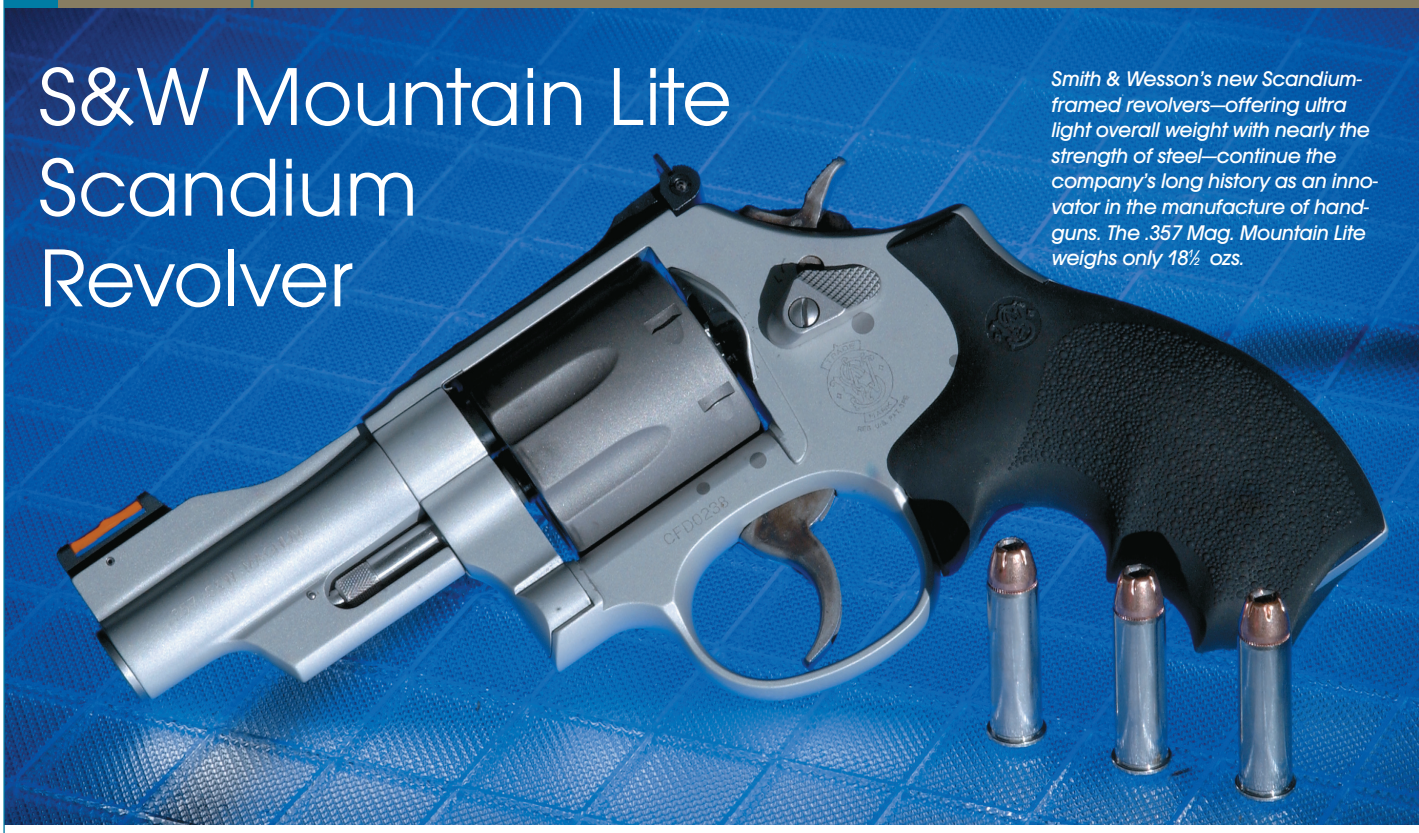
S&W Mountain Lite Scandium Revolver



Smith & Wesson's new Scandium-framed revolvers—offering ultra light overall weight with nearly the strength of steel—continue the company's long history as an innovator in the manufacture of handguns. The .357 Mag. Mountain Lite weighs only 18½ ozs.

Among this year's new products from Smith & Wesson is a line of lightweight revolvers with scandium alloy frames. Previous lightweights from S&W and other manufacturers featured frames of aluminum or titanium. Aluminum makes for a very light gun, but its limited tensile strength restricts its use to guns with chamberings no more powerful than .38 Spl. +P. Even then, the S&W's cylinder has to be steel, thus limiting the weight reduction that could be achieved.

Scandium is a rare and expensive element. Thankfully only a small amount of scandium is needed to boost the tensile strength of aluminum to the point where it compares to that of steel. Combined with titanium cylinders, the use of a scandium and aluminum alloy means S&W's guns made from that alloy can be both lighter *and* more powerful.

The Mountain Lite is chambered in .357 Mag., and it features a titanium cylinder CNC-machined from bar stock with a seven-shot capacity. The frame and barrel shroud are of the aluminum and scandium alloy, while the barrel itself consists of stainless steel. By maximizing the use of lightweight materials, the Mountain Lite weighs in at just 18½ ozs.

In such a lightweight handgun, careful attention must be paid to the composition of internal components that are especially vulnerable to battering from recoil of cartridges as powerful as the .357 Mag. Accordingly, the Mountain Lite makes use of Titanium pins for the hammer and trigger pivots that hold up better under recoil, along with triggers and hammers of casehardened steel. Titanium has a hardening threshold beyond which parts become brittle, which is why hammers, triggers and other internal operating parts are of hardened steel. Few mishaps will put a revolver out of action faster than a bent ejector rod; accordingly, a shroud beneath the barrel protects the Mountain Lite's stainless steel unit.

A wide checkered paddle on the external hammer aids thumb-cocking for single-action fire. In contrast, the trigger's

S&W MOUNTAIN LITE

MANUFACTURER: Smith & Wesson (Dept AR), 2100 Roosevelt Ave., Springfield, MA 01102; (800) 331-0852; www.smith-wesson.com
CALIBER: .357 Mag. (tested) or .38 Spl. +P*
ACTION TYPE: double-action revolver
FRAME: matte-finished, forged scandium alloy
BARREL: 3⅛" stainless steel
RIFLING: six-groove, 1:18" RH twist
CYLINDER: seven-shot titanium
SIGHTS: fixed-post front with Hi-Viz fiber-optic insert, V-notch rear adjustable for windage and elevation.
TRIGGER: double-action: 10 lbs. pull, double-action; 3 lbs. pull. single-action
OVERALL LENGTH: 8⅛"
WIDTH: 1⅝"
HEIGHT: 5"
WEIGHT: 18½ ozs.
ACCESSORIES: trigger lock and key, lockable aluminum carry case,
SUGGESTED RETAIL PRICE: $799
*Other options available.

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."

SHOOTING RESULTS

.357 Magnum Cartridge	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Group Size in Inches Smallest	Largest	Average
Hornady XTP 125-gr. JHP	1256 Avg. 37 Sd	438	2.45	3.26	2.81
Federal Hydra-Shok 158-gr. JHP	1119 Avg. 25 Sd	440	2.83	5.11	3.78
Winchester Nosler PG 180-gr. JHP	931 Avg. 22 Sd	347	2.56	4.37	3.63
Average Extreme Spread:					3.41

Measured average velocity for 10 rounds from a 3⅛" barrel. Range temperature: 78°F. Humidity: 64%. Accuracy for five consecutive, five-shot groups at 25 yds. from a Ransom Rest. Abbreviations: JHP (jacketed hollow point), PG (Partition Gold), XTP (Extreme Terminal Performance).

curved face is smooth to limit any perceived recoil that could be transmitted through the trigger assembly of this lightweight gun. For safer storage, the Mountain Lite includes a lock pin on the left-hand side of frame above the cylinder latch. Turning the pin counter clockwise blocks movement of the trigger, hammer and cylinder. An "L" with an arrow stamped above the cylinder lock serves as a visual cue for the user.

Although the Mountain Lite's more visible features seem to be aiming for high-tech cachet, the hammer and cylinder are powered by traditional flat springs.

A powerful, lightweight revolver also demands stocks that aid recoil management. With that purpose in mind, Hogue Bantam Grips are standard on the Mountain Lite. The Bantam is a one-piece unit that wraps around the front, but not the back strap. Interior aluminum panels stiffen the Bantam's soft neoprene surface. The grip has a large fillet above the topmost of its three finger grooves to protect the firer's hand from any potential rapping from the trigger guard, and the last finger groove extends beyond the bottom of the grip frame, allowing the firer to establish a shooting grip using his whole hand.

The light weight and unique recoil profile of titanium revolvers have been known to unseat bullets in lightly crimped cartridges. The manuals for the last group of S&W titanium revolvers we tested (August 1999, p. 34) specifically recommended that users avoid unjacketed bullets, but Smith & Wesson makes no specific recommendation or restrictions on ammunition brands or types for the Mountain Lite. However, the manual does advise users to test ammunition by loading a cylinder and shooting all but the last round. If the bullet in the remaining cartridge shows signs of unseating, that ammunition should not be used.

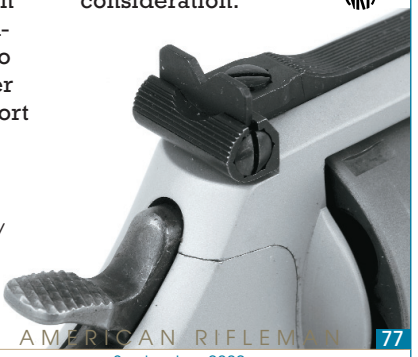
For accuracy and velocity testing we shot the Mountain Lite from a Ransom Rest. Results are shown on the accompanying table. Consistent with S&W's previous guidelines, we saw no evidence of bullets unseating in commercial ammunition with jacketed bullets. We did, however, observe some loosening in the unjacketed wadcutters we tried in search of a lighter load for practice. The trigger of our example broke at 10 lbs. pull in the double-action mode and just 3 lbs. single-action. There was no stacking, and the trigger pull length was very short for a double-action.

The Hogue grips are comfortable and do an admirable job protecting the firer's fingers from the rap of the trigger guard. The backstrap, however, is open and recoil through the web of the hand was harsh. Although shooters experienced in controlling hard-kicking handguns found it manageable, it is wise to remember that the Mountain Lite is not a strong candidate for those seeking a plinker for long shooting sessions.

Hi-Viz sights are large and easy to see even in low light, thus aiding rapid sight alignment. Like the Mountain Lite's large L-frame and wide seven-shot cylinder, its sights are too bulky for discreet carry next to the body under clothing. These features should present no problem for carry in a backpack or belt holster. Bulk is far less of a penalty than weight when trekking the high country in any case.

The Mountain Lite is a special-purpose tool. For those who need a powerful handgun that is too light to be left behind, it is certainly worth consideration.

A recess with a steel pin (top) serves as a lanyard loop for backcountry adventurers who might lose their gun in a fall. The internal operating parts of the Mountain Light are hardened steel, while the hammer and trigger pivot pins are titanium.



The rear sight blade has a V-notch (r.) and is screw-adjustable for windage and elevation. Many previous S&W target and hunting revolvers featured an orange insert to aid rapid sight alignment in poor light. The Hi-Viz fiber-optic front sight (l.) is a natural evolution of that tradition.

Burris Landmark Spotting Scope

Burris' new Landmark spotting scope is aimed at the hunter and shooter who does not need an expensive, "everything proof" scope. Evaluated here is the 20-60X Landmark with an 80 mm objective lens.

Because of its size and weight, the Burris Landmark 20-60X spotting scope will be used mostly from fixed/semi-fixed positions and from vehicles. The smaller 15-45X can be carried by the hunter comfortably in the field.

Most hunters who use a spotting scope will never portage the Yukon Territory or trek the high country in the Sierra Nevadas. For those reasons, they do not need an expensive spotting scope that is "everything proof." Still, the main objective in the purchase of any spotting scope for hunting and shooting must be a clear, bright image with plenty of definition to enable the user to judge animals and targets from a distance. For those who use spotting scopes under more typical conditions, Burris offers its Landmark series. Designed specifically for hunters and shooters, the Landmark scopes offer bright, crisp images with a one-year warranty at a great value. How great a value? Try $227 to $290.

With magnification set at 20X, the Landmark enables the user to get the "big picture" while quickly scanning large amounts of territory. The 60X magnification setting enables the hunter to judge game detail or scratch scores on targets by zooming up on them for a closer look. Experienced hunters find spotting scopes an excellent tool for planning stalking routes in advance, avoiding obstacles and identifying points of reference. Target shooters find spotting scopes help them judge wind and mirage as well as scores.

Burris' Landmark spotting scopes are offered in two models—a 15-45X with a 60 mm objective lens and a 20-60X with an 80 mm objective lens. Both are relatively compact and lightweight. The 15-45X model measures just over 12½" in length and weighs 24 ozs. The 20-60X model is approximately 17¼" in length and weighs 44 ozs. We received an example of the latter for test and evaluation.

As image quality was a major consideration in the Landmark series, Burris specified multi-coating on all lens surfaces, variable magnification and large-diameter objective lenses.

To keep weight down, the scope tubes are made of aluminum alloy with a high-impact plastic focus adjustment knob. Magnification adjustment is by means of twisting the ocular eyepiece, which is marked clearly for 20X, 40X and 60X. A white dot on the eyepiece body serves as a reference point. The eyepiece has a rubber cup with approximately 3/4" of eye relief. A flat base with a threaded hole integral to the rear tube allows fast, easy mounting on most tripods.

Our test example scope offered a 105' field of view at 1,000 yds. when set at 20X magnification and 52' at 60X—quite sufficient for most hunting applications. Exit pupil is 4 mm at 20X and 1.33 mm at 60X. Both are acceptable for a spotting scope of this type and power. With its 80 mm objective lens, the Landmark gathers enough light to provide a twilight factor of 40 at the lowest setting and 69 at the highest magnification, which enables the user to easily judge game at dawn, dusk and in heavily overcast conditions. Compare those figures with a typical 3-9X 40 mm rifle scope with a twilight factor of 19!

Landmark scopes come with two, high-impact, black plastic lens covers—the rear threads into place while the objective lens cover seats with a friction fit. A padded nylon carry case is supplied with each scope. The case has adjustable, quick-release cover fasteners and an adjustable carry strap for secure field transport. We carried this scope while hiking for long periods and found it comfortable to carry. However, this is definitely not the case with a tripod! For that reason, the Landmark will find most use in fixed or semi-fixed camps and from vehicles.

To begin our tests, we first attached the Landmark to a tripod we have used previously for testing spotting scopes. No difficulties were encountered in mounting or orienting the Landmark. Next, we checked image brightness and light transmission on a heavily overcast, rainy afternoon—just the type of hunting condition where a spotting scope is invaluable. Targets of examination ran from the inner limbs of dark trees to brick walls, small print on signs and birds. Ranges varied from about 150 yds. to more than 600 yds.

AT 20X, the image was bright, flat, clear and the colors acceptably crisp in the wide field of view. Small details such as pine bristles, branches and grass blades could be discerned easily at ranges to 300 yds. At 40X, the image remained bright, flat and clear with a minimal amount of color washout. However, the field of view narrowed noticeably although it remained acceptable and resolution of detail remained very good. At 60X, the image dimmed substantially and was not as clear with a noticeable amount of color washout and a narrow field of view. In our opinion, the 60X magnification will find very little use for hunting although target shooters may find it acceptable for very long ranges. Focus was by means of a plastic knob atop the rear housing. Smooth and easily turned, we found the ratio too fast, which caused us to constantly overshoot the focus.

As the Landmark is not waterproof or nitrogen-filled, we did not subject this example to our normal water immersion test. However, we did take the Landmark from a dry inside atmosphere of 73° F to a high humidity outside temperature of about 36° F to check for fogging. None occurred.

Burris has a well-earned reputation for high-quality rifle scopes. To this must now be added a reputation for quality spotting scopes. The Landmark series of spotting scopes offers good optical performance at a reasonable price. Burris Landmark spotting scopes are an excellent choice for the hunter or shooter who does not need an expensive spotting scope for extreme conditions or rough handling.

Available from: Burris Co. (Dept. AR), 331 E. 8th St., Greeley, CO 80631; (970) 356-1670; www.burrisoptics.com Suggested Retail Price: $227 (15-45X), $290 (20-60X).

Each Burris Landmark spotting scope is supplied with high-impact plastic lens covers and a padded, black nylon carry bag.

The eyepiece (below) has approximately 3/4" of eye relief and is twisted to adjust magnification. The focus ring (below r.) is on the front of the rear housing.

Gunsite Marksman 1 Titanium Frame M1911

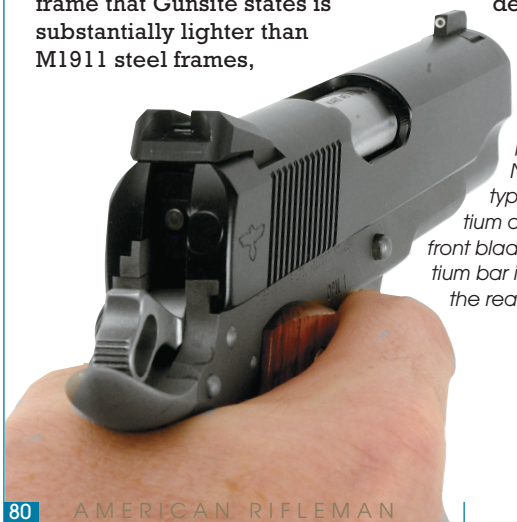
In keeping with Gunsite philosophy, the built-to-spec Marksman 1 titanium frame series are single-action, M1911-type, service pistols designed and upgraded for modern defensive use.

Although the Gunsite Academy is well known as a premier training facility offering a wide spectrum of instructional shooting courses, it also produces a line of upgraded M1911 pistols. One of the newest examples of its built-to-spec guns is the Marksman 1 series with a titanium frame that Gunsite states is substantially lighter than M1911 steel frames, but with greater strength, durability and corrosion resistance. The NRA Technical Staff received a Commander-size model of the Marksman 1 for test and evaluation.

In keeping with Gunsite Academy principles, the Marksman 1 titanium frame pistols are single-action, M1911-type, service pistols designed and upgraded for the school's theories on modern defensive conditions. Accordingly, .45 ACP is the only chambering offered. The pistols incorporate only the features Gunsite has found useful over the years.

Titanium has broadly similar strength characteristics to alloyed steel at approximately half the weight. Titanium, however, costs substantially more than steel and is more difficult to machine. The all titanium Marksman frames begin as investment castings made to Gunsite specifications by Caspian Arms, Ltd. The frame has a matte natural finish and is assembled with an extended safety lever, an extended magazine release button, an aluminum trigger (adjustable for overtravel) and a beavertail grip safety. All levers are of stainless steel with a matte finish matching the frame, while the beavertail safety is of titanium. In addition, fine sharkskin-type stippling is applied to the frontstrap and mainspring housing to improve purchase. Grip panels are smooth rosewood with laser-etched Gunsite logos.

A steel slide with a satin blue finish and 13 grip serrations on the rear sides top the Marksman 1. Gunsite equipped it with a Kart rampless barrel, a skeletonized hammer to reduce lock time and a match-grade barrel bushing.



Sights are low-profile Trijicon/ Novak combat types with a white tritium dot insert in the front blade and a white tritium bar in the bottom of the rear notch.

SHOOTING RESULTS

.45 ACP Cartridge	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Group Size In Inches Smallest	Largest	Avg.
Remington R45AP7 230-gr. JHP	747 Avg. 9 Sd	285	1.92	5.79	4.42
Winchester X45ASHP2 185-gr. JHP	874 Avg. 24 Sd	308	2.54	6.04	4.34
Black Hills 185-gr. JHP	928 Avg. 9 Sd	354	3.04	4.41	3.71
Average Extreme Spread:					4.10

Measured average velocity for 20 rounds from a 4¼" barrel. Range temperature: 81° F. Humidity: 42%. Accuracy for five consecutive, five-shot groups at 25 yds. from a sandbag. Abbreviations: Sd (standard deviation), JHP (jacketed hollow point).

Although Gunsite Academy is well known as a premier training facility, it also offers a variety of upgraded M1911s, including the titanium-framed Marksman 1.

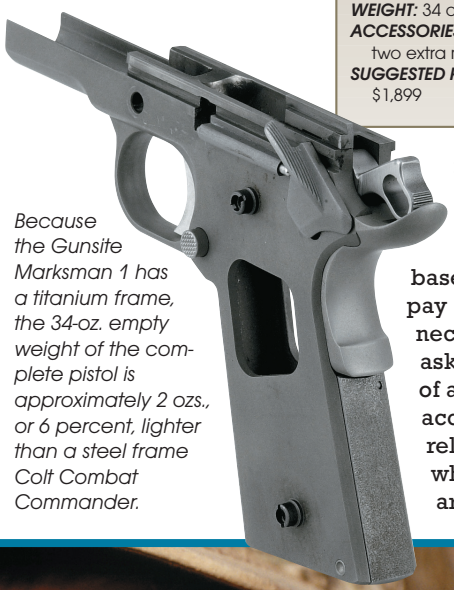
Three Chip McCormick Corp. eight-round magazines are provided. We found the nickel-plated steel magazines dropped free of the pistol when the magazine release button was pressed. Of course, the magazine well is beveled.

Sights are low-profile Novak combat types as made by Trijicon with a green tritium dot insert in the front blade and a green tritium bar in the bottom of the rear notch. Both front and rear sights are drift-adjustable for windage as they are mounted in dovetails cut into the slide.

Because the Marksman 1 has a titanium frame, the 34 oz. empty weight of the complete pistol is approximately 2 ozs., or 6 percent, lighter than that of a steel frame Combat Commander.

To test the Marksman for reliability, we fired several hundred rounds of .45 ACP ammunition through the example. Bullet weights of 185 and 230 grs. were used. Quite simply, the Marksman 1 digested everything we tried without a hitch. Accuracy tests were fired at 25 yds. from a sandbag rest using various types of ammunition. In defensive shooting-style drills, the Marksman 1 fared very well due to its reliability—there were no failures of any kind—crisp trigger pull and Novak sights.

Gunsite has resisted the urge to add unnecessary bells and whistles to the Marksman. Yes, Gunsite's Marksman 1 titanium frame pistol is expensive, but it delivers the performance-based pedigree you pay for. In that connection, one might ask what the value of an ergonomic, accurate and reliable pistol is when the chips are down.



Because the Gunsite Marksman 1 has a titanium frame, the 34-oz. empty weight of the complete pistol is approximately 2 ozs., or 6 percent, lighter than a steel frame Colt Combat Commander.

MARKSMAN 1

MANUFACTURER: Gunsite Academy (Dept. AR), 2900 W. Gunsite Road, Paulden, AZ 86334; (928) 636-4565; www.gunsite.com
CALIBER: .45 ACP
ACTION TYPE: short-recoil operated semi-automatic pistol
FRAME: Caspian matte titanium alloy
BARREL: 4¼"Kart match-grade
RIFLING: six-groove, 1:16" LH twist
MAGAZINE: eight-round, single-column
SIGHTS: Novak low-profile combat with tritium inserts, drift-adjustable for windage
TRIGGER: single-stage, 3½ lb. pull, adjustable for overtravel
OVERALL LENGTH: 8"
WIDTH: 1⅝"
HEIGHT: 6"
WEIGHT: 34 ozs.
ACCESSORIES: soft carry case, two extra magazines
SUGGESTED RETAIL PRICE: $1,899

Leica LRF 800 Rangefinder

When it comes to gear hunters are bringing to camp, the biggest change we've noted over the past decade is the sudden prevalence of laser rangefinders. We may very well have reached that point where more big-game hunters' packs than not now contain the battery-powered distance-measuring devices, and

Among the laser rangefinders we have used, the LRF 800 provided first-time hits more frequently, and did so in driving rain and heavy snowfall, gloomy swamp and glaring desert, and on occasion, exceeded its advertised 800-yd. maximum.

they have been adopted by varmint shooters and turkey callers as well. Though reaction to their mid-1990s introduction was widespread and immediate, it was not entirely favorable. Skeptics were quick to voice a number of concerns: that the units were burdensome, costly, unreliable and fragile, perhaps the laser even hazardous. Furthermore, some cited ethical fears that rangefinders would prompt ill-advised long-range shooting.

Instead, as rangefinders proved their worth afield, the objections all but vanished overnight, and the rapidity with which they became standard equipment has been remarkable.

Chalk up the rapid success of laser rangefinders to the right idea at the right time, but much credit must also go to manufacturers for quickly making their products more practical and affordable. While laser rangefinders can be had in various guises, today's base model has evolved into a pocket-sized, half-pound-or-so instrument capable of maximum readings ranging from 400 to 800 yds. and costing between $250 and $500. One of the leaders in this category is the Leica LRF 800.

While Leica is best known for cameras, fans of high-end optics hold the German firm's binoculars and spotting scopes in the highest regard. In fact, Leica was one of the first to offer a laser rangefinder to sportsmen, incorporating the technology within a superb 7x42 binocular dubbed the Geovid. Many consider this the ultimate rangefinder, but its weight (three pounds) and price (more than $2,500) have limited sales to the most dedicated users.

As with all consumer-grade laser rangefinders, the LRF 800 emits pulses of infrared light that reflect off the target object, then rebound back to the unit's receiver within a fraction of a second. A precise internal clock times the round trip of a series of pulses, then converts that data into distance displayed in a highly visible LCD readout. When the reflective quality of the target is sufficient, the entire process is virtually instantaneous, providing the user an accurate number on which he can base his decision to shoot or try to get closer.

A precise internal clock times the round trip of a series of laser pulses, then converts that data into distance displayed as a highly visible LCD readout inside the rangefinder.

Indeed it may surprise some to learn that target reflectivity, not ambient light, is the prime determinant of rangefinder effectiveness. In short, light is better than dark, shiny better than dull. In our experience, employing models representing all major brands, positive readings off game animals were altogether satisfactory, though some units on some targets required more than one try. Among all those we have used, the LRF 800 provided first-time hits more frequently, did so in driving rain and heavy snowfall, gloomy swamp and glaring desert, and on occasion exceeded its advertised 800-yd. maximum. When time is short for ranging a roving elk or deer, such reliability is much appreciated.

The LRF 800 also provides 7X magnification, in effect functioning as a monocular to help the user pinpoint small, distant subjects. Though it is not a spotting tool *per se*, the optical quality delivered by multi-coated lenses is certainly worthy of the Leica name. The unit is housed in tough rubber armoring that makes it nearly impervious to weather and hard knocks, and has a fold-down eyecup for easy eye-relief adjustment. Nicely compact at 4"x4"x1⅜", the unit nonetheless sports square corners that can make one-handed removal from a pocket a chore. Too, we'd like to see a more prominent control button, as the current part is difficult to feel through heavy gloves and may require the user to take his eyes off the action downrange.

Quickly, accurately, and for most, affordably, laser rangefinders supply hunters vital data to make ethical decisions and take their best shots. Among the top in its class, the Leica LRF 800 has helped ensure these tools are here to stay.

Available from: Leica Camera, Inc. (Dept. AR), 156 Ludlow Ave., Northvale, NJ 07647-2308; (201) 767-7500; www.leica-camera.com/usa. Price: $450.

Rangefinders, such as the LRF 800, have evolved into pocket-sized devices capable of readings ranging from 400 to 800 yds.