

WILSONWERKS ARCHIVES

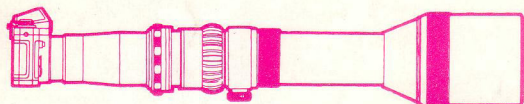
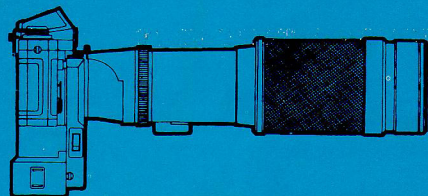
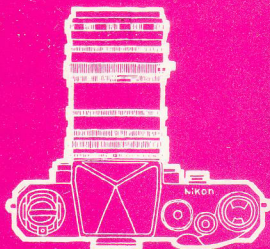
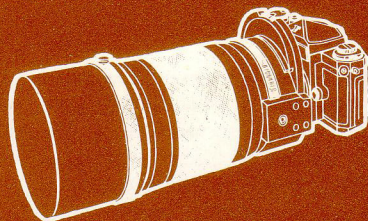
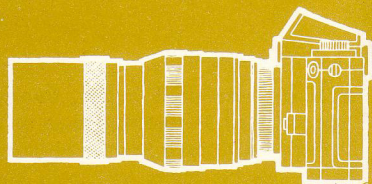
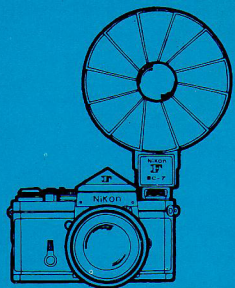
This camera manual is for reference and historical purposes, all rights reserved.

This cover page is copyrighted material. This document may not be sold or distributed without the express consent of the publisher.

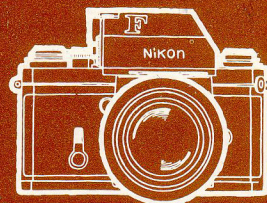
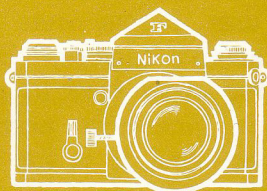
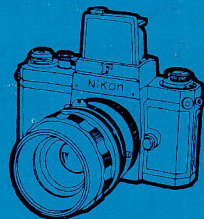
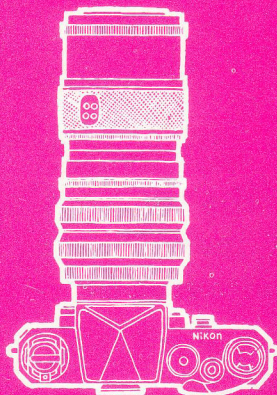
©2008 wilsonwerks Llc

Nikon F System

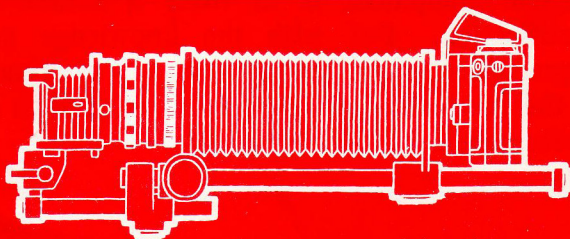
a comprehensive approach
to 35mm photography



Peerless Camera Stores Corp.
415 Lexington Avenue
New York 17, N. Y.



Nikon Incorporated Garden City, N.Y. 11530
Subsidiary of Ehrenreich Photo-Optical Industries, Inc.





The Nikon F is the earnest camera for all people in earnest about photography.

The Nikon F has been so closely identified with the professional user, it has come to be known as "the cameraman's camera." But in a large sense, it is for every man to whom photography fulfils his innermost need for creative self-expression. And it is for every man in photography to whom the possession of fine equipment is in itself a source of gratification. For with the knowledge and appreciation of its quality goes the awareness of the inevitable quality to be enjoyed in its performance.

Nikon F System

The Nikon F system is the most complete and comprehensive in 35mm photography; its capabilities, as modern and up-to-the-minute as the latest and most recent developments.

The key to this versatility is in the nature of the Nikon F itself. Its design is based on the principle of modular or unit construction. It is an instrument that seemingly knows no obsolescence. This very fact that Nikon does not introduce new cameras every year or two is a tribute to the soundness of the instrument's basic design.

Not only does the Nikon F offer lens interchangeability, but the facility for interchanging finders and focusing screens, as well. This flexibility of design gives the Nikon F user a freedom of choice through which he can achieve the greatest effectiveness in his work. It gives him command of every conceivable picture situation, and extends his mastery of the process from the infinitesimal world of micro-organisms to the infinite expanse of outer space.

The Nikon F was born with a built-in capacity for progress, a timelessness never before achieved. Implemented by the total system, it endows the user with an ability to soar far above the commonplace in photographic expression.

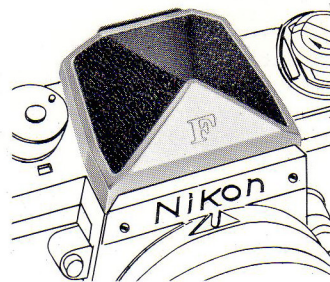
Interchangeable Nikon F Finder System



The Nikon F is acknowledged to be the only 35mm reflex with a truly accurate finder system. It shows the precise picture area, and frames the subject exactly as it will be framed on the film. Composition can be planned with complete confidence. There is no risk of excluding wanted subject matter or including unwanted material. When shooting color slides, and in other applications which preclude cropping, this assurance of framing accuracy is a valuable asset. Also remarkable is the versatility of the Nikon F finder system, growing out of the ready interchangeability of viewfinders and focusing screens. There are four viewfinders to choose from: the Eye-Level, the Waist-Level, the Action and the Photomic-TN. These finders can be interchanged at will—in a matter of moments—to satisfy any preference, need or convenience. Whatever viewing method may be best suited for a given situation, there is always a way to meet it with Nikon F.

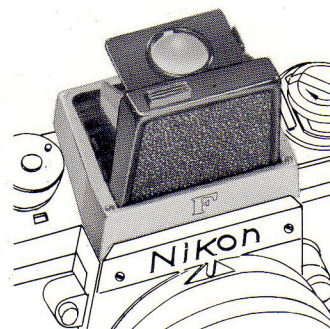
EYE-LEVEL FINDER

Houses an optically precise pentaprism and magnifier eye-piece. The image is bright, erect and unreversed, and almost life-size with the normal lens.



WAIST-LEVEL FINDER

Especially useful in macro-photography and copying, or wherever other-than-eyelevel-viewing is desired. It may be used with the camera overhead or at a low position, or for viewing at right angles to the subject. It is equipped with a folding, self-erecting hood and magnifier, and is supplied with leather case.



PHOTOMIC-TN METER/FINDER

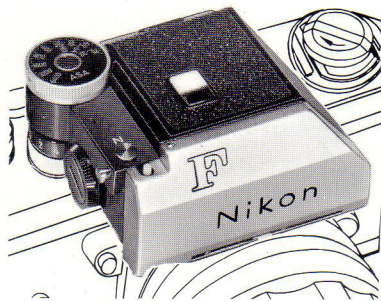
Combines the accuracy of thru-the-lens exposure control with the convenience of eyelevel viewing. The pentaprism finder and meter system are contained in one housing.

Cross-coupled to shutter speed and diaphragm, the meter doesn't interfere with the automatic diaphragm convenience offered by the Nikkor Auto lenses. This is one of the great advantages with this system as the lens remains wide open, even while the aperture ring is being rotated to the correct exposure setting. You will enjoy the comfort of a brilliant finder image at all times. The meter needle or exposure indicator is visible in the finder above the picture field, and is also visible in the meter window on top of the housing.

The Photomic-TN exposure system is designed to read the entire picture field, but favors its central portion coinciding to the 12mm circular area or spot found on most Nikon F focusing screens. This area represents only about 1/8th of the total picture field but approximately 60% of the exposure reading is made from this circular area with 40% information from the edge areas of the screen.

The Photomic-TN, thus, has the excellences of both the averaging and the narrow angle 'spot' type meters and provides accurate

exposures for all subjects, even in situations with intense contrast. Where extension tubes or bellows are used, which interrupt the coupling linkage, or with non-automatic Nikkor lenses, the correct exposure is obtained by actually stopping down the diaphragm until the meter needle centers.

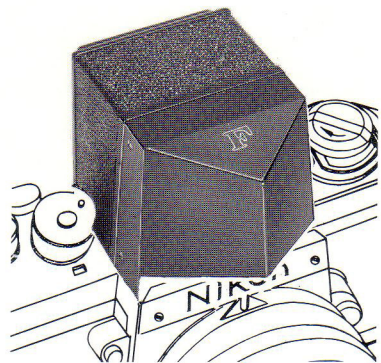


The acceptance angle of the loaded central portion is $13^{\circ}40'$ with 50mm lens and $3^{\circ}25'$ with 200mm lens. The Photomic-TN can be set for film speeds from ASA 20 to 6,400. Metering range from EV2 through EV17 at ASA 100 with the Nikkor Auto 55mm f/1.2 lens. Uses twin CdS cells powered by two mercury batteries (1.3V each).

Battery check button is provided. Supplied with leather case. An Angle Finder attachable to eyepiece frame, and Eye Cup to permit undisturbed viewing are available.

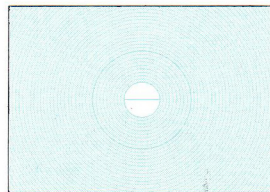
ACTION FINDER

This new prism reflex sportsfinder allows you to see the entire picture area with your eye placed approximately $2\frac{1}{2}$ " (60mm) from the finder. The image is right side up and unreversed. It has an over-sized rectangular eyepiece and permits full view of the picture area even from positions other than the center of the finder. Ideal for sports and all types of action photography, and for use when protective glasses and goggles are worn or on occasions when the eye cannot be brought close to the finder.

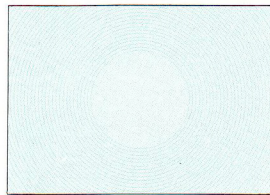


Interchangeable Focusing Screens

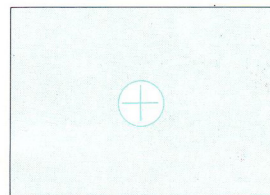
The Nikon F user doesn't have to adapt to the limitations of a single screen. He has a freedom of choice through which he can satisfy any need. He can select on the basis of personal preference, comfort or convenience, or because he finds one better suited for certain lenses or picture situations. There are fourteen different screens available for the Nikon F. Each has its own characteristic pattern. And each offers some advantages in specific applications. The chart on the next page can serve as a useful guide.



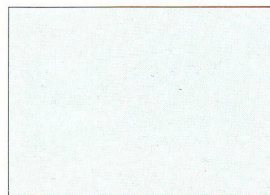
Type A Matt Fresnel field with split-image rangefinder spot and a 12mm circle. Accurate focusing. Excellent for general photography.



Type B Matt Fresnel field and 12mm fine-ground matt focusing spot. For general photography. Especially suited for use with telephoto lenses.



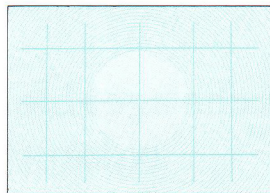
Type C Fine-ground matt field with clear spot and cross-hair reticle. For photomicrography, astrophotography and similar applications.



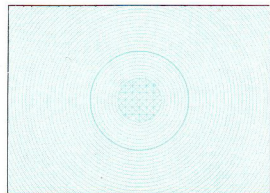
Type D Overall, fine-ground matt field. For specialized close-up photography, and for use with high-magnification telephoto lenses.

FOCUSING SCREEN SELECTOR CHART

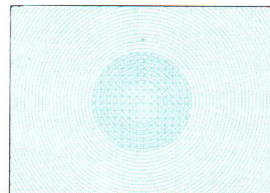
Nikkor Lens	Recommended	Suitable
24mm f/2.8	A, B, E, J, G-1, G-2, H-1, H-2	
28mm f/3.5	A, B, E, J, G-1, H-1	
35mm f/2.8	A, B, E, J, G-1, H-1, H-2	
35mm f/2	A, B, E, J, G-1, G-2, H-1, H-2	
35mm f/3.5 PC	A, B, E, J	
50mm f/2	A, B, E, J, G-1, G-2, H-1, H-2	
50mm f/1.4	A, B, E, J, G-2, H-2	
55mm f/1.2	A, B, E, J, G-2, H-2	
55mm f/3.5 Micro	A, B, E, J, H-2	G-2
85mm f/1.8	A, B, E, J, G-2, H-1, H-2	
105mm f/2.5	A, B, E, J, G-2, H-1, H-2	
135mm f/3.5	A, B, E, J, G-2, H-2	C, D
135mm f/2.8	A, B, E, J, G-2, H-2	C, D
135mm f/4 (Short mount)	A, B, E, J, H-3	
200mm f/4	A, B, E, J, G-2, H-2	C, D, H-3
200mm f/5.6 Medical	A, B, E, J, H-2	
300mm f/4.5	A, B, E, J, G-3, H-3	C, D, H-2, H-4
400mm f/4.5	A, B, E, J, G-3, H-3	C, D, G-4, H-4
500mm f/5 Reflex	A, B, E, J, H-3	C, D, H-2, H-4
600mm f/5.6	A, B, C, D, E, J, G-3, G-4, H-3	H-4
800mm f/8	A, B, C, D, E, J, G-4, H-4	G-3, H-3
1,000mm f/11 Reflex	A, B, C, D, E, J	H-3
1,200mm f/11	A, B, C, D, E, J, G-4, H-4	H-3
43-86mm Zoom	A, B, E, J	H-2
50-300mm Zoom	A, B, E, J	G-3, G-4, H-3, H-4
85-250mm Zoom	A, B, E, J, G-3, H-3	H-4
200-600mm Zoom	A, B, C, D, E, J, G-4, H-4	G-3, H-3



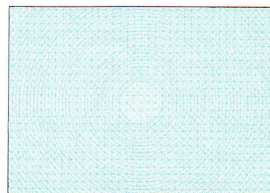
Type E Matt Fresnel field and 12mm fine-ground matt focusing spot with etched vertical and horizontal lines. Ideal for architectural photography.



Type J Matt Fresnel field with extra-bright microprism focusing spot. A circle of 12mm in diameter. Easy to focus. Covers most general purposes.



Type G series Clear Fresnel field with 12mm extra bright microprism focusing spot. **Type H series** Clear Fresnel field with microprism focusing pattern over entire screen area. Both series are specially designed for use when brighter viewing is more important than depth of field observation. Four screens are available in both series from No. 1 to No. 4, having Fresnel patterns matching specific lenses.





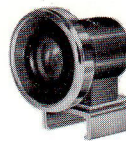
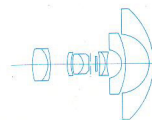
Interchangeable Nikkor Lenses

No name, over the past 15 years, has been more frequently or more closely identified with progress and development in photographic optics than that of Nikon. Whichever criterion you apply—variety, quality, versatility, inventive originality—this inevitable fact stands out: the current complement of interchangeable Nikkor lenses for the Nikon F is without equal in photographic history.

There are some 30 of these Nikkor lenses for the Nikon F, ranging from 7.5mm super-wide-angle to 1,200mm super-telephoto. Widely acclaimed by the most critical, discriminating users, they are universally acknowledged to be the finest lenses ever made available for 35mm photography. Some of them are so significantly unique in concept, in design and in application that special descriptions are warranted.

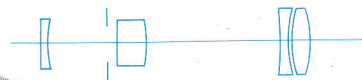
7.5mm f/5.6 FISH-EYE-NIKKOR

A unique optical achievement, this all-embracing lens "sees" a full 180° hemisphere—everything in front, above, below and to both sides. And it reproduces this extraordinary view of the subject as a circular composition on the film. The advantages of the Fish-eye in special-effects photography are obvious. Less obvious, though no less significant are the many applications for the Fish-eye in scientific and industrial work. Six filters are built into the lens on a rotating turret. Supplied with a Fish-eye Finder.



200mm f/5.6 MEDICAL-NIKKOR AUTO

A most unusual lens system. It reduces many of the problems in industrial and scientific photography to routine simplicity. It is so completely automatic in operation, consistently successful results are assured even in the hands of people with little or no previous experience. Instead of conventional focusing, the lens provides 11 reproduction-ratio settings from 1/15th actual size to 3X magnification in combination with six auxiliary lenses. The magnification setting, in conjunction with the previous setting of the film speed, automatically "programs" the aperture at which the exposure will occur.



The lens incorporates its own light sources around the front element: incandescent illumination for focusing and viewing ease, and a shutter-synchronized, electronic ring-light flash which gives uniform, shadowless light for the exposure. Portable battery and AC power packs are available for powering the lights.

When the shutter is released, the diaphragm automatically stops down to correct aperture for the built-in flash automatically compensating for the exposure increase required at each magnification. The lens also embodies facilities for identifying the film as to frame number or magnification ratio.

35mm f/3.5 PC-NIKKOR

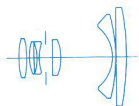
By ingenious design, the PC-Nikkor permits photography of fairly extended subjects without tilting or inclining the camera. In so doing, it provides a facility never before possible, except with large view cameras equipped with rising, falling and shifting lens standards.

The PC-Nikkor, therefore, is extremely useful in architectural, industrial and commercial photography and where perspective compensation in the enlargement stage is difficult.

In the PC-Nikkor, a micrometer lead-screw control permits moving the optics off-center by as much as 11mm. The effect is the same as is produced on a view camera having a 3-inch rise and equipped with a 9 1/2-inch lens.

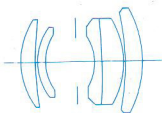
The entire lens mount rotates so that the correction can be applied in any direction—horizontally, vertically or diagonally. There are 12 click-stop positions at 30° intervals. In its normal position, the lens is also an effective intermediate wideangle with a picture field of 62°.

Use of the Type E focusing screen is recommended.



55mm f/3.5 MICRO-NIKKOR AUTO

The resolving power of this extraordinary lens is almost incredible. As suitable for normal photography as for extreme close-ups, the dual-helical system in which this lens is mounted, gives it an uninterrupted focusing range from infinity to 1 : 2 reproduction ratio. A coupling tube (M-Ring) supplied with the lens further extends this to 1 : 1. The automatic diaphragm action remains operative throughout the entire range, also automatically compensating for the exposure increase required at each magnification all the way to 1 : 1.

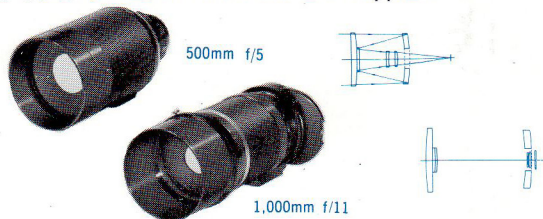


REFLEX-NIKKOR LENSES

These remarkable catadioptric systems are based on design principles used in large astronomical telescopes. In conventional refractor lenses, the light follows a single path and direction. In mirror-lens systems, such as these, the light doubles back, travelling the same distance in less space. This leads to surprising compactness and reduced weight. Both the 500mm and 1,000mm lenses weigh about 1.6 kg. (3.5 lbs.).

Besides scientific applications, the Reflex-Nikkors can be advantageously used in isolating architectural details, sports action, news and wildlife photography.

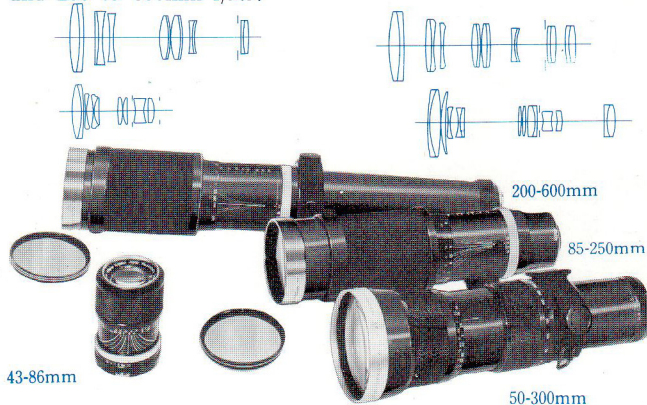
The Reflex-Nikkors are not equipped with aperture diaphragms. So, for adjusting the image brightness neutral density filters are used. Color correction filters are also supplied.



NIKKOR AUTO ZOOM LENSES

These lenses provide all the advantages of lens interchangeability without the need to change lenses. With one lens and from one shooting position, you can command a wide range of picture angles and magnifications. Without moving camera or subject, you can enlarge or diminish image size for exactly the effect desired. Once in sharp focus at one focal length, your Nikkor Zoom is in sharp focus at all focal lengths. All have automatic, instant-reopen diaphragms.

Nikon was first to design practical zoom lenses for 35mm still photography and first to make zoom lenses comparable in performance to the finest individual, standard lenses available. The Nikkor Zooms cover from medium wide angle to 12-power telephoto: 43 to 86mm f/3.5; 50 to 300mm f/4.5; 85 to 250mm f/4; and 200 to 600mm f/9.5.



In choosing his personal complement of Nikkor lenses, the Nikon F owner enjoys a twofold advantage. He can draw upon a variety that is unexcelled in 35mm photography. And he can be certain that all his lenses exhibit the same high standard of picture quality in every application.

The pictures shown here illustrate the changes in image size and picture angle obtained by using Nikkor lenses of different focal lengths. All were taken from the same position.



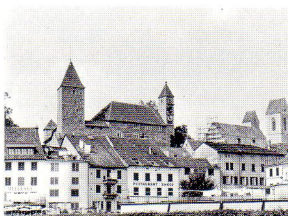
21mm



35mm



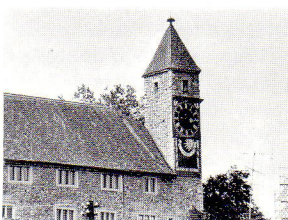
50mm



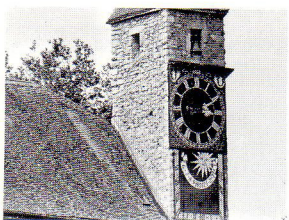
85mm



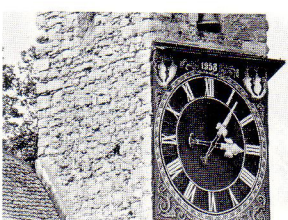
135mm



300mm



600mm



1,200mm

NIKKOR LENS CHART

Lens	Diaphragm Action	Minimum Aperture	Picture Angle	Closest Focus (dual calibration)	Filter Size	Hood	Case
21mm f/4	manual +	f/16	92°	36" (0.9m)	52mm	screw-in	Ⓛ
24mm f/2.8	automatic*	f/16	84°	12" (0.3m)	52mm	screw-in	Ⓛ
28mm f/3.5	automatic*	f/16	74°	24" (0.6m)	52mm	screw-in	Ⓛ
35mm f/2	automatic*	f/16	62°	12" (0.3m)	52mm	screw-in	Ⓛ
35mm f/2.8	automatic*	f/16	62°	12" (0.3m)	52mm	screw-in	Ⓛ
50mm f/1.4	automatic*	f/16	46°	24" (0.6m)	52mm	screw-in snap-on	P L
50mm f/2	automatic*	f/16	46°	24" (0.6m)	52mm	screw-in snap-on	P L
55mm f/1.2	automatic*	f/16	43°	24" (0.6m)	52mm	screw-in snap-on	P L
85mm f/1.8	automatic*	f/22	28°30'	3.5' (1m)	52mm	screw-in	Ⓛ
105mm f/2.5	automatic*	f/22	23°20'	4' (1.2m)	52mm	screw-in snap-on	Ⓛ
135mm f/2.8	automatic*	f/22	18°	5' (1.5m)	52mm	* built-in	Ⓛ
135mm f/3.5	automatic*	f/22	18°	5' (1.5m)	52mm	screw-in snap-on	Ⓛ
200mm f/4	automatic*	f/22	12°20'	10' (3m)	52mm	* built-in	Ⓛ
300mm f/4.5	automatic*	f/22	8°10'	13' (4m)	72mm	* built-in	Ⓛ
400mm f/4.5	automatic†	f/22	6°	16' (5m)	122mm	* built-in	W
600mm f/5.6	automatic‡	f/22	4°	35' (11m)	122mm	* built-in	W
800mm f/8	manual †	f/64	3°	60' (18m)	122mm	* built-in	W
1,200mm f/11	manual †	f/64	2°	130' (40m)	122mm	* built-in	W
500mm f/5 Reflex	—	f/10	5°	50' (15m)	39mm	* screw-in	Ⓛ
1,000mm f/11 Reflex	—	f/11	2°30'	25' (8m)	built-in	* slip-on	Ⓛ
43mm-86mm f/3.5 Zoom	automatic*	f/22	53° to 28°30'	4' (1.2m)	52mm	screw-in	Ⓛ
50mm-300mm f/4.5 Zoom	automatic*	f/22	46° to 8°10'	8.5' (2.5m)	95mm	—	L
85mm f/4-250mm f/4.5 Zoom	automatic*	f/16	28°30' to 10°	13' (4m)	series 9	* screw-in	L
200mm f/9.5-600mm f/10.5 Zoom	automatic	f/32	12°20' to 4°10'	13' (4m)	series 9	* screw-in	W
7.5mm f/5.6 Fish-eye	manual +	f/22	180°	fixed focus	built-in	—	Ⓛ
35mm f/3.5 PC	pre-set	f/32	62°	12" (0.3m)	52mm	—	Ⓛ
55mm f/3.5 Micro	automatic*	f/32	43°	0.79" (0.241m)	52mm	—	Ⓛ
200mm f/5.6 Medical	automatic	f/45	12°20'	3 : 1	—	—	Ⓛ

* Couples to Photomic system.

† Supplementary viewfinder necessary.

‡ Focusing Unit necessary.

◦ Lens hood supplied with corresponding lens.

P=Plastic case supplied on order

Ⓛ=Plastic case supplied as standard equipment to lens.

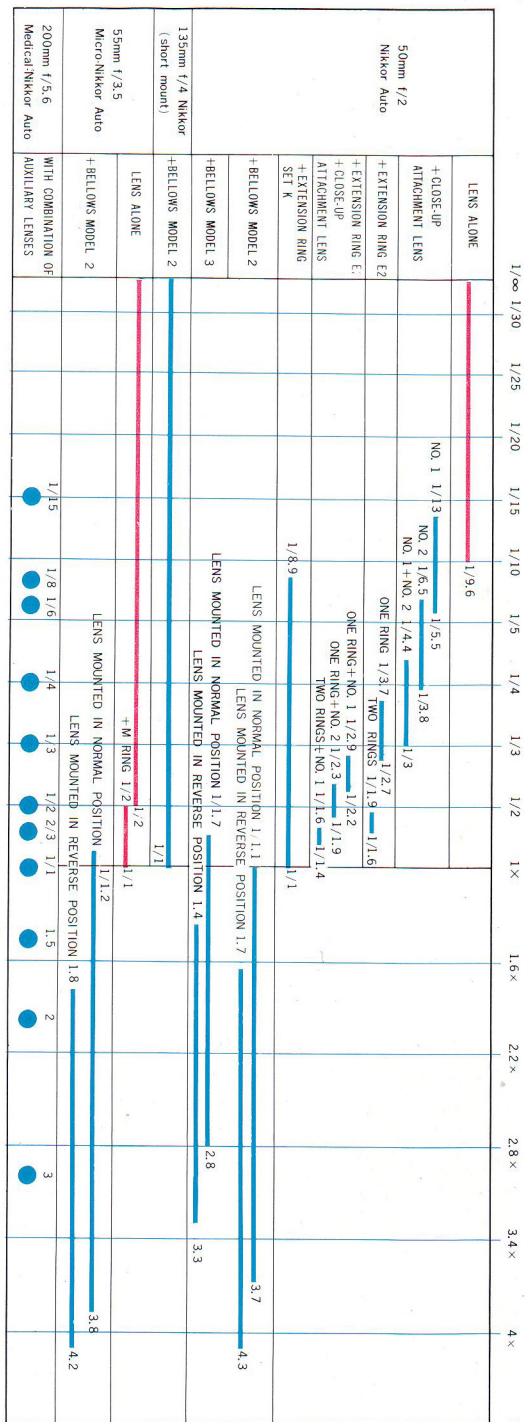
L=Leather case supplied on order.

Ⓛ=Leather case supplied as standard equipment to lens.

W=Wooden case supplied on order.

Case will not be supplied when purchasing lens attached to the camera body.





Close-Up, Macro- and Micro-photography, and Photomicrography

These are the areas in which the unique capabilities of the Nikon F system can be best demonstrated. Perhaps it is because of the inherently critical nature of this work, especially as it applies to science and industry, or to forensic or educational photography. Or perhaps it is that the sub-visible world presents a greater challenge than the world of news events, chiefs-of-state, sports and people. We think not. For the very same versatile qualities of the Nikon F system are at work in either case. Consider the freedom from parallax error the Nikon F provides. Consider the ability to perceive depth-of-field, and the ability to focus and compose through the same lens that takes the picture. And remember, too, that the Nikon F finder provides 100% accuracy—shows you neither more nor less than the film will record. Even if you're not involved in the lofty realms of such use, the same qualities and capabilities are yours for flower photography, postage stamps, insects or reproducing a manuscript—you name it.

The increasing demands of classification and communication in various fields of scientific research have made the faithful record of sub-visible specimens and phenomena by a microscope, instead of by camera lenses and extension devices, an almost indispensable requirement. Nikon also being an expert in the manufacture of microscopes offers a complete line of professional equipment for photomicrography besides the ones mentioned on page 23.

LENSES FOR CLOSE-UP PHOTOGRAPHY

The normal 50mm f/2 Nikkor Auto lends itself to successful close-up work with any accessory. But, where high resolution is paramount, the 55mm f/3.5 Micro-Nikkor Auto will be found to meet the most exacting requirements. This lens, as well as the unique 200mm f/5.6 Medical-Nikkor Auto are described elsewhere in this booklet. In addition, there is the following:

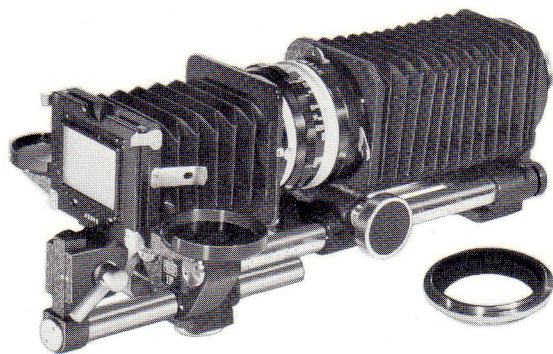
135 mm f/4 Nikkor (short mount)

This lens is designed for use with the Bellows Focusing Attachment. No focusing mechanism—focuses only with Bellows. Attaches with BR-1 Adapter Tube. Focusing range extends from infinity to 1 : 1 magnification ratio with Bellows Focusing Attachment Model 2. Accepts 43mm screw-in filters. Supplied with plastic case.

BELLOWS FOCUSING ATTACHMENTS

There are 2 types of Bellows Focusing Attachments, the Model 2 and Model 3. They both fit between camera and lens without adapter, and are the most flexible single accessory for close-up and macrophotography with the Nikon F. They accept almost all Nikon F lenses and provide a continuous focusing range for close-up and macrophotography. They can be used on any support, or with a Repro-Copy Outfit.

On Model 2, reproduction with 50mm f/2 lens ranges from 0.9 to 3.7 times. With the lens in reversed position, reproduction ratios range from 1.7 to 4.3 times. The Model 2 has two tripod sockets. Its rotating camera mount permits both horizontal and vertical format.



BR-2 Macro Adapter Ring

Bellows Model 2 with Slide Copying Adapter

The Model 3 is simply designed and lightweight weighing only 220g. (8 oz.). Slide copying cannot be performed with this model. With the 50mm f/2 lens reproduction ratios range from 0.6 to 2.8 times magnification. With the lens in reversed position, reproduction ratios range from 1.4 to 3.3 times magnification. This model is equipped with a single tripod socket.

BR-2 MACRO ADAPTER RING

Permits any lens with 52mm front thread to be mounted on Bellows in reverse position. Provides optimum optical performance at reproduction ratios greater than 1 : 1.

SLIDE COPYING ADAPTER

Provides a simple and accurate means for duplicating 35mm color or black-and-white transparencies. It is used in combination with the Bellows Model 2 and accepts both mounted slides and strips. Besides duplications, enlarging sections of transparencies to full 35mm format can be performed when the lens is attached in reversed position by means of a BR-3 Adapter.

EXTENSION RING E2

This convenient close-up device is inserted between camera body and lens, adding an extension of 14mm. It accepts any Nikkor lens from 28mm up, except the 135mm f/4 short mount for Bellows.

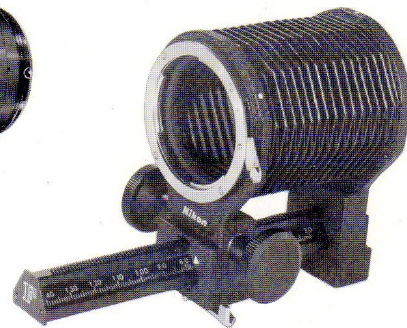
When used with Nikkor Auto lenses, the built-in plunger is depressed to open the lens to full aperture for viewing and focusing. Releasing the plunger stops the lens down to "taking" aperture. The plunger accepts a Nikon Cable Release. Two or three E2 rings may be combined for greater magnification.



135mm f/4 Nikkor



Extension Ring E2



Bellows Model 3

EXTENSION RING SET K

Consists of a set of 5 rings which can be used individually or in combination. For close-ups from 1 : 8.9 to 1 : 1 with 50mm f/2 lens. Rings fit between camera body and lens; accept any Nikkor lens from 28mm through 300mm (except 135mm f/4 short mount for Bellows and 200mm Medical-Nikkor). Supplied with leather case.

CLOSE-UP ATTACHMENT LENSES

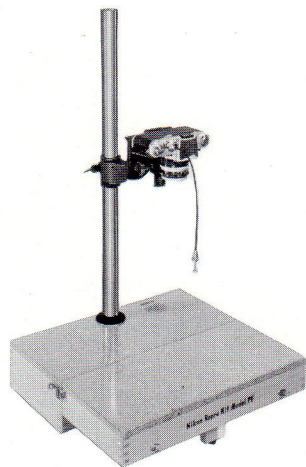
Simple meniscus lenses in 52mm screw-in mounts designed to fit most Nikkor lenses. Readily adapt Nikon F for copying and close-up work. They require no compensation in exposure. Available in three progressively increased powers: No. 0, 1 and 2. May also be used in combination, and in conjunction with Extension Rings or Bellows. Each attachment comes with leather case.

REPRO-COPY OUTFIT MODEL PF

Converts the Nikon F into a completely integrated close-up system for reproducing flat copy or photographing objects and specimens of varying sizes and shapes. The outfit consists of a base, an upright column and sliding arm, equipped with a camera cradle which provides fine up and down rack and pinion movement.

The outfit may be used with Bellows, Extension Rings, or any of the other special accessories. The camera cradle on the sliding arm can be locked at every 45° position which is very convenient in photographing material mounted on a wall, as well as on the base.

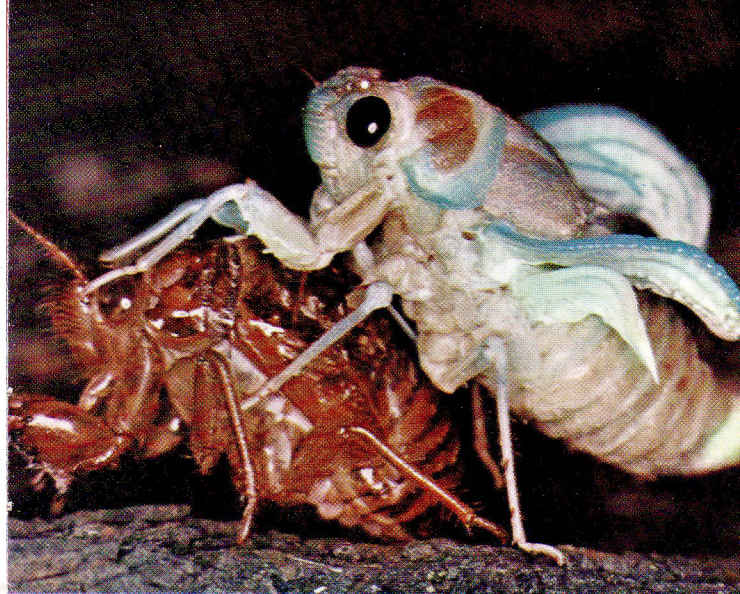
Model PFB is supplied with a laminated hardwood base; Model PFC, with a laminated hardwood carrying case which unfolds to serve as a base; Model PFT, with a table clamp to secure the upright post onto work bench or desk.



Repro-Copy Outfit PFC



Extension Ring Set K



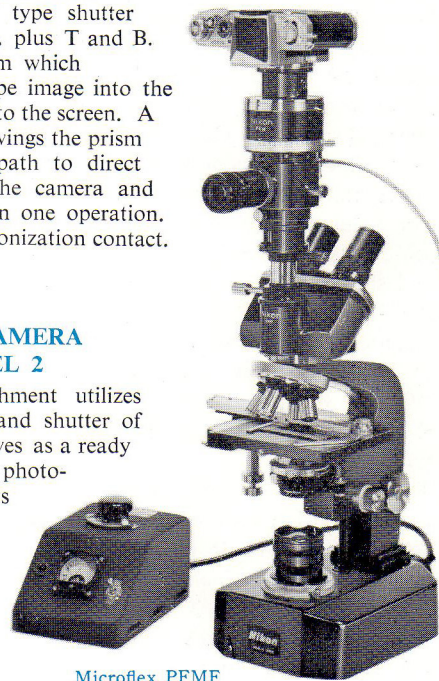
MICROFLEX PFMF—PRISM REFLEX PHOTOMICROGRAPHIC ATTACHMENT

Permits the Nikon F to be used to produce high quality photomicrographic prints or transparencies. Fits any standard microscope.

Has a built-in leaf type shutter from 1 to 1/250 sec. plus T and B. It has a prism system which diverts the microscope image into the viewing ocular or onto the screen. A single cable release swings the prism out of the optical path to direct the whole light to the camera and releases the shutter in one operation. Provided with synchronization contact.

MICROSCOPE-CAMERA ADAPTER MODEL 2

This simple attachment utilizes the viewing system and shutter of the Nikon F, and serves as a ready means for producing photomicrographs. It adapts the camera to any standard microscope. Supplied with a green filter and Type C focusing screen in leather case.



Microflex PFMF

Nikon Electric Motor Drives

Automatic Fire Power

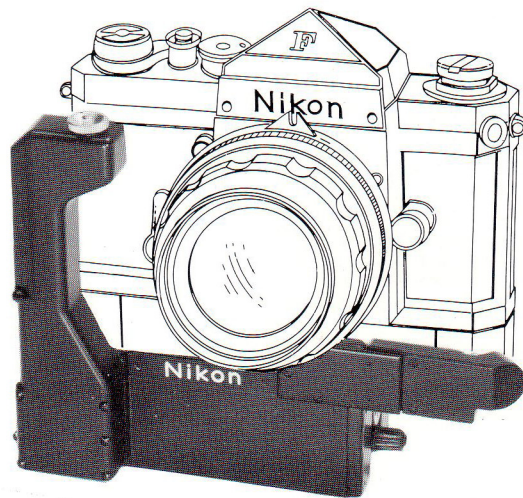


Nikon F with F36 Motor Drive

The simple addition of a Motor Drive transforms the Nikon F into a unique, automatic instrument that opens up a whole new realm of picture opportunities. The motor-equipped Nikon F can be operated in-hand or remotely, wired or by radio control. The motor automatically makes the exposure, advances the film and winds the shutter. It may be preset to fire single shots, burst of two or more, or continuously, through an entire film load, at rates of 2, 2 1/2, 3 or 4 shots per second, at the shutter speeds of 1/8th to 1/1,000th second.

The value of the Motor Drive for producing sequences is self-evident, as is its use in time-lapse studies, motion analysis and surveillance. No less important, however, is the facility the Motor Drive provides for capturing the momentary situation, the elusive action, the fleeting expression which so often occurs the instant after the exposure is made. Whether you are stalking one picture or a whole sequence, the unrelenting fire pattern of the motor is sure to bag your quarry.

There are two Motor Drives for the Nikon F: the F36, for standard 35mm cartridges or bulk-loaded Nikon cassettes with up to 36 exposures; and the F250, for special Nikon cassettes which hold up to 10m (33 feet) of bulk film (250-exposures). The F250 provides the same selection of firing rates and shutter speeds as the F36. They interchange with the regular Nikon F camera back.



Cordless Battery Pack attached

CORDLESS BATTERY PACK

Provides automatic fire power in its most convenient form. Designed for use with the F36 Motor Drive only and transforms the Nikon F into an integrated, one-piece automatic unit. Has built-in release button and selector switch for single and sequence shots. Built-in relay simplifies remote operation. Uses conventional 2-conductor, household-type cord, which may be connected to a manual switch, intervalometer, radio control receiver or other switching device. It holds 8 penlite AA batteries. It may also be operated from an external 12-volt DC source.

STANDARD BATTERY PACK

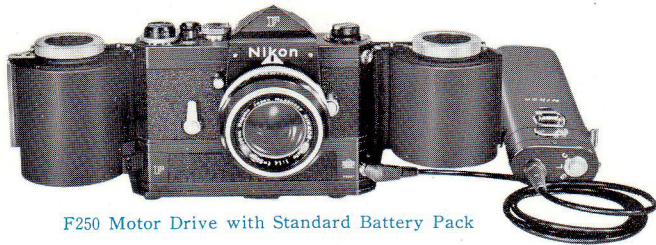
Slim leather case holds 8 "C" batteries. Has triggering button and setting for single or sequence shots. Permits use of remote triggering devices, such as relay box, intervalometer and wireless control, as well as extension cord. Supplied with shoulder strap and 1 m (3-foot) cord for connecting to F250 or F36 Motor Drive.

PISTOL GRIP FOR MOTOR DRIVE

Used with Standard Battery Pack, it is equipped with trigger-controlled micro switch and cords for electrical operation of F36 or F250 Motor Drive.

10m (33-foot) CONNECTING CORD

A 3-conductor cord which leads directly into the Standard Battery Pack to permit a Nikon F equipped with either F36 or F250 Motor Drive to be operated from a distance up to 33 feet.



F250 Motor Drive with Standard Battery Pack

RELAY BOX

Used between the Standard Battery Pack or any suitable 12V DC power source and the F36 or F250 Motor Drive, it permits the remote firing of the motorized Nikon F through a conventional two-conductor cord, terminating in any circuit closing device: manual switch, intervalometer, radio control receiver, or other. The Motor Drive may also be operated by button on Relay Box. Supplied with 1 meter (3-foot) three-conductor cord.

BATTERY TESTER

Miniature voltmeter instantly checks condition of motor batteries in Standard Battery Pack. Indicates voltage as well as the point when batteries should be replaced.

NIKON REPEATING ELECTRONIC FLASH UNIT

Designed exclusively for Nikon Motor Drive F36 and F250, to increase their usage and application range. This electronic flash unit is composed of flash head and AC power pack, and enables repeating flashes that synchronize to shutter at the rate of 2, 2 1/2 and 3 shots per second with the recycling time of 1/3 second.

The AC power pack supplies power for both the flash head and motor drive at the same time from AC power source so no extra battery is required. The color temperature is approx. 6000°K eliminating the necessity of using a compensating filter even when shooting with daylight color film.

250-EXPOSURE FILM CASSETTE

Made for F250 Motor Drive, loads up to 33 feet of film cut from 100-foot rolls. Supplied with leather case.

BULK FILM LOADER

Rapid film loader for loading film into 250-Exposure Film Cassette in darkroom. Stops automatically at preset film length. Fluorescent frame number markings. Can be easily loaded from 100-foot film rolls.

Nikon F Accessories

OPTICAL GLASS FILTERS

Optical quality is as indispensable in filters as in lenses. Only the finest optical glass is employed. Precision ground, polished to plano-parallel flatness and strain-free mounted, these filters are free from striation, stress, or other flaws which might deteriorate image quality. Both surfaces have hard coatings to prevent reflections.

Type	Screw-in						Series
	34.5mm	43mm	52mm	72mm	95mm	122mm	
Lens used	1,000/11 Reflex	135/4 (short mount)	21/4, 24/2.8, 28/3.5, 35/3.5 PC 35/2, 35/2.8, 50/2, 50/1.4, 55/1.2 55/3.5 Micro 85/1.8, 105/2.5, 135/3.5, 135/2.8, 200/4, 43-86 Zoom	300/4.5	50-300 Zoom	400/4.5, 600/5.6, 800/8, 1,200/11 Zoom	85-250 Zoom, 200-600 Zoom
Filter color							
Skylight			○	○			
UV haze	○	○		○	○	○	○
Yellow	Light	○	○				○
	Medium	○	○		○	○	○
	Dark	○	○				○
Orange	○	○	○	○	○	○	○
Red	○	○	○	○	○	○	○
Yellow- ish Green	Light	○	○				
	Dark	○	○	○			
Polarizing			○				
Neutral Density	ND 4X	○					
	ND 8X	○		○			
	ND 10X	○					
	ND 400X	○					
Amber	Light			○			
	Dark	○		○			
Blue	Light			○			
	Medium			○			
	Dark			○			

Filters for 7.5/5.6 Fish-eye and 1,000/11 Reflex are built-in and filters for 500/5 Reflex are supplied with lens.

52mm FILTER ADAPTER RING

Employed when using the standard Series 7 filters on lenses having a 52mm screw-in front thread.

PISTOL GRIP MODEL 2

A newly designed pistol grip with rounded off corners to give added support for hand-held shooting. Grip screws firmly into tripod socket either under camera, motor drive or under lens as required. Connecting Cable Release couples to the trigger on grip for operating the shutter release on camera. Also provides facility to fire F36 Motor Drive equipped with Cordless Battery Pack by means of Coiled Connecting Cord.

LENS HOODS

Four types of Nikkor lens hoods are available: screw-in, snap-on, slip-on and built-in hoods. Lens hoods are calculated for each focal length to give maximum protection without danger of cutting off. Snap-on hoods fit firmly into the lens frame and also attach firmly to filters, when used. The hood can be reversed on lens for compactness in carrying, and accepts a lens cap.

PANORAMA HEAD

Mounts between camera and tripod, and accurately spaces series of exposures that will join as single panorama picture covering up to 360°. Click-stop positions for 35, 50 and 105mm lenses, and color-coded stop indicators for 28, 85 and 135mm lenses. Bubble Level accessory available to check whether camera and Panorama Head are horizontal.

REAR LENS CAPS AND BODY CAP

Available to protect and keep lens and camera body dust-free when handled or stored separately.

FILM CASSETTE

All-metal, easy to load with standard bulk film. Can be loaded up to 36 exposures. Recommended for use with Motor Drive. Reminder markings provided to tell you whether film has been loaded or not ... what the film ASA speed is.



EVEREADY CAMERA CASES

Made of top quality cowhide. The following varieties are available to suit your convenience or preference.

Hard Case Brown, velveteen-lined Shoulder strap and non-slip cushion pad

Case Model	Camera	Lens
CTT	Nikon F Photomic-series or Nikon F	21/4, 24/2.8, 28/3.5, 35/2.8, 35/2, 50/2, 50/1.4, 55/1.2, 85/1.8, 105/2.5, 35/3.5 PC or 55/3.5 Micro
CTTZ		21/4, 24/2.8, 28/3.5, 35/2.8, 35/2, 50/2, 50/1.4, 55/1.2, 85/1.8, 105/2.5, 135/3.5, 35/3.5 PC, 43-86 Zoom or 55/3.5 Micro
CTS	Nikon F	Same as CTT
CTZ		Same as CTTZ

Semi-soft Case	Camera	Lens
Black Supplied with shoulder strap	Nikon F Photomic-series or Nikon F	21/4, 24/2.8, 28/3.5, 35/2.8, 35/2, 50/2, 50/1.4, 55/1.2, 85/1.8, 35/3.5 PC or 55/3.5 Micro
The snap-on front cover of this case can be interchanged to allow accommodation of lenses with long barrels such as, 105/2.5, 135/2.8, 135/3.5 or 43-86 zoom. Please specify the type of front cover when ordering.		

Soft Zippered Pouch	Camera	Lens
Black Supplied with neckstrap	Nikon F Photomic-series or Nikon F	21/4, 24/2.8, 28/3.5, 35/2.8, 35/2, 50/1.4, 50/2, 55/1.2, or 35/3.5 PC

A semi-soft case, black to accommodate Nikon F with Action Finder and normal lens is also available. A special case that damps shutter click is available on order. Suitable when taking shots inside theaters and courts.



FITTED COMPARTMENT CASES

All made of top quality cowhide, and supplied with shoulder strap having non-slip cushion pad. Roomy and convenient compartments for carrying your Nikon equipment safely.

Model FB 3

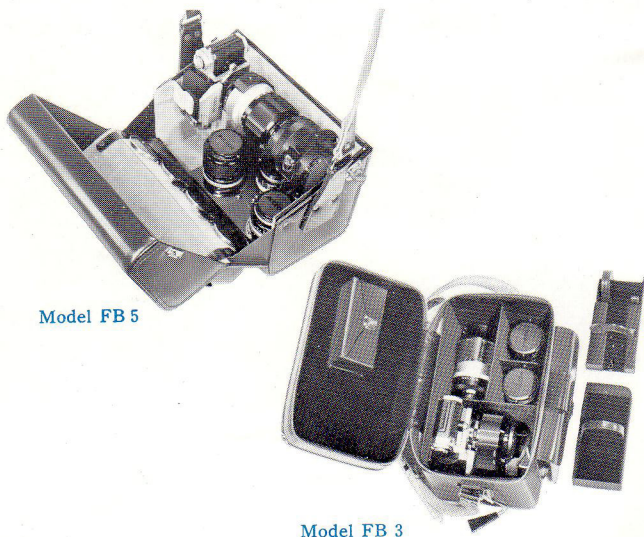
27cm (10⁵/₈ in.) wide, 16cm (6³/₈ in.) deep, 20cm (8 in.) high. Holds Nikon F or F Photomic series with normal lens, two wide-angle lenses, one telephoto lens (85mm to 135mm focal length), Waist or Eye-Level finder and Photomic series finder, six filters, and sundries. Outside pocket for miscellaneous accessories.

Model FB 5

29cm (11¹/₂ in.) wide, 16cm (6³/₈ in.) deep, 24cm (9¹/₂ in.) high. Holds Nikon F or F Photomic series, four lenses of shorter than 300mm in focal length except 85-250mm Zoom, and 4 filters. One lens is fitted on camera, while the other three are engaged securely to the bayonet mounts provided on the bottom base plate of the case. Two roomy outside pockets.

Foam Rubber Compartment Case

31cm (12¹/₈ in.) wide, 13cm (5¹/₈ in.) deep, 22cm (8³/₄ in.) high. Holds Nikon F or F Photomic series with normal (except 55mm f/1.2) or wideangle lens, one 135mm f/3.5, one 105mm f/2.5 or 85mm f/1.8, one 35mm wideangle, six filters, Extension Ring or two Close-Up Attachments. Tripod fastens on outside of case.



LENS CASES

Either reinforced leather, transparent plastic or wooden cases are supplied as standard cases to lenses. The type of case to be supplied with each lens is indicated in the lens chart on page 15.

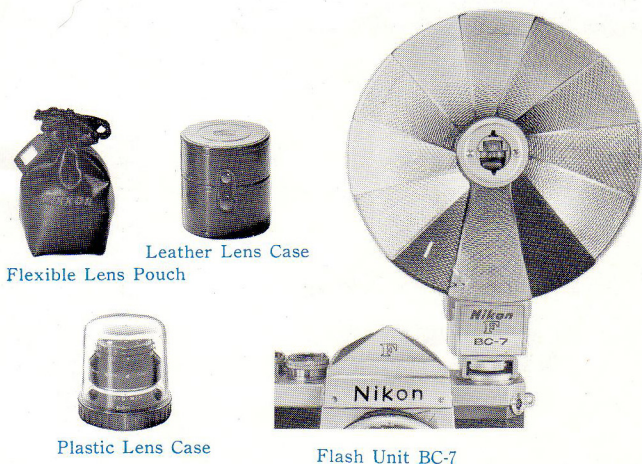
Besides the above lens cases, there are Flexible Lens Pouches made of soft black leatherette. Type No. 51 accommodates normal or wideangle lenses, Type No. 52 telephoto lenses up to 135mm, and Type No. 53 telephoto lenses up to 200mm.

FLASH UNIT BC-7

Compact and cordless flash unit fitting directly onto the Nikon F. A standard 15V battery is used and a synchronizing cord terminal is fitted to facilitate the use of extension flash. The reflector is a collapsible fan type and the click-stop swivel head permits direct or bounced light. It is provided with a three-way socket permitting the use of bayonet or miniature base or AG-1 flash bulb. Test circuits incorporated allow you to check the bulb, capacitor charging and synchronization circuit.

EYEPIECE CORRECTION ATTACHMENTS

Ground to specific powers, these attachments enable wearers of glasses to focus and view without glasses. Screw directly onto the Photomic-series finder or the Eye-Level finder by means of Eyepiece Frame Adapter. Available in corrections from -5 to +3 diopters.



With the exception of viewfinders, focusing screens, 36-exposure film cassette, Nikon electric motor drives and eveready camera cases, all other accessories and attachments together with all lenses listed in this booklet can also be used on the Nikkormat.