

SPORTS OPTICS BY

Dushnel





Thank you

for your interest in our products. We hope you will find just what you are looking for in our new catalog, and at the price you wanted to pay. Only by offering you the lasting value you seek in a fine viewing instrument can our business grow...as

Recognized the world over for optical quality, advance design, and outstanding workmanship, Bushnell products are sturdily built to last a lifetime, as well as to give our customers a genuine pride of

Whatever you select, you are free to use and compare it on our 30-day exchange plan. We want you to be completely satisfied, not only initially, but also for years to come. After-sales service is one of the most important aspects of our business.

After you have looked over our catalog, we suggest that you see our products and make your selection with the assistance of your local Bushnell dealer. With the assistance of your local bushnell dealer.

If you are unable to locate a dealer nearby, please write us...we are here to serve you.

Thank you again for your interest.

Dave Pourtnell

D. P. Bushnell President

SERVICE WARRANTY-30-DAY MONEY-BACK GUARANTEE

DENVICE WARRANTES

(1) All Bushed popular products are high precision instruments or upaged crastruction. Each is fully tested and carriers a service warranty from Bushnell Optical Complany. (2) Bushnell instruments are warranted against detective mercinial and/or workmanning, Bettor shipping, cach inceives and must fully pass a series of tests covering essentials of optical and mechanical perfection. (3) The original Registered owner of a Bushnell instrument is entitled or regain or replacement without charge for the stated warranty product, promise without charge for the stated warranty product, promise and an advantage of the stated warranty produced product and assembled. (4) International Control of the stated warranty products produced in the product of the stated warranty control of the stated warranty or the

2828 East Foothill Blvd., Pasadena, California 91107 In Canada: 899 West 8th Avenue, Vancouver 9, B.C.



LET'S TAKE THE MYSTERY OUT OF BINOCULARS!

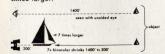
PEOPLE BUY BINOCULARS FOR BETTER VIEWING, HOWEVER...

certain self-styled experts would have you believe that selecting a binocular is a tricky numbers gaine.

Let's put the cards on the table; the numbers are nothing more than a simple, practical guide to help you select binoculars more quickly and confidently, so let's take the mystery out of them, right now.

DECODING BY THE NUMBERS

Ever since Galileo was in the business, the number preceding the multiplication sign "x" (like 7x35) has stood for power of magnification ... meaning a binocular will bring an object that many times closer to the viewer-that is, make it appear that many times larger.



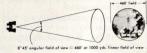
DON'T OVERPOWER YOURSELF

As magnification increases, hand tremor becomes more noticeable...steady viewing more difficult. A 7 power glass offers the ideal magnification an average viewer can use without undue disturbance ... that's the biggest reason why 7x35's are the all-time, all-purpose favorites. 6 and 8 power binoculars are good, too. Above 8, prolonged, detailed viewing often requires something more than hand-held support.

The number following "x"...30, 35, 50, etc., is the diameter of the front (objective) lens expressed in millimeters, It's a factor in light transmission when related to the power of the eveniece, and is explained further on under the heading "Exit Pupil."

CONFUSED ABOUT FIELD OF VIEW?

Probably not, but many people are...let's review it quickly. Field of view is the diameter (width) of the picture seen at any given distance...it varies tremendously among binocular brands and models, and is usually expressed in one of two ways-one way is with figures like 7° 10'...8° 45'...etc .- this is angle of view, and will make immediate sense to a trained surveyor! But for most people this other way is more understandable-stating the actual diameter of the viewing area, usually at 1000 yards-such as: 460 feet at 1000 yards.



All else being equal, the widest field possible consistent with optical quality is highly desirable...especially so for hunters and sport spectators.

LOOK SHARP...YOU CAN SEE THE DIFFERENCE

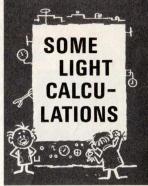
Ever notice how a normal size photograph is brighter, better detailed, more lifelike than a blow-up of the same shot?

In binoculars, the capacity to retain detail and clarity while magnifying is called resolution or definition. Take two 7 power glasses widely varied in price. Unless there's out-and-out false labeling involved, both will bring an object seven times closer...



but the difference in distinguishing and identifying fine detail can be shocking! Test it yourself with an ordinary magazine page. And while we're on the subject, there's the matter of prolonged viewing. Better binoculars are built with the eyes in mind...they're critically sharp, optically balanced to deliver eye-saving comfort hour after hour. The buyer who thinks price is more important than resolution ... who says after a short look, "I can see all right with this lower priced binocular," runs an odds-on risk of experiencing some degree of eyestrain the first time - and every time - he puts them to extended use.

The best optics deliver the highest resolution and eye-saving comfort...superior optics are the main ingredient of high quality binoculars



Although the "experts" like to write about it, the explanation of light transmission has very little to do with selecting binoculars. Basically, people are far more interested in bright, clear viewing than learning a formula to justify it!

If you wish to get technical, however... a binocular's capacity to transmit light is dependent on 3 factors:

1. OPTICAL QUALITY

2. COATING

3. SIZE OF EXIT PUPIL

OPTICAL QUALITY...well, the best optics deliver the best picture.

COATING:

Most modern binoculars have some hardcoating; often not enough. Its purpose is to reduce internal reflections, and for best results it must be applied on all optical surfaces. A simple test of this is to stand under a fluorescent light, holding the binocular so that the light is reflected first from the objective end and then, from the eyepiece lens. On both ends, you will see a series of images, actual reflections from each external and internal optical surface. On a 100% coated binocular, all reflections will be either blue or amber...otherwise every white reflection will represent an uncoated surface. 100% coating is costly business, but standard procedure in better binoculars.

EXIT PUPIL:

And while you're looking, notice the bright disc of light emitted from the eveniece. This is the exit pupil which transmits light to the eye ... and the larger it is, the brighter will be your view. Its size is determined by dividing magnification into the objective lens diameter... (8x30mm = 3.75mm exit pupil diameter), which, incidentally, is the minimum diameter for comfortable normal use, including occasional night viewing. You will find 5mm even brighter and more comfortable...another reason for the popularity of the 7x35 binocular.

If night viewing is the dominant use, the 7x50mm offers a huge 7.1mm exit pupil corresponding to the widest opening of the human eve. Don't flinch if someone mentions Relative Light Efficiency...it's only a comparative formula determined by squaring the exit pupil and adding 50% for fully

Remember though, a sharp, brilliant picture is worth a thousand words!



From a business viewpoint, it makes outstanding sense to buy higher quality binoculars...and there's a couple of very vital reasons why you will be happier—

BETTER BINOCULARS COST LESS TO OWN...because you pay for them only once!

Any top-notch binocular will take hard knocks in stride...normal, day-to-day punishment that a less rugged glass can't take — inside. The owner of a "bargain" binocular might easily spend many times its original value in repairs...but he'll still end up with something much less than the best.

LIFETIME INVESTMENT

Think twice before you say, "I only use binoculars occasionally"..."occasionally about the two thousands of hours over a lifetime. With that much use in sight, you should look forward to sparkling, comfortable vision that's built-in to stay...you should do business with a company whose service is as dependable as its products!



When you become convinced that nothing less than top-quality will do, you'll be inclined to see the big difference in binoculars. In addition to quality, however, there's more to a **Bushnell** binocular than meets the eye...

- ADVANCED DESIGN SPECIFICATIONS
- PRECISION OF MOVING PARTS
- . SUPERB DETAIL AND FINISH
- CARRYING CASE QUALITY
- OUT-AND-OUT DOLLAR VALUE
- SATISFACTION GUARANTEED (See Bushnell's Famous Warranty on page 2 of this catalog.)

Comparisons like this make a fine binocular look even better!

MODEL RECOMMENDATIONS

ALL PURPOSE GROUP

7x35 Insta-Focus and Center Focus in Custom, Featherlight, Banner and Sportview models.

8x30 and 8x40 Wide Angle Sportview. 7x25 and 8x30 Broadfield Compacts.

6x25 and 7x26 Custom Compacts.

FOR SPECIALIZED USE

SPECTATOR, ACTION SPORTS:

7x35 Rangemaster, Featherlight, Banner and Sportview—especially Insta-Focus models.

7x25 and 8x30 Broadfield Compacts.

6 to 12 and 7 to 12 power ZOOM models.

HUNTING:

6x25 and 7x26 Custom Compacts. 7x35 and 8x36 Custom.

7x35 Banner and Sportview

Wide Angle Models — Rangemaster, Banner, Sportview, models with Insta-Focus preferred.

7x25 and 8x30 Broadfield Compacts.

HIKING OR TRAVELING LIGHT:

6x25 and **7x26** Custom Compacts. **8x30** EXPO – Fiberglass Knock-About Binocular.

8x20 "Minocular," 7x25 and 8x30 Broadfield Monoculars.

6 and 8 power Palm/Pocket Monoculars.

SIGHT-SEEING:

6x25 and 7x26 Custom Compacts.

7x25 Broadfield Compact.
7x35 Custom, Featherlight, Banner, and Sportview.

8x40 Wide Angle Sportview.

MARINE/BOATING:

7x35 and 7x50 Custom.
7x50 Featherweight, Banner, and Sportview.

8x30 EXPO-It Floats!

8 power Palm/Pocket Monocular.

NIGHT USE/ASTRONOMY:

7x50 Custom, Featherlight, Banner, and Sportview.

8x40 Wide Angle Sportview.

THEATER:

2.5x23, 3x23, 3x28 Theater Glasses. 6x25 Custom Compact. 7x25 and 8x30 Broadfield Monoculars. 8 power Palm/Pocket Monocular.

NATURE STUDY:

7x35 All Models, Insta-Focus preferred.

7x25 and 8x30 Broadfield Compacts. 8x36. 9x36 Custom.

8x40 Wide Angle Sportview.

8 power Palm/Pocket—lens detaches for use as a magnifier!

6 to 12 and 7 to 12 power ZOOM models.

LONG RANGE VIEWING:

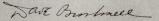
9x36 Custom

10x50 Custom and Sportview.
7 to 12 power ZOOM models.

A WORD ABOUT BUSHNELL

In the past few decades, countless thousands of Bushnell binoculars have been purchased by an informed, self-reliant public. Every one of these sales was made, we believe, because the customer recognized in Bushnell something extra...solid quality and moderate price.

There's no mystery to this, either. Bushnell products are designed by top optical engineers to an unsurpassed standard of excellence; most are then produced in Japan's finest optical laboratories for maximum economy.



Bushnell CUSTOM COMPACTS

So spa

"...when every ounce counts!"

So small and precisely built that NASA chose it for use in Gemini space flights. Every ounce counts too for the hunter who covers a lot of ground and works at getting the weight of his gear down. Just 11 OUNCES in the shirt pocket. Nothing else like it...it does it all!

Designed for the hunter, CUSTOM COMPACTS appeal equally to the ladies and find enthusiastic supporters among...bird watchers, theater goers, campers, hikers, sports, spectators, flyers, archers...and especially vacation travelers.

CUSTOM COMPACTS—a startling achievement in miniaturization. The power and clarity of large, conventional binoculars in a miniature 11 ounce body that exacts no performance penalty for all its small size. Pocket-sized convenience with light-gathering capacity well within the requirements of the mature adult's eye pupil at the point of maximum expansion.

For eye and sunglass wearers, a unique high eye-point optical system combines with rubber roll-down eyecups to provide a full field of view. Light transmission increased with magnesium fluoride coatings on all air-to-glass surfaces. Lenses and prisms are locked in, matched and balanced to prevent eyestrain. Built-in "Squint-Pruf" filters block reflected glare from water, sand, snow and haze. Adjustable eyepiece compensates for difference in eye strength. Lightweight magnesium body covered with non-slip gutta percha. Complete with neck cord and deluxe soft zippered carrying case.

6 POWER, 25mm CUSTOM COMPACT—Preferred for its wider field and extra light gathering capacity. Field 420'; exit pupil 4.2mm; Ht. 3"; Wt. 11 oz. #10-6251...\$91.50 7 POWER, 26mm CUSTOM COMPACT—Preferred for its extra power. Field 368'; exit pupil 3.7mm; height 3"; weight 11 oz. #10-7261...\$97.50



Chosen by NASA for Gemini Space Flights for use as a secondary sighting system.



20 YEAR WARRANTY







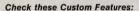
CUSTOM-Award Winning Binoculars

ship and optical superiority, a triumph of binocular engineering, the brilliantly styled Custom line is the crowning achievement of Bushnell's long record of functional improvements in

You feel the difference as the sculptured curve of the body design balances effortlessly in your hands...in its satin smooth adjustments...in its flawless detail.

You see the difference in the brilliant tru-color images, sharply defined throughout the field of view...distant objects a revelation of sharp detail. Constructed

for keeps, the Custom binocular asks only reasonable care for a lifetime of trouble-free enjoyment...a lifetime of proud possession.



- * Electronically computed optical systems of unexcelled tru-color brilliance, balanced and aligned to super critical standards to prevent eve strain.
- * All air-to-glass optical surfaces amber hard coated to prevent internal light loss.
- * "Squint-Pruf" front lenses block reflected glare from water, snow, sand and haze.
- * Shock-resistant construction extra strength hinge and bridge guard against misalignment; high index prisms are permanently
- * Adjustable diopter setting permits precise compensation when eyes are not of equal strength.
- * Exclusive mono-unit magnesium alloy body for maximum
- * Built-in tripod socket (except #10-7352). Eyepiece Rainguard





CUSTOM-8 power, 36mm Excellent daylight and twilight

performance for all around use when traveling, hunting, viewing sports, or nature study. Focuses down to 14 feet Retractable nylon evecups.

Field at 1,000 yards 420'; exit pupil 4.5mm; height 51/2"; weight 27 oz.

#11-8362.....\$131.50



CUSTOM - 9 power, 36mm

Excellent for advanced bird watchers and those who hunt in mountain country. Highest power recommended for handheld use. Focuses down to 14 feet. Retractable nylon eyecups. Field at 1,000 yards 420'; exit pupil 4mm; height 5%"; weight 26 oz.

#11-9362.....\$137.50

CUSTOM - 7 power, 50mm The extra light transmission of this superior binocular makes it the outstanding choice for boat owners, night watchmen and others who use binoculars under minimum light conditions. There's heft to these wellbalanced glasses that men of action go for. Retractable nylon eyecups. Field at 1,000 yds.

Field at 1,000 yards 368'; exit pupil 5mm; height 613/6"; weight

CUSTOM-10 power, 50mm

High efficiency glass for day or

at dusk. Ideal for hunters glass-

ing at long distances, ornithol-

ogy and all other long-distance

viewing. Retractable nylon eye-

#11-1052.....\$143.50





394'; exit pupil 7.1mm; ht. 71/8"; wt. 40 oz. #11-7502 . \$137.50

All Custom and Rangemaster models come complete with eyepiece Rainguard, neck strap, and luxurious, hand-crafted carrying case

You'll find in these conventional one-piece body binoculars all

the craftsmanship and trouble-free performance embodied in



20 YEAR WARRANTY

WORLD FAMOUS CUSTOM, 7 power, 35mm

Top Rated by Consumer Test Groups, the superb 7x35 Custom is

the established favorite for general use. Ideal for travel, spectator

sports, hunting, birding, nature study. Focuses down to 14'. Special optical elements combine with non-marring nylon rectractable eyecups to provide full Wide Field Viewing with or without eyeglasses! Now with the revolutionary INSTA-FOCUS that focuses almost as

fast as the human eye! Field at 1000 yds. 420'; exit pupil 5mm; height 5"; weight 26 oz.

#10-7351 Custom 7x35.....\$125.50 #10-7352 Custom Insta-Focus 7x35 \$137.50

RANGEMASTER® Binocular 7 POWER, 35mm, WIDE ANGLE

Unquestionably the finest wide-angle binocular. Selected for armed forces in Viet Nam, this one gulps in huge chunks of territory at a single glance. Used by leading sportscasters who need its extra-wide range and razor sharp definition. Exceptional clarity, brilliance, and lack of distortion so often associated with wide angle glasses. Contoured body fits the hands for perfect balance for prolonged viewing comfort. Up to 90% more viewing area than most 7x35's. Unsurpassed for sports, spotting game or panoramic

Field at 1000 yds. 578'; exit pupil 5mm; height 5"; weight 36 oz.

#11-7392 Rangemaster 7x35.....\$168.50



FEATHERLIGHT SERIES

Custom Quality in Conventional Body Style





Insta-Focus adjusts

instantly to the eves

Rubber roll down for use with eveglasses

Bushnell's Custom Binoculars. Optics are Bushnell's finest. Deluxe case and straps. FEATHERLIGHT-7 power, 35mm

FEATHERLIGHT-7 power, 50mm

Traditional Navy

style, ideal when

All-purpose binocular

Field at 1000 vds.: 420' Exit pupil: 5mm Height: 55/8 Weight: 211/2 oz. #11-7354 \$84.50

with INSTA-FOCUS

best for general

perfect balance.

#14-7350 Monocular, w/o Insta-Focus \$44.50

image brightness is more important than size Field at 1000 Exit pupil:

Height: 73/8' Weight: 39 oz.

#11-7504....\$94.50

with INSTA-FOCUS

20 YEAR WARRANTY

Bushnell BANNER® and SPORTVIEW® Binoculars

When the budget dictates the purchase of less than Bushnell's best, focus on BANNER and SPORTVIEW brands for outstanding value, They're priced at little more than you'd pay for an ordinary binocular, and you'll find them consistently high in performance and quality from binocular to binocular. These are brand names you can trust—our world wide reputation gained over decades is zealously guarded. Each binocular is serialized, factory registered and warranted in writing to be free of defects in manufacture and workmanship. You will use these binoculars and lend them with pride long after the price



■ ADJUSTABLE FOR EYE STRENGTH

The graduated scale on one eyepiece adjusts the diopter rating of the eyepiece to accommodate eyes of unequal vision in the same way an optometrist fits the eyes for glasses.

is forgotten.

ADJUSTABLE FOR EYEGLASS WEARERS

The position of the eye in relation to the eyepiece determines the width of the image seen through the binocular. With sun or oyeglasses, the rubber eyecups may be rolled down to permit a greater field of view.



function of focusing... At Bushnell we have transferred the focusing drive from the center focus operated by the relatively weak forefinger to the much stronger and faster right thumb drive. This unique patented feature we call INSTA-FOCUS. Both eyepieces are focused about three times faster with a simple gliding motion of the right thumb. This offers a most important advantage as well...INSTA-FOCUS relieves a great deal of tension and eyestrain caused by the eye attempting to bring the object into focus before the binocular focus is achieved.





BANNER BINOCULARS

5 YEAR WARRANTY



Bushnell's biggest unit volume seller for sports action viewing where both wide field of view and fast focus really count! Snaps the picture bright and clear—you see more action than ever

before - the kind you'd miss with conventional focus.

#12-7392 INSTA-FOCUS: field 578'; height 41/8"; weight 27

#12-7390 CENTER FOCUS: field 578'; height 41/2"; weight

Constructed in the Bausch & Lomb American style, Banner binoculars utilize a one piece body construction that increases rigidity and provides a firm foundation for retention of optical alignment under rugged field conditions. Bodies are made of weight-saving aluminum alloy with high tensile strength, encased in grained, non-slip gutta percha. Metal parts are finished in multi-coat baked enamel. Porro-type prisms are firmly locked in place and all optical elements are fully magnesium fluoride coated to prevent light loss by internal reflection.



7 POWER, 35mm ALL PURPOSE

Insta-Focus model rated by consumer test group as best for rugged focus mechanism construction and fast convenient focus. Wide 420' field of view. Most popular choice for all-purpose viewing where the basic consideration in choosing a binocular is the best compromise of power, weight, size and field of view.

#12-7352 INSTA-FOCUS: field 420'; height 5%"; weight 22 oz.; exit pupil 5mm....\$73.50 #12-7350 CENTER FOCUS: field 420'; height 5%;" weight 22 oz.; exit pupil 5mm....\$63.50





7 POWER, 50mm EXTRA BRIGHT

Best light gathering for all lighting conditions, including astronomy. Added eye comfort that goes with large exit pupil. The kind of brightness you'd prefer when extra weight and size is not a deterrent.

#12-7502 INSTA-FOCUS: field 376'; height 7½"; weight 37 oz.; exit pupil 7.1mm...\$89.50 #12-7500 CENTER FOCUS: field 376'; height 7½"; weight 36 oz.; exit pupil 7.1mm...\$76.50

SPORTVIEW BINOCULARS

1 YEAR WARRANTY



Constructed in the traditional German style, Sport-view prismatic binoculars are distinguished by the characteristic two piece body construction—objective lenses in the lower part, prisms and eyepiece lenses in the other. Bodies are made of weightsaving aluminum alloy with high tensile strength, encased in grained, non-slip gutta percha. Metal parts are finished in multi-coat baked enamel, Porro type prisms are firmly locked in place and all optical elements are fully magnesium fluoride coated to prevent light loss by internal reflection.



7 POWER, 50mm EXTRA BRIGHT

Highest light gathering power of all Sportviews. Preferred when need for extra brightness exceeds considerations of size and weight. Especially suited for boating, astronomy and use in poor light.

#13-7502 INSTA-FOCUS: field 376'; height 7\(\frac{1}{2}\)"; weight 36 oz.; exit pupil 7.1mm...\$68.50 #13-7500 CENTER FOCUS: field 376'; height 7\(\frac{1}{2}\)"; weight 35 oz.; exit pupil 7.1mm...\$51.50



10 POWER, 50mm EXTRA POWER

Highest practical power for hand holding. Preferred when need for extra power exceeds considerations of size, weight, field of view. For long distance viewing and greater detail even under adverse lighting conditions.

#13-1052 INSTA-FOCUS: field 271'; height 6%"; weight 36 oz.; exit pupil 5mm....\$70.50 #13-1050 CENTER FOCUS: field 268'; height

7"; weight 36 oz.; exit pupil 5mm......\$52.50



1 YEAR WARRANTY

SPORTVIEW W-I-D-E ANGLE SERIES

7 POWER, 35mm

Compact, lightweight, yet it offers 50% more viewing area than the standard 7x35. Wide angles and Insta-Focus are preferred for spectator sports, racing, hunting—wherever action viewing is

with deluxe case.

Most popular general purpose favorite - for sports, travel and

all outdoors viewing-most often chosen as the best com-

promise selection-good balance of magnification, bright-

ness, field of view without burdensome weight or bulk.

#13-7352 INSTA-FOCUS: field 420'; height 51/6"; weight

#13-7350 CENTER FOCUS: field 345'; height 5%"

7 POWER, 35mm ALL PURPOSE

weight 21 oz.; exit pupil 5mm

20 oz.; exit pupil 5mm...



#13-7392 INSTA-FOCUS: field 520'; height 476"; weight 21 oz.; exit pupil 5mm....\$62.50 #13-7395 CENTER FOCUS: field 520'; height 5"; weight 21 oz.; exit pupil 5mm....\$52.50

7 POWER, 35mm 11° EXTRA WIDE ANGLE

Provides the field of view you need to cover fast action spectator sports. Combines all purpose seven power with oversize prisms that cover big hunks of territory and lets you see what you'd miss with a small picture.



#13-7391 CENTER FCCUS: field 578'; height 5"; weight 30 oz.; exit pupil 5mm......\$59.50

8 POWER, 40mm WIDE ANGLE

Preferred power for bird watching, nature study, whenever extra detail is desired. 40mm model offers extra brightness under poor light with wide angle; 30mm model offers compactness, light weight.



#13-8400 CENTER FOCUS: field 473'; height 5%"; weight 22½ oz.; exit pupil 5mm. . \$53.50 #13-8300 CENTER FOCUS: field 394'; height 45%"; weight 18 oz.; exit pupil 3.8mm. . . \$43.50

3

EXTRA WIDE ANGLE

Bushnell DIVISION OF BAUSCH & LOMB

BROADFIELD® COMPACTS

Grandstanders buy the best seat in the house behind Bushnell Broadfield Compact binoculars! Remarkably efficient, space-saving roof prisms channel light in a complex path that permits slenderizing the body, sharply reducing bulk and weight. The "battle of the bulge" is ended with eyepieces placed directly in line with objective lenses, giving the binocular a distinctive, comfortable-to-hold "H" shape. In spite of its space saving size, fields of view are impressively wide, ideally suited to viewing spectator sports.

Broadfields utilize internal focusing bridges to focus both eyepieces simultaneously, unexposed to damage from bumps and shock.

Broadfields correct for far and nearsightedness eliminating the need to wear eyeglasses, except in cases of astigmatism. For those preferring to wear glasses, Broadfields have rubber eyecups that roll down to provide virtually the full field of view. All optics are fully coated on all air-to-glass surfaces and balanced to prevent eyestrain. All models come in deluxe, soft carrying case.





20 YEAR WARRANTY

7 POWER BROADFIELD COMPACT-All Purpose, Wide Angle

Most popular magnification combined with wide field of view preferred for hunting and action sports. Field 525'; exit pupil 3.6mm; height 4½"; width 4½"; Field 525'; exit pupil 3.6mm; height 4½"; weight 17 oz.

#10-7250 7 x 25 Binocular\$113.50 #14-7250 7 x 25 Monocular\$47.50



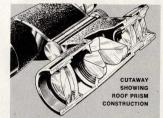


8 POWER BROADFIELD COMPACT-Extra Power, Wide Angle

Preferred when extra power is required - hunting, nature study, bird watching.

Field 446'; exit pupil 3.8mm; height 5"; width 4½"; Field 446'; exit pupil 3.8 mm; height 5¼"width weight 19 oz.

Field 446'; exit pupil 3.8 mm; height 5¼"width 1-9/16"; weight 7 oz. #10-8300 8 x 30 Binocular\$120.50 #14-8300 8 x 30 Monocular \$51.50





BUSHNELL 8 POWER "MINOCULAR"®

Gratifies the most demanding requirements of space-age miniaturization. With its premium quality, high performance optics, this tiny roof prism monocular provides an incredible 341' field of view and a full eight power magnification—packed into a 3½" body tube that weighs only 21/4 ounces! Fully antireflection coated. 20 YEAR WARRANTY. Case included

#14-8200 8x20 "Minocular" \$41.50



7x-12x Z-O-O-M BANNER®

A really different binocular concept. Gives the viewer the excitement of the fast near and far action he associates with the TV presentation of his favorite sporting events. With a fast motion of the zoom lever, he whips from the normal 7 power magnification to a 12 power close-up view. The whole range of powers is at his fingertips. And all this without the penalty of heavy mechanisms - the 7x-12x weighs only 27 ounces!

35mm objective; field of view 289' at 7 power; exit pupil 5mm at 7 power; height 6". 5 YEAR WARRANTY. #12-9114...\$101.50

6x-12x Z-O-O-M **SPORTVIEW®**

Outstanding zoom range in a compact binocular. 30mm objective provides good brightness for all normal usage. Fully coated optics. Fast center focus.

Field 320' at 6 power; weight 24 oz.; ht. 51/6". 1 YEAR WARRANTY. #13-6120 ... \$77.50

THEATER GLASSES



Telescoping adjustable handle

20 YEAR WARRANTY

2.5x23 LORGNETTE

The theater in the grand manner! Traditional elegance with telescoping. adjustable handle. Mother-of-pearl enhanced with gold trim Tailored case in Height: 2-1/16" Weight: 8 oz.

#15-3232 ... \$38.95



3x28 THEATER GLASS

A superior combination of quality optics and fire craftsmanship make this compact theater glass a striking addition to an evening's entertainment at the theater. Rich gold, black and mother-of-pear exterior. Handsome case included. Ht. 2"; Wt. 7 oz.

#15-3287.....\$24.95



4x30 FIELD GLASS

For indoor or outdoor use, camping, hiking or traveling. Small enough to fit in jacket pocket. Handsome black finish. Comes complete with sideopening carrying case. Height 31/6"; Weight 7 oz.

#15-4300.....\$19.95



2"; Weight 7½ oz. #15-3230.....\$24.95



3x28 THEATER GLASS

Glamorous, sculptured curves flow in delicately tinted haze-green pearl finish. With soft, pouch-style evening case. Lovely to look at-lovely to look through. Height 2\%"; weight 7 oz.

#15-3231.....\$32.95

11



If you've wanted a pair of knockabout binoculars that would stand up to abuse and come back for more, you'll want EXPO. Many expensive binoculars will take rough treatment and survive, however, when you make a sizeable investment in a binocular, you treat it kindly. But with EXPO's low cost you have a binocular that can take its lumps and with your small investment you'll take it anywhere - even let the kids use it without reservation.

EXPO is a patented Bushnell product that was raised from the drawing boards to be unique yet inexpensive. Obviously you wouldn't expect Bushnell's best optics, but you can expect good quality lenses, carefully ground and polished, matched and balanced, and of course, anti-reflection coated. EXPO carries Bushnell's full ONE YEAR WARRANTY. The body is fiberglass just like the hulls of modern boats - tough and astonishingly light weight-just 12 ounces! Dropped overboard, it bobs to the surface.

EXPO uses a patented new focus system called "THUMB FOCUS," the system is so simple that men,

women and children can learn to focus without instruction.

SPECIFICATIONS: 8 power, 30mm; wt. 12 oz.; ht. 4"; width 61/2"; field of view, 394' at 1000 yds.; fiberglass construction; lenses shock-mounted in rubber; anti-reflection coated optics; roll-down rubber eyecups give full wide picture with sun or eyeglasses.

#13-3300 WHITE - Ideal for boating, fishing ... around water. #13-3402 TAN - Color goes well with any color combination. SAFETY ORANGE - Ideal for hunter, life guard, utility. GRAY - Most practical color for hard usage.

Each ...\$32.50 #16-9301 Soft, zippered carrying case \$ 3.95

Bushnell BINOC-RADIO PAK-for spectator sports

Baseball, football ... see it all ... hear it all! With Bushnell's BINOC-RADIO PAK you have everything going for you for maximum enjoyment of your favorite spectator sport. Now, as you bore into the action with powerful binoculars, your radio sports announcer associates the right names with player's numerals, provides background performance statistics, and fills you in with details of the referee's calls...choose sound privately piped to your ear through earphone extension or through the built-in speaker...and for extra enjoyment - whether hiking, camping, vacationing - wherever you go, you're only a dial-twist away from up-to-the-minute news or your favorite music.

RADIO SPECIFICATIONS: Full circuit superheterodyne, 6 transistor AM radio receiver with internal ferrite bar anienna. Built compactly into the bottom of handsome case with external volume and station selector controls positioned for instant use with case opened or closed. Permanent magnet dynamic speaker. Hi-Fi PM type

earphone with cord and plug included; plugs into external jack, bypassing the speaker system for private listening. Utilizes 1 DC 9V battery. All purpose BINOC-RADIO PAK

Includes 7x35 Sportview INSTA-FOCUS Binocular - best for all 'round use - best compromise of magnification and brightness without weight and bulk. Unique thumb-drive INSTA-FOCUS gets you in focus 3 times faster — never miss the action. Field 420'; ht. 5\%"; wt. 20 oz.; exit pupil 5mm. Deluxe case with built-in radio. #16-9352.....\$68.50

Wide Angle BINOC-RADIO PAK

Includes 7x35 Wide Angle Sportview INSTA-FOCUS Binocular - compact, light weight, offers 50% more viewing area than conventional 7x35's. Combines with INSTA-FOCUS as preferred choice for spectator sports, racing, hunting — wherever action viewing is involved. Field, wide angle \$20'; height 4%"; weight 21 oz.; exit pupil 5mm. Deluxe case with built-in radio. #16-9353 . . . \$74.50



Bushnell DIVISION OF BAUSCH & LOMB

FISH SPOTTER for FISH HUNTERS!



HERE'S WHAT YOU SEE Con Con 0500

Puts the full measure of fun into fishing...the kind of fun you have when you're catching fish instead of sitting there hoping! The Fish Spotter puts you "in the know"-lighted signals tell you the depth and with only a little practice you'll be able to interpret the condition of the bottom-rocks, ledges, underwater brush, slopes, etc.

As a fisherman you probably already know the haunts and habits of your favorite fish, so already you're ahead of the game! Fish Signals appear as momentary flashes between the bottom and the surface signals - the rest is up to you!!!

Built with the open boat fisherman in mind, the Fish Spotter is designed for portability. It's constructed of handsome, rugged ABS material, in non-fading marine tan and black. Corrosion and splash resistant, the unit is built for long life in a marine environment

The Fish Spotter is ideal for fishing in lakes, ponds and bays-even use it off the pier or dock. Perfect for the rented boat and shallow water navigation

Signals are bright and clear, easily read. Dial is calibrated up to 100' and is sun shielded. SENSITIVITY CONTROL adjusts to bring in, readings sharp and clear. INTERFERENCE CONTROL works to eliminate multiple echoes from motor interference

No external power required. Works with two 6 V. DC lantern batteries that last up to 80 hrs. The latest solid state circuitry minimizes battery drain.

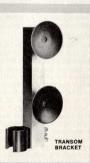
Transducer bracket is included. Heavy duty suction cups in a slotted wood base attach it firmly without tools to boat transom.

HOW THE FISH SPOTTER WORKS

The Fish Spotter's electronic transducer fastened to boat transom sends down a cone of ultra sonic waves-the same sonar waves that are used to detect enemy submarines!

At the rate of 1500 feet per minute, the sound waves probe the bottom and rebound as reflected echoes to be picked up by the transducer, converted to electrical energy and reproduced on the dial face as light flashes of a high intensity neon bulb. The time interval between the sending and receiving of the sound waves is measured accurately by the instrument and appears on the dial as depth in feet. Thin lines that appear between top and bottom signals are FISH.





1 YEAR WARRANTY

BUSHNELL FISH SPOTTER

Completely portable-measures 91/2" long, 61/2" high, and 51/2" wide-with built-in handle. Rugged ABS material construction, marine tan and black. Includes transducer with 51/2 yards of cable, and suction cup transducer mounting bracket. Weight, including batteries, 5 lbs. 6 ozs.

#60-1001	\$127.50
#60-6008 10' Transduce:	r
extension cable	\$3.50

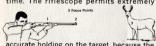
HOW TO SELECT A RIFLESCOPE

LET'S BEGIN WITH A BRIEF **DESCRIPTION OF THE ADVANTAGES** OF A RIFLESCOPE

YOU SEE BETTER

Whatever the shooting conditions or magnification, you actually see better, more clearly, through a riflescope than you do with the naked eve.

YOUR AIMING POINT IS ON THE TARGET No human eye can focus on both front and rear iron sight and the target at the same time. The riflescope permits extremely



accurate holding on the target, because the crosshair aiming point and the target are in the same plane of vision-one point on which to focus as an aiming point. The crosshair actually appears to be on the

target. When the eves are young, the rapid shifting of focus from rear to front iron sight to target is a practical exercise in accompdation. As the years pass, the rapid shift of focus becomes a practical impossibility.

SCOPED RIFLE SHOOTING IS SAFE SHOOTING

With the crowded conditions that exist in most hunting areas, the importance of see ing the target clearly is a must. Not only do you see clearly with a riflescope, but you

The 4x is considered the general, all pur-

pose magnification for medium distance

At this range targets are easier to hold in

the sight picture and are frequently sta-

tionary. 4x is preferred when the shooter

expects to have the time to aim carefully

The 6x is considered the long range, open





This is simply the diameter of the sight picture seen at a given distance. The riflescope's field is rated at 100 yards ... 100 yards being the standard comparative distance. Basically, field of view is controlled

see the lower part of the target which is

Little wonder, then, that each year brings

Since each riflescope has its specification,

you will need to understand the specialized

normally obscured by iron sights.

ever increasing sales of riflescopes!

terms to make your selection:

FIELD OF VIEW



by the diameter of the eveniece and the magnification. The normal position of the eye from the eyepiece (called "eye relief")

is also a factor. As a rule of thumb, the field of view is reduced as the magnification is increased. Where targets are small and stationary, the field of view is relatively unimportant and higher powers are entirely practical. With a close-in moving target, a wider field of view becomes extremely important since it is not practical to have the animal flash across the scope's field of

MAGNIFICATION

A wide range of magnifications is available for big game hunting, since selection of the scope is based upon shooting conditions and distances which the shooter expects to encounter. The 2.5x (2.75x) is long established as the ideal scope for brush or closein shooting. The wide field associated with the low power makes it possible to find the game quickly in the telescope sight and hold on the moving target.

country scope where increased magnification is important **VARIABLE POWERED SCOPES**

and shoot accurately.

The lower powered variable scope (1.5x-4.5x) is an ideal combination for brush shooting and medium range shooting. The higher powered variables (2.5x-8x and 3x-9x) make ideal scopes for full coverage of the shooting range from brush shooting to varmint shooting.

Of prime advantage, the shooter has the opportunity to select the power suited to the field condition of the moment.

RELATIVE BRIGHTNESS

This is a frequently misunderstood term which refers simply to the size of the shaft of light (exit pupil) which is transmitted to the eye. This exit pupil is determined by the diameter of the objective lens-the lens that faces the target. "Relative Brightness" is used to rate the various model scopes for performance under adverse light conditions. It makes reference to the size but not the actual brightness of the shaft of light. While it would seem that the largest exit pupil possible would be desirable, it should be recognized that the eye is a part of the optical system and the eye's iris admits only the amount of light that it requires with the result that the excess exit pupil produced by an oversized objective might not be utilized. Further, the large objective "bell" may present a problem under certain mounting conditions.

LENS COATING

Coating of all air-to-glass optical surfaces effectively increases light transmission up to 50% by controlling internal light reflection. All Bushnell scopes are 100% hard

EYE RELIEF

"Eve relief" is the distance from the evepiece at which the eye sees a full sight picture. Naturally, the shooter would not wish to place his eye close to the eyepiece to receive the gun's recoil. A minimum of 3" eye relief is required to provide the necessary safety for high powered rifles. Eye relief is related to diameter of the eyepiece (magnification) but there is a practical limit to size and eye relief for proper

RETICLE (or Reticule)

The crosshair has long been the most popular reticle, recently superseded by the multi-post (Multi-X) which combines crosshair with heavier portions that lead the eye

to the center point. The ScopeChief Magnetic Command Post offers the shooter the crosshair under normal sighting conditions or an optional tapered post which can be flicked up at will for close-in shooting or added visibility under poor light conditions.

PARALLAX

Each riflescope is set to be parallax-free at only one distance. The condition called "parallax" occurs when the eye is moved to the side of the exit pupil and the target distance makes the reticle appear to change position with relation to the target. The 2.5x, 4x and the 1.5x-4.5x variable are factory set parallax-free at 100 yards. The 6x and the higher range 2.5x-8x and 3x-9x variables are set parallax-free at 150 yards. Scopes with magnification of 10x and more are equipped with a range focus device to permit parallax adjustment over the large range that may be utilized. Under 10x, range focus is not required since the maximum amount that may exist over the shooting range would be insignificant.

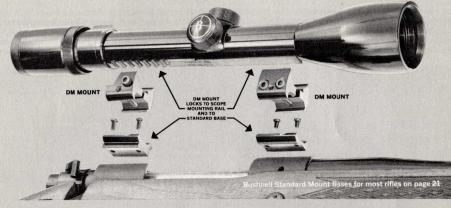
CONSTRUCTION

No other optical instrument is called upon to perform with laboratory precision, combined with the ruggedness that will withstand the recoil of a high caliber rifle or an accidental fall in the field. With the time money and effort that is associated with hunting, and the likelihood that often the hunt results in but a single opportunity for a "shot," a riflescope cannot under any circumstances fall short in mechanical performance.

Bushnell riflescopes are offered in a wide range of models and prices. Each is designed to perform dependably under rugged field conditions. The basic difference lies in the optical refinements of image quality, correction, and brightness and/or valuable accessories-built-in mounts, Command Post, etc. Make your choice as your pocketbook permits with the assurance that all are built for the wide range of rifle calibers and hunting conditions.

CUSTOM-DM INCLUDES DETACHABLE MOUNTS

for use with standard one and two piece bases



EXTRA MARGIN OF RELIABILITY AND SHOT-UPON-SHOT ACCURACY WITH SIGNIFICANT SAVINGS

NEW Custom DM riflescopes effectively span the gap between the professional quality ScopeChief and the solid dependability of the economy Banner line of riflescopes.

Free of aberrations and distortion, they produce flat pictures, bright and sharp throughout, with each air-to-glass surface fully coated to reduce internal reflections and increase brightness. Reticle remains centered even when exaggerated eleva tion or windage adjustments are made to zero-in. Custom DM scopes are waterproof, o-ring sealed to prevent intrusion of moisture, nitrogen filled to eliminate internal moisture. They're rust proof, scratch resistant - finished in rich, glossy black to complement even the finest rifle.

NEW — DETACHABLE MOUNTS

Shockproof, streamlined DM-Detachable Mounts come with

scope, lock to scope mounting rail and to standard one and two piece bases to resist the heaviest recoil under roughest field conditions. Cumbersome scope rings are eliminated.

FYTRA FVF SAFFTY

Custom DM's unique mounts offer the shooter new latitude in scope positioning for long, safe, comfortable eye relief.

"BEFFED-UP" STRUCTURAL STRENGTH

Unlike conventional riflescopes, the Custom DM body is of advanced design utilizing extruded extra strength aluminum to provide increased wall strength, built-in reinforcing side ribs and an integral scope mounting rail. In the Bushnell tradition, superior optics are ground and polished to computer-formulated specification

CUSTOM-DM — COMPLETE WITH DETACHABLE MOUNTS







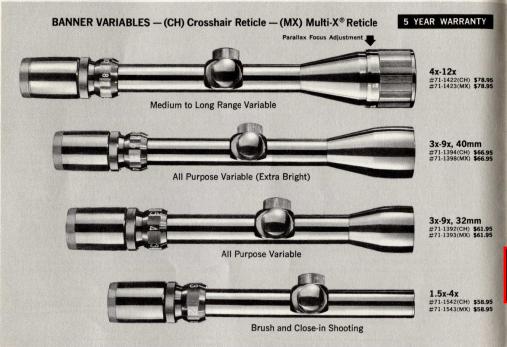
10 YEAR WARRANTY

	CUSTOM RIFLESC	OPE SPEC	IFICATION	CHART								
Nitrogen filled and sealed ag	ainst moisture. Hare	d, anodized	, scratch-re	esistant finis	sh. Tube dia	meter: 1 in	ich.					
MODEL	CHARLEST ARE STREET	F	IXED POWER	RS	VARIABLE POWERS at principal setting							
		2.5x 4x		6x		3x -	- 9x					
Actual magnification		2.5	4	6	3	4	6	9				
Clear aperture of objective lens	(mm)	20	32	38	38	38	38	38				
Exit pupil	(mm)	8	8	6	12.6	9.5	6.3	4.2				
Relative brightness		96	96	54	237	135	60	27				
Field of view at 100 yards	(ft.)	49	29	19	35	27	17.5	12.5				
Eye relief	(in.)	4.25	3.75	3.25	3.75	3.5	3.25	3				
Crosshair width at 100 yards	(in.)	1	.72	.48	.96	.72	.48	.32				
Post width at 100 yards	(in.)	5	3	-	THE PROPERTY.	DAY BALLS IN	-					
Total weight (oz.). Add 1.75 oz. for models with buil	It-in mounts	7.75	9.75	10.75			.50					
Outside diameter-objective end	(in.)	1	1.61	1.81	TARGET S		81					
Overall length focused to infinity	(in.)	10.75	11.75	13.38	100000000000000000000000000000000000000	12	.50					
Corrected for parallax at	(yds.)	1	00	150			50	ANTO DE				
Outside diameter eyeplece end	(in.)		.5	1.5	1.5							
Click adjustment at 100 yards	(in.)	.5	.33	.25			16	mura un				
Graduations at 100 yards	(in.)	1.5	1	.75			.5					

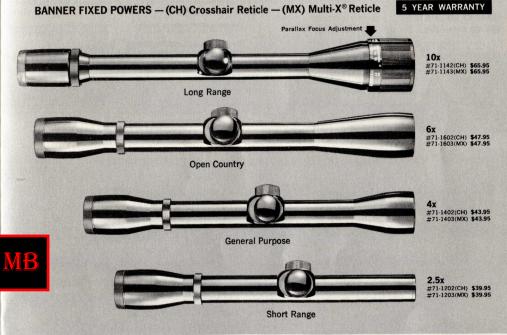
BANNER® Rugged, Accurate Performance with Economy!

For novice and expert, Banner remains the unchallenged leader in its price class . . . rated "Best Buy" whenever accurate, dependable shot-after-shot performance is required, teamed with economy. Now Banner's proven reliability combines with new features you'd expect only in high priced telescopic sights.

NEW Safety-Guard Eye Protection: neoprene protective eyepiece guard, plus Banner's traditionally long eye relief provide the shooter with the extra margin of eye safety with even the heaviest recoil rifles.



NEW Triple Test Weatherproofing: new generation Banners move ahead with impressive three-way protection from fogging. Lenses are locked in and hermetically sealed; zoom power change systems are sealed with O-ring moisture barriers; scopes are filled with dry nitrogen to drive out fog-producing internal moisture. Compared with others in its price class, you can see the difference in Banner's bright, clear, undistorted picture. All the lenses are fully magnesium fluoride coated to restrict loss of light due to internal reflection.



NEW EYE SAFETY New neoprene EYE GUARD com-

bines with Banner's long eye relief (i.e., how far you hold your eye from the eyepiece to see the full sight picture) for that EXTRA MARGIN OF SAFETY.

(CH)

(MX)

Multi-X®-

Crosshairs -

Most popular of all reticles. Medium weight is standard in Bushnell's Banner – heavy enough to see under most light conditions, but not too heavy to obscure

A popular combination reticle. The wider outer portion of the reticle serves to lead

the eye to the center for quick shots in poor light. The central crosshairs provide an efficient aiming point for shots under normal sighting conditions.



ALWAYS CENTERED RETICLES

Shockproof reticles remain centered in the field of view

even when abnormal adjustments are made in windage and elevation. In the variable power scopes, the size of the reticle remains unchanged when magnification is changed. Banner variables maintain their point of impact without drift throughout power change - the most critical test of a variable scope.

Nitrogen filled an	d sealed	against	moisture	. Hard, a	nodized, s	cratch-re	sistant f	inish. Tube o	liameter: 1	inch.					
			FIXED	POWERS	TOTAL STATE	VARIABLE POWERS at principal settings									
MODEL	Z II PANOLY	2.5x 4x 6x 10x 1.5x - 4		- 4x	3x-9x & 3x-	9x (40mm)	4x-12x								
Actual magnification		2.5	4	6	9.5	1.5	4	3	9	4	12				
Clear aperture—objective end	(mm)	20	32	32	40	21	21	32(40)	32(40)	40	40				
Exit pupil	(mm)	8	8	5.7	4.2	13	5	10 (13.3)	3.6 (4.4)	10	3.:				
Relative brightness		96	96	49	26.4	254	38	150 (265)	19 (29)	150	16.				
Field of view at 100 yards	(ft.)	45	29	19.5	12	63	28	39	13	29	10				
Eve relief	(in.)	3.5	3.5	3	3.5	3.5	3	3.75	3	3.25	3				
Crosshair width at 100 yards	(in.)	1.2	.75	.48	.25	1.8	.72	.95	.32	.75	.25				
Post width at 100 yards	(in.)	4.8	3	-	-	6	3	-	11 12 12 E		-1000				
Total weight	(oz.)	8	10	10.5	14.6	10	10.25		.13	1					
Total meight	41-5		1.6	16	2		1	1.6	1.9)		2				

BANNER RIFLESCOPE SPECIFICATION CHART

These scopes are equipped with a Range Fo

Overall length focused to infinity Outside diameter—eyepiece end

Click adjustment at 100 yards Graduations at 100 yards

Corrected for parallax at



SCOPECHIEF® IV with Retractable Post for Dawn to Dusk Lighting Conditions



When it's too dark to see the crosshairs..



Switch instantly to Command Post!



STRETCH YOUR SHOOTING DAY ANOTHER 40 MINUTES . . .

At early dawn and late twilight when game is on the move, ScopeChief's brilliant optics pick out targets with astonishing clarity. Too dark for crosshairs? Your Command Post reticle pays off handsomely. Before you know it, the minutes add up to hours and days of extra hunting pleasure. You're always "Reticle Ready."

Move through open country, brush or timber . . . in and out of sun and shade . . . switch from crosshairs to post and back again. You're always ready with the right reticle for that trophy shot . . . for clean kills at long range or

BUSHNELL'S SCOPECHIEF IV -TRULY THE EXPERTS' HUNTING SCOPE IN EVERY WAY

PRECISION ACCURACY

ou choose a high power, low power or vari-power ... ScoreChief delivers tight groups you associate with high priced target scopes. Both reticles are always centered . deliver same point of impact. Use pin point accurate adjustments for different loads, as well as elevation and windage . . . they'll return to exact zero every ScopeChief reticle in the variable models remains sharp and clear without changing in size when you increase

RUGGED RELIABILITY

The ScopeChief riflescope is the product of optical engineers who shoot and hunt . . . who know the tough requirements of performance in the field. Long, safe eyerelief . . . large eyepiece . . . wide, distortion-free field ... finest anti-reflection, coated optics . . . extra strength tube . . . all add up to fast, easy sighting. It's rugged and light with handsome, mar-resistant, Rhino-coat finish. Nitrogen filled . . . fog-free and completely sealed against dust or moisture.



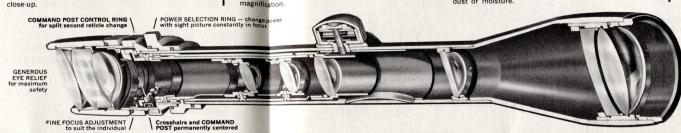


ne EYE GUARD provides an extra measure of eve protection

AIR SPACED LENSES for photographic clarity even at critical higher powers

ugged "RHINO FINISH"-cratch and mar resistant

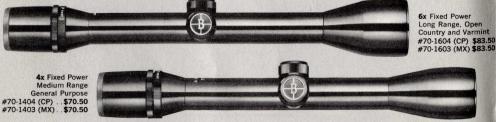
ALL WEATHER SEALING

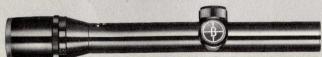


SCOPECHIEF IV Fixed Powers — (CP) Command Post Reticle — (MX) Multi-X Reticle

20 YEAR WARRANTY

SCOPECHIEF IV Variable Powers — (CP) Command Post Reticle — (MX) Multi-X Reticle





2.75x Fixed Power Short Range Woods and Brush #70-1204 (CP) . .\$61.50 #70-1203 (MX) . .\$61.50



3x-9x Variable All Range **Hunting and Varmint** #70-1394 (CP) \$103.50 #70-1393 (MX) \$103.50

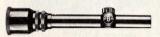


2.5x-8x Variable All Range, Compact #70-1284 (CP) . \$92.50 #70-1283 (MX) . \$92.50





1x Shotgun/Rifle Scope



exit pupil 15mm; relative brightness 337.5; field at 100 yds. 92'; eye relief 6"; crosshair width at 100 yds. 3"; post width at 100 yds. 10"; wt. 11.5 oz.; outside dia. obj. end 1"; length 9%"; outside dia. eyepiece 1.8"; parallax correction at 50 yds #70-1104 (CP)

		SC	OPECHI	EF RIFLE	SCOPE S	SPECIFIC	CATION	CHART					11/10			
Nitrogen equals 1/2	filled an	d sealed 100 yard	against r s. Scale e	noisture. quals ½	Hard, and	odized, s 00 yards.	Tube dia	neter: 1 i	nch.				7			
MODEL	Alama 15		ED POWE		22 10 W	VARIABLE POWERS at principle settings										
MODEL		2.75x	2.75x 4x 6x 1.5x-4.5x 2.5x-8x			I IK WEST	3x-	-9x	OTOTAL							
Actual magnification		2.75	4	6	1.5	4.5	2.5	4	8	3	4	6	9			
Clear aperture of objective lens	(mm)	21	32	38	21	21	32	32	32	38	38	38	38			
Exit Pupil	(mm)	7.6	8	6	14	4.7	12.4	8	4	12.7	9.5	6.4	4.2			
Relative Brightness		87	96	54	294	33	226	96	24	241	135	61	27			
Field of view at 100 yards	(ft.)	43	30	20	78	26	46	30	15	39	31.5	21.5	13			
Eye-relief	(in.)	3.5	3.5	3	4.38	3.25	4	3.5	3.25	4	3.5	3.25	3.25			
Crosshair width at 100 yards	(in.)	1.3	.9	.6	3	1	1.22	.72	.38	.96	.72	.48	.32			
Post width at 100 yards	(in.)	5	3	2	9	3	5	3	1.5	4	3	2	1.3			
Total weight (oz.). Add 1.75 oz. for models with built-in mounts		9	10.7	11.5	7.	75	they be to	11.4	4.56.19	17.16		2				
Outside diameter-objective end	(in.)	1	1.6	1.8	1	CONTRACTOR	ALTERNATION	1.6	(F) (F) (S) (S) (S)	0.50		.8	A BOTTO			
Overall length focused to infinity	(in.)	9.9	11.6	12.6	9.		7.00	11.1		The same		1.4	111001848			
Outside diameter- eyepiece end	(in.)		.5	1.5	1.		The state of	1.5	distribution of	1.00 miles		.5				
Corrected for parallax at	(yds.)	10	00	100	10	00	V. Mai	100	12 Vall 2 V	Carlo	10	00	TATE OF A			

SCOPECHIEF IV WITH OPTIONAL MULTI-X® RETICLE

With its new MULTI-X RETICLE, Bushnell brings to the shooter in one reticle the advantage of the popular crosshairs reticle, plus - post and crosshair, and rangefinding reticles. (The Command Post is not offered

in combination with the Multi-X reticle.)

The heavier portions of the new reticle lead the eye to the center aiming point providing improved accuracy under dawn and dusk shooting conditions. At the same time, the medium crosshairs at the center offer superior accuracy under normal shooting conditions for even the small target.



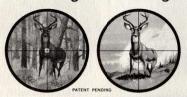
OPTIONAL CLEAR LENS CAPS



DELUXE VINYL LENS CAPS INCLUDED

SCOPECHIEF® V "LITE-SITE®" RIFLESCOPES

... with Lighted Aiming Point for Dawn to Dusk Light Conditions

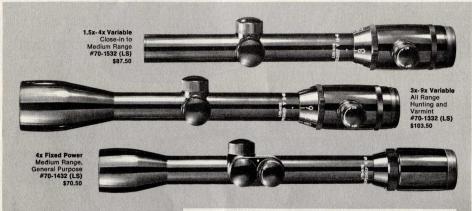


20 YEAR WARRANTY

Proved the most positive optical aiming point for use in poor light.

CLICK IT ON for dawn and dusk lighting conditions. Instantly you see a steady lighted aiming point projected on the center of the crosshairs. You select the color of the aiming point red, green or natural - to suit your individual requirements. Lite-Site is powered by a compact, easily replaced

CLICK IT OFF for normal light conditions. The lighted aiming point disappears leaving sharply defined crosshairs, the reticle considered by the experts best suited for hunting in good light conditions. Two reticles in a single scope - the choice is instantly yours. Truly the expert's hunting riflescope in every way.



8 SUPERIOR SCOPECHIEF FEATURES -your assurance of rugged dependability and precision accuracy.

- ... Nitrogen filled to insure moisture-free internal air - all-weather sealed to keep moisture and dust out.
- ... Safety Eye Guard a soft eyepiece bumper that could prevent a nasty cut for a stock crawling shooter.
- ... Tough alloy, rust-free body parts, painstakingly finished in highly polished, scratchresistant Rhino finish.
- ... Windage and Elevation adjustments with a wide range, and reticles that remain centered regardless of the degree of adjustment. Special zero reset feature.
- ... In the variables, reticle remains the same size and point of impact remains unchanged throughout the power change - the most critical test of a variable.
- ... Optics are fully anti-reflection coated, resolving detail finer than the resolution capability of the human eye.

SCOPEC	HIEF V	-"LITE-SITE" R	IFLESC	OPES				
Sealed against moisture	. Fog fre	ee. Scratch resis	tant fini	sh. 1" tu	be diam	eter.		
		FIXED POWER	VARIA	BLES at p	principal settings			
		4x	1.5x	-4x	3x-9x			
Actual magnification		4	1.5	4	3	9		
Clear aperture—objective end	(mm)	32	21	21	38	38		
Exit pupil	(mm)	8	14.6	5.2	13	5.2		
Relative brightness-anti-reflection	coated	96	213	27	169	27		
Field of view at 100 yds.	(ft.)	27	68	26	35	12.3		
Eye relief	(in.)	3.3	3.50	3.25	3.5	3		
Crosshair width at 100 yds.	(in.)	.75	1.8	.72	.95	.32		
Lighted dot at 100 yds. subtends	(in.)	5	13.3	5	6	2		
Total weight	(oz.)	11.5	11	.5	MARKET 1	4		
Outside diameter—objective end	(in.)	1,6			1.	78		
Outside diameter—eyepiece end	(in.)	1.5	1.	51	1.	61		
Overall length focused to infinity	(in.)	12	10	.75	12	.88		
Corrected for parallax at	(yds.)	100	10	00	1	50		
Click adjustment at 100 yds.	(in.)	.166	3	13		16		
Graduations at 100 yds.	(in.)	.5			.5			
Battery #640; 1.4 volt	100 ST		(0.55) (B.O.)					

- ... Shock resistance that many times exceeds the recoil of the heaviest magnum rifle. ... Long, safe, comfortable eye relief.

Lite-Site test rated in American Rifleman's September, 1971 Dope Bag. Reprints upon request.



Bushnell DIVISION OF BAUSCH & LOMB

RIFLESCOPE MOUNTS and BASES



1" DETACHABLE RING MOUNTS Streamlined, with Socket Screws

Precision made of high strength aluminum alloy these streamlined, split ring mounts will not come loose on the heaviest magnums or under the roughest field conditions. Easily removed by means of the locking side screw. Locked in place by the special anti-recoil groove in the mount base mating with the screw body. Socket screws are hardened to resist breakage and head damage. Both high and low mount sets available for use with the bases listed. Glossy black, scratch resistant finish. Complete with Allen wrench

#76-3110	Detachable 1" Ring Mounts— LOW MOUNT (set of 2)\$7.95
	Detachable 1" Ring Mounts— HIGH MOUNT (set of 2) \$7.95
MOUNT E	BASES for above Ring Mounts 2 pcs. (front and rear)\$1.50
	BASE for above Ring Mounts 1 pc. BRIDGE Mount\$1.50



1" PIVOT MOUNT RINGS

Designed expressly for the shooter who wants instantly to be able to swing his scope aside to use iron sights. Steel pivot mount latches lock the scope in place, but permit it to be disengaged with a firm push and pivoted to one side. Relatched, the scope returns to zero. Extra strength socket screws are used in the split rings to securely clamp the scope—Allen wrench is in-cluded. Rings and bases finished in scratch resistant glossy black.

#76-3130 PIVOT MOUNT RINGS Set of 2	\$8.95
PIVOT MOUNT BASES for above (2 pcs.)	\$2.50
PIVOT MOUNT BASE for above (1 pc.) BRIDGE Mount	\$2.50

MOUNT BASE SELECTION REFERENCE

To order front and rear bases, substitute numbers listed in the chart below for the last two digits of the basic mount code #76-0000 (e.g., for Browning Bolt Action, order 76-0045 rear mount base; 76-0046

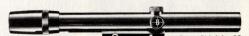
MFR. & RIFLE MODEL	Rear	1930	Front	Rear	Fron
·····································	19		19	119	11!
ANSCHUTZ 153 Deluxe (factory drilled)	19		19	119	
BROWNING 22 Auto (single base required)	45	60	46	145	14
Bolt action, High-Power & other cal. Semi Automatic High-Power	54		54	154	15
BSA Monarch Medium Action	36		40A	136	14
Monarch Long Action	36		35	136	13
Other High-Powers	28		28		
CIL 900	19		19	119	11
950	61		46		
COLT Coltsman in 264, 30-06 (round receivers)	54		54		
Coltsman in 223 (Sako action)	67 67		66 65		
COOEY 71	47		46	147	14
ENFIELD Winchester 70	47 36		46 35	147 136	14
H & R 300, 301, 330, 370	45		46	145	14
317	67		66		
Topper 30, 22 Jet (single base req.)		60			
HIGH STANDARD Hi-power	55		46		
JAPANESE 6.5mm, 7.7mm (single base req.)		70			170
MARLIN 336, 444, 36, 62, Glenfield 30 (single base req.)		63			163
455	45		46		
including former HUSQVARNA	45		46	145	14
MAUSER w/receiver ring approx. 1.300" diameter,					
HVA, Lightweight HUSQVARNA, ZB8mm, 7mm,				155	14
6.5mm w/round receiver	55		46		
MOSSBERG 800	55 20A		55 42	155	15
PARKER-HALE 1000, 1000C, 1100, 1200, 1200C	45		46	145	14
REMINGTON, 700 in 270, 280, 30-06, 7mm Magnum, 300 Winchester Magnum, 264, 375, 458	36		35	136	13
725 in 280, 270, 30-06, 375; Rem. 721	36		35	136	13
700 in 222, 222 Mag., 22-250, 243, 6mm, 308	36		40A	136	14
722, 40X	36		40A	136	14
725 in 222, 244, 243	36		40A	136	14
740, 742, 760 (single base required)		62			162
660, 600 (single base required)		70			170
788	76		75		
14, 141	20A	60	27		
XP-100 (single base required)		70			
					16
RUGER 44 Magnum Deerstalker	47		68	147	16
SAKO Vixen	67		66		
Forester, Finnbear	67		65		153
Finnwolf (single base required)		53			
SAVAGE 99	14		19	114	11
110	61		46		
170		62			162
SCHULTZ & LARSEN	54		46	154	14
SEARS 50. 51	45		46	145	14
51L	55		46	155	14
53			46	147	14
			55	154	15
'03-A3	54 59		45	154	10
VOERE 2150, 2165/1, 2165/2, 2165/3, 2165/4	45		46	145	14
WEATHERBY MARK V, VANGUARD	36		20A		
Other models with FN Mauser actions			46		
Mark V 22-250 short action			46		
WINCHESTER 70 postwar models, 300 H&H,					
375 H&H Mag., 1963 and all prior models	49A		46		
300 Winchester Mag. and all other cal.			46	147	1
54, early model 70	48		46		
670, 770	47		46	147	1
88, 100 (single base required)		53			153

.22 RIFLESCOPES



SCOPECHIEF.22

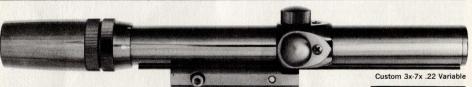
The superlative ScopeChief .22 brings you all that you could ask for to complement your finest .22 rifle. The extra brightness you can see for yourself. Extra performance, extra dependability - no plastic parts or plastic lenses here. The 7/8" tube brings you a wider field and features the integral mounting rail extruded as part of the aluminum alloy body to provide mounting versatility and extra rugged strength. Glossy black scratch-resistant finish.



20 YEAR WARRANTY

10 YEAR WARRANTY

4x	#70-3000	Deluxe vinyl	lens caps	included \$21.50
				included \$29.50



CUSTOM.22

Second to the award winning ScopeChief .22, there's no better buy in a .22 than the Custom - all that you've ever needed in a .22 riflescope. The Custom features the same strong extruded tube design with integral rail, but with a smaller objective lens system. Custom optics produce a bright, sharp image surpassed only by the ScopeChief .22. Design is sleek, streamlined, finished in glossy black with built-in protection from scratching, marring.



4x	#72-3000	Lens caps	included.							\$14.95
3x-7x	#72-3100	Lens caps	included.							\$20.95

A DIFFERENCE IN BRIGHTNESS YOU CAN SEE!

Look through these riflescopes — you'll see the difference see the difference — Always this NOT this sight pictures that are brighter, sharper, extra clear from edge to edge. You'll find no plastic lenses or "blue shadow halos" to downgrade performance. All airto-glass optical surfaces are anti-reflection coated to restrict light loss — eyepieces focus to the need of the individual shooter. Always this NOT this

DEPENDABLE ACCURACY!

Crosshairs stay centered in the sight picture even when

Always this you make extreme adjustments of windage or elevation. Change of the adjustment dials moves the point of impact precisely as you intended.

REMARKABLE VERSATILITY IN MOUNTING



.22 RIFLESCOPE SPECIFICATIONS ScopeChief 3x-8x .22 Variable Custom 3x-7x .22 Variable

Magnifications:	3x	4x	5x	6x	7x	8x
Field at 100 yards (ft.):	30	24	18	16	14	12
Exit pupil (mm):	7.4	5	4	3.4	2.9	2.5
Overall length: 11"; overall weigh 20mm; outside diameter, eyepie end: ½"; eye relief: 2½"-3"; a	ce end:	13/4":	outside	e diame	eter, of	piective

ScopeChief 4x .22

Field at 100 yards (ft.): 30; exit pupil: 5mm; overall length: 11''; overal weight: $7\frac{1}{2}$ α_s ; clear aperture of objective lens: 20mm; outside diameter eyepiece end: $\frac{1}{2}\alpha_s''$; outside diameter, objective end: $\frac{1}{2}\alpha_s''$; eye relief: $2\frac{1}{2}\alpha_s''$ adjustment scale graduations equal: 1'' at 100 yds.

Magnifications:	3x	4x	5x	6x	7x
Field at 100 yards (ft.):	29	23	17	15	13
Exit pupil (mm):	5.3	4	3.2	2.7	2.3
Overall length: 10"; overall weigh 18mm; outside diameter, eyepie	nt: 61/2 oz.; ce end: 11/2	clear ap	perture o	f objecti meter, o	ve ler bjecti

Custom 4x .22

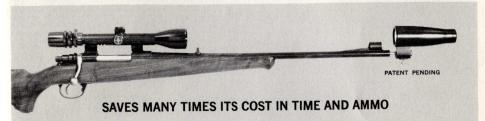
Field at 100 yards (ft.): 28.4; exit pupil: 4mm; overall length: $10\%_{h}''$; overall weight: $5\%_{h}$ oz.; clear aperture of objective lens: 18mm; outside diameter, eyepcitee end: 1''; outside diameter, objective end: %''; eye relief: $2\%_{h}''$; adjustment scale graduations equals: 1'' at 100 yds.

Bushnell DIVISION OF BAUSCH & LOMB

BORE SIGHTER

Shooting Accuracy Insurance!

5 YEAR WARRANTY



. . . an invaluable aid to serious shooters and hunters for rechecking alignment of riflescope or iron sights in the field - be sure that your rifles and handguns will shoot where they aim!

Previously considered the tool of the professional gunsmith, the Bushnell Bore Sighter now provides the shooting enthusiast lifetime performance for a modest cost easily recovered in savings of sighting-ammunition alone!

.At the range, sighting-in test shots are "on the paper," requiring only minor fine adjustments to achieve pin-point zero at a given distance.

...On the hunt, when "the chips are down," you make sure your rifle remains accurately sighted whatever the rough and tumble conditions by optically checking zero positioning when test shots would frighten game for miles around!

The Bore Sighter is an optical instrument fitted to the muzzle of the gun with a round rod of the proper diameter to fit the caliber of the rifled barrel. Thus positioned, the sighting grid within the Bore Sighter may be viewed with relationship to the reticle of the riflescope. It also can be used to check and align non-optical sights - aperture, "peep," or open notched.

Windage and elevation adjustment of the riflescope mounts and final adjustment of built-in internal scope adjustments bring the sights into alignment with the bore of the firearm.



When several rifles and/or handguns are involved, Bushnell's unique EXPANDABLE ARBORS offer exceptional flexibility. With only three Expandable Arbors, the user can bore sight the full range of calibers from .22 to .45!

Each graduation of the Bore Sighter grid is equivalent to 4 inches at 100 yards. Using the scope adjustments, you can make correction for bullet drop at a specific distance provided the trajectory of the specific load is known.



#74-3002 BORE SIGHTER

with carrying case......\$26.95

Diameter of front lens: 11/2"; Length of body: 47/8"; Weight: 61/2 oz.

EXPANDABLE ARBORS #74-3011 Expandable Arbor

Fits Any Bore from .22 to .270 caliber \$5.50 #74-3012 Expandable Arbor

Fits Any Bore from 7mm to .35 caliber #74-3013 Expandable Arbor Fits Any Bore from .35 to

.45 caliber \$5.50 #74-3123 Set of three Expandable Arbors \$13.50

SINGLE CALIBER ARBORS

#74-3032 Arbor - .25 Cal #74-3031 Arbor - .177 Cal. .22 Cal #74-3021 Arbor — #74-3023 Arbor -6 mm #74-3029 Arbor -6.5 mm #74-3024 Arbor - .270 Cal #74-3025 Arbor -7 mm #74-3022 Arbor -30 Cal .32 Cal. #74-3028 Arbor — #74-3027 Arbor -35 Cal #74-3026 Arbor - .375 Cal. #74-3030 Arbor - .44 Cal. Each (specify caliber) . \$2.75

22

Bushnell MAGNUM PHANTOM Scopes

Beefed up to withstand the punishing recoil of higher caliber handguns, the new PHANTOMS provide solid protection for the optics, with factory loads. Re-designed adjustments are extra strong, extra precise, with click stops added. Eyepiece adjusts focus to the shooter's need. All optics are magnesium fluoride hard coated to increase light transmission. Finish is hard anodized. glossy black, scratch resistant.



1.3x MAGNUM PHANTOM-All pur- 2.5x MAGNUM PHANTOM-Varmint pose and target. #74-2910. . . . \$35.50

and long range. #74-2911....\$45.50



PHANTOM HANDGUN MOUNTS

The PHANTOM mounts utilize a unique locking principle to "weld" the scope to the top strap of the handgun. Two hardened 6-48 chrome molybdenum steel studs seat rigidly into the top strap of the handgun, lock into matching holes in the mount base with Allen screws. Integral mounting rail of the PHANTOM scope slides into the top slot of the mount base and in turn locks with two socket head screws that seat into transverse slots in the mounting

*76-2920 Colt Python; Three-Fifty-Seven; Trooper; Officers Match Model; New

*76-2921	S&W K22; K32; K38; Combat Masterpiece; Combat Magnum; S&W .22 Jet; S&W .38/.44 Outdoorsman; .45 Target 1955; .357 Magnum; Highway Patrolman; .41 Magnum; .44 Magnum
*76-2926	Ruger Blackhawk; Super Blackhawk; Super Single Six\$6.00
76-2928	ALL PURPOSE. Dual mounts, grooved at top, grip Phantom rail. "V" block bottoms mount on any level surface, whether round flat, and lock to hardened chrome molybdenum stude seated in two 6-48 drilled and tapped holes. Minimum in-line stud mounting dis- ance %"." "V" base ½" wide

†76-1916 Winchester 94 rifle mount; replaces rear sight; no drilling or tapping \$7.50

20 YEAR WARRANTY

"Unquestionably the Phantom increases potential of any revolver"..."doubles normal shooting range"..."puts iron sights to shame when it comes to accuracy."

WHY SCOPE A PISTOL?

No human eye can focus on both iron sights and target at the same time. With the Phantom, crosshair and target are one razor-sharp image that remains bright and clear even when light is poor.

The handgun with iron sights is without question the most difficult firearm to master. Since distance between sights is so short, small sighting errors cause dismal failure at the target. This problem of keeping both front and rear sights in exact alignment, with the target a fuzzy blur in the background, has kept many shooters with years of experience shooting low scores.





PHANTOM ELIMINATES SIGHTING PROBLEMS

The Phantom gives perfect clarity of sight picture and permits extremely accurate holding on the target, because the crosshair and target are on the same plane of vision. This single sighting plane plus micrometer reticle adjustments give precision not possible with iron sights. Target remains sharp and clear even with poor lighting Also, the crosshair reticle in the Phantom always remains centered in the field of view. This is especially valuable

The Phantom designed specifically for handguns has an eye-relief of 6" to 17". All optics are hard coated to give greater luminosity.

SPECIFICATIONS:

Magnification	1.3X	2.5X
Weight (oz.)	5	5.5
Length (in.)	7.6	9.25
Eyepiece dia. (in.)	1.25	1.25
Objective dia. (in.)	7/8	7/8
Field at 100 yds (ft.)	24	10
Eye-Relief (in.)	6-17	7-16





A real boon to old timers and those who have trouble focusing on iron sights, the amazing Bushnell Phantom Scope, front and center on their faithful 94's will give them faster, "dead on" accuracy that they never dreamed possible. In fact, for any shooter, the Phantom beats open sights for faster, more accurate shooting. There's absolutely no safety problem in mounting because there's no need to drill or tap the barrel.

The Phantom mounts easily in the dovetail slot just forward of the receiver, to allow for top ejection of cartridge. Long eye-relief lets the shooter utilize the large unrestricted field of the naked eye around the scope. Through the scope, both target and crosshairs are crystal clear...the fastest possible combination for brush shooting or close

Bushnell SHOOTING GLASSES



Comfort In A Quality Shooting Glass

Bushnell shooting glasses are free of distortion and aberration, prevent eye-strain, eye-fatigue and headache. Extra-large lenses, and lightweight frames, designed to ride high on the bridge of the nose, offer an obstruction-free view when the head is in sighting position. Nose pads are easily adjusted to fit the individual. Glasses have gold wire frames and are enclosed in a handsome reinforced case that combines protection with good looks.

Select the color best suited to your needs from your **Bushnell Dealer's**

CUSTOM SHOOTING GLASSES

#80-2000/YELLOW - For cloudy, hazy days, dense brush and woods. Filters out glare producing ultra-violet rays, providing sharply improved contrast and visibility. Game stands out against background. \$24.95

#80-2001/GREEN-#80-2002/GRAY-For bright sunlight. Filters out ultraviolet and infra-red rays. Irritating glare is sharply reduced giving improved



Bushnell PRISMATIC TELESCOPES

20 YEAR WARRANTY



SPACEMASTER® II Z-O-O-M Telescope 20 to 45 Power

HIGH RESOLUTION, 60mm PRISMATIC

First choice of experts, champion marksmen, advanced bird-watchers, moon gazers, and for general observation. SPACEMASTER II has a ZOOM power range ideally suited to its big 60mm objective lens-zoom at will from wide, bright 20 power to the detailed close-up of the 45 power! Handy, light weight, compact-perfect for rugged field use. Amazing clarity and brilliance through the finest achromatic color corrected, fully hard-coated optics. Maximum eye comfort for prolonged viewing. Finger-tip fast focusing. Focus mechanism is internal-sealed against moisture. Bushnell's unique electric blue "Squint-Pruf" filter is built into the objective lensknocks out the glare from water, sand, snow and haze! Inner shielding eliminates need for external lens shield. Protective lens caps. Standard thread tripod mount quickly attaches to camera tripod or shooter's stand Length 11%"; weight 36 oz.; neutral gray crackle finish; field at 1000 yards 120' to 72'; exit pupil 3mm to 1.3mm. #78-1809 SPACEMASTER II 20-45x, 60mm Zoom\$147.50

SPACEMASTER® II FIXED POWER HIGH RESOLUTION, 60mm PRISMATIC

Same optical and body features as ZOOM but with fixed power eyepiece, interchangeable if you wish-in seconds!





SHOOTER'S STAND TRIPOD



extra eyepieces. #78-9105



SENTRY® II FIXED POWER HIGH RESOLUTION, 50mm PRISMATIC

With design inspired by Spacemaster II, the NEW SENTRY II is ideal for all-around use, rifle range, nature study, astronomy. Its smaller size and added carrying ease make it the favorite for field use of trophy game hunters and rifle marksmen. Prismatic. Finest achromatic, color corrected, fully hard-coated optics. Fingertip focusing adjusts eyepiecesealed against moisture and dust. Standard thread mount attaches to tripod or shooter's stand. Screw-on protective caps included; neutral gray crackle finish, rugged construction. L. 125/8"; Ht. 33/8"; Wt. 25.4 oz.

Model No.	Eyepiece	Field at 1000 yds. (ft.)	Exit Pupil	Price
#78-1520	w/20 power	120	2.5	\$76.50
#78-1532	w/32 power	70	1.5	\$76.50
#78-1548	w/48 power	45	1.1	\$76.50



20 YEAR WARRANTY

Long the favorite of target range experts and competitors, the angled Long the tayorite of larger traing experience and common the eyepiece lets you check your target effortlessly without moving from shooting position. Fully hard-coated, achromatic, color-corrected optics. Internal, moisture and dust proof focusing system. Protective lens caps. Rugged construction. Neutral gray crackle finish.

Length 161/4"; height 5"; weight 43 oz.

Model No.	Eyepiece	Field at 1000 yds. (ft.)	Exit Pupil	Price
#78-2115	w/15 power	158	4mm	\$147.50
#78-2120	w/20 power	124	3mm	\$147.50
#78-2121	w/20 wide angle	175	3mm	\$156.50
#78-2125	w/25 power	105	2.4mm	\$147.50
#78-2140	w/40 power	61	1.5mm	\$147.5
#78-2160	w/60 power	37	1mm	\$147.5

HOW TO USE YOUR SPACEMASTER AS A TELEPHOTO LENS

Add a few accessories to your Fixed Power Spacemaster Telescope and it becomes a dramatic telephoto lens for your single lens reflex camera—(not for use with 45° or ZOOM Spacemaster).

for SUPER **TELEPHOTO** EFFECTS-750mm to 3000mm





Comparison photographs by B. J. Rose, Bismarck, N.D.



depending upon the interchangeable eyepiece used. Now you can reach out for startling pictures of unapproachable subjects, conquering space with an endless variety of telephoto effects. Dramatic sports shots pictured as if you were part of the action! The wonderful candid photos of children at play unaware of your presence. Wildlife closeups. Span the miles to the moon—your Spacemaster will do all this and much more! The variable Camera Mount is clearly engraved with focal length and f-stop values for quick selection of telephoto effects. With the proper Camera Body Adapter affixed, it connects directly to the camera body with proper alignment and rigidity—a bonus you'd never expect from such a splendid all-purpose



for these SLR cameras:

Canonflex..... Miranda

ADAPTERS

#20-0003



Provides variable telephoto effects depending upon standard eyepiece used. (Not for use with 45° or ZOOM SPACEMASTER.) SPACEMASTER INTERCHANGEABLE EYEPIECES \$29.50

15 power eyepiece provides 750 to 1500mm telephoto effect (magnifies from 15-30 power).

20 power eyepiece provides 1500 to 2160mm

telephoto effect (magnifies from 30-43 power).

#78-2225 25 power eyepiece provides from 2160 to 3000mm telephoto effect (magnifies from 43 to 60 power).





Bushnell DIVISION OF BAUSCH & LOMB

HOW TO SELECT A WIDE ANGLE OR TELEPHOTO LENS FOR A SINGLE LENS REFLEX CAMERA



PICTURE WITH NORMAL 50mm LENS



WITH 35mm LENS



WITH 28mm LENS



WITH 21mm LENS

TELEPHOTO EFFECTS



WITH 135mm LENS



WITH 200mm LENS



WITH 300mm LENS



WITH 400mm LENS

WIDE ANGLE EFFECTS

One of the most exciting features of the single lens reflex (SLR) camera is the opportunity to add a well chosen assortment of longer and shorter than normal focal length lenses for the greatest enjoyment of photography.

To more easily decide what lenses you need for practical or aesthetic reasons, it will be helpful to understand the effects produced by these various focal lengths.

The most obvious effect of a shorter focal length (wide angle) lens is the increase in the size of the area that can be included in the picture, while the longer focal length (telephoto) lens reduces the size of the area and brings distant objects closer. Let's examine in detail the effect of focal length on three basic considerations in picture taking: depth of field, image size, and perspective.

WIDE ANGLE - SHORT FOCAL LENGTH LENSES

If there's a frequent need to get more into the picture than your present lens will accommodate - group shots, interiors, building facades, pictures which offer no time to focus, you'll want a wide angle. But just how wide? You'd think the wider the better, except that as the image area increases, the subject matter becomes smaller, perhaps too small. A wide angle lens seems to make distant objects appear farther than they actually are. It's ideal where the effect of great space is desired. Pictures shot downward give the feeling of great height, while buildings photographed at any angle appear taller than

With wide angle lenses close-by objects are pictured in interesting perspective . car hood appears a "block long," a person with legs crossed appears to have feet of mammoth size. Used intentionally, the effect can be dramatic.

Depth of field is a term which applies to the zone of reasonably sharp focus in front and behind the main object of interest. The wider the lens, the greater the depth of field. Consequently, critical focusing is unnecessary and a quality picture can even be made by holding the camera overhead in a crowd and composing by guesswork! . . . What wide angle to buy? . . . the 35mm is the most likely place to start for general purpose use.

TELEPHOTO - LONG FOCAL LENGTH LENSES

While the selection of a wide angle is rather easily narrowed down to a starting point with the 35mm general purpose lens, the choice of a long focal length is more difficult.

The longer the focal length, the larger the image size. With a variety of lenses (or a zoom) you can shoot your subject exactly the image size you wish.

In direct contrast to the wide angle, telephoto lenses have a very short depth of field — the longer the focal length, the shallower. Taking advantage of this peculiarity, it is easy to separate a subject from a background that would normally be distracting. The effect of the long lens is to compress depth. In a view taken down a crowded road, the cars appear close together - foreshortened, and very nearly the same size.

For this reason, a 135mm is often used for portraits. Now it's possible to move somewhat away from the subject and photograph the subject's head and shoulders, filling the frame without distortion. You thus avoid the portrait shot that makes the nose appear large, the ears too small. Pictures of people become far more flattering.

The most versatile of the long lenses is the zoom, a continuously variable focal length lens which remains in focus throughout the zoom range. Now it is possible to make the subject the desired size in the frame without moving backward or forward.

For the initial telephoto lens you'll find the 135mm telephoto or a zoom most versatile for general photography.

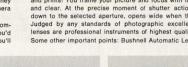
Bushnell Fully Automatic LENSES for SLR CAMERAS

New consumer surveys reveal that most SLR camera owners want to acquire a variety of automatic lenses...but they just as clearly indicate that with budgets pinched, most will wait to make their purchases, stressing that they are hesitant to buy cheaper lenses of lesser quality than their basic camera

The need is a very real one and we've moved to fill that need with a complete line of FULLY AUTOMATIC lenses with the superb optics that you'd expect of Bushnell and remarkably low prices that satisfy the budget! You'll

find them a delight to handle, fast for color shots with available light, and wait 'til you see the sharp detail and life-like color they put into your slides and prints! You frame your picture and focus with the lens wide open, bright and clear. At the precise moment of shutter action, the diaphragm closes down to the selected aperture, opens wide when the exposure is complete. Judged by any standards of photographic excellence, Bushnell automatic lenses are professional instruments of highest quality.

Some other important points: Bushnell Automatic Lenses have fixed mounts-





mm

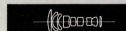
Super WIDE ANGLE \$222.50

The most cramped area becomes a wide open space with this widest of Bushnell's wide angle lenses. With a coverage of 90°, landscapes acquire a feeling of spaciousness. The 12" close focus opens up rich opportunities for creative close-ups and unique perspective, with relatively little distortion. Despite the exceptionally wide field of view, this lens provides edge-to-edge brilliance and sharpness. The unusual depth of field makes focusing virtually unnecessary. All but the dimmest of available light shooting is possible with the 3.8 aperture.

Lens construction: 8-group, 9 element Angle of view: 90°; Aperture 1/3.8-16 Min. focus dist : 12": Filter size: 72mm

20-0300 - Pentax, Praktica, Mamiya/Sekor 20-0301 - Canon FT, TL, Pellix 20-0270 - Nikon, Nikkormat

20-0271 - Minolta SR, SRT 20-0306 - Konica





28 mm f/2.8

Extra WIDE ANGLE \$121.50

Most photographers think of the "28" in terms of confined space shots, panoramic landscapes, and whenever the camera position is restricted. But with its 12" close focusing distance, the "28" can be utilized for dramatic close-ups and perspectives in which a principal object looms large while the background appears to recede. With its great range of depth of field and emphasized perspective, this lens is used for general photography and for objects needing to be strongly ex pressed. It's great for quick action, low light

Lens construction: 6 group, 7 element Angle of view: 74°; Aperture: f/2.8-16 Min. focus dist.: 12"; Filter size: 58mm

20-0272 - Pentax, Praktica, Mamiya/Sekor

.....\$144.50 20-0316 - Canon (including FTB). 20-0274 - Nikon, Nikkormat

20-0275 - Minolta SR, SRT 20-0307 - Konica...\$144.50





35 mm f/2.8

WIDE ANGLE.... \$98.50

Immensely versatile, lightweight and requires a minimum of focusing. Especially valuable for candid and news photography. Often used by photo journalists on their SLRs as a permanent, slightly wide angle, normal lens. Useful for the majority of wedding shots, interiors, vacation scenes and for architecturals when the slightly wider angle is desirable, but not so great as to result in unbelievable perspectives. The 64° picture is covered by the light angle of a flash gun. Particularly handy in close quarters-great depth

Lens construction: 5 group, 6 element Angle of view: 64°; Aperture: 1/2.8-16 Min. focus dist.: 16"; Filter size: 49mm Length: 2"; Weight: 7.8 ounces

20-0276 - Pentax, Praktica, Mamiya/Sekor

20-0317 - Canon (including FTB). 20-0278 - Nikon, Nikkormat

20-0279 - Minolta SR, SRT 20-0308 - Konica... \$119.50



55-135mm; f/3.5 ZOOM



Lens construction: 9 group, 13 element Angle: 43° to 18°; Aperture: 1/3.5-22 Filter size: 62mm; Length: 5"; Wt.: 23 oz.

A single lens provides the ideal focal range-from the 'standard" 55mm to the perfect portrait 105mm through the most popular moderate telephoto range. The zoom opens up new possibilities for creativity allowing the photographer to choose exactly the perspective and framing angle without moving subject or camera. Retractable 20-0314 - Konica.....\$286.50

20-0304 - Nikon, Nikkorma

20-0305 - Minolta SR, SRT

20-0302 - Pentax, Praktica, Mamiya/Sekor

20-0323 - Canon (including FTB).... \$286.50



90-230mm; f/4.5 ZOOM Angle: 27 to 12'; Aperture: (14.522 Minimum focusing distance: 10' Filter size: 58mm; Length: 734"; Wt.: 32 oz.



In one compact package a zoom range that provides medium telephoto at one end suitable for portraits and nearby candid shots, and a super telephoto at the other end for sport, action and wildlife photography. Excellent for photographing moving objects whose distance and

Built-in tripod socket and retractable lens shield.

20-0296 - Pentax, Praktica, Mamiya/Sekor 20-0322 - Canon (including FTB)..., \$286.50

20-0298 - Nikon, Nikkormat 20-0299 - Minolta SR. SRT

\$286.50 20-0313 - Konica



caps, too, of course, and retractable lens shields on zooms and telephoto lenses.

135

f/2.8

mm

they are not interchangeable. Our surveys indicated the great importance placed on automatic performance reliability. So our R&D people took a searching look at the interchangeable mount concept. Then they told us what we already had discovered-great for the dealers' inventory control-but all too often, less than satisfactory to the consumer. So, to insure the smooth, tight fit that a fine camera sysnem requires, we're making lenses that fit specific cameras. Another point—the 300, 400 and 90-230mm enses have a rotatable tripod socket-great for quickly changing from horizontal to vertical or squaring up picture. Finally-we're including the very latest in deluxe SOFT CASES with every lens! Metal lens

200

mm

\$144.50

Lens construction:

Angle of view: 6°

Filter size: 72mm

Length: 13";

Weight: 37 oz.

Aperture: 1/6.3-22

3 group, 4 element

f/3.5



5 YEAR WARRANTY





TELEPHOTO \$113.50

Considered the "standard" telephoto lens. The 135mm is just right for portraits, large images of sports at a medium distance and landscape shots. Image is magnified almost three times. Useful in close-ups where reduced depth of field provides hazy, soft background, sharp foreground.

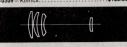
Lens construction: 4 group, 4 element Angle of view: 18°; Aperture: 1/2.8-22 Min. focus dist.: 6'; Filter size: 55mm Length: 31/2": Weight: 14 ounces

20-0280 - Pentax, Praktica, Mamiya/Sekor

20-0318 - Canon (including FTB). 20-0282 - Nikon, Nikkormat

20-0283 - Minolta SR. SRT

20-0309 - Konica.





In spite of the long focal length (magnifies four times), the 200mm has high mobility and can be hand held. Fine for candid portraits, sports in-doors and out, Excellent for small landscape or architectural details. Shallower depth of field then 135mm for emphasizing special features Retractable lens shield

Lens construction: 4 group, 4 element Angle of view: 12°; Aperture: 1/3.5-22 Min. focus dist .: 7': Filter size: 62mm Length: 5¾"; Weight: 25 ounces

20-0284 - Pentax, Praktica, Mamiya/Sekor 20-0319 - Canon (including FTB).....

20-0286 - Nikon, Nikkormat 20-0287 - Minolta SR, SRT 20-0310 - Konica.

\$168.50



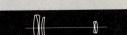
mm f/5.5

TELEPHOTO

Excellent for distant sporting events, wildlife, nature and shy portrait subjects. Magnifies six times. When it is not possible to approach or alter the subject and a large image is required. the 300mm is most effective. Its narrow angle of view and shallow depth of field provide unusual perspective. Tripod socket and lens shield.

Lens construction: 3 group, 5 element Angle of view: 8°; Aperture: 1/5.5-22 Min. focus dist.: 24'; Filter size: 62mm Length: 61/2"; Weight: 30 ounces

20-0288 - Pentax, Praktica, Mamiya/Sekor 20-0289 - Canon FT, TL, Pellix 20-0290 - Nikon, Nikkormat 20-0291 - Minolta SR, SRT



400mm: f/6.3 Telephoto \$187.50



The "400" in the group of automatic lenses is the longest focal distance that can be used for hand held photography. Magnifies eight times. Excellent for sports and wildlife photography. Invaluable for photographing unapproachable subjects or to keep a safe distance from dangerous conditions. Built-in tripod socket and retractable lens

20-0292 - Pentax, Praktica, Mamiya/Sekor 20-0293 - Canon FT, TL, Pellix

20-0294 - Nikon, Nikkormat 20-0295 - Minolta SR, SRT



EXTENDERS High performance multielement converters that match the Bushnell lenses





automatic lenses. Simply add the extender to your normal or telephoto lens and couple to your camera. Works automatically without affecting focus scale, minimum focus, or requiring exposure calculation. Your 50mm becomes 100mm with 2X, 150mm with 3X,

in quality. Doubles, even triples the focal length of your

etc. Added lens usefulness at little cost.

2 POWER

Mamiya/Sekor\$21.50	
23-0115 - for Canon FT, TL, Pellix\$31.50	
23-0116 - for Nikon, Nikkormat\$31.50	
23-0117 - for Minolta SR, SRT\$31.50	
3 POWER	
23-0118-for Pentax, Praktica,	
Mamiya/Sekor	
23-0119 - for Canon FT, TL, Pellix \$42.50	
23-0120 - for Nikon, Nikkormat \$42.50	
23-0121 - for Minolta SR, SRT\$42.50	

Bushnell MICROSCOPES

20 YEAR WARRANTY

FOR THE HOME LABORATORY

MODEL 90-5000

Unparalleled value for the beginning student. An accurate, high precision microscope which offers a full range of magnification at a new low price.

SPECIFICATIONS:

Rack-and-pinion focusing with dual control. 45° inclinable base. Triple objective turret. Substage mirror. Substage aperture control. Height: 9". Weight: 1 lb., 12 oz.

Complete with dissecting kit, hardwood case and how-to-use booklet.

	POWER CHART (All optics marked * inclu		
EYEPIECES	3	10x*	15x
	5x*	50x	75x
OBJECTIVES	20x*	200x	300x
	40x*	400x	600x



INCLUDED WITH 90-5000 and 90-5010 ONLY.



Hardwood Case: Fitted carrying/storage cabinet of handsome, durable, fine-grain hardwood provides protection for the life-time of your instrument.

"Hunting with the Microscope": Interesting and highly educational book on how to use your microscope.

Basic Dissecting Kit: Tweezers, knife, spatula, scissors, Six Prepared Slides

MODEL 90-5010

Top rating by consumer test groups, this exceptional microscope is ideal for the secondary student and the home laboratory. Bushnell quality with extra sturdiness and added features.

SPECIFICATIONS:

Rack-and-pinion focusing with adjustable tension dual control. 45° inclinable base. Triple objective turret. Standard diameter eyepieces. Objectives with standard society threads. Hard-coated optics. Double, substage mirror, plano-concave. Substage aperture control. Height: 101/2". Weight: 3 lbs 6 07

Complete with dissecting kit, hardwood case and how-to-use booklet. POWER CHART

(all optics marked		* includ	ded)	
EYEPIECES	3	10x*	15x	
	4x*	40x	60x	
OBJECTIVES	10x*	100x	150x	
	40x*	400x	600x	

10x eyepiece included. 15x eyepiece— #91-1151...\$4.95 Figures in chart indicate total magnification.

#90-5010 \$85.50

MICROSCOPE ILLUMINATOR

Built-in blue filter, adjustable for trans-mitted or reflected light. Complete with 20-watt bulb. Extra bulbs, 35¢.

#91-0028 ...

SCHOOL MICROSCOPE

A superior quality instrument designed to meet the critical needs of research . . . medicine . . . advanced learning.

MODEL 90-5040

A full-size college microscope featuring high grade optical correction and substage aperture control...plus fine focusing and built-in condenser lens for added versatility.

SPECIFICATIONS:

Rack-and-pinion focusing with adjustable tension control. Dual control fine focusing 45° inclinable base. Triple objective turret. Rack stop prevents damage to objectives and slides. Hard-coated optics. Double substage mirror, plano-concave. Built-in condenser lens 0.65 N.A. Substage aperture control. Height: 12". Weight: 7 lbs. 2 oz.

Complete with fitted, hardwood carrying/storage case, lock and keys.

	WER C	HART d * included)	
EYEPIECES		WA10x*	15x
	4x*	40x	60x
OBJECTIVES	10*	100x	150x
	40x*	400x	600×

10x eyepiece included. 15x eyepiece — #91-2151...\$10.95. Figures in chart indicate total magnification.

#90-5040 \$114.50



Bushnell MINI-MITE TELESCOPES TYEAR WARRANTY

POWER-PACKED HAND TELESCOPE A mighty 10 power magnification shrinks the distance. Slim and trim-performs like the big brothers. Tripod mount adapts to any standard tripod. Coated, color-corrected lenses. 10" long, weighs 11 ounces. Field, 183' at 1000 yds. #16-7002 10 power, 30mm\$14.50 #78-3004 Table Top Tripod \$3.50

See Tripod on page 28

GOLFSCOPE with RANGEFINDER



. Sight scope on flagstick-get it in sharp focus.

2. Position rangefinder's bottom line (mark "green") on lowest end of flagstick. The number next to line that touches top of flagstick is distance in yards between you and the flagstick.

Great score-improver...now you can accurately judge the distance to the pin from 40 to 300 yards! A "natural" to help the golfer with his approach shots...and great as a full six power telescope to see what's going on at a distant green or the hole ahead. Prismatic, fully coated optics. Complete with zippered

#14-6130-6 power, 15mm with rangefinder\$22.50

8 POWER **POCKET SCOPE**

A mighty 8 POWER-the panoramic view of a full-size binocular! The magic of powerful optics at your fingertips wherever you go. The 8 power lens ideal for travel, birding, hiking, nature study, spectator sports, and theater. 437' field at 1000 yards. Use lens by itself as a CLOSE-UP MAGNIFYING GLASS to study stamps, coins. Use for many other fascinating projects. 31/2" long, weighs 4 ounces, fully coated lenses, complete with handsome zippered carrying case and wrist strap.

#14-6180-8 power, 24mm \$22.50



"POCKETTE" PRISMATIC **TELESCOPE**

So "pocketable" you need never be without a full six magnification at your command...to read the evasive house number from your car...decipher the street sign ...or keep an eye on the kids at play! 21/2" long, weighs only 3 ounces, fully coated lenses, complete with soft, zippered case.

#14-6160-6 power 18mm \$14.50

ASTRONOMICAL TELESCOPES

SKY CHIFF® II 45 TO 304 POWER

Bold adventure awaits you when you look through the Bushnell Sky Chief II telescope. Explore the earth and the universe beyond, travel across mountains and plains, far out to sea, into the starry night. A wide range of eyepieces (20mm, 12.5mm, 6mm, plus Barlow lens) deliver from 45x to 304x magnification, drawing the most distant objects into intimate range, sparkling, life-like, breathtaking to behold! All lenses are hard-coated, fully color-corrected.

SKY CHIEF II SPECIFICATIONS (Focal Length 910mm)

Objective Lens: 60mm, achromatic, hard-coated, air-spaced. Eyepieces: K 20mm (45x magnification), HM 12.5mm (73x magnification), HM 6mm (152x magnification). 2x Barlow lens doubles power of each eyepiece. Auxiliary Finder Telescope: 6x. 30mm cross-wire reticle, fully adjustable. Equatorial Mount: Flexible cables for slow motion controls, easily positioned for use as alt-azimuth mount. Additional Equipment: Zenith Diagonal Prism for overhead viewing; moon and sun filters for safe solar observation; prism erecting system for terrestrial viewing; hardwood tripod, adjustable, fully-braced, with accessory tray. Weight: 38 lbs., including fitted hardwood carrying case.

#78-5300 Sky Chief II only \$210.50 complete.



20 YEAR WARRANTY

20 YEAR WARRANTY



SKY CHIEF® JR **35 TO 280 POWER**

The expanse of space invites conquest, and hunters of the sky will welcome the Sky Chief Jr. for its compactness and superb performance. The 20mm and 5mm eyepieces, plus Barlow lens, deliver from 35x to 280x magnification offering versatility that brings both the world around you and the world far beyond into sharp. brilliant finger-tip closeness. All lenses are hard-coated, fully color-corrected.

SKY CHIEF JR. SPECIFICATIONS (Focal Length 700mm)

Objective lens: 60mm, achromatic, hard-coated, air-spaced. Eyepieces: R 20mm (35x magnification), SR 5mm (140x magnification). 2x Barlow lens doubles power of each eyepiece. Auxiliary Finder Telescope: 5x, 20mm cross-wire reticle, fully adjustable. Alt-Azimuth Mount: Flexible cable for slow motion elevation control. Additional Equipment: Zenith Diagonal Prism for overhead viewing; sun filter for safe solar observation; prism erecting system for terrestrial viewing; hardwood tripod, adjustable, fully-braced, with accessory tray. Weight: 21 lbs., including fitted hardwood carrying case.

#78-5200 Sky Chief Jr. . . . only \$131.50 complete.

Bushnell SPORTS OPTICS... first choice of noted professionals



me the vision necessary to keep on top of the play or race...Bushnell's are truly the All-Americans of

R. Marlin Perkins, Director, St. Louis Zoological Gardens



est difficulty even in Rain Forest with condensation important aid to flying or moisture of any kind accumulating inside the perfect. Plenty of magnifi-cation, wider field of view instruments . . . the finest optical equipment that any expedition has ever had." and a most brilliant image

Donald W. Douglas, Sr. Douglas Aircraft

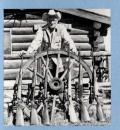


"...with a single shot blasted a bull moose... first time I ever hunted big game with a handluck coupled with

Wally Taber, Int'l. Hunter and Lecture



Post is really tops in poor light and the rugged simplicity of the built-in mount is pretty sensational.



"There's no gun use harder on scopes than rough high country trips. Bushnell scopes have the stand up, and that includes use on pickups and jeeps bouncing over rough country. The simple post mount is outstanding - never have I had any

Leslie (Les) Bowman



"10 years and 150,000 miles of travel to be the first to bag the 26 species of big game in North America-your Sentry played a basic part in every hunt—and it still looks and works like new!"

Bob Householder, Dir. The Grand Slam Club

NATIONAL POLICE TESTING LABORATORIES, INC.



Awarded to Bushnell Binoculars, Rifle and Plstol Scopes, Spotting Scopes, Microscopes and Photo Optics. Bushnell is the first optical firm to receive this much coveted award from the National Police Testing Laboratories, a subsidiary of the National Police Officers Association of America.



CUSTOM COMPACTS USED ON GEMINI SPACECRAFT

tion, use with sextant, humidity, and optical performance.

IN RESPONSE TO SHOOTERS' REQUESTS ...

Bushnell Brassards for your shooting

jacket display. Rich yellow on black; 31/4" wide, 33/4" high. #60-5003 \$1.00



CUSTOM BINOCULAR TIE TAC

A faithful reproduction of Bushnell's World Famous Custom Binocular in gold plate - a creative carving original by Sid Bell.

#60-5004 \$2.95

