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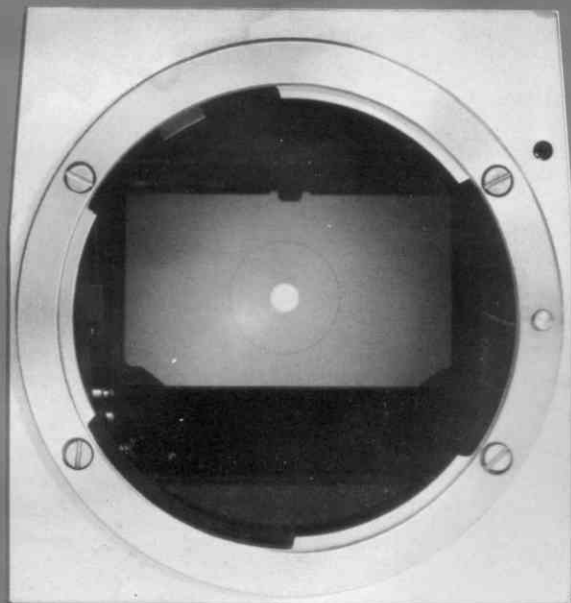
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9. The Interchangeable Nikkor Lenses



More than 40 of the very best reasons for owning a Nikon F are the Nikkor lenses available for it.

In number, variety, in quality — both optical and mechanical — and in sheer optical originality, there's nothing like the Nikkor lens system with its range from 6mm Fisheye to 2000mm Reflex Nikkor.

Would anyone ever need all of them? Probably not. But, whatever lens you do need, it's available to you if you have a Nikon System camera. The chart on the following page details the full variety of interchangeable Nikkors.

Why Nikkor? — Today, Nikon stands for everything a fine camera should be: a

combination of incomparable optics with a camera built to the highest standards of reliability. But, for some 67 years, Nikon was an optical company. The Nikon reputation was built on lenses and other precision optics — indeed, the first major mark Nikon made on the international scene was with lenses to be used on other cameras. Ironically, an occasional Nikon user tries to economize with inexpensive lenses. This is truly false economy.

It makes sense to use nothing but the finest lenses if you're going to the expense of owning the finest camera. Lenses for which the camera was specifically designed. And, optical quality is

not the only reason. Perhaps surprisingly, mechanical quality is just as important. Consider something as basic as the way a lens fits. Especially with high-speed lenses, the distance from lens flange to film plane is critical beyond description. Much more than a lens fitted with an adapter can hope to match.

Take the little metal "yoke" on top of the lens which engages the Photomic meter. If this part is not precisely aligned, the meter will be programmed wrong and exposure readings will be inaccurate.

Or, take the incredibly complex mechanism of the automatic diaphragm. You view with the lens wide open. When



10. More About Nikkor Lenses

you press the shutter release, the lens has just 26 milliseconds to stop down to taking aperture, which could be as far as f32. All Auto-Nikkor lenses can make it in 20 milliseconds. Many others can't do it in 26. It all has to do with the quality and number of bearings used in the diaphragm and the care with which the bearing "raceway" is machined. Noie, too, that the auto diaphragm link pin on the back of Auto-Nikkors is protected so it won't be damaged if the lens is put down without a rear cap.

Lens comparisons usually pit a new lens against a new lens. But, the real test of quality is in how well the lenses will perform after years of hard use. An inexpensive lens may focus smoothly, precisely when new. But it may accomplish that smoothness with a thick coating of

grease — which will gradually dissipate with use. Nikkor lenses do it with selected, highly wear-resistant metals machined to microscopic tolerances.

How is the lens held together? Nikkors use threaded retaining rings and precision screws. An inexpensive lens may have components simply fitted together and held in place by screws which don't penetrate the second piece of metal. Screw holes may even be drilled with components in place so that metal particles are left inside.

Undeniably, some inexpensive lenses represent good value for the price. But if you're serious enough about photography to own a Nikon F, you owe yourself the assured quality — optical and mechanical — of a Nikkor lens.

Special, descriptive brochures are

available — request for each of the following categories:

Nikkor News Lenses, Nikkor Fisheye Lenses, Nikkor Wide Angle Lenses, Nikkor Telephoto Lenses, and Nikkor Zoom Lenses.

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 highest standard of picture quality. The range of pictorial expression at his command may be gathered from these pictures. They 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.



20mm



28mm



35mm



50mm



85mm



135mm



200mm



500mm

LENSES									
	Product Number	Diaphragm Action	Minimum Aperture	Picture Angle	Closest Focus	No. of Elements	Filter Size	Weight	
FISHEYE NIKKORS	6mm f5.6 Fisheye	227	Manual (1)	122	270°	fixed focus	9	6 built-in filters	15.3 ozs.
	6mm f2.8 Fisheye		Automatic (2)	122	220°	10"	12	6 built-in filters	11 lbs. 8 ozs.
	7.5mm f5.6 Fisheye	229	Manual (1)	122	180°	fixed focus	10	6 built-in filters	11.2 ozs.
	8mm f2.8 Fisheye	226	Automatic (2)	122	180°	12"	10	5 built-in filters	2 lbs. 2 ozs.
	10mm f5.6 OP Fisheye	228	Manual (1)	122	180°	fixed focus	10	6 built-in filters	14.3 ozs.
	15mm f5.6		Automatic (2)	122	110°	12"	15	4 built-in filters	19.8 ozs.
	20mm f3.5	233	Automatic (2)	122	94°	12"	11	72mm	13.75 ozs.
	24mm f2.8	232	Automatic (2)	116	84°	12"	9	52mm	10 ozs.
	28mm f3.5	237	Automatic (2)	116	74°	24"	6	52mm	8 ozs.
	28mm f2	236	Automatic (2)	122	74°	12"	9	52mm	12.2 ozs.
WIDE ANGLE NIKKORS	35mm f2.8	240	Automatic (2)	116	62°	12"	7	52mm	7 ozs.
	35mm f2	239	Automatic (2)	116	62°	12"	8	52mm	9.9 ozs.
	35mm f1.4	238	Automatic (2)	122	62°	12"	9	52mm	14.6 ozs.
	45mm f2.8 GN	234	Automatic (2)	132	50°	36"	4	52mm	5.3 ozs.
	50mm f2	245	Automatic (2)	116	46°	24"	6	52mm	7.3 ozs.
NORMAL NIKKORS	50mm f1.4	246	Automatic (2)	116	46°	24"	7	52mm	11.5 ozs.
	55mm f1.2	247	Automatic (2)	116	43°	24"	7	52mm	15 ozs.
	85mm f1.8	260	Automatic (2)	122	28°30'	3"	6	52mm	15 ozs.
	105mm f2.5	265	Automatic (2)	132	23°20'	3 1/4"	5	52mm	15.2 ozs.
	135mm f3.5	271	Automatic (2)	132	18°	5"	4	52mm	15.9 ozs.
LONG FOCUS & TELEPHOTO NIKKORS	135mm f2.8	270	Automatic (2)	122	18°	5"	4	52mm	21.8 ozs.
	180mm f2.8	280	Automatic (2)	132	13°40'	6"	5	72mm	29.3 ozs.
	200mm f4	175	Automatic (2)	132	12°20'	7"	4	52mm	22.1 ozs.
	300mm f4.5	278	Automatic (2)	122	8°10'	13"	5	72mm	2 lbs. 3 ozs.
	400mm f5.6		Automatic (2)	132	6°	16"	5	72mm	3 lbs. 1 oz.
	400mm f4.5	189	Automatic (4)	122	6°	16"	4	122mm	6 lbs. 12 ozs. (4)
	600mm f5.6	191	Automatic (4)	122	4°	35"	5	122mm	7 lbs. 9 ozs. (4)
	800mm f8	194	Automatic (4)	122	3°	60"	5	122mm	7 lbs. 11 ozs.
	1200mm f11	196	Manual (4)	164	2°	130"	5	122mm	9 lbs. 5 ozs. (4)
	RT-FLX NIKKORS	500mm f8	190	(5)	(5)	5°	13"	Mirror Lens System	39mm
1000mm f11		197	(5)	(5)	2°30'	25"	Mirror Lens System	4 built-in filters	3 lbs. 8 ozs.
2000mm f11		(5)	(5)	(5)	1°10'	60"	Mirror Lens System	4 built-in filters	38 lbs. 9 ozs.
36mm f3.5		275	Automatic (2)	122	53°16'	4"	9	52mm	14 ozs.
50mm f4.5		274	Automatic (2)	122	45°10'	8 1/2"	14	95mm	5 lbs.
ZOOM NIKKORS	75mm f4.5	276	Automatic (2)	132	30°10' to 12°20'	6"	15	52mm	29.3 ozs.
	28-60mm f9.5	277	Automatic	132	12°20' to 44°	13"	19	82mm	5 lbs. 2 ozs.
	35mm f2.8 PC	243	Pre-set	132	62°	12"	8	52mm	11.8 ozs.
	55mm f3.5 Micro	250	Automatic (2)	132	43°	1.1	5	52mm	8 ozs. (with M-ring, 12.5 ozs.)
	105mm f4 Belows	166	Pre-set (3)	132	23°20' to 13°	5	52mm	8.5 ozs.	
SPECIAL NIKKORS	200mm f5.6 Medical	296/297	Automatic	145	12°20'	3-1	4	38mm	22.8 ozs.

(1) Cannot be used with Photomic system on Nikon F. Fits only cameras with independent mirror control. Supplied with optical centering index. (2) Couples to exposure meter and Photomic systems. (3) For use only with bellows. (4) Requires focusing mount adapter No. 199 (weighs 3 lbs.). (5) Reflex Nikkors have no diaphragms but use filters to control light transmission. All lenses are supplied with front caps. Telephoto lenses from 105mm up include lens hoods. "Nikkor" "F" mount lenses can be used on "C" mount movie and TV cameras by means of Nikon "C" mount adapters. For highest quality black & white and color enlarging. (1) Nikkor 50mm f2.8 offers maximum resolving power and flatness of field. Specifications subject to change without notice.



11. Close-up, Macro and Micro

The boundless versatility of the Nikon F system is best demonstrated by the ease with which it lends itself to the requirements of photography in all its phases. There is hardly an application arising in science, industry, education, journalism, law enforcement, or in the art or hobby of photography, that isn't within the capabilities of this all-encompassing system...

from the infinitesimal to the infinite!

In the exacting area of closeup photography, the unique advantages of the Nikon F assume special significance. Interchangeability of finders and finder screens provide an unmatched capacity to suit any requirement and preference, in any application. The convenience and reliability of thru-the-lens metering is

available even for vertical viewing by combining the Photomic FTN with the Right Angle Finder. Ultra-critical focus is simplified by the Eyepiece Magnifier or 6X Magnifying Finder. And, for added assurance, the Nikon user enjoys the only 100% accurate finder system in the 35mm slr field.



The Nikon System provides a whole sub-system of closeup equipment ranging from simple closeup lenses to attachmeras for photomicrography at hundreds of times magnification. Included are three bellows units (one with front swing and shift facilities), extension tubes, slide copying attachments for use with the bellows, lens reversing ring, and copying stands. Microscope equipment includes camera adapters and the precision Microflex with self-contained shutter and viewing system.

Most Nikkor lenses can be used with one or another of the closeup accessories. Some lenses, however, are better suited for this application than others.

The 50mm Auto-Nikkor f2 lends itself to successful closeup work with any accessory. Where optimum resolution is paramount, the 55mm Micro Auto-Nikkor will be found to surpass the highest requirements. There is also the Medical Auto-Nikkor — a complete self-contained system for close-up work.

A special, illustrated brochure describing all Nikon closeup accessories is available upon request.

12. Electric Motor Drive

The simple addition of the motor drive to a Nikon F results in a unique, automatic instrument that opens a new vista of picture-taking possibilities.

The motor-equipped Nikon F can be fired in-hand or remotely by intervalometer, photocell relay, or other triggering device...wired or by radio control. The motor automatically makes the exposure, advances the film and winds the shutter. It can be preset to fire single shots, bursts of two or more, or through an entire film

load — at rates of up to 4 frames per second. The automatic mirror remains fully operative at up to 3 per second.

The value of the motor drive in news and sports photography, and in action sequences generally, is self-evident, as is its use in time-lapse study, motion analysis and surveillance.

Less obvious, but no less important, is its facility to capture **the elusive moment**, the fleeting expression, **the essence** of the picture situation **which so often arises**

the moment after the shutter was fired.

Whether you're stalking one picture or the whole sequence, the unrelenting fire pattern of the motor is sure to bag your photographic quarry.

There are two motor drives for the Nikon F, both battery powered. F36, for standard film cassettes, is available with cordless battery pack which attaches directly to the motor drive, or with separate standard battery pack. F250, for 250-exposure cassettes, uses the standard pack.



13. Motor Drive Accessories

Cordless Battery Pack — attaches to F36 motor drive and transforms Nikon F into an integrated automatic unit. Has release button and selector switch for single and sequence shots. Built-in relay simplifies remote operation. Works on self-contained penlite batteries.

Pistol Grips — give added support for hand-held shooting and provide facilities for operating motor drive.

Pistol Grip II — is used with cordless battery pack. Accepts coil cord for electrical operation of F36 motor drive, or mechanical cable for operating camera shutter from pistol grip.

Pistol Grip with Micro Switch — for use with standard battery pack, has micro switch and cord for electrical operation of motorized Nikon F.



Intervalometer — Permits the motor-equipped Nikon F to be fired at pre-determined intervals, automatically. Time-lapse photography, as this technique is called, is used in virtually every field of research and development. The Intervalometer works on a self-contained battery and connects directly to cordless battery pack. Relay box is required for use with standard battery pack.

Wireless Control — Lets you operate the motor-equipped Nikon F just as space satellites are controlled from earth.

Relays your "fire" command to camera as far as 1/2 mile away. One wireless control can be used to operate one or two Nikon F cameras, individually or together.



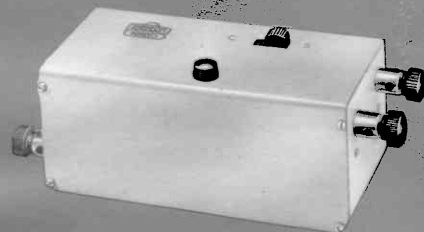
Bulk Film Loader — For rapid loading of special cassettes for Nikon F250 motor drive. Can be preset to stop automatically at any desired film length.

Accessories for use with standard battery pack only

30-foot Extension Cord — connects directly to battery pack for remote operation of motor-equipped Nikon F.

Relay Box — required for operating camera remotely by means of intervalometer, wireless control or manual switch.

AC Power Supply MA-1 — permits operation of motor-equipped Nikon SLR on 110 volt current, directly or through Intervalometer.



14. More Nikon F Accessories

Film Cassettes

All-metal, easy to load with standard bulk film. Cost is quickly defrayed by economy of bulk film. Can be loaded for fewer than 20 exposures. Cassettes are recommended for use with motor drive. Available in 36- and 250-exposure capacity, the latter for the 250-exposure motor drive only.

Cord System — for connecting various components of Nikon Motor Drive system. Includes 4 basic cords (3ft., 6ft., 15ft. and 30ft.) plus 5 adapter cords to fit specific application: Triggering Button, Alligator Clips, Twin Lugs, Mini Plug, and Banana Plugs. Detailed literature available upon request.

El Nikkor Enlarging Lenses

Finest optics for critical color and b&w enlarging. Unsurpassed for center-to-edge resolution, all-round correction and flatness of field. Available in 50mm f2.8, 50mm f4, 80mm f5.6, 105mm f5.6, 135mm f5.6, 150mm f5.6 & 210mm f5.6.



Optical Glas Filters

Made from one of the finest optical glass, precision ground, polished to plane parallel flatness, and chemically treated. Free from striations, bubbles, or other flaws which might deteriorate image quality. Available in yellow, green, red, orange, 80B, 80C, 81A, 82A, 85, 85B, skylight and UV haze, also neutral density ND4X and ND8X in 52mm screw-in mounts, each with case. Other sizes available at Nikon dealers.

Polarizing Filter

Screens out surface-reflected light without affecting color values. Oversized filter can be used with extreme wide angle lenses without vignetting. In rotating 52mm screw-in mount,* with case.

Sealed Glass Filters

For protection, 3, 5, 7, 8 filters to front of 1" filter holder. Sealed frame holds filter in place, eliminating need for rings or spacers. 20mm diameter rear lenses, 1.6mm (1/16") diameter front lenses, 1.6mm (1/16") diameter (filter includes lens hood).

52mm Adapter Ring

— Screw-in design, accepts standard Series 7 filters.*

Snap-on Lens Hoods and Front Lens Caps

Special design combines ease of "slip-ons" with secure holding power of screw-in units. Lens hoods are calculated for each focal length to give maximum protection without vignetting. Can be reversed on lens for compactness in carrying.

Rear Lens Cap and Body Caps

Protect and keep lenses and camera body dust-free when handled or stored separately.

Panorama Head AP-2

Mounts between camera and tripod for shooting series of photos that will join as panoramic picture covering up to 360°. Has click stops at 30° intervals, also permits continuous rotation. May be preset for 28, 35, 50, 85 and 105mm lenses but usable with all lenses 20 to 195mm. Built-in bubble level permits precise horizontal alignment.

* 52mm screw-in fits all lenses from 24 to 200mm (except 180mm f2.8)



Eveready Camera Cases

Model 478—black, lined with velveteen. Accepts Nikon F with standard Prism or Photomic Finder.

Model 476—Similar to 478 but semi-soft.

Model 473—Holds Nikon F with Prism Reflex Sportsfinder attached.

Model 480—For Nikon F or FTN with 43-86mm Zoom or 105mm f2.5 lens.

Deluxe Compartment Cases

Finest quality velveteen-lined cases with fitted compartments. Supplied with straps and non-slip shoulder pads.

FB 5—Holds camera with normal or W.A. lens, three additional lenses (to 300mm) in bayonet sockets, and accessories. Has

2 outside pockets. Opens away from wearer for easy access to contents.

FB 6—For two cameras with normal or W.A. lenses plus two other lenses (to 200mm) and accessories. Has zipper top and outside pocket.

FB 7—Holds two Nikon bodies with attached motor drives plus total of 3 lenses (to 200mm), spare batteries and accessories. Has zipper top and outside pocket.

FB 8—Opens away from wearer.

A accommodates 2 cameras with lenses, plus 3 extra lenses (to 300mm) in bayonet sockets. Two outer pockets.

FB 9—Multi-compartmented case for

camera and total of four lenses (to 200mm), extra finders, etc. Has zipper top and large outside pocket.

Model A—Compact multi-partition case for camera, total of 4 lenses (to 200mm) and accessories, all protected by foam-rubber cushioning. Full zipper closing.

Special folder describing Nikon Compartment cases available on request.

Lens Cases

Reinforced leather cases are available for most lenses. Rigid, transparent plastic cases are also available for 28, 35, 50, 105 and 135mm lenses. Flexible pouches are available to fit all lenses through 200mm.



Model 478



Model A



FB-9



FB-5

15. Nikon Electronic Flash System

Offers utmost precision and uncommon lighting flexibility. Provides not less than 95% output when ready-light glows. Choice of 4 interchangeable power sources, with recycling as fast as 1.5 seconds. System includes 2 ring lights for closeup and macro work, and ready-light eyepiece attachments for Nikon finders. Special descriptive folder available.

BC-7 Flash Unit – Ultra-compact, slips into shoe on Nikon F rewind assembly and makes direct contact with cordless synch

terminal on camera. Accessory PC synch cord and shoe adapter are available for use on other cameras. Accepts all-glass (AG-1) and miniature (M2/M5) flash-bulbs in change-over socket. Has tilting fan-fold reflector, bulb and circuit tester, bulb ejector and exposure guide. Supplied with case.

Flash Unit Coupler/Accessory Shoe

Provides standard accessory shoe for attaching flash units with standard shoe mounts. Not required with Nikon BC-7.



16. Speed Magny

Permit the use of Polaroid and other large-format films with Nikon F. The capacity to produce on-the-spot prints in color and black-and-white adds an exciting new dimension to the versatility of the Nikon F system.

Attaching a Speed Magny transforms the Nikon F into an unusually compact, large-format single lens reflex ($3\frac{1}{4} \times 4\frac{1}{4}$ with Speed Magny 100, and "RF" 4x5 with Speed Magny 45). Moreover, it retains such advantages as prism eyelevel focusing and viewing, auto-return mirror, auto-reopen diaphragm, thru-the-lens metering, and the use of Nikkor optics.

Speed Magny 100 accepts Polaroid $3\frac{1}{4} \times 4\frac{1}{4}$ film packs.

Speed Magny 45 uses holders for 4 x 5 Polaroid or conventional sheet films.

Speed Magny "RF" takes Polaroid $3\frac{1}{4} \times 4\frac{1}{4}$ roll film.

