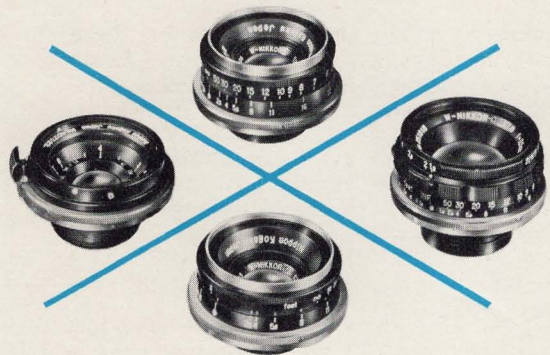




*combining high speed with high resolution*

**NIKKOR LENSES**

*for nikon cameras, and other fine 35's*



the unique  
combination of  
high-speed and  
high-resolution

# NIKKOR LENSES

In this day and age of claims, concreteness is an uplifting relief. Numbers are safe, definite. 100% is more than 75%. With lenses however, numbers alone cannot begin to tell the story. The growth and promise of available light technique has made maximum aperture too convenient a method for lens comparison and evaluation. Is  $f/2$  better than  $f/2.8$ ?  $F/1.5$  still better? And will  $f/1.0$  automatically be best?

The professional photographer who lives by the lens is unimpressed by numbers-for-numbers sake. True, a lens must have speed — speed enough to permit pictures under any lighting conditions. But it must also have resolution, enough definition to ferret out every detail and to record it—sharp and clear—on the negative. And that holds true whether the picture is taken at *optimum* or *maximum* aperture.

The reason for the meteoric rise of Nikkor as the most desirable name in 35mm camera lenses is as simple to explain as it was difficult to achieve:

*Nikkor lenses combine high-speed with highest attainable resolution!*

How did this come about? Nippon Kogaku, manufacturer of Nikon cameras, had been pioneering the development of high speed lenses since 1925. That their lenses never reached the world market was due to many complex situations. In fact, it wasn't until 1950, during the Korean conflict, that Nikkor Lenses were "discovered". Once they were, the news spread like wildfire.

David Douglas Duncan's epic book, *This is War!* was photographed entirely with Nikkor Lenses. In commenting upon this, Duncan wrote, "... Horace Bristol and I began experimenting with the whole new line of Nikkor Lenses, and discovered to our utter amazement, that their three standard lenses for 35mm cameras were far superior, in our opinions, to any standard 35mm lenses available on the open market — British, American or German."

*This is War!* was photographed and written in 1950. In the eight ensuing years, the number of Nikkor Lenses has grown steadily. Today there are 17 different lenses — from 25mm wide angle to 500mm telephoto. And today, there are many more stories tracing the remarkable performance of Nikkor.

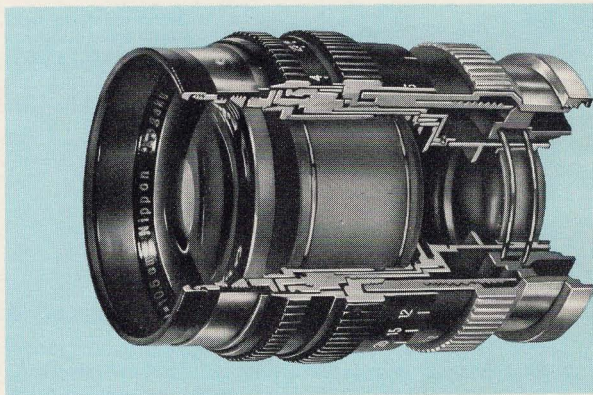
- A photographer documents the rescue of missionaries in the wilds of South America. An 8-foot by 12-foot blowup is made of one 35mm negative. What had appeared to be a dust spot on the 8 x 10" print turns out to be a helicopter in the giant enlargement. The lens — a Nikkor!
- A world famous fashion designer permits a magazine photographer to photograph his new line — in color. The only restriction: no flash or flood lights. The story runs for 6 pages in one of our largest picture magazines. The lens — a Nikkor!
- A leading photo-journalist is faced with this challenging assignment: "Bring back a picture story on mental institutions." It had to be by available light. It was. And the story ran for 13 pages. His lens — a Nikkor!
- A renowned national magazine seeks to dramatize advances in photography. They show an aerial shot of Atlantic City, in full color, *at night!* The lens — a Nikkor f/1.1!
- Magazine and newspaper editors seek new visual impact (competition from television is keen). Photographers are called on for better, more compelling pictures. Print sizes run to 9 x 12" and larger. The photographers produce. Their lenses, more often than not, Nikkors!

Events like these repeat themselves, day-in, day-out, with professionals and amateurs alike. How come? Precision. Optical precision and mechanical precision.

**Optical Precision.** Nikon is one of the two lens makers who manufacture their own optical glass. Rare earth elements are used to the fullest advantage; special considerations, like platinum liners for the glass crucibles, are an integral part of the manufacture; glass that is virtually bubble free — said to be an impossible achievement — is the result. What's more, as a manufacturer, rather than a purchaser of optical glass, Nikon earmarks the premium yield for use in Nikkor Lenses.

**Mechanical Precision.** Once the lens has been designed, the optical glass poured, annealed, lenses ground and polished, a complex of mechanical operations takes over. The lens elements must be precisely "seated" in the lens barrel — to tolerances that would impress a watchmaker. The lens mount must fit precisely into the camera mount to assure accurate alignment with the film plane. Were it not for the mechanical genius reflected in Nikon cameras, the optical genius that developed Nikkor Lenses would have gone awaste.

*Each of the 17 different Nikkor Lenses provides the same highest-speed with high resolution in its class.*



Performance is distortion-free; lenses provide corner-to-corner sharpness without vignetting — even at full aperture. Color correction (also important in black and white photography for exact focus) is notably outstanding. Nikkor lenses in black mounts are made of special aluminum alloys, with phosphor bronze at points of wear to maintain continued precise alignment. These mounts average 50% lighter in weight than their forerunners, freeing the Nikkor Lens user of undue strain with continued usage. Further, each black-mount lens features oversized white numerals for maximum visibility.

While Nikkor Lenses were designed for Nikon cameras, the widespread demand has resulted in their availability in mounts for other fine 35mm cameras.

Here are some of the questions most often asked about interchangeable lenses in general, and Nikkor in particular.

## "EXACTLY WHAT IS THE DIFFERENCE BETWEEN FOCAL LENGTHS?"

Other than perspective changes, the effect of focal length differences can be expressed in two ways:

- A**—rate of magnification, as compared with the 50mm (standard) focal length, at the same distance.
- B**—the *effective* distance compared with 50mm lens at the *actual* camera-to-subject distance.

Here is a comparison of all Nikkor Lens focal lengths, showing their magnification, and effective distance.

Lens Focal Length	Magnification Compared with 50mm	Effective Distance (with actual camera-to-subject distance of 50 feet)
25mm .....	0.5x .....	100 ft
28mm .....	0.56x .....	89.3 ft
35mm .....	0.7x .....	70.0 ft
50mm .....	1.0x .....	50.0 ft
85mm .....	1.7x .....	29.4 ft
105mm .....	2.1x .....	23.8 ft
135mm .....	2.7x .....	18.5 ft
180mm .....	3.6x .....	13.9 ft
250mm .....	5.0x .....	10.0 ft
500mm .....	10.0x .....	5.0 ft

## "WHY 17 DIFFERENT LENSES?"

Nikkor Lenses are available in 10 different focal lengths from 25mm ultra wide angle to 500mm long telephoto. Several focal lengths are available in different maximum apertures — for those who require extra speed — for those who want and need Nikkor resolution but don't feel that the highest available speed is vital.

## "HOW CAN YOU WORK QUICKLY WITH INTERCHANGEABLE LENSES?"

As you know, Nikon has profound respect for handling ease and speed. This is the underlying design



philosophy behind the new Nikon SP and S-3, as well as their forerunner, the S-2. And interchangeable lens work is no exception. First, all Nikkor Lenses in Nikon mounts feature the Nikon quick-

change bayonet lens mount. One-quarter turn mounts a lens in position, with positive seating and precise alignment with the film plane. Then, all lenses from 25mm to 135mm automatically couple to the rangefinder (180mm, 250mm and 500mm lenses require the Nikon Prism Reflex Housing).

## "HOW ABOUT FRAMING WITH A LENS OF DIFFERENT FOCAL LENGTH?"

Yes, a different focal length calls for a different finder frame. Both the new Nikon SP and S-3 permit you to use interchangeable lenses faster and



Subject as seen through Nikon SP finder, with field selector at 85mm.

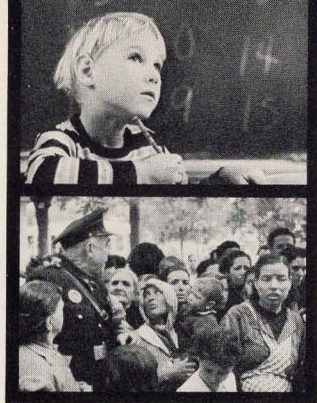
more effectively. The new Nikon SP, with Universal Viewfinder, provides built-in frames for 6 lenses — 28mm through 135mm. The new Nikon S-3 with Trifocal Finder, provides built-in frames for 35mm, 50mm and 105mm. With other focal lengths and other cameras, a series of Nikon auxiliary finders — individual, varifocal and sports-type — are available.

## "WHAT ABOUT A FILTER/LENS SHADE INVESTMENT?"

This is held to a minimum wherever possible. Many of the Nikkor lenses accept the same size filters and shades. For example, a 43mm screw-in filter for the 50mm Nikkor f/1.4 can be used with any Nikkor wide angle lens (except the 25mm) and with the 135mm telephoto lens.

By the way, since the filter is placed between subject and film, it should be of the same high manufacturing quality as the lens itself. Wherever possible, it is advisable to use Nikon filters with your Nikkor Lenses.

*If you are sensitive to great pictures, and can spot picture quality, you no doubt have recognized pictures showing the unmistakable quality of Nikkor Lenses. If you have yet to work with a Nikkor, a new experience awaits you. You find yourself shooting with greater ease, new confidence—knowing that no light is too dim, no enlargement too great, for the speed and resolution of Nikkor Lenses.*



## NIKKOR 50mm "STANDARD" LENSES

Through usage, the 50mm focal length has become the "standard" lens for all around work, and is supplied with most 35mm cameras. As a class, the 50mm provides good depth of field and a 46° angle of view. Nikkor 50mm lenses add a high degree of image contrast and color correction, and are available in four models.



**50mm NIKKOR f/1.4**

Probably the most desirable single lens in 35mm photography today. Provides critical sharpness and definition, with speed to handle almost any lighting conditions — with black & white or color film. Features 7 elements; click stops to f/16; focuses to 3 feet. Accepts 43mm screw-in (or Series VII) filters.



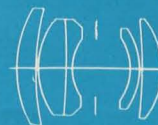
**50mm NIKKOR f/2**

This high speed high resolution lens is second in popularity to the f/1.4. One stop slower, its speed is ample to handle many available light situations. A recomputation of a proven design, it provides great correction of aberrations and reduces vignetting to a minimum. Features 6 elements; click stops to f/16; focuses to 3 feet. Accepts 40.5mm screw-in (or Series VI) filters.



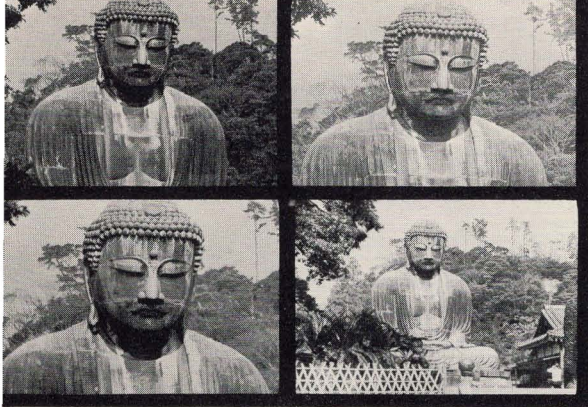
**50mm NIKKOR f/1.1**

This super-speed lens is 60% faster than Nikon's own f/1.4 — 300% faster than an f/2. Despite the remarkable speed, its sharpness and freedom-from-distortion, even at full f/1.1 aperture, is greater than many f/2 lenses available today. This noteworthy example of Nikon technological leadership was made possible through radical redesign using split elements and air-spacing. Features 9 elements; click stops to f/22; focus to 3 feet. Accepts 62mm screw-in filters.



**50mm MICRO-NIKKOR f/3.5**

This unusual lens provides resolving power beyond the capacity of most films. It also offers a rare degree of color correction, assuring precise focus of all color primaries on the film plane. Ideal for color work, microfilming, copying and general photography where ultra-speed is not vital. Features 5 elements; click stops to f/22; focuses to 3 feet; collapsible mount; accepts 34.5mm screw-in (or Series VI) filters.



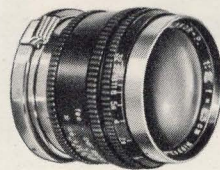
Field of view of 85mm lens (upper left), 105mm (upper right), and 135 mm (lower left), compared with 50mm (lower right).

# NIKKOR TELEPHOTO LENSES

Like a telescope, the telephoto lens magnifies the image. It permits you to pack added detail into distant subjects, to take candid shots from afar (without being noticed), to get full-face portraits without risk of distortion. The telephoto, with less depth of field than a short-focus lens (at any given  $f$ /stop) lets you throw unwanted background detail out of focus to reduce distractions. The Nikon SP provides built-in viewing fields for 85, 105 and 135mm telephotos; the S-3 has a frame line for 105mm, and can be used with auxiliary finders for 85mm and 135mm. All Nikkor telephotos are supplied with front and rear lens caps and a lens shade.

## 85mm NIKKOR $f/2$

This fast, high resolution long-focus lens provides 1.7x magnification with a  $28.5^\circ$  angle of view. Features 5 elements; click stops to  $f/32$ ; focuses to 3.5 feet. Accepts 48mm screw-in (or Series VII) filters.



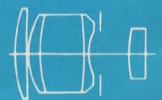
## 85mm NIKKOR $f/1.5$

This ultra high-speed long-focus lens combines ample speed, for most any lighting conditions, and high resolution. It provides 1.7x magnification with its  $28.5^\circ$  angle of view. Features 7 elements; click stops to  $f/32$ ; focuses to 3.5 feet. Accepts Series VIII filters.



## 105mm NIKKOR $f/2.5$

This intermediate telephoto is one of the most popular long-focus Nikkors. Its 2.1x magnification ( $23.5^\circ$  angle of view), high speed, and unusual resolution, make it the first choice of many who seek their first telephoto lens. Features 5 elements; click stops to  $f/32$ ; focuses to 4 feet. Accepts 52mm screw-in (or Series VII) filters.



## 135mm NIKKOR $f/3.5$

This fast, high resolution telephoto provides 2.7x magnification, with an  $18^\circ$  angle of view. Features 4 elements; click stops to  $f/32$ ; focuses to 5 feet. Accepts 43mm screw-in (or Series VII) filters.



## 135mm NIKKOR $f/4$ (in Short-Mount)

Provides focusing from 1:1 (life-size) to infinity for use with Nikon reflex housing and bellows attachment.

# NIKKOR LONG TELEPHOTO LENSES

These telephotos provide even greater magnification, and are used where the photographer wants to work without being observed (nature study), where distance must be kept (wild animals, satellite launchings) and where sweeping action covers a wide area (football, baseball). These lenses — in short-mount — require use of the Nikon prism reflex housing for focusing and framing. They are supplied with front and rear caps, and lens shade.

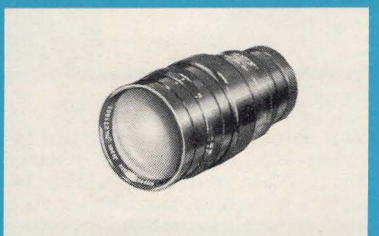


Field of view of 180mm lens (upper left), 250 mm (upper right), and 500mm (lower left), compared with 50mm (lower right).



## 180mm NIKKOR f/2.5

A fast, high resolution telephoto providing 3.6x magnification with a 13.5° angle of view. Features 6 elements; stop settings to f/32; pre-set diaphragm; focuses to 7 feet. Accepts Series IX filters.



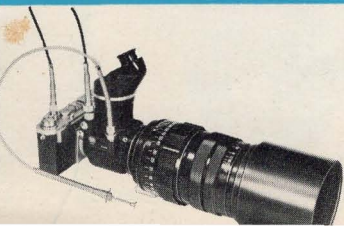
## 250mm NIKKOR f/4

A versatile, high resolution telephoto that delivers 5x magnification with a 10° angle of view. Features 4 elements; stops to f/32; focuses to 10 feet. Accepts series IX filters.



## 500mm NIKKOR f/5

Provides 10x magnification with its 5° angle of view. Features 3 elements; stops to f/45; pre-set diaphragm; focuses to 25 feet. Accepts 110mm filters.

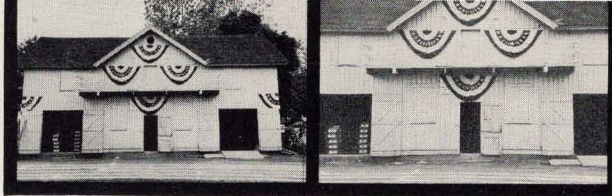


## NIKON PRISM REFLEX HOUSING

For use with 180mm, 250mm, 500mm and 135mm short-mount lenses. Housing attaches to the camera's bayonet mount; lens attaches to Housing's bayonet mount. Features an image erecting prism; 4.3x magnifier; precise adjustment for synch of hous-

ing-mirror with camera shutter; and provision for keeping the mirror raised for multiple exposures with the Nikon Electric Motor Drive. It is equipped with finger release, a cable release and coupling cable.

Left: field of view of 35mm lens compared with 50mm lens, at right.



## NIKKOR 35mm WIDE ANGLE LENSES

As the name implies, a wide angle lens takes in a wider field of view than the "normal" 50mm lens — from the same distance. Its 63° field of view covers 2x the area of a 50mm. Because of its greater depth of field, the 35mm lens is gaining increasing popularity as a lens for all-around work — particularly with magazine and newspaper photographers. The high resolution of Nikkor doubly extends the usefulness of the 35mm focal length, since it produces needle

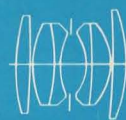
sharp enlargements even from a portion of the negative. Lenses are provided with front and rear lens caps.

The Nikon S-3 permits you to use the 35mm lens as you would a 50mm — with a combined life-size viewfinder and rangefinder. The SP provides a brilliant optical finder window for 35mm, barely an eyelash from the rangefinder window. Other cameras require the use of an auxiliary finder.



**35mm NIKKOR f/1.8**

A remarkably fast wide angle, featuring unusually large front and rear elements (front elements would cover an f/1.4) to noticeably decrease vignetting over other wide angle formulas. Rare earth lanthanum glass provides an unusual flat field and excellent correction despite the fast speed. Features 7 elements; click stops to f/22; focuses to 3 feet. Accepts 43mm screw-in filters.



**35mm NIKKOR f/2.5**

While a stop slower than f/1.8, this lens provides ample speed for most available light situations and is eminently suited to general work. This new lens design provides corrections far beyond acceptable minimums of residual aberration. Features 6 elements; click stops to f/22; focuses to 3 feet. Accepts 43mm screw-in (or Series VII) filters.



**35mm NIKKOR f/3.5**

This medium speed lens offers Nikkor resolution and wide angle versatility at surprisingly low cost. Features 4 elements; click stops to f/22; focuses to 3 feet. Accepts 43mm screw-in (or Series VII) filters.



Field of view of 25mm lens (left) and 28mm (center) compared with 50mm (right).

## NIKKOR ULTRA-WIDE ANGLE LENSES

The 25mm and 28mm Nikkor Lenses provide a wider angle and greater depth-of-field than the 35mm focal length lenses. They are ideal for architectural exteriors and interiors, and pictures in confined areas — and are used for all-purpose work by some professionals.



**25mm NIKKOR f/4**

This is the widest angle Nikkor lens available. While by no means a high speed lens, the effective use of rare earth elements provides unusual speed for the focal length. It covers 4x the area of a 50mm lens with an 80.5° angle of view. The symmetrical design delivers exceptional flatness of field and minimum vignetting. Features 4 elements; click stops to f/22; focuses to 3 feet. Accepts Series VII filters.

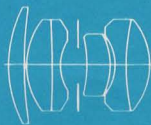


**28mm NIKKOR f/3.5**

Provides a 74° angle of view; covers 3.2x area of a 50mm lens. Computed on a new optical formula with an overly large rear element to provide unusual sharpness and minimum vignetting. Can be used with the Nikon SP's built-in finder; with the Nikon S-3, and other 35mm cameras an auxiliary finder is required. Features 6 elements; click stops to f/22; focuses to 3 feet. Accepts 43mm screw-in (or Series VII) filters.

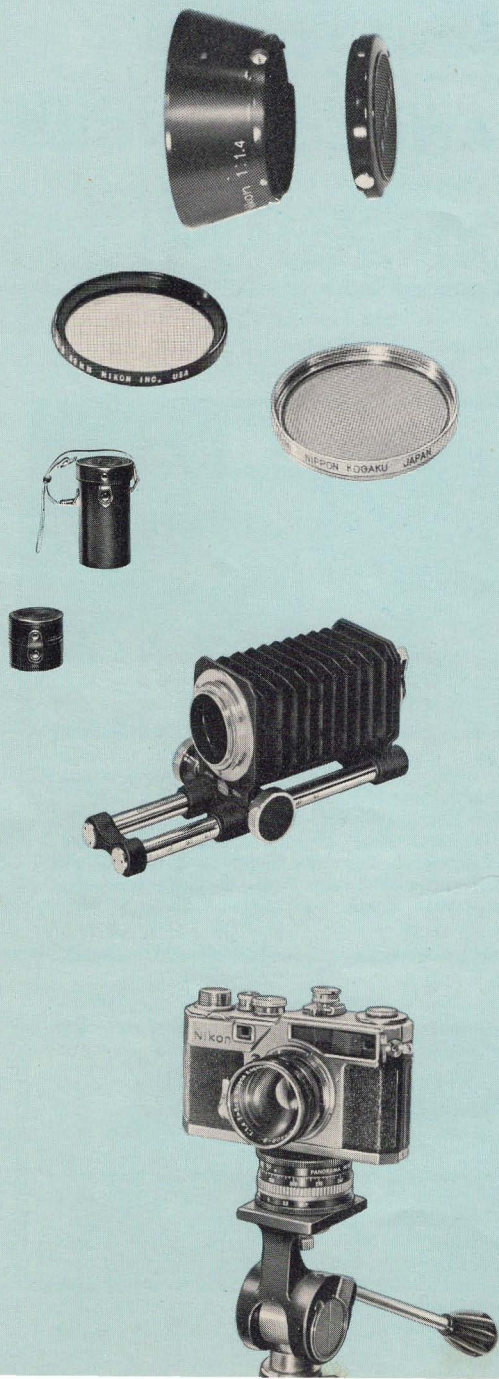
## ENLARGING LENS

**EL NIKKOR 50mm f/2.8**



The remarkable resolution provided by Nikkor Lenses created the need for an enlarging lens capable of producing all the detail packed into the 35mm negative. In answer to this need, Nikon developed the EL Nikkor enlarging lens. Its six elements provide unusual flatness-of-field; oversized front and rear elements assure maximum illumination to the corners. Amber surface coating of magnesium fluoride 0.00008mm thick, and other corrections compensate for the shorter wave lengths that predominate in enlarger light sources. At full aperture, resolution is higher than any taking lens. There is no shift in focus as the lens is stopped down. Aperture settings (with click stops) are in white, for maximum visibility in darkroom. Furnished with Leica-thread mount; adapter ring available for enlargers requiring long lens barrel.

# NIKKOR LENSES



## NIKON SNAP-ON LENS HOODS AND CAPS

The ingenious Nikon Snap-on mounts attach with the speed of a "slip-on" and the security of a "screw-in" (with no time delay or danger of damage to threads). The lens hoods for all 50mm and wide angle lenses (except the 50mm f/1.1) can be reversed on the lens, covered with the snap-on lens cap, and stored in the camera's eveready case.

### CAMERA BODY CAP

Protects interior of camera when no lens is mounted.

## REAR LENS CAPS

Low-cost insurance against dirt, dust and possible damage to lenses "off-camera".

## NIKON OPTICAL GLASS FILTERS

Precision ground and polished to plano-parallel optical flats, these filters are made with the finest optical glass. Available in yellow, green, red-orange, UV haze, Skylight, 85C and 82A. The filters are fitted with screw-in mounts, for most Nikkor lenses, and are front-threaded to accept Nikon snap-on hoods and caps.

Since the filter, as well as the lens, is placed between subject and film, Nikon filters are recommended with Nikkor lenses.

## LENS CASES

For added protection of lens when not in use. Available for all models from 25mm to 135mm, in genuine leather, velveteen lined.

## BELLOWS ATTACHMENT

Provides image magnification range from 0.8x to 4.8x with the Nikon Prism Reflex Housing and Nikkor Lenses from 50mm to 135mm (regular and short mount). Equipped with adapter rings to permit the 50mm f/2 or f/1.4 to be mounted in reverse position, and deliver magnification from 2.2 to 4.8x.

## PANORAMA HEAD

Permits you to take panorama sequences to full 360° with any Nikkor Lens from 28mm wide angle through 135mm telephoto – with click-stop settings for 35, 50, and 105mm. Rotation is governed so that there is a slight overlap of exposures to assure continuity. With the 28mm Nikkor Lens and the Panorama Head, 3 shots provide a full 180° coverage.

## BUBBLE LEVEL

Attaches to the Nikon accessory shoe and indicates when camera is perfectly horizontal. Ideal for use with Panoramic Head and wide angle lenses.



## NIKKOR LENSES FOR OTHER 35mm CAMERAS

So spectacular has been the acceptance of Nikkor that even photographers who maintained a loyalty to their existing equipment sought out and demanded the unmistakable quality of Nikkor Lenses. It was inevitable that Nikkor Lenses would become available — in a wide assortment — for non-Nikon photographers.

### For Leica and Canon

The complete line of Nikkor Lenses is available in mounts to fit both Leica-thread and Canon models. 25mm to 135mm lenses couple directly to the rangefinder. The bayonet-mount Leica M-3, with an adapter, will also accept Nikkor Lenses. Each lens is supplied with front and rear lens caps. Lens hoods are included with 85, 105, 135, 180, 250 and 500mm lenses (180mm and 250mm are used with the Leica reflex housing).

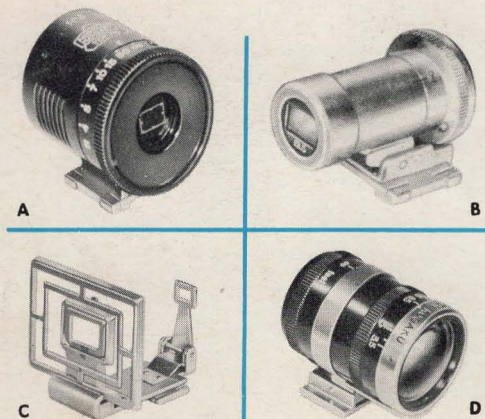
All performance specifications are identical to the foregoing listings of Nikkor Lens models. The only differences, other than mounts, are filter size specifications as follows: 25mm f/4, Series VI filters; 28mm f/3.5, 35mm f/2.5, and 35mm f/3.5, 34.5mm screw-in filters.

### For Contax

All Nikkor Lenses, with the exception of the 50mm series, can be used with Contax cameras. Ultra wide-angle and 35mm Nikkors for Nikon cameras fit accurately. 85mm through 135mm require and are made in special Contax mounts. All lenses couple automatically to the rangefinder. Each is supplied with front and rear lens cap; specifications are identical to Nikkor Lenses in Nikon mounts.

### For Kine Exakta

The 135mm Nikkor f/3.5 lens is available with Kine Exakta mount. Lens is supplied with front and rear cap, and lens hood.



## NIKON VIEWFINDERS

While both the new Nikon S-3 and SP offer built-in multiple viewfinder frames, there are times when a user might desire an external finder, or where the camera has no built-in frame for the focal length to be used, or where owners of previous Nikon models (or other 35mm cameras) seek the advantages of interchangeable lenses. All Nikon finders slip into the accessory shoe on the camera.

### A LIFE-SIZE FINDERS

For 85, 105 and 135mm focal lengths; notably brilliant life-size (one-to-one) finders with viewing that extends beyond the bright frame lines. Each finder has parallax setting provision, and is supplied with leather carrying case.

### B INDIVIDUAL FINDERS

For 25mm, 28mm and 35mm (latter is bright frame). Also available is an ingenious, compact, miniature finder for 35mm lenses which can be stored, on-camera, in the Nikon Eveready Camera case. 28mm and 35mm (bright frame) are supplied with leather case.

### C SPORTS FRAME FINDER

For shooting especially fast moving subjects, the open frame design permits you to see considerably beyond the field of view to better "set" for approaching action. Provides frames for five focal lengths: 35, 50, 85, 105 and 135mm. Supplied with leather case.

### D ZOOM-TYPE VARIFOCAL FINDER

Single finder for all lenses from 28mm through 135mm (for 28mm, an adapter lens is attached to front of finder). This finder maintains the same field-frame for each focal length, and varies the size and area of the image to conform to the lens coverage. Includes parallax setting provision and is supplied with leather case.

## NIKON LITERATURE

Nikon Cameras ..... F200

Nikon Accessories ..... F148

Nikon Electric Motor Drive ..... F146

Nikon Prism Binoculars ..... F60

Nikon Astronomical Telescopes.. F149

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