GUN TESTS®

THE CONSUMER RESOURCE FOR THE SERIOUS SHOOTER

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COMPETITION 9MMS

Tested: Springfield Armory Range Officer, Walther Q5 Match SF, and the Arex Rex Alpha. Which one can go from the counter to the firing line? ● Page 6

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DOWNRANGE

SEEING RED OVER RED FLAG LAWS



Todd Woodard

I **recently** came across an essay by Dr. John Edeen, a pediatric orthopedic surgeon in San Antonio and the membership director for Doctors for Responsible Gun Ownership (DRGO.us). DRGO is a nationwide advocacy and watchdog group of physicians and other health professionals who promote gun safety and who seek to prevent injury and death "through wise use [of firearms] and lawful self defense." Part of the DRGO mission statement says, "We teach what science shows — that guns in responsible hands save lives, reduce injuries, and protect property by preventing violent crime."

So Dr. Edeen, who prominently notes he's not a attorney, nonetheless has concerns about so-called "red flag" laws that mirror my own. I don't use the "red flag" language because I think it's inaccurate and evasive. I think "no-due-process gun confiscations" is correct. And I think the red rules are ripe for abuse.

Edeen notes in his essay that "Red Flag laws are currently in effect in 15 states and the District of Columbia. Hawaii's and Nevada's Red Flag laws will take effect on January 1, 2020. Red Flag laws allow courts to issue orders to temporarily confiscate the firearms of individuals deemed to be a risk to themselves or others. Individual states differ as to who can request this."

Like Edeen, my objections to these laws aren't based solely on 2nd Amendment infringements. He writes that the hearings are "… *ex parte*, which means that the at-risk individual has no notice, no representation and no opportunity to rebut the claims of those who would have his firearms taken. In most cases, the only warning is the knock on the door when law enforcement comes to take his property."

Edeen says, and I agree, "Many Constitutional protections are turned upside down or violated by these laws." The most obvious I had figured out were the Second Amendment and the Fourth Amendment. Edeen points out what he considers to be violations of the Fifth Amendment and the Fourteenth Amendment, among others.

Boiled down to their essence, under the Red Flag laws, "Your accuser has no obligation to prove your guilt. The order to deprive you of your Constitutional rights is given using completely unsubstantiated, arbitrary terms. You then have to stand before your government to prove your innocence," Edeen concludes.

These laws are being used every day to strip citizens of their rights and guns. To read Edeen's essay and get a fuller understanding of the problems, search online for "Red Flags for ERPOs & GVROs" and it should pop right up. **GT**

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Editor .....W. Todd Woodard
Managing Editor ..... Tracey Taylor
Contributing Editors .... R.K. Campbell
Roger Eckstine
Robert Sadowski
David Tannahill
Ralph Winingham
Joe Woolley
Sr. Tech Coordinator.....John Taylor
Preproduction.....Cara Blake

TO CONTACT THE STAFF:
GunTestsEditor@icloud.com

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Aw Shucks, Thank You...

Reader PM resubscribed after many years to get our 2nd Amendment reporting and commentary. Reader Richard got his latest issue in the mail, and it was "trimmed" on the side. Here's how to resolve that.

Re "Downrange"

Honored Sir: I will be 67 next month. My great-uncle John taught me the basics of shooting when I was 8 years old, starting me out on a Daisy BB pump gun. I soon graduated to a 22 bolt action under his wise tutelage, and later, when in my teens and able to handle strong weapons, his Remington 30-06. I have been involved in firearms and shooting ever since. I bought my first handgun in my early 20s and have bought, sold, traded, and inherited firearms ever since. While I appreciate the GUN TESTS mission and dedication to freedom, I don't really see myself as an active gun consumer anymore, so, theoretically at least, I would not need your services.

I took your fine periodical by subscription for a number of years. Then, a few years back, I quit subscribing to the many gun periodicals cluttering my home. I didn't really miss them, as they had developed a sameness, and I was becoming somewhat alienated by the trend in modern firearms development and the costs associated with it.

A GT teaser letter came late last year from you, and I realized immediately the one thing I had given up that I sorely still needed: your editorials. I took a 10-month trial run. Today, I returned my subscription card and payment, re-enlisting for the next 20 issues in the GUN TESTS fold SOLELY to be able to have access to your editorial, which I consider to be essential in the current political environment. Though I am armed enough, your awareness and sage commentary are all I need to justify participation in the GT enterprise. How does it feel to be a difference-maker? Pretty good, right?

And I also like the slick-paper format, which is a nice upgrade to the periodical. Many thanks and best always. **— PM**

Thank you. I wish I could say the gun debates had died down while you were gone, but it's just the opposite. The growing incidence of no-due-process gun confiscations (aka "red flag" seizures) are the most worrisome trend these days, in my opinion. — Todd Woodard

Re "Slim-Line 9mm Contest: Ruger, Beretta, and Bond Arms," October 2019

Nice article on the slimline 9s. As to the 9-round magazines, after using them at capacity a dozen times or so, loading becomes tolerable. And they are reliable



with my carry load (Federal Micro HST 150-grain JHP) as well as other suitable loads like the Hornady Critical Defense, Speer Gold Dot for Short Barrels, and W-W PDX.

Also, I did not see any mention of the LC9s' magazine safety. While some people might say this feature

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.

eliminates it from consideration for EDC, on the contrary, it makes it much more suitable for many of us. If you must leave your EDC in the car, removing the magazine and taking it with you disables the pistol. For those with children and/or grandchildren in the house, again the pistol is disabled by removing the magazine and keeping it with you. It takes less than a second to restore the pistol's functionality by inserting a magazine. In general the magazine safety (or, more properly, "magazine disconnect") is not given the serious consideration it should by most people. To those who say they must be able to fire it without a magazine, you must wonder how they envision getting into such a desperate situation. Always carry a spare magazine or two, especially when they are skinny. **— Russ**

Re "Rifles Ready for All 50 States: Springfield, Troy, and Uintah," June 2018

First, please carefully think kind thoughts about your devout Second Amendment folks who, like us upstate NYers, are held captive by massive anti-American urban populations. Second, in helping us cope with this intensely unfair power distribution system (how I wish NYS had an electoral college set-up), Troy Industries manufactures a slide-action AR-type rifle in a couple configurations. Are you folks familiar with that item? Have I missed one of your fine evaluations? (Heaven forbid). And, finally, if you haven't reviewed the firearm to which I have alluded, are you planning to do so? Also, thanks for looking over the 10mm semi-auto handguns. **— James**

Hey James: Good news and bad news. The bad news you already know: New York isn't going to repeal any of its onerous gun laws anytime soon. But maybe SCOTUS will. The good news is, we reviewed the Troy Industries Pump Action Hunting Rifle in 243 Winchester, giving it a B grade and called it "A modern take on an





old design, this gun was actually a lot of fun. Most accurate with the rounds topped with lighter bullets, the Hunter proved more portable than other AR-10 frames." Further, "Our Team Said: Using the Troy pump-action rifle required a different shooting mindset. The biggest advantage was portability. The Troy was compact, making getting in and out of tree stands easy. Unlike most AR-10s, we enjoyed carrying the Troy over the shoulder, and we even found that Galco's Safari Ching Sling with elbow support fed nicely into the slide-action protocol. Magazine capacity could be as much as 20+1, depending on where you live. The Troy Pump Action Hunting Rifle may be just the truck or ATV gun for chance meetings with pests such as coyotes and pigs." — tw

Re "40 S&W Compacts: Taurus, Kahr, S&W, Springfield, & SIG," September 2019

Hi, Todd. The September 2019 issue got me thinking about QC at Smith & Wesson. I noticed you had problems with both of the 40s from S&W. I bought quite a few S&W revolvers without any problems until recently. Rewind: Back around 2006 or so, I ordered a Walther PPK made by S&W, and from day one, the very first pull of the trigger "clicked" on double action. Thumb the hammer back, pull the trigger, "bang," no problem. But on double action, it was a 50-50 chance it would go "click" instead of "bang." I later sold that pistol because I had bought it for concealed carry.

Fast forward to this past May. I had the local gun store order a 6-inch Model 48 22 WMR. A 48-7 DJS2962 to be exact, and right out of the plastic case, the barrel was stamped ".22 LONG RIFLE CTG." but I figured, "Hey! It's one of a kind, mislabeled from factory and is now worth more than I paid." Then I took it for a test drive and about the third shot, the cylinder wouldn't rotate. What the heck?

Shot beautifully. Nice accurate handgun. Nice single-action trigger, but it would bind up after a couple of shots. I figured out that the recesses for the cartridge heads weren't milled deep enough in the cylinder to allow for the slight swelling of the fired cartridge cases. Back to the store and back to S&W.

Finally, the revolver is returned. A new barrel. I had brought some empties that were fired in the gun originally, inserted them into the cylinder while I was still in the store, and surer than poop, the cylinder would bind up, would not rotate to next chamber. Back to Smith again.

I finally got the revolver back. It seems to have a new cylinder. It's a beautiful gun, but it should have never left the factory with wrong barrel and should have been test-fired with at least a cylinder





full of live ammo to make sure it functioned properly. **— Charlie**

Hard to argue those points, Charlie. But to Smith's credit, they did keep trying to make it right. — tw

Re "A Look at Left-Hand Holsters: Picks for Southpaw Shooters," September 2019

I'm glade to see you reporting on holsters. My three favorites are not among the tested in the February or September issues. Here in Arizona, if you see someone wearing a tucked-in polo under an untucked and unbuttoned shirt, you can be sure he is packing IWB. Why else would you wear two shirts in this heat? So I use pocket carry, which works for both right- or left-handed people. During the week, I use a Uncle Mike's Sidekick, which is not much more than a pouch that covers the trigger and protects the gun. However, it is easy to slip out of my pocket and into the car's locked center console before going into my workplace.

During the weekend, I use a Tuff Pocket-Roo, which I love. It looks similar to the Swap Rig Cargo Pack, a holster with an extension to fill the pocket and keep my 357 stubby in one place and vertical. The extension has a place for a 5-round speed strip. The stickiness and extension keeps it from coming out with the gun. After a couple of years, it is still as good as new. There are versions for semi-autos with a extra magazine.

The best rig I have found is the Original Thunderwear Concealed Holster (Thunderwear.com). It has a elastic strap around your waist with a denim pouch in front. All this is under your pants. Mine has a split pouch with a 357 snubby on the right and a speedloader on the left. Not even my wife knows I am packing! I have worn this to weddings an other events without issue. Very comfortable! I hope you can review these. **— Bill**

Thank you for the insights on these holsters, Bill. — tw

Sticky Chamber

Hi, I have a Mossberg M590A1 that has an intermittent problem. After anywhere from a few to quite a few shells, the fired casing sticks in the chamber, and requires enormous effort to work the slide. This has happened with various makes of ammunition, even including Aguila Mini-shells. How to fix this? **— Chuck**



Got an issue with your issue, as Reader Richard did with his trimmed edition? Let Customer_Service@GunTests.info know.

Take the barrel off and polish the chamber with a Dremel tool and a buffing wheel. No abrasive wheels. Repeat as needed. — tw

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Competition-Ready 9mms from Springfield, Walther, and Arex

All three handguns offer great accuracy, good triggers, and manageable recoil. Choosing between them will be the customer's task because each one has positives suitable for different games.

The 9mm Luger reigns supreme in action shooting competition pistols because the cartridge is easy to control, inexpensive to train with, and accurate enough for cardboard and steel. It is also used in bullseye competition, though the 45 ACP is the most popular in those style matches. Production divisions in a variety of shooting disciplines are very popular due the fact the pistols are, for all intents and purposes, stock and out of the box. This allows shooters to participate in a shooting sport without having to purchase a custom gun or buy a stock gun and have it tweaked by a gunsmith.

We took a look at three distinctly different competition-ready 9mm pistols.

- The *Springfield Armory Range Officer* is a 1911-style platform with a single-action trigger.
- The *Walther Q5 Match SF (Steel Frame)* uses a fully-cocked striker-fire-action trigger.
- And the *Arex Rex Alpha* uses a double-action to single-action trigger.

These pistols all came in hard plastic cases with die-cut holes in the interior foam for pistol, magazines, and accessories. All came with extra magazines, and—



The Springfield Armory 1911 Range Officer (top) offered great accuracy, but it also showed 1911 quirks, such as more muzzle flip. The Arex Alpha Rex (middle) has a DA/SA trigger, great accuracy, and a good grip, but the hammer was sheared off during testing. A new hammer didn't arrive in time to reshoot the gun, so it gets an F grade for now because it's not operable. The Walther Q5 Match SF (bottom) is a steel-frame adaptation of the polymer-frame Q5 Match, and we think this is a good out-of-the-box competition pistol, but we had initially had issues with the slide locking back on the last round fired. When we factor in price, we feel the Walther Q5 Match SF offers a lot bang for a lot of bucks, but stick with the Springfield Armory Range Officer if you are on a tighter budget.

to a certain degree — also have features that make them competition-ready, such as a crisp trigger, big, bold target sights, and extended controls. They are also heavier than the typical polymer-frame concealed-carry or service-size sidearms. All used metal frames, which for Walther is a departure from its recent history of introducing only polymer-framed pistols. Weight is an asset in competitive shooting because it helps reduce felt recoil.

All the pistols also use a short-recoil system with tilting barrel mechanism, the same as nearly every other modern 9mm pistol. While they have similar features and mechanisms, they have distinctly different triggers. The Walther uses a fully cocked striker, which makes the trigger feel crisp. In comparison, a Glock uses a partially cocked striker, so the trigger feel is different. The Arex uses a traditional DA/SA trigger like a SIG P226, CZ75, or Beretta 92FS. The Springfield uses a single-action trigger like all traditional 1911-style pistols. We thought these pistols would offer a good head-to-head comparison, even though the triggers are apples and oranges.

How We Tested

Since these are game guns, we assembled an assortment of training/target ammo in a variety of bullet weights. We wanted to look at how well low-cost ammo — factory new and remanufactured — would run through these pistols since many competitors try to save on ammo costs by reloading or buying remanufactured ammo. Our 115-grain FMJ options were Federal American Eagle and Defender Ammunition. Defender is veteran owned and located in North Carolina. It produces new and remanufactured ammo. They also have a Brass Exchange program where you can send in your sorted, used brass for online store credit. Different calibers have different exchanges rates — 9mm is $1.50 per pound — so we scrounged up a bunch of empties, followed the online instructions (defenderammunition.com/pages/brass-exchange), and had some of Defender's 115-grain RN ammo sent to us. It was an easy process and, as we found out, the ammo is good and consistent. We also ran Armscor 124-grain FMJs and Atlanta Arms 147-grain FMJs. We felt the speed of these loads in all three pistols. The 115-grain loads gave a snappy recoil due to higher muzzle velocities that ranged from 1150 to 1202 fps. The Atlanta Arms 147-grain ammo was slower, with a muzzle velocity range of 870 to 881 fps. This load was softer shooting. The Armscor 124-grain was snappy, too, with a muzzle-velocity range of 1063 to 1094 fps.

We tested for accuracy using our range bag as a rest at 15 yards using our standby 2-inch black-square target for both the accuracy and speed testing. For the speed test, Bill Drills were performed at 7 yards using six rounds loaded in each of the magazines. We started from the low-ready position and found



The grips of the pistols varied. The Springfield Armory (left) grip is flat with a straight mainspring housing. The Walther backstrap is arched, and the side panels have a slight palm swell. The Arex (right) also has a slight palm swell in the side panels, an arched backstrap, and is longest.

we could shoot very fast and accurately with these pistols. That's a good thing, since these pistols were intended for fast, accurate shooting.

Besides the different features and triggers of these pistols, what we really noticed was the difference in muzzle flip between the three pistols. Muzzle flip is a function of the height of center axis of the bore above the shooter's grip. The higher the bore center axis, the more flip. Bullet weight and velocity also factor into the equation. If you shoot a 1911 chambered in 45 ACP, you know the feeling. With 9mm-chambered 1911s, the flip is less but still noticeable, especially when compared to the other pistols in this match up test. The SA had that 1911 muzzle flip, which is very manageable, but the flip of the Arex was much less due the design of the grip and even less in the Walther. For sheer ability to get back on target fast with minimal muzzle flip, the Walther was the clear winner with the Arex close behind. Both offered minimal flip, which resulted in excellent control. The SA performed as expected from a 1911 platform. At the very least these are all fun pistols to shoot.

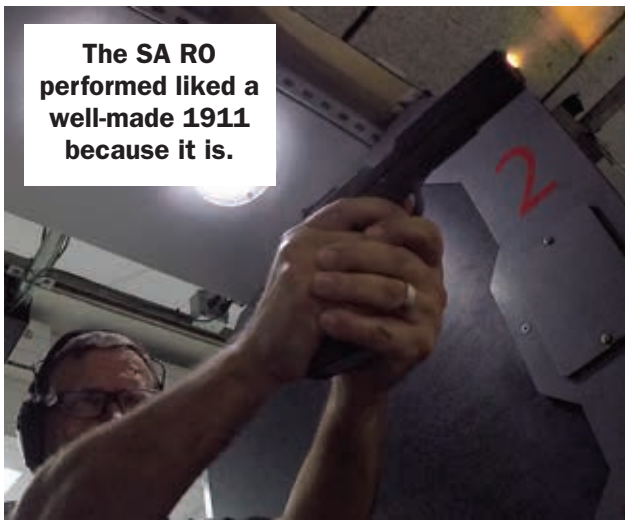
SPRINGFIELD ARMORY 1911 RANGE OFFICER PI9129LP 9MM LUGER, $744

GUN TESTS GRADE: A-

This Range Officer showed the idiosyncrasies of the 1911 platform as well as renowned traits, such as a nice trigger and good accuracy. In our opinion, this would be a good, inexpensive option for certain shooting competitions.



Action	Single action, locked breech, short recoil
Overall Length	8.6 in.
Overall Height	5.5 in.
Maximum Width	1.5 in.
Weight Unloaded	41.0 oz.
Weight Loaded	45.0 oz.
Barrel	5.0 in.
Capacity	9+1
Slide	Parkerized, steel
Slide Retraction Effort	13.0 lbs.
Frame	Parkerized, steel
Frame Front Strap Height	2.5 in.
Frame Back Strap Height	3.1 in.
Grips	Checkered cocobolo
Grip Thickness (max)	1.3 in.
Grip Circumference (max)	5.5 in.
Front Sight	Post
Rear Sight	Adjustable
Trigger Pull Weight	6.0 lbs.
Trigger Span	2.8 in.
Magazines	3; stainless steel
Safety	Thumb, beavertail grip
Warranty	Lifetime
Made In	Brazil/USA
Website	Springfield-Armory.com



The SA RO performed liked a well-made 1911 because it is.



Reloads need more finesse since the single-stack magazine is going into a narrow mag well.

The front gripstrap is not textured, which we missed. The trigger is aluminum and long, and the magazine release is standard size and not fast during reloads.



The rear sight is serrated and was marked for easy zeroing. The black sights can get lost on a black target compared to the Arex and Walther, but we were able to work well with the Springfield. It liked the 147-grain full-metal-jacket rounds from Atlanta Arms.





The extended thumb safety operated distinctly and without effort.



The group is from the Springfield Range Officer shooting Atlanta Ammo 147-grain FMJs.

They aren't inexpensive, however. Here's what else we discovered.

Springfield Armory 1911 Range Officer PI9129LP 9mm Luger, $744

All the prices listed are recent prices from BudsGunShop.com. Inside the Range Officer (RO) plastic case were two stainless-steel 9-round magazines, a cleaning brush, polymer holster and polymer double-magazine holder. All you need to compete is a sturdy belt. The RO is a traditionally styled GI-style 1911 with a domed slide fitted with large target sights. The black front post and black adjustable rear sights are good even when shooting at a black target. The rear sight is flush with the end of the slide and serrated to cut glare.

Our sample had an excellent Parkerized finish on the steel receiver and slide. It features a stainless match-grade barrel, traditional GI-style bushing, and a long aluminum match-grade trigger. The trigger broke at a crisp 6 pounds. There is a little take up, about 0.125 inch, then a crisp release. Trigger reset was short. It is equipped with an extended thumb safety for right-handed shooters. The slide stop was also extended, so transitioning from a locked-back slide to a freshly loaded pistol was smooth — except for a few initial failures that we will get into. Fine angled serrations are located at the rear of the slide only, similar to a GI 1911A1. It also featured a skeletonized hammer.

The mainspring housing is checkered, and the front grip strap is smooth. We wanted a bit more texture on the front strap. The grip safety had a good beavertail, and the speed bump was large enough so even a sloppy grip allows the shooter to fire the pistol. The grips are checkered cocobolo in double-diamond style and SA's crossed-cannons logo. We thought grip panels were serviceable and looked good. You may want to swap them out with some better-textured G10 grips, but these grips will get you started.

We had high hopes for the RO, then came the range test. We loaded up with some orphan rounds to get the 1911 running. We did not collect data on this ammo since we did not have enough on hand. From the get-go, we experienced numerous failures to go into battery, and the slide would not lock back on the last round fired. This didn't faze us since new 1911s require a bit of breaking in, but we did wonder if the final score would be an F. The RO being a new 1911, we field-stripped it and lubed it. Then the RO came to life.

It's easy to like the RO since the trigger and sights don't make you work too hard. The black sights on black target were a bit lost on our black-square target compared to the Arex and Walther, but we were able to work well with the RO. The weight of this pistol, 41 ounces, helps to stifle some flip, but we did notice the flip. It liked the 147-grain FMJs from Atlanta Arms, giving us the best overall accuracy. Our best 5-shot

AREX REX ALPHA REXALPHA9-01 9MM LUGER, $999

GUN TESTS GRADE: F

Initially, the Rex Alpha performed well — good grip shape, accurate, and minimal muzzle flip. In extended testing, the slide sheared off the hammer. After extensive conversations with FIME, we received a replacement part and have begun testing again. Until the retest is complete, we give the gun an F.

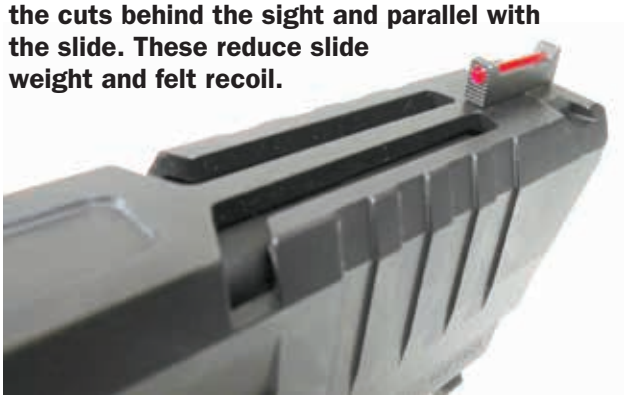


Action	Double action to single action, locked breech, hammer fired
Overall Length	8.9 in.
Overall Height	6.1 in.
Maximum Width	1.6 in.
Weight Unloaded	39 oz.
Weight Loaded	46.1 oz.
Barrel	5.0 in.
Capacity	17+1 (double stack)
Slide	Black, steel
Slide Retraction Effort	17.0 lbs.
Frame	Black, steel
Frame Front Strap Height	2.4 in.
Frame Back Strap Height	3.3 in.
Grip	Textured polymer
Grip Thickness (max)	1.33 in.
Grip Circumference (max)	5.87 in.
Front Sight	Fiber optic
Rear Sight	Adjustable
Trigger Pull Weight Double Action	12.0 lbs. (standard, blue spring)
Trigger Pull Weight Single Action	2.98 lbs.
Trigger Span Double Action	3.0 in.
Trigger Span Single Action	2.54 in.
Magazines	3; steel
Manual Safety	Thumb
Warranty	Limited 1 year
Made In	Slovenia
Website	FIMEgroup.com

The Arex was heavy, allowed for a high grip, and was accurate. The extended beavertail and thumb safety worked well. We would have liked a larger slide release.



The front sight is a fiber-optic tube. Note the cuts behind the sight and parallel with the slide. These reduce slide weight and felt recoil.





Left: The rails on the receiver are long, contributing to the accuracy of the Rex Alpha.

Right: The rear sight is serrated to reduce glare and has simple markings to make zeroing easier.



The Alpha was shooting the black out of the target with Armscor FMJs. The trigger is wide with a smooth face. The stroke was consistent, and you can replace the hammer spring to adjust pull weight.

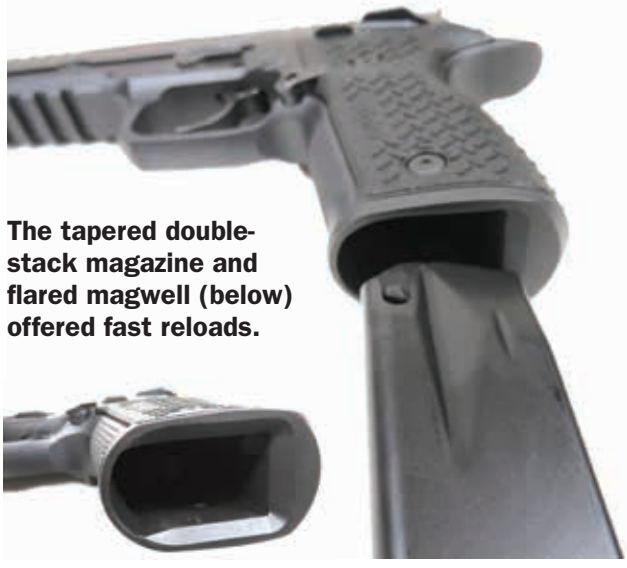




The hammer sheared off and hit one of our testers. He thought it was an ejected piece of brass. No injuries, but the Arex was out of commission. We will begin testing with a new hammer shortly.



No tools are required to field-strip the Alpha into five components. The Rex uses a steel guide rod, which also contributes to better accuracy. The magazine-release button (arrow) is oversized and ambidextrous.



The tapered double-stack magazine and flared magwell (below) offered fast reloads.

group measured 1.26 inches with Federal American Eagle 115-grain FMJ bullets. Sweet.

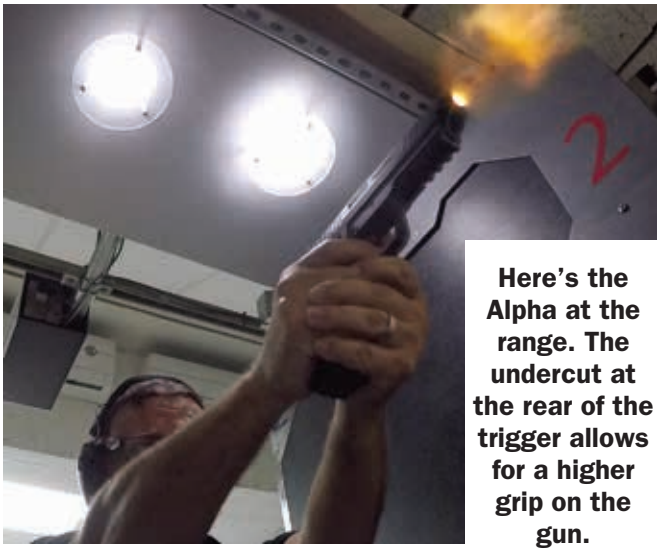
Making fast magazine reloads with a 1911 takes training. There is a small bevel on the magazine well, but the top of the single-stack magazine is nearly the same size as the magazine-well hole, so it takes some finesse to load fast. Our suggestion is to perform reloads smoothly with minimal movement, and speed will come. Those familiar with a 1911 had no problems, but newbies to the 1911 system lagged during reloads.

Our Team Said: We did notice muzzle flip and initially experienced the idiosyncrasies of the 1911 design in the RO. It also holds fewer rounds, and that may be a stopper depending on the category you plan to compete in. For IDPA, we think this is a good option. We liked the trigger. The RO did show its design age and required break in, but after that it ran hard. You will need to keep the RO well lubed for it to perform at its best. We like 1911s, especially those like the SA RO, though you might want to keep your options open depending on the type of competition you intend to enter. Plus there are plenty of 1911 aftermarket parts to tweak the RO to your liking. At the very least, this is a fun-to-shoot pistol.

Arex Rex Alpha
REXALPHA9-01 9mm Luger, $999

The Rex Alpha has an angular look. It comes with three steel 17-round magazines and two additional hammer springs. This pistol is similar to the Arex Rex Zero 1 Standard, which we graded B back in 2018. What the Rex Alpha lacks is the decocking mechanism of the Rex Zero 1. So, in actual use, the Rex Alpha can be cocked and locked like a 1911 platform. Check the rules of the sport you want to compete in because some disciplines may require you to start off in double-action mode.

The Rex Alpha features a steel frame and slide and a 5-inch barrel. The dust cover is sharply angled and sports a Picatinny rail. Coarse slide serrations are located on the rear and front of the slide and offer a



Here's the Alpha at the range. The undercut at the rear of the trigger allows for a higher grip on the gun.

WALTHER Q5 MATCH STEEL FRAME 2830001 9MM LUGER, $1277

GUN TESTS GRADE: A-

We liked the grip, which made the Q5 a soft shooter. The ability to mount a red-dot sight makes it versatile. The cost is steep, but this pistol excels in fast action shooting.



Action	Locked breech, short recoil, striker-fire
Overall Length	8.7 in.
Overall Height	5.4 in.
Maximum Width	1.3 in.
Weight Unloaded	41.6 oz.
Weight Loaded	47.9 oz.
Barrel Length	5.0 in.
Capacity	15+1 (double stack)
Slide	Black, steel
Slide Retraction Effort	16.0 lbs.
Frame	Black, steel
Frame Front Strap Height	2.1 in.
Frame Back Strap Height	3.1 in.
Grip	Checkered polymer
Grip Thickness (max)	1.38 in.
Grip Circumference (max)	5.75 in.
Front Sight	Fiber optic
Rear Sight	Adjustable, optic mount
Trigger Pull Weight	5.5 lbs.
Trigger Span	2.77 in.
Magazines	3; steel
Manual Safety	Trigger
Warranty	Limited lifetime
Made In	Germany
Website	WaltherArms.com



The Walther Q5 had a low bore center of axis so there was very manageable muzzle flip.



The rear-sight-mount base can be removed and replaced with one of three additional optic bases, provided with the pistol. They are compatible with Docter Optics, Trijicon, and Leupold reflex sights.

The magazine release was large, and many small-to-average-hand-size testers found it easy to operate without changing the grip.





Left: The front sight is a fiber-optic tube. Note the front-slide cuts also act as slide serrations. Right: The rear sight notch is inset to reduce glare and markings are clearly detailed.



No tools are required for field stripping the pistol into five components. The recoil guide rod is steel and uses a flat spring.



The Q5 was accurate. This is a 5-shot group that fits inside the trigger guard was with remanufactured 115-grain Defender Ammo.



The trigger is wide and serrated, and the front grip strap is textured. The slide release is extra large and ambidextrous, making reloads fast.

good grip. Relief cuts are made in the top of the slide to lighten it. The front sight is a red-fiber-optic unit dovetailed into the slide. The rear sight is adjustable for windage and elevation and sits flush with the rear of the slide. The flat surfaces of the sights that face the shooter are serrated to reduce glare.

The Rex Alpha is designed for competition shooting, which becomes obvious with features like an extended, ambidextrous magazine release button and ambidextrous safety levers. Flip the safety up, and the trigger is deactivated but the slide can be retracted. A nice feature. Flip it down and the pistol can be fired. The levers are smaller than an extended 1911 safety lever but that did not hinder performance. All the controls worked flawlessly. The large magazine release made it easy and fast to dump the empty magazine. The trigger is wide and smooth and offers a smooth consistent pull and clean break at 13 pounds, which in our opinion is too heavy for a competition pistol. In single-action mode, the trigger broke at a clean 3.5 pounds. You can modify the DA trigger-pull-weight with additional springs included with the gun. The grey-colored spring is light weight, and the yellow spring is heavy. The standard weight, a blue-colored spring, came installed in the pistol. The recoil spring guide rod is metal, and the slide fits onto the receiver on long rails. These two features help ensure an accurate pistol.

The grip is very different compared to the Rex Zero 1. The Alpha's grip allows the user to get a higher hand hold on the pistol to reduce the distance between the center axis of the bore and the user's hand. It also has an extended beavertail grip, so there were no gripes from our ham-fisted shooters. There is an undercut behind the trigger guard that also allows for the higher grip. The grip has a nice full feel without being chunky and has a coarse texture. The front grip strap is serrated.

Going hot with the Alpha, we loaded up with orphan rounds to warm up and get a feel for the pistol. We were impressed with the pistol's accuracy, our ability to manage flip and recoil, and the speed with which we could shoot. The Rex Alpha chewed through all the ammo we fed it. There was noticeably less muzzle flip with the Rex Alpha compared to the Range Officer. With Armscor 124-grain FMJ ammo, we fired our smallest five-shot group, 0.93 inch. Shooting for speed and incorporating fast reloads, we found the extended magazine floorplate pads help to more rapidly seat fresh magazines with the palm of our hand. The magazine well is beveled, and the tapered design of the double-stack magazine allows a user to more easily and quickly insert the magazine into the magazine well.

The slide release is a bit small but was easy to operate smoothly. Going from slide lock back to fresh magazine was effortless. We liked the oversized magazine-release button and it was ambidextrous.

9MM LUGER RANGE DATA

Federal American Eagle 115-grain FMJ	Walther Q5 Match Steel Frame	Arex Rex Alpha	Springfield Armory 1911 Range Officer
Average Velocity	1202 fps	1159 fps	1150 fps
Muzzle Energy	369 ft.-lbs.	343 ft.-lbs.	338 ft.-lbs.
Smallest Group	1.05 in.	1.34 in.	1.26 in.
Average Group	1.10 in.	1.37 in.	1.53 in.

Defender Target/Practice 115-grain RN	Walther Q5 Match Steel Frame	Arex Rex Alpha	Springfield Armory 1911 Range Officer
Average Velocity	1159 fps	1160 fps	1166 fps
Muzzle Energy	343 ft.-lbs.	344 ft.-lbs.	347 ft.-lbs.
Smallest Group	1.00 in.	1.00 in.	1.40 in.
Average Group	1.12 in.	1.29 in.	1.57 in.

Atlanta Arms 147-grain FMJ	Walther Q5 Match Steel Frame	Arex Rex Alpha	Springfield Armory 1911 Range Officer
Average Velocity	881 fps	870 fps	873 fps
Muzzle Energy	253 ft.-lbs.	247 ft.-lbs.	249 ft.-lbs.
Smallest Group	1.56 in.	1.42 in.	1.45 in.
Average Group	1.67 in.	1.55 in.	1.47 in.

Armscor 124-grain FMJ	Walther Q5 Match Steel Frame	Arex Rex Alpha	Springfield Armory 1911 Range Officer
Average Velocity	1094 fps	1063 fps	1083 fps
Muzzle Energy	330 ft.-lbs.	311 ft.-lbs.	323 ft.-lbs.
Smallest Group	1.58 in.	0.93 in.	1.53 in.
Average Group	1.75 in.	1.30 in.	1.59 in.

To collect accuracy data, we fired five-shot groups from a bench using a rest. Distance: 15 yards with open sights. We recorded velocities using a ProChrono digital chronograph set 15 feet from the muzzle.



The Springfield Armory (left) uses a standard GI-style bushing. The Walther (center) has a squared-off muzzle. The Arex (right) has an aggressive angular front, which makes reholstering easier.

Still, for a competition pistol, we would have liked the slide stop to be a bit larger. Not a disqualification by any means. That would come later.

The sights were good, and the weight of the pistol helped keep us on target. At 39 ounces unloaded, the Rex Alpha was the lightweight among our three test pistols. When loaded with 17 rounds, weight increased to 46.14 ounces.

We did not expect to eat Slovenian steel, but during the tail end of speed testing, the slide sheared off the top of the hammer, sending a piece of metal into the face of one of our testers, who thought it was empty brass. No injuries, but plenty of disappointment.

Our Team Said: The Rex Alpha is an excellent pistol for those who like a DA/SA trigger. Since the Rex can be cocked and locked like a 1911, you don't necessarily need to start with an initial DA trigger pull. We liked the grip. Not sure why the decocker was not included on this pistol. We suspect the grip design of the Alpha does not allow for the decocking mechanism like in Rex Zero 1. There are aftermarket parts for the Rex Alpha, so you can customize the pistol to your liking. Since we had a failure with the pistol that would stop us from shooting it, we graded it an F.

VALUE GUIDE: COMPETITION HANDGUN RANKINGS

GUN NAME	ISSUE	GRADE	COMMENTS
Colt Gold Cup National Match O5870A1 45 ACP, $1190	May 2019	A	Our Pick. The National Match Colt is the most accurate handgun tested by a considerable margin.
SIG Sauer Traditional Match Elite 1911T-45-TME 45 ACP, $1050	May 2019	D	This pistol needed a little help out of the box. That said, the SIG is accurate and handles well.
Glock G34 Gen5 MOS PA3430103MOS 9mm Luger, $710	Apr. 2019	A	The Glock 34 has good features, and we feel that the Gen5 guns are the company's best yet.
Springfield XD(M) 4.5 9mm Luger XDMT9459FDEHCE, $505	Apr. 2019	A	Our sole complaint was we had trouble loading the magazines to capacity.
CZ-USA CZ P0-9 91620 9mm Luger, $402	Apr. 2019	B	Best Buy. This isn't the competition pistol you are looking for, but it is a good personal-defense handgun.
FNH FNS-9L Longslide 66725 9mm Luger, $570	Apr. 2019	B	Heavier trigger. Accuracy wasn't as good as the other handguns.
Glock G35 Gen3 PI3530103 40 S&W, $560	July 2018	A	Tested with a Double Diamond Threaded Barrel, $160, and Magpul PMAG 27 GL9, $22.
S&W PC M929 170341 9mm Luger, $1189	Sep. 2017	A	Had all the bells and whistles one would expect in a S&W Performance Center competition revolver.
Springfield Armory 1911 RO PI9129LP 9mm Luger, $704	Sep. 2015	A	For the dedicated target shooter, we think the Range Officer is the better choice.
Springfield Armory Loaded T'gt PI9134LP 9mm Luger, $873	Sep. 2015	A	For the tactical shooter, the practical advantages of the stainless Loaded Target make it a better buy.
S&W Champion Model 625-8 JM 160936 45 ACP, $979	Jan. 2015	A-	We would not hesitate to purchase the 625-8 JM and use it in competition. It was a pleasure to shoot.
Ruger GP100 Match Champion Revolver 1754 357 Mag., $899	Dec. 2014	A-	The double-action trigger as delivered was smooth and light enough to satisfy most competitive shooters.
S&W Pro Series 686 SSR 178012 357 Mag. Revolver, $999	Dec. 2014	B+	The 686 SSR is pretty much ready to go for IDPA Stock Service Revolver competition.
H&K P30L Variant 3 Long Slide M730903L-A5 9mm, $1108	June 2012	A-	The "light" LEM Variant 1 would be our choice for competition.
Glock G34 Gen 4 9mm Luger, $649	June 2012	A-	The grip frame provided greater stability, in our view, and felt recoil seemed more consistent, too.
S&W M&P 9 Pro Series 178010 9mm Luger, $670	June 2012	B+	Overall, we liked the natural point and handling characteristics of the M&P9 Pro Series pistol.
CZ USA SP-01 Shadow Custom No. 91029 9mm Luger, $1200	Feb. 2012	A	With the DA trigger all but melted into the single-action chain of fire, this is an exciting gun to shoot.
CZ USA 75 CTS LSP 91710 9mm Luger, $1450	Feb. 2012	A	We would have liked this pistol more if its DA trigger felt as light as the one on our SP-01 Custom.
Springfield Armory XDM 5.25 Competition 9mm Luger, $865	Feb. 2012	A-	Friendly grip, great sights, easy-to-work-on recoil system, a bag full accessories, a great value.
Glock Model G34 9mm Luger, $679	Feb. 2012	B+	The G34 fits perfectly into the Practical Shooting scene.

After the hammer failed, we went to the FIME website and sent a email via the website. We did not identify ourselves as GUN TESTS because we wanted to see how the company handled a typical customer issue. Ten days later we received an email from FIME Customer Service requesting the model, serial number, date of purchase, our name, address, and phone number. They said they would send out a replacement hammer. Five days elapsed and we did not receive a confirmation email that the hammer was shipped, so we called Customer Service. Customer Service confirmed that the hammer had been shipped. While we were on the phone we asked how the hammer could have failed and what was the frequency of these failures. The customer service rep was very helpful and apologetic. He said there could have been an issue with the metal composition during the molding process. The hammer is an MIM part. He also said in the last two years, three hammers have failed; two on the Rex Zero pistols and this one on the Alpha Rex. Very rare. They offered to do the repair themselves in lieu of sending us the hammer. We are waiting on delivery of the hammer and will reevaluate the Rex Alpha at that point and adjust the grade, if needed.

Walther Q5 Match Steel Frame 2830001 9mm Luger, $1277

If the Rex Alpha is a rung up from the RO, then the Q5 is multiple rungs up from the Rex Alpha. There is no mistaking that Walther designed this pistol for competition shooting. In fact the Q5 is USPSA approved for Production and Carry Optics, and IDPA approved for Stock Service Pistol and Carry Optics. This is a unique looking pistol with multiple weight-relief cuts in the slide and a blue trigger.

Based on the polymer-frame PPQ M2, the Q5 design incorporates many of the PPQ M2's features, but does it better, especially with the steel frame. When we tested a PPQ M2 Navy in 2015, we gave it a B. We think Walther listened to shooters, and the Q5 is the result.

In the hard case are three 15-round steel magazines with polymer floor plates, three reflex-sight mounting plates, and a magazine loader. All fit into foam cutouts.

As mentioned, this is a steel-frame pistol with a full-length Picatinny rail, large trigger guard, beveled magazine well, and extended beavertail. In hand, the pistol feels much different than the PPQ polymer-frame grip. There is also the weight of the Q5 SF, which is 42 ounces compared to the polymer version, the Q5 Match, at 29 ounces. The Q5's grip is textured and rubbery with slight palm swells. It does an excellent job of filling your hand without feeling chunky. The grip length was slightly smaller than the other pistols. The front grip strap is finely checkered. The beavertail allows the shooter to get a high grip on the pistol. The pistol has a nice balance and is not muzzle heavy. You can add a magazine funnel ($89.50; shop.waltherarms.com), which essentially converts the Q5 Match SF to a Q5 Match Pro SF model sans the extended magazines. Mag extensions are also available ($49.90; shop.waltherarms.com).



The Walther's tapered double-stack magazine easily fits in the flared Q5 magazine well for fast reloads.

The slide is aggressively machined to reduce weight. The cuts act like large slide serrations at the muzzle, and there are coarse serrations at the rear. Walther also mills long serrations on the top side of the slide, which gives the Q5 a traditional Walther look. It uses a steel guide rod, which helps with accuracy. The long extractor acts as a loaded-chamber indicator.

The front sight is a red-fiber-optic post, and the rear is fully adjustable. Both can be replaced with other aftermarket sights if so desired. We liked these sights. You can also mount a reflex red-dot optic to the Q5 with the three optic plates that are provided.

The controls are well laid out. The slide release is extended and ambidextrous. The magazine release is reversible, and the button is the same size as the Q5 Match polymer frame, but there is not a ridge under it to hamper use. The Q5 SF magazine button is easier to use.

Going hot, the Q5 was a very soft shooter and had minimal muzzle flip. It was easy to stay on top of this pistol. Initially, we had issues with the slide not locking back on the last shot fired. That resolved itself after a few magazines. We fired a best five-shot group with 115-grain Defender ammo that measured 1.00 inches. Federal American Eagle was close behind, with a best group that measured 1.05 inches. Clearly, the Q5 had a preference for 115-grain ammo. Moving to the speed portion of the test, we liked how the Q5 handled. Transitioning from slide lock to magazine reload was smooth, thanks to the extended magazine button and extended slide release. The trigger was crisp and helped us achieve the small groups. Walther's Quick Defense trigger is an excellent striker-fire trigger.

Our Team Said: The Q5 SF is very pricey, but the pistol performs, and it costs less than a custom gun. You could get by with a less costly option, but the Q5 SF sets you up to compete in either iron or optic classes. There are plenty of aftermarket parts for the Q5 in case you want to tweak it. We would choose this pistol for ourselves if cost was not an option.

Special thanks to Eastern Outfitters (easternoutfitter.com) of Hampstead, NC, for their assistance.

Written and photographed by Robert Sadowski, using evaluations from GUN TESTS *team testers.* **GT**

22 Rimfire Fun Guns: We Range-Test Four 'Tactical 22s'

We test four rifles, including two super customs and two off-the-shelf semi-automatic rifles. The Hunting Tactical Super Sixty is a gem that breathes new life into a classic rimfire action, the Marlin Model 60.

We recently tested four 22 LR–chambered rifles for all the right reasons: accuracy, ease of use, and fun shooting. The test program, we admit, was a lot of fun as we fired several thousand rounds of 22 rimfire ammunition. In the end we found four rifles well worth the money, but one was a standout. The first rifle was a self-build based on a Ruger 10-22 stainless action we already owned, to which we added parts from Adaptive Tactical ourselves to improve the rifle's fit and accuracy. So we admit there was owner equity involved, but we were pretty sure we could sort out our emotions from the facts because bullet holes on paper don't lie. Next, we brought in a factory custom rifle, the Hunting Tactical Super Sixty, that met or exceeded every claim for adaptability to diverse body sizes and arm lengths that the company promotes. Then, we added a well-appointed but affordable factory rifle, the Thompson/Center T/CR22, that had an interesting feature set for not a lot of money. And, last, we added a Mossberg 715T very similar to a unit we tested in the May 2012 issue that offers some cosmetic similarities to an AR-15.



From top: We cannot fault the Mossberg 715T; it was simply outclassed in this round up. The Thompson/Center is a good rifle for the price. We gave the Hunting Tactical Super Sixty, which can be purchased as a complete firearm based on the Marlin Model 60 action, the Best Buy award based on its performance and value. If price were no object, Our Pick would be to purchase a used Ruger 10-22 or 10-22 action and modify the piece with Adaptive Tactical parts, such as a new stock, barrel, and Picatinny mount for a riflescope.

● Looking at the rifles in more detail, we start with the *Mossberg 715T 37209, $254.* The 2012 version was the 37204 model number, which had an A2-style (carry handle) receiver that received an **A-** grade when compared to a Citadel M-1 22 Carbine CIR22M1W (**B**) and an ISSC MK22 Desert Folding Stock Rifle ISSC211003 (**A-**) in a match-up of rimfire replicas of military weapons. The designation 715T was new for 2012 and established the "T" nomenclature as a "Tactical 22" with adjustable stock and 25-round magazine. Interestingly, the 715T 10-shot-magazine version (37205) was available at Bud's for $260, and a version with a red-dot sight (37229) was on sale at $293. Here, we test the optics-ready flat-top 25-shot 37206 model, which we should note is not an AR-type chambered in 22 LR. It is a Mossberg Plinkster 702 in a plastic shell. The Smith & Wesson M&P M15 22 would be your choice if you want commonality with your

MOSSBERG 715T 37209 22 LR, $254

GUN TESTS GRADE B-

The Mossberg 715T is an economy rifle in a plastic shell. While it went against stiff competition, the Mossberg wasn't a bad choice at all. It was reliable, but the least accurate rifle tested, and the plastic shell didn't look very good against the nicer rifles.



Action Type	Semi-automatic
Overall Length	33.5 to 37 in.
Height Unboxed	9.1 in. w/o magazine
Height As Tested	12.1 in.
Width Stock	1.5 in.
Weight Unboxed/Unloaded	5.0 lbs.
Weight As Tested/Loaded	5.25 lbs.
Barrel Length/Twist	18 in., 1:16
Barrel Finish	Blued steel
Barrel Muzzle Device	Muzzle brake
Stock Buttpad	Integral Checkered
Stock Length of Pull	10.75 to 14.5 in.
Stock Comb Adjustment	NA
Stock Sling Attachments	Detachable Loop
Trigger Pull Weight	6.5 lbs.
Trigger Style	Single Stage
Trigger Guard Material	Plastic
Safety	Crossbolt
Magazine	25 Round Detachable
Magazine Release	Lever
Bolt	Standard
Bolt Release	None
Front Sight	Non-adjustable post
Rear Sight	Removable A2-style, Picatinny mounted adjustable
Warranty	Limited 1 Year
Telephone	(203) 230-5300
Website	Mossberg.com
Made In	Brazil

tactical rifle for training. The rifle is pressed into a type of plastic clam shell. Disassembly takes some effort, so for prep, we simply squirted oil into the action during the testing rather than field-stripping the rifle. Had the rifle malfunctioned, we would have done a field strip. Though the rifle is supplied with a flat top for easily mounting optics, it comes with sights, a rear peep and front post. We liked the sights the very much, they performed well, although the front sight isn't adjustable. The controls are nothing like an AR-15. The cross-bolt safety is in front of the trigger guard. The six-position stock is plastic and is the least attractive feature of the rifle.

● Another from-the-factory choice is the *Thompson Center T/CR22 12299 22 LR, $350.* The T/CR22 is a straight-up clone gun of the Ruger 10-22. Unlike most clones, the T/CR22 isn't designed to be less expensive than the original but does offer more features at a fair price. As an example, a base Ruger 10-22 was available at BassProShops.com for $230. So, what does the more expensive T/CR22 offer? The big upgrades are a Magpul stock and threaded barrel. Another shooter-friendlier uptick is that the bolt may be released with a tug rather than the sometimes hard-to-learn Ruger-type bolt release and lock. Some find the Ruger a bit hard to get the hang of. Some do not. The rifle locks open on the last shot if you use the supplied TC magazine.

● The *Hunting Tactical Super Sixty 22 LR, $500*, is a base Marlin 60 autoloader with several factory upgrades in a complete rifle. Broken down, the Hunting Tactical website lists a stock upgrade for $260. Those who have a Marlin 60 or similar rifle with either a tubular or a box magazine may fit their rifle to the stock starting with a good used Marlin 60 for less than $100. But there is more to the equation. While the Hunting Tactical stock offers excellent range of adjustment, for an extra $240, you get a properly assembled, perhaps fitted, rifle with a special target trigger that is 3/8 inches wide and offers a crisp break at a clean 4.0 pounds even. The safety is also enhanced, and the cocking handle is a custom type. We feel that it would be difficult to match the Super Sixty's price if you purchased a new Marlin and then added the Hunting Tactical stock and parts. Owners of a long-serving Marlin may wish to upgrade, but



The rifle features a crossbolt safety in front of the trigger guard (left arrow), a non-AR lever-type magazine release (right arrow), and a 25-round magazine that's easy to load.



The rear sight is easily removed by turning the big attachment knob and lifting the sight off, and the top rail is clean for mounting optics.



The Mossberg's rear peep sight is fast on target and offers some adjustment with big knobs.



The Mossberg's charging handle is sure handling and easy to use well. We didn't have operational issues with the 715T, but it was clearly less accurate than the other rifles.



Left: The front post looks good but isn't adjustable. It can easily be detached from the top rail, below.



we tested the Super Sixty as a complete from the factory unit.

● The *Adaptive Tactical/Ruger 10-22 Self Build, $635*, is a component rifle built on the famous rimfire autoloading action. The Ruger 10-22 was designed for ease of manufacture, reliability, and accuracy comparable to any other self-loading 22-caliber rifle. These attributes, particularly the easy-change design of the barrel, make the rifle an attractive base for custom builds. The Ruger 10-22 is an immensely popular rifle. It seems everyone owns two or three. There are less expensive rifles and more expensive rifles to be had. An advantage of the Ruger 10-22 as a base for a build is the easy availability of the type in the used rack at gun stores. While Ruger offers several interesting variations of factory rifles, the aftermarket offers many more options. This project involved building a rifle up from a standard stainless-receiver 10-22 using Adaptive Tactical parts. We started with a used stainless Ruger 10-22 that included a Bushnell Banner 3-9x scope as part of the buy price, $195. Of course, this price will differ depending on where you start, and if you purchase a new rifle to start your build, then the total expenditure is more. We wished we had bought the new inexpensive Ruger 10-22 sold without sights (31145, about $190). Whatever the starting point, adding the Adaptive Tactical Tac Hammer Barrel is $330, which includes an integral scope mount rather than using a separate scope rail. Then, we bought the Adaptive Tactical RM4 stock, $110, for a total price of $635, with $440 in upgrades.

In the four rifles we used the CCI Mini-Mag, Federal Hunter Match, Winchester Super X hollowpoints, and Remington Thunderbolts, the last of which cost ($21.89/500 rounds from SportsmansGuide.com). We fired 1,000 rounds of the Thunderbolt and 500 rounds each of the CCI Mini-Mag and Winchester Super X during offhand fire and shooting for reliability. The Mini-Mag, Super X, and Hunter Match loads were fired for bench accuracy at 50 yards. Here's how the rifles fared:

Mossberg 715T 37209 22 LR, $254

This was a recent price at BudsGunShop.com. The rifle was fun to handle and fire quickly at multiple targets. But it did not perform as well as the other

THOMPSON CENTER T/CR22 12299 22 LR, $350

GUN TESTS GRADE: A-

The T/CR22 is a good rifle, reliable, accurate, and light. If we were grading for best truck gun, one of the raters said this is it. The T/CR22 features a magazine that holds the bolt open on the last shot. For the most part, we used Ruger's affordable and available magazines. The sights, stock, and accessory rail make for a good value. The sights are the best feature.



Action Type	Semi-automatic
Overall Length	35.0 in.
Height Unboxed	5.5 in.
Height As Tested	5.5 in.
Width Stock	1.65 in.
Weight Unboxed/Unloaded	4.5 lbs.
Weight As Tested/Loaded	4.65 lbs.
Barrel Length/Twist	17 in.; 1:15 in.
Barrel Finish	Blued
Barrel Muzzle Treatment	½-28 thread
Stock	Magpul, OD Green composite
Stock Buttpad	Checkered, separate buttpad
Stock LOP	13.25 in.
Stock Comb	Standard
Stock Sling Attachments	Integral, M-Lok rail
Trigger Pull Weight	4.2 lbs.
Trigger Style	Single stage
Trigger Guard Material	Plastic
Safety	Crossbolt
Magazine	10-round flush-fit rotary
Magazine Release	Extended lever
Bolt	Standard
Bolt Release	Two-position lever
Front Sight	Post with fiber optic
Rear Sight	Adjustable peep, built in Picatinny rail
Warranty	Limited lifetime
Telephone	(866) 730-1614
Website	TCArms.com
Made In	U.S.A.
NY Compliant	No

rifles. At 50 yards, where we did the final accuracy testing, the rifle was the least accurate of the quartet, with five-shot groups of 4 to 5 inches. We blame this on the loose construction; the stock actually had some discernible wobble. The 6.5-pound trigger pull did not help.

While the 715T works okay, the stock isn't as rigid as the other rifle stocks, and we preferred the surer feel of the others. The bolt holds open by pressing the cocking handle in. Then pull the bolt handle out to release. The magazine catch is a lever that is pressed down to release the magazine. This lever is mushy and gives little indication of when the magazine is actually released. The forend accessory rails are a bit sharp. It takes some getting used to. The trigger break weight is too heavy, we believe, and while it isn't a bad trigger for a rimfire rifle, the reset is long and mushy. The magazine isn't difficult to load, but care must be taken in stacking rounds in the magazine to ensure proper feeding.

Despite a number of complaints revolving around the necessarily cheap construction, the Mossberg 715T never failed to feed, chamber, fire, or eject. It holds open on the last shot by jamming the follower into the bolt. The rifle's sights received high marks. We really liked the sight picture and ease of adjustment. Accuracy was okay at 25 yards, we found.

Our Team Said: This rifle is a fun plinker, no question there, but for hunting and target shooting, it is less desirable than the others. We rated the rifle down a full grade on accuracy and another half grade on stock wobble and sharp edges. It was worth the money for some uses, but it's clearly not in the same class as the others.

Thompson Center T/CR22 12299 22 LR, $350

The T/CR22 is possibly the best of the four guns tested for a personal-defense role, particularly with the Ruger X series 25-round magazine. The rifle is supplied with a 10-round magazine that holds the bolt open on the last shot, but only with the TC rifle. It will not hold the bolt open on the last shot on a Ruger rifle. The rifle showed good attention to detail and excellent stock-to-action fit. One drawback we found early was the 10-shot TC magazine, modified to incorporate a hold open feature, was noticeably more difficult to load than standard Ruger magazines. We wound up using the Ruger magazines during most of the test fire. Something to be aware of.

The Magpul stock is a great choice. The stock is comfortable and features a rail for mounting combat lights or lasers. However, this isn't the Magpul X stock, as there is no adjustable cheek riser or M-Loks





While the 22 LR isn't often thought of as a defensive firearm, it is a fine choice for the recoil shy or those who have trouble manipulating handgun controls. The T/CR22's front rail easily accepts devices like the TruGlo combat light for use in home-defense.





Note the angled Magpul stock. Some liked it better than others, but it sat on sandbags really well, stabilizing the rifle for bench shooting.



The peep rear sight is among the best features of the Thompson/ Center T/CR22. Because the sight sits on the back of the receiver, sight radius is longer.



We really like the fiber-optic front sight on the T/CR22. Note the cover for the threaded barrel.

in the stock. We mounted the new TruGlo Predator light and several other lights to test the outfit. The TruGlo features a clamp that mounts to the barrels of shotguns and rifles and may be used to mount the light to a rail as well. This would make a neat combination for keeping predators away from the chickens, which one of the raters does on a regular basis. He finds a 22 LR rifle a better choice than a shotgun for this use.

We liked the manner in which the bolt was easily locked back, compared to the more-complicated Ruger method, and the easy bolt release. The TC sights are excellent. By placing the aperture sight on the rear of the receiver rather than a leaf-style sight on the barrel, Thompson Center has greatly increased the sight radius. The aperture sight is ideal for most uses and provided surprising accuracy. The front sight features a bright-green fiber optic. The TC's sights are good as far as they go, but the Tech Sights that came with the Super Sixty offer a greater range of adjustment. On the other hand, the TC sights are standard issue and don't add any cost to the package.

In operation, the rifle never failed to feed, chamber, fire, or eject. Handling is very fast. The rifle proved accurate enough for any reasonable chore. At a 50 yards, the rifle came in third in accuracy, but it was very consistent. Several groups were just over 2.0 inches or a little more, excellent for an iron-sighted rifle.

Our Team Said: Quite a few folks in the country keep a 22 semi-automatic rifle around for personal defense, and the Thompson/Center T/CR22 would be a good candidate for that. We rated it down a half grade for the cranky 10-round magazine.

Hunting Tactical Super Sixty HTSSA1 22 LR, $500

The Marlin 60 is something of a wallflower compared to the Ruger in terms of accessories, especially tactical types. But Hunting Tactical solves that problem by aggregating useful add-ons onto a Marlin 60 action and selling the whole enchilada to you as a complete package.

Many of the raters have experience with the Marlin 60 and regarded it as a good squirrel and small-game rifle, and a good plinking rifle, but they seldom thought of it as target grade. All were surprised at the accuracy improvement possible. We don't wish to discourage anyone from building their own rifle from a Marlin 60 rifle; it is satisfying, and the expense is taken in increments rather than all at once. But we believe purchasing the Super Sixty as a package is more cost-effective in terms of time and money.

The HT60 stock is manufactured from Mil-Spec

polymer. The modular stock conversion features a telescoping and pivoting stock, a neat trick not possible with the AR-15-type rifle stock. The rake of the pistol grip may be adjusted for maximum fit and comfort. Even the grip system may be adjusted. In short, the rifle will fit all ages and sizes, given a user takes his time to adapt the stock to the shooter's physique. The result is a means of getting more performance and versatility from the Marlin action. The grip has built-in storage. As for adjustment, it requires some effort, but the task is nothing the average 12-year-old could not handle. As a result, when the stock is adjusted and tightened down, it is very rigid. The adjustment may be as simple or as complex as you wish.

The Super Sixty allows easy mounting of lasers and lights on the stock. An adjustable forend, with a Picatinny rail on three sides, is provided for attaching accessories.

While we repeat this stock may be fitted to an older rifle you already own, those veteran rifles generally average 6- to 7-pound trigger compression. Hunting Tactical also offers a trigger-spring kit supplied as a trigger component with the Super Sixty. This consists of four custom-designed springs — the hammer spring, sear spring, disconnect spring and trigger return spring. These springs will bring the Marlin 60 trigger action to a smooth 3.75 pounds. We have performed this modification with an older rifle and found an average improvement across the board of 2 pounds or more. The springs are manufactured from ASTM 228 Music Wire and 302 stainless-steel spring wire. Also, for the tubular-magazine Marlin 60 rifles, there is a 6061 billet cut and anodized into a trigger guard assembly with a specially adjustable trigger action. Threaded pins allow the shooter to do away with the old-style plastic Marlin 60 trigger guard assembly. The target-grade aluminum flat-face trigger is ⅜-inch wide. This allows a trained shooter to spread the trigger weight around a larger area. The adjustment screw allows removing almost all pre-travel. With a trigger averaging 3.75 pounds on the Lyman electronic trigger gauge, we were good to go.

We feel that the rifle's barrel is high quality and capable of good accuracy. After all, it is a Micro Groove design. The 19-inch barrel produced higher velocities than the other rifles. In initial handling, we really liked the extended bolt-racking handle. This aided all shooters in quickly making the rifle ready. The bolt stop is similar to the Ruger's, located right

HUNTING TACTICAL SUPER SIXTY HTSSA1 22 LR, $500

GUN TESTS GRADE: A

The Hunting Tactical rifle features a modern stock on the reliable Marlin action. From the extended bolt release to the super-sharp 3.8-pound trigger, the Super Sixty is an exceptional rifle. Since reloading time usually isn't critical with a 22 rifle, the tubular magazine is an advantage because it is unobtrusive.



Action Type	Semi-automatic
Overall Length	36.25 to 39.25 in.
Height Unboxed	6.75 in.
Height As Tested	7.5 in.
Width Stock	1.75 in.
Weight Unboxed/Unloaded	5.5 in.
Weight As Tested/Loaded	5.7 oz.
Barrel Length/Twist	19 in.; Micro Groove 1:16 in.
Barrel Finish	Blue
Barrel Muzzle Treatment	None
Stock	Synthetic, adjustable
Stock Buttpad	Integral checkered
Stock Length of Pull	10.5 to 13.5 in.
Stock Comb Adjustment	NA
Stock Sling Attachments	Metal Loops
Trigger Pull Weight	3.75 lbs.
Trigger Style	Single Stage Custom
Trigger Guard Material	Aluminum
Safety	Crossbolt
Magazine	14 round, tubular
Magazine Release	Twist/Turn
Bolt	Standard
Bolt Release	Lever
Sights	Leaf type original/ Tech Sights Fitted
Warranty	Lifetime
Telephone	None
Website	HuntingTactical.com
Made In	U.S.A.

in front of the trigger guard. It is easy to use quickly. Fit and finish of the rifle are good. The rifle features a 14-shot tubular magazine. The tubular magazine makes storing the rifle easier. The Super Sixty, without a protruding magazine, easily slips behind the seat of a truck. So will the other rifles, but only if they have the 10-round magazines in place. On the other hand, it is much easier to replenish the magazine supply with a box magazine.

We sighted the rifles in at 25 yards initially, but the real accuracy testing was done out to 50 yards. The Super Sixty's good trigger and easy handling made accuracy easy at 25 yards. However, the original Marlin-style sights were limited at 50 yards. Just the same, we were able to secure good accuracy with the rifle. We have good riflemen in the crew used to the leaf-type sights. At 50 yards, 2.5 to 3.0 inches were the norm for five-shot groups. That isn't bad at all, but we looked for more.

So we installed a Tech Sight TSM200, an aperture rear and post front similar to those in use on military-type rifles and used in competition. This resulted in a great improvement in sight picture, a longer sight radius, and the sight is affordable, $69 at Tech-Sights.com) The average improvement in sight radius is 8 inches. The aperture sight offers greater precision than the simple open rear sight. The aperture leads the eye to the center of sight, allowing for centering the front post in the rear sight easily. After installing the TSM200 front and rear pieces and sighting them in, we fired again for accuracy at 50 yards. The best results came with the Federal Hunter Match, a five-shot 1.6-inch group.

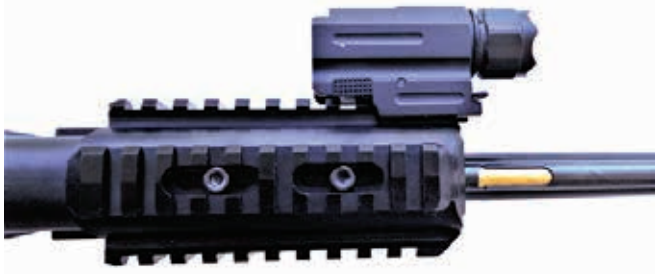
Our Team Said: This is definitely an accurate rifle well worth its price. We liked the handling of the rifle. There were no malfunctions. The Marlin Micro Groove barrel has less depth in the grooves and cuts less into the bullet, so there is less damage or reconfiguring as the projectile does down the barrel. It should be more uniform when leaving the barrel than with other designs. The accuracy, remember, was with aperture sights, not an optic. The Super Sixty may also serve as a personal-defense firearm for those who have a 22 LR on hand and nothing else. With a total price of just short of $570 including the Tech Sight, the Super Sixty is a Best Buy for precision use.

Adaptive Tactical Ruger 10-22 Self-Build 22 LR, $635

While the upgrades seem simple enough, attention to detail is important, and the 10-22 rifle's famous reliability and accuracy potential must be maintained



The Super Sixty's rail is easily removable for those who prefer a cleaner look on the forend.



The Hunting Tactical Rifle is very versatile in terms of mounting lights and lasers in different positions.



We felt the Tech Sight evened the playing field and made a real improvement in the rifle's practical accuracy. These sights could be moved to any of the test rifles except the top rail of the Adaptive Tactical self build, which is optics-only ready.



The Super Sixty's six-position stock offers excellent adjustment.





The overall impression of the Super Sixty is that it is a well-thought-out design based on the M60 action. Without a protruding magazine, it easily slips behind the seat of a truck.

ADAPTIVE TACTICAL RUGER 10-22 BUILD 22 LR, $635

GUN TESTS GRADE: A

We spent more than $400 improving a used Ruger 10-22 rifle. We used a stainless-steel chassis and felt that the receiver and trigger guard were superior to less expensive and more available blued-steel and plastic types. The rifle turned out well, with plenty of performance and more than a little pride of ownership. We would have liked a better trigger, but we didn't feel limited by it, as the accuracy results show.



Action Type	Semi-automatic
Overall Length	33.5 to 36.5 in.
Height Unboxed	6.0 in.
Height As Tested	8.4 in.
Width Stock	2.1 in.
Weight Unboxed/Unloaded	5.0 lbs.
Weight As Tested/Loaded	7.0 lbs. (including 13-oz. scope)
Barrel Length/Twist	16 in. 1:16; 17.25 in. long as tested with compensator
Barrel	Blued steel; 0.920 in. diameter
Barrel Muzzle Treatment	½x28 threads; multiple-port compensator
Stock	Adaptive Tactical Adjustable
Stock Buttpad	Integral
Stock Length of Pull	10.2 to 14.25 in.
Stock Comb Adjustment	NA
Stock Sling Attachments	Screw-in metal swivels
Trigger Pull Weight	5.0 lbs.
Trigger Style	Single stage
Trigger Guard Material	Stainless steel
Safety	Crossbolt
Magazine	10 round; 15- and 25-round available
Magazine Release	Lever
Bolt	Standard
Bolt Release	Two position
Sights	Bushnell 3-9x40mm
Warranty	None written on rifle; lifetime for Adaptive Tactical Parts
Telephone	(208) 442-8000
Website	AdaptiveTactical.com
Made In	U.S.A.

for this to be a helpful idea for the accuracy conscious.

The rifle used as a basis is a Ruger 10-22 stainless version obtained at a fair price at a local pawn shop for less than $200. It seemed to be in decent working condition. There was no barrel band on this version. There was a stainless rail attached to the receiver, and a Bushnell 3-9x scope was mounted on the rail. On closer examination, we saw the big bell of the scope was actually touching the barrel. Because we intended to put on a sightless replacement barrel, we had to include the price of the glass in the starting total. The rifle was loaded with the CCI Mini-Mags and fired with a full Ruger X25 magazine of 25 rounds. It ate the full load up, so we were good to go on function. The wood-stocked and scoped 10-22 fired a 3-inch 50-yard group, so it wasn't a dog.

The goal, however, was to produce a good-quality target-grade rifle useful for practice, training, small-game hunting and perhaps predator control. We did not plan on modifying the trigger action, only the stock and barrel. The parts ordered included the Adaptive Tactical RM4 stock. This stock is a pistol grip type with an adjustable length of pull. The stock features two holders in the buttstock for Ruger 10-round magazines. This stock features a plate in the forend that may be removed for use with a bull barrel. A Stowaway accessory rail is located in the forend of the rifle stock. This rail may be reversed for use with a bipod. The length of pull is easily adjusted, and the storage compartments are ambidextrous. After building the rifle, we also used the TacTRED monopod, which fits into the pistol grip after a covering pad is removed. This rifle, once completed, isn't too heavy to use without a brace, but with a bipod or the TacTRED monopod, the rifle is very stable. This stock is priced at $110 from AdaptiveTactical.com.

To install the stock, we first disassembled the rifle. The rifle's single stock screw is turned until it is completely loose. In this case we removed the stock screw from the Ruger stock to use it in the



We liked the barrel compensator; it seemed to dampen 22 recoil to nearly nothing. The compensator, we felt, may not be needed on a 22 LR, but after using the device, we liked it.



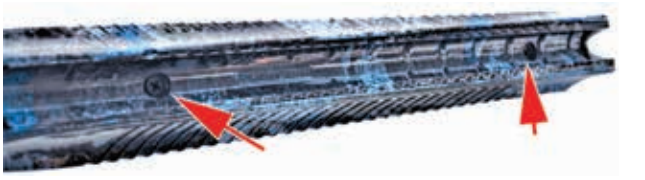
The Ruger/Adaptive Tactical/Bushnell scope combination gave excellent results at the range.



The Adaptive Tactical stock is a good option for target use.



Left: It isn't difficult to remove the Ruger 10-22's barrel. In its place we installed an aluminum-shroud bull-barrel style, below.



An insert in the stock's raceway must be removed for bull-barrel use. Removing the two Phillips-head screws allows the sleeve to lift out, making the full barrel channel available.



The rifle scope was actually touching the Ruger's original barrel. Here, the Adaptive Tactical Picatinny rail scope base raises the scope's front bell enough to easily clear the barrel.

Adaptive Tactical stock. The original stock is simply pulled off. Adaptive Tactical also offers stocks for takedown models. The sequence for assembling the stock on a takedown-model Ruger 10-22 differs slightly. Because we elected to install the Tac Hammer Barrel, $330 with rail, we also removed the original barrel. The rigid rail and barrel interface simply made a great deal of sense in this application. The barrel features a Bentz chamber, a match-grade chamber for a semi-auto. The Bentz is slightly larger overall than a regular minimum-dimension match chamber, but it still tighter than a standard chamber.

There is also a very nicely done compensator. The barrel is threaded for a suppressor. The barrel is advertised as a rigid-core stepped-barrel design. The shroud is aluminum. The Tac Hammer barrel is intended to offer the balance and accuracy of a bull barrel without the weight. It seems to deliver on these concepts.

To remove the original Ruger barrel, we loosened a wedge holding the barrel by removing two bolts that screw into the receiver. This is a very simple set up that works well in practice. When we disassembled the rifle and then removed the barrel, we noted that the barrel was slightly loose. When mounting the new barrel in the stock, we noted the Tac Hammer produced a good, tight fit in the receiver. It was necessary to remove the original flat sight rail from the receiver to accommodate the higher and more complex Tac Hammer rail. Considerable effort was needed to mate the Tac Hammer barrel to the receiver. This ensures a tight fit, but you also may need the services of a gunsmith if you are timid about using force in fitting. Next, we fitted the barreled receiver to the Adaptive Tactical RM4 stock.

The receiver is placed in the stock with the barrel tilted upward and the receiver angled into the rear of the stock. Next, the barrel is pressed downward. A bit of pressure is needed to fit the barrel into the stock, and this is a tight fit. After the receiver and

22 LR RANGE DATA

CCI Mini-Mag 40-grain Copper-Plated RN	Adaptive Tactical Ruger 10-22 Build	Hunting Tactical Super Sixty	Mossberg Model 715T	Thompson/Center T/CR22
Average Velocity	1233 fps	1249 fps	1199 fps	1206 fps
Muzzle Energy	135 ft.-lbs.	139 ft.-lbs.	128 ft.-lbs.	129 ft.-lbs.
Small Group	1.25 in.	1.3 in.	4.0 in.	2.1 in.
Average Group	1.5 in.	1.8 in.	5.0 in.	2.7 in.

Winchester Super X 37-grain Plated HP	Adaptive Tactical Ruger 10-22 Build	Hunting Tactical Super Sixty	Mossberg Model 715T	Thompson/Center T/CR22
Average Velocity	1219 fps	1239 fps	1226 fps	1211 fps
Muzzle Energy	122 ft.-lbs.	126 ft.-lbs.	123 ft.-lbs.	120 ft.-lbs.
Small Group	1.1 in.	1.5 in.	3.9 in.	2.2 in.
Average Group	1.85 in.	2.3 in.	4.75 in.	3.0 in.

Federal Hunter Match 40-grain Match HP	Adaptive Tactical Ruger 10-22 Build	Hunting Tactical Super Sixty	Mossberg Model 715T	Thompson/Center T/CR22
Average Velocity	1170 fps	1190 fps	1166 fps	1174 fps
Muzzle Energy	122 ft.-lbs.	126 ft.-lbs.	121 ft.-lbs.	122 ft.-lbs.
Small Group	0.9 in.	1.5 in.	3.6 in.	2.0 in.
Average Group	1.25 in.	1.9 in.	4.4 in.	2.45 in.

All groups were fired at 50 yards from a solid benchrest position. We used a Competition Electronics Pro Chrony to measure velocity. The chronograph was 10 feet from the muzzle of the firearm. Ammo sources: CCI Mini-Mag 40-grain copper-plated roundnose ($5.59/100 rounds from TargetSportsUSA.com); Federal Hunter Match 40-grain Match HP ($40/500 rounds from TargetSportsUSA.com); and Winchester 37-grain Super X hollowpoint ($7.59/100 from SportsmansGuide.com).





barrel are pressed into the stock, the stock screw is tightened into place. The result is a very snug fit. Next, we fitted the Bushnell rifle scope to the new rail. We made adjustments in the original setting of the rings and fit the bases onto the rail for proper eye relief. This rail is far superior to the original, and the Bushnell now rides properly above the barrel. Rifle scopes with a bell of 50mm will not be difficult to mount or have any problem clearing the Tac Hammer bull barrel. The overall look is nice, even racy, and the rifle remains light and fast handling.

During the offhand firing stage, we found the assembled rifle was fast onto target. We fired at silhouette targets at 25 and 50 yards and steel plates and predator sized targets as well. The results were excellent. The rifle is easily adjusted for hand fit, not too heavy for fast work, and very accurate. The final step was firing for accuracy.

The rifle was accurate with all three loads. The least accurate, the CCI Mini-Mag, is still useful. While there are more accurate combinations, as the table shows, the Mini-Mag is affordable, available, and deadly on small game. The Ruger 10-22 Tac Hammer/Adaptive Tactical RM4 combination turned in groups of 2 inches at 50 yards for excellent accuracy in initial break-in firing with the Mini-Mag. However, after the initial work, the rifle was carefully fired from a benchrest and it turned in groups of 1.1 inches with the Winchester Super X and an exceptional 0.9-inch group with the Federal Match load. We also benchrested the rifle at 100 yards in a side test and found the rifle was practically as accurate at 100 yards, making it among the most accurate rimfires we have tested. Simply pay attention to detail in assembling the rifle, and good results are assured. There were no malfunctions of any type.

We should also mention the TacRed MonoPod is nice to use. At $40 from AdaptiveTactical.com, it isn't really part of the upgrade, but is instead a range accessory. It works well for benchrest testing.

Our Team Said: As the accuracy and chrono results illustrate, this is a very accurate combination. But the Hunting Tactical Super Sixty cost less and performs well. Just the same, the Adaptive Tactical upgrade is easy enough to install and offers real improvement, along with a bit of bling. The 4.5-pound trigger could have been improved. If price is no object, this is Our Pick.

Written and photographed by GUN TESTS *Staff, using evaluations from* GUN TESTS *team testers.* **GT**

Electronic Hearing Protection: We Test Four Units Ear to Ear

The contestants: Venture Gear Amp BT, Walker's Razor Slim, Champion Ear Muffs, and Howard Leight Impact Sport. Do any of them offer more sound reduction for the buck?



Above: We tested four electronic ear protection devices and thought they all did a good job of blocking loud gunshots. The units tested (left to right) included Venture Gear Amp BT, Howard Leight Impact Sport, Walker's Razor, and Champion. We liked the Walker's and Howard Leight best for comfort and protection. The Venture Gear was bulky, and the Champion had some issues with hissing and crackling.

Hearing protection is critical for shooters doing live-fire training. Shooters exposed to excessive noise will have hearing loss, similar to workers in noisy environments. Appropriate ear protection reduces the noise to safe levels. For instance, exposure to an intense sound like a gunshot — that's 140 dB (decibels) or more — can permanently damage the ear. OSHA and the Centers for Disease Control suggest the safe-exposure limit is 85 dB for eight hours. An example of 85 dB is urban city traffic. Normal conversation is 60 dB, a hair dryer is 90 dB, an MP3 player is 100 dB at full volume, a rock concert is 110 dB, and a chainsaw is about 119 dB. It is generally considered that 120 dB is the pain threshold and the point where ear damage starts. So let's put decibels into terms we shooters understand. A Daisy Red Ryder BB gun produces 97 dB, a 22 LR rifle is 140 dB, a full-size 9mm produces 162 dB, and an AR-15 rifle in 5.56 NATO produces 165 dB.

There are the low-tech solutions to sound overexposure, such as earplugs, which seal the ear channel if inserted correctly. These do the best job of reducing gun-fire report, and they unfortunately also do a good job of stifling communication between people at the shooting range. I wish I had a dollar for every time I heard shooting partners say, "What? Whadya say?" even when standing next to each other. Our team shooters always have ear plugs on hand when we test because the devices can easily be stored in a range bag and the batteries never run out. But they are not ideal. They are easily dropped and take longer to insert than putting on muffs.



Here you can see the size and shape of the ear cushions; (clockwise starting at the top left) are the Venture Gear, Howard Leight, Walker's, and Champion earmuff sets.

The same is true to a lesser extent with traditional earmuffs, which are also referred to as passive earmuffs. Passive earmuffs use a cushioned cup for each ear with an adjustable band that goes either over the top or behind the user's head. The good things about passive earmuffs is that they are convenient to put on and take off repeatedly, they are easily paired with earplugs, they are inexpensive, and they can be folded so they are easy to stow, one size usually fits all, and they are durable. No worries if you drop these earmuffs since they can take abuse, and they can be shared in a pinch. The downside of passive earmuffs is they can be bulky, can interfere with proper cheek weld when shooting a long gun, may not seal around the ear when shooting with safety or prescription glasses, they do not provide as much noise reduction as earplugs, and they impede communication with other shooters. Passive earmuffs can also be uncomfortable to wear and some cannot be used with ball caps, and if you have long hair that can be an issue, too. Some of our testers use both earplugs and passive earmuffs when shooting specific firearms.

Electronic earmuffs stifle gun noise yet allow you to communicate without removing ear protection or resorting to yelling. Readers have asked us to review electronic earmuffs, so we assembled a variety of models at different price points from different manufacturers, which included Venture Gear Amp BT ($100 from RAJSupply.com), Walker's Razor Slim ($70; WalkersGameEar.com), Champion Electronic Ear Muffs ($30; CheaperThanDirt.com), and Howard Leight Impact Sport Earmuff ($60; Cabelas.com).

How does electronic ear protection work? Electronic earmuffs are similar to traditional earmuffs. They use



Left to right are the Walker's, Champion, Howard Leight, and Venture Gear units. All of the muffs folded to a compact size when transporting. The Howard Leight was the most compact and the Venture Gear was the bulkiest.

a cushioned cup over the ear to seal out sound, plus they use external microphones and internal speakers to allow users to hear normal conversation or range commands while cutting out loud, harmful sounds like gunfire. Some can also be connected to smart phones via a Bluetooth connection and external audio plugs.

The advantages of electronic ear protection include the ability to filter noise; muffling loud noises but amplifying subtle noises like a deer walking in the woods or conversation with fellow shooters. On the flip side, they are expensive, not necessarily water resistant, and require batteries. Like passive earmuffs, some electronic earmuffs can also be bulky and uncomfortable to wear for extended periods of time.

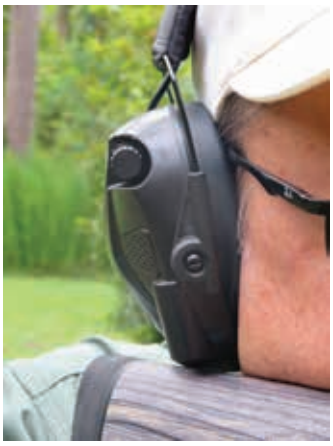
How We Tested

Prior to range use, we tested the electronic earmuffs with a test offered by the CDC online (CDC.gov/niosh/mining/content/quickfitweb.html). The test allows you to determine if you are getting at least minimal 15 dB level of hearing protection. We tested using the earmuffs turned off and then turned them on and found they all passed the 15 dB test. When turned on, we could also hear the sound. We also tested the muffs at outdoor and indoor ranges firing a 22 LR pistol, compact 9mm pistol, a 357 Magnum revolver, 12-gauge shotgun, and an AR-15 in 5.56 NATO with a 16-inch barrel. We chose a range of firearms so we could get a range of noise from popular firearms as well as cheek welds from long guns. Some also have the ability to help hunters hear game approaching, and these units should be weatherproof.

All muffs tested used either AA or AAA batteries, which are easy to locate and buy. The Walker's, Venture Gear, and Howard Leight had one battery compartment, the Champion had two.

We looked for noise reduction, clarity of sound, wearing comfort, and ergonomics. We also drop-tested them on a concrete floor to simulate an accidental drop. All passed the drop test. Since each ear on humans is slightly different, we looked at how well the ear cups sealed off the ear from sound. All testers wore prescription glasses or shooting glasses when testing. We found that some eyewear frames can affect the seal of the cups. Some earmuffs have a strong spring





Left: The Venture Gear Amp BT offered a good seal, even when the shooter was wearing eye protection. Downside: They were bulky and interfered when shouldering a long gun. Below: The Venture Gear muffs had a large control knob and are Bluetooth compatible.

in the head band that can be uncomfortable when wearing eye protection. Here's what we discovered about each unit.

Venture Gear Amp BT, $100

These came from RAJSupply.com. The Amp BT electronic earmuff cups are large and offer a good seal over the ear. Some testers used ear plugs in addition to the Amp BT when shooting AR-15 on indoor ranges. The sound and reverberating concussion inside the indoor ranges means a higher level of ear protection is needed even if the range has sound dampening material in the divider between ranges.

In our opinion, you could have a normal conversation while wearing the Amp BT, which uses four microphones so you can hear what is in front of you and behind you. The on/off knob is large and well textured, so you can turn it on off even when using gloved hands. When you turn the volume on, a start-up tone is played, which is a nice feature. This tells the user the earmuffs are on. Many testers turned on earmuffs but did not hear any sound, so they initially turned up the volume on the earmuffs, only to turn it down because it was too loud. The Amp BT avoids this issue.

We attached our iPhone to the muffs and made a call at the range and could hear clearly. In fact the clarity with this unit was good, with no static. Because the ear cups are so large, they did make contact with the stock on long guns and got in the way of some testers' cheek welds.

The headband is made of a synthetic material, so it cleans easily and is padded for comfort. It was comfortable to wear and easily adjust. It was easy to access the battery compartment. The auxiliary jack does come with a plug, so there is a chance moisture can get in.

Our Team Said: In our opinion, the Amp BT is a good choice for an all-round earmuff, but it is better suited for pistol shooters because the ear cup could interfere with the stock. We like the auto shutoff. We don't think there is much value in the smart-phone feature, but it could be valuable for someone who works in loud environment and needs to communicate.

GUN TESTS GRADE: A-



Walker's Razor Slim, $70

These are available at WalkersGameEar.com. The Walker's Razor muffs are comfortable to wear, with no



The ear cups on the Walker's Razor offered a good seal and were compact enough to not interfere when shouldering a long gun.





The volume knob on the Walker Razor is large and easily turned, even when using gloved hands. The microphone has a grill and the auxiliary input is protected with a rubber plug.

C-clamp effect on the head and ear cups that are sized in-between the Venture Gear and Champion units. The outside of the ear cups are also tapered so there is less knocking of the ear cup against the stock when mounting a long gun. The Razor uses two microphones so the headset can be worn with microphones facing front or rear. The volume control is a gnarly knob with excellent serrations that offer great texture when operating with or without gloves. The headband is padded and made of a synthetic material that is easy to wipe clean. The outside of the headband is a cloth material. The battery compartment offers easy access. The auxiliary jack input comes with a rubber plug so there is no chance of moisture getting into the electronics. In our opinion, the Walker's was the most comfortable to wear of all the units tested. We still used ear plugs with them at the indoor range. We also felt the Razor was more friendly to eyewear and that maybe was due to the soft ear cushions in the cups. There was a slight bit of hiss when we turned the volume high. With the wind blowing a brisk 5 mph during one outdoor range session, we could hear the wind in the microphone. Some of our testers who have used Howard Leight earmuffs for years appreciated the Walker's Razor design.

Our Team Said: The Walker's Razor is well suited for the recreational shooter and hunter. This unit is less bulky than the Venture Gear and the Champion units. We liked the auto shut off on this unit as a measure to prevent battery drain.

GUN TESTS GRADE: A





The cushion on the Howard Leight earmuffs was a bit stiffer, so we had to be sure to adjust eyewear for a good seal. At times, the bottom edge of the ear cup interfered when shouldering a long gun.







The microphones on the Howard Leight muffs had a foam covering to block wind noise.

Howard Leight Impact Sport, $60

These came from Cabelas.com. Howard Leight Impact Sport earmuffs have a medium-sized ear cup similar to the Walker's Razor. The ear cups are also tapered, so there was chance a buttstock would knock up against the muff when shouldering a long arm. It has two microphones so you can wear the microphone point to the front or rear. The microphones are covered in foam to reduce wind noise; we like this feature, especially when training outdoors where the wind can blow. The sound clarity with the Impact Sport was good; at high volume there is a hiss. When turning the volume high with all of these earmuffs, you can hear the proverbial pin drop. They really enhance sounds, to the point that you can hear the recoil spring in an AR-15 buffer tube compressing and expanding. The volume-control button on the Howard Leight was large and easy to manipulate. The headband is padded on the inside and has leather on the outside. We found them easy to put on and adjust. The padding in the ear cups was slightly harder than the material on the other earmuffs. This meant the cushion did not seal as well as on the user's ear compared to the ear cups on the other earmuffs. This was especially prevalent with all of the earmuffs when using eye protection. What we did like about the Howard Leight earmuffs was that the ear-cup cushions can be replaced. None of the other electronic earmuffs have this feature. For about $10 ($9.79; Grainger.com), you can replace worn out ear cushions. No need to trash the earmuffs

and buy news ones if the cushion cracks or gets worn out. Also on the upside with the Howard Leight muffs was their compactness. They folded into the smallest package, followed by the Walker's, Champion, and the largest, Venture Gear. Battery replacement is easy. We also like the auto shut off. One of our testers has had a pair of Howard Leight for years and rarely needs to replace batteries, even though our test team member shoots weekly. We used plugs with the earmuffs when going hot with an AR-15 indoors. We liked the comfort and clarity of these muffs.

Our Team Said: We like the fit and comfort of the Howard Leight earmuffs, the battery life, and the added features like replaceable ear cushions.

GUN TESTS GRADE: A

Champion Ear Muffs Electronic, $31

This was a recent price at OpticsPlanet.com. The Champion earmuffs are equipped with two microphones located at one side of the cup so you can wear these to hear the ping on the steel target in front of you or hear what is in back of you, such as a range officer's command. We don't mean that you won't hear either if you swap the way you wear the Champion earmuffs. You will be able to hear relatively clearly. There are also separate volume controls for each ear. We prefer one volume control. The ear cup is small but offered a good fit. Some testers felt the padded head back was a bit tight, and those with big heads also felt like their head was in a C-clamp. This diminished comfort but made sure

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The Champion had a good fit even when the shooter was wearing eye protection. The ear cuff did not interfere with a cheek weld.







The Champion has a volume control and microphone on each ear cup. We preferred one volume control that controlled the whole set.

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there was a good seal no matter what type of eye protection the user was wearing. The headband has cloth inside toward the shooter and a synthetic material on the outside is easy to wipe clean.

We noted there was a bit of static when we turned on the Champion earmuffs. The knobs are relatively small and worked well, but we'd prefer larger knobs. There is no auto shut off, so make sure you turn them off after each use and pack extra batteries. We did not have issues with the ear cup interfering with stock weld. It was easy to access the battery compartments to get fresh power.

Our Team Said: The Champion earmuffs are an inexpensive option if you can put up with a bit of hiss and static. They are well suited for a shotgun or rifle shooter because you can wear the earmuffs with the microphones pointing away from the muzzle for less noise. We'd recommend using ear plugs in indoor ranges when shooting an AR-15 or magnum revolver.

GUN TESTS GRADE: B

Special thanks to Eastern Outfitters (EasternOutfitter.com) of Hampstead, NC, for its assistance.

Written and photographed by Robert Sadowski, using evaluations from GUN TESTS *team testers.* **GT**

COMING UP IN GUN TESTS

- Single-Action Rimfire Revolver Shoot-out: Inexpensive revolvers go head to head. Tested: Chiappa 1873, Heritage Rough Rider, Ruger Wrangler, and Traditions Rawhide Rancher.

- Guns For Older and/or Disabled Shooters: Choosing a handgun is a daunting proposition for some folks, and shooters with hand-strength or vision limitations need to be involved in the process — another interested party cannot simply pick the handgun for them. But we can offer a number of excellent choices and certainly eliminate bad choices by focusing on what's best for home defense and general shooting.

- Big-Bore Hunting Revolvers from Smith & Wesson and Taurus: We ran a 44 Magnum, a 460 S&W Magnum and a 500 S&W Magnum head to head to see what we'd choose to hunt with. Tested: The S&W Performance Center Model 460XVR, the Taurus Raging Hunter, and the S&W Model S&W500.

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