GUN TESTS®

THE CONSUMER RESOURCE FOR THE SERIOUS SHOOTER

$5.95 July 2017/Vol. XXIX, No. 7



AMERICAN-MADE NINES

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DOWNRANGE

WAY TO GO, JUDICIAL WATCH!



Todd Woodard

You may have not heard about Judicial Watch (JW), a Washington, D.C.-based watchdog group that bedevils many different agencies with requests for information that said agencies would rather not share. They use what are called Freedom of Information Act (FOIA) requests, which is part of federal law, to pry out information that should be public. Usually, federal agencies thumb their bureaucratic noses at JW and don't deliver squat, which then prompts JW to sue their sorry a***s. I admire what JW does generally, but I also like that they take on the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) in particular.

Recently, Judicial Watch filed a FOIA lawsuit against ATF seeking records of communications inside the agency when it was considering reclassifying certain types of AR-15 ammunition as armor-piercing—and effectively banning it from civilian use.

The suit was filed in the U.S. District Court for the District of Columbia (*Judicial Watch v. U.S. Department of Justice* (No. 1:17-cv-00600)).

I very much want to see what the agency's internal deliberations were when it was trying to get green-tip AR ammunition banned. Readers who want to check out the precise statutory definition of "armor-piercing ammunition" can find it in the U.S. Code at 18 U.S.C §921(a)(17), and then decide for yourselves if the Bureau's push for this unnecessary action it attempted a couple of years ago had any merit. Quite a few members of Congress thought it did not.

In March 2015, more than 200 members of Congress wrote to former ATF director Todd Jones expressing their "serious concern" that the proposal might violate the Second Amendment by restricting ammunition that had been primarily used for "sporting purposes." The letter asserted the ATF's move "does not comport with the letter or spirit of the law and will interfere with Second Amendment rights by disrupting the market for ammunition that law abiding Americans use for sporting and other legitimate purposes."

At the time, Judicial Watch filed a March 9, 2015, FOIA request seeking information on the ammo-ban effort. So after the agency failed to respond for two years, JW sued BATFE, seeking "All records of communications, including emails, to or from employees or officials of the ATF related to the decision to revise the ATF 2014 Regulation Guide to no longer exempt 5.56 mm. SS109 and M855 (i.e., 'green tip' AR-15) ammunition from the definition of 'armor-piercing' ammunition."

Said Judicial Watch President Tom Fitton, "The Obama ATF simply ignored our request on their ammo ban. Let's hope the Trump administration finally brings transparency to this out-of-control agency." **GT**

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GUN TESTS ® (ISSN No. 1042-6450) is published monthly by AG Media, Inc.; 111 Corporate Drive, Big Sandy, TX 75755-2446. Periodicals Postage Paid at Big Sandy, TX, and at additional mailing offices.

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Subscriptions: $49 (U.S.) annually. Outside the U.S. and Canada $72 (U.S.) for one year, $144 (U.S.) for two years. Single copies $7.50 (U.S.). Bulk-rate subscriptions for organizations and educational institutions are available.

Postmaster: Please send address changes to: ***GUN TESTS***, P.O. Box 8535, Big Sandy, TX 75755-8535, or ***GUN TESTS***, P.O. Box 39, Norwich ON, N0J 1P0. **Canada Publishing Agreement** #40016479.

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10mms: How About the P220?

Reader Mark wanted coverage of 10mm handguns to include a SIG. Already done. Reader David requested coverage of a MechTech conversion kit. Done. And loving A5 Humpbacks.



Re "Three More 10mm Autos: Kimber, Dan Wesson, Tanfoglio," May 2017

Neat comparison of 10mms; kinda hoping you'd toss the SIG P220 in 10mm into the mix. I thought your comments on the Kimber TLE II grips were interesting. I haven't shot that model, but I own a Kimber Custom Eclipse II in 10mm and have no such issue with my grips when firing up to 100 rounds in a session. For those who would like the edges less raspy, I use blue buffing on a buffing wheel mounted in my drill press to polish out G10 revolver and knife grips. It's not too aggressive, and you could take a little edge off without substantially changing the grip's appearance. Clean up with a little denatured alcohol and a toothbrush and you're ready for the range.

—Mark

Hey Mark: We tested the SIG P220-10 Match Elite 10mm, $1417, shown directly below, in the May 2016 issue. We said:

"The P220-10 is a refined and substantial pistol weighing in at 52.4 ounces with a loaded magazine. The weight really helped to reduce felt recoil, as our testers soon found out. It uses a full-mass slide to help combat recoil. Other P220 slides have lightening cuts, depending on the model variant. Out of the box, the Reverse Two-Tone Stainless finish was impeccable and looked sharp with the green toothy G10 Piranha grips. In hand, the SIG did not have the girth of the Glock, which felt chunky in hand and was harder for shooters with small hands to control. The RIA had a similar girth as the SIG due to the grip panels, which could be adjusted with aftermarket grips but at an additional cost.



"The SIG is traditional, using a double-action/single-action trigger. The first shot is fired DA with a long smooth press followed by SA mode. Both trigger modes were crisp. DA pull averaged 8.6 pounds but felt lighter, and SA was 4.5 pounds on average. Located on the left side of frame was a decocker; the only manual safety on the pistol that safely decocks the pistol from SA to DA. The SIG also incorporated a firing pin block. The pistol will fire with the magazine removed. A loaded-chamber indicator tells shooters a cartridge or a case is in the chamber. Field stripping does not require tools and is fast.

Our Team Said: This is more of a hunting pistol because it was large and heavy for concealed carry.

GUN TESTS REPORT CARD GRADING

Gun Tests Grade: A

A gun with this rating functions perfectly, shoots accurately, and exhibits comfortable, easy use for its owner. We may prefer one gun over others based on its unusual accuracy, superior performance, unusual features, or nice cosmetics. We recognize such a gun for these traits without regard to its cost.

Gun Tests Grade: B

We give this ranking to a gun that functions appropriately for its category, but which might not do as well in major areas as an **A**-ranked gun.

Gun Tests Grade: C

We may have reservations about some aspect of a gun's performance or pricing. We express those reservations so the reader can balance our concerns with his or her needs.

Gun Tests Grade: D

Some aspect of a gun's performance — in particular, safety, function, or accuracy — doesn't meet our standards and isn't easily resolved.

Gun Tests Grade: F

Some aspect of a gun's performance is dangerous, inappropriate for the category, or is likely to fail.

We would own one of these in a heartbeat — except for the price. So for those readers who don't want us to factor money into the grade, just buy this one."—Todd Woodard

Red-Dot Test Request

I would like to see tests of pistols that come from the factory with red-dot sights. In particular, it would be interesting to see how the SIG P320 RX full size compares with the SIG P226 RX SAO. SIG makes the Romeo 1 red-dot sights and sells them on the pistol. I like the idea of having only one vendor involved if there are problems. I think Springfield, Glock, and Smith offer guns with attached red-dot sights from other vendors. So which rig works the best and are they any better than iron sights?

I have had trouble with the red dot going dark because of loose battery connections. Sometimes, this can be corrected by tightening the battery cap. Other times, I have had to send the sight back to the manufacturer. So, it is helpful that the SIG P320 RX has suppressor sights that co-witness with the red dot so I can keep shooting if the red dot goes dark.

A question I have is about magazine-release controls. Yes, I want to be able to change magazines quickly, but I also don't want to bump the magazine release inadvertently and cause a malfunction. It seems there is a trade off. In a self-defense situation, I want the magazine to stay in so the gun will function.

I think your magazine is one of the few places that I can get accurate unbiased information. I like the facts that are presented, but the opinion of your experienced gun guys is the most valuable. **—Gayle**



We have taken steps toward this already with the July 2016 article, "Optics-Ready: M&P9 Ported, FNX-45 Tactical, G17 Gen4 MOS." But you want the sights included as well. Consider "Red Dots: Straight Outta the Factory" to be on the development list. Great idea, and thanks for sending it. —tw

MechTech Test Request

Please test MechTech Systems' conversion for pistols that changes 1911, XD, and Glock pistols into short carbines resembling the AR-15 in appearance. If it works, it would provide an effective carbine in 9mm or 45 ACP, which I have long thought would be an useful carbine in those calibers. Years ago, Marlin put out the 9mm Camp Carbine, but it was a blowback type, depending on the weight of the bolt and the strength of the recoil spring to keep the bolt closed during ignition. Please research and test the MechTech pistol conversion. **— David**

Hey David: Good news—we've already looked at one MechTech product in the June 2012 issue. That particular item was a MechTech Systems Carbine Conversion Unit for Glock 9mm, $505 at the time of the test. Here's part of what we said about it:

"This is a different piece because it isn't a firearm at all but a conversion unit. While more complex than a .22-caliber conversion unit and the like, it is a bona fide accessory rather than a firearm. These conversions are available for the 1911 and the Glock, and we chose the Glock 19 9mm conversion for our test.

"By removing the slide of the Glock and fitting the receiver into the MechTech conversion, you have a light, handy carbine. When assembling the Glock conversion, it is vital that a piece known as the Glock Block be included. This



piece ensures reliable feeding and takes the place of the Glock's integral feed ramp, once the barrel is removed along with the slide from the original pistol. In common with the 1911 conversion, there was no manual safety.

"The carbine was simple to set up and greatly increased the practical accuracy and hit potential from that of the handgun.

"The MechTech conversion is an interesting option that adds to the utility of the Glock pistol without any legal wrangling. No paperwork was involved because it is not a firearm. The base price was reasonable, in our opinion, for such high quality. But adding a fixed carrying handle rear sight, post front sight and adjustable stock did increase the price of the conversion over the base unit's cost.

"Our Team Said: This was a good conversion, but the result was less practical than our other test guns, which were full-time carbines. However, for what is basically a gun part to win a B rating against a purpose-designed carbine such as the Thureon was, in our view, most impressive. If we were comparing conversion units, this one would get a solid A+. The MechTech Systems Carbine Conversion Unit for Glock is one accessory that is difficult to ignore." —tw

Re "Browning's Sweet Sixteen: Still Sweet After All These Years?" May 2017

I picked up a Light 12 about six years ago from the used rack at Cabela's in Wheeling. It was only $400, older than the one you tested, and I wanted it because it was a Browning design (the same reason I have a 1911 and a Hi-Power). Shortly after I got it home, I looked into removing the gizmo attached to the end of the barrel, a Poly Choke, until some research revealed I would



have to have a smith do that for me, and that the choke was actually functional, useful, and probably cost a previous owner about $100 installed. I downloaded the manual for the gun and the Poly Choke and added a slip-on rubber recoil absorber, more to increase the length of the stock than for its intended purpose. I have more suitable guns, purchased new from Ruger and Guerini, for birds and clays, but I have taken the A5 afield a few times, particularly when it was wet, cold, and messy. One freezing-cold day while out for birds on a preserve, the gun would not cycle reliably when I took two consecutive shots at the same bird (and both missed). There is a ring that slides on the magazine tube and, according to the manual, it makes a difference which way one slides it on (it goes on under the spring, I think), according to the heaviness of the load being fired. After that occurrence, I made sure that ring was oriented for lighter loads and kept everything very clean and fully, but lightly, oiled. It's functioned perfectly ever since, allowing my new stepson to take his first bird. **— Mike**

I thoroughly enjoyed your article on the vintage Sweet Sixteen. I was fortunate enough to find a 1956 vintage gun at a gun show about 40 years ago. It was the best shotgun purchase I ever made. Mine has a vent rib and a Modified-choke barrel. I installed a recoil pad to make it fit me. This has been my "go to" dove and quail gun ever since. It has filled many a limit of both gamebirds over the years, and I don't remember ever having a malfunction. I just clean it at the end of each season and go out the next year and do it all over again. I fully understand why no one would loan one to you for your tests. I would never let a stranger shoot my "baby." I intend to pass it down and keep it in the family. Keep up the good work! **—James**

James and Mike's satisfaction with their A5s tells everyone else why their prices in the used market stays high. —tw

Re "More Winning Gun Laws, Please," May 2017

In regards to the Texas reduction in cost for a License to Carry—please do not attribute this in any way to the Trump administration. (I assume that from Trump's campaign promise of "getting tired of winning"). If so, you must also attribute the cost rise from $70 to $300 for both the initial and renewal cost for a License to Carry in Connecticut, where I live. Just be thankful you live in a Free State. **—Pete**

Pete: I am very thankful. —tw

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American-Made 9mms: Ruger, Springfield, and Honor Defense

Springfield Armory's EMP 1911 leads the way, while Honor Defense's LE Honor Guard provided backup. Ruger's American Compact lagged behind in the estimation of our testers.

When it comes to 9mm carry pistols, there are several characteristics that immediately come to mind. Polymer frame, striker fired, wide grips, and high capacity. Recently we found three, or should we say three and a half pistols, that didn't quite fit that description.

The first was Ruger's $579 American Compact model 8633 that featured thumb-operated safeties on both sides.

Next were products from Honor Defense, one of the newer makers on the market. The $499 Honor Guard HG9CLE is a single-stack double-action-only pistol. The LE suffix stands for law enforcement. This gun was a variation on the original Honor Defense pistol, but it lacks a Picatinny accessory rail to favor inside-the-waistband carry for undercover work. Our 3.8-inch-long-barreled Compact LE pistol arrived with a second top end ($250, sold separately) that housed a 3.2-inch-long barrel. The shared receiver boasted unique grip contours, and both top ends utilized the same guide rod and recoil spring.

Third was the $1220 Springfield Armory 1911 EMP 4-inch Conceal Carry Contour pistol, which arrived with three 9-round magazines. The EMP operates with a single-action trigger, and this might have been our first test wherein a single-stack 1911 pistol packed more rounds than its polymer-framed competitors. Its descriptive name referred to the gun's backstrap, which has been sliced diagonally, making the rear of the grip about ¾ of an inch shorter than if it were continued in a straight line to the heel of the magazine well. This made the pistol more concealable, specifically when holstered with a butt forward (or muzzle back) cant.



Our first hint that the Ruger American Compact was firing out of battery was misalignment of the slide, visible from the shooter's perspective. We also noticed that the primary recoil spring was creeping through the slide yoke and hindering the gun's ability to cycle. Firing out of battery is a safety issue.

Our test sessions began and ended on the reactive targets located on Steel Alley at American Shooting Centers in Houston. Accuracy data was collected from a distance of 15 yards with the guns supported by a Caldwell Matrix rest. Our choice of test ammunition consisted of Browning's new 147-grain



We chose three concealable American-made pistols chambered for 9mm ammunition. Left is the $579 Ruger American Compact with 10+1 capacity. It might be the perfect size, but it developed cycling problems. We did like its ambidextrous thumb safeties that locked down the slide as well as the action. Shooting groups from the 15-yard line was too easy for the $1220 Springfield Armory EMP Conceal Carry, middle. Named "Conceal Carry" for the bobbed grip, its 9+1 capacity puts it in league with many small polymer pistols that are far less capable. Left, the $499 HG9CLE Honor Guard from Honor Defense is a new version sans an accessory rail, making it ideal for carrying inside the waistband. We also tested the Honor Guard with a shorter top end, sold separately.

BXP X-point jacketed hollowpoints and three different rounds from Black Hills Ammunition of Rapid City, South Dakota. They were the 115-grain JHP EXPs that were designed for maximum performance in guns not rated for +P ammunition, a 124-grain JHP +P choice, and a new subsonic round, the 125-grain non-expanding HoneyBadger ammunition. We tracked the velocity of each combination using an Oehler 35P (printing) chronograph.

All three guns were recent releases, so we really didn't know what to expect. As always our goal was to reveal reliability and accuracy as well as handling characteristics. Would we find versatility or would the accuracy of each gun be limited to a single bullet weight? Our job was to deliver to point of aim every time we pulled the trigger. Would any of these guns make that job easier than the others? Here is what we learned.

Ruger American Compact 8633 9mm Luger, $579

There are 16 different models listed under Ruger's "American Pistol" lineup chambered for either 9mm Luger or 45 ACP, but when you look at the main spec sheet at Ruger.com, the handguns fall into two categories: Pro Model and Manual Safety. The ambidextrous manual safety levers on our pistol added about 0.11 inches in width when compared to the Pro Model. Ambidextrous safeties are rarely found on striker-fired pistols, and when they are on such guns, they simply turn off the trigger. In the case of the RAP they also prevented the slide from moving. Maximum capacity of the 45 ACP pistols was 11 rounds (10+1), but the 9mm RAPs carry either 10-round or 17-round magazines. The longest barrel lengths in this series measure 4.5 inches long but are limited to the forty-fives. The larger 9mm pistols shoot from a 4.2-inch-long barrel, but the barrel in our compact model was much shorter, measuring 3.55 inches in length.

Taking it from the top, the RAP Compact offered Novak's snag-

RUGER AMERICAN COMPACT 8633
9MM LUGER, $579
GUN TESTS GRADE: D-

The RAP Compact is an ideal size for concealed carry. With thumb safeties in place, the trigger could be shorter and lighter. We could not complete our tests without reseating the recoil assembly multiple times.



Action	Double action, striker fired
Overall Length	6.65 in.
Overall Height	4.48 in.
Maximum Width	1.51 in.
Weight Unloaded	25.9 oz.
Weight Loaded	34.0 oz.

Barrel Length	3.55 in.
Barrel	Steel
Magazine	10 rounds, staggered column
Slide	Black nitride, stainless steel
Frame	Glass-filled nylon
Front Strap Height	2.4 in./2.9 in.
Back Strap Height	2.9 in.
Grip	Glass-filled nylon
Grip Thickness (max)	1.25 in.
Grip Circumference	5.3 in./5.6 in.
Sight Radius	5.8 in.
Trigger Pull Weight Double Action	9.0 lbs.
Trigger Span Double Action	2.6 in.
Warranty	None written
Telephone	(770) 432-1202
Website	Ruger.com
Made In	U.S.A.



The Ruger American Compact arrived with three backstraps, two of which offered the same circumference but a slightly different feel along the sides. We found each to be suitable.



A quarter turn of the Torx screw was all that was needed to anchor the grip panels in place.



Using the thumb-operated safeties prevented unwanted slide movement as well as accidental operation of the trigger. We think the Manual Safety models could be trusted with a more responsive trigger that would promote better accuracy.

resistant sights enhanced with three white dots. A relief in the barrel hood was available for visual chamber loaded/unloaded confirmation. Grip serrations found on the rearward portion of the slide were only interrupted on the right-hand side by an externally mounted extractor of impressive size. The complete top end was easily removed by locking back the slide and rotating the takedown lever located on the left-hand side of the frame clockwise about 45 degrees. This is much like SIG Sauer's design and also the Springfield Armory XD/XDM pistols of Croatian origin. The recoil assembly was a two-piece design working off two captured springs.

The Ruger American series are striker-fired pistols with a Glock-style safety lever located in the face of the trigger. In addition, the operator could release the magazine from either side, and there was a three-slot accessory rail ahead of the trigger guard. The grip was steeply undercut, creating a beavertail to assist in recoil control. Three different size and contour backstraps were supplied to accommodate different hands. Two of the backstraps measured the same in terms of circumference, but one had less palm swell, making up the distance in width, side to side. The backstraps were held in place by a Torx-type screw that only needed a quarter turn to set and release a cam-style lock. If you misread this subtle movement or mistook the camming screw for one that needs to be completely removed, you will shear off the wrench tip. Don't ask how we know this. While our shooters defaulted to the smallest of the backstraps, no one was uncomfortable with any of the supplied backstraps.

Two 10-round magazines were supplied, each with a pinky ledge that worked to complete the grip profile. A flat basepad was also supplied; it did not limit capacity, but did make the Ruger easier to conceal. We think only larger hands will prefer the larger basepads.

At the range, our first offhand

HONOR DEFENSE HONOR GUARD SUB-COMPACT HG9CLE 9MM LUGER, $499

GUN TESTS GRADE: B+

Admirably fills the role of a highly concealable fighting gun that's inexpensive and fun to shoot.



Action	Double action, striker fired
Overall Length	6.28 in.
Overall Height	4.6 in.
Maximum Width	0.96 in.
Weight Unloaded	23 oz.
Weight Loaded	29.8 oz.

Barrel Length	3.8 in.
Barrel	Steel
Magazine	7 and 8 rounds/Single column
Slide	Stainless steel/ferritic nitrocarburized
Frame	Polymer, stainless steel chassis
Front Strap Height	1.8 in./2.26 in.
Back Strap Height	2.7 in.
Grip	Polymer
Grip Thickness (max)	0.95 in.
Grip Circumference	4.9 in./5.15 in.
Sight Radius	5.65 in.
Trigger Pull Weight Double Action	8.5 lbs.
Trigger Span Double Action	2.7 in.
Warranty	Limited 2 year (original owner)
Telephone	(678) 943-8035
Website	HonorDefense.com
Made In	U.S.A.



The Honor Guard LE was meant to serve the law-enforcement community with a gun that was comfortable to tuck inside the waistband. The $60 Galco GunLeather KingTuk Air helps by providing ventilated low-profile IWB carry.



We found the clothlike grip texture on the Honor Guard receiver to be attractive and highly effective.



The new LE Long Slide top end (rear) offers a smooth profile rather than an accessory rail for more comfortable inside-the-waistband carry. The shorter top end graces the SC sub-compact models, and both units utilize the same recoil assembly. Barrel lengths are 3.2 inches and 3.8 inches, respectively.

session was punctuated by case ejection into the shooter's face. While ejectors can be manually tuned, the problem did abate, perhaps due to break-in speeding up the slide action or perhaps wear to the ejector itself. From the bench, we were hunkered down behind the sights so that ejection was primarily over the shooter's right-hand shoulder. Trigger-pull weight measured about 9.0 pounds on average. Offhand accuracy required steering the front sight to the center over the duration of a half-inch-long trigger pull that felt slow and cumbersome.

From the bench, the RAP Compact showed a distinct preference for all 115-grain ammunition, but most notably the Black Hills 115-grain JHP EXP rounds. The next best choice in combination with this pistol was the subsonic 125-grain HoneyBadger ammunition. But during our tests, we had a breakdown that could have been catastrophic. We noticed that the slide was not going fully forward, but the gun would still fire. As soon as we realized this we stopped the session to investigate. This was dangerous, because if the gun is capable of firing even slightly out of battery, the cartridge case was not being fully encapsulated by the chamber. The resulting lack of support could have resulted in case rupture, pushing out debris and propellant through the space between the chamber mouth and the breech face.

Our first telltale sign was the rear of the slide sitting slightly ajar. We also noticed that the first coil on the primary recoil spring was slipping through the yoke at the front of slide. We reseated the recoil spring and were able to continue our tests. When this happened a second time, we questioned the ability of the yoke to secure the front of the recoil spring. We also noticed that the rear of the recoil assembly was riding up and not seating properly against the barrel lug. We completed our tests, but we had to remove the top end and reseat the recoil assembly multiple times. However, during our final offhand

SPRINGFIELD ARMORY 1911 EMP CONCEAL CARRY CONTOUR PI9229L 9MM LUGER, $1220

GUN TESTS GRADE: A

The EMP delivered accuracy and ergonomics on par with more expensive custom guns and simply outclassed the other pistols.



Action	Single action, hammer fired
Overall Length	7.5 in.
Overall Height	5.5 in.
Maximum Width	1.4 in.
Weight Unloaded	28.0 oz.
Weight Loaded	35.3 oz.

Barrel Length	4.0 in.
Barrel	Steel
Magazine	8 rounds, single column
Slide	Stainless steel, satin finish
Frame	Anodized aluminum alloy
Front Strap Height	2.6 in.
Back Strap Height	2.4 in.
Grip	Polymer
Grip Thickness (max)	1.14 in.
Grip Circumference	5.0 in.
Sight Radius	5.5 in.
Trigger Pull Weight Single Action	5.5 lbs.
Trigger Span Single Action	2.7 in.
Warranty	Limited lifetime, original owner
Telephone	(800) 680-6866
Website	Springfield-Armory.com
Made In	U.S.A.

One of the many custom upgrades on the Springfield EMP was the light-gathering-filament front sight made popular by practical shooting competitors. Spare filaments in both red and green were supplied.



The dimpled texture that wrapped the grip panels, front strap, and mainspring housing of the EMP proved to be extraordinarily skid proof and kind to the hands. Note the "sliced" rear corner. This removes the edge that typically spoils concealment.



Takedown required an L-shaped pin that fit into a pre-drilled hole in the guide rod. Lock back the slide, drop in the pin, and release the slide. The slide-stop pin is now aligned with the takedown notch and is ready to be removed. A piece of wire (arrow) can be substituted for the supplied takedown pin should it be misplaced.



RANGE DATA

Black Hills Ammunition	**Springfield Armory**	**Ruger American**	**Honor Defense**
115-gr. JHP EXP	**EMP 19229L**	**Compact 8633**	**HG9CLE/HG9SC**
Average Velocity	1218 fps	1226 fps	1240 fps/1180 fps
Muzzle Energy	379 ft.-lbs.	384 ft.-lbs.	393 ft.-lbs./355 ft.-lbs.
Average Group	1.3 in.	1.3 in.	2.0 in./2.0 in.
Black Hills Ammunition	**Springfield Armory**	**Ruger American**	**Honor Defense**
124-gr. JHP +P	**EMP 19229L**	**Compact 8633**	**HG9CLE/HG9SC**
Average Velocity	1205 fps	1117 fps	1176 fps/1051 fps
Muzzle Energy	400 ft.-lbs.	343 ft.-lbs.	381 ft.-lbs./304 ft.-lbs.
Average Group	1.5 in.	1.9 in.	2.5 in./2.6 in.
Black Hills Ammunition	**Springfield Armory**	**Ruger American**	**Honor Defense**
125-gr. HoneyBadger	**EMP 19229L**	**Compact 8633**	**HG9CLE/HG9SC**
Average Velocity	975 fps	993 fps	NA
Muzzle Energy	264 ft.-lbs.	274 ft.-lbs.	NA
Average Group	1.0 in.	1.5 in.	NA
Browning Ammunition	**Springfield Armory**	**Ruger American**	**Honor Defense**
147-gr. BXP X-Point	**EMP 19229L**	**Compact 8633**	**HG9CLE/HG9SC**
Average Velocity	972 fps	947 fps	993 fps/901 fps
Muzzle Energy	308 ft.-lbs.	322 ft.-lbs.	622 ft.-lbs./265 ft.-lbs.
Average Group	0.9 in.	1.6 in.	2.75 in./3.6 in.

To collect accuracy data, we fired five-shot groups from a Caldwell Matrix rest. Distance: 15 yards. We recorded velocities using an Oehler 35P chronograph, with the first sky screen set 10 feet from the muzzle.



When loaded into a belt holster, the bobbed grip frame of the Springfield Armory EMP Concealed Carry greatly reduces the chance of telltale printing beneath one's cover garment. The $80 Defender holster from LAGTactical.com is an example of today's thin-walled Kydex holsters that can be worn IWB or on the belt.

session, we recognized that the gun was not going to maintain battery and retired the pistol.

Our Team Said: We're not sure why our gun did not always go fully into battery, but we think either the forward recoil spring was not fit properly to the guide rod or the guide rod assembly was a poor fit to the yoke. We liked the ambidextrous safeties. They were properly placed for intuitive access, and they locked down the slide. This means the tactic of pushing off an aggressor with a muzzle strike (a lost art since the demise of the revolver and 1911 in police work) was back in play. We think the Manual Safety RAPs should be called the "Pro" model. But take away bench support, and the RAP Compact was not the easiest gun to shoot accurately off hand. It has a long trigger, and balancing the gun in the hand while steering the sights was where our skill level was tested. We think the long trigger, a safety device in itself, was better suited to the Pro Models. With thumb safeties in place, a long trigger was doubling down unnecessarily, in our view. The magazine release was also quite sticky from either side and needed refinement.

Honor Defense Compact HG9CLE 9mm Luger, $499; HG9SC Conversion, $250

Honor Defense is a Georgia-based manufacturer with fewer than eight different models in production, all of which are chambered for 9mm Luger and designated Honor Guard pistols. The company logo is based on the shoulder patch worn by American soldiers fighting in what has been referred to as "The Forgotten Theatre of World War II." This refers to action in the China-Burma-India Theatre, including the Himalayas. The patch helped MPs identify American personnel, especially in light of conflicts with British military also serving in the area. All components are manufactured in the United States, and Honor Defense is known for hiring veterans for assembly, test firing, and general input.

The Honor Guard pistols work primarily off one available grip frame or receiver with color options such as Black, Mil-Green and FDE (flat dark earth). All grip frames are cut to accommodate a thumb-operated safety lever but some models like our pistol operated sans safety levers. The series is split between subcompact and Long Slide models meaning mounted with either a 3.8-inch-long barrel and accompanying slide or a top end built around a 3.2-inch-long barrel. Until the release of our LE model all pistols that shipped with long slides featured a grip frame enhanced with a two-slot picatinny rail. The one outlier in the catalog is the Sub-Compact FIST that features the full-length frame fit with the shorter top end. The underlug juts out beneath the barrel and slide offering a spiked frontal surface for defending via a muzzle strike.

The most eye-catching characteristic of the Honor Defense pistols is the grip frame enhanced with stippling that resembles woven cloth. This texture was very effective and covered the grip frame from the front of the trigger guard to the backstrap. The gun is quite narrow, so it was inherently easy to point. If this mimics the Browning 1911 pistol, the imagery is extended by the choice of two supplied backstraps playing the role of a flat mainspring housing and an arched mainspring housing. Two magazines were supplied, one holding seven rounds with a flat base pad and another holding eight rounds that extended the grip by about a half inch. Low-profile release buttons that energetically released the magazines were located at the lower rear corner of the grips on both sides.

The Honor Defense pistols are striker fired with a locked-breech system that works much like the SIG pistols. And like the Ruger American Compact, the Honor Guard was field-stripped by locking back the slide and rotating a takedown lever. The guide-rod assembly, however, does not capture the forward spring. The top end was fit with snag-resistant sights, offering a red dot on the front sight to be found between two white dots on the rear sight. The rear unit was drift adjustable and anchored by a 0.050 sized Allen wrench. This is one size smaller than typically found in wrench sets. Generous cocking serrations were machined into the slide fore and aft on both the long- and short-slide top ends. This was helpful because the slide latch was flush fit to enhance its snag-free profile, making it necessary to pull back the slide to send it into battery.

In comparing the Honor Defense receiver with the short and long slide top ends, our accuracy results were remarkably similar. While there was a significant drop in velocity from the longer barrel (about 92 fps on average for all shots fired), it was difficult to tell which groups were fired with which top end. From the bench, each combination was capable of delivering 2.0-inch groups when firing the Black Hills 115-grain JHP EXP rounds. Likewise, most groups measured about 2.5 inches across when loaded with the 124-grain JHP +P rounds. The 3.8-inch barrel liked the 147-grain Browning BXP ammunition just fine (2.75-inch groups on average), but we'd not choose them for the shorter barrel because the resulting groups were nearly 1-inch wider across. The most accurate rounds (Black Hills 115-grain JHP EXP) lost only 60 fps when switching from the 3.8-inch barrel to the 3.2-inch-long barrel. The 124-grain +P rounds lost the most (125 fps on average). Our only failure in the test was finding out that the subsonic HoneyBadger rounds would not cycle fully into the chamber. We think that since the primary recoil spring was not captured, the Honor Guard was open to experimenting with different-weight springs that might offer greater slide travel and/or more time for the rounds to feed into the chamber.

Firing carefully from the bench, we did find a minor rough spot in the trigger that seemed to improve with use, leading us to believe this could be refined with polishing. Working on the Honor Guard pistols or changing to a different-color grip frame, for that matter, was simple because the chassis that contains the frame rails and firing system can be easily removed just by rotating out the takedown lever. In the meantime, Honor Defense recommends lubrication at points of interaction along the trigger bar. Fired standing offhand, the ergonomics of the narrow pistol with its grippy texture helped us stabilize the sights while pressing the trigger. Another plus was the relatively short distance the trigger needed to travel to reach the point of ignition.

Our Team Said: We think the Honor Guard bridges the gap between primary carry and backup gun. It does hide well, and without the accessory rail, the gun makes for comfortable carry. If the "Long Slide" model is a good pistol, it is a little down on rounds compared with other guns approximately the same size. With the short top end in place for deeper concealment, its capacity was, in our view, more forgiving. And giving up one round to make the gun even smaller didn't bother us because controllability was excellent. A formidable foe from either combination, we liked the way the Honor Guard popped into our hands and cycled quickly, making it fun to shoot.

Springfield Armory 1911 EMP 4-Inch Conceal Carry Contour PI9229L 9mm Luger, $1220

The original EMP pistol from Springfield Armory was a smaller pistol competing with the Kimber Micro 9 and others like it. A likable pistol, it could be seen as a variation on a 1911 Officer's model, but it was actually quite heavy for its size. The EMP 4-inch pistol tested here could be defined as a Lightweight 1911 Commander. One key difference would be the traditional Commander-length barrel measures 4.25 inches in length. The receiver or frame compares evenly to the full-size Government model, save for the backstrap, which has been trimmed diagonally at the rear bottom edge. To make this more comfortable, the rear of the grip, including the mainspring housing, has been given a rounded profile just short of a full palm swell. Not everyone's hand applies pressure to the rear of the grip top to bottom, and the point at which



Both the Ruger and Honor Defense pistols arrived with two magazines. Left to right are the Honor Guard 7-round magazine, topped with a round of Black Hills 115-grain JHP EXPs, then two 10-round magazines for the Ruger fit with different basepads. It is carrying the Black Hills 125-grain HoneyBadger ammunition. Then comes the Springfield Armory 9-round magazine a 147-grain Browning X-Point round and the Honor Guard's 8-round magazine showing off Black Hills' 124-grain JHP +P ammunition.

the angle was cut should seat nicely inside the hollow of most shooter's palms. Holstered with the angle of the bore pointing to approximately 1 o'clock and 7 o'clock (for the right-handed shooter), the highest point on the resulting silhouette would be minimized and blunted, making telltale printing beneath a garment less likely.

With a suggested retail price more than $1000, the EMP was fit with a number of features that were developed by competitive shooters and would normally be considered custom parts. These features include a Novak snag-resistant rear sight affixed via a wide dovetail cut into the slide. The rear sight was matched with a front sight offering a light-gathering filament that glowed with a red dot in ambient light. We didn't break the filament, but extra lengths of red and green were provided. The slide was machined from forged stainless steel and finished with a satin texture.

Further custom upgrades included a lowered and flared ejection port, a skeletonized hammer for faster reset, a ventilated aluminum trigger and an oversized beavertail with memory bump. The memory bump is a raised area that assures every palm size will make positive contact and fully compress the grip safety. Thumb-operated safety levers that lock the trigger and seize movement of the slide were mounted on both sides of the forged aluminum alloy frame. The frame was treated to a black hardcoat anodized finish.

The story of the Springfield Armory EMP is in the grip. Not so much its special contour, but the way the shooter "wears" the pistol in his hand. Whereas just about every polymer pistol maker has been chasing the perfect grip by providing alternate panels that change the impression the gun makes in the shooter's hand, the 1911 single-stack pistol has never had any such problem. Yes, you can change the side panels from flat to rounded, but the rectangular nature of the 1911 frame with the narrow length facing forward has always made this design easy to hold and point. Once you have a good grip on the EMP, you never have to change it until it's time to reload. Larger hands may not need to shift the gun at all to drop the magazine.

The chance of the EMP swimming in the hand was further reduced by a dimple-style grip pattern that flowed from the front strap to the side panels to the mainspring housing. Good looking and comfortable the gun stuck like glue in our shooter's hands without being abrasive. A channel machined into the left side grip panel helped access the left-side-only magazine release button. The thumb safeties were operated easily and the trigger needed only about 5.5 pounds of pressure over 0.07 inches of travel to drop the hammer.

Takedown of the EMP was simple, but did require a tool that could be improvised if it were lost. To remove the EMP's top end, the gun was emptied and the slide locked fully to the rear. This exposed the front of the bull barrel and the solid guide rod. Finding the small hole in the guide rod, we inserted the supplied "L" shaped takedown rod. (A bent length of wire would also suffice.) This captured the recoil spring, thereby removing pressure from the slide.

The top end was then released against the take down pin. This automatically aligned the slide-stop lever in line with the takedown notch in the slide. The slide stop can now be removed, freeing the top end from the frame. If there were a tricky part to reassembling the handgun in reverse order, it would be lining up the barrel link, which swings freely so that the slide stop pin can be threaded through to the other side of the frame.

At the range we were reminded why we used the analogy of wearing the EMP rather than merely holding it. From the bench we had a great sense of control. Despite all four rounds being very different in terms of bullet shape, construction, bullet weight, and velocity, we printed five-shot groups that averaged less than 1.2 inches across for all shots fired. The Black Hills HoneyBadger landed 1.0-inch groups and cycled quickly in the EMP, despite its recoil feeling much less than our recorded 975-fps average velocity. The Browning 147-grain BXP X-Point rounds were even better, printing groups that averaged 0.9 inches across.

Our Team Said: The real story behind our accuracy results was we had to work really hard to produce good results with the other pistols. But the EMP was very easy to shoot accurately, and it never failed for a moment.

We think just about any shooter is going to be able to achieve results comparable to ours. One staffer said the gun was so easy to shoot we were getting lazy and probably could have produced tighter groups if we tried harder. While the other guns were challenged by the 15-yard test distance, we're sure the EMP will be able to keep pace with many more-expensive full-sized 1911s from the 25-yard line.

Written and photographed by Roger Eckstine, using evaluations from Gun Tests team testers. **GT**

Mouse Gun Shoot Out: Three Tiny Pocket Pistols Compete

The PTAC Bullfrog, the NAA Mini Revolver, and the Beretta 950 semi-auto chamber 22 Magnum and 25 ACP, respectively, in shirt-pocket-size options. Is one right for your last-ditch defense?

Love them or despise them, mouse guns — aka very small pocket pistols — are an important part of the self-defense landscape by virtue of their sheer numbers. For example, the North American Arms Mini Revolver is a popular handgun that has created a niche all its own. It is offered in several versions, with relatively long barrels as well as the traditional short barrel. We were interested in what type of accuracy a trained shooter could wring out of the Mini Revolver because a 6.5-ounce 22 Magnum just might have appeal as a pocket revolver or backup. We also tested a newcomer and competitor to the Mini Revolver. The PTAC Bullfrog is a copy of the NAA revolver in some ways but is mechanically different in others. We also added a small automatic pistol to the test. The Beretta 950 25 ACP handgun is a widely used pistol and can be called a standard among pocket pistols. For safety, each of the revolvers and the Beretta self-loader demand that the hammer be cocked before the pistol may be fired. Each also features a single-action trigger, although the revolvers must be cocked for each shot. In the end, we thought one gun offers a good-enough chance at stopping hostile action, but to be frank, members of our team would still be reluctant to buy it.



The Beretta 25 ACP pistol sat well in the hand and was easy to get hits with, even at 50 feet. It was likewise easy to control the Beretta 950 in rapid-fire testing despite its very light weight.



Top to bottom are the PTAC Bullfrog, North American Arms 22M, and the Beretta 950 BS. Our raters eliminated the Bullfrog from consideration because of various problems, so it came down to the NAA revolver versus the Beretta self-loader. For us, neither handgun fills the bill for personal defense. Each has a serious deficit of power. However, many gun owners believe these pistols have a place in armed defense.

25 ACP AND 22 MAGNUM LOAD PERFORMANCE DATA

North American Arms 22M w/1.6-inch barrel	Average Velocity (fps)	Muzzle Energy (ft.-lbs.)	Average Accuracy (in.)	Power Factor (pf)	Expanded Width (in.)	Retained Weight (gr.)	Penetration In Water (in.)
22 Magnum Fiocchi 40-gr. JSP	1050	98	4.0	42	0.22	40/100%	16
22 Magnum CCI 40-gr. JHP	903	72	3.5	36	0.24	40/100%	14
22 Magnum Hornady 45-gr. FTX	968	94	4.1	43	0.60	44/99%	12

Beretta 950 BS Jetfire w/2.4-inch barrel	Average Velocity (fps)	Muzzle Energy (ft.-lbs.)	Average Accuracy (in.)	Power Factor (pf)	Expanded Width (in.)	Retained Weight (gr.)	Penetration In Water (in.)
25 ACP Aguila 50-gr. FMJ	730	59	2.9	37	0.25	50/100%	14
25 ACP Hornady 35-gr. XTP	935	68	2.5	33	0.30	34/99%	8

Notes: *Average Velocity and standard deviation readings were obtained by firing four five-shot strings over a Competition Electronics Pro Chrono The PTAC Bullfrog was omitted from accuracy testing because the accuracy was so poor we could not reasonably control our shots. Ambient temperature: 68 degrees. Elevation: 815 feet above sea level. ● The accuracy figures are the average of two five-shot groups. For accuracy, we fired the test gun from a benchrest at a 15-yard target. ● To calculate IPSC power factor, multiply bullet weight in grains by the velocity in fps, then divide by 1000. ● The retained-weight column shows the recovered bullet weight as a percentage of the actual bullet weight. We did not do accuracy and chronograph testing of the PTAC Bullfrog because of safety considerations.*

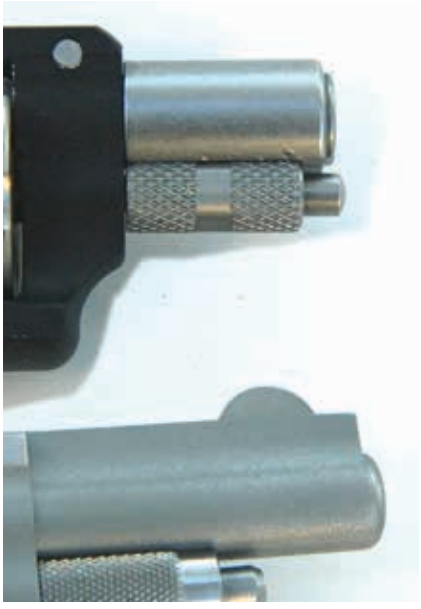
Loads tested: *Fiocchi 40-grain Jacketed Soft Point 22 Magnum, 22.25/50 rounds from BulkAmmo.com; CCI 40-grain Jacketed Hollow Point 22 Magnum, $11/50 from SportsmansGuide.com; Hornady 45-grain FTX 22 Magnum, $15.19/50 from SportsmansGuide.com; Aguila 50-grain Full Metal Jacket 25 ACP, $22/50 from LuckyGunner.com; Hornady 35-grain XTP 90012, $17.79/25 from MidwayUSA.com.*

North American Arms 22M 22 Magnum, $220

This was our price at SCGUNCO.com, and for that money, the NAA 22M came with a nice locking metal gunbox that is large enough to hold two mini revolvers. We liked this very much. There are several options with the North American revolver. One of these is to order a version with a spare 22 LR cylinder for inexpensive practice. This is okay as far as it goes, but we all agreed we would not be doing a lot of practice with this revolver. It isn't difficult or painful to shoot, but the loading manual of arms simply doesn't invite extensive range work. There are longer barrels and also larger and smaller grips.



The 25 ACP, left, isn't as powerful as the 22 Magnum, right. We are not comfortable with the power level of either cartridge for personal defense, but we do realize the value of having any gun rather than no gun. We're pretty sure no one wants to get shot with either round.



Here's one of the big problems we had with the PTAC Bullfrog, top. The total lack of a front sight means that the Bullfrog is only good at contact distance, or slightly beyond. Even the rudimentary sight on the NAA, bottom, offers the ability to place shots where you want them.

The 22M tested is a type of default NAA revolver and the one we felt was most practical. The trigger is single action, which means the revolver much be cocked for each shot. The trigger is a simple spur type. To load the revolver, the cylinder pin is removed and the cylinder is pressed out of the frame. Five cartridges are loaded and the cylinder is replaced and the cylinder pin lined up and locked in place. Once the cylinder is replaced, the user determines how he wishes to carry the revolver. You cannot simply allow the firing pin to rest on the cartridge. There are two options. One is to slightly bring

the hammer to the rear and allow the hammer to rest in the safety notch. This isn't a half-cock notch, but is instead a safety notch built into the hammer. This seems safe enough. The second one is preferred by our raters. There are notches between the chambers. The firing pin may be lowered to ride in this notch, preventing the hammer nose from riding on a cartridge. You have to remember to place the revolver in the safe mode, which is acceptable, but there is nothing to impede drawing and firing the revolver. You simply draw and fire; there is no manual safety as the revolver is transitioned from Safe mode to Fire mode. To unload the revolver after firing, the cylinder is removed and the spent cases are pressed out one at a time with the cylinder pin. We never had any difficulty pressing the spent cartridge cases from the cylinders. The rear sight is a simple notch in a raised portion of the frame. The front sight is a half moon. Surprisingly, the sights were visible when the revolver was properly held. Our best firing technique for accuracy was to hold the revolver in the strong hand high enough for the sights to be visible. The hammer is cocked with the support-hand thumb. Some will have difficulty simply holding and firing the revolver properly, but it can be done with sufficient practice. We had no difficulty firing the revolver, quickly, with one hand, but it simply wasn't as accurate. The NAA 22M was fired offhand at an attacker-sized target at a distance of 5 yards. We used the Fiocchi 40-grain JSP, the CCI Maxi Mag 40-grain round, and the Hornady 45-grain FTX loads in testing. We were surprised to find that we could make a 4-inch group at 5 yards, sometimes a bit smaller with concentration. The front sight really stood out and helped in getting a solid aim on the target. We fired from the benchrest at 7 yards, printing a group with each load. There was no difference to speak of in accuracy, as the shooter simply had to try to manage the trigger. The trigger breaks at 6 pounds,

NAA 22M 22 MAGNUM, $220

GUN TESTS GRADE: A

The NAA revolver is small but well made. The revolver was reliable and useful. We were able to make hits far past bad-breath range, and the revolver functioned properly without difficulty. It isn't our first choice for self defense, but it is a viable deep-cover hideout or backup revolver.



Action	Single-action revolver
Overall Length	5.1 in.
Overall Height	2.9 in.
Maximum Width	1.06 in.
Weight Unloaded	6.5 oz.
Weight Loaded	7.5 oz.
Barrel Length	1.6 in.

Barrel	Steel
Capacity	5
Frame	Stainless steel
Frame Front Strap Height	1.6 in.
Frame Back Strap Height	2.0 in.
Grips	Rosewood
Grip Thickness (max)	1 in.
Grip Circumference (max)	3.3 in.
Sights	Fixed
Trigger Pull Weight Single Action	6.5 lbs.
Trigger Span Single Action	2.1 in.
Safety	None
Warranty	Lifetime
Website	NorthAmericanArms.com
Telephone	(800) 821-5783



We liked the fit and finish of the NAA 22M revolver.



To unload the revolver, the shooter must follow a time-consuming process. The cylinder locking pin is used to remove spent cartridge cases one at a time.



This is the NAA 22M cylinder with five spent cartridge cases. We never experienced any problem removing these spent cartridges from the chambers.

PTAC BULLFROG 22 MAGNUM, $294

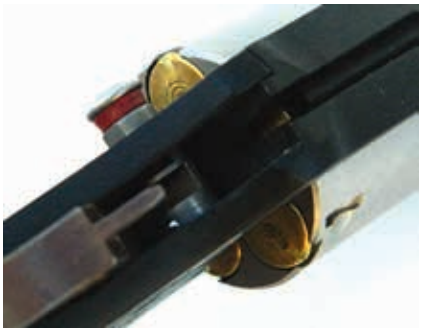
GUN TESTS GRADE: D-

Stuff shooting out from the revolver stung our cheeks, even with the revolver held at full extension, and this isn't acceptable. There was also a problem with either pressure or rough chambers because empties stuck in the chambers. It was not wise to continue shooting this firearm, so we stopped.



Action	Single action revolver
Overall Length	4.5 in.
Overall Height	2.6 in.
Maximum Width	1.06 in.
Weight Unloaded	5.0 oz.
Weight Loaded	6.0 oz.
Barrel Length	1.125 in.

Barrel	Steel
Capacity	5
Frame	Aluminum
Frame Front Strap Height	1.5 in.
Frame Back Strap Height	2.0 in.
Grips	G10
Grip Thickness (max)	0.8 in.
Grip Circumference (max)	3.0 in.
Sights	Fixed rear, no front sight
Trigger Pull Weight Single Action	7.0 lbs.
Trigger Span Single Action	2.0 in.
Safety	Manual Safety
Warranty	1 year
Website	PTACUSA.com
Telephone	(805) 668-5851



This is the PTAC Bullfrog revolver safety in operation, shown in the Fire mode.



The Bullfrog is the lightest handgun tested. The PTAC Bullfrog features an aluminum frame. The revolver's greatest design flaw, we felt, was the lack of a front sight.



Each revolver features generous cocking spurs on the hammers that are easy to manipulate.

which isn't heavy but pulling much weight against a 6-ounce revolver is difficult. We fired groups averaging 3 to 4 inches at 7 yards, certainly not worthless performance from such a small handgun. We believe that with sufficient practice by the owner, the revolver may have some merit against large reptiles on the trail.

We experienced a single failure to fire with CCI 22 Magnum load. The cartridge was removed from the chamber and displayed a good primer strike. It was replaced in the cylinder and rotated so that a different part of the case rim would be exposed to a strike. The second whack of the firing pin fired the revolver. Such is the occasional event with rimfire loads.

Our Team Said: The NAA 22M does what it is designed to do and does it well.

PTAC Bullfrog 1.125-Inch Barrel, $294

The Bullfrog is usually available for about $57 more than the NAA 22M, a search of internet prices found. We did not compare the prices of the versions for either revolver with both the 22 LR and the 22 Magnum cylinders. The Bullfrog is delivered in a small clamshell plastic box. The Bullfrog should offer an advantage over the NAA 22M revolver for this price hike. To the contrary, we found a revolver with significant demerits compared to the NAA 22M. The Bullfrog's frame is black-anodized aluminum. The grips are checkered G10 material. Each is modern and acceptable. Weight is saved with the aluminum frame, and the G10 grips give good purchase. The revolver has no safety notch in the action as exists in the NAA revolver. Also, there are no cuts in the cylinder to rest the hammer nose. The Bullfrog uses a pushbutton safety that is applied with the hammer cocked. A bolt is moved left to right and the hammer lowered into a notch in the safety. The revolver may be cocked and the trigger pressed, but the hammer will fall onto the safety bar and not reach the cartridge when the safety is applied. To fire, the hammer is cocked and the safety lever pushed

to the left by the trigger finger. Left-hand shooters need not apply. There is simply too much going on that works against simple readiness. To first cock the handgun and then press the safety button is too awkward for one-hand manipulation. We also foresee a safety issue if the cocked revolver is wallowing in the hand while we manipulate the safety.

The trigger of the Bullfrog breaks at 7 pounds. The revolver was comfortable enough to fire. However, when firing the first round, we were stung on the cheeks by some type of ejecta. There was no powder on the face and no blood, no evidence of any powder or lead projectiles, but we certainly felt it. Always wear safety glasses! No matter if you're shooting a hundred-dollar gun or a thousand-dollar gun, our first shot is fired into the berm at close range and the hand is at full extension. Firing in this manner is how we first felt the stinging ejecta. We were glad the gun wasn't closer to the face.

The rear sight, or, rather, the only sight, is a trough in the top of the strap. We liked this rear-sight design better than the NAA, but there was a big defect—there is no front sight. We were unable to find a range at which we could connect with the target past about 5 feet. Even then, the point of aim could not be repeated with each effort. Results were extremely poor. With each shot we felt what may have been unburned powder from the short barrel or perhaps something from the barrel and cylinder gap. Yet the gap between the cylinder and forcing cone seemed as tight as the NAA 22M. Each revolver had some fore and aft play, but less when cocked. The Bullfrog did not lock quite as tightly as the NAA 22M when the hammer was cocked, but it was close. When at rest with the hammer down, there was no difference in the play of the cylinder that we could determine. We were unable to produce any type of reliable hit on the target past a few feet. Eliminating the front sight is a serious design flaw, in our estimation. As we saw with the NAA 22M, this size of revolver is

BERETTA 950 BS JETFIRE 25 ACP, $285

GUN TESTS GRADE: A-

The pistol came out of the box firing without any reliability issues. The accuracy potential of this handgun is greater than the NAA 22M, an important point. The Beretta also offers 8+1 25 ACP rounds, a significant difference between the self loader and the two five-shot revolvers. As a gun, we like the Beretta. The big problem is a deficit in power.



Action	Locked breech single-action semi-auto
Overall Length	4.7 in.
Overall Height	3.4 in.
Maximum Width	0.9 in.
Weight Unloaded	10 oz.
Weight Loaded	12 oz.

Barrel Length	2.4 in.
Barrel	Steel
Magazine	8-rd. detachable box
Slide	Steel
Frame	Aluminum
Frame Front Strap Height	1.6 in.
Frame Back Strap Height	2.4 in.
Grips	Plastic
Grip Thickness (max)	0.9 in.
Grip Circumference (max)	4.5 in.
Sights	Fixed
Trigger Pull Weight Single Action	5.9 lbs.
Trigger Span Single Action	2.3 in.
Safety	Lever
Warranty	None
Website	Beretta.com



The Beretta 950 is well made and offers excellent reliability and accuracy. The Beretta is a considerably more accurate handgun than we thought when handling the pistol initially.



The manual safety lever offers a good option of leaving a round in the barrel, yet being able to fire quickly. The Beretta safety is off and ready to fire as shown here.



The ability to pop the barrel open and insert a loaded cartridge rather than to rack the slide is an advantage in a small pistol.

capable of reasonable accuracy in a short-range defensive situation.

As we unloaded the revolver, we were faced with another dilemma. The fired Fiocchi cartridge cases were stuck tight in the cylinders. We were forced to take a cleaning rod and ram the cartridge cases out with considerable effort. Whether the revolver would not take the pressure of the 22 Magnums or whether the cylinders were simply rough, we could not ascertain. After ramming the spent cartridges out and reloading with CCI 22 Magnum loads, the revolver was fired again. This time the senior rater told the crew to fire into the ground a few feet in front of the revolver. Again, the cartridges were stuck in the cylinder. The senior rater then called a halt on the testing.

Our Team Said: The ejecta from the revolver was stinging our cheeks, even with the revolver held at full extension, and this isn't acceptable. Second, there was a significant problem with either pressure or rough chambers, and this isn't good. It was not wise to continue shooting. Finally, accuracy was so poor we could not reasonably control our shots, and it was not wise to continue trying to hit the target with this revolver. We would not buy the Bullfrog.

Beretta 950 BS Jetfire 25 ACP, $285

The Beretta 950 Jetfire is a single-action self-loader chambered for the 25 ACP cartridge. The Beretta 950 has been widely used as a cop's backup and a pocket pistol for civilians. The pistol features a matte finish that is not unattractive. The grips are checkered plastic. The pistol features a tip-up barrel. By tipping the barrel up and loading straight into the chamber, the slide need not be racked for firing. This also makes unloading more efficient as the cartridge cannot be damaged by unloading. There is no extractor; powder gases blow the spent cartridge case out of the chamber. The pushbutton magazine release is handy to use. The frame-mounted safety may be applied when the hammer is cocked or when the hammer is at rest. Most shooters will prefer to leave the hammer down and on the safety notch. Simply pull the hammer back slightly until it clicks. There is plenty of leverage for cocking the hammer. The plastic grips are properly checkered for good adhesion, which is important in a pocket pistol. The NAA revolver is held securely in the hand largely due to the design of the grips, which works well. The Beretta finds the proper purchase in a different manner.

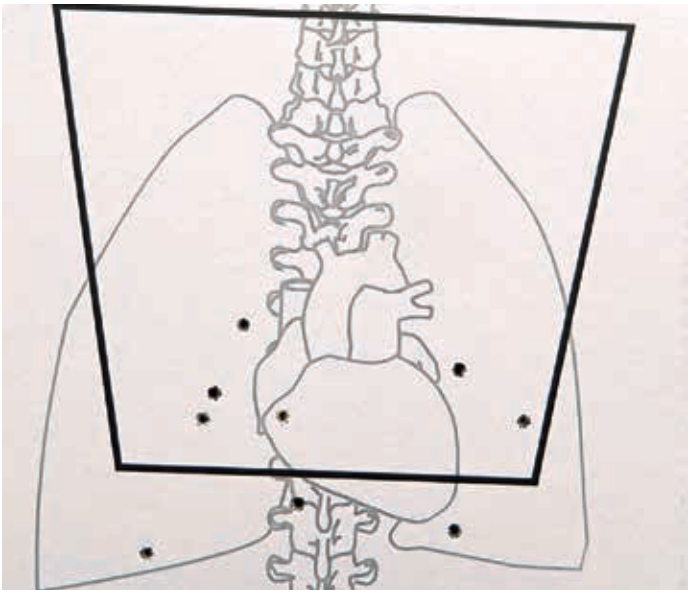


The Beretta's mag release could be activated in a pocket, dumping a magazine inadvertently.

The trigger action is a clean 6 pounds. The Beretta is necessarily taller than the NAA revolver, but no wider, and only a little, if any, more difficult to conceal. Both get on target about as quickly. In handling, the Beretta is a pleasant firearm to use. Using the Aguila 50-grain FMJ and the Hornady 35-grain XTP, firing was pleasant, with five-shot groups of around 2 inches at 7 yards. We felt this was good performance from this type of handgun. The combat target was placed at 15 yards and we found that we could easily get center-zone hits quickly. This is an easy handgun to shoot well and an easy handgun to like. The Beretta never failed to feed, chamber, fire, or eject in firing 50 rounds of the Aguila FMJ load and 40 rounds of the Hornady XTP loading. For what it was designed to do, the Beretta certainly fits the bill

Our Team Said: After range testing, we rated the pistol an A. Then, after carrying the 22M in the pocket and the Beretta in the pocket, sometimes both at once in separate pockets, we rated the Beretta down a half grade when we found that a press on the magazine release could release the magazine in the pocket.

We eliminated the Bullfrog from consideration because of its various problems, so it came down to the NAA revolver versus the Beretta self-loader. Neither handgun fills the bill for personal defense for our shooters. Each has a serious deficit of power. However, as a last-ditch hideout, which is the criteria for which they were designed, each has merit. For the Beretta, some type of holster is usually recommended, but the grip is also exposed with a holster, so this is a consideration. Because the magazine can inadvertently be released, the Beretta would fire only once, and no more, if this had not been discovered. This will not happen with the NAA revolver. Based on overall power and reliability, we have to rate the NAA revolver the better buy.



This is a rapid-fire group shot with the Beretta 950 25 ACP pistol at a long 15 yards. We felt that this is excellent shooting with a pocket size 25 ACP pistol. Our military intelligence officer found the Beretta a fun gun to fire and use, but he noted it is a handgun with limited value for personal defense.

Written and photographed by Bob Campbell, using evaluations from Gun Tests team testers. **GT**

Combo Gun and Ammo Tests: .410 Bore Self-Defense Choices

Nice accuracy at short range, ammunition versatility, and ease of handling put the S&W Governor ahead of a Taurus Judge and a Mossberg M500 Cruiser pump-action shotgun.

The decision of which self-defense .410 firearm is the correct choice for up-close-and-personal situations encountered in the home often comes down to a handgun in one hand or a short-barreled pump-action shotgun in the other. Because of their ease of handling, two revolvers that are capable of firing both .410 loads and handgun rounds are becoming quite popular; and pistol-grip short-barrel shotguns remain a favored option in self-defense circles. The question arises about which type of close-range firearm is the most effective with the diminutive .410 loads, including those that have recently been developed with short-barreled revolvers in mind.

Acting on a reader request, we conducted a multitude of tests on a trio of readily available self-defense firearms that included a Taurus Judge (handles .410-bore shotshells and 45 Colt) that retails for $629; a Smith & Wesson Governor (handles .410, 45 Colt, and 45 ACP) that retails for $809; and a Mossberg Model 500 Cruiser that sells for $467 and fires .410-bore shotshells.

Each of the firearms (all have been examined in previous GT reviews) is specifically designed for close-quarters







Right, top: Very close range (9 feet) patterns of the firearm trio in our test, from left, a Smith & Wesson Governor; a Taurus Judge; and a Mossberg Model 500 Cruiser pump-action were all effective, with the only major spread difference with the No. 6 shot pellets on these Birchwood Casey 12-by-18-inch BC Bad Guy targets.

Right, middle: Shots taken at 21 feet (the mid-range line used during concealed-carry courses and what some consider as the maximum home-defense shot) such as with this one being fired with the Mossberg Model 500 Cruiser .410, demonstrated that while the pellet spread was quite a bit wider with both the revolvers, all loads with all firearms in the test produced intruder-stopping patterns.

Right, bottom: The Smith & Wesson Governor being shot at targets set at 21 feet was surprisingly accurate with the larger pellet shotgun loads and really shined with the solid handgun loads — particularly the 45 ACP. We found the Governor was the best handling firearm of our .410 self-defense trio.

action, such as when an intruder has illegally entered a residence, placing the people living in the home in a potentially life-threatening situation. In such a life-or-death scenario, a reliable, easy-to-handle, and effective self-defense tool is essential.

In this part of the GT evaluation and match-up, our focus was on the handling ability of the three firearms and their patterning performance at close-quarters ranges. We attempted to walk the fine line that divides ease of handling with putting the pattern in the right place to evaluate the two revolvers and the pump-action.

Additional testing of the trio will cover the punch factor of whether there is a significant difference between the energy delivered on the target when the rounds are fired through short-barreled handguns or down the 18.5-inch barrel of the pump-action shotgun.

Up close and personal with a home intruder is not the time to be concerned about whether a home-defense firearm is packing enough punch.

Being able to deliver an effective, accurate and deadly shot into a threat or threats is the paramount factor in any home-defense situation, although this must be weighed against whether or not the homeowner is able to easily handle the firearm. In recent years, that factor has often centered on the use of a .410 by the home defender.

The tiny popper has been around for a long time on skeet fields or in hunting situations; and is often mistakenly used as an introductory gauge for beginning shooters. At typical clay and live target ranges, the diminutive .410 throws an unforgiving pattern — there is no room for error like with a 12, 20, or even a 28 gauge. That is why it is considered a pro's shotgun, not a beginner's tool, in most wingshooting circles.

However, there is less recoil with the .410, and that factor seems to be the main reason for its regular use both in the field and for home defense.

The idea seems to be that an inexperienced shooter facing an

SMITH & WESSON GOVERNOR .410, .45 ACP, .45 COLT REVOLVER 160410, $809

GUN TESTS GRADE: A

Good feel, solid heft, nice trigger, and very nice patterning performance at close-quarter targets moved the S&W to the top of our list. We liked the way it pointed and how it could be quickly brought onto targets packing a variety of shotgun loads and two different handgun rounds.



Action Type	Revolver
Chamber Size	2.5 in. (.410)
Overall Length	8.5 in.
Height	5.5 in.
Capacity	6

Weight (Unloaded)	30.9 oz.
Barrel Length	2.5 in.
Barrel	Stainless steel; 1:15 twist
Frame	Matte silver scandium alloy
Grip	Black synthetic
Front Sight	Black ramp
Rear Sight	Fixed notch
Trigger Pull Weight Single Action	4.75 lbs.
Trigger Pull Weight Double Action	11.0 lbs.
Warranty	Lifetime
Telephone	(800) 331-0852
Website	Smith-Wesson.com
Made In	U.S.A.



The textured synthetic grip of the Governor with comfortable finger grooves provided a solid and secure hold with no appreciable difference in felt recoil.



Having the capability of holding six shots, including a variety of shotgun shells and two handgun rounds, was a plus we could not ignore. In addition, as the cylinder cycled into battery, we noticed it was a solid, fine-tuned action each and every time.



A light-colored sight, rather that jet black, would have been a plus in our book, although we experienced limited difficulty with sight-to-target alignment on the close-quarters paper in our patterning tests.

MOSSBERG MODEL 500 CRUISER .410 PUMP ACTION NO. 50455, $467

GUN TESTS GRADE: B

Although tight patterns at close range can be both good and bad, depending upon the skill level of the shooter, we were impressed with the handling ability of the shotgun. Recoil when shot from the hip was not a problem with any of the test loads.



Action Type	Pump	Buttstock	Black synthetic pistol grip
Chamber Size	2.5 to 3 in.	Forearm	Black synthetic ribbed
Overall Length	28.5 in.	Forearm Length	7.0 in.
Height	6.0 in.	Front Sight	Brass Bead
Capacity	5+1	Rear Sight	None
Weight (Unloaded)	4.5 lbs.	Trigger Pull Weight	5.5 lbs.
Barrel Length	18.5 in.	Warranty	2-year limited
Barrel	Blued	Telephone	(800) 363-3555
Receiver	Flat black	Website	Mossberg.com
Choke	Cylinder	Made In	U.S.A.





The black synthetic grip was just a little slick, although there were no handling problems when shooting the various loads. The grip was not as comfortable as either the textured synthetic of the Governor or the "Ribber" grip of the Judge. As with the pistol grip, the slick factor of the forearm was a minus in our ranking. We did like the grooves cut in the forearm and the rounded design that fit well into the hand.



Note the recessed action-release button, which was a little hard to operate during the firing tests.

intruder will have an easier time wielding the .410 in a life-or-death situation than a heavier, harder-kicking 12 or 20 gauge.

This concept has led to the development of revolvers designed to handle the .410 loads and their being promoted as good choices for home-defense situations.

When a GUN TESTS reader contacted us asking for a comparison of the revolvers versus the most recommended home-defense firearm — a short barreled, pump-action shotgun — we managed to get our hands on several representative models for a head-to-head-to-head comparison.

The price difference between the two revolvers was relatively small, with both handguns well above the retail price of the pump-action shotgun. We believe the capability of the two pistols to fire handgun loads was most likely a key factor in their heftier price tags.

To cover a variety of loads that might be used in a close-range, self-defense situation, the ammunition we selected for our testing included: Federal Premium 2.5-inch, 000 buckshot (four pellets) with an average muzzle velocity of 850 fps; Remington Express XLR 2.5-inch one-half ounce No. 6 shot with an average muzzle velocity of 1250 fps; Winchester PDX1 Defender 2.5-inch loads containing three plated defense discs and 12 plated BBs with an average muzzle velocity of 750 fps; and Winchester 2.5-inch hollow-point rifled slugs (one-fifth ounce) with an average muzzle velocity of 1830 fps. In addition, our handguns loads for the two revolvers included Hornady Critical Defense FTX 45 Colt, 185-grain loads with an average muzzle velocity of 950 fps and Barnes TacXPD 45 Auto +P, 185-grain loads with an average muzzle velocity of 1000 fps.

We tested the firearms on the range with targets set at two ranges used in concealed carry courses to simulate typical home-defense scenarios. The close targets were set at 9 feet (3 yards) and the second set of targets

was shot at 21 feet (7 yards). Here are our findings:

Smith & Wesson Governor .410, 45 Colt, & 45 ACP, $809

While trying not to go down old trails (the S&W Governor was given an A- rating in its June 2011 GT evaluation), we focused this review on the revolver's handling ability and patterning performance in home-defense situations.

What we found at first blush is that for a self-defense firearm that will spend most of its time on a nightstand beside a bed, the Governor had the best heft and feel of the review trio.

Slightly lighter than the Taurus Judge we matched it against — weighing in at 30.9 ounces — the Governor was a better-balanced handgun and was also easier to bring to bear onto a target than the hip-shooting Mossberg.

Featuring a six-shot cylinder rather than the five-shot cylinder in the Judge, which made the Governor just a touch wider, we found the feel of the firearm to be very nice. When a handgun fits the hand well and feels good, that really helps a shooter be on target.

We also appreciated the textured synthetic grip and the deeply rounded trigger of the Governor. During the range time, these comfort factors were a major contributing factor to the Governor's accuracy with all the test loads.

With a 2.5-inch barrel, the Governor was a half-inch shorter than the Judge, measuring 8.5 inches in length. Having an overall height advantage of one half-inch (5.5 inches), along with a slightly larger width, we found the S&W to have a better heft of the two handguns.

We found no faults in the solid design and workmanship in the Governor, although we would have preferred a different front sight. The black ramp tritium insert, while adjustable, was not difficult to see on a target, but did not stand out quite as well as the Judge's red fiber-optic sight.

The trigger pull of the Governor

TAURUS JUDGE NO. 2-441039T .410, .45 COLT REVOLVER, $629

GUN TESTS GRADE: B

While the Judge provided what we would consider acceptable close-range performance with all loads, the patterning results were below both the Governor and the Mossberg. If price is the key factor in a purchase decision, the Judge would fit the bill of an adequate home-defense firearm.

Action Type	Revolver
Chamber Size	2.5 in. (.410)
Overall Length	9.5 in.
Height	5.0 in.
Capacity	5
Weight (Unloaded)	32.0 oz.
Barrel Length	3.0 in.
Barrel	Matte stainless steel, 1:12 twist
Frame	Matte Stainless Steel
Grip	Black synthetic
Front Sight	Red fiber optic
Rear Sight	Fixed notch
Trigger Pull Weight Single Action	6.0 lbs.



Trigger Pull Weight Double Action	11.5 lbs.
Warranty	Unlimited Lifetime Repair
Telephone	(800) 327-3776
Website	TaurusUSA.com
Made In	Brazil



The five-round cylinder provides the Judge with a slightly smaller profile than the Governor, which may be preferred by some shooters. We felt the handgun was slightly muzzle heavy and was not as balanced as the Governor.



Billed as more recoil absorbing, we found the "Ribber" synthetic grip had a spongy feel and was not as comfortable as the textured grip of the Governor.



Slightly smaller and less curved than the trigger of the Governor, we found that with its 6-pound SA and 11.5-pound DA pull, we had a harder time with trigger control and maintaining sight alignment.

was a crisp 4.75 pounds in single action and 11 pounds in double action. While the double-action pull was a little long for our tastes, it was very smooth. The cylinder also turned smoothly with a solid click as the handgun came into battery. The action was very similar to large-caliber S&W revolvers that have found favor with many handgunners.

Moving onto the shooting range, the Governor produced results that were quite impressive.

Fired at targets set nine feet down range, the Governor produced its best pattern of 10 inches across with the Remington No. 6 shotshells; a 5-inch group with the Winchester PDX1 Defender loads containing three plated defense discs and 12 plated BBs; a 1.5-inch group with the Federal Premium 000 (four pellets) buck shot; and a perfect center mass hit with the Winchester one-fifth ounce hollow-point slug.

Each of the hits with the various loads would have been what we would consider a man stopper.

Recoil with all the loads was surprisingly mild, which we attributed to the high quality heft and feel of the revolver.

Moving back to 21 feet, the spread of the No. 6 shot increased to an average of 16.5 inches; the Defender load spread was eight inches; and the 000 buckshot spread was 3.5 inches. The slug shot was still dead center in the chest of the target.

Once again, all were what we would consider an effective and deadly group for a home defense firearm.

Since the Governor was also capable of handling both 45 Colt and 45 ACP rounds (three two-round moon clips and two six-round moon clips are included in the Governor package), we also sent a few rounds downrange to check out the handgun's accuracy.

The best 45 ACP three-shot group of 1.5 inches from center to center at both 9 feet and 21 feet was considered exceptional for a short-barreled handgun. The 45 Colt three-shot groups came in at 1.5 inches at 9 feet and 3 inches at 21 feet, which was also considered above adequate for a revolver with a 2.5-inch barrel.

Because of the variety of loads the Governor handles well, a 000 buckshot, followed by a Defender load, followed by two 45 Colt rounds, followed by two 45 ACP loads might be considered a hard combination to beat.

Our Team Said: Although the price tag of the Smith & Wesson was the highest among our three firearms, its accuracy at close-quarter, self-defense ranges; handling ability and crisp trigger pull, plus the revolver's capability to handle a variety of loads moved it to the top of our list. We found the recoil from all the loads was well within the acceptable range.

Taurus Judge .410 & .45 Colt, $629

Although reviewed by GT in a slightly different version in August 2009, this examination of the popular hand cannon went into further detail on how it handled and punched holes in paper at self-defense ranges.

Tipping the scales at 32 ounces, we found that the Judge was slightly muzzle heavy with a 3-inch barrel and did not feel as balanced in the hand as the Governor.

The Taurus does present a smaller profile than the S&W that may be attributed to the five-round cylinder, as opposed to the six shots available in the Governor. One more round is not much of a difference, but it is a difference that we noted.

The overall length of the Judge was 9.5 inches, with a height of 5.0 inches and a 3-inch barrel. Touted as a shock-absorbing "Ribbers" synthetic grip, we found that the feel was a little spongy and we experienced no discernible reduction in recoil compared to the grip on the Governor.

The matte-stainless-steel finish was not quite as sharp and distinctive as the finish on the Governor, which cost the Judge a few appearance points. We did like the red-optic front sight that offered a good sight alignment through the square-notch rear sight — in good light. In low-light conditions like those that might be found in a home at night, we found there was little difference between the S&W and the Judge.

While the S&W trigger and hammer were blued with a very good feel, we found the stainless trigger and hammer of the Judge were just not as comfortable to use. Not a big difference, but enough to note.

The trigger pull of the Judge was 6 pounds in single action and 11.5 pounds in double action, with a slight creep during the long pull. We also noticed the Judge was not as smooth firing in double action, and it did not feel as solid when the cylinder turned as when we shot DA with the Governor.

At the shooting range, the Judge fell a little behind the Governor in performance with every load. Firing at targets set down range at nine feet, the Judge's best pattern spread with the No. 6 shot was 13.5 inches; a 6.5-inch spread with the Defender load; a 4-inch spread with the 000 buckshot; and the slug hit about 2 inches above the hold point in the center of the chest.

As with the Governor, we felt the patterns were acceptable for close range home-defense situations.

Moving out to 21 feet resulted in an 18.5-inch spread with the No. 6 shot; a 3-inch-high spread of 8.5 inches with the Defender load; a three-inch-high spread of 10 inches with the 000 buckshot; and an off-the-the target high hit (about 12 inches above the hold point) with the slug. Overall, we felt this was a barely satisfactory performance.

With the handgun load of 45 Colt, the best three-shot groups were 2 inches at 9 feet and 8 inches at 21 feet. While still within the realm of potential man-stopping hits, the performance fell below that of the Governor.

Our advice for those using the Judge in a home-defense situation is to avoid the No. 6 or any other bird shot. A good combination would be a couple of Defender loads, a couple 000 buckshot loads, and a 45 Colt round as the final shot.

Our Team Said: Slightly greater recoil, balance not equal to the

S&W, and less-than-stellar accuracy results with all loads were the factors in ranking the Judge as third in a three-way race. However, if price is the major deciding factor in selecting a home-defense handgun, we would consider the Judge to be an acceptable selection.

Mossberg Model 500 Cruiser .410 Pump-Action, $467

If shooting a low-recoil shotgun from the hip is your game, the diminutive .410 pump may be just what fulfills your needs as a homeowner interested in a good close-quarter defense firearm. Mossberg has been manufacturing what many have found are solid, dependable pump-action shotguns for decades, although .410 tactical firearms are relatively new to the market.

The model we tested in this self defense trio (the Mossberg was also reviewed by GT in October 2012) is designed to be compact and easy to handle, particularly by an inexperienced shooter. Weighing just 4.5 pounds (unloaded) with an overall length of 28.5 inches and sporting an 18.5-inch barrel, we found the shotgun was quite easy to bring to bear on close-range targets.

However, we did have a concern about how a very inexperienced shooter might be at a disadvantage in a self-defense situation if he or she has no way to align the sight on a target. We would recommend that anyone who might be put into self-defense service spend some quality time on the range adjusting to hip or chest shooting.

The trigger pull of the Mossberg was 5.5 pounds, which is quite typical for an out-of-the box shotgun. A little lighter would be better, in our opinion. Like the other Mossberg pump-actions, the safety is located on top of the receiver — we liked this feature — to allow for quick and easy access.

However, the action-release button is tucked up behind the left side of the trigger guard and can be a little difficult to operate, particularly in a speed mode or when under pressure.

We found the feel of the Mossberg Cruiser's synthetic pistol grip and forearm to be slightly less comfortable than the feel of either of the handguns. We thought the plastic was just a little slick to the touch.

While chambered for 3-inch shells, we limited our range time to the 2.5-inch loads to maintain a proper comparison (the handguns in the test only handle 2.5-inch shotgun shells) in the three-way test.

Firing at the Birchwood Casey Bad Guy Target set 9 feet down range, the best pattern produced by the Mossberg was a 4-inch spread with the No. 6 shot; a two-inch spread with the Defender load; a one-inch spread with the 000 buckshot; and a center punch with the slug.

Our only concern was the tight patterns with the No. 6 shot and other pellet loads might result in a missed shot at a close-range intruder. Spreads of from 1 inch to 3 inches leave little room for error.

The experienced shooters in our test group had no problems hitting the close-range target from the hip, but that might not be the case with someone unfamiliar or unpracticed at this type of shooting.

Moving back to 21 feet, the tighter groups with the Mossberg continued to produce satisfactory stopping shots. The best No. 6 shot group was a spread of 8 inches; the Defender spread was 3 inches; the 000 buckshot spread was 2 inches; and the slug hit just slightly high, but close enough to dead center that the results would have been a man-stopper.

As noted earlier, we found that proper shot and slug placement with the Mossberg was harder than when we were able to sight down the barrel of both the handguns.

We did not have any recoil problems with any of the loads fired in the shotgun, and as we experienced with both the handguns, all ammunition was cycled without a hitch.

Our Team Said: Pump-action shotguns produced by Mossberg are among the most popular field and self-defense firearms in the country and this model lived up to that reputation. Good, tight patterns with pellets, plus acceptable handling and functioning, were all reasons for our second-place ranking of the shotgun.

Written and photographed by Ralph Winingham, using evaluations from Gun Tests team testers. **GT**

.410 Bore Ammo Tests

We compared the ballistics of the Taurus Judge and S&W Governor and Mossberg Cruiser for personal defense.

The argument for a .410-chambered handgun is moot if ammunition performance isn't credible, so we tested the loads used in evaluating the three .410s, two handguns and a shotgun, using water, our standard ballistic material. For consistency, we used the same ballistic testing for the two revolvers and the pistol-grip shotgun that we have developed in testing all defensive ammunition. We tested four shotgun loads and two personal-defense handgun loads. The 45 Colt



The Mossberg Cruiser shotgun is a light and easy to use package, even in the close quarters of a home. But the two handguns, the Governor on the left and the Judge on the right, would be even easier to deploy.



This is a piece of the Winchester slug after being poured out of a water jug. Interestingly, the wad and padding from the shell followed it along its line of penetration. Would the wad and grain/filler penetrate several inches into an assailant? Probably at short range.



We tried a Black Hills Ammunition TAC +P using the Barnes bullet. It lost too much velocity to instigate expansion. The 45 ACP isn't as good a choice as the 45 Colt for use in the Governor, per our findings.



Hornady's 45 Long Colt 185-grain Critical Defense gets the nod for personal defense with excellent performance.



When fired from the handguns, birdshot rounds penetrated the first water jug and a few hit and penetrated the second jug, with a small but steady leak produced. The wounds in the water jugs were at best a trickle. Not ideal for a self-defense situation.



The Winchester PDX mixed shot load is an interesting option.

loading was fired in the Judge and the Governor, while the 45 ACP loading was tested only in the Smith & Wesson Governor because the Judge isn't chambered for 45 ACP. In the end, the difference in performance was stark. We cannot recommend birdshot for personal defense. The buckshot and PDX loads are interesting and have some merit. The slug is speedy but very light in weight for personal defense. The 45 Colt is a heavyweight with good performance, while the 45 ACP load was below what we expected in velocity compared to a full-size 5-inch-barrel 1911 handgun.

Since the .410-bore handgun is often chosen for personal defense in the home based on a perceived lack of penetration, we conducted a modest test of penetration in the home. One of the raters spends his money on guns, but he recently replaced an aging door in his home. Not wasting anything, we subjected the hollow door to fire from the Remington birdshot load, the Winchester PDX, Winchester slugs, and Federal buckshot. The results (no table needed) were that all the loads penetrated. We were surprised that the birdshot penetrated both sides of the door, but it did. Every pellet exited. The Federal buckshot made clean holes, and so did the slug. The Winchester PDX penetrated fully, but the discs, in some cases, were found on the ground 4 to 5 feet behind the door, indicating they lost a lot of energy. If you wish to limit penetration among the A- and B-rated defense loads, the Winchester, with its lighter payload, seems to be the choice.

It is an odd coincidence, but as we were doing research for this report, we saw a newscast of two robbers, holding a man at gunpoint, who were subsequently shot with a shotgun by another person coming in from the second floor of the dwelling. While details are sketchy, it seems birdshot was used, lightly wounding the felons who fled, were treated at a local ER, and then were arrested at the hospital. Yes, it's anecdotal, but we thought it was worth mentioning. Here's how the various loads performed in these handguns:

Remington Game Load 410 Bore 2.5-Inch .5-Oz. #6 GL4106

We bought this for $14.30/25 at CheaperThanDirt.com. Birdshot isn't a good choice for personal defense, and firing it in a handgun chambered for the .410 shotgun shell doesn't elevate our opinion of its effectiveness. This conclusion is based on solid test evidence. Penetration was very light in water. After all, this shot is designed to cleanly kill a bird weighing a few ounces. It is badly



.410 SHOTSHELL, 45 COLT, 45 ACP PERFORMANCE DATA

Gun: Smith & Wesson Governor Revolver w/2.5-inch barrel	Average Velocity (fps)	Muzzle Energy (ft.-lbs.)	Average Accuracy (in.)	Power Factor (pf)	Expanded Width (in.)	Retained Weight (gr.)	Penetration In Water (in.)
185-gr. Hornady FTX 45 Colt	884	321	2.0	164	0.65	185/100%	18
185-gr. Barnes TAC +P 45 ACP	791	257	3.0	146	0.45	185/100%	30

Gun: Taurus Judge Revolver w/3-inch barrel	Average Velocity (fps)	Muzzle Energy (ft.-lbs.)	Average Accuracy (in.)	Power Factor (pf)	Expanded Width (in.)	Retained Weight (gr.)	Penetration In Water (in.)
185-gr. Hornady FXT 45 Colt	910	340	2.75	168	0.65	185/100%	18

*Gun: Smith & Wesson Governor Revolver w/2.5-inch barrel**	Average Velocity (fps)	Muzzle Energy (ft.-lbs.)	Average Accuracy (in.)**	Power Factor (pf)	Expanded Width (in.)	Retained Weight (gr.)	Penetration In Water (in.)
219-gr. Remington #6 shot	911	403	10	200	NA	NA	12
292-gr. Federal Buckshot	850	468	1.5	248	NA	NA	18
310-gr. Winchester PDX	791	431	5	245	NA	NA	18
88-gr. Winchester slug	1217	289	3	107	NA	NA	12

Gun: Mossberg Cruiser Pump Shotgun w/18.5-inch barrel	Average Velocity (fps)	Muzzle Energy (ft.-lbs.)	Average Accuracy (in.)	Power Factor (pf)	Expanded Width (in.)	Retained Weight (gr.)	Penetration In Water (in.)
219-gr. Remington #6	1280	796	4	280	NA	NA	8
292-gr. Federal Buckshot	1190	918	1	347	NA	NA	18
310-gr. Winchester PDX	1090	818	2	338	NA	NA	20
88-gr. Winchester slug	1555	472	3	137	NA	NA	12

Notes: ● **Though the Governor is listed as the test firearm for the shotshell results, the shot loads in the revolvers were basically identical, so just one gun is listed. More important, performance and penetration in water was identical. With the shotgun, performance was upgraded, so these results are listed separately from the handgun performance. Accuracy for the cartridges was taken at 25 yards. We fired three three-shot groups with each load. **Accuracy results for the shotshells reflect the size of the pattern at 9 feet.* ● *To calculate IPSC power factor, multiply bullet weight in grains by the velocity in fps, then divide by 1000.* ● *The retained-weight column shows the recovered bullet weight, then that weight as a percentage of the unfired bullet weight.*



A disadvantage of the revolvers is that they chamber only 2.5-inch shells, shown on the right. The shotgun would be more formidable with 3-inch shells, the three on the left.

Left, the Hornady 45 Colt load expanded well. Right, the 45 ACP +P load, also at 185 grains, did not expand at all.



mismatched against a felon. When fired from the revolvers, the shot stopped in the first water jug, for the most part. It was found in the middle of the jug laying on the bottom. Interestingly, the main part of the charge seemed to stop in the first 2 to 3 inches of water. However, a small number of pellets, perhaps 4 to 10 of each test shell fired, managed to penetrate to the second jug. These were on the fringe of the pattern. The shotgun showed a strong visual difference when fired into water. The higher velocity resulted in a stronger impact, with the jug bursting open, while the shot from the pistols only pierced the jug. However, seldom did

a pellet penetrate to the second jug, and many were found settled to the bottom of the jug at 3 inches or so during the shotgun test. Perhaps the higher velocity flattened the pellets more quickly from the shotgun. While birdshot would make a nasty wound at close range, penetration is insufficient for personal defense. A heavy leather coat worn by a person with ill intent would probably stop much of the charge, and light cover certainly would make the load next to ineffective. The charge also loses a lot of power over distance.

GUN TESTS GRADE: C

Federal Premium .410 Handgun Personal Defense 2.5-Inch PD412JGE 000 Buck Shotshell Ammo

We bought this for $15.99/20 at BassPro.com. This is a formidable loading. While the payload is smaller than 12- or 20-gauge buckshot, penetration is on the par with the larger shells. 000 isn't as large as 00; however, it is well matched for the .410 shell. Results were very consistent at 18 inches of water penetration from the handgun. The load gained some 400 fps in velocity from the shotgun and 2 more inches in penetration. Penetration is ideal, and we feel that a well-centered pattern should prove effective. The copper-coated projectiles flattened to an extent in water. This is the recommended load for .410 defensive use in the home in all of the three firearms.



The Federal buckshot flattened in water.

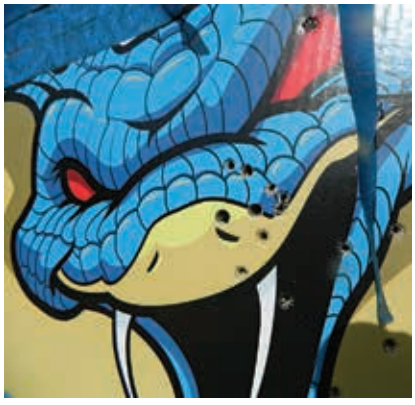


GUN TESTS GRADE: A

Winchester PDX1 Defender Ammunition 410 Bore 2.5-Inch S410PDX1 (10)

We purchased 10-shell boxes of this load at Cabelas.com for $16.99. This load features three plated defense disks and twelve BB pellets (0.25-ounce). Results were consistent, with 18 inches of penetration for the disks in the handguns and 20 inches in the shotgun test. The BBs consistently stayed in the 12-inch penetration depth. However, in one of three firings, it was noted that one or two BBs penetrated to the maximum along with the disks. This is interesting performance. Penetration is adequate; however, the projectiles are light. We prefer a heavier charge of buckshot.

GUN TESTS GRADE: B (HANDGUN)
GUN TESTS GRADE: A (SHOTGUN)



We did a side test of the .410 loads as snake charmer solutions. In territory populated by dangerous reptiles, the Judge and Governor would have no peers among regular handguns.

The Defender load, with its plated shot and disks, is a reasonable choice for personal defense, our shooters said after testing it against water bottles. It is sure to produce a complex wound.





When fired from the shotgun, the effects shotshells had on the first jug were immediate, with the jug bursting apart and the wad residing inside.



Winchester Super-X 410 Bore 2.5-Inch 0.2-Oz. Rifled Slug X41RS5 (5)

We bought five-shell boxes of this for $6.39 from CheaperThanDirt.com. The Winchester slug proved accurate enough to make good hits out to 15 yards or so. We feel the accuracy potential is equal to most 45 Colt loads at modest range. Energy isn't impressive from the handguns, about that of an average 9mm load. From the shotgun, energy was a solid 472 foot-pounds. The performance in the shotgun was likewise different. The slug sometimes fragmented when fired from the handguns, but it always fragmented when fired from the shotgun. However, in each test the slug penetrated 12 inches, less than the buckshot loads or the conventional 45-caliber handgun loads. The slug would be a good load

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for predator control, and though it has promise for personal defense, we feel that if you are a solid shot, the 45 Colt load would be superior. However the slug is cheap, which cannot be overlooked.

GUN TESTS GRADE: B

Hornady Critical Defense 185-Grain FTX 45 Colt 92790

We bought this for $18.79/20 rounds from MidwayUSA.com. The Critical Defense load seems to exhibit lower recoil than the shotgun loads. Power factor calculations bore out this firing impression. Accuracy was good. Penetration is good to excellent at 18 inches, ideal for personal defense. The load is surprisingly fast from the short barrel of the .410-bore handguns at 884 fps and 910 fps from the Smith & Wesson Governor and the Taurus Judge, respectively. Expansion was not the same as in previous testing with 4.75-inch-barrel revolvers, but just the same was pretty good at a 0.65-inch average. Expansion was always present in several tests, and the Hornady bullet maintained its full weight when recovered. We rate this load superior to the 45 ACP for personal defense in the Governor.

GUN TESTS GRADE: A

Black Hills Ammunition 45 ACP +P 185-Grain Barnes TAC-XP Hollow Point

We bought 20-round boxes of this for $25 each at ImpactGuns.com. Because the Governor uses full-moon clips to utilize the 45 ACP, we tried a load well suited to personal defense. The Barnes solid-copper JHP bullet makes more than 1000 fps from a 5-inch-barrel 1911. The availability of moon clips for rapid reloading offers promise and real utility for personal defense. However, performance of the 45 ACP was off in the Governor. The long cylinder jump and short barrel are part of the equation. The Barnes 185-grain bullet has given good results in the past in 1911 handguns, with expansion to more than 0.70 inch. The Governor exhibited 791 fps. The bullet penetrated 30 inches in water and put a dent in the sixth jug. For comparison, we fired the Black Hills load in a short-barrel compact 45, the Smith & Wesson M&P Shield, which has a 3.1-inch barrel. The Barnes load clocked 954 fps. Because the Shield also has a short barrel, this tends to bolster our theory on the Governor's velocity loss being the bullet has to jump across a long cylinder throat.

GUN TESTS GRADE: B



The Winchester slug sometimes fragmented when fired from a handgun, but it always fragmented when fired from the shotgun.



.410 birdshot should be left to the game field and animals weighing only a few ounces, in our opinion.



While accurate and reliable, the Barnes 45 ACP bullet lost too much velocity. Other 45 ACP loads relying on velocity for expansion might suffer the same problem.

Written and photographed by Bob Campbell, using evaluations from Gun Tests team testers. GT

30 Carbine Picks: Hornady, Speer, Buffalo Bore Loads Tested

Shot from a lightweight rifle, this cartridge gives good results compared to any pistol round. We like the Hornady Critical Defense and the Speer Gold Dot for tactical use.

The 30 Carbine cartridge is an interesting and historically significant round. The M1 Carbine was the first little-maintenance firearm issued to the U.S. Army and was also among the first firearms that might correctly be called a Personal Defense Weapon (PDW). Designed for military officers, back-area troops, truck drivers and other personnel not usually armed with a rifle, it was specifically intended to allow officers to carry a lightweight rifle that was more powerful and accurate than a handgun. The carbine was not a short-barrel full-power rifle as earlier carbines had been, being instead designed for a lower-powered cartridge compared to the 30-06 cartridge used in the M1 Garand. Compared to the Russian M44 or the British No. 5 carbine, the M1 carbine is much easier to use well and handle. The M1 Carbine was designed for close-range area defense and personal defense. The concept was successful, and eventually, the army manufactured more than 6 million carbines. Numerous police agencies used the M1 carbine, including post-war Berlin and the NYPD. For close-range battle, the M1 carbine has much to offer.

We feel that the attributes of the M1 Carbine might make it even better suited to home defense than the typical AR-15 rifle. For hunting use and predator control, not so much. We cannot recommend the energy level of the 30 Carbines for deer-sized game, but its low recoil and low muzzle flash are essential for home defense, and the 30 Carbine offers both, but with 357 Magnum energy. The rifle is ergonomic and provides high hit probability. We admit the standard 110-grain FMJ load at about 2000 fps isn't the best choice for home defense, based on over penetration and a lack of wound potential.



The 30 M1 Carbine is a fast-handling rifle. Although we fired the rifle until hot, it never gave any trouble with four out of the five loads tested.



From bottom, our 30 Carbine loads were the Buffalo Bore Full Power 110-Grain Soft Point Round Nose 46A/20, Federal Power-Shok 110-Grain Soft Point Round Nose 30CA, Prvi Partizan 110-Grain Soft Point Round Nose, Speer Gold Dot 110-Grain Gold Dot Soft Point 24465, Hornady Critical Defense 110-Grain FTX 81030. Five loads is not an extensive selection, but some of the rounds we tested are excellent.

30 CARBINE LOAD PERFORMANCE DATA

Gun: Israel Arms International Carbine w/18-inch barrel	Average Velocity (fps)	Muzzle Energy (ft.-lbs.)	Average Accuracy (in.)	Power Factor (pf)	Expanded Width (in.)	Retained Weight (gr.)	Penetration In Water (in.)
110-gr. Buffalo Bore JSP	2120	1097	0.9	233	0.83	100/91%	14
110-gr. Speer Gold Dot	2011	987	1.25	221	0.58	100/91%	18
110-gr. Federal Power Shock	1978	955	1.1	218	FRAG	89/81%	18
110-gr. Hornady Critical Defense	1980	957	1.9	218	0.47	100/91%	20
110-gr. Prvi Partizan JSP	1944	923	2.0	214	0.83	100/91%	12

Notes: *Accuracy shooting was conducted at 25 yards, and we fired three three-shot groups with each load to get the group sizes. We also tested the rifle with the two most accurate loads at 100 yards to confirm its viability as a rifle to dust off predators and pests and also as a personal-defense rifle against threats at long range. Most M1 Carbines are good for 4 minutes of angle, but this rifle, with good ammunition, was a bit better. ● The accuracy figures are the average of two five-shot groups. ● To calculate IPSC power factor, multiply bullet weight in grains by the velocity in fps, then divide by 1000. ● The retained-weight column shows the recovered bullet weight, then that weight as a percentage of the unfired bullet weight.*

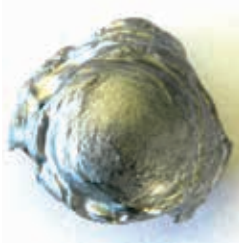
There have been 110-grain jacketed soft points and jacketed hollowpoints used by police agencies, but most of these loads seem out of production by old mainstays Winchester and Remington. Still, we were able to collect loads using modern expanding bullets and compare them for accuracy penetration and expansion. What we found was that accuracy is good to excellent for all loads, although some were more accurate than others. For use in the home or area defense and animal defense against feral dogs and coyotes to 50 yards or more, the little rifle is plenty accurate. While we find there was something to recommend about all the loads tested, there are standouts. The Buffalo Bore full-power load and the Speer Gold Dot are at the top of the pack for home defense, with the Critical Defense load a strong contender for tactical use.

In this test, we fired 50 cartridges of each load, which included three cartridges each for penetration and expansion testing and fifteen cartridges (three five-shot groups) for accuracy. The remaining 32 rounds were fired in off hand shooting for personal defense work at 5, 7, and 25 yards. We tested accuracy from 25 yards. The rifle was a vintage Israel Arms International carbine. Here are the results:

Buffalo Bore Full Power 110-Grain Soft Point Round Nose 46A/20

We bought this for $28.79 per 20 rounds directly from BuffaloBore.com. This load was the fastest tested at 2120 fps, some 120 fps over specification. You could detect the difference in muzzle blast, which was not offensive but stronger than the other loads. There were no malfunctions using both magazines, including the original and one ordered from Brownells.com. Accuracy was excellent with a 0.9-inch group at 25 yards. The carbine used is more accurate than most and will group 2 inches at 50 yards with the right handloads. This





BB loading demonstrated excellent performance for home defense. The expansion was a plump 0.81 inch. Penetration was 14 inches. Testers noted that as velocity drops off at 50 yards, expansion will diminish and that will affect penetration. Still, we are primarily interested in personal defense at close-in range, and we find the Buffalo Bore loading to be an excellent choice.

GUN TESTS GRADE: A

Federal Power-Shok 110-Grain Soft Point Round Nose 30CA

We bought this for $22.47/20 at AbleAmmo.com. This loading averaged 1980 fps. The Federal Power Shock was the only load that fragmented; however, it traveled 18 inches in water while doing so. Perhaps having a separated core and jacket might be a better term. Penetration was greater than the Buffalo Bore load, which did not fragment. The jacket measured at







The Gold Dot, left, and the Federal Power-Shok, right and bottom, appear identical, but they are much different in performance and velocity.

16 inches and the expanded core at 18 inches. If you like more penetration for the worst-case scenario, this is an affordable load with strong characteristics. When foraging for medium-sized game is part of the situation, a round that fragments in water may not be the best choice. Just the same, the loads may behave differently at a lower velocity at 25 to 50 yards. We rated this load down a grade because of the fragmentation.

GUN TESTS GRADE: B

Hornady Critical Defense 110-Grain FTX 81030

We bought this for $23.75/25 at CheapertThanDirt.com. This load is delivered in a 25-round box, placing it in line with the 20-round boxes for the price. Velocity





is good and so is accuracy, at 1975 fps and a 1.25-inch group at 25 yards. This load has optimal penetration for tactical use, with the Critical Defense bullet penetrating a full 20 inches with good expansion and no trace of fragmentation. It is a different choice for a different scenario, and the scale favors penetration in this case. The Hornady Critical Defense would be the hunting load for small deer and feral hogs.

GUN TESTS GRADE: A

Speer Gold Dot 110-Grain Gold Dot Soft Point 24465

This cost us $29.99/20 at SurplusAmmo.com. This round was often difficult to find at the beginning of 2017. We delayed the test until we were able to find enough to conduct this shootout. The Gold Dot looks similar to the Federal 110-grain JSP, but it is a very different bullet with different performance. This load is the fastest tested, save for the Buffalo Bore loading, at 2011 fps. When the loads are souped up a bit, it tells by bumping up bullet performance. The Gold Dot was also accurate.





It expanded to 0.58 inch while penetrating 18 inches of water. The Speer 110-grain Gold Dot offered optimal performance we like for personal defense. Because of the sold testing results we rated this round highly.

GUN TESTS GRADE: A

Prvi Partizan 110-Grain Soft Point Round Nose

This 30 Carbine load ran $23.79/50 at SCGunco.com. This loading had the potential for being the best buy, with fifty rounds for the price of 20 of any other loading. And it should be a good practice load, comparable to the Federal American Eagle 110-grain FMJ at $29.99/50 rounds. As a personal-defense load, the primary shortcoming was reliability. In firing 50 cartridges, there were four failures to function adequately. In each case, the spent cartridge caught in the bolt and was not fully ejected from the chamber. This failure isn't acceptable for personal-defense use. The cause seems to be the lower velocity exhibited by the Prvi load at 1944 fps, well below the others. Or it may be the powder used has a different pressure curve. In any case, that is an 8% failure to function rate when the rifle ran 100% with the other loads. When firing for accuracy, the results were okay, with an average 2-inch 25-yard group. The bullet penetrated 12 inches of water, the least of any loading tested, but it expanded the most of any loading, all the way out to 0.83 inch. However, the shot seemed to tumble and not





The Prvi Partizan load expanded on every shot during our testing.



Prvi Partizan bullets expanded but did not mushroom evenly. In this photo it mushroomed more on the left side than on the right side.

track straight in the water, so expansion was uneven down one side of the bullet. On a positive note for personal-defense use, the first water jug exhibited slashes in the side wall, which indicated that fragments must have been thrown off the bullet in the first few inches of penetration. However, we were not able to recover any fragments. We rated the load down a grade based on penetration and bullet performance compared to the other loads. The real problem is reliability, and we cannot recommend this loading for any use save practice and training.



Prvi Partizan's 110-grain JSP would be a good pest popper or practice load. Reliability in our rifle was not ideal.

GUN TESTS GRADE: C

Our Team Said

The selection comes down to the three 'A'-rated loads. However, the Gold Dot, we learned after testing, is being phased down and is difficult to obtain. Just the same, there are stores with the load in stock, and we stand by rating the round as an A. This leaves us with the Buffalo Bore Full Power loading and the Hornady Critical Defense loading. The Buffalo Bore would get the nod for home defense based on energy and expansion. The Hornady load gets the nod for those who prefer more penetration against light cover. These loads breathe new life into an old warhorse and maximize the cartridge's utility for a new generation of shooters.

Written and photographed by Bob Campbell, using evaluations from Gun Tests team testers. **GT**

COMING UP IN GUN TESTS

- **Four Compact 9mm Handguns Tested**: Glock 43, $445; Honor Defense Honor Guard, $449; Walther PPS, $451; and the Smith & Wesson Shield, $395.

- **Three 22 Rimfire Revolvers:** Chiappa 1873 SAA 22 Buntline SAA1873-22 22 LR, $339; North American Arms NAA-22LR 22 Long Rifle; and the North American Arms NAA-22M 22 Magnum, $236.

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