

# NIKON MONARCH

## 4-16X 42 mm SF



**T**he optics market, like many segments of industry, is one of trends. When one company establishes a better reticle, surface coating or finish, rest assured that other companies will be quick to copy or develop their own versions. A current trend in riflescopes is increased range of magnification, as advancements in erector systems enable greater range of zoom in 30 mm and 1" tubes, without an obscene increase in weight or bulk. Among the companies capitalizing on this

technology is Nikon with its new Monarch series riflescopes.

Instead of the 3X zoom of the older variant, the new Monarch features a 4X zoom system, which delivers much greater magnification ranges, on the same 1" tube. For example, with a 3X system, common ranges were 2.5-7, 3-9 and 4-12. However, on a 4X system, those ranges swell to 2.5-10, 3-12 and 4-16. In essence, it creates riflescopes much more capable than previous models of being able to "do everything."

Our test model, a 4-16X 42 mm

SF (side focus) model was evaluated extensively both afield and on the range. Mounted to a Thompson/Center Icon in .30 T/C, we field tested the new Monarch on safari in Africa. On the range, we tested mechanical adjustments and repeatability. After international travel, hundreds of miles in open-top safari vehicles, three sighting sessions on two different rifles, seven one-shot kills, and hundreds of rounds sent downrange, we felt confident in the ruggedness and quality of Nikon's new Monarch.

When redesigning the Monarch line, Nikon engineers sought to deliver riflescopes appropriate for any type of hunting, regardless of caliber or environs. To make it more appealing to American shooters, Nikon stuck with a 1" main-body tube, machined from aircraft-grade aluminum, making it light and durable. The tube is shorter overall than previous models without sacrificing the available space for mounting rings. As a bonus, the end of the objective bell on all new Monarch models is threaded to accept a sun shade, which comes standard on the 5-20X 44 mm and 6-24X 50 mm versions.

The heart of the new Monarch line is the company's proprietary lead-and-arsenic-free Eco Glass lenses and Ultra ClearCoat anti-reflective multicoatings. Together, Nikon claims, these enhancements deliver 99.5 percent light transmission per glass surface, which translates to 95 percent total light transmission. Nikon says all scopes in the Monarch line are waterproof, fogproof and shockproof, and after taking one around the world and back, we see no reason to doubt that claim.

Another key feature, of course, is the 4X zoom range, which allows 4" of eye relief throughout the power range. The ocular bell's rear-facing magnification indicators on the zoom control and quick-focus eyepiece make the new design inherently user friendly.

Also new is an interchangeable turret system that enables switching out turret knobs and caps, depending on user preference. There, we found the click adjustments distinct in both sound and feel as the turret turned and settled into place. Our test model featured 1/4-m.o.a. adjustments, while two models in the line, the 5-20X 44 SF and 6-24X 50 SF, utilize 1/8-m.o.a. adjustments.

All models with magnifications exceeding 10X also feature a locking side focus knob on the left side of the adjustment turret adjustable from 50 yds. to infinity. When used afield, we appreciated the ability to make quick parallax adjustments during certain hunting scenarios, as well as the locking mechanism—there was no worry about losing the setting despite banging the optic in the back of open-top trucks and while hiking through the rugged Namibian hill country.

Monarch riflescopes are available with Nikon's Bullet Drop Compensating (BDC) reticle, a trajectory-compensating design that is calibrated for quick acquisition with various aiming points for specific yardages. When set at the highest magnification, 16X on our

4-16X 42 mm SF model, descending "ballistic circles" below the crosshairs on the vertical stadia subtend 2" at 100 yds., and each represents a specific yardage and corresponding hold. On standard calibers, users sight-in the rifle at 100 yds., which in turn yields 200, 300, 400 and 500 yds. on descending circles, respectively. For magnum calibers, the BDC should be zeroed at 200 yds., with descending circles representing 300, 400, 500 and 600 yds.

In practice, however, this is merely a starting point with the BDC. After sighting-in the rifle at the appropriate distance, points of impact should be confirmed after shooting each ballistic circle as point of hold for its respective distance. Most loads are likely to be within those points of hold when using the scope at the maximum zoom setting. However, users should also shoot at each zoom setting to see how point of impact changes within each ballistic circle at each distance.

The point, which cannot be made too emphatically, is that sportsmen must confirm how their loads correspond to the BDC aiming points prior to hunting in order to take full advantage of the system. We recommend extensive

## NIKON MONARCH 4-16X 42 mm

**IMPORTER:** NIKON SPORT OPTICS (DEPT. AR)  
1300 WALT WHITMAN ROAD, MELVILLE,  
NY 11747; (800) 645-6687, OPTION 4;  
WWW.NIKONSPORTOPTICS.COM

**MODEL:** MONARCH

**MAGNIFICATION AND OBJECTIVE:**  
4-16X 42 MM

**TUBE DIAMETER:** 1"

**FINISH:** MATTE-BLACK ANODIZED ALUMINUM  
**FIELD OF VIEW:** 25.2 (4X) TO 6.3 FT. (16X)  
AT 100 YDS.

**EYE RELIEF:** 4" TO 3.7"

**EXIT PUPIL:** 2.6 MM

**CLICK VALUE:** 1/4 M.O.A.

**MAXIMUM INTERNAL ADJUSTMENT:**  
40 M.O.A. WINDAGE AND ELEVATION

**RETICLE:** BALLISTIC DROP COMPENSATING

**LENGTH:** 13½"

**WEIGHT:** 18 OZS.

**ACCESSORIES:** SUN SHADES


**OPTIONS:** INTERCHANGEABLE TURRET SYSTEM

**SUGGESTED RETAIL PRICE:** \$450

range sessions and the formulation of a ballistic chart to be carried afield or adhered to the scope or stock. And if you do your homework, and know where the bullet is hitting with the ballistic circles at all ranges and magnifications, then you will have a powerful ally in the field.

For those who prefer more conventional reticles, the Monarch line is available with Mildot or cross-hair variants. Monarch riflescopes are available in the following models: 2.5-10X 42 mm, 2.5-10X 50 mm, 3-12X 42 mm SF, 4-16X 42 mm SF, 5-20X 44 mm SF and 6-24X 50 mm SF. Suggested retail prices range from \$410 to \$650.

Ultimately, we found the new Monarch's zoom control fluid and smooth, while the hand-turned elevation and windage adjustments were solid and positive. We found the scope durable during field tests in extremely inhospitable conditions, riding and hiking through rough country, where fine-grit sand did nothing to impede operation of either the zoom or parallax adjustment mechanisms.

During low-light hunting, we were satisfied with the scope's light transmission, and during benchwork we found adjustment to be precise and repeatable. In short, we feel the Nikon Monarch delivers considerable performance for the money—rewarding the user with high-end form and function at a mid-level price. 



Nikon's new Monarch includes a 4X zoom range and the Bullet Drop Compensating (BDC) reticle.



## LEUPOLD VX-7 1.5-6X 24 mm

*The VX-7 includes a new Xtended Twilight Lens System designed to improve performance in low-light.*

**F**or Leupold, 2007 marks its 100-year anniversary and the introduction of a line of scopes labeled Golden Ring VX-7, whose innovative features have fueled hopes that its scopes will rival even the Old World's finest optics manufacturers. Leupold fans have long been pleased with the company's line of riflescopes, even with the transition from Vari-X to VX lines a few years ago. The new VX-7 line is vastly different from its lesser-priced VX cousins, incorporating many significant features combined to make a user friendly yet high-quality riflescope.

The innovative Xtended Twilight Lens System incorporates unique lens coatings that generate the image quality needed for low-light conditions when shooting or hunting—"brightness, crispness and clarity." Constructed of lead-free glass, the lenses have been precision-ground and highly polished to improve resolution and contrast while the edges have been blackened to diminish any stray light refraction. The lenses are protected by DiamondCoat 2 to defend against scratching. In

addition, the krypton/argon gas purging of the main tube ensures water- and fogproof reliability.

Leupold's Speedial system follows a new trend of making adjustments easier for the hunter or shooter. In the field, when windage or elevation changes are called for, the Speedial system allows the shooter to adjust without using tools or fumbling to remove the scope caps. Rotating the captive cap one-half turn from its locked position enables the user to lift the cap and turn the adjustment knob for 1/4-m.o.a. adjustments. The titanium nitride/stainless steel adjustment mechanism is made with tighter tolerances, therefore better maintaining desired windage, elevation and parallax adjustments. After using the VX-7 on an African safari one staffer found the Speedial knobs to be more user-friendly than traditional style adjustment knobs.

Leupold has engineered the VX-7 series with an "eyebow" that is extremely forgiving, allowing the shooter to quickly get on target while at the same time minimizing scope shadow and blackout. The

European style eyepiece rotates 1.5 revolutions from lock-to-lock positions. Also, contributing to the handy design is an Alumina rubber eyepiece guard that protects the shooter's face in the event of the scope hitting it under recoil.

Using the VX-7 1.5-6X 24 mm on safari in Namibia, we found the experience satisfying whether shooting long distances across the red sands of the Kalahari or shorter distances in the brushy hillsides of the Khomas. In the bright African sunlight or in the purplish haze of dusk, the light transmission seemed quite efficient, and animals appeared clear and well defined with every shot.

The following VX-7 scopes are available: 1.5-6X 24 mm, 2.5-10X 45 mm, 3.5-14X 50 mm Long Range, L 3.5-14X 56 mm Long Range and L 4.5-18X 56 mm Long Range. The two VX-7L models have the rather unique crescent-shaped bell or Light Optimization Profile introduced in 2006. Standard VX-7s, like the 1.5-6X 42 mm evaluated here, have 30 mm main tubes, but the VX-7L models will have 34 mm main tubes. All VX-7 scope tubes

are machined from a single piece of aircraft-grade aluminum.

Leupold offers a variety of reticle options in the VX-7 line depending on model. The VX-7 1.5-6X 24 mm is available in XT Duplex, German No. 4 and circle dot. Reticle options for the VX-7 2.5-10X 45 mm include XT Duplex, German No. 4 and Boone & Crockett Big Game. For the VX-7 3.5-14X 50 mm Long Range XT Duplex, German No. 4, Boone & Crockett Big Game and Varmint Hunter's reticles are available. The VX-7L 3.5-14X 56 mm Long Range is available in XT Duplex, Boone & Crockett Big Game and Varmint

Hunter's reticles. Finally the VX-7L 4.5-18X 56 mm Long Range reticle options include Fine Duplex, Boone & Crockett Big Game and Varmint Hunter's. 



## LEUPOLD VX-7 1.5X 24 mm

**MANUFACTURER:** LEUPOLD & STEVENS, INC., (DEPT. AR) P.O. Box 688 BEAVERTON, OR 97075-0688; (800) 538-7653; WWW.LEUPOLD.COM

**MODEL:** LEUPOLD GOLDEN RING VX-7 1.5-6X 24 MM

**MAGNIFICATION AND OBJECTIVE**  
(ACTUAL): 1.5X TO 5.8X

**TUBE DIAMETER:** 34 MM

**FINISH:** MATTE-BLACK ANODIZED ALUMINUM

**FIELD OF VIEW:** 16.9 (9X) TO 62.1 (3X) FT. AT 100 YDS.

**EYE RELIEF:** 4.5" TO 3.8"

**CLICK VALUE:** 1/4" at 100 yds.

**MAXIMUM INTERNAL ADJUSTMENT:**  
60 M.O.A. WINDAGE AND ELEVATION

**RETICLE:** GERMAN No. 4

**LENGTH:** 10½"

**WEIGHT:** 15.3 ozs.

**SUGGESTED RETAIL PRICE:** \$1,689

*The pop-up, easy-to-use, Speedial knobs combine the cap and adjustment turret, so you can't lose the cap.*

# LEICA RANGEMASTER CRF 900



**I**ts background in developing laser-based surveying instruments and a century of expertise in grinding glass lenses for binoculars, microscopes and cameras more than prepared German optics manufacturer Leica to enter the sporting mar-

ket with the LRF 800 monocular rangefinder in 2000.

Since then, the company's circular red medallion has graced a series of progressively smaller, lighter, more sophisticated units. The latest are the Rangemaster CRF 900 and 1200, which differ from pre-

vious Leica models in that they rest vertically rather than horizontally in the hand during use.

The CRF 900 became a handy companion during an early-June plains-game safari in the southwestern African country of Namibia. The unit's size—little



more than a deck of playing cards—and smooth contours made withdrawing it from the breast pocket of a shirt quiet and effortless. The non-slip exterior coating allowed a secure hold even when hands were stiff from the early morning cold. Equally convenient was the compact Ultra-vid 8X 32 mm binocular that hung from the evaluator's neck.

During the 10-day hunt, the package served exactly as Leica Sports Optics Vice President Terry Moore suggested it would—"not so much as a necessity, but as an enhancement of the African safari experience."

As is often the case when hunting bushveldt terrain, none of the shots from a Winchester Model 70 Classic .375 H&H were

long—the farthest being 139 yds. on a blue wildebeest. In addition, the factory Federal Premium Vital-Shok, carrying the 260-gr. Nosler Accubond bullet's ballistic coefficient of .473, made holdover calculations unnecessary.

Nonetheless, of the four animals taken, including a 1,200-lb. eland, an average-size impala and an average-size warthog, none required guessing as to *exactly* how far the shots were likely to be, when setting up on a watering hole beforehand, or how far they had been, when ranging the distances afterward for the purposes of confirming bullet placement and evaluating bullet performance.

On several occasions, while spotting for a hunting partner, we called out precise range measurements that aided his shot placement on small, distant animals, such as jackals.

Using the CRF 900 couldn't be simpler. Adjust the eyecup and diopter setting to the preferred positions, and look through the 7X monocular. A single press of the top-mounted Distance Measure-

## LEICA CRF 900 RANGEMASTER

**IMPORTER:** LEICA CAMERA, INC. (DEPT. AR),  
1 PEARL COURT, UNIT A, ALLENDALE,  
NJ 07401-1610; (800) 222-0118;  
WWW.LEICACAMERAUSA.COM

**MODEL:** RANGEMASTER CRF 900

**MAGNIFICATION:** 7X

**FIELD OF VIEW:** 34.5 FT. AT 100 YDS.

**EYE RELIEF:** 19/64"

**RANGE/ACCURACY:** 11 YDS.  
TO 900 YDS., +/- 1 YD.

**RETICLE:** RED AIMING SQUARE,  
RED DIGITAL NUMERIC DISPLAY

**BATTERY:** ONE 3-VOLT, CR2 LITHIUM CELL

**CONSTRUCTION:** DIE-CAST ALUMINUM  
CHASSIS ENCASED IN CARBON-FIBER-  
REINFORCED PLASTIC

**FINISH:** MATTE-BLACK NON-SLIP COATING

**DIMENSIONS:** 2 $\frac{7}{8}$ " WIDE, 1 $\frac{3}{8}$ " HIGH,  
4 $\frac{1}{8}$ " DEEP

**WEIGHT:** 7.8 OZS.

**FEATURES:** SCAN MODE, BATTERY LEVEL  
INDICATOR, DIOPTRIC COMPENSATION,  
FOLD-DOWN RUBBER EYECUP

**ACCESSORIES:** CARRY CASE, NECK STRAP,  
OWNER'S MANUAL

**SUGGESTED LIST PRICE:** \$600

ment Release Button activates the laser, which is reflected off the target and read by the unit. A small, red aiming square simultaneously appears in the center of the lens. A second press displays the distance in yards below the aiming point.

The rest is up to the shooter, as the CRF series units do not incorporate trigonometric software for angle compensation. They do, however, incorporate a scan mode. Simply hold down the release button during the second press and distances automatically re-register as the unit's beam reflects off various targets.

Most hunters understand the benefits of using binoculars in combination with laser rangefinders. And it stands to reason that the convenience gained by the latter's compactness, light weight and simplicity equate to more unhindered glassing time through the former for trophies. Any piece of equipment as small and light as the Leica CRF 900 that can do that reliably and conveniently is worth its weight in gold. 🦋



*The Rangemaster CRF 900 is a 7X rangefinding monocular. Depressing the Distance Measurement Release Button on the unit's top (l.) activates the laser. There is a red square in its center, and when the button is pressed again, the measurement in yds. appears. There is also a scan mode in which the unit will continuously read the distance to objects so long as the button is held down.*



## SWAROVSKI Z6 1.7-10X 42 mm

**Z**oom describes the adjustable magnification range of an optical instrument; the larger the zoom factor, the wider the range of magnification adjustment. The lowest magnification setting offers the widest field of view, while the highest setting provides better identification of the target and a more precise aiming point. Accordingly, most hunters would choose a low-power scope for brush hunting where shooting opportunities appear and disappear quickly, and a high-power scope for hunting the plains, where long-range shots requiring precision shot placement are the norm. Swarovski's Z6 scopes with 6X zoom offer sportsmen the best of both worlds.

Variable scopes have generally been limited to a 3X zoom factor in a 1" tube and a 4X or 5X zoom factor in a 30 mm tube. A greater range of magnification adjustment makes Swarovski's

Z6 scopes more versatile and increases the number of hunting and shooting applications for which they are suited. They are available in 1-6X 24 mm, 1.7-10X 42 mm and 2-12X 50 mm. Also available are Z6 scopes compatible with the Swarovski Rail mount.

The 1.7-10 X 42 mm Z6 Swarovski sent to us for testing is 12½" long and weighs 16¾ ozs. All of the scopes in the Z6 line feature 30 mm main tubes and the 1.7-10X model has a 42 mm objective lens. Transparent caps are supplied to protect both the ocular and objective lenses. The objective bell is threaded for the attachment of a sun shield and filter (which are available as accessories) for increased contrast.

Swarovski states that its Z6 scope tubes are hardened to better resist recoil and impact for better zero retention, nitrogen-purged to prevent fogging and rated as waterproof to a depth of 13 ft. or 0.4 bar. Swarovski's

own Swarotop lens coating, that reduces reflection, and precision cut microstructure grooves cut into the inside of the tube reduce residual reflection to help ensure crisp, high-contrast images, even in the brightest sunlight. Swarovski rates the light transmission of the 1.7-9X 42 mm Z6 scope as 90 percent.

The new Swarovski scopes are also available in Z6i (illuminated) models. When the scope's illumination setting is activated, a center dot and ring take on an amber-colored glow while the horizontal and vertical stadia arms remain black. Amber was chosen over red for reduced eye-strain. The Z6's illumination unit is contained in a low-profile housing built into the top of the ocular bell. Wide brightness adjustment pads on either side of the battery compartment (minus on the left, plus on the right) make for quick and easy adjustment of the Z6i's 64 brightness levels.

An automatic shut-off function differentiates between day and night modes. It activates after three hours on the daytime setting and five hours on the nighttime setting to prevent the batteries from being run down. The scope retains two memory illumination settings; one for day and one for night. The illuminated reticle returns to the last brightness setting when the unit is turned on.

A lever at the rear of the illumination unit allows the user to alternate quickly between day and night modes and immediately displays which mode has been selected. When the battery has reached the end of its useful life, the reticle blinks, indicating that it is time to change the battery.

A dioptic correction ring on the rear of the objective bell provides focus adjustment from +2/-3. At the front of the objective bell is a power ring that turns 180 degrees to adjust magnification from 1.7X to 10X. The ring is ribbed for better purchase. A raised thumb-pad on the power ring provides a tactile and visual index of the power setting. When the raised thumb-pad is turned all the way to the left (the 9 o'clock position) magnification is at its highest (10X) setting. Conversely, when the thumb pad is turned all the way to the right (the 3 o'clock position) magnification is at its lowest (1.7X) setting.

The Achilles heel of Swarovski scopes has been their stingy eye



relief. Many hunters who wanted a scope with Swarovski's optical quality often had to pass them by because mounting a scope with such short eye-relief on a hard-kicking rifle was an invitation to injury. Swarovski has addressed that problem in its latest scopes. All of the standard Z6 models provide 3.74" of eye relief. Additionally, the 1-6X 24 mm scopes are available in an EE (extended eye relief) model with 4.72" of eye relief.

The scope's reticle is centered in the second image plane. So the size of the reticle remains the same, and only the image is magnified. This prevents the reticle from obscuring the target when the magnification setting is increased. Needless to say, this is a critical feature in a scope with 6X zoom capability.

Each click of the windage and elevation turrets moves point of impact 1/3" at 100 yds. The 1.7-10X 24 mm Z6 scope provides up to 54" of windage and elevation adjustment at 100 yds. Swarovski's four-point coil spring system helps maintain zero and provides consistent and repeatable adjustments.

The test scope was fitted to a Remington 700 BDL in .30-'06 Sprg., and we shot the square to test the Z6's consistency and repeatability of adjustment. We shot our first five-shot group for zero then turned the dials 12 clicks up and 12 clicks right and shot our second group. Then we turned 24 clicks down and fired our third group. We then added 24 clicks to the left and fired our fourth group. We turned 24 clicks up and fired a fifth group. For our last group we turned 12 clicks right and 12 clicks down to return to zero. All of the corner groups were equidistant and the last

## SWAROVSKI Z6 1.7-10X 42 mm

**IMPORTER:** SWAROVSKI OPTIK  
(DEPT. AR), 2 SLATER ROAD,  
CRANSTON, RI 02920;  
(800) 426-3089;  
WWW.SWAROVSKIOPTIK.COM

**MODEL:** Z6

**MAGNIFICATION AND OBJECTIVE:**  
1.7-10X 42 MM

**TUBE DIAMETER:** 30 MM

**FINISH:** MATTE-BLACK ANODIZED ALUMINUM  
**FIELD OF VIEW:** 75.6 (1.7X) TO 12.6 FT.  
(10X) AT 100 YDS.

**EYE RELIEF:** 3.74"; EE, 4.72"

**CLICK VALUE:** 0.361" AT 100 YDS.

**MAXIMUM INTERNAL ADJUSTMENT:**  
4½ FT. AT 100 YDS. WINDAGE, 4½ FT.  
AT 100 YDS. ELEVATION

**RETICLE:** 4, 7A, CD-I, 4A-I, TDS

**LENGTH:** 12.6"

**WEIGHT:** Z6, 16<sup>5</sup>/<sub>8</sub> OZS.; Z6i 18¼ OZS.

**FEATURES:** OCULAR FOCUS RING,  
FINGER-ADJUSTABLE TURRETS.


**ACCESSORIES:** LENS CLEANING CLOTH,  
TRANSPARENT LENS COVERS

**OPTIONS:** CHOICE OF RETICLES,  
SR RAIL MOUNTING SYSTEM

**SUGGESTED RETAIL PRICE:** Z6,  
\$1,855; Z6i, \$2,499



group overlapped the first.

Although its price is high, Swarovski certainly delivers the goods when it comes to optical quality. The Z6 consistently provided crisp, high-contrast images on the range and in the field. A scope like the Z6, with its 6X zoom, is certainly attractive to any sportsman pursuing a variety of game or facing a hunt in Africa or Alaska where unpredictable shooting conditions are the norm. 

*The Z6 is the first scope we've tested that provides 6X zoom, in this case 1.7X to 10X, making it an extremely versatile scope. The adjustment turrets (l.) can be turned by hand in 1 cm or 0.361" increments at 100 yds. and proved very repeatable. The innovative illumination system of the Z6 (above, r.) offers both day and night modes and 64 brightness settings.*



## BUSHNELL TROPHY RED DOT

**IMPORTER:** BUSHNELL OUTDOOR PRODUCTS (DEPT. AR), 9200 CODY, OVERLAND PARK, KS 66214; (800) 423-3537; WWW.BUSHNELL.COM

**MODEL:** TROPHY 1X 28 MM

**MAGNIFICATION:** 1X

**FIELD OF VIEW:** 68 FT. AT 100 YDS

**CLICK VALUE:** 0.33" AT 100 YDS.

**MAXIMUM INTERNAL ADJUSTMENT:** 50-M.O.A. WINDAGE AND ELEVATION AT 100 YDS.

**RETICLE:** SELECTABLE BETWEEN 3-M.O.A. RED DOT, 10-M.O.A. RED DOT, 65-M.O.A. RED CROSSHAIRS AND 65-M.O.A. RED CIRCLE WITH 3-M.O.A. RED DOT

**BATTERY:** ONE 3-VOLT No. 2032 LITHIUM CELL

**FINISH:** MATTE-BLACK ANODIZED ALUMINUM

**LENGTH:** OVERALL, 5½" (7" WITH SUNSHADE AND FILTER); MOUNTING LENGTH, 4¼"

**WEIGHT:** 7 OZS.

**ACCESSORIES:** ALUMINUM, WEAVER-STYLE RINGS, SUNSHADE, POLARIZING FILTER

**SUGGESTED LIST PRICE:** \$164

# BUSHNELL TROPHY 1X 28 mm RED DOT SIGHT

**L**ong known for the solid value exhibited by its conventional riflescopes and for the innovative nature of its holographic electronic sights, Bushnell has in recent years brought to market a line of red-dot sights that offers both value and innovation. Foremost is the Trophy 1X 28 mm red-dot sight.

Externally, the Trophy resembles other sights of its type. It is built on a one-piece, machined-aluminum body with a main tube onto which the adjustment turrets, reticle selector, reticle intensity switch/battery compartment and power switch are mounted. The cylindrical 30 mm objective and ocular are compatible with conventional scope rings, and vertically split aluminum rings are included for mounting to a Weaver-style rail or bases. The ocular is rubber-covered to protect the shooter's eye in those cases where the sight is mounted conventionally; but, because eye relief is unlimited, the Trophy can be used on handguns, shotguns or in "scout"-style rifle applications mounted forward of the action.

The scope's reticle selector switch is on the left rear of the main tube. Markings on the knob denote small and large dots, crosshairs and a "donut"-style reticle.

The reticle intensity switch is at the top front of the main tube with settings from "0" to "11." It does not have mechanical limits and can be rotated in either direction to any setting. A sealed compartment for a single CR2032 battery occupies the inner portion of the knob. The battery is replaced by removing the knurled, slotted top cover.


The elevation turret rests atop the rear of the main tube. Like the windage turret at the rear of the main tube's right side, its settings are adjusted with a coin and protected by a removable cap that tightens against the sight body with a rubber seal.

On the main tube's forward right side is the main power switch. Its knob is marked "F," "O" and "A" to represent, curiously, off, on and automatic settings, respectively. The final setting indicates the Trophy's most distinctive feature—an automatic power shut-off activated when the unit is rotated greater than 45 degrees on its axis for more than five seconds.

Once mounted to an appropriate Weaver-style rail or bases, operation of the Trophy red dot is straightforward. Turn the main power switch to "O" or "A," select the desired reticle and simply look

at the target while bringing the gun to the firing position. Keeping both eyes open, superimpose the red reticle on the target and fire. It is in that method of quick, instinctive shooting that red-dot sights shine. And the Trophy pleasantly offered no surprises in that regard.

Having mounted the Trophy on a Ruger Mini-14 carbine fitted with an UltiMAK Scout Scope rail, we fired rapid shot strings at close range and found that it allowed quick target acquisition and exhibited reliable operation. In addition, we shot it for accuracy off the bench at 100 yds. using the smallest dot and found that it allowed the gun to perform to its full accuracy potential.

The Bushnell Trophy 1X 28 mm red dot offers features not found in other red dot sights with a price that places it well below those of "military-grade" red dots. For the hunter or sport shooter looking for a red-dot sight with selectable reticles and a battery-saving automatic shut-off feature, the Trophy is worthy of consideration. 



*The Trophy's right side has the elevation turret and the main power switch with off, on and automatic settings. The unit has an automatic power shut-off.*





## TRIJICON ACCUPOINT TR20 3-9X 40 mm

**W**hat you see through the Trijicon Accupoint rifle-scope is radically different: a fine double-line post topped with a brightly glowing arrowhead that provides a clear field of view uncluttered by the stadia arms of a standard reticle. The post is actually a proprietary fiber-optic tube imbedded in the glass.

On the outside, what makes this scope look so different is the ocular bell, which is overlapped by a prominent oval of finely bundled optical fibers in either red or amber. The oval-shaped light collector is especially noticeable on models with the amber bundle.

This fiber-optic light collector powers the Trijicon aiming point in the presence of any ambient light source. In high-contrast sunlight conditions, the glowing aim point appears too bright for some shooters, so an adjustable shroud wraps around the fiber-optic collector.

The second element in Trijicon's

dual-power illumination system is a tritium lamp, which illuminates the aiming point arrow that produces a greenish glow in low light or total darkness.

Using the Air Force 1951 resolving bar test target, there proved to be no distortion or spherical aberration, even in low-light conditions. We also tested the Accupoint at various power settings. There was no 100-yd. point of aim shift when the scope was zoomed.

Mechanically, the 1/2"-wide power adjustment ring is rubber-armored, providing a sure grip in wet or cold conditions. Power setting numbers are bright and legible, as is the indicator arrow on the adjustment ring. The resistance of the ring is minimal and its travel smooth.

Elevation and windage adjustments are standard, with knobs providing firm, positive 1/4-m.o.a. clicks. As for repeatability, when we "shot the square," in this case

10 clicks from zero in all directions, return to zero was precise and accurate.

For this test—at the range and in hunting field conditions—we used a Savage Model 112 in 300 Win. Mag. This heavy rifle sports a 26" fluted, stainless-steel bull barrel. At first glance, the triangle reticle might not appear to be designed for precision shooting, not in the same way that one might consider a super-fine crosshair. With the Trijicon TR20 set at 9X, and with the big Savage cradled with sandbags and a Caldwell Rock BR 1000 rest, the rifle produced a three-shot group virtually cutting one hole on a 3" diamond sighter target at 200 yds. Indeed, the bright Trijicon reticle arrow provided a very precise aiming point. The reticle measures 2 m.o.a. (at 100 yds.) at the 9X setting and 6 m.o.a. at 3X.

To measure the reticle in actual field use, we fired two shots at a

100-yd. target marked with a horizontal line: the first with the point of the reticle/triangle touching the line; the second with the bottom of the reticle on the line. We repeated the drill several times. At 9X the Trijicon TR20 produced a 1½" vertical measure.

We tested to determine if the triangle aiming point can be used to accurately find holdover. Zeroed at 200 yards, we shot mild but accurate 300 Win. Mag. handloads that produced 2700 f.p.s. muzzle velocity using 180-gr. Nosler Partition bullets. At 300 yds., the 8½" bullet drop was compensated by holding over double the height of the aiming triangle.

During a caribou hunt in far northern Quebec, using that knowledge, two fine animals were taken at about 270 and 290 yds. with perfect double-lung shots.

The most important advantages of the fiber-optic aiming point in the Trijicon scope are fast target acquisition, reticle distinction against confusing backgrounds or in low-light situations. There is never any searching for the intersection of crosshairs. The triangle simply stands out.

Field-testing continued with a successful one-shot kill on a six-point Pennsylvania whitetail. This was accomplished at 250 yds. from a ladder stand by a woods hunter who normally forgoes medium to long shots. This bright aiming point triangle provides an edge in low-light conditions.


The one drawback of the design is that a shooter wearing a billed cap may find that it blocks light to the collector, and in some low-light conditions obscures or negates the bright aiming point advantage entirely.

This scope measures 12¼" and weighs 12.8 ozs. The 5½" mounting length of the 1"-diameter tube between bells is an advantage especially in short to medium actions, as it provides a measure of adjustment for eye relief.

However, on the very long Sav-

age Magnum action, a reversed Leupold front extension ring was necessary. Even with that, adjustment of only ¼" was possible. Fortunately, the generous 3.6" maximum eye relief made adjustment unnecessary.

We submitted the TR20 Accupoint to a torture test, freezing it in a block of ice. When thawed, it produced no fogging or leaks. We also left the scope in a locked vehicle with intense summer heat with no ill effects.

The Trijicon 3-9X Accupoint is more than a quality scope, it is something unique in the world of sporting optics—a scope with an illuminated reticle that works in all light conditions and requires no batteries. 



*The fiber-optic collector bundle on the top of the ocular powers the triangular aiming point by gathering available ambient light. A cover allows the user to reduce brightness. For very dark conditions, a tritium lamp powers the aiming point.*



## TRIJICON TR20 ACCUPOINT

**MANUFACTURER:** TRIJICON (DEPT. AR)  
49385 SCHAFER AVE., WIXOM, MI  
38393-0059; (800) 338-0563;  
WWW.TRIJICON.COM

**MODEL:** TR20

**MAGNIFICATION AND OBJECTIVE:**  
3-9X 40 MM

**TUBE DIAMETER:** 1"

**FINISH:** MATTE-BLACK ANODIZED ALUMINUM

**FIELD OF VIEW:** 33.8 (3X) TO  
11.3 FT. (9X) AT 100 YDS.

**EYE RELIEF:** 3.2" to 3.6"

**CLICK VALUE:** ¼" AT 100 YDS.

**MAXIMUM INTERNAL ADJUSTMENT:**  
4½ FT. AT 100 YDS., WINDAGE; 4½ FT.  
AT 100 YDS., ELEVATION

**RETICLE:** FIBER-OPTIC TRITIUM TRIANGLE

**EXIT PUPIL:** 13.3 MM (3X) TO 3.6 MM (9X)

**LENGTH:** 12¼"

**WEIGHT:** 16.8 OZS.

**FEATURES:** FIBER-OPTIC ARROW AIMING  
POINT, TRITIUM LAMP FOR LOW LIGHT

**ACCESSORIES:** LENS COVER, OWNER'S  
MANUAL

**OPTIONS:** CHOICE OF AMBER RETICLE

**SUGGESTED RETAIL PRICE:** \$699

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

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