

*Winchester's new Model 70 Coyote blends the accuracy of varmint rifles with the convenience of sporters for an identity all its own as what may be the ultimate predator hunting rig.*

## Winchester Model 70 Coyote

### COYOTE

**MANUFACTURER:** U.S. Repeating Arms Co. (Dept. AR), 275 Winchester Ave., Morgan, UT 84050 (801) 876-3440; www.winchester-guns.com

**CALIBER:** .223 Rem., .22-250 Rem. (tested), .243 Win.

**ACTION TYPE:** push-feed, bolt-action repeating rifle

**RECEIVER:** chrome-moly steel

**FINISH:** medium-polish blue action

**OVERALL LENGTH:** 44"

**BARREL:** 24", medium contour stainless steel

**RIFLING:** conventional; 1:14" RH twist

**MAGAZINE:** internal box with hinged floorplate; capacity five (six in .223 Rem.)

**WEIGHT:** 9 lbs.

**TRIGGER:** single-stage, non-adjustable, 5½ lb. pull

**STOCK:** brown laminated hardwood; length of pull, 13½"; drop at heel, 3/4"; drop at comb, 5/8"

**SUGGESTED RETAIL PRICE:** \$688

Winchester's new Coyote rifle is a variant in the new Model 70 rifle line that is too heavy to be a dedicated sporting rifle and too light to be a dedicated target/varmint rifle. Instead, this rifle has an identity all its own as what may be the ultimate predator hunting rig.

If you were designing such a rifle from the ground up, you'd want to start with an action from an established maker such as Winchester. The gun would naturally come in .22-250 Rem. caliber so pelt hunters or Animal Damage Control contractors would have a wide selection of bullet types and weights suited

for nearly any task at hand. If you were economy-minded, and wanted the greatest potential for accuracy, the bolt would be of the push-feed variety to reduce costs and, theoretically, provide more concentric lockup.

Next, you'd want your rifle to have a heavy barrel, but not one too heavy. Here, you want a balance between the added rigidity and stability of more metal and the ability to move quickly and



*The Coyote's firing pin assembly is easily removed for cleaning or repair by pressing the catch at the bolt's rear.*



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.



## SHOOTING RESULTS

.22-250 Rem. Caliber	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Recoil (ft.-lbs.)	Smallest (inches)	Largest (inches)	Average (inches)
Federal 22250C 40-gr. Blitz JHP	3693 Avg. 36 Sd	1211	3.3	0.60	1.12	0.80
Remington R22502 55-gr. Power-Lokt HP	3490 Avg. 30 Sd	1488	4.0	1.10	1.82	1.30
Winchester USA222502 45-gr. HP	3837 Avg. 22 Sd	1472	3.8	1.26	1.84	1.55
Average Extreme Spread:						1.32
Measured average velocity for 10 rounds from a 24" barrel. Range temperature: 64° F. Humidity: 81%. Accuracy for five consecutive, five-shot groups at 100 yds. from a sand-bag. Abbreviations: HP (hollow-point), JHP (jacketed hollow-point), Sd (standard deviation)						



conveniently to new vantage points or calling areas. And since predators rely heavily on their eyesight, the barrel would be bead-blasted to a dull finish so it wouldn't reflect light and give away your presence. The barrel would be of stainless steel for durability and

would be free-floated for greater accuracy. The action would be glass-bedded tightly in a tough synthetic or laminated hardwood stock.

Since most shooting is expected to be from the sitting position, the rifle needs sling swivel studs for attaching a bipod along with the carrying sling. For the occasional target of opportunity where you can't deploy the bipod in time, the fore-end has to be wide and stable for resting on impromptu rests such as fence posts or tree limbs.

While Winchester's Model 70 Coyote rifle doesn't meet all of the above criteria *exactly*, it does come very close. Brown laminated hardwood is the only stock option on the Coyote, and we'd prefer that the action be glass-bedded and the barrel free-floated. The fore-end tip of the Coyote does provide upward pressure on the barrel, however, which can improve accuracy in many cases. As with most currently

manufactured factory rifles, the trigger on the sample Coyote we received wasn't particularly good: It took 5¼ lbs. pull to fire. There was no take-up, and the break was clean. Such "shortcomings," if you can call them that, are very easily remedied.

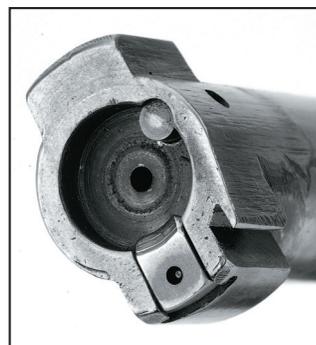
We recently had the opportunity to try a Coyote in the field—not on predators, but on ground squirrels. In the places where these rat-size rodents live, they're abundant and regarded as pests. The ground literally teems with them, and it's not uncommon for an area measuring 6'x6'

that rifle prairie dog hunting in Wyoming, firing more than 300 rounds of Hornady, Black Hills and Norma ammunition during two days without a single hitch. Shots were in the 125- to 250-yd. range, and the medium-contour barrel did not heat up to the point that accuracy degraded. We fitted that rifle with a Nikon Monarch UCC 5.5-16.5x44 mm scope and tested it with results shown in the accompanying table. Since we had such great success in the field with Winchester's new USA brand ammunition, we chose it as one of our test loads as well.

Best accuracy from the Model 70 Coyote will be realized with lighter bullets because of the



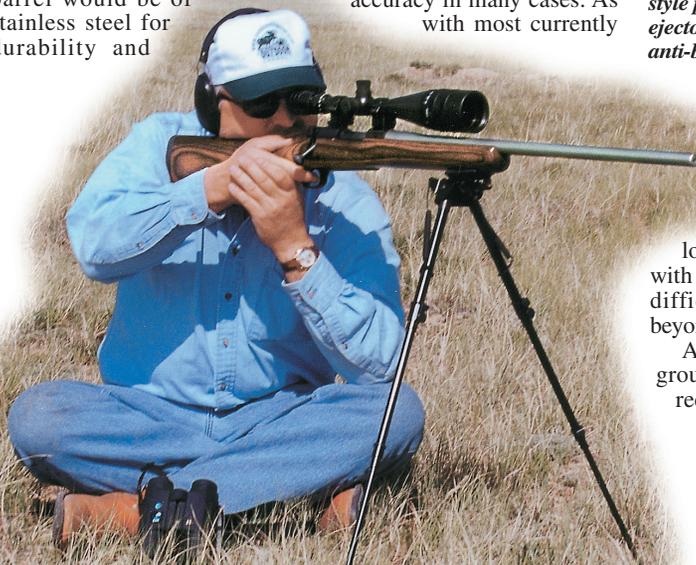
*The Model 70 action is drilled and tapped for scope bases (not included). Since predators rely heavily on their eyesight, the stainless steel barrel is bead-blasted to reduce glare. The Coyote's bolt has two locking lugs and features the post-'64-style push-feed and plunger ejector (r). The 1968-vintage anti-bind system is retained.*



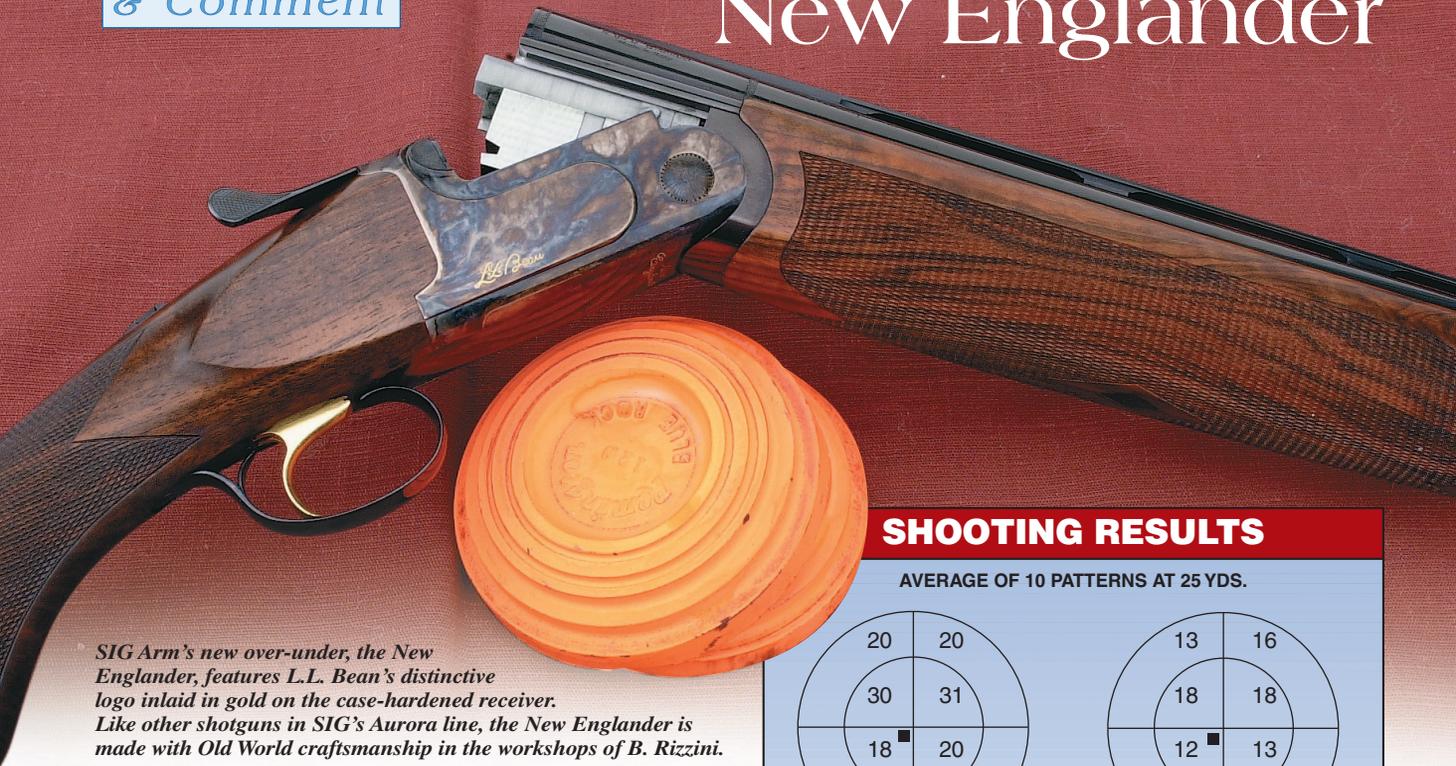
to contain half a dozen squirrel holes. Over a weekend of continuous firing, there were no malfunctions with the Model 70 Coyote. Its long-range potential showed with regular hits on the small, difficult targets at distances beyond 250 yds.

After the weekend of ground squirrel shooting, we received a different Coyote for accuracy testing. Another staffer took

barrel's slow rate of twist. We'd like to see a little more emphasis on the Coyote's trigger pull and have its action glass-bedded. Overall, the Coyote is an effective hunting rifle that serves its purpose well as a tool for predator control or the fur trade. It can also serve double duty as an occasional varmint or informal target rifle and, in .243 Win. caliber, wouldn't be a bad choice for hunting game the size of deer from a stationary blind. 



# L.L. Bean New Englander



*SIG Arm's new over-under, the New Englander, features L.L. Bean's distinctive logo inlaid in gold on the case-hardened receiver. Like other shotguns in SIG's Aurora line, the New Englander is made with Old World craftsmanship in the workshops of B. Rizzini.*

**S**IG Arms' new over-under shotgun is an L.L. Bean special edition appropriately named the New Englander and available in 12 or 20 ga. Mechanically, the New Englander follows the design first seen from SIG in 1998 in its SA5 Upland Hunter (Feb. 1998, p. 42) and more recently in the current SIG Aurora line. Like the earlier SIG shotguns, the New Englander is made on state-of-the-art equipment with Old World craftsmanship in the Val Trompia, Italy, workshops of B. Rizzini.

The design employs a conventional boxlock action built on the monobloc principle; and on the New Englander, the bloc is finely jeweled. At the upper

front edge of the standing breech are a series of reliefs that blend around the sides of the action to form false partial sideplates. Inside the action, top-mounted sears are tripped by an inertial block that is moved back from the sear by the manual safety button when on "safe." A barrel selector built into the safety button pivots the inertial block to select which barrel to fire first. Additional features common with SIG's other shotguns include the Browning-style, single lug lockup; chrome-lined bores; selective, automatic ejectors; five changeable choke tubes; and steel shot compatibility.

Embellishment is the real feature that distinguishes the L.L. Bean New Englander from its stablemates. For its stock, the L.L. Bean New Englander has select Turkish walnut with a rich, hand-rubbed, oil finish. The pores of the wood on our sample were not completely filled, lending more character to the stock that is further augmented by moderate figure and 20-line-per-inch,

hand-cut checkering on the wrist, semi-pistol grip and fore-end. Compared with the SA5, more attention to detail and wood-to-metal fit is obvious on the New Englander. For example, there is no proud wood around the top tang, though one or two more finishing passes to the wood around the trigger would be welcome.

While the SA5 had false sideplates heavily embellished with engraved game bird scenes, the New Englander takes a more conservative approach to decoration. "Classy" best describes the color case-hardened finish of the receiver. Contrasting nicely with the case finish are gold-filled L.L. Bean logos on each

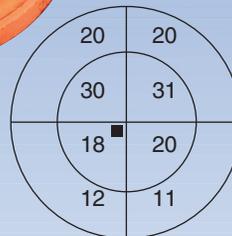
Attachment of the fore-end is by an Anson push rod-type latch. The small release button at the end of the fore-end is engraved with a "bull's eye" similar to the ejector rods of early Colt 1873 revolvers.



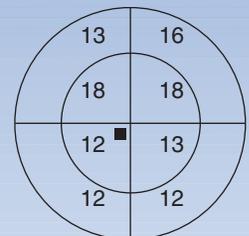
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## SHOOTING RESULTS

AVERAGE OF 10 PATTERNS AT 25 YDS.



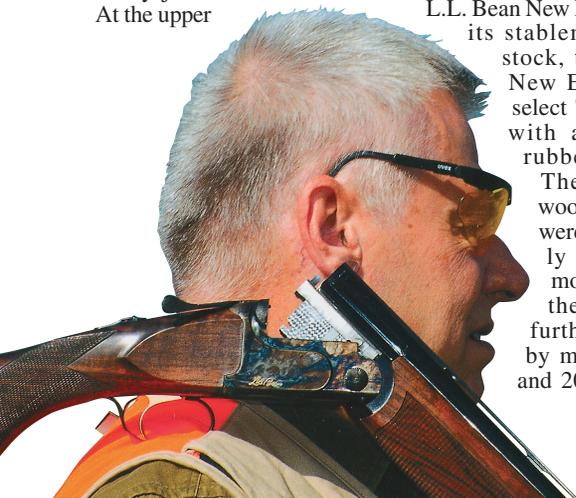
Modified Tube



Improved Cylinder Tube

■=Point of Hold  
Federal P128—12-ga.,  
2 1/4"—1 1/4 oz.—No.6 Lead  
Average Pellet count—353  
Measured Velocity @3-ft.—1352 ft.p.s.  
Remaining Energy Per Pellet @40 yds.: 3 ft.-lbs  
Recoil: 30.2 ft.-lbs

Total Hits	162 (64%)	Total Hits	114 (45%)
21" Inner Circle	99 (39%)	21" Inner Circle	61 (24%)
30" Outer Ring	63 (25%)	30" Outer Ring	53 (21%)



## L.L. BEAN

**MANUFACTURER:** Battista Rizzini, Via 2 Giugno, 7/7Bis-25060, Marcheno (Brescia) Italy

**IMPORTER:** SIG Arms, Inc. (Dept. AR), Corporate Park, Exeter, NH 03833; (603) 772-2302; www.sigarms.com

**GAUGE:** 12, 3" (tested), 20, 3"

**ACTION TYPE:** boxlock, over-under shotgun

**RECEIVER:** color case-hardened steel

**OVERALL LENGTH:** 43¼"

**BARREL:** chrome-lined, 26" (tested) or 28"

**FINISH:** color case-hardened receiver, blued barrels

side and "New Englander" on the bottom of the receiver. Also gold colored is the trigger while the barrels, trigger guard, top latch and fore-end iron are blued.

Attachment of the fore-end is by an Anson push rod-type latch. The small release button at the end of the fore-end is engraved with concentric rings forming a "bull's eye" like the ejector rods of some engraved early Colt Model 1873 revolvers. Lady staff members



*Inside the action, top-mounted sears are tripped by an inertial block retracted from the sears by the manual safety button when on "safe." A barrel selector is incorporated into the safety button.*



**TRIGGER:** single, selective, gold-plated; 4½-lb. pull, both barrels

**STOCK:** oil-finished Turkish walnut: length of pull, 14¾"; drop at heel, 2¾"; drop at comb, 1¼"

**WEIGHT:** 7 lbs.

**ACCESSORIES:** five steel shot-compatible interchangeable choke tubes, tube wrench, fitted aluminum case.

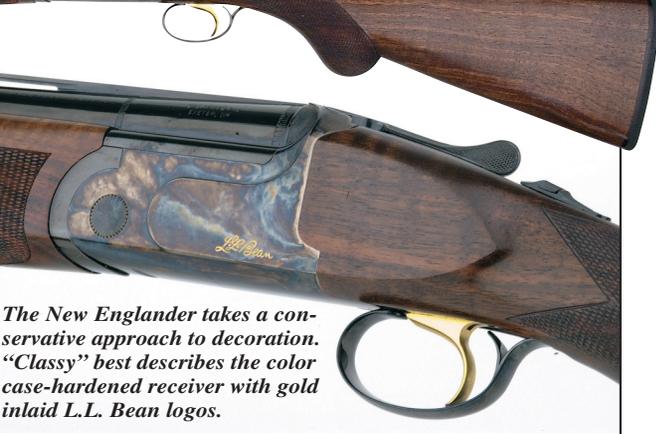
**SUGGESTED RETAIL**

**PRICE:** \$1,995

in the office who shoot commented that this fore-end attachment system reduces the chances of breaking a nail when disassembling the shotgun.

Concealing the front attachment point of the fore-end iron is a centrally located, blued steel diamond. Barrels are available in 26" or 28" lengths with solid side and ventilated top ribs. A single, brass front bead tops the cross-hatched, straight, 7 mm rib.

We found the SIG Arms L.L. Bean New Englander to be a very lively gun. There is no cast, but the toe out of the stock caused us to mount it in such a way that we were sighting straight down the rib. Size of the fore-end is deceptive, as it looks like it should feel a lot bigger than it does. It's also a little light,



*The New Englander takes a conservative approach to decoration. "Classy" best describes the color case-hardened receiver with gold inlaid L.L. Bean logos.*

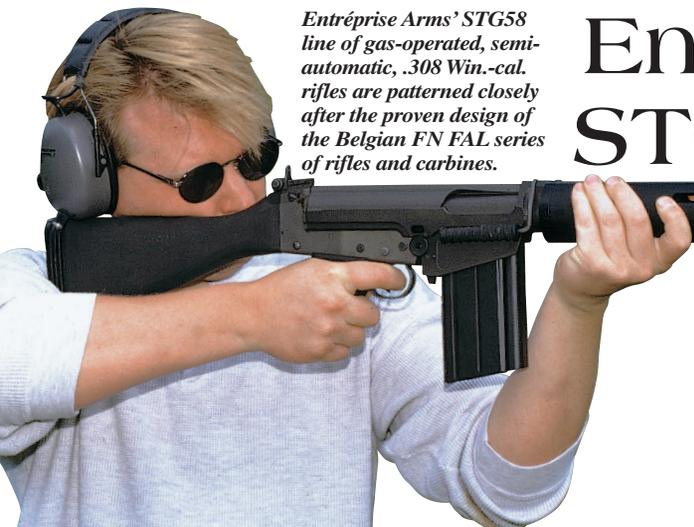


*The design employs a conventional boxlock action built on the monobloc principle, and on the New Englander, the monobloc is jeweled. Lockup is by a Browning-type single lug.*

which helps make the muzzles more responsive on flushing birds. Patterning was at 40 yds. using the modified and improved cylinder choke tubes with the results shown in the accompanying table. There were no malfunctions of any kind here or while function firing. Trigger pulls on our sample were crisp and sure, and recoil was modest despite the thin, solid rubber recoil pad.

While the New Englander is

quite lively, it nonetheless swings smoothly while tracking a clay bird. Those who favor a more muzzle-heavy balance should not find it too flighty, either. In sum, the SIG Arms L.L. Bean New Englander will appeal to those who appreciate a well-made arm with the classy look of tastefully restrained receiver decoration. Those who regard the shotgun as a tool on the level of a hammer will probably remain indifferent. 



*Entréprise Arms' STG58 line of gas-operated, semi-automatic, .308 Win.-cal. rifles are patterned closely after the proven design of the Belgian FN FAL series of rifles and carbines.*

## Entréprise Arms STG58C Carbine

**M**ore than 90 countries adopted the seminal, Belgian-designed, FAL rifle for military service. Versions of the FAL have been manufactured in Argentina, Australia, Austria, Belgium,

Brazil, Canada, India, Israel, Mexico, South Africa, Great Britain and Venezuela. In recent years, the United States has been added to the list, and one of the more prominent makers of the domestic FAL is Entréprise Arms Inc.



Located in Irwindale, Calif., Entréprise Arms, Inc., best known for its M1911-based pistols, is fairly new to the manufacture of long guns. It currently offers semi-automatic-only versions of the FAL military rifle for sale to civilian and law enforcement customers. Called the STG58, Entréprise Arms FAL rifles are made entirely in the U.S. to metric standards from new parts. At present,

Two different metric receiver types are manufactured: Type 01 (military version with lightening cuts to mil specs) and Type 03 (without lightening cuts). Both types are semi-automatic-only. Basically, the Government, Carbine, Target and Match Target models are made with the Type 01 receiver while all other models feature the Type 03 receiver. All Entréprise Arms

*The upper and lower receivers of the STG58 are hinged together at the front. This makes disassembly for cleaning and routine maintenance fast and easy without requiring special tools.*



Entréprise Arms offers seven different FAL/STG58 models on two different receiver types for civilian sale: Scout, Carbine, Lightweight, Standard, Government, Target and Match Target. For law enforcement customers, Entréprise offers the STG58 Police Carbine and Police Target. We received an Entréprise Arms STG58C Carbine for test and evaluation.

Entréprise manufactures receivers for all of its STG58 rifles in-house on state-of-the-art equipment using heat-treated 4140 chrome-moly steel.

STG58 rifle models are chambered for .308 Win.

Entréprise STG58s share four features developed by the firm. First are "billet" internal parts precision-machined from a solid piece: hammer, sear, gas piston and ejector block. Second and third, all Entréprise STG58 rifles feature a "mil-spec," black oxide metal finish and a legal pistol grip. Lastly, all civilian models are factory-equipped with the Entréprise ZeroClimb muzzle device. Most models also feature a folding, insulated carry

handle, sling swivels and a black nylon sling. The Standard, Government, Scout, and Police Target models come equipped with a folding bipod. Because of legislation passed in 1994, Entréprise Arms STG58 rifles are not equipped with bayonet lugs.

The Entréprise ZeroClimb muzzle device is a 3" long unit combining the functions of a muzzle brake and compensator into one. This is accomplished by three .310" diameter holes drilled at a 90 degree angle on the sides of the device to deflect high-pressure muzzle gases to both sides thus reducing perceived recoil. In addition, two similar diameter holes are drilled in the top front of the device (but not the bottom) to deflect high-pressure muzzle gases upward to combat muzzle rise. We found the compact device worked as advertised, reducing perceived recoil and muzzle rise substantially.

Another unique feature is the rifle's aluminum, free-floating, ventilated, front handguard. Our test model Carbine was so equipped. Machined from heavy-wall, extruded aluminum tubing, the Entréprise handguard isolates the barrel by eliminating external forces and pressure points for increased accuracy and more consistent performance. Slotted at the top, it is cut with three 1¼"-long oblong vents on either side and five .370"-diameter holes on the bottom. The black anodized handguard effectively protects the shooter's hand from barrel heat, however, we recommend more vents and holes in the handguard to allow faster barrel cooling. While we liked the rigidity

## STG58C

### MANUFACTURER:

Entréprise Arms  
(Dept. AR),  
15861  
Business  
Center Drive, Irwindale,  
CA 91706; (626) 962-  
8712; www.entreprise.com

### CALIBER:

.308 Win.  
**ACTION TYPE:** gas-operated, semi-automatic, center-fire rifle

### RECEIVER:

4140 chrome moly steel

### FINISH:

black oxide

### OVERALL LENGTH:

38½"

### BARREL:

16½" (18" with muzzle brake)

### RIFLING:

four groove, conventional, 1:12" RH twist

### MAGAZINE:

detachable, 20 round capacity

### WEIGHT:

10 lbs.

### SIGHTS:

elevation adjustable post front, aperture adjustable for elevation, ramp rear drift adjustable for windage

### TRIGGER:

two stage, non-adjustable, 10½ lb. pull

### STOCK:

black synthetic; length of pull: 14½"; drop at heel, 3/4"; drop at comb, 3/4"

### ACCESSORIES:

one 20-round double-column magazine, black nylon sling; three piece tool kit optional at additional cost

### SUGGESTED RETAIL

PRICE: \$1,399

and hand-filling size of the 2¼" diameter unit, some did not care for the 1/2 lb. plus of extra weight it added—though it did help tame recoil. Some found the fore-end to be slick, and lightly knurling or stippling the outer surface would allow additional purchase. For those shooters with very small hands, the standard, ribbed handguard may be a better choice.

Both buttstock and the separate pistol grip are made of black synthetic material having a non-reflective, matte finish. The detachable pistol grip is hollow to keep weight to a minimum and uncheckered. It is nicely

angled for comfort while firing. A unique feature of the buttstock is the plastic butt pad that can be trimmed to reduce stock pull length. The pad is marked on the exterior sides with ribs

*We found the Entréprise Arms STG58 rifle well-made, reliable and accurate with low perceived recoil.*



## SHOOTING RESULTS

.308 Win. Cartridge	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Recoil (ft.-lbs.)	Smallest (inches)	Largest (inches)	Average (inches)
PMC No. 308D 168-gr. FMJ-BT	2327 Avg. 9 Sd	2021	10.2	1.48	3.21	2.35
Hornady No.8097 168-gr. HPBT	2361 Avg. 10 Sd	2080	10.5	1.02	2.62	1.97
Black Hills No.308-175 175-gr. HPBT	2350 Avg. 17 Sd	2147	10.6	1.54	1.76	1.62
Average Extreme Spread:						1.98
Measured average velocity for 10 rounds from a 16½" barrel. Range temperature: 68° F. Humidity: 83%. Accuracy for five consecutive, five-shot groups at 100-yds. from a sand-bag. Abbreviations: Sd (standard deviation), FMJBT (full metal jacket-boattail), HPBT (hollow point-boattail)						



*The STG58 has a two-position safety lever on the left side of the lower receiver. In the safe position the pointer will be in the upper right position marked "S."*

3/16" apart, and the top and bottom surfaces are angled to match the buttstock contour. Approximately 5/8" total can be trimmed from the pad thickness enabling the pull length to be reduced from 14 1/2" to 13 1/2".

The iron, battle sights are calibrated for 7.62x51 mm NATO M80 ball ammunition with 144 to 150 gr. FMJBT bullets. The front unit is a protected post adjustable for elevation by turning it up or down with a front sight adjustment tool. The rear sight is a .060" diameter peep type that slides on inclined rails to adjust elevation from 200 to 600 meters. In addition, the rear sight base is mounted on a dovetail cut into the receiver that allows for windage adjustments. Two lock screws hold the sight base in whatever windage position is selected. Optionally available is an aluminum top cover with an integral, Picatinny rail-type scope mount base. We mounted and used such a cover for accuracy testing.

As appropriate for a battle rifle, the STG58 has a non-adjustable, two-stage trigger. Following initial slack of about 3/16", take-up length is a short 1/8" followed by a consistently crisp let-off. However, trigger pull was a heavy 10 1/2 lbs. that proved tiring and somewhat detrimental to accuracy.

Operation follows that of the original FAL. Gas is bled from a hole in the upper surface

of the barrel about 11" from the bolt face and enters a gas block assembly with a 13-position adjustable regulator. The expanding gas then drives the piston, bolt carrier and bolt rearward. Excess gas is exhausted to the atmosphere. The gas regulator enables the

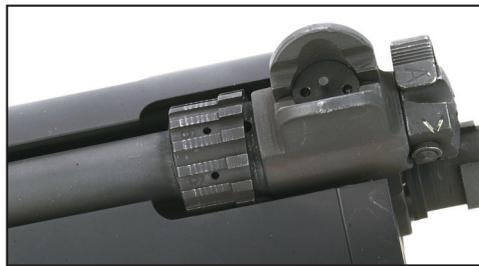
STG58 to be adjusted for different loads, temperature extremes and operating conditions. As the bolt carrier and bolt move rearward, the bolt is cammed upwards, unlocking it from the receiver. Both bolt carrier and bolt then continue to travel rearward against the captive recoil spring in the buttstock, compressing it. The bolt carrier and bolt then travel forward under tension from the recoil spring, stripping the top cartridge off the magazine, chambering it, then tilting the bolt downward to lock.

As many American shooters will not be familiar with an adjustable gas regulation system, the adjustment process is simple and expedient. First, turn the regulator clockwise until it bottoms against the gas block. Next, rotate the regulator one full turn to the full-open position so that the figure "7" on the sleeve is aligned with the bore axis. Insert the empty magazine then fire one round after which the bolt will not remain open. Turn in the regulator sleeve clockwise click by click, firing one round after each adjustment, until the hold-open device engages the bolt. Verify the setting by firing several more rounds.

When clean, the regulator sleeve can normally be turned by hand. Use caution here:

The regulator gets *hot*. With firing, the regulator sleeve may accumulate carbon and powder residue, making it necessary to use the nose of a cartridge or the special wrench to turn the regulator. We did not find it necessary to adjust the regulator once set.

The STG58 has several nice ergonomic features. For example, the gas system is located above the barrel, which enables a low bore axis to help control recoil. The operating rod handle located on the left side of the receiver does not reciprocate with the bolt carrier—a nice feature that eliminates the possibility of the handle striking the shooter's hand. And, the bolt is held open after the last shot has been fired. Also, there is a small lever



*Shooters will find the adjustable gas regulator system on the Entréprise Arms STG58 very easy to adjust.*

under the magazine release that can be used to hold the bolt open if there is no magazine in the rifle.

The STG58 can be field-stripped for cleaning or maintenance in seconds without tools—a welcome feature in the field or on the range. Simply pressing a lever on the left rear of the receiver allows the lower receiver to pivot away from the upper receiver, exposing the interior of the mechanism. The bolt assembly easily slides out the rear of the upper receiver. Doing so

the high order of workmanship, excellent fit and even finish of the STG58. While the STG58 is not an expensive, custom hunting rifle, it is a well-designed and well-made rifle that proved extremely reliable. It is also one of the handiest .308 Win. semi-auto rifles we have encountered.

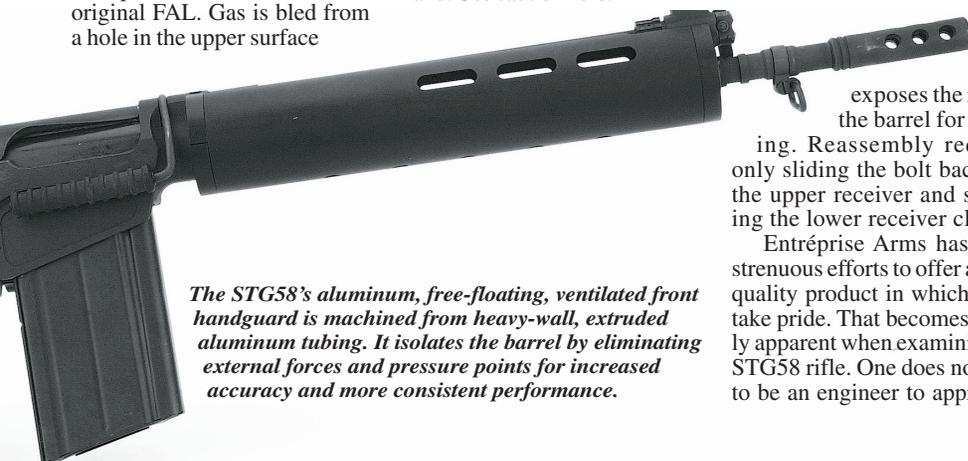
After adjusting the gas regulator as per the instructions, we fired approximately 200 rounds of M80 military ball ammunition from various sources for break-in. They were fired without incident. As we were interested in determining the effect of the short, 16 1/2" barrel on muzzle velocity, we fired 10 rounds of each type through the chronograph. We found that the short barrel had a significant effect

(for example a drop of 273 f.p.s., or 10 1/2 percent) from specifications of 2600 f.p.s. in a 24" barrel with the PMC loads) on muzzle velocity. However, for purposes of self-defense, informal target shooting and law enforcement, the loss in muzzle velocity would not be important. Next, we tested the STG58 for accuracy using several

types of factory-loaded, match-grade ammunition with 168- and 175-gr. HPBT bullets. Once again, our concern was the effect the short barrel might have on accuracy. We need not have worried as accuracy proved very good for a rifle of its type. As a matter of fact, the STG58 is the most accurate FAL variant tested in the pages of the "Dope Bag" to date.

Firing battle rifles in formal and informal competition is excellent marksmanship training that is made easier by using a high-quality rifle such as the Entréprise Arms STG58. The quality workmanship and STG58's proven design should give many years of reliable service. Its .308 chambering and durability make it well suited for the role of a "ranch rifle" as well. Shooters of small stature will appreciate the low perceived recoil by virtue of the ZeroClimb muzzle brake.

With nine different models to choose from, Entréprise Arms offers an STG58 for every requirement.



*The STG58's aluminum, free-floating, ventilated front handguard is machined from heavy-wall, extruded aluminum tubing. It isolates the barrel by eliminating external forces and pressure points for increased accuracy and more consistent performance.*

exposes the rear of the barrel for cleaning. Reassembly requires only sliding the bolt back into the upper receiver and swinging the lower receiver closed.

Entréprise Arms has made strenuous efforts to offer a high-quality product in which it can take pride. That becomes readily apparent when examining the STG58 rifle. One does not have to be an engineer to appreciate

# Cabela's Starr Revolver

Compared with other Civil War-era percussion revolvers like those from Colt's and Remington, the Starr is little known. That's surprising, as nearly 48,000 various models of Starr revolvers were ordered by the Union making Starr the third largest revolver supplier during the War Between the States. The first of these Starrs were double-action, .36-cal., 1858 Navy models followed by a similar revolver in .44 cal. called the 1858 Army.

Starr developed what some have called the most modern revolvers of its time. Notable features include a sliding trigger switch on the rear of the cocking lever, or front trigger, for selecting single- or double-action operation. The trigger proper is a small protrusion in the rear of the trigger guard. With the trigger switch in its uppermost position, several things happen when you pull the cocking lever. First, the cylinder stop lowers to release the cylinder. Next, the hammer jumps back to its "half-cock" position and the substantial hand starts to rise and rotate the cylinder.

The hammer continues back to full cock while a lug on the rear of the trigger tips up into a locking recess in the rear of the cylinder. As the cocking lever comes fully back, a hump on the trigger switch depresses the trigger stub releasing the hammer to strike the percussion cap and firing the revolver for essentially double-action operation.

Sliding the trigger switch down puts the Starr in single-action mode in which the hammer is *not* intended to be manually thumbed back. In this condition, you again use the cocking lever, and all of the above double-action motions happen the same until the cocking lever reaches its rearmost position. This time, the hump on the trigger switch that depressed the trigger in double-action mode instead makes contact with the frame inside the trigger guard and arrests any further rearward

movement of the cocking lever. At this point, the hammer is held in its full-cock position. The shooter simply releases the cocking lever, causing the cylinder stop to rise up into the cylinder notches and manually depresses the small trigger to fire single-action.

The two-piece frame is hinged at the front, and secured at the top of the standing breech by a bolt that allows quick and easy removal of the cylinder for cleaning.

Revolvers of that era were generally designed with the cylinder rotating around a central pin. Blackpowder fouling quickly gums up the works with such a design, causing the cylinder to bind. Colt's addressed the problem with a spiral fouling groove cut in the pin while others, such as Remington, simply made the pin undersize. Starr's approach was to dispense with the troublesome central pin entirely.

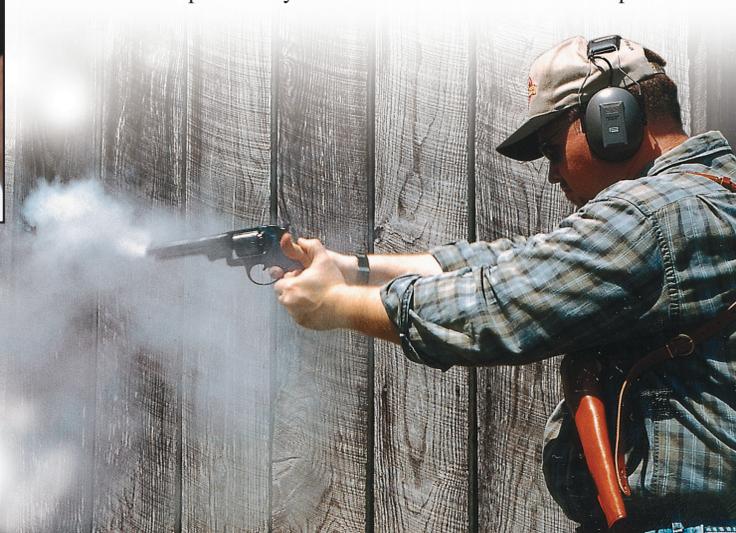
Instead, Starr revolvers have a large ratchet at the rear of the cylinder that fits in a circular recess in the standing breech, and a cone-shaped, central bearing pin at the front of the cylinder that fits in the frame below the barrel. Fouling generally doesn't find its way into the ratchet, and the bearing pin is essentially self-cleaning. The designed proved itself successful during a test in March 1863 when Lieutenant Commander J.S. Skerrett report-



*A throughbolt secures the hinged, two-piece frame at the top of the standing breech. It is easily removed for cleaning.*



*The front "trigger" is the cocking lever. It functions as the trigger when the Starr is in the double-action mode. The trigger proper is the small tab in the rear of the trigger guard.*





*Cabela's offers a reproduction of the double-action Starr 1858 Army revolver. Starr was the third largest supplier of revolvers during the American Civil War.*

## STARR 1858

**MANUFACTURER:** F. LLI Pietta snc, Via Mandolossa 102, I-25064 Gussago (BS), Italy  
**IMPORTER:** Cabela's (Dept. AR), One Cabela Drive, Sidney, NE 69160; (800) 237-4444; www.cabelas.com

**CALIBER:** .44  
**ACTION TYPE:** double- or single-action blackpowder, cap-and-ball revolver  
**CONSTRUCTION:** carbon steel

**FINISH:** high-polish blue

**OVERALL LENGTH:** 11½"

**BARREL:** 6"

**RIFLING:** seven-groove, RH twist

**WEIGHT EMPTY:** 47 ozs.

**WIDTH:** 1½"

**HEIGHT:** 5¾"

**SIGHTS:** notch in hammer rear, blade front

**TRIGGER:** selective single- or double-action; single-action, 6-lb. pull; double-action, 13½ lb. pull

**STOCKS:** one-piece, satin-finished walnut

**ACCESSORIES:** Optional starter kit containing 100 lead roundballs, nipple wrench, spare nipples, capper, flask and Spit Ball Lube available

**SUGGESTED RETAIL**

**PRICE:** \$300

(\$340 with starter kit)

## SHOOTING RESULTS

.44 Caliber	Vel. @ 15'	Energy (f.p.s.)	Recoil (ft.-lbs.)	Smallest (inches)	Largest (inches)	Average (inches.)
Speer .451" lead roundballs one Quick Shot pistol pellet CCI No. 11 percussion caps	878 Avg. 80 Sd	197	4.3	4.12	8.12	5.85
Hornady .451" lead roundballs 20-grs. Goex FFFg Clear Shot CCI No. 11 percussion caps	420 Avg. 44 Sd	45	1.1	1.67	3.41	2.87
Hornady .451" lead roundballs one Pyrodex Pistol Pellet Ox-Yoke Wonder Wads CCI No. 11 percussion caps	629 Avg. 69 Sd	101	2.9	2.77	5.36	4.37
Average Extreme Spread:						4.36
Measured average velocity for 10 rounds from a 6" barrel. Range temperature: 64° F. Humidity: 66%. Accuracy for five consecutive, five-shot groups at 25 yds. from a sandbag. Abbreviations: Sd (standard deviation)						

edly fired 6,314 shots without cleaning while experiencing a total of only 22 failures—and they were attributed to faulty percussion caps.

Cabela's offers a reproduction of the 1858 Army model, .44 cal. Starr revolver that we recently received for test and evaluation. Style and operation of the reproduction follow that of the original Starr.

The service load for the Starr is reported to have been 20-grs. of blackpowder, so we chose that load except we used Goex's new FFFg Clear Shot powder. We also tested loads using Pyrodex Pistol Pellets and Quick Shots Pistol Pellets. Accuracy results using Hornady and Speer lead roundballs are shown in the accompanying table. We experienced only one annoying problem: Even with the hammer in the half-cock position, which allows the cylinder to turn freely, we still had to slightly depress the trigger to lower the cylinder stop out of the cylinder notches so the cylinder could turn. That is mentioned in the owner's manual, and should not be con-

sidered a malfunction. One of the six chambers of our test revolver was also slightly out of time, though the inertia of the turning cylinder in the double-action condition compensated enough to snap the cylinder into position. Timing was not an issue in single-action mode as the cylinder stop in that mode is triangular in cross section and engages cylinder notches that are triangular in cross section. Such an arrangement automatically rotates the cylinder into position if timing causes it to come up a little short.

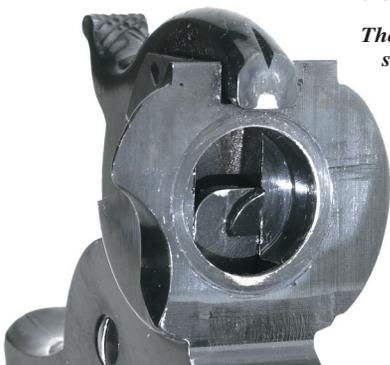
Fairly accurate shooting was possible despite the traditional cap-and-ball revolver sights. On the Starr, a very shallow notch in



the hammer serves as the rear sight, while the front is a fine blade dovetailed into the barrel. Windage adjustments are possible by drifting the front sight, and bullet impact can be raised by filing down the front sight. We experienced several initial misfires. Cap-and-ball revolvers typically use No. 10 size percussion caps. Those would not seat fully on the Starr's nipples, so the hammer impact seated the caps instead of exploding them. We had no problems when we switched to No. 11 caps.

The original service load is one of the more anemic loads we've used, but was the one

*The cylinder is rotated by a substantial hand engaging the rear ratchet. Cylinder lock-up is conventional in the single-action mode. In double-action, a lug on the rear of the trigger tips up into a locking recess in the rear of the cylinder.*



best-suited to and most accurate in Cabela's reproduction of the Starr. Sights were perfectly regulated for that load, printing relatively small groups right at point of aim. Pellet-powered loads were not as accurate and placed shots about a foot high.

Original Starr revolvers met with mixed reviews during the Civil War. Clearly, those who took purchasing decisions for the Union were impressed enough to buy them in quantity. Different reports came from the field, however. One officer from the 12th Kentucky reportedly suggested that Starr and the contractor who bought his revolvers be "hanged as traitors!" We agree that using the Starr in single-action mode is not nearly as natural as thumbing back the hammer of a Colt. On the other hand, had we been the testers of the Starr revolver 137 years ago, we may have recommended it, too. Beyond its functional abilities, Cabela's Starr 1858 Army model revolver gives blackpowder enthusiasts and Civil War re-enactors an interesting alternative to Colt's and Remington revolvers. 