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HISTORY & IDENTIFICATION OF GERMANY'S STANDARD-ISSUE BOLT-ACTION RIFLE DURING WORLD WAR II.

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692 Convertible Executive Grade .357 Mag./.38 Spl./9mm

PROOFHOUSE

Taurus

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Springfield Armory

Model 2020 Boundary 6.5 CM

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P. 74 BODDINGTON Speed Kings:

Speed Kings: Sorting out the fast cartridges.



P. 31

EMARY
When the benefits of the flat-tip meplat were discovered.



P. 120

WOOD
U.S. Supreme
Court reversed the
Bump Stock ban.

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STURM, RUGER&CO.

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BY BRAD FITZPATRICK

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CHANGE OF COMMAND

Meet Doug Hamlin, NRA Executive Vice President and CEO.

BY GUNS & AMMO EDITORIAL STAFF

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TOO MANY, TOO FAST

Part 1: Magnum rifle cartridges that one-up another in the name of speed.

BY CRAIG BODDINGTON

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KARABINER 98 KURZ

Remembering the standard service rifle Germany issued during World War II.

BY DAVE EMARY

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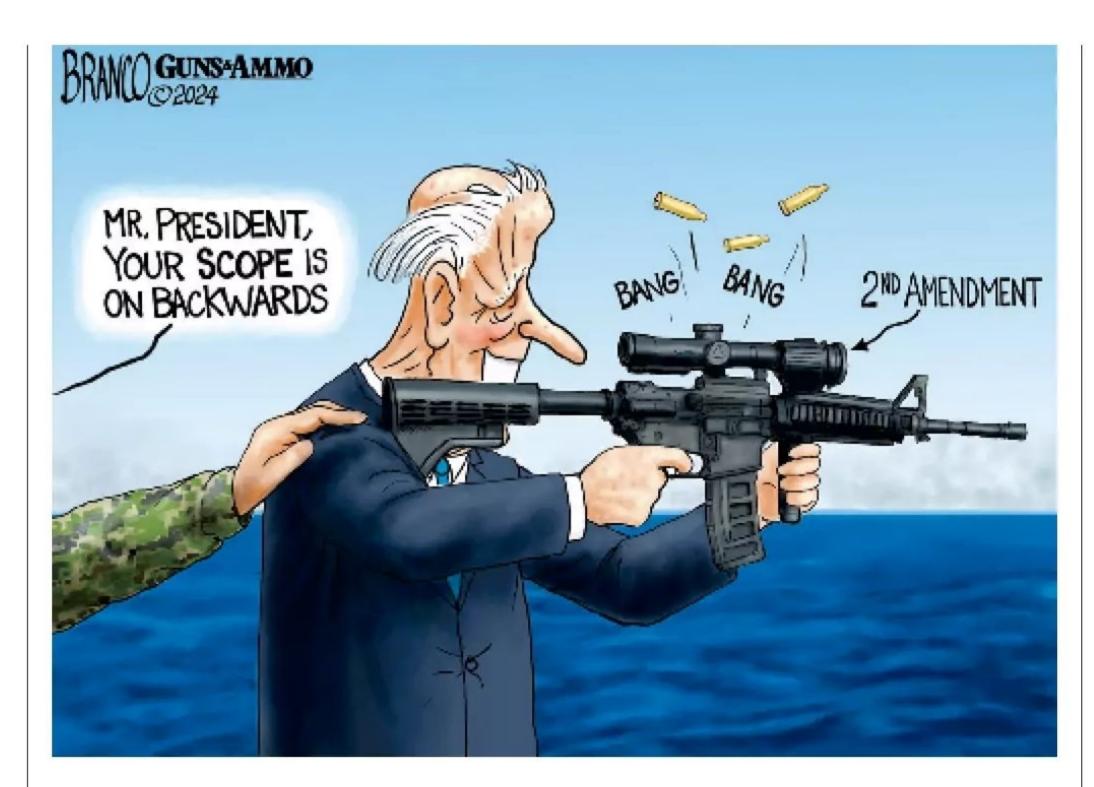
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READER BLOWBACK

WRITE US! "Letters," Guns & Ammo, 2 News Plaza, 3rd Floor, Peoria, IL 61614, or email us at gaeditor@outdoorsg.com. Please include your city and state of residence. Letters may be edited for brevity and clarity.



.327 FED. MAG. COVERAGE

I bit my tongue and refrained from responding to James Tarr's column, "Dead for Defense" (March 2024), and his discussion regarding the .327 Federal Magnum. My everyday carry? Ruger's SP-101 in .327 Magnum with 3-inch barrel. I have a 4-inch SP-101 in the nightstand. A 100-grain .327 delivers nearly identical energy as a 125-grain .357 Magnum load. For the last few years .327 has been hard to find. Why? I blame Guns & Ammo and other such mags. Little has been written on this awesome cartridge.

Paul Ruff Sarah, Mississippi

PRAISE FOR .38-55

I'd like to read and hear some praise of the .38-55 cartridge. I have taken many deer with this round. It performs well with cast bullets. There are not enough jacketed bullets available at a decent price to make buying them worthwhile. The Lyman #375248 and the #375449 are my cast bullets of choice with the

#375248 being my first choice for whitetail deer in my 336 Marlin.

Dennis Horg Email

J-FRAME WISH

My carry gun is a Smith & Wesson Titanium AirLite J-frame in .32 H&R Magnum. Gunwriters at the time agreed: The .32 H&R Mag. usually beat the .38 Special. Its recoil is more manageable; it provided six rounds instead of five; and bullets came out of the sub-2-inch barrel fast enough that the hollowpoint would expand, which is doubtful in the .38. I load .32 H&R Mag. with MagSafe frangible rounds to keep the featherweight gun light, and I carry it in an Uncle Mike's front pocket holster. Once, when wearing a t-shirt and shorts, a police detective friend looked astonished when I told him what I was carrying. Looking me carefully over, he couldn't find the revolver. It disappears! Because it is so light, it doesn't weigh my pants down. I am sold on the .32 H&R for concealed carry in a J-frame. I wish they

made the same gun in .327 Federal.

John Taylor Tucson, Arizona

.45, **ANYONE?**

Yes, I like .45 ACP. One shot, not three.

Danny Wilke West Allis, Wisconsin

10 GUNS I'D LOVE TO OWN

I liked Keith Wood's list (May 2024), but mine would be:

- Charleville, the actual rifle used at Concord Bridge.
- U.S. Marine rifle used during the Battle of Belleau Wood.
- .50-cal. spent case fired at Pearl Harbor on 12/7/1941.
- First American rifle to cross the Rhine in World War II.
- Baker breechloading flintlock used by the British Royal Army.
- USMC-issue M1941
 Johnson rifle used in World War II.
- Civil War Union Spencer Repeating rifle.
- Girandoni Air Rifle carried by Lewis and Clark.
- Gen. George S. Patton's S&W Registered Magnum .357.
- Rifle my father carried when landing in France, June 1944.

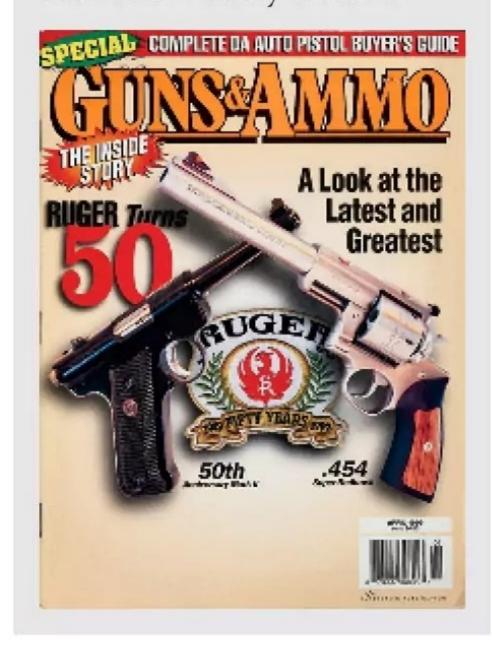
Ron Sindric Email

DON'T LET IT HAPPEN!

I've been a Guns & Ammo reader since 1964 and have held a subscription since 1980. Unfortunately, I live in the western state of Austra-

25 YEARS AGO APRIL '99

A collection of notable prototype firearms and tools, including embellished models by engraver Paul Lantuch, were used to illustrate a short feature celebrating "The Ruger Half-Century." The text and photographs were sourced from "Ruger & His Guns: A History of the Man, the Company and Their Firearms" by R. L. Wilson. The cover featured a Super Redhawk in .454 Casull and a 50th Anniversary Mark II.



lia, which is fast becoming one of those "People's Paradises" that people joke about. The state government bans anything that might be a threat to its governance, including firearms. In addition to the firearms and cartridges already banned, the Minister for Police is advocating to further ban calibers deemed too powerful for individuals who are not in law enforcement. It is rumored that all .30-caliber and highvelocity small calibers are next. Banned firearms are purchased by the government from licensed owners at "market value," for which the federal government has allocated 160 million dollars toward gun control, and then those firearms are destroyed. Not even secu-

SIGNATE SENSE

rity personnel are allowed to carry firearms. It is not possible to legally obtain a firearm for the purpose of self-defense in Australia. Firearm owners have no redress against these bans. Soliciting assistance of the media is quixotic. Most are unsympathetic to our cause. Education institutions are indoctrinating the next generation against firearm ownership, which has evolved into most of the voting population. "Australia will lead the world in gun control," said the Prime Minister. One can only assume that Australia will align with China and Eastern European countries with people-control policies.

Bob Wood Meekatharra, Australia

LOAD INFO

I have a box of bullets from Cast Performance Co. in Wyoming. I need some reloading information on the .458/440-grain LFNGC sized .459 for my .45-70 rifle. I cannot find information on it.

Joseph Tarnowsky, Jr. Great Falls, Montana

The "Lyman Cast Bullet Handbook" has data for a 450-grain cast bullet. It should work just fine if the seating depths are similar. A copy of this publication is available at lymanproducts. com for \$31.

— D. Emary

.410 FOR SQUIRRELS

As a 10- to 12-year-old boy on a farm, I used my grandfather's Harrington & Richardson single-shot .410 with a full choke, 2½-inch shells in 4, 5 and 6 shot. I don't even think I was aware of 3-inch shells at the time. Unfortunately, that gun was lost in a house fire in 1965, but for nostalgic reasons my father bought a similar gun that I still own. Regarding the letter from Mr. Waterfield (July 2024) on using 2½-inch shells for squirrels — yes, they work.

Ronald D. Weddle, MD Bardstown, Kentucky

MORE PLEASE!

Great article, "Meplat"
(July 2024). I like Guns &
Ammo but usually don't
write because the content
rarely excites me enough
to comment. Beckstrand's
excellent article made all

the difference. Keep up the good work and publish more like it! Jeremy Robinson Baltimore, Maryland

TAKE HEED!

Do some articles on statecompliant firearms, but readers should be warned that if they don't involve themselves politically they might end up living in a state that requires "compliant firearms." The number of gun owners who fail to vote amazes me. Then, when their Second Amendment rights are constrained, they ask, "How could it have happened?" Chuck Williamson Mechanicsville, Virginia

110 ACCURACY

Thanks for producing the



best gun magazine available. The June 2024 issue was especially interesting due to Craig Boddington's two-part series on the Savage Model 110. I've been reading gun stuff for more than 75 years. The mention of Chet Brown brought back memories. I competed against him in Running Deer shoots in Livermore, California. The accuracy reputation of the 110 is well deserved. I have owned several 110s including a 110L in .243, being a southpaw. With a good barrel and trigger, the 110 will out-shoot many \$3,000-plus rifles offered today. James Nitsos Carmel, Indiana

STATE COMPLIANT

I would like an article

reviewing state-compliant firearms for New York. George Denney Greenfield Center, New York

SAVAGE 99 FOREARM

I have my dad's Savage Model 99 in .300, which was made in 1946. I have been trying to get a new forearm for years. I have called Numrich Gun Parts for the last 10 years. They have a good part number, but they never have it in stock. Maybe Guns & Ammo could help? Craig D. Mays Slickville, Pennsylvania

A few sources still advertise Savage 99 parts, including 8¾-inch forends. Old Arms of Idaho (oldarmsofidaho. com), for example, offers a

plain forend for \$69.25 and a checkered one for \$75.50. Boyd's Gun Stocks (boydsgunstocks.com) also offers a plain Takedown forend for \$69. Brownells (brownells. com) offers a forend for the Savage 99 for \$68. If you would prefer an original part, I have seen these for sale on eBay and Gunbroker.com for between \$60 and \$90. Hardware is typically not included. Know that parts may require fitting or finishing by a gunsmith.

— E. Poole

.222 VS. .223

I have a Gerbam .222 varmint rifle made in France. Hornady recently released .222 ammo in the Superformance Varmint line with a 35-grain NTX projectile and

50-grain V-Max bullet. The velocity of these rounds is said to be 3,345 to 3,760 feet per second (fps), making my .222 hotter than a .223! Shooting at 100 yards, I was able to put threeshots in a half-inch group. I would like to see an article comparing the .222 against the .223.

Bob Darling Thompson, Connecticut

J-FRAMES

Come on, guys! The Smith & Wesson M&P Bodyguard .38 is no more of a J-frame than a Ruger LCR. It is a J-frame in size, but nothing more. It's a bit of an insult to a J-frame to call it one. The Model 40, 34, 36 and 640 — those are J-frames. Jack Thorne Email CM



THE LIGHT PRO





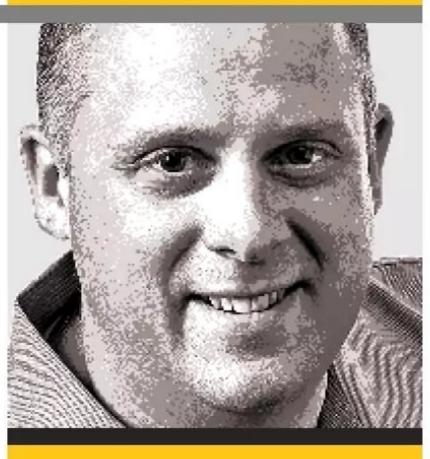




SPRINGFIELD ARMORY.

EDITORIAL SEPTEMBER 2024 G&A 13

A grip wrap solution like nothing else.



ERIC R. POOLE

@GUNSANDAMMOMAG

STAY IN CONTROL

RACANALOK is a veteran-owned company producing American-made products. It has developed a unique drytouch polymer that has already seen use in the athletic, medical and automotive industries. At first glance, the product looks like a grip wrap — because it is. In sports arenas, the polymer is being used on everything from tennis rackets to baseball bats. In the medical field, it's being used to cover and protect wounds as a rapid-application splint and bandage. In the automotive and motorsports community, it's being used as a comfortable grip for the throttle of a motorcycle and in race cars. In fact, the first mention of it I saw was on the steering wheel of a 1969 Dodge Charger named "Scraptona" that appeared at SEMA in 2018. The material is thin and adheres to skin at a molecular level. It performs better than vinyl, silicon or rubber — especially when wet. It's better because it conforms to every ridge and groove, every fingerprint and line in your palm.

The firearm grip wrap design is a product of DefGrip. It's been available directly through glockstore.com, but the company is quickly expanding its list of firearms to

contour the material for. Like the grip products developed by Racanalok, what distinguishes DefGrip from other grip-wraps are the interlock-

The DefGrip

installs

ing tabs that eliminates a failure point.

quickly and is symmetrically cut to fully cover the grip of several popular handguns, as well as the pistol grip of an AR-15.

Since the invention of the checkered wood grip, shooters have sought ways to better control a firearm for aiming and through recoil. While working as a full-time armorer for Blackwater in the mid-to-late 2000s, firearm instructors and clients began using an electric stippling pen to permanently modify the texture of a polymer-frame pistol, frequently Glocks. Some borrowed the skateboard-tapewrap trick from the competitive shooting scene, but that solution eventually melted away and left a sticky, dirty residue in hot environments. There have been grip wrap products since, but they have largely been overshadowed by the factory molded texture efforts made by firearm manufacturers since the introduction of the Glock Rough Textured Frame (RTF) models. Unfortunately, focus groups can't agree on how much or what type of texture is ideal for duty, recreation, or defensive use.

The first DefGrip product I became familiar with was the brand's sandpaper-type grip. I've used it on a personal

> Glock 19. What made it different than other products is the positive adhesion to the frame and the patented interlocking tabs that secure the grip to the backstrap. The texture remains consistent and hasn't melted or slipped while shooting. This led me to discover DefGrip's new wrap featuring the dry-touch micro-polymer grip. I like that it's thin and doesn't change the circumference in a way that alters my handling of a pistol. It's cut to conform to every groove and contour, so there are no uncomfortable creases and wrinkles.

If you want to remove DefGrip for any reason — selling a firearm or trying something else — simply unlace the

tabs in reverse order. Any adhesive left behind is easily removed with a mild solvent or cleaner. The best part is that you are not out a lot of money. DefGrip retails between \$19.95 and \$24.95 at glockstore.com. In addition to Glock models, you'll

The DefGrip dry-touch polymer wrap is thin and precisely

model of pistol grip. \$24.95

cut to fit the shape of a particular

soon find DefGrip available for pistols such as the Springfield Armory Hellcat series, SIG Sauer P365 family, and more. Visit defgripusa.com to learn more.

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ECHELON







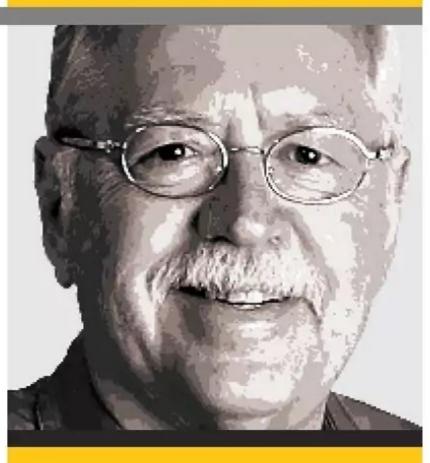
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GUN ROOM SEPTEMBER 2024 G&A 15

"The scooped-out cylinder flutes, style of grip checkering, and safety lever, all indicate a Teutonic origin."

ENTIFICATION & VALUES



GARRY JAMES

GARRY.JAMES@ OUTDOORSG.COM





LARGE AND HOYT LONG RIFLE, 95%: \$1,650

CONTEMPORARY LONG RIFLE

Q: Would you please give me an idea of what my muzzle-loader is worth? I know it's a replica. I bought it in 1973. The barrel has "W. M. LARGE" stamped on the barrel, and "R. A. HOYT" scribed on the barrel, also. I believe it was built by Hoyt and the barrel made by Large. I was living in Pennsylvania when I bought it and think it was made locally.

J. F. Email

A: A decent piece! Bill Large barrels are highly regarded. Bobby Hoyt also made barrels, though I've never seen a rifle built by him. The market is down on contemporary long rifles, so a piece in this grade would probably bring \$1,500 to \$1,800. Large was from Ohio and Hoyt from Pennsylvania. Your guess about the piece being a local one is correct.

EARLY MODEL 70 FEATHERWEIGHT

I have a Model 70 question. I have a pre-'64
Winchester Model 70
Featherweight in .243. The serial number is 361236, placing its manufacture in early '55, the same year
Winchester introduced the .243 cartridge. Since

in 1955 was 361026 and ended with 393596, is there any way to find out how many .243-chambered M70s were produced before mine? Does being a 1955 gun and the year the .243 was introduced add value? The gun is about 95-percent.

D. D.

Email

A: As I am not all that versed in the Byzantine intricacies of Model 70 lore, I referred this query to my go-to authority on modern sporting rifles, Dwight Van Brunt of Sportsman's Legacy. Here are his thoughts: "Winchester strongly supported the introduction of its .243 cartridge from its launch

until production ceased on the pre-'64 Model 70. Per Roger Rule's "The Rifleman's Rifle" (2009), some 43,000 .243 Winchesters were produced, making it one of the most popular Model 70 chamberings. Winchester factory records for the majority of pre-'64 Model 70 rifles do not exist, so answering the question regarding about a specific rifle's production date/order/caliber sequence is not possible. Of course, action serial number does not precisely indicate the true chronology of production/shipment for a multitude of reasons. That said, a pre-'64 Model 70 Featherweight in 95-percent condition—assuming it remains original/

AUCTION BLOCK

A scarce, unfired Kimber LAPD SWAT Custom II in .45 ACP realized a remarkable \$10,000 at a May 12, 2024, Sportsman's Legacy sale. Following extensive testing in 2001 and 2002, the LAPD SWAT selected a modified version of the Kimber Custom II as its duty pistol. The initial order was delivered in 2002. Seven complete overrun pistols were sold to Kimber employees, and this pistol is one of those seven. Special markings include "LAPD SWAT CUSTOM II" on slide right and serial number "K" (Kimber) "LA" (Los Angeles). Included in the sale were a molded prop pistol from the movie "SWAT" (2003), as gifted to a former Kimber employee; correct Surefire tactical light, as issued by LAPD SWAT with the Kimber pistols; and the Kimber factory hard case with correct end labels and literature. For more information about this and future sales, visit Sportsman's Legacy at sportsmanslegacy.com.









RADLA SHOTGUN (MODIFIED), <50%

unaltered — is desirable.
Proper market valuation
turns primarily on percent of
original condition, as well as
wood quality (i.e., figure) to
a lesser extent. In this case,
the rifle could be marketed
as a "very early" rifle in
this caliber, an interesting
collector's detail to be sure
but one unlikely to move the
financial needle."

RADLA SIDE-BY-SIDE SHOTGUN

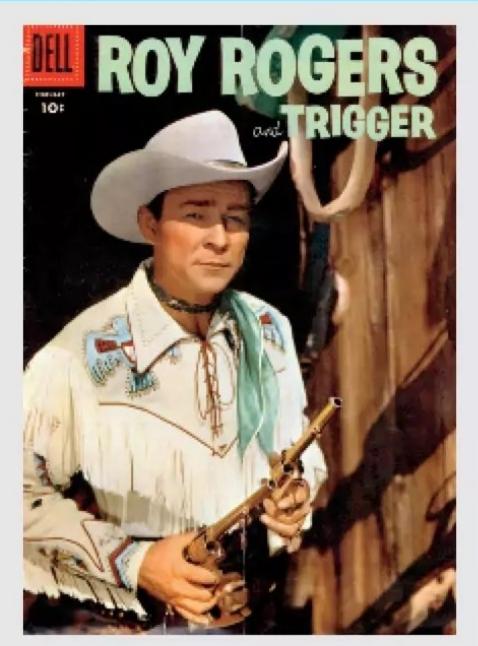
Q: I bought an old double-barrel hammer shotgun as a wall hanger. It is marked "RADLA." The problem is, I cannot find any information about it. I would like to know how old it may be and where it was made.

A. D.

Email

HOLLYWOOD HARDWARE

Roy Rogers, "King of the Cowboys," carried a pair of gold-plated .45-caliber Colt Single Action
Army revolvers in a number of his movies, television appearances, and exhibition tours. Fitted with faux ivory grips, the guns bear the markings of Oklahoma's famous 101 Ranch, where factory records attest to the fact they were sent in 1926. Later the duo was exhibited at the Roy Rogers-Dale Evans Museum. (Photos courtesy of the National Firearms Museum, Fairfax, Virginia.)





A: This is not a bad-looking gun at all! I cannot track down "Radla," though it is an Eastern Europeansounding name. The look of the piece and quality of workmanship indicates it is likely of Belgian origin. Thousands of such guns with a myriad of names — some reflecting the title of the hardware store from which they were sold — were exported to the U.S. in the last quarter of the 19th century and early part of the 20th. Your gun, while not retaining much finish, appears to be sound, though the barrels have been rather inexpertly shortened. The front bead has replaced with an Allen screw, which I would change with a proper bead if the gun belonged to me.

UNUSUAL EUROPEAN REVOLVER

Q: I'm neither as educated nor prepared as Guns & Ammo's usual writers, but I enjoy reading your column. The included photos show a gun that belongs to a friend. It is a little Webley-looking double-action revolver with no finish. Any idea as to what it is?

R. M.

Email

A: Your friend's revolver is a copy of a Webley RIC-style revolver. It is likely German, though I cannot see any proofmarks to completely verify this supposition. It is definitely not British. The scooped-out cylinder flutes, style of grip checkering, and safety lever, all indicate a Teutonic origin. Dating from the 1880s, assuming it works, its value would be in the \$375 to \$450 range. Though now a gray color, this piece was probably originally blued.

WEBLEY WG ARMY MODEL

Q: I have a Webley .455-.476 "WG" Army Model with the following characteristics. Can you please provide the period of this gun, history and value, if possible? Features are Webley patent with "WS" winged bullet; barrel inscription "Army & Navy CSL"; serial number 95XX; K83XX in front of cylinder on the barrel frame; three little star proofmarks, two on top of barrel flute, one on the frame next to trigger guard; and the cylinder has been altered to fire .45 Colt. I have fired it with Colt .45 Cowboy Action loads. The gun is in perfect





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working order with a good bore. It appears to be all original. The barrel is lightly pitted and still has some original bluing. This is the only model I have seen with the longer cylinder flutes. Is there a reason for this? R. M.

Email

A: The Webley "W.G. revolvers, including the Target and Army, were superbly built and extremely reliable six-shooters with absolutely silky double-actions. The "W.G." which has been mis-identified as meaning "Webley Green," supposedly after the inventor of

the Webley stirrup latch,

stands for "Webley Govern-

ment." Webley W.G. models

were produced from 1885

Edwinson Green, likely



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to 1902 with slightly more than 22,000 made. Target versions had square butts and Army models had bird's head — or "parrot-beak," as the Brits call them grips. Prior to 1893, W.G. revolvers had model dates assigned to them and were so-marked. After that time, year markings were eliminated. As your pistol has standard cylinder flutes, as opposed to earlier "churchsteeple," and no date, it was undoubtedly made after '93

based on its serial number, not all that much after. The barrel markings indicate the piece was retailed by the "Army & Navy Cooperative Society Limited," a monolithic organization that suppled a variety of items for British civilians and military for consumption at home and abroad. The photos you sent show a nice-condition revolver. These are quite sought-after. In unaltered shape, it would easily bring \$2,500 to \$2,750. The

rechambering affects value adversely, probably shaving \$500 off its worth.

SHOTGUN BARREL **INSERT IDENTIFIED**

Q: As to the Ithaca Double Conversion in your June 2024 column, I have attached two photos taken from my 1908 Sears, Roebuck catalogue. Maybe this is where the .38-55-barrel sleeve came from. M. W.

Madison, Wisconsin





A: Thank you for the effort and diligence! From what I can see in the advertisement, I'm inclined to agree with you that this is the origin of the barrel insert. Very interesting. I must admit, I have not seen this Sears offering previously. Clever contrivance!

FEG AUTO PISTOL

Q: My father, a World War II vet, passed away 24 years ago, and my mother just recently. As these stories go, while cleaning out their house, we found a handgun that Dad brought back from the European Theatre. It had its certificate of customs with serial number. I watched Guns & Ammo TV several times and found it interesting. (Your TV presence

is outstanding.) A friend disassembled the gun for photos and encouraged me to forward this info, hoping to determine what we have and its value.

J. S.

Lancaster, Ohio

A: Your dad liberated a Hungarian Model 1937 pistol. This piece, manufactured by Fegyver- és Gépgyár (FÉG) of Budapest, was initially military issue with the Hungarian army, chambered in .380 ACP. In 1941, the German military ordered a large number of these from FEG in .32 ACP, changing the Hungarian slide markings to "P.Mod 37 Kal 7.65." This quality blowback was produced in large numbers for both militaries. Your pictures indicate a high-condition gun with



an original holster and spare magazines. As it is lacking a manual safety — the German guns had them, the Hungarian versions did not — and has a Hungarian-style holster, it appears you have a Hungarian model, though this does not preclude it from somehow possibly

finding its way into German hands during World War II. As the gun appears to be in at least 90-percent shape, and has its original holster, spare mags and papers, I'd value it at \$900 to \$1,100 — about 15 percent more were German issue and so marked.



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THE CARRY RIG

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The Milt Sparks
55BN is a premium
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(OWB) holster that
mounts the firearm
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both a stitched-on belt
loop and a punched-out
rear belt slot. Molded to
fit a specific pistol, the
55BN also features a
metal-reinforced mouth
and an internal sight
channel. \$170



MILT SPARKS 55BN

IT'S DIFFICULT TO REVIEW a leather holster without first mentioning the late, great Bruce Nelson, doubly so when the holster bears his initials. Competitor, cop, instructor, and pistol-shooting pioneer, Nelson was also a holster maker until his death in February 1995. Nelson learned the basics from gunleather-legend John Bianchi and built a small business. At the same time, Nelson was a career peace officer, worked as an instructor for Jeff Cooper at the American Pistol Institute (now Gunsite), and helped found the International Practical Shooting Confederation (IPSC). His real-world experience and proximity to the great combat pistol philosophers of the 1970s and '80s allowed him to elevate the design and construction of hard-use holsters. Wearing many hats, it's no surprise that demand for Nelson's holsters exceeded his ability to produce them. As a solution, he worked with other makers to ensure his customers received the equipment they needed. Among those, Milt Sparks was a trusted colleague and talented leather worker.

Like Nelson, Sparks also passed in 1995, but his eponymous Idaho-based business has been building premium gunleather for more than 50 years. Among the catalog of original designs are Nelson's Summer Special inside-thewaistband (IWB) and 55BN "Professional" outside-thewaistband (OWB) holsters. They remain best sellers.

The Professional is one of the most imitated leather holster designs extant. It was notable for its single-sheet leather wrap molded to the dimensions of the firearm. For on-body retention, it incorporated both a wide belt



loop, i.e., "tunnel," stitched to the holster's backside, and a punched-out belt slot on the rear wing. The result is a stable holster that — given a sturdy gunbelt — can securely support the weight of a heavy pistol. Too, the rear wing and belt slot draw the gun (particularly the grip) close to the body, aiding concealment, even while worn with a light cover garment.

Of course, the Professional has evolved since it was first conceived by Nelson. The Milt Sparks 55BN features a metal-reinforced holster mouth to ensure the pocket does not collapse after the draw. Inside, two narrow leather rails are stitched in parallel to create a protected channel, accommodating the path of a pistol's front sight. As well, all Milt Sparks holsters are hand molded with great detail. Looking at the holster's molded contours, it's often easy to identify the specific firearm it was tooled for.

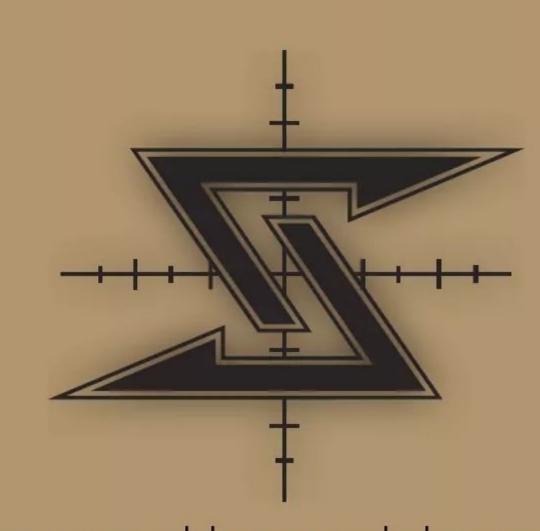
In terms of fit, the 55BN is a pistol holster. Milt Sparks Holsters can accommodate most popular semiautos, but customers can confirm available options by phone







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MILT SPARKS HOLSTERS 55BN	
MATERIALS	Leather, cowhide (tested), horsehide, or horsehide with exotic trims
CARRY TYPE	Outside the waistband (OWB)
RETENTION TYPE	Level 1, friction fit
ADJUSTABILITY	No
MSRP	\$170 (tested) to \$280
HANDGUN FIT	Semiautomatics, no optics; Kimber KDS9c (tested)
ACCESSORY RAIL ACCOMMODATIONS	No
POSITIONS TO CARRY	Strongside, 3 to 5 o'clock (right hand tested)
AVERAGE TIME TO ATTACH	20 seconds
COMFORT RATING	5/5
CONCEALMENT CLOTHING	Unbuttoned shirt, light jacket
AVERAGE DRAW-TO-FIRE TIME	1.24 seconds
MANUFACTURER	Milt Sparks Holsters, Inc., 208-377-5577, miltsparks.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.

or online at miltsparks.com. As far as options, the 55BN can be had with an FBI-style cant or a straight-drop configuration. Leather selections include cowhide (\$170, natural tan or black) and horsehide (\$175, black). Exotic trims such as shark (\$205) and elephant leather (\$280) are available upgrades.

Milt Sparks is a small shop operated by skilled craftsmen. Each job is a custom piece fulfilled by an individual holster maker. As of this writing, lead time for a Milt Sparks holster is around 10 months. When you see the stitching and feel the burnished and painted edges, it is understandable why these holsters are in such high demand.

KIMBER, MEET MILT SPARKS HOLSTERS

Guns & Ammo's review of the 55BN resulted from an introduction I facilitated between Kimber and Milt Sparks. Of course, there are many Kimber pistols — particularly 1911s — already carried in Milt Sparks' gunleather. The complemen-

tary brands enjoy a high degree of customer crossover, and those discussions quickly produced a series of holsters for the Kimber KDS9c, including the 55BN, reviewed here.

30-DAY CARRY

I ordered a 55BN for the Kimber KDS9c in cowhide with a natural finish and a slight forward rake. It proved ideal for carrying just behind the strongside hip. Fit was perfect; friction with the holster provided enough retention to hold the gun, even when turned upside down. Yet, the pistol could be drawn fast and smooth, as you'd expect from an open-top leather holster.

The KDS9c I carried was not equipped with an optic or a dustcover rail. (However, the pistol is designed to accept slide-mounted optics, and railed models are available.) If



The 55BN features a reinforced mouth that is stitched, burnished, and edged to prevent collapse even when cinched to a belt. The generous sight channel is also supported.

you plan to run a firearm with a red dot, know that the 55BN holster is not compatible. However, Milt Sparks does offer several OWB and IWB optic-ready holster models, including the OM-1

and VM-2, respectively.

Naturally, concealed carry using an OWB holster requires a bit more cover and consideration than a typical IWB rig might. For that reason, my 30-day evaluation was conducted over an extended period from early May to late June. Some days were simply too hot — and my clothes too light — for effective concealment. However, every time the weather permitted a light cover garment, I appreciated how close-fitting and concealable the 55BN can be. I primarily wore an unbuttoned shirt or

a lightweight zip-front hoodie as my cover garment. The KDS9c disappeared beneath the loose-fitting outerwear. A standard sport coat or vest would work, as well.

The 55BN was comfortable, as OWB holsters tend to be. Without the need to loosen the belt or find extra room inside the waistband, the 55BN simply slid into place. I opted for 1½-inch belt accommodations and cinched it down behind my hip. The setup rode snug and secure all day. When called upon during my range evaluation, the holster remained where I put it, and it presented the pistol grip to my hand for a quick, clean draw.

There's really nothing like carrying a nice gun in premium leather. If you are interested in an elevated carry experience, I can't recommend the products from Milt Sparks Holsters highly enough.

— J. Kurtenbach



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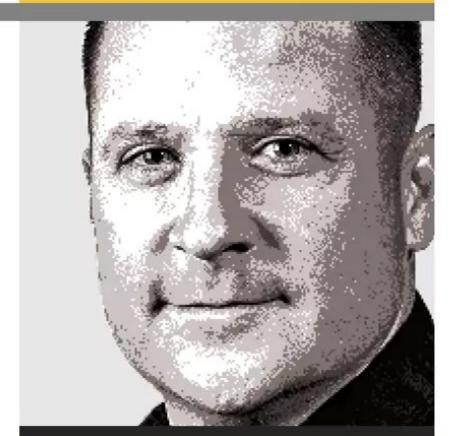


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GUN TECH SEPTEMBER 2024 G&A 27

Cuda RX-795



RICHARD NANCE



The Cuda RX-795 is a button-less red-dot optic that is as care-free as iron sights on a pistol. Featuring a "tap" interface, touch points are used to set brightness of the unit's 3 MOA IntelliDOT system. IntelliDOT automatically adjusts the dot's intensity level to address lighting conditions at the target. In the "Settings" menu, dot intensity is adjusted; battery life can be checked; the instant on/enhanced-off feature can be activated or deactivated; and audio can be enabled or disabled. Once the RX-795 is configured, autonomous functionality ensures the dot works when you need it. The RX-795 is mounted to the Docter/Noblex footprint and includes a rail mount. \$350

AUTONOMOUS SIGHTING

WHILE THERE IS NO SHORTAGE of red-dot sights, most require manual manipulation to adjust the dot's brightness. Optics with auto-adjust features don't often give the user a say in how bright the dot is. Cuda, a brand in Zvetco's portfolio of companies (zvetco.com), features IntelliDOT technology. An ambient light sensor makes imperceptible adjustments to the dot's intensity with reference to the user-preferred setting, so that it appears consistent — even in changing light. According to Zvetco CEO Zavi Cohen, the adjustment occurs "10 times per second," faster than the human eye can discern.

"Our unique algorithm enabled us to create a dot with constant perceived intensity that's as autonomous as iron sights," Cohen said.

An intensity offset feature allows users to override the default setting if they prefer a brighter or dimmer dot. Once selected, the dot will appear the same, regardless of lighting conditions. In the "Settings" menu, set it and forget it.

To enter the
Settings menu,
tap the light
sensor on the
front of the
housing three
times. Since this
is a deliberate
procedure resulting in a change
in motion and
light, you won't



A light sensor at the front of the RX-795 measures ambient light, initiating adjustments to the brightness intensity of the dot.

accidentally alter its settings. A distinct chime and flashing reticle indicate you are in the Settings menu. From there, you can check the battery level and diagnostics by tapping and holding the light sensor until the unit beeps. The battery level is revealed by the number of consecutive beeps and reticle flashes. For example, five represents optimal battery life; one suggests the battery should be changed. This process occurs automatically after each use.

In addition to the battery and diagnostic check, the Settings menu allows users to change the default dot brightness, deactivate the instant on/enhanced off feature, and mute audio.

To change the dot's intensity, tap and hold the sensor until you hear two consecutive beeps. To dim the dot, tilt the firearm left and tap a side touch point, located on either side of the housing toward the rear. Reverse the procedure to brighten the dot. An additional tap on the sensor confirms the reticle brightness change.

Deactivate instant on/enhanced off by tapping and hold-



The RX-795 features a Settings menu that is accessed and changed by tapping the light sensor three times.

ing the sensor
until you hear
three consecutive
beeps. Then, tilt
the firearm left
and tap either
side touchpoint.
Tilting right and
hitting either
side's touchpoint
reactivates the
feature. In either

case, a secure tap on the sensor saves the setting.

When instant on/enhanced off is activated, an internal accelerometer detects motion to automatically turn the unit on when it's picked up or drawn from the holster. The unit senses when the unit is holstered or stored and shuts down to preserve the CR1632's battery life, which is 10 years in "Standby" mode.

To mute audio, tap the sensor and hold until four consecutive *beeps* are heard. Tilt left and tap either side's touchpoint. The opposite procedure turns the sound back on. With the sound off, reticle flashes replace audio cues. The reticle flashes provide visual confirmation even when audio is activated, though. Tap the sensor once to save your preferred audio setting.

Adjusting the settings is something you'll only have to do once unless you decide to make a change. Technology makes the RX-795 both customizable and intuitive.

The RX-795's LED produces a brighter dot than a standard LED and uses less power. It's available with either a red or green dot, 3- or 6-MOA dot configurations.

The housing is constructed of 6061 aluminum alloy for durability. Flexible circuit boards increase vibration resistance. An IPX7 waterproof rating means the RX-795 can sustain submersion in 1 meter for 30 minutes.

Looking for a durable, technologically advanced red-dot sight that you can neglect after mounting? The Cuda RX-795 may be your autonomous solution. Visit cudaoptics.



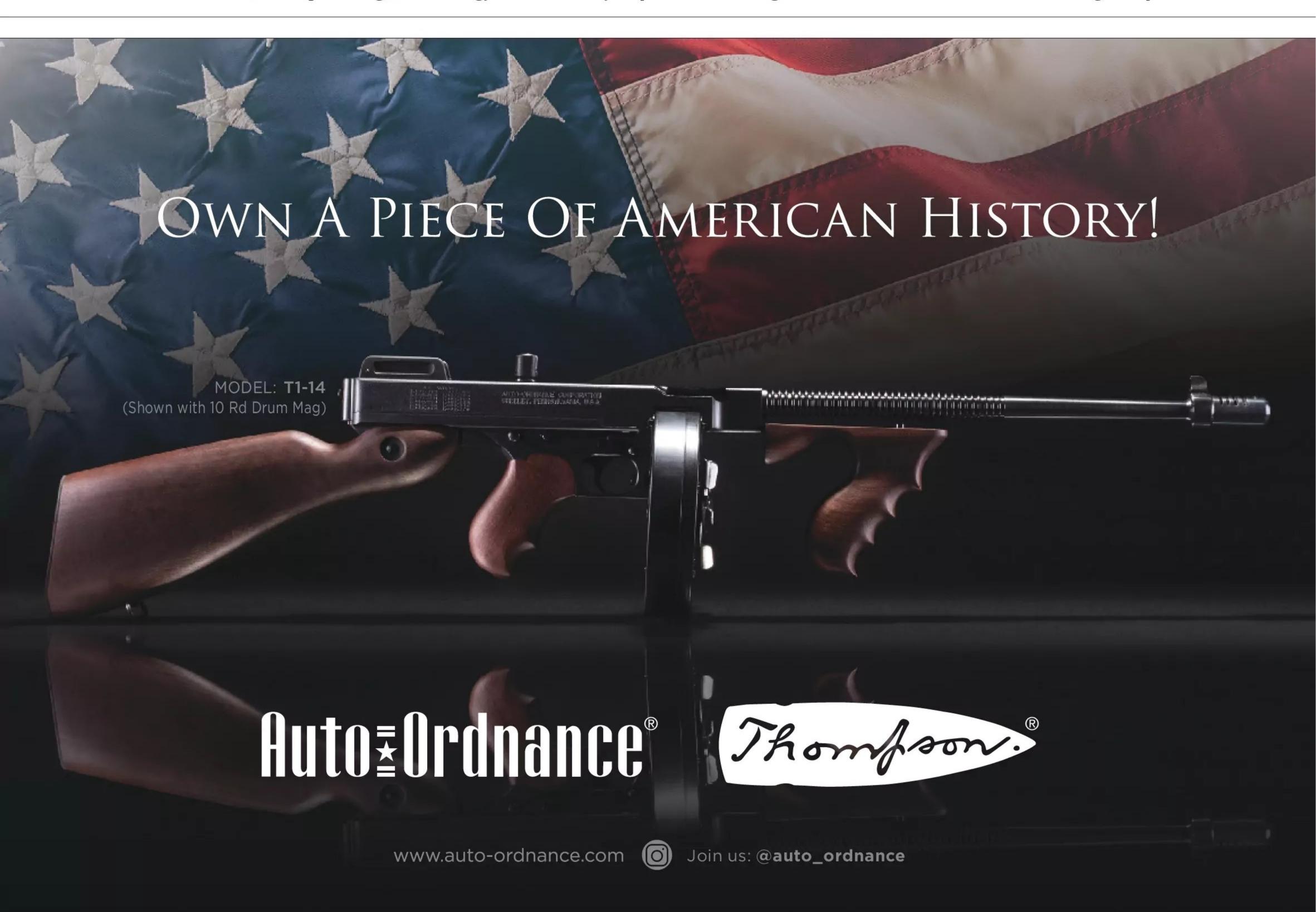
A mechanical ball detent locks the sight adjustments in place, protecting your settings even after hard use and the slide's reciprocating recoil energy.



The RX-795 is direct-mounted to a Doctor/Noblex footprint, or to the supplied rail mount. Replacing the battery requires that the sight be removed.



The lens wears a hydrophobic and contrast-enhancing coating for excellent target acquisition.







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SEPTEMBER 2024 G&A 31 BULLET BOARD

A technical **history of the flat meplat**, the tip of a bullet.



DAVE EMARY

A REVEALING DISCOVERY

IN MARCH OF 2024, Hornady announced it had received a patent regarding tipped bullets using a flat meplat instead of the conventional rounded meplat. "So what? What's significant about that?" As it turns out, meplat is very important to the long-range performance of bullets. It was a significant factor in the design of Hornady's A-Tip match bullet design, which is perhaps the most consistent and accurate long-range match bullet available. The discovery of the effects of the meplat design feature was somewhat by accident. It was a case where the little details mattered.

THE BACKSTORY

During the course of research and testing that resulted in the Hornady ELD-X and ELD-M line of bullets, a perplexing phenomenon was observed. Significant variations in drag and retained velocity were noticed within the test groups of bullets at long ranges, primarily below 2,000 feet per second (fps). Further testing in support of the Hornady 4DOF exterior ballistics program with almost every other manufacturer revealed that tipped, boat-tail hollowpoint (BTHP) and monolithic, lathe-turned bullets exhibited the same phenomenon. Unsurprisingly, there was a correlation between drag variability and the uniformity of the finish of the meplat on BTHP bullets. The sharper the nose on a BTHP or lathe-turned bullet, the worse the drag variability was. It wasn't predictable or consistent! The variations were not huge, but they were bad enough that we engineers worked to figure it out and eliminate the issue. In the pursuit of designing and producing long-range, small-caliber bullets, absolute performance consistency from bullet to bullet is the "Holy Grail." When I worked at Hornady, we researched available literature and carefully measured everything that could be measured on a bullet, but no smoking gun was found. We tried a number of approaches such as machining the base of boat-tails to get a sharp

heel, making shallow grooves on the ogive, different loads, and a perfect loaded-round runout. This effort didn't work. In the Spring 2017, Jayden Quinlian — now chief ballistician at Hornady — and I tested a suppressed 6.5 Creedmoor and 140-grain ELD-M bullets to observe suppressor effects on long-range ballistics. Quinlian was shooting and I was running the radar, taking quick looks at data. We saw noticeable variations in the

> drag, retained velocity and instability of the bullets beyond 600 yards. We discussed it a bit and felt that it must have been a suppressor effect, so we kept shooting. I noticed that, as he shot through a five-round

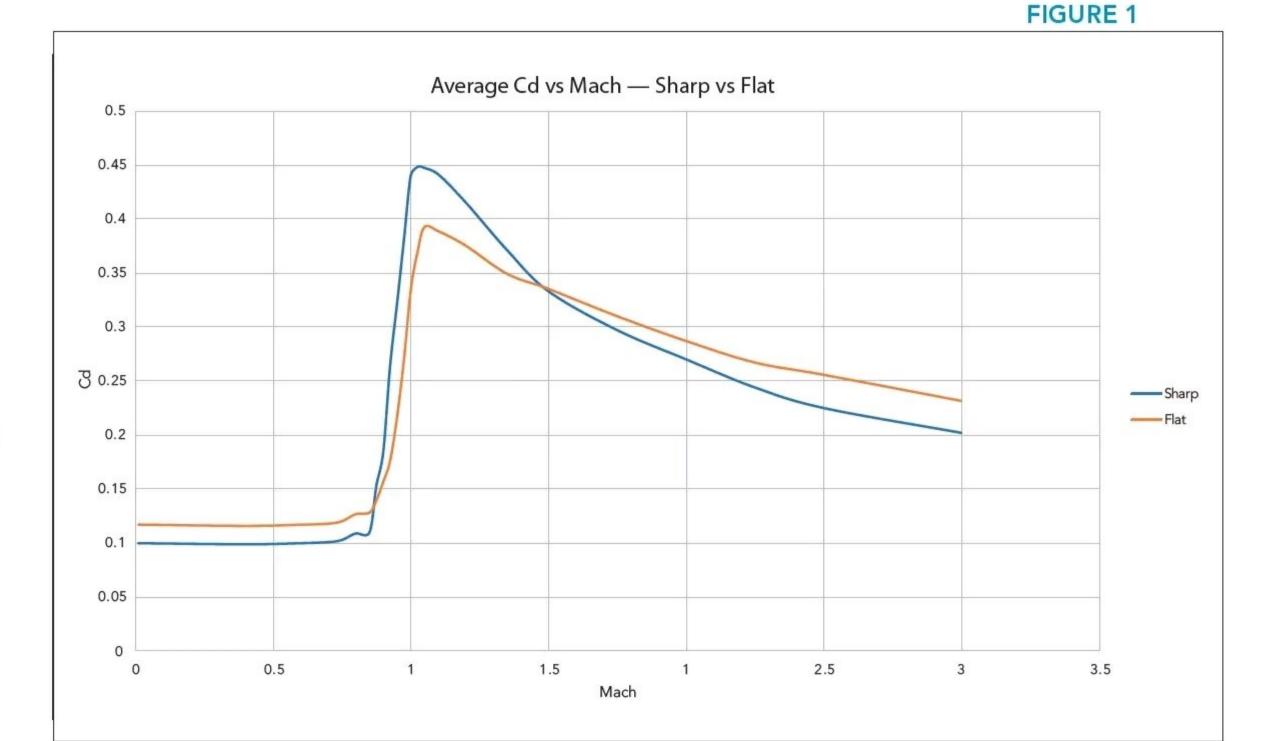
magazine, the drag variation appeared to decrease near the bottom of the mag. Quinlian is a methodical person. He began slowly (and carefully) chambering rounds from the magazine. After several firing strings, we deduced that the last couple of rounds had a bit of a flat-

tened tip due to recoil. We looked at each other and opined that it couldn't possibly have any effect. So, using our best "garage mechanic" engineering skills, we used a Leatherman's file and scuffed the nose of the next five bullets flat, and as close to the same size as we could get. Quinlian single-fed five more rounds; drag performance and retained velocity was nearly identical for the five bullets. We both exclaimed, "No way!"

Afterward, we performed an extensive literature search and talked to people considered a lot smarter than us. No one had seen or heard of this phenomenon, or had any explanation as to why this would be. Hence, we made up a number of aluminum tips with flat points in order to thoroughly explore the flat-point discovery further. The tips were as identical as could be machined on a CNC lathe. These were substituted into bullets being produced, and we tested them. We not only found a near-identical drag performance for as far as the radar could see the bullet, but also that there was lower

drag at transonic Mach numbers through and below Mach 1. Shortly after these tests, I retired from Hornady.

Quinlian continued this work through the remainder of 2017 and '18. In late 2018, Hornady applied for the flat-meplat patent and developed the A-Tip line of match bullets introduced in 2019. Astute readers took



note of the flat meplat when the A-Tip bullet was introduced in the 2020 Guns & Ammo Annual. Later, in 2019, Hornady quietly converted all lines using its Heat Shield tip to a flat meplat. As of the publication of this article, the A-Tip, CX, ELD-M, ELD-VT and ELD-X lines all use a flat-tip meplat.

The effects of the flat tips were undeniable from the radar data. Many of us thought, What is going on here?

UNDERSTANDING THE DATA

From the radar information, we could see that the overall drag, drag variation and stability of the bullets were noticeably better at transonic and slower Mach numbers with a flat meplat. Figure 1 shows the drag coefficient for individual tests of identical bullets. The only difference is one has a flat meplat, and the other a round meplat. The difference in the performance of the two was clear. The round meplat data showed instability and three times the

drag variation as the flat point. We needed to determine the aerodynamic phenomenon that was occurring.

The secret to figuring this out was Schlieren photography. Schlieren Photography (SP) is a high-speed video photography technique that high-lights differences in air density in the airflow around an object in

flight. In essence, it allowed us to visually see the shock waves and airflow on and around a projectile. Hornady conducted a large number of tests using SP high-speed photography. Figure 2 shows an SP frame capture from a projectile with a flat tip. Note the secondary shock wave right behind the shock wave at the front of the bullet. Also note the dark area surrounding the nose, at the tip of the bullet. This showed a strong density gradient of air around the nose. Both of these observations were indicators of a slightly detached shock from the nose of the bullet. Contrast that with Figure 3, which shows an SP frame capture from a sharply pointed monolithic projectile. There was no secondary shock seen behind the leading shock, and no density gradient at the nose. The shock was attached to the nose of the bullet. Rounded, sharp-pointed and hollow-point bullets all revealed the attached shock was inconsistent in its location on the nose. If this shock is inconsistent in its location on the nose, it will place variable

FIGURE 2

A dark area curving around of the flat tip of the bullet was observed due to the density of air caught between two separate shockwaves.

The air pocket prevents the tip of the bullet from interacting with the first shockwave.

FIGURE 3

With a pointed-tip bullet, there is only one shockwave at the front of the bullet, and it is in direct contact with the bullet. The result was slight variations that created significant inconsistencies with the trajectory.

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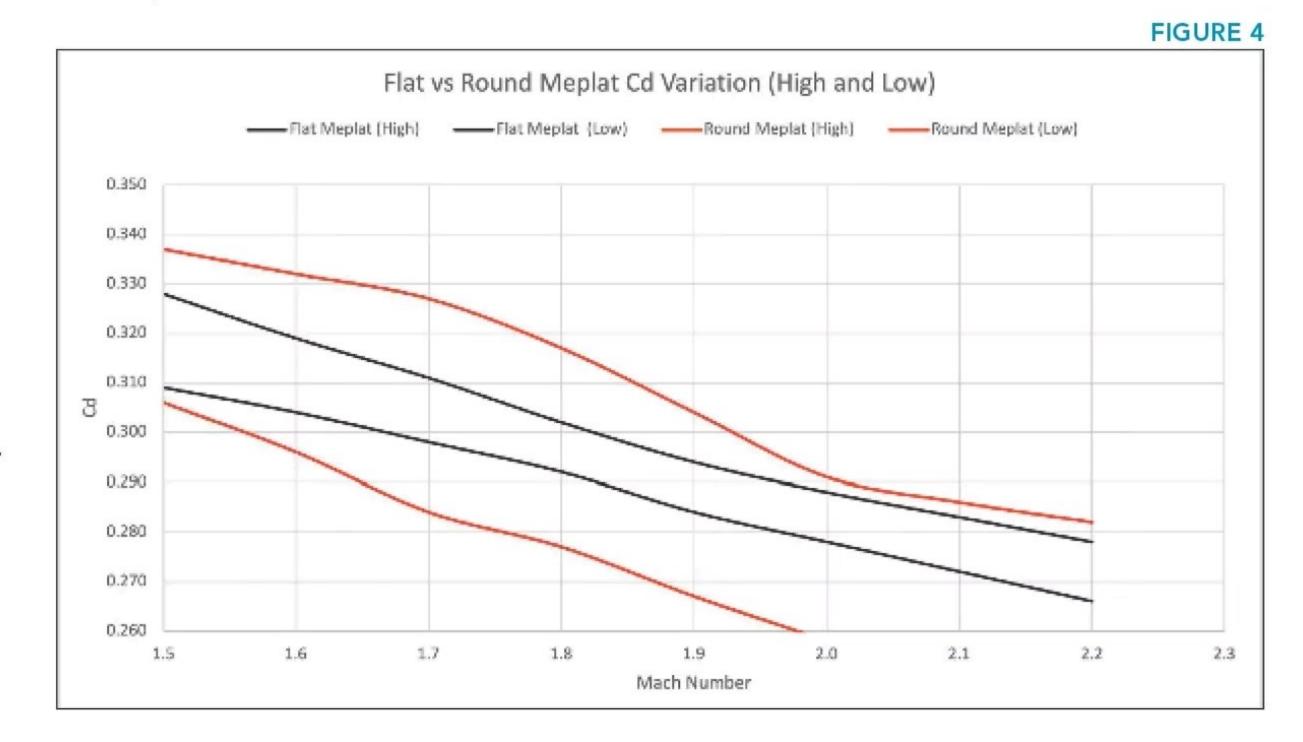


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on the projectile. In turn, this adversely affects the stability, and the pitch and yaw of the projectile become variable, causing variable drag. The strongest shock wave on the projectile can vary where it attaches to the nose. The attachment point depends on subtle



differences in the nose shape or small amounts of pitch and yaw, which varies a little from shot to shot depending on influences at the muzzle. Simplistically, this nose shock is "wondering where it should be" and it doesn't stay in a fixed place on the nose.

This becomes particularly important at long range. At distance, the dynamics of the spinning projectile result in the bullet starting to fly with a small but increasing amount of pitch and yaw relative to the line of flight as it begins to descend at long range. Thanks to the round meplat tip, as this happens the shock wave changes where it touches the nose as the attitude of the projectile changes. The best analogy I can give is this: Try to imagine standing on a small hemispherical dome with one foot in a 20-mph wind and being told not to move versus doing the same on a larger flat surface. The varying attachment point of the shock on the nose causes instability that, in turn, causes variability and increases in drag. This is why we saw the drag variation and increased drag at long ranges and transonic velocities. The U.S. Army reported on work done with sharply pointed bullets that showed instability, as well.

Referring to Figure 2, the small area of high-density air around the point — and the secondary shock behind the main shock wave — displays the presence of a bow shock. The shock wave has a small separation between the nose flat and the shock wave. It is not impinging on or attached to the projectile. The bow shock also has some width to it. It results in less sensitivity to small variations in the pitch and yaw of the projectile. Because of this, the shock wave will accommodate the pitch and yaw changing a little along its flight path and not try to relocate to a different position on the nose. The result is more consistent drag on the projectile and a more stable bullet as it slows down and begins to have a small amount of pitch and yaw.

The increase in stability from the flat tip results in a more stable bullet and much lower drag from Mach 1.5 — or approximately 1,650 fps — all the way through Mach 1 down to about Mach .9. The flat-tip meplat does not exhibit the instability and unpredictable behavior near Mach 1 that many bullets do. Figure 4 shows the overall Cd versus Mach number for identical bullets other than a

flat versus a sharply pointed meplat. Incidentally, the roundtip meplat performed nearly identical to the sharp-pointed bullet. It clearly showed a substantial improvement in the drag of the flat-point bullet at transonic Mach numbers. The sharp-pointed bullet demonstrated

increasing instability below Mach 2.4, and a sharp increase in instability and drag coefficient below Mach 1.7. For the flat meplat, all of these factors work together to improve long-range accuracy. The only drawback of the small flat-point meplat is that there is a small increase in drag at high supersonic Mach numbers. However, this is more than compensated for by the reductions in drag in the transonic velocity region where the projectile spends about two-thirds of its flight time to a retained velocity of Mach .9.

Due to the continuously changing shape of a radiused nose relative to the axis of the bullet, and the attached shock as the attitude of the bullet changes, the location of the attached shock on the nose will change. This causes inconsistency of aerodynamics, drag, retained velocity, which hurts accuracy. The small, flat-point tip is fixed over a significant diameter relative to the axis of the bullet. There has to be significant changes in the attitude of the bullet for the shock wave to change its location. This is a more stable and consistent aerodynamic situation.

BETTER INFORMED

In my view, this discovery was a significant breakthrough in the understanding of the aerodynamics and design of small-caliber projectiles for extreme-range shooting. It is hard to believe that this small little detail, i.e., a flat point versus a rounded point on the meplat, measured in tens of a thousandth of an inch, could make a quantifiable and significant impact on the performance of the bullet — but it does! It also seems logical that a sharply pointed bullet will have less drag, which it does for a little while. Unfortunately, the benefit is forfeited due to instability and higher drag caused by the sharp point at long range. It's hard to argue with the measurable effects of the improvement of the flight performance from radar data for the flat meplat. Schlieren photography confirmed the differences in airflow and the resulting physical effects on the projectile.

The flat-point tip produces a much more forgiving and consistent aerodynamic flow and shock wave structure at the nose of the bullet than a radiused or sharp-pointed nose. The result is a bullet technology possessing more consistent and higher retained velocity, improved projectile stability and, ultimately, improved accuracy.

PRO PRECISION BROSERIES





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QUIET TIME

Rugged Suppressors Obsidian9



THE CONVERTIBLE

SUPPRESSORS don't have to be expensive to be well-featured or modular. Expense occurs when a company tries to combine those aspects with lightweight and exotic materials. Offering tremendous value, Rugged Suppressors' Obsidian9 is worth admiration. Introduced in 2019, it's a pistol suppressor that also dabbles in centerfire rifle, excels at rimfire, and often sells for a little more than \$600 despite the \$822 manufacturer's suggested retail price (MSRP).

The key to the Obsidian9 is the rational design and material selection. Every consideration was made in favor of performance and value; it shows. The suppressor's tube is made from hard-coat anodized aluminum, and the removable baffles are made from 17-4 stainless steel. These materials are not considered exotic, yet they offer 95 percent of the perfor-

mance seen in suppressors made of Inconel, titanium, cobalt alloys, and others. For an ever-so-slight increase in weight, the price is almost half of the exotics of this type.

Most important is the performance that the Obsidian9 demonstrated during Guns & Ammo's testing. Our ears suggested the Obsidian9 performs like every other 9mm pistol suppressor having similar external dimensions. Such a statement might get the decibel-chasers up in arms, but

suppressed pistols are only so quiet. The Obsidian9 gets them as quiet as anything else. What impressed us the most about this suppressor is its versatility.

Rimfire suppressors
typically sell for a couple of
hundred bucks less than the
Obsidian9, but those are
only good for rimfire use.
The Obsidian9 can thread
on any rimfire host that has
the barrel threaded ½x28.
The suppressor comes with



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RBG308A1500 RB65C1500

.308 WIN &
.338 LAPUA
6.5 CREEDMOOR &

.300 WIN MAG

BARRELS

.308 WIN & .338 LAPUA, OR
6.5 CREEDMOOR & .300 WIN MAG
26-INCH STAINLESS STEEL,
NITRIDE BLACKENED

WEIGHT LENGTH

13.2 LBS 46.25"

FOCK RIVER ARMS

PERFORMANCE COUNTS ROCKRIVERARMS.COM





Rugged Suppressors engraves the serial number into the thickest part of the mounting system, allowing for easier replacement of parts in the event of any significant damage to the can.

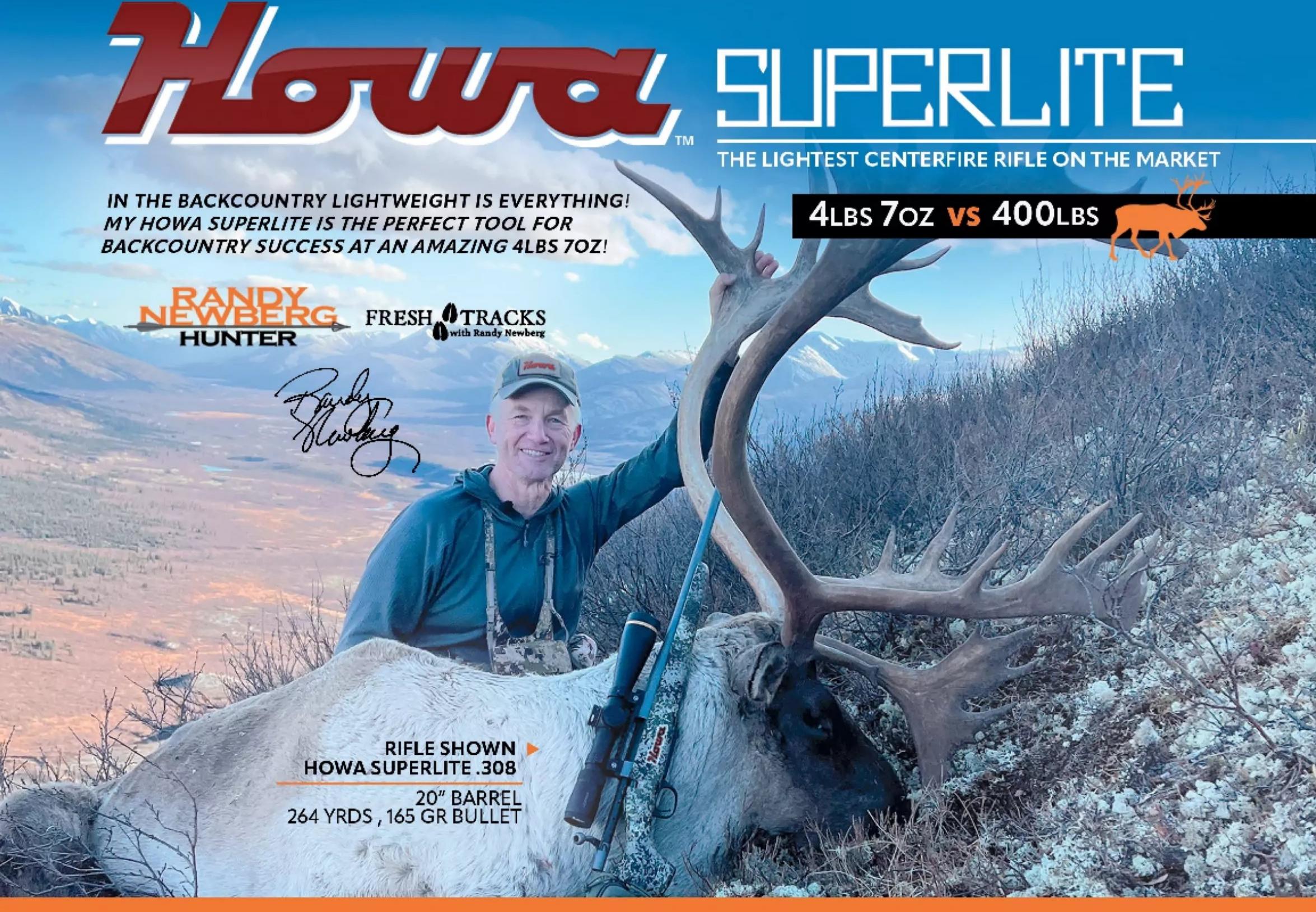




Baffles are made from 17-4 stainless steel and are keyed with indexing tabs to let users align them properly. The baffles also interlock in a way that creates a gas seal, significantly reducing carbon buildup.

a 9mm internal piston for use on most semiautomatic 9mm pistols, however, the thread pitch for 9mm pistols and .22 rimfire rifles and pistols is usually the same. It is best to order and use the fixed-barrel spacer with the Obsidian9 when shooting it on a rimfire host, just to keep the can from bouncing around on the muzzle. Even with a rimfire pistol, using the piston spring and not the fixed-barrel spacer can result in a baffle strike.

Once the spacer is in place, the Obsidian9 is an excel-



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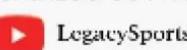
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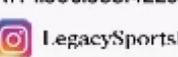
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Maintainence can be performed rather easily by removing all baffles and the piston from the tube. While carbon buildup is gradual within the Obsidian9, removing it is straightforward.

lent rimfire suppressor. It has massive internal volume, is made from high-quality materials and disassembles for maintenance. That last part is important. Rimfire suppressors accumulate wax, powder and lead residue fairly quickly, and need to be cleaned regularly. The Obsidian9 simplifies maintenance.

The tube's internals are comprised of 17-4 stainless steel baffles that have three locking tabs to ensure that incorrect assembly is impossible. I wouldn't put a suppressor on



ADAPT Modular Technology allows shooters to enjoy the benefits of a multi-configurable suppressor. Tools are not required. Simply remove the ADAPT module and move the end cap to the body.

any rimfire firearm unless it had removable baffles. Making baffles out of 17-4 is why they're so durable, and it's what gives the Obsidian9 its "belt-fed" rating. The belt-fed rating applies to all handgun calibers, meaning that there's no way to shoot handgun cartridges through the Obsidian9 fast enough to damage it. Even when compared to more expensive exotic materials, 17-4 usually beats them on durability at the expense of being slightly heavier. The baffles slide out of the tube for maintenance and can be



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StoegerIndustries.com





RUGGED SUPPRESSORS OBSIDIAN9

9mm; rimfire up to CALIBER .350 Legend DIAMETER 1.37 in. **OVERALL** 7.8 in. (long); LENGTH 4.9 in. (short) 12.7 oz. (long); WEIGHT 8.7 oz. (short) **FINISH Anodized** MSRP \$822 Rugged Suppressors, MANUFACTURER 864-810-0513, ruggedsuppressors.com moved around in any order if the shooter feels that baffle erosion might become a future problem. The locking tabs guarantee proper assembly, but the baffles have to be clean to get them to fit back together.

In addition to carrying a belt-fed rating for pistol cartridges, the Obsidian9 is also capable of handling a few rifle cartridges under certain conditions. The .300 Blackout round loaded to subsonic velocity is fine when fired from an 8-inch barrel or longer, and





the 9x39mm Soviet — a necked-up 7.62x39mm cartridge — is also approved when fired at subsonic velocity from an 8-inch barrel or longer. All .350 Legend loads are good-to-go as long as they're fired from a 16-inch barrel or longer. Rifle ratings on a pistol suppressor are uncommon (even with subsonic cartridges), so green-lighting the .350 Legend in all its forms shows, again, how durable Rugged Suppressors made the Obsidian 9.

MULTI-PURPOSE

WWW.RITONOPTICS.COM

The overall length is user-configurable with the Obsid-

ian9. The full length is the quietest and measures 7.8 inches. Removing the module shortens it to 4.9 inches. Being able to tailor the length is useful for a suppressor of this type. The long version is best for use at the range or on pistol-caliber carbines (PCC). Maximizing the sound suppression makes shooting fun for the shooter and everyone around, but the extra length makes the firearm a little less handy. The short version is what would be on my home-defense pistol or carbine. Firing a gun inside a house is loud enough to be distracting, even when facing a life-threatening situation. Suppressor use is becoming

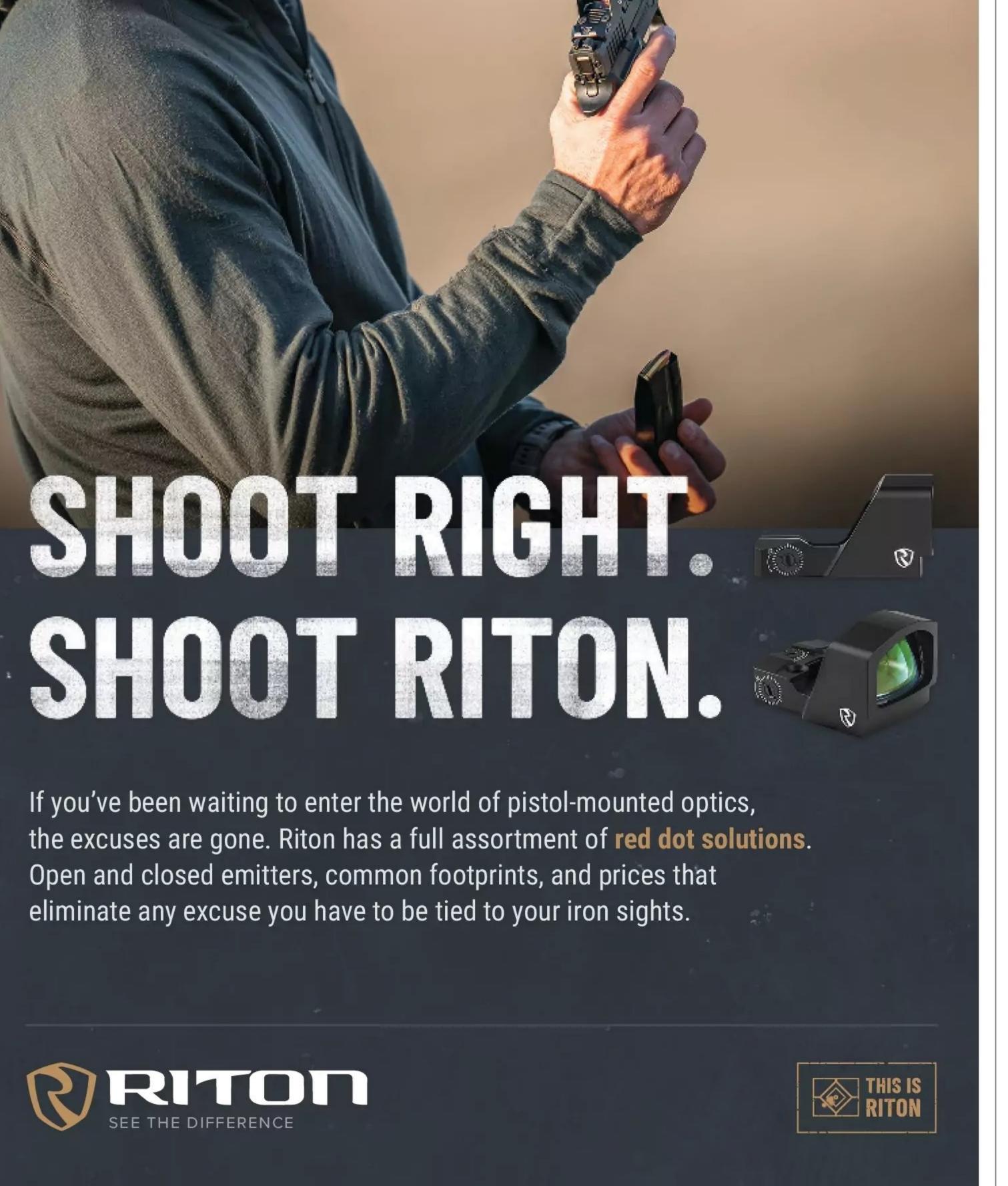
more mainstream and easier than ever before, so I'd encourage using one for home defense.

Mounting the Obsidian9 has several options that make it a great choice for just about any appropriate firearm. Pistols using the classic Browning-type recoil operating system have barrels that initially move rearward while locked to the slide. After traveling a short distance, the barrel drops away from the slide and stops while the slide continues moving rearward to eject the empty case and load a fresh cartridge. A spring-loaded piston is essential to allow the suppressor to momentarily float while the barrel is moving. This makes sure the pistol's timing remains unchanged and supports reliable operation. Rimfire firearms and firearms with fixed barrels should either use a direct-thread plate or the fixed spacer, both of which are options with the Obsidian9. Another option is the classic three-lug attachment method. This is the fastest way to attach the suppressor to a firearm because it only requires the shooter to slide the suppressor over the lug mount, compress the spring, and twist about 60 degrees before releasing the suppressor. The three-lug system only works with fixed-barrel firearms, though, and not on a rimfire.

PARTING SHOT

The Obsidian9 is a great choice for a 9mm pistol suppressor because it isn't limited to just pistol use. Anyone with a pistol is likely to have a few rimfires, and might even dabble in subsonic shooting or the .350 Legend. This is the one suppressor I've found that can fill all those roles at a great price.

— T. Beckstrand





Always make it smooth. A champion knows how to win the day, and look good doing it.

COMPACT



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MARK IV

Manufactured in Prescott, Arizona, the Mark IV is the current evolution of the Standard pistol. The Standard established Ruger as a gunmaker in 1949. It featured a blowback design, cylindrical receiver, and a grip that was formed from two welded halves. Though it looked like a World War II veteran's P.08 Luger bring-back pistol, it was mechanically inspired by the Japanese Nambu.

Ruger's partner, Alexander Sturm, passed away in 1951. To honor his friend, Ruger changed the color of the heraldic eagle logo from red to black. The Standard model evolved into the Mark I in 1950, Mark II series in

1982, Mark III in 2004, Mark III 22/45 in 2012, and the Mark IV series in 2016. The Mark IV is a striking blend of the previous eras' achievements.

The 75th Anniversary logo is laser engraved on the receiver and back of the bolt, and it is packaged in a throwback-styled, 75th Anniversary printed box with a decal. Being a Mark IV means that it features the simple, one-button takedown for quick and easy disassembly and access for chamber-to-muzzle cleaning of the barrel. A departure from the manufacturing methods used to make the Standard pistol affordable in 1949, the Mark

MARK IV					
TYPE	Blowback operated, semiautomatic				
CARTRIDGE	.22 LR				
CAPACITY	10+1 rds				

RUGER 75TH ANNIVERSARY

BARREL 6.88 in., tapered target, steel alloy, 1:16-in. twist

LENGTH 11 in.
HEIGHT 5.58 in.

WEIGHT 2 lbs., .8 oz.

GRIP Wood laminate, checkered

FINISH Blued (steel)

Partridge, fixed (front); notch, adjustable (rear)

MSRP \$599

MANUFACTURER Sturm, Ruger & Co., 336-949-5200, ruger.com

IV sports a one-piece, precision CNC-machined grip frame, cold hammer-forged tapered target barrel and precise rifling for target-quality accuracy. The Mark IV has an easy-

to-use bolt stock, and a comfortable grip with checkered, laminate-wood panels. Target sights are classic and adjustable, but the receiver is drilled and tapped to accept an optic mount, if desired. The manual safety is ambidextrous and can be converted to left-side only. The Mark IV maintains the magazine disconnect feature that disables the pistol from being fired with the magazine removed, and magazines drop free from the conveniently located push-button release. Two 10-round magazines are included. In retrospect, each of these features are improvements borrowed from each Mark's evolution.

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10/22 SPORTER

Ruger's 10/22 rifles are manufactured in Newport, New Hampshire. More

than 7 million have been sold — as of 2024 — since it's introduction in 1964.

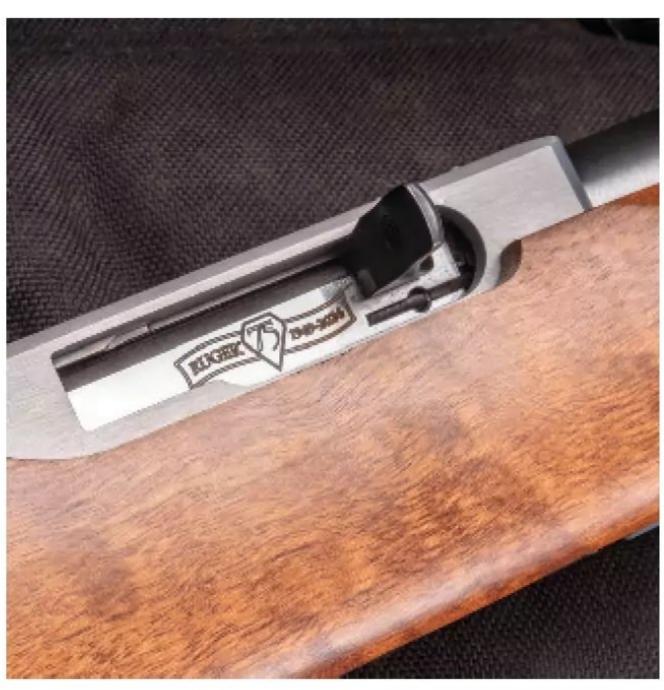
The 10/22 wasn't Ruger's first autoloading rifle. That was the .44 Magnum Carbine released in 1960. However, it would become a more popular model. Resembling an M1 helped its reception among World War II and Korean War veterans.

The receiver was made from investment-cast aluminum, a manufacturing process Ruger pioneered for this industry. The genius may have been the 10-round rotary magazine. Fast to load, it simply worked. The 10/22 hasn't changed much, though there are a plethora of factory configurations created and aftermarket support.

Two models of 10/22 75th Anniversary guns are avail-



336-949-5200, ruger.com



able featuring the 75th Anniversary logo laser engraved on the bolt, with printed Anniversary packaging.

Offering a walnut-stained hardwood stock and a natural-finish hardwood stock option, these are classic versions of the ubiquitous rimfire autoloader. The action is the same as current production, accepting Ruger's 10-round rotary magazine. The cold-hammer-forged barrel is secured to the receiver by two screws and a V-block design. Both have a gold bead front sight and adjustable rear, while the $18\frac{1}{2}$ -inch barrel is made of stainless steel. The receiver and stock are classicly styled.

Like many kids, my first rifle was a 10/22. I was a kid when John "Chief AJ" Huffer broke a world record in 1987 by shooting 40,060 2½-inch wooden blocks out of the air using a 10/22. I still have the gun that Dad gave me, and I'll never part with it.



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LCP MAX

The LCP Max is manufactured in Mayodan, North Carolina. It is an evolution of the Lightweight Compact Pistol (LCP), a thin, 10-ounce handgun that transformed everyday carry (EDC) when it was introduced in 2008. The LCP was developed in response to the positive changes made to concealed carry laws throughout the U.S. during the early 2000s. The concealed-carry lifestyle created a demand for compact carry revolvers and pistols, spurring Ruger to also introduce the LCR revolver in 2009. The LCP, however, transformed from

a six-round .380 pocket auto to the 9mm LC9 in 2011, to the LCP II in 2016, and became the ultimate EDC pocket pistol as the LCP Max in 2021. The Ruger 75th Anniversary LCP Max is a nod to those who depend on the brand for personal defense.

The 75th Anniversary LCP Max features the laser-

RUGER 75TH ANNIVERSARY LCP MAX				
TYPE	Recoil operated,			

TYPE	Recoil operated, semiautomatic				
CARTRIDGE	.380 ACP				
CAPACITY	10+1 or 12+1 rds.				
BARREL	2.8 in., steel alloy				
LENGTH	5.17 in.				
HEIGHT	4.12 in.				
WIDTH	.81 in.				
WEIGHT	10.6 oz.				
SIGHTS	Tritium, white ring (front); notch, drift adj. (rear)				
MSRP	\$479				
MANUFACTURER	Sturm, Ruger & Co., 336-949-5200, ruger.com				

engraved logo on top of the slide, and it is packaged in the throwback-style printed box with decal. The slide is finished in matte stainless steel with polished sides and tactile cocking serrations. The LCP Max carries 10 rounds in its magazine with a flush floorplate installed, but the pistol will accept Ruger's 12-round LCP magazine with finger extension, also. At the front of the slide is a tritiumfilled night sight with a white outline that's easy to see. The rear is a serrated U-notch for quick, instinctive alignment. Both the front and rear sights are secured in dovetails. The rear sight

was also designed with a front face that can be used for one-handed cocking. The magazine release is reversible, making the LCP Max a friendly option for all shooters. A soft pocket holster and magazine loader are included. Ammunition is all that's needed to start benefiting from its defensive reliability.

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44 If you're planning to shoot steel at distance - or even 200 yards and in - the Flash Bang is a wonderful kit for your range bag. 77

- Richard Nance
Guns & Ammo December 2023









MORE TO COME

In addition to these 75th-Anniversary announcements, Ruger will continue releasing models through the remainder of 2024. The list includes the limited-production SR1911 (\$1,799) and American Rifle Generation II.

The SR1911 was introduced in 2011 to commemo-

rate the 100th anniversary of the Government Model 1911. The 5-inch-barreled model evolved to include Commander and Officer-types, as well as a Target version designed by the Ruger Custom Shop in 2017. For 2024, only 750 Anniversary SR1911s will be produced. All will be Government Model .45s, distinguished by relief engraving on the stainless-steel



slide, and wood stocks and complete with a special "R75" serial-number prefix.

Also introduced for 2024, the Ruger American Rifle Gen II enhances the feature set of its predecessor with splatterpattern stocks, Cerakote finishes, and spiral-fluted barrels. The most noteworthy improvement, in my opinion, is the addition of a three-position safety that allows the rifle to be unloaded and loaded with the safety engaged. The American Rifle set a new standard of quality and performance when it was introduced in 2012; the Gen II models add to that reputation. The Ruger 75th Anniversary American Rifle Generation II was developed to celebrate both Ruger and Hornady — both founded in 1949. The brands collaborated to create a limited-edition rifle based on Ruger's latest bolt-action rifle that evolved from the Ruger American Rifle. Each rifle wears a serial number with the range

of "75VIP-001" to "75VIP-075". The action is set in a custom red- and black-splatter stock, and has a spiral-fluted barrel with muzzlebrake. The barreled action is finished in FX Cosmic Cerakote. It is only chambered in Hornady's .204 Ruger cartridge, and the product was limited to 75

> examples. Unfortunately, these sold out immediately after being announced.

Before December 31, 2024, I'd expect the anniversary celebration continues with additional releases. I would like to see 75th Anniversary models for the Blackhawk, Redhawk, Single-Six, GP100 and SFAR. Of course, what anniversary would be complete without a limitededition Ruger No.

1 in a Ruger cartridge such as .204, .300, .338, 375 or .416?

Every Ruger has contributed to American culture. Ruger is now one of the most important brands in firearm history. It would be impossible to devote coverage to every noteworthy Ruger firearm, but the table below includes a list of notable platforms and year of introduction.

Bill Ruger died on July 6, 2002. What many of us forget is that his namesake company has carried on for more than 20 years since his passing. It remains in good hands. His legacy and principles of design, engineering, and business have been safely stewarded by chief executives including William B. Ruger, Jr., Michael O. Fifer, Christopher J. Killoy, and a board of directors. What interests me most will be what comes from Ruger in the next 25 years. Onward and upward!

RUGER INTRODUCTIONS									
1949	Standard	1972	Old Army	1987	Super Redhawk	2009	LCR	2016	Silent-SR ISB
1950	Mark I Target	1972	Security-Six	1989	SP101	2011	SR1911	2017	PC Carbine
1953	Single-Six	1973	Mini-14	1993	Vaquero	2012	American Rifle	2019	Ruger-5.7
1955	Blackhawk	1977	Red Label	2004	Gold Label	2013	American Rimfire	2019	Wrangler
1957	Bearcat	1979	Redhawk	2004	Mark III	2013	SR-762	2020	Custom Shop Models
1959	Super Blackhawk	1982	Mark II	2004	Mark III 22/45	2014	AR-556	2020	Marlin Acquisition
1961	44 Carbine	1983	77/22	2007	Charger	2014	LC Charger	2021	Max-9
1963	Hawkeye	1985	GP100	2007	SR9	2015	American Pistol	2022	LC Carbine
1967	No. 1	1985	P85 (P-Series)	2008	LCP	2015	Precision Rifle (RPR)	2023	SFAR
1968	M77	1987	Mini Thirty	2009	SR-556	2016	Mark IV	2024	American Rifle Gen II

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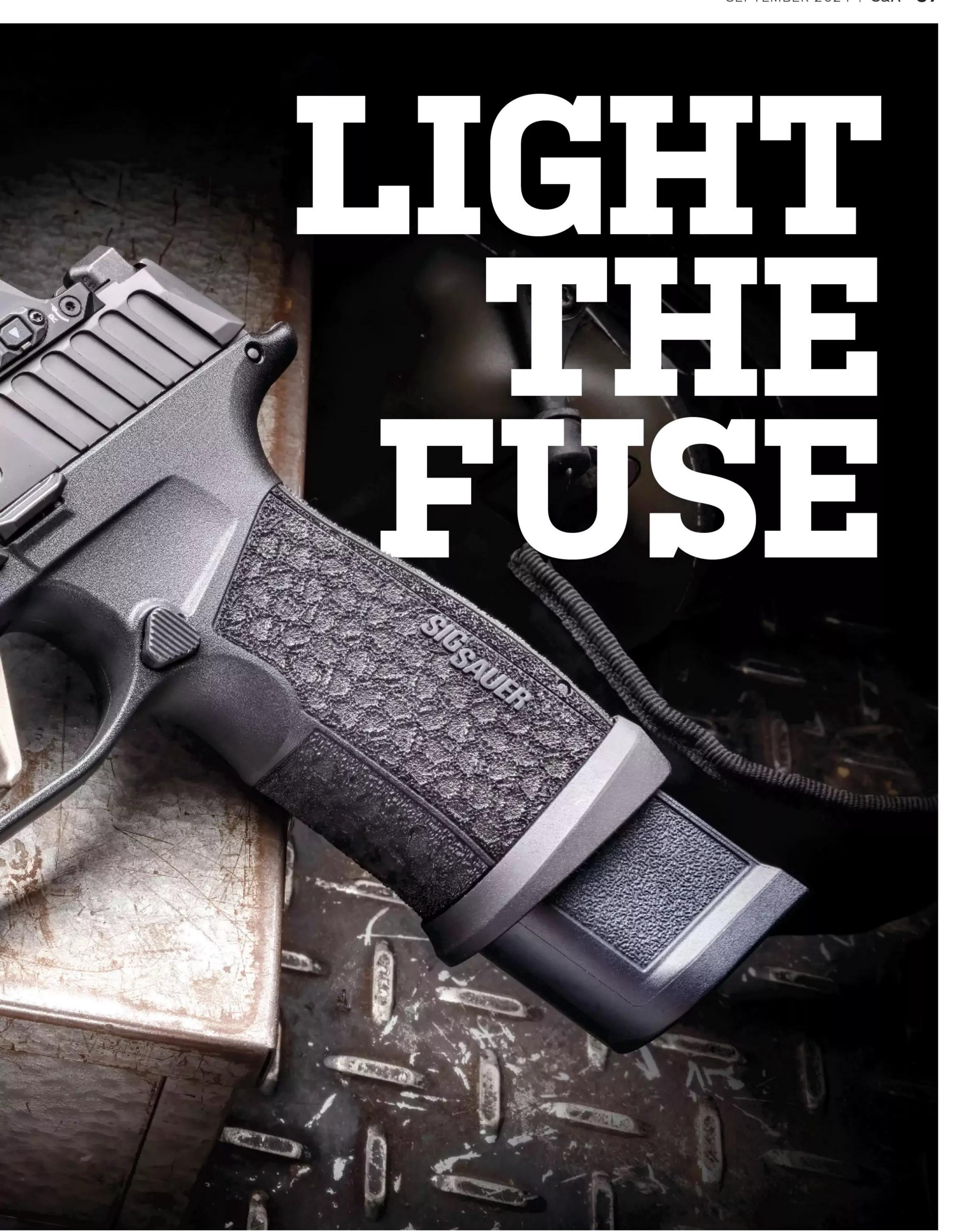
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WHY A FULL-SIZE P365?

Some will think that offering a full-size version of a micro is unnecessary. So, I need to address the current phenomenon we've seen with many micro or subcompacts evolving into full-size models. Expanding dimensions of pistols such as the P365 can make them harder to conceal. For many who would agree,

> what that tells me is you may not be shooting your pistols as often as you should be. The original P365 was a great gun and an amazing choice for self-defense, but a larger version is easier for most to shoot. The dimensions of the original P365 were an effort to fit as many rounds as possible into a package that measured 5.8 inches in length, by 4.3 inches in height and 1 inch wide. Initially, the stack-and-a-half arrangement in the magazine accepted 10 rounds for the flush-fit and 12 rounds for the extended. And the first model lacked an optic cut to the slide. It was as small as possible while still being large enough to hold on to and shoot decently. The number one criterion for whether a gun is comfortable and controllable enough to shoot fast and accurately beyond 10 yards is grip length. Can you get all your fingers around it? While the first P365 concealed better with the flush magazine inserted, we now know that

most P365 users only wanted to shoot it with the extended magazine inserted.

ENTER THE XMACRO

three backstraps, lockable

SIG Sauer, 603-610-3000,

case

sigsauer.com

MANUFACTURER

SIG Sauer designed the extended frame of the P365-XMACRO (Guns & Ammo, November 2022) to be just

longer than the P365 with the fingerhook magazine inserted. Not only could just about everyone comfortably grip the gun with their entire hand, but the capacity also increased from 10-plus-one rounds to 17-plus-one. Many of those who I know that carry the P365, who actually shoot their carry guns, predominantly prefer the XMACRO-frame models. They are more than balanced out by the enhanced



The stainless slide wears a Nitron finish, locking up with the 4.3inch carbon-steel barrel. The length extends the sight radius.

one sporting the aluminum AXG grip — it costs just a few bucks more than a standard P365. That \$729 price includes two spare and extended 21-round magazines. It is optic ready, and versions will be available from SIG Sauer with an electro-optic mounted. Think of the FUSE as the ultimate iteration of the P365. What was once labeled a "micro-

compact" is now full size.

capacity, features, and price quickly

shot it to the forefront of most gun

owners' minds. Since then, SIG Sauer

has continued to develop and enhance

the P365, including the new-for-2024 P365-FUSE.

grip (and 17-round standard capacity) of the P365

a few unique features. Since this FUSE is a standard

model with a polymer lower grip module — not a

The P365-FUSE combines the extended polymer

XMACRO with a longer 4.3-inch barrel, plus there are

FRST-ROUND KNOCKOUTS



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The green fiber-optic front sight and serrated rear notch are usable given the low cut engineered for electronic optics.



Though the texture on the grip module, magazine, and replacable backstraps are similar, the sides are distinctively cratered.

handling and capacity.
The frame isn't that much longer, and the principal applies to the P365-FUSE.
Comparing the FUSE to the first generation P365 — with its flush-fit 17-round magazine inserted — it is only .6 inches longer than the original P365 with the 10-round magazine.

WHY NOT A P320?

Between the increased length of the grip and barrel-and-slide assembly,

the P365-FUSE is a full-size pistol. Dimensionally, it isn't much smaller in height and length than the P320. Why would you want the P365-FUSE over a P320? The answer might not be obvious, but with the gun in hand it's easy to understand.

Compared to any standard, full-size 9mm, the P365-FUSE feels exotic, the slender supermodel of guns if you will. It is significantly thinner than a P320. Though the distance between the front of the trigger and the backstrap

is similar, it feels different because the grip is significantly narrower. People with small hands will reach the trigger without needing to adjust their grip while shooting.

THE TECHNICAL STUFF

The P365-FUSE measures 7.2 inches long, 5.3 inches tall with the flush magazine inserted, and 1.1 inches wide at the slide stop. The slide is just .94 inches wide, and the removable extended steel magazine well increases width to 1.42 inches at the base of the frame. Unloaded, its weight with an empty magazine was scaled at 23.1 ounces

The original P365 had a 3.1-inch barrel. The P365-FUSE has a 4.3-inch barrel. It is made of carbon steel and has a black diamond-like carbon coating (DLC) for a finish. The slide is made of stainless steel, which is given a Nitron finish. It is probably safe to presume that flat-dark-earth (FDE) versions of this pistol will follow, as it has happened with other P365 models. The entirety of this pistol, though, is matte black, except for the flat, matte nickel trigger.

The proportions of the P365-FUSE look perfect, at least to my eyes. The slide is the right length for the grip, and if you're already carrying an XMACRO inside the waistband (IWB), the extra length of the FUSE will remain hidden inside your pants. However, you'll notice a difference in handling when it's time to shoot.

The fiber-optic front sight with black serrated rear was a solid choice. The front sight appears to be a Dawson Precision model, dovetailed into place. It has a green fiber-optic insert, and SIG Sauer provides additional lengths of green and red fiber-optic rods with the pistol should you want to

replace or restore the front.

The front sight has a narrow .09-inch width, while the rear notch is .13-inch. This means you get a lot of daylight around that front sight as you're aligning them, which is just the way I like it. The setup reminds me of the sights I ran on my old competition guns.

The slide is optic-ready, too. The optic cut was made direct-mount for any optic with an RMSc footprint. That includes SIG Sauer Romeo-X Compact

optics. Supplied with this pistol for Guns & Ammo's evaluation was the enclosed-emitter ROMEO-X Compact red dot. The slide is cut low enough that you'll be able to use your iron sights through the optic window.

The slide has numerous and aggressive cocking serrations at the front and back. There's also a decorative cut lengthwise near the muzzle. Overall, I think it looks great without being too busy. The only mark on the slide is a small "P365" on the left side.



The P365 trigger remains excellent, featuring a matte nickel finish and a flat face with a hook that breaks at 90 degrees.

Tisas

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In the promotional materials for this gun, you'll see that it uses the LXG Grip Module. The P365 is like the P320 in that the grip is not the "frame"; it is not the serialized part. The P365, like the P320, features a removable stainlesssteel chassis within the grip module, and that is the serialized part. The chassis in the P365 isn't quite as quickly or easily removed as the one in the P320, though, but I've done it on my personally owned 1st-gen P365 simply because I didn't like the near-vertical grip angle on the original gun. (I replaced that grip module with a Wilson Combat version that has a much-improved grip angle.) In fact, both the original P320 and P365 had vertical grips, so it wasn't long before SIG Sauer started offering its X-Grip Modules for the P320 that provided a more angled grip. Almost every P320 and P365 — apart from the militarycontract M17/M18 — sports an X-Grip Module, and that's what we get with the P365-FUSE. The LXG is the company's slightly more angled polymer X-Grip module with a modest beavertail and laser-engraved texturing.

The FUSE grip module has the standard fine texturing, but crater-like patches have been added, increasing the aggressive surface of the grip's sides, frontstrap and backstrap. I liked it for shooting because the gun didn't move in my hand. I carry a gun with a grip this aggressive, and I can tell you — from personal experience — that you'll want a t-shirt or something similar between your skin and this grip for comfort.

The pistol is supplied with three interchangeable back-straps. The Medium is installed at the factory. The Small-and Large-size backstraps were found in the lockable hard case; those don't have the laser-etched texture. The size is marked at the bottom-rear.

The original, smaller P365 had a frame rail. For a time, it was proprietary. SIG Sauer was often the only source for lights and lasers. The P365-FUSE has a three-slot MIL-STD-M1913 Picatinny rail, meaning it will accept pretty much any light on the market meant for a pistol this size. SIG Sauer provided its Foxtrot2R (\$150, sigsauer.com) with the pistol for this evaluation, but I confirmed the rail's utility with a Streamlight TLR-7 (\$225.75,



The stainless-steel slide features aesthetically pleasing serrations and lighting cuts. Underneath is a Picatinny rail.

streamlight.com). It fit the FUSE perfectly.

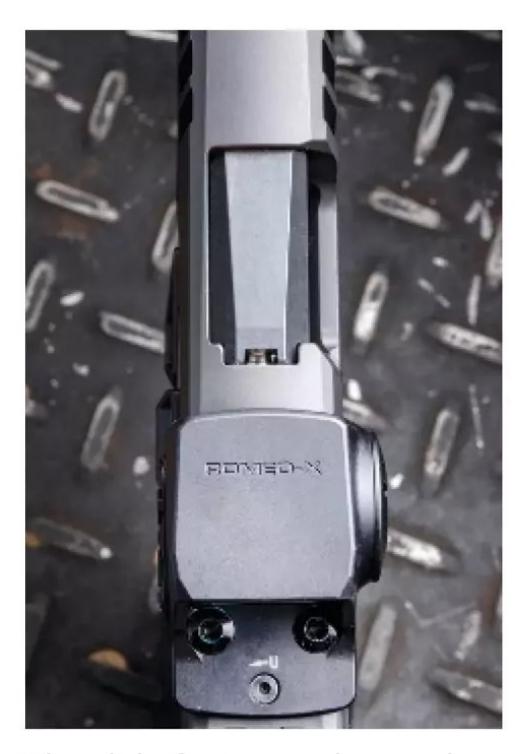
At the bottom of the grip, you'll find a removable magazine well. I was surprised to find that it wasn't made of polymer (or even aluminum). It's made of steel. The opening mates well with the beveled opening in the grip module. The magazine well does add about a quarter-inch



In addition to the near-flush-fit 17-round magazine, the P365-FUSE includes a pair of 21-round mags. Why reload so often?



Controls are pronounced on the P365-FUSE, including the takedown and slide-lock levers. The magazine release is reversible.



The slide features a low and flared ejection port. The barrel is notched, providing access to inspect for a loaded chamber.

in length, but it doesn't protrude farther than the base of the 17-round magazine. It adds less than .2 inches of width to either side of the grip.

While there are neutered 10-round versions for those of you living in states that hate the Second Amendment, the standard version of the P365-FUSE ships with one flush 17- and two extended 21-round magazines. I don't see anyone carrying this gun with an extended mag inserted, but for a spare magazine,

or seemingly non-stop fun at the range, it's hard to beat running those big sticks.

The triggerpull on G&A's sample FUSE was better than average among striker-fired guns, but that describes the P365 trigger as a rule. After a short takeup, there's a short, smooth, rolling break. The trigger halted at 90 degrees.









Total pull weight was 5½ pounds. Reset was short and positive.

A brief aside on the enclosed Romeo-X Compact optic (\$400, sigsauer. com) supplied with the test gun: SIG Sauer's line of Romeo-X optics grew out SIG Sauer's development

of the M17/M18 optic for the military contract pistols. They were introduced in 2023. The full-size Romeo-X requires a DeltaPoint Pro footprint, while the Compact model uses the RMSc footprint. It has aluminum and glass construction, a low deck, side-mounted battery, and 20,000 hours of battery life on a CR1632 at the medium brightness setting. It has a 6-MOA dot produced by an enclosed emitter.

AT THE RANGE

When it was time to test the P365-FUSE I brought my original P365 and oldest son to the range. I was curious how he'd like the two different grips. Harrison is 6 foot, 4 inches tall with size 14 feet and hands to match. I've got slender hands that fit into size medium gloves. Harrison could only get half of his pinky on the extended

PERFORMANCE

LOAD	VEL. (FPS)	ES	SD	BEST GROUP (IN.)	AVG. GROUP (IN.)
Black Hills 115-gr. FMJ	1,127	27	11	2.5	3.3
Federal PD HST 147-gr. JHP	958	26	13	2.6	3.1
Hornady Crit. Duty +P 135-gr. FLX	1,095	39	17	3	3.6
SIG Sauer Elite 115-gr. FMJ	1,112	36	15	3.3	4

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

fingerhook basepad of the original P365; it slipped off whenever he started shooting. He also noticed that it had a bit of snap to the felt recoil. Regarding the original P365, he said, "It's concealable, but it's not much fun to shoot." And that's the point, really, of the FUSE.

It's a complete P365 package maximized for shootability more than concealability. He had no complaints about the FUSE, and neither did I. We spent an afternoon hammering down steel and perforating paper, getting the slide of the FUSE too hot to touch. It shoots like a full-size gun because it is a full-size gun.

The P365-FUSE was a blast. It ran just as well as you would expect from a proven design. I fed it everything, from bargain-priced steel-cased Magtech FMJs to +P JHPs. It ate it all. The pistol has got great sights — irons and optic — and the texturing on the full-length grip kept our hands solidly in place. Even if you've got big hands, I doubt you'll find the grip too small for you. At this point, SIG Sauer appears to offer a version of the P365 to suit every need and taste. If you're a fan of full-size semiautos as I am, the P365-FUSE is for you.



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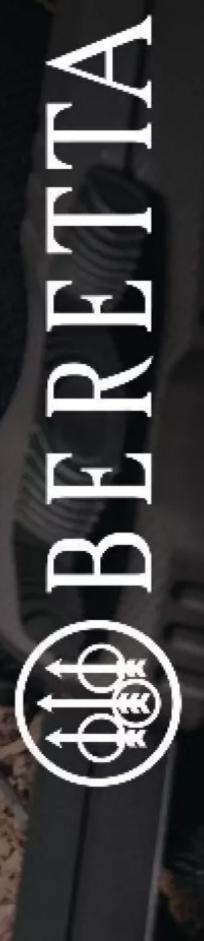
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CHANGE COMMAND

MEET DOUG HAMLIN, NRA EXECUTIVE VICE PRESIDENT AND CEO.

BY GUNS & AMMO EDITORIAL STAFF

ON MAY 20, 2024, at the conclusion of the 153rd NRA Annual Meetings & Exhibits in Dallas, Texas, the Board of Directors of the National Rifle Association elected former U.S. Congressman Bob Barr as President. Doug Hamlin was elected to serve as NRA Executive Vice President and CEO. Notably, Mr. Hamlin replaced Wayne LaPierre, who held the position since 1991. LaPierre resigned amid allegations of corruption on January 31, 2024. So, who is "Doug Hamlin?"

Hamlin is a graduate of the University of Michigan, a U.S. Marine Corps officer who served with the 1st and 3rd Marine Divisions from 1980 to '86. Hamlin was discovered by Petersen Publishing Company (PPC) Founder and Chairman Robert E. Petersen and Tom Siatos, vice president and executive publisher.

On October 1, 1986, Hamlin resigned from the Marines and began working for PPC. Hamlin became publisher of Guns & Ammo for the November 1991 issue. He continued with G&A until being promoted to executive vice president and group publisher of the Motor Trend Group in 1995. Hamlin resigned on January 1, 2000, to start AutoMedia Solutions, Inc. He worked as an independent automotive consultant in Detroit until joining the NRA Publications Division as its executive director in 2014. Due to his affection for Guns & Ammo, as a former publisher of G&A, the following interview was offered after his selection to lead the NRA.



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Editor's Note: The following interview was shortened and edited for clarity and space considerations. To read the transcript or view a video of the interview, visit gunsandammo.com.

G&A: What was the process for your selection?

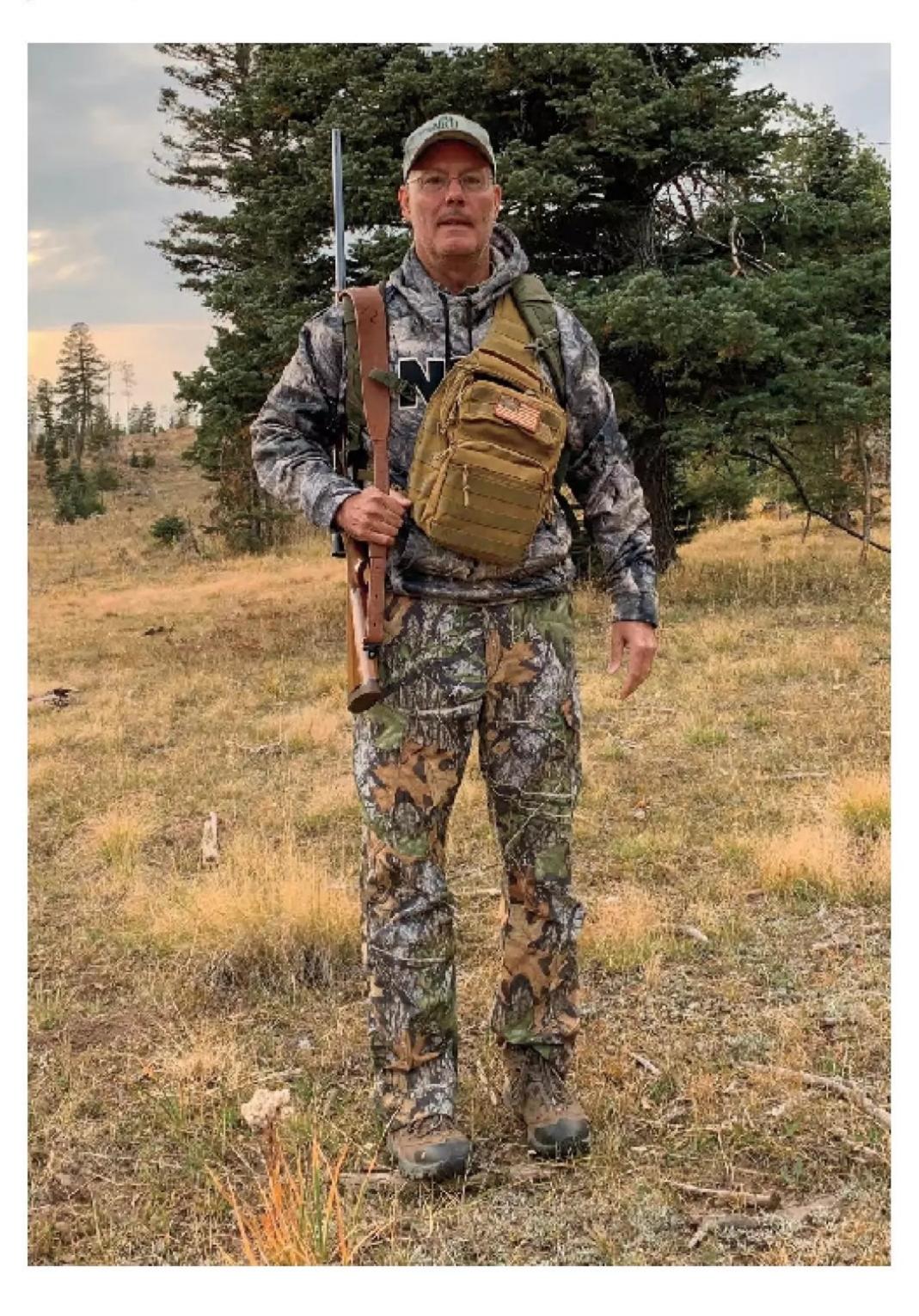
Hamlin: There was an open election. Of 76 board members, 67 [attended] the meeting, and the nominating committee nominated their candidate. And then the question was asked, "Are there any nominations from the floor?" My name came up and they took a paper ballot. The votes were counted and I was elected EVP, CEO.

G&A: What needs to be done to deal with corruption within the NRA?

Hamlin: Number one, we

have become very transparent. When they had the elections, there was a motion from the floor to keep the process open to the public. That was the first tangible step that we were going to move away from the cloak of secrecy and let people see the process for what it was. Now that we're embarking on this new opportunity, the next 154 years, the objectives are to rebuild the trust of the members, because that's who we work for; the industry, who plays an important role in what we do and how we do it; the donors who back us; and mostly the staff. The staff needs to feel appreciated. I'm not sure about [the Outdoor Sportsman Group], but Publications is down 20 percent, headcount, and we're doing the same amount of work. What I'm trying to do is figure out a way to get the members to reengage with us, the industry, and the donors, so we can build the NRA back to where we were. Our membership is down, but you have to understand that we have withstood a billion dollars plus of negative public relations. There is an agenda to hurt NRA, and it's been very effective. My goals are to try to generate capital via fundraising and restore membership. One of my favorite magazines, Guns & Ammo, your audience; if we can get folks to reconsider, recruit a new member, that would be very helpful.

G&A: Why should people financially support the NRA? How will you safeguard and steward contributions? Why should we trust the NRA?



Hamlin: At the board meeting, the same day I was elected, we elected Bob Mensinger as our chief compliance officer. He's the guy who will be having regular training and making anyone who is uncomfortable with anything they witness, give them an avenue to report misdeeds. Whistleblowers will have an 800-line, they can report it publicly, they can do it anonymously, and we pledge to our staff that there will be no repercussions; there will be no backlash. We pledge to be transparent, open and in compliance. We pledge to be good stewards of our members' money. I ran a very tight Publications Division, literally saved the NRA over \$30 million dollars over the last 10 years, and did it quickly. [Within] my first week on the job I exercised the 90-day-out clause

and brought all sales in-house, thereby reducing the cost of sales from 22 percent to under 10 percent. When you're talking upwards of \$22 million dollars per year in sales, and you're taking 12 percent off the top, you do the math. I've always been very fiscally responsible. ... My point is that I think you can rest assured that I'm going to be very vigilant and make sure that we're not wasteful, and that we're good stewards of our member donations.

G&A: How does the NRA position itself to get out the vote in November? The NRA was important to Donald Trump's 2016 election victory, but in 2020 there were many distractions and a failure to turn out the vote. What is the plan for the next few months to ensure that races at all levels of government, including states, are deemed important?

Hamlin: That's a good question. We had \$30 million dollars to spend back in 2016, and we had a helluva run. We upset who [people] thought was going to win and we ended up with three [U.S.] Supreme Court justices that gave us some balance in government. That was huge. Think about where we would be without that. We won't have \$30 million dollars, but we have resources. The one thing we do have, a lot of people know this, and that's why they target us, is that we have the ability to geotarget, we have email databases that are fairly refined, and in those eight or 10 House battleground seats, and



those half-a-dozen Senate seats, we'll get in there and play. My point is we may not have the money, but we will be operating very smartly, use the resources that we have, literally the millions of voters in our databases, mobilize them to get out there in those districts, in those states where there's a Senate race or two [to be won].

G&A: There have been a lot of calls for Board reform. The NRA Board has been partly blamed for mismanagement of the organization. What do you think it's going to take to fix the board and prevent future mismanagement?

Hamlin: I think that it's somewhat of a misnomer that the Board has been stagnant because over the last five or six years, there have been 30 new

board members [who] have come in. There's been a lot of turnover. Without that turnover, you wouldn't have had the slate of officers [who] was elected [at the NRA Annual Meetings]. There's just no way. I think the Board understands that they have a fiduciary responsibility. I think you [are] going to see a lot of oversight on their part.

G&A: Is it true that you declined a salary increase when you were elevated to CEO/EVP?

Hamlin: No one mentioned an increase in salary, and I didn't mention it to anyone. With the financial situation that we're in, that didn't seem appropriate. I'll be honest, I did not need to do this. This is a hard job. This is a challenging situation. I'm at a point in my career where I didn't need to do it, but I'm doing it, and I'm going to give it a 110 percent because I feel strongly about our country. I feel strongly about NRA. I'm going to do my best to rebuild it, or at least get it moving in the right direction.

G&A: Will audits be established? If so, what would an audit look like? Would the NRA show its members a report of how donations are spent?

Hamlin: Good question. I can't really respond to audits. I do know that we file through our finance committee annual reports. I know Board members have access to our



financial services department; they come in and have access to anything they want to see. I'm not sure if it's like bringing in a third-party auditor to do that, but I will say this: With this Bob Mensinger hire, he has an auditor with him, and they don't report to me. They report to the Board. Our chief compliance officer and his auditor, a gentleman by the name of David Medrano, the two of them are ostensibly in a position to do what you're asking.

G&A: How many members does the NRA have? How many were lost since the 5 million claimed when Trump was elected in 2016? And what does the health of the NRA look like?

Hamlin: Financially, we're going to make it. Things are tight. You name it, we've cut

it. And I think, now, we've reached a point where we can only go up. We're going to start staffing up again, and I believe, if we do what I hope we do, and folks that are around me, are able to communicate with [media such as Guns & Ammo], and people are told "Give the NRA a shot," I think we'll start stemming the losses. We're down about a million members! We're down [to] around 4 million members from five, but 4 million is nothing to sneeze at. There's not a lot of organizations that could have withstood the last five years that we've been put through. This is a tough group of people and our members, yes we've lost a million members, but we've got 4 million [who] have hung with us. I'd rather think of those folks, mobilize those folks, renew and upgrade, and recruit a new member.

G&A: To existing members: What do you see as the NRA's core mission, and has it changed?

Hamlin: There're five objectives when you go back to 1871, but mostly we want to be advocates for Second Amendment rights. You have to admit that despite all of the fallout over the last five years, we have been able to increase the number of concealed carry states to 29, we have won two U.S. Supreme Court cases, including one massive case, the *Vullo* case. If you haven't studied it, I think the implications and the impact in America, and the organization of government, it's a huge win for the NRA.

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And we funded that.

G&A: You mentioned NRA v. Vullo. There was a surprising amount of collaborative effort between the NRA and the ACLU. The case centered on a call-to-action for banks and insurance companies to discontinue association with gun-promoting groups [and businesses], made by the former New York State

Department of Financial Services Superintendent Maria Vullo. Are we going to see the NRA start to partner with an organization like the ACLU more frequently?

I THINK [OF] THE TERM, "GUN VIOLENCE," WHERE YOU HAVE THE INANIMATE OBJECT THAT'S OUT THERE CREATING VIOLENCE. AT THE NRA, WE CALL IT THE "CRIMINAL MISUSE OF FIREARMS."

Hamlin: I thought it was a brilliant move to partner with the ACLU; their advocacy is about the First Amendment. What the case told me was, when Justice Sotomayor [wrote] the opinion, and we know where she sits on the liberal-conservative scale, they realized that, as an example, if you're in a Red State, and you're Planned Parenthood, the Red State could go after you! I think cooler heads prevailed, and it's obvious that with that unanimous decision, the Court decided that's not the direction we want to go in this country ... The New York Department of Financial Services, conspiring with the banks and insurance companies, to not do business with NRA because of our First Amendment political advocacy point of view. [It was a very] important landmark decision. Based on that precedent, I don't see why not. I can't predict the future, but [the collaboration with the ACLU] worked pretty darned good this time.

G&A: What are the plans for the National Firearms Museum?

Hamlin: No changes. We were talking about Robert Petersen of Petersen Publishing. His was the single largest donor to the NRA. We have the Robert and Margie Petersen gallery in the National Firearm Museum. Phil Schreier, who G&A readers knows [works with Garry James], probably one of the best curators, if not the best in the country. I welcome people to come to the National Firearms Museum, take a look around; phenomenal. No plans to change anything about it; just keep it open to the public.

G&A: How about mailers? Are we going to keep getting mailers asking for donations? This question refers to the persistent requests members received to sign up or to become more than a Life member, including donations of assets.

Hamlin: That's a great question. I'm getting my arms around what the frequency is. I will give you my word that

I'm going to look at it hard and close, to not badger our great members as much as we do. I think you realize what we're facing, and it works! Direct mail works.

G&A: There are divides along the spectrum of gun owners. How does the NRA become more considerate towards the conflicting ideologies and cultures regarding subjects such as Black Rifles, maga-

zine capacities, bump stocks, arm braces, private sales, etc.?

Hamlin: I think the marketplace will dictate the products that people want. First of all, if you're law

abiding, you should not be restricted. For example, high-capacity magazines, a highly charged issue. When you have four assailants on your property, I need more than 10 rounds! My firearm of choice is an AR-style rifle. If I'm a law-abiding citizen, why should I lose my rights? Why should I be the one who pays the price because there are others out there who are irresponsible?

G&A: There's a large movement behind the suppressor industry. They've been legalized in many states, and legalized for hunting, as well. The time to get ATF approval for stamps has been reduced, and there's more education being shared to the benefit of G&A readers and NRA members. However, the topic crosses over the NFA subject. Do you feel the NFA should be repealed?

Hamlin: I'll say this, through folks like Silencer Central, they've created the marketplace because the process of application has been streamlined. So, I've hunted with suppressors; there's no recoil, no noise. We hang around hunters; we hang around shooters; we're all hard of hearing. I think that, without getting into the jurisprudence of it, I think that more people have access to them, and I think that's a great thing. I think that [suppressors] are becoming more mainstream. In the last five years, it's accelerating. I use them. I think they're great.

G&A: Our country is facing rising crime, and certain groups target gun rights in their immediate response. How does the NRA differentiate the law-abiding gun owner from the armed criminal element?

Hamlin: I think [of] the term "gun violence," where you have the inanimate object that's out there creating violence. At the NRA, we call it the "criminal misuse of firearms." If people break the law using a firearm, I think there's a five-year minimum sentence that's on the books. We've all said, "Enforce the laws on the books!"

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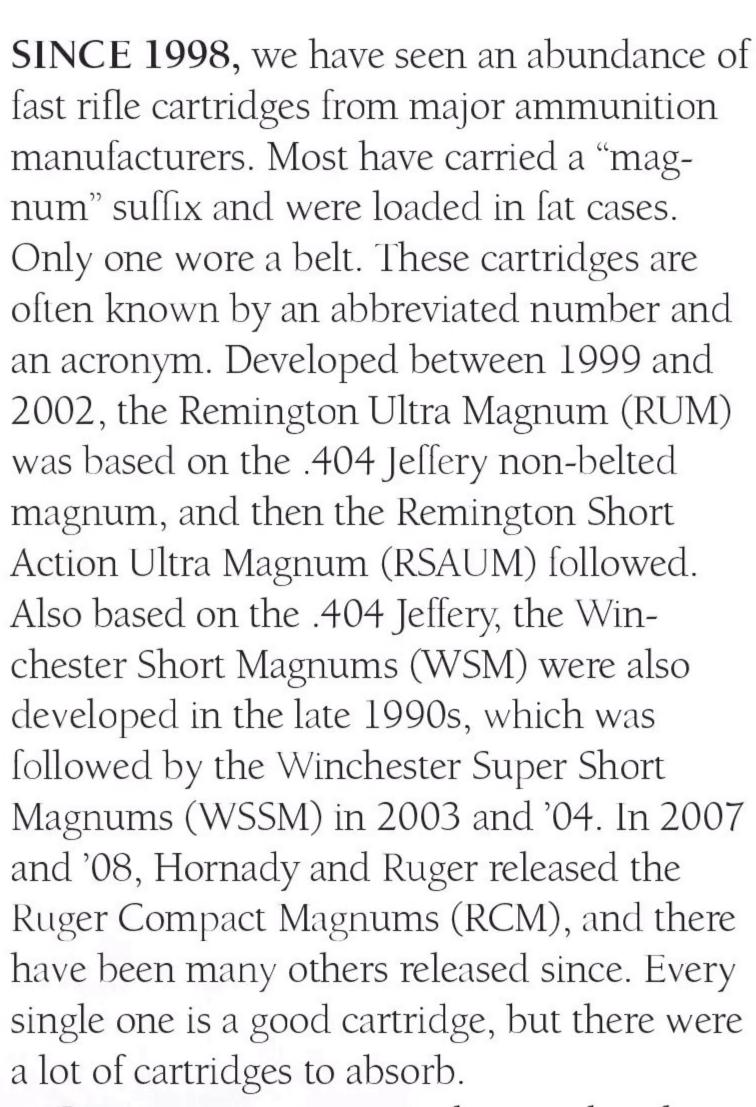
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MANY

PART 1: MAGNUM RIFLE CARTRIDGES THAT ONE-UP ANOTHER IN THE NAME OF SPEED.

BY CRAIG BODDINGTON



Genius was not required to predict there would be winners and losers. Some of those cartridges became popular, but many have languished. After some of the shortest production runs in cartridge history, several are already gone. When compared

to the industry's 1998 to 2010 timeline, new cartridge introductions have slowed. I don't think the engineers are out of ideas, but there is more restraint. The market for rifle ammunition is bigger than 20 years ago, and it has changed. More shooters are interested in long-range performance.

There are new cartridges, as Guns & Ammo readers are aware. The Hornady Precision Rifle Cartridges (PRC), for example, now include the 6, 6.5, 7mm and .300 PRC. The .300 PRC was introduced in 2018 and based on the .375 Ruger case. Also introduced in '18, the 6.5 PRC was designed on the .300 RCM case. The 7mm PRC is the newest of Hornady's PRCs, arriving in 2023 and winning that year's G&A Ammo of the Year honors. The PRC seems to have staying power, but it's too early to predict any lasting popularity.

THE FIRST MAGNUM CRAZE

In the early 1950s, Roy Weatherby made the big ammo manufacturers nervous. From 1956 to 1965, almost every new cartridge was termed "magnum." It started with the .458 Winchester Magnum in 1956





The current family of cartridges based on the .375 Ruger case include — from left to right, above — .375 Ruger, .300 RCM, .338 RCM, .416 Ruger, 6.5 PRC, and .300 PRC.



Most belted magnums are based on the .375 H&H case, while the .404 Jeffery case spawned the largest number of unbelted magnums, short and long. Above left to right: .375 H&H, .300 Wby. Mag., .350 Rem. Mag., .404 Jeffery, .28 Nosler, 7mm RSAUM.

and grew with the .264 and .338 Winchester Magnums in 1958. Remington responded in 1962 with its 7mm Remington Magnum, for which Winchester responded with its .300 a year later. All were belted cartridges based on the .375 Holland & Holland case shortened to fit in a .30-'06 Springfield-length action. None were as fast or as powerful as Weatherby's cartridges, but all achieved amazing success, initially. It seemed the word "magnum" was the magic formula for huge sales. Or was it?

Norma tried with its .358 Norma Magnum in 1959, followed by the .308 Norma Magnum in 1960. Neither cartridge, both excellent, caught on. In 1965, Remington brought out the 6.5 and .350 Remington Magnums. Probably mismatched to Remington's platforms, they were not

popular either. By then, Remington's "Big Seven" was eating the .264's lunch, though. For the next 30 years, brave new magnums were few and far between.

Whether short or long, fast unbelted cartridges are not new. Above, left to right: .30 Newton, .35 Newton, .250 Savage, .300 Savage. The Newton cartridges date to 1912; the .250 and .300 Savage to 1915 and 1920. The Newton cartridges are similar in dimensions to the .375 Ruger.



The 6.5 PRC is ballistically similar to the .264, but the .264 Winchester is almost obsolete. The .300 PRC is only slightly faster than the .300 Win. Mag., but it competes against established, popular and fast .30s. Above, left to right: 6.5 PRC, .264 Win. Mag., .300 PRC, .300 Win. Mag.

THE SECOND MAGNUM CRAZE

I was a kid through the wave of belted magnums, but it was a time when business was good and the big brands visibly practiced one-upmanship. Author Jack O'Connor's posthumous and outspoken "The Last Book: Confessions of a Gun Editor" (1984) described this period in a chapter titled "The Golden Age of Freeloading." That decade of fat, unbelted magnums would have been a great time to be a gunwriter! There was an average of two new magnums introduced per year for 10 years, but the following decades saw the arrival of the .204 Ruger (2004), 6.5 Creedmoor (2007), .300 (2007) and .338 Marlin Express (2009), and .450 Marlin (2000). We rarely had to wait for

a topic to write about. The "Golden Age" of such ammo introductions is long since over, in my opinion. Invites to manufacturer seminars are now infrequent, but shooting and hunting remain deep-rooted passions. During the last 30 years, I've written about all of those magnums — and others — and hunted with all but one.

DESIGN & NOMENCLATURE

Before 1890, all cartridges were rimmed. The rim served as the headspace index and made it easy for the extractor to grab. Peter Paul Mauser developed the rimless case with extractor groove ahead of the rim and believed his shoulder headspacing was more precise. A same-diameter belt ahead of the rim is also a headspace index. Holland & Holland's 1905 .400/.375 Nitro Express was the first belted cartridge, which was replaced in 1912 by the .375 H&H Magnum.



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The .300 RUM, 7mm RUM, and .338 Win. Mag. are available. The 7mm RSAUM, .300 RSAUM, .338 RUM, .375 RUM are limited.



Competing with Remington, Winchester developed its WSM and WSSM cartridges. The newer 6.8 Western has lasting potential.



Magnums by other names, Hornady continues releasing cartridges in the Creedmoor and PRC series. RCMs are no more.



Federal's magnums include in-demand rounds such as the .300 WSM and 7mm Rem. Mag. Federal also created the .224 Valkyrie.

The term "magnum" was taken from an extra-large bottle of champagne, suggesting that a cartridge was larger and more powerful than a previous version. Holland & Holland's second .375 cartridge got it right. It was a magnum in all ways — and it retained the belt. For the next 86 years, almost all rifle cartridges carrying the "magnum" moniker were belted, but we mistakenly identified the belt with speed and power.



Lazzeroni developed a proprietary catalog of short and long unbelted magnums with names inspired by aircraft, missiles and rockets. Calibers range from 6.17mm (.243) to 12.04mm (.474).

Unbelted rimless cartridges are "in." During the last 50 years, there have been a few new belted cartridges: 8mm and .416 Remington Magnum, and the .450 Marlin. The .450 Marlin's belt serves to preclude chambering in a .45-70 Government. Weatherby is an exception, retaining the traditional belt as it added to the Weatherby Magnum line. However, even Weatherby crossed this line with its 6.5mm Weatherby Rebated Precision Magnum (RPM) in 2020. The 6.5 Weatherby RPM was designed using a rebated rim with shoulder headspacing.

UNBELTED, FAST & FAT (CASED)

Fast, fat-cased, unbelted cartridges are not new. In America, Charles Newton's cartridges developed before World War

I all achieved magnum performance. In Germany, so did Wilhelm Brenneke's. John Rigby's .416 is fat, too, unbelted, and fast. None were dubbed "magnum," though.

Short and fat also isn't new. The .250 and .300 Savage were short and fat cased rounds. Remington's 6.5mm and .350 Rem. Mag. were based on the belted H&H case, cut down to fit into short bolt-actions. Decades ahead of their time, they were true short magnums.

There were multiple families of proprietaries and wildcats using the .404 Jeffery and .416 Rigby cases, fat and unbelted, but it was really Tucson-gunmaker John Lazzeroni who stirred the unbelted pot. In the early 1990s, "Lazz" developed parallel lines of fat, unbelted cartridges in both short and long versions. He experimented with all

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popular bullet diameters. He received a lot of press in the gun media — as did Roy Weatherby 40 years earlier — and he made the majors nervous.

First came the long RUMs, then the short WSMs, and then ... well, you know. By the mid-2010s, we had a slew of unbelted magnums. Of those fast cartridges, the three that omit the word "magnum" were the .375 Ruger, .416 Ruger, and 6.5-284 Norma (1999). The term was overused to the point that, recently, most manufacturers seem to avoid it. The lone exception is Weatherby, adding the 6.5-300 Weatherby Magnum (2016) and the 6.5 Weath-

erby RPM (2019). Since the days of Roy Weatherby, all Weatherby cartridges have been magnums. Others come up with with another descriptor.

Starting in 2013 with the .26 Nosler, the Nosler family now includes the .22, .26, .27, .28, .30, and .33 Nosler. All are fat-cased, unbelted cartridges. All except the .22 are based on the RUM (.404 Jeffery) case, shortened for standard-length actions. Fast and powerful, they could all be termed "magnum," but Bob Nosler and his team chose not to use it.

Whether we add hype words such as "magnum,"

"express," or "nitro," the most common cartridge nomenclature usually starts with nominal bullet diameter, followed by the inventor or maker. Today, perhaps a byproduct of overuse of the term "magnum," we're seeing more of what I call "whimsical" names: "Blackout," "Buckhammer," "Bushmaster," "Grendel," "Creedmoor," "Legend," and "Western," to name a few. That's not to disregard acronyms such as "ARC," "PRC," and "RPM." I have a tough time remembering acronyms, so this must be hell on new shooters. It doesn't matter. What's important? When a cartridge is submitted for standardization — Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) in the U.S., or International Permanent Commission for testing of firearms (CIP) in Europe, the name speaks to case dimensions, overall length, rifling twist and maximum pressure. However a cartridge is described, the name provides the details.



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TIPPING POINT₂ is available in the following calibers:

Caliber	Bullet Wgt.	Туре	FPS
.243 Winchester	95 gr.	SST	3170
6.5mm Creedmoor	140 gr.	SST	2714
.270 Winchester	150 gr.	SST	2813
7mm-08 Remington	162 gr.	SST	2512
.308 Winchester	165 gr.	SST	2645
.30-06 Springfield	165 gr.	SST	2749



THE SURVIVORS

Long before 2008 it was obvious that not all of the new magnums were going to survive. Commercial success isn't always based on merit. I still use — and admire — several unpopular cartridges, but it's not my job to pick winners and losers; that's up to you. The lasting magnums to survive the early 2000s include the 6.5x284 Norma, .270 WSM, .300 WSM, .300 RUM and .375 Ruger. Popularity doesn't matter, except for availability. Most cartridges are initially only loaded by the introducing company. After a cartridge has been on the market for a while, it is wise to ask yourself, who else makes it?

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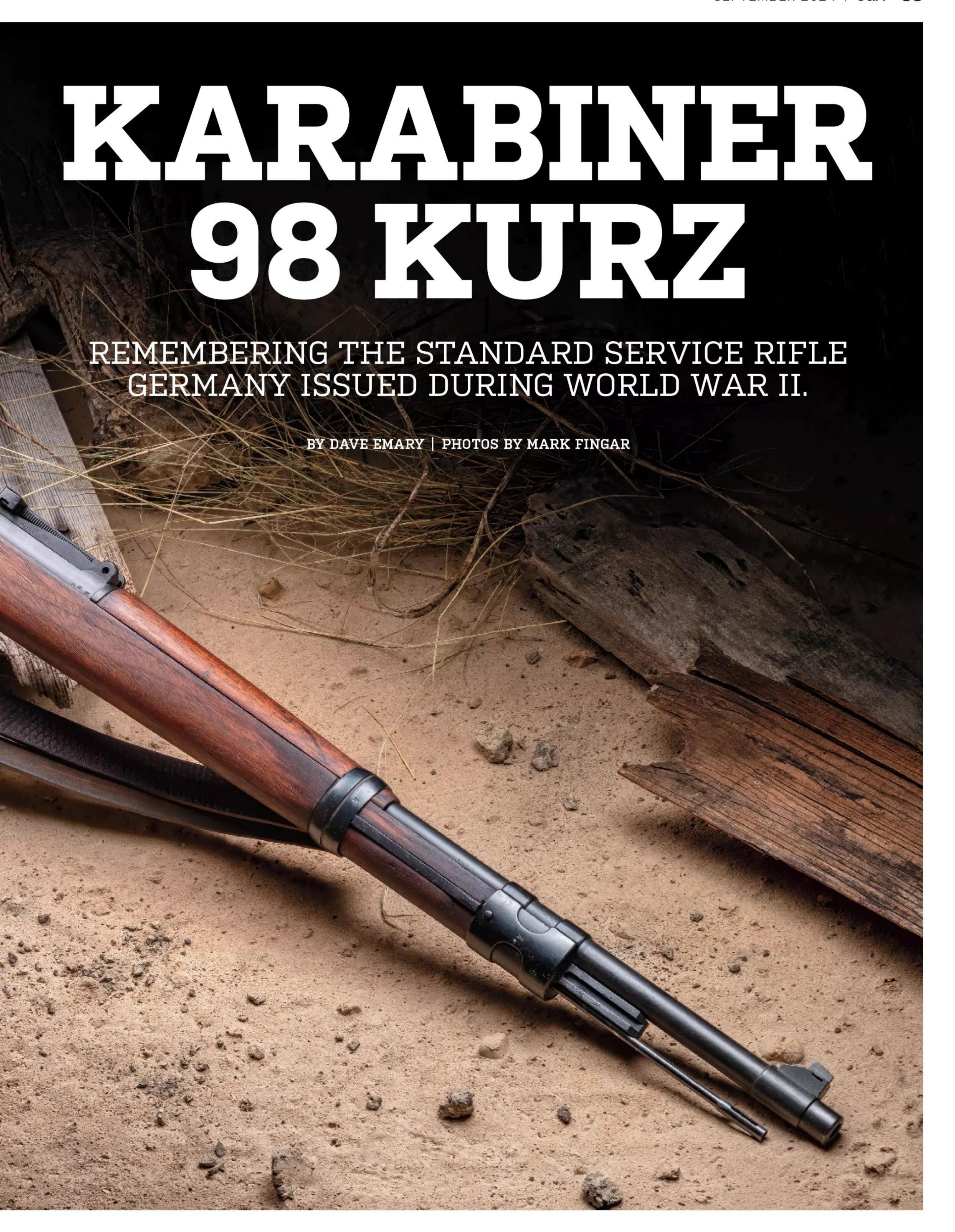
FEW FIREARMS IN HISTORY possess the mystique, history and variety for the gun collector as the World War II German K98k bolt-action rifle. It was obsolete with the introduction of the U.S.-made M1 Garand and similar semiautomatic rifles, but it remained the mainstay of the Wehrmacht, the armed forces of the Third Reich. It was robust, reliable and fired the powerful 8x57mm cartridge. Produced from 1934 to 1945 by Germany and its allies, manufacturing of the rifle continued in various forms by the Czechs, French, Yugoslavians and others. German K98k rifles were also overhauled and converted to chamber 7.62x51mm NATO for use by the Israeli Defense Forces spanning 1947 to 1949, later supplemented by other variants of Mauser from 1951 through the 1970s.

PRE-WAR

After World War I, Mauser worked to remain solvent. The Czech armory in Brno and Fabrique Nationale (FN) were aggressively seeking international sales with the Model 1924, a shortened carbine version of the long-barrel Mauser 98

with improved sights. The "Standard Model" was introduced during the mid-1920s to quietly resume firearm production. This rifle had a 23.6inch barrel as opposed to the 29.1-inch barrel on the World War I-vintage Gewehr 98. The gun continued the Gewehr 98 sling attachments, barrel bands and band retention springs, with a straight bolt handle, but sported sights featuring a leaf rear with an interchangeable cam for different calibers and loads. It replaced the cumbersome roller coaster-like sight of the Gewehr 98. The updated rifle, along with covert business practices, kept Mauser in business.

During Winter 1933, Mauser introduced the Reichpost, a postal service rifle. It was essentially the K98k. This rifle used the same 23.6-inch barrel, but the bolt handle was bent and the stock inletted for the bolt knob. The front and rear bands of the K98k design with the Gewehr 98-type band retention springs. The stock was inletted for the K98 side-mounted sling, and the improved sight was kept with a cam for the better performing s.S. Patrone 198-grain spitzer boattail bullet. At this point, Adolf Hitler was chancellor.





The Army Weapons Office released specifications for a new rifle in early 1934. Mauser and J. P. Sauer & Sohn were so confident in matching the requirements that they used the Reichpost-pattern rifle and began limited production that year. Sauer retained the Gewehr 98-type band retention springs. Mauser used the single-band spring between the upper and lower band, which was selected for the final K98k design. The K98k, as we know it, was officially adopted on June 14, 1935. Official production began

with four manufacturers. J. P. Sauer rifles were converted to the Mauser single-band spring design. Between the 1935 adoption and the start of World War II on September 1, 1939, most of the Gewehr 98 and Kar 98a rifles from World War I were converted to the K98k configuration. Conscription started on March 16, 1935. The rapid growth in Germany's armed forces placed unprecedented demand on producers of the K98k. Additional contractors were added to meet that demand.

IDENTIFICATION

The K98k is known for its many markings. In the beginning, it's believed that these marks were purposely deceptive as an effort to confuse the fact that Germany was rearming. Initially, manufacturers were assigned number codes preceded by an "S" to denote who the manufacturer was. This system was then changed to three letters later in the war.

TABLE 1: K98K MANUFACTURERS

MANUFACTURER	CODE	DATES
	S/42	1934 – Early 1938
Mauser Werke AG,	42	Late 1938 – 1940
Oberndorf	byf	1941 – 1944
	SVW 45	1945
	S/147	1934 – Early 1938
J. P. Sauer und Sohn Gewehrfabrik, Suhl	147	Late 1938 – 1940
CONTRACTOR CONTRACTOR AND	ce	1941 – 1944
	S/27	1935 – Early 1938
Erfurter Maschinenfabrik (ERMA)	27	Late 1938 – 1940
	ax	Late 1938 – 1941
	S/243	1935 – Early 1938
Mauser Werke AG, Borsigwalde	243	Late 1938 – 1940
	ar	1941 – 1944
	S/237	1936 – Early 1938
Berlin-Lubecker Maschinenfabrik (BLM), Lubeck	237	Late 1938 – Early 1940
	duv	Late 1940 – 1942
Berlin-Suhler-Waffen und Fahrzeugwerke	BSW	1937 – Early 1939
Berlin-Suhler-Waffen/Gustloff	337	Late 1939 – 1940
Gustloff Werke,	337	1940
Weimar	bcd	1941 – 1945
Steyr-Daimler-Puch AG,	660	1939 – Early 1940
Steyr	bnz	Late 1940 – 1945
Waffen Werke Brünn AG Bystrica, Czechoslovakia	dou	1942 – 1945
Waffen Werke Brünn AG Brünn,	dot	1943 – 1944
Czechoslovakia	swp 45	1945

were used to denote the year of manufacture to maximize confusion. "K" was used for 1934 and "G" was used for 1935. An example: 1934 Mauser K98k made in Oberndorf was marked "S/42 K" on the receiver ring. The initial code "42" was the number assigned to Mauser's Oberndorf factory. By 1936, Germans became bolder. It was obvious that Germany was rearming, so they became less deceptive. Germany

turned to using a four-digit numeric year date. In 1937, the "S" prefix was dropped from the manufacturer code. In 1940, the production year was changed to the last two numeric digits. In 1944, some manufacturers went to using the last number only. In 1940, the numeric manufacturer codes were changed to three letters. By 1941, all manufacturers used three-letter manufacturer codes. Table 1 shows the manufacturers of the K98k, and the codes and dates used throughout its production history. Table 2 shows the approximate number of rifles produced by year for each maker. This information was sourced from "Backbone of the Wehrmacht: The German K98k Rifle, 1934-1945" by Richard D. Law (1993), Collector Grade Publications. The information was derived from captured German production documents and combined with an extensive survey of collected firearms serial numbers.



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	NUMBER OF RIFLES PRODUCED MANUFACTURER CODE																				
YEAR	MAU: OR		J. F Sau		ERM	1A	MAUS BOR		100	RLIN ÜB.	BERL SUH		STI	EYR	GUSTLO	FF	WAFFE Bystric		WAFFE Brün	1000	TOTALS
1934	15,737	S/42K	7,656	S/147K																	23,393
1935	182,317	S/42G	75,574	S/147/G	3,456	S27.G	7,671	S/243G													269,018
1936	256,367	S/42	198,154	S/147	23,347	S27	35,077	S/243	11,452	S/237											524,757
1937	256,312	S/42	178,458	S/147	99,265	S27	80,899	S/243	46,180	S/237	23,780	BSW									684,884
1938	251,606	S/42	180,413	S/147	168,339	S27	176,308	S/243	84,692	S/237	49,359	BSW									910,717
1939	279,078	42	199,259	147	135,709	27	237,661	243	118,780	S/237 / 237	58,817	BSW	17,426	660	9,295	337					1,056,025
1940	415,457	42	215,188	147	131,274	27	198,211	243	196,543	237			130,492	660 / bnz	130,144	337					1,417,300
1941	336,441	byf	210,592	ce	93,799	ах	121,802	ar	179,291	duv			109,714	bnz	163,669	337					1,215,241
1942	380,421	byf	183,321	ce			110,489	ar	242,403	duv			117,836	bnz	158,188	bcd	95,582	dou			1,288,241
1943	1,142,336	byf	326,535	ce			120,652	ar					217,880	bnz	315,107	bcd	409,502	dou	219,843	dot	2,751,855
1944	1,434,219	byf	207,289	ce									175,816	bnz	348,081	bcd	408,636	dou	621,959	dot	3,196,000
1945	205,591	byf / svw											196,625	bnz	91,679	bcd	29,172	dou	187,684	swp	711,291
Total	5,155,	,882	1,982	,799	655,	189	1,088	,760	879	9,333	131,9	56	1,21	6,163	965,78	39	943,43	32	1,029,4	186	14,048,789



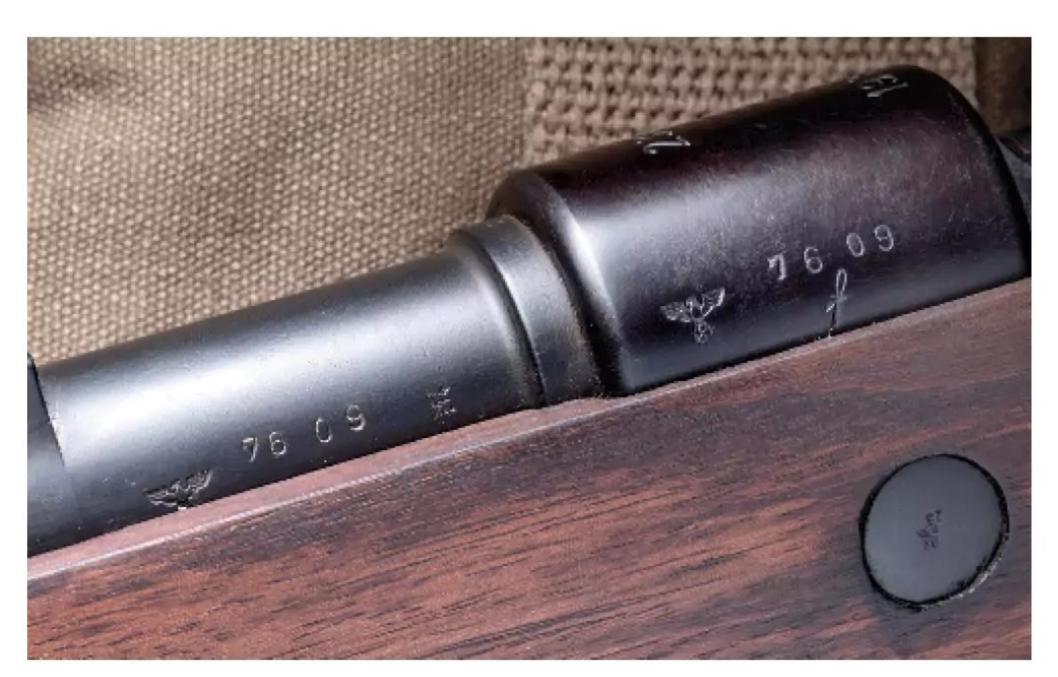
The manufacturer code and production date can be accompanied by the caliber marking on the receiver bridge.

PROOFMARKS

In the beginning, the old Weimer Republic Eagle-type firing proofmark was placed on the barrel and receiver ring. In 1937, the Weimar Eagle was replaced by the Nazi Eagle. The proofmark was officially changed to the Nazi Eagle in 1938.

INSPECTOR MARKS

The Waffenampt was the stamp placed on parts and rifles by government inspectors. These were denoted by a small eagle motif with the inspectors' number underneath. Lists of Waffenampt numbers and the manufacturing plant where the inspector worked at are available. During the early years, Germans were fastidious about marking every part on a firearm with the inspector's Waffenampt, as well as the serial number or the last two numbers on small parts. By 1942, the practice of stamping every part with a Waffenampt was reduced. In mid-1944, the practice ceased in the interest of increased production. Late-war examples sometimes have little evidence of quality control through the lack of Waffenampts and proofmarks beyond the receiver and barrel.



Waffenamt proofmarks usually match, including eagle seals or stamps. Some later production examples dropped these marks.





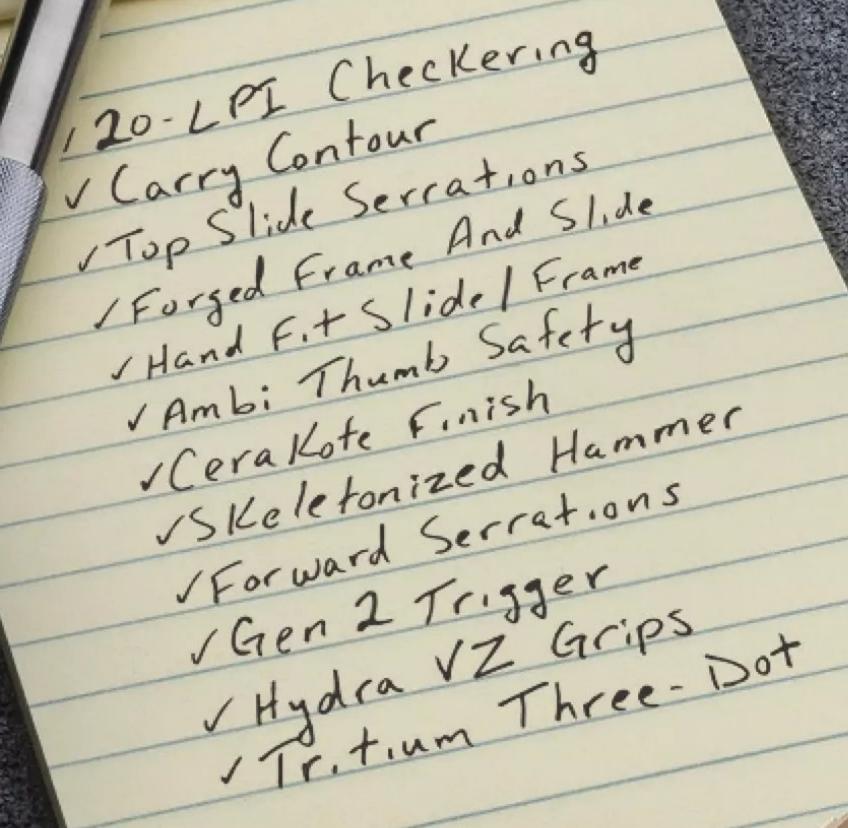
Inspector marks featuring an eagle over a number are often found on individual parts and assemblies.

SERIAL NUMBER

Throughout most of production, Germans used a fourdigit serial number. At the start of every year, the serial number was started at "1". Some manufacturers used "0" preceding the last digit, but some did not. After the first 9,999 rifles were produced, the number went back to "1" followed by a letter "a", and so forth, sequentially every 9,999 rifles. The guns were made in 9,999 letter-coded blocks. If production was great enough, double letters were used. Production date periods can be approximated by using Table 2 and considering the total number of rifles

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The last two or four digits of the serial number were often stamped on many parts. For collectors, these support originality.



Stocks changed from solid walnut to laminated beech. The round part above the stock inspector cartouche is a bolt takedown disc.







Early Mauser sights were stamped on both sides with range indicators. Later models abandoned this level of detail, eventually giving up on adjustable sights altogether.



The front barrel band usually had lightening cuts, giving it a distinctive "H" shape.

a manufacturer produced that year. Correlate that information back to the serial number. To decide approximately when a rifle was produced, find the total number of rifles produced by the manufacturer in that year and divide by 12. Then calculate what number in production the rifle is from the serial number. This should approximately indicate the month a rifle was produced. Consistent production can be assumed valid until the start of 1944, which is when the American bombing campaign seriously disrupted German transportation and production. For rifles made after late 1943, the best that can be assumed is a general range of early, mid, or late that year. According to serial number research studies, Germans did not use "j" in serial numbers because it looked too much like an "i".

In 1943, Mauser Orberndorf used a five-digit serial number due to the large numbers of rifles being produced. A letter was placed after the number when they reached 99,999, but not all K98k manufacturers adopted the practice.

CALIBER

The caliber, across the lands, was stamped on the top of the barrel shoulder in front of the receiver. The number generally ranged from "7.90" to "7.93" (mm). The practice was stopped in 1942.

STOCKS

Solid walnut was used in making stocks, initially, featuring a flat buttplate. As early as 1937, walnut was running low.

Experiments began with using other solid woods, as well as a laminated beech stock. Beech was readily available and the laminated stock was more stable and less prone to warping than other solid woods. During 1939, the laminated stock had nearly replaced the solid stock. By 1940, laminated stocks were almost entirely used.

A small number of laminated stocks with a flat buttplate appeared in 1937. Laminated stocks with a flat buttplate replaced the solid walnut stocks in 1938. The cupped buttplate was introduced in 1939. It protected the rear of the stock from damage, and was quicker and less expensive to produce. The cupped buttplate was increasingly used throughout 1940, but by the end of the year the stores of flat buttplates were empty. Walnut stocks with cupped buttplates appeared in 1939 and '40.

METAL HARDWARE

Initial K98k production rifles used entirely milled parts made from solid billets or forgings. Tight-tolerance parts were highly finished, but manufacturing was time consuming and expensive. As the war continued, Germans became more desperate to increase production and replace its losses in North Africa and Russia. During 1943, an effort was made to simplify and increase production. Large numbers of women were added to the labor force, too, and the first shortcuts appeared in 1942.

The K98k rear sight was initially stamped with range markings on both sides of the sight; Mauser eliminated







Milled parts were both produced in the early war and taken from existing World War I stocks.



Quality triggerguards, floorplates, and finishing were hallmarks of early rifles, later replaced with unfinished stamped parts.



Mauser K98k buttplates were stamped with the last digits of the serial. Some are curved, fastened to the walnut stock.



Early to mid-war models of the K98k featured a bayonet lug an an underslung cleaning rod.

this in '42 to speed production. Nearly all other manufacturers followed Mauser's lead.

Mauser Orberndorf produced a large number of rifles in 1943 with a front band that was still milled from a billet, but it did not have the lightening cuts that gave it the distinctive "H" appearance. Other manufacturers adopted it throughout '43. This led to a milled, closed and welded front band and, by the end of the year, a stamped and welded front band. The rear band, band spring, triggerguard, floor plate and follower were converted to stamped parts, too. By early '44, inventory of milled parts was used up. Even the lock screws on the stamped triggerguards were eliminated. Some late K98k rifles were produced with milled parts. These were the last parts that remained from the World War I K98 rifles. There are no absolute guarantees of what style of parts were found on K98 rifles after late '43. By early '44, most parts were stamped.

The effort to simplify and increase production led to the *Kriegsmodell*, adopted in 1944. It eliminated the bolt-takedown disc in the stock, which was replaced by a hole drilled in the cupped steel buttplate. The band spring was eliminated, and

screws were used to attach the two-barrel bands to the stock. The cleaning rod and bayonet lug was also eliminated, as well as the top bolt guide. There was a gradual adoption of *Kriegsmarine* — navy of Nazi Germany — features in some manufacturers rifles. Steyr began eliminating the stock takedown disc in late '44. In 1945, most rifles produced were of the Kriegsmarine design, including a stamped and welded fixed rear sight.

TO THE END

Germany produced more than 14-million K98k rifles during World War II. Pre-war examples received commercial quality fit-and-finish, but as Germany became more desperate production became rough and inconsistent. By late '44, the polish on metal parts was ignored if it didn't affect function. Bolts were not always polished, so the smoothness of the action suffered on late examples. Machine marks were left on the receiver, barrel and elsewhere. Stocks were left unsanded and unpolished, and many were unstained. A phosphate coating supplanted bluing in 1944 through 1945. The end of the Third Reich could be predicted by the condition of its small arms production.





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PROOFHOUSE

Taurus 692 Executive Grade .357 Magnum/.38 Special/9mm



FLEXIBLE DEFENSE

The Taurus 692 Executive Grade convertible revolver is the latest in a series of enhanced defensive handguns. In the company's wheelgun C-suite, the double-action/single-action (DA/SA) Taurus 692 joins the previously promoted Taurus 856 (.38 Special +P, \$682), Taurus 605 (.357 Magnum, \$758), and Taurus Judge (.45 Colt/.410, \$947) Executive Grade models. Each of these guns are assembled and tuned to a higher degree of performance by specialized Taurus gunsmiths. Executive Grade guns are also distinctive for the hand-polished stainless-steel finish, presentation-grade laminate wood grips, and multi-layer Nanuk (nanuk.com) hard cases with custom-cut foam interiors.

> The Taurus 692 is a seven-shot revolver built on the brand's medium steel frame. The 692 has been often cataloged with the Tracker series of Taurus revolvers, and the solid topstrap frame has been adapted to accommodate chamberings from the .17 HMR to .44 Magnum. Alongside

the Tracker 992 in .22 LR/.22 Magnum, the Taurus 692 uses a quick-change cylinder system to adapt and accept multiple cartridges using bullets of similar diameter. The Taurus 692 includes two cylinders, one for .357 Mag. and .38 Special cartridges — including .38 SPL +P loads — and a second cylinder for 9mm cartridges. Both cylinders have a seven-round capacity. Also provided are five, seven-round moon clips — called "Stellar Clips" by Taurus. These improve function when shooting the rimless 9mm.

Looking specifically at the Taurus 692 Executive Grade, the revolver features a 3-inch target barrel. It may seem a misnomer to ascribe the terms "target" and "match" to such a short barrel, but Guns & Ammo took it to mean just that. Like other Executive Grade features, this is a best-quality component for Taurus. The barrel is ported with eight circular vents, four on each side of the front sight, allowing propellant gases to escape up like a booster to counter muzzle rise during recoil. The barrel features a fulllength underlug, shrouding the ejector rod.







The 692 Executive Grade features angled ports on each side of the muzzle, as well as a brass sight. The rear target sight is adjustable.



Each cylinder is labeled with the chambering and serial number, matching it to a specific revolver.







To unload the seven-shot cylinder, press the extended ejector rod to eject the cases. To remove the cylinder from the frame, depress the cylinder-release button on the right side of the frame while pulling the assembly forward and out of the frame; reinstall it in reverse order.

The front sight incorporates a brass rod in a steel fixture, not unlike a fiber-optic sight. Although the exposed brass does not increase the sight's light transferring capability, it adds to the gun's traditional and attractive aesthetic. It also presents the shooter with a proven front-bead-style sight picture. It's paired with a black, square-notch target-style rear sight that is adjustable for windage and elevation using a small flathead screwdriver.

CYLINDER CHANGES

Two interchangeable cylinder assemblies include a cylinder, ejector rod, extractor, and yoke. The cylinders are not fluted, but the cylinder-stop notches are cleanly machined with relieved approaches. We liked that both cylinders

were clearly laser etched with the correct chambering, "357 MAG-NUM" and "9mm", as well as the revolver's serial number, effectively matching the cylinders to the gun.

Exchanging the cylinders is a simple process. With an unloaded firearm, release the cylinder by pressing forward on the checkered cylinder catch. The cylinder swings out to the left side of the frame. Once released, depress the cylinder yoke catch button, located at the lower-front corner on the right side of the frame. With the button

depressed, the cylinder assembly can be pulled forward and removed. Note the channel around the circumference of the yoke's mounting lug where the catch engages the assembly. To reinstall, insert the yoke's mounting lug into the frame while pressing the yoke catch so that the assembly seats completely. Release the yoke catch to lock the assembly into the frame.

STEADY & FAST

Being a DA/SA design, there are two ways to fire the 692; pulling the trigger rearward initiates the double-action firing sequence. A full trigger press powers the hammer into its cocked position (one action) and release the sear to drop the hammer (second action). In single action, the

shooter pre-cocks the hammer by drawing back the checkered spur. The action also moves the trigger nearly all the way to the rear of the triggerguard. Afterward, only a short and light triggerpull is required to release the sear.

With either method of operation, as the hammer moves toward its cocked position, the revolver's other internal mechanisms are also engaged. First, the cylinder stop, located between the trigger and cylinder, drops out of engagement with the cylinder notches and



The hammer features a diamond-checker pattern on the wide spur, offering a positive experience when manually cocking the action for precision shooting.





The trigger features a curved and smooth face. It's smoother and lighter to operate due to hand-fitting for Executive Grade models.

recedes into the frame. Once the cylinder is unlocked, the hand emerges from the frame to engage the star-like gear on the cylinder's extractor. Upward movement of the hand rotates the cylinder counterclockwise one position. As the rotation completes — but before the sear is released — the cylinder stop reemerges to lock the cylinder into position for firing.

Taurus utilizes a transfer-bar safety in the 692 Executive Grade, incorporating another function. Unlike early cartridge revolvers, modern handguns do not incorporate a firing pin as part of the hammer, nor does the hammer directly contact the firing pin in most modern revolvers. Instead, a component called the "transfer bar" completes the connection, but only when the trigger is pulled. As

the trigger travels rearward, the transfer bar ascends between the hammer and the firing pin. It will stay in its upward position as long as the trigger is fully pressed, and its function is to transfer the energy of the hammer strike to the firing

pin. If the trigger is not pressed fully, the bar will not reach its apex position, and the hammer cannot exert force on the firing pin. The arrangement renders even a loaded and cocked revolver safe from drops or unintended impacts to the hammer.

The trigger is a wide, curved lever with a smooth face. Even in the age of flat-faced triggers, double-action revolvers and pistols usually offer a curved trigger. Double-action pull weights tend to be heavier than single-action or striker-fired triggers, so the wide, curved trigger increases finger engagement and facilitates greater leverage. Guns & Ammo's staff measured the pull weight for the sample 692 Executive Grade. The double-action pull averaged 10



Custom walnut-stained laminate wood grips are designed and manufactured by Altamont for Taurus Executive Grade revolvers.



The cylinder-release latch is serrated and contoured without sharp edges for comfort. Evidence of machine work are absent and smooth.

PERFORMANCE

LOAD	VEL. (FPS)	ES	SD	BEST GROUP (IN.)	AVG. GROUP (IN.)
Winchester Defend (9mm) 147-gr. JHP	944	56	15.8	1.95	2.73
Federal Personal Defense (.357 Mag.) 158-gr. JHP	1,136	45.6	11.4	1.98	2.07
Fiocchi Range Dynamic (.38 Spl.) 130-gr. FMJ	795	25.2	7.3	2.15	2.74
Hornady Critical Defense Lite (.38 Spl.) 90-gr. FTX	882	51.9	17.1	2.3	3.06
Speer Gold Dot (.38 Spl.) +P 135-gr. GD JHP	903	35.9	12.2	2.43	2.75

Notes: Accuracy is the average of five, five-shot groups fired at 25 yards from a Ransom Rest Multi Cal. Steady Rest. Velocity is the average of 10 shots measured using a Garmin Xero C1 chronograph offset 6 inches from the muzzle.

pounds, 10 ounces, compared to its 6-pound single-action pull.

Throughout testing, we were impressed by the trigger. Despite the weight of the double-action pull, the trigger offers a

smooth, consistent arc of travel, free of grit, walls, mush, or stops. The single-action pull is equally clean, with only the slightest hint of take-up; most shooters would simply press right through it. It was only detected during careful examination of the revolver's mechanics, but it was never felt on the range.

The stocks on the Taurus 692 Executive Grade are a dark-stained laminate wood with ergonomic relief cuts and diamond-pattern checkering. The 692 frame is technically a round-butt design, but the Executive Grade stocks provide a distinctly square-butt look and feel. There is a small flathead screw that secures the stocks together, and it features handsome brass fittings that complement



Creating the perfect blend of competition and tactical features requires collaboration. SIG SAUER chose Avient's Gravi-Tech™ material for the grip module on the new P320-XFIVE DH3, developed with Team SIG's Daniel Horner. The TXG grip, made of the tungsten-infused polymer provides the weight of steel without compromising flex, comfort, or performance.

Challenge Accepted.





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the front sight and suggest a traditional appearance. The aesthetic is further enhanced by the polished metal finish and the attractive contours that define Executive Grade models; the taper beneath the muzzle, the ramp to the rear sight, the slope of the frame by the hammer, and the profile of the triggerguard and grips. Given its appearance, it would be easy to lose sight of the fact that the 692 Executive Grade is a serious defensive revolver. It's also one of the most adaptable guns in its category for its defensive cartridge compatibility.

AT THE RANGE

To put its versatility to the test, G&A's evaluation incorporated both cylinders and a total of five loads comprised of .357 Mag., .38 Special, .38 Special +P, and 9mm ammunition from five different makers using five different bulletweights. Most striking was the consistent performance. Less than an inch separated the best accuracy results averaged from five, five-shot groups. The largest average group size measured just more than 3 inches, which we agreed is excellent for an iron-sighted 3-inch gun at 25 yards.

During testing, the adjustable rear sight became one of the staff's favorite features. Given the diversity of ammunition, being able to give the sight a couple *clicks* up or down to center punch targets was convenient and very helpful. We also appreciated the barrel's porting; it did an admirable job taming recoil. Paired with the 692's weight, which measured 34.8 ounces, unloaded, even the defensive .357s were quite manageable to shoot. Finally, the thorough dehorning that Executive Grade revolvers receive at the factory was noted for praise. For all of our manipulations, there were no bites, cuts or scratches.

The Taurus 692 Executive Grade scored highly for its fit, function, and ammunition flexibility. The trigger, sights, and overall shootability offer an experience par excellence. It pairs a professional appearance with refined construction, all for a reasonable price. Anyone in the market for, or curious to try a high-quality defensive revolver should put the Taurus 692 Executive Grade at the top of their list.



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PROOFHOUSE

Springfield Armory Model 2020 Boundary 6.5 CM



EXTENDING BORDERS

FOUR YEARS AGO, Springfield Armory announced the Model 2020 Waypoint bolt-action rifle in Guns & Ammo's November 2020 issue. The new-for-2024 Model 2020 Boundary shares much of the same DNA, but is without the detachable-box magazine. A longer internal magazine is now in its place. Many, especially among hunters, prefer an internal magazine because it is more comfortable to carry in the field. Some find the flush-fit internal mag more aesthetically pleasing (and less "tactical"), too. Regardless of the magazine, the Model 2020 Boundary exhibits the same exceptional performance as its predecessor.

The stock is made by AG Composites. Complete with bottom metal and an internal magazine, it weighs 2 pounds, 4 ounces. The flush-fit bottom metal and floorplate are made from aluminum, and all contours of the floorplate and bottom metal are smooth. There are no sharp edges to discomfort the

hand. Guns & Ammo received a test sample chambered in 6.5 Creedmoor, so it held four cartridges in the magazine. While it was possible to stuff five rounds in the magazine, it required a sharp slap of the bolt handle to move the bolt forward to chamber a round. Trying to load five rounds isn't practical.

The internal box magazine has a longer length than the detachable box that comes with other models. The Boundary is capable of feeding rounds that are 2.99 inches long from the internal magazine, instead of the 2.85-inch length in the polymer detachable box mags. Considering the significant differences in bullet shape, the additional length is welcome because it allows handloaders to seat bullets at their preferred distances from the barrel's lands. Having the option of loading rounds longer than normal also allows shooters to chase the lands as the barrel wears and the lands migrate down the bore.





Made for Springfield Armory by AG Composites, the carbon-fiber stock resembles the aesthetics and profile of other Model 2020 Waypoint models. However, the Boundary stock was slimmed to reduce weight. While free of adjustability features, the weight and handling were impressive.

SPRINGFIELD ARMORY MODEL 2020 BOUNDARY

TYPE	Bolt action
CARTRIDGE	6.5 Creedmoor (tested)
CAPACITY	4+1 rds.
BARREL	22 in. , 1:8-in. twist
OVERALL LENGTH	43 in.
WEIGHT	6 lbs., 13 oz.
STOCK	AG Composites, carbon fiber
LENGTH OF PULL	13.75 in.
FINISH	Matte blue (stainless steel)
TRIGGER	2 lbs., 6 oz. (adjustable)
SIGHTS	None
MSRP	\$2,600
MANUFACTURER	Springfield Armory, 800-680-6866, springfield-armory.com



SUM OF ITS PARTS

On inspection, the Boundary's carbon-fiber stock is a more streamlined version compared to the original Waypoint. It has no adjustable comb, which reduces weight. Within the carbon fiber, the stock uses aluminum pillars that are machined to match the action's contour. The pillars ensure that the receiver sits at the right height to guarantee reliable feeding.

Two flush cups on the left side of the rifle accommodate quickdetach sling swivels. Placing the

sling mounting points on the left side of the rifle lets the flat side sit against the rifleman's back when carrying slung over the shoulder. This also keeps a sling-swivel stud from protruding out of the stock's toe where it could impact the shooter's support hand when firing prone or from the bench. Up front, under the forend's tip, there are two M-Lok points for attaching a bipod.

The Model 2020 action utilizes two locking lugs on the bolt for a 90-degree lift that requires less effort. The bolt handle is arched to stay as far away from a mounted optic





A one-piece bolt offers a comfortable bolt knob turned down for leverage, and to prevent fingers hitting a low-mounted optic. The two-lug bolt head surrounds the large extractor and ejector.

as possible. The shape did a good job maximizing the distance between the shooter's hand and a mounted optic when cycling the action. The bolt carries the extractor on the face of the outboard lug, and the plunger-type ejector is found on the lower and opposite side of the bolt face. The bolt stop/release is on the left side of the receiver, just above the stock's waistline.

The Boundary comes with a TriggerTech Field trigger that adjusts from 2½ to 5 pounds. There is a small Allen screw on the bottom of the trigger housing just forward of shoe



It's a wide open shot but you just can't close the distance in time.

Your rangefinder agrees, 500 yards and some change. It's a helluva stretch between you and that trophy—and the setting sun isn't doing you any favors. You inhale slowly, take aim, and think to yourself:

I sure hope the freezer is big enough.

SST



HUNT LONG RANGE WITH CONFIDENCE. HuntLR 6.5 Creedmoor—exclusively from AMMO, Inc.





Springfield Armory uses the TriggerTech Field Trigger in the Model 2020 Boundary. It's adjustable from 2½ to 5 pounds.



The Boundary can be had with either a stainless-steel barrel or a carbon-fiber-wrapped barrel made by BSF Barrels.



The Boundary features a modern font marking the maker, model, serial number and chambering. A secure 20-MOA rail is included.

that adjusts pull weight. Remove the barreled action from the stock to access the screw. There is a ball and detent holding the screw, so it *clicks* when turned. When adjusting the test rifle to as light of a triggerpull as possible, the pull weight measured 2.4 pounds. TriggerTech has a reputation for actually being able to adjust to the published pull weight, as this example demonstrated.

The Boundary is available with two barrel types: A traditional, fluted, stainless-steel barrel or a carbon-fiber barrel with stainless-steel internal liner. G&A's test rifle had the



On the right side of the thumbrest, behind the bolt, is the two-position safety lever, which is a component of the TriggerTech trigger.



Standard with the threaded barrel is a crowned, radial-ported muzzlebrake. It is the same as included with the Model 2020 Waypoint.

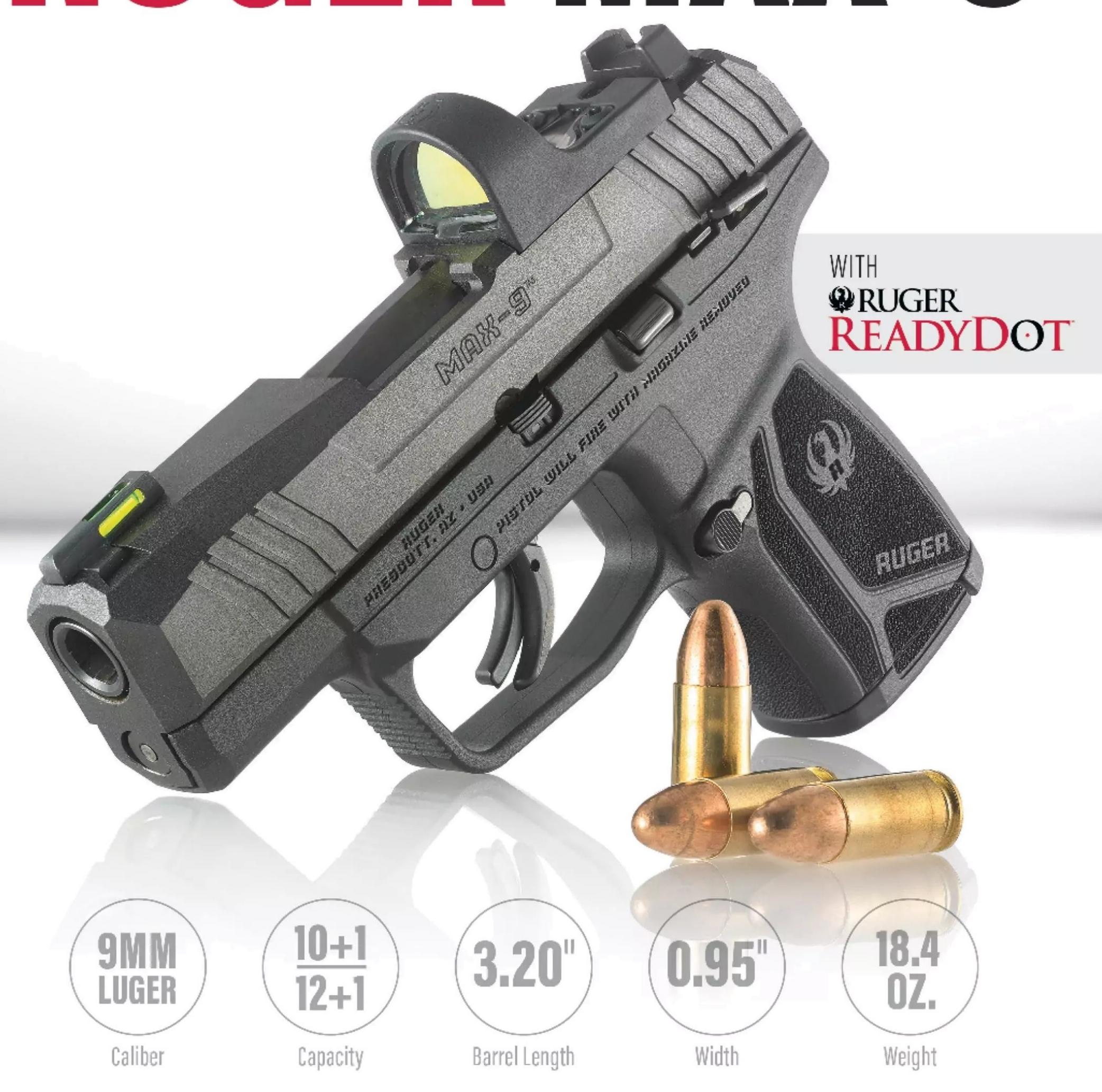


The bolt stop/release lever is located conveniently on the left side of the receiver. Users of the Model 700 will find it familiar.

carbon-fiber model, which maintained Springfield Armory's .75 MOA accuracy guarantee for three shots.

The carbon-fiber barrel is made by BSF Barrels, and it is unique in how it's made. Unlike most carbon-fiber barrels where the carbon and resin are wrapped directly around the steel liner, BSF uses the carbon fiber like a stiff sleeve that only contacts the steel barrel at the ends. The sleeve surrounds the steel liner, but leaves a small gap through which air can flow. The sleeve is slightly longer than the barrel, so it provides tension for the steel. The limited

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@





number of BSF barrels G&A has tested, as of this review, has indicated the tensioning strategy works. G&A's test rifle shot exceptionally well, even when it wasn't allowed to cool.

PERFORMANCE

6.5 CREEDMOOR	VEL. (FPS)	ES	SD	BEST GROUP (IN.)	AVG. GROUP (IN.)
Fed. Cntr. Strike 140-gr. OTM	2,661	21	8.3	.52	.68
Norm. Gld. Tgt. 130-gr. HPBT	2,774	43	13.7	.52	.71
Horn. Match 140-gr. ELD-M	2,715	25	9.3	.74	.87

Accuracy is the average of five, five-shot groups from a benchrest at 100 yards. Velocity is the average of five shots recorded by Garmin Xero C1 chronograph.

increase. BSF's counter to accuracy loss through heat accumulation is the tension placed on the barrel by the carbon-fiber sleeve. When put through G&A's accuracy and function protocols, the Boundary shot well. Since this is a hunting rifle, though, three-shot groups would typically be the order. However, it shot so well that we tested it with the five-shot standard of tactical and precision target rifles.

During accuracy testing, the Boundary showed a preference for Federal Gold Medal CenterStrike ammunition. Using the 140-grain load, a .22-inch three-shot group and a .9-inch 10-shot group were recorded when fired in less than a minute. Of course, there is no scenario where a

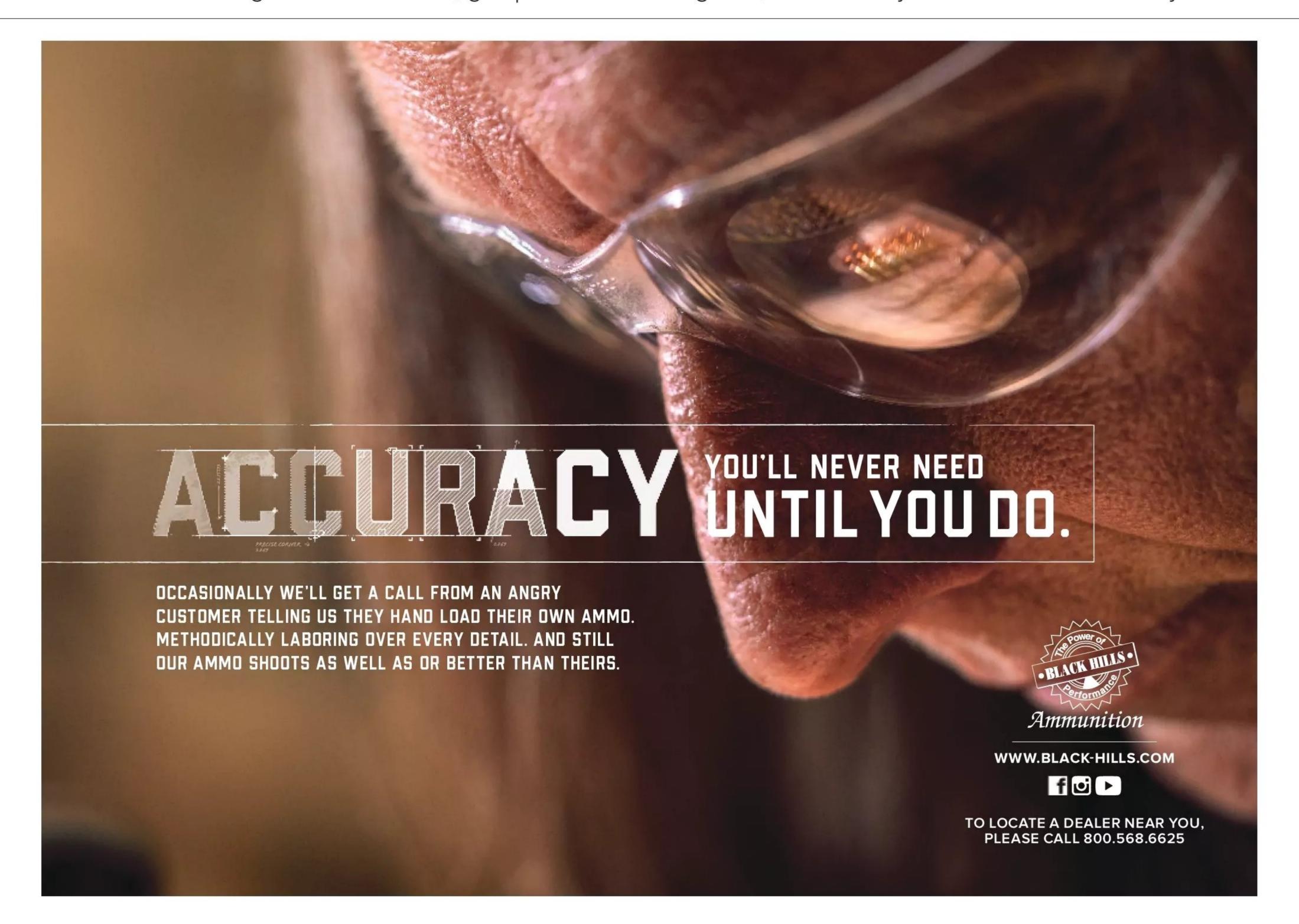
hunting rifle would ever need to shoot 10 shots rapidly, but the barrel withstood the generated heat. The tensioning premise holds merit.

The Model 2020 Boundary is a well-balanced approach to a contemporary hunting rifle. The action feeds and extracts reliably and easily. The stock

design is a good fit for sporting use, and the barrel is plenty accurate. For those looking for a premium hunting rifle, one with a floorplate instead of a detachable box magazine, the Boundary fits that criteria remarkably.

AT THE RANGE

The lighter the contour of a barrel, the faster a barrel heats up. It occurs because the stainless steel in the barrel absorbs the heat from firing. The less steel in the barrel, the hotter the barrel gets. As barrels heat, group sizes









THUNDER 2 2 3



Two-Handed Grip

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PROOFHOUSE

Gunwerks Skuhl .375 H&H Magnum



FOR DANGEROUS GAME

A CASUAL GLANCE at the Gunwerks Skuhl and a rifleman might conclude that it is another Model 700-footprint action in a carbon-fiber stock, chambered in cartridges designed to pursue dangerous game. Technically, that's correct. However, a list of details for this rifle is found nowhere else.

Gunwerks makes its own stocks, and the methods used are entirely exclusive. Most carbon-fiber stocks use a mold and a bladder, for example. The mold determines the shape while a bladder is inserted inside the mold and then filled with air. The bladder squeezes the carbon-fiber shell into place so each stock is the same when it's cured. The bladder is then removed and the manufacturer injects expanding foam into the shell.

As long as the foam stays bonded to the carbon-fiber shell, the stock performs fine. The foam serves a vital role in most synthetic-material stocks; it's what supports the action and keeps it from moving when the rifle fires because the action doesn't contact the shell. If there is an aluminum bedding block, the foam is what the block attaches to. The worst that can happen to the foam in a synthetic stock is it can't handle the loads placed on it — such as when stocks are made really light — or when it separates from the outer shell. The release agent for the bladder used in making the shell inhibits the foam from sticking to it, so manufacturers invest time cleaning the release agent out before injecting foam. The option is to make cheap stocks and hope everything sticks together.

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Gunwerks' Clymer model stock features a negative comb, integrated sling-swivel attachment points and an effective recoil pad.



Available in either Professional Green (shown), Professional Brown, or Professional Grey colors, exposed carbon fiber accents the stock.



A modest length of rail and a flush cup attachment point under the end of the forend do not uncomfortably interfere with handling.

Gunwerks makes its stock differently. A Gunwerks stock is formed, shaped and cured in one operation. When asked how one makes the lightest and most rigid stock possible, Gunwerk's President Aaron Davidson said, "The secret is you can't add the foam later." Gunwerks takes the carbon-fiber shell and places two semi-cured syntactic foam stiffener plates along the sides and bottom edge.



The two-lug bolt features a near 90-degree lift, robust handle, and dual ejectors opposite of a Model 1911-inspired extractor design.

The plates are about a quarter-inch thick and run from the tip of the forend through the grip. These plates replace the traditional foam used in synthetic stock making. Once the stock and stiffener plates are put under heat and pressure, the assembly co-molds into a single monolithic unit where the plates cannot separate from the shell. The structure is so stiff and efficient that Gunwerks' stocks are stronger and







Gunwerks radial muzzlebrake is effective and blends its profile with the contours of the barrel. A directional muzzlebrake is also offered.



The two-position safety lever sits familiarly to the right of the octagonally-machined bolt plug. It's part of the TriggerTech trigger system.



Pressing the magazine release inside the triggerguard allows the user empty the magazine without needing to repeatedly cycle the bolt.



The stock seen on the Skuhl is the Clymer model, which was designed to be a compact hunting stock. It has all of the features that made Gunwerks stocks popular with discerning sportsmen willing to pay a premium for a solution, not just a rifle. The negative comb, i.e., a comb that is higher at the shoulder than at the grip, decreases



TriggerTech triggers are a standard for Gunwerks rifles. The Skuhl arrives with a pre-set pull weight measuring 2½ pounds.

the pressure put on the shooter's cheek when the rifle fires. The toe is flat on the bottom and carries a slight angle that allows the shooter to make slight elevation adjustments by moving the rear bag fore and aft.

Sling-swivel flush cups sit on each side of the buttstock. They are machined into an aluminum plate that sits between the buttpad and stock, so there is zero chance



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Capacity of the Skuhl chambered in .375 H&H Magnum is three-plus-one rounds. The large magnum loaded and ejected flawlessly.

of the flush cups pulling out of the carbon-fiber shell.

The stock's grip has flats for the thumb and for the thumb's portion of the palm. Many shooters like to rest the thumb on the side of the grip. This model allows either left- or right-handed shooters to do so effort-lessly with lots of support. The grip is angled and leaves enough space between the firing hand and the triggerguard that the guard does not make contact with the fingers under recoil, even when shooting the .375 H&H Magnum.

The forend is equally well-engineered. There is a flat on the bottom with slightly angled edges. This allows the forend to ride supports and rest well while still being comfortable in the hand. There is a section of rail and a flush cup recessed into the forend tip so that it is also flush with the bottom of the forend. This is the most copied stock feature appearing on synthetic stocks today; Gunwerks created it. It allows the forend to be completely smooth and flat, while still allowing for the quick attachment of bipods, tripods and slings.

There is an aluminum bedding block that exists inside the stock. It

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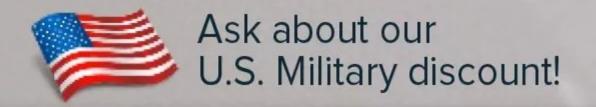


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PERFORMANCE

.375 H&H MAGNUM	VEL. (FPS)	ES	SD	BEST GROUP (IN.)	AVG. GROUP (IN.)
Fed. Cust. Shop 300-gr. Bear Claw	2,459	28.5	9	1.02	1.2
Hornady DGX 300-gr. Bonded JSP	2,557	19.6	6.2	1.27	1.52

Notes: Accuracy is the average of five, three-shot groups at 100 yards. Velocity is the average of five shots measured with Garmin Xero C1 placed adjacent to the muzzle.

contains the best-kept secret in how to build a bedding block, yielding excellent accuracy. Gunwerks uses a wedge system that pinches the recoil lug to immobilize the barreled action under recoil. Just about everyone knows that aluminum bedding blocks don't need bedding compound; drop in a barreled action and head to the range. Watch a rifle with a regular bedding block fire under a high-frame rate camera and it's obvious the barreled action moves around. The wedge system Gunwerks uses almost completely eliminates this movement; it's a reason why this rifle doesn't throw the occasional "flyer."

The action also has significant improvements versus the usual M700 clone. A glance at the bolt face reveals two plunger-style ejectors and a 1911-type extractor. This is evidence of thoughtful design. The dual ejectors push cases out of the receiver quickly and reliably. The extractor is located just inside the outboard bolt lug, so cases are thrown as far away from the scope as possible. It's a

great combination for the long .375 H&H Magnum to guarantee reliable extraction and ejection.

AT THE RANGE

Shooting the Gunwerks Skuhl was less punishing than Guns & Ammo's staff expected. The stock and buttpad absorbs a lot of recoil. The steel barrel has a heavy profile, and the weight's location further helps this rifle remain shootable. As well, the small muzzlebrake is effective but doesn't direct the blast back toward the shooter; it does a great job of reducing the rifle's rearward movement.

There are several features built into the Gunwerks Skuhl that are not usually found on rifles chambered in .375 H&H. The Skuhl brings all of the modernity, convenience and reliability that design and manufacturing allow for one of world's most proven and effective dangerous game cartridges. For \$100 less, the Skuhl is also available in .338 Remington Ultra Magnum (RUM), .375 Ruger, and .416 Ruger. A left-hand action is also an option.





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SEPTEMBER 2024 G&A 119 CONNECT

"Best of" lists can be fun — in moderation.

LISTS ON LISTS

THERE ARE MANY types of articles available online. Integrated video, slideshows, long page scrolls, are a few examples of formats that utilize the webpage well. The most popular type of web article — by far — is the "Top 10" list. Many of Guns & Ammo's highest engagement pieces have been lists that com-

pare guns, cartridges, accessories, and even states for gunowners.

The popularity of the Top 10 can be attributed to several factors: First, this type of list disassembles the subject into an easy-to-read format. Numbers on the list make for a nice summary, often highlighting the pros and cons. Links are usually provided should the reader want to know more. Shooters looking for recommendations also enjoy lists as a straightforward tool to compare products. "How-To" guides also benefit from being presented as a list. The various tips and tricks don't always flow together well as a story.



10 MORE UNDERRATED **HUNTING CARTRIDGES**

G&A's last article on this subject received a huge amount of feedback. We took it seriously and followed up, reviewing several of the most popular suggestions.



BODDINGTON'S TOP 10 HUNTING CARTRIDGES Craig Boddington has applied decades of hunting experience to explain which game-getting cartridges got it right, and why.

From a writing perspective, lists offer a strong appeal. From the editor's chair, I see that lists can be profitable for content producers. Rattling off a Top 10 on nearly any firearm-related subject — regardless of how niche — is an excellent exercise to stay current on new products and trends, especially when you're workshopping it with colleagues. For a writer, it can also be like putting to pen a conversation you've sorted out with friends on a back porch. That's not to say there isn't work to writing them; each numbered list still requires proper sources and vetted research to support it.

So, if lists are so great, why doesn't



12 TIPS FOR **COMPETITIVE SHOOTING**

Pro shooters Jessie Harrison, KC Eusebio, and Trent Eichler from Team Taurus share tips to make you a better shooter.



ANTONIO ACITELLI

Guns & Ammo offer more of them online? Well, it's possible to have "too much of a good thing," as the idiom goes. The novelty lists can wear thin, especially when other lists crowd the homepage. More than a few prominent news and

entertainment websites have crumbled under the weight of endless Top 10 articles. It's easy to saturate a website on a topic. Eventually, readers get sick of lists! That is why the digital team prefers to assign them sparingly among G&A's reviews and news.

Are there any topics you'd like to see a list feature? Let us know! Email us at gaeditor@outdoorsg.com with your suggestions. CM

TOP COMMENTS

In response to G&A's online article, "Boddington's Top 10 Hunting Cartridges":

"I was surprised at how similar my picks were with Mr. Boddington's! Though there were a few exceptions, we were both very agreeable on the 'Top 10' cartridges. What made the article really stand out was how the list was presented, and never were any other cartridges criticized. All cartridges are worthy when used properly, and all cartridges hold a special place in cartridge history and hunter's hearts!

While I've used and shot many of these rounds, I still find myself using oddball favorites. Mine are the 6.5 Swede, .300 Savage, most all .35s, including the .356 and .358 Winchesters, etc. — generally, to hunt deer nowadays.

Still, many of my favorites have been included in Boddington's list. The best part is being able to read great articles by one of my favorite authors! Great job, and thanks for another great piece."

— Art Shingler, Email



Respond to articles, find community and join the conversation in the Guns & Ammo forums and by engaging with us on social media:





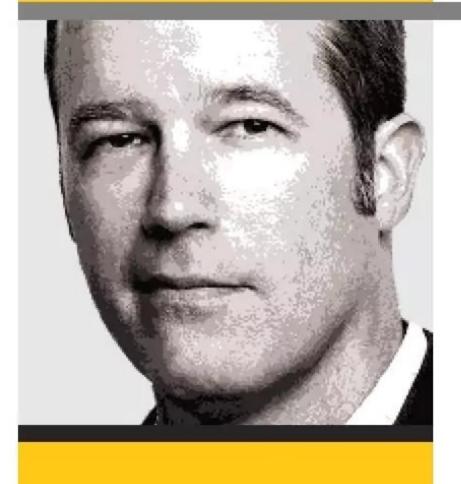








120 G&A SEPTEMBER 2024 SPENT CASES



"Amend the law, not it's meaning," Court decides.

KEITH WOOD

BUMP STOCKS ARE BACK

IN 2019, THE TRUMP ADMINISTRATION'S Department of Justice amended ATF's rules to finalize an executive ban on "bump stocks" by reclassifying them as "machine guns." Many viewed such devices as a gimmick until a maniac in Las Vegas used them to murder 58 people and wound an additional 500 in 2017. Under the rule, which the Administration pursued in the wake of that mass

shooting, bump stocks had to be destroyed or surrendered. Possession of a bump stock on March 25, 2019, was legal but ownership would be the basis of a felony at the stroke of midnight.

The 2019 ban was challenged in the courts. In June 2024, the U.S. Supreme Court ruled 6-3 in *Garland* v. *Cargill* that a bump stock is not a machine gun and that the ban was unlawful. The

ruling in that case was important, not because of bump stocks, but due to the broader precedent that it set. The Court didn't reject the ban because it violated the Second Amendment; it did so because the Executive Branch exceeded its statutory authority in reclassifying them. Just because a bump stock acted like a machine gun didn't make it one under the law.

"A bump stock does not alter the basic mechanics of bump firing, and the trigger still must be released and re-engaged to fire each additional shot," the Court stated.

In his concurring opinion, Justice Alito wrote, "The horrible shooting spree in Las Vegas in 2017 did not change the statutory text or its meaning. That event demonstrated that a semiautomatic rifle with a bump stock can have the same lethal effect as a machinegun, and it thus strengthened the case for amending [the law]. But an event that highlights the need to amend a law does not itself change the law's meaning."

The point is that statutes can only be stretched so far to enact an administration's policy goals. Our founding documents establish that only Congress can make laws, and it is the Executive Branch's role to enforce them. The courts could apply these same principles to other pending cases related to firearm accessories, including pistol braces, binary triggers and other emerging technologies. The opinion

reiterates that Congress passes laws, not the White House, no matter what party occupies it. This should apply whether we are talking about bump stocks, gas stoves or internal combustion engines. The process matters.

Personally, I could care less about bump stocks, but I respect our Constitution and rule of law. When I stated as much as the ban was announced, a reader from Texas denounced

my words as "inflammatory" and "anti-government." Well, it appears that six out of the nine U.S. Supreme Court justices agreed with my so-called, "dangerous talk."

Will the U.S. Congress ban bump stocks? Only time will reveal the answer to that question. As stated in 2019, my fear is that such legislation could become a vehicle for a broader ban; then-Chairman of the Senate Judiciary Committee, President Biden was a champion of the 1994 Federal Assault Weapons Ban. He has made his position clear, wanting to reinstate a broader version of that law. Losing the Republican majority in the House of Representatives in November 2024 could make that a reality.

Before you set out to (re-)attach a bump stock to your rifle, remember that 16 states have banned them. These bans were passed by the respective state legislatures and are unaffected by the U.S. Supreme Court ruling, which only applies to the ATF rule. In the wake of this ruling, I predict that more states will act.



EMISSARY ALL-BLACK









