

.44 MAGNUM — THEN AND NOW

SHOOTING TIMES

DECEMBER 2023 // JANUARY 2024

QUICKSHOTS

- ▶ **WINCHESTER**
Big Bore .357 Magnum
- ▶ **RITON**
5 Tactix 1-10X 24mm
- ▶ **KINETIC**
Less-Lethal
12-Ga. Ammo



SIG SAUER'S **P320-AXG LEGION**
LIKE NO OTHER 9MM

**SPRINGFIELD'S
NEW MODEL
2020 RIMFIRE**
RUGGED AND
REFINED

**THE ULTIMATE
CAR GUN**
WIELAND
OFFERS AN
EXTRAORDINARY
SOLUTION

**BERGARA B-14
RIDGE CARBON**
BUILT FOR THE
BACKCOUNTRY



PDP

It's our duty to build the best performing firearm...



IT'S YOUR DUTY TO BE READY



Red Dot
Ergonomics



Performance Duty
Grip Texture



Red Dot Ready



SuperTerrain
Serrations



Modularity



Performance
Duty Trigger

PDP Full Size



PDP Compact

What does it mean to be ready?

waltherarms.com

© 2023 Walther Arms Inc. | All Rights Reserved



22 CREEDMOOR

THE WORLD'S MOST VERSATILE
.22 CALIBER CARTRIDGE



VANDAL



VANDALX

**FAST.
FLAT.
LETHAL.**

VELOCITY

At 600 yards, the 22 Creedmoor is almost 600 FPS faster than the 22-250.

DROP

At 1,000 yards, the 22 Creedmoor has almost 12 feet less drop than the 220 Swift.

WIND DRIFT

At 600 yards, the 22 Creedmoor has 24.8 inches less wind drift than the 22-250 with a 10 mph wind at 90 degrees.

ENERGY

At 1,000 yards, the 22 Creedmoor has enough kinetic energy for hunting deer.

*Comparisons are using 22 Creedmoor with 80 gr ELD-M, 22-250 with 55 gr V-MAX, 6.5 Creedmoor with 143 gr ELD-X, and 220 Swift 50 gr Nosler.

COMING SOON!



SHOOTING TIMES FEATURES CONTENTS

DECEMBER 2023 // JANUARY 2024 VOLUME 64, ISSUE 11



Rugged & Refined

There's a new bolt-action .22 LR rimfire rifle on the scene, and it's a real humdinger. Made by Springfield Armory, the new Model 2020 Rimfire is offered in six configurations.

By Joel J. Hutchcroft

26

Like No Other 9mm

The P320-AXG Legion isn't your run-of-the-mill striker-fired 9mm pistol.

By Joel J. Hutchcroft

32

A Yeoman's Backcountry Rifle

Bergara's New B-14 Ridge Carbon is a no-nonsense backcountry rifle with a new carbon-wrapped barrel.

By Joseph von Benedikt

40

The .44 Magnum—Yesterday and Today

Regardless of how it might be measured, the .44 Remington Magnum is one of the all-time great cartridges.

By Layne Simpson

46

.357 Magnum Factory Ammo Versus Handloads

We compared factory-loaded .357 Mag. ammo to handloads in a 3.0-inch-barreled revolver. Here are the results.

By Steve Gash

60

Quick Shot

Riton 5 Tactix 1-10X 24mm

This rugged scope has a 30mm tube, an illuminated reticle, zero-resettable turrets, high-density glass, and more.

By Joel J. Hutchcroft

62

Quick Shot

Winchester Big Bore .357 Magnum Ammo

With its 158-grain SJHP bullet, this .357 Mag. loading is intended for big-game hunting and personal protection.

By Brad Miller PhD

64

Quick Shot

Kinetic Less-Lethal 12-Gauge Ammo

This unique 12-gauge defensive ammo produces virtually no recoil and 16 times less noise.

By Joel J. Hutchcroft

66

Shooting Times Index for February–December 2023 Vol. 64.

800-338-3220 | HORNADY.COM



NEW 7 PRC

The new 7mm Precision Rifle Cartridge delivers results from the treestand to the mountain top. This high performance, modern 7mm cartridge utilizes long, heavy for caliber bullets in a standard long action. With results you can count on, trust your next hunt or ELR match to the 7mm PRC.

FIND OUT MORE

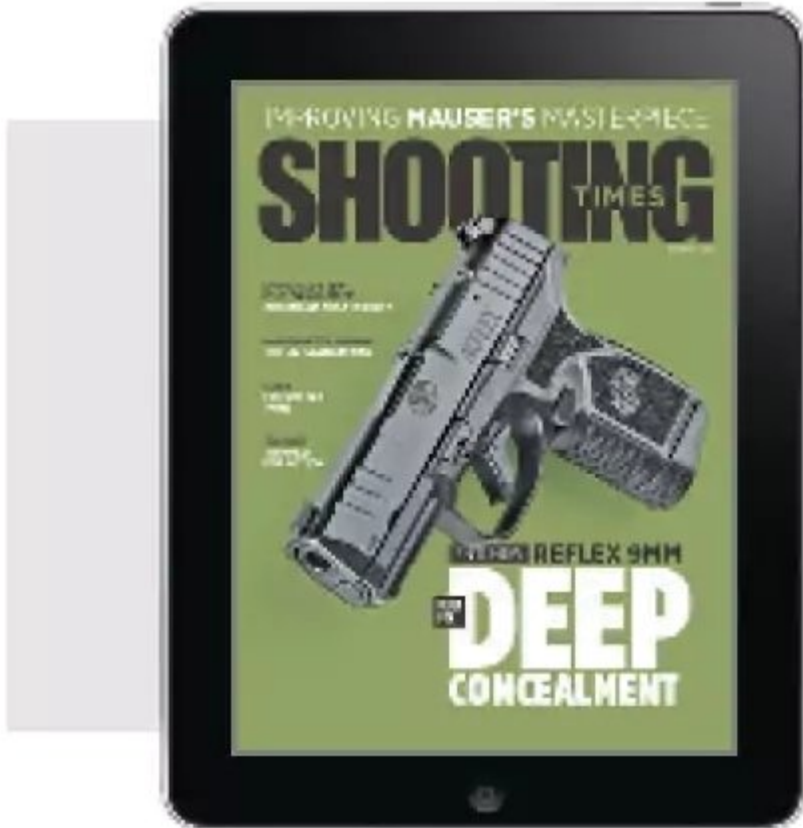


Precision Hunter®
175 gr. ELD-X®

Match™
180 gr. ELD® Match

Outfitter®
160 gr. CX™





SHOOTER'S UPDATE

- 8 Readers Speak Out
Thwarting the .264 Win. Mag., Loves the Ithaca Model 37, and a Better Way to Clean Cases
- 10 New Guns & Gear
Rossi Brawler, Davidson's Exclusive Pietta Revolvers, FN 502 MRD, Auto-Ordnance Tanker 1911
- 12 Ask the Experts
Rossi or Taurus and Winchester Model 70 Gunsmith?

SHOOTER'S GALLERY

- 14 The Shootist
Model 1891 Argentine Mauser
Joseph von Benedikt
- 18 The Ballistician
Shorter than "Short"—Winchester's Super Short Magnums
Allan Jones
- 22 The Reloader
Loads for Speer's New Impact Rifle Bullet
Lane Pearce

SHOOTER'S SHOWCASE

- 68 Gunsmoke
The Ultimate Car Gun
Terry Wieland
- 72 Hipshots
Stalwart of the Snubnose
Joel J. Hutchcroft



facebook.com/ShootingTimesMag



shootingtimes.com



twitter.com/ShootingTimesUS

VICE PRESIDENT,
SHOOTING GROUP PUBLISHER
Chris Agnes

EDITORIAL
EDITOR IN CHIEF
Joel J. Hutchcroft

COPY EDITOR
Bill Bowers

CONTRIBUTORS
Craig Boddington
Jake Edmondson
Steve Gash
Allan Jones
Payton Miller
Lane Pearce
Layne Simpson
Joseph von Benedikt
Terry Wieland

ART
ART DIRECTOR
Mark Kee

STAFF PHOTOGRAPHER
Michael Anschuetz

PRODUCTION
PRODUCTION MANAGER
Terry Boyer

PRODUCTION COORDINATOR
Jenny Kaeb

ENDEMIC AD SALES
VP, ENDEMIC SALES
Michael Savino — mike.savino@outdoorsg.com

NATIONAL ENDEMIC SALES
Jim McConville (440) 791-7017

WESTERN REGION
Hutch Looney — hutch@hlooney.com

MIDWEST REGION
Mark Thiffault (720) 630-9863

EAST REGION
Pat Bentzel (717) 695-8095

NATIONAL AD SALES
ACCOUNT DIRECTOR—DETROIT OFFICE
Kevin Donley (248) 798-4458

NATIONAL ACCOUNT EXECUTIVE—CHICAGO OFFICE
Carl Benson (312) 955-0496

DIRECT RESPONSE ADVERTISING/NON-ENDEMIC
Anthony Smyth (914) 409-4202

Shooting Times (ISSN 0038-8084) is published monthly with a bimonthly issue in Dec/Jan by Outdoor Sportsman Group®, 1040 6th Ave., 17th Floor, New York, NY 10018. Periodicals Postage Paid at New York, NY and at additional mailing offices.

POSTMASTER: Please send address changes to Shooting Times, P.O. Box 37539, Boone, IA 50037-0539. Return undeliverable Canadian addresses to 500 Rt 46 East, Clifton, NJ 07011. Canada Post International Publications Mail Product/Sales Agreement No. 41405030.

Readers Speak Out Illustration: @mstanley13 - fotolia.com
New Guns & Gear Illustration: @Oleksandr Moroz - fotolia.com
Ask the Experts Illustration: @rukanoga - fotolia.com

MOSSBERG | 590S® SERIES

**SHORT
SHELLS?
NO
BIGGIE.**



#51604 -
590S® Optic-Ready
12GA, 20" Barrel
(Optic not included)

#51601 - 590S®
Shockwave®
Bird's Head Grip
12GA, 14" Barrel
(Shockwave is a trademark of
Shockwave Technologies, Inc.)

SAFETY TIP

Store firearms securely, inaccessible to
children and unauthorized users.

Consult and comply with any and all applicable federal, state,
and local laws, regulations, requirements, and/or restrictions,
including but not limited to those regarding the purchase,
ownership, use, transport, and carrying of a firearm.
Not all products are available in all states and jurisdictions.

**CYCLES 1.75," 2.75," AND 3" SHELLS
INTERCHANGEABLY, RIGHT OUT-OF-THE-BOX.**

Short shell capability— No adaptor required. With the 590S, you can
cycle a range of 12GA shells interchangeably— in any combination—
gaining up to 13+1 capacity with 1.75" short shells. New optic-
ready models have an innovative cut receiver that allows direct
mounting of Shield-RMSc pattern micro dot sights, for improved
eye alignment and target acquisition.

**Mossberg— Makers of dependable, hardworking firearms
for more than a century.**

LEARN MORE AT
MOSSBERG.COM



SCAN CODE FOR MORE INFO

MOSSBERG
SINCE 1919

WILSON  COMBAT

OUTDOOR SPORTSMAN

GROUP®

PUBLISHING & BRANDED MEDIA

CHIEF OPERATING OFFICER,
PUBLISHING & BRANDED MEDIA
Mike Carney

EVP, GROUP PUBLISHER & OPERATIONS
Derek Sevcik

VP, CONSUMER MARKETING Peter Watt

VP, MANUFACTURING Deb Daniels

SENIOR DIRECTOR, PRODUCTION Connie Mendoza

DIRECTOR, PUBLISHING TECHNOLOGY Kyle Morgan

SENIOR CREATIVE DIRECTOR Tim Neher

DIRECTOR, DIGITAL EDITORIAL Darren Choate

For questions regarding digital editions, please contact
digitalsupport@outdoorsg.com

MEDIA
outdoorsg.com

TELEVISION
outdoorchannel.com
thesportsmanchannel.com
worldfishingnetwork.com

FISHING
bassfan.com
floridasportsman.com
flyfisherman.com
gameandfishmag.com
in-fisherman.com

HUNTING
bowhunter.com
bowhuntingmag.com
gundogmag.com
petersenshunting.com
northamericanwhitetail.com
wildfowlmag.com

SHOOTING
gunsandammo.com
handguns.com
rifleshootermag.com
shootingtimes.com
firearmsnews.com

Copyright 2023 by Outdoor Sportsman Group®

All Rights Reserved. No part of this book may be reproduced without written permission. Shooting Times® is a registered trademark of Outdoor Sportsman Group® in the United States.

The Publisher and authors make no representations or warranties regarding the accuracy, completeness, and timeliness of the information contained in this publication. Any reliance or use of the information is solely at your own risk, and the authors and publisher disclaim any and all liability relating thereto. Any prices given in this issue were suggested prices at the press time and are subject to change.

Some advertisements in this magazine may concern products that are not legally for sale to California residents or residents in other jurisdictions.

SUBSCRIPTIONS INQUIRIES: Should you wish to change your address, order new subscriptions, or report a problem with your current subscription, you can do so by writing Shooting Times, P.O. Box 37539, Boone, IA 50037-0539, or E-mail us at stmcustserv@cdsfulfillment.com, or call TOLL FREE 1-800-727-4353.

BE AWARE THAT SHOOTING TIMES ONLY ACCEPTS SUBSCRIPTION REQUESTS FROM AUTHORIZED AGENTS! WE MAY NOT HONOR REQUESTS FROM UNAUTHORIZED AGENTS, AND YOU THEREFORE MAY LOSE YOUR MONEY IF YOU BUY FROM AN UNAUTHORIZED AGENT. If you are offered a subscription to Shooting Times, please call 1-800-727-4353 to determine if the agent is authorized. For more information on subscription scams, please visit www.ftc.gov.

Subscription rate for one year is \$23.98 (U.S., APO, FPO, and U.S. possessions). Canada add \$13.00 (U.S. funds) per year, includes sales tax and GST. Foreign add \$15.00 (U.S. funds) per year.

Occasionally, our subscriber list is made available to reputable firms offering goods and services that we believe would be of interest to our readers. **If you prefer to be excluded, please send your current address label and a note requesting to be excluded from these promotions to: Outdoor Sportsman Group - 1040 6th Ave, 17th Floor, New York, NY 10018 Attn: Privacy Coordinator, or email your label information and note to privacycoordinator@outdoorsg.com**

FOR REPRINTS: For Reprints/Eprints or Licensing/Permissions, please contact: Wright's Media - TOLL FREE 1-877-652-5295.

CONTRIBUTIONS: Manuscripts, photographs and artwork must be submitted to the editorial department with a SASE. The Publisher assumes no responsibility for loss or damage to unsolicited material. Please send to: Shooting Times, Editor, 2 News Plaza, Peoria, IL 61614.

PRINTED IN THE U.S.A.



THE ALL-NEW NULA

ULTRALIGHT BOLT-ACTION RIFLE

Wilson Combat has spared no expense in the development of the new generation New Ultralight Arms line of bolt action rifles.

Wilson Combat has taken the Melvin Forbes legendary rifle design and integrated several improvements by leveraging modern manufacturing methods and our 45 years experience producing industry leading quality firearms. The modern NULA rifle takes Melvin's time tested design to the next level of accurate and dependable bolt action rifles.



SUB 1" MOA



TIMNEY ELITE HUNTER TRIGGER



CARBON FIBER STOCK



4.94 LBS TOTAL WEIGHT*

*4 lb. 15 oz to 5 lb. 4oz (depending on caliber and barrel length)



BOLT FULLY MACHINED FROM 4340 BARSTOCK

ARMORLUBE DLC FINISH

MODEL 20 SPECS

AVAILABLE CALIBER

.243 Winchester

6.5 Creedmoor

7mm-08 Remington

.308 Winchester

.358 Winchester

BARREL LENGTH

16.25"

20"

22"



Scan QR Code or Visit
WILSONCOMBAT.COM
to Learn More.



GREAT NEW PRODUCTS FROM RUGER

MAX-9[®] WITH READYDOT[™] OPTIC

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



SECURITY-380[®]

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



MARK IV[™] 22/45[™] LITE WITH CLEAR ANODIZED FINISH

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



SFAR[™]

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



LC CHARGER[™]

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



SUPER WRANGLER[®]

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



LEARN
MORE



The acquisition, ownership, possession and use of firearms are heavily regulated. Some models may not be legally available in your state or locale. Whatever your purpose for lawfully acquiring a firearm – know the law, get trained and shoot safely.



RUGER

Marlin



SHOOTER'S UPDATE

READERS SPEAK OUT

NEW GUNS & GEAR

ASK THE EXPERTS



Thwarting the .264 Win. Mag.

I ENJOYED ALLAN JONES'S COMMENTS RELATED TO THE THWARTING OF the .264 Winchester Magnum in his April column. As a user, I would like to add my comments as well. I believe the diminished success was due to hunters, sports writers, and Winchester itself.

Living in Utah, I took possession of a Sako Finnbear .264 Win. Mag. in 1962 at the age of 15. Area hunters considered a .264-caliber bullet too small and preferred the .30-06, .30-30, and .308 Winchester. Savvy hunters shot the .270 Winchester loaded with 130-grain bullets for deer. Big trophy deer were plentiful at the time, but I chose the .264 Win. Mag. not only for deer, but future antelope, caribou, sheep, and goat hunts in Wyoming, Alaska, and British Columbia. (I'm still waiting.)

Sports writers characterized the .264 Win. Mag. as both "overbore-capacity" and a "barrel-burner," with barrels being shot out in 1,200 rounds. This scared away a lot of hunters and shooters. Frankly, 1,200 rounds is a lot of trophy animals. This alone did a lot to kill the interest of potential buyers. Incidentally, I could never understand why writers considered the .257 Weatherby the darling child of high-performance cartridges for everything from field mice to elephants and why the .264 Win. Mag. was a bad design! I'm still trying to figure out why published load data show such a marked performance difference between the two cartridges.

Winchester and gun manufacturers did not supply appropriate firearms or ammunition to suit the cartridge. Rifles needed 26-inch barrels. (I'm not worried about how "handy" a rifle is on a sagebrush flat in the middle of Wyoming or above timberline on some mountain in Alaska.) Also, hunters did not understand the concept of "heavy-for-caliber" bullets for long-range shooting that is currently in vogue. Ammunition makers should have marketed a 129-grain loading as an option for improved exterior ballistics. There are now (and were then) plenty of suitable bullets from Nosler and others that would provide great performance on medium-size big game. With modern bullet construction, even 120-grain bullets would be adequate for light-skinned game.

As to my decision for selecting the Sako over the Winchester, I liked the Model 70's looks, features, history, etc., but my Sako will put bullets down the bore of the Winchester at 100 yards!

Bruce R. Hawkins
Elk Ridge, UT

Loves the Ithaca Model 37

I really liked Joseph von Benedikt's column on the 20-gauge Ithaca Model 37. I've always loved the old "corn cob" front grip Model 37s, and I had a serious case of gun envy when my teenage buddy got one in 12 gauge with a Poly Choke. Several years ago, I was looking for one in 20 gauge. I checked several nearby shops but came up with nothing. Then I saw a 12 gauge that needed cleaning up a bit, and it was at a reasonable price. I bought it even though I wanted the 20 gauge because it had a 26-inch IC factory barrel. The serial number indicates 1947 manufacture. I figured there weren't that many issued with that barrel length and choke in those days when 30-inch Full choke was popular. I love taking it out in the field trying to kick up the odd rabbit.

Jim White
Via email

A Better Way to Clean Cases

I have found a much better way to clean brass cases that's based on years of practical experience.

After using a vibrating bowl and crushed walnut shells, which become like coal dust as it is used and cases aren't as clean as they should be, several years ago, I invested in a Stainless Tumbling Media (Orem, Utah) Rebel 17 stainless-steel pin tumbler that utilized five pounds of stainless pins (about 0.040 inch diameter by 0.25 inch long). To this is added the brass, water to about 1 inch below full, approximately a tablespoon of cheap liquid dish soap, and about a half-teaspoon of Lemi Shine. The amount of brass that can be added to the tumbler depends on its caliber—approximately 100+ small-caliber rifle brass and pistol brass. About 1.5 to 2 hours of tumbling should be enough for most fired brass.



I deprime each case with an RCBS decapping die before cleaning. If I am reloading brass with crimped primers, after cleaning, I use an RCBS Trim Mate Case Prep Center with aftermarket carbide cutters to remove the crimps. If I am running large quantities of dirty pistol or rifle brass, I install this same decapping tool in my Dillon XL-650 and tool head to deprime hundreds of rounds of brass very quickly.

Next, I full length resize the brass, periodically checking the brass head space with the caliber-specific Wilson case gauges. I generally prefer Hornady reloading dies because I can install a micrometer on the seating die to control bulletseating depths and cartridge overall length for customers, ladder-testing with specific calibers and bullets.

At this point, I most often trim all the brass to uniform length with an RCBS Trim Pro Case Trimmer, fitted with the Trim Pro-2 universal shellholder and aftermarket carbide cutters. This trim unit will reliably trim consistently to +/- 0.001 inch, especially if you use the prep station to trim the primer pockets inside the case, as it is necessary to have close-tolerance case lengths.

After these steps, I start priming the brass with a Hornady single-stage press. If I reload smaller-caliber rifle cartridges or pistol rounds, I set up my Dillon for larger quantities of target plinking ammo.

When customers receive their new bright shiny reloads, they always say they look like factory new, and they report good results. I generally tell them the Lone Ranger had silver bullets, but mine look like gold!

The Stainless Tumbling Media tumbler does a very good job of cleaning the brass, inside and out, and it does a good job on cleaning the primer pockets, too.

Tom Reynolds Sr.
Red Dog Reloading, LLC
Trout Lake, WA

ST

Survival of the Sharpest

A 13 1/4" fixed-blade Bowie survival knife

On my latest trek through the woods, a recent addition to my pack came in extra handy. I'd planned for a five-day survivalist getaway, relying only on my wits and whatever I carried with me. My adventure was a little bit more than I bargained for, but luckily I brought my **Camo Survival Knife**, a tool that's built to take on the elements. This 13 1/4" fixed-blade knife is more than an attractive piece of cutlery. It's an all-camo Bowie with a dipped, crosshatched handle and a rubber endpiece for better grip.



But it was the handle that unscrews to reveal a survival kit with a compass, bandages, matches, fishing line and hook that saved my five-

day trek from becoming six. With a camo nylon knife sheath and sharpening stone also included, it is easy to see why this is one of the fastest selling knives in our company's history, and a must-have for any outdoorsman.

Buy within the next 30 days. As popular as this knife is, we're unsure how long we can keep it in stock. We only have ~~2,147~~ 1,370 left at this price, and half have already sold! **Your satisfaction is 100% guaranteed.**

Don't get caught in the wilderness without the tools you need. Get the Camo Survival Knife today!

Knife Specifications:

- 13 1/4" overall. 8" stainless steel blade
- Survival kit includes: compass, bandages, matches, fishing line and a hook.
- Camo nylon knife sheath with sharpening stone included

Camo Survival Knife

~~\$199~~ \$79* **Save \$120**

***You must use Insider Offer Code CSK117-01 to get this price.**

California residents please call regarding Proposition 65 regulations before purchasing this product.

1-800-333-2045

Your Insider Offer Code: CSK117-01

Stauer, 14101 Southcross Drive W., Ste 155,
Dept. CSK117-01, Burnsville, MN 55337 www.stauer.com

A secret compartment in the handle reveals a compass and small survival kit inside!





SHOOTER'S UPDATE

READERS SPEAK OUT

NEW GUNS & GEAR

ASK THE EXPERTS



Rossi Brawler

THE NEW HAMMER-FIRED, BREAK-ACTION SINGLE-SHOT BRAWLER pistol from Rossi is chambered for .410 Bore shotshells and .45 Colt cartridges. It features a 9.0-inch barrel, a Picatinny optics rail with built-in rear sight, a post front sight, and a recoil-absorbing ergonomic grip. The steel receiver has a polymer overmold, and the barrel is finished in black oxide. The pistol weighs 36 ounces and measures 14.3 inches long.

MSRP: \$239.99

rossiusa.com

Davidson's Exclusive Pietta Revolvers

Davidson's has teamed up with Pietta to offer eight new exclusive 1873 Western single-action revolvers. Barrel lengths are 4.75 and 5.5 inches. Chamberings are .357 Magnum, .357 Magnum/9mm Luger, and .45 Colt. Trigger guards and grip frames are brass and steel. Frames are color-casehardened. Sights are grooved topstrap rears and blade fronts. The cylinders are fluted, and the grips are two-piece walnut.

MSRP: \$625 to \$750, depending on configuration
galleryofguns.com



Auto-Ordnance Tanker 1911

Auto-Ordnance is honoring America's "armored warriors" (American soldiers who faced the enemy in armored fighting vehicles like the classic M4 Sherman tanks of World War II) with the new commemorative Tanker 1911 .45 ACP pistol. This special Model 1911 features a 5.0-inch barrel, a drift-adjustable rear sight, a blade front sight, a GI-style trigger, a GI-style grip safety, GI-style controls, custom engraved wood grip panels, and a seven-round magazine. The slide and frame are customized by Outlaw Ordnance with Army O.D. Green Cerakote finish and the iconic white star of the Sherman tank. The all-steel Model 1911 is 8.6 inches long and weighs 36.8 ounces.

MSRP: \$1,324

auto-ordnance.com

FN 502 MRD

The new polymer-frame FN 502 MRD .22 LR semiautomatic pistol features a 4.0-inch barrel, ambidextrous controls, a thumb safety, front and rear cocking grooves, a loaded-chamber indicator, and polymer sights. The aircraft-grade anodized aluminum slide is milled for mounting popular red-dot sights, and the pistol is offered in FDE and black finishes. The FN 502 MRD weighs 22.5 ounces and comes with two 10-round magazines.

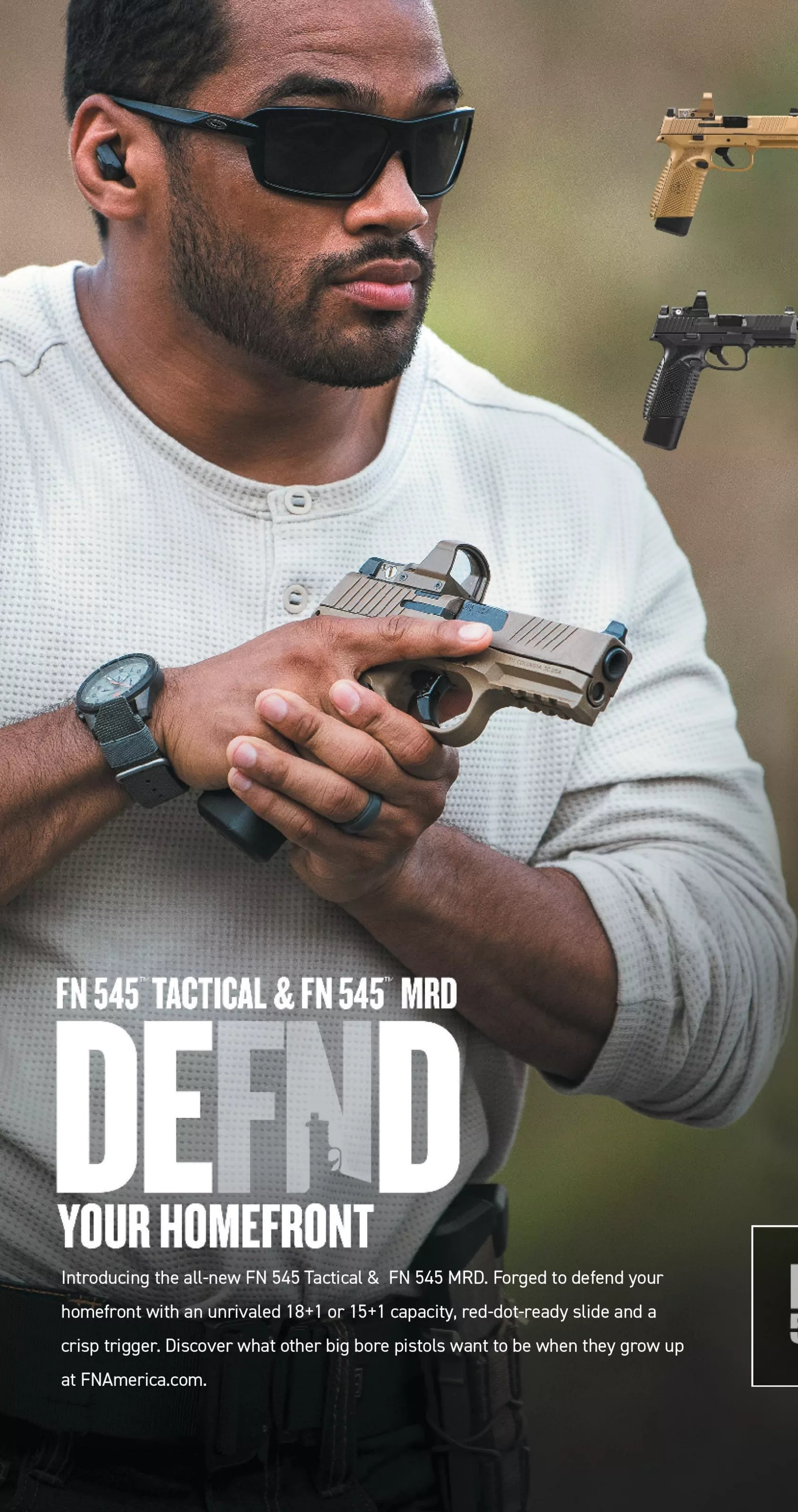
MSRP: \$469

fnamerica.com

ST



ST



NEW FN 545™ MRD

.45 ACP	15+1
----------------	-------------

- 15 OR 10-RD MAGS
- OPTICS-READY
- DAY SIGHTS



FN 545™ TACTICAL

.45 ACP	18+1
----------------	-------------

- 18 OR 15-RD MAGS
- OPTICS-READY
- NIGHT SIGHTS
- SUPPRESSOR-READY

SCAN HERE



FN 545™ TACTICAL & FN 545™ MRD

DEFEND YOUR HOMEFRONT

Introducing the all-new FN 545 Tactical & FN 545 MRD. Forged to defend your homefront with an unrivaled 18+1 or 15+1 capacity, red-dot-ready slide and a crisp trigger. Discover what other big bore pistols want to be when they grow up at FNAmerica.com.

FN
545



CARRY THE FUTURE®



SHOOTER'S UPDATE

READERS SPEAK OUT

NEW GUNS & GEAR

ASK THE EXPERTS



Rossi or Taurus?

Q. I READ “ROSSI REVOLVERS RETURN” ON THE COVER OF THE SEPTEMBER issue of *Shooting Times*, and I was excited to see that Rossi “is back in the revolver business.” However, in viewing the photos, I saw the imprimatur of Taurus on the gun, so is it a Rossi or a Taurus? Despite the obvious implication in the photos, the written content of the article makes mention of neither Taurus nor Braztech Int’l L.C. Please advise.

Michael Shanley
Myrtle Beach, SC

A. The revolver reported on in the September issue was in fact a Rossi. Here’s the corporate structure for Rossi and Taurus, as I understand it. Taurus Holdings, Inc. (founded in 1982) owns Taurus International Manufacturing (Taurus firearms), Braztech International L.C. (Rossi firearms), and Heritage Manufacturing (Heritage firearms). Taurus Holdings is currently based in Bainbridge, Georgia, and it is owned by Taurus Armas, S.A., which is located in Brazil.

Taurus Holdings manufactures single-action revolvers, double-action revolvers, semiautomatic pistols, single-shot long guns, and semiautomatic long guns at its Georgia facilities. Taurus International manufactures some Taurus firearms in the United States and imports others from Taurus Armas. Braztech International services and imports Rossi firearms, which are made in Brazil by Taurus Armas. Heritage firearms are made in the U.S.A. at the Bainbridge, Georgia facilities.

As an aside, the Rossi company was founded by Amadeo Rossi in 1889. In 1997 Braztech International L.C. was created as the exclusive importer of Rossi firearms in North America. Previously, Rossi firearms were imported by Interarms of Alexandria, Virginia.

Joel J. Hutchcroft

Winchester Model 70 Gunsmith?

Q. I have Winchester Model 70 Super-grade rifles in .264 Winchester Magnum and 7mm STW. I would like to have both free floated and pillar bedded. Can you recommend a good Model 70 guy (or gal) for me?

David Aycock
Via email

A. That’s a great question. Most gunsmiths these days specialize in Remington 700-type rifles and clones. The best work I’ve personally seen on Model 70s was done by Lex Webernick of Rifles Inc., but he’s more of a full custom kind of guy. For top-quality piece work, such as free floating and glass/pillar bedding, I’d reach out to the good folks at Hill Country Rifles. They’re a bit pricey, and you may have to wait a while for an opening, but they do tremendous work and are very well versed in working with Model 70s.

If you’re on social media, you may want to check out @pre64win, a company that specializes in fine old Model 70s. They do some wonderful restoration and custom work as well.

Joseph von Benedikt

ST



AERO PRECISION

LAHAR-30



LAHAR-30K



LAHAR-30



LAHAR-30L



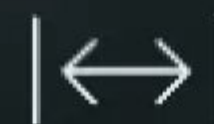
MULTICALIBER



FULL-AUTO
RATED



FULLY
WELDED



NO MINIMUM
BARREL LENGTH



MODULAR
ATTACHMENT

[AEROPRECISIONUSA.COM/LAHAR](https://aeroprecisionusa.com/lahar)



SHOOTER'S GALLERY

THE SHOOTIST

THE BALLISTICIAN

THE RELOADER



Model 1891 Argentine Mauser

In the author's opinion, the Model 1891 Argentine Mausers are among the most beautiful Mausers ever built. **BY JOSEPH VON BENEDIKT**

SHORTLY BEFORE 1891, ARGENTINA CONTRACTED with Mauser for a brand-new bolt-action repeater, to replace its single-shot Remington Rolling Block military arms. Around 220,000 of the sleek repeating rifles and carbines were ordered. Some remained in service until the 1960s.

An evolved version of the Model 1889 Belgian Mauser, the 1891 did away with the Belgian guns' steel barrel sleeves, opting instead for short, wood handguards. Uniquely, that handguard was fixed to the barrel with wire. Rifles featured 29.13-inch barrels and straight bolt handles; carbines sported short, lively 17.6-inch barrels and turned-down bolt handles. Both were fitted with full-length military-type stocks.

Two manufacturers in Berlin produced the Model 1891 Argentine Mausers: Ludwig Loewe and Deutsche Waffen und Munitionsfabriken. The carbine showcased here was made by the latter—often abbreviated to DWM.

In my opinion, Model 1891 Argentine Mausers are among the most beautiful Mausers ever built. They were given sleek, attractive lines; good walnut; and high-quality finishes. Handle one, and you'll find it strongly reminiscent of a high-quality German sporting Mauser with a Mannlicher-style stock.

The cartridge of choice was the 7.65x53 Mauser. It was the first bottlenecked, rimless cartridge designed to use smokeless powder in Mauser-type rifles, and it had debuted just a few years earlier in the Model 1889 Belgian Mauser. Early projectiles were 13.65-gram (211 grains) round-nose FMJs, pushed at about 2,130 fps. Those were short-lived and were replaced by a 10-gram (154.3 grains) Spitzer at about 2,720 fps, then eventually an 11.25-gram (173.6 grains) boat-tailed Spitzer at 2,380 fps. Ballistically, the 7.65x53 is comparable to the .308 Winchester and the .303 British.

Eventually, quantities of surplus Model 1891 Argentine Mausers made their way to the United States. For

Approximately 220,000 Model 1891 Argentine Mausers were made in rifle and carbine configurations. These rifles are known for their smooth actions and sleek lines.

PICK UP THE TEMPO™

Harness speed with the new and innovative TEMPO™ Barrel System from Smith & Wesson® - designed to offer a more consistent, more reliable, and a more accurate platform.

You can pick up the TEMPO™ today with the new M&P®5.7 and M&P®22 Magnum from Smith & Wesson®.



M&P 5.7



M&P 22 MAGNUM



Smith & Wesson®

EMPOWERING AMERICANS™

smith-wesson.com

a time, several American ammo companies produced ammunition, but no longer. Currently, Norma and Prvi offer ammunition. Hornady occasionally makes a run of special private-label ammo for Graf & Sons. And of course, surplus ammo is available.

However, many American shooters and hunters couldn't find 7.65x53 ammo readily available for the inexpensive Mauser they'd purchased. Being resourceful sorts, they discovered that a .30-06 chamber reamer would cleanly convert their rifles to shoot widely available .30-06 ammo. The fact that bore diameter is spec'd at 0.312 inch rather than 0.308 inch didn't deter them.

The rifle shown here has been converted to .30-06. It's had several other modifications as well, including the receiver being drilled and tapped for scope mounts, different sights being installed, and the metal parts being polished and blued.

Mechanicals

Model 1891 Argentine Mausers were built before Paul Mauser invented the legendary controlled-feeding, full-length, nonrotating claw extractor. The 1891 is a push-feed design with a 0.19-inch-wide extractor set into the boltface at about 1 o'clock, just above the right-side locking lug.

The design also predates two other pivotal mechanical features: Mauser's double-stack magazine and the cock-on-opening bolt. Model 1891s feed from single-stack magazines, and they can be loaded using stripper clips. The magazine is detachable, but not for fast reloads. It's a feature meant to ease field stripping for thorough maintenance.

As for the striker, it catches the sear and cocks when the bolt is pushed forward and closed. It's a different feel from modern rifles but was preferred by shooters who placed an emphasis on speedy follow-up shots.

Aside from that, the Model 1891 action showcases features that would become classic Mauser: dual, opposing locking lugs; fixed, blade-type ejector; wing-type safety on the bolt shroud; left-side lever-type bolt release; two-stage trigger; and so forth.

Provenance

As far as I can tell, according to its serial number, this carbine was manufactured in 1899 or 1900. Somewhere in the decades since, it was converted to .30-06

MODEL 1891 ARGENTINE MAUSER	
MANUFACTURER	Deutsche Waffen und Munitionsfabriken
TYPE	Bolt-action repeater
CALIBER	Converted to .30-06
MAGAZINE CAPACITY	5 rounds
BARREL	17.6 in.
OVERALL LENGTH	37 in.
WEIGHT, EMPTY	7.5 oz. (with scope)
STOCK	Walnut
LENGTH OF PULL	13 in.
FINISH	Blued metal, oil-finished stock
SIGHTS	Aftermarket Williams rear base, bead front
TRIGGER	5.19-lb. pull (as tested)
SAFETY	Two-position wing type on bolt shroud

and spruced up a bit with fresh bluing, sights, and a scope.

The stock appears to be correct, but it was refinished and sporterized, and all numbers and cartouches were sanded off. A fixed steel loop was installed a few inches aft of the trigger guard, presumably for attaching a carrying strap. I found a couple similar, nonsporterized 1891 carbines for sale on Gunbroker with identical steel loops, so presumably it's a correct variation.

A sling-swivel stud was installed near the barrel band, the protective wings were ground off of the fore-end cap at the muzzle, and a Williams rear sight and a ramped front sight base and bead-type sight replaced the original military sights.

Very nice, deep bluing is present over the entire rifle, indicating that whoever did the bluing knew his craft. The pre-bluing polishing was quite aggressive, however, and most of the metal corners and edges and the maker's rollmarks and proof marks were rounded off.

MODEL 1891 ARGENTINE MAUSER ACCURACY & VELOCITY				
AMMUNITION	VEL. (FPS)	E.S. (FPS)	S.D. (FPS)	100-YD. ACC. (IN.)
.30-06, 17.6-in. Barrel				
Norma Whitetail 150-gr. SP	2661	51	16	2.76
Federal 165-gr. GameKing	2638	46	12	2.69
Hornady 180-gr. SST	2589	36	11	2.65
NOTES: Accuracy is the average of three, three-shot groups fired from a sandbag benchrest. Velocity is the average of nine rounds measured nine feet from the muzzle using a LabRadar. Ambient temperature: 75 degrees Fahrenheit. Elevation: 5,100 feet.				

Rangetime

I set out to accuracy test the converted Model 1891 conversion with some trepidation, for two reasons: (1) its bore is surely slightly oversized for the .308-diameter bullets in factory .30-06 ammo, and (2) the full-length Mannlicher-type stock, barrel band, and steel fore-end cap all tightly fixed to the barrel must have considerable negative effect on accuracy—not to mention the wire strapping the wood upper handguard to the barrel.

No surprise, groups ranged from about 2 inches to 3.5 inches at 100 yards. That’s certainly capable for hunting big game inside 200 yards or so, but I suspect the accuracy could be improved by handloading 0.311-inch- or 0.312-inch-diameter bullets made for the .303 British and 7.62x54R cartridges. Though one should surely keep handloads moderate in respect to the vintage, small-ring Mauser action.

Because I was interested in the effect of the stock and all the metal fixtures, I performed a couple of barrel-heating tests to determine whether point of impact would change. Sure enough, bullets walked steadily lower on the 100-yard target. The first three impacts from a cool barrel would be on target. The next three would migrate 3 or 4 inches lower, and the seventh and eighth shots would be lower still. If hunting with this rifle, I’d want business to be done and the dust settled with the first three shots.

Reliability was stellar. The action was smooth as the proverbial grease on glass. Once you get used to the cock-on-close feature, it’s fast and slick to operate. Balance and pointability are admirable. The two-stage trigger releases crisply. A shortish 13-inch length of pull made the carbine feel both quick to shoulder and a little bit miniature, what with my monkey arms and turkey neck.

Prices for Model 1891 Argentine Mausers run from a few hundred dollars for a well-used and/or sporterized version with mixed numbers on its parts to a couple thousand for a complete, correct version in good shape and with a bayonet.

With its modifications, this particular Model 1891 Argentine Mauser clearly has little collector value. However, I think the tasteful nature of the scope mount work and the conversion to .30-06 are nice enough to offset the detracted value. For a big-woods whitetail hunter who rarely shoots past 150 yards and cherishes hunting with vintage firearms, this little carbine is as good as it gets.

ST

STILL THE GOLD STANDARD OF HUNTING CARTRIDGES



A perennial Best Seller, HSM’s Trophy Gold indeed sets the Gold Standard for serious, when-only-the-best-will-do, hunting cartridges on 6 continents.

Start with 50+ years’ experience meticulously formulating incredibly accurate and always-reliable metallic ammunition. Feature Berger Bullet’s vaunted and world-renowned VLD bullet. Select powders maintain maximum velocity over extended distances. Exceptional accuracy that rivals even the best handloads. For that critical shot that makes all the difference, choose and depend on HSM Trophy Gold, the Gold Standard for hunting ammunition.

6mm BR	6.5 Creedmoor	.280 Remington	.300 WSM	.338 Lapua Mag
.243 Winchester	6.5x55 Swedish	7mm SAUM	.300 H&H Mag	.340 Weatherby
6mm Remington	6.5-284 Norma	7mm WSM	.308 Norma Mag	.338 RUM
.240 Weatherby	6.5 Rem. Mag.	7mm Rem. Mag	.300 Winchester Mag	.338 Norma
.257 Roberts	.270 Winchester	7mm RUM	.300 Weatherby	
.25-06 Remington	.270 WSM	.308 Winchester	.300 RUM	
.257 Weatherby	.270 Weatherby	.30-06 Springfield	.30-378 Weatherby	
.260 Remington	7mm-08 Rem.	.300 SAUM	.338 Winchester Mag	

Look for the orange logo!
www.HSMAmmunition.com





SHOOTER'S GALLERY

THE SHOOTIST

THE BALLISTICIAN

THE RELOADER



Shorter than “Short”— Winchester’s Super Short Magnums

The Winchester Super Short Magnums provide top velocities with less powder, yet all three are struggling in the marketplace. **BY ALLAN JONES**

Winchester introduced the WSSM cartridges starting in 2003. They are based on shortening and necking down the .300 WSM (left). Shown here are .223 WSSM rounds (right).

WINCHESTER SCORED BIG IN 2001 WITH THE .300 Winchester Short Magnum (WSM). Inspired by Rick Jamison’s concept of a “short, fat” cartridge case, the .300 WSM solidly delivered on concepts Jamison stated in his patent. The 2.1-inch-long nonbelted case had a 0.555-inch base diameter and a rebated rim to fit H&H-size breechfaces.

Winchester went even shorter in 2003–2004, introducing three new cartridges. They inherited the case head and rim dimensions of the .300 WSM, but the cases are only 1.670 inches long. That’s shorter than

the old .222 Remington, but the fat case makes up for any capacity loss. They were christened the Winchester Super Short Magnums (WSSM).

.223 WSSM

The .223 WSSM has, to be kind, a unique appearance. It makes me think this is what a .221 Fireball cartridge might look like if it binged on milkshakes.

I was skeptical when I first saw the velocity claims, but our pressure barrel confirmed the potential. Current Winchester specs list a 55-grain bullet at 3,850



YOU'VE BEEN PROMOTED

The Judge

HAND-POLISHED
SATIN
FINISH

PRESENTATION
GRADE
GRIPS

HAND
FITTED
ACTION



ENHANCED PERFORMANCE. UNRIVALED ELEGANCE.

The latest addition to the exclusive **Taurus® Executive Grade** line, the legendary **Taurus Judge®** heightens its legacy—and your collection—with luxe styling, function-forward advancements and aesthetics galore.



TaurusUSA.com

fps and a 64-grain bullet at 3,600. That is smack in the middle of the .220 Swift’s business. Factory .220 Swift loads with a 50-grain bullet show 3,870 fps. Handloaders with either can safely achieve published factory performance.

Speer’s current .223 WSSM data show eight propellants that drive a 50-grain bullet to 4,000+ fps. Seven propellants pushed 55-grainers to factory spec or higher. Even Speer’s old 70-grain Semi-Spitzer with its long bearing surface that keeps the loads down a bit achieved the mid to upper 3,500 fps range.

I’ve seen warnings of .223 WSSM pressure issues with bullets lighter than 50 grains. We did not test 40- and 45-grain Speer .22-caliber bullets for a “twisted” reason.

Those were designed decades ago when the quickest center-fire .22-caliber rifling twists were 1:14 inches. The standard twist for the .223 WSSM is 1:10 inches. The 1:14 .220 Swift spins a 4,000 fps bullet at just under 206,000 rpm; in a .223 WSSM, it would be doing 288,000 rpm. We judged that a 40 percent increase in rotational velocity would have those thin-jacketed Speer bullets acting like upland bird loads!

Is there some wizardry imbued in the short, fat case that surpasses the .220 Swift? We need no incantations to explain where “advantage WSSM” arises. The .223 WSSM has a maximum

average pressure (MAP) of 65,000 psi, and that is 5 percent higher than the Swift’s. The *Speer Handloading Manual Number 15* shows the water capacity of the squat WSSM as 7.2 percent greater than the Swift’s. Simple. More propellant space, more pressure, more velocity.

Given a rifle action of appropriate size, the .223 WSSM is a great choice. Shooters who like .22-caliber bullets that are longer than 1:14 twists can stabilize should be happy with the .223 WSSM.

.243 WSSM

The .24-caliber WSSM was introduced at roughly the same time as the .223 WSSM but did not deliver the surprise performance of its littermate. Obvious comparisons are to the still-popular .243 Winchester. Winchester factory ammo for the WSSM drives a 95-grain bullet at a published 3,150 fps and a 100-grainer at 3,110 fps. The same company’s .243 Win. ammo drives those same bullet weights at 3,100 and 2,960 fps, respectively. That’s too close for a real-world difference.

Again, working pressure and case capacity are at play, but capacity advantage is not helping much. In spite of a 7 percent



TOKAREV
TT12

SEMI AUTO.
FULLY VERSATILE.

The dependability you’ve come to expect from the TT12, now with enhanced features that add exceptional versatility to an already feature-rich 12-gauge.

TOKAREV ★ USA
TOKAREVUSA.COM

MAP advantage, the .243 WSSM case has only a 2 percent advantage in water capacity over the .243 Win.

What if you take away both capacity and pressure advantages? My favorite .24-caliber cartridge, the 6mm Remington, has the same MAP (65,000 psi), and case capacity is only 1 percent greater than the WSSM. Even with handloads, the differences are small, but the 6mm Rem. holds a slight edge across bullet weights with newer propellants. The WSSM has a small advantage—its near-parity in velocity with the 6mm Rem. comes while using one to four grains less propellant.

.25 WSSM

About 2002–2003, Lane Pearce and I were convinced that Winchester's evolution of the .300 WSM case would be in the "quarter-bore" arena. It was, but Winchester chose the little WSSM case over the longer parent case. The .25 WSSM appeared in 2004.

Winchester catalogs two loads, an 85-grain bullet at 3,470 fps and a 120-grain bullet at 2,990. Those are identical velocities to what Winchester lists for the .25-06 cartridge. However, the .25 WSSM case capacity issue versus its .25-caliber stablemates is quite different.

The .25-06 and the .257 Roberts +P both have larger water capacities than the .25 WSSM. Per Speer's *Manual Number 15*, the capacity of the Roberts is 4.5 percent greater than the .25 WSSM's, and the .25-06 is a whopping 21 percent greater.

The .25-06 has an MAP that is 3 percent less than the WSSM's, and the Roberts is 12 percent lower. With top safe handloads, the WSSM usually slots in about 100 fps faster than the Roberts and 100 fps slower than the .25-06. That is frankly amazing, considering the capacity and pressure relations. I'm not sure if this better promotes the WSSM or the Roberts, but the .25 WSSM is posting very respectable velocities while using quite a bit less propellant than the .25-06. When propellant costs pass \$50/pound, less is more.

Their current status makes the future of all three WSSMs uncertain. Only Winchester loads them, and one of the biggest online ammo sellers lists them as "limited production."

Given data I saw when developing handloads, the performance in all three is there, yet they are struggling. Is "too short" an issue for popular bolt-action rifles, or were they inevitable casualties of three years of panic buying of more-established cartridges? The jury is still out on that.

ST



The advertisement features a dark, textured background with a large, stylized red and white "WILDCAT" logo at the top. Below the logo, the text "22 LR SEMI-AUTO" is displayed in white. In the center, a Winchester Wildcat 22 LR Semi-Auto rifle is shown in a dynamic, angled position. The rifle has a black and red finish. Below the rifle, the words "FAST. FLAWLESS. FUN." are written in large, bold, white capital letters. At the bottom, there is a red banner with the website "WINCHESTERGUNS.COM" and the text "WINCHESTER IS A REGISTERED TRADEMARK OF OLIN CORPORATION." on the left, and the Winchester logo with the text "WINCHESTER REPEATING ARMS" on the right.

WILDCAT®

22 LR
SEMI-AUTO

FAST.
FLAWLESS.
FUN.

WINCHESTERGUNS.COM
WINCHESTER IS A REGISTERED TRADEMARK OF OLIN CORPORATION.

WINCHESTER®
REPEATING ARMS

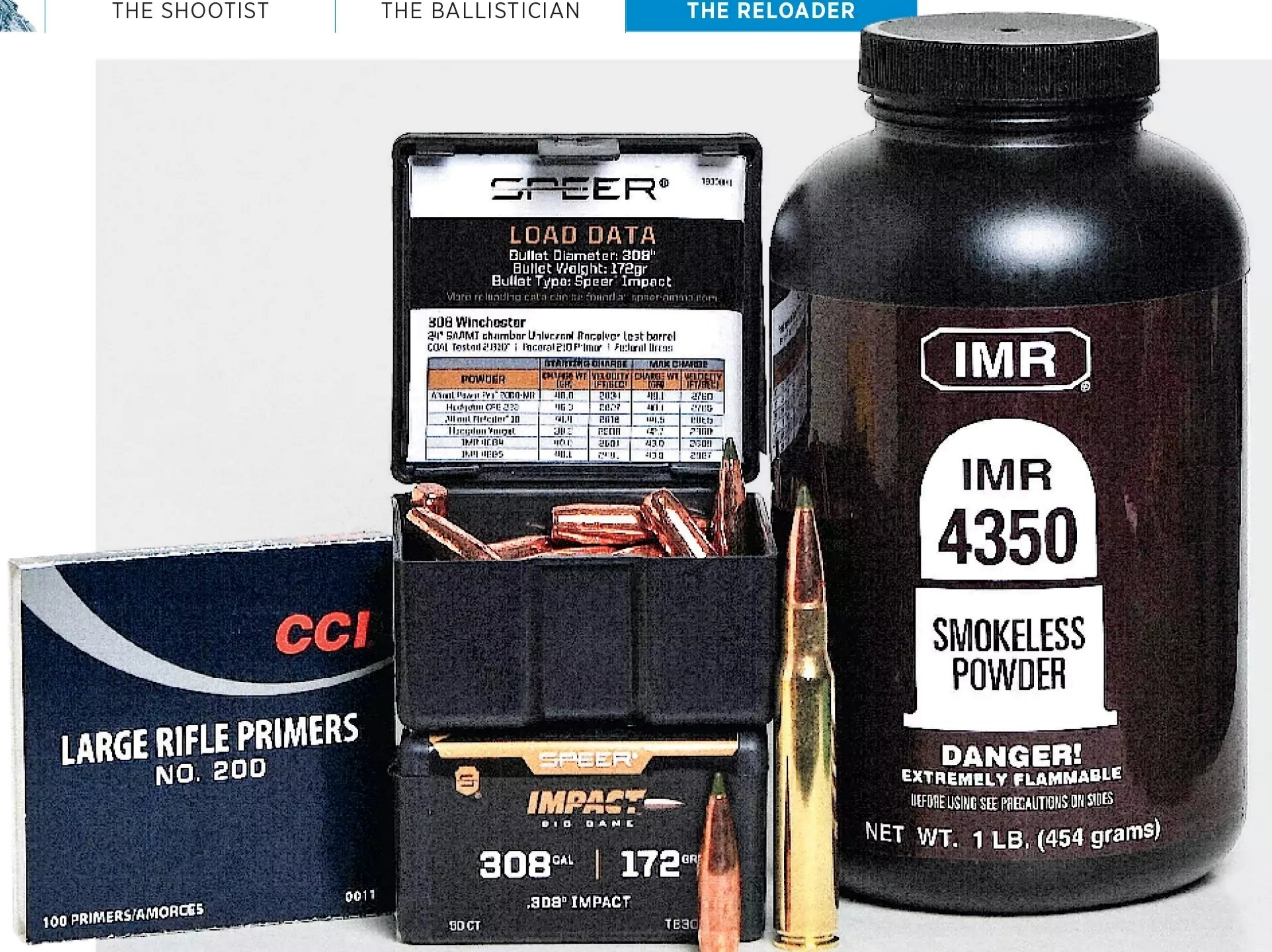


SHOOTER'S GALLERY

THE SHOOTIST

THE BALLISTICIAN

THE RELOADER



Loads for Speer's New Impact Rifle Bullet

Speer's new Impact component bullet produced outstanding ballistic performance in handloads powered by IMR 4350 and Alliant Reloder 17 powders. **BY LANE PEARCE**

Speer's new Impact rifle bullet is the company's first polymer-tipped rifle bullet. The .30-caliber 172-grain component bullet performed exceptionally well in Lane's .30-06 handloads.

SPEER HAS BEEN IN THE BULLETMAKING BUSINESS since 1944. HOT-COR, Gold Dot, Fusion, DeepCurl, Grand Slam, and TNT labels have described the construction and performance of many rifle and handgun projectiles developed by Speer. However, just recently the company introduced its first tipped rifle bullet. For now, the new Impact product line includes only three 6.5mm and .30-caliber SKUs, but other calibers are planned.

Jeff Williams, the product engineer responsible for the new Impact bullet, said it's essentially derived from Fusion technology, and as I said earlier, it is the first Speer bullet to have a polymer tip. It also has a

prominent, 8-degree boattail. A less noticeable feature is the sleek, hybrid ogive profile. Measured ballistic coefficients are significantly greater for the Impact bullet, contributing to enhanced external and terminal ballistic characteristics.

These changes complement the proven scheme of electrodepositing pure copper on a swaged lead/antimony alloy core. The heat-resistant Slipstream tip is made from the same material used in Federal's Trophy Tip and Terminal Ascent bullets; however, the actual design configuration is different. Williams tells me the leading section of the tip breaks free instantly on impact, leaving a hollow tube that

channels the ensuing hydrostatic force to ensure immediate and controlled expansion. Testing has indicated adequate expansion can occur at 200 to 300 fps lower terminal velocities compared to other well-known hunting bullets.

These new bullets are available as components for handloading and also in Remington's new Premier Long Range rifle ammunition. Vista Outdoor acquired Remington ammunition three years ago, and it's an integral part of the Federal, CCI, Alliant, Speer, and RCBS group of brands.

The three current Impact bullets are a 6.5mm 140-grainer and two 0.308-inch bullets weighing 172 and 190 grains, respectively. I obtained samples of the .30-caliber 172-grain Impact bullets and prepared the handloads listed in the accompanying chart.

I used the recommended load data enclosed with the bullets and also consulted with Jon Langenfeld, Remington's R&D manager. He suggested trying IMR 4350. I did so and also assembled and fired a few

rounds loaded with Reloder 17.

The reloading process was routine, and the boat-tail feature helped ensure each bullet was properly aligned in the case mouth when seated. I weighed each powder charge to enhance the ballistic results. I also received a couple boxes of .30-06 Remington Premier Long Range factory-loaded ammo, and I included those results in the chart as well. I adjusted the overall length of my handloads to match that of the factory rounds (3.32 inches).

The Remington factory-loaded ammo recorded an average velocity of 2,764 fps with a standard deviation (S.D.) of 17. That's excellent. I nearly duplicated



The new Impact bullet features a polymer tip, an ultra-sleek hybrid ogive profile, and an 8-degree boat-tail. Photo courtesy Speer.

INNOVATION HAS A BOLD NEW LOOK.



Tisas® NIGHT STALKER SERIES

With two all-new signature models to choose from, the Night Stalker series boasts thoughtful design, rugged styling and a long list of impressive yet standard features designed to elevate your shooting experience.



PX9

Available in 9mm



1911

Available in 9mm,
.45 ACP and 10mm

Tisas

TISASUSA.COM

that velocity with a handload consisting of 55.5 grains of IMR 4350, and it was even better ballistics-wise with an S.D. of just 3. Its accuracy was outstanding, producing a 0.78-inch group. The recommended Reloder 17 charge was close to 1.5 grains less; however, its recorded velocities were 100+ fps faster. And the accuracy results were very good.

As you can see from the chart, the Remington factory-loaded

ammunition with the new Impact bullet performed well, but it wasn't as accurate in my rifle as most of the handloads. However, coincidentally, just before wrapping up this column, I was conversing with writer Bryce Towsley. He had tested samples of the new Remington Premier Long Range ammo, and his favorite .30-06 rifle produced the best results of any factory load he'd ever shot in it.

ST

SPEER IMPACT ACCURACY & VELOCITY							
BULLET	POWDER		CASE	PRIMER	VEL. (FPS)	S.D. (FPS)	100-YD. ACC. (IN.)
	(TYPE)	(GRS.)					
.30-06 Sako A7, 22-in. Barrel							
Speer 172-gr. Impact	IMR 4350	55.5	Rem.	CCI 200	2749	3	0.78
Speer 172-gr. Impact	IMR 4350	56.0	Rem.	CCI 200	2782	15	1.09
Speer 172-gr. Impact	IMR 4350	56.5	Rem.	CCI 200	2822	6	0.81
Speer 172-gr. Impact	IMR 4350	57.1*	Rem.	CCI 200	2824	5	1.11
Speer 172-gr. Impact	Reloder 17	55.0	Rem.	CCI 200	2814	6	0.69
Speer 172-gr. Impact	Reloder 17	55.6*	Rem.	CCI 200	2857	8	1.24
Remington Premier Long Range 172-gr. Impact	Factory Load				2764	17	1.25
* Suggested powder charge from Speer							
NOTES: Accuracy is for one, five-shot group fired from a sandbag benchrest. Velocity is the average of at least five rounds measured eight feet from the gun's muzzle.							

Unquestioned performance in the field.

Exceptionally accurate. Extremely precise.



Seeing beyond



Conquest® V4 Riflescopes

Legendary ZEISS glass is combined with highly intuitive reticles, an External Locking Windage Turret, and the Ballistic Stop™ to deliver a superior optical system that ensures first shot impact on long-range targets – exactly where you want it.

Scan to learn more:



Make it a
MADE IN AMERICA
Christmas.

Put a HENRY
Under the Tree.



HENRY

Made In America, Or Not Made At All

www.HenryUSA.com

SCAN THE QR
FOR FREE CATALOG



& HOLIDAY
GIFT GUIDE!





LIKE NO OTHER 9MM

SIG SAUER'S P320-AXG LEGION
ISN'T YOUR RUN-OF-THE-MILL
STRIKER-FIRED 9MM PISTOL.

BY JOEL J. HUTCHCROFT

THE FIRST THING I NOTICED ABOUT SIG SAUER's new duty-size P320-AXG Legion pistol is the integral two-port expansion chamber/compensator at the muzzle end of the slide. Each port is 0.24 inch wide and 0.66 inch long, stretching across almost the entire width of the top of the slide. In addition, together they extend about 0.9 inch beyond the end of the pistol's barrel, bringing the slide's length to 7.5 inches. This is newsworthy because the P320-AXG Legion is the first P320 with a built-in expansion chamber. But that's not the only feature that makes this version of the tried-and-true P320 pistol unique.

LIKE NO OTHER 9MM



The new P320-AXG Legion 9mm pistol features SIG’s aluminum AXG grip frame; a special, extended magwell; and custom Hogue G10 grip panels.

The Bells & Whistles

The all-metal 9mm P320-AXG Legion also has a special frame. In fact, it’s made of aluminum alloy. It has an integral three-slot Picatinny accessory rail built into the dustcover. It has a squared trigger guard, with a small patch of checkering on the front surface. The Alloy XSeries Grip (AXG) grip frame is sculpted, and the trigger guard sweeps up to allow a high-hand grip. The frontstrap of the grip frame is checkered. The backstrap of the grip frame is textured in a pattern that mimics the texturing on the custom Hogue Legion G10 grips. And the top of the backstrap has an ample beavertail. At the bottom of the grip frame is a special, extended magwell. The entire frame, except for the magwell and the controls, is finished in Legion Gray Cerakote. The magwell is matte black, as are the grip panel screws.

The new pistol comes with three double-stack magazines. You can get them in 21-round configuration or 10-round configuration. *Shooting Times* received three 10-rounders. They have metal bodies with numbered witness holes; removable, checkered aluminum baseplates/ bumper pads that sport the Legion

symbol; and polymer followers. “Made in Italy” is stamped on the right-hand side, and “SIG SAUER” and “9mm” are marked on the left-hand side. They wear a deep, dark, polished black finish.

The flat and skeletonized XSeries trigger is matte black and measures 0.36 inch wide. The fingerpiece has a slight ledge at the very bottom, and I found it to be quite convenient as it provided an extra bit of control. And speaking of trigger control, our P320-AXG Legion has one of the most consistent trigger pulls I have felt on a striker-fired 9mm pistol. It has some take-up but no detectable overtravel. And it broke consistently at 4.5 pounds of pull over a series of 10 measurements with an RCBS trigger pull gauge. There was no more than 3 ounces of variance over all 10 measurements.

Back to the slide. The slide is attractively contoured, and as is the rage today, the top is cut for installing a red-dot optic. On this pistol, the filler plate is ahead of the rear sight, in contrast to some of the custom and semicustom Model 1911s that have the rear sight forward of the slide cut. It is made to accommodate SIG SAUER

P320-AXG LEGION	
MANUFACTURER	SIG SAUER sigsauer.com
TYPE	Striker-fired recoil-operated autoloader
CALIBER	9mm Luger
MAGAZINE CAPACITY	10, 21 rounds
BARREL	3.9 in.
OVERALL LENGTH	8.2 in.
WIDTH	1.6 in.
HEIGHT	5.5 in.
WEIGHT, EMPTY	36.1 oz.
GRIPS	Legion Gray Hogue G10
FINISH	Legion Gray Cerakote
SIGHTS	Xray3 day/night sights, optic-ready slide cut
TRIGGER	4.5-lb. pull (as tested)
SAFETY	Striker lock
MSRP	\$1,529



The pistol comes with three double-stack magazines that hold 21 or 10 rounds of 9mm ammunition. They feature checkered aluminum baseplates/bumper pads.



The XSeries flat trigger is skeletonized and finished in matte black. Our sample's trigger pull averaged 4.5 pounds, with no more than 3 ounces of variance over 10 measurements.

ROMEO1 Pro and ROMEO2, Leupold DeltaPoint Pro, and Trijicon RMR red-dot optics. The slide has angled grasping grooves at the rear and at the front. They each measure 0.19 inch wide, and there are six on each side up front and seven on each side at the rear.

The sights are SIG's Xray3 day/night sights that feature tritium dots (two on the rear sight and one on the front sight). The front sight's dot is surrounded by a fluorescent green ring, and both sights are dovetailed into the top of the slide, making them drift adjustable. The sight radius is 5.9 inches. Like the frame, the slide is finished in Legion Gray Cerakote, except for the black sights and the black slide cut filler plate.

The takedown lever, the slide stop, and the magazine release are located in the traditional places, and they are finished in matte black. The magazine release button is checkered, and the slide stop is ambidextrous. There is no manual thumb safety on this model.

The black, ramped barrel is 3.9 inches long, and its chamber is throated and polished. The muzzle has a recessed crown. The pistol is 8.2 inches long overall, weighs 36.1 ounces, is 1.6 inches thick at the magwell,



The new P320-AXG Legion is a duty-size 9mm pistol with a 3.9-inch barrel, all-metal construction, and Legion Gray Cerakote finish.



SIG's Xray3 day/night sights feature tritium dots, and the rear sight has a square notch. It is drift adjustable for windage.



The front sight features a fluorescent green ring around the tritium dot. Note the slide's integral two-port expansion chamber/compensator at the muzzle end of the slide.

LIKE NO OTHER 9MM

and is 5.5 inches tall without a red-dot optic. It comes in a foam-lined hard carrying case along with the three magazines, a cable lock, an operator’s manual, and a couple of decals.

The Range Results

With its all-metal construction and AXG grip frame, the P320-AXG Legion was extremely comfortable to shoot. Recoil was hardly noticeable, even with the hottest factory loads I tested.

As for accuracy, well, the pistol did not disappoint in that department, either. Overall average accuracy for three, five-shot groups with nine different 9mm factory loads was 3.03 inches. The details of each load are listed in the accompanying chart, but briefly, my best individual string came with the Winchester Defender 147-grain JHP ammo. It was just over 1.0 inch, and that’s at 25 yards. As the chart shows, the three-group average for that loading was 2.25 inches. Interestingly, it was not my most accurate loading, on average, with the pistol. That distinction goes to the Federal 150-grain HST load, which averaged 2.00 inches for three, five-shot groups. I suspect the fact that it was the softest-shooting load has something to do with me being able to shoot it so accurately.

The load with the highest average velocity was the SIG SAUER 115-grain JHP, and it averaged 1,230 fps with an extreme spread of 20 fps and a standard deviation of 9 fps. I don’t have to tell you that those are impressive figures. For the record, velocities were measured 12 feet from the gun’s muzzle with a Competition Electronics ProChrono Digital chronograph using its indoor light setup.

All in all, the P320-AXG Legion is an excellent pistol. It shoots comfortably—and accurately. Reliability is top-notch, as I didn’t have a single failure to feed, extract, or eject over the course of my shooting session. It has some very special features that reflect its high quality and enhance its performance. And it’s part of the SIG SAUER Legion family, which means by purchasing it, you have the opportunity to register and join the SIG SAUER Legion. Doing that entitles you to a complimentary premium zippered pistol case and a challenge coin matched to your gun, plus it gives you members-only access to unique opportunities, special gear and other merchandise, and exclusive communications.

SIG SAUER’s Legion firearms are state-of-the-art fighting tools, and the new P320-AXG Legion is a fine addition to the line. It is most certainly not a run-of-the-mill 9mm pistol.

ST

SIG SAUER P320-AXG LEGION ACCURACY & VELOCITY				
AMMUNITION	VEL. (FPS)	E.S. (FPS)	S.D. (FPS)	25-YD. ACC. (IN.)
9mm, 3.9-in. Barrel				
Hornady Critical Defense 115-gr. FTX	1078	39	21	3.50
SIG SAUER 115-gr. JHP	1230	20	9	3.75
Nosler Match Grade 124-gr. JHP	1044	22	12	3.50
SIG SAUER 124-gr. JHP	1121	37	18	3.00
Hornady Critical Duty 135-gr. FlexLock +P	966	30	11	2.75
Wilson 135-gr. HBFN	920	33	14	2.50
SIG SAUER 147-gr. FMJ	901	48	20	4.00
Winchester Defender 147-gr. JHP	927	28	16	2.25
Federal Personal Defense Micro 150-gr. HST	813	25	14	2.00
NOTES: Accuracy is the average of three, five-shot groups fired from a sandbag benchrest. Velocity is the average of five rounds measured 12 feet from the gun’s muzzle.				

STATEMENT OF OWNERSHIP, MANAGEMENT & CIRCULATION

1. Publication Title

Shooting Times

2. Publication Number

0038-8084

3. Filing Date

10/01/2023

4. Issue Frequency

Monthly with a bi-monthly issue of Dec/Jan

5. Number of Issues Published Annually

11

6. Annual Subscription Price

\$28.94

7. Complete Mailing Address of Known Office of Publication

Outdoor Sportsman Group
David Madrid
1040 Sixth Avenue, 17th Floor, New York, NY 10018-3703
Phone: (212) 852-6600

8. Complete Mailing Address of Headquarters or General Business Office of Publisher

Outdoor Sportsman Group
1040 Sixth Avenue, 17th Floor, New York, NY 10018-3703

9. Full Names and Complete Mailing Addresses of Publisher, Editor and Managing Editor

Publisher: Christopher Agnes
2 News Plaza, 2nd Floor, Peoria, IL 61614
Editor: Joel J. Hutchcroft
2 News Plaza, 2nd Floor, Peoria, IL 61614
Production Manager: Terry Boyer
2 News Plaza, 2nd Floor, Peoria, IL 61614

10. Owner

Outdoor Sportsman Group
1040 Sixth Avenue, 17th Floor
New York, NY 10018-3703

11. Known Bondholders, Mortgagees and Other Security Holders Owning or Holding 1 Percent or more of Total Amount of Bonds, Mortgages, or Other Securities.

None

12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates)

The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes:
☒ Has Not Changed During Preceding 12 Months
☐ Has Changed During the Preceding 12 Months

13. Publication Title

Shooting Times

14. Issue Date for Circulation Data Below

November 2023

15. Extent and Nature of Circulation

	AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	NO. COPIES OF SINGLE ISSUE PUBLISHED NEAREST TO FILING DATE
a) Total Number of Copies	154,275	152,253
b) Paid Circulation		
1) Mailed Outside-County Paid Subscriptions Stated on PS Form 3541	129,058	125,947
2) Mailed In-County Paid Subscriptions Stated on PS Form 3541	0	0
3) Sales Through Dealers and Carriers, Street Vendors, and Counter Sales	3,514	4,500
4) By Other Classes of Mail Through the USPS	0	0
c) Total Paid Distribution	132,572	130,447
d) Free or Nominal Rate Distribution		
1) Outside-County Copies Included on PS Form 3541	71	48
2) In-County Copies Included on PS Form 3541	0	0
3) Copies Mailed at Other Classes Through the USPS	0	0
4) Distribution Outside the Mail	508	501
e) Total Free or Nominal Rate Distribution	579	549
f) Total Distribution	133,152	130,996
g) Copies Not Distributed	21,558	21,758
h) Total	154,710	152,754
i) Percent Paid	99.56%	99.58%
16) Electronic Copy Circulation		
a) Paid Electronic Copies	1,895	1,858
b) Total Paid Print Copies + Paid Electronic Copies	134,467	132,305
c) Total Distribution + Paid Electronic Copies	135,047	132,854
d) Percent Paid (Both Print & Electronic Copies)	99.57%	99.59%

17) This statement of ownership will be printed in the Dec. 2023/Jan. 2024 issue of this publication.

18) Signed Peter Watt, Vice President, Consumer Marketing
Date 10/01/23

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

Howa™

NEW HERA H7 SERIES

JAPANESE PRECISION MEETS GERMAN ENGINEERING



FEATURES

- Std 22" / Hvy Steel 24" / Carbon Fiber 24"
- Available in 6.5 Creedmoor & .308 WIN
- Available in OD, Tan or Black
- H7 Chassis - M-Lok Mount Points
- 3 LOP Adjustment Inserts
- Removable Butt Panel
- Fiberglass-Reinforced Polymer
- Aluminum V-Lock Bedding
- Aluminum Forestock
- Polymer Cheek Piece Support
- AICS-Compatible 5 Round Magazine
- Integrated QD Cup Sling Mounts
- STD Barrel MSRP \$839
- Heavy Barrel MSRP \$899
- Carbon Fiber Barrel MSRP \$1299

HA COMPLETE HUNT PROTECT
HERA INDUSTRIES

**LIFETIME
WARRANTY**

**SUB-MOA
GUARANTEE**

H.A.C.T.
2-STAGE TRIGGER

FOR MORE INFORMATION VISIT: [LEGACYSPORTS.COM](https://www.legacysports.com)

2023 CATALOG OUT NOW - REQUEST YOUR FREE COPY TODAY: 1.800.553.4229



Howa ITADEL POINTER



LegacySportsIntl



LegacySportsInternational



LegacySportsInt



A YEOMAN'S BACKCOUNTRY RIFLE

BERGARA'S NEW B-14 RIDGE CARBON IS A SOLID, NO-NONSENSE BACKCOUNTRY RIFLE WITH A NEW CARBON-WRAPPED BARREL.

BY JOSEPH VON BENEDIKT

BERGARA." THE UNFAMILIAR WORD ROLLED off my tongue with promise. "I'm not familiar with the brand. Where are they made?"

"Spain, actually," came the response from the guy behind the gun counter.

My eyebrows went up. I was familiar with the beautifully made Spanish AYA side-by-side shotguns but no Spanish rifles. "Any good?" I asked.

"Yep. Personally, I think they're what the Remington 700 always should have been," said the clerk, without hesitation.



B-14 RIDGE CARBON

MANUFACTURER	Bergara bergara.online/us
TYPE	Bolt-action repeater
CALIBER	6.5 Creedmoor
MAGAZINE CAPACITY	4 rounds
BARREL	22 in.
OVERALL LENGTH	41.50 in.
WEIGHT, EMPTY	7 lbs.
STOCK	Composite
LENGTH OF PULL	13.5 in.
FINISH	Sniper Gray Cerakote action, carbon-wrapped barrel, gray and tan stock with black spiderwebbing
SIGHTS	None, full-length optic rail
TRIGGER	2.4-lb. pull (as tested)
SAFETY	Two position
MSRP	\$1,599

That interchange occurred years ago, when Bergara was just a fledgling brand in the United States. But that comment about the rifle being what the Remington 700 always should have been stuck with me. Time proved that—at least in certain ways—the gunshop employee was right. Bergara earned a name for excellent accuracy, dependable reliability, and a forward-looking design ethos that keeps up with trends.

This latter characteristic is apparent in the company's newest variation on the proven B-14 Wilderness Series hunting line—the Ridge Carbon. It's engineered to be light enough to pack into gnarly country, and it sports a carbon-fiber-wrapped barrel that should provide an elevated level of precision.

I think it's worth noting that as part of Bergara's "Wilderness" named line of rifles, the B-14 Ridge Carbon is touted to

be quite light. Not crazy light, but at an advertised 6 pounds, 8 ounces, it is light enough.

Now, I'm a lightweight-rifle snob. I drool when numbers come in under 7 pounds. So, I had to lay the bare B-14 Ridge Carbon across my scale (plus, it felt a little heavy to my weight-snobish fist). Perhaps it would have tipped the scale at 6.5 pounds without the factory-installed optic rail atop the action and the radial Omni muzzle brake, but with them in place, it scaled exactly 7.0 pounds.

The Action

With that task accomplished, I closely examined the B-14 action. It has robust receiver rings front and rear, which provide plenty of space to mount scope bases. A two-position,

A YEOMAN'S BACKCOUNTRY RIFLE



Bergara B-14 actions have Remington Model 700 footprints and receiver tops, so they accept scope bases, aftermarket triggers, and stocks designed for Model 700s.

rocker-type safety is located at the right rear of the action. It does not lock the bolt closed when engaged, so the shooter can remove a live round from the chamber with the safety “On.”

Continuing with the Remington Model 700 comparison, unlike the Model 700, the B-14 action has a bolt release button in the left side of the rear receiver ring. It makes removing the bolt easy.

Spiral fluting lightens the bolt body, and black Cerakote in the flutes provides a nice contrasting look. Up front, the bolt is graced with dual, opposing locking lugs. A robust, 0.18-inch-wide, sliding-plate-type extractor is dovetailed into the right-side locking lug, slightly above the 3 o'clock position.

This is important because it circumvents both the weak C-clip-type extractor of the Model 700 and the reliability-destroying characteristic of extractors placed above the recoil lug at 2 o'clock or thereabouts. Those are notorious for throwing cases up at such an angle that they bounce off the massive windage turrets common on today's scopes and right back into the action.

A plunger-type ejector is embedded into the face of the bolt at about 8 o'clock. It reliably heaves fired cartridge cases out the ejection port.

At the back end is a well-contoured bolt shroud, hollowed for reduced weight. The tail of the cocking piece/firing pin protrudes from beneath it. It has a protected notch filled with bright red paint and ably serves as a “cocked” indicator.

One thing Bergara's B-14 actions are known for is smoothness, and the Ridge

Carbon holds that reputation up with flying colors. The bolt body is glass smooth, and working the bolt rearward and forward made me say, “Ooh.” Another nice feature is the firing-pin spring is not so stiff that it makes the bolt hard to open. I can lie prone and single-finger the bolt open without undue effort after a shot.

Bergara's Wilderness Series is not part of the company's Premier line of hunting rifles and does not have a premium, match-quality trigger. Still, the standard Bergara Performance Trigger is user adjustable from about 2.5 to 4 pounds, without removing the action from the stock. The one in my rifle was usable, and though it was slightly mushy, it released at just 2 pounds, 7 ounces (as it came from the factory), with about 2 ounces of variation over a series of five measurements. I can live very happily with that.

I'm a floorplate guy, preferring a good, traditional hinged magazine cover to the detachable magazines so in vogue these days, and the B-14 Ridge Carbon is fitted with a nicely profiled, aesthetic trigger bow and floorplate. From what I can tell, the assembly is cast of some type of metal, and it's finished in a nice nonglare matte black.

The magazine capacity is four rounds in standard cartridges and three rounds in magnums. Currently, the Ridge Carbon is offered in 6.5 Creedmoor,

The B-14 bolt has a plate-type extractor dovetailed into the right locking lug. Modest flutes reduce weight, and a beefy, knurled bolt handle makes for fumble-free, low-effort operation.



HELLCAT[®] PRO



17 RND MAG
●●●●●●●●●●
NOW AVAILABLE



SPRINGFIELD-ARMORY.COM

SPRINGFIELD ARMORY.

A YEOMAN'S BACKCOUNTRY RIFLE

6.5 PRC, .308 Winchester, and .300 Winchester Magnum. Mine is chambered for the 6.5 Creedmoor.

While the bolt and bolt shroud are matte black (matching the bottom metal), the body of the action, the barrel shank, and the muzzle are finished in Sniper Gray Cerakote. It's a super-robust, corrosion- and abrasion-resistant, ceramic-based finish.

I'd like to note that the B-14 has the same action footprint, scope-base dimensions, and trigger footprint as the Remington Model 700, so with rare exceptions, any aftermarket part made for the Model 700 fits the B-14.

The Barrel

Barrel lengths are 20 inches on the .308 Win., 22 inches on the 6.5 Creedmoor and 6.5 PRC, and 24 inches on the .300 Win. Mag. "MADE IN SPAIN" is engraved on the shank of the barrel. And Bergara makes and carbon-fiber wraps the barrels. The barrel's core is 410 stainless. The rifling twist rate is 1:8 on both 6.5mm chamberings and 1:10 on both .30-caliber versions.

I've been unable to determine how large in diameter the barrel's core is or how thick the carbon-fiber wrap is. However, visually, it's easy to see that the barrel is turned a whisker below final diameter and then finished with a nicely applied, thin carbon-fiber finish layer that shows off a basketweave pattern.

Up front, the muzzle is threaded 5/8-24 for easy compatibility with most American-made centerfire suppressors. And as mentioned earlier, mine came factory-fitted with an Omni muzzle brake.

The Stock

The barreled action is mated with an injection-molded stock. Spinning the action bolts out, pulling the action, and examining the bed revealed that it appears to be well fitted with small metal pillars around the action bolts, but it is not glass bedded.

The stock's lines are quite classic, with a clean, open grip; an oval fore-end shape; and quite a lot of drop in the buttstock. The stock's surface finish is a cool, subtle gray and tan overlaid with fine black spiderwebbing. Whatever final coat Bergara uses, it results in a nice, soft-touch, rubbery surface that provides a sure grip in mud and sweat.

Shooting Results

To wring out the B-14 Ridge Carbon at my shooting range, I mounted a Leupold VX-6HD 3-18X 44mm scope in low-height 30mm Warne Mountain Tech rings. It went on beautifully—a benefit of the full-length, 1913-spec Picatinny optic rail factory-mounted atop the receiver.

However, here I need to detail a couple of things I'd change about this model. Such optic rails are trendy and popular and make great—although misguided—selling points. They're appropriate on dedicated precision rifles, but they add weight to a backcountry hunting rifle. Worse, with such a rail, there's no way to mount the scope low and tight to the action. Combined with the significant amount of drop in the Ridge Carbon's

stock, the resulting high-mounted scope eliminates the shooter's ability to achieve a consistent cheekweld. If I were going to keep this rifle, I'd remove the full-length rail and mount the scope tight to the action in low, lightweight bases and rings.

When I began loading and firing the B-14 Ridge Carbon, a second disadvantage of the full-length optic rail made itself obvious. It's difficult for big thumbs to fit under and push cartridges down into the magazine. Two-piece mounts would better enable ready access to the magazine.

Some shooters may point out that a full-length rail is said to add accuracy-enhancing stiffness to an action. Personally, I've fired so many super-accurate rifles fitted with two-piece bases that I just don't put much stock in that claim.

As I loaded, fired, and ejected 6.5 Creedmoor rounds in the B-14 action, I was surprised to find the ejection port much shorter than I'm used to. It measures just 2.40 inches, which is 0.4 inch shorter than a 6.5 Creedmoor cartridge. Unfamiliar with handling such an abbreviated loading and ejection port, I fumbled at first to load rounds smoothly into the magazine. And as mentioned, the full-length optic rail and my stout thumbs didn't help.



Bergara's carbon-fiber-wrapped barrel is made in-house. It's generously free-floated in the sleek fore-end of the stock.



The Ridge Carbon's composite stock is injection molded and features small metal pillars around the action bolts.



DUTY RDS™

NEVER COMPROMISE

- **ALL NEW** professional grade optic
- CR2032 Battery –3 year life, constant-on
- Compatible with night vision
- Flush-mounted windage & elevation adjustments
- Digital intensity controls
- One-piece torsion nut mount
- Accessible price point



**SCAN TO JOIN THE AIMPOINT
REWARDS PROGRAM.**

Earn points & exclusive rewards every
time you shop.

MO3655

Aimpoint®

A YEOMAN’S BACKCOUNTRY RIFLE

Also interesting—and fumble-inducing for me—is the fact that the boltface retracts a long way past the rear of the ejection port. As in, about 0.6 inch as best I could measure it. I’m used to loading my bolt-action rifles with the muzzle slightly elevated, which causes cartridges to slide to the rear against the boltface, and then pressing the rounds down into the magazine. It’s a time-proven method that all early bolt actions were engineered for, and it enabled soldiers to load without looking at their rifles. It does the same for hunters and is particularly crucial for hunters in pursuit of dangerous game.

With this method, however, the 6.5 Creedmoor cartridges were so far rearward past the front wall of the ejection port that my thumb pressed down just behind the cartridge shoulder region, often causing the round to nose-dive in the magazine and become stuck. It didn’t help that the boltface retracts past the rear top edge of the magazine, and the rims of those rounds were hanging up on the top edge of the magazine.

It was fiddly, but I eventually figured out how to load the magazine without tangles. I just had to thumb each cartridge down in a slightly forward position, then hook my thumb on the cartridge shoulder and stroke it rearward until the base contacted the rear of the magazine. From that point on, the rifle digested cartridges perfectly. And I must point out that feeding from the magazine into the chamber and fired-case extraction and ejection were ultrasmooth.

Now to the shooting results. First down the pipe toward the 100-yard berm was Hornady’s Precision Hunter ammo loaded with 143-grain ELD-X bullets. The load shot reasonably well, with one startling group coming in at 0.29 inch. Next, I tested Hornady’s Match ammo loaded with 140-grain ELD Match bullets, and it turned in perfectly consistent sub-MOA groups.

Since my rifle is chambered in 6.5 Creedmoor—a cartridge known for accuracy and consistent, long shot strings—and the barrel is intended to be an accuracy and consistency upgrade from an all-steel tube, I ran the B-14 Ridge Carbon through a quite rigorous test protocol. I fired three consecutive three-shot groups without allowing the barrel to cool between groups. This routine enabled me to determine whether accuracy degraded as the barrel heated and whether any point of impact shift occurred.

I’m happy to report that neither occurred. The rifle met Bergara’s sub-MOA accuracy guarantee with three of the six loads I fired.



Three out of six loads tested met Bergara’s sub-MOA accuracy guarantee. Hornady’s 140-grain ELD Match ammo took top honors, averaging exactly what this group measures: 0.71 inch at 100 yards.

BERGARA B-14 RIDGE CARBON ACCURACY & VELOCITY				
AMMUNITION	VEL. (F.P.S.)	E.S. (F.P.S.)	S.D. (F.P.S.)	100-YD. ACC. (IN.)
6.5 Creedmoor, 22-in. Barrel				
Barnes VOR-TX 120-gr. TTSX	2826	35	13	1.95
Remington 129-gr. Tipped Core-Lokt	2906	36	11	1.58
Federal 130-gr. Terminal Ascent	2875	30	11	1.02
Hornady 140-gr. ELD Match	2715	67	24	0.71
Winchester 142-gr. ABLR	2677	47	18	1.21
Hornady 143-gr. ELD-X	2674	38	11	0.78
NOTES: Accuracy is the average of three, three-shot groups fired from a bipod. Velocity is the average of nine rounds measured 10 feet from the gun’s muzzle. Ambient temperature: 75 degrees Fahrenheit. Elevation: 5,100 feet. Wind: gusting to 12 mph.				

In addition to the difficulty I experienced in achieving a consistent cheekweld, I noticed the fore-end was quite flexible. My rest was a Harris bipod, and I used a bunny-ear leather sandbag beneath the toe of the stock. Usually, that combination provides a rock-steady arrangement. However, as I fished for a chinweld in lieu of a cheekweld, the fore-end braced still by the bipod would flex and the crosshairs would wiggle. Thankfully, the barrel was generously free-floated in the fore-end, so I don’t believe that flexibility had a negative effect on accuracy, aside from making the rifle challenging to hold absolutely steady.

The cost of the Bergara B-14 Ridge Carbon is \$1,599. It’s neither a budget rifle nor a top-shelf rifle. It’s a reasonable price for a rifle with a carbon-fiber-wrapped barrel and a Cerakote finish, especially one that comes with a sub-MOA accuracy guarantee. The Ridge Carbon is a solid, hardworking rifle that’ll provide yeoman’s service in the backcountry—just like Remington’s Model 700 did back in its heyday.



HYPERFORMANCE DROPPING POWER



FIOCCHI HYPERFORMANCE

Fiocchi's Hyperperformance ammo combines the latest in material and component technology with Old World craftsmanship to deliver cartridge performance seasoned hunters across the globe depend on. The Fiocchi Hyperperformance ammo ensures high performance for every pursuit.



FIOCCHIUSA.COM



THE .44 MAGNUM— YESTERDAY AND TODAY

REGARDLESS OF HOW IT MIGHT BE MEASURED, THE .44 REMINGTON MAGNUM IS ONE OF THE ALL-TIME GREAT CARTRIDGES.

BY LAYNE SIMPSON

THE .44 MAGNUM WAS DEVELOPED BY REMINGTON and introduced in 1955 in the then-new Smith & Wesson Model 29 double-action revolver. Shortly thereafter, Bill Ruger beefed up his Blackhawk single-action revolver in .357 Magnum and chambered it for the new .44-caliber round. That first Remington ammo was loaded with a 240-grain semiwadcutter lead bullet with a gas check at a claimed velocity of 1,470 fps from a 6.5-inch barrel. The muzzle energy was listed at 1,150 ft-lbs (about 65 percent more than for the .357 Magnum).



These bullets are stabilized in flight by a 1:20 rifling twist rate. Bullets longer than the Speer 270-grain DeepCurl SP may not be stabilized when fired from rifles with the slower 1:38 twist, and when loaded in the .44 Magnum case, those exceeding 305 grains in weight exceed the cartridge length accepted by repeating rifles. Left to right: Hornady 225-grain FTX, Hornady 240-grain XTP, Swift 240-grain A-Frame, Rim Rock 240-grain Deer Grenade, Speer 270-grain DeepCurl SP, Swift 280-grain A-Frame, Swift 300-grain A-Frame, Hornady 300-grain XTP, Rim Rock 305-grain LFN, Rim Rock 335-grain LFN, Rim Rock 340-grain LFN.

Soon after the .44 Magnum was launched, Arizona gunsmith Ward Koozer began converting Winchester Model 92 lever-action rifles in .44-40 Winchester for the new cartridge. Not long after that, Ruger initiated the design of a gas-operated, semiautomatic carbine in .44 Magnum and introduced it in 1961 as the Ruger Deerstalker.

The owner's manual included with the little Ruger warned that use of ammunition loaded with lead bullets would clog up its gas-handling system. Almost overnight it seemed, Norma introduced what the company called .44 Magnum Carbine ammo loaded with a 240-grain Power Cavity softnose bullet with a jacket of mild steel. Velocity rating from an 18.5-inch barrel was 1,750 fps for 1,632 ft-lbs of energy. The Norma ammo received a lot of publicity when Robert Peterson, founder of Peterson Publishing Co., used it in an S&W Model 29 revolver with a 6.5-inch barrel to take a record-book polar bear. From a distance of 25 yards, he quickly placed five bullets just behind the shoulder, and due to the lack of expansion, three ended up against the offside hide. The other two made it all the way through.

That was some tough bullet!

Using the Norma load in my Model 29, from about 35 yards, I shot two medium-size feral hogs standing broadside and shoulder to shoulder in perfect alignment as they were eating shelled corn. The bullet entered the near pig just behind the shoulder, exited the far pig in about the same place, and kicked up dust far beyond. Remington and Winchester quickly responded by introducing .44 Magnum ammo loaded with their versions of a 240-grain jacketed softnose bullet.

Hunters who wanted to handload for their Ruger carbines had to wait a bit longer. At the time, Hornady's only offering was the 240-grain Short Jacket semiwadcutter, and its partially exposed

lead core made it unsuitable for the job. Speer offered 225-grain hollowpoint and 240-grain softnose bullets of the same shape, and while described as semijacketed, their longer jackets fully enclosed the bearing surface area of the lead core. They were the first jacketed bullets I handloaded for my Smith & Wesson revolver, and they worked equally well in my father's Ruger Deerstalker. The 225-grain bullet was quite effective on deer and feral hogs. Remington was first to offer 240-grain jacketed softnose bullets of conventional form to handloaders.

Whereas the S&W Model 29 and Ruger Blackhawk were introduced with a rifling twist rate of 1:20 inches, the Ruger carbine was given a much slower 1:38 twist. Other rifles and



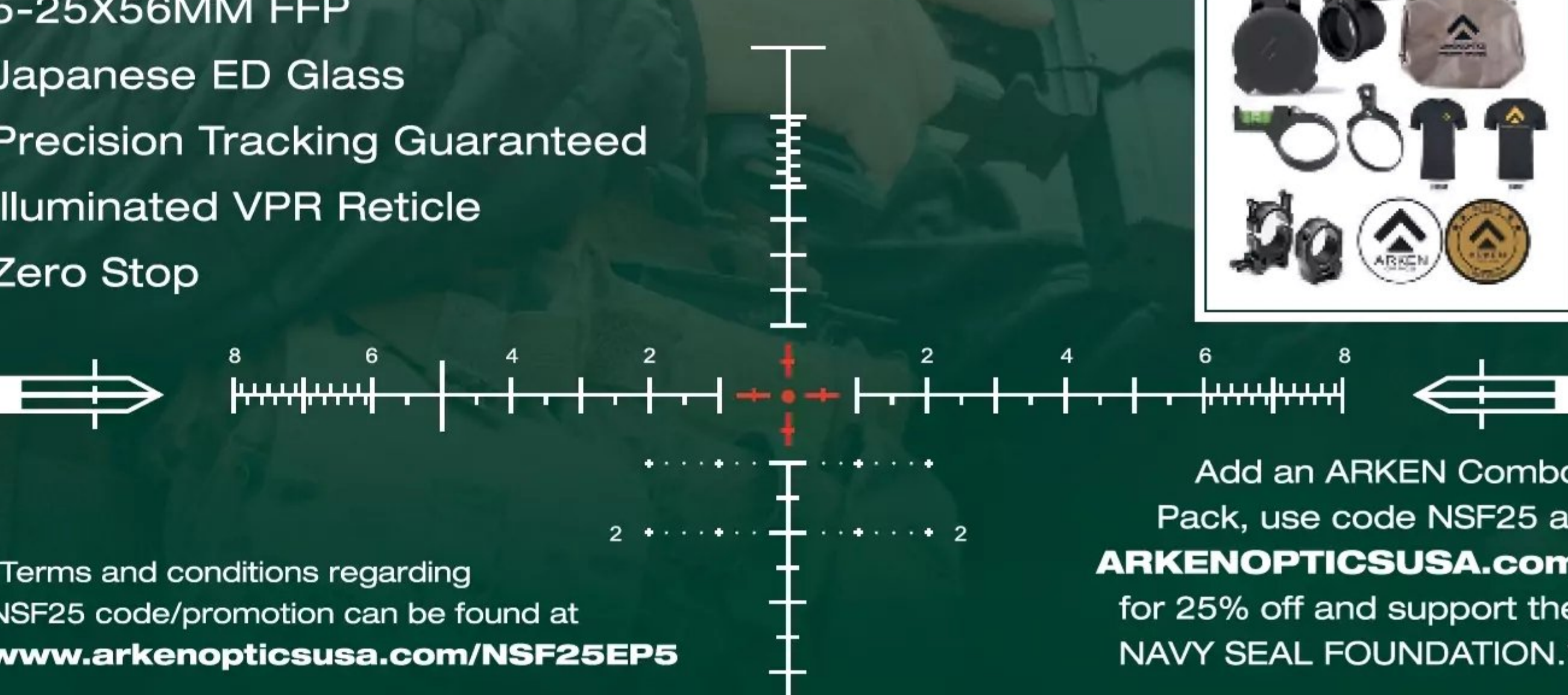
RUGGED PRECISION



EP-5

5-25X56MM FFP
Japanese ED Glass
Precision Tracking Guaranteed
Illuminated VPR Reticle
Zero Stop

\$529.99



*Terms and conditions regarding NSF25 code/promotion can be found at www.arkenopticsusa.com/NSF25EP5

Add an ARKEN Combo Pack, use code NSF25 at ARKENOPTICSUSA.com for 25% off and support the NAVY SEAL FOUNDATION.*



THE .44 MAGNUM—YESTERDAY AND TODAY



While the Ruger Super Redhawk Alaskan in .44 Magnum with a 2.5-inch barrel would not be as effective at stopping a charging bear as a large-caliber rifle, it is more likely to be carried at all times and is far better than no protection at all.

carbines with the lazy twist are the slide-action Vulcan 440, lever-action Browning B-92, lever-action Marlin Model 336 and Model 1894, bolt-action Remington 788, and the lever-action Winchester Model 94.

J.D. Jones of SSK Industries, Larry Kelly of Mag-Na-Port, and other serious handgun hunters who took very large game animals around the world with .44 Magnum revolvers often used heavier bullets of higher sectional density. J.D. preferred hard-cast bullets of his own design, and I still have a mold made by him for an excellent bullet weighing 310 grains. Cast bullets as heavy as 340 grains eventually became available from Rim Rock and others. Meanwhile, 300-grain jacketed bullets were introduced by Barnes, Hornady, and Swift.

Extremely heavy (long) bullets can be quite accurate when fired from revolvers because their 1:20 rifling twist rate is quick enough to stabilize them in flight. Due to partial and sometimes total bullet instability, this seldom holds true for rifles with the slower 1:38 twist. Measuring a nominal 0.765 inch long, today's Speer 270-grain DeepCurl SP usually works, as did the 265-grain bullet once made by Hornady. But

some hunters wanted to shoot even heavier bullets in their rifles and carbines, so several manufacturers responded by switching to a quicker 1:20 twist. Examples that spring to mind are the Models 77/44 bolt action, 96/44 lever action, and Deerfield

RUGER'S NEW MARLIN MODEL 1894 CLASSIC

AS MENTIONED IN THE MAIN PORTION OF THIS ARTICLE, the 1:38 rifling twist of Model 1894 rifles built by Marlin and Remington is too slow to stabilize the heavier bullets some hunters prefer to use in the .44 Magnum cartridge. Many fans of the little rifle (including this one) often urged Marlin officials to make a change, but it fell on deaf ears. A 1:20 rifling twist of the six-groove rifling in the new Model 1894 Classic came as no surprise since all but one rifle built by Ruger in the past has had that twist. Ruger's rifling groove diameter specification for the Model 1894 is 0.430 inch plus or minus 0.001 inch, and when I was slugging the bore of the one I received during late June 2023, it measured 0.429 inch. That is the same as for .44 Magnum revolvers built by Ruger.

With a few exceptions, my description of Ruger's new Marlin Model 336 Classic in .30-30 in the August issue of *Shooting Times* fits the new Model 1894 Classic equally well. The Model 1894 weighs 6.5 pounds. It has a 20.3-inch barrel and an overall length of 37.5 inches. The magazine capacity is 10 .44 Magnum cartridges or 11 .44 Specials. The stock has a straight grip and a thin rubber

buttpad, and it and the forearm have a durable synthetic finish and nice checkering coverage. The rifle also has posts for quick-detach sling swivels. Finding a low-magnification scope with a one-inch tube appropriate in size for such a small, trim rifle is not easy today, so I used a faithful old 1.5-4.5X Bushnell Scopechief VI to shoot three-shot groups. The results are listed in the accompanying chart, and as you can see, most loads averaged between 3.5 and 4.5 inches at 100 yards.



semiautomatic carbines built by Ruger; the Henry Big Boy lever action; Uberti's reproduction of the lever-action Winchester Model 92; and the new Ruger-made Marlin 1894 lever action.

Another issue is worth mentioning. SAAMI respective barrel groove diameters for the .44 Magnum are 0.429 inch for revolvers and 0.431 inch for rifles. For best accuracy with a jacketed bullet, the bullet diameter should be the same as barrel groove diameter, and while none that I am aware of are, at 0.430 inch, Hornady bullets come closer than the others. This explains why Hornady bullets often deliver better accuracy from rifles than their competition, although from my rifles the Swift A-Frame is equally accurate. That also explains why lead-alloy bullets measuring 0.001 to 0.002 inch larger than actual barrel groove diameter are often more accurate in some rifles than any jacketed bullet.

Recommended Powders & Go-To Bullets

Hercules 2400 and IMR 4227 powders got the .44 Magnum off and running among handloaders, but it was not long before W296 and H110 joined the chase. I find 2400, now made by Alliant, to be better than the Hercules version in several ways, with cleaner burning and lower velocity variation being the most important. W296 and H110 are other longtime favorites. Newcomers like Lil'Gun, Vihtavuori N110, and Alliant Power Pro 300-MP are also quite good, with Accurate 11FS producing extremely low velocity spread.



Wearing a rugged and optically excellent Nikon Force XR scope, this .44 Magnum Colt Anaconda with an 8.0-inch barrel delivered excellent accuracy at 100 yards.

Charges of slow-burn powders should never be reduced below starting loads shown in various reloading manuals, with W296 and H110 at their best when loaded to maximum pressures with the charges lightly compressed as a bullet is seated. Reduced-velocity practice loads with inexpensive 240-grain cast bullets require quicker-burning powders, and Unique is my all-time favorite, although Universal and CFE Pistol are also excellent choices.

As bullets go, I believe Remington got it right back in 1955. For hunting whitetail deer with the .44 Magnum, 240-grain bullets, such as the quick-expanding Remington SJHP, Hornady XTP, Speer DeepCurl HP, and the Rim Rock SWC, the latter

BERRY'S

2023 NEW BULLETS

.38 / .357 MAG		.40 / 10MM	
#33495	#73891	#81200	#10220
125GR	125GR	200GR	220GR
HYBRID HOLLOW POINT	FLAT POINT THICK PLATE	FLAT POINT THICK PLATE	FLAT POINT THICK PLATE

BERRYSMFG.COM
800-269-7373

THE .44 MAGNUM—YESTERDAY AND TODAY

.44 REMINGTON MAGNUM ACCURACY & VELOCITY									
BULLET	POWDER		CASE	PRIMER	COL (IN.)	VEL. (F.P.S.)	ENERGY (FT-LBS)	25-YD. ACC. (IN.)	100-YD. ACC. (IN.)
	(TYPE)	(GRS.)							
Ruger Super Redhawk Alaskan, 2.5-in. Barrel, 1:20 Twist, Open Sights									
Swift 300-gr. A-Frame	PP 300-MP	22.0	Starline	Rem. 2½	1.585	1061	750	2.12	----
Rim Rock 305-gr. LFN	W296	22.5	Starline	Rem. 2½	1.640	1248	1055	2.66	----
Rim Rock 335-gr. LFN	W296	20.5	Starline	Rem. 2½	1.730	1137	962	2.10	----
Rim Rock 340-gr. LFN	W296	20.5	Starline	Rem. 2½	1.765	1119	945	1.87	----
Buffalo Bore 265-gr. MSFN		Factory Load			1.600	1329	1039	1.53	----
Buffalo Bore 305-gr. LFN		Factory Load			1.610	1297	1139	2.45	----
Buffalo Bore 340-gr. LFN +P+		Factory Load*			1.760	1218	1120	2.11	----
Colt Anaconda, 8.0-in. Barrel, 1:20 Twist, Nikon Force XR 2.5-8X									
Hornady 240-gr. XTP	W296	24.0	Starline	Rem. 2½	1.590	1564	1303	----	3.14
Rim Rock 240-gr. MHHP	2400	21.0	Starline	Rem. 2½	1.650	1531	1249	----	3.59
Speer 270-gr. Gold Dot SP	Accurate 11FS	21.5	Starline	Rem. 2½	1.590	1439	1241	----	5.55
Swift 280-gr. A-Frame	W296	20.5	Starline	Rem. 2½	1.615	1336	1110	----	4.42
Hornady 300-gr. XTP	VV N110	19.0	Starline	Rem. 2½	1.580	1230	1008	-----	3.74
Swift 300-gr. A-Frame	W296	19.5	Starline	Rem. 2½	1.615	1286	1102	----	4.05
Rim Rock 305-gr. LFN	W296	22.5	Starline	Rem. 2½	1.640	1550	1627	----	4.10
Rim Rock 335-gr. LFN	W296	20.5	Starline	Rem. 2½	1.730	1424	1509	----	4.13
Rim Rock 340-gr. LFN	W296	20.5	Starline	Rem. 2½	1.765	1364	1405	----	4.28
Hornady 240-gr. XTP		Factory Load			1.575	1331	944	----	4.10
Buffalo Bore 240-gr. MHHP		Factory Load			1.640	1625	1407	----	5.11
Remington 240-gr. SJHP		Factory Load			1.585	1366	994	----	5.19
Buffalo Bore 265-gr. MSFN		Factory Load			1.600	1501	1326	----	5.26
Hornady 300-gr. XTP		Factory Load			1.580	1177	923	----	3.51
Swift 300-gr. A-Frame		Factory Load			1.585	1256	1051	----	4.16
Buffalo Bore 305-gr. LFN		Factory Load			1.610	1364	1260	----	4.77
Buffalo Bore 340-gr. LFN +P+		Factory Load*			1.743	1445	1576	----	4.52
Ruger-Made Marlin 1894, 20-in. Barrel, 1:20 Twist, Bushnell Scopechief VI 1.4-4.5X									
Hornady 225-gr. FTX	Lil'Gun	21.5	Starline**	Rem. 2½	1.650	1770	1565	----	3.75
Hornady 240-gr. XTP	IMR 4227	24.0	Starline	Rem. 2½	1.590	1588	1344	----	4.12
Rim Rock 240-gr. MHHP	2400	21.0	Starline	Rem. 2½	1.700	1687	1516	----	4.25
Swift 240-gr. A-Frame	Lil'Gun	22.5	Starline	Rem. 2½	1.615	1718	1573	----	3.71
Speer 270-gr. Gold Dot SP	Accurate 11FS	21.5	Starline	Rem. 2½	1.590	1611	1556	----	3.16
Swift 280-gr. A-Frame	W296	20.5	Starline	Rem. 2½	1.615	1589	1570	----	3.39
Swift 300-gr. A-Frame	PP 300-MP	21.0	Starline	Rem. 2½	1.615	1439	1379	----	3.54
Rim Rock 305-gr. LFN	W296	20.0	Starline	Rem. 2½	1.620	1512	1548	----	4.34
Hornady 225-gr FTX		Factory Load			1.655	1842	1695	----	3.72
Hornady 240-gr. XTP		Factory Load			1.575	1847	1818	----	4.29
Buffalo Bore 265-gr. MSFN		Factory Load			1.600	1489	1305	----	3.64
Federal 270-gr. Hammer Down DeepCurl SP		Factory Load			1.595	1686	1704	----	4.10
Swift 300-gr. A-Frame		Factory Load			1.585	1470	1440	----	3.67
Black Hills 300-gr. XTP		Factory Load			1.580	1257	1053	----	4.40
Swift 300-gr. A-Frame		Factory Load			1.585	1489	1477	----	3.64
Buffalo Bore 305-gr. LFN		Factory Load			1.610	1614	1765	----	3.50
*Not for use in Smith & Wesson revolvers. See Buffalo Bore website for complete list of guns suitable and unsuitable for use with this +P+ load.									
**Trim case length to 1.255 inches.									
NOTES: Accuracy is the average of three, five-shot groups in the revolvers and three, three-shot groups in the rifle. Velocity is the average of five rounds mea- sured 12 feet from the guns' muzzles. Abbreviations: LFN = Lead Flat Nose; MSFN = Monolithic Solid Flat Nose Dangerous Game; MHHP = Medium-Hard Cast Hollowpoint All load data should be used with caution. Always start with reduced loads first and make sure they are safe in each of your guns before proceeding to the high test loads listed. Since <i>Shooting Times</i> has no control over your choice of components, guns, or actual loadings, neither <i>Shooting Times</i> nor the various firearms and components manufacturers assumes any responsibility for the use of this data.									

with an extremely large and deep cavity in its flat nose, will get the job done. Buffalo Bore ammunition is available loaded with that bullet, and the box reads “Deer Grenade” for good reason. Due to a 0.431-inch diameter, the Rim Rock bullets I have been using deliver excellent accuracy from rifles and revolvers. The Swift 240-grain A-Frame is as effective on deer as other jacketed bullets and may be a bit better when moving up to large black bears. Moose and elk medicine would include the Swift 280-grain A-Frame, the Hornady 300-grain XTP, the Swift 300-grain A-Frame, and the Rim Rock 305-grain hard-cast bullet with its wide meplat.

Other Considerations

Keeping cases trimmed to the same length for a uniformly heavy crimp helps to keep velocity spread at a minimum. When loading ammo for this project, all powder charges were thrown with a Redding Competition 10X Pistol/Small Rifle Measure. Lyman dies were used for resizing cases, for slight flaring of their mouths for bulletseating, and for roll crimping. When overall cartridge length required for feeding from the Marlin 1894 magazine did not align the mouths of cases with the crimp grooves in the Rim Rock 240-grain and 305-grain bullets, a Lyman taper crimp die for the .44 Magnum was used. That, along with slight compression of the powder charge during bulletseating, prevented recoil-induced bullet push-back in the tubular magazine.

Compared to my Marlin lever actions in .444 Marlin, .45-70, and .50 B&M Alaskan, any handgun charged with any .44 Magnum load is quite puny for protection in big bear country, but it beats bare hands. I have spent many nights with the thin wall of a tent between me and the Alaskan wilderness, and my favorite bunkmate has been a custom Super Blackhawk Predator with a 4.63-inch barrel built by Mag-Na-Port. It is quite fond of Buffalo Bore ammo loaded with the 305-grain hard-cast bullet. The Ruger Super Redhawk Alaskan I now have weighs the same as my old gun, and I’m thinking double action might be better than single action for personal-defense use. Buffalo Bore ammo loaded with a 335-grain or 340-grain hard-cast bullet at just over 1,200 fps from its 2.5-inch barrel should deliver all the penetration needed for discouraging the biggest grizzly. While weighing a bit more and being not as handy, an iron-sighted lever-action carbine in .44 Magnum is more effective bear repellent than a revolver because it holds about twice as many cartridges, delivers more punch with each shot, and is easier to shoot accurately. In the short-barreled revolver’s favor, it is small enough to always be with you and is easier to shoot with one hand should a bear be chewing on the other.

Regardless of how it might be measured, the .44 Remington Magnum is one of the all-time great cartridges, and no hunting battery is complete without a rifle and a revolver chambered for it.

ST

THE BEST WARRANTY

IS THE ONE YOU WILL
NEVER HAVE TO USE.

Whether it is that once-in-a-lifetime hunt, the biggest competition of your season, or a critical mission, Nightforce Optics provides unmatched performance and durability. For over 30 years we have exceeded the expectations and gained the trust of the world’s most discerning customers.

To see the entire line of Nightforce riflescopes, please scan the QR Code.



Nightforce is a registered trademark of Nightforce Optics, Inc.
© 2023 Nightforce Optics, Inc. All rights reserved.



NIGHTFORCE
RUGGED. RELIABLE. REPEATABLE.



.357 MAGNUM

FACTORY AMMO VERSUS HANDLOADS

THE AUTHOR COMPARED
FACTORY-LOADED .357
MAGNUM AMMUNITION
TO HANDLOADS IN THE
3.0-INCH-BARRELED TAURUS
DEFENDER 605 REVOLVER.
HERE ARE THE RESULTS.

BY STEVE GASH

WHEN I LIVED IN THE DENVER AREA several years ago, I frequented a large, well-stocked gunshop run by my buddy, Bob. Many a time, a potential customer would saunter in, look around as if shopping, and then ask, “Hey, Bob, what’s the best 9mm semiauto for concealed carry?” Bob would pause, smile slyly, and say, “A good .38-caliber revolver.” Aghast, the potential customer, who thought he had it all figured out, would stammer, “What?” “A *revolver*,” Bob would repeat.

Then Bob would detail the virtues of a wheelgun for the citizen, stating, “A revolver is darn near idiot-proof and is simple



Steve used the new 3.0-inch-barreled Taurus Defender 605 .357 Magnum revolver to compare factory-loaded ammo with his carefully crafted handloads.



SPRINGFIELD ARMORY

HELLCAT

THE WORLD'S
HIGHEST CAPACITY
MICRO COMPACT

.357 MAGNUM FACTORY AMMO VERSUS HANDLOADS

to operate—just squeeze the trigger. If it doesn't go off, squeeze the trigger again. A .357 Magnum revolver is chambered for a powerful yet controllable cartridge, it is relatively inexpensive, and you can shoot lower-powered .38 Special loads in it."

Often, the customer failed to assimilate the many valid points in Bob's free educational lecture and went with a semiautomatic anyway. Occasionally, though, Bob would interest a shopper in a revolver.

The revolver has been renowned as a premier, multi-purpose handgun for decades. Nowadays, paired with the powerful and versatile .357 Mag., the proper revolver can serve for hunting, self-defense, concealed carry, target shooting, and good old plinking fun—with the right loads.

A prime example of the "good revolver" that Bob talked about is the Taurus Model 605. The original Model 605 dates to 1995, but a new 3.0-inch-barreled version called the Defender was introduced to the handgun scene last year, and that's the version I used for this report. It is chambered to .357 Mag., has the 3.0-inch barrel (with a 1:16.5-inch twist rate), and weighs a mere 23.6 ounces. Several configurations are offered, and the one I used is matte-finished stainless steel, comes with Hogue rubber grips, has an MSRP of \$479.99, and is not too small, not too big, but just right. I am big fan of revolvers, and I found the new Defender 605 at a local store. It followed me home.

The goal of this exercise (and it was an exercise, all right) was to see if I could approach or equal the velocities of factory-loaded ammunition with my handloads. Well, while I must report that I failed in that venture, the results were actually very good. My handloads shot well, and were plenty powerful, but the factory fodder bested them.

The Factory Ammo

I tested six factory loads in the Defender 605. Five were from Hornady, and one was from Remington. In addition, I tested 12 handloads built with as many

different powders as seemed appropriate. The results are shown in the accompanying chart. I fired a five-shot group with each load from a benchrest at a distance of 10 yards. Note that since the overall goal was to obtain comparative velocities, the accuracy is just a relative index of the potential of each load.

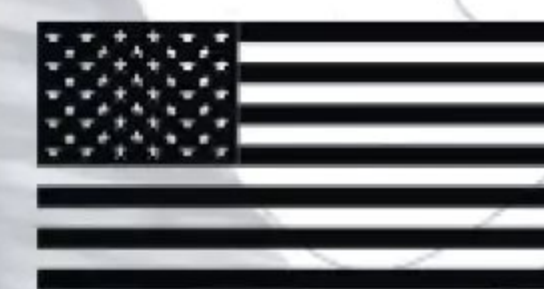
The bullet weights in the factory loads varied from 125 to 158 grains, and all shot really well. The average of all six loads was 1.72 inches. Hornady's LEVERevolution load with the 140-grain FTX bullet grouped into a 1.14-inch cluster and averaged 1,227 fps for velocity (measured 10 feet from the gun's muzzle). Hornady's Custom loading with the 158-grain XTP bullet clustered into a 1.36-inch group and averaged 1,156 fps.

The muzzle energies of these two loads in the same order were 468 and 469 ft-lbs. Overall, the average muzzle energy of the six factory loads was 454 ft-lbs. By comparison the 12 handloads averaged 362 ft-lbs, or about 20 percent less than the factory loads.

The power winner of the sextet was the Remington HTP load with the 125-grain HP bullet. Its velocity averaged 1,332 fps, for a muzzle energy of 493 ft-lbs. It was accurate, too, grouping five shots into 1.50 inches. In addition, it hit pretty close to point of aim, and that put it close to the top of my potential carry loads. I should mention that all the factory ammo seemed to be loaded pretty hot. Some of the fired cases had to be, shall I say, "assisted" from the chambers.

The Handloads

I have tested many loads in .357 Mag. revolvers over the years and have found what I consider to be the "perfect" load. It uses the Hornady 158-grain XTP atop a charge of 6.3 grains of Hodgdon Universal powder. That's Hodgdon's maximum charge. The SAAMI maximum average pressure (MAP) of the .357 Magnum is 45,000 CUP, and Hodgdon lists this load of Universal at 39,300 CUP. Its velocity out of the 3.0-inch-barreled Model 605 was



MODEL **2020** REDLINE

NO TERRITORY UNEXPLORED.

Designed to deliver a lightweight, custom-grade hunting rifle the Model 2020 Redline is available in .308 and 6.5 Creedmoor. Featuring a minimalist Grayboe Trekker stock, and outfitted with a 16" or 20" carbon fiber barrel, the Redline is suppressor ready and carries a .75 MOA guarantee. Precision manufactured for performance and reliability the Model 2020 Redline is perfectly suited for backcountry hunts where days are measured in miles.

X REDLINE



**.75 MOA
GUARANTEE**



SPRINGFIELD ARMORY

.357 MAGNUM FACTORY AMMO VERSUS HANDLOADS

929 fps, and it grouped into 1.57 inches. It is my “standard” .357 Mag. test load, and in my experience, if the gun being tested won’t shoot this load reasonably well, well, I have a real problem.

I also loaded this bullet over charges of eight additional powders that pretty much covered the burning-rate spectrum. For load data, I consulted the *Hodgdon Annual Manual* and the *Speer Handloading Manual Number 15*. The versatility of the .357 Mag. is evidenced by the number of propellants that are suitable for handloads in the round. The 158-grain jacketed bullet is pretty much a standard weight and type for .357 loads. Hodgdon lists data for 18 powders with this bullet, so from that list, I arbitrarily selected a “fast-,” “medium-,” and “slow-burning” powder for this test. Plus, I added several other powders I have used over the years.

I picked Titegroup for the “fast” powder, W572 for the “medium” powder, and H4227 for the slow-burning powder. For starting charge weights, I calculated the midpoint between the minimum and maximum charges for each powder and worked up from there. All charges were weighed on an RCBS M-1500 electronic scale, and once-fired Winchester and Remington cases were used for all loads. I used Winchester Small Pistol, Small Pistol Magnum, and Federal No. 100 and 200 primers for the test loads, and all worked fine. All bullets were firmly roll crimped into the cases with a Lee Carbide Factory Crimp Die.

Perhaps it was a quirk of this revolver, but as I approached maximum loads with the 158-grain XTP, some cases began to stick and some primers were really flattened. Especially “hot” in the Defender 605 were the charges of 15.2 grains of H4227 and 9.0 grains of True Blue. I cannot recommend either of these loads for this revolver.

More appropriate powders for this short-barreled revolver are W231 and Titegroup. I tried them with 110- and 125-grain bullets, and while the velocities were respectable, apparently, there is only so much one can wring out of a 3.0-inch barrel. Also, good accuracy was a “sometimes” thing.

The only 110-grain jacketed .38-caliber bullets I could locate were some older Zero JHPs. The velocities were higher than with the 158-grain loads but still not as fast as factory ammo loaded with the lighter-weight bullets. A charge of 7.5 grains of W231 launched the Zero 110-grain at 1,263 fps but made “buckshot patterns.”

Moving to the Hornady 125-grain XTP, again it was W231 to the rescue. The same dose of 7.5 grains of W231 produced a velocity of 1,290 fps.

In a nutshell, the handloader can produce loads that come close to factory-load velocities with all three bullet weights tested, but at least in my test, handloads did not exceed the factory loads. I will say they are still useful loads for practice. They are reasonably accurate and ballistically uniform. Any of them would ruin a bad guy’s day. And the great versatility of the .357 Magnum revolver can be brought to bear on many shooting chores.



On average, the factory-loaded ammo produced higher velocities and better accuracy than the handloads. This five-shot group was made by the Hornady Custom 158-grain XTP loading, and it measured 1.36 inches.



Another fine five-shot group was made by the Remington HTP 125-grain SJHP ammunition. It measured 1.50 Inches. This load also achieved the highest velocity, averaging 1,332 fps.



Steve’s go-to .357 Magnum handload consists of the Hornady 158-grain XTP over 6.3 grains of Universal powder, and although it wasn’t the most accurate load in the Defender 605 revolver, it’s still his standard test load.



UNCOMPROMISED QUALITY. EXCELLENCE IN EVERY DETAIL.

The TRG 22/42A1 family represents decades of refinement and innovation, bringing to life feedback from multiple militaries and agencies around the world, and is also available to civilian long-range precision shooters worldwide. The Sako TRG delivers a long-range shooting platform that meets the needs of durability, reliability, innovation, and consistent accuracy to satisfy the most demanding competitive precision shooters and perform in the most challenging Precision Rifle Series or Extreme Long-Range matches.



SAKO.GLOBAL/RIFLE/SAKO-TRG-2242-A1

sako

.357 MAGNUM FACTORY AMMO VERSUS HANDLOADS

Points to Ponder

I must confess that I was not looking forward to shooting a bunch of hot factory loads in this lightweight handgun, but the shape of the grip frame and the Hogue grip really made it easy. The little Model 605 was actually very pleasant to shoot. I calculated the average recoil of my handloads, and it was a relatively modest 6.2 ft-lbs, with a recoil velocity of 16.5 fps.

One of the great advantages of a .357 Magnum revolver is that one also can use .38 Special loads in it. Given the many +P loads available for the .38 Special, I thought it would be illustrative to chronograph some of them, to compare with the full-power .357 Mag. loads. I found four +P factory loads, two from Federal, and one each from Hornady and Winchester. All were loaded with fairly light bullets, ranging from 110 to 130 grains. The velocities were very close to 900 fps, the recoil was mild, and their accuracy was quite acceptable. These .38 Special +P factory loads approximate the power of some of the .357 Magnum handloads. My local dealer told me that he sells a lot of .38 Special +P ammo for lightweight carry revolvers, and I can see why.



Excellent powders for .357 Magnum handloads include W572, VV N350, HS-6, and W231.

While the answer to my main question is “no,” my handloads didn’t beat the factory-loaded ammo, they came close. More importantly, I believe this test proves that Bob was right. A good “.38-caliber revolver” like the Taurus Defender 605 fills the bill for a lot of roles, including personal protection. **ST**

.357 MAGNUM ACCURACY & VELOCITY

BULLET	POWDER		CASE	PRIMER	COL (IN.)	VEL. (F.P.S.)	S.D. (F.P.S.)	ENERGY (FT-LBS)	10-YD. ACC. (IN.)
	(TYPE)	(GRS.)							
.357 Magnum, 3.0-in. Barrel									
Zero 110-gr. JHP	W231	7.5	Win.	Fed. 100	1.585	1263	6	390	1.38
Hornady 125-gr. XTP	W231	7.5	Win.	Fed. 100	1.552	1290	8	462	1.77
Hornady 158-gr. XTP	Auto Comp	7.0	Rem.	Fed. 100	1.555	897	14	282	1.71
Hornady 158-gr. XTP	CFE Pistol	6.9	Rem.	CCI 500	1.555	972	12	332	1.40
Hornady 158-gr. XTP	H4227	15.2	Win.	WSPM	1.555	1043	8	382	2.01
Hornady 158-gr. XTP	HS-6	9.5	Rem.	Fed. 200	1.555	1062	15	396	1.51
Hornady 158-gr. XTP	Titegroup	6.1	Win.	WSPM	1.555	983	14	339	1.95
Hornady 158-gr. XTP	True Blue	9.0	Rem.	WSPM	1.555	1030	6	372	1.12
Hornady 158-gr. XTP	Universal	6.3	Rem.	Fed. 100	1.555	929	4	303	1.57
Hornady 158-gr. XTP	W231	6.2	Rem.	Fed. 100	1.555	945	9	313	1.65
Hornady 158-gr. XTP	W572	7.4	Win.	WSPM	1.555	1022	9	367	1.57
Hornady 180-gr. XTP	VV N350	8.4	Win.	WSP	1.555	1061	10	395	1.42
Hornady Critical Defense 125-gr. FTX			Factory Load		1.553	1221	27	414	2.02
Remington HTP 125-gr. SJHP			Factory Load		1.557	1332	16	493	1.50
Hornady Critical Duty 135-gr. FlexLock			Factory Load		1.548	1195	21	428	1.98
Hornady Custom 140-gr. XTP			Factory Load		1.545	1206	15	452	2.08
Hornady LEVERevolution 140-gr. FTX			Factory Load		1.588	1227	19	468	1.14
Hornady Custom 158-gr. XTP			Factory Load		1.554	1156	15	469	1.36
.38 Special, 3.0-in. Barrel									
Hornady Critical Defense 110-gr. FTX +P			Factory Load		1.492	935	19	214	1.57
Federal Personal Defense Punch 120-gr. JHP +P			Factory Load		1.414	889	18	211	0.91
Federal 129-gr. Hydra-Shok +P			Factory Load		1.437	886	11	225	1.91
Winchester PDX1 130-gr. JHP Bonded +P			Factory Load		1.433	888	33	228	1.65
NOTES: Accuracy is for one, five-shot group fired from a benchrest. Velocity is the average of five rounds measured 10 feet from the gun's muzzle. All load data should be used with caution. Always start with reduced loads first and make sure they are safe in each of your guns before proceeding to the high test loads listed. Since <i>Shooting Times</i> has no control over your choice of components, guns, or actual loadings, neither <i>Shooting Times</i> nor the various firearms and components manufacturers assumes any responsibility for the use of this data.									



UPGRADE YOUR EQUIPMENT AND YOUR SKILLS

Even after you upgrade to a new HK VP9, with its best-in-class trigger pull and ergonomic, customizable grip, you're not quite done yet. You still need a couple of important accessories. And we're not talking about holsters, lights and optics either. Training and Practice – They are two different things and we all need more of both. Look into it ... and go do the work!

HK
HECKLER & KOCH



www.hk-usa.com • 706-701-5554



RUGGED & REFINED

THERE'S A NEW BOLT-ACTION .22 LR RIMFIRE RIFLE ON THE SCENE, AND IT'S A REAL HUMDINGER. MADE BY SPRINGFIELD ARMORY, THE NEW MODEL 2020 RIMFIRE IS OFFERED IN SIX CONFIGURATIONS.

BY JOEL J. HUTCHCROFT

A LITTLE OVER FOUR YEARS AGO, *Shooting Times* writer Layne Simpson penned an opus entitled “Bolt-Action Beauties” in which he described several of his favorite bolt-action rimfire rifles. Now, Layne has been shooting rimfires for a long time and is well versed in classic rifles and handguns chambered for the .22 LR as well as other rimfire cartridges. His opinions on such guns are well respected by many, including me. I would never speak for him, but I suspect that if Springfield had introduced



the new Model 200 Rimfire back then, Layne would have included it in his article. I enjoy rimfire guns, myself, so I exercised my “editor’s prerogative” and decided to report on the new rifle instead of asking Layne to do it.

As I write this, the Model 200 Rimfire is offered in six configurations. The two Target versions come with synthetic stocks (black and sage colors) and heavy barrels, whereas the Classic versions come with sporter-weight barrels and walnut stocks. The walnut stocks are offered in Select Satin, Grade A, Grade AA, and Grade AAA versions. *Shooting Times* received the black Target Model 200 Rimfire and the Grade AAA Classic Model 200 Rimfire.

If the name Model 200 sounds familiar, that’s because Springfield also builds the Model 200 Waypoint and Model 200 Redline centerfire bolt-action rifles that were introduced in 2021 and 2023, respectively. The rimfire model joins the Model 200 family because, as Springfield Vice President of Marketing Steve Kramer put it, “The appeal of a well-made

MODEL 200 RIMFIRE	
MANUFACTURER	Springfield Armory springfield-armory.com
TYPE	Bolt-action repeater
CALIBER	.22 LR
MAGAZINE CAPACITY	10 rounds
BARREL	20 in.
OVERALL LENGTH	38 in. (Target), 38.25 in. (Classic)
WEIGHT, EMPTY	7.4 lbs. (Target), 6.2 lbs. (Classic)
STOCK	Reinforced polymer (Target), Turkish walnut (Classic)
LENGTH OF PULL	13.45 in.
FINISH	Matte blued barrel and action; black synthetic stock (Target); Grade AAA walnut stock (Classic)
SIGHTS	None, interrupted Picatinny optics rail
TRIGGER	4.75-lb. pull (Target), 5.5-lb. pull (Classic) (as tested)
SAFETY	Two position
MSRP	\$434 (Target, black stock), \$1,099 (Classic, Grade AAA stock)



Springfield’s new bolt-action Model 200 Rimfire rifles are built around a blued steel action that utilizes dual cocking cams and provides a 60-degree bolt throw. The 4140 steel bolt has twin extractors, a high-polish white chrome coating, and a threaded bolt handle.

rimfire rifle speaks to practically every shooting enthusiast. The new bolt-action Model 200 Rimfire line chambered in .22 LR provides just that, with a wide selection of models....”

Before I get to how the Model 200 Rimfires performed during my shooting sessions, let’s take a good look at the main features, starting with the action.

Action & Bolt

The Model 200 Rimfire has dual cocking cams, a 60-degree bolt throw, and an interrupted Picatinny rail on top of the receiver. The bolt is constructed of 4140 steel, and it has twin extractors and a high-polish white chrome coating. The bolt handle is threaded 5/16-24, which offers shooters the opportunity to customize their rifles with aftermarket bolt knobs. The bolt release is located on the left side of the action. The interrupted Picatinny rail has a total of nine cross-slots, it’s held in place by four 8-40 screws, and it makes installing a scope a cinch. A nice detail that might get overlooked by some is a

RUGGED & REFINED

small American flag molded into the underneath surface of the Target rifle's trigger guard.

Speaking of installing a scope, I used Riton's new 5 Tactix 1-10X 24mm scope with the Model 2020 Rimfire Classic (you can read all about it in the Quick Shot report on page 60 of this magazine) and Leupold's proven VX 5HD 3-15X 44mm with the Model 2020 Rimfire Target.

For those who care about such things, the round action has a length of 7.5 inches, including the tang, and a diameter of 1.14 inches. For the record, the bolts of our samples cycled smoothly and functioned perfectly throughout my shooting sessions.

Safety & Trigger

The rifle's safety is a two-position toggle setup located on the right side of the action. When the safety is forward in the "Fire" position, a red dot is visible, and when it's on "Safe," a white dot shows. The bolt can be cycled when the safety is engaged.

Interestingly, the Model 2020 Rimfire features a Model 700-pattern trigger that is adjustable for pull weight from 4.0 to 5.5 pounds. As such, the gun was designed to accept aftermarket 700-pattern triggers, thereby allowing the shooter to customize it. The factory-installed trigger's fingerpiece is 0.36 inch wide, and it is striated.

Springfield's operator's manual says the trigger pull is factory-set at 4.0 pounds of pull, but our samples had 5.5-pound and 4.75-pound pulls, respectively. Both triggers consistently broke cleanly and crisply, and while I would prefer a lighter trigger pull for precision target shooting, say somewhere around 3.0 pounds, both rifles shot really well with their factory-set trigger pulls.

I didn't adjust the trigger pulls for this report, but for those who want to know how it can be done, here's the procedure. Remove the barreled action from the stock. Insert the supplied hex wrench in the adjustment screw located on the front vertical surface of the trigger housing and rotate it—clockwise to increase the trigger pull, counterclockwise to decrease the trigger pull. Once that has been accomplished, be sure to check the trigger safety and function without ammunition before using the rifle.

Magazine, Barrel & Stock

Another interesting feature of the Model 2020 Rimfire rifles is they utilize a 10-round polymer rotary magazine that looks very much like the reliable Ruger 10/22 rotary magazine. In fact, Springfield says the rifle and magazine are "cross compatible"

with Ruger 10/22-pattern magazines of the same capacity. I must point out that the Model 2020 Rimfire magazines wear Springfield's crossed cannons logo on their bottom sides.

The magazines were easy to load, and they functioned 100 percent. Not a single round failed to feed into the chamber. I should mention that the magazine release is located under the action just ahead of the trigger guard. On the Classic rifle, it is flush with the bottom of the action and very unobtrusive, but the Target rifle has a large lever built into the release, which enables fast and fumble-free operation. I must admit that I preferred the levered release as it made dropping the magazine so much easier.

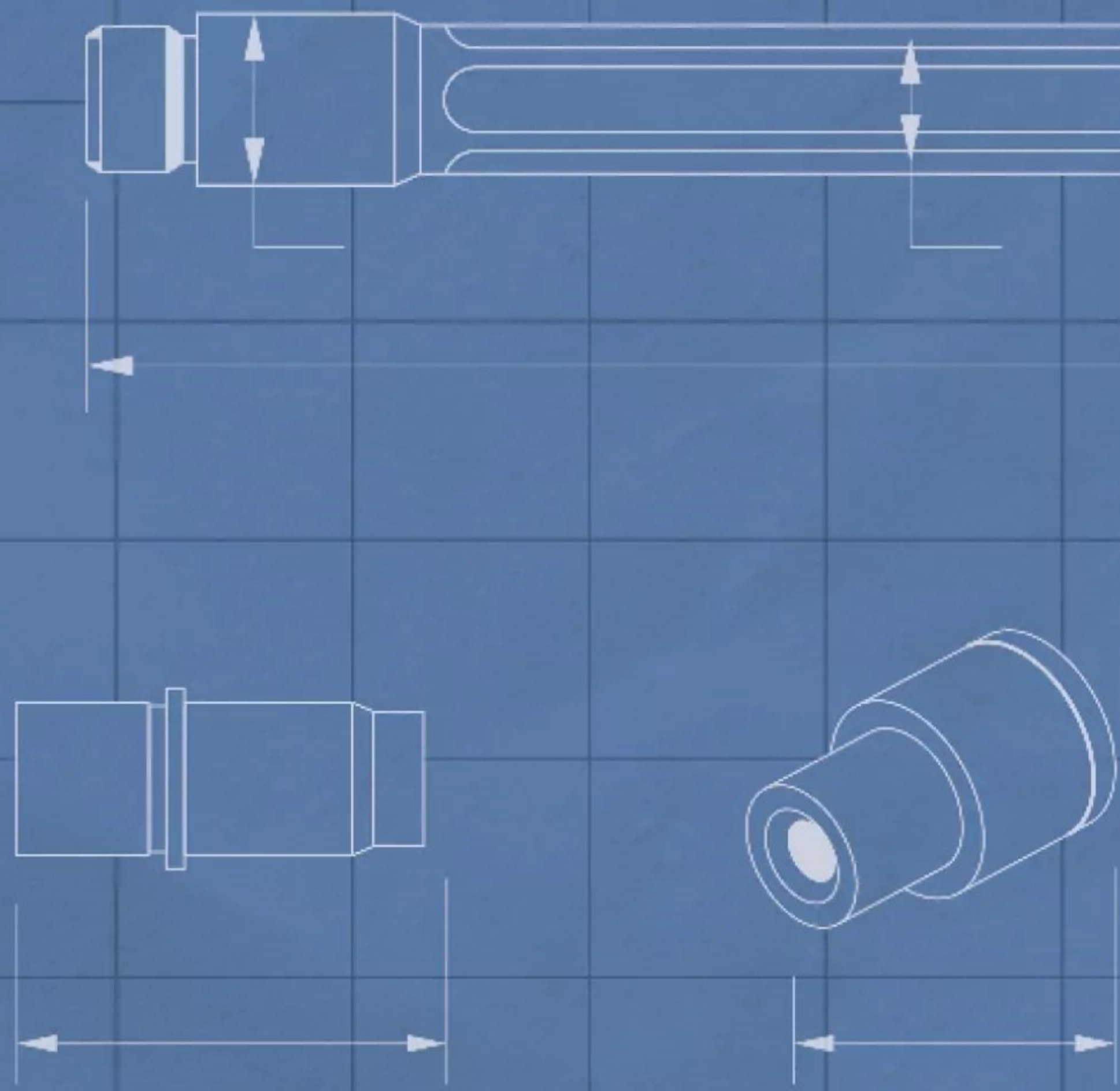
The Model 2020 Rimfire barrels are 20 inches long and free-floated. They have 1:16 twist rates and recessed and crowned



The two-position toggle-type safety is located on the right side of the receiver. The bolt can be cycled with the safety engaged.



The 700-pattern trigger is user-adjustable for pull from 4.0 to 5.5 pounds. Our Classic rifle was factory-set at 5.5 pounds of pull, and our Target rifle was set at 4.75 pounds of pull.



Length: 18 Inches
Weight: 32.02 Ounces
Caliber: .223 Wylde



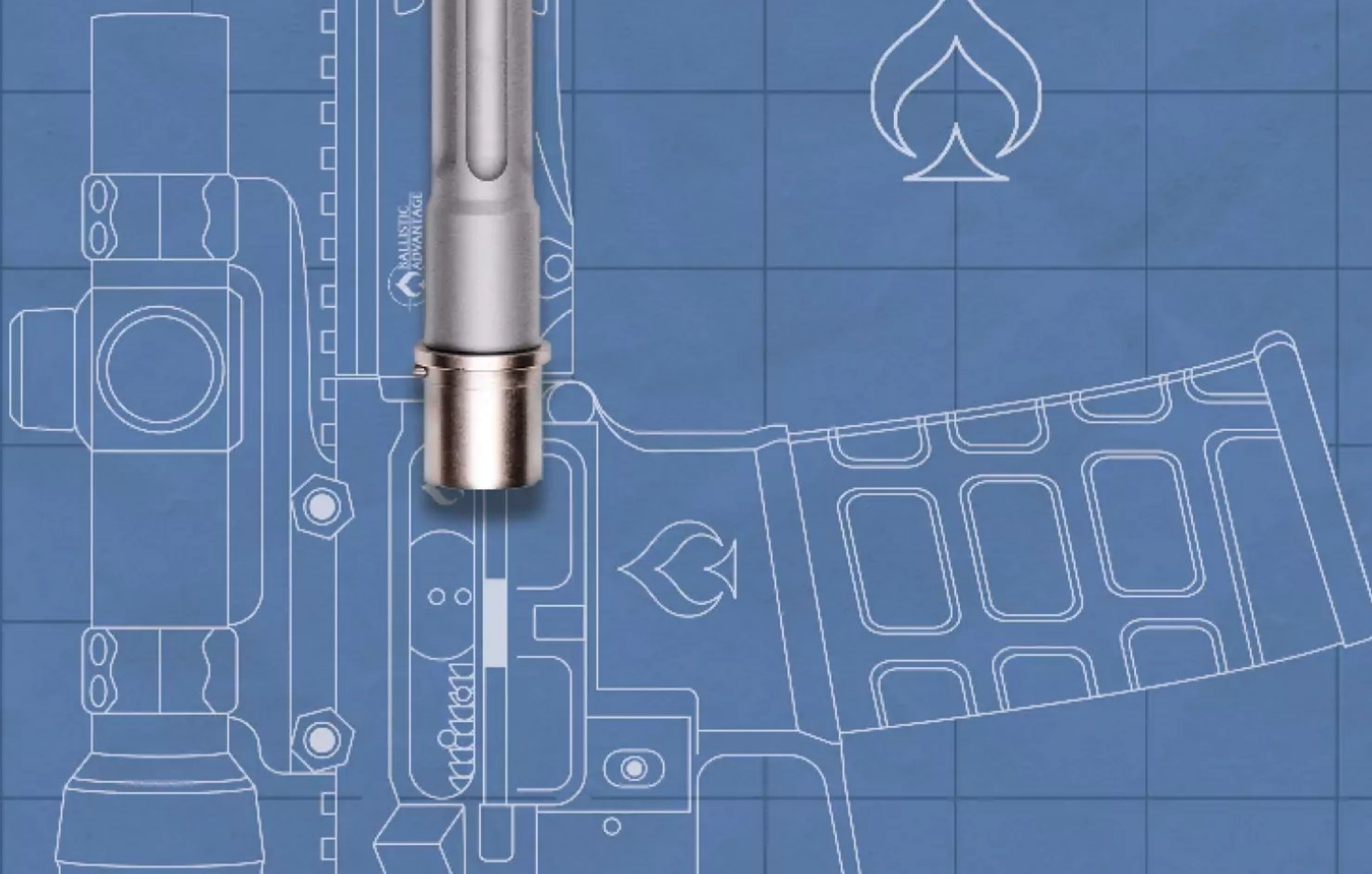
ACCURACY GUARANTEED. PERFORMANCE REDEFINED.



SUB-MOA
GUARANTEED



AMERICAN MADE



BALLISTICADVANTAGE.COM

RUGGED & REFINED

muzzles. But here's where the Target and Classic versions differ. The Target model's muzzle is threaded 1/2-28 so that it can accept suppressors and muzzle devices (a thread protector is included), and the barrel has a heavy profile, straight taper contour and measures 0.72 inch in diameter near the muzzle right before where the threads begin. In contrast, the Classic's #1 sporter-profile barrel measures 0.56 inch at the muzzle, and it is not threaded.

The stocks of the Model 2020 Rimfire versions also differ. As mentioned earlier, the Target model has a target-style synthetic stock (Springfield says it's "reinforced polymer" to be exact). It has a high comb and a relatively straight pistol grip (with slight palmswells and texturing on both sides), and the fore-end is flat and fairly wide. Two colors are offered—black and sage with black webbing.

As its name implies, the Classic model has a classic-style, checkered Turkish walnut stock with a satin finish, and four grades of wood are offered—Select Satin, Grade A, Grade AA, and Grade AAA. Our sample is Grade AAA, and it is made of the finest Turkish walnut with very nice figure. Grade AA stocks are made of premium Turkish walnut and are fully figured. Grade A stocks are lightly figured, and Select Satin stocks are pretty plain in figure by comparison. Of course, the MSRP's reflect the grade of walnut, with Grade AAA retailing at \$1,099; Grade AA retailing at \$839, Grade A retailing at \$690, and Select Satin retailing at \$529. The black Target model retails for \$434, and the sage with black webbing Target model retails at \$499. All stocks come with rubber buttpads and sling-swivel studs. And lengths of pull measure 13.45 inches.

The Classic model weighs 6.2 pounds unloaded and without an optic, and it is 38.25 inches long overall. The Target rifle weighs 7.4 pounds unloaded and without an optic, and



The new rifles use rotary magazines that hold 10 rounds of .22 LR ammunition. While Springfield has its own branded magazines, the rifles are compatible with Ruger 10/22 rotary magazines.

it is 38 inches long overall. Both of our rifles came with padlock-style cable locks and black, zippered soft cases with two interior pockets (one is for the cable lock) that have Velcroed flaps and "Springfield Armory" embroidered on the outside.

Accuracy & Velocity

Springfield offers an accuracy guarantee with the new Model 2020 Rimfire. It states, "Springfield Armory stands behind all Model 2020 Rimfire rifles and promises rock-solid performance and accuracy. Every configuration is guaranteed to shoot 1 inch or less three-shot groups at 50 yards with quality match-grade factory ammunition, in the hands of a skilled shooter." As you can see from the accompanying chart, I was able to meet that with all eight loads with the Classic rifle and all eight loads with the Target rifle. Please take into consideration that several of the loads I fired were more than 30 years old, and, as I have said many times before in print, I am an average shooter at best.

Overall, the new Model 2020 Rimfire rifles produced very good accuracy at 50 yards. Group averages for eight loads ranged from 0.41 inch to 0.99 inch. The results shown in the chart are the averages of three, five-shot groups fired from a benchrest. Note that seven of the loads I fired had 40-grain bullets. The overall average accuracy for all loadings in the Classic rifle was 0.77 inch. The Target rifle was even better with an overall average accuracy for all loadings of 0.66 inch.

My best accuracy average for the Classic rifle came with the SK Rifle Match ammo. That loading produced an average



The Model 2020 Rimfire Classic rifles have sporter-weight 20-inch barrels and Turkish walnut stocks. This one is the Grade AAA version.



The Model 2020 Rimfire Target rifles have heavy, straight taper, 20-inch barrels and target-style synthetic stocks.

accuracy of 0.43 inch and an average velocity of 1,025 fps measured 12 feet from the gun's muzzle with a Competition Electronics ProChrono Digital chronograph. The extreme spread was 52 fps, and the standard deviation was 21 fps.

With averages of 0.55 and 0.66 inch, the Winchester T22 Target and the Federal Rifle & Pistol Match #805 loadings were the second place and third place holders in the Classic rifle. Both of those were some of the oldest .22 LR ammo in my cache. The Norma TAC-22 Match and the PMC Match Rifle loadings also came in well under the 1.0-inch mark in the Classic rifle, averaging 0.73 and 0.86 inch, respectively.

My best accuracy average for the Target rifle also came with the SK Rifle Match ammo. It produced an average accuracy of 0.41 inch and an average velocity of 1,010 fps, an extreme spread of 16 fps, and a standard deviation of 6 fps.

Unlike the Classic rifle, second place in the Target rifle went to the Eley Match load, which averaged 0.51 inch. Third place went to the Winchester T22 Target loading, and it averaged 0.56 inch. The Federal Rifle & Pistol Match and the Norma TAC-22 Target loadings also shot well in the Target rifle, averaging 0.62 and 0.64 inch, respectively.

I'd like to call out one other loading, and it is the ECO

SPEED-22 from Norma. It's the only load I fired that is not a match or target load, and it is the only one I fired that did not have a 40-grain bullet, but I included it because it is so unusual. It is loaded with a 24-grain, lead-free, Zink Copper Layer (ZCL) flat-point bullet. Norma claims it has "up to 58 percent increased speed," with a factory-rated muzzle velocity of 1,706 fps. I didn't achieve that high of a velocity in either Springfield rifle, but the loading did produce the highest velocity of the eight loadings I tested. This load averaged 0.99 inch in the Classic rifle and 0.89 inch in the Target rifle. Norma says it's appropriate for hunting and plinking.

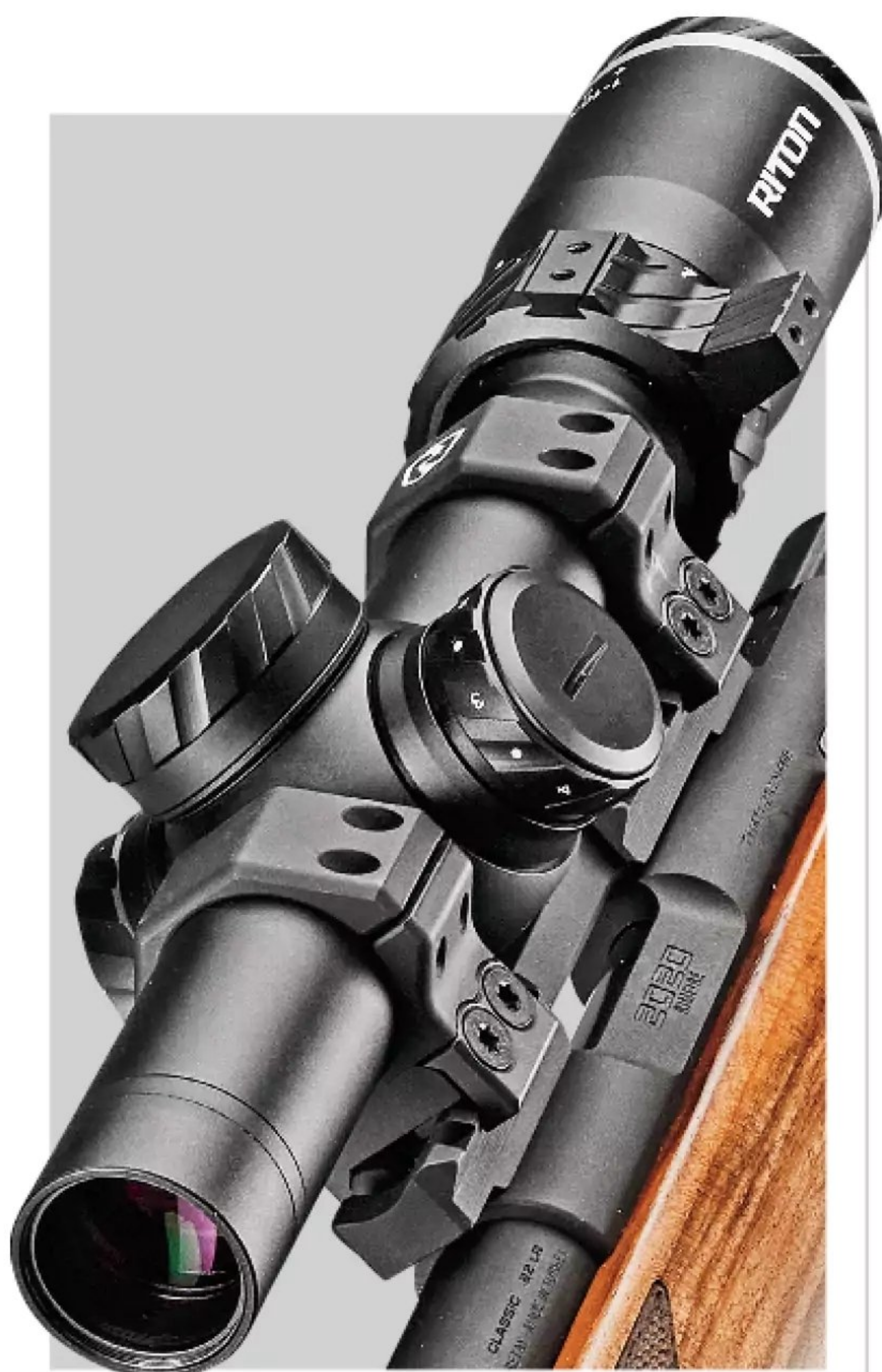
With all the attention given to its design and details, the new Springfield Model 2020 Rimfire rifle is certainly sophisticated. And after spending a considerable amount of time on the range with both the Classic and the Target versions, I can tell you they are undeniably well made. I can confidently report that these rimfire rifles are both rugged *and* refined.

ST

SPRINGFIELD MODEL 2020 RIMFIRE ACCURACY & VELOCITY

AMMUNITION	VEL. (FPS)	E.S. (FPS)	S.D. (FPS)	50-YD. ACC. (IN.)
.22 LR Classic, 20-in. Barrel				
Norma ECO SPEED-22 24-gr. ZCL	1318	90	58	0.99
Eley Match 40-gr. LFN	1048	25	12	0.94
Federal Gold Medal Target 40-gr. LRN #711	1090	42	19	0.97
Federal Rifle & Pistol Match 40-gr. LRN #805	1072	37	11	0.66
Norma TAC-22 High Performance Target 40-gr. LRN	1010	61	25	0.73
PMC Match Rifle 40-gr. LRN	1050	37	14	0.86
SK Rifle Match 40-gr. LRN	1025	52	21	0.43
Winchester T22 Target 40-gr. LRN	1113	55	25	0.55
.22 LR Target, 20-in. Barrel				
Norma ECO SPEED-22 24-gr. ZCL	1385	92	62	0.89
Eley Match 40-gr. LFN	1045	23	8	0.51
Federal Gold Medal Target 40-gr. LRN #711	1101	73	35	0.71
Federal Rifle & Pistol Match 40-gr. LRN #805	1059	54	21	0.62
Norma TAC-22 High Performance Target 40-gr. LRN	1024	33	18	0.64
PMC Match Rifle 40-gr. LRN	1035	37	14	0.96
SK Rifle Match 40-gr. LRN	1010	16	6	0.41
Winchester T22 Target 40-gr. LRN	1127	41	16	0.56

NOTES: Accuracy is the average of three, five-shot groups fired from a sandbag benchrest. Velocity is the average of 10 rounds measured 12 feet from the guns' muzzles.



SHOOT

HUNT

DEFEND

TRAIN

QUICKSHOT



Riton 5 Tactix 1-10X 24mm

By Joel J. Hutchcroft

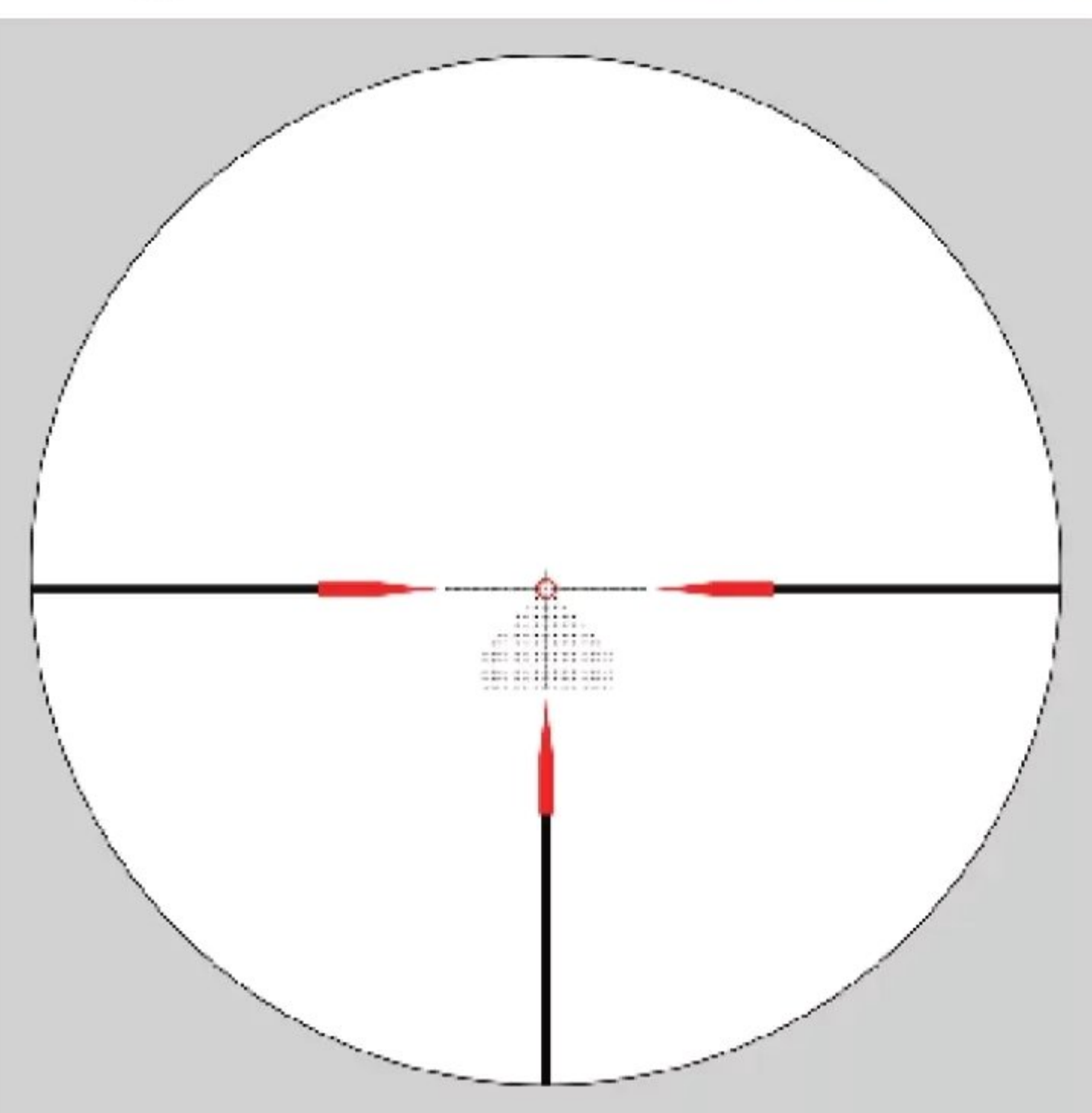
FOR MY GUN REVIEW OF THE NEW SPRINGFIELD MODEL 2020 RIMFIRE rifles beginning on page 54 of this issue, I installed a brand-new Riton 5 Tactix 1-10X 24mm scope on the Grade AAA rifle, and it was a very good choice. With its 30mm-diameter main tube, 24mm objective lens, 11.25-inch length, and 26-ounce weight, it fit the elegant rifle nicely and enhanced the gun's top-drawer accuracy capability.

The 5 Tactix 1-10X scope comes with Riton's illuminated 3OT reticle placed in the first focal plane. The reticle has an illuminated center dot surrounded by four illuminated lines that sort of form a diamond. It also has three thick and pointed illuminated lines at the 3 o'clock, 6 o'clock, and 9 o'clock positions. And there are graduated hash marks on the horizontal crosshair as well as ballistic solutions arranged "Christmas tree style" under the crosshair. They are designed for tactical use on ARs and such carbines, so obviously I didn't use them for the .22 LR bolt-action rifle. I mention them just to demonstrate that this top-of-the-line scope is intended for tactical use and provides fast target acquisition on low power as well as long-range precision on 10X. Note that parallax is fixed at 100 yards.

Some fine features of this scope include capped, zero-resettable turrets; three heights of interchangeable throw levers (8mm, 11mm, and 14mm); six levels of red illumination (powered by a CR2032 battery); a fast-focus eyepiece; aircraft-grade aluminum construction; high density glass; and proprietary fully multicoated lenses. It is 100 percent waterproof, fogproof, and shockproof, and it is covered by a limited lifetime warranty.

Riton scopes are known for their rugged construction and consistent high-level performance. The new 5 Tactix 1-10X scope has those qualities in spades.

MSRP: \$959.99
ritonoptics.com



5 TACTIX 1-10X 24MM

MANUFACTURER	Riton Optics
MAGNIFICATION	1X to 10X
OBJECTIVE LENS DIAMETER	24mm
TUBE DIAMETER	30mm
EYE RELIEF	4.0 in.
FIELD OF VIEW	105.8 ft. (1X) to 10.5 ft. (10X) @ 100 yds.
ELEVATION ADJUSTMENT RANGE	40 MRAD
WINDAGE ADJUSTMENT RANGE	40 MRAD
LENGTH	11.25 in.
WEIGHT	26 oz.
FINISH	Matte black
MSRP	\$959.99

**IN THE WORST CONDITIONS,
IT'S AT ITS BEST.**

MRO HD



The Trijicon MRO® HD optic was built with a rugged design to survive in the roughest environments. We made it that way because that's what the teams on the ground count on. Plus, with a refined 2.0 MOA center dot and 68 MOA segmented circle reticle, the MRO HD puts you on target fast—even from non-standard shooting positions.

**Upgrade your optic at
[Trijicon.com/MROHD](https://www.Trijicon.com/MROHD)**



Brilliant Aiming Solutions™

QUICKSHOT

Winchester Big Bore .357 Magnum Ammo

By Brad Miller PhD

NOT LONG AGO WINCHESTER INTRODUCED A NEW LINE OF HANDGUN ammunition called Big Bore. It is intended for hunting and personal protection. Calibers are .357 Magnum, 10mm Auto, .44 Magnum, and .45 Colt. They feature a semijacketed hollowpoint bullet that provides



WINCHESTER BIG BORE .357 MAGNUM 158-GR. JHP ACCURACY & VELOCITY				
GUN	VEL. (FPS)	S.D. (FPS)	25-YD. ACC. (IN.)	AGGREGATE ACC. (IN.)
4.0-in. Barrel				
S&W Model 686	1156	36	3.22	4.56
7.0-in. Barrel				
S&W Model 686 Plus	1327	30	1.24	1.47
NOTES: Accuracy is the average of four, five-shot groups fired with the revolvers mounted in a Ransom Rest. The aggregate accuracy is for all 20 shots. Velocity is the average of 20 rounds measured eight feet from the guns' muzzles.				

optimal expansion and deep penetration in big game.

I tested the .357 Magnum load for velocity and accuracy. Its ballistics are a 158-grain jacketed bullet at 1,460 fps. Winchester's catalog shows this speed from a 6.0-inch vented barrel, but the ammunition box shows this speed from an 8.5-inch vented barrel. I guess someone at Winchester couldn't make up their mind. That happens to me, too.

The barrel lengths I had available were 4.0 and 7.0 inches—both are S&W Model 686s. In the 4.0-inch barrel, the loading averaged 1,156 fps, and in the 7.0-inch barrel, it averaged 1,327 fps. Based on my chronograph readings, it looks like Winchester's advertised speed is from an 8.5-inch barrel.

Accuracy was assessed at 25 yards with the guns mounted in a Ransom Rest. The 4.0-inch revolver produced an average five-shot group size of 3.22 inches and a 20-round group of 4.56 inches. My 7.0-inch gun loved this round, producing an average five-shot group of 1.24 inches, and it kept all 20 rounds in just 1.47 inches. That's a third of the group size of the 4.0-inch gun. (The ammo was all from the same lot number.)

If you're looking for a potent hunting or defense round that offers deep penetration, check out Winchester's Big Bore line. Winchester does not list a suggested retail price on its website, but I found the .357 Magnum loading at MidwayUSA for \$33.99 for 20 rounds

ST

800-338-3220 | HORNADY.COM



NEVER COMPROMISE AT ANY DISTANCE

When you set out to exceed the limits of what is expected of hunting ammunition, you don't do it by guessing what should happen. You test, evaluate and refine until you arrive at Hornady® Precision Hunter® ammunition, loaded with our ballistically advanced ELD-X® bullet with Heat Shield® tip. Engineered specifically to deliver **match accuracy** and **lethality at all practical ranges**, Hornady® Precision Hunter® ammunition is the best **ALL-RANGE** hunting ammunition.



FREE DOWNLOAD
Hornady Ballistic App with 4DOF®



4DOF® available
on the Hornady®
Kestrel® 5700
Ballistics
Weather Meter



Scan for more info
and videos

Available in 28 different calibers, including the 6.5mm PRC, 7mm PRC and 300 PRC!

QUICK SHOT



Byrna Kinetic Less-Lethal 12-Gauge Ammo

By Joel J. Hutchcroft

KINETIC LESS-LETHAL 12-GAUGE SHOTGUN AMMUNITION FROM BYRNA

Technology has almost no perceived recoil and, according to the company, 16 times less noise than a standard shotgun round. In decibels, that's about 117 dB. It accomplishes that because there is no gunpowder, yet it is effective out to 100 feet. The primer provides the propulsion, and a muzzle velocity of 312 fps and a muzzle energy of 14.75 ft-lbs are produced. The shells are 2½ inches long, and the projectile is what the company calls a Clamshell Sabot Jacket. Byrna cautions that less lethal does not mean non-lethal. The projectile can cause serious bodily injury and even death. It uses fin-tail technology for enhanced accuracy, and it is most effective when fired in shotguns with Cylinder Bore and Improved Cylinder Bore chokes.

I've been shooting the Kinetic Less-Lethal 12-gauge shells in a brand-new Mossberg Model 500 Retrograde pump gun with an 18.5-inch barrel and Cylinder Bore choke, and I can put five rounds into a 12-inch circle at

100 feet. The 500 Retrograde's magazine holds five rounds, and the gun weighs 6.75 pounds and has a bead front sight. After shooting three boxes of the Less-Lethal ammo, I can confirm that it is quiet, and it has very little recoil.

Be aware that these rounds will not cycle semiautomatic shotguns, but they can be fired by manually cycling the action. And the company also cautions to never mix Less-Lethal ammunition with lethal shotshells in any shotgun magazine.

MSRP: \$39.99 per 10 rounds
byrna.com

PHOTO COURTESY BYRNA TECHNOLOGY

Better than fish oil... better than krill... definitely better than jellyfish...

New “Brain Fuel” Discovered in The World’s Purest Ocean Waters

Almost 1 Million Satisfied Americans Choose This Antarctic Marvel To Support Memory And Focus At Any Age...

Half a mile beneath the icy waters off the coast of Antarctica lives one of the most remarkable creatures in the world.

Fully grown, they’re less than two feet long and weigh under 10 pounds.

But despite their small size, this strange little squid can have more of a positive impact on your brain health than any other species on the planet.

They are the single richest source of a vital “brain food” that 250 million Americans are starving for, according to a study published in the British Medical Journal.

It’s a safe, natural compound called DHA — one of the primary building blocks of your brain. It helps the brains of children grow during their development. And in adults, it supports healthy brain function as they age.

Because DHA is so critical for brain health, it’s important to get enough of this critical nutrient in our diet. But it’s getting more and more difficult. While some may dislike fish and others may struggle to afford it, there’s growing evidence the majority of store bought fish have lower levels of DHA than the more expensive “wild caught fish.”

Regenerative medicine specialist Dr. Al Sears, says, “Thankfully, there’s still hope. Getting more of this vital brain food helps to nourish your brain and helps support memory and cognitive health as we age.”

Dr. Sears, a highly-acclaimed, board-certified MD — who has published more than 500 studies and written 4 bestselling books — says in an ideal world, we should be able to get enough DHA from our diets... But we don’t anymore.

“For thousands of years, fish were a great natural source of DHA. But due to industrial fish farming practices, the fish we eat and the fish oils you see at the store are no longer as nutrient-dense as they once were,” he explains.

THE SECRET TO MAINTAINING A HEALTHY MEMORY

Some researchers believe our paleo ancestors were able to grow

bigger and smarter brains by eating foods rich in one ingredient — DHA. According to Dr. Sears, DHA is the most important **Omega-3** by far, because our brains contain large amounts of this essential fatty acid to process thinking and memory.

“Our memory center in the brain — called the hippocampus — thrives when it has abundant supplies of DHA, and grows because of it,” explains Dr. Sears. “Without DHA, our brains would shrink, and our memories would quickly fade.”

In one study on more than 1,500 postmenopausal women, researchers found that those with low levels of **Omega-3s**, had smaller brains.

FARM-RAISED FISH HAVE LOWER LEVELS OF DHA

Dr. Sears uncovered that sometime during the 1990s, fish farmers stopped giving fish their natural, DHA-rich diet and began feeding them a diet of inflammatory seed oils.

“It’s cheaper for fish farmers to feed them ‘fish pellets’ than what they’d eat in the wild,” explains Dr. Sears. “But in order to produce optimal amounts of DHA, fish need to eat a natural marine diet that contains natural fish oils, like they have for millions of years.”

“Since fish farmers are depriving these animals of their natural diet, DHA is considerably lower in the oils they produce.” A study published in the journal Public Health Nutrition reveals that DHA in farm raised fish is about half of what it used to be.

“Considering that 80% of fish oil comes from fish farms, it’s no wonder Americans are not getting enough of this vital Omega-3 fat. It’s almost impossible to get enough DHA from fish oil alone. And that’s bad news, because loss of brain size and brain volume is a common side effect of DHA deficiency as people age.”

So, what can Americans do to improve their memory and brain function in the most effective way possible? Dr. Sears says, “Find a quality DHA supplement and that will help support cognitive health



Beyond fish farms & burps... Dive into pristine Antarctic DHA!

as you age.”

Dr. Sears and his team worked for over two years developing a unique brain-supporting formula called **Omega Rejuvenol**.

Omega Rejuvenol is made from the most abundant natural sources of DHA in the ocean, Antarctic squid and krill — the two species that cannot be farmed and live exclusively in the wild.

According to Dr. Sears, these are the purest and most potent sources of DHA in the world, because they come from pristine waters and haven’t been tampered with. “**Omega Rejuvenol** is sourced from the most sustainable fishery in Antarctica. You won’t find this oil in any stores.”

MORE IMPRESSIVE RESULTS

Omega Rejuvenol has sold more than 850,000 bottles worldwide. And for a good reason, too. Satisfied customers can’t stop talking about the memory support they get from quality-sourced DHA oil.

“I can feel a difference. The occasional brain fog I dealt with for years doesn’t feel as bad. Now I wake up feeling sharper and more energetic,” says Owen R.

“I remember what it was like before I started taking **Omega Rejuvenol**... but now I have a feeling of clarity,” says Estelle H.

“My mood and focus are at

an all-time high,” raves Bernice J. “The difference that **Omega Rejuvenol** makes couldn’t be more noticeable.”

And 70-year-old Mark K. says, “It feels like my focus and memory are back to younger levels.”

These are just a handful of the thousands of reviews Dr. Sears receives regularly thanks to his breakthrough memory formula, **Omega Rejuvenol**.

HOW TO GET OMEGA REJUVENOL

To secure bottles of this brain-booster, buyers should contact the Sears Health Hotline at **1-800-966-6024** within the next 48 hours. “It takes time to manufacture these bottles,” says Dr. Sears. “The Hotline allows us to ship the product directly to customers who need it most.”

Dr. Sears feels so strongly about **Omega Rejuvenol**, he is offering a 100%, money-back guarantee on every order. “Send back any used or unused bottles within 90 days and I’ll rush you a refund,” says Dr. Sears.

Call **1-800-966-6024** to secure your limited supply of **Omega Rejuvenol**. Readers of this newspaper immediately qualify for a steep discount, but only if they call within the first 24 hours. To take advantage of this great offer use Promo Code **OMST1123** when you call.

SHOOTING TIMES

INDEX FOR FEBRUARY–DECEMBER 2023 (VOLUME 64)

ACCESSORIES

MTM Divided Ammo Crate.....	Joel J. Hutchcroft. [Mar. p.58]	Ruger One-Shot Sled.....	Steve Gash. [June p.66]
Safariland SafariVault Holster.....	Joel J. Hutchcroft. [June p.64]		

AMMO/RELOADING

The .38 Short Colt Makes a Comeback.....	Brad Miller. [Feb. p.32]	Bullet Creep.....	Brad Miller. [July p.50]
The Best PRC Yet.....	Joseph von Benedikt. [Feb. p.44]	Europe's One-Gun-for-Everything	
Going 6.8 Western.....	Craig Boddington. [Feb. p.56]	Cartridge.....	Joseph von Benedikt. [Sept. p.54]
When the .38 Special Was King.....	Layne Simpson. [Mar. p.36]	A Hunter's Synergy.....	Steve Gash. [Oct. p.32]
60 Years of Success.....	Steve Gash. [Mar. p.50]	Light Lead Bullets in the .38 Special.....	Brad Miller. [Oct. p.50]
.244 Remington & 6mm Remington—		A Close Look at Lapua and	
The Whole Story.....	Layne Simpson. [Apr. p.34]	SK .22 LR Ammunition.....	Layne Simpson. [Oct. p.54]
.338 WBY RPM.....	Joseph von Benedikt. [May p.30]	8mm Remington Magnum: The .32-Caliber King... Steve Gash. [Nov. p.42]	
.357 Magnum Ballistics Over Time.....	Brad Miller. [May p.36]	The .44 Magnum—Yesterday and Today . Layne Simpson. [Dec./Jan. p.40]	
What Happened to the .220 Swift?.....	Steve Gash. [May p.42]	.357 Magnum Factory Ammo	
Federal .357 Magnum 154-Gr. HST.....	Brad Miller. [May p.58]	Versus Handloads.....	Steve Gash. [Dec./Jan. p.46]
Don't Sell the .22 Short Short.....	Layne Simpson. [June p.44]	Winchester Big Bore .357 Magnum Ammo.....	Brad Miller. [Dec./Jan. p.62]
The Versatile Veteran.....	Steve Gash. [July p.38]	Kinetic Less-Lethal 12-Gauge Ammo..	Joel J. Hutchcroft. [Dec./Jan. p.64]

HANDGUNS

Off the Charts.....	Layne Simpson. [Feb. p.24]	A Quality Classic.....	Joel J. Hutchcroft. [July p.30]
Advantages of a Convertible Single Action.....	Payton Miller. [Feb. p.38]	A Real Winner.....	Layne Simpson. [July p.54]
Uberti 1873 Cattleman II Brass		Proven. Ergonomic.Reliable.....	Joseph von Benedikt. [Aug. p.52]
Dual Cylinder 9mm/.357 Magnum.....	Joel J. Hutchcroft. [Mar. p.56]	High-Cap Hybrid.....	Joel J. Hutchcroft. [Sept. p.26]
The Equalizer—S&W's Ultimate CCW.....	Jake Edmondson. [Apr. p.24]	Optimized for Personal Protection.....	Brad Miller. [Sept. p.40]
Long Time Coming.....	Joel J. Hutchcroft. [Apr. p.48]	Draped in Old Glory.....	Joel J. Hutchcroft. [Sept. p.46]
Springfield Hellcat Pro OSP 9mm.....	Joel J. Hutchcroft. [Apr. p.58]	Big Boy Revolver.....	Joel J. Hutchcroft. [Oct. p.24]
A Grand Melding.....	Joel J. Hutchcroft. [May p.24]	Built for Deep Concealment.....	Joel J. Hutchcroft. [Nov. p.28]
Optimized for 9mm.....	Joel J. Hutchcroft. [May p.50]	Advanced Adaptability.....	Joel J. Hutchcroft. [Nov. p.50]
TriStar American Classic .38 Super.....	Steve Gash. [May p.56]	Like No Other 9mm.....	Joel J. Hutchcroft. [Dec./Jan. p.26]
FN Tames the Beast.....	Jake Edmondson. [June p.28]		

MISCELLANEOUS

7 Steps to Better Rifle Shooting.....	Craig Boddington. [Apr. p.40]	Shooting Times Index for	
		February–December 2023 Vol. 64.....	[Dec./Jan. p.66]

OPTICS/SIGHTS

A Sight for Old Eyes.....	Payton Miller. [Mar. p.32]	Boddington's Guide to Choosing	
Zeiss SFL 30 Ultra-Compact Binoculars.....	Joel J. Hutchcroft. [June p.65]	the Right RifleScope.....	Craig Boddington. [July p.44]
		Riton 5 Tactix 1-10X 24mm.....	Joel J. Hutchcroft. [Dec./Jan. p.60]

RIFLES

America's Rifle.....	Joel J. Hutchcroft. [Mar. p.24]	The Marlin Model 336 Is Back!.....	Layne Simpson. [Aug. p.60]
Browning's Blue-Collar Beauty.....	Joseph von Benedikt. [Mar. p.42]	A Hunter's Synergy.....	Steve Gash. [Oct. p.32]
Ruger Small-Frame Autoloading		Benelli's BE.S.T. Lupo.....	Joseph von Benedikt. [Oct. p.40]
Rifle 7.62 NATO/.308 Win.....	Lane Pearce. [Apr. p.56]	Smooth Operator.....	Joel J. Hutchcroft. [Oct. p.62]
Simple as a Twist.....	Joel J. Hutchcroft. [June p.58]	Improving Mauser's Masterpiece.....	Joseph von Benedikt. [Nov. p.36]
Five Stars.....	Jake Edmondson. [Aug. p.30]	A Yeoman's Backcountry Rifle.....	Joseph von Benedikt. [Dec./Jan. p.32]
Discrete Capability.....	Joseph von Benedikt. [Aug. p.38]	Rugged & Refined.....	Joel J. Hutchcroft. [Dec./Jan. p.54]

SHOTGUNS

Smart Design Equals Smooth Shooting.....	Layne Simpson. [Feb. p.50]	Shooting Percussion Shotguns.....	Layne Simpson. [Aug. p.46]
Winchester's New Trench Gun.....	Steve Gash. [June p.38]	A Lifetime with .410 Shotguns.....	Layne Simpson. [Sept. p.34]
A Vintage Gun Becomes a Favorite.....	Joseph von Benedikt. [June p.50]		

CROSS-REFERENCED BY AUTHOR

BODDINGTON, CRAIG

Going 6.8 Western	[Feb. p.56]	Boddington's Guide to Choosing the Right Riflescope	[July p.44]
7 Steps to Better Rifle Shooting	[Apr. p.40]		

EDMONDSON, JAKE

The Equalizer—S&W's Ultimate CCW	[Apr. p.24]	Five Stars	[Aug. p.30]
FN Tames the Beast	[June p.28]		

GASH, STEVE

60 Years of Success	[Mar. p.50]	The Versatile Veteran	[July p.38]
What Happened to the .220 Swift?	[May p.42]	A Hunter's Synergy	[Oct. p.32]
TriStar American Classic .38 Super	[May p.56]	8mm Remington Magnum: The .32-Caliber King	[Nov. p.42]
Winchester's New Trench Gun	[June p.38]	.357 Magnum Factory Ammo Versus Handloads	[Dec./Jan. p.46]
Ruger One-Shot Sled	[June p.66]		

HUTCHCROFT, JOEL J.

America's Rifle	[Mar. p.24]	A Quality Classic	[July p.30]
Uberti 1873 Cattleman II Brass Dual Cylinder		High-Cap Hybrid	[Sept. p.26]
9mm/.357 Magnum	[Mar. p.56]	Draped in Old Glory	[Sept. p.46]
MTM Divided Ammo Crate	[Mar. p.58]	Big Boy Revolver	[Oct. p.24]
Long Time Coming	[Apr. p.48]	Smooth Operator	[Oct. p.62]
Springfield Hellcat Pro OSP 9mm	[Apr. p.58]	Built for Deep Concealment	[Nov. p.28]
A Grand Melding	[May p.24]	Advanced Adaptability	[Nov. p.50]
Optimized for 9mm	[May p.50]	Like No Other 9mm	[Dec./Jan. p.26]
Simple as a Twist	[June p.58]	Rugged & Refined	[Dec./Jan. p.54]
Safariland SafariVault Holster	[June p.64]	Riton 5 Tactix 1-10X 24mm	[Dec./Jan. p.60]
Zeiss SFL 30 Ultra-Compact Binoculars	[June p.65]	Kinetic Less-Lethal 12-Gauge Ammo	[Dec./Jan. p.64]

MILLER, BRAD

The .38 Short Colt Makes a Comeback	[Feb. p.32]	Optimized for Personal Protection	[Sept. p.40]
.357 Magnum Ballistics Over Time	[May p.36]	Light Lead Bullets in the .38 Special	[Oct. p.50]
Federal .357 Magnum 154-Gr. HST	[May p.58]	Winchester Big Bore .357 Magnum Ammo	[Dec./Jan. p.62]
Bullet Creep	[July p.50]		

MILLER, PAYTON

Advantages of a Convertible Single Action	[Feb. p.38]	A Sight for Old Eyes	[Mar. p.32]
---	-------------	----------------------	-------------

PEARCE, LANE

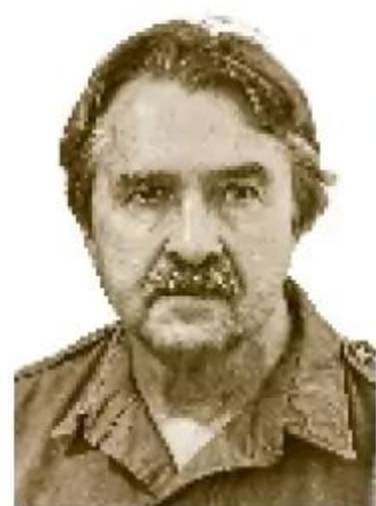
Ruger Small-Frame Autoloading Rifle 7.62 NATO/.308 Win	[Apr. p.56]
--	-------------

SIMPSON, LAYNE

Off the Charts	[Feb. p.24]	Shooting Percussion Shotguns	[Aug. p.46]
Smart Design Equals Smooth Shooting	[Feb. p.50]	The Marlin Model 336 Is Back!	[Aug. p.60]
When the .38 Special Was King	[Mar. p.36]	A Lifetime with .410 Shotguns	[Sept. p.34]
.244 Remington & 6mm Remington—The Whole Story	[Apr. p.34]	A Close Look at Lapua and SK .22 LR Ammunition	[Oct. p.54]
Don't Sell the .22 Short Short	[June p.44]	The .44 Magnum—Yesterday and Today	[Dec./Jan. p.40]
A Real Winner	[July p.54]		

VON BENEDIKT, JOSEPH

The Best PRC Yet	[Feb. p.44]	Proven. Ergonomic. Reliable	[Aug. p.52]
Browning's Blue-Collar Beauty	[Mar. p.42]	Europe's One-Gun-for-Everything Cartridge	[Sept. p.54]
.338 WBY RPM	[May p.30]	Benelli's BE.S.T. Lupo	[Oct. p.40]
A Vintage Gun Becomes a Favorite	[June p.50]	Improving Mauser's Masterpiece	[Nov. p.36]
Discrete Capability	[Aug. p.38]	A Yeoman's Backcountry Rifle	[Dec./Jan. p.32]



SHOOTER'S SHOWCASE

GUNSMOKE

HIPSHOTS



The Ultimate Car Gun

Guys have been debating the best gun to carry on everything from stagecoaches to steam trains to cars to bicycles for the better part of two centuries, and gunmakers have come up with some extraordinary solutions. **BY TERRY WIELAND**

This 14-bore double-barreled percussion howdah pistol made by James Woodward & Sons, London, is as well made and finely cased with accoutrements as any duelling pistol. Terry says it would be the ultimate car gun. Photo Courtesy Rock Island Auction Co.

THE BLUNDERBUSS WAS DESIGNED FOR STAGE-coach use and evolved into the sawed-off shotgun and the term “riding shotgun,” while cyclists during the bicycle craze of the 1890s preferred a small revolver to ward off dogs—the most common attacker. It may get you some points in a gun club trivia contest to know that the 5.5mm Velo Dog was designed specifically for the latter, “Velo” being short for “velocipede” (bicycle) and “dog” being self-explanatory.

In India, Brits hunting tigers from elephant back had some special requirements. During a tiger drive through the long grass of the *Terai*, it was not unusual for a tiger to turn the tables by leaping up into the *howdah*—the box-platform on the elephant’s back—and savage the occupants.

The solution came to be called a howdah pistol. It was, typically, a double-barreled, large-bore hammer

handgun. Up until 1860, these were percussion guns. After the advent of centerfire cartridges, they could be chambered for anything big and heavy, with the preference usually being the .577 Snider.

As I write this, the Rock Island premier auction is coming up in a couple weeks, and there are three howdah pistols on offer. One is a percussion gun made by James Woodward & Sons, while the other two are chambered for the .577 Snider. One of those is by John Rigby & Co.; the other was made in Birmingham and retailed by Calcutta gun dealer Lyon & Lyon.

As you might expect, the Woodward is an exquisite piece. Woodward was the only gunmaker James Purdey ever deigned to acquire (1949), and the Woodward name was included on the Purdey letterhead for years. Purdey’s main objective was to acquire the Woodward over-under design.

Woodward manufactured its guns and rifles in a factory at 1 Blue Ball Yard, just off St. James's, London, and presumably this howdah pistol was made there. The estimated date is 1875, long after cartridge guns had taken over for most purposes. Some, however, preferred to stick with percussion because they were more dependable and much more powerful than early cartridge handguns.

In the late 1860s, Britain adopted its first cartridge-firing service rifle, the Snider-Enfield. Its cartridge was the .577 Snider, and in its military guise it launched a 480-grain lead bullet at around 1,250 fps. From an 8.0-inch-barreled pistol, it would not reach that velocity, but it would still get your attention—the tiger on one end, you on the other.

Some years ago, during a tented hunting trip on the high plains, Garry James, former editor of *Guns & Ammo*, brought his .577 howdah pistol, and we fired a few shots at large chunks of firewood. We did not chronograph it, but the fact that more than once the bullet split the heavy chunks in two suggested it would handle a tiger satisfactorily. And if it didn't, what would?

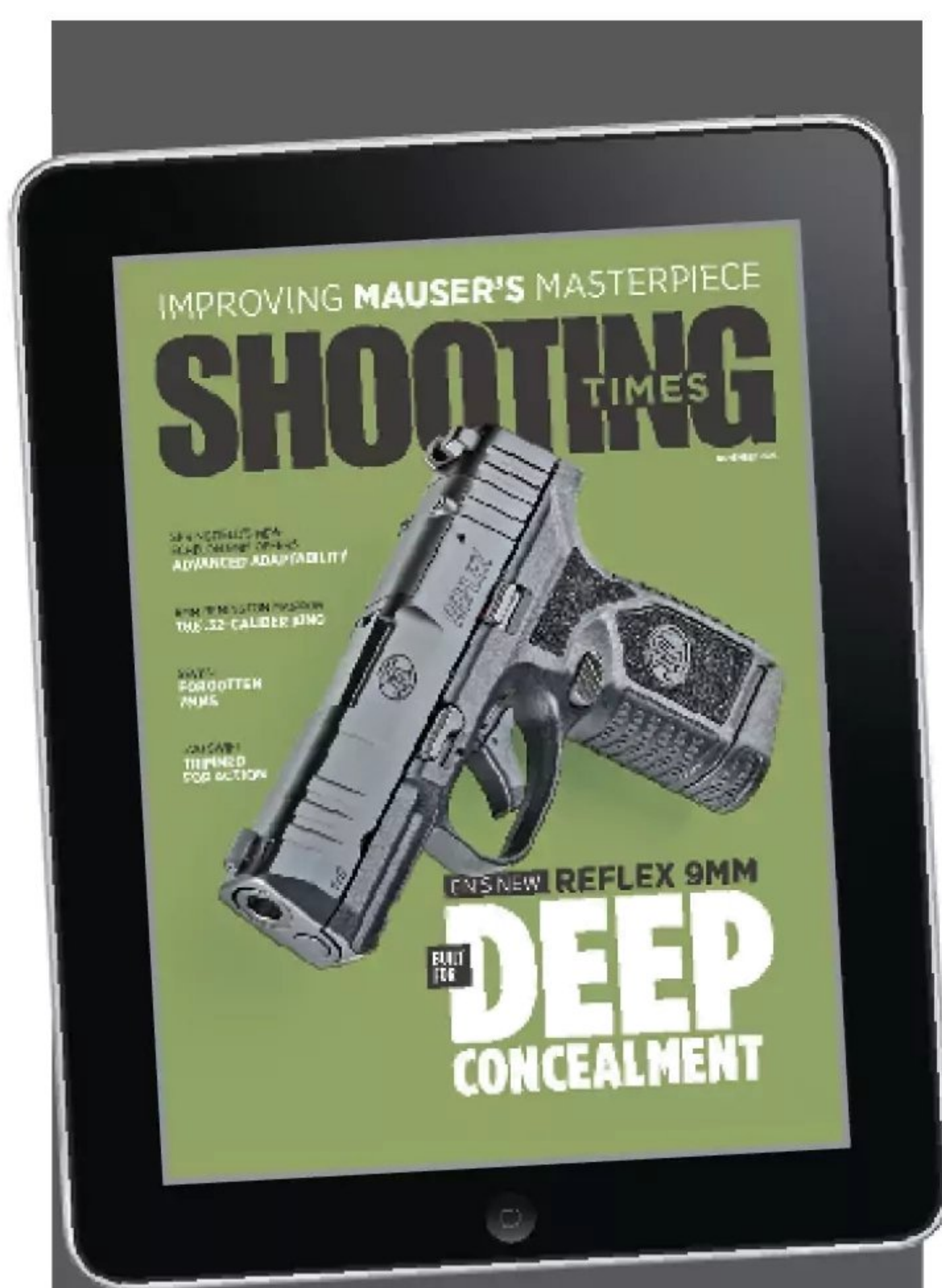
The two .577 howdah pistols in the Rock Island auction are interesting. Both are hammer guns. The Rigby uses an underlever similar to an early Daw, while the Lyon & Lyon has the super-strong Jones underlever. Both are built to "best" gun standards, and both have seen action but have been well cared for.

Over the years, there have been varying theories of appropriate car guns, ranging from the Thompson submachine gun (Bonnie and Clyde, for example) to the Colt 1911 to the Broomhandle Mauser. Stick a shoulder stock on a Broomhandle, park it on the passenger seat, and watch the expression on the face of anyone who approaches. I once did exactly that, during a drive through one of the less-sophisticated neighborhoods of the Missouri Ozarks, which is how I know.

But a howdah pistol?

That strikes me as the ideal car gun—visually intimidating to a fault; ballistically capable of dealing with the biggest, nastiest car-jacker; and—provided you can prove it was made before 1898—not even legally considered a firearm in most jurisdictions.

ST



SHOOTING TIMES
AT YOUR FINGERTIPS

www.mymagnow.com



MTM®
CASE-GARD™
QUALITY SHOOTING SPORTS ACCESSORIES

GETTING IT THERE IS EASY
WITH AN MTM® MULE™

THE MULE™
MOBILE GEAR GRATE
CHECK IT OUT AT MTMCASE-GARD.COM

PROUDLY AMERICAN MADE

For a time, Fitz was a successful bare-knuckles prize fighter and police shooting instructor with the New York State Police, and then he went to work in the firearms industry. His first job for a firearms company was with Iver Johnson, but by 1918 he had signed on with Colt. He worked there for 27 years up to right before he passed away in 1945.

Fitz liked big bores and short barrels, and he is perhaps most famous for developing what became known as the Fitz Special snubnose revolver. It was a double-action wheelgun typically of .45 Colt caliber with the barrel shortened to 2.0 or 3.0 inches and the hammer-spur cut off. As most readers are aware, that type of snubnose revolver is pretty common these days, but back when Fitz created it, it was a rarity. One other very distinctive feature of the Fitz Special was the cut-away trigger guard, in which the front half was removed, making it wide open. Fitz believed this modification enabled a faster draw and first shot.

And that's another area where Fitz was recognized as an early authority: defensive shooting. In his work as a police shooting instructor and in his development of firearms and other shooting items,

Fitz promoted what we today call practical shooting. He defined it as follows: "Practical shooting is the placing of your bullets in the human body in such a manner that said human will be unable to shoot at you. The penalty for not being able to do this is the loss of your own life."

He preached it, he wrote about it, and he even developed a special training target (the Colt Police Silhouette Target) for it. Today, we all know Fitz's type of target, but in his day, no such thing existed, and law enforcement training primarily was conducted using bullseye targets. In addition, Fitz taught a two-handed shooting position, especially for longer-range defense and target shooting, much like what became the Weaver stance 50 years before Jack Weaver and Jeff Cooper came along. Fitz's crowning achievement in this area was his book entitled *Shooting*, and it was published in 1930. His ideas would become the foundation of modern firearms training.

While he may be somewhat unknown by younger gun enthusiasts these days, John Henry "Fitz" Fitzgerald holds a unique place in American firearms history. ST



ALMOST NO AMMUNITION MANUFACTURER
INSPECTS EVERY SINGLE ROUND, BUT WE DO.
IT TAKES EXTRA TIME AND COST TO
HUNT FOR THE SMALLEST IMPERFECTION,
**BUT WE WOULDN'T DO IT
ANY OTHER WAY.**

BLACK HILLS
Ammunition

TO LOCATE A DEALER NEAR YOU, PLEASE CALL 800.568.6625 | www.black-hills.com    

NORTH AMERICA'S #1 Selling Walk-In Tub

Featuring our Free Shower Package

Back by Popular Demand!
FREE SHOWER PACKAGE!

Now you can finally have all of the soothing benefits of a relaxing warm bath, or enjoy a convenient refreshing shower while seated or standing with Safe Step Walk-In Tub's **FREE Shower Package!**

- ✓ First walk-in tub available with a customizable shower
- ✓ Fixed rainfall shower head is adjustable for your height and pivots to offer a seated shower option
- ✓ High-quality tub complete with a comprehensive lifetime warranty on the entire tub
- ✓ Top-of-the-line installation and service, all included at one low, affordable price

Now you can have the best of both worlds—there isn't a better, more affordable walk-in tub!

**FREE SHOWER
PACKAGE**

PLUS \$1600 OFF

FOR A LIMITED TIME ONLY

Call Toll-Free 1-800-699-3187

 **safestep**[®]
www.BuySafeStep.com

With purchase of a new Safe Step Walk-In Tub. Not applicable with any previous walk-in tub purchase. Offer available while supplies last. No cash value. Must present offer at time of purchase.



Call Today for Your Free Shower Package

1-800-699-3187

Scan me ▶



FINANCING
AVAILABLE
WITH APPROVED
CREDIT





SHOOTER'S SHOWCASE

GUNSMOKE

HIPSHOTS



Stalwart of the Snubnose

Firearms expert, lecturer, shooting instructor, prize fighter, and New York State Trooper John Henry Fitzgerald was an avid advocate of the snubnose revolver. **BY JOEL J. HUTCHCROFT**

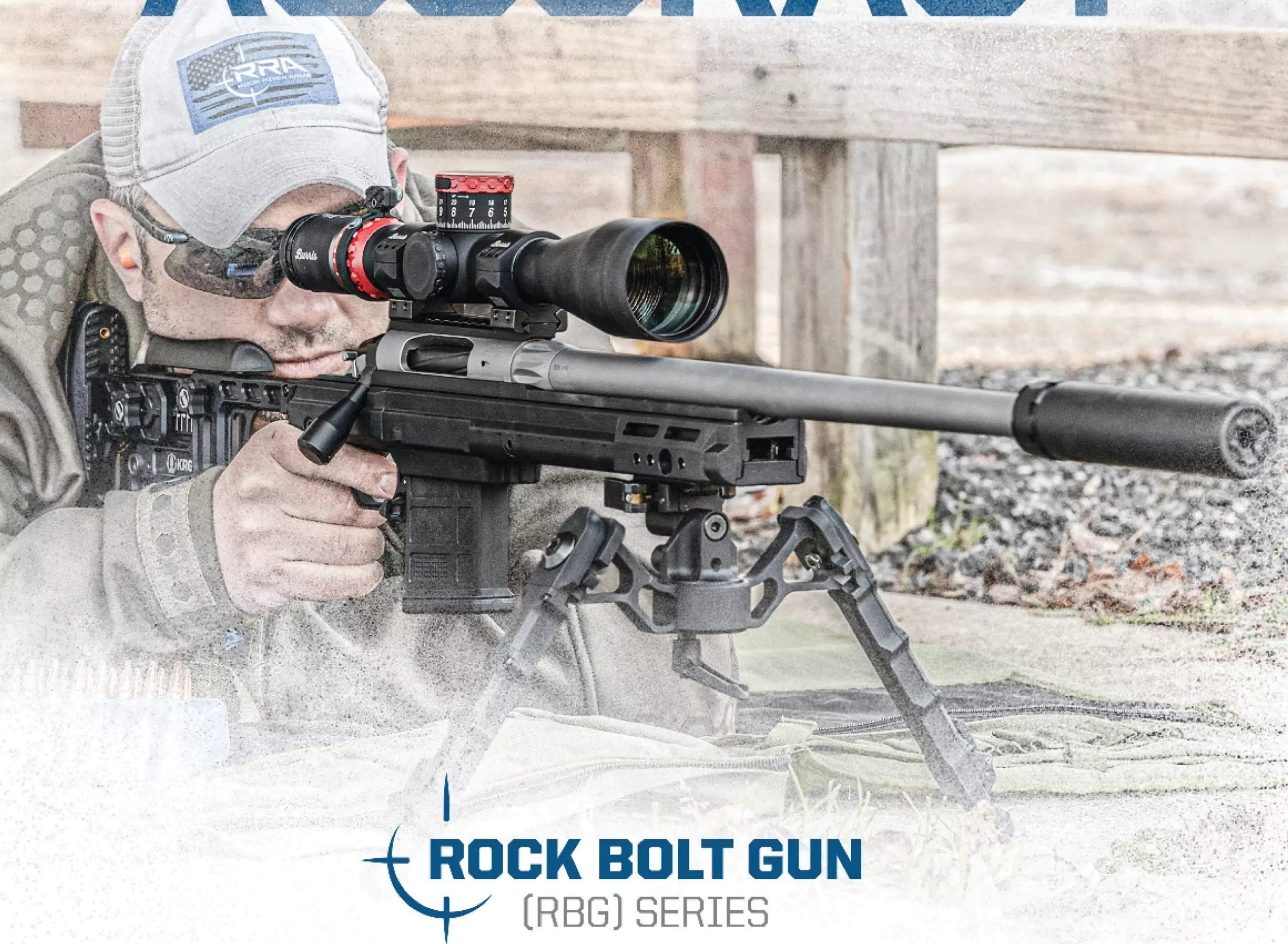
John Henry “Fitz” Fitzgerald (1876–1945) didn’t invent the snubnose revolver, but he was perhaps its biggest promoter, and he was a pioneer in practical shooting techniques and shooting-related products.

BORN IN 1876, JOHN HENRY “FITZ” FITZGERALD became an advocate of big-bore double-action revolvers for defensive use, and he championed short barrels on those revolvers. As all accounts portray, he was a legendary salesman, a colorful personality, and the “face” of Colt’s Manufacturing Co. He also wrote the book on practical shooting, literally. But before all that, he was gun-curious at the early age of 10.

I have not been able to find out much about Fitz’s upbringing or his formal schooling; however, I did find one account of how he became interested in firearms when he was just 10 years old. Apparently, one day when he was particularly bored, he went searching through the drawers of his father’s desk, when

he chanced upon an engraved, silver-plated, ivory-handled .22-caliber revolver and some ammunition. Acting all on his own, he snuck away to the hills near his home and began a lifetime of shooting. He started out with the target (a tin can in this case) up close at about 15 feet. Eventually, he bought his own .22 handguns, became proficient shooting on bullseye targets, eventually added quick-draw and rapid-fire work, and broadened his types of ammo and guns to include 15 different centerfire chamberings. He also began tuning up his own guns, as well as those of his friends, and along the way he became an expert in ballistics, an accomplished gunsmith and handloader, and a popular shooting showman.

PRECISE LONG-RANGE ACCURACY



ROCK BOLT GUN (RBG) SERIES



CALIBER	BARREL		WEIGHT	LENGTH		
	6.5 CREEDMOOR	20" / 22" / 24" WILSON STAINLESS STEEL, 1:8 TWIST		20" BARREL: 39.5"	22" BARREL: 41.5"	24" BARREL: 43.5"
	.308/7.62X51MM	20" / 22" / 24" WILSON STAINLESS STEEL, 1:10 TWIST		20" BARREL: 39.5"	22" BARREL: 41.5"	24" BARREL: 43.5"

LEFT-HANDED MODELS AVAILABLE

PERFORMANCE COUNTS
ROCKRIVERARMS.COM



MORE KIMBER THAN EVER!



KDS9c FEATURES



OPTICS-READY SLIDE



15+1 ROUND CAPACITY



SUPERIOR ERGONOMICS



REVERSIBLE MAG CATCH



LEARN MORE

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

Kimber

WHAT ALL GUNS SHOULD BE™