

Kel-Tec SU-16C Rifle



The SU-16—shown with a HydraStorm Predator and a Pocket Survival Pak from www.equipped.org—makes for a handy survival rifle chambered in .223 Rem.

KEL-TEC SU-16C

MANUFACTURER: Kel-Tec CNC Industries, Inc. (Dept. AR), 1475 Cox Road, Cocoa, FL 32926, (321) 631-0068; www.kel-tec.com
CALIBER: .223 Rem.
ACTION TYPE: gas-operated, semi-automatic center-fire rifle
RECEIVER: Zytel upper and lower with aluminum barrel block
BARREL: 16½" carbon steel
RIFLING: six-groove, 1:9" RH twist
MAGAZINE: polymer double column with 10-round capacity supplied, takes standard AR-15 magazines
SIGHTS: post front detent-adjustable for elevation, aperture rear screw-adjustable for windage, integral Picatinny rail
TRIGGER PULL: single-stage; 8 lbs., 2 ozs.
STOCK: synthetic; length of pull, 13¾"; drop at heel, 1"; drop at comb, 1½"
OVERALL LENGTH: 37½"
WEIGHT: 4 lbs., 11 ozs.
ACCESSORIES: manual, 10-round magazine
SUGGESTED RETAIL PRICE: \$640

Kel-Tec has made a name for itself with its compact handguns and pistol-caliber carbines. Its latest offering, dubbed the SU-16C or Sport Utility Rifle, is a semi-automatic rifle chambered for the .223 Rem. cartridge. It will accept most standard AR-15-type magazines and the fore-end can be unfolded to form a bipod for more accurate shooting. Like Kel-Tec's previous carbine, the SUB 2000, the SU-16C can be taken down to a size of 27" x 7½" for compact storage. The rifle is built around polymer upper and lower receivers that are hinged where the trigger guard meets the magazine well. The two halves are held

together by a steel take-down pin that runs through the wrist of the stock. The lower receiver is split vertically and held together by six machine screws. It contains the trigger assembly and provides an attachment point for the stock. An aluminum barrel block is molded into the front of the upper receiver, which also contains the bolt assembly and the magazine well. The rifle's system of gas operation most resembles that of the Beretta AR-70. Inside a gas tube above the barrel, expanding propellant gases transfer energy to the operating rod that is fixed to the bolt carrier. A coil spring surrounding the operating rod compresses as the bolt assembly is pushed to the

rear by the expanding gases. Once gas pressure has dropped, energy from the compressed spring pulls the operating rod and bolt assembly forward and back into battery. The 16" barrel has a stepped profile. Its diameter measures 0.74" from the receiver to the gas block, which reduces to 0.62" from the gas block to the muzzle. The gas block also serves as a base for the A2-style front sight post, which is detent-adjustable for windage. Wings extend upward from the gas block to prevent damage to the sight. A Picatinny rail molded into the top of the upper receiver provides a base for the rear sight aperture, which is screw-adjustable

SHOOTING RESULTS (100 YDS.)					
.223 Rem. Cartridge	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Group Size In Inches		
			Smallest	Largest	Average
Federal 50-gr. HP No. AE223G	2887 Avg.	925 18 Sd	1.65	2.06	1.82
Hornady 55-gr HP V-Max No. 8327	2871 Avg.	1006 18 Sd	1.76	2.14	1.93
Winchester 62-gr. FMJ USA223R3	2578 Avg.	920 24 Sd	1.83	2.22	2.06
Average Extreme Spread:					1.94

Measured average velocity for 10 rounds from an 18½" barrel. Range temperature: 86°F. Humidity: 69%. Accuracy for five consecutive, five-shot groups at 100 yds. from a sandbag. Abbreviations: HP (hollow-point), FMJ (full metal jacket) Sd (standard deviation).

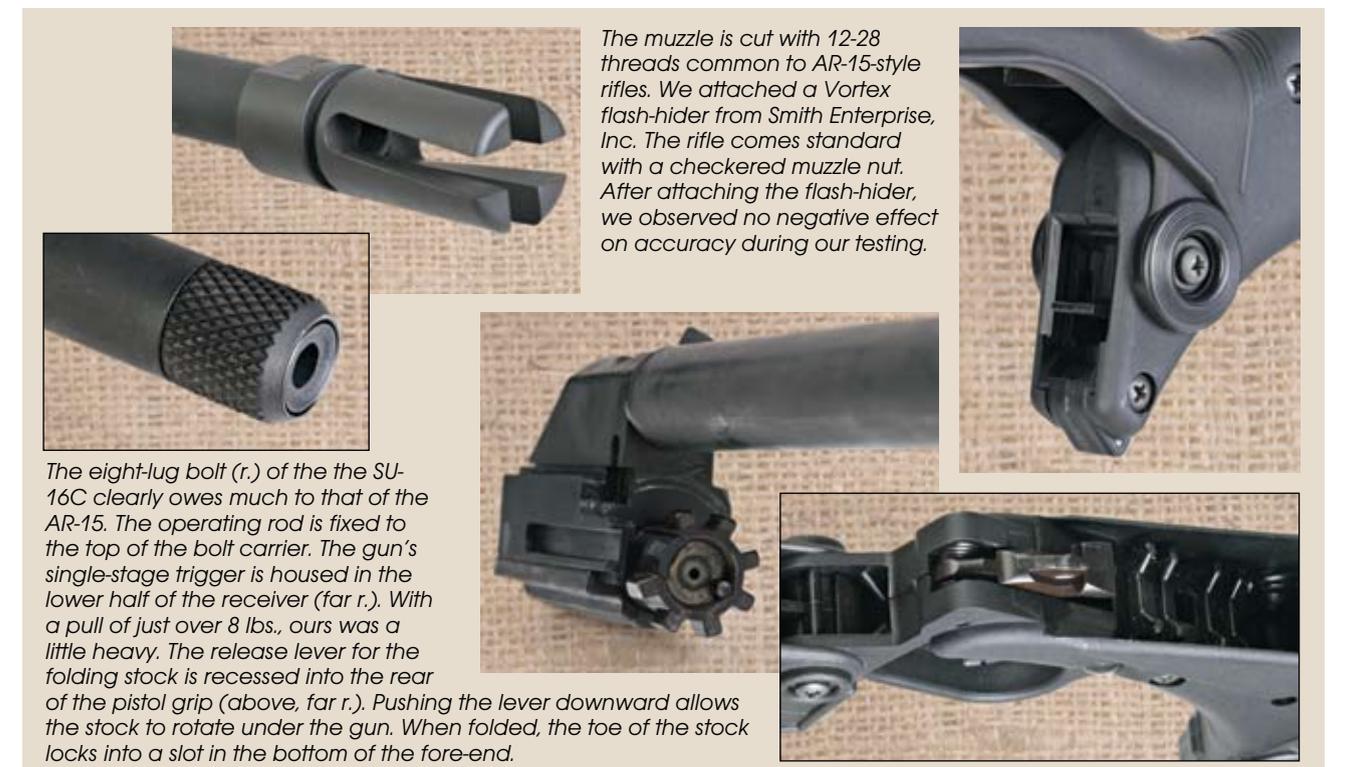


for windage. The rail also serves as a mounting point for aftermarket sights. A long vertical slot in the comb of stock allows it to fully rotate over a 30-round AR-15-style magazine. The supplied ten-round magazine, however, cannot be removed or inserted through the slot because of its wide floorplate. Controls include a charging handle on right

side of receiver, a round crossbolt safety button at the rear of the trigger guard (reversible for left-handed operation) and a square magazine release button forward of the trigger guard. The latter is fenced to help prevent accidental release. Neither factory nor aftermarket magazines will fall out of their own empty weight, so semi-circular cut-outs on both sides of the

magazine well aid removal. The bolt stop keeps the action open after the last shot from the magazine is fired, but there is no bolt stop lever. The curved polymer trigger blade of the SU-16C has a grooved face. After a little take-up, the single-stage unit broke cleanly, but at 8 lbs., 2 ozs. pull, it was heavy compared to other semi-automatic carbines of this type. For our accuracy testing we chose a variety of hollow-point and soft-point loads from Federal, Winchester and Hornady. Given the barrel's intermediate 1:9" twist rate, bullet weights were limited to no more than 62 grs. Since the gun is compatible with AR-15-style magazines, we added some examples from Brownell's

to the gun's testing regimen. There were no malfunctions of any kind. Accuracy results are shown in the accompanying table. The stock of our test gun locked securely in place when extended, and though it looks like the stock has just a top half, it had enough surface area for a good cheek weld. No studs or loops are provided for attaching a sling, so backcountry adventurers on foot may find that limits its utility, but those in search of a reliable .223 Rem. carbine that can be stored in a small space for predator control, survival or self-defense need look no further because the Kel-Tec SU-16's compact dimensions make it a useful accessory for a ranch truck, boat or small plane.



The muzzle is cut with 12-28 threads common to AR-15-style rifles. We attached a Vortex flash-hider from Smith Enterprise, Inc. The rifle comes standard with a checkered muzzle nut. After attaching the flash-hider, we observed no negative effect on accuracy during our testing.

The eight-lug bolt (r.) of the the SU-16C clearly owes much to that of the AR-15. The operating rod is fixed to the top of the bolt carrier. The gun's single-stage trigger is housed in the lower half of the receiver (far r.). With a pull of just over 8 lbs., ours was a little heavy. The release lever for the folding stock is recessed into the rear of the pistol grip (above, far r.). Pushing the lever downward allows the stock to rotate under the gun. When folded, the toe of the stock locks into a slot in the bottom of the fore-end.

The American Rifleman has used the phrase "Dope Bag" at least since 1921, when Col. Townsend Whelen first titled his column with it. Even then, it had been in use for years, referring to a sack used by target shooters to hold ammunition and accessories on the firing line. "Sight dope" also was a traditional marksman's term for sight adjustment information, while judging wind speed and direction was called "doping the wind."

WARNING: Technical data and information contained herein are intended to provide information based on the limited experience of individuals under specific conditions and circumstances. They do not detail the comprehensive training procedures, techniques and safety precautions absolutely necessary to properly carry on similar activity. Read the notice and disclaimer on the contents page. Always consult comprehensive reference manuals and bulletins for details of proper training requirements, procedures, techniques and safety precautions before attempting any similar activity.

SIGARMS P226 X-Five



The accuracy, ergonomics, reliability and "feel" of the X-Five make it a worthy competitor to the venerable M1911 design.

Single-action semi-automatic handguns are de rigeur among practical shooting aficionados primarily because they allow the skilled shooter to deliver an accurate first shot faster than other pistol types. Accordingly, the M1911-style pistol dominates every practical pistol sport in which it is used. In late 2004, however, SIGARMS brought the new single-action semi-automatic P226 X-Five to American shores as an alternative to that venerable design.

The X-Five features all-steel construction, a 5" barrel, adjustable target-type sights, and a host of ergonomic and functional modifications for competition, including an ambidextrous sear-block-

ing thumb safety, reversible extended magazine release, front slide serrations, and beavertail frame extension. At present, two calibers are offered: 9 mm Luger and .40 S&W.

Internally, the pistol offers few surprises for those familiar with SIG Sauer guns. The barrel retains a square shoulder which locks against the ejection port, as well as a large underlug whose angled cams engage matching surfaces on the blued steel locking insert. Sear release is actuated by a stamped steel trigger bar linked to the pivoting trigger. When the slide recoils, a semi-circular recess in the right slide rail cams down an upward-protruding tab on the trigger bar, disconnecting the bar from

the sear and allowing it to reset and hold back the hammer. Other characteristic SIGARMS features are the spring steel claw extractor on the right side of the slide, stamped-steel ejector and inertia firing pin, whose passive safety is disengaged only when the trigger is pulled.

Mechanically, the most distinctive feature of the gun is its single-action trigger for cocked-and-locked carry. The trigger mechanism is user-adjustable for trigger position, and a gunsmith can adjust the trigger pull for pull weight and overtravel.

Precision sights include an undercut 0.14"-wide front post mounted in a transverse dovetail, and a wide rear blade with a 0.016" notch adjustable for

SIGARMS X-FIVE

MANUFACTURER: SIG Sauer, Sauerstrasse 2-6, D-24340 Eckernförde, Germany, +49 4351 4710, www.sigsauer.de

IMPORTER: SIGARMS, Inc. (Dept. AR), 18 Industrial Drive, Exeter, NH 03833, (603) 772-2302, www.sigarms.com

CALIBER: 9 mm Luger, .40 S&W (tested)

ACTION TYPE: short-recoil-operated, center-fire semi-automatic pistol

FRAME: stainless steel

BARREL: 5" stainless steel

RIFLING: six grooves, 1:15" RH twist

MAGAZINE: steel box with extended basepad, 14-round capacity

SIGHTS: undercut dovetail-mounted front post, rear blade click-adjustable for windage and elevation

TRIGGER PULL: single-action, two-stage, 3½ lbs.

OVERALL LENGTH: 8½"

HEIGHT: 5½"

WIDTH: 1½"

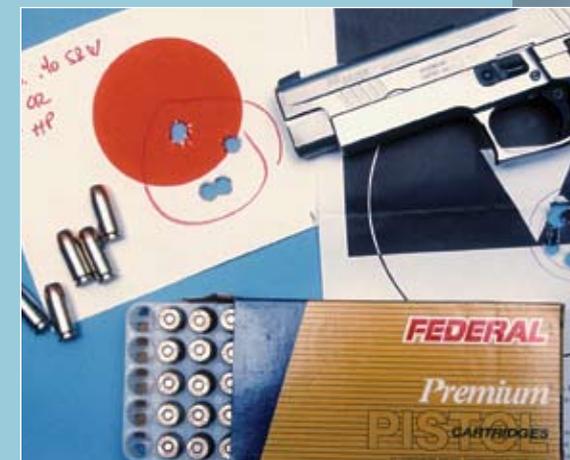
WEIGHT: 46 ozs.

ACCESSORIES: hard plastic case, owners manual, test target

SUGGESTED RETAIL PRICE: \$2,499



The X-Five's lockup (above) will be familiar to fans of SIG pistols. The generous magazine well (r.) permitted bobble-free magazine insertion, and the oversize magazine release gave the shooting-hand thumb easy access to the release button without having to rotate the firearm in the hand (as is often the case with the M1911). Pointability of the X-Five was also judged to be very good.



Accuracy of the X-Five is excellent, as shown by the 1.4" group with Federal's 180-gr. HST hollow-point at left, and the 1.2" test target supplied with the pistol. The short reach of X-Five's smooth 3½-lb. trigger made it easy to get the most out of the gun's inherent mechanical accuracy.

windage and elevation.

Our .40 S&W X-Five test pistol came with two 14-round steel magazines with extended aluminum basepads. Standard 12-round .40 S&W P226 magazines will also work in the X-Five. Loads from Black Hills, Federal and Winchester were used in our accuracy and reliability testing. Results are shown in the accompanying table.

No malfunctions were noted during the 140-

round test-fire session, although ejection was a little anemic with the lightest loads. A situation easily remedied through the installation of a slightly weaker aftermarket P226 recoil spring. Accuracy of the X-Five was excellent: all ammunition tested grouped less than 2", with enough groups in the 1.1" to 1.4" range to back up the 1.2" 25-meter test target supplied with the gun. SIGARMS' factory test-

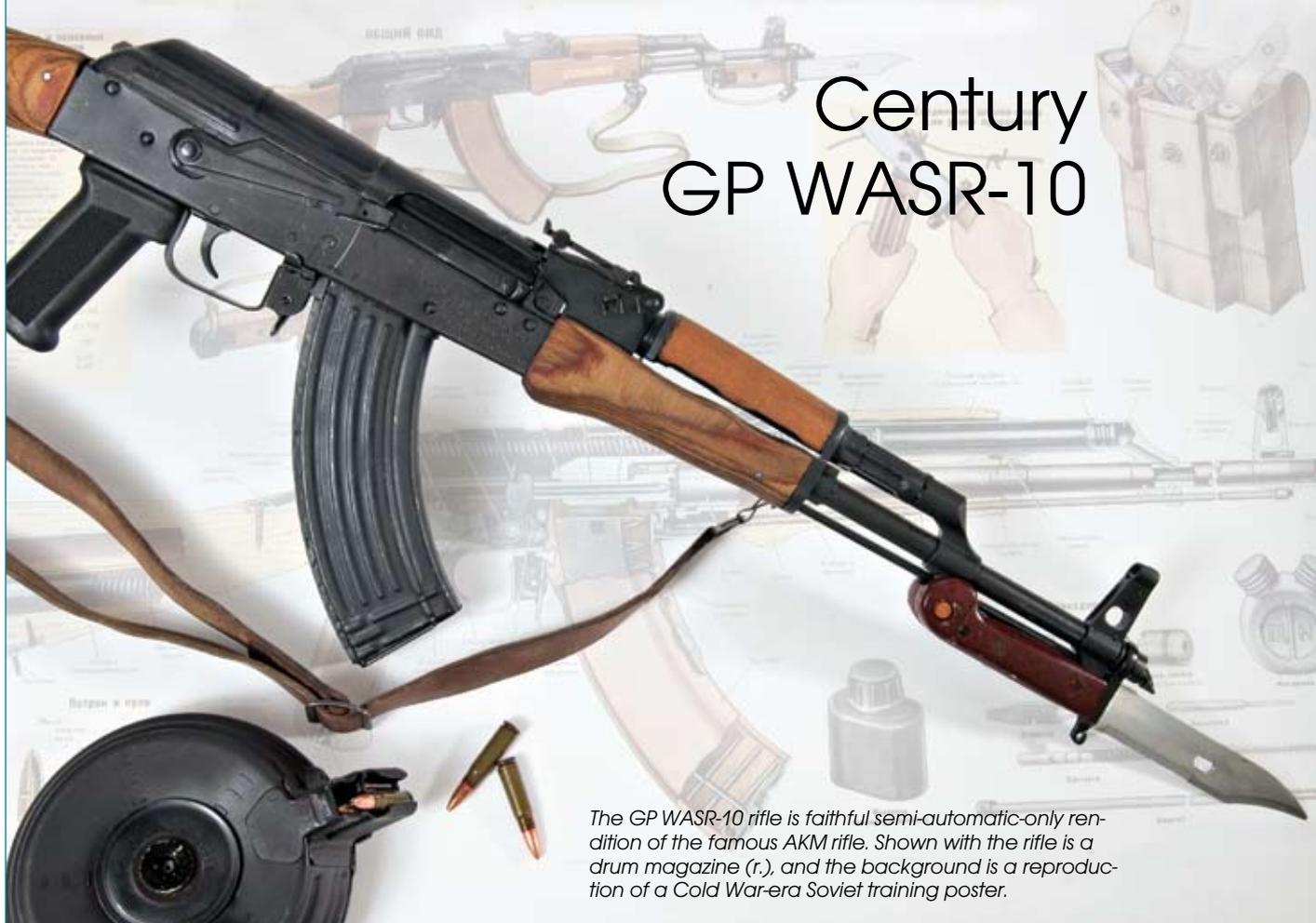
SHOOTING RESULTS (25 YDS.)					
.40 S&W Cartridge	Vel. @ 15'	Energy (f.p.s.)	Group Size In Inches		
			Smallest	Largest	Average
Black Hills 180-gr. HP	976 Avg.	381	1.23	1.61	1.35
Federal No. P40HST1 180-gr. HST HP	1040 Avg.	432	1.09	1.39	1.22
Win. No. RA40TA 165-gr. SXT HP	1125 Avg.	464	1.44	1.87	1.62
Average Extreme Spread:			1.40		

Measured average velocity for 10 rounds from a 5" barrel. Range temperature: 52°F. Humidity: 56%. Accuracy for five consecutive, five-shot groups at 25 yds. from a sandbag rest. Abbreviations: HP (hollow-point), Sd (standard deviation), Win. (Winchester).

nomics and "feel" are as important as accuracy. Two experienced practical shooters who put the X-Five through its paces gave high marks to the gun's slightly undercut trigger guard, 30 line-per-inch frontstrap checkering, beavertail grip contour, target sights and extended ambidextrous thumb safety, which could easily and comfortably be ridden by the strong-hand thumb.

Though slightly longer and wider than a comparable full-size 1911, and about a quarter-pound heavier; the X-Five handled nimbly in multiple-target drills. Its double-column magazine made its grip almost 3/16" wider than a single-stack M1911, and its grip circumference roughly 1/2" greater; nonetheless, the X-Five's trigger reach was actually slightly shorter than a typical M1911 pistol with a long trigger. The comfortable grip contours made the X-Five's larger grip size less apparent.

With an MSRP of \$2,499, the X-Five carries a hefty price, but no more than a custom 1911. The X-Five is the first pistol we've seen the capable of dethroning the 1911 from its position of preeminence in practical pistol competition.



Century GP WASR-10

The GP WASR-10 rifle is faithful semi-automatic-only rendition of the famous AKM rifle. Shown with the rifle is a drum magazine (r.), and the background is a reproduction of a Cold War-era Soviet training poster.

The Century Int'l Arms, Inc., GP WASR-10 is a semi-automatic-only rendition of the famous 7.62x39 mm AKM rifle configured with a fixed laminated stock and a laminated fore-end.

Manufactured in Rumania, the 7.62x39 mm GP WASR-10 is imported as a "single-stack" rifle that accepts single-column 10-round magazines. After arriving in the U.S., the rifles are disassembled, the magazine wells machined out to accept double-stack magazines, and the requisite number of U.S.-made parts are installed for BATFE compliance.

In the case of this particular variant, the U.S.-made parts are as follows: trigger, hammer, disconnect, compensator, gas piston

and pistol grip. The trigger, hammer and disconnect are investment cast from 4140 steel for Century by Thompson Investment Castings, while the compensator and stainless steel gas piston are manufactured by a local firm. The synthetic pistol grip is manufactured by Century.

With the sunseting of the so-called "assault-weapons ban" in September of 2004, semi-automatic rifles are now allowed to have features such as threaded muzzles, folding/collapsing stocks and bayonet lugs. Consequently, this particular GP WASR-10 features a threaded muzzle (with a removable, slant brake) and a bayonet lug. Currently the rifles are imported without these

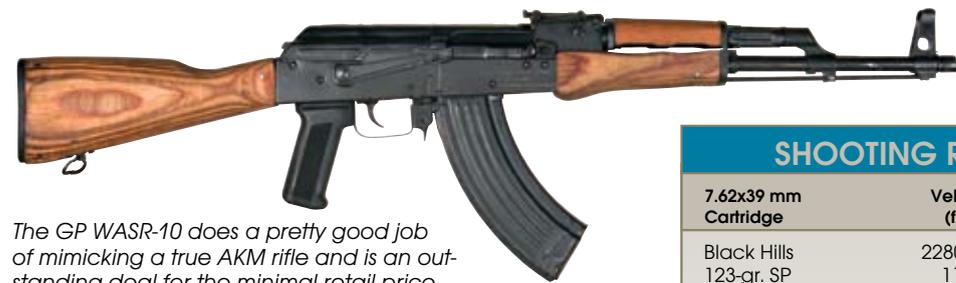
features, requiring Century to thread the muzzles and weld on and machine new bayonet lugs. The rifle came with a batch of accessories, including a canvas double magazine pouch, two 30-round magazines, a cleaning kit designed to fit in the buttstock storage compartment, and an early-style Model 59 bayonet.

Fit and finish clearly reflected the philosophy behind the design—utilitarian and nothing more. The magazine well was evenly cut with no sharp edges, and magazines locked easily into place. The barrel exhibited exterior tool marks, and parts such as the front and rear sight bases and the gas port block had rough shaping marks. The U.S.-

made trigger and hammer appeared to be well-made. The compensator, although well-shaped, had very evident machining marks, and the bayonet lug was a bit oversized. Attaching and detaching the bayonet several times seemed to wear it in, with it easily locking into place and releasing after that.

As a side note, actual AKM rifles originally manufactured to accept double-stack magazines have "dimples" on both sides of the lower receiver above the magazine well. The GP WASR-10 rifles are manufactured as single-stacks and, therefore, are devoid of such dimples.

The GP WASR-10 does a good job of mimicking the appearance of a true AKM rifle and all its requisite



The GP WASR-10 does a pretty good job of mimicking a true AKM rifle and is an outstanding deal for the minimal retail price.

updates from the original AK-47. Like the AKM rifle, it has a stamped receiver, ribbed top cover and a gas tube void of vent holes. The fixed stock was also reminiscent of an AKM as it was made from laminated wood, and the fore-end matched quite well. The lower fore-end, however, lacked the raised "swells" of the AKM.

Although the fit and finish of the rifle was a bit rough around the edges, it is important to remember that, as the saying goes, handsome is as handsome does.

Handling revealed a compact and handy rifle. Controls were easy to manipulate, but there was a bit of "stickiness" to the operation of the safety

lever when in the "on" position. Removing the safety lever and giving it a slight tug outward seemed to solve the problem. As stated earlier, magazines were easily inserted and removed and locked up solidly. The trigger pull was surprisingly good, breaking cleanly at 7¼ lbs.

Firing the rifle produced almost monotonous reliability. The rifle simply would not malfunction. We did, however, notice an unpleasant tendency for the trigger to "slap" the shooter's finger during firing.

For accuracy testing, we fitted a K-Var KV-04 scope mount (www.k-var.com) on the side-mount scope rail. Unlike Soviet scopes

SHOOTING RESULTS (100 YDS.)					
7.62x39 mm Cartridge	Vel. @ 15'	Energy (f.p.s.) (ft.-lbs.)	Group Size In Inches		
			Smallest	Largest	Average
Black Hills 123-gr. SP	2280 Avg.	1,420 11 Sd	1.74	5.02	3.15
Winchester SuperX 123-gr. PSP	2225 Avg.	1,352 31 Sd	3.32	4.90	3.85
Wolf Steel Case 122-gr. HP	2422 Avg.	1,590 11 Sd	1.90	4.14	3.07
Average Extreme Spread:					3.36
Measured average velocity for 10 rounds from a 16¼" barrel. Range temperature: 73° F. Humidity: 8%. Accuracy for five consecutive, five-shot groups at 100 yds. from a sandbag. Abbreviations: HP (hollow point), PSP (pointed soft point), SP (soft point).					

and mounts, the K-Var unit centers the scope over the bore line—a welcome feature for our southpaw testers. Accuracy was on par with what is common for these rifles, printing average groups in the 3" range.

The GP WASR-10 was easy to shoot and handily sized, although several testers complained that the short length of pull was distracting. The slant

brake seemed to be mostly an affectation, albeit a rather interesting one.

The GP WASR-10 represents an exceptional deal to those in the market for a short- to mid-range semi-automatic rifle that is both extremely reliable and highly affordable.

GP WASR-10

- MANUFACTURER:** Cugir Arsenal, Romania
- IMPORTER:** Century Int'l Arms (Dept. AR), 430 S. Congress Ave., Suite 1, Delray Beach, FL 33445; (800) 527-1252; www.centuryarms.com
- CALIBER:** 7.62x39 mm
- ACTION TYPE:** gas-operated, semi-automatic center-fire rifle
- RECEIVER:** Parkerized, stamped steel
- BARREL:** 16¼", Parkerized
- RIFLING:** four-groove, 1:10" RH twist
- MAGAZINE:** detachable box
- SIGHTS:** fixed-notch rear, windage-adjustable post front
- TRIGGER PULL:** two-stage, 7¼ lbs.
- STOCK:** length of pull, 12¼"; drop at heel, 1½"; drop at comb, 1½"
- OVERALL LENGTH:** 35¼"
- WEIGHT:** 7 lbs.
- ACCESSORIES:** two 30-round magazines, magazine pouch, cleaning kit, bayonet
- SUGGESTED RETAIL PRICE:** \$450

For accuracy testing, we fitted the GP WASR-10 with K-Var Corp.'s KV-04 scope mount (r.) and a Leupold scope. Since the GP WASR-10 was originally manufactured as a single-stack magazine rifle, it does not have the familiar "dimples" in the lower area of the receiver above the magazine well (below).



With the sunseting of the so-called "assault weapons ban," semi-automatic rifles can now have features such as threaded muzzles and bayonet lugs (r.).



Nightforce 5.5-22x56 mm NXS

While many makers offer high-magnification scopes, only a handful of high-end models are preferred by “professionals,” such as top long-range competitors and military snipers. Nightforce scopes, from Lightforce USA, have earned an enviable reputation among such shooters.

Each Nightforce scope is assembled in the company’s plant in Idaho, and receives an extensive multi-point inspection that includes tests for optical quality, mechanical accuracy, thermal stability, water resistance and shock resistance to 1,250 Gs.

The current Nightforce line consists of the NXS (Nightforce Extreme Scope) series, built with the tactical or military user in mind and including models from 3.5-15x50 mm to 12-42x56 mm; two NXS hunting models, the 1-4x24 mm and 2.5-10x24 mm; and the 8-32x56 mm and 12-42x56 mm Precision Benchrest Series target scopes.

The 30 mm 6061-T6 aluminum body tubes have walls two to three times thicker than those used in many comparable scopes. Mechanical durability and repeatability are assured by the use of carefully selected, hardened metals for internal components, extra-stiff, fatigue-proof titanium erector springs, and extremely tight machining and assembly tolerances.

All air-to-glass surfaces receive a proprietary abrasion-resistant broadband coating that maximizes light transmission. Lenses are mounted using not only O-rings and metal lock rings, but also a proprietary bonding agent that provides a shock-



Nightforce scopes, long popular with military units and benchresters, have also become dominant on F-Class competition rifles.



Markings on turrets, including direction indicators, are easily seen from behind the scope.

absorbing, strain-free and zero-movement lens bed.

The 5.5-22x56 mm NXS has 4” of eye relief, 0.25” click values and 100 m.o.a. of elevation adjustment. Nine reticles are available for this scope, including various crosshair, Mil-Dot and ranging designs; our scope had the CH-2 fine crosshair. Reticles are in the second focal plane, so they appear the same size as magnification varies.

We tested the 5.5-22x56 mm NXS on two highly accurate custom F-Class rifles, one based on an accurized Remington action in .308 Win. with a Shilen barrel and H-S Precision stock; and the other consisting of an H-S Precision action with a Douglas barrel in 6.5-.284 Win. set in a Sinclair

F-Class stock. Testing was performed at 100, 200 and 300 yds., as well as during an actual F-Class match at 600 and 1,000 yds.

To put it simply, the scope performed superbly in every respect. Optical clarity, brightness and resolution rivaled that of a 45X spotting scope being used during the test session, and the windage and elevation adjustments were accurate and repeatable, with easily discernible clicks and highly visible index marks. No reticle shift was observed with either of the rifles used, and the scope’s parallax adjustment—conveniently located on the saddle—was effective at all ranges tested.

With a list price of \$1,400, the Nightforce 5.5-

NXS2256

MANUFACTURER:

Lightforce USA, Inc.
(Dept. AR), 1040 Hazen Lane, Orofino, ID 83544,
(208) 476-9814, www.nightforceoptics.com

MODEL: NXS2256

MAGNIFICATION AND OBJECTIVE: 5.5-22X
56 mm

FINISH: black matte anodizing

FIELD OF VIEW (FT. @ 100 YDS.): 17.5 (5.5X), 4.7 (22X)

EYE RELIEF: 3.9”

CLICK VALUE (IN. @ 100 YDS/M.O.A.): 0.25”/0.25 m.o.a.

WINDAGE AND ELEVATION ADJUSTMENT RANGE: 100 m.o.a. (E), 60 m.o.a. (W)

RETICLES: nine designs, including target crosshair, Mil-Dot and rangefinding reticles (CH-2 fine crosshair tested)

LENGTH: 15.2”

WEIGHT: 32 ozs.

ACCESSORIES: lens caps, mirage tube, sunshade, miliradian turrets, Zero Stop

PRICE: \$1,400

22x56 mm is probably not suitable for—nor is intended for—the casual varmint or target shooter. For serious long-range riflery, however, where a national championship or critical military objective may be at stake, this scope would be hard to beat. 