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.

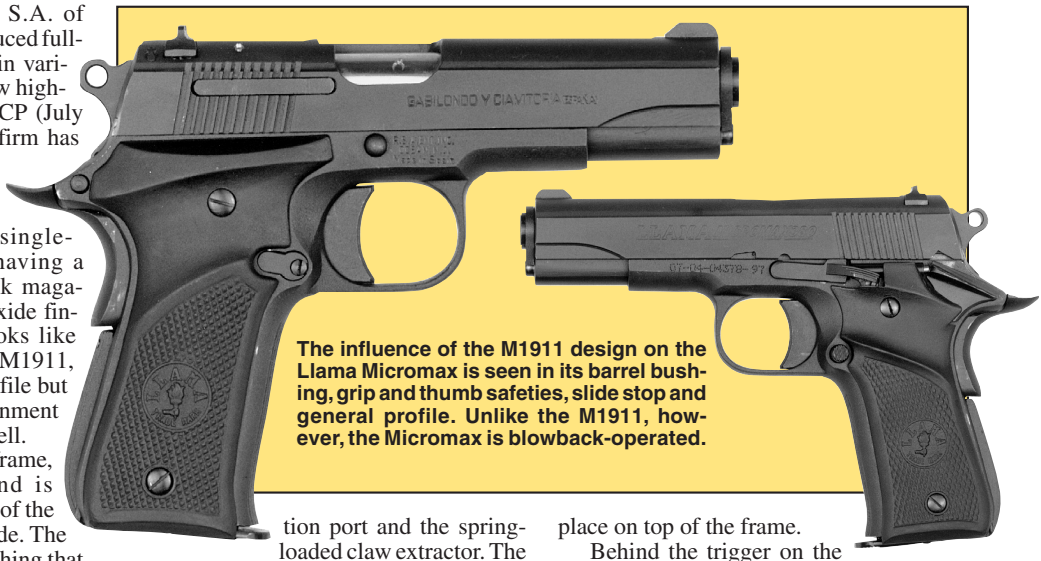
LLAMA MICROMAX

LLAMA-GABILONDO Y CIA., S.A. of Vitoria, Spain, has long produced full-sized M1911-based pistols in various configurations, including a new high-capacity compact model in .45 ACP (July 1997, p. 34). More recently, the firm has introduced a new compact .380 ACP pistol having a strong M1911 lineage.

The Llama Micromax is a single-action, semi-automatic pistol having a seven-round-capacity single-stack magazine, plastic stocks and a black oxide finish. In appearance the pistol looks like nothing so much as a scaled-down M1911, retaining not only that pistol's profile but virtually all of the signature Government Model design characteristics as well.

The slide rides in rails on the frame, has angled rear serrations and is machined in a pattern reminiscent of the lateral scalloping on an M1911 slide. The barrel is positioned by a barrel bushing that also serves to retain the recoil spring plug in its tunnel under the barrel. This tunnel, which surrounds both the spring plug and the single-coil recoil spring, is not machined integrally with the slide but is a separate part mortised into the slide and silver-soldered into place.

On the right side of the slide are the ejection port and the spring-loaded claw extractor. The latter is one of the few departures from M1911 principles, as it pivots around a vertical roll pin, visible in the top of the slide, and is tensioned by a small coil spring that pushes against its tail.



The influence of the M1911 design on the Llama Micromax is seen in its barrel bushing, grip and thumb safeties, slide stop and general profile. Unlike the M1911, however, the Micromax is blowback-operated.

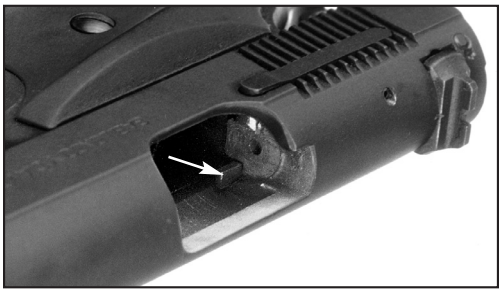
The rear sight with its .098"-wide notch is mounted in a dovetail cut in the slide, and is drift-adjustable for windage. The front post is .087" wide, ramped for a no-snag draw and rounded in front for easier reholstering. The sights are painted in the familiar three-dot pattern.

The underside of the slide features an M1911-type disconnector track with semicircular disconnector cut and a passive firing pin block plunger. At the rear, the firing pin stop sits in a slot in the rear slide face and retains the spring-loaded inertia firing pin.

The frame also reflects a strong Government Model influence. An extended, serrated slide stop is tensioned by a spring-loaded plunger that projects from the front of a frame-mounted plastic plunger tube, while a second plunger at the rear of the tube engages a detent in the pistol's thumb safety, giving positive stops in both the "safe" and "fire" positions. The Micromax's ejector is silver-soldered in place on top of the frame.

Behind the trigger on the left side of the frame is the M1911-style magazine catch that is depressed to release the magazine. It is not reversible for left-handers. The pistol's plastic stocks, however, are designed for ambidextrous use, as both sides have a shallow thumb rest as well as a panel of molded-in checkering. The stock screws do not turn into bushings but directly into threaded holes in the .092"-thick frame sidewalls.

At the rear of the frame the mainspring housing contains the mainspring, main-



Instead of a spring-steel M1911-style extractor, the Llama Micromax features a pivoting claw extractor tensioned by a coil spring that bears on its tail. Also visible in this view are the breechface's firing pin hole and the ejector tip (arrow).

LLAMA MICROMAX

MANUFACTURER: Llama Gabilondo Y Cia., Dept. AR, Apartado 290, E-01080, Vitoria, Spain
IMPORTER: Import Sports, Inc., Dept. AR, 1750 Brielle Ave., Unit B1, Wanamassa, NJ 07712
MECHANISM TYPE: blowback-operated, semi-automatic pistol
CALIBER: .380 ACP
OVERALL LENGTH: 6½"
BARREL LENGTH: 3¾"
WEIGHT: 23 ozs.
WIDTH: 1¼"
HEIGHT: 4⅝"
MAGAZINE CAPACITY: seven
TRIGGER: two-stage, 6-lb. pull
SIGHTS: fixed, three-dot system, rear drift-adjustable for windage
STOCKS: black plastic
ACCESSORIES: plastic carrying case
PRICE: $258.95

The Micromax field-stripped, showing its (1) slide, (2) barrel bushing, (3) barrel, (4) recoil spring and guide, (5) spring plug, (6) slide stop and (7) frame. The semicircular cut in the barrel underlug (arrow) engages the slide stop pin and positions the barrel.

spring cap and hammer strut. It is retained by a frame crosspin. The magazine well is slightly beveled around its edges to facilitate magazine insertion.

The external resemblance to the M1911 continues inside the pistol as well. All the major lockwork parts—trigger, hammer, sear, disconnector and sear spring—are simply scaled-down versions of the corresponding components of the Government Model, and the Llama generally adheres to that pistol's basic cycle of operation. The Micromax does show one significant departure from the parent design's principles, however; being blowback-operated, it does not fire from a locked breech. Gone are the M1911 swinging link and radial barrel and slide lugs; and the Llama's barrel, instead of being pinned or threaded rigidly to the frame, as on many other blowback-operated .380s, is positioned in the frame by the slide stop pin, which abuts a semicircular cut in the lower barrel lug.

The safety mechanisms of the Micromax echo those of the modern Colt Series 80 pistols, but with some twists. Both the sear-blocking thumb safety and trigger-blocking grip safety of the Micromax function as do their M1911 counterparts. Additionally, the Micromax features a slide-mounted firing pin block plunger that must be lifted to allow full firing pin excursion and thus ignition. While the Colt Series 80 mechanism employs a trigger-actuated two-lever mechanism to lift the firing pin block, the Micromax employs a frame-mounted pin that is forced upward to lift the block when the grip safety is depressed. Since this system is not linked to the trigger, it cannot adversely affect trigger pull as can the Series-80-type trigger-actuated mechanism. On the other hand, the Llama system, by not being tied to the trigger, may not, in theory, offer as much protection from accidental discharge—though seemingly more than any Series 70-type design that lacks a firing pin block altogether.

As might be expected, the Micromax is field-stripped using the familiar M1911 procedure, which needs not be detailed here. Detail stripping is also similar, but not identical. The extractor and plunger tube, for example, differ markedly from those of the original M1911. Detail stripping, however, is not required for general maintenance, and should be left to a gunsmith.

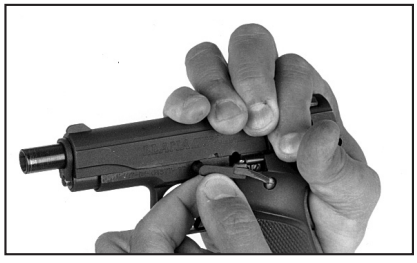
We fired our test Micromax for accuracy with the results found in the accompanying table, and function-fired the pistol with more than 300 rounds of mixed CCI, Federal, Hornady and Winchester ammunition. We observed three feeding failures and several occasions when the slide locked open prematurely (unassisted by an errant thumb). Some fired cases showed bulging, an indication of the lack of case head support. This appeared to result from the gun's generous barrel throat, itself a feature designed to promote feeding reliability.

Firing the Micromax was quite pleasant. The Llama's beavertail grip safety helped distribute recoil over a larger area of the hand and assisted in controlling muzzle flip (although one test-firer noted that the sharp frame edges adjacent to the beavertail abraded the web of his hand). The trigger pull, though heavy, was nonetheless crisp—and head and shoulders above the initial trigger pull of any double-action .380. Ergonomics of the pistol were quite good, as to be expected from its lineage, and muzzle flip controllable. The relatively short 2.3" reach from backstrap to trigger face enabled small-handed persons to manipulate the gun handily, though

ACCURACY RESULTS

.380 ACP Cartridge	Vel. @15' (f.p.s.)	Smallest (ins.)	Largest (ins.)	Average (ins.)
Fed. No. P380HS1 90-gr. HS	908 Avg. 19 Sd	2.52	4.23	3.65
Hdy. No. 9010 90-gr. XTP	888 Avg. 23 Sd	3.81	5.75	4.43
Win. X380ASHP 85-gr. STHP	932 Avg. 31 Sd	4.53	8.10	6.60
Average Extreme Spread				4.89

Five consecutive five-shot groups from 25 yds., fired from sandbags
Abbreviations: Sd (standard deviation), Fed. (Federal), HS (Hydra-Shok), Hdy. (Hornady), XTP (Extreme Terminal Performance), Win. (Winchester), STHP (Silvertip Hollow Point)



The Micromax disassembles like an M1911. Here the slide is retracted to align its disassembly notch with the tail of the slide stop, allowing removal of that part.

ham-handed types may find that reach too short, or the trigger guard a little bit too snug for their fingers to fit comfortably.

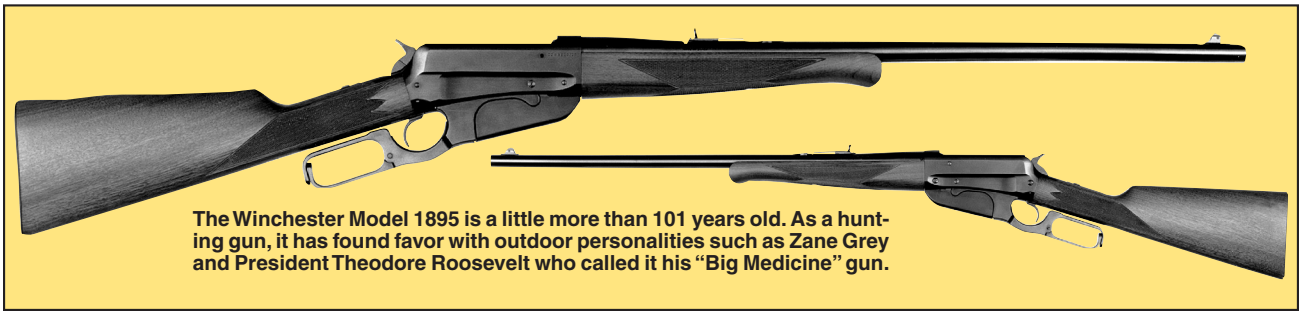
Delivering a quick, accurate first shot with the Micromax is easier than with many other .380 pistols, thanks to its single-action operation. Our pistol tended to print its groups well to the left of the point of aim, with some brands as much as 12" left at 25 yds. While at first glance this seems to be a considerable distance, it is the equivalent of

Seen here are the Llama's beavertail grip safety, thumb safety, extended slide stop, Commander-style hammer, plastic thumbrest stocks and fixed three-dot sights.

less than 3½" at seven yds.—a range closer to that at which a personal protection pistol such as the Micromax would likely be used. Moreover, the lateral deviation we noted would be easily correctable by drifting the gun's rear sight to the right.

We have conflicting feelings about the Llama Micromax. While we have great respect for the M1911 pistol, we question the rationale for downsizing a relatively complex design; many recent blowback designs have been far simpler. Yet the pistol seems quite robust, and would appear capable of considerable use. It is also gracile, but perhaps too long to be a true pocket pistol. In any event, its single-action operation, suitable for cocked-and-locked carry, would seem to preclude any form of carry that did not involve a holster. We suspect that the greatest appeal of the Llama Micromax will be to ardent fans of the Government Model design who seek a smaller, functionally comparable companion pistol in .380 ACP.

WINCHESTER MODEL 95 RIFLE



The Winchester Model 1895 is a little more than 101 years old. As a hunting gun, it has found favor with outdoor personalities such as Zane Grey and President Theodore Roosevelt who called it his "Big Medicine" gun.

A little more than 101 years ago, Winchester began production of the first lever-action rifle using a non-detachable box magazine that was designed to handle jacketed, pointed Spitzer bullets.

Initial offerings included a sporting rifle, carbine and military musket chambered for .30-40 Krag, .38-72 or .40-72. A 6 mm Lee Navy musket was cataloged, but apparently never produced. Later production guns could be had in .35 Win., .405 Win., .30-'03, .30-'06, .303 British and 7.62x54 mmR cals.

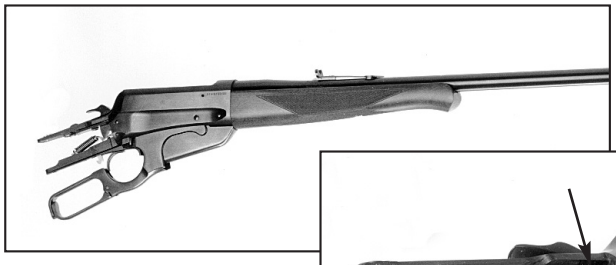
Shortly after World War I, the .30-'06 chambering was dropped from the line because of rumors that the action was not strong enough for this cartridge. Investigations suggested that wrecked rifles had failed because shooters erroneously used war souvenir 8x57 mm Mauser cartridges in their .30-'06 rifles.

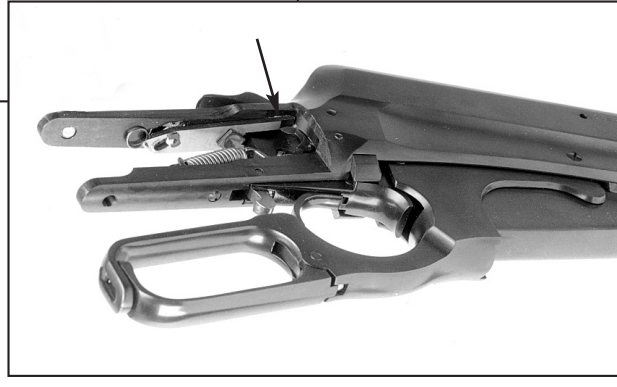
The Winchester Model 1895 was used afield in both North America and Africa, and was especially liked by famous outdoorsmen like Zane Grey and President Theodore Roosevelt who called his .405 Win.-chambered Model 1895 his "Big Medicine" gun. Additionally, more than a quarter of a million Model 1895s chambered for the 7.62x 54 mmR round were made in 1915-16 for troops of the Imperial Russian government.

Production of the original Model 1895 ended in 1931, while sales continued until as late as 1938.

Though the romance associated with the Winchester Model 1895 has endured, the zenith of its popularity was reached nearly three generations ago. Browning made a limited run of 10,000 guns in 1984 chambered for .30-'06 (June 1984, p. 56) and currently U.S. Repeating Arms Co. has seen fit to resurrect this classic with some improvements over not only the original, but the later Browning version as well.

The most salient of these improvements is the addition of a sliding hammer-blocking safety on the top tang. When operated, a lower extension of the safety button moves in an angled slot cut in a flat steel bar positioned under the top tang. This bar in turn pivots in or out of an area relieved from the side of the hammer. If the trigger is accidently pulled while the gun is cocked and the safety is on, the hammer will fall, but its forward movement is arrested when the shoulder of the relieved area stops against the pivoting steel bar.





The most salient improvement over the original is a tang-mounted safety. When engaged, the safety pivots a flat steel bar (arrow) into a relieved area on the side of the hammer. If the trigger is pulled while the safety is on, the hammer falls, but its forward movement is arrested just before it strikes the firing pin.

Another feature on U.S. Repeating Arms' gun that was not available on the Browning is checkering in a bordered point pattern of 20 lines per inch on the wrist and schnabel fore-end. The checkering on our sample was very well executed with no overruns and few flat diamond points.

While most original Model 1895s were fitted with a crescent buttplate, the new version sports a matte-blued steel shotgun one that many believe is less punishing to the shooter with regard to recoil.

Though not an historically accurate chambering for the Model 1895, the .270 Win. offers some hunting nostalgia in its

While most original Model 1895s were fitted with a crescent buttplate, the new USRAC version sports a steel shotgun-style buttplate that many believe reduces felt recoil.

MODEL 95 RIFLE

MANUFACTURER: Miroku Firearms Mfg. Co., 537-1 Shinohara-Nangoku City, Kochi Pref., Japan
IMPORTER: U.S. Repeating Arms Co., Dept. AR, 275 Winchester Ave., New Haven, CT 06511
MECHANISM TYPE: lever-action rifle
CALIBER: .270 Win
OVERALL LENGTH: 42½"
BARREL LENGTH: 24"
WEIGHT: 8 lbs., 6 ozs.
MAGAZINE CAPACITY: four
RIFLING: four-groove, 1:10" RH twist
TRIGGER: single-stage, 6¼ lbs. pull
SIGHTS: gold bead front, semi-buckhorn rear adjustable for windage and elevation.
STOCK: Walnut, length of pull, 13¼"; drop at heel, 3⅝" drop at comb, 2⅛"
PRICE: $909

A number of the very first Model 1895s had flat-sided receivers and one-piece finger levers. Current-production of the lever-actions have the more-familiar scalloped receiver and two-piece finger lever that is interlocked with the trigger to prevent firing unless the action is completely closed.

own right, and was even called "advanced [in] age" in 1970 by one of its most well-known proponents, Jack O'Connor.

Some final notable deviations from the original design include the use of a powerful coil mainspring rather than a flat spring, and a mousetrap carrier spring instead of a "V" spring.

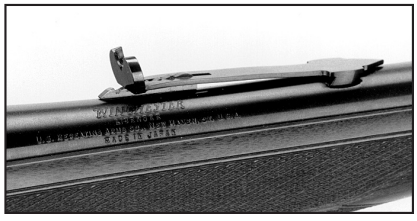
Approximately the first 5000 of the original 1895s were made with flat-sided receivers and one-piece finger levers. The current production gun has the more familiar scalloped receiver and two-piece finger lever that is interlocked with the trigger to prevent firing unless the action is completely closed.

Being a top-ejecting gun, the Model 1895 does not lend itself easily to scope use. Currently, though, a Weaver side mount is available, but requires drilling and tapping the receiver.

Disassembly can be complicated, and we agree with the manufacturer that this task is best left to a qualified or factory-authorized gunsmith.

We fired our sample at 100 yds. using the supplied gold bead front sight and semi-buckhorn rear sight with the results shown in the accompanying table. Function firing was with a mix of pointed and round-nose cartridges from various manufacturers with no malfunctions of any kind. The rifle's accuracy, even with the historically-accurate but outdated sights, was nearly as good as many scope-equipped bolt-action guns we have tested.

Overall, we were impressed with the new 1895 from U.S. Repeating Arms Co. Unlike the Browning version that was limited to 9000 Grade I and 1000 High Grade rifles, "the new Model 1895 will be made in continuing quantities each year" according to the manufacturer's catalog.



If he was alive today, Theodoore Roosevelt might have a problem with the newly-made Model 1895's "made in Japan" label, but its accuracy might just be the spoonful of sugar that helps the "medicine" go down.

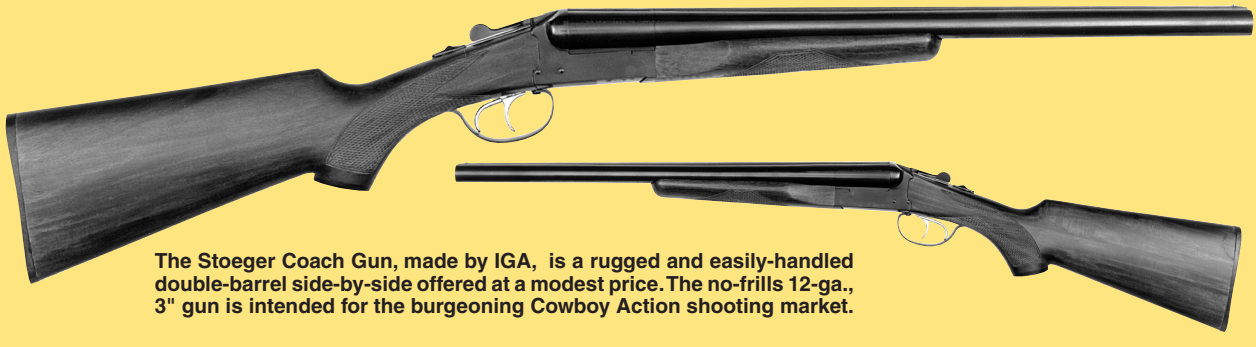
If Teddy Roosevelt was alive today, he might have some trouble with the gun's "made in Japan" label; however, the quality of the workmanship and proven accuracy of the new Model 1895 could be the spoonful of sugar that helps this medicine go down.

ACCURACY RESULTS

.270 Win Cartridge	Vel. @15' (f.p.s.)	Smallest (ins.)	Largest (ins.)	Average (ins.)
Federal Premium P270T1 140-gr. TB	2946 Avg. 17 Sd	2.88	4.31	3.61
Speer Nitrex 130-gr. GS	3212 Avg. 19 Sd	1.62	3.57	2.75
Winchester Silvertip X2703 130-gr. ST	3038 Avg. 5 Sd	2.40	3.87	2.99
Average Extreme Spread				3.11

Five consecutive five-shot groups from 100 yds., fired from sandbags. Abbreviations: GS (Grand Slam), Sd (standard deviation), ST (Silvertip), TB (Trophy Bonded)

STOEGER COACH GUN



The Stoeger Coach Gun, made by IGA, is a rugged and easily-handled double-barrel side-by-side offered at a modest price. The no-frills 12-ga., 3" gun is intended for the burgeoning Cowboy Action shooting market.

THE newly-introduced Coach Gun from Stoeger Industries will not necessarily appeal to the stereotypical well-heeled shotguner, nor should it. By design, the Brazilian-made side-by-side is intended for the Cowboy Action shooter, and it may have some attraction as a personal protection arm for the home as well.

The Coach Gun is a plain-finish, basic, utility-grade boxlock in 12-ga. with 3" chambers. Our test sample featured sturdy 20" barrels choked improved cylinder and modified, with a cross-grooved rib that is solid on the top, ventilated between the barrels and equipped with a single brass front bead sight. Barrels and action are polished blue and the triggers are silver colored.

There is a long history of shotguns being made for Stoeger by IGA in Brazil, and the Coach Gun is no exception. It has familiar features like coil spring-powered hammers,

The Coach Gun is a plain-finish, basic, utility-grade boxlock side-by-side in 12-ga. with 3" chambers. The sturdy 20" barrels were choked improved cylinder and modified, with a cross-grooved rib that is solid on the top, ventilated between the barrels and has a single brass front bead sight.

double underlugs, double triggers, an automatic tang safety, a beavertail fore-end and a pistol grip hardwood stock like we found on the IGA-made Stoeger DB20 shotgun (November 1983, p. 61).

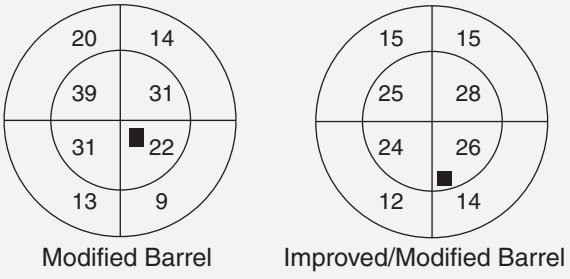
The stock is made of a straight-grained hardwood with a dark, walnut stain and grooved black plastic buttplate and grip cap. Functional, hand-cut bordered checkering is in a diamond-shaped pattern on the fore-end and on the pistol grip. On this working gun the coarse 16 lines per inch checkering provides a secure gripping surface even though all points are flat. Wood-to-metal fit varied from being flush at the fore-end and tangs to the buttstock being 1/16" higher than the action.

Cocking is on opening and as it is opened the fore-end iron cams down the gun's cocking levers while an actuator simultaneously lifts the two extractors.

Take-down of the unloaded Coach Gun is conventional in that you depress the fore-end lock and pull the fore-end down and off. Next, press the top latch to the right and tip the barrels from the action. No further disassembly is recommended, nor should it be necessary for routine cleaning and maintenance. Reassembly is in the reverse order.

STOEGER COACH GUN

AVERAGE OF 10 PATTERNS AT 40 YDS.



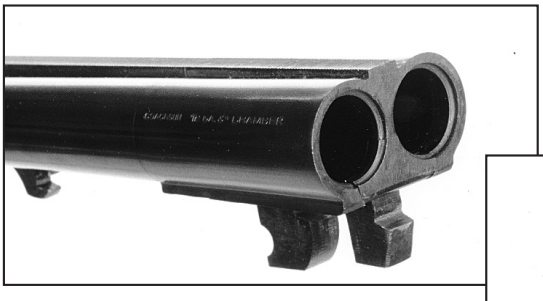
Modified Barrel — Improved/Modified Barrel

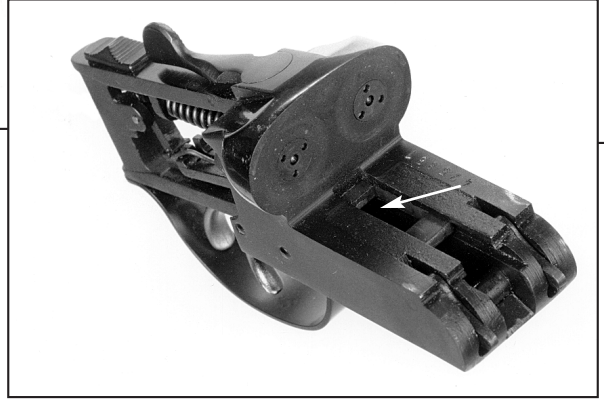
■= Point of Hold
PMC Quail & Dove 3¼ –1 oz.– 6
Pellet count—236

Total Hits	179 (75%)	Total Hits	159 (67%)
21.2" Inner Circle	123 (52%)	21.2" Inner Circle	103 (43%)
30" Outer Ring	56 (23%)	30" Outer Ring	26 (23%)

at 25 yds. with 1-oz. PMC Dove & Quail loads with the results shown in the accompanying table. Function firing was carried out with a variety of foreign and domestic target and field loads including No. 4 Buck and Foster-style slugs. There were no malfunctions of any kind in the course of the test procedure.

The Coach Gun's boxlock mechanism as seen from the front illustrates a number of its features. The firing pins and firing pin bushings are clearly visible in the breechfaces for both barrels. Also seen are the cocking levers and the sliding locking bolt (arrow). Shown at left are the Coach Gun's side-by-side barrels. Note the fore-end hanger and dual underlugs. The gun has no ejectors and an actuator lifts the extractors when the action is opened.





An action detail (above) of the Coach Gun shows the double triggers, hammers, sears and top latch spring, as well as the gun's sliding tang safety mechanism.

IGA COACH GUN

MANUFACTURER: IGA, Veranopolis, RGS, Brazil
IMPORTER: Stoeger, Inc., Dept. AR, 5 Mansard Ct., Wayne, NJ 07470
MECHANISM TYPE: break-action, side-by-side shotgun
GAUGE: 12-ga., 3"
OVERALL LENGTH: 36 5/16"
BARREL LENGTH: 19 15/16"
WEIGHT: 6 lbs., 12 ozs.
TRIGGER: double: front, 10¼ lbs. pull; rear, 9¾ lbs. pull
STOCK: walnut stained hardwood: length of pull, 14⅝"; drop at comb, 1 11/16"; drop at heel, 3"
ACCESSORIES: none
PRICE: $382

Despite the utilitarian design, or perhaps because of it, the Coach gun comes quickly to the shoulder and swings steadily. Recoil, though sharp, was not punishing, though muzzle flash from the short barrels could be considered distracting. Recovery for an immediate second shot was not a problem.

The Stoeger Coach Gun was patterned

Overall, we were satisfied with the Coach Gun, though we would have preferred a straight grip so it would be easier to slide the trigger hand back to pull the second trigger. Also, the automatic safety proved to be a nuisance in rapid firing when a reload was required.

The Stoeger Coach Gun, then, is simply a rugged and easily-handled double barrel at a modest price, that doesn't pretend to be something it is not.

BUSHNELL YARDAGE PRO 800

Depressing the "fire" button (1) on the Yardage Pro 800 emits an infrared laser beam from the left 40 mm objective. The beam is reflected off the target and returns through the right-hand 40 mm objective to sensor circuitry. The smaller center lens is for the 6X viewing monocular. The "mode" button (2) selects the current targeting mode. The LCD display (below, r.) gives range, current mode, target quality and other parameters (see text).

THOUGH many believe that today's heavy-barreled factory rifles chambered in flat-shooting, ultra-high-velocity magnum calibers enable the average shooter to make clean kills out to 400-500 yds. and beyond without worrying overmuch about bullet drop, the truth is that, even for a competent rifleman, any shot in the field much beyond 250 yds. is still challenging—particularly when the target is small. The problem lies primarily in accurately estimating the range to the target. With a 7 mm Magnum propelling a 150-gr. bullet at 3100 f.p.s., at 400 yds. a range estimation error of 40 yds.—only 10%—can produce an 8" difference in drop—enough to produce a miss or, worse, a crippling wound instead of a clean kill.

While optical rangefinders have long been available, the less expensive of these generally afford only 90 to 95% accuracy, while more accurate models are typically a cumbersome 18" to a meter or more in length. The other long-range alternatives are laser rangefinders such as the Leica Geovid and Swarovski's LRS and RF1 units which, though all accurate out to 1,000 yds., carry a four-figure price tag.

A less expensive alternative was introduced in 1995 when Bushnell introduced its Yardage Pro 400 rangefinder, which used an infrared laser to give readings out to a maximum range of around 400 yards. Though the 400 worked well, its maximum range could be reduced when the unit was used in bright sunlight or on small or non-reflective targets. Moreover, many shooters simply wanted a unit with considerably more range. Bushnell responded to these demands by releasing its Yardage Pro 800 unit this year.

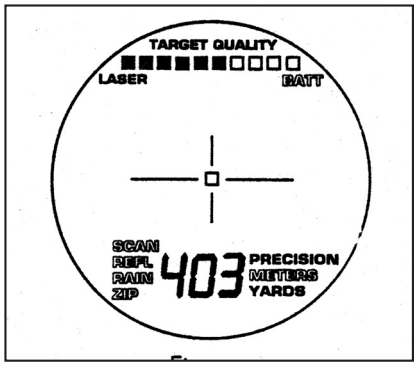
The Yardage Pro 800 gives about twice the ranging performance of the 400, measuring distances up to 800 yds. with a claimed accuracy of up to plus or minus one yd. (Bushnell states that, under ideal conditions, the unit can range out to about 1,000 yds.). About 5½" long, 5" wide and 2½" high, and 18 ozs. in weight, it is powered by a standard 9v alkaline battery and boasts a bright liquid crystal display (LCD) viewing screen that can be seen clearly under diminished light conditions, as well as a variety of ranging modes for better performance.

Like its Yardage Pro 400 predecessor, the 800 uses an invisible, eye-safe 904 nm Class 1 infrared laser beam to gauge distances. The unit is used by looking through the eyepiece, centering the crosshairs in the LCD on the target (at least 25 yds. distant), and pressing the "fire" button on the top right side of the unit. This causes an infrared laser beam to be emitted, some of which bounces back to a sensor in the unit. Internal circuitry measures the time for the emitted beam to go from the unit to the target and be reflected back, and converts this interval into distance, which displays in yards or meters.

The LCD display offers a number of features designed to enhance operation. At the top, a TARGET QUALITY meter registers the quantity of light being reflected back from the target. The higher the quantity, the easier it is for the unit to range to the object. Note that this has nothing to do with accuracy; anytime a range figure is displayed, it is accurate to within three yds. (one yd. if the PRECISION indicator to the right of the range display is lit).

Below the crosshairs is the large digital distance display; to the left of this the current targeting mode is shown (selected by pressing the "mode" button atop the left side of the unit). The Yardage Pro 800 offers three targeting modes to enhance ranging: REFL (increases the unit's ability to range highly reflective objects by lowering its sensitivity to eliminate noise); RAIN (improves ranging through rain by ignoring all reflected light from objects less than about 95 yds. distant); and ZIP (similar to RAIN but ignores reflected light from objects less than 165 yds. away). Additionally, a new SCAN mode can be selected, which provides continuous ranging data on multiple objects as they are traversed by the crosshairs.

We tested the Yardage Pro 800 in the field on a variety of targets under various lighting conditions. We found the unit to be easy to use, and the backlit LCD display was visible even in near-darkness. Our tests highlighted the capabilities—and limitations—of such rangefinders. We were easily able to range a haystack in a field at more than 700 yds. in late afternoon light, but had more difficulty in ranging smaller, less reflective targets at such extended distances. In general, laser rangefinders work better in reduced light conditions (bright sunlight produces light "noise" that competes with the laser beam) on reflective targets (such as light-colored animals or shiny leaves). Target size is also a factor, the rough rule of thumb being that if you can't see it



through the 6X monocular, you probably won't be able to range it. Bushnell representatives stated that the average person should be able to range a full-grown deer out to well past 500 yds. under most conditions likely to be encountered. With greater experience with the unit, that distance might be extendable to around 600 yds.

Though considerably more expensive than the Yardage Pro 400, the 800 offers better performance and some new features in a package no bigger or heavier than typical full-sized binoculars. For the dedicated long-range varminter or big-game hunter, it allows accurate judging of target distances at about the cost of a typical target scope.

Available from: Bushnell Sports Optics, Dept. AR, 9200 Cody, Overland Park, KS 66214. Price: $549