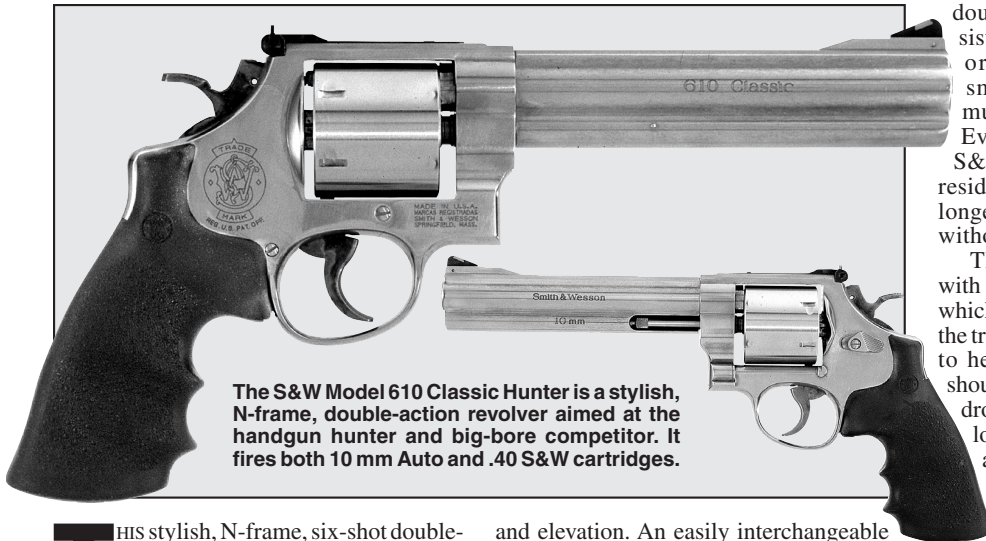


# DOPE BAG

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."

CAUTION: 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.

## S&W MODEL 610 CLASSIC



The S&W Model 610 Classic Hunter is a stylish, N-frame, double-action revolver aimed at the handgun hunter and big-bore competitor. It fires both 10 mm Auto and .40 S&W cartridges.

double-action pull was notable for consistency and predictable letoff. Inserting or removing full-moon clips was smooth and jam-free (they act very much like speed loaders in this respect). Even after firing many rounds of .40 S&W ammunition, which left powder residue in the front of the chambers, the longer 10 mm Auto cartridges chambered without difficulty.

The Model 610 revolver is equipped with S&W's hammer-block safety system, which prevents the gun from firing unless the trigger is pulled. This feature is designed to help prevent an accidental discharge should a loaded revolver be inadvertently dropped or struck. A key-operated trigger lock is included with every Model 610—and every other Smith & Wesson for that matter—whether you want it or not. In addition, the hard, blue, plastic case can be locked and the illustrated owner's manual contains numerous safety warnings and tips.

A couple of nagging, though minor, problems did crop up during the course of our evaluation of the Model 610. First, the full-moon clips are difficult to fill and even harder to clear after firing. Snapping the clips into the cartridge's extractor grooves proved a painful thumbbuster as the clips seemed considerably undersized and did not loosen with use. In our experience, the stubby .40 S&W cases were worse than the longer 10 mm Auto cartridges in this respect. The cartridge extractor groove slots in the full-moon clips need to be slightly

**T**HIS stylish, N-frame, six-shot double-action revolver is aimed at handgun hunters and big-bore competitors. Chambered for the powerful 10 mm Auto cartridge, the S&W Model 610 will also fire .40 S&W ammunition using moon clips. Configured with a full-lug, 6½" barrel and an unfluted cylinder, the Model 610's empty weight tops 52 ozs.

Constructed of stainless steel, the Model 610's exterior surfaces—the barrel, frame and cylinder—feature a low-maintenance, natural, satin finish. The target hammer and target trigger retain their case-hardened colors, which contrast nicely with the frame. The factory-supplied stocks are comfortable Hogue units of black rubber with finger grooves and surface stippling.

The blued, standard S&W rear sight is micrometer click-adjustable for windage

and elevation. An easily interchangeable front blade enables the shooter to match the characteristics of the ammunition and target. For those who favor optical sights, the Model 610's frame is drilled and tapped for scope mounts.

After firing hundreds of rounds through the Model 610 without a hitch, several characteristics became evident. First, the Model 610 is comfortable to shoot even with heavy 10 mm Auto loads. Perceived recoil is modest due to the long, heavy-weight barrel and is easily controlled thanks to the comfortable stocks. Despite the full-lug barrel, the gun balances well and does not feel muzzle heavy. We found the single-action trigger pull crisp and pleasant out of the box. The



A full-length barrel lug, unfluted cylinder and Hogue finger-groove rubber stocks contribute to the low perceived recoil of the S&W Model 610 revolver. The 610 also features S&W's new, more-ergonomic cylinder release on the left side of the frame.

### MUZZLE VELOCITY COMPARISON

Caliber	Bullet Brand	Bullet Weight (grs.)	Catalog Muzzle Vel. @15' (f.p.s.)	Actual Muzzle Vel. @15' (f.p.s.)	Diff. (f.p.s.)	Diff. (%)
.40 S&W	Triton	135	1325	1453	+126	+9.6
.40 S&W	Winchester	155	1205	1297	+92	+7.6
.40 S&W	PMC	165	1010	1125	+115	+11.4
.40 S&W	Black Hills	180	1000	1012	+12	+1.0
10 mm	Federal	155	1330	1365	+35	+2.6
10 mm	CorBon	165	1250	1333	+83	+6.6
10 mm	Winchester	175	1290	1233	-57	-4.5

Actual velocities taken from Model 610 at 15' using an Oehler Model 43 chronograph. Factory velocities taken from published sources.

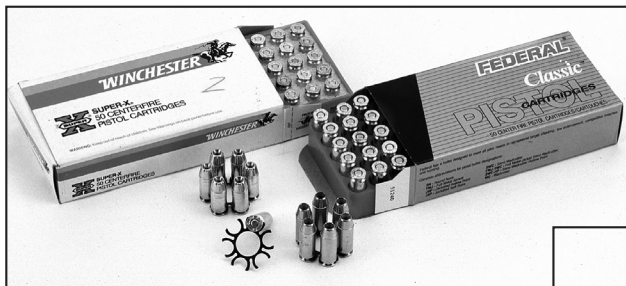
larger in diameter.

Fortunately, Ranch Products—(Dept. AR), P.O. Box 145, Malinta, OH 43535—offers a tool that makes the job of removing the cases easier and far less painful.

The short, sharp (but not heavy)

recoil of the full power 10 mm Auto cartridges caused a moderate amount of muzzle flip, even with the fully lugged 6½" barrel. Adding compensator ports to the barrel near the muzzle would further lower perceived recoil and could well transform the Model 610 into an outstandingly stable shooter.

Recesses for the cylinder stop are cut into the thinnest parts of the chamber walls. Certainly, S&W's engineering staff has considered this carefully and found it safe. Other revolver manufacturers, however, have moved the stop recesses to a position between the chambers where the metal is thicker.



S&W's Model 610 double-action revolver can fire .40 S&W or 10 mm Auto ammunition using metal moon clips. Three full-moon clips are supplied with the gun. The 10 mm Model 610 allows shooters to fire .40 S&W loads through it for relatively inexpensive—and more pleasant—target practice, much akin to firing soft-recoiling .44 Spl. loads through a .44 Mag. cal. revolver.



Muzzle energy levels of 10 mm Auto ammunition when fired through the Model 610 place it between the .357 Magnum and the .41 Magnum. This would certainly be suitable for hunting varmints and small game as well as many species of larger game at typical handgun hunting ranges.

The barrel cylinder gap in the Model 610 revolver did not contribute significantly to velocity loss. In fact, the long 6½" barrel more than made up for whatever loss did occur because of the gap. Factory ballistics for .40 S&W and 10 mm Auto are developed in much shorter 4" to 5" barrels. The longer barrel of the Model 610 enables these loads to actually exceed factory catalog velocity levels by as much as 11 percent. A brief comparison of published factory velocities vs. those turned out by the Model 610 with an Oehler Model 43 is listed in the accompanying table.

In terms of price, the Model 610 is slotted 2 percent higher than the .44 Mag. cal. Model 629 Classic stainless, but is fully 21 percent higher than the .41 Mag. cal. Model 657 stainless.

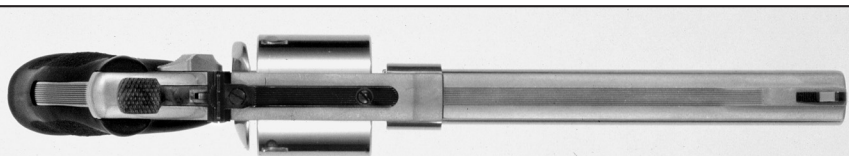
The S&W Model 610 Classic will no doubt appeal to handgun hunters by virtue of its excellent

handling characteristics, which combine balance and power with low perceived recoil. On the competitive side, the ability to fire .40 S&W or 10 mm loads using moon clips combines both the power and reliability demanded by wheelgun bowling pin shooters. S&W's lifetime service policy adds another plus. The Model 610 will likely not interest the majority of big-bore competitors—save for die-hard fans of the 10 mm Auto and some bowling pin shooters—but it is a worthy and welcome addition to S&W's big-bore revolver lineup.



## ACCURACY RESULTS

.40 S&W Cartridge	Vel. @ 15' (f.p.s.)	Smallest (ins.)	Largest (ins.)	Average (ins.)
Triton 135-gr. QSHF +P TR40QSA	1455 Avg. 20 Sd	2.03	3.16	2.68
Winchester 155-gr. STHP X40SWSTHP	1295 Avg. 19 Sd	1.12	3.13	2.24
PMC 165-gr. FMJ 40DPMC	1125 Avg. 21 Sd	2.03	3.16	2.67
Black Hills 180-gr. JHP BH40JHP	1010 Avg. 26 Sd	2.16	3.40	3.05
Average Extreme Spread				2.66
10 mm Auto Cartridge				
Federal 155-gr. JHP 10E	1365 Avg. 20 Sd	1.82	3.71	2.56
CorBon 165-gr. JHP CB10165	1335 Avg. 31 Sd	1.86	4.19	2.67
Winchester 175-gr. STHP X10MMSTHP	1233 Avg. 16 Sd	1.89	2.84	2.45
Average Extreme Spread				2.56
Five consecutive five-shot groups from 25 yds. fired from Outers Pistol Perch. Abbreviations: Sd (standard deviation), FMJ (full metal jacket), QSHF (Quikshok hollow point), STHP (Silvertip hollow point), JHP (jacketed hollow point).				



The Model 610 includes S&W's blued, standard rear sight that is micrometer click-adjustable for windage and elevation. An easily interchangeable front blade enables the shooter to match the characteristics of the ammunition and target. For those who favor optical sights, the Model 610's frame is drilled and tapped.

## S&W 610 CLASSIC

**MANUFACTURER:** Smith & Wesson (Dept. AR), 2100 Roosevelt Ave., Springfield, MA 01102

**MECHANISM TYPE:** double-action revolver

**CALIBER:** .40 S&W/10 mm Auto

**OVERALL LENGTH:** 10½"

**BARREL LENGTH:** 6½"

**WEIGHT:** 50 ozs.

**WIDTH:** 1¾"

**HEIGHT:** 6¼"

**STOCKS:** Hogue black rubber with finger grooves

**CYLINDER CAPACITY:** six

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

**TRIGGER:** double-action, 12½ lb. pull; single-action, 4½ lb. pull

**SIGHTS:** Interchangeable front blade, fully adjustable square-notch rear, drilled and tapped for scope bases

**ACCESSORIES:** three full-moon clips, key-operated trigger lock

**SUGGESTED RETAIL PRICE:** \$664

## SAVAGE SHORT ACTION 16FSS



Savage Arms introduces its first true short-action receiver based on the proven Model 110 design. The new action, almost a full inch shorter than the standard 110, is available in nine new models.

**S**INCE its introduction in 1958, the Savage Model 110 series of rifles has exemplified sound design and engineering, but has lacked appealing aesthetics. The Model 110 system uses a large, and to some unsightly, locknut to fix the recoil lug to the receiver. This system allows the barrel to be finish-chambered before assembly, threaded into the receiver against a

headspace gauge, then secured at the proper headspace by the locknut. The system is fast and economical and is one of the reasons Savage can offer quality rifles at competitive prices.

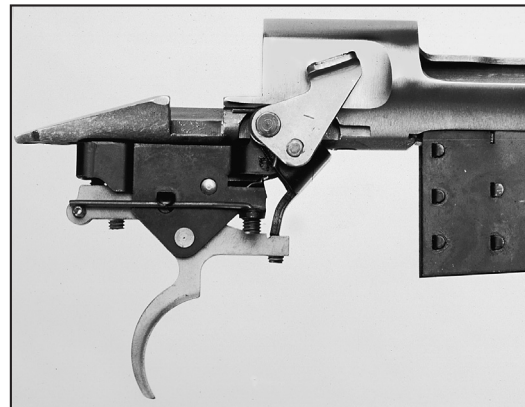
A "short action" was added to the Model 110 line in 1959. While this action was shorter than the standard-length 110, it was actually more of a mid-size action. In 1989, Challenger International Ltd. acquired certain assets of Savage Industries and formed Savage Arms. Rifle production was downscaled to a single Model 110 bolt-action. All Model 110 rifles, regardless of caliber, were built on the long action to make production more efficient.

Many thought Savage was finished in 1988-89, but the company has come back from bankruptcy to offer new models and return old favorites.

For 1998, Savage Arms introduces its first true short-action receiver based on the proven 110 design. The new action, almost a full inch shorter than the standard Model 110, is available in nine new models, including left-hand versions, and chambered in four of the most popular short-action calibers—.223 Rem., .22-250 Rem., .243 Win. and .308 Win.

The sample we recently received is the new Model 16FSS, part of Savage's "Weather Warrior" series. This rifle features top-loading design, a stainless steel barrel and action and a black graphite/fiberglass stock. The stock has Savage's new, fancy, "scrolled," molded-in checkering with 22 lines per inch on the pistol grip and fore-

end. The stock also features dual pillar bedding—a system in which two steel pillars are permanently embedded in the stock. Both front and rear action screws pass through a pillar to provide rigid steel-on-steel bedding contact for the action. The bar-



The trigger mechanism on the Savage short-action rifles is the same as that of the rest of the Model 110 rifle line. Our sample had an excellent trigger pull of three pounds with no overtravel or creep.

rel is free-floating. Both of these normally aftermarket features are usually done by custom gunsmiths to enhance accuracy.

A 3/4" thick, ventilated, rubber recoil pad, black plastic grip cap and stainless steel sling swivel studs are also standard on this rifle.

The twenty parts that make up the bolt



At the front of the bolt handle base is the cocking indicator. Holding the indicator down allows the bolt to be lifted and removed from the rear of the action for cleaning. The indicator is pinned to the rear, which also serves as the bolt stop.

### SAVAGE 16FSS

**MANUFACTURER:** Savage Arms, Inc. (Dept. AR), 100 Springdale Rd., Westfield, MA 01085

**MECHANISM TYPE:** bolt-action rifle

**CALIBER:** .223 Rem. (tested), .22-250 Rem., .243 Win., .308 Win.

**OVERALL LENGTH:** 42"

**BARREL LENGTH:** 22"

**WEIGHT:** 6 lbs., 13 ozs.

**MAGAZINE CAPACITY:** four

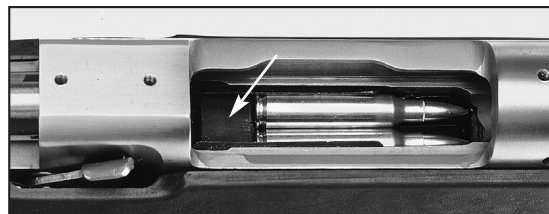
**RIFLING:** five-groove, 1:9" RH twist

**TRIGGER:** single-stage, 3 lbs. pull

**STOCK:** black graphite/fiberglass; length of pull, 13 1/2"; drop at heel, 1 1/2"; drop at comb, 1 1/2"

**ACCESSORIES:** trigger lock

**SUGGESTED RETAIL PRICE:** \$530

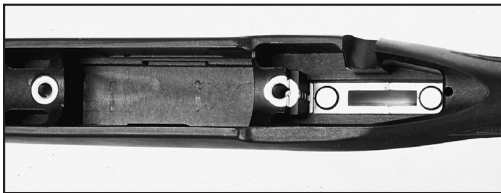


Our sample gun was chambered in .223 Rem. caliber. As the magazine is made for cartridges up to .308 Win. length, the extra space behind the shorter .223 Rem. must be filled. Savage Arms uses a simple piece of sheet metal bent at a right angle (arrow) to serve as a spacer.

## ACCURACY RESULTS

.223 Rem. Cartridge	Vel. @15' (f.p.s.)	Smallest (ins.)	Largest (ins.)	Average (ins.)
Federal P223E 55 gr. SGBTHP	3272 Avg. 18 Sd	1.03	1.70	1.33
Hornady No. 8325 40 gr. VX	3661 Avg. 25 Sd	.89	1.70	1.36
Remington PRV223RA 50 gr. PTBT	3259 Avg. 73 Sd	1.15	1.76	1.47
Average Extreme Spread				1.38

Five consecutive five-shot groups from 100 yds., fired from sandbags. Abbreviations: SGBTHP (Sierra GameKing boat-tail hollow-point), Sd (standard deviation), PTBT (polymer tip boattail), VX (Varmint Express)



The 16FSS features dual pillar bedding; a system in which two steel pillars are permanently embedded in the stock. Both front and rear action screws pass through the two pillars to provide rigid steel-on-steel bedding contact for the rifle's action.

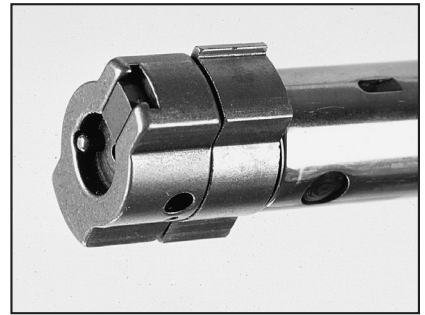
are designed for easy manufacture. The bolt handle itself is even a separate component part of the bolt, and what looks like a second set of locking lugs is a gas baffle. This baffle plugs the entrance to the breech when the action is closed, and directs gas out relief holes on the sides of the receiver ring should a cartridge case fail. The baffle also serves as the location of a Husqvarna-style guide rib that engages a keyway in the right side of the receiver. This helps prevent the bolt binding apparent in pre-1972 Model 110s.

At the front of the bolt handle base is the cocking indicator. Holding the indicator down on an uncocked gun allows the bolt to be lifted and removed from the rear of the action for cleaning. The indicator is pinned to the sear, which also serves as the bolt stop.

There are three positions to the tang-mounted safety. All the way forward exposes a red dot with the letter "F." In this position, the gun will fire if the trigger is pulled. With the safety button all the way back, both the trigger and bolt are locked. An intermediate position keeps the trigger locked, but disengages the sear from the bolt allowing the bolt to be cycled. This position is especially handy when unloading the Savage Model 16FSS as the magazine is blind so cartridges must be cycled through the action for removal.

Our sample gun was chambered in .223 Rem. caliber. As the magazine is designed for cartridges up to .308 Win. length, the extra space behind the shorter .223 Rem. must be filled. Savage uses a simple piece of sheet metal bent at a right angle to form the spacer. Cartridges easily move against the spacer's smooth front surface, but its position is forward enough that loading must be deliberate. Cartridges must be placed far forward in the 16FSS' ejection port before they can be pressed down into the magazine.

There are no sights supplied by Savage on the Model 16FSS, but the receiver is drilled and tapped for standard scope bases and mounts. We mounted a Nikon Monarch



What looks like a second set of locking lugs is a gas baffle. This baffle plugs the entrance to the breech when the action is closed, directing gas out relief holes on the sides of the receiver should a case fail.

UCC 6.5-20x44AO scope on the M16FSS using Weaver rings and bases. With the above setup we fired the gun for accuracy with the results shown in the accompanying table. Function firing was with a variety of bullet weights ranging from 52 grs. to 75 grs. and included a lazy Saturday morning of groundhog hunting. There were no malfunctions of any kind during the course of our testing.

Even with a short Harris bipod attached to the front sling swivel, the Savage Model 16FSS was light and easy to carry afield. Its accuracy was more than sufficient for shooting groundhogs, foxes or coyote, but would be lacking if shooting long range at prairie dogs or crows.

Careful ammunition selection could result in improved accuracy and make this gun even more suitable for smaller targets. In scaling down the reputable Model 110 into a true short-action, Savage has made no less of a gun. The addition of enhancements such as pillar bedding and a synthetic stock puts this gun well ahead of its "short-action" predecessor in value.

NRP

## FABARM RED LION



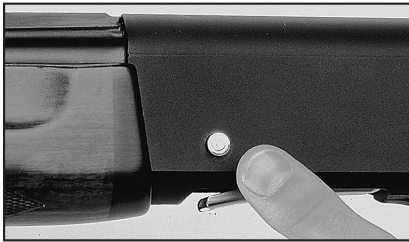
One of the strengths of H&K rifles is in-line recoil. H&K wanted a semi-automatic shotgun with the same recoil characteristics. The ones they chose are from FABARM, one of Italy's premiere shotgun makers.

**H**ECKLER & KOCH, INC., of Sterling, Virginia, has added FABARM shotguns to its product line. One of Italy's premiere gunmakers, FABARM offers a wide variety of shotgun types. H&K

has chosen to import two FABARM semi-automatics, one pump-action, eight over-unders and two side-by-sides. All are made to H&K's specifications for use in clay target sports, hunting or law enforcement.

We recently visited H&K where we were given a thorough demonstration of the FABARM Red Lion semi-automatic shotgun. H&K stressed the similarity in recoil between its semi-automatic rifles and

# DOPE BAG



The Red Lion's magazine cutoff is on the right side of the aluminum receiver while the bolt release (above) is on the gun's left.

FABARM semi-automatic shotguns. One strength of H&K rifles is in-line recoil. H&K wanted a semi-automatic shotgun with similar recoil characteristics.

Recoil is straight back with minimal muzzle rise to optimize recovery time for a fast second shot. FABARM employs several design features to accomplish this.

First, there are no action parts in the buttstock, only a through bolt to join the receiver to the stock. Buttstock-mounted action springs have a strong downward pitch, which is thought by some to have the potential to jar the buttstock from the shoulder.

Second, the single-strand recoil spring surrounds the magazine tube. Its movement is in line with the axis of the bore, thus fur-



The Red Lion's crossbolt, trigger-blocking safety is conventional in operation and is mounted on the rear of the trigger guard.

## FABARM RED LION

**MANUFACTURER:** Fabbrica Bresciana Armi, Via G. Zola 33, 25060, Brescia, Italy

**IMPORTER:** Heckler & Koch, Inc. (Dept. AR), 21480 Pacific Blvd., Sterling, VA 20166

**MECHANISM TYPE:** gas-operated, semi-automatic shotgun

**GAUGE:** 12, 3"

**OVERALL LENGTH:** 48"

**BARREL LENGTH:** 24"

**WEIGHT:** 7 lbs. 2 ozs.

**MAGAZINE CAPACITY:** two

**TRIGGER:** single-stage, 6½ lbs. pull

**SIGHTS:** plastic, fluorescent red front bead

**STOCK:** American Walnut: length of pull, 14½"; drop at heel, 2"; drop at comb, 1½"

**ACCESSORIES:** five choke tubes, tube wrench, lockable hard case

**SUGGESTED RETAIL PRICE:** \$804

ther contributing to straight-back recoil.

Third, gas bleeds from the barrel through ports in a long, angled block. The gas travels the length of this block more in line with the bore than at a right angle to it.

Finally, gas that exceeds the volume necessary to operate the action vents straight forward out of the fore-end cap. Usually, a semi-automatic vents gas upward along the sides of the barrel, which can push the muzzle of the gun down.

Also noteworthy is the balance, symmetry and overall value of these shotguns. Center of balance of the FABARM Red Lion is even with the front of the ejection port. Optional powdered tungsten-filled counterweights/recoil dampeners are available to suit various shooting applications. The front weight replaces the fore-end cap and is suggested for sports such as trap, which require a fairly slow but steady swing. Skeet shooters can insert a similar counterweight into the buttstock instead so the muzzle remains quick to respond. Waterfowlers, turkey hunters or others who hunt with heavy loads from a stationary blind may want to attach both weights to achieve maximum recoil reduction and retain the center of balance.

Receivers start as solid blocks of a lightweight aluminum alloy called Ergal 55. This alloy is tough and has the metallurgical resilience of steel. The finish is matte black. FABARM makes barrels out of aged steel, and drills them instead of using the more traditional hammer-forging method.

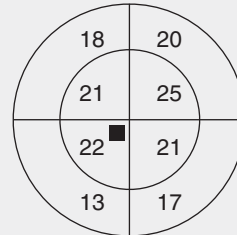
Europeans traditionally cover the target with the muzzle when shotgunning while Americans hold under. H&K specified that



A replacement cap for the Red Lion contains powdered tungsten to act as a muzzle weight/recoil dampener. A comparable weight is available for the gun's buttstock.

## FABARM RED LION

AVERAGE OF 10 PATTERNS AT 40 YDS.



Modified Barrel

■ = Point of Hold  
Sovereign Aristocrat  
3¼-1¼-6  
Pellet count—281

Total Hits	157 (56%)
21.2" Inner Circle	89 (32%)
30" Outer Ring	68 (24%)

the ventilated rib with fluorescent red front bead be engineered to accommodate the American shooting technique so FABARM shotguns shoot a little high.

Forcing cones are the long, typically European type, chambers are 3", bores are chrome-lined and the muzzle will accept FABARM choke tubes. Guns come with cylinder, improved cylinder, modified, improved modified and full chokes, which are unique to FABARM guns. Optional IN-OUT choke tubes are available. These tubes are extended because they feature a "stabilization zone" in which

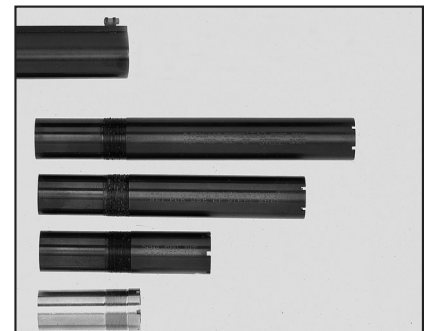
the shot column is gradually restricted, then allowed to stabilize. The lengths of the IN-OUT tubes vary with constriction; full choke is the longest and extends about 5" from the muzzle. Standard and optional chokes are marked whether they can handle steel shot.

The stock is American walnut with cut checkering of 20 lines per inch on the pistol grip and fore-end. The pistol grip has a right-hand palm swell and FABARM's signature olive wood grip cap.

Leather covers the ¾" thick, ventilated rubber recoil pad so the gun mounts more easily, but still won't slip.

Bolt lockup is by a block that protrudes up from the bolt and engages a notch in the top of the barrel extension. This block is attached by the operating handle to a square lug on the two-armed, one-piece

**FABARM Red Lion shotguns come with five conventional choke tubes. Optional IN-OUT choke tubes are available. These tubes vary in length depending on the degree of constriction and the distance the shot must travel before it stabilizes.**





**A single-strand recoil spring around the magazine tube returns the bolt to battery. Its movement is in line with the axis of the bore, further contributing to in-line recoil.**

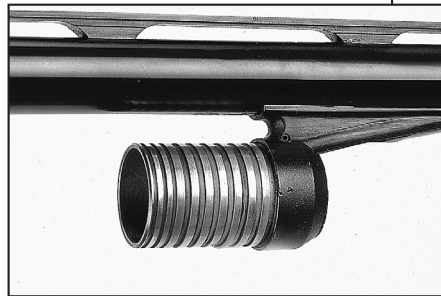
action bar. The locking block rides up and down the face of this lug, and in and out of the locked position.

When a shell is fired, gas bleeds through the two ports in the barrel and impinges on the gas piston. The piston is propelled backward 1", carrying with it the action bar. At the end of its travel, momentum is transferred to the action bar, which continues rearward. No O-rings are needed in this system. Initially, the bar moves back 1/4", which allows the locking block to drop. Once this block drops, the action bar continues back, the bolt opens and the fired shell is kicked out by the fixed ejector. The bolt impacts against a Volcolan shock absorber at the end of its rearward travel in the receiver and a fresh shell simultaneously pops out of the magazine and comes to rest on top of the carrier. As the bolt returns forward under the power of the recoil spring, the carrier lifts the shotshell in front of the bolt path where

it is loaded into the Red Lion's chamber.

A magazine cut-off button on the right side of the receiver allows a round in the chamber to be exchanged with a different load. Capacity of the magazine is two (plus one in the chamber) to comply with federal migratory waterfowl regulations.

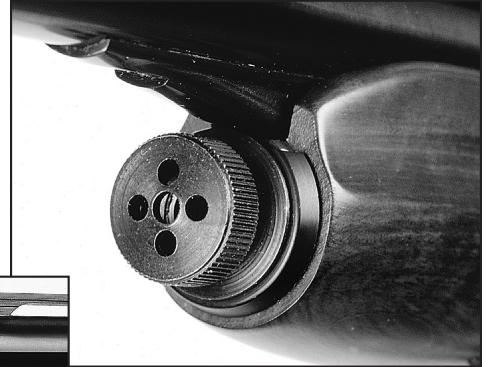
We patterned the FABARM Red Lion with Sovereign Aristocrat No. 6 shot with the results shown in the accompanying table. Function firing was conducted with a variety of foreign and domestic 2 3/4" and 3" shotshells. There was a single malfunction with a 3 3/4 dram, 1 1/2 oz. PMC target load that did not clear the Red Lion's ejection port.




Recoil is straight-back, which creates an unusual perceived recoil. The recoil is not any harder than with other guns, but it barely rises, so follow-up shots are easy, even

with Remington Max dram 1 1/2 oz. No. 6s.

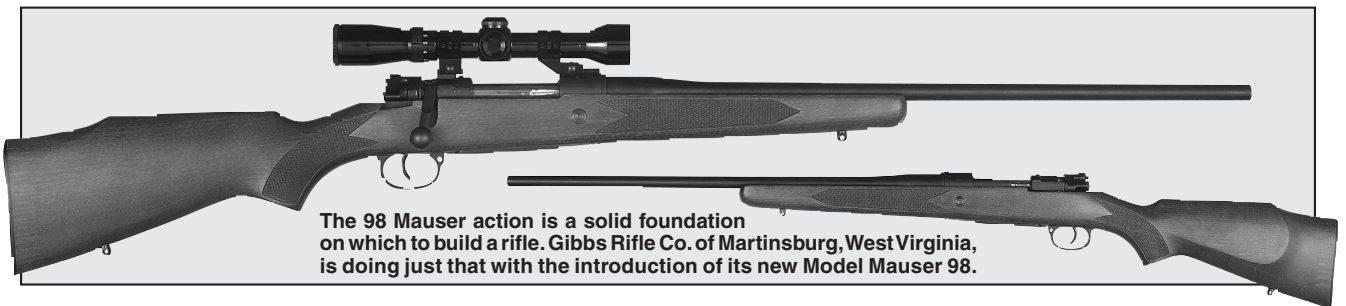
At a suggested retail price that competes directly with established lines like Benelli, Beretta and Browning, FABARM has stiff competition. It is a quality gun, though, and nicely compliments H&K's rifles. These



**Gas is bled from the barrel through two ports in the bore. The gas travels down a long, angled block (l.)—more in line with the bore than perpendicular to it—before impinging on the short-stroke gas piston. Excess gas not needed to cycle the Red Lion's action is vented forward through four ports in the end cap (above).**

attributes, combined with the variety of models offered, could be just what is needed to get FABARM shotguns into the hands of American shooters. 

## GIBBS MAUSER 98 SPORTER



**The 98 Mauser action is a solid foundation on which to build a rifle. Gibbs Rifle Co. of Martinsburg, West Virginia, is doing just that with the introduction of its new Model Mauser 98.**

**O**NE hundred years ago, Peter Paul Mauser perfected what many believe is the zenith of bolt-action rifle development—the Model 1898. This rifle and its many variants have been produced in the millions for sportsmen and militaries all over the world. It has served as the basis for some of the most exquisite custom rifles made by world-famous gunsmiths—and for some of the crudest, homely sporters made in kitchens and garage workshops. Elegant or ordi-



nary, the 98 Mauser action is a solid foundation on which to build a rifle.

Gibbs Rifle Co. of Martinsburg, West

Virginia, is doing just that with the introduction of its Model Mauser 98. Gibbs calls this gun one of the "lowest-priced, entry-level guns on the market." At a suggested retail price of \$330, we agree.

These sporter rifles start with a military-surplus, large ring 98 Mauser action. Manufacturer and country of origin vary

**Manufacturer and country of origin vary considerably on the Mauser 98 actions, but all must meet Gibbs' quality standards. The Mausers are drilled and tapped then fitted with matte, blued-steel Weaver-type bases.**

## GIBBS MAUSER 98

**MANUFACTURER:** varies (see text)  
**IMPORTER:** Gibbs Rifle Co. (Dept. AR), Cannon Hill Industrial Park, Rt. 2, Box 214 Hoffman Road, Martinsburg, WV 25401  
**MECHANISM TYPE:** bolt-action repeating rifle  
**CALIBER:** .270 Win., .30-'06 Sprg. (tested)  
**OVERALL LENGTH:** 45"  
**BARREL LENGTH:** 24"  
**WEIGHT:** 7 lbs. 9 ozs.  
**MAGAZINE CAPACITY:** five  
**RIFLING:** five-groove, RH twist  
**TRIGGER:** two-stage military, 6½ lbs. pull  
**SIGHTS:** none, equipped with steel, Weaver-type scope bases  
**STOCK:** hardwood: length of pull, 14½"; drop at heel, 1½"; drop at comb, 1"  
**ACCESSORIES:** trigger lock, scope bases  
**SUGGESTED RETAIL PRICE:** \$330

considerably, but all meet Gibbs' quality standards.

Once quality actions are selected, Gibbs sends them to Greg Warne, of Kimber fame. Warne cuts and turns down the bolt handle, then relieves the top half of its stem to provide clearance for a scope. A low-swing safety replaces the three-position Mauser-type, and a new, 24" Wilson barrel is installed.



As part of the sporterizing process, the bolt handle is turned down and relieved to clear a scope. Even with this modification, we encountered difficulties when mounting a scope. Gibbs intends to offer a "package gun" with a scope already in place.

All parts except the bolt body receive an even, matte blue finish. Both the bolt body and claw extractor are brightly polished.

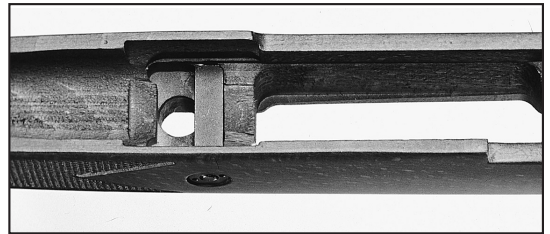
The rebarrelled, reblued, sporterized actions are drilled and tapped then fitted with matte, blued-steel Weaver-type scope bases and returned to Gibbs.

Gibbs then mounts the barrelled actions in Parker-Hale hardwood stocks stained to a walnut finish. Standard embellishments include a black, check-

ered, plastic buttplate with white-line spacer; steel sling swivel studs and pressed checkering of 18 lines per inch on the wrist and fore-end. As befits a gun equipped for scope mounting, the stock has a Monte Carlo cheekpiece to raise the shooter's eye in line with the scope. The hardened steel crossbolt is carried over to the new stock and provides steel-on-steel contact between itself and the recoil lug on the action.

We equipped the sample we received for testing with a Redfield Five Star 3-9x compact scope and fired it for accuracy with the results shown in the accompanying table. Typical of the 98 Mauser, there were no malfunctions of any kind.

We found the rifle pleasant to fire and the perceived recoil typical of any .30-'06 Sprg. sporter rifle. The stock was comfortable, even for left-handed shooters, and the two-



**The hardened steel crossbolt of the original military Model 98 is retained. This piece provides steel-on-steel contact between itself and the recoil lug on the rifle's action.**

Simmons 4x4 rings. The extended rings provide more versatility by placing the rings closer together so a shorter scope can be used. The first scope we tried was a Simmons 44 Mag, but despite being turned down and relieved, the bolt handle wouldn't clear the large ocular lens. Higher rings would have made this combination work, but with them, ring spacing presented an eye-relief problem.

Gibbs recognizes that a workable combination between gun and scope can be difficult, so the company is working on a "package" gun. This package will include: a scope; a synthetic stock; a hard, plastic, lockable case; and a sling.

Does the Gibbs Model Mauser 98 at this suggested retail price represent a good value? We think so. A Mauser action with turned-down bolt and low-mount safety can be had for around \$100. Fajen has an excellent, finished, drop-in stock for \$89 and change, and Midway sells a short-chambered barrel for around \$70. These major components alone total \$259. Add in the gunsmithing costs to fit the barrel, sand blast and blue the action and drill and tap for scope bases and you can really see the value in this gun.

The Gibbs Model Mauser 98 isn't going to break any accuracy records, but it is an excellent buy as an entry-level sporting rifle or for those who want a sporterized Mauser, but don't want to spend a small fortune to have one.

NRD



**To make scope mounting easier, the original Mauser three-position safety is removed, and it is replaced with a newly manufactured, low-swing safety by Gibbs.**

stage military trigger was perfectly acceptable. Aftermarket, single-stage, adjustable triggers are readily available and easily installed for shooters who prefer them.

Operation was typically Mauser with all the reliability and advantages that made the gun so popular for so many years. The only advantage that is precluded on this gun is the practicality of using the stripper clip charging slots. Though they remain, the gun has no iron sights so a scope is required, and it obscures access to the slots.

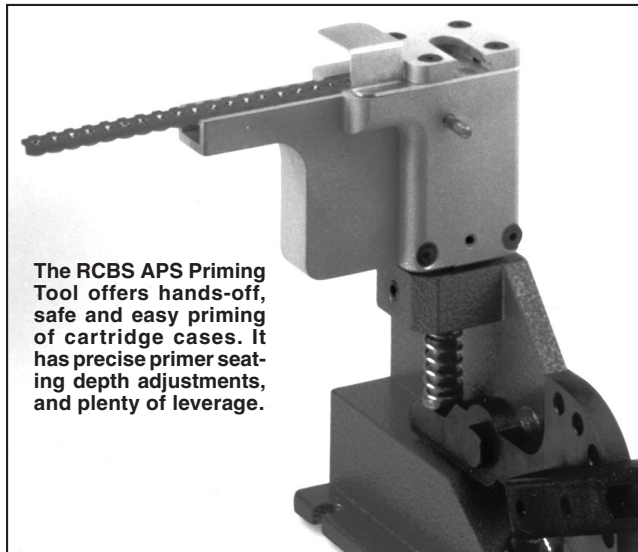
We experienced some difficulty with mounting a scope. Since the Mauser action is relatively long, we opted to use extended,

## ACCURACY RESULTS

.30-'06 Sprg. Cartridge	Vel. @ 15' (f.p.s.)	Smallest (ins.)	Largest (ins.)	Average (ins.)
Fed. Classic 3006A 150-gr. HSSP	2974 Avg. 24 Sd	1.58	2.65	1.94
Horn. Custom No. 8115 165-gr. BTSPI	2777 Avg. 23 Sd	1.89	3.21	2.47
Win. Supreme S3006S180 180-gr. STBT	2738 Avg. 24 Sd	2.99	4.51	3.84
Average Extreme Spread				2.75

Five consecutive five-shot groups from 100 yds., fired from a sandbag rest. Abbreviations: BTSPI (boattail spire point Interlock), Fed. (Federal), Horn. (Hornady), HSSP (Hi-Shok soft-point), Sd (standard deviation), STBT (Silvertip boattail), Win. (Winchester).

## RCBS AUTOPRIME SYSTEM



The RCBS APS Priming Tool offers hands-off, safe and easy priming of cartridge cases. It has precise primer seating depth adjustments, and plenty of leverage.

**T**HE RCBS APS (Automatic Priming System) provides totally hands-off control of primers; convenient, ready-to-load primer storage; and simple, safe and fast repriming of cartridge cases.

The plastic APS primer strips, which hold 25 primers in a row, are the heart of the system. Strips are color-coded for large and small rifle or pistol primers—both standard and magnum. Additionally, the ends of the strips are designed so that they can be interlocked for continuous feeding. CCI offers its many primers already loaded in APS primer strips.

For handloaders who have loose primers of any brand already on hand, RCBS offers an APS Strip Loader that loads all 25 holes in the primer strip at once. To use the strip loader, begin by attaching the handle lever as described in the owner's manual.

Next, place the square end of an empty strip flat side down, into the right guide rail of the loader. With your other hand, depress the handle lever until the 25 loading pins are flush with the bottom of the primer channel. Keeping the handle lever in this position, insert an empty primer strip part way. Without letting up on the handle lever, attach a second strip to the one in the loader. Once the two strips are connected, continue to push the strip into the loader until it lines up with the guide marks on either side of the loader.

With an empty strip in position, lift the clear cover from the grooved primer reservoir, then place a package of primers upside down in the reservoir. Slide the cover off of the primer box, then shake the strip loader until all primers turn anvil side up. Replace the clear cover over the reservoir and tilt the loader away from you so the primers slide back into the empty holes of the strip. To seat primers in the strip, press down on the han-

dle lever with firm, even pressure. Slowly raise the lever while gently pushing on the right end of the strip in the direction of the loader. As the lever raises, you will be able to push the loaded strip out the left side of the tool with the empty strip you previously connected to it.

Continue connecting and loading strips until the

loader needs refilling. Special APS tape is included that should be applied over the

anvil side of loaded strips. The tape protects the primers from contamination and helps guard against multiple detonation of primers should an accident occur.

The RCBS APS Priming Tool is currently offered in two versions—bench-mounted and press-mounted. There is reported to be a hand-held tool in the works. We received the bench-mounted tool for test and evaluation. After attaching the operating handle as described in the owner's manual, we mounted the tool to a 6" square piece of plywood and used C-clamps to hold the plywood to our bench.

To use the APS priming tool, begin by selecting the large or small primer ram, depending on which size primer you are loading. Lower the handle of the priming tool and drop the ram, large end first, into the hole in the top of the tool. If you insert the ram into the tool without lowering the handle, the ram will fall into the tool and require complete disassembly to retrieve.

The RCBS APS Priming Tool comes with two red plastic bushings for large or small primers that are inserted into the bottom of the shell holder to help guide the primer into the primer pocket. After inserting the proper bushing into the shell holder, insert the shell holder into the top of the tool. We used a Hornady shell holder and, though it worked well, found the

fit to be tight. Now, take a loaded APS primer strip and insert it anvil side up and hooked-end first into the left side of the priming tool until it clicks. Next, insert an unprimed case into the shell holder and lower the handle to seat the primer. With the handle still down, insert the supplied cam lock pin into the hole on the face of the APS priming tool. Remove the primed case from the shell holder and check it for proper primer seating depth. Primer seating depth may be changed below the operating handle by using the supplied Allen wrench. Turn the screw clockwise for

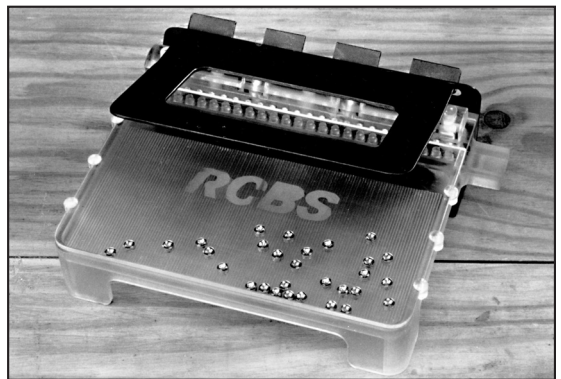
deeper seating or counter-clockwise for less seating depth. Seating can be adjusted and held to a precise depth because the adjustment screw acts as a stop.

Once satisfied with the seating depth, remove the cam lock pin and begin priming. Operation of the handle automatically advances the APS primer strip.

The RCBS APS Priming Tool offers reloaders a fast, safe and hands-off method of priming cartridge cases. The operating handle has plenty of leverage and precise primer seating depth adjustments. When combined with the APS Primer Strip Loader, the handloader can apply these advantages to any brand of primer.

Available from: RCBS (Dept. AR), 605 Oro Dam Blvd., Oroville, CA 95965-4650. Price: \$85.95 (APS Bench-Mounted Priming Tool); \$54.95 (APS Press-Mounted Priming Tool); \$21.95 (APS Primer Strip Loader).

NRP



For handloaders who have loose primers on hand, or for recipes that use other manufacturer's primers, the RCBS APS Strip Loader can be used to load strips with other primers for use in the APS.