ERIC R. POOLE @GUNSANDAMMOMAG

USE THE RIGHT TOOL

IN OCTOBER 2005, I completed Bill Laughridge's Cylinder & Slide Barrel Fitting and Model 1911 Pistolsmithing coursework. To enroll required purchasing a specified list of parts and tools, an investment of nearly \$5,000 at that time.

Brownells was my primary source, and the annual catalog

became a bench reference.

"Take care of your tools and use them properly," Laughridge said. "If you use the right technique, keep your files clean and your punches free of burrs, you should never have to replace them." Twenty years later, I still heed that advice. I'm careful to select the correct-size bit for my drivers, inspect the face of my hammers for imperfections, and use Brownells' card and chalk to keep those same files free of debris.

It's important to quickly re-apply new skills to master them. After that training, I returned to work at the NRA and sourced a .22-caliber 1911 slide assembly from Marvel Precision (marvelprecision.com). The frame and small

parts were purchased from Caspian Arms (caspianarms. com). A few weeks later, a rimfire bullseye pistol for a two-part series in "Shooting Sports USA" magazine was finished. I verified its accuracy and function by competing in an indoor pistol league, and then donated it to an NRA-ILA auction. That pistol along with my C&S class-built .45 1911 raised more than \$9,500.

Weeks later, I received a personal letter in the mail from Frank Brownell. He thanked me for mentioning Brownells in those articles as the source of many parts and tools. His words were carefully selected, thoughtful and encouraging. "I'll be watching your career through your writing," he wrote.

I felt personally connected to Mr. Brownell through years of correspondence. However, mine were of many that he penned on letterhead. Next to his desk was a stack of articles mentioning his products, and he read nearly every one.

I met Frank and Pete Brownell during a July 2014 tour of

their original facility in Montezuma, lowa, just prior to the completion of the massive warehouse, distribution center and store now seen on the north side of I-80 in Grinnell. Frank relayed several stories of working alongside his father, Bob, who in 1951 transitioned from gunsmithing to building a business to support gunsmiths and hobbyists nationwide. Brownells received clever tools and solutions often engineered in a small shop or garage. In fact, they grew their annual catalog by adding such items to the mailer. I've worked with many gunsmiths and armorers who kept previous editions of the print catalog on a shelf above their bench. The number of Brownells catalogs was a subtle indicator that represented

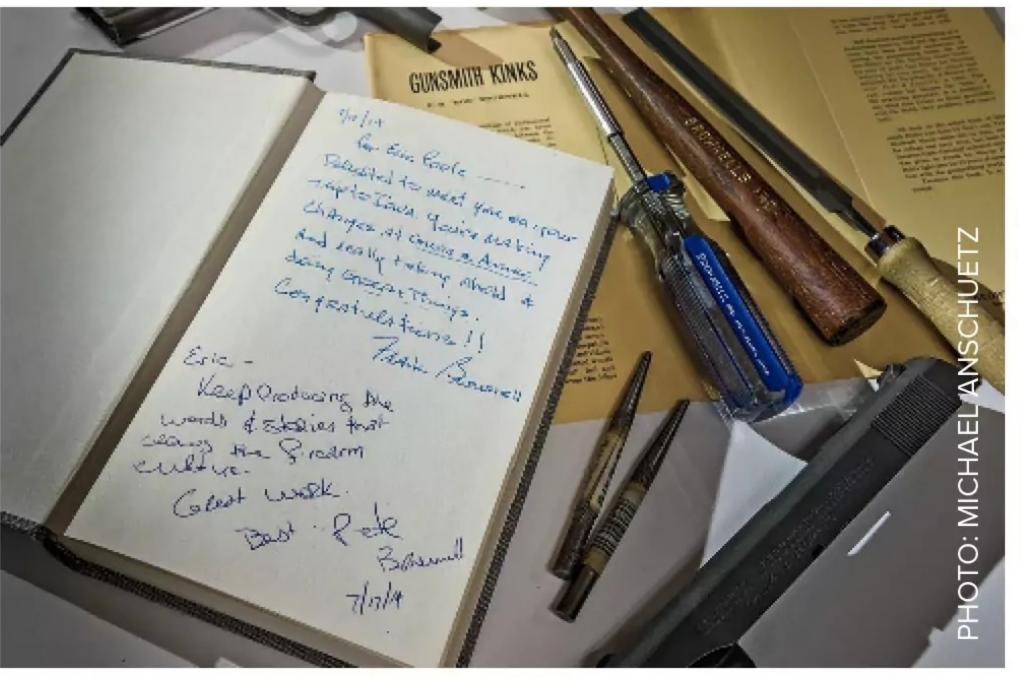
> one's experience working on guns. Also on the bench? At least one nylon/brass hammer, a Magna-Tip screwdriver set, files, punches, and various specialized tools and gauges.

I carried my first edition of "Gunsmith Kinks" into Frank's office, which was authored by Bob Brownell in 1969. He and Pete graciously signed the copy before I left. "You're making changes at Guns & Ammo, and really

taking ahold [and] doing great things," he wrote. I resolved not to disappoint them.

Frank Royce Brownell III, former president, CEO, and Chairman of the Board at Brownells, passed away on June 18, 2025. He was a week shy of 86. 🖎







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GUN ROOM OCTOBER 2025 G&A 15

"As an aside, 'Gun Room' was a follow-on to Ackley's 'Gunsmith' column, which he wrote from circa 1959 to 1974, and was later ably authored by J. B. Wood."

AVALUES & VALUES



GARRY JAMES

GARRY.JAMES@ OUTDOORSG.COM





ANTIQUE GERMAN SHOTGUN

Q: Attached are photos of a German double-barrel, double-hammer, percussion shotgun belonging to a friend of mine. The barrel markings are as follows: "Anschutz in Zella (illegible) Gotha". The stock is carved, and there is scroll work on the barrels. It is missing the ramrod. I am familiar with legendary Anschutz firearms, and I am looking for any further information you can provide.

M. M., Email

A: Anschütz is the family name of many gunmakers dating back to the early 17th century in the Suhl, Zella-Mehlis areas of Thuringia, Germany. The most well-known is the highly respected J. G. Anschütz company founded in 1856 by Julius Gottfried Anschütz. Your shotgun dates from the mid-19th century and could have been made by any one of several members of

the family. Gotha is a city in Thuringia, somewhat to the north of Suhl and Zella-Mehlis. I'm inclined to think the unintelligible word after Zella is "bei," which means "near." I have found several other German gunmakers using a similar address. I have not been able to pinpoint the exact Anschütz who built your gun. Per chance, are there any other markings on the

piece that might help me out? Generally, the shotgun in the photos appears to be of decent quality and decidedly Germanic in its appearance, especially with its buttstock carving, slingswivel studs and scrolling triggerguard. The holes in the forward portions of the back action locks are likely for missing manual safety catches. Value on the gun, assuming the bores are OK and the piece is functional, is in the \$850 to \$1,000 range. The missing catches do detract from its appeal, somewhat.

CUSTOM .22-250 RIFLE

Q: I have a custom rifle in

.22-250. I inherited it from my uncle. In the early 1960s, he and my dad would take my brother and me with them to shoot groundhogs. They would shoot them on the spoil banks around the strip mines from a car and then send us to get them. They took them to a lady who ate them. I was told that the rifle was custom made by a local gunsmith. There is no serial number. It has a Mauser action and a Douglas barrel, and Unertl scope. They would generally shoot at several hundred yards. I would like some idea of its value. K. W., Hilliard, Ohio

A: It looks like a decent.

AUCTION BLOCK

A rare Smith & Wesson Model 1940 Semiautomatic Light Rifle brought a healthy \$6,765 at a September 10, 2024, Morphy Auctions sale. Contracted by the British in 1939, this 9mm longarm was intended as a link between that country's military .303-caliber longarms and various caliber handguns. Unfortunately, the stout 9mm Brit service ammunition caused these to develop receiver fissures. Despite an upgraded version being produced, the British scrapped the program. Smith & Wesson retained a number of the carbines, and after they were exempted from NFA short-barrel restrictions in 1975, they were sold out of stores, some 80 of which are now owned by collectors. The Mark II seen here is in excellent mechanical condition and displays almost all of its original blue finish. For more information about this and future sales, visit Morphy Auctions at morphyauctions.com.



no-frills custom rifle built on a 98 Mauser military action. The Unertl scope is a definite plus, value-wise. I would price the piece at \$1,200, with \$600 attributable to the scope and \$600 to the rifle. As an aside, I never thought of groundhog as any kind of a culinary delight. Then again, I come from Southern California, which is not exactly whistlepig country.

MORE ON 1884 TRAPDOOR/ ACKLEY RIFLE

Q: In the July 2025 issue of Guns & Ammo, you feature a letter about the "7" on a Trapdoor rifle. I have a similar Trapdoor with a "7" about 1½-inches high with the same script. Underneath the "7", it also has a number "805", about three-quarter inch in size. The rifle came, as far as I know, from the Rochester, New York, area, but I realize it could have been carried from someplace far away. Even though the subject is in the past, I thought you might be interested. Also, I have a .257 Roberts rifle with a Mauser action that is stamped on

the barrel with "P O Ackley".

Does this stamping add

anything to the value of the

rifle? I know Ackley was a

prominent gunsmith.

R. W., Email

A: Thank you for the added info concerning the "7" marked 1884 Springfield "Trapdoor." I really don't have too much to add to my original answer other than the tempting supposition that your rifle — and the one previously covered in my column — possibly came from New York and may have been issued to the famous 7th New York Militia Regiment formed in 1806 and in service until 1922. (It also had a brief presence from 1940 to 1943.) Arms connected with the esteemed Parker Otto Ackley normally have added value and desirability, the degree of which depends upon what they are, condition, and so on. As an aside, the "Gun Room" column was a follow-on to P. O. Ackley's "Gunsmith" column, which he wrote from circa 1959 to 1974, and was later ably authored by J. B. Wood.



DUTCH REVOLVER

Q: I have this European military revolver. I don't see any caliber or other markings on it. I took it to a gunsmith and found out it was in 9.4 Dutch. What do I have?

D. G., Email

A: You have a Model 1894 Dutch Colonial Revolver used by Koninklijk Nederlands Indisch Leger (Royal Netherlands East Indies Army) from 1894 until the 1940s. It is chambered in 9.4mm Dutch, a round originally developed for a Chamelot-Delvigne-style revolver adopted by Holland in 1873. The cartridge was also chambered in the Model 1884 Luxembourg Gendarmerie Nagant revolver. Value on this piece is in the \$450 to \$600 range.

FRANKEN SHOTGUN

Q: When a friend showed me an old shotgun he'd been given, I was flabbergasted. It's primarily a Remington Model 10, but it has a Winchester Model 97 barrel. It seems to function. I took it to the range and tied it to a bench. From about 30-feet away, I fired it using a string on the trigger. It worked.

Can you perhaps give me a little insight as to how the Remington and Winchester could be married? I've included some photos for reference.

S. K., Email

A: This was a bit out of my area of expertise, so I passed it on to my friend and master gunsmith David Stavlo of Lodgewood, Mfg. (info@lodgewood.com) for his thoughts. Stavlo said, "I sat down with my '97 and Model 10 this evening and did some experimenting. I'll start by saying that the two guns are definitely not 'plug and play.' Surprisingly, the interrupted threads of both barrels are the same thread pitch, and it looks like the two could be made to mate together with some modifications. The extractor on the Remington is located at the top of the bolt, and the Winchester extractor is located on the side. So, some machining — or at least some creative file work — would be required on the Winchester barrel to allow for clearance of the extractor claw on the Remington.

"Having said that, I would strongly advise against shooting a gun set up this way, even if one could

HOLLYWOOD HARDWARE

COLT NEW SERVICE, "ONE-EYED JACKS" (1961)
Directed by and starring Marlon Brando, 1961's "One-Eyed Jacks" is one of the more unusual westerns of the period combining realism, brutality, nuance and "method" into one compelling tale. Throughout the film, Brando's character, "Rio," generally uses a Colt Single Action Army revolver, but in scenes where rapid firing was required, he employed a double-action Colt New Service revolver fitted with an SAA-style ejector rod to create the impression he was handier with a Peacemaker than he really was. This bit of subterfuge was common from the early days of cinema where rifles and handguns were altered to give the impres-

sion they (and the actors) were something they were not. (Courtesy National Firearms Museum, Fairfax, Virginia; Loan by Hollywood Guns, Santa Clarita, California.)





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confirm that the new 'Franken shotgun' was properly headspaced, which I doubt. As you know, both guns are takedowns, and both designs feature adjustment bushings. Winchester's adjustment bushing is threaded onto the barrel, but Remington's is threaded into the face of the receiver. Because these bushings are meant to be screwed in or screwed out while adjusting the tension between the two receiver halves, they are the inherent weak point in the connection between the

barrel and the receiver. To overcome this, both models are designed to interlock with a corresponding set of much stronger threads machined from solid stock to serve as an anchor point for the bushing.

"In the case of the Winchester, the bushing is installed on the barrel, so the corresponding 'anchor threads' are machined inside the receiver. However, Remington installed its adjustment bushing inside the face of the receiver, requiring the solid anchor

threads of the Remington to be machined as part of the barrel. If a Winchester 1897 barrel is installed on a Remington Model 10, you're mating two weak barrel bushings together and eliminating the machined anchor threads from each design. When the threads of the Winchester barrel bushing are interlocked with those of the Remington receiver bushing, it's going to create a lot of fatigue on the fine threads that those bushings are threaded into, and could cause them to fail under

recoil, or at least wear quite heavily and cause the gun to shoot itself loose."

AN ENFIELD & A COLT

Q: Your column is the reason I love "Guns & Ammo." I wish it was more pages! Thanks to your excellent article on the matchlock, I made one. I built a 1370 version, but updated the action to the 1530 type for easier shooting. The reason for writing to you is to see what you can tell me about two old guns I have. The first one I believe is a Webley. There are no identification marks, just the proofmarks and what I believe may be a serial number. The stamping is hard to read. It is .38 caliber and has a bobbed hammer. I believe



FASTEST PUMP ON THE PLANET. WINCHESTER,

WINCHESTERGUNS.COM



the bobbing was done at the factory, as the finish is the same as the rest of the gun. It appears to me it was intended for double action and close-in shooting. I got it in the days when you sent \$10 to a surplus dealer and he sent you the gun. I'd like to know if it is a Webley and what year (or years) it was produced. The second gun is one I got in a trade many years ago. There is no serial number. The firing pin is on the hammer. It is covered with engraving. I can't find a name on it, though. I was wondering if it could be factory engraved, or was it likely that it was an individual who did it. The factory markings say it is a "Police Positive", and a .38 Special. L. H.

Olympia, Washington



A: Thank you for your nice comments concerning "Gun Room." I'm glad my matchlock piece inspired you to make one yourself. They are a lot of fun to shoot. I'd love to see a photo of yours if it isn't too much trouble. Now to your revolvers. The "Webley" is actually a British military-issue No. 2 Mk 1 Enfield revolver. The No. 2 series in .380-200 caliber was manufactured in England by Enfield and Albion Motors, and in Australia by Howard Auto Cultivators. Unfortunately, from the supplied

pictures I cannot tell which maker turned out this particular piece. Production of Enfield revolvers ran from 1927 to 1945. Original versions had spurred hammers and were double/single (DA/ SA) action. DA-only guns date from circa 1938.

Your Colt Police Positive is quite interesting. The engraving is very competent and could possibly be factory. If you can find a serial number on it, open the cylinder and look on the frame beneath the crane. It would be worth getting a letter from Colt on the gun. You can achieve this, for a fee, by contacting the Colt Historians, 860-554-8088, coltarchives.com. More than 200,000 Colt Police Positives were manufactured between 1905 and 1943. CM



PROBIGY COMP





Let's compare 9mm range ammo.



JAMES TARR

BELLE OF THE BALL (AMMO)

11/4 51 3 3 1

9mm LUGER

THIS MONTH'S COLUMN started with a simple question that became a bigger endeavor than any of us planned, but I think you're going to like it. The question was whether there was enough difference in quality or performance between bulk-packaged, budget-priced 9mm ammunition to matter. Many of us just buy the lowest-priced box and head to the range, right?

Originally, I was going to take three similar pistols and three different brands of 9mm full metal jacket (FMJ), then test the ammunition's accuracy and velocity. It

didn't take long for three brands of 9mm to expand to six. In addition to measuring accuracy and velocity, I was going to compare felt recoil and randomly sample each load's overall length and actual — as opposed to advertised — bullet weight. I found more than a few surprises.

THE DEBUTANTES

First, the contestants. Brass-cased, 115-grain FMJ ammunition is the most common, affordably priced 9mm load on the market. I gathered three 50-round boxes of each contestant except for Winchester's. (More on that in a bit.) In alphabetical order: Federal Champion (\$25), Fiocchi Range Dynamics (\$13), Magtech (\$11), Remington Range (\$25), SIG Sauer Elite (\$23) and, finally, Winchester, the famed Winchester USA "white box" load (\$53); I bought two 100-round value packs.

To avoid accusations that this ammo was cherry-picked, I bought the Federal, Magtech, Remington, and Winchester loads off the shelf from my local gun store, Patriots Ammo and Arms in Shelby Township, Michigan. The Fiocchi load

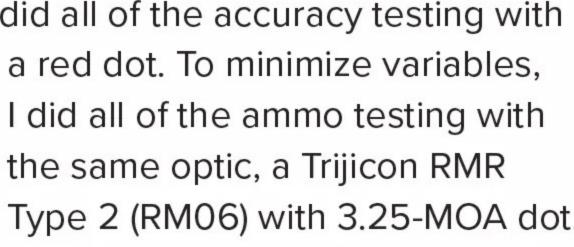
came from Guns & Ammo's T&E gun room. Only the SIG Sauer ammunition came direct from the manufacturer, due to time constraints for this issue's deadline.

I used similar guns for testing, choosing three full-size polymer-framed striker-fired pistols. One was the full-size Springfield Armory Echelon with 4½-inch barrel. Another was an LTT-customized HK VP9F with 4.43-inch barrel. Third was a Shadow Systems DR920 with 4.4-inch barrel. These guns are optic ready, and as optics provide more precision I

> did all of the accuracy testing with a red dot. To minimize variables, I did all of the ammo testing with the same optic, a Trijicon RMR Type 2 (RM06) with 3.25-MOA dot.

> This was not an evaluation of the pistols. Try and guess which of those guns was Test Gun 1, 2 or 3. (You're probably wrong.)

ammunition that shouldn't have inspections; crushed cases, sidea smaller cartridge case, etc. With high-volume SKUs, i.e., 115-grain 9mm FMJ, there may be fewer samples inspected and less attention to details, thus there's a higher chance of a bad round slipping into a cartridge tray.



The first task was to inspect the ammunition visually. Perhaps a waste of time to some, I've seen made it through quality control ways primers, bullets stuffed into

FIRST LOOK

Everything but the bulk-boxed Winchester was loaded into trays. I scanned them while in the trays, looking at the primers first. Missing or damaged primers are easy

to spot, but I also ran my fingertips over them to check for high primers. I then looked for cartridges that



were noticeably
longer or shorter
than the others. In
fact, this is something you should
be doing with your
ammo, either at
home or at the
range. Do it before
you load ammo into
your magazines. It's

SPECIFICATIONS

CARTRIBAE	OVERALL LENGTH (IN.)			BULLET WEIGHT (GR.)				
CARTRIDGE 9MM, 115-GR. FMJ	MAX.	MIN.	SPREAD	AVG.	MAX.	MIN.	SPREAD	AVG.
Federal Champion	1.15	1.146	.005	1.148	116.3	115.4	.9	116
Fiocchi Range Dynamics	1.155	1.15	.005	1.152	116.7	116.1	.6	116.5
Magtech	1.152	1.149	.003	1.151	116.6	115.7	.9	116.3
Remington Range	1.123	1.128	.005	1.125	115.7	115.2	.5	115.5
SIG Sauer Elite	1.15	1.148	.002	1.149	115.6	115.3	.3	115.5
Winchester USA	1.154	1.144	.01	1.149	115.1	114.3	.8	114.8

the second-best
weight consistency,
with a maximum
spread of just .5
grains between the
bullets weighed.
While Remington's
was the shortest
cartridges and
Winchester's had
the lightest bullets,

worth your time. I actually poured the Winchester ammunition into my palm and examined this way.

Between the six brands, I had 950 rounds. That's not a huge amount for testing, but I was pleasantly surprised not to find a problem. There were no split or wrinkled cases, or badly seated bullets; and no dents. A few of the SIG Sauer cases displayed mild discoloration, but I almost missed it. Five of the Remington cases had scratches on them, about where the base of the bullet was inside the case mouth; it was obviously caused by the loading process, but function wasn't affected.

Next, I measured the cartridge overall length (COAL) and then used a kinetic bullet puller to extract and weigh the bullets to check consistency. There's no "minimum" length

for a loaded 9x19mm round, but the maximum overall length (OAL) per the Sporting Arms & Ammunition Manufacturers' Institute (SAAMI) is 1.169 inches. I chose five cartridges from each brand randomly, picking at least one from each box. I extracted and weighed the bullets on an RCBS digital scale. How close was the bullet weight to the advertised 115 grains? Check the table for the hard data, but what follows are a few takeaways and obvservations.

Ammunition was the clear winner, both in OAL and weight consistency. The OAL of the cartridges varied by a maximum .002 inch. That's incredible. It was more consistent than I thought commercial loading machines were capable of. The pulled bullet weight differed by a maximum of .3 grains.

Second place surprised me even more. The budget-friendly Magtech ammo had the second-most consistent OAL. The maximum difference in OAL was just .003 inch between the five cartridges measured with a micrometer.

Remington Range ammo had

PERFORMANCE

TEST FIREARM	VEL. (FPS)	ES	SD	BEST GROUP (IN.)	AVG. GROUP (IN.)					
FEDERAL CHAMPION										
Gun 1	1,170	23	11	2.4	3					
Gun 2	1,159	27	14	2.6	3.6					
Gun 3	1,161	22	10	2.5	3.2					
FIOCCHI RANGE DYNAMICS										
Gun 1	1,122	42	22	2.8	3.3					
Gun 2	1,135	30	15	2.6	3.5					
Gun 3	1,138	37	20	2.3	3.1					
MAGTECH										
Gun 1	1,223	32	15	2.3	2.5					
Gun 2	1,204	40	19	2.8	3.5					
Gun 3	1,230	27	12	2.7	3.2					
REMINGTON RANGE										
Gun 1	1,188	81	37	2.9	3.7					
Gun 2	1,205	48	16	3	3.6					
Gun 3	1,198	35	13	2.5	3					
SIG SAUER ELITE BALL										
Gun 1	1,176	35	12	1.6	2.5					
Gun 2	1,184	24	9	2.8	4					
Gun 3	1,167	28	13	2.6	3					
WINCHESTER USA										
Gun 1	1,211	25	12	2.1	2.6					
Gun 2	1,202	20	13	2.4	3					
Gun 3	1,209	22	10	2.3	2.7					
Notes: Accuracy is the average of four five-shot groups at 25										

yards from a MTM FRR-30 front rifle rest. Velocity is the average of 10 shots measured with an Oehler Model 35P chronograph set 12 feet in front of the muzzle.

all of the ammunition was impressively consistent within that brand's lot. The difference between the longest and shortest cartridges and lightest and heaviest bullets across all brands was very small, too. You'd see a greater OAL difference comparing FMJs and jacketed hollowpoints (JHPs) given the flat meplat.

An observation: The Federal Champion box indicates that its ammunition features "FMJ" bullets, but they sure looked like plated bullets to me (and fully encapsulated), and not jacketed. If they are jacketed, I'm guessing they are very thin jackets. It didn't affect velocity results, though. Federal's load produced consistent speed despite not being as accurate as some of the other ammunition.

"WHAT'S THAT SMELL?"

If you've shot enough cheap ammunition, you'll eventually find yourself using ammo with gunpowder that just stinks.

In 2024, I shot surplus and commercially loaded ammunition that smelled like I was burning garbage. All of the ammo tested for this article smelled normal, and none of it generated inordinate amounts of smoke. When I pulled bullets to weigh them, I inspected the gunpowder inside the cases. While Magtech's powder was a noticeably different color than the rest — a light gray instead of a dark gray — all of it smelled the same when shot.

To subjectively evaluate the recoil impulse of each load, I shot each firearm and load offhand. The Federal Champion ammunition demonstrated the lowest recoil impulse, followed closely by Magtech's. The remaining four brands produced the same recoil, roughly, but the difference between all of them was so slight that I could barely discern it when shooting them side-by-side. (And I do this for a living.)

PERFORMANCE

With regards to the accuracy and velocity tables, there's a lot to unpack. Here are the highlights:

Winchester's white box showed the most consistent velocity across all three test guns. It averaged the lowest extreme spreads (ES), i.e., the difference between fastest and slowest round recorded. Several of the other loads were very close.

When it came to accu-

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racy, certain brands were more accurate than others, and certain guns were more accurate than another. Gun #1 was the most accurate on average, printing the best groups with four out of the six brands — but note how it wasn't the most accurate with every load. All guns tend to have preferences. Gun #1 was very accurate with the SIG Sauer ammo, for example. Gun #2 provided the worst group in these tests. However, the worst group wasn't that bad, and I think that was the most significant takeaway that I discovered for myself in this evaluation.

There was no "gotcha" moment. No ammo brand failed



miserably. For this assignment, I tested the most common offering in the most popular caliber in America. Millions of 9mm 115-grain FMJ rounds are loaded into primed and charged cases every month, and these were as inexpensive as brass-cased 9mm gets. Ammo makers could get sloppy with their product at this price point and few would notice.

OAL variances are mea-

sured in the ten-thousandths of an inch. Bullet weight variances are consistently less than a grain. I was completely surprised by those results. Even inexpensive ammunition seems to be loaded with care and precision.

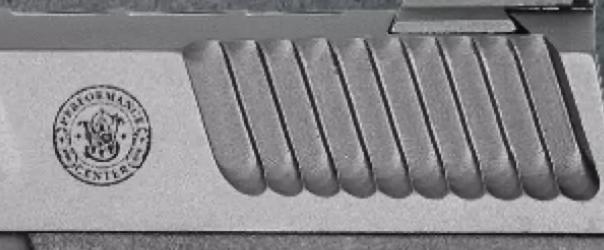
The only real place I see room for substantive improvement is with velocity. Proportionally, the variances in velocity were higher than they were for OAL and bullet weight. I wonder if that has to do with the powder, or if ignition variances in the primers factor in as well? At this point, I should probably shut up before these questions inspire more ideas for another in-depth column.





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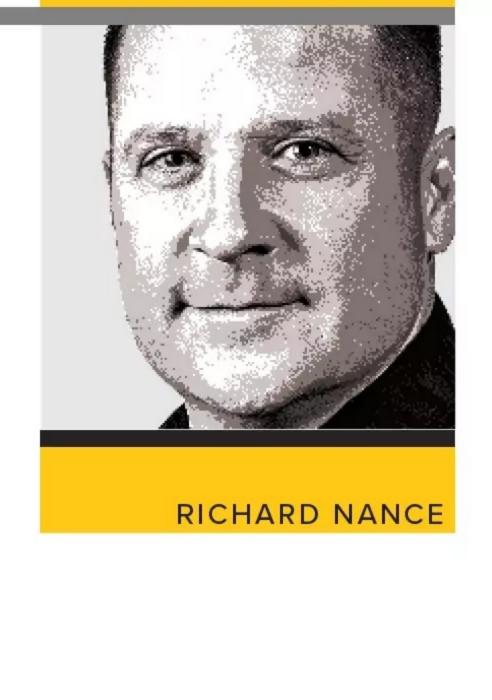


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GUN TECH OCTOBER 2025 G&A 25

Firefield Hexcore HD 1-3X NV



Firefield Hexcore HD 1-3X Night Vision
Binoculars can be held, helmet mounted
or worn with the supplied headband. These
enable the user to see, record and photograph in low-light conditions. In daylight,
the image appears in full color. At night, the
1280x720-pixel digital night vision (NV) sensor produces a well-defined, black-and-white image on the 640x360
TFT LCD display. The digital zoom feature enables users to

see through low light beyond 150 yards while the integrated

2200mW IR illuminator enhances clarity, even in total dark-

ness. Four AA batteries (included) power the unit for up to 8 hours. \$216

NIGHT WATCH

HUMANS ARE VERY RELIANT ON VISION to comprehend the world around them. In fact, research suggests that as much as 80 percent of our sensory perception comes from vision. In darkness, our most dominant sense is largely useless, leaving us blind to the environment. Obviously, being able to see through darkness is a tremendous advantage, whether observing or hunting (in states where it's legal to do so).

Unfortunately, technology that enhances our night vision can be cost prohibitive. That's why affordable night vision products such as the Firefield Hexcore HD 1-3X Night Vision Binoculars are so sought after. Not only do these enable you

to see, they can also record video and capture photos in high definition (HD).

The Hexcore HD 1-3X Night Vision Binoculars measure 5.7 inches long, 2.2 inches tall, 5.8 inches wide, and weigh just more than 19 ounces — with batteries installed. The body is constructed of ABS+PC, providing strength and heat resistance. Rubberized, honeycomb side panels offer a comfortable non-slip gripping surface,

while the soft rubber eye piece ensures comfort. A ¼-20 thread atop the housing provides mounting options, as well. The operating temperature range for the unit is 14 degrees to 140 degrees Fahrenheit. Although shockproof to 3 feet, the Hexcore HD 1-3X Night Vision Binoculars have not been nitrogen purged and are not waterproof.

During the day, the Hexcore HD 1-3X Night Vision Binoculars display full-color imagery. At night, three infrared (IR) modes provide the best image quality regardless of light conditions. The night vision detection range is 219 yards. Nighttime recording capabilities are effective, too, even at distances beyond 150 yards.

The Complementary Metal Oxide
Semiconductor (CMPS) sensor provides 1280x720 pixel resolution, ensuring imagery appears clear in the large 12mm format TFT 640x360 resolution display, which provides a 105-foot field of view at 100 yards. The minimum focusing distance is just less than 1 foot. A 1- to 3X push-button digital zoom feature enables the user to see farther, while the focus dial ensures



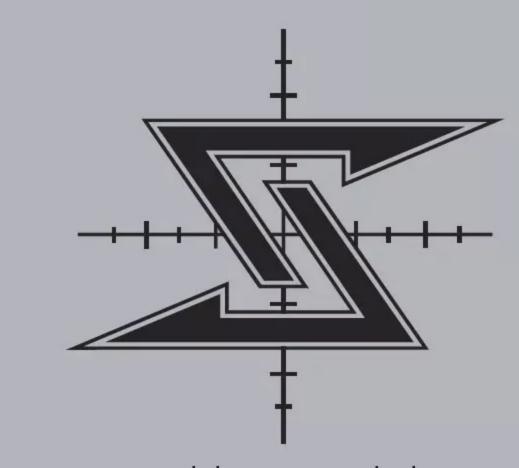
The headband supports the binoculars to free the hands. Weight is forward and imbalanced, eventually uncomfortable.







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The Hexcore HD 1-3X Night Vision Binoculars IRilluminator uses an LED emitter with an IR wavelength of 850 nanometers (nm), providing a balance of range and stealth. The unit produces a faint red light through the IR lens. On high IR, the unit generates 2,200 milliwatts (mW), 1,400 mW on medium IR and 600 nW on low IR. The higher output increases range but also consumes power.

Four AA batteries — two each in a battery compartment on either side of the unit — provide a 1½-hour battery life in high IR, 3 hours in medium IR, and 5 hours in low IR. In

Daytime mode, the battery life is 8 hours. Alternatively, the Hexcore HD 1-3X Night Vision Binoculars can run on a 5V external power supply through USB-C. A 64-GB Micro SD card (not included) stores up to 11 hours of HD video in the AVI format, while photos are saved in JPEG format. Playback mode enables users to view media directly from the display.

The supplied quick-start guide



The dial on the left side of the unit adjusts the image focus. It's easy to grasp without looking away from the target.



Micro SD cards range in storage capacity. The largest supports hours of footage, and most cost less than \$50.



Not only for hunting, sometimes night vision is useful to check your home's perimeter without turning on the lights.

details how to operate the Hexcore HD 1-3X Night Vision Binoculars using the four-button array on the top, left side of the housing. The down, up, power and "M" buttons allow you to navigate the menu. Some common tasks such as switching between day and night modes and zooming in or out — can be accomplished simply by using buttons without having to scroll through the menu.

The Hexcore HD 1-3X Night Vision Binoculars come with a DNV head mount, adapter, extension arms, a head strap, a neck strap, a soft carrying case, a USB-C to USB cable, and four AA batteries. For more information, visit firefield.com.





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TOM BECKSTRAND

HARDCORE HUNTER

a magnification of 3-9X, and that was all we thought we needed. Those were the same days when military sniper scopes topped out at 10X, and we were expected to be able to shoot 800 to 1,000 yards accurately depending on the branch of military. Those days are gone.

It would be easy to attribute the rise in demand for high-magnification scopes to the simple and basic human desire for "more," but I don't think that's accurate. What's changed during the last 15 years in precision rifle shooting is how much more precise and accurate we've become as a community, which includes everything and everyone from manufacturers to endusers. Rifles are the best they've ever been thanks to advancements in modern manufacturing. Rifleshooters, as a whole, are more capable due to better equipment and the rise of ballistic calculators that make long-range shooting possible. Long-range shooting used to involve a lot of semi-educated guessing that ballistic calculators have elimi-

Superior rifles and shooters allow us to hit smaller targets at increasing distances, which also requires enhanced scopes. Higher magnification enables us to see greater detail, and that can be the difference between knowing you missed and knowing you missed low and right by a few inches.

The Trijicon Tenmile HX 5-25x50mm is a prime example of what modernization has brought to the premium long-range hunting community. One of the features that stands out to me is the magnification range combined with the objective lens size. Most 5-25X scopes have a

56mm objective lens, but this one has a 50mm objective lens. This is our first clue in the intended application of this scope.

LONG-RANGE HUNTING

nated.

Trijicon sees its Tenmile HX as a premium hunting scope, even though it has a first focal plane (FFP) reticle. It has the 50mm objective lens to keep weight down to a svelte 29 ounces, making this one of the lightest 5-25X scopes available. Weight is a huge consideration on any hunting optic,

so if you like magnification and don't like a heavy scope this one is for you. The FFP reticle is a wise choice for most of today's long-range hunters. The reticle subtends accurately at any magnification, so holding off for wind at all magnification settings is still possible with this reticle.

What makes this scope so desirable is the combination of high magnification, light weight and extreme durability. Trijicon got its start as a company making optics for the military, so durability is part of its DNA. Even when it comes to lightweight hunting scopes, its military ethos remains. Trijicon subjects this scope to a number of torture tests to ensure reliable operation

in the field. Hunting rifles can take a beating, so

Trijicon wants to make sure its scopes are up to the task. Even though this is a hunting optic, it still had to endure 5,000 rounds of fire atop an M4 rifle (no biggie) and 5,000 rounds atop the FN SCAR-H (i.e., the devourer of magnified optics). The SCAR-H is a 7.62x51mm semiautomatic rifle used by U.S. Special Operations, and it has a well-earned reputation of beating scopes to death thanks to reciprocating mass. The Tenmile HX passed decisively.

Thermal shock testing is the next step. It involves cooling a scope to minus-20 degrees Fahrenheit then rapidly warming to ambient room temperature, then heating to 140 degrees Fahrenheit to expose potential dimensional issues. There are a number of materials used in manufacturing a scope, all with different thermal coefficients. Since everything is expanding or shrinking at different rates, Trijicon wants to ensure that it breaks on its dime, not yours. Next up is drop testing, where they bolt it to a

stock/scope combination on hard-packed earth and on plywood placed atop concrete. The scope has to survive multiple drops in multiple orientations. Some drops are from 18 inches above the ground, others are table-top height. The scope must show no loss of zero, no cracked lenses and still remain functionally usable in order to pass. The Tenmile HX does.

BEYOND DURABLE

But wait, there's more! Shock and vibration testing is next.



The Tenmile HX pairs a 30mm maintube with a 50mm objective lens diameter. Powered by a CR2032 battery, the reticle can be illuminated in either red and green color.



Zero-stop turrets allow shooters to rapidly return the scope to zero without overdialing. After shooting recreationally, hunting or competition, be sure to return the turret to "0."



Not typical for many hunting scopes, the Tenmile HX is a first focal plane scope. Multiple reticles are available.

If you've ever fought for your life at a home improvement store on a Saturday morning, you've likely seen the paint shaker do its thing. Trijicon runs a similar test to simulate the bouncing and jarring that the scope may receive riding around in a vehicle on the

backroads. They attach it to the shaker and let it rip. Last is immersion testing, where the scope is submerged in 10 feet of water for 30 minutes. In order to pass, the scope must have no moisture intrusion.

The controls on the Tenmile HX are laid out well and further reflect the needs of today's long-range hunter. The exposed elevation turret adjusts in quarter minute-of-angle (MOA) increments and has 25 minutes of adjustment per revolution. The windage turret is capped and also adjusts in quarter-MOA increments. Both elevation and windage turrets are easily reset to zero by simply unscrewing the top half of the cap and pulling the cap body away from the scope. There is a zero-stop feature that can be zeroed with the use of a 1.5mm wrench.

The side-focus knob serves two purposes. The first is to focus the scope's image. It does this from a range as close as 10 yards. There is a second knob that controls the illumination system. This is the traditional illumination system that bathes the etched reticle in either red or green light,





Trijicon works with Kenton Industries (kentonindustries.com) for shooters wanting a custom turret for their scope.

and is powered by a CR2032 battery. The illumination system is helpful when the scope is set at the low end of its magnification range by making the diminutive reticle more visible. The user can choose between red or green by selecting opposing directions to

rotate the illumination control section with five settings for each color. External lighting conditions and the color of the target background will determine which color fits best, so Trijicon gives the shooter easy access to the two choices.

PARTING SHOT

I'd be hard-pressed to find a more fully featured long-range hunting scope than this one, especially for those that favor MOA adjustments. The magnification range is appropriate, and the objective lens diameter is ideal for a hunting application where lots of walking is on the menu. The turret layout and controls put everything in easy reach, right where you'd expect to find it. I also appreciate the extreme measures Trijicon took to ensure the scope is durable enough to survive any hunt. Few things are more disappointing than traveling a great distance for a rare opportunity, only to have your optic fail. Trijicon did everything reasonable — and a few things that weren't — to make sure this never happen to you.

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Remembering my friend, Don Swearingen.



DAVE EMARY

FAITH & HONOR

WE HAVE ALL MET PEOPLE IN LIFE who are quite unassuming and mild mannered, those who go about their way yet make big contributions without anybody really knowing it. My friend Don Swearingen was one such person. He was an avid shooter throughout his life and served the shooting community at the NRA National Matches and Berger Bullet's Southwest Nationals in Phoenix for years. I met him shortly after retiring from Hornady and moving to New Mexico.

We got to talking one Sunday after church. When Don put two-and-two together and figured out who I was, he immediately invited me to his rural property in the foothills to shoot for several articles I was working on. He set up a shooting range on his property designed to support what I needed for article testing. We hit it off instantly and found out that we also shared a mutual interest in birding. The last conversation I had with him — the Saturday before he passed away — was about the birds we'd been seeing

enthusiastic.

Don died suddenly on Thursday, June 3, 2025, on a hiking trail with his wife. He was 78. I can say he died doing what he liked to do. He was a wise and deeply spiritual person, and I truly miss him.

during the spring migration. As usual, he was very

Don was born in Toledo, Ohio, in 1946. He grew up there, too. He was raised in a working-class family and performed several odd jobs after high school. He was drafted into the U.S. Army in June 1966 and served a tour of duty in Vietnam during 1967 as a Military Police officer. His last assignment was at Fort Louis, Washington, where he met his wife of 56 years, Lila, while attending church. He was discharged in June 1968, and after marrying Lila they moved back to Toledo.

They later settled in southern Michigan and had a son, Eric, in 1983. Don worked in construction with his brother, building mostly churches for 40 years. As Eric grew up and showed an interest in guns and shooting, Don spent many hours shooting with him and teaching the fundamentals. Don encouraged and participated in Eric's burgeoning shooting skills.

He always said he was just Eric's "support person."

Don was also an avid pistol shooter. He regularly competed in club pistol matches, and I can attest to his skills with a handgun from his regular help on my articles! We would usually each shoot some of the groups for my assignments and then kid each other about who shot the smallest group.

After retiring, Don and Lila bought a motorhome and toured the country for 8 years. In 2013, they bought 240 acres in the foothills of the Rio Grande valley southeast of Socorro, New Mexico. They finished building their home in 2017 and settled into a quiet life with a beautiful view framed by the picture window in their living room.

The Swearingens were fixtures at the NRA
National Matches. They worked the matches from
2007 to 2024, Lila as the tower caller and Don as a
Range Safety Officer and operator of the function
range. Many who've attended Camp Perry or later
Camp Atterbury matches may know them. Since

its inception in 2015, they also served in the same roles at the Berger Southwest Nationals held in Phoenix, Arizona.

Don's time was spent teaching Eric shooting skills, and encouraging him to shoot paid dividends. Eric served as an active-duty U.S. Marine and deployed twice to Fallujah, Iraq. As a U.S. Marine Corps reservist, Eric won the NRA National Service Rifle Championship in 2010, along with The Navy Cup that same year. At the CMP's 2013 National Trophy Rifle Matches, he also won the National Trophy Individual match, as well as three other trophy events. To say that Don was proud of his son would have been a gross understatement. Don kidded the Marine Corp team that he couldn't shoot service rifle because he was a "precision shooter," to which the team responded, "What are we then?" That led to the accompanying picture of Don standing in front of the Sinclair Precision Shooter sign on Commercial Row that year.

Don was one of the easiest people to be around I have ever known. He was always kind

and a gentleman. He epitomized the phrase, "He could have a conversation with a dead person." You could talk to him for an entire afternoon — which I did a number of times — and never have to say much. He loved pizza and anything with sugar. One of the funniest things I heard him say about food was, "At my age, I need my preservatives."

Later in life, Don got a little burned out on shooting. I think I rekindled his love for it with some of my writing projects these last 8 years. He

especially loved Guns & Ammo's World War II Sniper Rifle series published throughout 2025. He was so excited about the next project that he bought a Rolling Block Remington and a new barrel that another friend and I were going to put together for him. He had just received the barrel before he died. As was always the case with Don, we talked for hours



In addition to supporting G&A projects, Don Swearingen continued to educate new shooters. Among them, he helped teach Editor Eric Poole's son, Connor, how to load and operate a Winchester 9422M.

about what to do with this project — the caliber, the barrel length, the twist rate, and so on. He loved it. I will finish the rifle for his son, Eric, who wants to shoot it next year. In the two years G&A Editor-in-Chief Eric Poole and I have been doing projects at Don's house, Eric's young son, Connor, had become quite close to Don and Lila. He especially loved to go exploring with Lila.

This is not the usual column you'd expect from me, but Don was a true friend who made a

significant contribution to many of these articles, and who served the shooting community for years. I miss him dearly and just wish we could have one more afternoon of conversation. I know he is where he wanted to be, with his Lord and Savior. So, I thought it was appropriate to honor him within the pages of Guns & Ammo. Thank you for reading.



SENDIT SMARTER



Watch the

head to head.

tech go



Legal opportunities may restore some gun rights.



SUE & SETTLE

ON JULY 4, 2025, President Donald Trump signed the One Big Beautiful Bill Act into law. The Act, also known as "H.R. 1," is a wide-ranging budget package that made its way precariously through the closely divided U.S. Congress. For firearm enthusiasts, one small section stood out: The elimination of the \$200 tax on the registration of suppressors — referred to as "silencers" according to the law — short-barreled rifles (SBRs), short-barreled shotguns (SBSs), and any other weapons (AOWs). Not only did the provision put an end to the unconstitutional tax on the ownership of these firearms and accessories, it also set the stage for a viable legal challenge to the National Firearms Act (NFA).

The law that became known as the "NFA" was introduced in the U.S. House of Representatives as H.R. 9741 on May 28, 1934. Only voice votes were taken, and minimal amendments were offered. Less than a month later, the bill was signed into law by then-President Franklin D. Roosevelt, a gun-control advocate going back to his days as the governor of New York. The NFA went into effect late that July. For those unfamiliar with the ordinarily glacial pace of moving legislation through Congress, the bill's path to passage was unbelievably fast. Legislative haste nearly always leads

to negative outcomes, and for supporters of the Second Amendment, the NFA's passage was disasterous.

One point that was nearly lost to history is that the original legislative proposal — created by Attorney General Homer Cummings — would have included all handguns as part of the NFA. It was the result of a growing populist movement during the 1920s and '30s to ban handgun ownership outright. After a fierce lobbying and grassroots effort, however, pistols and revolvers were removed from the proposed bill.

The firearms that became known as "SBRs," "SBSs," and "AOWs" were originally defined in the draft as a way to ensure there were no loopholes in the tax on handguns. Lawmakers didn't want manufacturers attaching a stock to a handgun and calling it a "rifle" to avoid the tax. Modern-day gun-control advocates claim these firearms were placed into the NFA because they were particularly dangerous, but the historical record doesn't support such claims.

The reality is that when pistols and revolvers were removed from the NFA draft, there was no one left to advocate for the removal of SBRs and similar firearms. As a result, they were hit with the \$200 tax along with machine guns and so-called "silencers." Adjusting for inflation, that



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\$200 tax in 1934 would be the equivalent of \$4,800 today. Though the NFA functioned as a gun control law, from a procedural perspective it was a tax.

Fast-forward 91 years and the tax was still in place. While \$200 is not as prohibitive as it was in the 1930s, it still stings, especially if, like me, you register six to eight NFA items per year.

When the U.S. House of Representatives began work on H.R. 1, language was added to remove the \$200 tax stamp imposed by the NFA on all items except machine guns and Destructive Devices (DDs). Later in the process, additional language was added to not only repeal the tax but to remove those items from the NFA altogether. Suppressors, SBRs and the like would be eligible for purchase with a Form 4473, just like any other firearm. H.R. 1 passed out of the House and made its way to the Senate with that language included.

The Senate's rules differ significantly from those of the House. In the Senate, a filibuster can be used to effectively block the body from voting on a bill. Under the current rules, it takes 60 votes to invoke cloture and shut down the filibuster. However, there is an exception for budget reconciliation bills.

H.R. 1 needed to follow the budget reconciliation process in order to pass through the Senate. Reconciliation bills are subject to the Byrd Rule, established long ago in the name of the late Senator Robert Byrd (D-WV). The Byrd Rule was established to prevent "extraneous" language from being included in a budget bill. Essentially, the rule is there to prevent non-budgetary policy language from being snuck-in through the reconciliation process.

To cull the extraneous language, the Senate conducts what's become known as the "Byrd Bath." During this process, the "non-partisan" Senate Parliamentarian reviews policies that have been flagged by the minority party as extraneous to determine their eligibility. For example, in 2021 Senate Democrats attempted to raise the federal minimum wage to \$15 through reconciliation. The Senate Parliamentarian — Elizabeth MacDonough, the incumbent Parliamentarian since 2012 — ruled that such language was "merely incidental" to the budget and removed it from the bill under the Byrd Rule.

Senator Bernie Sanders (I-VT) was irate.

"The idea that we have a Senate staffer, a high-ranking staffer, deciding whether 30 million Americans get a pay raise or not is nonsensical," he told reporters at the time. "We have got to make that decision, not a staffer who is unelected."

Four years later, the same unelected Parliamentarian ruled that language removing suppressors, SBRs, SBSs, and AOWs from the NFA were "merely incidental" to the budget process. Republicans who had celebrated the minimum wage decision were incensed, and Democrats, who had chastised the parliamentarian for that same 2021 decision, celebrated. The Byrd Bath gutted the hopes of the Second Amendment community before H.R. 1 was final.

All was not lost, though. When President Trump signed H.R. 1, the \$200 tax on most NFA items was repealed, effective January 1, 2026. Not only did this action remove a financial burden to accessing these firearms and accessories, it set up a potential legal challenge that could undermine much of the NFA as we know it.

Even before H.R. 1's enactment, several advocacy organizations and industry participants announced a lawsuit and, on July 4, 2025, a complaint was filed in the U.S. District Court for the Northern District of Texas. The straightforward 16-page complaint in *Silencer Shop Foundation v. Bureau of Alcohol, Tobacco, Firearms, and Explosives* alleges that the NFA's very basis relies on the \$200 tax that it originally imposed. With that tax repealed, the NFA does not have a constitutional basis to stand upon.

"The constitutional foundation on which the NFA rested has dissolved ...," the complaint argues. "And the NFA cannot be upheld under any other Article I power. With respect to the untaxed firearms, the Act is now unconstitutional."

The lawsuit can and will progress through the traditional process of the courts, which will take a significant amount of time, but that's not the only path to victory. In past decades, Democratic administrations adopted what's become known as a "Sue and Settle" policy with environmental groups.

"Sue and Settle" is, when in response to a lawsuit from a special interest group, a federal agency concedes to an agreement to enact policy changes outside of the normal rulemaking process. It basically means that the agency doesn't fight the lawsuit because it agrees philosophically with its policy aims. According to the U.S. Chamber of Commerce, the EPA chose not to defend itself in 60 lawsuits filed by advocacy groups between 2009 and 2012, which resulted in 100 new regulations.

Instead of waiting for the U.S. District Court to act, DOJ and ATF could simply settle the lawsuit and discontinue enforcement of the NFA for the untaxed firearms and accessories. Machine guns and DDs would still be regulated, but the other items would simply be considered "firearms." Common sense might suggest that suppressors aren't firearms but mere accessories. Regulating them as firearms affords their manufacturers protection under the Protection of Lawful Commerce in Arms Act (PLCAA). If we want to continue to see a thriving suppressor industry that drives innovation, those protections need to stay in place.

At the time of this column's writing, the U.S. government has not responded to the Silencer Shop Foundation complaint, so we don't have an indication of how they will handle this case. We can maintain hope that this Second Amendment-friendly administration will settle the suit in favor of the plaintiffs and their valid constitutional argument. If not, the plaintiffs and the government can battle it out in the courts as the case moves forward. In the meantime, the \$200 tax will disappear on January 1, 2026. With current approval times averaging a few days, the painful NFA process is becoming less painful. Either way, the ball has been moved toward the goal post. \blacksquare — K. Wood

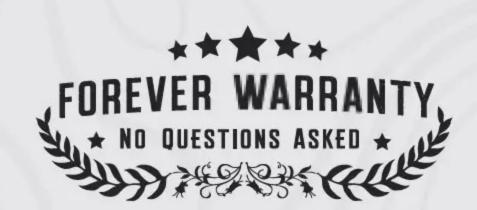


FIND WHAT MATTERS



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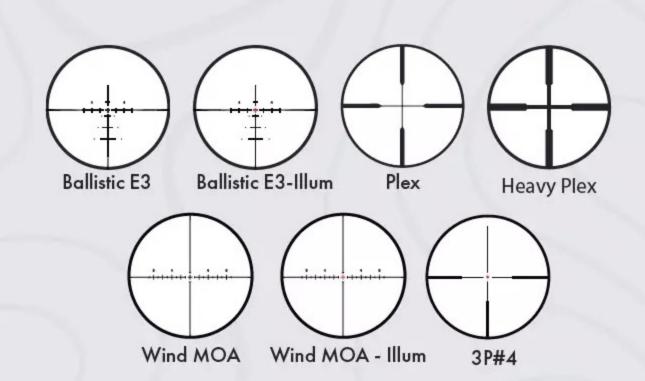












Inside the name of this column.



THE ESSENTIALS

WHEN PEOPLE FIRST GET EXCITED about a new interest
— especially a topic such as shooting — many can spend
excessively and purchase far more than what's realistically
necessary. Buying "stuff" is not a bad thing if you can afford
to, but the storage tubs filled with gadgets and gizmos in
our garages suggest that we can be wiser with our money.
What do we really need for a productive range day? An
experienced shooter will agree: A little goes a long way.

The following is what an editor or gunwriter typically brings to the range to test and evaluate firearms.

SAFETY FIRST

Eye and ear protection. Your two most valuable senses are

worth protecting. A pair of gas-station aviators and 9mm brass in the ears don't cut it. (Yes, I have seen both recently.) Eye protection should be ballistic rated, either to military or ANSI standards. Lenses should wrap entirely around the front and side of the eyes, too. Bigger is better when it comes to eye protection. I once saw a healthy chunk of spalling ricochet off a steel target and almost take out another man's eye; he was only wearing reading glasses. A quarter-inch higher and the spall would've undoubtedly left him partially blind. Full-size shooting glasses would have protected his vision entirely.

Hearing protection also subscribes to the "bigger-is-better" philosophy. There is a clear difference in thickness









between many earmuffs and in-ear plugs. Earmuffs with greater mass covering each ear typically offer greater decibel (dB) protection, but hearing damage can result from noise through an open mouth, the nostrils and soft tissue under the ears, for example. If I know I'll be running an extended range session with loud-report firearms, I'll combine foam in-ear protection with appropriate muffs. Hearing loss and tinnitus caused by shooting firearms should not be dismissed. Whatever you decide to purchase, check the specs for the dB reduction and ensure they are confirmed by a third party.

Another important piece of gear is one you'll hope to never need: An individual first-aid kit (IFAK). It's an absolute must for any range session. Unfortunately, accidents happen, and tourniquets and bleed-control first-aid kits have saved lives. I keep one in my vehicle at all times, so I add it to my range bag after I arrive. As important as it is to bring a bleed kit with your range gear, it's just as important to know how to use it. First aid training is also recommended.

INTHE BAG

If you have a giant range bag, then it's going to get filled. I learned quickly that it's not nearly as efficient to keep every piece of range gear I like in one bag. My range time goes smoother when I bring a small bag with exactly what I need. With a huge bag, I waste time looking for and reorganizing gear. Most of what I carry fits within a Storm Range Bag I sourced from Full Forge Gear (\$35, fullforgegear.com). It doesn't have more pockets than I need, and the pockets it does have are rarely used. Large bags hold a lot more, but contents get jumbled in the middle due to the soft base. The best feature of the Storm Range Bag is the hard bottom shell, preventing the bag from sagging in the middle. There may be no wrong answer when deciding on a useful range bag, but a hard base makes a difference. Full Forge Gear's Storm Range Bag supports my needs to test firearms, including several pounds of ammo. The bottom has yet to collapse from the weight.

In addition to a hard base, check your range bag to ensure that it has quality zippers and stitching. It's infuriating enough when a grocery bag tears, but there's nothing more aggravating than chasing spent brass you've already picked up because of a torn range bag or one that won't zip closed.

TOOL TIME

I used to carry three separate tool kits in my range bag. Each featured a unique tool, but they all perform essentially the same tasks when I stopped to think about it. Consolidation is always a good thing. There are only a few tasks I can't complete with what's included in the Real Avid X3 13-piece driver bit set (\$40, realavid.com). It includes a ratcheting driver, too. Real Avid also offers larger 52- and 57-piece X3 Driver Gunsmithing Bit Sets, but the only thing I've come to add to the 13-piece set are a few small Allen wrenches that I need for removing/installing scope turret caps. Otherwise, the X3 handles the basics at the range.

Not everyone needs a trigger gauge at the range, but I always keep a Wheeler Digital Trigger Gauge (\$53, wheeler. com) in mine. I also keep a digital caliper (\$40, frankfordarsenal.com) in my kit to measure groups. It's a lot more accurate than a flimsy measuring tape.

ADVANCED RANGE WORK

Everything previously described to this point is enough for an enjoyable range session. Of course, you'll need ammo, holsters and targets dependent on the firearm type and discipline.

Once you become a regular at the range, a shot timer should find its way into your range bag for advanced range work. Timers are not just for competition. For concealed-carry practice, I use it to push myself to keep my draw-to-fire times to within 1½ seconds — regardless of carry method. With rifles, a shot timer drives me to work the action faster and more effectively. A shot timer can help balance shot placement and speed while under a time constraint.

There are many great shot timers, but in keeping with the "simple-is-best" philosophy, I like the PACT Club Timer III (\$130, pact.com). There are only a few buttons, and it's quick and easy to navigate the menu. Other shot timers offer more detailed touch screens and dozens of setup options, which are great for range masters of a shooting competition, but I've found that all I need for general rangework is countdown and instant or par-time shot trackers. That's where the Club Timer III excels.

The last piece of kit I added was a chronograph. These are a significant investment in range work, and they're not really necessary for those who don't handload, compete, or shoot long range. The Garmin Xero C1 Pro (\$600, garmin.com) won the 2024 Guns & Ammo Technology of the Year award. Its greatest advantage is the compact size and accurate reporting. It conveniently fits inside my range bag, unlike my older chronographs. It doesn't chew through AA batteries (it's USB-C rechargeable), and it has yet to drop a shot in a shooting string. The results can also be linked to the Garmin app in a smartphone for convenient reference later. It calculates average velocities, extreme spreads (ES) and standard deviation (SD).

ONE MORE THING ...

Obviously, to go to the range, you'll need a firearm and ammo, perhaps an optic or spotter as well. You'll likely store accessories such as these inside the bag, so it should be handy to grab. A simple range bag works best for me, and I rarely add more. As with many of my trips to the range, I often leave something behind. If you think I've left an important piece of gear out of my range bag, and you can't make a trip to the range with out it, shoot back and let me know! You may find that we have to share it in a future edition of "Reader Blowback." Email us at gaeditor@outdoorsg. com, or send a letter to "Letters," Guns & Ammo, 2 News Plaza, 3rd Floor, Peoria, Illinois, 61614.



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TYPICALLY, shotguns are long and often unwieldy. However, there is a type of compact and portable shotgun that is short and handy. It's a style of shotgun that's seen more interest in recent years. It's a type of shotgun that isn't, technically, a "shotgun."

I'm referring to the non-shotgun firearms. The first by Mossberg was the pump-action 590 Shockwave (\$581, mossberg.com), launched in 2017. It was the gun that grabbed everyone's attention and caused the segment to explode. It resembles a "sawed-off" pistolgripped shotgun — but it's not. Though it fires shotshells, legally, it's not even a shotgun! Since its inception, people have been begging for a semiauto model. Here we go. Meet the 990 AfterShock.

Initially, the AfterShock will be available in three versions. The standard model has a 14³/₄inch barrel and retails for \$1,120. An identical version is offered with a Crimson Trace Lasersaddle for \$1,302. The standard version with the same length magazine tube but sporting an 18.5-inch barrel runs \$1,120. The original Crimson Trace Lasersaddle (LS-250) is not compatible with the 990 AfterShock due to the movement of the charging handle. The new Lasersaddle for the AfterShock is not available outside of Mossberg at the time of this writing.

The AfterShock has a 3-inch chamber, and capacity is five-plus-one with $2^{3}/_{4}$ -inch shells. With its 14³/₄-inch barrel, the 990 AfterShock is 271/8 inches long and weighs 6 pounds empty, balancing in the middle of the gun.



MOSSBERG EXPANDED ON ITS PUMP-ACTION SHOCKWAVE CONFIGURATION TO PRODUCE THE SEMIAUTO 990 AFTERSHOCK.





GAUGE

BARREL

LENGTH

HEIGHT

WIDTH

WEIGHT

RECEIVER

FOREND

SIGHTS

TRIGGER

SAFETY

MANUFACTURER

MSRP

GRIP

CAPACITY

IT'S NOT A LOOPHOLE. IT'S AN OPPORTUNITY.

Before diving into the details of this firearm, we need to understand how the Mossberg 990 AfterShock isn't legally classified as a "shortbarreled shotgun" (SBS), or in any other way subject to the National Firearms Act (NFA). First, nonshotgun firearms like the Shockwave are legal because they are not cut down or sawed off, and are not meant to be fired from the shoulder. If you cut the barrel of a shotgun shorter than 18 inches, it becomes an NFA item and is subject to (unconstitutional) legal requirements. These guns were manufactured without stocks and with smoothbore barrels shorter than the

legal limit of 18 inches. Because they are not a pistol (no rifling), a rifle (no rifling, no stock), or a shotgun (barrel shorter than 18 inches, not meant to be fired from the shoulder), and more than 26 inches in length (avoiding the title of a short-barrel shotgun), they are simply, legally, a "firearm."

Firearms that fit into this niche have been legal for some time, but it wasn't until 2017 when Mossberg dared to wade into the fray with the 590 Shockwave. Since then, they've entered the public consciousness. As a simple firearm, they are as legal to buy as a traditional shotgun, provided your state hasn't passed laws to the contrary. When an FFL does the required paperwork and background check, they don't check the handgun or long gun box; they mark the "other firearm" box. Non-shotgun firearms such as the AfterShock are the firearms equivalent of "none of the above."

Since the \$200 NFA tax stamp will no longer apply in January 2026, I suspect many people will be interested in buying an AfterShock to register it as a shortbarreled shotgun (SBS) and mount a stock. I've already seen a very sexy SBS treatment of the AfterShock on

Instagram by Vang Comp Systems (vangcomp.com) that was just — *chef's kiss*. I reached out to Mossberg, curious to see if the gasoperated 990 AfterShock accepted stocks designed for its gas-operated semiauto 940. The short answer was "No," but it accepts most stocks meant for the Mossberg 590 (not including pistol-grip variants). The full answer also included a little bit of an education on the brand-new gas system designed into the 990.

semiautomatic 12 gauge 14.75 in., 3-in. chamber 5+1 shells (2¾ in.) 27.13 in. 4.2 in. 2.4 in. 6 lbs. Aluminum, anodized; drilled and tapped AfterShock, polymer AfterShock, polymer Fiber optic, red (front) 4 lbs. (tested) Tang switch, two position \$1,120 O. F. Mossberg & Sons, 203-230-5300, mossberg.com

GAS IT!

Mossberg's first modern gasoperated semiauto, the 930, was a decent design. Since it was introduced in 2016, some have found it to be a little finicky, especially when

dirty. The subsequent 940, which arrived in 2020, included an upgraded piston with sealing/scraping rings similar to an AR-15 bolt's three gas rings. The piston spacer tube was redesigned to better distribute gases inside the forearm, too, and the gas-relief system was modified. Since the piston and other improvements allowed the gun to run more efficiently, they were able to reduce the rate of the gas relief spring, improving the way gases bled off the system. The gun was designed to run 1,500 rounds between cleanings.

The 990 AfterShock uses the same barrel and piston as on the 940, but engineers optimized the gas holes for the 14¾-inch barrel. Since the gun isn't shouldered, Mossberg had to develop gas hole sizes to work across multiple payloads and different shooting styles and grips. Even with a gas-operated system, these variables can affect cycling.

The biggest difference between the two platforms is in the action-return systems. The 940 contains components in both the forearm and the stock. With the 990, everything that was in the stock has been moved into the forearm, reducing the part count. The design is also more



The bright red fiber-optic front sight is quick to see. A tight-focused white light could be attached for rudimentary aiming. The muzzle is flush to the magazine cap, which is aesthetically pleasing.



The endcap keeps the magazine tube extension in place. The M-Lok slots are accessible on the left, right and bottom. A QD slot can be attached to complement the QD mount integral to the grip.



The top of the receiver is drilled and tapped to accept an optic rail. A red-dot sight is useful for precise aiming, especially if needing to shoot slugs at distances beyond 10 yards.



Without a stock to absorb the brunt of recoil, the forend handstrap helps keep the hand in place during operation. In conjunction with the handguard texture, the AfterShock's muzzle is controllable.

linear, which should help reduce wear.

The 990 AfterShock is quite streamlined, and it offers just about everything one might want in this kind of firearm. The front sight is steel with a red fiber-optic insert. The receiver is drilled and tapped for an optic rail or adapter. The barrel has a fixed cylinder-bore choke. The magazine tube has a sizable aluminum cap, which makes the assembly protrude to the same length as the barrel. Just behind the muzzle is a polymer adapter with M-Lok slots at 3, 6 and 9 o'clock. The polymer forend sports an aggressive texture, as well.

Mossberg recently redesigned its receiver-mounted safety switch, and it's a distinct improvement. It's a polymer slider that's bigger and easier to use. It's also equally accessible whether you're right- or left-handed. The bolt handle is large and knurled, and the bolt release is a generous-size polymer lever. The receiver loading port was oversized and beveled, making reloading both faster and less likely to result in pinched fingers. The non-binding magazine follower is aluminum and anodized in an interesting rust/copper color Mossberg calls "orange." The triggerguard is polymer, and inside the trigger was tested at a crisp 4 pounds.

The AfterShock grip is brand new and gives the gun

its name (or vice versa). The body is polymer with a rubber insert along the top to help absorb recoil. A quick-detach (QD) sling socket is at the rear of the grip.

DEFENSE & FUN

Non-shotgun firearms such as the Shockwave or After-Shock look cool and are fun to shoot. I've shot skeet with them, which was a blast. However, most people are buying these for self-defense. Unlike a traditional shotgun, learning how to employ these firearms effectively requires some uncommon shooting techniques. That strap on the forend is there for a reason! It will help keep your support hand on the gun. Without a shoulder stock, the front end wants to jump during recoil. One of the main reasons end users asked for a semiauto model of the Shockwave was to reduce the recoil impulse. The AfterShock delivers.

Shotgun patterns don't spread out into a massive cloud as soon as they leave the muzzle — even out of a shorter barrel. You have to aim. Shooting from the hip like an 1980s action star is fun and looks cool, but unless you opt for the Crimson Trace Lasersaddle-equipped model — or perhaps mount a light with a focused beam to the forend — you can't aim from the hip or chest.



The 990 AfterShock features Mossberg's new receiver-mounted safety. It's oversized, featuring aggressive knurling for sure activation. Press the switch forward to fire, and thumb it back for safe.



The 990 AfterShock magazine follower is colored bright orange, making it easy to spot an empty magazine. The loading port is as wide as it can be for efficient and intuitive reloading.



Expected on modern semiautomatic shotguns, the bolt handle and bolt release are enlarged and knurled. The bolt-release button is enlarged and protected by a fence against unintended use.



The molded polymer triggerguard is a functional size, and there is a large "M" logo for "Mossberg" toward the front. The steel trigger averaged 4 pounds on the trigger gauge.

All you can do is point. Beyond actual spitting distance, you'll be hard pressed to shoot the 990 AfterShock as accurately as you'll want or need. You should still try it, though, because indoors, especially if confronted by an intruder who's practically within arm's reach, tucking the grip back into your chest makes perfect sense to gain control of it.

As a rule, shoot the 990 AfterShock from eye level, and use that fiber-optic

sight. Hold the gun up in front of you and aim down the barrel as you would a standard shotgun. Your support hand is on the forend, through the strap; your shooting hand is on the grip a few inches in front of your face at chin level. It won't recoil back and hit you in the face,



Reminiscent of the so-called "Mare's Leg" on a lever-action rifle, the AfterShock grip is purpose-built for semiauto function. It accepts QD sling swivels and has a rubberized palm pad.

but there's no getting around the fact that you have to muscle guns like this to keep the recoil manageable.

With your support hand, push forward on the forend while pulling back on the pistol grip with your firing hand. Push and pull as hard as you can without the force screwing up your ability to pull the trigger. This push/pull technique will soak up a lot of the recoil force. Holding the gun in

this position feels natural; it's only the push/pull technique you'll have to work on.

Not everyone has the strength to use the AfterShock properly. If you can run it, it's highly effective at realistic defensive distances.



The all-new Kuna[™] pistol from Springfield Armory[®] is a PDW built to deliver exceptional performance in a portable package. Featuring a roller-delayed operating system and precision manufactured for optimal fit and function, the Kuna is chambered in 9MM with 30-round magazines. The small profile, nimble handling, and prolific capacity make it a fierce personal defense platform. The Kuna from Springfield Armory – ready to roll.



AT THE RANGE & AT HOME

I tested the 990 AfterShock with a variety of loads. I found that if I simply held onto the gun as loosely as possible (without allowing it to fly out of my hands) while shooting light target loads, I could induce malfunctions. While the 990 AfterShock is gas operated, it needs resistance for the bolt to cycle properly. Holding it with a proper grip, the AfterShock was perfectly reliable. Recoil was still stout, but noticeably less abusive than the pump-action 590 Shockwave.

If you want to employ the 990 AfterShock defensively, you have a few decisions to make about ammo. How big do you want your pattern, and at what range? The standard defensive 12-gauge shotgun load is 00 buckshot, featuring eight or nine .32-caliber pellets heading downrange between 1,150 and 1,600 feet per second (fps). Standard, generic buckshot will produce roughly 1 inch of spread per yard from the muzzle, and smaller shot might produce patterns even a bit larger than that. I don't recommend birdshot for self-defense, even at close range; the pellets just don't have enough mass to penetrate properly. That said, if you're worried about overpenetration, due to living in an apartment for example, and you're not going to have a shot beyond 10 yards, Winchester Defender Close Range might be something you need to look at. It's loaded with roughly 100 pellets of #2 copper-plated shot and generally follows the 1-inch-per-yard spread.

If you're a fan of slugs, I've found no other product that produces tighter groups out of smoothbore guns than Federal's low-recoil 1,300-fps TruBall 438grain (1 ounce) slug. The same was true with the 990



Shooting from the hip (above, top) may be a lot of fun, but it's not practical for effective aiming. When aimed (above, bottom), the Mossberg 990 AfterShock proved to be quite accurate.

AfterShock. Your main hindrance to slug accuracy with the AfterShock will be the front sight, which is about 8 inches wide on a 50-yard target. With a red dot, I probably could have halved the size of my groups. With the fiber-optic front sight, I was able to average 6-inch groups at 50 yards with this ammunition. (I had to work for it.)

Unusual firearm introductions can crash and burn, but you can also have standouts. Consumers have shouted, "I don't know what I'm going to do with it, but I want one!" The 990 AfterShock is unusual, but to me there's no question what it's good for. It's a purpose-built defensive non-shotgun ideal for close-in work. It's significantly more expensive than the pumpaction Shockwave, but you get what you pay for.

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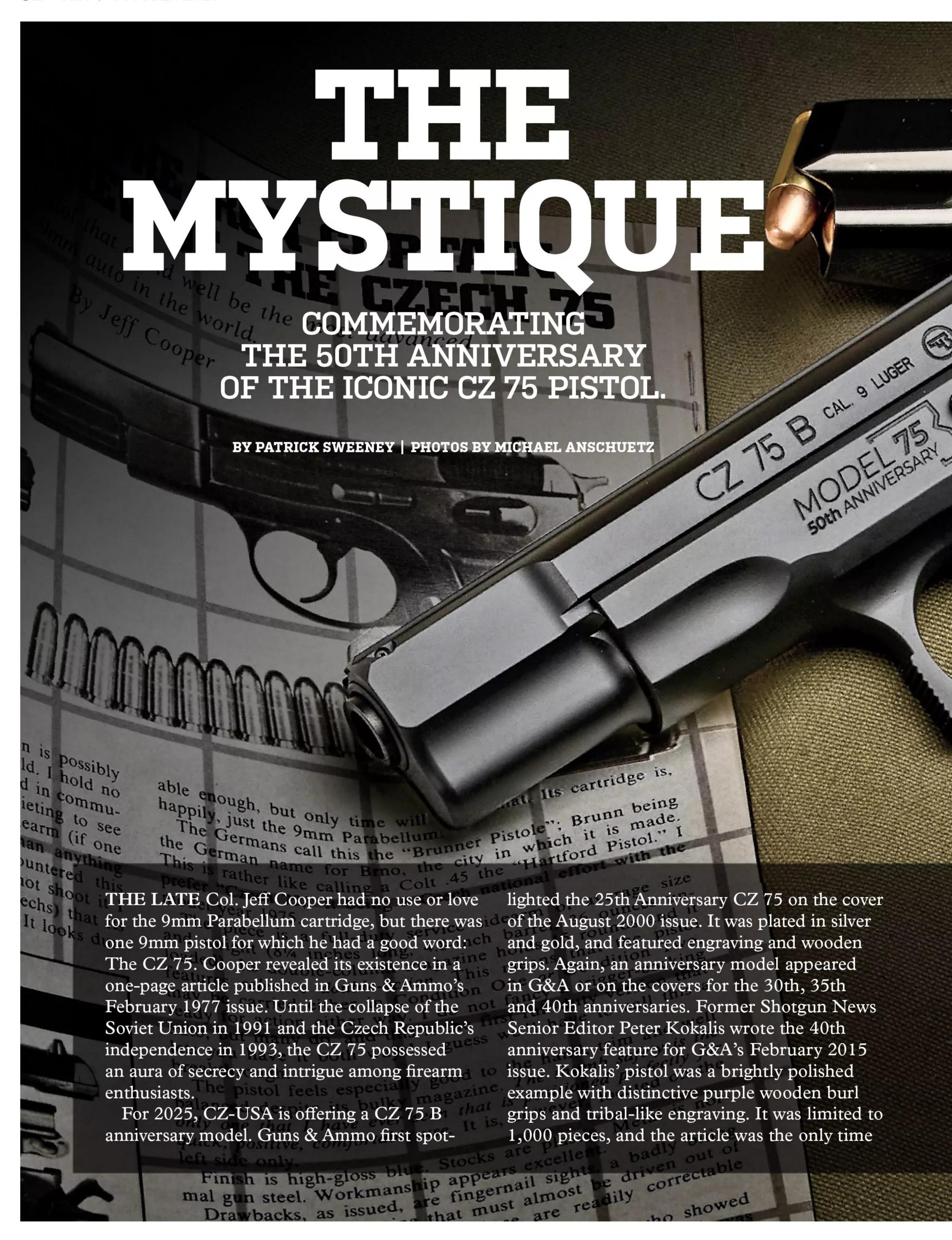
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Kokalis wrote for G&A.

Most recently, Editor-in-Chief Eric Poole wrote his column featuring the 45th Anniversary CZ 75 B for the August 2020 issue. It had a gloss blue finish with silver controls, wooden grips and deep engraving throughout. Again, production was limited to 1,000.

In this modern world of polymer and strikerfired pistols, the CZ 75 is still rarely seen on the range. Unless it gets featured in a video game or within the pages of G&A, many shooters get this puzzled look on their faces when you utter "CZ

75." They might know the modern iterations, but not the original. The 50th Anniversary edition reminds us of the model's history.

František Koucký was lured out of retirement as a weapons designer in Czechoslovakia to produce a new 9x19mm pistol for export purposes. Outside of the Warsaw Pact, shooters and military organizations wanted a handgun in 9mm — not the 9x18mm Makarov or the 7.62x25mm Tokarev. Koucký had a free hand in design, and he exceeded expectations.



5.5 in.

1.38 in.

Steel

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cz-usa.com

2 lbs., 2.6 oz.

Polycoat, black

4 lbs., 10 oz. (SA),

Polymer, checker molded

10 lbs., 8 oz. (DA) (tested)

Decocker, manual lever

CZ-USA, 800-955-4486

Post (front), notch (rear)

HEIGHT

WIDTH

WEIGHT

SLIDE

FINISH

SIGHTS

TRIGGER

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MSRP

GRIP

and early '80s, 9mm pistols were starting to make inroads, but they were almost all built with what later became known as traditional double-action (DA) triggers. The pistol could be fired from its ready state by trigger-cocking it, as with a DA revolver. Once the hammer was cocked, you used the safety or de-cocker to lower the hammer. Having lowered the hammer, your choices were to thumb-cock the hammer or use the trigger in DA mode. Many 1911 users hated DA triggers because they could not be carried in Condition One:

cocked and locked. Revolver shooters hated them because there were two different trigger pulls. The DA and single-action (SA) trigger is markedly different in weight and travel. Few loved the de-cocker staying down except police administrators. Spring-loaded de-cockers that automatically returned to fire came later. The CZ 75 changed that. You could, once you lowered the hammer on your own because there was no decocking lever — use the DA trigger to fire it. If you wanted to, you simply used the thumb safety to lock it on safe with the hammer cocked to set Condition One.

The slide was locked with the safety on, so that part was familiar. This endeared it to the 1911 users. The revolver shooters were still put out with the two different trigger pulls, but you can't please everyone.

Col. Jeff Cooper's first article about the then-new CZ 75 appeared in the February 1977 issue. I was a subscriber then, and

I'd like to say I remember the review — but I didn't. He didn't fire one in for that story, but he did shoot samples later. It was the grip shape that he kept mentioning. It was so much so that when the iconic Bren Ten was designed by Thomas Dornaus and Michael Dixon, it followed the form of the CZ 75, influenced by Cooper.

The CZ 75 uses a frame-to-slide design that puts the rails of the frame on the inside so the slide rides inside of the frame, unlike the Model 1911. This has the effect of reducing slide mass, and thus the CZ



The CZ 75 — the original or the 50th Anniversary CZ 75 B edition — can be fired single action (SA), hammer cocked.



With the hammer at rest, the CZ 75 B can be fired as a double action (DA), using the trigger to cock and fire the pistol.



If the hammer must be carefully lowered to the half-cock notch, you can fire the CZ 75 in DA or by cocking the hammer to SA.



Unlike DA pistols of the 1970s, the CZ 75 could then (and now) be cared in Condition One: Safety on, hammer cocked.



The slide of the CZ 75 rides inside the frame rails. Inset Photo: The recoil spring and guiderod do not protrude from the slide at full recoil, either.



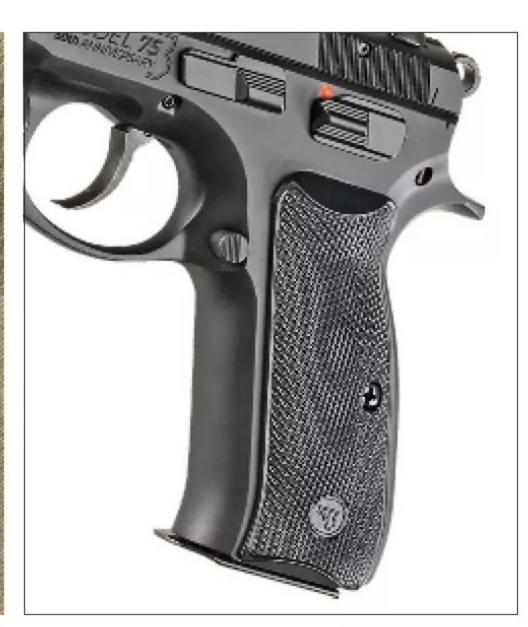
CZ 75 grip panels cover the mainspring assembly. The design is popular enough that aftermarket grip panels are readily available to personalize the pistol.

75 has a faster slide movement than slides that ride outside of the frame. (This proved to be problematic in the 1990s when the .40 S&W became popular.) Ejection is brisk. You will not find your empties in a neat pile close to your feet.

The CZ 75 is all-steel, so it was tough enough then and now to make nails look flimsy. Not that 9mm has (or had) much recoil, but that weight does dampen the felt recoil a lot. Then there were the magazines, 15 rounds each. At a time when a 1911 in 9mm held nine-plus-one, the 15-plus-one capacity of the CZ 75 was alluring.

Back then, a 9mm 1911 was not considered reliable, mainly because





The grip contour of the frame gave the CZ 75 a welcome reception, and it was large enough to accept double-column 16-round magazines. The frontstrap is smooth and lacks texture.



The controls are placed exactly where a Model 1911 user would expect them to be, including the slide-lock/slide release lever, thumb safety/de-cocker, and magazine release button.

they weren't reliable. So, in the 1980s, you could have a reliable, accurate, soft-shooting 9mm that held a lot of ammo. It had a firing system that let you choose between Condition One or DA, but the real selling point of the CZ 75 was the ergonomic grip shape. You thought the extra capacity was tempting? Cooper loved the grip with good reason.

MODEL 1911 VS. CZ 75

The ergonomics of the 1911 are like a classic car with semi-bucket seats. It is comfortable, reliable, dependable, but not sexy. The Browning Hi-Power is the muscle car with bucket seats. The CZ 75 is a vehicle with a Recaro seat that fits you complete with a racing har-

ness. When you sit down, you know you're going to get some speed on. I have never handed someone a CZ 75 and not gotten "that look." It just fits, regardless of your hand size or shape. (Yes, it is that good.)

In addition to the gloriously ergonomic frame contours, the thumb safety is perfectly placed to meet your thumb, much like that of the 1911. The slide-stop is a bit of a reach, but you can readily grasp it



When the CZ 75 became the CZ 75 B, the rounded triggerguard was changed to a squared and serrated profile.



The sights on the CZ 75 B 50th Anniversary model are a tribute to the original. The three-dot, fixed front post, drift-adjustable rear notch were functional and reliable.

with the same grip twist you'd use to reach the magazine button, which is also properly placed. Magazines drop free, of course, and it locks open after the last round has been fired.

So why weren't they all over the place in the 1980s, winning matches and selling like hotcakes, even being in 9mm? Communism. The then-Czechoslovakia was part of the Warsaw Pact, and all manner of goods made behind the Iron Curtain could not be imported to the USA. Canada, yes, but not here. Back then, Canada was a different country than it is today. I spent the 1980s hearing about the various methodologies of getting a Canadian CZ 75 into the U.S. with proper

paperwork. All expensive, all with voluminous paperwork, and some kinda sketchy.

It was not until after the Velvet Revolution in November and December 1989 that the CZ 75 could be exported to the U.S., and by then the U.S. firearms market was entirely different. Polymer was king and striker pistols ruled, or at least that's what we were told. Some things "we all know" just aren't

true, and thumb safeties and steel still work like they did in the past.

50 YEARS LATER

The CZ 75 50th Anniversary is a model known in CZ collector circles as a "CZ 75 B." For 2025, CZ-USA offers all of its pistols in 50th Anniversary models. The first pistols were made with a forged steel slide and frame, both requiring a lot of machining, and are known as the short-frame CZ 75s. That design lasted for a short time. The next step was the pre-B with forged slides and cast frames (machined to final dimensions), and with a longer frame and rails. The "B" models started in 1993 with the addition of an internal firing pin safety, and the triggerguard and

hammer shapes were changed. Gone was the round triggerguard and spur hammer, and in was the squared triggerguard and ring hammer. CZ did not stop evolving the CZ 75 after that, and the range of models is impressive. For the 50th Anniversary edition, they went back to the CZ 75 B, with the internal firing pin safety, triggerguard and hammer changes.

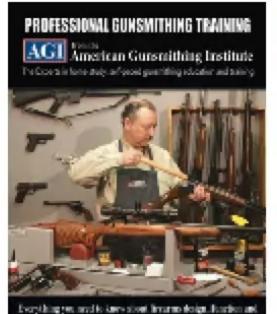
The markings are also differ-



The external extractor is as tough as the rest of the CZ 75. Note that the finish does not coat the inside of the steel slide.

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ent. The old CZ 75 had proofmarks on the slide behind the extractor, and a simple set of markings on the left side of the slide: "Model 75" and "Made in Czechoslovakia" on the frame. Slide, frame and barrel held the serial number. There's

also a proofmark and year of manufacture. The frame of the new pistol is marked "CZECH REPUBLIC CZ" on the right side. On the left of the slide is "CZ" 75 B", the caliber, the CZ logo. The frame is marked "MODEL 75 50TH ANNIVERSARY". The commemorative sent to Guns & Ammo differs from the pre-B I own in some ways and is just like it in others. Back then, the CZ 75 received a baked-on black polymer finish, with a lot of lacquer-like shine and durability. The 50th Anniversary pistol has the CZ-USA Polycoat finish, which is not as glossy as the old pistols are. This, I think, is a good thing. As durable as the old finish was/is, it is also just a bit slick. The new Polycoat is not. The magazines are the updated ones, and they hold 16 rounds. Your 50th Anniversary will come with a pair of them. The CZ 75 has been around long enough and been evolved enough that you will not lack for

choices in magazines. The newer ones can be had in even-greater capacity.

How strong is the CZ 75? In the early 1990s, there were many United States Practical Shooting Association (USPSA) and International Practical Shooting Confederation (IPSC) shooters who built them up as Open-class guns. They shot gallons of hot-loaded 9mm and 9x21mm ammo through their CZs (and clones of

the CZ), and the guns held up just fine.

Now, not all things 1970s were great. The trigger is pure 1975. For the time, and compared to what you could have had back then, the CZ 75 trigger was marvelous — a revelation. To risk being seen as much of a trigger snob as Handgun Editor Jim Tarr, the SA trigger of the 50th Anniversary has grit and creep in it. The DA trigger is long and has an interesting decrease in pressure halfway through, which almost guarantees your trigger finger is going to slam into the back of the triggerguard. I weighed the trigger pull of the sample CZ 75 B sent to G&A and compared it to my pre-B

> model. The single actions pulls were as if they had been built the same day.

At 4 pounds, 10 ounces, the hammer falls. The DA trigger differs, with mine requiring 9 pounds, 13 ounces, and the 50th Anniversary model taking a pound more and change. However, mine has proba-

bly been dry-fired half a bazillion times. The trigger pull is correctible if you desire. Just call Angus Hobdell at CZ Custom (czcustom.com); he can tune yours up. In the 1980s, there were a lot of revolver 'smiths who could not bring your DA trigger pull to less than 10 pounds, and the CZ 75 50th Anniversary almost did that right out of the box. As far as the two trigger pulls "problem," that one was solved a long time ago with practice and training, as demonstrated by the CZ IPSC team in many World Shoots. I've watched Eric Grauffel not Czech, by the way, but using a CZ pistol — Pavel Jasansky and Petr Znamenacek among many others win medals having mastered the two trigger pulls.

One aspect I found in testing was that the low bore axis and the all-steel construction made a day of shooting 9mm as much fun at the end as it was during the beginning. That led me to drag out my pre-B CZ

> 75 — made in 1984 if the proofmarks are to be believed — and have even more fun. If you don't have one, here's your chance. If you already have one, put the old collectible away and shoot the new collectible. How many will CZ make? As many as shooters want — but only in 2025. The next time the ball drops in Times Square, there will be no more 50th Anniversary models made.

PERFORMANCE

LOAD	VEL. (FPS)	ES	SD	BEST GROUP (IN.)	AVG. GROUP (IN.)
Black Hills 100-gr. Honey Badger	1,271	21	8.6	2.4	2.8
Federal Syntech 124-gr. TSJ	1,178	6	2.1	2.4	2.9
Hornady Critical Duty 135-gr. FTX	1,031	21	9.7	2.5	3.1
SuperVel +P 90-gr. JHP	1,447	17	6.8	2.6	3

Notes: Accuracy is the average of four five-shot groups fired at 25 yards from a Champion shooting rest. Velocity is the average of 10 shots measured with a Labradar chronograph set 15 feet from the muzzle.



The taper at the top of the double-column magazines aided in fast and intuitive reloads, even without a beveled magazine well. Two 16-round mags mean reloads are fewer than with a single-stack.







A FARM IN CENTRAL ILLINOIS has long been a proving ground for me to evaluate certain firearms, optics and ammunition for Guns & Ammo. In addition to growing corn and soybeans, my in-laws raise everything from chickens to several head of cattle for beef while maintaining land in the Conservation Reserve Program (CRP) to enhance wildlife habitat and reduce erosion from the river that runs through it. Ducks, geese and whitetail often find sanctuary in cordoned-off sections of property; only once did we trespass to recover

a deer. Though it proved to be hard work at times, hunting coyotes at night was always a job I volunteered for.

When you raise chickens and cattle, transient coyotes target the property. They seemingly know how far to buffer when scouting the perimeter in daylight; they rarely approached within 300 yards of the house or a building. At night, they attempted to poach livestock until a defensive strategy was built with the aid of night vision. I started with Gen 3 night vision in 2009, but I prefer thermals these days.



PAIR A PULSAR THERMAL AND AN ACCURATE FIREARM TO MANAGE HOGS, COYOTES AND VERMIN.

BY ERIC R. POOLE | PHOTOS BY MARK FINGAR





The rubber cap shades the environment to support the user's view of the thermal imaging screen in lowlight or daylight conditions. The buttons activate the laser rangefinder, recording and zoom.

Night vision has advanced in resolution and fallen in price since I wore a uniform, but I've never been more successful since I started hunting with thermals. Commercially available thermals manufactured by Pulsar are superior to those I was once issued. What many landowners who I've talked with don't realize is that thermals can be useful during daytime and night. They think of them as another form of night vision — but they are not. Though thermals can be used to reveal images in the dark, they can also be used during daytime and adverse conditions such as through smoke, rain and fog. Most night vision devices (NVDs) can only reveal the dark in low-light to no-light conditions by amplifying starlight, ambient or projected infrared (IR) light sources. Ther-

mal sensors differentiate temperature variations to create an image. Pulsar incorporates the most advanced of these IR-spectrum detectors, which are sourced from France and made by Lynred (lynred.com). Pulsar devices are assembled with these sensors, high-resolution micro-OLED screens and other technologies in Lithuania and Latvia.



Spotting and identifying a potential target using a thermal monocular is recommended for safety when hunting in low-light or no-light field conditions. G&A evaluated the Telos LRF XG50. \$4,100

Especially since 2010, consumer thermal technology advanced so quickly that it may not have been a reasonable investment for the average landman to configure and zero a dedicated rifle, pistol or shotgun. It is now. Handheld and scope thermal imaging technology is now at a point where it won't be antiquated or become more affordable anytime soon. As a gun owner who has field-tested every brand and price-point of thermal optics, it's my opinion that Pulsar's current lineup has risen to become the industry standard.



The laser rangefinder works in tandem with the thermal lens. The blue power button activates the Thermion 2 LRF, while the lens focus is adjusted by a knob on the left side of the housing.



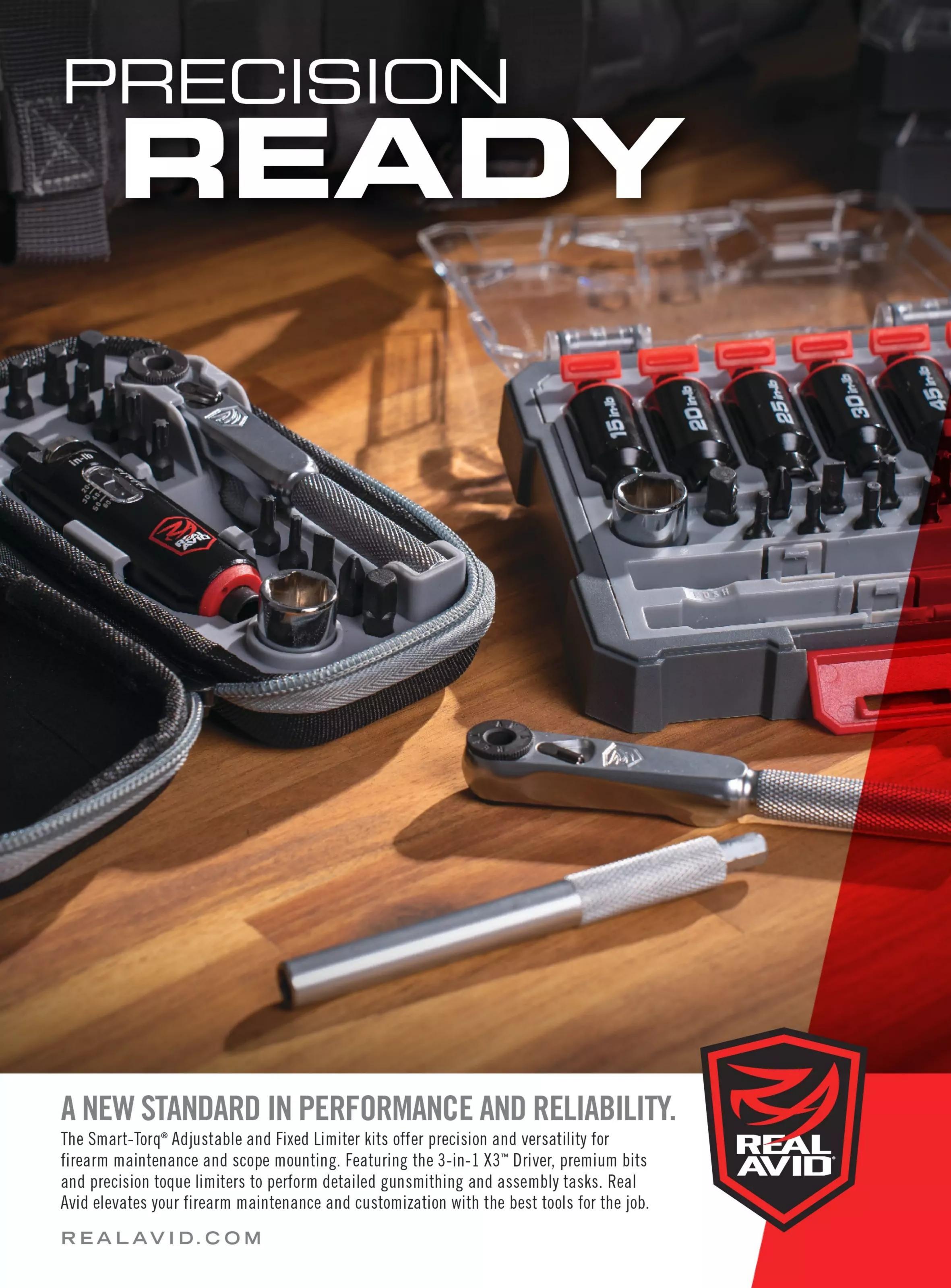
The knurled wheel on the left side of the Thermion 2 LRF XL60 is a controller that allows the user to navigate menu and zoom functions seen on the thermal screen. To the side is the "select" button.

SAFETY FIRST

When I hunt with firearms equipped with a thermal, I don't use the optic on the gun to search a field for my target. Many do because it's the only thermal they have, but it's not safe to point a firearm in the direction of a potential target that hasn't already been identified. Night vision is an acceptable substitute in certain con-

ditions, but I recommend carrying a thermal imaging monocular or a binocular. Pulsar makes those, too.

Sellmark offers Pulsar Merger XP35 and XT50 professional-grade thermals with familiar binocular handling qualities that include laser rangefinder (LRF) technology and the widest — 17.8 degrees — field of view. These start at \$5,200, but remember that the user is handling a more advanced thermal handheld that also lends itself to more immersive viewing and less eye fatigue than a single monocular. Even for the technology stuffed in it, the 35mm model has a lightweight, compact





Pulsar uses custom-spec glass lenses from Germanium Optics to see heat. Germanium glass is made of a high-density IR-transmitting material that blocks UV and VIS wavelengths.

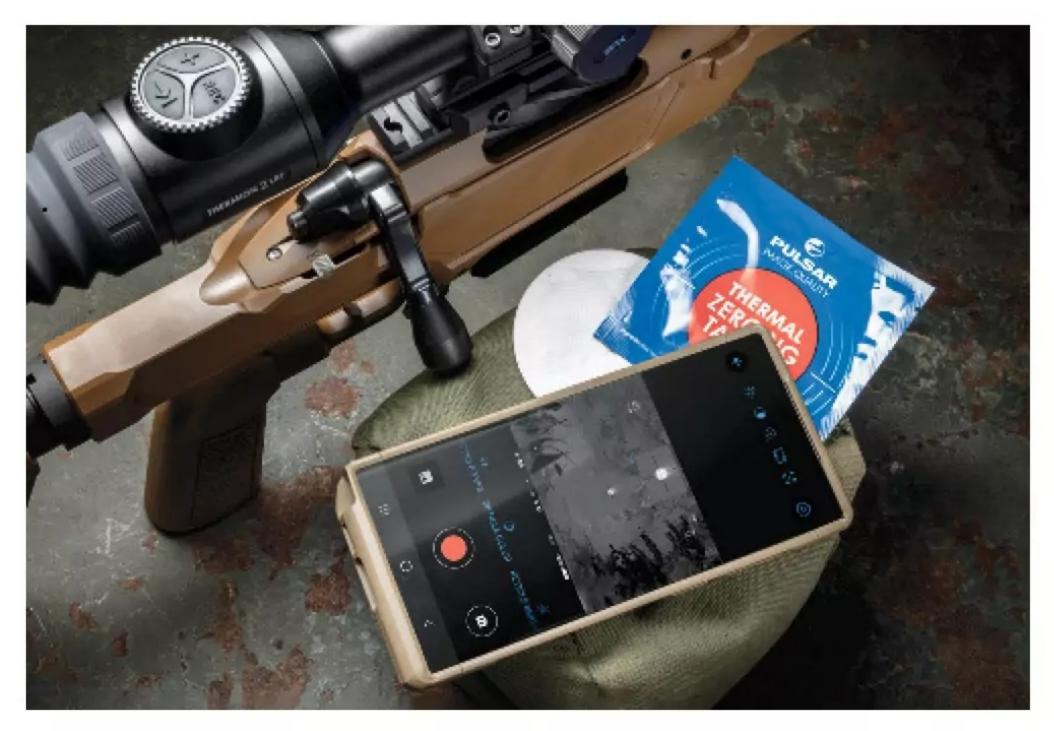


The battery compartment is where the conventional elevation turret is located. Remove the cap to access the removeable battery pack. Two batteries, charger, tools and remote switch are included.

profile. Resolution is 640x480 pixels and the frame rate is 50 hertz. These are ideal for prolonged observation situations, and particularly useful to hunting guides and outfitters. The Merger's rangefinding capability extends to a little more than 1,000 yards of the Merger's 1,350 detection range with a single measurement or continuous scanning modes. Battery life is advertised at 9 hours.

Binoculars are great for scanning a large area and providing a wide, stable field of view, but monoculars are easier to deploy if you must move quickly on your feet or hold something like a rifle. My longtime favorite has been the Helion 2 XP50 Pro 2.5-20X thermal, but it was recently discontinued. The Axion, Oryx and Telos are intuitive options with upgrades, and many configurations integrate LRF. In 2018, I first used a prototype of these Pulsar monoculars and riflescopes with LRF to discern a wild boar at 100 yards against a herd of lingering cattle at 500 yards. Both were the same size at a glance, but without the clarity of current models.

Non-LRF handhelds are the most affordable option for those interested in a thermal spotter. The Axion XQ30 Pro starts at \$1,600. It has a 2-8X magnification



Download the Stream Vision app to connect to the Thermion 2 LRF XL60. The app supports ballistic controls for cartridges and reticles, as well as the recording, sharing and transfer of video/photos.

PULSAR THERMION 2 LRF XL60		
TYPE	Riflescope, thermal	
MAGNIFICATION	2.5-20X	
OBJECTIVE	60mm	
TUBE DIAMETER	30mm	
LENGTH	17.4 in.	
WEIGHT	2 lbs., 9 oz.	
DISPLAY	AM (Micro) OLED, 2560x2560 pixels	
SENSOR	1024x768 pixels	
FRAME RATE	50 Hz	
EYE RELIEF	2.56 in.	
RANGE DETECTION	3,062 yds.	
PALETTES	8 (white hot, black hot, red hot, rainbow, ultramarine, red monochrome, sepia, violet)	
FIELD OF VIEW	11.7 deg., 22.4 yds.	
RETICLE	Crosshair, variety	
ELEVATION / WINDAGE	.63 in. per click/100 yds. (2.5X)	
VIDEO / PHOTO	.mp4/.jpg (format), 1280x960 pixel (resolution), 64 GB (memory)	
CONNECTIVITY	Wi-Fi 2.4 GHz/5GHz, Bluetooth	
RANGEFINDER	875 yds.	
BATTERY	7 to 10 hours, rechargeable; internal and external	
MOUNT	ADM 30mm QD Recon, cantilever (incl.)	
MSRP	\$7,200	
MANUFACTURER	Pulsar, Lithuania, pulsarnv.com	
IMPORTER	Sellmark Corp., 817-225-0310, sellmark.com	

range and a 384x288 pixel sensor. It's pocket-sized and — due to the magnesium-alloy housing — is lightweight at 10.93 ounces. Step up to the Axion 2 XQ35 Pro with LRF technology for \$2,000. With each price increase, the sensor capability and field of view is enhanced. You get what you pay for. The Axion 2 imagers will also connect to smart devices through Wi-Fi channel and the compatible Stream Vision 2 app for Android and Apple smart devices to transfer data or stream images. Wi-Fi allows you to transfer video and still photos from the 16 GB internal storage as well as update firmware, use the smart device as a remote





the number of elusive hogs responsible for damage to farmland.

control, and use the device as a secondary display. (For riflescopes, the Stream Vision Ballistic app enables you to create ballistic profiles, also.) A single charge provides up to 11 hours with a rechargeable lithium-ion battery. I didn't evaluate the battery life since there was only 8 hours of darkness during field testing. I plugged in a USB-C charger in the morning to power-up the internal battery and removed the external battery packs each day to put them on a recharging dock in a shed. In addition to running each thermal all night, I often woke up my friends and colleagues with middle-of-thenight texts containing pictures and video of a few kills.

Sellmark also owns Dark 30 (dark30.com). In May 2025, Guns & Ammo's editorial staff evaluated the Defiance 640 PTZ thermal camera mounted to a UTV used during a team-building adventure at Sellmark Ranch in Freestone County, Texas (sellmarkranch.com). What makes this worth noting is that pricing is estimated near the \$6,000 range and it can be mounted to almost any type of vehicle. Dark 30 integrates thermal technology into a remote-controlled 360-degree camera mounted atop the UTV. The driver and passengers shared the remote to scan the landscape and navigate more effectively. The long-range image with extremely wide fieldof-view is seen on a 10.1-inch screen that was hung like a rear-view mirror on a ceiling mount between the driver

THE STALK

With a Telos LRF XG50 monocular on my hip (\$4,100) and the latest Thermion 2 LRF XL60 (\$7,200) on a Springfield Armory Model 2020, Digital Editor Antonio Acitelli and I moved between round bales of hay and through the oaks and prickly pear. For several hours, we used our thermal-sighted rifles to effectively pick off several mature boars and sows from different groups across 6,800 acres. Acitelli carried an AR-15 in 5.56 NATO with a Thermion 2 XQ35 Pro costing \$2,600, which featured a 2.5-10X magnification range and 384x288 pixel sensor. My XL60 with LRF had a sharper 1024x768 sensor and wider 2.5-20X magnification. The Thermion 2 LRF XL60 also recorded video and provided premium photo resolution, but those performance figures mattered little when adding up the number of hogs we took down.

There's a satisfying *thwack* that returns to the ear when you've made a solid hit. I made several of them that first night, usually aiming just behind the ear. I prefer to hunt hogs with a suppressed bolt-action in .308 or 6.5mm because the sound is minimal and result is definitive. The Model 2020 was an easy choice for me.

My first hog on this hunt was taken at sunset from a tower blind. The boar was alone, taking a shortcut through a field in front of me. After he went down, nothing else moved until nighttime. We transitioned to KUTZ *adj.* Deutsch. 1a. A comparatively short length. 1b. Kompakt.



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the UTV, which was equipped with Dark 30 to cover more ground. Following up on a shot and successfully hitting a subsequent pig at night was a rare feat because of the tall grass and thick brush that insulated the treelines. Pigs were ready to escape and sensed the danger.

A semiautomatic rifle wasn't necessary for me since I tend to take very deliberate shots. Acitelli used his AR-15 to great effect though. After piling up several hogs in the fields, the off-road adventure ended in a game shed where we took the largest of our boars and hung them on a scale. Whether it's quantity or weight, hog hunting for depredation always turns into a competition. Acitelli bested me that weekend: My largest boar weighed 159.74 pounds while his weighed 221.14.

Of note, the Dark 30 was particularly useful in quickly locating hogs that were shot and expired at a different location. It allowed us to pursue several groups before we tired for the evening. (Fully charged batteries never lost power before we did.)

Though Pulsar thermals offer eight-color palette combinations to discern temperature and gradations, I set my monocular, scope and Dark 30 screen on the UTV to display "white hot." Warmer temperatures contrast brighter for me, but your preference may be different. With the action often unfolding quickly, it was a seamless transition to go from spotting a group of rooting hogs in the UTV, to locating the largest pig with the monocular, to then shooting it with my rifle.

As the night continued — and hunters tired — it became conve-

SPRINGFIELD ARMORY MODEL 2020 WAYPOINT

TYPE	Bolt action		
CARTRIDGE	6.5 Creedmoor (tested)		
CAPACITY	5 rds.		
BARREL	22 in., 416R stainless steel, 1:8-in. twist (tested)		
LENGTH	43.5 in.		
WEIGHT	7 lbs., 3 oz.		
sтоск	Carbon fiber, hybrid profile, M-LOK, QD cups (tested)		
FINISH	Evergreen camo (stock); Cerakote, green (H-264) (barrel/action)		
TRIGGER	TriggerTech, 2.5 lbs. to 5 lbs., adj.		
SIGHTS	None		
MSRP	\$2,173		
MANUFACTURER	Springfield Armory, 800-680-6866, springfield-armory.com		

nient to leave non-hunters at the UTV, while the guide and gunman stalked a coyote or group of hogs. Those left behind did not miss out on the action, though. The Dark 30 kept the others engaged with the stalk, while some continued to scan the area with a thermal monocular. For those within Wi-Fi range of the Thermion 2 LRF XL60, users could view real-time images remotely while also recording video or taking photos with their smart device through the Stream Vision 2 mobile app. Download the app through Google Play or the Apple App Store. The app turns the device into a remote, as well, and stays current through over-the-air firmware updates. The video and photos may also be stored to free space in the Stream Vision 2 Cloud storage made available to users.

SIGHTING IN

Zeroing is recommended at a temperature close to the rifle-



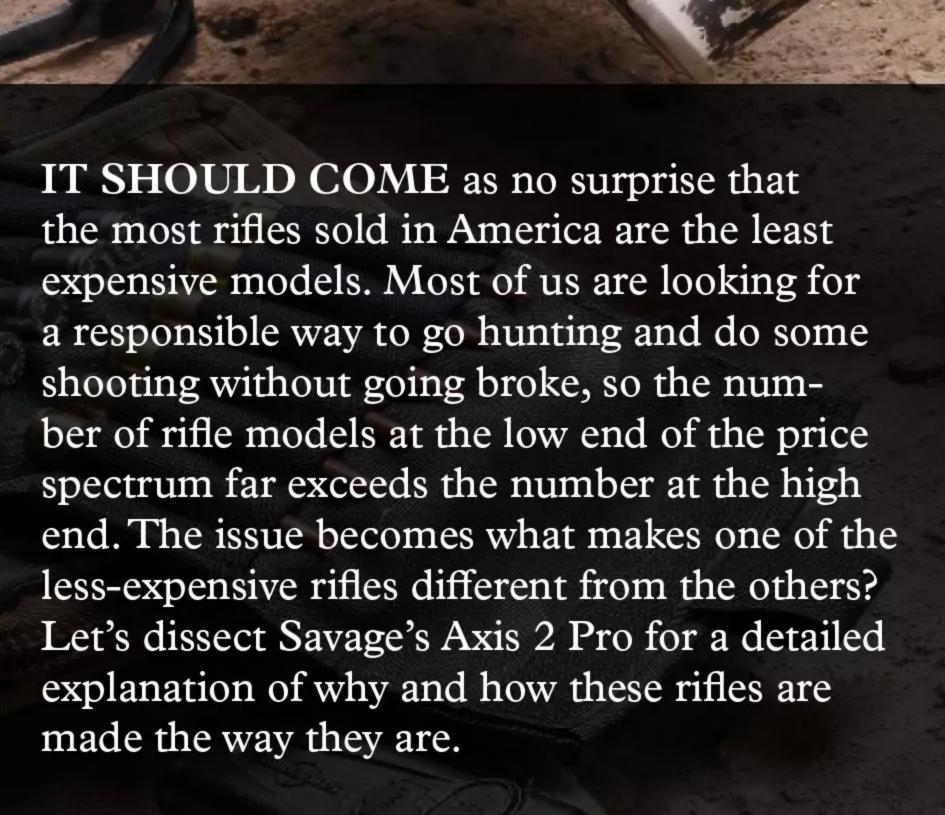
scope's operating temperature. With "hot" aiming point downrange, I prefer to boresight the thermal optic to the barrel. This is easy with bolt actions; remove the bolt and look through the bore and adjust the optic at a specific distance until the reticle crosshair intersects the center of the target through the bore. This is also straightforward with an AR-15 or similar-type of rifle, but you must remove the lower receiver and bolt carrier assemblies to peer through the barrel. I also prefer to do this boresighting on a benchrest with bags for stability. Once boresighted, I reassemble the rifle and take a shot at that distance.

To align the reticle with the impact point, go to the main menu, and then click "Reticle & Zeroing," which has a crosshair icon, then click "Add new distance" with the plus icon to set the zeroing distance. (My preference is 100 yards.) Enter the "Windage/Elevation" in the submenu, and while holding the reticle at the aiming point, move the auxiliary cross "X" until it is aligned with the impact point by rotating the controller ring. To change the cross movement from horizontal to vertical, press the controller button. To enhance the accuracy of zeroing, you may also want to consider changing the magnification in the menu. When zeroed, press and hold the controller button to save the new position for the reticle. Exit the zeroing menu by long pressing the controller button again. Fire a second shot and repeat, if necessary, until the point of impact matches the point of aim. Now I've done it a few times, it usually takes me three to five shots to zero these thermals to a rifle.

MAINTAINING THE ADVANTAGE

Some farms and ranches in the southern states have made hog hunting part of their business model. We will never eradicate coyotes, hogs or vermin, but there is an increasing need to manage these populations that use crops and livestock for sustenance or cover. A way for land managers to strike a balance is to look at acquiring Pulsar's latest thermals and employ them wisely. Whether the firearm is a bolt-action, semiautomatic or single shot matters little. Equipping a dedicated firearm with a thermal and carrying a handheld to spot with can guarantee you will always own the night across your property. CM





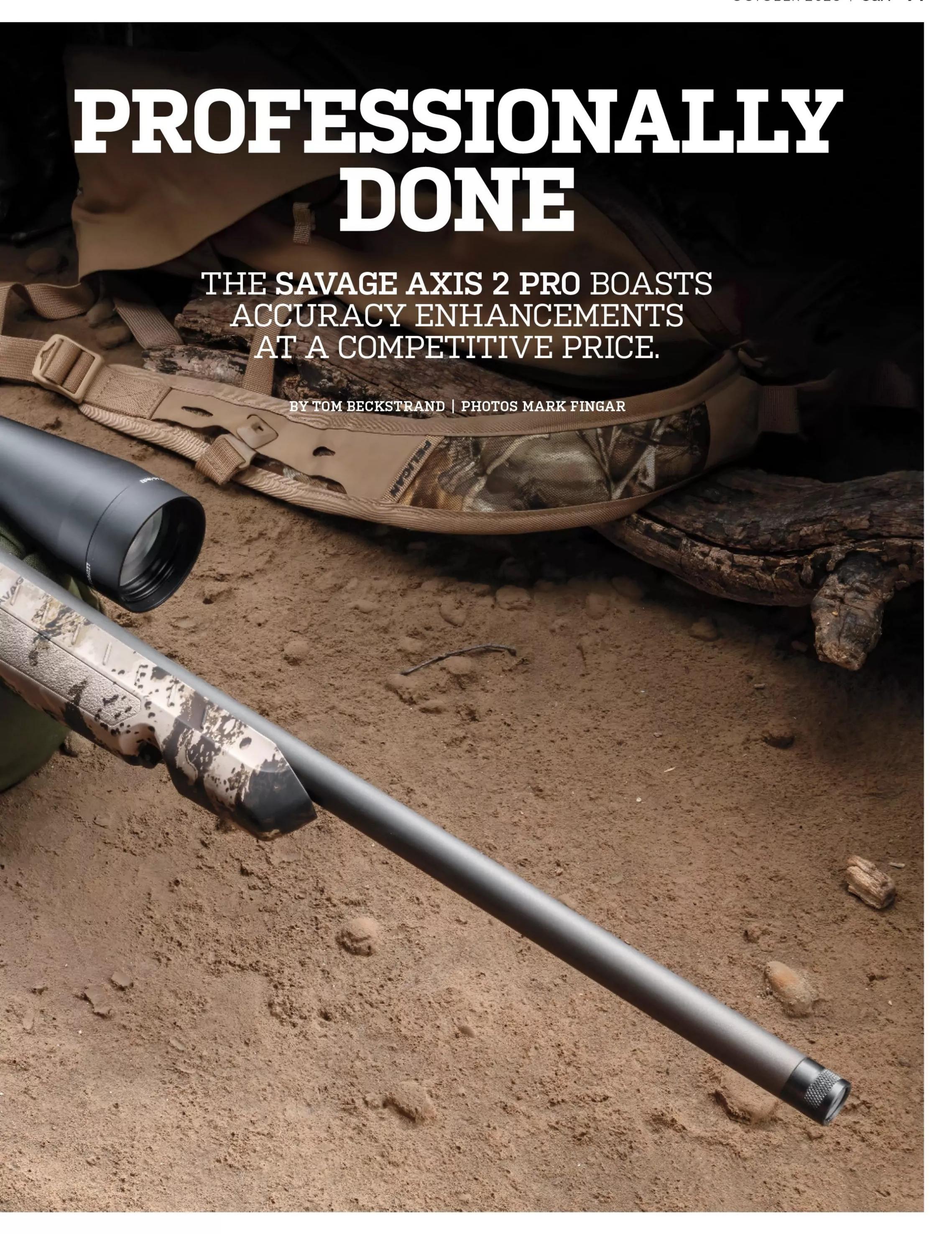
THE BARRELED ACTION

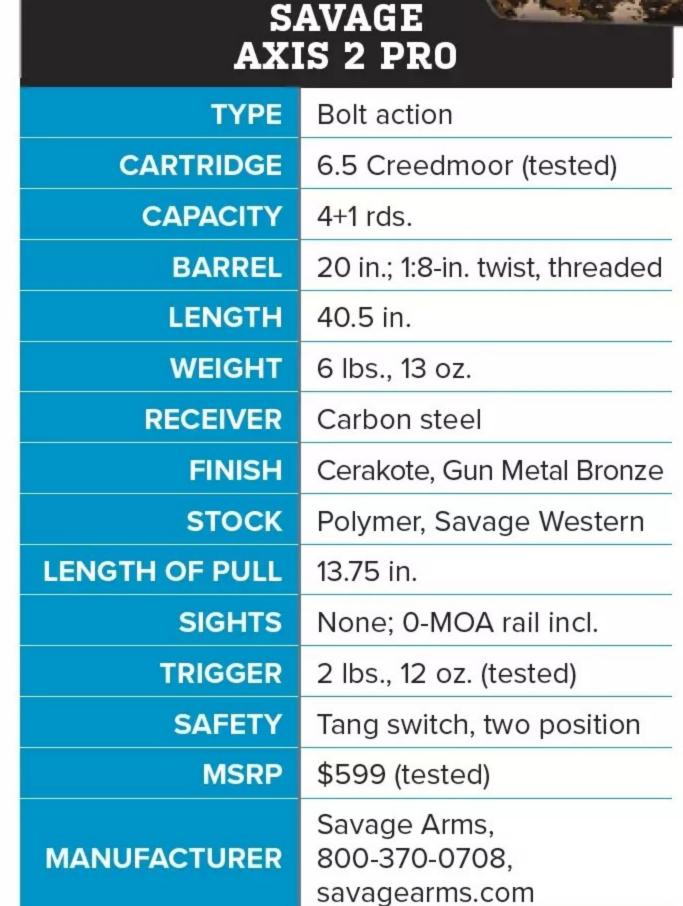
The heart of any rifle is the receiver or "action." The Savage Axis 2 receiver is the same as the original Axis, and its design shows why it both performs well and isn't expensive to manufacture. The receiver body is a thick-walled steel tube with raceways cut into the interior at 3 and 9 o'clock. The body is thick, so the Axis has more receiver for the action screws to grab. I always pay attention to how much of the action screw actually attaches to the receiver because this is what holds the receiver in the stock or chassis. More screw engagement will likely result in less erratic accuracy, often known as "fliers." Of all the rifles at the lower end of the

price spectrum, I don't think anyone has more action screw engagement than the Axis. Savage has always had a reputation for accuracy, and this is one of its secrets.

Savage uses a steel insert in the stock that slips into a recess in the receiver body as a recoil lug, similar to what Tikka does with its rifle. This is a tested and proven way to keep receivers from slipping rearward under recoil while still minimizing the amount of machine time (and cost) of the receiver body.

Finally, Savage uses a trigger system unlike anything else I've seen. Most manufacturers have the interface between the trigger and the bolt's cocking piece located at the 6-o'clock position. Savage has its at 3-o'clock, when looking into the back of the receiver. The Savage system is simple and requires less machine time and cuts to the receiver because the bolt stop and trigger interface are the same piece of metal, and it comes through a single slot in the side of the receiver. Just about every other manufacturer that I can think of has the trigger interface in one spot and the bolt stop in another. This makes for twice the complication and expense when manufacturing.





Speaking of triggers, the Axis 2 has Savage's AccuTrigger. This is one of the most mimicked triggers on production rifles today. The AccuTrigger uses a sliding blade in the center of the shoe that prevents the rifle from firing, should the sear slip off the trigger after an impact or from rough handling. The AccuTrigger was revolutionary when it came out because it was the first factory trigger in decades designed to give light pull-weights. The only way to get light pull-, or let-off, weight

in a trigger is to either reduce the amount of trigger/sear engagement or to reduce the spring weight that pushes the two together. Reduce either one and the odds of an accidental discharge increase when the rifle is jarred or dropped. The AccuTrigger uses that blade in the center of the shoe to block the sear from firing the rifle, unless the blade is fully depressed and flush with the trigger shoe. The secondary advantage of the center blade is it allows the shooter to feel "trigger" movement before firing the rifle, as a two-stage trigger. When folks are amped up — such as when seeing

a monster buck through the scope
— or scared, we don't feel triggerpull weight, but we can still easily
detect trigger movement. That center blade has a lot of travel, so even
the neophytes and easily excitable
among us will register that they are
about to fire the rifle when their
finger moves rearward.

Finally, Savage's system of putting the barrel on the receiver is so

Finally, Savage's system of putting the barrel on the receiver is so ingenious that it has been copied and used by many other custom gun builders. The barrel has no shoulder that requires a gunsmith

to set headspace. The barrel simply threads into the receiver until headspace is correct (established by "Go" and "No-Go" gauges), then a jam nut is tightened until it contacts the receiver face. This reduces the skilled manpower required to build rifles and eliminates even more machine time, further reducing cost.

STOCK, THREADS & FINISH

The stock and the finish applied to the Axis 2 Pro are what visually separate it from the Axis 2. The barreled action is finished with Cerakote, a hard ceramic



The AccuTrigger is user-adjustable, featuring a safety lever in the center that must be depressed before the trigger can be operated. The triggerguard and "bottom metal" are molded polymer.



The Axis 2 Pro models maintain Savage's standard-shank barrel locking system to secure the barrel to the action. The optic rail smartly extends over the lock nut for scope-mounting flexibility.





An upgrade from the Axis 2, the Axis 2 Pro features a new texture and contour on the forend. The buttstock (above, top) has also been updated. The palm swell of the pistol grip is more vertical.

coating that is highly resistant to wear and corrosion. The stocks of the Axis 2 and Axis 2 Pro are identical in shape, but differ in color. Pro models receive a camouflage finish that contrasts well with the Cerakote.

The Axis 2 stock represents what's new with rifles in this price category. It is injection-molded polymer, but much more rigid than what we found on these rifles even five years ago. The stock is light, but it has internal reinforcing ribs that make it rigid. The comb is as high as it can be made without interfering with bolt removal, and the grip is nearly vertical, reflecting what most riflemen today desire.



Front and rear sling-swivel studs are recessed into the forend and toe, protecting the hands. The bolt is a two-lug, 90-degree design with a sliding extractor and plunging ejector within the bolt face.

Two sling-swivel studs are recessed into the forearm and toe. This makes attaching a sling easy, but it also keeps the studs out of the way of bags or hands that may be used to support the rifle. I don't know how many sling-swivel studs I've had rake across the top of my left hand when it's wrapped around a rear bag supporting the toe, but it hurts. The Axis 2 stock means that's no longer a risk.

Close inspection of the Axis 2 Pro shows the barrel is shorter, heavier and threaded when compared to



Finished in a Gun Metal Bronze Cerakote that complements the stock's camo pattern, the 110 action is fitted with a 0-degree rail and serialized at the rear of the receiver.



The push-to-fire safety switch is conveniently positioned for the thumb. Even with a 90-degree lift, the bolt handle has plenty of clearance for scopes including the Leupold Mark 4HD. \$1,400

the Axis 2 tubes. Savage refers to the Pro's barrel as a "heavy sporter," and threads it for use with a suppressor. Just about every Pro comes with a 20-inch barrel, with the exception of the one chambered in .350 Legend; it has an 18-inch barrel. The prevalence of short

barrels occurs because Savage sees these rifles being used frequently with suppressors. The barrels have a heavier contour than the regular Axis 2 rifles to provide a solid shoulder against which the suppressor or suppressor mount can seat.

AT THE RANGE

Performance at the range of the Axis 2 Pro was excellent, and about what I would expect from this class of rifle. Savage has a couple of accuracy tricks up its

sleeve. The first is action screw engagement mentioned above and the other is their floating bolt head, a feature I wasn't expecting on a less-expensive rifle. The floating bolt head is an old machinist trick to





The steel-body detachable magazine system with polymer floorplate fits neatly into the 110 action to position rounds smooth, center feeding into the chamber. The 6.5 CM mag holds four rounds.



The Axis 2 Pro models have threaded barrels for use with suppressors. Savage entered the suppressor market in 2025 with its AccuCan AC30 B.O.B. "B.O.B." refers to its "Back Over Barrel" mounting design. \$800

ensure the bolt is centered and concentric to the chamber. Many lathes have floating bolt heads to allow them to the center of the bore when reaming a chamber, for example. The floating bolt head in the Axis 2 allows the bolt head to have equal pressure between the

lug abutments in the receiver while not forcing the round off-axis or inducing runout between the loaded cartridge and the centerline axis of the bore. I was so confident in the accuracy potential of this rifle, I shot

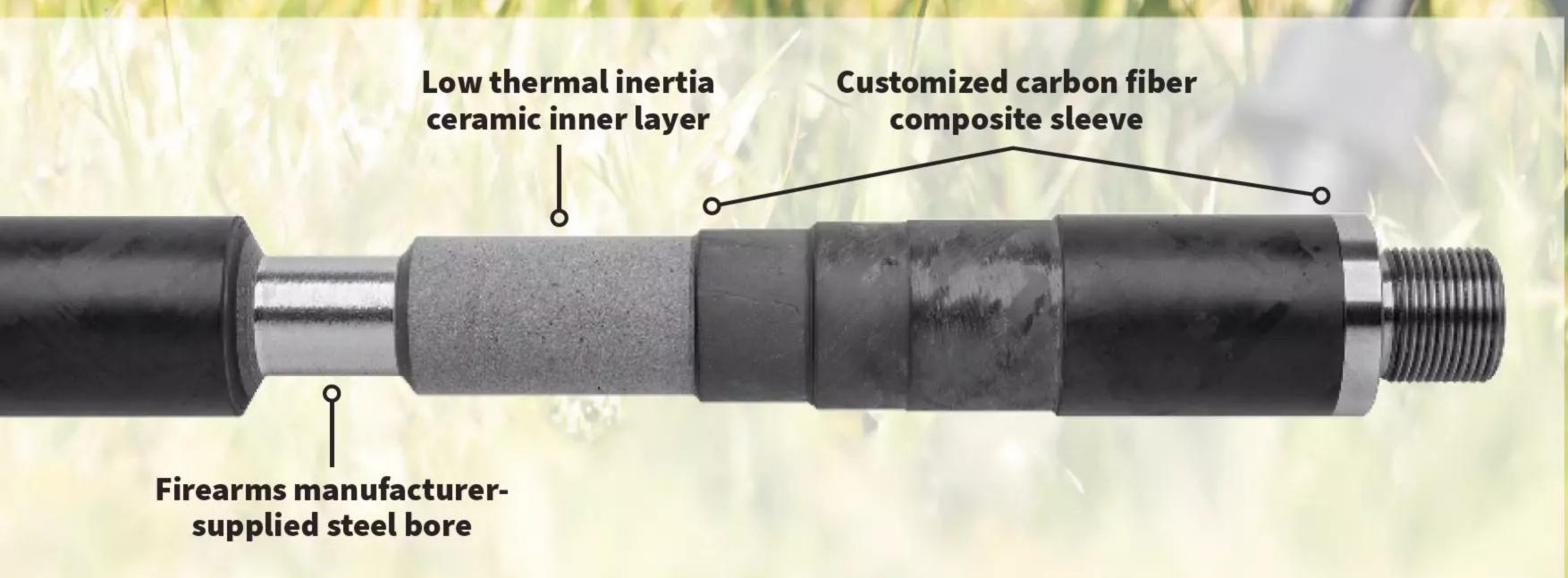
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five-shot groups instead of the normal three used on hunting rifles like this one. The attached table shows how it performed.

The Pro also has a slightly different scope base than the regular Axis 2. The Pro has a

one-piece Picatinny-style rail base that spans the length of the receiver. This allows the shooter to mount the scope easily without being confined to two small sections of scope base that can be problematic,

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depending on the rings and how much maintube real estate is available.

Another feature of the Axis 2 that I noticed was the detachable box magazine. I've shot Savage rifles in the past that had box mags with questionable retention in the bottom metal. The magazine on this rifle locked firmly in place and fed beautifully. When I asked Savage about it, they said that the magazine retention system in all Savage rifles had been improved about three years ago with the addition of a second spring Providing additional tension on the magazine catch. I noticed

> and think it is a worthy addition to the Axis 2 Pro that further enhances the performance of an already great rifle.

The class of less-expensive rifles available today far outperform from just a few years ago. Savage, through thought-

models in this category

ful design and by leveraging premium features such as its floating bolt head and AccuTrigger, has built one of the most excellent rifles available in this category with the Axis 2 Pro. CM

PERFORMANCE

LOAD	VEL. (FPS)	ES	SD	BEST GROUP (IN.)	AVG. GROUP (IN.)
Hornady V-Match 100-gr. ELD-VT	3,086	80.3	27.3	.86	1.03
Federal GMM 140-gr. BTHP	2,696	33.2	13.4	.96	1.04
Hornady Match 140-gr. ELD-M	2,563	53.9	17.3	1.12	1.34

Notes: Accuracy is the average of five five-shot groups fired from a bench rest at 100

yards. Velocity is the average of 10 shots measured with a Garmin Xero C1 Pro chrono-

graph placed adjacent to the muzzle.



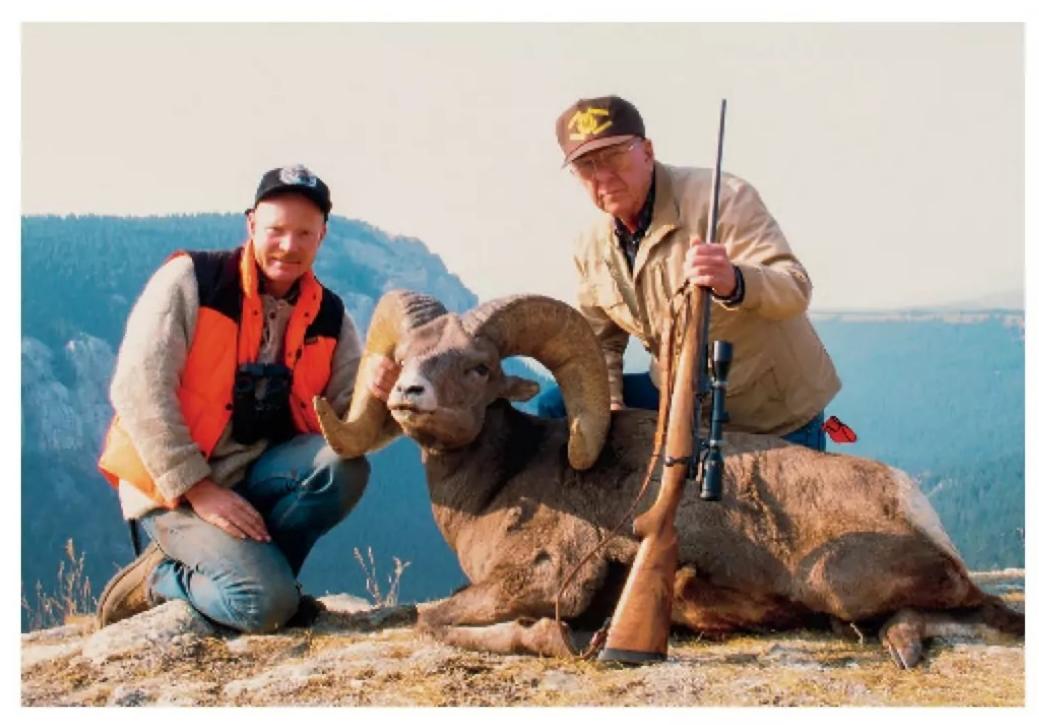


AMMUNITION

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Craig Boddington and his dad pose with Craig's Montana bighorn taken in 1994 with a Dakota in .270. A handloaded 140-grain Nosler Ballistic Tip was used to take this first of many wild sheep.

GUNWRITER JACK O'CONNOR (1902-1978) was the .270 Winchester's best-known and most outspoken proponent, almost to a fault. It's nearly forgotten that the professor had other lifelong favorites: 7x57mm, .30-'06 Springfield, and .375 H&H Magnum. Nor is it widely remembered that he wasn't shy about using big guns for extra-big game. He owned .416s, a .400 Jeffery double, and a .450 Watts, forerunner to the .458 Lott.

Also nearly lost to history is that his wife, Eleanor, was an accomplished hunter. Lions and tigers and bears ("oh my!"), along with some big rams. Neither O'Connor liked recoil, and Mrs. O'Connor hated it. She used her husband's .270s, but she was more a 7x57 girl. She took her big cats and elephant with the .30-'06, which she considered a cannon. Professor

O'Connor wrote much — and wrote well — about his beloved .270s. Even today, as the .270 Winchester reaches 100 years and remains popular, it's difficult to separate the cartridge from the O'Connor legacy.

O'Connor didn't start the .270 legend. He had one early on, didn't keep it long, and didn't take the .270 under his wing until it was a teenager. The .270 came of age about the same time O'Connor emerged as America's dean of gunwriters and

adopted the .270 as his personal talisman. It was also around during the period when post-war Americans started hunting again. The .270 became extremely popular, and O'Connor had much to do with that. He still does, 46 years after his passing.



Donna Boddington used her MG Arms Ultra-Light in .270 Winchester with a giraffe finish to take this excellent old desert bighorn in Mexico's Baja Sur. The bullet was Hornady's 130-grain Interlock.



At 6½ pounds — including Leupold VX-3I Boone & Crockett scope — Donna's MG Arms Ultra-Lite in .270 is not without recoil. Everyone has different recoil tolerance, but she finds it comfortable.



Donna Boddington and friend Zack Aultman look over a nice Georgia whitetail taken with Donna's MG Arms Ultra-Light in .270. The .270 is just about perfect for all North American deer hunting.

less, but recoil wasn't an issue for me.

An early takeaway of mine was that hunting isn't a spectator sport. When it was obvious I should have my own rifle, we settled on a short, light, MG Arms Ultra-Light in .270 Winchester built on a skeletonized left-hand Model

Donna Boddington

(**DB**): Like most women, I didn't grow up reading gun magazines, and I didn't hunt until my 40s. I've learned a lot, but cartridge nomenclature is almost nonsensical to me; the .30-'06, .270, 7x57, this-orthat "Magnum." How do you know which is more powerful and shoots farther? People have different recoil tolerances, too. I did my first hunting with a Ruger M77 in .30-'06. If it kicked too much, I wasn't aware. I also used Craig's 7x57. It kicked



Red stags are supposed to be smaller than elk, but this huge-bodied Argentinian stag wasn't. Donna Boddington took him cleanly with one shot from her MG Arms in .270 with a 130-grain bullet.

700 action (mgarmsinc.com). I had little input in choice of cartridge. To me, ".270" was just a number — a good number. I've never looked back.

That rifle served me on six continents, hard enough that it's been back to MGArms for refinishing and a new barrel. I don't have Craig's experience with numerous cartridges, but I have other choices such as a Blaser R8 with .270 and .308 Winchester barrels, as well as a Dakota M76 7mm-08, both with left-hand bolts and short stocks.

I use larger cartridges for larger game. I have a .375 H&H barrel for the Blaser, and another light MG Arms rifle in .376 Steyr. Still, for mountain game, African plains game and on up to elk, the .270 has been my go-to for 20 years. I've never found it wanting.

Craig Boddington (CB): The first game I took with a .270 were my first black bear and my first whitetail, both in 1974. I've had one or another .270 ever since, however, I didn't hunt with the .270 much in the '70s and '80s. I was already a wannabe gunwriter, and no young writer dared tread on Professor O'Connor's coattails, even years after his passing.

I was also a child of the first magnum craze. I knew the .270 was excellent for deer, but I wasn't sure about its efficacy for elk. For African plains game, I was so happy with the .30-'06 that I didn't take a .270 to



Craig Boddington's best-ever mule deer — also the biggest-bodied deer he'd ever seen — was taken in Alberta with a Kimber Mountain Ascent in .270. He fired a 130-grain Barnes TTSX.

Africa until the late '90s. I used belted magnums for my early elk hunts and for my first sheep hunts. In 1994, I drew a Montana bighorn tag and made a conscious shift, taking a fine ram with a Dakota in .270.

A year later, I used a Browning in .270 for my first Asian hunt, where I flattened a big ibex in Turkey. Unlike Donna, on mountain hunts I go back and forth. I've taken numerous sheep and goats with .270s, but also an equal number with fast .30s and a few with quick 6.5mm and 7mm cartridges.

I finally dared to hunt elk with a .270 in February 2002, a year before I shipped out to the Persian Gulf. My old friend and mentor Mike Ballew — then director of the NRA Whittington Center — unabashedly hates recoil and loves the .270; he thinks of it as a "big gun." My hunting partner Chub Eastman carried a 9.3x64 Brenneke, which is a definite big gun. I didn't want to mess up in front of either Ballew or Eastman, so there was trepidation. Using the same Dakota .270 with a 150-grain Partition, I shot a good bull at 400 yards. One step and he went over backwards.

I'll often choose a larger cartridge for elk, but that's the last time I've had concerns. The older I get, the more I think O'Connor was right. His beloved .270 Winchester is just about perfect for deer-sized game, which includes all sheep and goats, and more than

I ONG-DANGE COMPADISON

	VELOCITY (FPS) ENERGY (FTLBS.)					DROP (IN.) 200-YD. ZERO				
LOAD	MUZZLE	400	600	800	1000	100	400	600	800	1000
.270 WINCHESTER										
Horn. Superformance 130-gr. SST	3,060 2,702	2,277 1,496	1,933 1,079	1,625 763	1,362 536	1.4	-18.5	-64	-147.4	-285.3
Win. Exped. BG 140-gr. AccuBond	2,950 2,705	2,203 1,508	1,874 1,092	1,580 777	1,332 551	1.6	-19.9	-66.4	-154.7	-303.3
Fed. 150-gr. Sierra GameKing BTSP	2,850 2,705	2,130 1,510	1,817 1,100	1,537 787	1,302 565	1.7	-21.4	-73.6	-168.4	-322.6
6.5MM CREEDMOOR										
Horn. Prec. Hunter 143-gr. ELD-X	2,750 2,401	2,200 1,536	1,950 1,207	1,719 939	1,511 725	1.8	-21.5	-71.9	-159.1	-293.6
7MM REMINGTON MAGNUM										
Remington Core-Lokt 175-gr. PSP	2,860 3,178	2,057 1,644	1,713 1,141	1,417 780	1,187 548	2	-22.7	-77.5	-180.8	-354.1

The Model 54 was the first successful bolt-action centerfire for Winchester, and the first to chamber the .270 Winchester. It was produced until 1936, modified, and reintroduced as the Model 70. (Kent Harvey Collection)



When Donna needed a versatile lightweight rifle that wouldn't loosen her fillings, the choice was easy; I suggested a .270. Numerous new 6.5mm, .270, and 7mm cartridges have come along in the last 20 years, but I wouldn't change that choice.

TECHNICAL CHALLENGES

The .270 Winchester was developed in 1923 and introduced in 1925 in Winchester's first bolt-action, the Model 54. The M54 was the forerunner to the

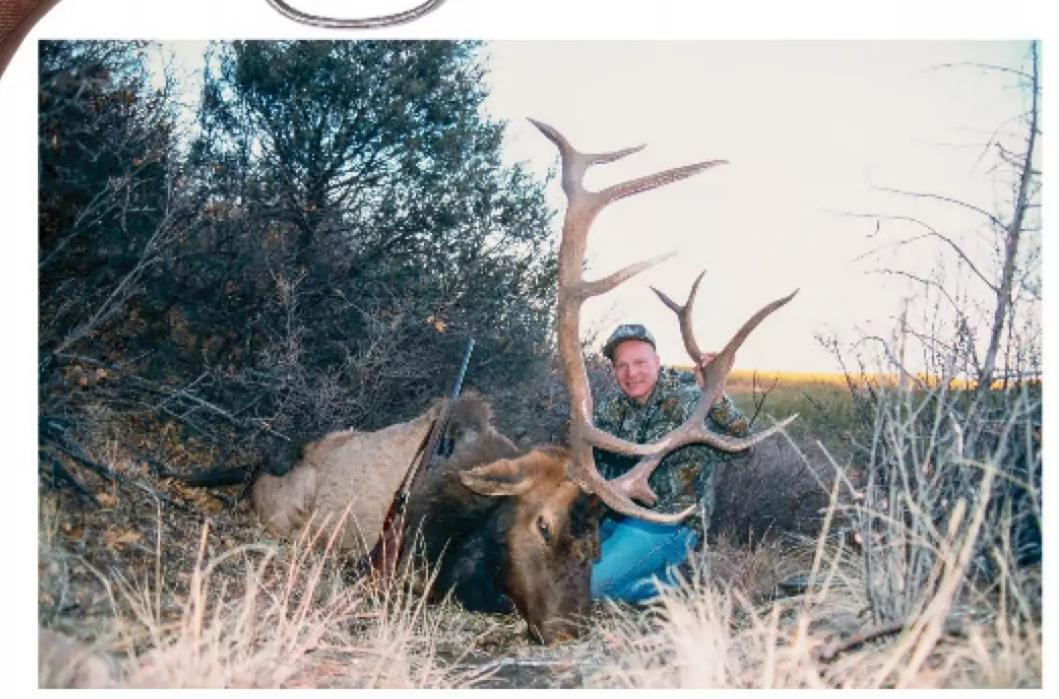
Model 70. The .270 today is much as it was in 1925, its historical impact long since achieved.

When World War I broke out, Marlin, Savage and Winchester were lever-action companies. Savage stole a march in 1915 with the .250-3000 (.250 Savage). Developed by Charles Newton for Arthur Savage, it was the first commercial cartridge to break 3,000 feet per second (fps). To this day, 3,000 fps remains fast. In 1915, it was elusive because smokeless propellants were still evolving.

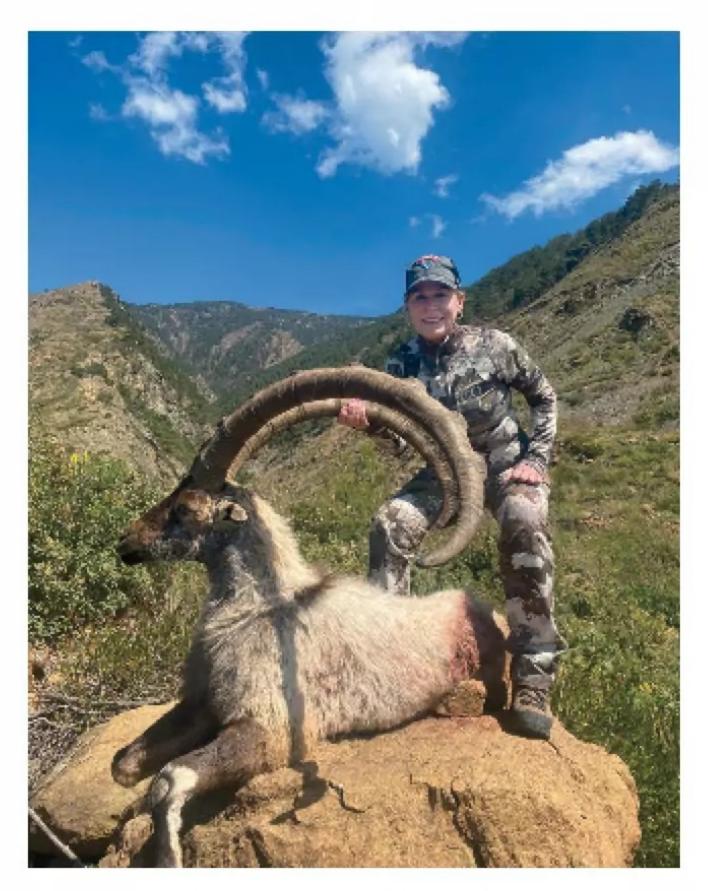
During World War I, the .25-06 was developed at Frankford Arsenal. The short and efficient .250 Savage could only break 3,000 fps with light bullets. The goal was to beat the .250 Savage, but with

heavier bullets. With the propellants available in 1918 the .25-06 could not. In 1920, Savage brought out the .300 Savage, plus America's first commercial boltaction — the M20. Sized to .250 and .300 Savage, it was also the world's first short bolt-action. Winchester was left behind, but it was not yet critical because leveractions dominated and scope use was minimal. For those who wanted bolt guns, there were plenty of surplus Krags, 1903 Springfields, and 1917 U.S. Enfields.

Cartridges were a bigger problem. The .30-'06 ruled and Winchester lost the velocity race. It needed a car-



Taken in New Mexico in 2002, this was Craig Boddington's first ".270 elk"; one 150-grain Nosler Partition at 400 yards. On that day, he accepted that O'Connor was right: With good bullets and careful shot placement, the .270 is adequate for game up to elk.



Donna Boddington used her MG Arms in 270 with 128-grain Copper Rose bullet to take a Bezoar goat in Turkey, March 2024.

tridge that was faster and shot flatter than the .30-'06 — and kicked less. The .25-'06 was obvious, but Winchester's engineers likely rejected it for over-bore capacity. It probably also looked at Canada's .280 Ross and Charles Newton's .256, .30, and .35 Newton cartridges. All were fast, rimless, and unbelted — far ahead of their time — but with available powders they couldn't quite reach 3,000 fps with adequate bullet weight.

Winchester was surely aware of the U.S. Army's .276 Pedersen project, using a .284-inch bullet in a shorter case of smaller diameter. It likely rejected a commercial version as too slow. Going back to the .30-'06 case, engineers must have

also considered a 6.5-'06 and a 7mm-'06, but perhaps rejected them because they were built on European bullet diameters.

Why a .277-inch bullet? Among many experiments on his rimless bottleneck case, Peter Paul Mauser developed a 6.8mm Mauser for China; bullet diameter was .277. It was not produced and is so obscure that even Frank Barnes' "Cartridges of the World" has no photo or case dimensions. Maybe Winchester's engineers knew of it? Otherwise, where did they get .277? A key design goal was clear: Beat Savage and exceed





The Asian wapiti is, visually, almost identical to American elk. Donna Boddington used a Blaser R8 with .270 Winchester barrel and 130-grain Hornady Interlock to take this stag in Mongolia.

3,000 fps with a bullet heavy enough for large game. That wasn't easy with 1920s propellants.

We say, "The .270 is based on the .30-'06 case necked down." That's not precisely true. To wring out that last little bit of velocity, Winchester's engineers went back to the already obsolete .30-'03. It had a longer 2.540-inch case, while Model of 1906 (.30-'06) was shortened to 2.494 inches. Greater capacity put the .270 over the hump. The original load stated a 130grain bullet at 3,140 fps. In 1925, it was the world's fastest cartridge, slightly faster than the .300 H&H Magnum, which was also introduced in 1925.

The standard 130-grain load was downgraded to 3,060 fps, where it remains. Soon added, a 150-grain load at 2,850 fps and later a 140-grain load at about 2,950. The actual parent cartridge (.30-'03) is just one of several misconceptions about the .270. Let's explore a few more.

FIVE .270 MYTHS

"Jack O'Connor took all his wild sheep with the .270." Like fingernails on a blackboard, it's not true. O'Connor didn't take a ram with the .270 until his first Alberta bighorn hunt. Only one of his Sonoran rams — his last in 1946 — was taken with a .270. He also took desert bighorns with .257 Roberts, 7x57, and .348 Winchester. From the 1940s, he took most of his wild sheep with .270s but carried other cartridges on mountain hunts.

"The .270 is not accurate." Astute and respected



A big zebra stallion weighs about 800 pounds, similar to a bull elk, and tough. This is the upper end of sensible game for the .270. Using the shoulder chevron as an aiming point, Donna Boddington took it with a single 130-grain Interlock from a Blaser R8 in .270.

gunwriting colleagues have perpetuated this. Even so, we call it "horse-pucky." The .270 was designed as a hunting cartridge, not as a target cartridge. As such, .277 bullets have been primarily hunting bullets; there are few target or match bullets. Among the .270s we've owned, and the dozens of test guns we've grouped, we have yet to see a woefully inaccurate .270 Winchester. Sure, few would win in a benchrest match, but nor will most sporting rifles — especially with hunting bullets. However, the .270s we've owned are all sub-MOA rifles, and much better on good days. They are often wonderfully non-finicky, too.

"The .270 doesn't shoot flat." This denies mathematics. From 1925 to 1945 — when Roy Weatherby entered the scene — the .270 was the fastest and flattest-shooting factory cartridge. Also loaded with hard-hitting round-nose bullets, it was designed for and loaded with spitzers. The low-drag bullets we use in 2025 didn't exist then, and Winchester's design goal was clearly velocity. So, it was given a 1-in-10-inch twist capable of stabilizing hunting bullets of credible weight that could be pushed fast. It is not a 1,000-yard target cartridge. On game — including long or extreme ranges — just study the charts. The .270 shoots plenty flat enough to simplify shooting to a quarter mile and more, still a far poke on game and retaining enough energy when the bullet arrives.

"The .270 isn't enough gun for elk." Especially with today's bullets, the .270 is an effective, mildkicking minimal choice.



Left to right: .250-3000, .25-06 Remington, .276 Pedersen, .30-'06 Springfield, and .270 Winchester In 1923, the .250-3000 (.250 Savage) was the cartridge Winchester had to beat. The .25-06 was over-bore-capacity, and the experimental Pedersen cartridge was too slow. Instead of using the .30-'06 case, Winchester stepped back to the slightly longer .30-'03 case to wring out more velocity.

DB: I took my first elk in Colorado when my MG Arms .270 was new; it was shoulder shot and down. Red deer are usually a third or so smaller than elk, but a couple years later, I took a huge-bodied old stag in Argentina. It was thick and he ran over a lip after my shot before piling up in a deadfall; again, one shot from the MG Arms .270.

When we hunted Mongolia in 2018, I used the Blaser with a .270 barrel. I had a permit for Altai wapiti or maral stag, which is visually identical to our elk. Craig was going for argali first, so they split us up and I was left to do this hunt on my own with local guides. What I didn't know: I was the first person to hunt this area because it had been closed for years.

There was a chief, a game ranger, and at least three other "VIPs" in robes and on their horses. All watched me check my rifle — rather, checking to see if I could shoot. I could tell they didn't have much hope. It was snowing and they wanted me prone in the snow, shooting uphill. It wasn't my finest hour, and probably not theirs either.

The wapiti should have been bugling, but the next day was cold, windy, and still snowing. We kept moving, glassing and listening, seeing and hearing nothing. Another cold night in my tent; next day, it was much the same. Eventually we came to a cut between stands of pine forest, still snowing steadily. At that point my team decided we should sit it out. The cut was covered in snow, and we huddled up against some boulders.

It was looking dismal, but I kept glassing. Sitting cold and wet, it's easy to lose your attention. I kept glassing and a beautiful bull started walking across the cut about 200 yards away. I looked back at the guides, but they weren't looking in that direction. I tapped the closest one and pointed; they got animated. Slowly, I raised my knee and used it for a rest. I took the shot as soon as the crosshairs settled on the bull. It was spectacular to see that big boy do a back flip and go down. The look on the faces of the guides



Left to right: .280 Ross; .256, .30, and .35 Newton; and .270 Winchester. Winchester's engineers must have looked at Canada's .280 Ross and the Newton cartridges. All were fast, rimless and unbelted, but none could quite get to 3,000 fps with existing powders. The .270 Win. was the first to reach that speed with credible bullet weights.



Left to right: 6.5 Creedmoor, .270 Win., 6.8 Western, .27 Nosler, and 7mm Rem. Mag. The .270 is more powerful than the 6.5 CM, and it holds up well compared to the 7mm Rem. Mag. New .270s, including the 6.8 Western and .27 Nosler have faster twists and heavier bullets. However, they kick harder, and not everyone needs the advantages of their heavier bullets.

was priceless. Yes, the .270 is enough gun for elk.

"The 6.5 Creedmoor and 7mm Remington Magnum are more powerful." Despite its hype, the 6.5 Creedmoor is less powerful than the .270 — another denial of physics. The 6.5 Creed is slower and delivers less energy. With the Creedmoor's action-length limitations, and the .270's rifling-twist limitation, both are usually used with similar bullet weights, 130 grains to 150 max. Creedmoor recoil is a bit less, but the .270 produces more energy and shoots flatter to at least 400 yards, at which point the 6.5mm's superior aerodynamics shows. Although bullet diameter difference is small — .264 to .277 — the greater frontal area of .277 bullets seems enough to make a difference in hitting power. Especially on larger game, we think we see



better effect with the .270 than with 6.5mms.

The 7mm is a different discussion. When the 7mm Remington Magnum was new, O'Connor famously dismissed it as "not being able to do anything his .270 couldn't do." We believe bullet diameter makes a difference in hitting power, but we cannot say how much more frontal area it takes. We've used .270s and 7mms to take hundreds of animals and

don't see appreciable difference between .277 and .284, especially if bullets are of similar weight and striking velocity. For the game O'Connor hunted with his .270s and 7mms, he saw little difference and was probably correct.

Obviously, he was ignoring the big argument in favor of the 7mm — and so are we: Its ability to use heavier bullets. We join O'Connor in arguing that the .270 with a good 150-grain bullet is adequate for game up to elk,



Winchester is re-packaging many loads for 2025. The .270 Win. offerings have evolved to include Copper Impact and Deer Season XP technologies, and favorites such as the Nosler AccuBond LR.

but we cannot ignore that a 7mm offers deeper and more reliable penetration with its traditional 175grain heavy bullet.

DOES .270 MAGIC CONTINUE?

The 1-in-10-inch twist has always been the .270's Achilles heel. The restriction is bullet length as much as weight. For decades, the heaviest .277 bullet was the semispitzer 160-grain Partition; it is purposefully

short. Until recently, Sierra's 135-grain MatchKing, Federal's 136-grain Terminal Ascent and Hornady's 145-grain ELD-X have been among the longest and most aerodynamic .277 bullets that will stabilize in the 1-in-10 twist rate.

For long-range target shooting, and for specific hunting of larger game, it's silly to compare these bullets against 7mm bullets now up to 190 grains. The obvious answer is heavier .277 bullets in faster-twist barrels. First



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Berger and then others started offering heavier .277 bullets. Any .270 can be rebarreled to a faster twist. New are fast-twist .270 cartridges, currently the .27 Nosler and 6.8 Western. Perhaps more will come.

Whether at extreme range on steel, or at distance on larger animals, a 30-percent increase in bullet weight is huge — except it's not that simple. Unless you increase case capacity and add more powder, heavier bullets are slower, and they kick more. In a "heavy-bullet .270," you can get fast 7mm performance, but you lose velocity and increase recoil. For much hunting, throughout the world, there's no reason. The good old .270 Win. still does the job.

DB: We love our .270s and are not likely to rebarrel them. We are not extreme-range shooters on game; elk-size game is the top end for our .270s. When new, Craig used a 6.8 Western with heavy bullets. He considered it much the same as a 7mm Rem. Mag., but he



Jack O'Connor with one of his last rams, a fine Stone sheep, probably in 1972. The rifle was his famous Biesen No. 2 in .270 on a Winchester M70 Featherweight stocked by Al Biesen. This was likely O'Connor's favorite rifle from 1960 until his death in 1978.

hasn't suggested abandoning the .270s. For the game we hunt, at the distances we shoot, there isn't much need. I have three of the four North American sheep with my MG Arms .270. I tried for the fourth, a Stone ram, but never got a shot and may never be able to try again. I've also taken Asian sheep and ibex with my .270s. I can't imagine why I would want more gun or settle for less.

In Africa, I say no girl can have too many zebras. Large and tough, I've taken several with the .30-'06, .300 Magnum, .375 and .270. In 2013, I had a chance for a zebra on the last day. A .270 barrel was on my Blaser. Zebras have this unfortunate birthmark of a chevron on their shoulder; on the broadside presentation, the apex of that chevron is a perfect target. I concentrated hard on that vital chev-

ron and fired the 130-grain Interlock that the rifle loves. The big stallion dropped on the spot. Done. I placed the shot well, and that's what the .270 Winchester will always do for at least another century. CM



JUST RELEASED!

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No coin embodies the spirit of America more than the Morgan Silver Dollar. From the Comstock Lode discovery that provided millions of ounces of silver to make them, to outlaws robbing stagecoaches in the Wild West to pay for their bar tabs and brothel visits, the hefty Morgan Silver Dollar holds a special place in American history.

It's no wonder collectors and history buffs alike clamor to get their hands on them. That is, if they can get their hands on them.

Prized Last-Year Coins

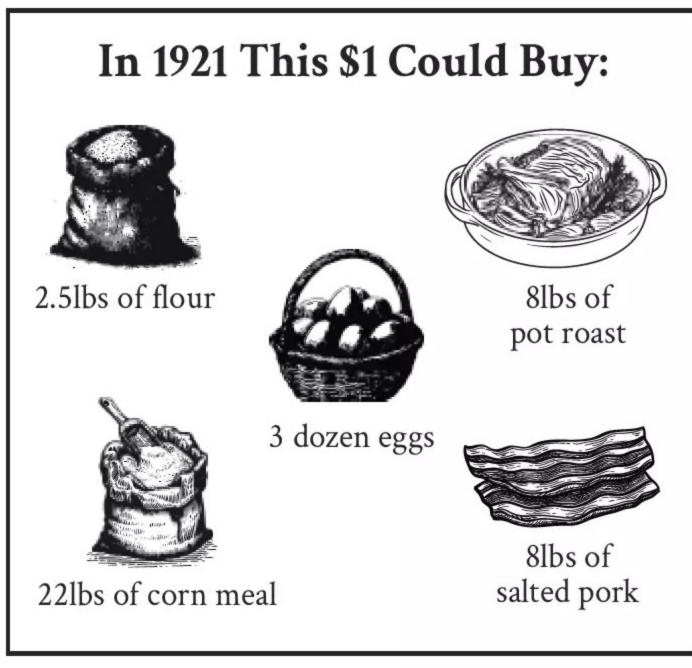
Collectors love "lasts" as no collection is complete without the last coin struck. Last year coins are often hard to find and always in demand. Little did master engraver George T. Morgan know the legacy he was creating when he designed what has become known as "The King of Silver Dollars" but it came to an end 104 years ago with the last-year 1921 Morgan Silver Dollar, the most beloved coin in American history.

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Shadow Systems MR920 CA-compliant 9mm



CALIFORNIA COOL

THERE ARE FEW PISTOLS that are perfect out-of-the-box. Sights, triggers and other parts are common aftermarket purchases. Better sights and triggers help with faster target acquisition and follow-up shots. The problem with customizing a pistol is that it can double the cost of the firearm, and aftermarket parts may create malfunctions. The Shadow Systems series of Glock-inspired handguns have the customizations many want without the cost or headache of aftermarket parts. The California-compliant MR920, for example, is about as close to an ideal polymer-framed handgun as a production model can get for restrictive states.

CALIFORNIA COMPLIANT

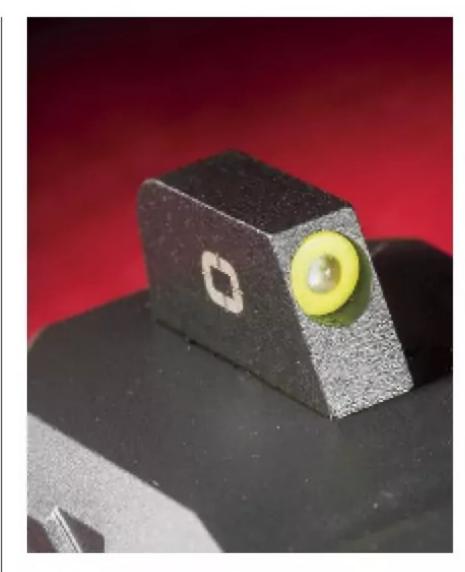
Any new semiautomatic handgun intended for California's civilian market must abide by the Unsafe Handgun Act (UHA). Among the many requirements, the pistol must be safety tested by a state-approved laboratory. It must have a readily visible loaded chamber indicator (LCI). The pistol must also include a magazine disconnect, so that it can't be fired without a magazine inserted. Per California Penal Code section 32310, magazine capacity is limited to 10 rounds or fewer. Outside of these features, the MR920 is the same as the model available to the free states.

From a manufacturer's standpoint, one of the pains about California compliance is implementing the visual LCI. The slide design must be adapted to include a lever (the physical indicator) and text. The indicator must meet these conditions:

- Stand in color contrast to the firearm.
- Be visible from a distance of at least 24 inches.
- Explanatory text must be incorporated onto or adjacent to the indicator.
- The letters of the text must have a distinct contrast and have a minimum height of one-sixteenth of an inch.
- The text and graphics should inform an adult user that a cartridge is in the chamber without having to consult the manual or other source for its function.



The loaded chamber indicator (LCI) is necessary for California compliance but must clear a mounted optic.



A Night Fision Tritium front sight is one of the few outsourced components.



The sights are Glock compatible.



The triggerguard sports a unique undercut for a high grip.

AT A GLANCE

First impressions reveal that the MR920 is more than a G19 clone. From the slotted 17-4 stainless-steel slide, spiral-fluted 4-inch barrel and textured polymer frame, the MR920 displays the touches one would want on a customized pistol. Although aesthetically pleasing, these improve its handling and performance versus a G19.

The MR920 is chambered in 9mm and is similar in size to the G19, measuring 7.12-inches long, 4.75-inches tall and 1.2-inches wide. Digging deeper, we noted several customizations. The nitride-finished slide has been cut and lightened for great handling and fast cycling. The nitride finish is accomplished in-house. The forward-leaning serrations are deep, too, giving the slide a positive grip. The slide is narrower from the window to the muzzle, creating a pronounced ledge. The ledge allows the index and thumb to dig deeply into the slide for effortless press checks. Serrations are also found on the top of the slide. Whether the hands are gloved, wet or dirty, the slide is easy to grasp firmly without much finger pressure.

OPTIC READY

For aiming duties, the MR920 employs a serrated, black square-notch rear sight and Tritium front dot punctuated with a green ring. Both are made from steel and are Glock-compatible.

The slide is red-dot ready and uses the two most common



Ambidextrous recoil control ledges help manage muzzle rise.



The dust cover offers a single-slot rail-mounting point.

PERFORMANCE

LOAD	VEL. (FPS)	ES	SD	BEST GROUP (IN.)	AVG. GROUP (IN.)
Federal Punch 124-gr. JHP	1,088	32	10	1.6	1.9
Hornady Critical Defense 115-gr. FTX	1,091	27	9	1.8	2
Hornady American Gunner 115-gr. XTP	1,161	31	9	2	2.3
Sellier & Bellot 115-gr. FMJ	1,146	21	5	2.2	2.7
Fiocchi Range Dynamics 124-gr. FMJ	1,090	10	9	2.5	2.9

Notes: Accuracy is the average of five five-shot groups fired at 25 yards from a bagged benchrest. Velocity is the average of 10 shots recorded by a Garmin C1 Pro chronograph adjacent to the muzzle.

red dot screw spacings for mounting. The MR920 accepts a multitude of footprints including the Trijicon RMR, Leupold DeltaPoint Pro and Shield RMSc. The plate-less system allows the red dot to ride low enough to co-witness the stock sights through the red dot window. Included in the kit are three screw lengths, three spacers, and Loctite 243. By design, the screws are longer than most screws found in an optic kit. Shadow Systems wanted to beef up screw strength by making them longer, and they shortened the plunger to accommodate the screws. The spacers fill the gap between the rear sight and the rear base of the optic. When installed, they relieve some of the recoil forces going to the screws.

FRAMEWORK

The polymer frame shows many handling enhancements. The long beavertail reduces the chance of slide bite. The



The extended beavertail ensures protection against slide bite.

triggerguard has a unique undercut, allowing the hands to climb closer to the bore axis and improve recoil management. Ambidextrous recoil control ledges with stippled walls jut from the frame's side. There are also thumb rests.

The grip is generously stippled with a removable backstrap. Three backstraps are included in the kit: Flat, medium and thick. What is unique about these is that they are designed to change the grip angle. The flat backstrap dips the muzzle; the medium is a neutral position; and the thick one raises the muzzle. Sitting at the base of the grip is a removable, flared magazine well.



The polymer magazine well is is flared and removable.

Shadow Systems' trigger features a safety blade bisecting the middle of the shoe. The pull weight for Guns & Ammo's sample tested at 4 pounds, 5 ounces. The pistol features a stout magazine release, magazine catch, takedown lever and rail on the dust cover. Two 10-round Magpul PMAG 10 GL9-G19 mags were included, along with a soft carrying case. Fieldstripping is also Glock-like where the trigger must be pressed before the slide can be removed.

AT THE RANGE

Before the trip to the range, we swapped out the backstraps









The slide supports popular optic footprints, including the RMR, DeltaPoint Pro and RMS. Long screws and compression spacers are provided.



Angular top and side serrations are useful for presschecks and racking the slide.



Generous stippling surrounds the grip.



The backstraps are designed to alter the grip angle.

to see which provide a more natural point of aim. With the middle backstrap, the sights were dead on.

For testing, a Meprolight's MPO
Pro-F (\$360, meprolight.com) enclosed
emitter pistol sight was mounted to
the slide. The red dot offers a threesegment reticle, 3-MOA aiming dot,
33-MOA ring and dot, or a 33-MOA ring.
The ring with the dot makes alignment
on a round target a breeze at 25 yards.

For G&A's test protocol, five different

loads of range training and defensive ammo were used to evaluate the MR920. It took no time to get used to the pistol. Recoil was easily manageable, and the gun stayed on target shot after shot. The pistol functioned reliably with all test ammo.

Accuracy was acceptable at 25 yards for defensive scenarios. The largest group measured 3.3 inches, and the smallest grouped at 1.6 inches. Considering the many performance



improvements, including the trigger and match barrel, one picky staffer expected better performance with at least one 1-inch group.

When running the gun, it loved to stay on target, and reloads were smooth and efficient. The 4-pound trigger has a light take-up and pressure wall. The reset was crisp and fast. Thanks to the grip texture, grip depth and thumb shelf, the pistol bobbed mildly when the trigger was pressed like a jackhammer. The flared magazine well provided a wide mouth for reloads, and the sights proved easy to acquire in day- or low-light conditions.

The Shadow Systems MR920 was tested for compatibility with four different G19 holsters and original Glock magazines. Afterwards, a SureFire XC3 (\$299, surefire.com) pistol light was also used to confirm fit on the rail and in the tested holsters. While carrying the MR920 inside the waistband against bare skin, the grip texture did not chafe the skin.

An editor commented on the striking similarity between a customized Glock and the MR920. "It felt like I was holding my Glock," he said.

His customizations included a slide with lightening cuts, a spiral-fluted barrel, a flared magazine well and a competition trigger. Only the aftermarket trigger was better than the MR920's. The big difference? Price. The aftermarket parts alone cost as much as the complete MR920. If you're a California shooter who likes pistol customizations, save yourself the money and get the MR920. Its parts are designed and produced to seamlessly work together. The result is a pistol that is easy and reliable to shoot. More importantly, you'll be hard-pressed to justify any upgrades. CA



GUNSANDAMMO.COM



Hi-Point HP-15 5.56 NATO



BANG FOR THE BUCK

IT SEEMS THAT WITH HI-POINT everyone has an opinion. People either love the brand or think the worst. Haters assume they're unreliable due to its firearms' low price and non-traditional appearance. Then there's the folks who love Hi-Point because they are so different, tough and affordable. Hi-Point has leveraged its uniqueness to attract a cult-following for offerings such as the YC9 Yeet Cannon (\$236, hi-pointfirearms. com). Since "yeet" is slang for "a powerful throw," the name tracks.

One thing most can agree on is that Hi-Point firearms are reliable. These are among the most budget-friendly pistols on the market, but there's more to Hi-Point than pistols. For years, Hi-Point has manufactured pistol-caliber carbines (PCCs). Like the pistols, Hi-Point PCCs are straight blowback operated and aesthetically unique. They look like something you might find on a Sci-Fi movie set. Despite the other-worldly

appearance, Hi-Point PCCs have a reputation for affordability and reliability, too. For the first time, Hi-Point has brought an AR-15 style firearm to market in 2025.

HP-15

Dubbed the "HP-15," Hi-Point's foray into the AR-15 world is available in three configurations. The three models are an AR-15 rifle, AR-15 pistol chambered in 5.56x45mm, and an AR-15 pistol chambered in .300 Blackout. Unlike other Hi-Point firearms, the HP-15 is direct-impingement gas operated, consistent with Eugene Stoner's original intent for the AR-15. Both rifle versions feature carbine-length gas systems, while the pistol version uses a pistol-length gas system.

The HP-15 is also Hi-Point's first firearm chambered in a non-pistol caliber. It strays from the rest of the Hi-Point family in both form and function. The HP-15 looks like what it is, a no frills, mostly military M4-style AR-15. Save for the prominent, white Hi-Point logo on the right side of the magazine well and a subdued Hi-Point logo on the left, the HP-15 is nondescript. Without the branding, you'd never know the HP-15 was a Hi-Point.

Like all Hi-Point firearms, the HP-15 is made in the USA, but for now many components are outsourced from other American companies. Hi-Point saves money by not having to tool up a production facility. It passes that savings to the customer. Final assembly occurs at Hi-Point's Mansfield, Ohio, headquarters.

Guns & Ammo recently evaluated the 5.56 NATO-chambered HP-15 rifle. In true AR-15 fashion, the HP-15 is infinitely customizable, but it's also serviceable right out of the box — with one exception. It doesn't come

with sights. There's plenty of room to mount iron sights or an optic on the Picatinny-style rail.

That rail runs the length of the forged 7075 T6 aluminum upper receiver and 15-inch 6061

aluminum forend.



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The free-float handguard provides numerous M-Lok slots on the left, rear and bottom flats. The Picatinny-style rail extends the full length of the handguard from atop the receiver.



The A2-style birdcage muzzle device is closed at the bottome to function as a compensator. A crush washer is used to clock the ports at the top.



The HP-15 upper receiver maintains the forward assist, which can be used to forcefully push the notched bolt carrier forward into battery, despite dirt or debris.



The bolt carrier group features a nitride finish. Note the mil-spec notches along the right sight for the forward assist to press against. The gas key, bolt and cam are standard items.

The forend features M-Lok slots to mount accessories such as a light or foregrip. M-Lok slots enable users to add attachment points, as well, only where needed. It's unnecessary to add weight and bulk, or use a quad rail. ("Quad rail" handguards were all the rage on AR-15s from the early 2000s.)

The forend houses a free-floated

16-inch 4150 chromoly vanadium steel barrel, featuring a 1-in-8-inch twist. The barrel is threaded ½x28 and is capped with an common A2-style birdcage flash hider. The forward assist helps to push on the bolt carrier and force the bolt to close should it be dry of lube and can't go into battery. Many budget-friendly AR-15s such as the HP-15 are



The left side of the lower receiver sports a subdued Hi-Point branding in addition to the model and serial number. The lower parts are standard and easily upgraded with aftermarket options.

devoid of a forward assist. Although it's not frequently used on well-maintained ARs, a forward assist provides some with peace of mind — often veterans who trained with them.

The full-auto bolt carrier group and charging handle are of the mil-spec style. The bolt carrier group and all-steel components are nitride finished. The charging handle and all-aluminum parts are Type III hardcoat anodized. Like the upper receiver, the HP-15's lower receiver is constructed of forged 7075 T6 aluminum. The bolt release, magazine release and 90-degree manual safety selector are also

mil-spec. The classic A2 pistol grip's texture and single finger tab provide a familiar interface for many that adds to the rifle's controllability.

The six-position, M4-style stock enables users to adjust the HP-15's overall length from 32 to 351/4 inches. More importantly, it allows shooters of different sizes to adjust length of pull so they can shoot comfortably, without having the stock cause their body to blade to the target.

The HP-15 trigger and hammer are polished. The single-stage trigger tested at 5 pounds, 8 ounces. While not an exceptional feeling trigger, it's what you'd expect on a budget AR-15. Reset was easily discernable, too.

AT THE RANGE

While you can expect even an inexpensive AR-15 to function reliably, accuracy is anyone's guess. For testing, the HP-15 was shot at 100 yards from a bench and a Leupold Mark 5HD 2-10x30mm (\$2,000, leupold.com) was mounted. Results were impressive, and not just for a \$500 AR-15 — for any AR-15! Not only did the HP-15 function flawlessly, but it was also accurate.



The A2 grip has molded checkering and a tab for the middle finger to press against. Note the absence of a right-side safety lever.



The M4-style stock is six-position adjustable and holds a QD mounting point in front of the adjustment lever for a sling.





The HP-15 trigger is a robust single-stage design. It was tested at 5 pounds, 8 ounces. There's no provision to accept an auto sear.



The upper and lower receivers of G&A's test rifle feature a "key-hole" mark, indicating that they were created by Cerro forge.

The best group measured just a half inch, while the overall

average of five, five-shot groups with three loads of differing bullet weights was a respectable 1.2 inches.

Shooting offhand, the HP-15 handled well. It's lightweight and maneuverable, which makes for efficient transitions between targets. Rifles that are heavy – especially toward the muzzle – can be difficult to stop on target

when driving between multiple targets, or tracking a moving target left to right and vice-versa.

There are numerous accessories that could bolster the effectiveness of an AR-15. Two popular additions to an AR-15 intended for defensive use are a sling and a light. Quick-detach (QD) sockets on the stock and forend provide attachment points for a sling, which allows the user to secure the HP-15 on their body without having to hold it in their hands for incidental movements. The stock also has a slot that the rear of the sling can attach to. Regardless of how its attached to an AR-15, a sling enables a person to maintain control of the rifle while freeing a hand to operate a door, move a person or object, call police, etc.

The need to illuminate a target in a defensive scenario is self-evident. Before pressing the trigger, it's incumbent upon you to confirm that you are dealing with an imminent deadly threat. While a handheld light works well with a handgun,



One U.S.-made, polymer, 30-round magazine is included with the HP-15. STANAG-pattern AR-15 magazines will function in the HP-15.



QD mounting points are available on the handguard behind the M-Lok. Two screws index and secure the forend to the barrel nut.

PERFORMANCE BEST AVG. **GROUP** VEL. **GROUP** LOAD (FPS) ES SD (IN.) (IN.) Hornady 55-gr. TAP 3,064 64 22 Hornady 75-gr. BTHP 2,786 40 13 1.1 1.3

14

40

1.2

1.5

Notes: Accuracy is the average of five, five-shot groups at 100 yards from Ransom Multi Cal. Steady Rest and rear bag. Velocity is the average of 10 shots measured with a Garmin Xero C1 Pro chronograph placed adjacent to the muzzle.

2,689

Black Hills 60-gr. V-MAX

it's not a viable option with a rifle. The length and weight of a rifle typically requires the use of both hands, which means the light needs to be mounted on the rifle. Although you could use a handheld light with the rifle slung, that would mean you couldn't immediately fire if your light confirmed a deadly threat.

Despite the HP-15's enticing \$500 price-point, there are less expensive AR-15s on the market. It's not the cheapest AR-15 available, but the HP-15 may be the best blend of affordability and performance. By keeping the feature-set basic, Hi-Point created a solid foundation from which to upgrade. Guns & Ammo's testing proved that other than mounting sights, a light or an optic, there's nothing needed to run the HP-15 reliably and accurately. By purchasing a base model AR-15, you can prioritize which components to upgrade, then customize the rifle at your convenience rather than paying for upgrades you might not even want.

As usual, Hi-Point is offering us a high value proposition with its HP-15. With the money saved, you can afford an optic, sling, light, ammunition. Better yet, invest in training. The HP-15 ships with one 30-round polymer magazine, so you'll want more of those too. Like all Hi-Point firearms, the HP-15 is backed by a limited lifetime warranty.

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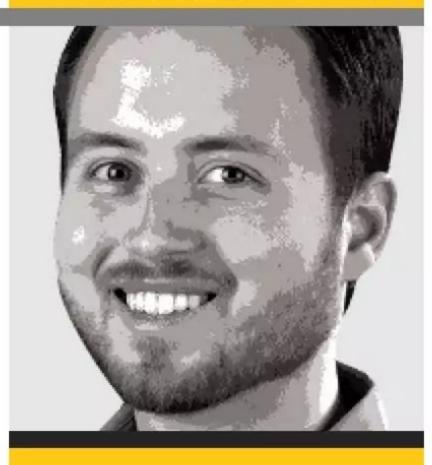
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OCTOBER 2025 G&A 103 CONNECT

Big things are on the way for the web and TV.



ANTONIO ACITELLI

INLIVING COLOR

THE GUNS & AMMO editorial team has been having a great 2025, and the rest of the year and beyond is only looking brighter for G&A. During a conversation with Managing Editor Jack Oller, I casually asked how the production of Guns & Ammo TV was coming along and if there were any projects he was excited about. His enthusiasm was infectious, and I found myself excitedly discussing a long list of upcoming film shoots.

First, Oller told me about the team's work with the Cody Firearms Museum in Cody, Wyoming, exploring the "Oddities of the Old West," a 13-part segment currently airing on the Outdoor Channel and Sportsman Channel. These are guns that may have sold decently at the time, but never reached widespread acceptance. While the Colt Single Action Army and Winchester 1873 claimed the fame, other guns have stories, too.

The year 2026 will have key events for gunowners to watch for. With

BEST ELK CARTRIDGES

Craig Boddington lists his favorite cartridges for taking down an elk.









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The G&A TV catalog can be found on MOTV.

suppressors, short-barreled rifles and short-barreled shotguns losing the \$200 tax stamp, the G&A TV crew intends to lead viewers through every step of suppressing a firearm, explaining the science of sound suppression to the purchase process.

Along with that, 2026 marks the 250th Anniversary of the United States of America. Therefore, G&A TV will review iconic American martial arms from 1776 to today. Even more has been planned, including tactical lever-

LOOKING SHARP!

The Sharp Bros P365 grip module enhanced the ergonomics of SIG Sauer's popular EDC gun, while also giving it a classic aesthetic with replaceable grip panels.

guns and 1911s, to Midwestern hunting. There's much to show, and even more to shoot!

If you're interested in older episodes of G&A TV — the "re-runs" — we have you covered, also. Legacy episodes are on My Outdoor TV (MOTV).

The digital side doesn't lag behind, either, with even more unique content to come. For what's online now, be sure to check out Craig Boddington's list of elk cartridges that bring a smile to his face. For those in the market for a modern carry gun with a classic look, read about the Sharp Bros.' grip modules for the SIG Sauer P365. Author and photographer Alfredo Rico provided a well-illustrated breakdown.

Interested in what's to come? We're not just excited, but open to suggestions! Email us at gaeditor@outdoorsg. com. Enter "Sound Off" in the subject line to get the conversation started.

TOP COMMENTS

In response to the August issue's "Connect" column, "Niching the Niches":

I'd like to see [Guns & Ammo] do a review of the Seekins Precision HIT rifle in 6mm Creedmoor.

Henry B. Email

In response to the October 2024 issue's "Connect" column, "Looking Back":

Not the hunter or outdoorsmen we were all brought up reading about, in my humble opinion, Mike Venturino deserves some ink. How about Bart Skelton and his dad? Joseph B. Email







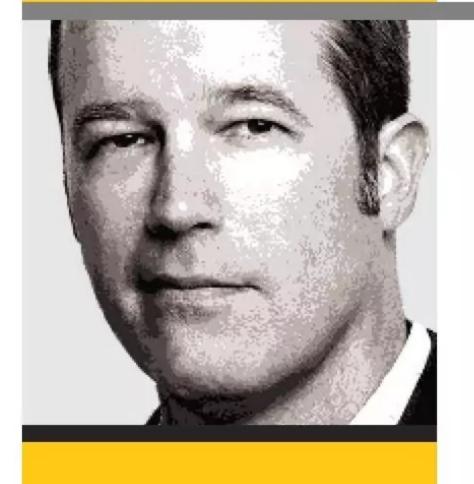








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A clear pattern that proves the good-guy narrative.

KEITH WOOD

GOOD GUYS & GUNS

IN JUNE 2025, an armed maniac showed up at the CrossPointe Community Church in Wayne, Michigan, with the clear intent to harm parishioners. The bad guy was wielding a semiautomatic rifle and carried a handgun, along with spare magazines stored in his tactical vest. He opened fire on the church as he approached on foot. In a matter of seconds, another tragedy was unfolding.

Thankfully, it didn't go the way the shooter intended. The CrossPointe Community Church's allvolunteer security team had prepared for this moment and responded without hesitation. As the bad guy fired at a security team member located outside of the church, a deacon who was running late sprang into action. He engaged the shooter with the

ALL IT TAKES
IS GOOD FOLKS
WITH A GUN

YOU PICKED THE
WRONG CHURCH
BUDDY!

best weapon he had available — his Ford F-150.

Jay Trombley, another member of the security team, rushed outside when he heard the gunshots. Using a handgun, he engaged the would-be murderer and killed him before further harm could result. Another team member also engaged the suspect with gunfire. One of the security team members was wounded in the leg but the only person killed was the bad guy. "Can I get an amen?"

Though there were some providential elements to the story — the F-150 driver arriving just in time, for example — the outcome was not a stroke of luck but a combination of planning, preparation, mindset and training on behalf of the church's leadership and security team.

The members of the security team spent more than a decade preparing to defend their fellow parishioners. They attended offsite training events and ran rehearsals onsite.

They consulted with local law enforcement and attended shooting courses. They lived the lifestyle that many of us share, preparing for the worst and praying that day never comes. When the day did come, though, they were ready.

"If you train enough, it's just muscle memory," said Trombley. "You don't think about it. Yes, 10 years of training led to this moment."

> This event is just one of several examples of ordinary citizens who stepped up and risked their lives to defend others when the need arose. These brave individuals should be celebrated, both as recognition of their deeds and as a deterrent to would-be murderers. Many of us are unwilling to stand by and let innocent people die.

It's a shame that

sacred places such as houses of worship and schools need to develop security plans, but that is the world we live in. Religious leaders should take note, work with law enforcement, and involve parishioners with aiding security to create contingency plans for critical situations. Carrying a gun isn't enough. Trombley and his team were successful because they trained together frequently. Their last training session was just 10 days prior to the attack.

Believe it or not, some states do not allow concealed carry in houses of worship. In my mind, this is insanity! There are more than 370,000 religious congregations in the United States. In many areas, law enforcement officers cannot respond fast enough to protect them. Events such as the one at CrossPointe Community Church further prove that individual citizens are capable of saving lives, especially when they are trained and dedicated to the cause.













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