

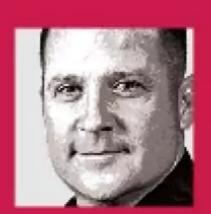




P. 46 **EMARY** Rangefinders, Windmeters & Ballistic Solvers



P. 52 **HUNNICUTT** Value Packed: TriStar Viper G2 Camo in 12 ga.



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P. 32

P. 23 NANCE S&W TEMPO: Barrel tech for 5.7mm and .22 WMR.



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Built by armorers at the Precision Weapons Section, the M45 MEUSOC pistol served the U.S. Marine Corps from 1985 to 2012.

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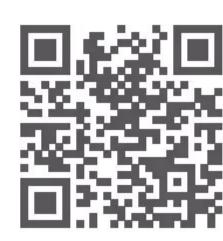


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READER BLOWBACK

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STILL PATHETIC

With due respect to Columnist James Tarr's article in the December 2023 edition, the 9mm is a pathetic manstopper compared to other rounds. As well as being acquainted with some of the FBI agents involved in the 1986 shootout he wrote about — and later being the chief of police at the very location where the shootout occurred — I was the project manager determining which caliber and type of firearm the Hollywood PD (Florida) would adopt, as well as being involved in several shootouts. The bottom line, after an extensive study, reviewing hundreds of shooting investigations and the reports of Dr. Martin Fackler, we went to the Smith & Wesson Model 4506 in .45 ACP for the following reasons: First, both the .38 Special and the 9mm were poor rounds when an armed felon needed to be stopped immediately. Second, we found that, with proper training, the .45 ACP could be handled by all officers. Those claiming bullet designs have so improved that the 9mm is now superior to other rounds, including the .40 S&W and .45 ACP, ignore the pesky fact that the same improvements applied to the bullets fired in other calibers presented superior effectiveness versus the 9mm. The only benefit the 9mm has going for it is that one can carry a few more rounds, but there are guns available in larger calibers that can carry almost as much capacity.

Chief Bruce W. Davis (Ret.) Village of Pinecrest, Florida

FLAGGED

I read Keith Wood's article,
"Without Consequence"
(December 2023), and
I agree! I think people
do this because they are
afraid. If you don't like guns
and you read about gun
violence every day, it makes
sense that they would not

Constitution like we do.
My writing is not simply to
agree with Mr. Wood. It is
to challenge all gun lovers
to be the change. Why
are we not addressing gun
violence? We usually only
talk about how our tools are
helpful and point out the

craziness of felons being in a revolving door system, in and out of jail, and using a firearm. Certainly, we need to point this out. Felons commit most of the gun crime. I have another: Why not combine Red Flag laws with due process? Why not have all of us demand more red-flag interventions? How often do police run into a person who is threatening or uses a gun in an unlawful manner? Or someone having mental illness who is aggressive? Let's automatically red-flag the individual and remove his firearms and access to future firearms. If you make a threat, you lose — with due process, of course. William Powell Email

SHOPPING FOR AN M1

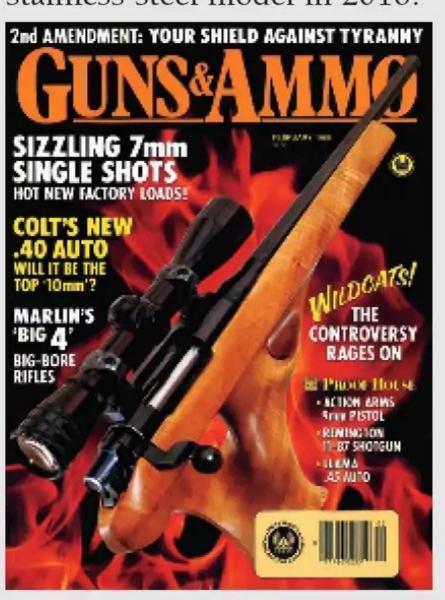
I've been reading Dave Emary's articles in Guns & Ammo on restoring an M1 Carbine (September, October, and November 2023), and they were totally awesome. I have one M1 Carbine and I'm using his articles as references to determine what I purchased several years ago. I wish I had this information back then! I look to add other M1 Carbines to my military collection, but I was always unsure about what I might buy. I now feel a bit wiser. Scott Temperly Email

SHOW US

I'd like to see an article where holsters are shown being worn by small people, big people, fat people,

FEBRUARY '88

Following Jeff Cooper's sneak-peak in the January 1987 issue, author Jan Libourel reported on the Colt Delta Elite in 10mm Auto, a Government Model 1911 in a chambering that stemmed from Whit Collin's 1972.40 G&A wildcat and the ill-fated Bren Ten. Recoil was reported to be "more vigorous than a .45's." Though powerful, accuracy was disappointing. Libourel's thoughts about the pistol were inconclusive. Multiple generations followed, including the return of the stainless-steel model in 2016.



women, and in various positions for each example. I have many holsters. I choose which one to use based on weather, attire, threat level, and so on. I can't tell how a holster will fit me by a simply picture of the holster containing a gun. Also, many gun clubs do not permit visitors to practice draw and live-fire from shoulder holsters, so that type might be pointless. Louis E. Larios Topsham, Maine

GARDEN GUN

The "Grandma's Garden Gun" letter as printed in the December issue's "Identification & Values" column reminded me of my mother and her garden gun during the 1980s.



As a farmer's wife, she always had a large garden. After moving into a small unincorporated village, she continued to maintain a garden. She used her .22-caliber Remington Model 514 with Routledge bore to discourage hungry birds. After several short and successful battles, she received a visit from the local sheriff who asked her if she had been shooting in her garden. "Yes sir," she replied. "Those darn birds are eating my strawberries." The sheriff then explained that he had received a complaint and that it was not legal to shoot in the village. We all know that .22 birdshot would not exit the garden, but the law is the law. She then gave that 1952-manufacturerd Rem-

ington to me, which I still have and treasure — along with her memory.

Ron Geppert Mankato, Minnesota

RUGER SR9C OPTIC

I have a Ruger SR9C that
I would like to install a
Vortex Venom red-dot sight
onto. From what I understand, for me to mount this
optic I need an adapter
plate. Where can I obtain
this plate?
Mark Thaler

Omaha, Nebraska

The most cost-effective solution is the Galloway Precision Optic Mount Plate for the Ruger SR9C. You can find one at galloway-precision.com for \$28.50, anodized red or black. The optic mount plate also sup-

ports the Ruger SR9, SR40, SR40C and SR45 pistols. — P. Pluff, Public Relations Mgr., Sturm, Ruger & Co., Inc.

NOT "UNIQUE"

enjoyed the Proofhouse on the Winchester SXP Extreme Defender (December 2023), as I own one of its many precursors: Winchester 120 Ranger. I have shot several thousands of rounds through it, and it keeps ticking. While the rotary bolt may be a Winchester-specific approach, suggesting that it is "... unique among pump actions for engaging the barrel extension rather than the top of the receiver," simply isn't true. Every Mossberg 500, 590 and 835 that I've seen has

a bolt that locks into the top of the barrel extension. These types of shotguns aren't exactly rare.

John Zurawka
Email

9MM VS. .45

Thanks to Jim Tarr for some sanity in writing his column, "Pistol Caliber Wars" (December 2023). At 85 years of age, and carrying a Hi Power all of my life, I worked as a gunsmith in northern Minnesota since 1962. The 9mm Luger is quite the design, and the Hi Power is the correction for John Browning's issues with the Model 1911, a club in the hand. It took several wars before the U.S. government finally woke up. Mark Berg

South of Bigfork, Minnesota



PRICE CHECK

On page 44 of the December issue, in Tom Beckstrand's "Rifles & Glass" column featuring the XLR Chassis, the price is incorrectly listed as "\$1,500." On page 38, the correct price is listed as "\$575." **Edward Williams Email**

Thanks for catching that! When purchasing the XLR Element 4.0, buyers can customize what parts and accessories come attached to the chassis. While the base price is \$575, the build that Mr. Beckstrand used for testing added up to \$1,500. Our notes should have specified these prices as "base" and "as tested," respectively. — A. Acitelli

MISLABELED

Since when is some ugly and modernistic firearm called the "Rifleman's Rifle" (September 2023)? I am 80 years old, and the Model 70 Winchester has always had this title, as it should have. I realize writers must cater to the younger crowd, but please quit trying to change everything. Gary Sutherland Brodhead, Wisconsin

PARENTING

Ah, how the memory fades. The parent case for the new .360 Buckhammer should be listed as the ".38-55," which was introduced around 1880 and spawned the .32-40 around 1884 and the .30-30 and .25-35, both around 1894 to 1895. Later still, around 1901, the .32 Special

bottleneck cartridge came to be. Generally, the straightwalled cases — or more correctly, "straight taper" were intended for use with blackpowder. Bottleneck cases were designed for use with newfangled smokeless powders. The .360 Buckhammer should be a joy to shoot with either, however. Erik Olsen Email

CAN'T FIND IT

I have been unsuccessfully trying to buy a Colt King Cobra .22-caliber revolver (December 2023) for some time now. Colt has been advertising it for more than a year, but they are virtually unavailable. I have contacted 20 different gun stores, and no one has one. In some cases, the store

representatives were not aware that these existed! I currently own a .357 King Cobra, a .357 Python and a .44 Magnum Anaconda. The .22-caliber King Cobra would allow me to practice at a more economical rate. Perhaps Guns & Ammo can get an answer to this situation! Michael A. Hunsinger

Sayre, Pennsylvania

We're in full production on the .22 LR King Cobra. Keep in mind, the public response to this product has been well beyond our expectations. We're working every day here in West Hartford to catch up on that demand. This is of the highest priorities for Colt and its consumers.

— P. Spitale, EVP, Colt 🖎



EELLE FRO

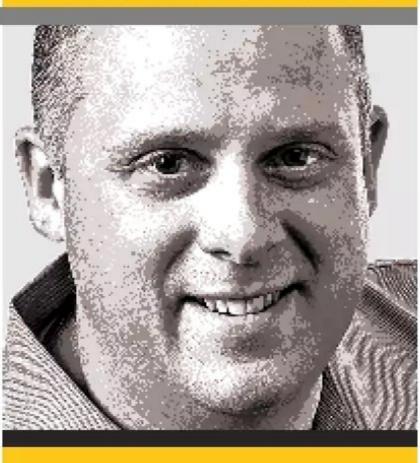


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EDITORIAL FEBRUARY 2024 G&A 13

A salute to veteran gunwriter Wiley Clapp.



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THE HANDGUNNER

AS A CADET enrolled at the Virginia Military Institute (VMI), I occasionally visited the computer lab to explore gunsandammo.com for the latest news and reviews. A webpage of profiles led me to wonder about each gunwriter's background, which is where I found Wiley Clapp's biogra-

phy. I was inspired to learn that he, too, was a graduate of VMI, Class of '57, an English major, and a U.S. Marine. Now 88, Clapp is a Vietnam

combat veteran who served as an infantry officer with 3rd Battalion, 7th Marines.

Upon returning home, he served 18 years in law enforcement with the Orange County Sheriff's Department. He started writing for "Gun World" in 1985 before being hired by G&A in '88, where he built an enviable reputation for his reviews.

In 2000, I wrote Clapp a letter inquiring, "Career Tips." Unexpectedly, he responded in the April 2001 issue. He only knew of Mike Venturino who set out to be gunwriter who then became one. He offered sound advice, concluding "You are facing a rough road and have my best wishes." My career priorities changed to best qualify myself for such an opportunity.

By 2004, I was the firearms inventory manager for NRA's Publications division. Attending the Pittsburgh Annual Meetings, I was invited to a dinner attended by other staff, and Clapp sat next to me. As the evening progressed, the conversation turned from gunfighting to everyday carry.

An editor asked, "Wiley, what do you carry?"

"I've got a .45 Colt Commander on my hip," Clapp replied. Leaning forward on his right arm, he looked over at me, squinted, and gestured beneath the table, adding, "And I keep a five-shot J-frame on my ankle."

That comment influenced my belief system for years. As the saying goes, "Two is one and one is none."

Clapp learned that night that I was the cadet who had written him a few years prior. He predicted my future success and laid claim to it. He has always been a gracious friend, the type who offers sound advice. He was first to congratulate me when I became G&A's 14th editor.

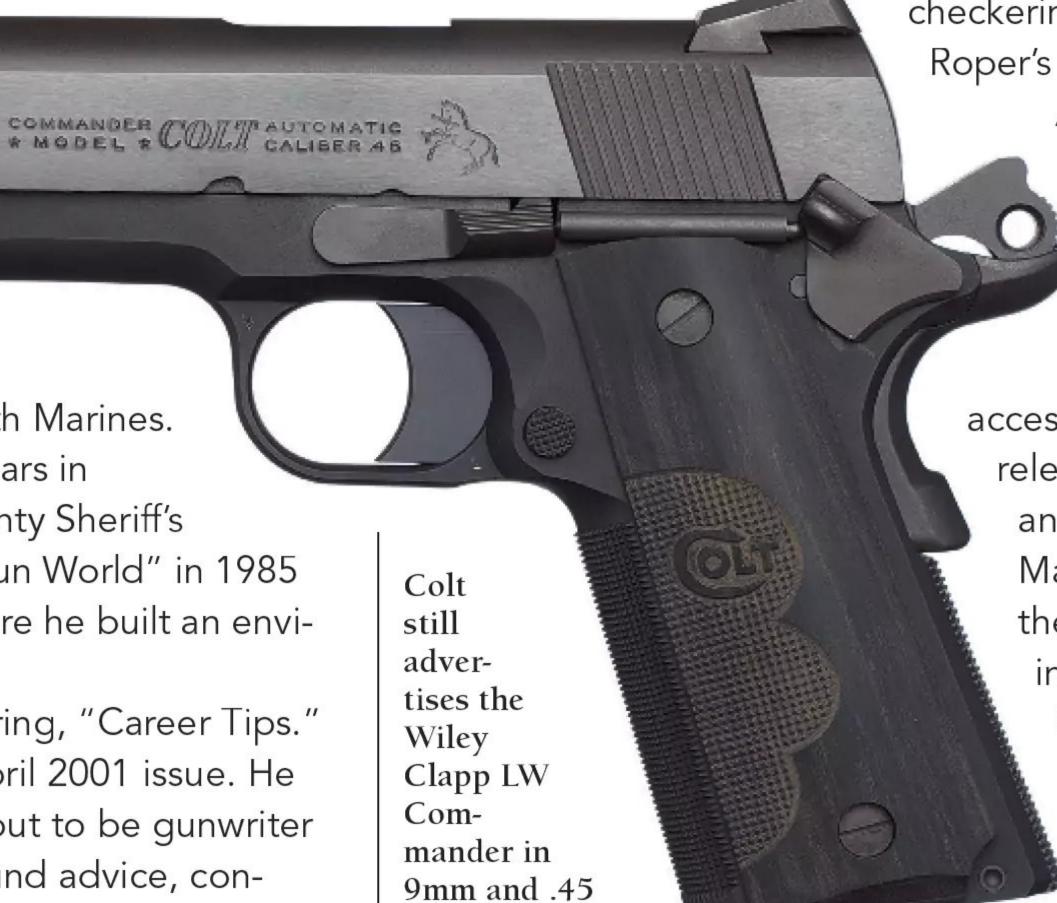
Few gunwriters have had such an influence on firearm designs as Clapp that a manufacturer was willing to build a model to spec and name it after him. In 2014, Clapp let me know of a collaboration with Colt to produce his ideal combat pistol. These Model 1911s would include his unique

checkering inspired by Walter Roper's stocks, but made by Altamont and featuring a thin, tapered front to shorten the reach to the trigger. They also enhanced access to the magazine release, thumb safety and slide-stop levers. Made in 9mm and .45, they were available in Government, Commander, and Officer sizes. Clapp directed that the pistol be made on a Series 70 firing system, the

"oval" grip design with finger

Commander with a lightweight aluminum-alloy frame. The beavertail grip safety was swept up, and Clapp's grips were unique to these models. Novak sights were dovetailed to the slide with a brass bead front paired with a black, extrawide notch at the rear. Pete Single's 25 line-per-inch (lpi) checkering was applied to the frontstrap and mainspring housing, and a pre-1911A1 thumb safety was installed for positive control. After more than 11,000 sold, only one model — the Wiley Clapp LW Commander in 9mm or .45 ACP — is still advertised, sold through TALO as a special edition (\$1,299, taloinc.com).

If you are a fan of Clapp, another handgun worth collecting is his Ruger GP100. Nearly 5,000 were produced in matte blue or stainless with a 3-inch barrel in .357. These also wear an adaptation of Clapp's signature grip design and a brass-bead or fiber-optic green set of Novak sights (\$1,250, lipseys.com). Recently, Gunsite honored Clapp by naming an academy classroom for his accomplishments.



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GUN ROOM FEBRUARY 2024 G&A 15

"In my opinion, the initials are too arbitrary to make any positive connection with a particular manufacturer."

IDENTIFICATION & VALUES



GARRY JAMES

GARRY.JAMES@ OUTDOORSG.COM







MYSTERY GIMCRACK

Q: You have helped me in the past identify odd and unusual items; here is another. It looks like a homemade apparatus. It is made up of several components: A .32 rimfire case

stuffed in the mouth of a .303 Savage case that is stuffed into a .45 Colt case. A hollow tube was welded to the end of the .45 Colt case. It is spring loaded with about a half inch of travel. I thought it was some kind of snap cap or dry-firing device. Your thoughts?

J. S. B.

Email

A: One of the fun things in doing this column is that I never quite know what unusual item will be sent along for I.D. This month yours takes the prize for its strangeness. I've spent some time studying the piece and going through my curiosa references, but I cannot turn up anything that slightly resembles this contrivance. With the editors' indulgence, I'd like to run some photos of it in the hopes that a reader might have some idea what the thing is. Whatever it may be, the quality of workmanship appears to be relatively high.

1980s BROWNING HI-POWER

Q: I inherited a Browning 9mm High Power made in Belgium by FN Herstal in 1982. As you can see, it is still in the original Styrofoam shipping box, and it is covered with the original cosmoline. Obviously, it has never been fired. The pistol came with one 13-round magazine and a cleaning rod. I've seen prices for

these pistols all over the price range, but I would value your opinion as to what it might be worth. If you would be so kind, in case you publish this item, could you blur out some part of the serial number? Thank you.

L. N. Sioux Falls, South Dakota

A: A very nice setup. It's a great pistol in remarkable condition. I consulted the "Forty-Fourth Edition Blue Book of Gun Values" (bluebookofgunvalues.com) and its editors opine your blue Belgian-made circa-1982 Hi-Power in 100 percent condition is worth \$1,325. The Styrofoam box insert adds no value to the piece at all, though.

UNUSUAL RUGER AUTO PISTOL

Q: I picked up this old Ruger .22 Standard model a while ago and the front sight is strange looking. Ruger told me serial number 67XXX was made in 1953, but they didn't tell me anything about

AUCTION BLOCK

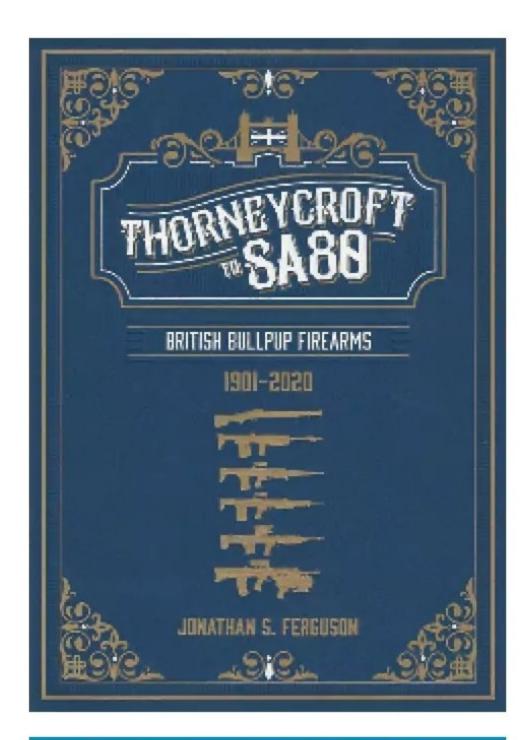
A scarce Kimber of Oregon Model 89 African bolt action in .505 Gibbs realized a comfortable \$12,500 at an October 28, 2023, Sportsman's Legacy sale. This elegantly understated rifle has a 24-inch tapered heavy barrel. Features include a banded front sight; checkered hood; brass-bead blade and flip-up oversized moon bead; banded sling-swivel stud; quarter rib; two express blades, one fixed with gold sighting line and one all-black folder; integral bases; full-length claw extractor for true controlled-round feeding and extraction; straight bolt handle; three-position safety; and a drop box magazine. The stock is formed from a select AA-grade English walnut blank with stout directional grain. Appointments include an ebony forend tip; 24 lines-per-inch wrap checkering; double crossbolts with ebony caps; scalloped English "pancake" cheekrest with shadow line; steel trapdoor grip cap; inletted sling-swivel stud;

Kimber recoil pad; and a satin finish. Its bore is strong and bright. Mechanics are solid, too. Metal and wood finishes exceed 99 percent.

For more information about this and future sales, visit Sportsman's Legacy at sportsmanslegacy.com.







RECOMMENDED READS

"Thornycroft to SA80: British Bullpup Firearms, 1901-2020" by Jonathan S. Ferguson; Headstamp Publishing LLC, Nashville, TN; 2023; 622 pages.

Undoubtedly, many current firearms enthusiasts believe the bullpup design is a relatively modern development. Author Jonathon Ferguson points out in his handsomely mounted book, "Thornycroft to SA80, British Bullpup Firearms, 1901 to 2020," such is definitely not the case. British ordnance types were looking at this concept as early as the turn of the 20th century. Alas, the radical bolt-action did not catch the fancy of the authorities who opted to continue with Lee-Enfield designs until the adoption of the L1A1 variant of the FN FAL semiautomatic rifle in 1954. Excellent rifle that it was, the 7.62 NATO-chambered L1A1 was replaced by the more extreme, forwardlooking bullpup-style 5.56 NATO SA80 in 1985, which remained UK standard issue. (As an aside, this reviewer had the opportunity to be one first gunwriters to evaluate the SA80 when British authorities brought examples of the arm to the United States in the mid-1980s.) Mr. Ferguson's well-illustrated, highly detailed retelling of the developments, trials and tribulations of bullpup-type firearms of the last century, and beyond, is not only a comprehensive reverence work, but an entertaining and informative treatment of a fascinating subject. Thus, it comes highly recommended. "Thornycroft to SA80" is available from headstamppublishing.com. \$98



this barrel configuration.
I hope you can enlighten me on this little pistol. It shoots great! I don't know whether the wood grips are original or add-ons.
Any help is appreciated.
R. T.
Email

A: I conferred with a couple of people who know about pieces such as yours. We concluded that your Ruger likely had its barrel shortened and threaded to take a suppressor at some time in its history. The setup on it is a barrel cover so the pistol can be fired efficiently without the suppressor. The arrangement on the end of the cover is a rotating sight that can be adjusted by the screws on the front, as the threads on the barrel securing the appliance will not assure a fixed blade would position the sight correctly. The suppressor has obviously been separated from the gun, while the barrel cover has been retained. It looks like a quality job. I'm curious if it was a semiproduction item. Perhaps one of Guns & Ammo's readers would know.

BELGIAN DA SIXGUN

Q: Your articles are the first ones I turn to when Guns & Ammo arrives! I so enjoy your knowledge and information imparted to readers and viewers on Guns & Ammo TV, as well. I came into possession of this old Belgian revolver. I'm assuming that .38 S&W ammo fits. I haven't fired it, nor do I intend to. The barrel measures 3-inches long, and the grips appear to be ivory. The only markings are a very faint serial number "R51XX" on the left side of the frame and what appears to be the initials "JS" and "FD" on the frame under the grips. Are you able to shed any light on what this gun is and the year it was made? The RCMP said it was made after 1945, but I dispute this. They said it was made by Joseph Saive according to the initials. Any prohibited firearms must be destroyed after I pass on,

meaning that it cannot be handed down to my son.
Anything made after 1945 is not eligible. Also, the frame does not appear able to take cold blue.

D. J., RCMP (Ret.) Langley, B.C., Canada

A: From its style and overall look, your little Belgian sixgun was likely made well prior to 1945, probably around 1880 or so. In my opinion, the initials are too arbitrary to make any positive connection with a particular manufacturer. The quality of the piece appears to be decent, with fairly competent engraving and what appear to be bone grip panels. It's hard to tell from the photos you sent, but finish could be nickel plating. If so, it will not take cold blue.

COLT MODEL 1903 POCKET AUTO

Q: I have this Colt .32 Auto with serial number 420XXX. My dad had it as long as I can remember, and it was the gun he always took with us on vacation. It has some wear on the left side, I assume from being put in and out of a holster. It shoots great and is very accurate. I was wondering how old it is and what it would be worth?

N. N.

Email







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PHOTOS COURTESY COLLECTORSFIREARMS COM

A: You have a very decent example of a Colt Model 1903, .32 ACP, Pocket Hammerless pistol. This excellent little gun was manufactured from 1903 to 1945. Some 572,215 were produced. As well, an additional 138,009 .380 ACP 1908 versions of the piece were also offered by Colt from 1908 to 1945. Blue and nickel were the most common finishes on both the 1903 and 1908, but more exotic embellishments could be had upon special order. Your blue '03 auto was manufactured in 1923. It appears to be in about 90-percent condition. According to the "Forty-Fourth Edition Blue Book of Gun Values" (bluebookofgunvalues.com), it is worth \$650.

HIGH-END AUSTRIAN FLINT COMBO GUN

Q: I have been reading your column for a number of years, and you do a great job! I bought this piece about a year ago. It is unique and has two barrels; the top is rifled (straight rifling) and the bottom is smoothbore. Both are about .50 caliber. The lock has a sliding pan so that each barrel can be selected as required. All the metal furniture is gilded. It is in excellent condition, only missing the front sight blade; there is no rear sight. There are no maker's marks that I can find. Inside the

lock recess are three "X"s stamped in the wood. The mainspring has three "X"s scratched on it. I would greatly appreciate any help in learning about this piece that you would be willing to give.

E. D. S. Eureka Springs, Arkansas

A: From your description and photos, it appears you have a very nice Austrian rifle/fowler combination dating from the mid part of the 18th century. The lack of marks is not unusual. For instance, I have an early German or Austrian flintlock Jaeger rifle in my collection that is quite elaborate, and it also has no identifying engravings or stampings. The dual-sliding pan cover allowing the barrels to be fired alternately each time the cock is pulled to the rear is a clever, scarce mechanism that I have

seen on similar high-grade pistols and longarms of the same period as your piece. Likely the Xs are benchmarks added when the gun was built or assembled. I hope this helps you out.

M1903 SPRINGFIELD REWORK

Q: A friend of mine has a Model 1903 Springfield rifle described below. He has used the internet to research it, but I'm not sure how accurate it is. He asked if I knew of a better way to get better information. After reading your column for years, I thought of you. His description is, "Pre-World War I; Model 1903 Springfield military rifle; serial no 179XXX; a modified Mauser-type bolt action; caliber .30-'06; fiveround magazine; 23.79inch barrel; weight is 8.75 pounds; sights adjustable (rear); blade (front); military stock; straight grip; made at Rock Island Arsenal, Illinois. He would like to know any information you could provide, including value, shootability, safety, and additional history. S. V. V. Email

A: The description data are basic 1903 specs telling us the rifle was originally made at Rock Island Arsenal in 1910. The photos you sent give me more information about the piece. Its Parkerized finish, stockwork and 1944-dated Springfield barrel indicate it is a World War II-period rework. Assuming the bore is good and the rifle functional, it is worth in the \$650 to \$750 range. The exterior condition appears to be a bit iffy. 🖎



THE CARRY RIG





FALCO CX85 CARBON FIBER HOLSTER

EXPENSIVE. That's the first word that came to mind when learning that the Falco CX85 Carbon Fiber Holster retails for \$599. Surveying the holster market, I only found exotic leather holsters and some hand-carved leather costing as much. "Worth" is subjective, but few true carbon-fiber holsters exist. Many holsters appear as carbon-fiber, though they're usually a plastic or Kydex shell with a simulated carbon-fiber appliqué. Due to specialized manufacturing techniques necessary to shape the carbon cloth in a useful way, the CX85 is actually a testament to what's possible rather than a holster expected to sell in large quantities.

To create the CX85, carbon-fiber cloth is embedded with resin. The carbon fiber used is made by the same source supplying carbon-fiber components to supercar manufacturer Koenigsegg. The mold with the formed sheets enter an autoclave where the material hardens through simultaneous elevated pressure and temperature. Semi-finished holsters are hand-tapped by Falco for a perfect fit, then

rounded, drilled and finished. A special adhesive is used to permanently join the two thin halves of carbon-fiber. In fact, each sheet of carbon fiber only measures .05-inch thick. Comparatively, a common sheet of Kydex is .09-inch thick and a piece of leather averages around .18-inch thick. The difference may appear insignificant, but the CX85 is one of the lowest-profile OWB holsters available.

The edges of the holster are buffed and smoothed by Falco before the mounting holes for the belt loops are bored using a special drill. The plastic loops accommodate a double-thick belt up to 1½-inches wide with a tenth-of-an-inch extra to allow a belt to thread through it.

The CX85 was engineered with a vertical, no-cant, 3-o'clock presentation, and there are no rubber bushings or screws to adjust tension or ride height. However, adjusting tension is unnecessary due to the holster's rigidity and tight-tolerance fitment.

The long-term benefit to wearing a carbon-fiber holster

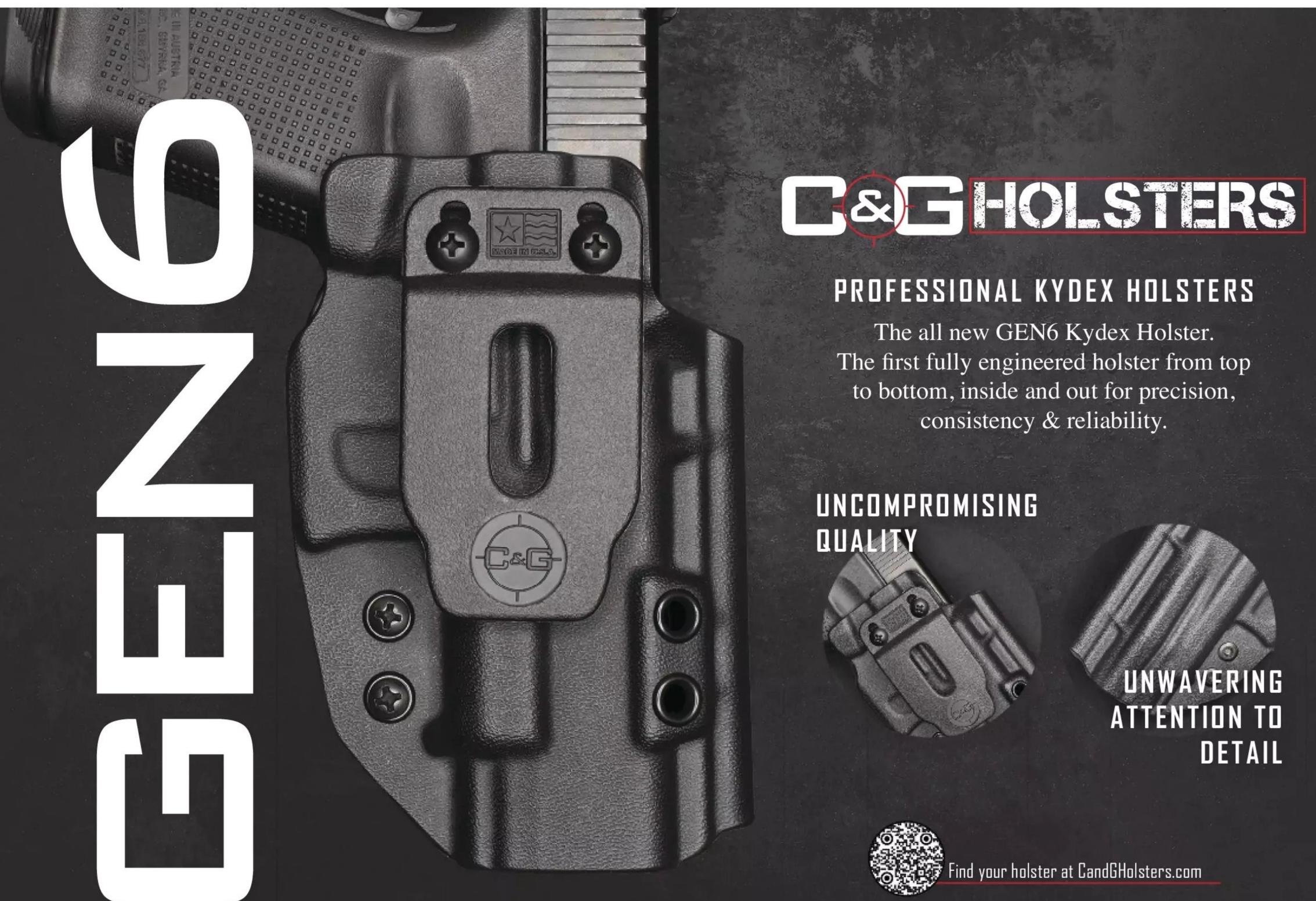
FALCO CX85 CARBON FIBER HOLSTER		
MATERIALS	Carbon fiber (shell), polymer (belt loops), steel (hardware)	
CARRY TYPE	Outside the waistband (OWB)	
RETENTION TYPE	Level 1; friction fit	
ADJUSTABILITY	No	
MSRP	\$599	
HANDGUN FIT	Glock 19 (Lone Wolf Dusk 19, tested)	
ACCESSORY RAIL ACCOMMODATIONS	No	
POSITIONS TO CARRY	OWB; 3 o'clock (right hand)	
AVERAGE TIME TO ATTACH	1 minute	
COMFORT RATING	5/5	
CONCEALMENT CLOTHING	Untucked, button-down shirt or jacket	
AVERAGE DRAW-TO-FIRE TIME	1.23 seconds	
MANUFACTURER	Falco Holsters, 800-490-7147, falcoholsters.com	

Draw-to-fire time is the average of five clean draws producing an A-zone hit on a stationary target positioned at 21 feet.

is that it will not wear differently or change its dimensions when a pistol is inserted. The CX85 has a slightly curved contour that comfortably wraps around the hip and pulls the grip towards the body for concealment. Of course, the most attractive feature of the CX85 for everyday carry is its lightweight, scaling a scant 3½ ounces. When worn, only the weight of the gun was noticeable. The high polish and smooth contours make this holster seem forgettable.

Due to the limited production, Falco Holsters is only offering the CX85 Carbon Fiber Holster in one configuration: A pancake-style, OWB, thread-on holster for the Glock 19. The CX85 was tested without, but it can be optioned to accept a red-dot optic. Currently, there is no option for pistols with mounted lights. Tested with a Lone Wolf Dusk 19, the holster proved fast and comfortable. 🖼 — E. Poole

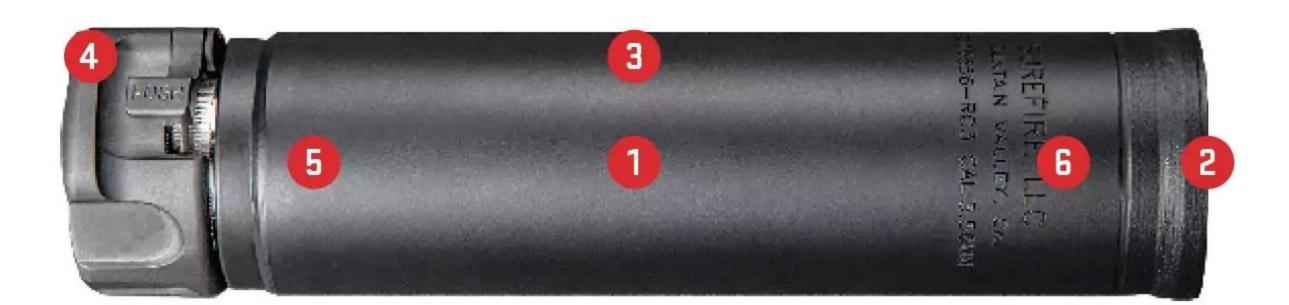






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GUN TECH FEBRUARY 2024 G&A 23



PERFECT TIMING

THE .22 WINCHESTER MAGNUM RIMFIRE (WMR) was designed in 1959. Today, they are typically loaded with 30- to 50-grain bullets traveling between 1,500 and 2,200 feet per second (fps). Maximum pressure for the .22 WMR is listed as "24,000 psi" by the Sporting Arms and Ammunition Manufacturers Institute (SAAMI). The .22 Magnum benefited from the KelTec PMR30 (2011) and Rock Island XT 22 (2018), but the recent Smith & Wesson M&P 22 Magnum has reignited interest in the .22 WMR for defense. Of course, availability of purpose-built ammo — Hornady's Critical Defense 45-grain FTX load, for example — has helped its popularity.

The 5.7x28mm was developed for NATO by FN in 1990 for use in the P90 personal defense weapon (PDW). It was also chambered in the Five-seveN pistol, last updated in 2023. The cartridge was designed to be capable of pene-

trating soft body armor and was intended to supplant the 9mm, but it never did. Commercial offerings are not armor piercing. Loaded with 23- to 40-grain bullet weights, 5.7mm projectiles travel between 2,350 and 3,060 fps from a 10-inch barrel. The 5.7mm is a bottleneck cartridge with a maximum pressure of 50,038 psi. In 2020, the

Federal, Fiocchi and Speer. Once again, interest in the 5.7 was piqued.

The capacity, price and high performance for the relatively low felt recoil attracts a lot of shooters to consider these pistols for self-defense roles. The 5.7x28mm and .22 Magnum produce different chamber pressures, though, so Smith & Wesson had to engineer a different two-piece Tempo barrel and sleeve for each model. The M&P 5.7 required a locked breech and a delay in cycling, so a rotat-

Ruger-57 was introduced, followed by the launch of the

to mention several carbines and commercial loads from

KelTec P50 and Smith & Wesson M&P 5.7 handguns, not

the lugs rotate, unlock, and continue with extraction, ejection and feeding. The M&P 22 Magnum features a gas-assisted blowback action due to the lower pressure

ing barrel was designed to allow pressure to drop before

ILLUSTRATION: SMITH & WESSON

While still in the barrel, once the bullet has passed the port near the muzzle, a portion of gas is used to push against two sets of gas rings, unlocking the barrel for cycling.

of the .22 Magnum. Aside from the pressure difference — and that the M&P 5.7 has a rotating barrel — both have a small port near the muzzle The gas escapes the bore and enters the barrel shroud, not the slide. The barrel acts as a piston, while the barrel shroud is effectively the cylinder. The size of the gas ports are different for each cartridge —

WHO

DARE

www.falcoholsters.com



The slide of the M&P 5.7 is distinctive for having long slots behind the front sight. These vent heat and reduce slide mass to ensure reliability, even when optics are mounted.





The M&P 5.7 is subject to higher pressures from its cartridge. To delay cycling and ease pressure, a locked-breech rotating barrel system was developed for the bottleneck cartridge.

5.7x28mm being larger — to optimize performance in each platform.

When the M&P 5.7 is fired, the barrel remains locked at the breech until gas from the fired round reaches the gas port. The gas pressure on the barrel forces it rearward into a cam surface in the shroud, causing the barrel to rotate and unlock from the slide. There is no tilt-barrel on the M&P 22; it is a blowback design.

Lighter recoiling when compared to a similar size-and-weight pistol chambering 9mm, the M&P 5.7 features slots specifically designed to reduce the slide's mass to ensure reliability across the spectrum of bullet weights and use of the pistol with optics. Reliability could be affected by shooting lightweight ammo loaded with

20-ish-grain, sintered, frangible or polymer-type projectiles. Results may vary with some of these uncommon loads. Besides these bullet types, reliability is excellent. The clever engineering behind the Tempo barrel system provides shooters with a more comfortable shooting experience that is easy to operate and maintain. The Tempo barrel system ensures the right timing for each cartridge, resulting in a consistent extraction process and less recoil. There was no need for a stiff recoil spring, which also means that the slides are easier to rack. The frequent need to reload is also reduced given that both models use magazines with either 22-round (5.7mm) and 30-round (.22 WMR) capacities. 🖎

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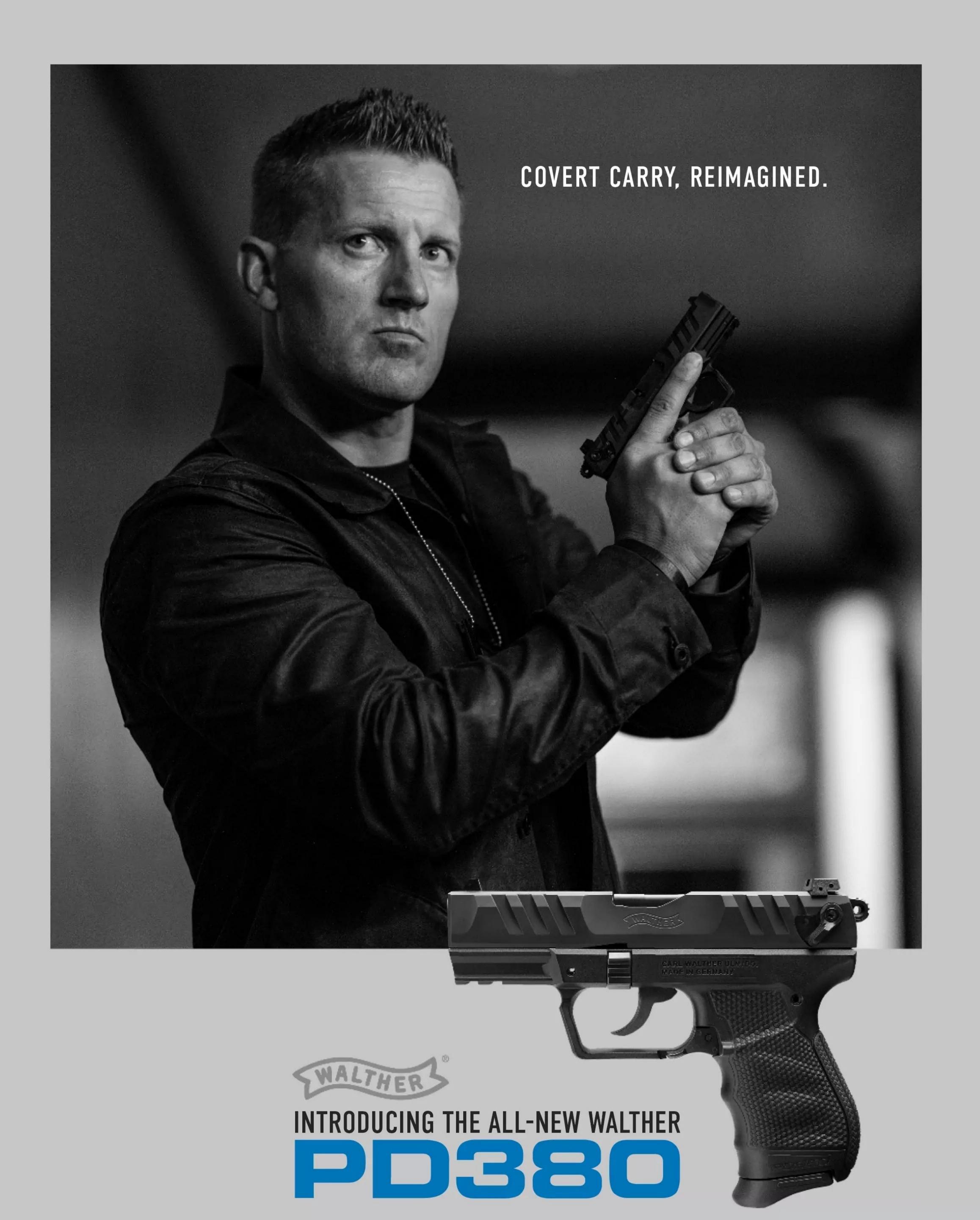
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HANDGUNNING FEBRUARY 2024 G&A 27



BETTER THAN EVER

I SPENT MOST of a week in October 2023 filming segments for Guns & Ammo TV, which gave me the opportunity to discuss some interesting subjects. One topic that resonated with me was how carry guns have changed through the years. It wasn't a discussion about the guns ostensibly built for concealed carry, but rather the guns carried when I was a young man versus those carried by Americans today.

I happily admit that I am an outlier. Not only do I carry a gun every day, I carry a full-size handgun. For most of 2023, my carry gun was a SIG Sauer P226 with a spare magazine over the opposite hip. Most people aren't like me, though. They never have been and never will be. As a rule, the average gun owner in the U.S. — when they bother to carry a handgun — wears one that is small and light. Most choose a gun that is convenient to carry, one that is small enough to stick in a pocket or purse, and some in a holster. Generally, people don't want to have to change their manner or style of dress to carry a gun.

For the purpose of this column, let's call the median of the most popular carry guns the "average" carry gun.

When I first started carrying a handgun in the late 1980s, the average carry gun was different than it is today. The number of reliable compact semiautomatics available was low by comparison, and a lot of gun owners didn't trust pistols as compared to revolvers. Snub nose revolvers are still somewhat popular, but through the end of the 20th century, they were the number one choice for everyday carry. They were relatively small and light, simple to operate, and reliable. Even if you preferred bigger semiautos, your carry gun was probably going to be a "snubbie."

The average snubbie in the '80s and '90s was a five-shot .38 Special, the Colt Detective Special or Smith & Wesson J-frame for example. These guns were easy to carry, but hard to shoot fast and accurate. This was due to the typically long, heavy trigger pulls and minimal sights. Those guns were low capacity and cumbersome to reload.

It wasn't all wheelguns though. There were quite a few small, compact semiautos that became available. Most had a bad reputation for reliability. There's a reason you never hear of Raven, Jennings, or Lorcin pistols anymore. They went out of business in the 1990s. When it came to reliable semiautos compact enough for concealed carry, the dependable choices were a Walther PPK/S, various Beretta models, and not much more.

The Walther PPK was reliable, and there was always a cool factor to the point that "James Bond" carried one, but it was heavy for its size being an all-steel gun, had

sharp edges, and a horrible double-action trigger pull. The PPK/S only held seven-plus-one rounds, but compared to a five-shot snubbie, that was a lot.

Beretta offered the Bobcat and Tomcat tip-up barrel pistols chambered in .22 LR, .25 ACP, .32 ACP, as well as the Cheetah in .32 and .380 ACP. These were double-action (DA)/ single-action (SA) semiautos with aluminum frames.

The larger 80-series Cheetah was an excellent

carry gun, and the .380 versions were the most popular. The Model 85, with its single-stack magazine, was more easily concealable than the double-stack 84. The Bobcat and Tomcats were always popular, too, despite the diminutive chamberings, simply due to the size. For every person carrying a 9mm, .357 Magnum or .45 ACP handgun in a proper holster, there were 10 carrying a .22 or .25 in a pocket. Why? Convenience. Lots of people carried derringers, as well, simply because they can be quickly stuffed into a pocket. One, two, or a few shots, and you had to cock it each time. It was like living in 1887.

rary carry pistols are also optic ready.

To sum up, the average carry gun of 40 years ago held five or six shots, and its power factor was closer to a .380 ACP than a .38 Special. We also can't forget that these guns were all metal, thus they were heavy and had minimal sights, not to mention the unimpressive trigger pulls.

Today, the average carry gun is a micro-compact, polymer-framed pistol in .380 or 9mm. It likely carries a double-digit capacity, has sights at least as good as those found on a full-size duty gun from the Reagan era, and a better trigger. While there are a number of worthy competitors, the carry gun against which all others are judged seems to be the SIG Sauer P365, a 10-plus-one-shot 9mm with night sights, a great trigger and optic ready.

These changes didn't happen in a vacuum. The number of citizens carrying concealed pistols is higher than it's ever been. There has been a nationwide push toward shall-issue and constitutional carry, and manufacturers have been outdoing themselves to attract new business. Compact handguns meant for concealed carry have been the biggest market segment for more than a decade. Forty years ago, women carrying guns were a rarity, but now they're the

fastest-growing concealed-carry segment. Don't think that gun manufacturers don't notice! Many pistols are tailored to them, making them smaller, lighter, and easier to use.

The improvements to handguns were accompanied by performance increases in defensive ammunition. Some ammunition manufacturers offer loads specifically engineered to work well out of short-barreled pistols. Federal

> offers a Personal Defense HST Micro line, for example. In the '80s, most carried ball ammo in their small guns because it was the only way to guarantee reliability. For others, fullmetal-jacket bullets were the only way deep penetration could be achieved.

I think the era of the modern carry gun didn't start with the P365 or the Smith & Wesson M&P

The Mossberg MC2sc 9mm is a micro-compact semiauto that feeds Shield. Rather, I credit the from either an 11- or extended 14-round magazine. Many contempo-Ruger LCP. In 2008, Ruger wasn't the first to market

a reliable, micro-compact, polymer-framed .380, but it was the first to capture the public's attention. Ruger has sold millions of these. The popularity of the LCP caused a prolonged shortage of .380 ACP ammunition. More importantly, its success made gun manufacturers reevaluate their catalogs, and we have reaped the rewards.

The average carry gun today is lighter than its predecessors. It typically features a molded polymer frame that was first designed and tested on a computer. They are so easy to make that these pistols are either cheaper than those older carry guns, or they include more features for the same price. Few still carry a .22, .25 or .32 these days because the .380 pistols are darn near the same size and weight, while 9mm pistols are only a bit bigger!

In terms of power, the modern carry gun in .380 or 9mm is not so different than guns sold 40 years ago, but new guns have good (or great) sights, a decent or better trigger, a corrosion-resistant finish, a capacity at or more than 10, and boring reliability. The pistols that fall into the "convenient to carry" category are twice as good as they were in 1980, and there are a lot of them: FN Reflex, Ruger Max-9, SIG Sauer P365, Smith & Wesson Shield (Plus), Springfield Armory Hellcat, Taurus GX4, and so on.

For better or worse, Americans have never been more well-armed than they are right now. Objectively, this is good news. Why do we need to be so well-armed? Well, that news isn't so good. I've written more than a few dystopian, apocalyptic — some would even say "realistic" novels that address this very topic. As the saying goes, "It's better to have it and not need it, than need it and not have it." What we're likely to have as far as an everyday carry gun is better than it ever was before.



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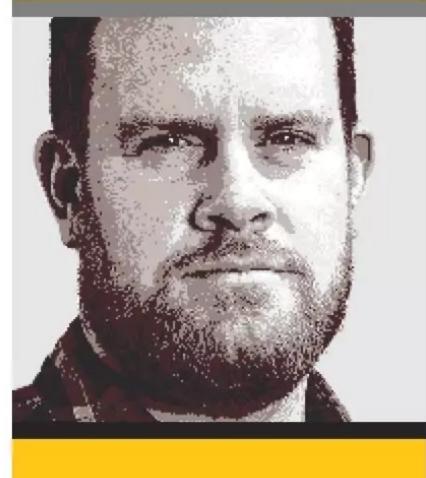
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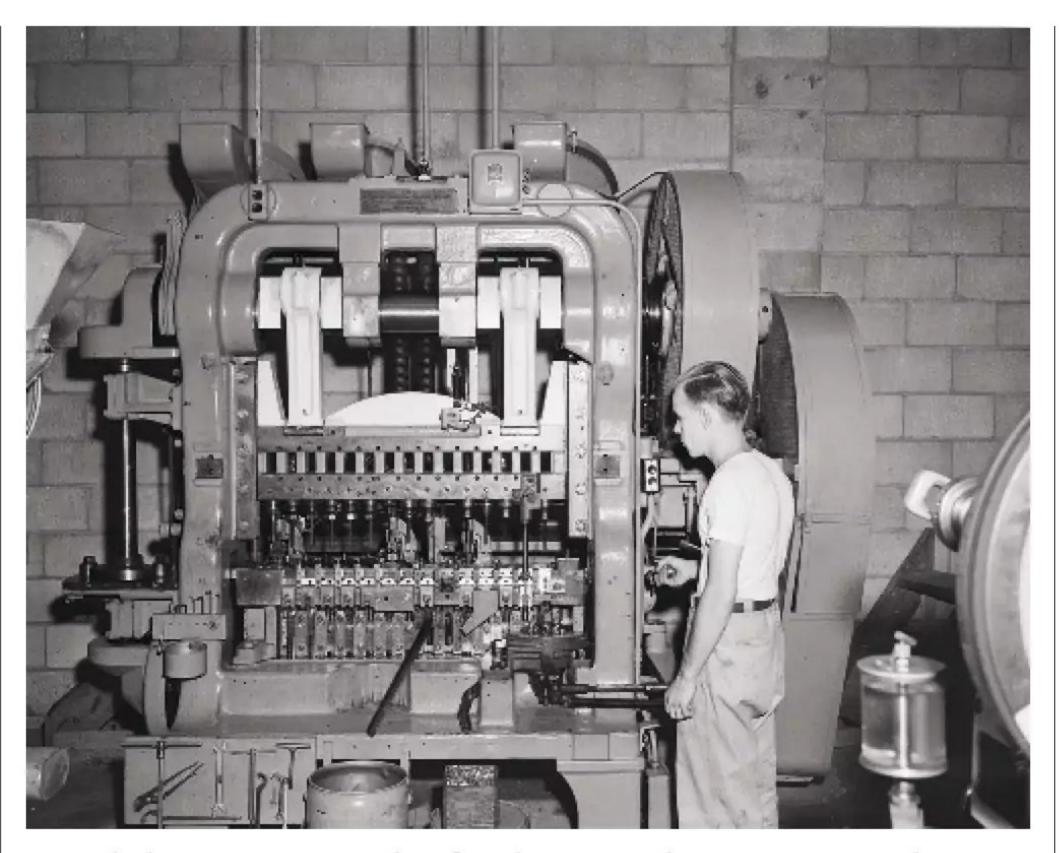




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BRASS & BULLETS

JOE KURTENBACH



Founded in 1949, Hornady's first heavy machine was a Waterbury Farrel press configured to make 150-grain .30-caliber spire-point bullets. The same presses, albeit with modern modifications, still operate at the Hornady factory today. (Photo courtesy of Hornady.)

stand word one, but I did recognize, and clearly recall, his passion for sport shooting and accuracy.

As it turned out, that's all a person needs to know about Hornady. It's a company of passion, accuracy, and a culture that encourages both.

Since joining the gun industry in 2011, I've had the privilege of visiting Hornady and its growing manufacturing operations on several occasions. I've shared bourbon and laughs with Jason Hornady, vice president and son of Steve Hornady, and I've traveled extensively to shoot and hunt with company representatives, including my friends Neil Davies and Seth Swerczek. In 2023, I finally had the pleasure of spending quality time with Steve Hornady, company president and son of founder Joyce Hornady. To be sure, Steve took the company's reins under difficult conditions; Joyce was tragically killed in a plane crash in 1981. Steve's leadership, however, has seen Hornady through an inspiring evolution from boutique bullet maker to, arguably, the industry's most influential and innovative ammuni-

tion manufacturer.

Touring the facility, it's incredible to see World War-era Waterbury Farrel presses, which were the first machines Hornady employed. They're still cranking out bullets as they've done for 75 years. Those machines have been built and rebuilt countless times, I was told, adding efficiency, functionality, and modern quality control measures. The facilities, too, have far outgrown the plant in Grand Island, now comprising multiple loca-

tions including a massive, newly constructed ammunition loading center and a primer manufacturing plant west of the city. In fact, it's on the grounds of the old Cornhusker Army Ammunition Plant.

It's taken serious brass – and not just cartridge case material – for the small family business to make such serious capital investments through the years. Then again,

OF CULTURE & CARTRIDGES: HORNADY MANUFACTURING

When considering product innovations and technological advancements, we often ask, "How could they come up with that?" or "How did they figure that out?" Of Hornady Manufacturing, I rhetorically pondered, How could they not?

My family's roots can be traced to Nebraska's 19th-century German and Irish settlers, particularly to the villages of Greeley and Lawrence. Today, my rela-



Steve Hornady, president of Hornady, describes cartridge case manufacturing with the crew of Guns & Ammo TV during a tour of the company's multiple plant locations.

tions span the Midwest and beyond, but Nebraska remains a hub. So it was that, while visiting family as a teenager, I passed through the garage of a retired Hornady employee in Grand Island. He showed off his prized rifles and presses and regaled us with stories of varmint shoots and benchrest competitions, as well as bullet weights and propellant charges. At the time, I probably didn't underhow could they not? To see Steve walk through these plants, moving and dancing in small moments to the rhythm of the machines, his commitment becomes obvious. He lives for this! He is passionate about this place and these people.

Steve's passion is pervasive. Hornady employees are far more than their job descriptions; they are hunters, shooters and competitors who push the envelope of ballistic performance. Their pursuits and pet projects are why we have the .17 HMR and the Flex Tip; it's why we got the 6.5 Creedmoor, the Heat Shield Tip, and Extremely Low Drag (ELD) bullets. It gave rise to the Precision Rifle Cartridge (PRC) series, and it's why Hornady was tasked with developing the 6mm Advanced Rifle Cartridge (ARC) and entrusted by the FBI to produce Critical Duty ammunition. With recent introductions such as the .22 ARC cartridge, V-Match ammunition and the ELD-VT bullet, it's clear the company is not slowing down.

To Steve, Jason, and the Hornady team, congratulations on 75 years of American manufacturing and innovation. Thanks for making accuracy more accessible.

.300 WIN. MAG.: MINUTE-OF-ELK?

At this writing, I'm preparing for an elk hunt in southwest Colorado to test a yet-unreleased SAKO bolt-action rifle. The event was organized by the good folks at Beretta. As such, I'll be using Steiner optics including an H6Xi 3-18x50mm riflescope (\$2,529, steiner-optics.com) and Predator 10x42mm Laser Rangefinding (LRF) binoculars (\$1,955). The rifle is chambered in .300 Winchester Magnum and features a 24-inch barrel, rifled

with a 1-in-10-inch twist rate. Ammunition, like the rifle, is from SAKO – of Finland, for those unfamiliar – and it features a 170-grain tipped non-lead monolithic bullet.

I adore chasing wapiti out west, but I would not have picked a .300 Win. Mag. for the pursuit. I've brought big game to bag with the .30 magnum, and the cartridge's capability is beyond reproach. As a guy who is, by nature of vocation, constantly using new and different rifles, I can attest that .30-caliber magnums offer the least-civilized pre-hunt workup, though. The .300 Win. Mag. is an ornery bugger; it's loud, it kicks, and I've never encountered an honest-to-goodness minute-or-better rifle. Add to my lukewarm predisposition the real possibility of a 400-plus-yard cross-canyon shot and you'll understand my misgivings. In my experience, the .300 Win. Mag. has plenty of power, but it has never offered confidence-boosting precision.

Introduced in 1963, the .300 Win. Mag. is a cartridge that suffers from the same issue as all legacy cartridges: Loose chamber-to-cartridge tolerances. Discussing the car-





Two confirmation shots from the author's zero target. The spread was about half an inch at 100 yards, from a bipod rest.

tridge with Tom Beckstrand, he said, "The .300 Win. Mag. has the dubious honor of having a 'ginormous' free bore." He's referring to the fact that the bullet's diameter is .308-inch, but the chamber around it, prior to the rifling, measures .315-inch. That's a lot of air around the bullet, making the chances of the projectile remaining perfectly straight during the jump from case mouth to rifling pretty slim. As Beckstrand noted, "To my knowledge, it is the only SAAMI chamber with such outrageous dimensions."

Imagine my surprise, then, when my first three shots at the zeroing bench punched a cool .52-inch (.993 MOA) group at 50 yards, followed by a .275-inch (.525 MOA) three-shot group

at the same distance. Moving the target to 100 yards, I completed my zeroing using a wobble-free sandbag rest, then swapped in a bipod to ensure there would be no funny business with my field kit. I fired two confirmation shots into the bullseye and the resulting pair was just .507-inch apart (.484 MOA). From there, I stayed with the bipod and rang 8- and 6-inch steel plates at 200, 12- and 8-inch plates at 250, and center-punched a 12-inch swinger at 309 yards with three shots in rapid succession. I left a single metallic smudge on the otherwise white painted steel.

Truth be told, I'm still gobsmacked by the rifle's performance. My best guess is that SAKO, being both the rifle and ammo maker, is holding tighter tolerances when its .300 Win. Mag. offerings are used in tandem. Until my full review is complete, I've gone from never knowing an MOA-worthy Win. Mag. to hunting with a rifle that will hit with authority and is knocking on the door of half-minute accuracy. There's no guarantee I'll see an elk, but if I do I'll be confident in my equipment.





The P365-AXG Legion features an aluminum-alloy frame, stainless-steel slide and a Legion Gray finish with G10 grips also wearing the Legion chevron logo. Guns & Ammo's test pistol arrived with optional accessories including a Romeo-X reflex sight (\$450) and 700-lumen Foxtrot2R pistol light (\$150).





SIG SAUER P365-AXG LEGION Recoil operated, striker **TYPE** fired, semiautomatic CARTRIDGE 9_{mm} **CAPACITY** 17+1 rds. **BARREL** 3.1 in., carbon steel **OVERALL** 6.6 in. **LENGTH WIDTH** 1.4 in. **HEIGHT** 5.2 in. **WEIGHT** 1 lb., 10 oz. Carbon steel (barrel), **MATERIALS** stainless steel (slide, FCU); aluminum alloy (module) **FINISH** Cerakote, Legion Gray SIG Sauer X-Ray3 day/ **SIGHTS** night sights; optics ready TRIGGER PULL 5 lbs., 8 oz. (tested) **SAFETY** Internal drop safety **MSRP** \$1,199 SIG Sauer, 603-610-3000, **MANUFACTURER**

sigsauer.com

IF YOU HAD TO PICK the single

that continues to this day.

greatest success in the firearms world in the last decade, the choice for a lot of people would be the SIG Sauer P365. Introduced in Guns & Ammo's May 2018 issue, the pistol's combination of size, weight, caliber, capacity, features, and \$600 price quickly shot it to the forefront of most gun owners' minds. In hindsight, I believe the P365 dethroned the Glock 19 as the carry gun that all others are judged against, and it accelerated a subcompact arms race

Success breeds competition, which is good for all of us. It also means that a popular design will inevitably be followed by additional models. Hollywood calls them "sequels." The first P365 — discontinued in 2023 — was just a basic compact gun. It wasn't capable of accepting an optic, and it was fed by a flush-fit 10-round magazine. (The 12-rounder was optional.) Subsequent models increased its size, weight and features, but the latest is both bigger and bolder than all of them: P365-AXG Legion. There's a lot to unpack with this gun, so allow me to hit the high notes first, then the details.

The P365-AXG

Legion is a larger version of the P365 with an aluminum grip module secured to an internal stainless-steel chassis assembly called the "fire control unit," or "FCU." It is fed by 17-round magazines with a serrated aluminum basepad featuring the Legion chevron.

Despite the XL slide length, the

stainless-steel slide sports a pair of compensating cuts forward of the 3.1-inch carbon-steel barrel. These are advertised to reduce muzzle rise, but the sight radius is extended to 5.1 inches versus the standard 4.9 inches. All P365 pistols are now optics ready, and Guns & Ammo's test sample arrived with the new Romeo-X reflex sight with a 2 MOA red dot. A 700-lumen Foxtrot2R was also included for testing, but the optic and light are optional accessories. The standalone pistol is easily concealable.



The P365-AXG Legion maintains the design's external extractor and angled bevel to ensure problem-free ejection.





The P365XL-length slide features a pair of compensating ports that reduces muzzle flip. The front X-Ray3 day/night sight is dovetailed just behind the comp. The rear sight co-witnessed in the lower third with the low-mount Romeo-X reflex sight.



The slide catch is an extended version of the standard P365 unit. To the left is the takedown lever. With the slide locked back, the takedown lever can be rotated 90 degrees down for disassembly.



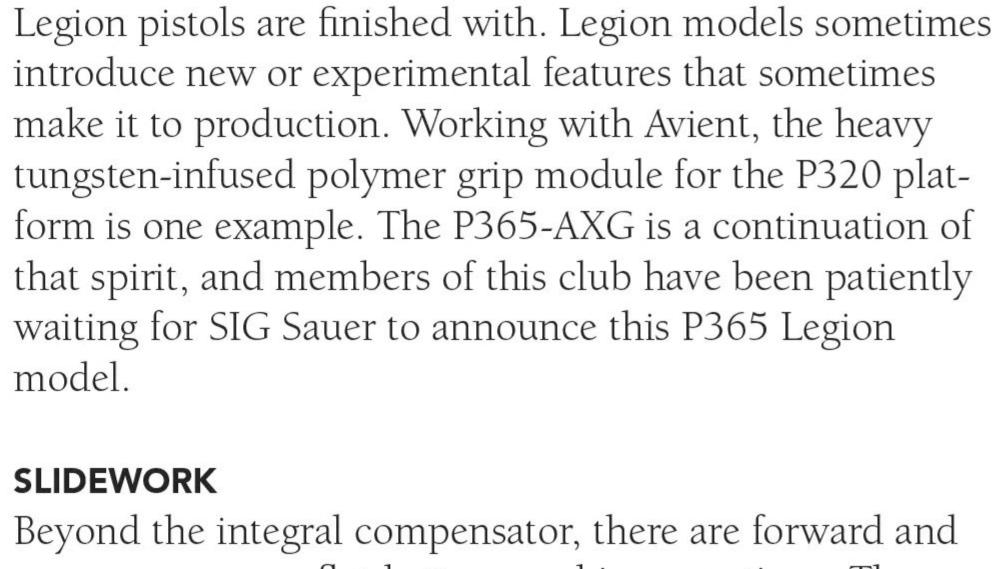
Rather than the proprietary SIG rail, a conventional three-slot Picatinny rail was machined to the aluminum-alloy frame. Though a Foxtrot2R was tested, other makes of lights can be installed.

Overall, this pistol measured 6.6 inches long, 5.2 inches tall, and 1.4 inches wide at the controls. The gun isn't much thicker than an inch, though, so it's very flat. With an empty magazine in place, it weighed 26 ounces.

Like the P365 X-Macro Comp (\$998), the P365 AXG Legion uses the same 3.1-inch barrel as the original P365; it ends inside the slide. Forward of the barrel is an expansion chamber topped by a two-port compensator that's machined into the longer XL slide. SIG Sauer first offered this arrangement on the P365 X-Macro, and I like the outside-the-box thinking. The two-port expansion

chamber in front of the barrel does work as a compensator, and it is a simpler manufacturing approach than a barrel-mounted comp. So, the P365-AXG Legion is basically an aluminum-framed special edition of the X-Macro Comp.

Founded in 2015, the Legion series program afforded access, training and product exclusives to those willing to pay an upcharge to become a member. A few select guns were unveiled each year in limited numbers and all received the Legion treatment. SIG Sauer's Legion pistols introduced a new signature Cerakote color called "Legion Gray," which all





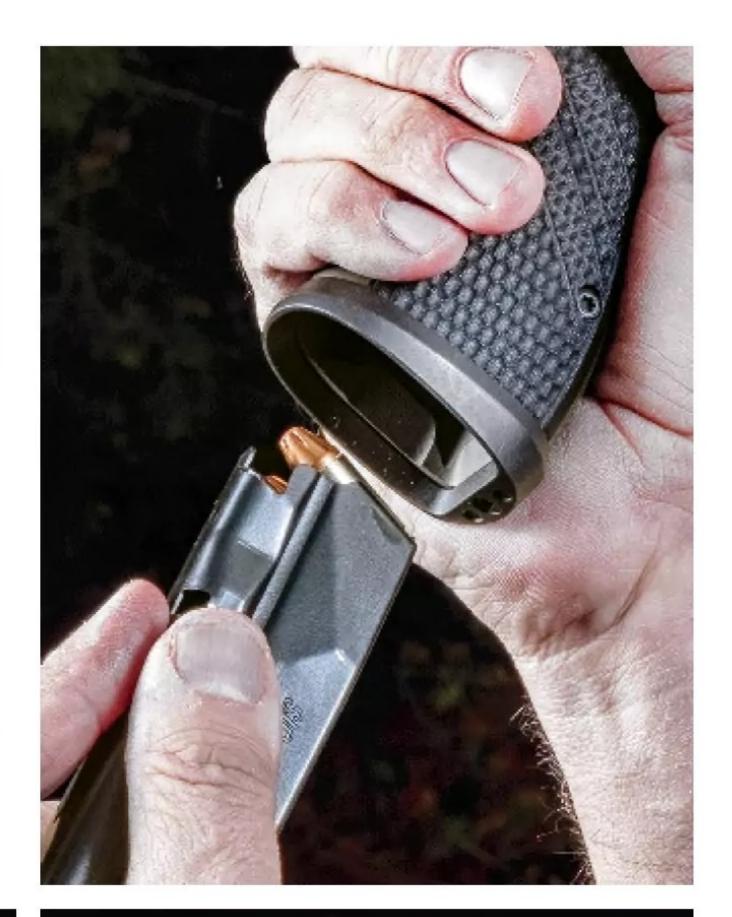
rear flat-bottom cocking serrations. The P365-AXG Legion features a great set of sights, which is one thing that always got the P365 attention. SIG Sauer's X-RAY3 day/night metal sights feature tritium inserts that glow in the dark. These sights are capable of duty use, but small enough that it doesn't prohibit sticking this pistol in a pocket. The rear sight is black and serrated with tritium capsules to either side of the notch. At the front, the tritium is surrounded by a lime green circle, which I found was nicely visible in any light. These aren't the best day/night sights on the market, but they're still better than most on







The P365-AXG grip module features cross-hatched texture on the front- and backstrap of the frame, as well as under the triggerguard. The G10 grip panels feature simple square-scallop texture with the subdued double-chevron Legion logo.







The aluminum magwell supports a postive grip and has a flare underneath to assist smooth reloads. Held on by a screw, it is removable for those wanting a more flush and concealable profile. Magazines carry 17 rounds and have the Legion basepad.

factory guns of any size. On the P365-AXG Legion, the front sight is set back behind the compensator. The original P365 had a sight radius of 4.9 inches. The P365 XL has a sight radius of 5.6 inches. With the compensated slide, the P365-AXG Legion has a sight radius in between at 5.1 inches, closer to the original P365.

If you're running a red dot, sight radius doesn't matter. The P365-AGX Legion has the slide cut for direct mounting of optics using the compact Shield RMSc footprint, and there are a lot of options. Leave the coverplate on and you'll see another logo reminding you it's a Legion model.

SIG Sauer refers to the lever on the left side of this pistol as a "slide catch." When I compared it to the lever on a standard P365, I noted that this version was extended. The reason why it's called a slide catch? The original didn't have a great reputation for working so well as a "slide release." This extended lever worked better when dropping the slide, but it's still a small piece that you might miss with your thumb. In contrast, the triangular magazine release is checkered, steel and easier to be consistent with.

FRAMEWORK

The P365 has always had some form of accessory rail.

The original featured a single-slot, proprietary rail that wasn't very useful or popular with the aftermarket. That's changed. The P365-AXG Legion sports a three-slot M1913 Picatinny rail, accommodating other brands besides its own Foxtrot series of lights.

If you haven't been paying attention, SIG Sauer has been working to take over every market segment that's even tangentially related to firearms. Not only does SIG Sauer make its own ammunition and electro-optics, it makes lights. The Foxtrot series is a good fit for the P365, especially if you want to employ this pistol in home defense. Costing around \$150, its 700-lumen LED runs on a single CR123A battery.

It's hard to shoot small pistols well, and even harder when they are saddled with gritty, heavy triggers. In weight and quality of pull, the trigger on the P365 has always been better than average for a pistol its size. This has contributed to its popularity. The FCU in the P365-AXG is the same as any P365 model. At 5½ pounds, it provided the same quality trigger pull, which is fine for a carry gun.

The P365 is a striker-fired 9mm. Like its big brother, the P320, the serialized part isn't the outward frame. Rather, its the stainless steel chassis that the FCU is built on. Also referred to as the "trigger group," it is not the grip mod-



The muzzle of the 3.1-inch barrel is recessed within the slide. Note the angular bevels at the front of the slide and dustcover. These angles aid in reholstering, especially with tight IWB rigs.

ule. The grip module of the P365 isn't as easy to change as that of the P320, but it still only requires the shooter to punch out one pin. I own an original P365, but I never really liked the grip angle. As soon as Wilson Combat introduced its grip module, I swapped it out. I'm bringing this up because the (A)luminum module is like the XMacro and follows the X-grip profile (X). The X-grip is more ergonomic and fits most hands better. It also has a modest beavertail. It looks good and reduces the chance of slide bite.

Since the grip module is aluminum and not polymer, the P365-AXG has grip panels; a pair of black G10 grips with the Legion logo. They have a good

texture, and are not too aggressive.

Both the front- and backstrap of the pistol have checkering, too. Checkering is also underneath the triggerguard. I didn't understand the purpose, but it was explained to me that the checkering there presses against the finger of your support hand and helps to keep the pistol from moving left and right. It may be a small improvement, but it's just the kind of little "extra" you get on a Legion gun.

If you look closely, you see raised ridges on either side of the grip module, just above the front of the triggerguard. This is where the thumb of the support hand presses when shooting with a two-handed grip. It provides just a bit more control. That's the reason for the flat trigger as well. It breaks at a near 90-degree angle, which keeps the muzzle from moving left or right as you're shooting.

As to why you might want an aluminum frame in your hand rather than polymer? There is a difference. In weight, and in feel. Some people simply prefer the feel of one versus the other. Aluminum adds weight, but polymer flexes when shooting. The recoil impulse is slightly different.

This P365-AXG Legion includes three 17-round magazines, all with aluminum basepads. They stick out just enough from the bottom of the gun, past the magazine well, to ensure proper seating. The aluminum magazine well is modest in size, and it doesn't compromise concealability. If you don't like it, it is easily removable.

The original P365 shipped with two magazines, a flat 10-rounder and one with an extended basepad. Even with

the extended basepad setup, most shooters could barely get all fingers on the gun. Here, the P365-AXG Legion is a full inch longer than that. The incredible ammunition arrangement means that the 1 inch takes it from a 10-plus-one shot handgun to a 17-plus-one shot pistol, one that is now comp'd, optics ready, and capable of wearing most lights.

Depending on your grip and shooting style — and what ammunition you're using — I think that you should see a 20- to 33-percent reduction in muzzle rise thanks to the integral compensator. When combined with the longer grip and weight of the aluminum frame module, the P365-AXG Legion has the felt recoil of a full-size gun while being smaller, lighter,



PERFORMANCE

LOAD	VEL. (FPS)	ES	SD	BEST GROUP (IN.)	AVG. GROUP (IN)
Black Hills 115-gr. FMJ	1,112	30	17	2.5	3.3
Winchester 3Gun 147-gr. JHP	920	27	12	2.6	3
Horn. Crit. Duty 135-gr. FlexLock	1,043	39	17	3	3.6
SIG Sauer Elite 115-gr. FMJ	1,098	34	11	3.3	4.1

Notes: Accuracy is the average of four, five-shot groups at 25 yards from a sandbag rest. Velocity is the average of 10 shots measured with an Oehler Model 35P chronograph set at 12 feet in front of the muzzle.

and more concealable.

I shot this pistol in Iowa while filming segments for Guns & Ammo TV at Brownells. It was a joy to shoot. It felt great in my hands, looked great — at least to me — and was flat shooting. When I got home, I rang steel and punched paper at the range before settling down for the accuracy tests.

I carry a full-size handgun because my philosophy is this: If all I've got is a handgun, I want it to be one that can solve any problem a handgun is capable of solving. This means good sights, controllability, and sufficient power and capacity to keep me on the right side of the dirt. The P365-AXG Macro offers all of this and more in a gun that's more concealable than a full-size gun.



BENELLI LAUNCHED its first bolt-action hunting rifle, the Lupo, in Guns & Ammo's March 2020 issue. The stylish gun was an immediate success and demonstrated that Benelli — a regarded shotgun manufacturer — could make a timeless turnbolt. It's no surprise that the Lupo line would expand. The Lupo is offered with black synthetic, camo and walnut stocks, and in nine chamberings spanning 6mm Creedmoor to .300 Winchester Magnum. For 2024, the Italian gunmaker goes long with its High Precision Rifle (HPR).

The HPR shares many of the same features that made the original an accurate sporter. The cylindrical receiver is precision machined from premium steel, and the three-lug full-diameter bolt comes with a plunger-type ejector and an extractor mounted to the outbound lug. It is field-strip-

pable without tools, as well. The bolt body is relieved in the middle, which also serves multiple purposes. Machining away material in the center of the bolt reduced weight without compromising durability, and it allowed the bolt to run through the action very smoothly. The trim design also allowed for an additional round to be carried in the magazine, from four to five. The ejection port was made large enough that the rifle could be effectively singleloaded, too, yet the design maintained the rigidity that's so vital for accuracy.

The hammer-forged barrel attaches to the receiver by way of a steel barrel extension. The barrel extension is secured with a recoil lug held firmly in place with two screws. All the while, the barrel is free-floated.



BY BRAD FITZPATRICK | PHOTOS BY MICHAEL ANSCHUETZ

The HPR barrel is considerably heavier than the standard Lupo barrel, measuring .86 inches in diameter where the muzzle threads begin. The barrel is fluted to reduce weight, though, but the fluting and the larger diameter are said to offer more surface area for barrel cooling. There's a muzzlebrake included with HPR rifles, but the 5/8-by-24 threads allow the shooter to mount other muzzle devices, including caliber-appropriate suppressors. The barrel receives the same Crio stress-relief treatment as Benelli's shotguns are known for, which translates to an even grain in the steel's metallurgy and a slick surface in the bore. Barrel twist rates vary by cartridge, but the .308 sent to Guns & Ammo for testing came with a 1-in-11-inch twist rate.

The triggerguard on the Lupo is steeply angled, and

there's ample room inside for gloved fingers. The trigger is crisp and pull weight is adjustable from 2.2 to 4.4 pounds. Just above the trigger is the sharply angled bolt handle and the rounded bolt knob. The bolt knob on the HPR is a more traditional bell-shape target design versus the Lupo's signature egg-shaped handle.

All Benelli Lupo rifles are considered "chassis rifles," but the chassis design differs from other chassis-stocked rifles. The Lupo HPR stock is a three-piece design with an aluminum block under the receiver, and the forearm and buttstock are separate. The recoil lugs fit into a machined cutout in the aluminum chassis, so tight tolerances ensure a solid, wiggle-free fit to promote accuracy potential.

Unlike the standard Lupo, the HPR comes with a more

000

target-centric stock and forearm design. The forearm features a flat base and includes a long finger groove. M-Lok slots on the base and sides of the forearm allow for easy installation and removal of items such as bipods and slings. The composite buttstock and forearm are colored in a tan finish with black epoxy spiderwebbing.

The stock of the HPR has an adjustable comb and interchangeable polymer pistol grips. The line from the pistol grip to the toe of the stock slopes gently, and there's a reduced "wrist" behind the pistol grip. The narrow base of the stock allows you to settle the rifle comfortably in a shooting bag. As with its shotguns, Benelli's Lupo HPR is equipped with a version of the Progressive Comfort system, which features a series of interlocking fingers that compress under recoil to absorb kick. The Progressive Comfort recoil pad is soft, too, and dense, further helping to take the sting out of its recoil. There's an M-Lok section on the base of the buttstock for

mounting sling studs, a monopod, or other accessories.

Also like Benelli shotguns, the Lupo HPR is adjustable for drop and cast

HPR is adjustable for drop and cast using the shim kit provided with the gun. To adjust drop and cast, you'll need to remove the recoil pad and Progressive Comfort system to insert the proper shims. Drop shims are included as well as a cast shim, which is labeled "DX" and "SX." If the shim is slightly thicker on one side than the other, and when it is oriented with the SX face of the plate toward the rear, the stock is "cast-on," meaning that it is angled slightly to the left of center. With DX oriented rearward, the stock is cast-off for right-handed shooters. There's also a length-of-pull adjustment shim kit that allows the shooter to adjust between 13\% and 14¾ inches of reach.

The Lupo HPR is drilled and tapped at the top of the receiver. The additional anchor points offer added strength and security, but they also offer a variety of mounting options. If you choose not to use the included 30 minute-of-angle (MOA) rail, you can replace it with two rear Remington Model 700 bases. Talley also offers lightweight machined aluminum rings for the Lupo (\$59, talleymanufacturing.com).

FIRST TO THE FINISH

No group of hunters can destroy a firearm's finish faster than waterfowl hunters, particularly those who hunt birds



The bolt handle features a steep down-angled shape. Even with the HPR target knob, it clears the ocular housing and power ring.

BENELLI LUPO HPR			
TYPE	Bolt action		
CARTRIDGE	.308 Win. (tested)		
CAPACITY	5 rds.		
BARREL	24 in., Crio treated, 5/8x24		
OVERALL LENGTH	46.26 in.		
WEIGHT	9 lbs., 7 oz.		
STOCK	Synthetic; ComforTech; Progressive Comfort; adj.		
GRIP	Interchangeable		
LENGTH OF PULL	13.75 in. to 14.75 in.		
FINISH	Anodized (aluminum), BE.S.T. (steel)		
SIGHTS	None; 30 MOA rail		
TRIGGER	3 lbs. (tested), adjustable		
SAFETY	Switch, two position		
MSRP	\$2,949		
MANUFACTURER	Benelli, 800-264-4962, benelliusa.com		



The heavy barrel features a large shoulder and threaded muzzle. A three-port muzzlebrake with 11-degree crown is included with the Lupo HPR.

in coastal areas. Brackish and salt water environments will eat away at the metal. In 2018, Benelli revealed its Benelli Surface Treatment (BE.S.T.) to G&A. To test its effectiveness, shotgun barrels were exposed to saltwater baths for extended periods; there was no damage to the metal. That same BE.S.T. treatment is now found on several models of Benelli's shotguns

and rifles, including the barreled action of the Lupo HPR. BE.S.T. is a combination of a physical vapor deposition (PVD) and plasma-enhanced chemical vapor deposition (PECVD) that's applied to the substrate metal of a firearm. To apply, Benelli has to place the metal in a vacuum chamber and then use plasma to excite the graphite material that forms the basis of the surface treatment, which then forms a vapor. The vapor is introduced to a reactive gas inside the chamber and the graphite material adheres to the raw metal. The resultant finish is waterproof and corrosion-resistant, an armor that is affixed to metal.

Benelli cracked the code for BE.S.T. by using PVD which



The bolt is sloped at the rear, revealing a red, cocked, firingpin indicator. Bridging the stock and receiver is the pushto-fire safety switch.

works at low temperatures. A typical plasma coating requires large amounts of heat, which stresses metal components; that's bad news for firearms manufacturing. However, the clever engineers in Urbino, Italy, cooked up a recipe to apply PVD at cool temperatures,

and they wouldn't share that information. Benelli spent years perfecting BE.S.T. and did not patent it. Why? They didn't want to publicize details of the process.

How good is it? Benelli tested BE.S.T. shotgun barrels by leaving them in open-air environments for months. Then, barrels were wiped down and attached to shotguns for testing. After inspection, the barrels functioned like new.

From personal experience, in my opinion, BE.S.T. is the most effective surface treatment available. I've carried BE.S.T. shotguns while breaking brush and thorns, hunting rabbits, and through many marshy duck blinds. I even used a Benelli BE.S.T. Lupo while hunting black bears in



There are two M-Lok slots on each side and underneath the Lupo HPR free-float forend. The heavy contour barrel is also fluted.

coastal Alaska. That was a place where salt spray was a fact of life. After every hunt, the guns still looked new. Benelli believes so strongly in BE.S.T. that they warranty it for 25 years.

The HPR comes with a detachable, double-stack magazine that holds five rounds of .308 Winchester. There's a two-position safety mounted on the tang, and a bolt-unlock button

on the right side of the receiver, just behind the bolt handle. Depressing the bolt-unlock allows the rifle to operate with the safety engaged. There's a bolt-stop button on the left-rear portion of the cylindrical receiver, and a magazine release tab in the front of the magazine well.

COST & COMPETITION

The Benelli Lupo HPR is available in nine chamberings. The retail price for any of them is \$2,949. That's less than the Browning X-Bolt Target Pro McMillan (\$4,129.99, browning.com), but more than a Savage 110 Elite Precision (\$1,999, savagearms.com) or Seekins Havak HIT



The HPR includes an interchangeable pistol grip that alters the profile, girth and amount of texture.

(\$2,100, seekinsprecision.com). All of these are bolt-action target rifles. With the exception of the Browning, all come with a chassis designed specifically for optimum accuracy and long-range performance. Unlike the other rifles, though, Benelli uses a proprietary magazine, not an AICS pattern. It's also the only gun on the list that comes standard with a 30-MOA rail, helpful for scope adjustments at long range.

Weight isn't as much of a factor with target guns and hunting rifles, but at 9.4-pounds the Lupo HPR is lighter than the aforementioned Savage, Seekins, and Browning rifles weighing 12.6, 11.5, and 10.8 pounds, respectively. The Seekins Havak HIT includes the added feature of a folding stock, and the Savage is available as a lefty.

The Lupo HPR offers an accuracy guarantee that the other guns do not match, though. The Lupo HPR is qualified to shoot three-quarters MOA for five shots, which is a very bold promise indeed. The Lupo rifles I've shot in the past were accurate, and the original version of the rifle was the only factory .30-'06 I've tested that routinely placed five shots in under an inch at 100 yards. It was time to put Benelli's promise to the test.

AT THE RANGE

We scoped the Lupo HPR with the new Burris Eliminator 6. Each version of the Eliminator has offered improve-

ments and upgrades, and the 4-20x50mm Eliminator 6, with its built-in rangefinder and ballistic calculator, was an ideal optic for the Lupo HPR. (See sidebar.)

With the Eliminator mounted and boresighted, I went to the range. It rained throughout the entire evaluation, sometimes as a drizzle and sometimes in cascading sheets. Even under the shooting canopy, there was no way to avoid soaking the rifle, but I had no concern about corrosion. It wasn't particularly comfortable though. By the time I was finished, most of the ammunition boxes and all the



Shims for cast-on and cast-off allow users to fine-tune the Lupo HPR to one's unique fit — just like a setting up a Benelli shotgun.



The magazine couldn't be more aesthetically pleasing when inserted into the Lupo. Holding five rounds, it is proprietary.



The Lupo HPR is equipped with a 30-MOA optic rail, which allows shooters to extend the usefulness of long-range-capable scope turrets.

paper targets were soaked. However, I was reminded about the benefits of BE.S.T., and it's a great reason the Lupo HPR should appeal to shooters.

Accuracy was, as expected, superb. I shot nothing but five-shot groups. While not all were under .75 inches at 100 yards, enough were that I was able to verify Benelli's accuracy claims. The test-best group measured .64 for five shots, and there were several in the .7- and .8-inch range. The 1-in-11-inch twist rate was interesting. It's squarely between the 1-in-10 — favored for heavy bullets — and the 1-in-12-inch twist that's been

popular with hunting-weight bullets around 150 grains for years. With bullets from 152 to 168 grains, the ammo performed well; a few broke an inch for five shots, hardly what you'd call an inaccurate group. The list of available chamberings offers a great deal of variety for long-range shooters, but Benelli should add 7mm PRC to the line.

I prefer the bell-shaped bolt knob on the HPR to the egg-shaped knob on the standard Lupo. This was really the only styling cue on the original gun that I did not care for. The standard bolt knob worked fine, but I think it's easier

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FIREARM LUBRICANTS

The Burris Eliminator 6 per-

BURRIS ELIMINATOR 6

formed extremely well while testing the Benelli Lupo HPR in .308 Winchester. The Eliminator 6 featured a 4-20x50mm design on a 34mm maintube. For longrange shooting or hunting, this scope is versatile for offering lots of adjustment range and features.

The reticle layout is a modified "Christmas-tree" design with cascading dots below the horizontal crosshair. Unlike most typical long-range optics with similar reticles, the Eliminator 6 offers elevation and wind holdoff solutions when you press the rangefinding button.

To set up the scope, make certain that it has power. The battery compartment is beneath the rangefinder activation button. Download the Burris Connect app to a smart device and allow the scope to connect through Bluetooth with the app.

Using the app, you can develop ballistic profiles for your rifle and cartridge, adding various loads. You can manually input ballistic data including G1 ballistic coefficient (BC), as well as the bullet weight and velocity. Or, if you are unsure about the details of a factory load, you can often find it in the Burris Connect library. The data is then pushed to Eliminator 6 to provide a shooting solution.

Sight in the rifle and optic at

your chosen zero distance. From here, every time you range a target, the Eliminator 6 responds by illuminating the dot that corresponds with the appropriate aiming point. You can finetune your accuracy by truing muzzle velocity and using real data in place of factory claims. Correct pressure, altitude, and barrel-length information will help. That said, Burris Director of Marketing Jordan Egli said, "Factory figures typically allow the shooter to hit steel plates to 500 yards, or so, without verification."

There's also a density altitude feature that, when turned on in the app, allows the scope to gather environmental data. A QR code inside the capped turrets also offers digital access to the owner's manual.

Setting up the Eliminator 6 is the work that occurs at the front end of using it, and even that isn't very intensive. Once the scope is zeroed and ballistics information is shared with the scope, range the target and hold the illuminated dot where you want the bullet to strike.

I zeroed the test scope at 100 yards and hit dead-on at 200 yards. At 300- and 400-yards, ringing steel was a matter of ranging the target, adjusting my point of aim and pressing the trigger. Don't forget to follow through! — B. Fitzpatrick



to operate the bolt on the Lupo HPR.

There were no cycling or loading issues save a single round that did not want to feed. (It could have been due to its flat-nose.) Simply pulling back on the bolt to relieve the tension and running it forward solved the issue. The magazine worked well and fit securely in the gun without fiddling. And, it was easy to load. The tang-mounted manual safety was easy to find and operate, and the grip angle made the thumbs-forward shooting position comfortable and practical. This style is favored by many target shooters.



personal life. The combination of the heavy contour and

flutes, as well as the relatively mild .308 velocities, meant

that barrel heat wasn't an issue. To ensure its best perfor-

mance, I let the barrel cool between groups.

Adjusting the comb was simple, though it sometimes required extra effort to raise or lower the comb. I made the mistake of allowing part of my cheek to slide behind the elevated comb, and I paid the price with a sharp stab. If the comb is elevated, make sure that your cheek is welded to the top of the comb or you may suffer the same fate.

Benelli made some lofty promises with the Lupo HPR, but it lived up to them in my opinion. It's a well-built rifle, a natural evolution of the Lupo line. I think shooters will

Benelli's beefy muzzlebrake did a good job redirecting muzzleblast and reducing felt recoil, but the tradeoff, of course, was increased concussion from the muzzle to those left and right of the muzzle. I test rifles with the hardware provided, but I'd probably switch to a lightweight sup-

PERFORMANCE

LOAD	VEL. (FPS)	ES	SD	BEST GROUP (IN.)	AVG. GROUP (IN.)
Federal Premium 168-gr. Berger Hybrid Hunter	2,650	20	9	.64	.71
Wilson Combat 168-gr. Sierra BTHP	2,594	18	9	.71	.75
Hornady 178-gr. ELD-X	2,579	25	10	.71	.75
Black Hills 152-gr. Dual Performance BTHP	2,830	38	12	.95	1.03
Barnes 175-gr. OTM	2,602	32	11	.95	1.07

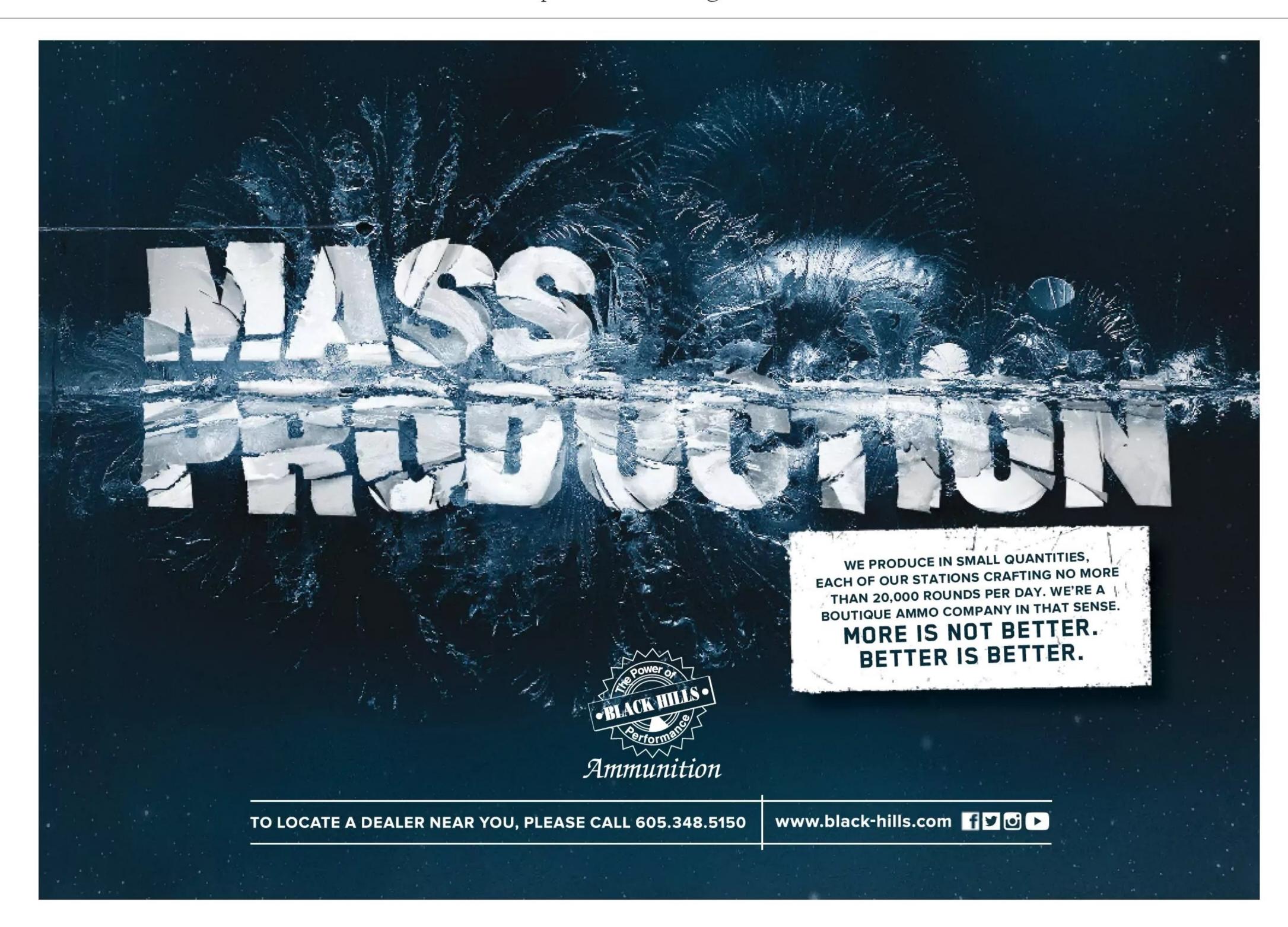
Notes: Accuracy is the average of five, five-shot groups at 100 yards from a fixed rest. Velocity is

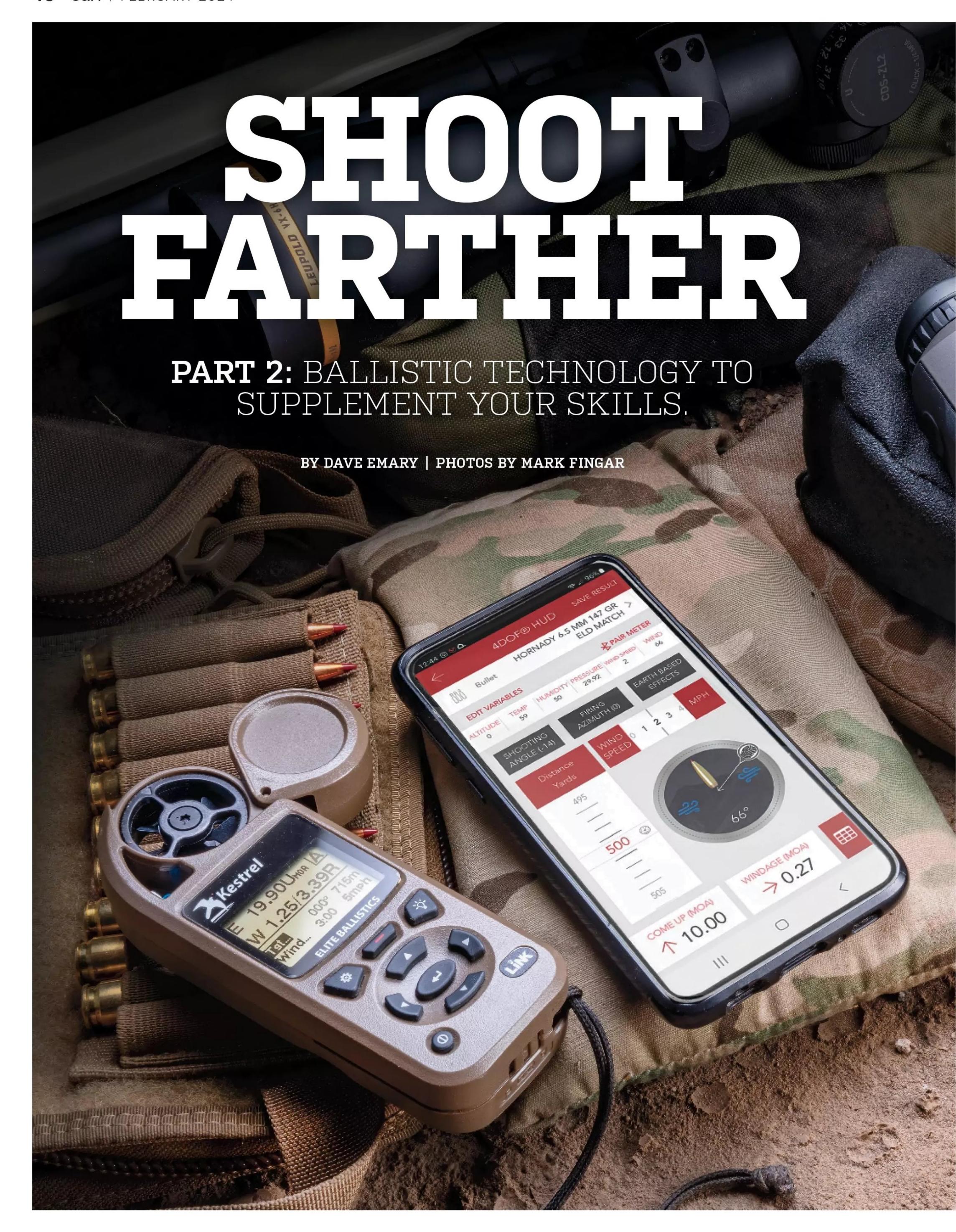
the average of 10 shots measured by Labradar placed adjacent to the muzzle. pressor if I were going to continue shooting this rifle in my

Comfort system, and users should take advantage of all the stock shims to help it fit perfectly. The Benelli brand may always be most closely associated with premium shotguns, but the

like the Progressive

Lupo has proven that the Italian firm is capable of producing premium rifles for the American market. The Lupo HPR is just as well-engineered and desirable as any Benelli shotgun. CM







Gunwerks Revic BR4 rangefinder features a superior ballistic calculator and sensors that add weather station and angle inclinometer capabilities. Bluetooth syncs this information with your ballistic profiles to the Revic Ops app. \$1,285





The SIG Sauer Kilo series offers simplicity and value. Rangefinding for hunting purposes should be limited to close distances. \$600

IN PART ONE, "LONG FOR LESS" (January 2024), I discussed ethical considerations for long-range hunting. I also discussed equipment and hunter limitations, and considerations for what distance you and your equipment are capable of for taking different size game. I described entry-level rifles and appropriate cartridges, as well as starter scopes, appropriate bullet choices and ammunition. In this article, I will cover additional equipment needed for long-range hunting and report on testing done with the two entry-level rifle and scope combinations using factory long-range hunting ammunition. I'll conclude with a test of the two scopes to investigate how well they work for long-range shooting.

RANGEFINDERS

It is imperative you have a rangefinder capable of reliably ranging game at the distances you plan on shooting. This is one piece of equipment I would save up extra funds for; buy the best you possibly can. Based on my experience, most of the claims for maximum ranging distance on game for small rangefinders are optimistic. If you multiply the claimed range by .6 to .7 — at best — that's about what it is capable of on animals in the field. Read the reviews and do your research. For a good firing solution for long-range hunting, you have to know the range accurately.

Both Leupold and SIG Sauer offer rangefinders that advertise long-range capabilities, as well as onboard ballistics solvers. In the case of SIG Sauer's, it also factors atmospheric condition measurements. These rangefinders

are generally in the \$500 to \$800 range. My recommendation, though, is to save up and purchase one such as the Gunworks Revic BR4 rangefinder. Yes, it is \$1,400 but it's well worth it. It has a built-in angle inclinometer, a weather station that is very accurate, and it is sync'd to an advanced ballistics solver that includes aerodynamic jump, spin drift, and angle of fire. The BR4 has a narrowed laser beam specifically tuned in size to provide ranging on animals out to 2,000 yards when tripod mounted. I have ranged dark rocks to 1,600 yards with this rangefinder; no problem. With the BR4, you won't need a hand-held weather station or ballistics solver. The unit also has an app for linking to your phone that provides detailed ballistics information and atmospheric conditions readouts. A small, inexpensive windmeter is all you would need to complement the Revic BR4.

WEATHER METER

If you don't have a rangefinder that gives accurate atmospheric condition data, you will have to have a good handheld weather meter. Nearly all of them have windmeters included. The longer the range you shoot, the more important it becomes to know the atmospheric conditions in order to make an accurate ballistics solution and air density determination for your ballistics solver. Your weather meter must be capable of measuring atmospheric pressure and temperature. Humidity is much less important, but still useful.



The Kestrel 5700 Weather Meter is the current standard for handheld weather stations. Basic and advanced models with optional G1/G7 ballistic calculators are available. \$449

Kestrel is the standard by which all handheld weather meters are measured. They have basic models that give wind speed, temperature and pressure for about \$160 and run up to nearly \$1,000 with meters that include WiFi, Hornady 4DOF, or Applied Ballistics solvers. Wind-only meters are available for \$50 to \$100.

BALLISTIC SOLVERS

An accurate ballistics solver is critical. There are many solvers available as an app for ranges out to 800 yards, but any solver that can handle the G7 ballistic coefficient (BC)

should work well enough. In addition to elevation and windage calculations, the solver must be able to calculate muzzle jump, spin drift and accurately allow for the angle of fire. Many solvers only use the Rifleman's Rule for angle fire, which is not accurate enough past 400 yards. The Hornady 4DOF solver is hard to beat for this; I have used it shooting in the mountains at ranges to 1,600 yards at angles of 30 degrees. It also calculates an atmosphere based on the inputs you give it to allow for changes in the elevation of the projectile in flight. This provides another level of accuracy when shooting in the mountains. Hornady 4DOF is available as a free app in the app store. The solver in the Revic BR4 rangefinder is also quite good. It uses the G7 BC, but it is more than accurate enough for ranges we should be hunting at.

MISCELLANEOUS

Other details to consider: You must have a good cheekweld to ensure repeatable, accurate, long-range shots. A gun having an adjustable comb or a strap-on cheekpiece that you can put foam under, if needed, helps provide a solid cheekweld and consistent, center placement of the pupil behind the ocular lens.

A compact spotting scope on a small, lightweight tripod is also handy. The spotting scope is, of course, useful for spotting game, but it is indispensable in reading mirage for wind drift. I often use a compact Vortex Razor HD 11-33x50mm on a small tripod. The setup is small, lightweight, and easy to pack, plus the Vortex HD is good glass.

You should have an adjustable bipod, and it is important that you practice shooting off of it. A small bean bag that can clip to your belt or belt loops can also be useful for building a solid rest. Practice field shooting positions, too; don't just practice from a bench.



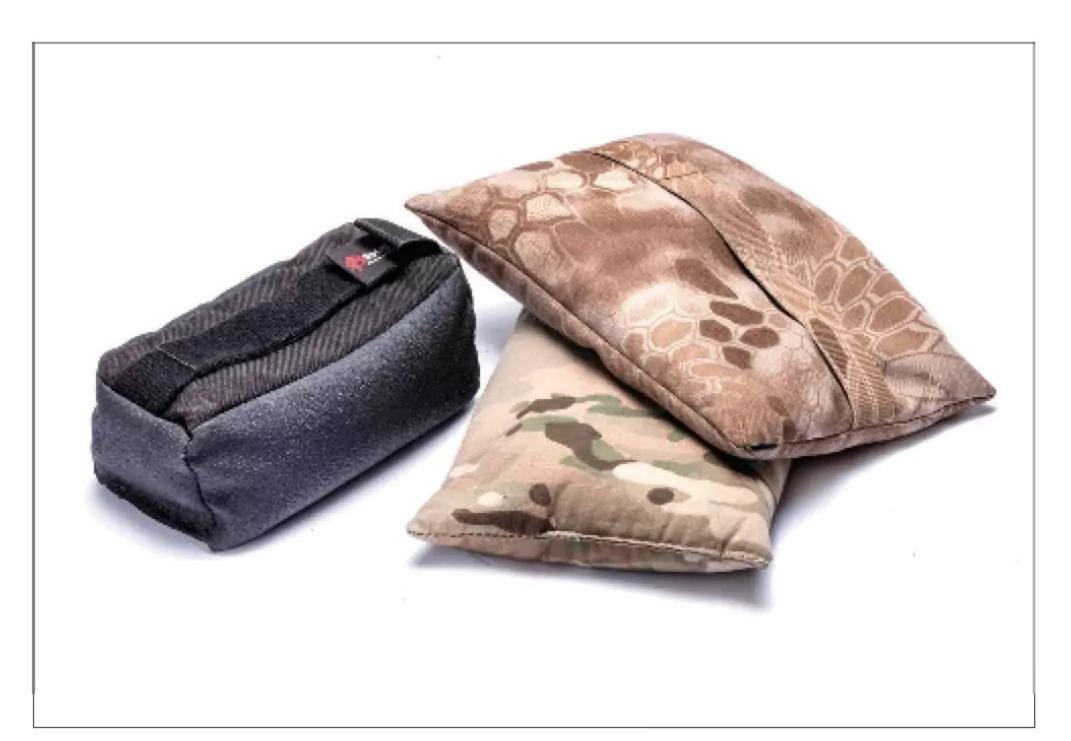
Hornady's 4DOF app is free for download on mobile devices. Custom profiles can be created for both factory cartridges and custom loads, as well as for different rifles and elevations.

AT THE RANGE

I tested two factory rifles with what I consider longrange scopes that are reasonably priced. The Mossberg Patriot LR Tactical in 6.5 Creedmoor has a rigid stock, adjustable comb, heavy contour 24-inch barrel, a one-piece scope rail and a detachable 10-round magazine. It retails for \$1,089. You will want to replace the included scope base with a 20 MOA-bias base to maximize the elevation adjustment range in the scope. You would need to get a five-round magazine for the rifle, or block the 10-round magazine for hunting. I topped this rifle

with a Burris Signature HD 3-15x44mm scope with side focus and target-type turrets. It has the Ballistic E3 reticle and retails for \$672. The elevation turret features a turret push-pull locking adjustment feature with positive click adjustments. The optics were clear and sharp.

I tested the rifle at 100 yards with Federal 130-grain Terminal Ascent, Hornady 143-grain Precision Hunter, Norma 143-grain Bondstrike, and Remington 140-grain Premier Long Range loaded with the Speer Impact bullet. These factory loads have bullets designed for long-range hunting, offering expansion at distance. Table 2 shows my test comparisons. Notably, the Remington load was very accurate and would be appropriate to about 700 yards. When I received this rifle, it had a number of rounds already through it, as evidenced by the heavy copper



Building a solid shooting rest in the field is essential to making precise shots at long range. Beanbags that can attach to your belt are a convenient and inexpensive solution.



To hunt with a spotting scope, find a balance between magnification and weight. The Vortex Razor HD 11-33x50mm is light enough to pack into the field with a small tripod. \$1,000

MOSSBERG PATRIOT LONG RANGE

TABLE 1 BEST **GROUP GROUP** VEL 6.5 CREEDMOOR Rem. Prem. LR 140-gr. PT JHP 2,559 26 10 .56 .71/.68 Norma Bondstrike 143-gr. PT JHP 1.25/1.19 2,687 53 20 .81 Fed. Term. Ascent 130-gr. PT JHP 2,895 29 11 1.18 1.29/1.23 Horn. Prec. Hunter 143-gr. ELD-X 2,601 31 1.18 1.33/1.27

RUGER AMERICAN GO WILD

RUGER AMERICAN GO WI	LD				TABLE 2
6.5 PRC	VEL (FPS)	ES	SD	BEST GROUP (IN.)	AVG. GROUP (IN./MOA)
Horn. Prec. Hun. 143-gr. ELD-X	2,877	36	14	.75	1.04/.99
Federal Fusion 140-gr. JSP	2,868	71	27	1	1.21/1.16

fouling the barrel had. It was likely reasonably well broke in. Table 1 illustrates the accuracy results.

The second rifle I tested was a Ruger

American Go Wild in 6.5 PRC. It sports a rigid camo stock, screw-on muzzlebrake, medium-contour barrel, a 20-MOA bias rail and a detachable three-shot magazine; it retails for \$789. I topped it with a Leupold VX-Freedom 6-18x40mm scope for \$500. It has a side focus adjustment, Tri-MOA reticle, target turrets with positive click adjustments, and sharp optics. I tested this rifle with Federal 140-grain Fusion ammunition. This is not a longrange load, but it was all that was available from Federal at the time. I also tested the long-range Hornady 143-grain Precision Hunter load. Table 2 shows the test results. The Hornady load would be appropriate to about 675 yards. The difference in accuracy between Remington's 6.5 Creedmoor load in the Mossberg and the higher performance 6.5 PRC Hornady load in the Ruger clearly shows the advantage of accuracy in terms of long-range shooting. This Ruger rifle was brand new and not broken in. I'm quite sure that with another hundred rounds through it,

the accuracy results of that rifle would improve.

To evaluate each scope, the rifles were zeroed and one shot fired at 100 yards. I used the Norma Bondstrike in the 6.5 Creedmoor and the Hornady Precision Hunter in the 6.5 PRC. I then raised the elevation 20 MOA, fired another shot, then returned the elevation to the original zero and fired another round and repeated this three times. I measured the height difference of the group centers, in inches, on target between zero and the 20 MOA elevated scope setting. I then converted this to the actual difference in MOA by dividing by 1.047 inch/MOA at 100 yards and calculated the click value for each scope by dividing the MOA value by 80, as each scope claimed ".25 MOA"

TABLE 3

click adjustments, 4 clicks per MOA. I then measured the group size for the 100-yard zero setting and the plus-20-MOA group. For all practical purposes, both scopes shot

groups within the results from above (Table 3). These are examples of reliable long-range scope options for a reasonable price.

SCOPE REPEATABILITY & CLICK ADJUSTMENT

SCOPE	20 MOA CHANGE @ 100 YARDS (IN.)	VALUE PER CLICK (MOA)	GROUP (IN.) @ ZERO	GROUP @ +20 MOA
Burris Signature 3-15x44mm	19.8	.236	.69	1.25
Leupold VX-Freedom 6-18x40mm	20.1	.24	.88	1.25

PARTING SHOT

Long-range shooting, much less long-range hunting, is challenging. You should not go into long-range hunting with the intention of purposely shooting game from far away. Having the capability gives you flexibility in the field, but hunting also means stalking and responsibly taking as clean and effective a shot as you can. There is a tremendous amount of equipment and ammunition available for this purpose. The performance of many of these products is very good for the price point. This article offered some considerations for long-range hunters. Hopefully, the equipment tested also convinces some that longrange hunting doesn't have to equal the down payment of a new pickup truck.









The rubber gripping surfaces have a nubby design that's the equivalent of 10 linesper-inch (lpi) checkering. The vent-rib barrel is secured to the tube by the forearm and knurled magazine cap.

THE LAST TIME Guns & Ammo checked in with TriStar, it was to examine the Viper G2 .410 (February 2019). That gun was a piece for the range or preserve hunt, with a beautifully figured Turkish walnut stock finished "Weatherby style." We revisited the type again with the Viper G2 Pro Camo in 12 gauge, a moderately-priced gun having a much more utilitarian persona.

The .410 version tested five years back cost \$800 at the time. Now, with the title of "Viper G2 Pro Bronze," it

comes in at \$1,050. There's an intermediate range, though, called the "G2 Pro Silver," and the 28 gauge and .410 will set you back \$900.

At \$855, the Viper G2 Pro Camo is another option, only available in 12 or 20 gauge. Traditionalists can specify the G2 Wood version at \$745 for both gauges, while the 16 and 28 gauges and .410 cost \$810.

If you're seeking the ultimate in economy, there's a black synthetic range at \$685 for 12 and 20 gauges, and \$745 for .410. The line is filled out with some alternative camo



A red fiber-optic rod above the muzzle is visible, even on bright days. The ventilated rib post design coordinates nicely with the overall hunting theme of this model.

TRISTAR VIE	PER G2 PRO CAMO		
TYPE	Semiautomatic, gas operated		
GAUGE	12, 3 in. (tested); 20, 3 in.		
CAPACITY	4+1 rds.		
BARREL	28 in., steel, chrome lined		
CHOKES	Full (.685 in.), Modified (.700 in.), Improved Cylinder (.710 in choke tubes		
OVERALL LENGTH	48.25 in.		
WEIGHT	7 lbs.		
STOCK	Polymer, textured rubber inserts		
LENGTH OF PULL	14.13 in.		
DROP AT HEEL	2.5 in.		
DROP AT COMB	1.25 in.		
FINISH	FDE (steel); Mossy Oak Terra Bayou (polymer)		
SIGHTS	Fiber optic, red (front); 6mm rib		
TRIGGER	5 lbs.		
SAFETY	Two-position button, manual		
MSRP	\$855		
MANUFACTURER	Armsan Silah Sanayi ve Ticaret A.Ş., Istanbul, Turkey		
IMPORTER	TriStar Arms, 816-421-1400, tristararms.com		

Available in 12 or 20 gauge, the Viper G2

with a thick recoil pad and stippled rubber

Camo is a no-nonsense hunting shotgun

gripping patches that provide a secure

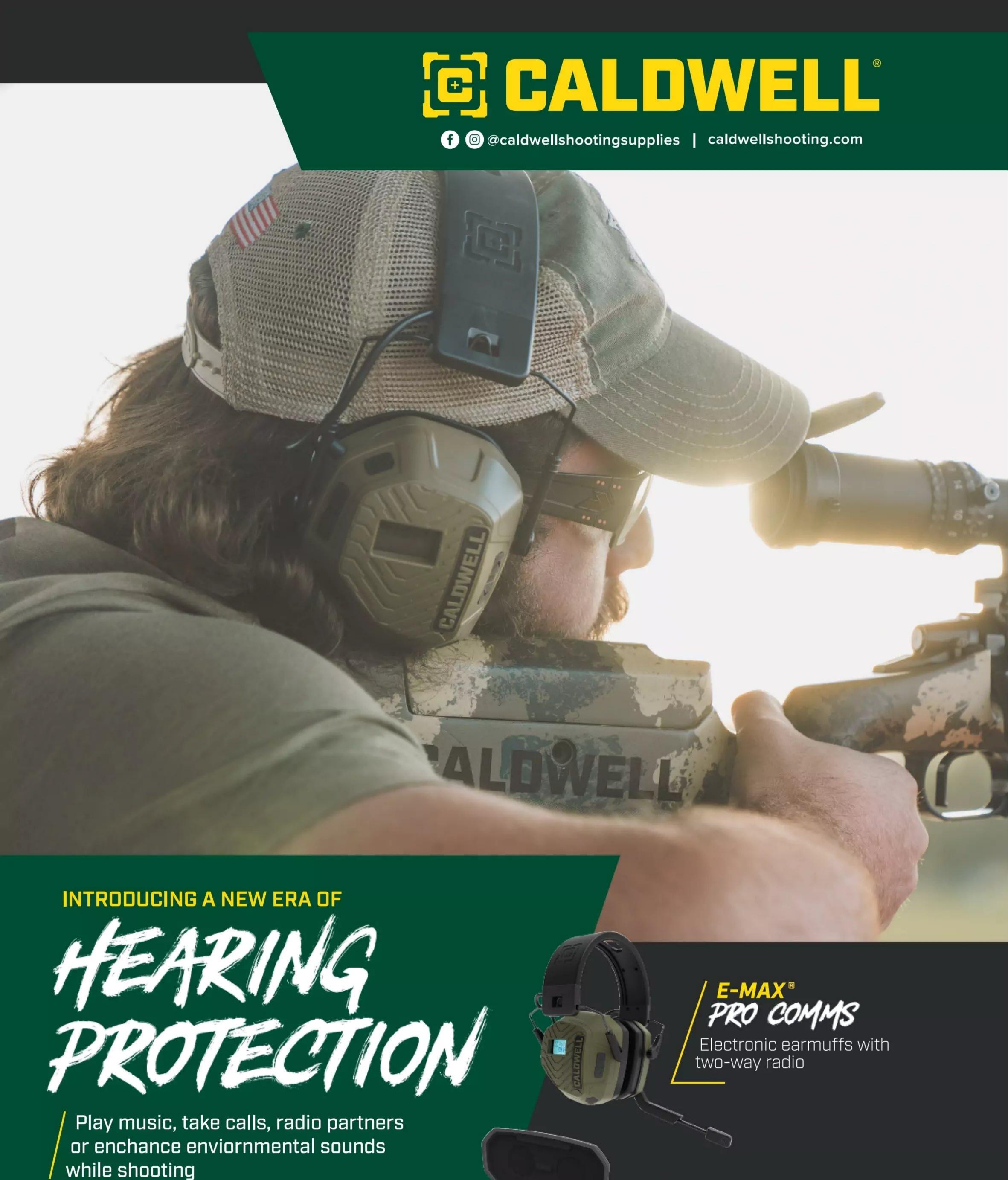
grip, even during the nastiest weather.

patterns, too, a pistol-gripped turkey gun, as well as true left-hand versions

in black or camo.

That's a pretty comprehensive lineup, which demonstrates the versatility of Turkish manufacturer Armsan, emphasizing just how many choices the consumer enjoys.

The Viper G2 Pro Camo has an overall subdued Flat Dark Earth (FDE) finish with contrasting black triggerguard, bolt and bolt release. The synthetic stock is in Mossy Oak Terra Bayou, with black rubber gripping inserts on the forearm and grip. These have oval nubs that approximate 10 lines-per-inch (lpi) of checkering, so







Bluetooth wireless hearing protection





Enlarged controls are not exclusive to competition shotguns anymore. The Viper G2 Pro includes an operating handle that juts out a full inch for easy use, not to mention the bolt release.

they're plenty grabby.

The comb has a soft rubber cover that's not going to

make you forget the pillowy Comtech of a Benelli, but it certainly improves comfort. The black, solid, rubber recoil pad, too, has a hard insert at the top to improve shouldering the shotgun.

A pumpkin-orange warning card cautions against exposing the finish and rubber patches to Deet insect repellent, mineral spirits, paint thinner, kerosene, acetone and turpentine. I don't carry much turpentine in the hunting fields these days, but the

Deet warning is certainly on point if you wear it to repel insects.

American shooters seem to have overcome the detestation their grandfathers felt for sling swivels; there's one at



The crossbolt safety button is triangular, nicely incorporating the space behind the trigger. The trigger pull averaged an even 5 pounds, which is perfectly acceptable for a waterfowl gun.



The receiver top integrates a half-inch tip-off rail for mounting an optic. As it's aluminum, watch the weight of accessories you're installing. When naked, the serrated top complements the rib.

the butt and another at the front of the magazine cap.

Controls once confined to 3-Gun competition have become commonplace on hunting guns. Here, the operating handle is a knurled cylinder protruding an inch from the receiver, and the enlarged bolt-release design is a cantilevered piece that's an inch long. The safety button is triangular, but still found at the rear of the triggerguard. Any gloves you're wearing

won't interfere with handling the Viper, either.

The bottom surface of the receiver curves upward at the loading port. Reloads are fast, which is a handy feature when the action gets hot. At the top of the receiver is a



SMALLPACKAGE. HUGEIMPACT.



NEW 5.7x28 ANNO

Going to the shooting range just got easier with your favorite 5.7x28mm pistol or carbine! The newest extension in the popular Fiocchi Range Dynamics line is now available in a bulk pack. This 5.7 cartridge is a 40 grain, full metal jacket projectile and bundled in a 150 round package. Another in a line of 5.7x28mm ammunition unmatched in the industry!



half-inch tip-off rail that allows easy installation of a red-dot sight or scope for turkey hunting.

The trigger assembly has a matte black plastic housing and is retained in the receiver by a single crosspin. You can drive it out if you want to clean or replace trigger parts but, in practice, you could shoot these guns for years without needing to remove the trigger. (But it's not a bad idea if you've been hunting in a driving rain.)

The barrel, typically for Italian-influenced Turkish shotguns, is chrome-lined for rust resistance, and its bore diameter measured .724 inch. It's topped by a 6mm ventilated rib that I found a little wan for a 12-gauge. There's a .10-inch red fiber-optic front bead, which in this case was mounted a bit off-line to the rib.

The magazine tube holds five 2¾-inch or four 3-inch shells. The supplied plug limits capacity to two, but it can be removed by unscrewing the

magazine cap and rocking the gun forward to drop the plug out the front.

Since this is a hunting gun, rather than one for competition, three choke tubes are provided: Full (.685 inch), Modified (.700 inch) and Improved Cylinder (.710 inch). These are in the Beretta MobilChoke configuration, which means an almost infinite supply of aftermarket tubes are available if TriStar's supplied chokes don't do it for you.





Other operating systems may have their day, but many hunters still prefer the smooth progressive recoil of a gas-operated semiauto. The Viper G2 Pro provides exactly that.

The gas operating system is typically Italian, with a separate spool-shaped piston that drives rearward against dual operating rods (referred to in the instructions as the

"action arm"). This mechanically engages a sleeve at the front and the bolt at the rear.

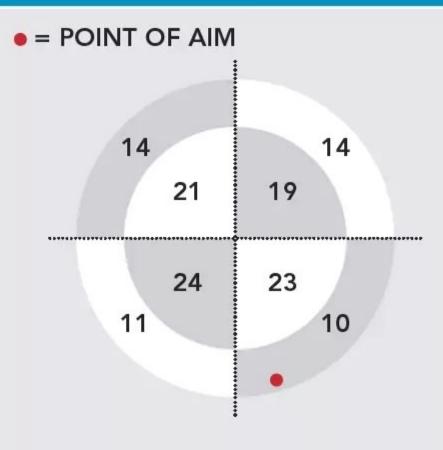
We've recently seen shotguns that mount the bolt rigidly to the operating rods, but here they are separate pieces. Reassembling this assembly to replace the barrel in the receiver was a procedure that required a lot of fiddling because tolerances were tight. Everyone loves tight tolerances until they make assembly a pain.

The .410 Viper tested in 2019 had a European-style magazine cutoff system, but this new model appears to have it deleted; that'll be no great loss among most U.S. buyers. It also lacks the shim kit for regulating drop and cast, a cost-saving measure that may be regretted by more users.

I patterned the Viper G2 Camo with

PERFORMANCE





(36%) (20%) TOTAL HITS 136 (57%) results shown in the accompanying table, and then I function-fired it on clay targets. There were no failures of any kind.

The Viper was comfortable with all ammo types, and the contoured receiver bottom made loading easy. The FDE metal finish was pleasantly non-reflective, and the fiber-optic bead stood out proudly despite its off-center mounting.

I find that Turkish-made

guns seem to have a peculiar pistol-grip shape that's a bit too upright, but others, especially those who've cut their teeth on ARs, may prefer it.

> The gun shot high, which to me is a great thing in a trap gun, but not so great in a hunting arm. Here's where the missing shim kit would come in handy.

There's a prominent bulge at the rear of the forend, but it serves no mechanical purpose except to continue the line of the receiver bottom. It's comfortable enough, but gives the Viper a slightly pregnant look.

The Viper G2 Pro Camo certainly follows through on the brand's "value" promise. If \$855 retail sounds like a lot, you probably haven't shopped for shotguns lately. Many of them are \$1,000 or more, and \$1,500 constitutes a moderate-priced gun these days. In that environment, the Viper G2 Pro demands a close look from the valueminded sportsman.

HS923 SUPPRESSOR - Modular construction - Long & short configurations included - Titanium blast baffle - Lightweight construction - Quiet AF



SHHHADOW SYSTEMS ()







I REMEMBER the first time I heard of the now-iconic Marine Expeditionary Unit, Special Operations Capable (MEUSOC) pistol, a Model 1911A1 in .45 Auto. I was an ROTC freshman and my Marine officer instructor — a ramrod-straight major who had just returned from the Gulf War — mentioned the custom pistols carried by Special Operation units on the Marine Expeditionary Units (MEU). The MEU was the Corps' bid to be the "First to Fight" during the 1980s and '90s. It consisted of naval amphibious ships afloat, deployed forward to crisis-prone areas. They were packed full of capabilities. Way down the list of those capabilities was a custom-built M1911A1 backing up the

suppressed HK MP5s of some very hard Marines.

In 1991, I was a broke college student, upgrading my first 1911 one piece at a time as I had money to spend. I was enchanted at the idea that specially trained shooters carried heavily modified Colt 1911s. In an era more closely associated with the Tomahawk cruise missile, the Stealth fighter, and the futuristic M1A1 Abrams

tank, the M45 MEUSOC was an anachronism. The U.S. military had largely completed the transition to the M9 pistol, a 9mm Beretta 92FS, including the Marines. Yet, in a small shop in Quantico, Virginia, the Rifle Team Equipment (RTE) section of the Weapons Training Battalion had match armorers converting World War II surplus M1911A1s into custom combat pistols. This unit of armorer became the Precision Weapons Section (PWS).

To get a sense of the finer details involved, I spoke with Kasey Crawford, a "2112," the military occupational specialty (MOS) number for a "match armorer." Crawford was involved in building the early MEUSOC .45s. (He is cur-



rently a pistolsmith known for making bullseye pistols and MEUSOC clones through KCs Kustom Creations (kcskustomcreations. com). He indicated that armorers would select the best of available M1911A1 frames, which would then have the frame cut for a beavertail safety and fitted with extended aluminum Videki triggers, King's extended and ambidextrous thumb safeties, aftermarket



sears and Commander hammers. The frame would be matched to a surplus 'hard' slide, which were often associated with National Match builds. Then, a Bar-Sto semi drop-in barrel was fit (bar-sto.com). A custom-made rear sight was matched up with a front that was silver-soldered to the slide. The M1911A1 arched mainspring housing was ground down flat and re-serrated. Finally, Pachmayr grips with wraparound rubber checkering were affixed to the frame.

The pistols served for more than 30 years with four broad generations of configurations, differing in the exact mix of slides, sights and parts, but all variations were on a theme and issued interchangeably. The M45 was carried by several specialized units but were

most closely associated with Force Reconnaissance and the early Marine Raiders of MARSOC. A large part of the mystique of the pistols was their status as the sidearms of those very selective units.

The MEUSOC .45 was introduced in 1985 when the "9mm versus .45" debates were a staple in gun magazines. Guns & Ammo's Lt. Col. Jeff Cooper was a strong advocate for both the Model 1911 platform and the .45 ACP cartridge to be used by serious professionals. The M1911s of that time were a largely custom proposition to get the beavertail grip safety, ambidextrous thumb safeties, custom trigger, and sights featured on the Marine pistols.

I spoke with my friend John A. Dailey about his perceptions of the M45 MEUSOC. Dailey was a veteran of Force Reconnaissance, Marine Corps SOCOM Detach-

M45 MEU(SUC) GEN 1				
TYPE	Recoil operated, semiau- tomatic			
CARTRIDGE	.45 ACP			
CAPACITY	7+1 rds. (Wilson 47)			
BARREL	Bar-Sto Drop-In; 5 in.			
OVERALL LENGTH	8.5 in.			
HEIGHT	5.5 in.			
WIDTH	1.2 in.			
WEIGHT	2 lbs., 4 oz.			
GRIP	Pachmayr Signature			
TRIGGER	Videki; 4 lbs., 8 oz.			
SAFETY	King's thumb lever; Wilson 66 grip safety lever (Repro			
FINISH	Parkerized (steel)			
SIGHTS	Millet, silver-soldered (front); RTE/PWS (rear)			
MANUFACTURER	KCs Kustom Creations, 843-267-3773, kcskustomcreations.com			

ment 1, and MARSOC. He authored the upcoming book, "Tough, Rugged Bastards" (2024). Dailey recalled his anticipation to be issued the sidearm and how lucky the men felt to have them, certain that these pistols conferred distinct advantages to the users. He recalled how Force Recon shooters would go through extensive training with the pistols and then, at a point after qualification, add the early Surefire pistol lights to prevent unnec-

essary wear on the slide-stop attachment point. (It was the era before rails on 1911s.)

Marines who were issued the special .45s trained hard and often with them, sometimes firing 500 or more rounds a day, every day, for weeks as they prepared to deploy. In the original service trials for the handgun that would become the "M1911," the U.S. Army had subjected the Colt and Savage contestants to a 6,000-round torture test with the round count approximating a reasonably expected service life for a military sidearm. The MEU direct-action platoons were nearing those numbers in the training package alone.

I interviewed one of the specialized 2112 gunsmiths who served with the MEU direct-action units around the turn of the 21st century. He remembered the struggle to



The M45 replaced the GI spur with an aftermarket Commandertype hammer. The armorers also fitted the frames with a Wilson 66 beavertail grip safety.



Unique to the M45 is the Videki three-hole speed trigger. Marine armorers removed the overtravel screw and welded the hole. The checkered-type slide-lock lever and mag release button were GI.



The Kings 201-A thumb safety lever was considered more robust than the competition-style levers on match pistols. All M45s were fitted by armorers with ambidextrous safety levers.



The bushing was included with each Bar-Sto semi-fit barrel. The checkered plunger was GI.



The extended thumb-safety levers assisted operators wearing gloves when shooting.

keep the pistols in perfect working order. After the extensive training regimen, he would go through each pistol and replace springs and high-wear items. He took it as a point of pride that his shooters' pistols stayed in optimal condition throughout the subsequent deployment.

One of the readily identifiable quirks of the MEUSOC pistols is how each part of the pistol has the last four digits of the serial number prominently hand-stamped on it. It makes sense when you consider that the armorer could be working on several pistols in various states of troubleshooting and repair, often at a rough ammo table on a range or on the fantail of an amphibious ship as shooters were keeping their skills sharp while underway.

A pistolsmith friend of mine was converting an M1911A1 into a MEUSOC clone for a mutual friend, and he reached out to ask me some technical questions. I had to dig through some old deployment photos to answer them before realizing that I only had photos of one particularly memorable pistol I carried briefly in Afghanistan.

This pistol was an older build, identifiable by the shop-made rear sight and old-school Wilson 66 beavertail. It carried a battle-worn finish that it had earned the hard

way, serving one Marine after another in harsh training and operations. Even the wraparound Pachmayr grips' rubber checkering was worn nearly smooth in places, and you could see where armorers had given the old warhorse multiple rack numbers through the years, each number painted atop the previous. The Colt frame was in the 1 million serial number range, which dated its manufacture to 1943. The frame of the pistol could have seen combat in every war and hotspot since.

A Springfield Armory slide housed the Bar-Sto barrel. The Colt was neither loose nor tight; it was that happy medium which tended to favor reliability for the long term with other builds of that era. The pistol had an unusual two-piece slide stop, and some of the finish wear suggested that it had carried a light at some point. The trigger broke at what was likely a touch under 5 pounds.

I remember taking the pistol out to the range on a Special Operations Forces (SOF) compound before a mission to get a little practice in and work through some nerves. The pistol piled 230-grain GI hardball into a neat hole at 7 yards, and still a close group at 15. I recall the pistol printing higher than I expected or preferred, about 3 inches

ABOUNTION HAS ABOUNEW LOCK.









Armorers hand-stamped the last four digits of the serial number on fitted parts such as the thumb safety lever and slide. Marines often trimmed the pinky lip from the Pachmayr grips with a razor.



The Wilson Combat 47 seven-round magazine was the standard-issue magazine for the M45, which continued with the M45A1 replacement in 2012.



Armorers installed Bar-Sto semi-fit barrels to the GI slide. These barrels were necessary for enhanced accuracy on missions such as in-extremis hostage rescue (IHR).



Match armorers custom-made rugged, high-profile serrated sights from barstock and pressed them into the standard dovetail cut.

above the sight picture at 15 yards.

The pistols were issued with a stack of the Wilson 47 seven-round magazines. Even as eight-round magazines became common in the civilian market, the Corps stood by Wilson's seven-round mags. Occasionally, Marines would supplement or substitute the official mags with eight or 10 rounders of their own, though.

For most of the service run, the .45s were carried in Safariland drop holsters in the 3004/6004 family (safariland.com). In the earliest years before Safariland made a holster to accommodate pistol lights, the M45s with the Surefire 610 were carried in a unique Ted Blocker leather drop holster (tedblockerholsters. com). In the last few years of its service life, as drop holsters became less popu-



lar, many of the Raiders carried the pistol in an open-top Safariland paddle holster, the Model 560 custom fit, sometimes adapting small shock cord or boot blousing bands as field-expedient retention straps until near the objective.

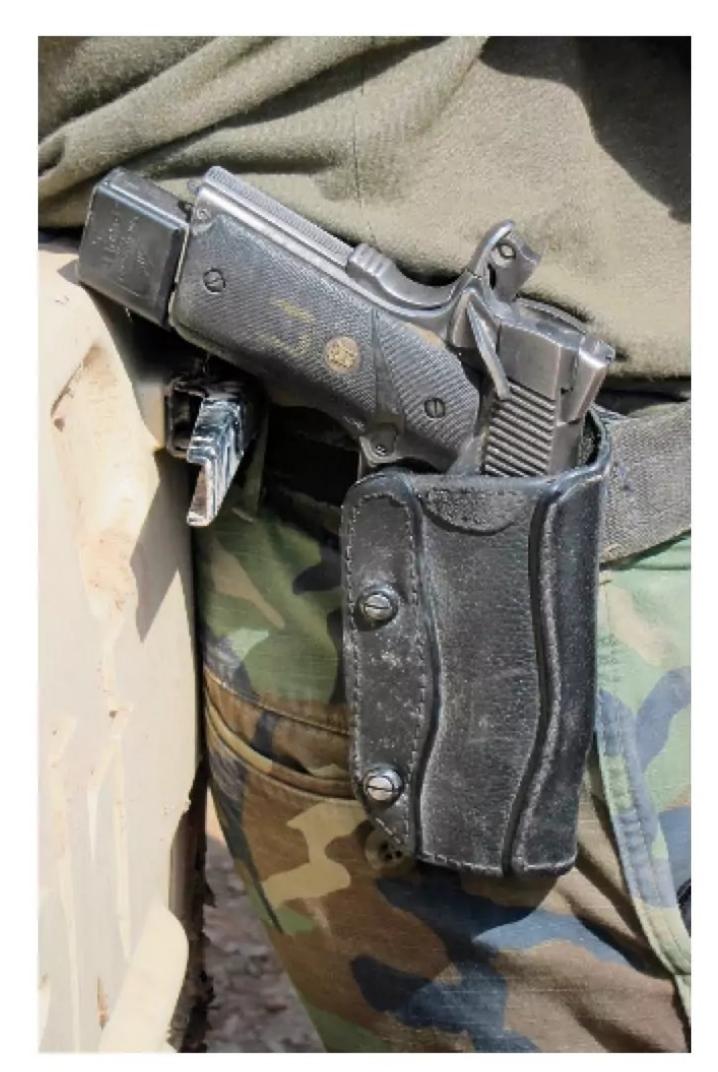
Military small arms often have a raft of official nomenclature, nicknames, and slang, which may vary by time frame, unit, and so on. The M45 MEUSOC was no dif-

ferent. Depending on the time and context, I heard it referred to as the "M45," the "CQBP" for "Close Quarters Battle Pistol," and as the ".45" or "1911," and more.

The Marine Corps is (in)famous for being conservative in its reluctance to abandon proven systems. The Marines fought through the early battles of World War II, for example, with the beloved Model



STAURUS



Some M45 pistols were fitted with Ed Brown beavertail safeties. Though issued with seven-round magazines, some Marines used personal gear including the Chip McCormick 10-round mag.

the M1 Garand. The Corps trailed the Army by years before fully embracing an optic-equipped M4 over the carry handle M16A2. By the end of the M45's run in 2012, it was the last .45-caliber 1911 standing in the U.S. arsenal. Even as the Corps was adopting the Colt M45A1 as a commercial off-the-shelf solution to replace the aging M45, the younger operators within the Raider battalions were clamoring for the wholesale adoption of the Glock 19 that some had been carrying in certain roles. It was fasci-

For most of its run, the shooters genuinely felt that the MEUSOC pistols were an advantage. The pistols facilitated hitting, and the big-bore cartridges were thought to have more effect in the urgent confines of CQB. There was also years' worth of mystique and tradition. However, as the pistols aged, they became less reliable. Parts support was iffy toward the end, and there were never quite enough armorers to correctly maintain the pistols. In a surprisingly short span, the legendary pistols were seen as too heavy, holding too few rounds, and being less reliable than other

nating to see that shift occur during a few short years.

Now that the pistols are almost a decade from active use, the men who carried them look back much more fondly. Many of the unit-level leaders in the Marine Raiders today came through the lengthy training pipeline as the M45 was

options.



Though used as a general purpose rig towards the end of service for the M45, the Safariland paddle holster was a common sight among MARSOC Marine Raiders. Technically, it was issued as a concealment holster.



In keeping with the pistol's role as a secondary weapon, Safariland 6004 holsters were the primary holster issued with the M45.

nearing the end of service. It was a rite of passage of no small stress to qualify during the direct-action phase of training. In every class, there were Marines who, after weeks of learning to shoot the pistols to high standards, didn't quite get all the necessary hits within the required times. This would either send them back to their previous unit or, in cases where the student showed unusual potential, to the next course months behind them. Mastering the big .45 mattered, and while Marines may not pine for the M45's return, there are strong memories tied to it.

There comes a point in the hero's journey when he is given a special weapon, often one made by mystical artisans. The weapon often requires great skill to wield or gives the hero a unique advantage. For a period of time, for the Marines who carried it, this was a perfect description of the MEUSOC .45.

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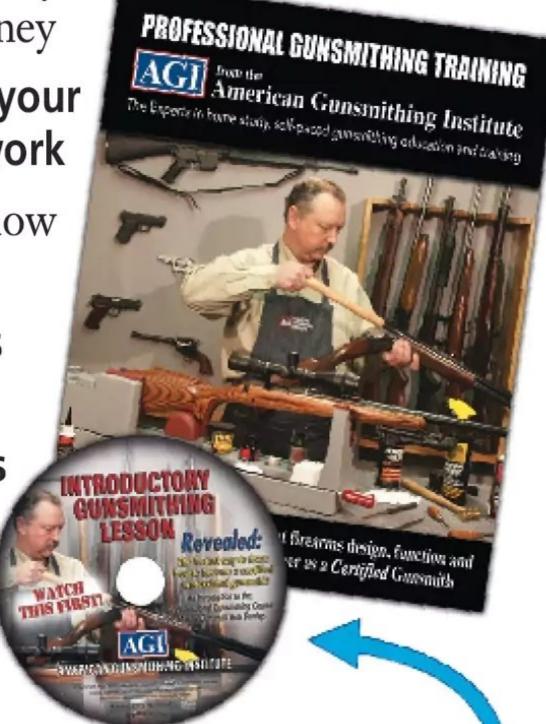
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SMITH & WESSON'S FIRST AR-style pistol-caliber carbine (PCC) offers familiar controls and the option to use Smith & Wesson M&P9 or Glock magazines.

PCCs are popular, and Smith & Wesson has quickly become one of the leaders in this segment. The company has followed up the 2023 release of the M&P Folding Pistol Carbine (FPC) 9mm with the new Response. Unlike the FPC, however, which looks and feels like a PCC built around the popular M&P M2.0 pistol, the Response takes its design elements from AR platform rifles. If you know the control layout of an AR-15 or AR-10, shooting the Response is very intuitive.

Though it may look like an AR-15, the Response operates very differently than Eugene Stoner's and Jim Sullivan's gas-operated rifle with rotating bolt. The S&W Response uses a straight blowback operation, which is common to rimfires and 9mm PCCs. The energy required to cycle the action is produced when a round is fired, which is simpler than the

traditional direct impingement gas system in an AR-15. Blowback operation also eliminates the need for a gas block and gas tube over a PCC's barrel. The Response has a 14-inch polymer handguard with a full-length top-rail, which covers the gas system that doesn't exist on this gun.

The bolt handles the cycle of operation for the Response. Pressure from a fired round pushes the bolt back, and the external extractor is visible on the bolt body through the uncovered ejection port. A fixed ejector blade is in a cutout within the two-piece bolt body, so when the action cycles the ejector automatically sends empty brass away from the gun. The bolt also has firing components in the front. According to Smith & Wesson's Senior Product Engineer Simon Muska — who also worked on the M&P12 shotgun — the design "preserves mass" in the bolt. The 14.8-ounce weight works in conjunction with the buffer system to manage bolt velocity and create a smooth-shooting, durable rifle.

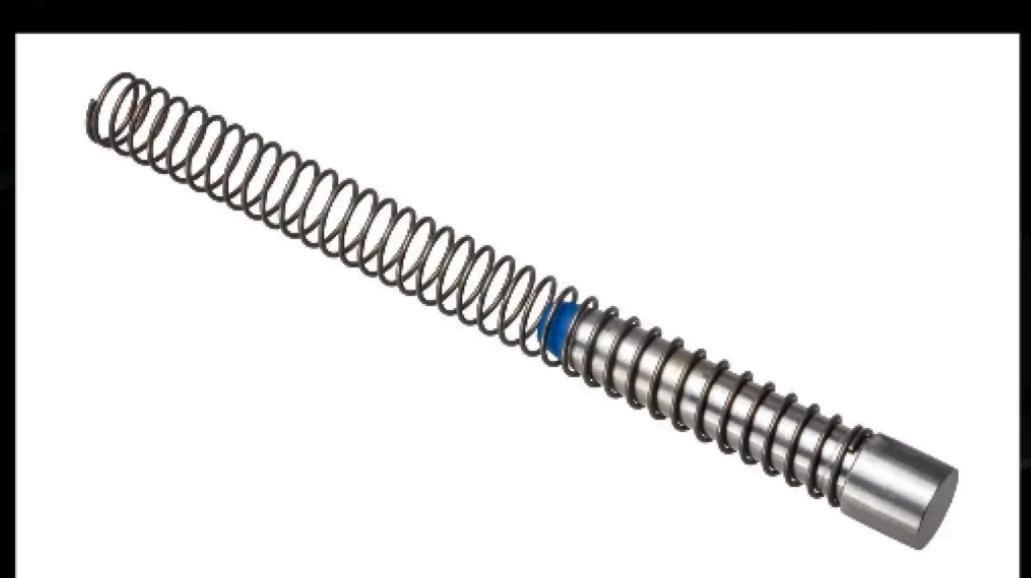


to release it from the upper receiver.

In addition to the polymer handguard, the upper and two-piece lower receiver assemblies are made from molded polymer. Its reduced weight is a side benefit. Still, the S&W Response accepts aftermarket AR triggers, pistol grips and stocks.



An AR-style buffer and recoil spring are contained within the receiver extension, though these parts are weighted and sprung unique to the Response for its pistol-caliber blowback operation.



SMITH & WESSON RESPONSE

TYPE	Blowback operated, semiautomatic				
CARTRIDGE	9mm				
CAPACITY	23+1 rds.				
BARREL	16.5 in., 1:10-in. twist				
OVERALL LENGTH	32.1 in. to 35.4 in. (adjust able stock)				
WEIGHT	6 lbs., 2 oz.				
LENGTH OF PULL	10.8 in. to 14.1 in., adj.				
STOCK	Magpul MOE SL, adj.				
GRIP	Textured, M&P M2.0				
FINISH	Armornite (steel)				
SIGHTS	None				
TRIGGER	4 lbs., 1 oz. (tested)				
SAFETY	Two-position selector				
MSRP	\$799				
MANUFACTURER	Smith & Wesson, 800-331-0852,				

smith-wesson.com



The Response receivers can be made of polymer due to the 9mm's low pressure. Most of the recoiling energy is used to cycle the blow-back action. The serial number is engraved on a stainless-steel plate.

SIMILAR, BUT DIFFERENT

Though the Response cycles differently than an AR-15, Smith & Wesson incorporated most of the controls and layout as found on America's rifle. The two-position safety selector is the same part as the rotating drum lever on an AR. It's located on the left side only for right-handed shooters. The bolt release and magazine release levers are also positioned where they would be on an AR-15, and there's a traditional charging handle for bolt manipulation.

The Response has the look and feel of the AR-15, but



Using the texture and backstrap shape on M&P9 M2.0 handguns, the polymer pistol grip is as familiar as the location of the controls. The magazine release was designed for the interchangeable magwell.

the upper and two-piece lower assemblies are made from a polymer mold. This helped to keep costs and weight down, of course, components such as the barrel, bolt, and small parts, are made of steel or aluminum. The 16½-inch barrel is threaded ½x28 to accept 9mm muzzle devices and suppressors. Inside, the 4140 chrome-moly steel barrel has a 1-in-10-inch twist rate.

The trigger is an AR-pattern with a flat-face design. It feels clean and akin to a match trigger. The average pull weight measured about 4 pounds with minor creep.

The two-piece lower receiver incorporates the FlexMag system. It utilizes interchangeable magazine well adapters, allowing shooters to use either the M&P9 double-stack 9mms magazines — which are provided — or, if preferred, simply change magwells for the adapter that runs G19/G17 magazines. Muska designed the FlexMag system from scratch to avoid patent infringements. The three-lever bolt hold open system that he included is novel and unique to the Response.

There's a follower transfer that's specially designed for each magwell. It is marked with a letter "M" or "G" to avoid confusion; the letter corresponds to the proper magwell. The magwell is held in place by tabs on the receiver that correspond with tabs on the magwell. To remove the magwell, the bolt-catch housing assembly should be removed. The proper follower transfer and magwell can then be slipped into position. It's worth noting that the magwell is inserted or removed laterally, not vertically. The process is relatively uncomplicated, and the manual offers detailed instructions with photos.





Smith & Wesson's FlexMag system accepts interchangeable magazine wells to accommodate either M&P9, G17 or G19 magazines. Swapping adapters is simple and secure.

The Response utilizes M&P-style polymer pistol grips with M2.0 texturing and four interchangeable palmswell grips. The Medium palmswell grip is installed at the factory, but shooters can change it for Small, Medium-Large or Large palmswells if desired.

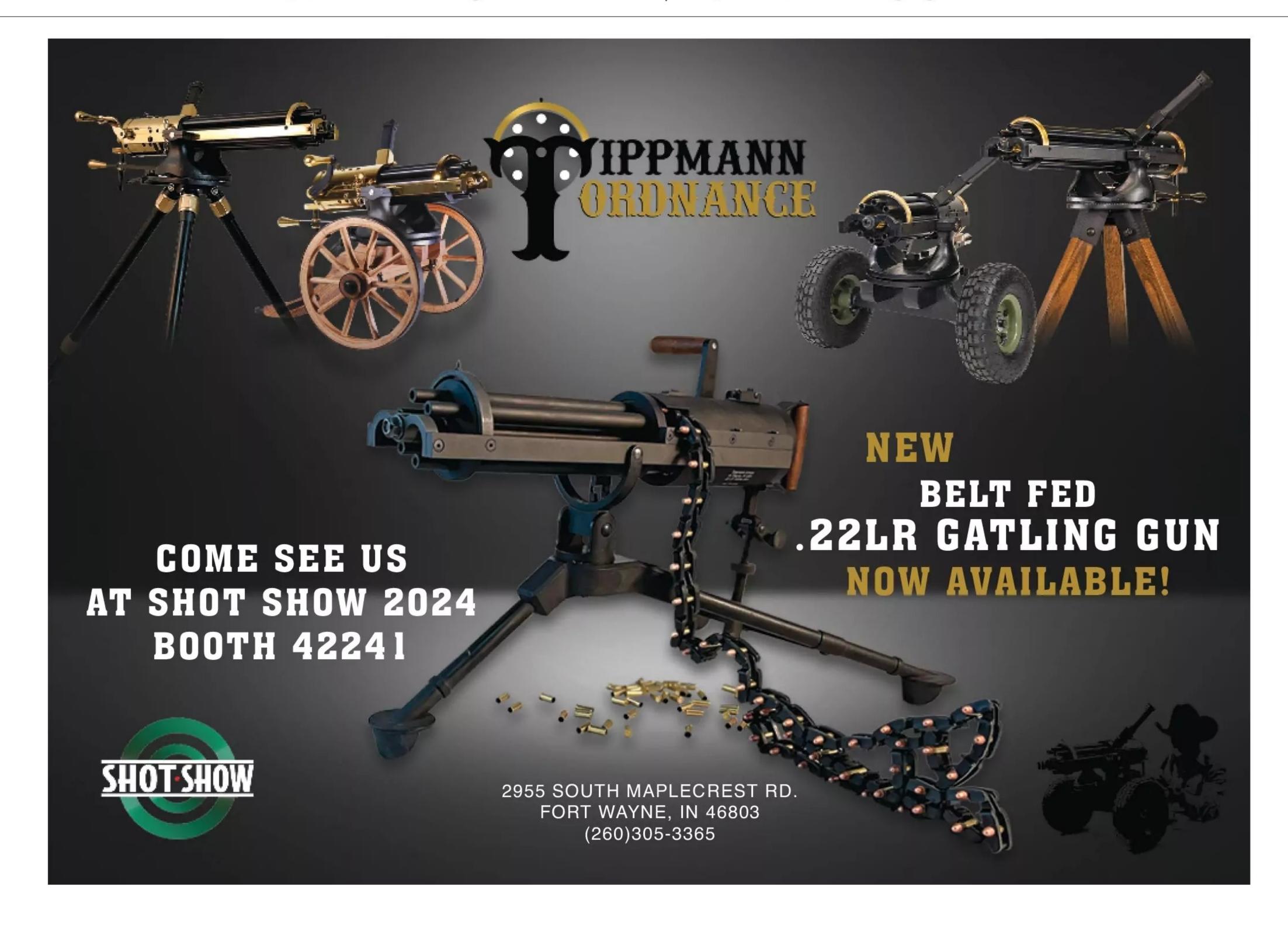
Like the upper and lower receiver, the 14-inch M-Lok handguard and charging handle are also polymer, but the carbine's compatibility with other AR-15 components makes personalizing its configuration an easy chore. The same is true of the stock, which slides along a carbine



The two-piece, stainless-steel bolt assembly was designed for blowback operation in an AR-pattern upper receiver, but there is no gas key. The assembly crosspin is also the firing pin retainer.

buffer tube. The provided Magpul MOE SL adjustable stock works well and offers several anchor points for slings as well as other features such as ambidextrous levers for adjusting the length of pull (LOP). The stock offers 31/4 inches of LOP adjustment.

Fieldstripping the Response for cleaning is quite simple, especially if you have disassembled an AR-15 already. The front and rear transverse pins must be pushed from left to right using a tool such as a non-marring punch. From this point, the bolt and charging handle can be removed for rou-







With the upper removed, the fixed ejector is visible behind the magazine. The bolt catch and trigger assembly is of the AR-pattern.

tine inspection and maintenance.

The Smith & Wesson Response measures 32.1 inches with the stock collapsed and 35.4 inches when extended. It weighs 6 pounds, 2 ounces, with an empty 23-round magazine inserted. Two 23-round M&P9 magazines are included, but lower-capacity M&P9 mags work, also.

VERSUS

Buyers seeking a 9mm PCC have many options. In addition to the Response, Smith & Wesson offers its FPC 9mm carbine (\$659), a direct competitor to the folding KelTec SUB2000 9mm carbine (\$578, keltecweapons.com). The Ruger PC Carbine (\$779, ruger.com) is another successful 9mm carbine, as is the Hi-Point 995 (\$339, hi-pointfirearms. com). Springfield Armory sells its Saint Victor Carbine in 9mm Luger, as well (\$1,299, springfield-armory. com). The Response costs less than the Springfield Saint Victor, but is priced more than the base-model Ruger PC Carbine, S&W FPC, KelTec, and the budget-priced Hi-Point. The FPC, 995, SUB2000, and PC carbines are unique approaches that are not as compatible with AR-15 components as the Response and Saint Victor.

The Response makes heavy use of polymer, while the Victor Carbine is made of 7075 T6 aluminum for the upper and lower. Springfield also uses 32-round Colt-pattern metal magazines, and only comes with one. The Response and FPC use M&P9 mags, and the Response can be adapted to accept Glock magazines. The Ruger uses Glock and Ruger mags, too, while the stock SUB2000 feeds from



The flat-face trigger invokes the feel of a light match trigger. G&A's sample recorded a 4 pound, 1 ounce, pull with a little creep.



Four palmswell backstraps are included with the Response. Though the grip is AR specific, the backstraps are of the M&P9.

Glock magazines, and its Multi-Mag version can run a variety of pistol magazines from SIG Sauer, CZ, Smith & Wesson, Canik, and others. The Hi-Point uses its own magazine design.

Of the guns listed, only the 4¼-pound SUB2000 and 5-pound FPC are lighter than the Response. The 995 weighs 6 pounds, 4 ounces, and the PC Carbine and Victor Carbine are closer to 7 pounds. With standard magazine options, only the 32-round Victor beats the Response's 23-round mag capacity. Of course, any PCC that accepts a Glock magazine can use the Glock 33-round mags, where legal.

The Response emulates the AR-15 pattern, and it should be popular for its familiarity. If you like AR-type carbines, and polymer receivers do not put you off, the Response will be a gun that you will enjoy. However, it is studier to mount accessories to an aluminum handguard than Smith & Wesson's polymer forend. To opt for an AR-pattern 9mm carbine with an aluminum structure, the option goes to the Springfield Armory Saint Victor Carbine, which requires the buyer to spend as much as \$500 more than the Response.

AT THE RANGE

Accuracy testing was conducted at 50

The barrel is threaded 1/2x28 and capped with a thread protector. Shrouded by a polymer forend, M-Lok slots also vent heat.

and 100 yards from a bench. Then, off-hand function testing commenced to evaluate the handling. Initial accuracy tests were conducted at 100 yards; while the carbine managed 4to 6-inch groups at that distance, our use of a Viridian RFX 45 reflex sight with a 5 MOA green dot hindered the staff's ability to extract the Response's true accuracy potential. At 50 yards, the dot covered less of the target and the aiming points were better visible. At 50 yards, the Response produced groups as small as 1.42 inches. The average group size varied from 1.6 to 2.7 inches for five shots, and the Response seemed to favor certain loads strongly. It repeatably produced a test-best 1½-inch groups using Hornady's 115-grain Critical Defense load, for example.

Off the bench, the Response was a pleasure to shoot. With a mild report and virtually no muzzle rise or felt recoil, the Response was an easy gun to shoot accurately — and quickly. The trigger was relatively light. From





The Magpul MOE SL stock provides 3¼ inches of length-of-pull adjustment, as well as several sling-mounting options.

25-yards it was easy to make consistent A-zone hits, even while transitioning targets and shooting on the move. Despite the use of a reflex sight with a 5 MOA dot, the accuracy potential and fast follow-ups were much easier to achieve at distance with the Response than with a traditional 9mm handgun. The AR-centric design made adding and changing accessories straightforward. Guns & Ammo's test gun was set up with a handstop and Streamlight ProTac 2.0 RM light attached to the M-Lok handguard. Reliability produced no failures.

TAKEAWAYS

The Response offers the look, feel, and versatility of an AR-pattern rifle in a polymer package with an interchangeable magazine adapter. The all-polymer design may not be as appealing to some as an aluminum-receiver carbine, but the Response is considerably less expensive. It's extremely fun to shoot. It is also a viable personal-defense carbine, perhaps even more than a handgun since it can be fired more accurate at moderate distances and offers more magazine capacity than most handguns. If you've been wanting a PCC that follows the AR blueprint closely, but is backed by a brand known for quality, the Response is a great choice. 🖎

PERFORMANCE

LOAD	VELOCITY (FPS)	ES	SD	BEST GROUP (IN.)	AVERAGE GROUP (IN.)
Hornady Critical Defense 115-gr. FTX	1,345	59	12	1.42	1.58
Federal HST 147-gr. JHP	1,071	28	8	1.59	1.75
Federal Syntech 130-gr. PCC	1,136	41	10	2.05	2.38
Fiocchi 115-gr. FMJ	1,352	76	22	2.1	2.62
Hornady Subsonic XTP 147-gr. JHP	1,151	62	13	2.38	2.6

Notes: Accuracy is the average of five, five-shot groups at 50 yards from a benchrest. Velocity is the average of 10 shots recorded by Labradar placed adjacent to the muzzle.



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The platform now holds the archives of hundreds of hunts from the Petersen's HUNTING team, which are available to you at the click of a button. You can head to Africa, following along with Publisher Kevin Steele and Field Editor Craig Boddington, or enjoy chasing big bull elk with Editor-in-Chief David Draper. There's plenty of episodes to choose from. Pick your favorites, sit back,

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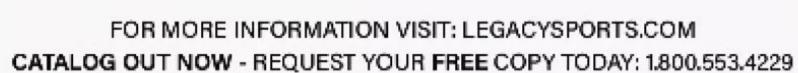
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CONNECT FEBRUARY 2024 G&A 79

"Restoration" means more than a new coat of paint.

YOU **ASKED** FOR IT!

RESTORATION content has always been a popular topic with readers. It's satisfying to watch an old, tarnished piece of art brought back to its former glory.

Firearm restorations are no exception. Alongside much of Guns & Ammo's readership, some of my favorite articles involve piecing together a heritage firearm with period-correct parts, or identifying and solving a mystery. Author Dave Emary's three-part series on restoring an M1 Carbine to its correct World War II configuration was not only one of G&A's most requested articles, but one of our most engaging. Your response produced tons of mail, including both questions and corrections.

There is such a demand for this kind of content that fraud has become a serious concern. Gunsmiths always caution us to be wary of so-called "authentic" parts available on the market. More than a few fakes have



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The three-part series, "Restoring an M1 Carbine," is available at gunsandammo.com.

been identified in Garry James' "Gun Room" through the years. Likewise, digital media offers plenty of gun refurbishing videos that were fabricated — especially on YouTube. We've found videos featuring incorrect parts that simply look good, and purposeful weathering, making new guns appear old and neglected. However, replacing parts can still create an informative experience, as long as the author is upfront about it. A project for "Book of the 1911" by Editor Eric Poole saw a modern Springfield 1911 Mil-Spec retrofitted with periodoriginal parts, making a replica of how it would have looked had it been produced during World War II.

More than a few gun collectors know of a classic sporterized military surplus rifle. Remilitarizing these is now a popular subject, and it has



TRACING A SPORTERIZED 1903A3

A sporterized Remington Model 1903A3 was sent to Garry James for evaluation. Great care was once put into modifying it for hunting.





ANTONIO ACITELLI

saved more than a few Mausers and Springfields that were worked over in someone's garage. There are still gems to be

found among such repurposed guns. Exemplified in a sporterized Remington 1903A3 sent to Garry James for evaluation, some gunsmiths put great care into scoping and modifying service rifles. Many are unique, even collectible works of art.

Are you interested in this type of firearm refurbishment? Is there a particular gun that you feel deserves a work-over in G&A? Perhaps a "Dos and Don'ts" of restoring a firearm is another topic to assign? Let us know! Email gaeditor@outdoorsg.com

TOP COMMENTS

In response to Brad Fitzpatrick's digital article, "Recreational Rimfires":

"I was reading your eight great plinkers and I believe you missed a few. You mentioned the Savage A22. What about the B22 Precision? You also missed the CZ 457. They are outstanding and quite possibly the best .22s on the market."

— D. H.

In response to the new digital version of Dave Emary's M1 Carbine Restoration:

"I've been reading these articles in Guns & Ammo, and they are totally awesome! I have one M1 Carbine, and I'm using [Emary's] article as a reference to see what I purchased several years ago. I wish I had this article available to me back then! I continue to look at additional M1s for my military collection when visiting local gun stores and shows in my area, but I was unsure of what I might be buying. I now feel a tiny bit wiser when I make my next purchase of an M1."

— S. T.





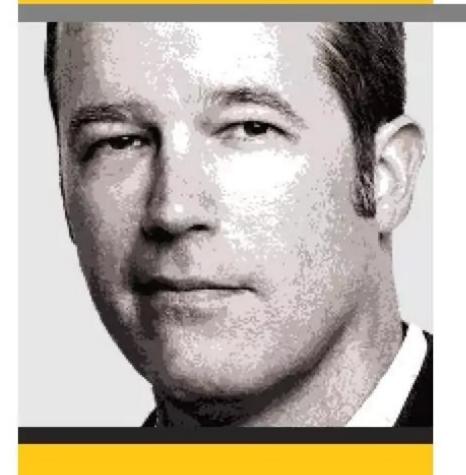








80 G&A FEBRUARY 2024



Justification to buy another custom gun.

KEITH WOOD

BOWEN'S BEAR GUN

A COUPLE OF YEARS AGO, a few friends and I chipped in to buy a small parcel of land in Montana's Madison Valley. It's not "Yellowstone Ranch," but it is large enough to put a cabin on and it's within hiking distance of a massive parcel of public land. The property is in the heart of grizzly country, though, so I had an excuse to seek out a new sidearm. There was no shortage of guns in my safe up to the task for bear defense, but fun and practicality rarely go together.

My choice was not something off-the-rack. I wanted a custom revolver from Bowen Classic Arms (bowenclassicarms.com), the Tennessee shop of Hamilton Bowen. Bowen is without peer in the custom revolver realm. His creations range from sixguns that would rival Elmer Keith's single-action No. 5 — a gun he's actually worked on — to esoteric field-grade guns made to serve a practical purpose. I already had one of his more aesthetic-minded revolvers, so this one was to be all business. (Sort of.)

Bowen is an interesting gentleman. He spent some time at gunsmithing school in Trinidad, Colorado, but he was mostly self-taught in terms of his trade. He holds degrees in History and English, as well as a Juris Doctor. He's an incredibly capable writer, and his book, "The Custom Revolver" (2001), is the definitive work on the subject. Hard copies are long unavailable, but it can be read as an eBook while he works on an updated Second Edition for print.

My bear gun began life as a stainless-steel Ruger Redhawk chambered in .44 Magnum. Bowen rechambered the cylinder to minimum .45 Colt dimensions with correct throats, slicked up the action, added an extended firing pin, fit a pair of his Rough Country sights and even installed a lanyard loop. Practicality ended there.

Bowen also turned down a 6-inch vent-rib barrel from a Colt Anaconda and cut a new barrel shank that would mate up with the threads on the Redhawk frame. This treatment is a tribute to the days when revolver 'smiths would mate a slow-twist Python barrel to a Smith & Wesson frame to increase accuracy for bullseye matches.

"Back before the Anaconda ever showed up," Bowen

said, "we figured out that you could put Python barrels on a GP-100. It just so happened that the rib laid out almost perfectly."

When the Anaconda hit the market in 1990, Bowen realized that those barrels would fit Ruger's strong, double-action Redhawk, too, the internals of which he was already intimately familiar with.

"We found out that they would adapt just as well," Bowen said. "With the barrels cut back to create a new

shank, a 6-inch Anaconda barrel ends up as a 4¼ incher."

The result is a compact sixgun that combines
Colt's attractive lines with Ruger's seemingly
indestructible strength and dead-simple lockwork. These guns are capable of handling heavy
loads, too, including the Garrett Cartridge 405grain +P load, as well as comparable handloads.
Thanks to the heavy underlug on the barrel,
and a set of Hogue rubber grips, the recoil from
such loads is tolerable. Best of all, both doubleand single-action trigger pulls are smooth, and
accuracy is excellent.

Bowen's work remains impecca-

was simply an excuse to add
another one of his guns to
my collection. Nonetheless, I couldn't be better
served by a defensive
revolver in function
or style. The latter
wouldn't matter to
an angry bear, but it
matters to me.

ble. I must confess, this property

Bowen combined a Ruger
Redhawk frame with
an Anaconda barrel and
added a lanyard ring.

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GREAT NEW PRODUCTS FROM RUGER

MAX-9® WITH READYDOT™ OPTIC

The MAX-9® with Ruger® ReadyDot™ Optic is slim, lightweight and compact for personal protection while still providing a capacity of up to 12+1 rounds of 9mm Luger ammunition. The Ruger® ReadyDot™ Optic is an ultra-reliable 1X reflex sight that utilizes the light-gathering properties of fiber optics and is designed specifically to co-witness with the Ruger MAX-9® pistol.

SECURITY-380°

Chambered in .380 Auto, the Security-380° is full-featured, ideally sized, modestly priced, and designed for hours of range training with minimal fatigue.



Featuring a mounting position for a standard Shield RMS footprint reflex optic in place of the Picatinny rail, the Mark IV™ 22/45™ Lite with Clear Anodized Finish features a raised front fiber optic sight and an adjustable rear sight that co-witness with most micro red dot optics.

SFAR[™]

Chambered in 7.62 NATO / .308 Win., the SFAR™ combines the ballistic advantages of .308 Winchester with the size of a traditional MSR, while remaining smaller and lighter than comparable .308-sized rifles.



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LC CHARGER

This large-format pistol based on the Ruger® LC Carbine™ utilizes the same magazines and controls as the innovative Ruger-5.7® pistol and features a 10.3" threaded barrel, ambidextrous manual safety, and a reversible magazine release.

The Super Wrangler® features a robust steel cylinder frame and ships with two cylinders, allowing you to convert between inexpensive .22 LR ammunition and powerful .22 WMR ammunition.















For over 30 years, Kimber has crafted a reputation for superior quality 1911s. With the introduction of the KDS9c, Kimber doubles down on capacity and takes quality to the highest level. From tremendous accuracy to relentless reliability, the KDS9c comes standard with two 15-round magazines that give you the capacity you want and the accuracy you need. 10-round magazines are available in compliant states, and 18-round extended magazines will be available soon. The KDS9c delivers more Kimber than any pistol before it because a Kimber is what all guns should be.

