

Nikon SLR Cameras

Nikon F2 • Nikon FM • Nikon EL2

- **Interchangeability of Nikon System Lenses**
more than 55, from 6mm to 2000mm.

- **Center-Weighted, Through-the-Lens Metering**, proven through literally millions of exposures as the most consistently accurate for through-the-lens exposure control.

- **High-Performance Automatic Firepower Capability**, through photography's largest system of Motor Drives and Auto Winders, each built for use with specific camera models.

- **All-Metal, Focal-Plane Shutters**, assuring accuracy and durability unattainable in other shutter types.

- **Uniquely Smooth, Responsive Handling** with the convenient 'Apollo' film transport lever which also activates the exposure meter, and the famed Nikon K' Type finder screen with 3-way focusing accuracy features patterned after Nikon cameras built for the U.S. space program

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The Nikon System for 35mm Photography



Nikon F2A Photomic

is the most advanced and most versatile of all Nikon cameras—indeed, of all 35mm cameras. It offers ready interchangeability of all components: viewfinders (including meter/finder systems), finder screens, motor drives, and camera backs, in addition to all lenses and countless accessories from the Nikon system.



Nikon EL2

assures correct exposures automatically, electronically, through any reflex-viewing Nikkor lens, accessory, or image-forming attachment. Equipped with the compact, cordless Nikon Auto Winder it also provides automatic film and shutter winding at rates to 2 frames per second. Its dual Silicon Photo Diode meter complements the fast-handling characteristics of this uniquely easy-to-use, high-performance Nikon.



Nikon FM

is the smallest and lightest of all Nikon-system cameras—yet an instrument of formidable capabilities, including high-speed motorized operation at rates to 3.5 frames per second. It offers an advanced dual Gallium Photo Diode meter with brilliant LED exposure readout, precise multiple-exposure capability, and many other, advanced features.

All specifications subject to change without notice.

Nikon F2 Cameras: An Introduction



The Nikon F2 is more than the finest of all 35mm cameras—it is the foundation of the entire Nikon System of 35mm photography—the world's largest. Through its uniquely modular concept and construction, it not only challenges but successfully defies obsolescence, permitting interchangeability of all basic components.

- **Interchangeable Nikkor and AI-Nikkor Lenses** more than 55 available, from 6mm to 2000mm
- **Interchangeable Viewfinders** including Standard Prism, Photomic through-the-lens meter/finders, with expanded sensitivity and automatic-exposure capability; Action Prism Finder; Waist-Level Finder, and 6X Focusing Finder
- **Interchangeable Finder Screens** 20 precision screens for every need
- **Interchangeable Nikon Motor Drive System** giving up to 5 exposures per second, requiring no modification, not even removal of camera back.
- **Interchangeable Backs** including 250- and 750-Exposure Magazines plus Speed Magny Attachments for Polaroid® and other large-format films.
- **Hundreds of Nikon accessories** for every requirement.

Through this ingenious, modular design, the Nikon photographer can, in effect, create an infinite number of picture-taking instruments attuned precisely to his specific needs—today *and* tomorrow.

There are three basic types of Nikon F2 camera/finder combinations.

- **Nikon F2 with Pentaprism Finder DE-1**, first choice of photographers employing separate exposure meters.
- **Nikon F2 Photomic and F2SB Photomic**, supplied with Photomic meter/finders DP-1 and DP-3, respectively, these offer full-aperture, center-weighted metering with all Nikkor lenses with meter-coupling shoe, including all AI-Nikkor lenses, the maximum aperture of the selected lens is indexed with a quick turn of the aperture ring.
- **Nikon F2A Photomic and F2AS Photomic**, supplied with Photomic DP-11 and DP-12 meter/finders (respectively) provide center-weighted full-aperture exposure control, automatic aperture indexing (AI) and through-the-finder Aperture Direct Reading (ADR) with all AI-Nikkor lenses. These most advanced F2 models also permit stop-down metering with non-AI lenses and, like other F2 models, accept all Nikkor SLR lenses from 6mm to 2000mm.

Significantly, any Nikon F2 camera can be converted to any other F2 model by simply substituting the appropriate finder—an example of true modular versatility unrivalled in all photography.

Nikon F2



Ultimate Precision and Versatility

Nucleus of the Nikon system, the Nikon F2 camera permits the photographer to choose the lens, viewfinder, finder screen, film magazine, even film transport and exposure control system appropriate to any assignment. Its fast-handling, responsive controls simplify every aspect of the picture-taking process. Each of its 1506 individual parts is engineered to quality standards that have made the name Nikon a universal symbol of optical and mechanical excellence.

Interchangeable Pentaprism Viewfinder

The DE-1 eye-level pentaprism finder supplied with the standard Nikon F2 is silver-coated for maximum brightness and contrast. It gives an upright, laterally-correct image at eye-level and incorporates a built-in ready light for connection with Nikon electronic flash units. Weighing only 3.2 ounces, this compact viewfinder is interchangeable with all other Nikon F2 cameras and accepts all Nikon Eyepiece Correction Lenses and other Nikon eyepiece attachments. Virtually 100% of the film image appears within any F2 viewfinder for the most accurate image control of any 35mm slr camera.

Titanium-Foil Focal-Plane Shutter

Exceptionally accurate, resistant to heat and humidity the Titanium-foil, horizontal-travel shutter is specially "quilted" for extra strength. Basic shutter speed range is 1 second—1/2000th second plus "B" with stepless, continuously variable speed selection from 1/80th second to 1/2000th. Additional shutter speeds of 2, 4, 6, 8, and 10 seconds (or any intermediate interval) are obtained via the built-in self timer. The shutter movement is ball-bearing mounted for ultimate accuracy and repeatability. Shutter curtains "scan" the film plane in just 10 milliseconds. The shutter is built to take the action of motor drive at up to 5 fps.

Oversize Instant-Return Mirror

Enlarged mirror eliminates finder image cut-off even with long telephoto lenses. Sophisticated damping mechanism virtually eliminates impact shock. Mirror may be locked up for special applications. Entire mirror chamber is effectively baffled and finished in matte material to prevent internal reflections.

Automatic Flash-Synch Adjustment

Setting shutter speed automatically adjusts for flash type in use. Electronic flash synch at all speeds to 1/80th second; FP synch from "B" and 1 to 1/30th and 1/125 to 1/2000th second. Special hot shoe provides cordless synch with Nikon-System flash units; automatic safety switch in shoe prevents electrical shock when unit is not in place. Single PC outlet accepts either Nikon screw-in or conventional PC cords.

Interchangeable Finder Screens

Standard Nikon Type K screen incorporates central split-image range-finder with microprism circle and overall matte/Fresnel groundglass for edge-to-edge brightness. Interchangeable with 20 optional Nikon screens.

Nikon F2

Short-Stroke Transport Lever

Large, plastic-tipped lever requires only 120° stroke, or any equivalent number of shorter strokes, to advance film, wind shutter and count exposure. Lever pivots on ball bearings for smoothest operation. Integral locking device prevents accidental shutter release before transport lever has completed its cycle.

Accurately-Registered Multiple Exposures

Simply by depressing the rewind button, then operating the film transport lever, the shutter may be recoiled, producing multiple exposures in precise registration. As many exposures as desired may be made on a single frame.

Multi-Function Self-Timer

Calibrated for delays of 2, 4, 6, 8, and 10 seconds. Alternatively with shutter set at "B" and shutter release fingerguard turned to "T" the self-timer produces accurate slow shutter speeds of these durations, or any intermediate times.

Easy Film Loading

The hinged back and multi-slotted take-up spool aid fast, error-free loading. Exposure counter automatically resets to "0" when camera back is opened. Rapid-rewind crank rises 6mm above camera top for unobstructed operation. A Film Memo Holder on the camera back accepts the film carton end tab for a practical reminder of film in use. A unique safety lock makes inadvertent back opening virtually impossible.

Superior Film Flatness

Film winds onto take-up spool emulsion-side-out for greatest tension. The large pressure plate, polished guide rails, and cassette stabilizer combine to assure exceptional film flatness for edge-to-edge sharpness.

Other Features

The fingerguard (around shutter release button) locks/unlocks shutter release, permits time exposures in the absence of a locking cable release, and also allows accurately-timed exposures of 2, 4, 6, 8, and 10 seconds (in conjunction with the self timer) according to the position selected. Depth-of-field preview is provided for focus check (or stop-down exposure measurement with Photomic meter/finder). Neckstrap eyelets are reinforced with stainless steel, and the camera lensmount is made of stainless steel for maximum durability and strength. The Nikon F2 camera accepts all Nikkor and AI-Nikkor lenses from 6mm to 2000mm. It is supplied in satin chrome (Product No. 1600) or professional black finish (Product No. 1605).

Technical Specifications

Camera Type: 35mm slr with interchangeable lenses, viewfinders, finder screens, film magazines and backs, and motor drives.

Lensmount: Stainless-steel Nikon bayonet accepts all Nikkor lenses 6mm-2000mm and all Nikon-mount accessories. Flange/film distance: 46.5mm. Automatic diaphragm coupling.

Exposure Control: Accepts optional Nikon Photomic meter/finder for through-the-lens metering.

Shutter: Titanium foil, horizontal-travel focal plane; speeds B, 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/80, 1/125, 1/250, 1/500, 1/1000, 1/2000th second via shutter speed dial and 2, 4, 6, 8, and 10 seconds at 'B' position, via self-timer. Speeds continuously variable from 2-10 seconds and 1/80-1/2000th second.

Flash Synchronization: "X" synch at "B" to 1/80th second; "FP" synch at B, 1 1/30th, and 1/125-1/2000th second; automatic synch adjustment as shutter speed is set.

Flash Contacts: Built-in Nikon F2 hot shoe with automatic safety switch; single PC outlet accepting Nikon screw-in or conventional PC cords.

Viewfinder: Interchangeable eye-level Pentaprism Finder DE-1 (supplied) with -1.0 diopter eyepiece and built-in ready light for Nikon electronic flash units. Virtually 100% finder coverage.

Focusing Screen: Nikon Type K Screen (supplied) with 3mm-diameter split-image rangefinder, 1mm micropism circle plus overall matte/Fresnel area, interchangeable with 20 other Nikon screens.

Reflex Mirror: Oversize instant-return type with independent locking control.

Film Loading: Multi-slotted take-up spool, hinged back and additive automatic-reset exposure counter for fast loading.

Film Transport: Ratchet-action lever advances film, winds shutter, and counts exposures in 120° action, may be left at "ready" position 20° from camera body or folded flush for storage.

Film Rewind: Rewind-release button on camera baseplate; fold-out rewind crank may be elevated up to 6mm for convenient access.

Multiple Exposure Control: By depressing rewind button while operating transport lever also operates with Nikon Motor Drive attached.

Battery Type: None required, camera accepts two 1.5v silver oxide batteries (Eveready S76 or equivalent) to power flash ready light or optional meter/finder.

Other Features: Depth-of-field preview; stainless steel reinforced neckstrap eyelets; built-in self timer with calibrated delays of 2, 4, 6, 8, and 10 seconds, also provides slow shutter speeds; fingerguard around shutter release button adjustable to lock or unlock shutter permits time exposures 2-10 seconds with self timer; film memo holder on camera back stores film carton end tab or other data.

Dimensions: Camera body with Pentaprism Finder DE-1 6.0" x 3.9" x 2.2" (152.5mm x 98mm x 56mm).

Weight: 25.8 oz. (730g).

Nikon F2A Photomic



- Optimum Handling Speed and Convenience
- Total Nikon System Versatility

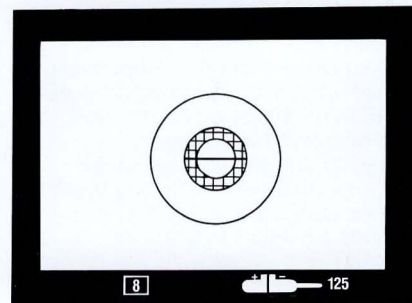
The Nikon F2A Photomic combines the proven reliability of the essential F2 camera with the advanced F2A Photomic Meter/Finder DP-11 for a new level of professional operating speed attuned to today's most challenging requirements. It permits the fullest utilization of the newest AI-Nikkor lenses, while accepting all other Nikkor lenses as well. The latest model of the camera selected by an overwhelming majority of professional photographers, the Nikon F2A Photomic again validates the Nikon premise of excellence through innovation...

Split-Second Lens Interchange...

With the Nikon F2A Photomic, the photographer need only attach the selected AI-Nikkor lens with a quick quarter turn, and the meter/finder is *automatically* programmed for maximum-aperture operation. This Automatic Indexing (AI) feature makes lens interchangeability faster and error-free with all AI-Nikkor lenses from 6mm to 600mm.

...With Direct Aperture Reading

With any AI-Nikkor lens, the selected aperture is reflected from the lens barrel directly into the viewfinder of the F2A Photomic through the ingenious Aperture Direct Reading (ADR) system. In addition, all other exposure information appears in the F2A finder, including the precise shutter speed in use, meter needle, and over/under-exposure indicators. Exposure can also be checked in a window on the finder top showing meter needle and reference marks.



Center-Weighted, Full-Aperture Metering

The sensitive CdS meter of the Nikon F2A Photomic provides full-aperture metering with all AI-Nikkor lenses. Stop-down exposure measurement (equally accurate) is used with non-AI lenses, specialized optics such as Reflex and PC-Nikkors, and accessories such as bellows units, microscopes, and telescopes. (Most non-AI Auto-Nikkor lenses can be converted for full-aperture AI operation; please see "Nikkor Lens AI-Conversion" page in *Nikkor Lens* catalog section for complete details.) Through the Nikon center-weighted system, the meter's CdS cells observe the entire image area, while concentrating more than half of their sensitivity on a central 12mm area, clearly defined by a circle in the finder, to provide consistently excellent exposures under the broadest range of lighting conditions. The meter, powered by two 1.5v silver oxide batteries in the camera baseplate, is activated by moving the film transport lever to "ready" position 20° from the camera body.

Nikon F2A Photomic

Fast, Error-Free Operation

For a correctly-exposed photograph with the Nikon F2A Photomic and AI-Nikkor lens, the photographer need only activate the meter via the film transport lever, adjust lens aperture or shutter speed until the meter needle is centered, and press the shutter release! Both shutter and aperture are cross-coupled to the meter system, and the full information display—shutter speed and selected aperture—in the finder makes it unnecessary for the photographer to remove his eye to check settings. an invaluable advantage in news, action, and candid photography.

Plus, All Other Nikon F2 Features:

- *Titanium-foil-curtain focal-plane shutter* with speeds 10 seconds–1/2000th second.
- *Automatic flash synch adjustment* with "X" synch at "B," 1–1/80th second; "FP" synch at "B," 1–1/30 and 1/125–1/2000th second.
- *Oversize, instant-return mirror* with independent lock.
- *Short-stroke film transport* with plastic-tipped, ratchet-action lever.
- *Precise multiple-exposure control* by depressing rewind button while operating film-transport lever; also operates with Nikon Motor Drive attached.
- *Fast loading and unloading* with hinged, detachable back and multi-slot take-up spool.
- *Superior film flatness* via 5-point flattening system with extra-large pressure plate and cassette stabilizer. Film winds emulsion-side-out for optimum tension.
- *Built-in self-timer* for either timed delays or long exposures of 2, 4, 6, 8, and 10 seconds or any intermediate time.
- *Plus, depth-of-field preview, fingerguard* for shutter lock and time exposures, *stainless-steel reinforced neckstrap eyelets, stainless steel lensmount, film memo holder.*
- *Accepts all Nikon F2 interchangeable finders, finder screens, motor drive systems, and film backs* without modification.*

The Nikon F2A Photomic camera body is supplied in satin chrome (Product No. 1670) or professional black finish (Product No. 1673).

*Except data backs

Technical Specifications

Camera Type: 35mm slr with through-the-lens CdS metering via Photomic Meter/Finder DP-11 (supplied), interchangeable lenses, viewfinders, finder screens, film magazines and backs, and motor drives.

Lensmount: Stainless steel Nikon bayonet accepts all Nikkor lenses 6mm–2000mm and all Nikon-mount accessories. Flange/film distance: 46.5mm. Automatic diaphragm coupling.

Exposure Control Through-the-lens, match-needle readout with aperture or shutter priority, with Nikon F2A Photomic DP-11 Meter/Finder (supplied).

Meter System CdS cells concentrate 60% of sensitivity on central 12mm area shown by circle in finder; operates at full aperture with all AI-Nikkor lenses; stop-down measurement with non-AI lenses, attachments, or instruments. Automatic maximum aperture indexing with all AI-Nikkor lenses.

Meter Ranges: ASA 6–6400; EV 1 to 17 (with ASA 100 film and f1.4 lens). Full-aperture coupling range: f1.2–f32.

Shutter: Titanium foil, horizontal-travel, focal plane; speeds "B," 1 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/80, 1/125, 1/250, 1/500, 1/1000, and 1/2000th second via shutter speed dial and 2, 4, 6, 8, and 10 seconds at "B" position, via self-timer. Speeds continuously variable from 2–10 seconds and 1/80–1/2000th second.

Flash Synchronization "X" synch at "B" to 1/80th second; "FP" synch at "B," 1–1/30th and 1/125–1/2000th second; automatic synch adjustment as shutter speed is set.

Flash Contacts: Built-in Nikon F2 hot shoe with automatic safety switch; single PC outlet accepting Nikon screw-in or conventional PC cords.

Viewfinder: Interchangeable eye-level pentaprism Photomic Meter/Finder DP-11 with –1.0 diopter correction and built-in ready light for Nikon electronic flash units; information display includes meter needle, under/over-exposure indicators, shutter speed in use, and selected lens aperture with all AI-Nikkor lenses through Nikon Direct Reading (ADR) system. Window on finder top shows meter needle and reference mark, permits exposure check from above. Virtually 100% finder coverage.

Focusing Screen Nikon Type K Screen (supplied) with 3mm-diameter split-image rangefinder, 1mm microprism circle plus overall matte Fresnel area, interchangeable with 20 other Nikon screens.

Reflex Mirror: Oversize instant-return type with independent locking control.

Film Loading Multi-slotted take-up spool, hinged back and additive automatic-reset exposure counter for fast loading.

Film Transport: Ratchet-action lever advances film, winds shutter, switches meter on, and counts exposures in 120° action, may be left at "ready" position 20° from camera body to activate meter; when folded flush, lever turns meter off.

Film Rewind: Rewind-release button on camera baseplate; fold-out rewind crank may be elevated up to 6mm for convenient access.

Multiple-Exposure Control By depressing rewind button while operating transport lever; also operates with Nikon Motor Drive attached.

Battery Type: Two 1.5v silver oxide batteries (Eveready S76 or equivalent) power meter. Battery tester built into Photomic finder.

Other Features: Depth-of-field preview; stainless steel reinforced neckstrap eyelets; built-in self timer with calibrated delays of 2, 4, 6, 8, and 10 seconds, also provides slow shutter speeds; fingerguard around shutter release button adjustable to lock or unlock shutter; permit time exposures or exposures 2–10 seconds with self timer; memo holder on camera back stores film carton tab or other data.

Dimensions Camera body with F2A Photomic Finder DP-11 6.0" x 4.0" x 2.6" (152.5mm x 102mm x 65.5mm)

Weight: 29.3 oz. (830g)

All specifications subject to change without notice.

Nikon F2AS Photomic



- **Ultra-Sensitive Silicon Photo Diode Meter**
- **Quick, Comfortable Handling**
- **Automatic Exposure Provision**
- **Total System Capabilities**

Every element of the Nikon F2AS Photomic blends together towards one goal: photographs of a range, diversity, and excellence unrivalled in all photography. It combines the legendary Nikon F2 camera—overwhelmingly selected by professionals everywhere—with the latest F2AS Photomic Meter/Finder DP-12 for unprecedented response speed and wide-ranging accuracy. And, with its seemingly endless array of instantly-interchangeable accessories—finders, finder screens, film backs, and motor drive systems—the Nikon F2AS lets you master any challenge, explore any dimension, in all the world of photography.

State-Of-The-Art Advances

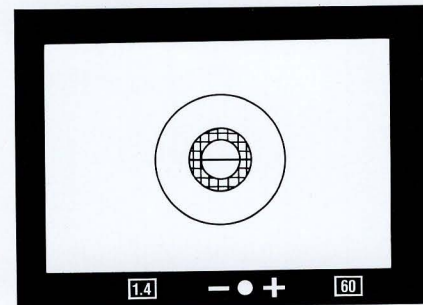
This most sophisticated of Nikon F2 cameras embodies many innovative features for ultimate handling ease and highly accurate operation. The maximum aperture of any AI-Nikkor lens is automatically indexed as you attach the lens with a quick quarter turn. The F2AS Photomic meter operates with the AI-Nikkor lens at its full aperture, so the finder image is always at its brightest; stop-down exposure measurement is also provided for through-the-lens metering with non-AI lenses, non-coupled or special-purpose lenses such as Reflex and PC-Nikkors, and attachments such as Nikon bellows units, telescopes, or microscopes. (Most non-AI Auto-Nikkor lenses can be converted for full-aperture, AI-compatible operation as detailed in the catalog page "Nikkor Lens AI-Conversion" in *Nikkor Lens* catalog section.) And, the selected aperture of all AI-Nikkor lenses is reflected into the viewfinder via the Nikon Aperture Direct Reading (ADR) system for full visual control at eye-level.

SPD Meter System with LED Readout

The Silicon Photo Diode meter (DP-12) provides center-weighted exposure measurement of remarkable sensitivity: EV -2 to +17 from *eight seconds* at f1.4 to 1/2000th second at f8 with ASA 100 film. A brilliant sequential LED display indicates optimum exposure, *plus* four levels of under-and-over-exposure in these gradations:

— ● +	Overexposure by more than 1 f-stop
— ● +	Overexposure by 1/5 to 1 f-stop
— ● +	Correct Exposure
— ● +	Underexposure by 1/5 to 1 f-stop
— ● +	Underexposure by more than 1 f-stop

This advanced meter readout system simplifies such professional exposure techniques as "bracketing" without removing the camera from the eye or adjusting the ASA film speed. And, the solid-state meter mechanism is extremely durable and shock-resistant—a vital consideration in motor-drive photography. In addition to the lens aperture, the selected shutter speed (from 1/2000th sec. to B) is shown. An external LED readout on the finder top permits exposure check or adjustment without looking through the finder, and an eyepiece shutter is built in to shield the meter from stray light when the external LED readout is used or when the camera is used in automated, remote operation.



Nikon F2AS Photomic

Shutter-Priority Automatic Exposure Control

To transform the Nikon F2AS into a completely automatic exposure camera, you need only slide on the cordless, self-powered EE Aperture Control DS-12; this compact servo unit automatically sets any AI-Nikkor lens to the lens aperture signalled by the camera's meter. By adding a Nikon motor drive, 250-exposure or 750-exposure film back, Intervalometer, and Modulite remote control unit, the photographer can enjoy completely automated, unmanned photography for extended periods, without adjustment. The EE Aperture Control module powers its self-contained servo motor by an interchangeable nicad battery DN-1 or with the accessory AC/DC Converter MA-4, can operate on standard household AC. Also DB-1 Cell Pack which accepts 4-C-cells.

Plus, All Other Nikon F2 Features:

- *Titanium-foil-curtain, focal-plane shutter* with speeds 10 seconds—1/2000th second.
- *Automatic flash synch adjustment* with "X" synch at "B," 1—1/80th second; "FP" synch at "B," 1—1/30 and 1/125—1/2000th second.
- *Oversize, instant-return mirror* with independent lock.
- *Short-stroke film transport* with plastic-tipped, ratchet-action lever.
- *Precise multiple-exposure control* by depressing rewind button while operating transport lever: also operates with Nikon Motor Drive attached.
- *Fast loading and unloading* with hinged, detachable back and multi-slot take-up spool.
- *Superior film flatness* via 5-point flattening system with extra-large pressure plate and cassette stabilizer. Film winds emulsion-side-out for optimum tension.
- *Built-in self timer* for either timed delays or long exposures of 2, 4, 6, 8, and 10 seconds or any intermediate time.
- *Plus, depth-of-field preview, fingerguard* for shutter lock and time exposures, *stainless-steel reinforced neckstrap eyelets, stainless steel lensmount, film memo holder.*
- *Accepts all Nikon F2 interchangeable finders, finder screens, motor drive systems, and film backs without modification.**

The Nikon F2AS Photomic camera body is supplied in satin chrome (Product No. 1675) or professional black finish (Product No. 1678).

*Except data backs

Technical Specifications

Camera Type: 35mm slr with through-the-lens Silicon Photo Diode metering, interchangeable lenses, viewfinders, finder screens, film magazines and backs, and motor drives.

Lensmount: Stainless steel Nikon bayonet accepts all Nikkor lenses 6mm—2000mm and all Nikon-mount accessories. Flange/film distance 46.5mm. Automatic diaphragm coupling.

Exposure Control Through-the-lens, LED-readout with aperture or shutter priority, with Nikon F2AS Photomic DP-12 Meter/Finder (supplied).

Meter System Silicon Photo Diode (SPD) cells concentrate more than half of their sensitivity on central 12mm area shown by circle in finder operates at full aperture with all AI-Nikkor lenses; stopdown measurement with non-AI lenses, attachments, or instruments. Automatic maximum-aperture indexing with all AI-Nikkor lenses.

Meter Ranges: ASA 12—6400; EV -2 to +17 (with ASA 100 film and f1.4 lens). Full-aperture coupling range: f1.2—f32.

Shutter: Titanium foil, horizontal-travel, focal plane; speeds "B," 1 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/80, 1/125, 1/250, 1/500, 1/1000, and 1/2000th second via shutter speed dial and 2, 4, 6, 8, and 10 seconds at "B" position, via self-timer. Speeds continuously variable from 2—10 seconds and 1/80—1/2000th second.

Flash Synchronization: "X" synch at "B" to 1/80 second; "FP" synch at "B," 1—1/30th and 1/125—1/2000th second; automatic synch adjustment as shutter speed is set.

Flash Contacts: Built-in Nikon F2 hot shoe with automatic safety switch; single PC outlet accepting Nikon screw-in or conventional PC cords.

Viewfinder: Interchangeable eye-level pentaprism Photomic Meter/Finder DP-12 (supplied) with -1.0 diopter eyepiece and built-in ready-light for Nikon electronic flash units; information display includes 5-stage LED readout with under/over-exposure indicators, shutter speed in use, and selected lens aperture with all AI-Nikkor lenses through Nikon Direct Reading (ADR) system. LED window on finder top permits exposure check from above. Virtually 100% finder coverage.

Focusing Screen: Nikon Type K Screen (supplied) with 3mm-diameter split-image rangefinder, 1mm microprism circle plus overall matte Fresnel area, interchangeable with 20 other Nikon screens.

Reflex Mirror: Oversize instant-return type with independent locking control.

Film Loading: Multi-slotted take-up spool, hinged back and additive automatic-reset exposure counter for fast loading.

Film Transport: Ratchet-action lever advances film, winds shutter, switches meter on, and counts exposures in 120° action, may be left at "ready" position 20° from camera body, to activate meter: when folded flush, lever turns meter off

Film Rewind Rewind-release button on camera baseplate; fold-out rewind crank may be elevated up to 6mm for convenient access.

Multiple Exposure Control: By depressing rewind button while operating transport lever: also operates with Nikon Motor Drive attached.

Battery Type: Two 1.5v silver oxide batteries (Eveready S76 or equivalent) power meter. Battery tester built into Photomic finder

Other Features: Depth-of-field preview: stainless steel reinforced neckstrap eyelets; built-in self-timer with calibrated delays of 2, 4, 6, 8, and 10 seconds, also provides slow shutter speeds; fingerguard around shutter release button adjustable to lock or unlock shutter, permit time exposure or exposures 2—10 seconds with self-timer: memo holder on camera back stores film carton tab or other data.

Dimensions: Camera body with F2AS Photomic Finder DP-12, 6.0" x 4.0" x 2.5" (152.5mm x 102mm x 64.5mm).

Weight: 29.6 oz. (840g)

All specifications subject to change without notice.

Nikon F2 Photomic



Center-Weighted Through-The-Lens Metering Broadens Nikon System Capability

The Nikon F2 Photomic adds an important dimension to the capabilities of the basic Nikon F2 camera: accurate, one-step, through-the-lens exposure metering. Aperture and shutter speed information are displayed in the bright silver-coated prism viewfinder. And, all the versatility of the essential camera is retained, including ready interchangeability of viewfinders, finder screens, lenses, camera backs and motor drives.

Center-Weighted Metering

The CdS sensor cells within the Photomic DP-1 finder cover the full image area but concentrate more than half of their sensitivity on the central 12mm-diameter area shown by a circle on the focusing screen. This system, designed by Nikon, is acknowledged to be the most consistently reliable for through-the-lens exposure control under the widest variety of lighting conditions. It operates accurately with camera in vertical or horizontal position, and regardless of the type of lens used.

...At Full Aperture

Metering is done at full aperture with all Nikkor lenses with meter-coupling shoe, including all AI-Nikkors. Stop-down metering (equally accurate) is used with non-coupled lenses or accessories such as extension rings, bellows units, microscopes and telescopes.

...Activated by Transport Lever

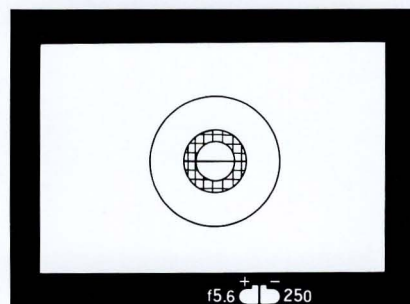
Bringing the film transport lever to "ready" position 20° from the camera body automatically activates the meter: when the transport lever is folded flush with the camera body, the meter is turned off. Power is supplied by two 1.5v silver-oxide batteries housed in the camera baseplate. By pressing the test button on the finder, battery condition can be checked at any time, using either the needle in the finder or that in the external window as a reference.

Wide Sensitivity Range

The specially selected dual CdS cell system gives accurate measurement over a range from EV 1 to 17 (1 sec. at f1.4—1/2000th sec. at f8) with ASA 100 film. ASA range is 6—6400.

Complete Exposure Information in Finder

Within the Photomic Meter/Finder DP-1 the photographer sees the meter needle and reference mark as well as the lens aperture and shutter speed in use. Meter needle and reference also are shown in a window on the finder top—a valuable aid in low-angle or candid photography, or when the camera is held overhead (upside down) or mounted on a copystand.



Nikon F2 Photomic

Shutter or Aperture Priority

The F2 Photomic is cross-coupled to both aperture and shutter speed controls; either may be adjusted to center the needle for correct exposure. The continuously variable shutter speeds from 1/80th to 1/2000th second are particularly helpful in obtaining accurate exposure settings, especially with Reflex Nikkor lenses, microscopes, or other instruments without lens diaphragms.

Built-In Flash Ready-Light

Activated by accessory Ready Light Adapter SC-4, which connects to compatible Nikon electronic flash units.

Plus, All Other Nikon F2 Features:

- **Titanium-foil-curtain focal plane shutter** with speeds 10 seconds—1/2000th second.
- **Automatic flash synch adjustment** with "X" synch at "B", 1—1/80th second; "FP" synch at "B" 1—1/30 and 1/125—1/2000th second.
- **Oversize, instant-return mirror** with independent lock.
- **Short-stroke film transport** with plastic-tip-cushioned, ratchet-action lever
- **Precise multiple-exposure control** by depressing rewind button while operating transport lever; also operates with Nikon Motor Drive attached.
- **Fast loading and unloading** with hinged, detachable back and multi-slot take-up spool.
- **Superior film flatness** via 5-point flattening system with extra-large pressure plate, long guide rails, anti-bellying roller, emulsion-side-out winding onto take-up spool, and cassette stabilizer
- **Dual-function self-timer** for either delayed shutter release after 2, 4, 6, 8, or 10 seconds or long exposures of same durations.

Plus depth-of-field preview, fingerguard for shutter lock and time exposures, stainless-steel reinforced neckstrap eyelets, stainless steel lensmount, film memo holder

Accepts all Nikon F2 interchangeable finders, finder screens, motor drive systems, and film backs without modification.*

Nikon F2 Photomic camera body is supplied in either satin chrome (Product No. 1650) or professional black finish (Product No. 1653).

*Except data backs

Technical Specifications

Camera Type: 35mm slr with through-the-lens CdS metering, interchangeable lenses, viewfinders, finder screens, film magazines and backs, and motor drives.

Lensmount: Stainless steel Nikon bayonet accepts all Nikkor lenses 6mm—2000mm and all Nikon-mount accessories. Flange/film distance: 46.5mm. Automatic diaphragm coupling.

Exposure Control Through-the-lens, match-needle readout with aperture or shutter priority, with Nikon F2 Photomic DP-1 Meter/Finder (supplied).

Meter System Center-weighted CdS meter concentrates more than half of its sensitivity on central 12mm area shown by circle in finder; operates at full aperture with all Nikkor lenses with meter-coupling shoe (including all AI-Nikkors); stop-down measurement with non-coupled lenses, attachments, or instruments.

Meter Ranges: ASA 6—6400; EV 1 to 17 (with ASA 100 film and f1.4 lens). Full-aperture coupling range: f1.2—f32.

Shutter: Titanium foil curtain, horizontal-travel, focal plane; speeds "B" 1 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/80, 1/125, 1/500, 1/1000, and 1/2000th second via shutter speed dial, and 2, 4, 6, 8, and 10 seconds via self-timer, with dial at "B" position. Speeds continuously variable from 2—10 seconds and 1/80—1/2000th second.

Flash Synchronization "X" synch at "B" to 1/80th second; "FP" synch at "B" 1—1/30th and 1/125—1/2000th second automatic synch adjustment as shutter speed is set.

Flash Contacts: Built-in Nikon F2 hot shoe with automatic safety switch; single PC outlet accepting Nikon screw-on or conventional PC cords.

Viewfinder: Interchangeable eye-level pentaprism DP-1 Photomic Meter/Finder supplied with -1.0 diopter eyepiece and built-in ready light for Nikon electronic flash units, information display includes meter needle, under/over-exposure indicators, shutter speed in use, and selected lens aperture. Window on finder top shows needle and reference mark, permitting exposure check from above. Virtually 100% finder coverage.

Focusing Screen Nikon Type K Screen (supplied) with 3mm-diameter split-image rangefinder 1mm micropism circle plus overall matte Fresnel area; interchangeable with 20 other Nikon screens.

Reflex Mirror: Oversize, instant-return type with independent locking control.

Film Loading Multi-slotted take-up spool, hinged back and additive automatic-reset exposure counter for fast loading.

Film Transport: Ratchet-action lever advances film, winds shutter, switches meter on, and counts exposures in 120° action, may be left at "ready" position 20° from camera body to activate meter: when folded flush, lever turns meter off

Film Rewind: Rewind-release button on camera baseplate; fold-out rewind crank may be elevated up to 6mm for convenient access.

Multiple Exposure Control By depressing rewind button while operating transport lever: also operates with Nikon Motor Drive attached.

Battery Type: Two 1.5v silver oxide batteries (Eveready S76 or equivalent) power meter Battery tester built into Photomic finder.

Other Features: Depth-of-field preview: stainless steel reinforced neckstrap eyelets; built-in self-timer with calibrated delays of 2, 4, 6, 8, and 10 seconds, also provides slow shutter speeds; fingerguard around shutter release button adjustable to lock or unlock shutter permit time exposures or 2 to 10 second exposures with self timer; film memo holder on camera back stores film carton tab or other data.

Dimensions. Camera body with Photomic F2 Finder DP-1 6.0" x 4.0" x 2.6" (152.5mm x 102mm x 65mm).

Weight: 29.6 oz. (840g)

All specifications subject to change without notice.

Nikon F2SB Photomic



- **Extended Sensitivity in Through-The-Lens Metering**
- **Automatic Exposure Control Capability**
- **Total Nikon System Versatility**

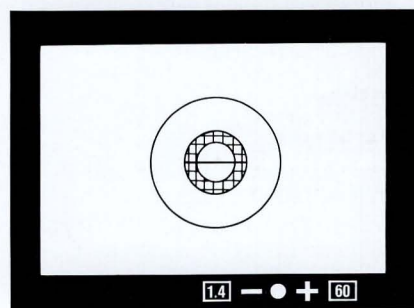
The Nikon F2SB Photomic combines the basic F2 camera body with the Silicon Photo Diode DP-3 Photomic Meter/Finder, which offers an exceptionally wide sensitivity range: EV -2 to +17 (more than 500,000:1, without any booster accessory!). Brilliant LED meter readout plus illuminated shutter and aperture displays are easily visible in viewfinder in even the dimmest light—including accurate time exposures from 2 to 10 seconds, obtained by means of the Nikon F2 dual-purpose self-timer. In addition to this, the Nikon F2SB adds exciting new capabilities in conjunction with the accessory EE Aperture Control DS-2 which provides fully automatic exposure control with all Auto-Nikkor lenses with meter-coupling shoe (including all AI-Nikkor lenses).

Solid-State LED Readout

The Nikon F2SB Photomic incorporates an always-bright LED exposure readout system in place of the conventional needle and index mark. Either the shutter speed dial or aperture ring can be adjusted until the desired exposure setting is reached, according to this sequence:

— ● +	Overexposure by more than 1 f-stop
— ● +	Overexposure by 1/5 to 1 f-stop
— ● +	Correct Exposure
— ● +	Underexposure by 1/5 to 1 f-stop
— ● +	Underexposure by more than 1 f-stop

Through this unique system, exposure techniques such as "bracketing" are immensely simplified, without any need to remove the camera from the eye or re-set film speeds. The solid-state meter circuitry is exceptionally shock-resistant and stable despite wide variations in temperature, humidity, or other factors.



Exposure Check Through Finder and From Above

The complete information display in the F2SB Photomic finder includes 5-stage meter readout, plus lens aperture and shutter speed in use. A built-in illuminator makes aperture and shutter settings easy to read, even in low light. Exposure also can be checked in an LED window on top of the finder; this valuable secondary readout facilitates operation when the camera is on a copystand or at a low level, or held overhead (upside down). An eyepiece shutter is built in, shielding the meter cells from extraneous light when the photographer's eye is not at the finder eyepiece; this feature also insures excellent metering accuracy in unmanned and remote-control applications with the accessory EE Aperture Control Unit or when stop-down metering is used for bellows or other applications.

Center-Weighted Full-Aperture Measurement

Nikon F2SB uses the Nikon center-weighted metering system, in which the meter responds to the entire image area but concentrates more than half of its sensitivity on the central 12mm area, outlined by a circle on the finder screen. Measurement is made at full aperture with all Auto-Nikkor lenses (including all AI-Nikkor lenses). Stop-down measurement is used with non-coupled lenses or accessories including

Nikon F2SB Photomic

bellows units, extension rings, microscopes and telescopes; in these applications the greatly expanded sensitivity of the F2SB Silicon Photo Diode meter is a welcome aid. The meter switch is activated by the film transport lever: no separate operation is required.

EE Aperture Control Unit

The accessory EE Aperture Control Unit DS-2 slides easily onto the Nikon F2SB and transforms it into a fully-automatic-exposure camera. It contains a powerful servo-motor which receives exposure information from the meter and adjusts the lens aperture ring *automatically* for correct exposure. No connecting cords are involved, and no modification of lens, camera, or finder is necessary. The EE Aperture Control Unit couples for automatic operation with any Nikkor lens with meter-coupling shoe. Powered by a self-contained, rechargeable nickel-cadmium battery DN-1 the Aperture Control unit can also operate on household current, using the accessory AC/DC Converter MA-4.

Equipped with EE Aperture Control Unit and Motor Drive, the Nikon F2SB Photomic offers unparalleled facilities for in-hand and remote-control photography. To this may be added a 250- or 750-Exposure Magazine Back and Intervalometer providing accurate, fully automatic sequence photography at intervals of up to 8 minutes between exposures—even completely unmanned operation for periods of several hours!

Plus, All Other Nikon F2 Features:

- *Titanium-foil-curtain focal-plane shutter* with speeds 10 seconds—1/2000th second.
- *Automatic flash synch adjustment* with "X" synch at "B" and 1—1/80th second "FP" synch at "B" 1—1/30 and 1/125—1/2000th second.
- *Oversize, instant-return mirror* with independent lock.
- *Short-stroke film transport* with plastic-tipped, ratchet-action lever: also activates meter switch.
- *Precise multiple-exposure control* by depressing rewind button while operating transport lever: also operates with Nikon Motor Drive attached.
- *Fast loading and unloading* with hinged, detachable back and multi-slot take-up spool.
- *Superior film flatness* via 5-point flattening system with cassette stabilizer oversize pressure plate, extra long guide rails, anti-bellying roller, and emulsion-side-out winding on take-up spool.
- *Dual-function self-timer* for delayed shutter release after 2, 4, 6, 8, or 10 seconds, and for long exposures of same durations.
- *Plus depth-of-field preview*, fingerguard for shutter lock and time exposures, stainless-steel reinforced neckstrap eyelets, stainless steel lensmount, film memo holder.
- *Accepts all Nikon F2 interchangeable finders*, finder screens, motor drive systems, and film backs without modification.

Nikon F2SB Photomic camera body is supplied in satin chrome (Product No. 1655) or professional black finish (Product No. 1656).

Technical Specifications

Camera Type: 35mm slr with through-the-lens dual Silicon Photo Diode metering, interchangeable lenses, viewfinders, finder screens, film magazines and backs, and motor drives.

Lensmount: Stainless steel Nikon bayonet accepts all Nikkor and AI-Nikkor lenses 6mm—2000mm and all Nikon-mount accessories. Flange/film distance: 46.5mm. Automatic diaphragm coupling.

Exposure Control Through-the-lens, LED-readout with aperture or shutter priority, with Nikon F2SB Photomic DP-3 Meter/Finder (supplied).

Meter System Silicon Photo Diode (SPD) cells concentrate more than half of their sensitivity on central 12mm area shown by circle in finder: operates at full aperture with all Nikkor lenses with meter-coupling shoe (including all AI-Nikkors); stop-down measurement with non-coupled lenses, attachments, or instruments.

Meter Ranges: ASA 12—6400; EV -2 to +17 (with ASA 100 film and f1.4 lens). Full-aperture coupling range: f1.2—f32.

Shutter: Titanium-foil curtain, horizontal-travel, focal plane; speeds "B", 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/80, 1/125, 1/250, 1/500, 1/1000, and 1/2000th second via shutter speed dial and 2, 4, 6, 8, and 10 seconds at "B" position, via self-timer. Speeds continuously variable from 2—10 seconds and 1/80—1/2000th second.

Flash Synchronization: "X" synch at "B" to 1/80th second; "FP" synch at "B" 1—1/30th and 1/125—1/2000th second; automatic synch adjustment as shutter speed is set.

Flash Contacts. Built-in Nikon F2 hot shoe with automatic safety switch single PC outlet accepting Nikon screw-on or conventional PC cords.

Viewfinder: Interchangeable eye-level pentaprism Meter/Finder DP-3 with -1.0 diopter eyepiece and built-in ready-light for Nikon electronic flash units; information display includes 5-stage LED readout with under/over-exposure indicators, shutter speed in use, and selected lens aperture. Window on finder top shows meter LED, permits exposure check from above; built-in aperture/shutter illuminator and eyepiece shutter. Virtually 100% finder coverage.

Focusing Screen Nikon Type K Screen (supplied) with 3mm-diameter split-image rangefinder 1mm micropism circle plus overall matte Fresnel area, interchangeable with 20 other Nikon screens.

Reflex Mirror: Oversize, instant-return type with independent locking control.

Film Loading Multi-slotted take-up spool, hinged back and additive automatic-reset exposure counter for fast loading.

Film Transport: Ratchet-action lever advances film, winds shutter, switches meter on, and counts exposures in 120° action, may be left at "ready" position 20° from camera body to activate meter; when folded flush, lever turns meter off.

Film Rewind Rewind-release button on camera baseplate; fold-out rewind crank may be elevated up to 6mm for convenient access.

Multiple Exposure Control by depressing rewind button while operating transport lever: also operates with Nikon Motor Drive attached.

Battery Type: Two 1.5v silver oxide batteries (Eveready S76 or equivalent) power meter. Battery tester built into Photomic finder.

Other Features: Depth-of-field preview: stainless steel reinforced neckstrap eyelets; built-in self timer with calibrated delays of 2, 4, 6, 8, and 10 seconds, also provides slow shutter speeds; fingerguard around shutter release button adjustable to lock or unlock shutter permit time exposures or exposures 2—10 seconds with self-timer: memo holder on camera back stores film carton tab or other data.

Dimensions. Camera body with F2SB Photomic Finder DP-3, 6.0" x 4.0" x 2.6" (152.5mm x 102mm x 65mm).

Weight: 30.0 oz. (850g).

Nikon F2H



Nikon F2H Camera and MD-100 Motor Drive for motorized photography to 10 f.p.s.

This specially-designed edition of the Nikon F2 and its matched motor drive permit single or continuous exposures as fast as 10 f.p.s.—the fastest rate ever achieved in a conventional style 35mm slr camera. The camera's multi-coated, non-moving mirror provides continuous image visibility at all speeds—a decisive advantage in professional sports, wildlife, surveillance, industrial, and scientific applications.

Nikon F2H Camera

The Nikon F2H camera incorporates several special features differing from the standard Nikon F2. The stationary reflex mirror eliminates image cutoff in the finder with even the longest Nikkor Tele, Reflex, and Zoom lenses. Multi-coated for extra efficiency, the mirror transmits approximately 65% of the light to the film plane, reflecting the balance to the Nikon pentaprism finder DE-1 (itself silver-coated for maximum brightness). The non-interchangeable Nikon Type 'B' screen with 12mm fine ground glass spot permits quick, precise focusing with the long lenses of moderate speed most often selected for motorized action coverage.

In normal use, the Nikon F2H maintains the lens diaphragm at taking apertures, a special 'preview' button permits full-aperture focusing and framing. Like the Nikon F2, the F2H contains a horizontal focal-plane shutter made of quilted titanium for maximum strength and reliability, but with speeds from 1/1000th to 1 sec. Speeds are continuously adjustable from 1/80th sec. to the fastest, a special advantage with Reflex Nikkor lenses, which have no variable diaphragm.

The Nikon F2H body is reinforced with titanium metal in many internal areas, also, many outer surfaces are made of this virtually indestructible material for ultimate ruggedness and durability. The F2H exterior is finished with a crinkle-finish black epoxy paint. While engineered especially for motorized use, it is equipped with Apollo-type 120° ratchet advance lever and film rewind crank and permits multiple exposures in precise registration, with or without the motor drive. Designed exclusively for use with standard 35mm film cassettes, the Nikon F2H accepts all reflex-viewing Nikkor lenses from 6mm through 2000mm as well as all Nikon F2A and F2AS viewfinders and most F2 accessories.

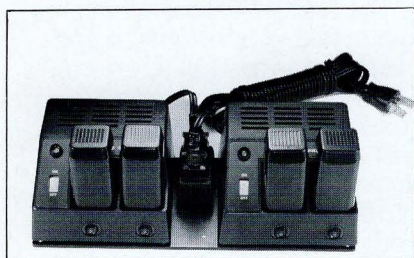
The F2H may also be used without motor drive as a conventional manually-operated camera.



Nikon F2H

Nikon MD-100 Motor Drive

The Nikon MD-100 motor drive is designed specifically for the Nikon F2H and supplied with the camera. Its anatomical grip contains a 3-way mode selector with 'continuous', 'single', and 'lock' settings. Five continuous firing speeds permit operation from 10 f.p.s. (at shutter speeds of 1/250th sec. or above) to 3 f.p.s. (at speeds as slow as 1/30th sec.) Film can be rewound automatically in about 7 seconds for a 36-exposure cassette. The MD-100 motor drive contains an external LED signal verifying each advance cycle. It is powered by 4 Nikon MN-1 Nicad batteries, which are recharged in approximately 3 hours with the special Nikon MH-100 quick charger



A Complete, Unified System

The Nikon F2H camera is supplied in a complete set which includes: DE-1 pentaprism finder, MD-100 motor drive, MB-100 cordless battery pack, four MN-1 Nicad batteries, and the MH-100 quick charger. The motor's remote terminal permits use of optional Nikon Modulite, Wireless Remote Control, Intervalometer, and all other timing and triggering accessories compatible with Nikon Motor Drives MD-2, MD-3 and MD-11.

Technical Specifications

Nikon F2H Camera Outfit.

Product No. 1680.

Black epoxy finish, similar specifications and capabilities as the conventional Nikon F2 camera except as noted

Lensmount: Chromed-steel Nikon bayonet accepts all reflex-viewing Nikkor lenses 6mm—2000mm. Lenses requiring mirror lock-up cannot be used.

Exposure Control: Manual; stopdown metering with accessory Nikon F2A and F2AS Photomic viewfinders. (Exposure compensation required due to fixed mirror.)

Shutter: Titanium-foil, horizontal focal plane; speeds 1 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/80, 1/125, 1/250, 1/500, and 1/1000th second. Speeds continuously variable 1/80—1/1000th sec. no self-timer.

Focusing Screen: Non-interchangeable Nikon Type B with 12mm central ground glass spot, overall matte/Fresnel area.

Reflex mirror: Extra-large, non-moving mirror with Nikon multi-layer Integrated Coating for maximum viewing brightness. (Approx. 65% light transmission, 35% reflectance.)

Other features: Full aperture focusing preview; titanium used for internal reinforcement and external surfaces for maximum strength. Finished in black epoxy paint.

MD-100 Motor Drive

Firing Modes: Continuous, single-frame, and lock settings provided.

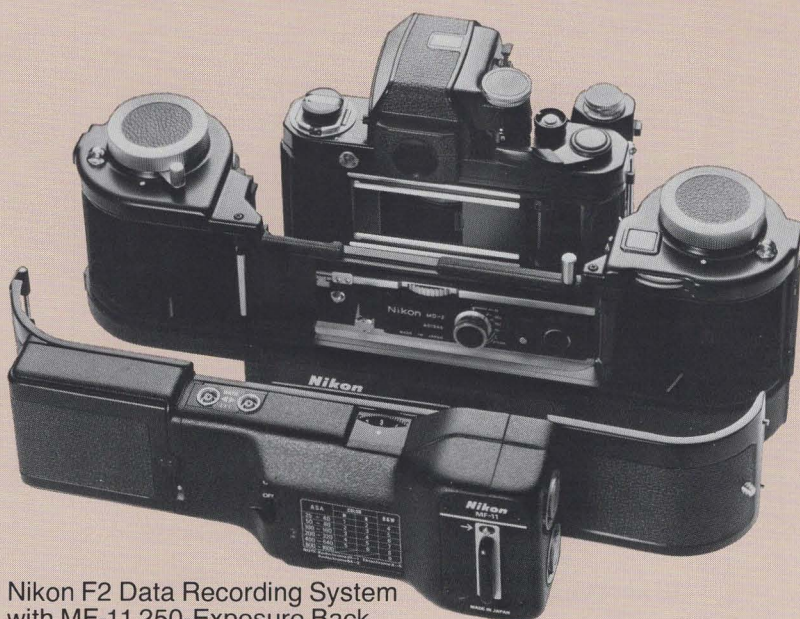
Firing Speeds:	Setting	H	M3	M2	M1	L
	Shutter Speeds	1/250-1/1000	1/125-1/1000	1/60-1/1000	1/60-1/1000	1/30-1/1000
	Approx. f.p.s.	10	7.5	6	3.5	3

Other features: Automatic film rewind; accepts all Nikon remote triggering and timing accessories compatible with Nikon MD-2/3/11 motor drives. Supplied with Nikon MB-100 cordless battery pack, 4 MN-1 Nicad batteries, MH-100 quick charger (recharges to 70-80% in approx. 3 hours, to full charge in 6 hours) charger uses 100-240V 50/60 Hz. AC.

Nikon F2 Data Recording Systems



Nikon F2 Data Recording System
with MF-10 36-Exposure Back

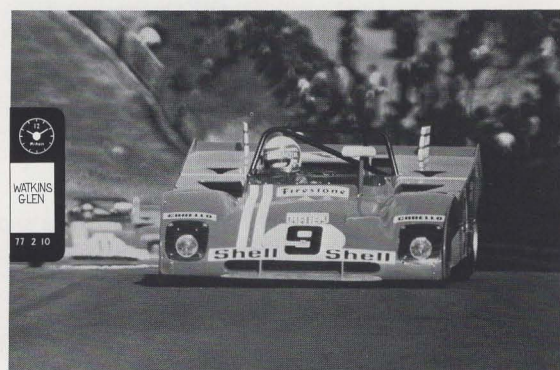


Nikon F2 Data Recording System
with MF-11 250-Exposure Back

These uniquely versatile Nikons provide unprecedented information capability for scientific, industrial, and forensic applications. A special, matched Data Back photographically imprints the time, date, and other information written on interchangeable memo plates. The information is exposed by a built-in electronic flash unit which assures consistent clarity and legibility, regardless of ambient lighting conditions or subject matter. Nikon F2 Data Recording Systems accept virtually all Nikon accessories including Motor Drive MD-2, EE Aperture Control Unit DS-12 for F2AS Photomic Finder DP-12, all Nikon F2 interchangeable viewfinders and finder screens, and all Nikkor lenses 6mm—2000mm for totally flexible picture-taking versatility.

Each Nikon F2 Data Recording System consists of two basic components:

- Special black Nikon F2 camera body with removable film plane mask, and selected Nikon F2 Photomic or Prism Finder
- Either of two *Nikon Data Backs*, each containing adjustable 12-hour timepiece (displays hours, minutes, and seconds), dating unit (year, month, and date), and memo plate slot (for insertion of written matter in 12x21mm area), as well as the built-in, battery-powered electronic data flash. Data Back MF-10 accepts standard 36-exposure film cassettes; Data Back MF-11 uses 250-exposure film loads in conjunction with a specially-matched 250-exposure film magazine MF-1 supplied with the Data Back. The 250-exposure Data System requires the MD-2 motor drive (purchased separately). Use of the MD-2 is optional when using the 36-exposure system.



Fast, Error-Free Operation

Film loading, lens mounting, exposure control, and shutter operation are performed exactly as with any Nikon F2. The photographer need only set the timepiece and dating unit, insert the memo plate with written information (if desired), and switch on the built-in electronic data flash, adjusting its intensity for the film speed in use. When the shutter is released, the Data Camera automatically imprints the time, date, and written notation on a 3.5mm x 10mm area at the left side of the 24mm x 36mm film frame. The special Type S focusing screen, included with each Data System, shows the imprinted area and offers the same 3-way focusing accuracy as the Type K screen: central 3mm split-image rangefinder, 1mm microprism circle, and overall matte Fresnel groundglass (as well as 12mm circle denoting center-weighted meter area).

Other Features

Data Systems with MF-10 36-exposure Back may be operated via the camera's film transport lever or the optional accessory Motor Drive MD-2; systems with MF-11 250-exposure Back are designed exclusively for use with MD-2. The MF-10 electronic data flash is powered by 2 AA alkaline batteries, Eveready Type E91 or equivalent; the MF-11 flash uses 4 cells (same type). Both flash units may be powered alternatively by an optional auxiliary 300-330v DC source, via their external power sockets. With alkaline cells, the flash units recycle in approx. 1 second at normal temperature; a special safety circuit activates the flash only when at full power to insure consistent data legibility. And, by removing the film plane mask and substituting a standard Nikon F2 camera back, any Nikon F2 Data Camera can be used as a normal F2 at any time.

Nikon F2 Data Recording Systems

Nikon F2 Data Recording Systems with MF-10 36-Exposure Back

- Following systems consist of a special black Nikon F2 camera body with viewfinder as indicated, matched MF-10 Data Back, MC-6 Synch Cord, AH-1 Hand Strap, and 10 Memo Plates.
- MD-2 motor drive with power supply may be purchased separately. Its use is optional.
- Uses most Nikon F2 accessories.

Product No.	1612	1642	1646
Description	F2 Data Camera	F2A Photomic Data Camera	F2AS Photomic Data Camera
Viewfinder	Pentaprism DE-1	F2A Photomic DP-11	F2AS Photomic DP-12
Meter System	None	CdS Center-Weighted	SPD Center-Weighted

Information Area	3mm x 10mm on left side
Time Input	Built-in 12-hour timepiece shows hours, minutes, seconds
Date Input	Adjustable dial shows year, month, date
Other Input	Interchangeable 12mm x 21mm Memo Plate for written data
Finder Screen	Type S Data
Flash Batteries	1.5v AA alkaline, 2 required (not included)
Number of Flashes	250 (approx.)
Recycling Time	1 second (approx.)
Usable B & W Films	ASA 25—1600
Usable Color Films	ASA 25—640
Dimensions, Back	2.7" x 6.9" x 2.4" (69mm x 176.5mm x 60mm)
Weight, Back	14.1 oz. (400g)


Nikon F2 Data Recording Systems with MF-11 250-Exposure Back

- Following systems consist of a special black Nikon F2 camera body with viewfinder as indicated, matched MF-11 Data Back, matched MF-1 250-Exposure Film Magazine, MC-6 Synch Cord, and 10 Memo Plates.
- Requires MD-2 motor drive and power supply (purchased separately).

Product No.	1613	1643	1647
Description	F2 Data Camera	F2A Photomic Data Camera	F2AS Photomic Data Camera
Viewfinder	Pentaprism DE-1	F2A Photomic DP-11	F2AS Photomic DP-12
Meter System	None	CdS Center-Weighted	SPD Center-Weighted

Information Area	3mm x 10mm on left side
Time Input	Built-in 12-hour timepiece shows hours, minutes, seconds
Date Input	Adjustable dial shows year, month, date
Other Input	Interchangeable 12mm x 21mm Memo Plate for written data
Finder Screen	Type S Data
Flash Batteries	1.5v AA alkaline, 4 required (not included)
Number of Flashes	1000 (approx.)
Recycling Time	1 second (approx.)
Usable B & W Films	ASA 25—1600
Usable Color Films	ASA 25—640
Accessories required	MD-2 Motor, Power Supply, 2 #2077 Cassettes
Dimensions, Back	2.7" x 11.8" x 3.0" (69mm x 299mm x 76mm)
Weight, Back	22.9 oz. (650g)

All specifications subject to change without notice.

Nikon, Inc., Garden City, N.Y. 11530. Subsidiary of Ehrenreich Photo-Optical Industries, Inc. Other offices in Niles, Ill., and San Francisco, Calif. 

Nikon F2 Interchangeable Viewfinders

The unmatched viewing accuracy—essential for critical composition and framing—of the Nikon F2 camera is complemented by an array of viewfinders and meter/finders ranging from simple waist-level type to sophisticated Silicon Photo Diode models with provision for completely automatic, cordless exposure control. Any finder listed may be used on any Nikon F2 camera without modification—thus, in effect, permitting the Nikon F2 photographer to create an infinite variety of cameras, each custom-equipped to meet his photographic requirements precisely.



Pentaprism Finder DE-1

Provides upright, laterally-correct image at eye-level; silver-coated prism for optimum brilliance and contrast. Excellent for photographers employing separate exposure meters. Accepts screw-in Nikon eyepiece accessories. Built-in ready-light for Nikon electronic-flash units. Provides 0.8x apparent image magnification with 50mm lens; -1 diopter correction. Weight 3.5 oz. (100g). Chrome finish, Product No. 2323; black, 2324; Carrying Case for DE-1, Product No. 405.



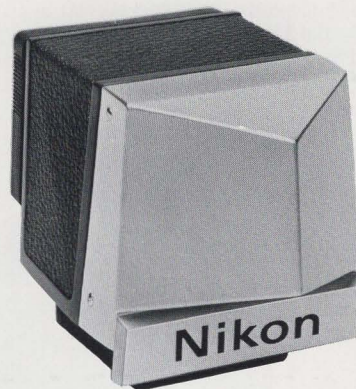
Waist-Level Finder DW-1

Compact, folding viewfinder with flip-up 5X magnifier, ideal for low-angle viewing or when camera is mounted on copy stand, tripod, etc. Provides 0.9X apparent image magnification with 50mm lens. Folds flat when not in use. Weight 3.2 oz. (90g). Product No. 2325. Carrying Case, Product No. 2302.



6X Focusing Finder DW-2

Magnifies entire image area six times for ultra-critical focusing, particularly helpful in photomicrography and macrography. Permits aerial-image focusing in conjunction with Type C or M Focusing Screens. Lens-quality 5-element, 3-group optics with continuous eyepiece adjustment from -5 to +3 diopters. Also serves as an excellent slide magnifier. With rubber eyecup. Weight 8.1 oz. (230g). Product No. 2317.



Action Finder DA-1

Pentaprism with extra-large, rectangular eyepiece allows full-image viewing at distances to 2.4" (60mm) from eyepiece. Widely preferred for sports photography as well as conditions where it is impossible to place eye close to finder—for example, when camera is in underwater housing or photographer must wear special goggles or eyeglasses. -1 diopter eyepiece; 0.7x apparent image magnification with 50mm lens. Weight 10.9 oz. (310g). Chrome, Product No. 2308; black, 2309.

Nikon F2 Interchangeable Viewfinders



F2A Photomic Finder DP-11

Silver-coated pentaprism finder with built-in CdS meter, with automatic maximum aperture indexing (AI), aperture direct reading (ADR), and full-aperture coupling with all AI-Nikkor lenses. (Note: most previous Auto-Nikkor lenses can be converted to AI operation; please refer to *Nikkor Lens AI-Conversion* page in *Nikkor Lenses* catalog section for details.) Provides stop-down meter operation with non-AI lenses, attachments and instruments. Shows upright, laterally-correct image with selected shutter speed and lens aperture below image area. Meter needle and reference mark visible both in finder and in window on top of finder. Built-in ready-light for Nikon electronic flash units. Accepts all Nikon screw-in eyepiece accessories. Meter ranges: ASA 6 to 6400; EV 1 to 17 (with ASA 100 film and f1.4 lens). Built-in battery check. Provides 0.8x apparent image magnification with 50mm lens and standard -1 diopter eyepiece (supplied). Powered by two S-76 1.5v silver-oxide batteries housed in camera baseplate. Weight 7.8 oz. (200g). Product No. 66. Delivery to be announced.



F2AS Photomic Finder DP-12

Combines ultra-sensitive Silicon Photo Diode (SPD) sensors with 5-stage LED exposure readout; gives automatic aperture indexing (AI), aperture direct reading (ADR), and full-aperture measurement with all AI-Nikkor lenses, stop-down measurement with non-AI lenses or attachments. (Note: most previous Auto-Nikkor lenses can be converted to AI operation, for details, please refer to *Nikkor Lens AI-Conversion* page in *Nikkor Lenses* catalog section.) 5-stage LED symbols permits over- or underexposure adjustment within 1/5th f-stop (± 0.2 EV), by means of shutter speed dial or lens aperture ring. Visible in any light, the LEDs make precise "bracketing" or special exposure compensation unusually easy. (A single, top-mounted LED window also permits exposure check from above.) Finder shows selected shutter speed and AI-Nikkor lens aperture below image area, shutter speed scale extends to 10 seconds for extra-long exposures using the F2AS' extended measuring range (EV -2 to +17 with ASA 100 film and f1.4 lens). ASA range 12—6400; same center-weighted measurement and optics as F2A Photomic Finder DP-11. Built-in battery test and eyepiece shutter. Accepts accessory cordless EE Aperture Control unit DS-12 for fully automatic, shutter-priority operation with all AI-Nikkor lenses 6mm—600mm. Weight 9.5 oz. (270g). Product No. 67. Delivery to be announced.



F2 Photomic Finder DP-1


Combines silver-coated pentaprism with center-weighted, through-the-lens CdS metering at full aperture with Nikkor lenses with meter-coupling shoe (including all AI-Nikkor lenses). Also permits stop-down readings with non-coupled lenses and accessories. Shows upright, laterally-correct image with selected shutter speed and lens aperture below image area. Meter needle and reference mark visible both through finder and in window on top of housing. Front window displays maximum aperture of Nikkor lens on camera. Built-in ready light for Nikon electronic-flash units. Accepts screw-in Nikon eyepiece accessories. Meter ranges: ASA 6—6400; EV 1 to 17 with ASA 100 film and f1.4 lens. Built-in battery tester. Provides 0.8x apparent image magnification with 50mm lens, and standard -1 diopter eyepiece (supplied). Powered by 2 S-76 1.5v silver-oxide batteries housed in camera base. Weight 7.8 oz. (220g). Product No. 62.



F2SB Photomic Finder DP-3

Pentaprism finder with built-in Silicon Photo Diode meter providing extra-wide sensitivity range—from EV -2 (8 sec. at f1.4) to +17 (1/2000th sec. at f8) with ASA 100 film—for full-aperture operation with all Auto-Nikkor lenses with meter-coupling shoe (includes all AI-Nikkor lenses). Meter has shock-resistant, 5-stage LED readout; photographer adjusts aperture or shutter speed until central LED glows; additional LEDs denote under- and over-exposure, valuable for "bracketing" and special applications. Another LED readout is visible in window on finder top. Finder shows selected shutter speed and aperture under image area; also shows maximum aperture of lens in front window. Special scale displays exposure times of 2, 4, 6, 8, and 10 seconds for long exposures with Nikon F2 self timer. ASA range 12—6400; same center-weighted measurement and optics as standard F2 Photomic DP-1 finder. Built-in battery tester, eyepiece shutter, and speed/aperture illuminator. Accepts accessory EE Aperture Control unit DS-2 for automatic shutter-priority exposure control with all Nikkor lenses with meter-coupling shoe (including all AI-Nikkors), particularly valuable in unmanned, motorized applications. Weight 9.5 oz. (270g). Product No. 64.

All specifications subject to change without notice.

Nikon, Inc., Garden City, N.Y. 11530. Subsidiary of Ehrenreich Photo-Optical Industries, Inc. Other offices in Niles, Ill., and San Francisco, Calif. 

Accessories for F2 Photomic Viewfinders



EE Aperture Control Units DS-2 and DS-12

Two compact, completely cordless servo-motor modules provide fully automatic, shutter-priority exposure control with designated F2S-series finders. The DS-12 model, designed exclusively for the F2AS Photomic Finder DP-12, gives this function with all AI-Nikkor lenses. The DS-2 model provides automatic exposure control with all Nikkor lenses with meter-coupling shoe (including all AI-Nikkor lenses), and may be used with the Nikon F2S and F2SB Photomic Finders DP-2 and DP-3. Both allow manual aperture control or "memorizing" specific aperture for selective exposure control, without removal of any components. Rechargeable, self-contained NC battery (not included) gives approx. 3 hours' continuous automatic-exposure operation, recharges in 3 hrs. Units may also be used with heavy-duty 'C'-cell powerpack, AC, or other power sources with accessories listed.

EE Aperture Control Components

Product No.	Description
53*	EE Aperture Control Unit DS-12 for F2AS Photomic Finder DP-12.
50	EE Aperture Control Unit DS-2 for F2S Photomic Finder DP-2 and F2SB Photomic Finder DP-3.
48	NC Battery DN-1 for all EE Aperture Control Units.
49	Charger DH-1 for NC Battery DN-1 adjustable for 100—117v and 220—240v AC.
87	DB-1 C-Cell Powerpak for all EE Aperture Control Units, for use in place of NC Battery DN-1 Requires 4—1.5v 'C' alkaline batteries.
42	AC/DC Converter MA-4 for all EE Aperture Control Units (individually or in conjunction with Motor Drive MD-2). Voltage stabilized.
86	Connecting Cord DM-1 links EE Aperture Control Unit to MA-4 AC/DC Converter

*Delivery to be announced.

General Accessories for Photomic Viewfinders

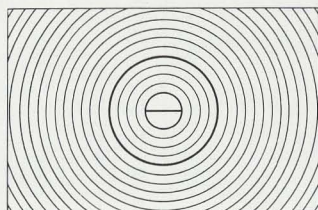
Product No.	Description
405	Carrying Case for F2, F2S, F2SB, F2A, and F2AS Photomic
2316	DL-1 Illuminator for meter readouts for F2 and F2A Photomics
83	1.3v mercury battery for DL-1 (1 required)
84	1.5v silver oxide batteries for all F2-series Photomics (2 required)

Note: All Nikon Photomic Viewfinders and DE-1 Pentaprism Finder accept all Nikon 19mm screw-in eyepiece accessories. Please refer to *Nikon and Nikkormat Viewfinder Accessories* catalog section for details.

Nikon Interchangeable Focusing Screens

Twenty precision focusing screens allow the Nikon owner unparalleled viewing comfort and focusing accuracy with any lens, while providing viewing accuracy superior to all other 35mm cameras. Nikon screens are mounted in sturdy metal frames and easy to handle. Except as noted, all are usable with any Nikon F2 finder or eyepiece attachment.

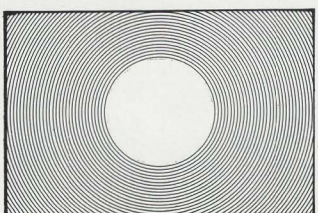
TYPE A



Matte Fresnel field with 3mm split-image rangefinder spot and 12mm reference circle. For general photography with lenses to 400mm telephoto, f4.5 or faster

Product No. 2331

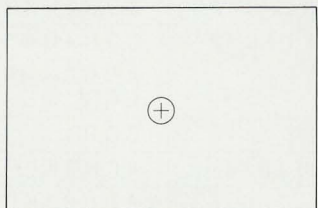
TYPE B



Matte Fresnel field and 12mm fine groundglass center. For general photography: especially suited for use with long-focus lenses and lenses of small maximum aperture (f5.6-f11).

Product No. 2332.

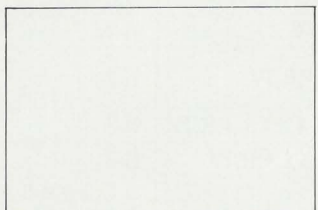
TYPE C



Fine-ground matte field with 4mm clear spot and cross-hair reticle. Especially suitable for photomicrography and other applications involving high magnification where aerial image and parallax focusing can be used with 6X magnifying finder DW-2 or 2X eyepiece magnifier

Product No. 2333.

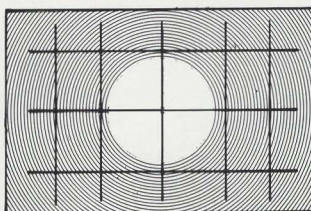
TYPE D



All-matte, fine-ground surface. For use with long focal-length lenses.

Product No. 2334.

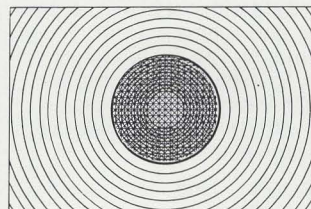
TYPE E



Matte Fresnel field with multiple vertical and horizontal reference lines, 12mm reference circle, and fine-ground matte spot. For architectural photography and other applications requiring accurate image placement or alignment.

Product No. 2335.

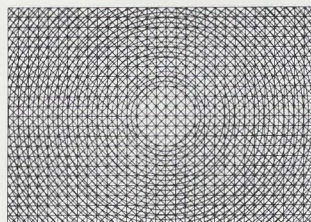
TYPE G SERIES



Clear Fresnel field with 12mm diameter microprism focusing spot. Provides extremely brilliant image for viewing and focusing in poor light. Available in 4 models with individual Fresnel patterns to match specific lenses, as shown on lens/screen selector chart.

G1, Product No. 2337;
G2, Product No. 2338;
G3, Product No. 2339;
G4, Product No. 2340.

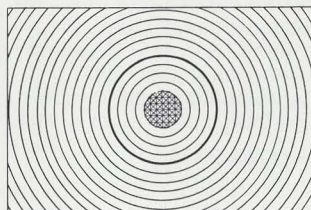
TYPE H SERIES



Clear Fresnel field with microprism pattern over entire screen area. Permits rapid focusing on any part of screen image, with optimum edge-to-edge brightness. Excellent for use in poor light and with moving subjects. Available in 4 models for specific Nikkor lens types (see selector chart).

H1, Product No. 2341;
H2, Product No. 2342;
H3, Product No. 2343;
H4, Product No. 2344.

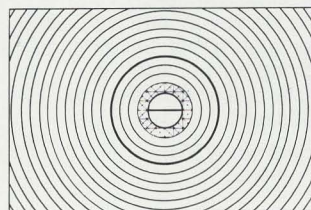
TYPE J



Matte Fresnel field with 4mm microprism focusing spot and 12mm reference circle. For general photography with any Nikkor lens.

Product No. 2345.

TYPE K

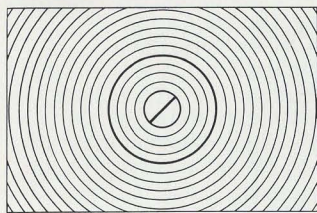


Matte Fresnel field with 3mm central split-image rangefinder spot surrounded by 1mm-wide microprism ring and 12mm reference circle. For general photography with any lens, supplied as standard with all Nikon and Nikkormat cameras.

Product No. 2346.

Nikon Interchangeable Focusing Screens

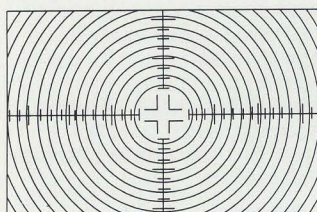
TYPE L



Similar to Type A but with split-image spot set at 45° angle. Facilitates focusing on horizontal line.

Product No. 2347

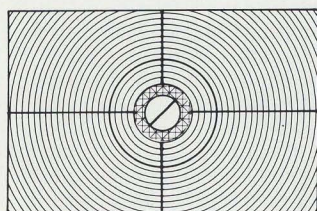
TYPE M



Clear field with double cross-hair reticle and scales in 1mm increments. For aerial-image focusing in photomicrography and other high-magnification work with 6X focusing finder or 2X eyepiece magnifier

Product No. 2348.

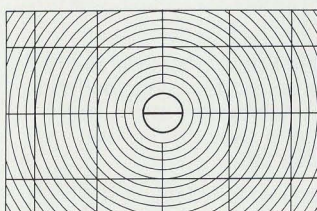
TYPE P



Matte Fresnel field with split-image spot at 45° angle surrounded by 1mm-wide micropism ring plus vertical and horizontal lines and 12mm reference circle. For general photography with all Nikkor lenses.

Product No. 2349.

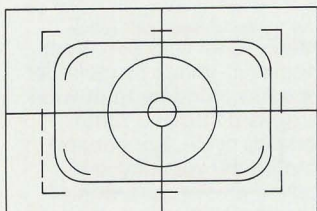
TYPE R



Combines features of Types A and E. 3mm-diameter rangefinder spot works best with lenses having maximum apertures f3.5 to f5.6. Excellent for architectural and multi-exposure photography where precise image placement is vital.

Product No. 2353.

TV-FORMAT SCREEN



Has central 3mm split-image rangefinder and overall matte Fresnel field. Special, engraved lines show standard TV frame plus 'safe action' and 'safe title' areas, insure that entire image recorded will be visible in commercial or closed-circuit TV broadcasts.

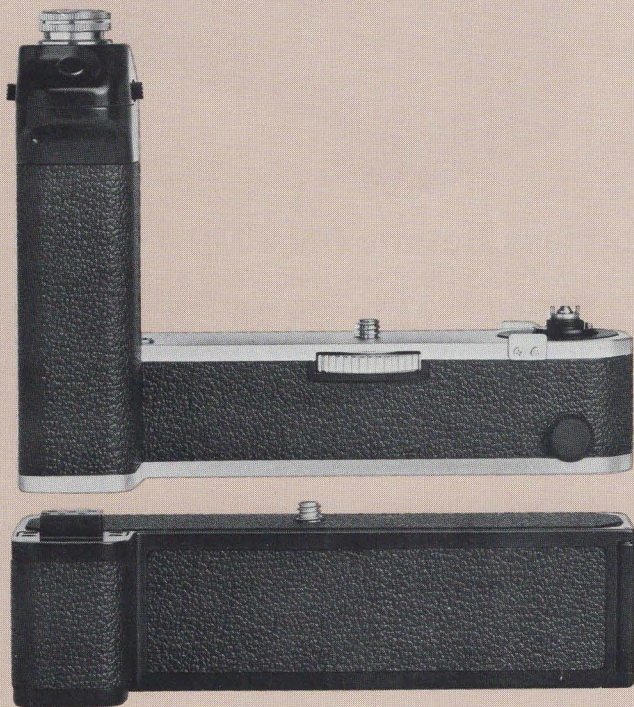
Product No. 2351

Focusing Screen Selector Chart

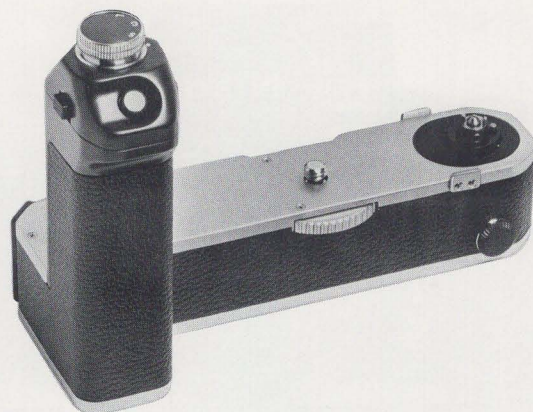
Nikkor Lens	Recommended	Acceptable
6mm f2.8 Fisheye	A,B,D,E,G-1,G-2,H-1,H-2,J,K,L,PTV	C,R
8mm f2.8 Fisheye	A,B,D,E,G-1,G-2,H-1,H-2,H-3,J,K,L,PTV	C,R
15mm f5.6	B,E,H-2,J,R	A,G-2,K,L,PTV
16mm f3.5 Fisheye	A,B,E,G-1,H-1,J,K,L,P,R,TV	
18mm f4	A,B,E,G-1,H-1,K,L,P,R,TV	
20mm f4	A,B,E,G-1,H-1,J,K,P,R,TV	
24mm f2.8	A,B,E,G-2,H-1,J,K,L,PTV	R
28mm f2	A,B,E,G-1,G-2,H-2,J,K,L,PTV	H-1 R
28mm f2.8	A,B,E,G-1,H-1,J,K,L,PTV	R
28mm f3.5	A,B,E,G-1 H-1,J,K,L,P,R,TV	
28mm f4 PC	B,E	A,J,K,L,P,R,TV
35mm f2	A,B,E,G-2,H-2,J,K,L,PTV	G-1,H-1,R
35mm f2.8	A,B,E,G-1,H-1,J,K,L,PTV	H-2,R
35mm f2.8 PC	B,E	A,J,K,L,P,R,TV
45mm f2.8 GN	A,B,E,G-1,H-1,J,K,L,PTV	R
50mm f1.4	A,B,E,G-2,H-2,J,K,L,PTV	R
50mm f2	A,B,E,G-1,G-2,H-1,H-2,J,K,L,PTV	R
55mm f1.2	A,B,E,G-2,H-2,J,K,L,PTV	R
55mm f3.5 Micro	B,E	A,G-2,H-2,J,K,L,TV
85mm f2	A,B,E,G-2,H-2,J,K,L,PTV	H-1 R
105mm f2.5	A,B,E,G-2,H-2,J,K,L,PTV	H-1 R
105mm f4 Micro	B,D,E,J M	A,C,G-3,H-4,K,L,TV
135mm f2.8, f2.0	A,B,E,G-2,H-2,J,K,L,PTV	C,D,G-3,R
135mm f3.5	A,B,E,G-2,H-2,J,K,L,P,R,TV	C,D
180mm f2.8	A,B,E,G-3,J,K,L,PTV	C,D,H-2,H-3,H-4,R
200mm f4	A,B,E,G-2,H-2,J,K,L,P,R,TV	C,D
200mm f5.6 Medical	B,E,H-2	A,H-3,K,L,P,R,TV
300mm f4.5 & ED	A,B,E,G-3,H-3,J,K,L,P,R,TV	C,D,H-2,H-4
400mm f4.5, f3.5	A,B,E,G-3,H-3,J,K,L,P,R,TV	C,D,G-4,H-4
400mm f5.6	B,E,G-3;H-3,J,R	A,C,D,G-4,H-4,K,L,PTV
500mm f8 Reflex	A,B,E,J,K,L,TV	C,D,P,R
600mm f5.6 & ED	B,D,E,G-3,G-4,H-4,J,R,TV	A,C,H-3,K,L,P
800mm f8 & ED	B,D,E,G-3,G-4,H-4	A,C,H-3,J,K,L,P,R,TV
1000mm f11 Reflex	A,B,E,J,K,L,TV	C,D,H-3,H-4,P,R
1200mm f11 & ED	B,C,D,E,H-4	A,G-4,H-3,J,K,L,P,R,TV
2000mm f11 Reflex	A,B,D,E,G-4,H-4,J,K,L,TV	C,G-3,P,R
28-45mm f4.5 Zoom	A,B,E,J,K,L,P,R,TV	H-1
35-70mm f3.5 Zoom	A,B,E,H-2,J,K,L,P,R,TV	G-2
43-86mm f3.5 Zoom	A,B,E,H-2,H-3,J,K,L,P,R,TV	H-3
50-300mm f4.5 Zoom	A,B,E,G-3,G-4,H-4,J,K,L,P,R,TV	G-3
80-200mm f4.5 Zoom	A,B,E,H-2,H-3,J,K,L,P,R,TV	
200-600mm f9.5 Zoom	B,D,E,G-4,H-4	A,C,G-3,H-3,J,K,L,P,R,TV

All specifications subject to change without notice.

Nikon F2 Motor Drive System



Paramount to the Nikon concept of high-performance photography is this: photography's largest array of automatic fire-power equipment. Each component is crafted to the standards of reliable precision that have made Nikon motor drives an essential element in sports, news, aerospace, industrial, scientific, and investigative photography throughout our world. Either of the two basic motor drive units attaches directly to the baseplate of any Nikon F2 camera, without modification; to the motor is added the desired power pack or supply, remote-control system, intervalometer—even, with MD-2, film magazine—or other accessories to provide the photographer with the ultimate in automatic capabilities.



Motor Drive MD-2

Compact, cordless motor fits directly on any Nikon F2 camera, without removing baseplate or even camera back—simply remove Open/Close key and screw on motor. Powered by the Cordless Battery Pack MB-1 or AC/DC converters MA-2 or MA-4, the motor is adjustable for either single-frame or continuous-burst operation, plus a special Lock position to prevent inadvertent firing. The 5-position speed selector permits rapid sequence operation from one to 4.3 frames per second with through-the-lens viewing, or 1 to 5 f.p.s. with the Nikon F2 mirror locked up. These high operating speeds may be obtained over a broad range of shutter speeds—from 1/125th second to 1/2000th second in continuous operation. Other shutter speeds to 1/4th second may be employed at slower motor speeds in continuous operation, and from B and 10-1/2000th second in single-shot mode. After the last exposure, the motor permits automatic film rewinding, requiring just 7 seconds for a 36-exposure roll. (With the accessory Camera Back MF-3, rewinding stops automatically while the film leader is outside the cassette—a valuable advantage with daylight-loading or automated processing systems.)

The MD-2 Motor Drive contains a built-in, subtractive exposure counter which may be pre-set to shut motor off automatically after a specific number of frames have been exposed, as well as a convenient hand grip with electrically-powered shutter-release button; the grip head (with Single/Continuous selector switch) is detachable for remote-control applications. The multiple exposure feature of the Nikon F2 camera may be employed at any time with the Motor Drive, by pressing the film rewind slide on the back of the motor while activating the shutter. A built-in relay permits radio, electrical or modulated-light-signal remote operation with the appropriate Nikon accessories. LED signal lamp glows each time the motor completes an advance cycle—particularly valuable to confirm correct operation in remote control operation—and when the film has been automatically rewound. The motor measures 5.8" x 4.3" x 3.0" (147mm x 110mm x 77mm) and weighs 16.6 oz. (470g). Supplied with Cordless Battery Pack MB-1 and two MS-1 Battery Holders, each accepting 5 AA alkaline batteries; Product No. 7. Also available without Battery Pack and Holders, Product No. 2. The first Nikon Motor Drive for the F2, Model MD-1 (which is no longer available), was similar to the MD-2 but did not have the auto-stop mechanism on rewind, LED indicator or safety locks.

Note: With the exception of the MF-3 back, all accessories for the MD-2 will operate with the MD-1 Motor Drive.

Nikon F2 Motor Drive System



Motor Drive MD-3

A rugged, lightweight, economical motor drive incorporating all the engineering precision which has made Nikon motor drive systems the acknowledged standard in 35mm photography. Attaches directly to any Nikon F2 body after Open/Close key is removed; anatomical hand grip contains shutter button and single/continuous-burst selector. The MD-3 motor drive may be powered by the same MB-1 Cordless Battery Pack or MA-4 AC/DC Converter as the Nikon MD-2 Motor Drive, or by the special MB-2 Cordless Battery Pack (to be available soon). Firing speed in continuous mode is set automatically according to the shutter speed and power source in use:

MD-3 Power Supply	Power Source	Maximum Firing Rate	Capacity: (Approx. No. of 36- Exposure Rolls)
MB-1 Cordless Battery Pack w/ MN-1 Nicad Battery Units (2)	Interch. Nicad Cells	4.0 f.p.s.	120 per charge
MA-4 AC/DC Converter	100-120v AC, 50/60 Hz.	4.0 f.p.s.	Unlimited
MB-1 Cordless Battery Pack w/AA Penlight Batteries	10 AA Alkaline Cells	3.5 f.p.s.	160
MB-2 Cordless Battery Pack	8 AA Alkaline Cells	2.5 f.p.s.	80

The MD-3 motor permits continuous operation at speeds from 1/80 to 1/2000th second, with the firing rate determined automatically by the power source and shutter speed in use. All speeds, including "B" are

usable in single-frame mode. Built-in, manually-reset (subtractive) exposure counter turns motor off at "0", enabling the photographer to expose any desired number of frames with automatic shutoff provision. For added versatility MD-3 may be used with Nikon Modulite ML-1 remote system, Nikon Wireless Remote Control MW-1 Pistol Grip Model 2, and Nikon Intervalometers MT 1 and NC-2. (MD-3 does not accept SC-series extension cords or Nikon Cord System components.) The MD-3 with its built-in anatomical hand grip measures 4.2" x 5.8" x 2.4" (106mm x 147mm x 62mm) and weighs 13.2 ounces (375g) less batteries. Product Numbers for MD-3 Motor Drive and MB-2 Cordless Battery Pack will be announced soon.



Cordless Battery Pack MB-1

For Motor Drives MD-1, MD-2 and MD-3; accepts two MS-1 Battery Holders (supplied), each holding 3 1.5v AA alkaline batteries, Eveready Type E91 or equivalent, which power approx. 80 rolls of 36-exposure film with MD-2, 160 with MD-3. Also accepts accessory MN-1 Nicad Battery Units, powering approx. 60 36-exposure film rolls per charge with MD-2, 120 with MD-3. MB-1 Cordless Battery Pack with two MS-1 Battery Holders, Product No. 18.



Nicad Battery Unit MN-1

For use with Cordless Battery Pack MB-1, set of two (required) powers approximately 60 36-exposure film rolls or equivalent on one charge with MD-1 and MD-2, 120 with MD-3; recharges in accessory MH-1 Nicad Battery Charger. Set of two, Product No. 38.



Nicad Battery Charger MH-1

Recharges two MN-1 Nicad Battery units, up to 80% capacity in approximately three hours; 100% capacity in six hours. For 100, 117, 220, or 240v AC, 50-60 Hz. Product No. 39.

All specifications subject to change without notice.

Nikon F2 Motor Drive System

Nikon Timing and Remote Control Systems for Motor Drives and Nikon Super-8 Movie Cameras

Following accessories are compatible with all Nikon MD-1 MD-2, MD-3, and MD-11 Motor Drives unless otherwise indicated.



Intervalometer MT-1

Activates motorized camera for automatic, unmanned photography. May be programmed for single frame sequences (including time exposures) or multi-exposure bursts at regular intervals of up to 8 minutes. All solid-state temperature compensation circuit insures consistent accuracy from 14° to 122°F (–10°C to 50°C). Can be remotely operated electrically or by Nikon Modulite or wireless remote control, also works with Nikon R8 and R10 movie cameras. Measures 2.4" x 5.9" x 5.1" (60mm x 150mm x 130mm), weighs 34.2 oz. (970g). Powered by four 1.5v AA batteries (Mallory MN-1500 or equivalent). Supplied with MC-5 connecting cord to attach to Motor Drives and R8/R10 Movie Cameras. Product No. 71



Intervalometer NC-2

For single frame sequences at intervals from 0.5 seconds to eight minutes. 15 timed intervals and 2X, 4X and 10X time extensions. Powered by eight 1.5v AA alkaline batteries. Automatic cycle may be overridden at will. Accuracy $\pm 3\%$ of selected interval. Measures 4.5" x 4.5" x 6.0" (114mm x 114mm x 152mm), weighs 24.0 oz. (680g). Accepts Nikon Remote Control Accessories. Product No. 37

3.3' Remote Cord MC-4

For use with electrical or mechanical timers, switches, or other triggering instruments, and Nikon cord system components. Product No. 29.



Modulite Remote Control System ML-1

Unique cordless, electronic remote-control system activates motor-drive-equipped Nikon slr or R8/R10 Super Zoom cameras at distances to 200 feet. Compact transmitter (powered by 4 AA alkaline batteries) emits special modulated light signals over 30° x 40° field; receiver (powered by 1 9v cell) mounts on camera accessory shoe and responds to the special modulated light signals within 100° x 100° angle. Dual channel selectors permit simultaneous, individual control of two cameras situated in close proximity with one transmitter. Cannot be triggered inadvertently by other light sources. Operates reliably even in off-axis or bounce mode. Transmitter provides approximately 750 light signals per battery set; receiver gives approximately 10 hours operation, in temperatures from 32°F to 113°F (0°C-45°C). Transmitter measures 1.57" x 1.57" x 5.1" (40mm x 40mm x 130mm), weighs 4.59 oz. (130g); Receiver measures 1.57" x 2.44" x 3.15" (40mm x 62mm x 80mm), weighs 6.0 oz. (170g), each less batteries. Supplied with receiver hood, MC-8 connecting cord for Nikon MD-1 MD-2, MD-3 and MD-11 motor drives, EA-4 connecting cord for R8/R10 movie cameras, and locking accessory shoe coupler. Product No. 72. Optional connecting solenoid for ELW and EL2, Product No. and Delivery to be announced.

Nikon F2 Motor Drive System



Wireless Remote Control Set MW-1

Compact, solid-state radio control unit for remote operation of up to 3 Nikon motor drive or R8/R10 Super Zoom cameras; delivers 80 MW output on CB wave lengths—no license required. Transmitter activates receiver at distances up to 2300 feet (700m). Transmitter and receiver are each powered by 8 AA alkaline batteries; each has built-in battery tester. Five operating modes: individual or simultaneous operation of up to 3 compatible Nikon cameras. Permits single exposures or, in conjunction with Nikon Intervalometer, time-lapse photography at distances to approx. ½ mile. Transmitter measures 1.61" x 2.99" x 7.48" (41mm x 76mm x 190mm), weighs 20.1 oz (570g); receiver measures 1.61" x 2.99" x 9.84" (41mm x 76mm x 250mm) weighs 25.8 oz. (730g); both less batteries. Supplied with connecting cords MC-5 for all motorized Nikon F2 and FM cameras and EA-3 for R8/R10 Super Zoom. Product No. 59.

Note: MW-1 will resist interference of CB radio transmissions.

Nikon Cord System for MD-1 and MD-2 Motor Drives and Accessories

All-purpose system of cords and plugs for operating motor drive units by remote control or with electrical or electronic timers or other instruments. Heavy-duty construction; provides low-voltage electrical triggering of motor/shutter release for single exposure or sequence operation. For MD-1 and MD-2 exclusively; not for use with AC. All cords require AE-2 Alligator Clips (Product No. 91) and MC-4 3.3' Remote Cord (Product No. 29) for use with Motor Drive MD-2.

Product No.	Description
20	3' Basic Remote Cord ME-3 (household/household)
21	6' Basic Remote Cord ME-6 (household/household)
22	15' Basic Remote Cord ME-15 (household/household)
23	30' Basic Remote Cord ME-30 (household/household)
90	Tripping Button AE-1 for any Basic Cord 3'—30' permits use of 2 or more cords for greater extensions.
91	Alligator Clips AE-2 for attachment of Basic Remote Cords to Nikon MC-4 3' Remote Cord ('Banana Plug' fitting).
92	Twin Lugs AE-3, for attaching Basic Cords to Relay Box or similar devices.
93	Mini Plug AE-4, for attaching Basic Cords to 'mini' type audio terminal
94	Banana Plugs AE-5, for attaching Basic Cords to Relay Box or DIN-type audio terminal

SC Remote Cords for MD-1 and MD-2

Connect removed Grip Head (SC Unit) with MD-1/2 motor grip for remote control operation. Not for use with 750-exposure film magazine. 10 SC Remote Cord MC-1 Product No. 24. 33 SC Remote Cord, Product No. 88. 66 SC Remote Cord, Product No. 89.

All specifications subject to change without notice.

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Nikon F2 Motor Drive System

Connecting Cord MC-7

For operation of Nikon Motor Drives with MB-1 Battery Pack detached from motor; an aid in special applications such as extreme cold-weather photography where the photographer can carry the battery pack inside coat or pocket to insure peak battery response. 5 ft. (1.5m) long. Product No. to be announced.



MA-2 AC/DC Converter

For operation of Motor Drive MD-1 MD-2, or MD-3 on 100, 117, 220, or 240v AC power; provides smooth, ripple-free current (400ma). Built-in voltage stabilization, overload protection, remote outlet, and shutter release button. Requires 10' Connecting Cord MC-2. Product No. 32.



MA-4 AC/DC Converter

For operation of Motor Drives MD-1, MD-2, MD-3 and EE Aperture Control Unit, individually or together from 100, 117, 220, or 240v AC current. Voltage stabilized. Same ripple-free operation and safety features as MA-2. With remote-control circuit and shutter-release button. Requires 10' connecting cord MC-2. Product No. 42.

10' Connecting Cord MC-2 for AC/DC Converters

Connects AC/DC Converter MA-2 or MA-4 with MD-1 MD-2, or MD-3 Motor Drive or MA-4 with MD-3 motor permits placing converter at most convenient location. Product No. 25.



Motor Release MR-1

Screws into remote terminal of motor drives, provides secondary shutter release button for left-hand operation or situations in which the standard motor release button is not conveniently accessible. Accepts Nikon AR-2 cable release. MR-1 Motor Release, Product No. 659.



Pistol Grip Model 2

Aids in holding camera/motor system steady, particularly with long tele and zoom lenses. Attaches to tripod socket on motor camera or lens; gives electrical shutter-release triggering with accessory cord MC-3. Product No. 45.

Coiled Connecting Cord MC-3 for Pistol Grip 2

Connects pistol grip trigger to motor's electrical shutter release contact. Insures smooth, responsive triggering. Product No. 28.



Camera Back MF-3

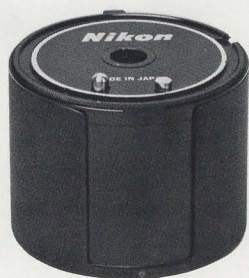
For optional use with Motor Drive MD-2 (only) in place of standard F2 back. Automatically shuts off film rewind with leader outside film cassette—valuable with daylight-load or automatic processing systems. Provides a more comfortable anatomical grip. Product No. 14.

Nikon F2 Motor Drive System



250-Exposure Film Magazine MF-1

For use with Motor Drives MD-1 and MD-2. Holds 33 (10m) exposure lengths of 35mm bulk film in special Nikon cassette. Film feeds from cassette to cassette; no rewinding necessary. Additive and subtractive exposure counters; latter may be pre-set to shut motor off after desired number of frames have been exposed. Built-in micromotor draws on Motor Drive power source. Integral shutter-release button with lock. May be combined with EE Aperture Control, Intervalometer, or other accessories. Less Cassettes (2 required). Product No. 13.



250-Exposure Film Cassette

For use with 250-exposure Magazine MF-1 (2 required). Holds up to 33 (10.0m) of 35mm bulk film; reloadable. Unique design opens cassettes inside Film Magazine for advance; closes light trap prior to unloading, permits mid-roll film interchange. With leather case. Product No. 2077



Bulk Film Loader

Mounted on sturdy wooden stand for rapid loading of 250-exposure cassettes in darkroom. Stops automatically at preset film length. Fluorescent frame number markings. Large, rotating crank. Product No. 2080.



750-Exposure Film Magazine MF-2

For use with Nikon Motor Drives MD-1, MD-2 and MA-2 or MA-4 AC/DC Converter, or in conjunction with Nikon EE Aperture Control unit, Intervalometer, or other accessories. Accepts standard 100 (30.5m) bulk-film rolls in Nikon MZ-2 cassettes (2 required); permits firing rates to approx. 4 frames per second with all shutter speeds from 1/80th to 1/2000th second usable in continuous-burst operation, at speeds from 1 to 1/2000th second in continuous operation at slower intervals, with intervalometer MT 1 or at all speeds from "B" and 1 to 1/2000th second in single-shot use. A built-in film trimmer provides advantages in short-run applications. Automatically shuts off motor at end of film roll. Built-in subtractive exposure counter may be pre-set for automatic shutoff after desired number of frames have been exposed. Five built-in tripod sockets for optimum mounting stability. 750-Exposure Film Magazine Back MF-2, less cassettes, Product No. 19.




750-Exposure Film Cassette MZ-2

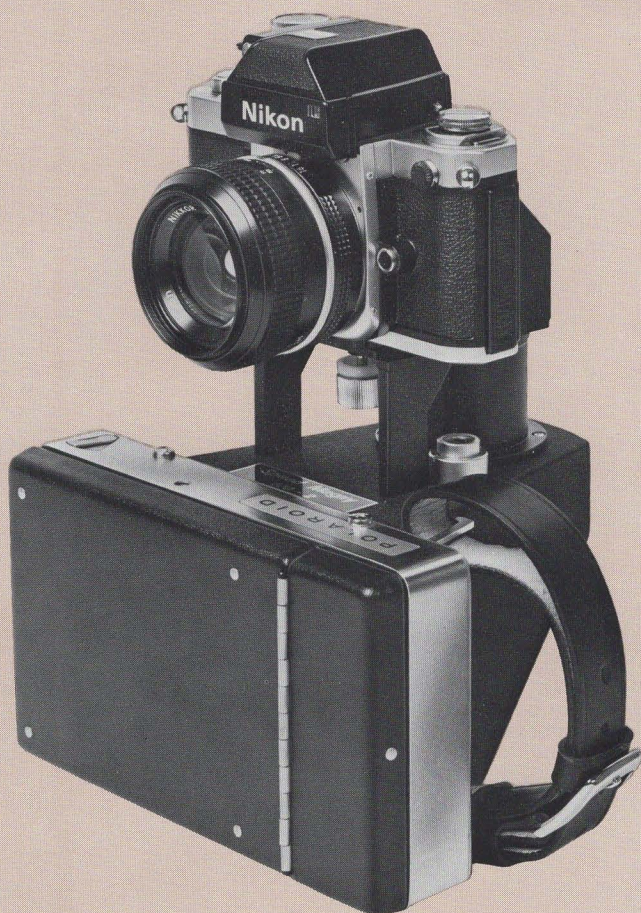
Accommodates 100 (30.5m) bulk film roll for use with 750-exposure magazine; 2 required. Magazines may be removed in mid-roll without danger to exposed film. Product No. 2076.

NOTE: The Nikon SB-5 Thyristor flash is ideally suited for high-speed photography with Nikon motor drives and Auto Winder. Please refer to description in Nikon Thyristor Flash catalog pages for complete data.

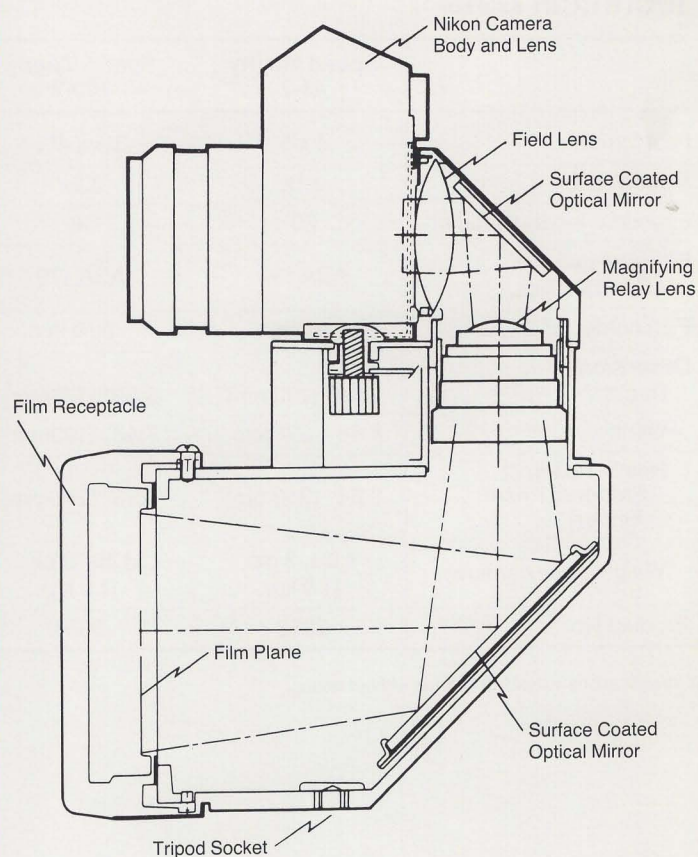
All specifications subject to change without notice.

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Speed Magny Backs for Nikon F2



Perhaps the most unique accessories in the Nikon F2 system, Speed Magny backs transform any F2 into a large-format "instant picture" camera for use with Polaroid® film packs, or a second model which uses standard 4x5 film holders. The Speed Magny replaces the regular, detachable camera back. All essential camera functions not related to the 35mm film—reflex viewing/focusing, through-the-lens metering, shutter speed control, flash synch, etc.—are retained, as is the superior picture quality and versatility of interchangeable Nikkor lenses.



Precision Optical System

The Speed Magny optical system utilizes a magnifying relay lens in combination with a coated field lens and 2 optically flat, surface-coated mirrors. With Model 100-2 the system increases the size of the picture 3.2 times to fill the $3\frac{1}{4} \times 4\frac{1}{4}$ Polaroid format. Image size is the same as if taken with a lens 3.2 times longer than the one used. With Model 45-2, the increase is 4.1 times.

Because of the difference in proportions between the 35mm and $3\frac{1}{4} \times 4\frac{1}{4}$ or 4x5 formats, slightly less picture length is recorded on the film than is shown in the Nikon finder.

Use of Speed Magny units requires increases in exposure over those normally indicated by the emulsion speed: an 18-time increase with Model 100-2 and a 20-time increase with Model 45-2. Photomic meter systems can be programmed accordingly via ASA setting.

Film Holders

Speed Magny 100-2 has built-in holder for Polaroid $3\frac{1}{4} \times 4\frac{1}{4}$ film packets. Speed Magny 45-2 accepts standard holders for 4x5 Polaroid and regular sheet film.

Nikon FM



- **Compact, Lightweight Convenience**
- **Gallium Photo Diode Meter with LED Readout**
- **Full Motor Drive Capability**

The Nikon FM is a camera of exceptional capabilities, crafted in the uncompromising tradition of Nikon excellence. Although significantly smaller and lighter than the conventional slr, its full-size controls are designed for the fast, comfortable handling intrinsic to the Nikon system of photography. Equipped with the optional compact Nikon Motor Drive MD-11, it provides the advantages of automatic firepower in single-frame or sequence operation at rates up to 3.5 frames per second. And, it accepts all reflex-viewing F-mount slr Nikkor lenses, from 6mm to 2000mm (except 6mm f5.6 and 10mm f5.6 OP Fisheye lenses) for unrestricted optical versatility.

Gallium Photo Diode Metering with LED Readout

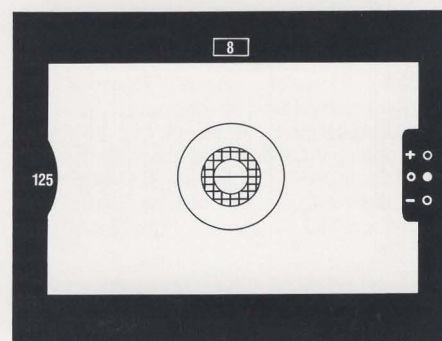
GPD system responds to light changes with incredible speed especially at low light levels. Also, its sensitivity range is so great that it can provide accurate readings anywhere from conditions requiring an exposure of 1 second at f1.4 to scenes demanding 1/1000th second at f16 (EV 1 to 18 with ASA 100 film and f1.4 lens).

The always-bright LED viewfinder readout responds to adjustments of either aperture or shutter speed. A total of 5 readout indications assure exposure accuracy within ± 0.2 EV (1/5 f-stop). Metering is speeded and simplified by automatic maximum aperture indexing with AI-Nikkor lenses and on/off switching by film transport lever. Solid-state meter circuit is highly shock-resistant for lasting reliability.

+	•	Overexposure by more than 1 f-stop
+	•	Overexposure by 1/5 to 1 f-stop
+	•	Correct Exposure
+	•	Underexposure by 1/5 to 1 f-stop
+	•	Underexposure by more than 1 f-stop

Center-Weighted Through-The-Lens Meter

The Nikon FM meter observes the entire image area but concentrates more than half its sensitivity in the central 12mm area, shown by a circle in the viewfinder. This proven, center-weighted method assures consistently excellent exposures with a single reading, under the broadest variety of lighting conditions and is equally accurate with the camera held in vertical or horizontal position. Metering is done at full aperture with all AI-Nikkor lenses, with stop-down metering of equal accuracy when using non AI-Nikkor lenses or accessories.



Full-Information Viewfinder

Shows precise lens aperture in use with all AI-Nikkor lenses via exclusive Nikon Aperture Direct Reading (ADR) method; also shows selected shutter speed, correct exposure, and under/ over-exposure signals. The extremely bright pentaprism finder contains the famed Nikon "K" screen, providing split-image rangefinder microprism circle, and full-area groundglass for unparalleled focusing accuracy.

Nikon FM

Unique Metal Shutter with High-Speed X-Synch

Vertical-travel shutter, specially designed for FM, travels up instead of down, minimizing noise and vibration and increasing durability. Top-mounted dial controls 12 speeds, 1 second to 1/1000th, plus "B" with electronic flash synch to 1/125th second and bulb synch to 1/30th. Built-in hot shoe accepts standard Nikon and other cordless flash units; shoe is switched on only when unit is in place, preventing annoying shock. Additional PC terminal, for cord-type units and for off-camera flash, is threaded for slip-proof Nikon screw-on cords, accepts all PC cords.

Convenient Multiple Exposure Control

Simply push button on camera top towards viewfinder while operating transport lever to re-cock shutter without advancing film. Registration accuracy is highly precise.

Other Features

Nikon FM offers a 'cancellable' self timer, film-memo holder, and depth-of-field preview control. Its oversize pressure plate plus extra-long film rails, cassette stabilizer anti-bellying roller and emulsion-side-out winding on takeup spool assure superior film flatness for optimum edge-to-edge sharpness.

Nikon FM is available in either satin chrome (Product No. 1682) or in professional black finish (Product No. 1686).

Nikon Motor Drive MD-11

This compact motor drive permits single-shot or sequence operation at firing rates up to 3.5 frames per second, according to shutter speed in use, as well as multiple exposures. The motor provides a convenient anatomical grip with built-in shutter release button. Using 8 penlite AA alkaline batteries, it delivers power for approximately 100 36-exposure film loads. Built-in external LED signal indicates correct functioning. MD-11 also permits remote operation via Nikon Modulite, Wireless Remote Control, and Intervalometers (described in *Nikon F2 Motor Drive* catalog section). All-metal MD-11 motor screws directly onto FM camera via a convenient knurled screw. Measures 5.7"x2.7"x4.3" (144mm x 68.5mm x 109.5mm) and weighs 14.5 oz. (410g), less batteries. Nikon MD-11 unit, Product No. 101

Technical Specifications

Camera Type: Compact 35mm slr with through-the-lens Gallium Photo Diode metering, interchangeable lenses, and accessory Motor Drive.

Lensmount: Stainless steel Nikon bayonet accepts all reflex-viewing Nikkor lenses 6mm-2000mm and all Nikon-mount accessories. Flange/film distance 46.5mm. Automatic diaphragm coupling.

Exposure Control: Through-the-lens, LED readout with aperture or shutter priority.

Meter System: Dual Gallium Photo Diode cells concentrate more than half of their sensitivity on central 12mm area shown by circle in finder; operates at full aperture with all AI-Nikkor lenses; stop-down measurement with non-AI lenses, attachments, or instruments. Automatic maximum-aperture indexing with all AI-Nikkor lenses.

Meter Ranges: ASA 12-3200; EV 1 to 18 (with ASA 100 film and f1.4 lens). Full-aperture coupling range: f1.2-f32.

Shutter: All-metal vertical-travel focal plane; speeds "B" 1 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, and 1/1000th second.

Flash Synchronization: "X" synch at "B" to 1/125th second; "M" synch at "B" 1-1/30th second.

Flash Contacts: Built-in hot shoe with automatic safety switch; single PC outlet accepts Nikon screw-on or conventional PC cords.

Viewfinder: Built-in pentaprism finder with -1.0 diopter correction; information display includes 5-stage LED readout, under/over-exposure indicators, shutter speed in use, and selected lens aperture with all AI-Nikkor lenses through Nikon Aperture Direct Reading (ADR) system.

Focusing Screen: Fixed Nikon Type K screen with 3mm-diameter split-image rangefinder, 1mm microprism circle plus overall matte Fresnel area, large circle shows center-weighted measurement area.

Reflex Mirror: Oversize instant-return type with special damping mechanism.

Film Loading: Multi-slotted takeup spool, hinged back and additive automatic-reset exposure counter for fast loading.

Film Transport: Single-stroke lever advances film, winds shutter, switches meter on, and counts exposures in 135° action, may be left at "ready" position 30° from camera body, to activate meter when folded flush, lever turns meter off.

Film Rewind: Rewind-release button on camera baseplate; fold-out rewind crank pulls up to open camera back, after safety catch is released.

Multiple Exposure Control: By pressing control button on camera top while operating film transport lever; also operates with Nikon Motor Drive attached.


Battery Type: Two 1.5v silver oxide batteries (Eveready S76 or equivalent) power meter.

Other Features: Depth-of-field preview; stainless-steel reinforced neckstrap eyelets; built-in self-timer with variable delay to approximately 10 seconds, timer cycle may be 'cancelled' before exposure; memo holder on camera back stores film carton tab or other data.

Dimensions: Camera body, 5.6" x 2.4" x 3.5" (142mm x 60.5mm x 89.5mm).

Weight: 20.8 oz. (590g).

All specifications subject to change without notice.

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- Automatic Exposure Control
- Silicon Photo Diode Meter Accuracy
- Nikon Quality and System Versatility
- Automatic Firepower Capability

The EL2 is truly the automatic Nikon. Its aperture-priority system provides fully automatic exposure setting with any reflex-viewing Nikkor lens and virtually any other image-forming attachment. Yet, it allows the photographer widest possible creative control over the exposure. Add the compact, optional accessory Auto Winder AW-1 and even the film transport becomes automatic. Every detail of the EL2, including its sophisticated electronic system, reveals the Nikon heritage of ingenious design and ultra-precise engineering.

Automatic Electronic Exposure Control

With the shutter dial set at "A" (automatic), the photographer merely selects the lens aperture, focuses, and shoots. Solid-state electronic circuitry relays the meter's exposure command to the electromagnetically controlled shutter and determines the precise speed required within a stepless range from 8 seconds to 1/1000th. Because the system is based on aperture priority, it works automatically with any reflex-viewing lens (even Reflex Nikkors, which have no diaphragm) as well as with closeup accessories, telescopes and microscopes. Full-aperture metering is provided with all AI-Nikkor lenses; stop-down method is used with other lenses.

Special Creative Exposure Controls

- Exposure Memory Lock**—Pressing the memory lock/self timer lever toward the lens locks the shutter at the automatically determined setting permitting selective exposure for backlit subjects and other special situations.
- Exposure Compensator**—May be programmed for deliberate variations from -1 to +2 EV e.g., 1 f-stop less to 2 stops more than normal exposure) with automatic operation.
- Match-Needle Control**—With shutter dial moved off the "A" setting, either the shutter speed or the lens aperture can be changed to align the meter needles in the finder for correct exposure.

Automatic Maximum Aperture Indexing

For full-aperture metering with the Nikon EL2, the photographer need only attach the selected AI-Nikkor lens with a quick 1/6th turn. No further adjustments are required. Stop-down exposure measurements, equally accurate, are used (either in automatic or manual mode) with all reflex-viewing non-AI lenses, attachments and optical instruments. (Note: most previous Auto-Nikkor lenses can be converted for AI operation; please refer to *Nikkor Lens AI Conversion* page in Nikkor Lenses catalog section.)

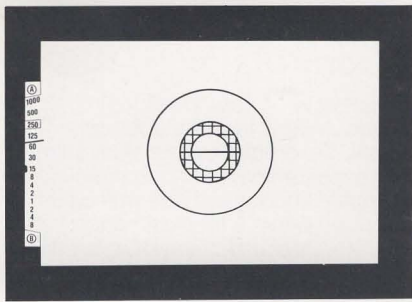
Full Flash Capability

Vertical-travel metal shutter permits "X" synch to 1/125th second, "M" synch to 1/1000th; no adjustments required for different flash types. Built-in hot shoe provides cordless flash synch with Nikon or other hot-shoe units; safety switch activates shoe only when flash is inserted, protects against annoying shock. PC outlet, for cord-type units or off-camera flash, accepts slip-proof Nikon screw-on or conventional flash cords.

Dual Meter Switches

- Moving transport lever 30° from camera body switches meter on when lever is flush against body, meter is switched off (and shutter release is locked).
- Separate switch around shutter release button controls meter (and overrides release lock) when lever is in flush position, for use with Auto Winder; also convenient for left-eye users at all times.

Nikon EL2



Center-Weighted Dual SPD Meter System

Most consistently accurate system for through-the-lens exposure control. Observes entire picture area, but concentrates more than half of its sensitivity on central 12mm-diameter area outlined in viewfinder. Result is correct exposure in the vast majority of shooting situations, whether camera is held in horizontal or vertical position. Advanced Silicon Photo Diode (SPD) cells provide practically instantaneous response and wide-ranging sensitivity, from EV 1 to EV 18.

Full Visual Control Through Finder

The brilliant EL2 viewfinder shows the shutter speed in use (automatically or manually selected) on a complete shutter speed scale from 8 seconds to 1/1000th second, and auto/manual indicator needle. The finder incorporates the famed Nikon K screen with central split-image rangefinder plus microprism ring and overall matte Fresnel surface for fast, pin-point focusing accuracy with any lens; a circle in the finder outlines the center-weighted meter area.

Other Nikon EL2 Features

Depth-of-field preview button; memory lock/self-timer; oversize mirror, preventing finder image cutoff with long lenses; independent mirror lock-up; hinged back with safety lock; Nikon 5-point film flatness control.

Nikon EL2 is available in chrome (Product No. 1623) or professional black finish (Product No. 1628).

Auto Winder AW-1

This compact, cordless accessory screws directly to the EL2 baseplate, without modification—easily attached or removed in seconds. As the photographer eases up on the shutter button, the Auto Winder advances film, cocks shutter, and counts exposures—all in approximately 0.5 seconds, permitting rapid-sequence automatic firepower at up to 2 exposures per second at shutter speeds of 1/125th second or faster. Auto Winder is powered by 6-1.5v AA batteries, good for up to approximately 5000 exposures (150 36-exposure rolls). Built-in LED signal flashes each time film is advanced. Equipped with its own film rewind button and tripod socket, the Nikon Auto Winder measures 5.7 x 1.5 x 1.6" (145x39x40mm) and weighs 9.9 ounces (281g) less batteries. Supplied exclusively in professional black finish, Product No. 8.

Technical Specifications

Camera Type: Automatic 35mm SLR with through-the-lens Silicon Photo Diode metering, interchangeable lenses, and accessory Auto Winder

Lensmount: Stainless steel Nikon bayonet accepts all Nikkor lenses 6mm—2000mm and all Nikon-mount accessories. Flange/film distance 46.5mm. Automatic diaphragm coupling.

Exposure Control: Automatic through-the-lens, with aperture priority manual match-needle with aperture or shutter priority.

Meter System: Silicon Photo Diode cells concentrate more than half of their sensitivity on central 12mm area shown by circle in finder; operates at full aperture with all AI-Nikkor lenses; stop-down measurement with non-AI lenses, attachments, or instruments. Automatic maximum aperture indexing with all AI-Nikkor lenses.

Meter Ranges: ASA 12—3200; EV 1 to 18 (with ASA 100 film and f1.4 lens). Full-aperture coupling range: f1.2-f32.

Automatic Exposure Compensator: Built-in, adjustable in 0.5 EV increments from -1 EV to +2 EV.

Automatic Exposure Memory Lock: Built-in, operated via self-timer lever.

Shutter: Electronically-timed, all-metal vertical-travel focal plane; speeds "B", 8, 4, 2, 1 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, and 1/1000th second in manual mode; continuously variable 8—1/1000th second in automatic mode. Shutter operates at 1/90th second in manual mode if battery is depleted.

Flash Synchronization: "X" synch at "B" and 8—1/125th second; "M" synch at "B" 8—1/30th, 1/250—1/1000th second; automatic synch adjustment as shutter speed is set.

Flash Contacts: Built-in hot shoe with automatic safety switch; single PC outlet accepts Nikon screw-on or conventional PC cords.

Viewfinder: Built-in pentaprism finder with -1.0 diopter correction; information display includes meter needle, under/over-exposure indicators, auto/manual signal, shutter speed in use, and complete shutter speed scale.

Focusing Screen: Fixed Nikon Type K screen with 3mm-diameter split-image rangefinder, 1mm microprism circle plus overall matte/Fresnel area; large circle shows center-weighted measurement area.

Reflex Mirror: Oversize instant-return type with independent locking control.

Film Loading: Multi-slotted take-up spool, hinged back and additive automatic-reset exposure counter for fast loading.

Film Transport: Single-stroke lever advances film, winds shutter, switches meter on, and counts exposures in 135° action, may be left at "ready" position 30° from camera body, to activate meter; when folded flush, lever turns meter off and locks shutter release. Control around shutter release button serves as secondary meter/shutter lock control.

Film Rewind: Rewind-release button on camera baseplate; fold-out rewind crank pulls up to open camera back.


Battery Type: One 6v silver oxide battery (Eveready 544 or equivalent) powers meter and shutter; battery tester built in.

Other Features: Depth-of-field preview; stainless-steel reinforced neckstrap eyelets; built-in self timer with variable delay to approximately 10 seconds; accepts optional Auto Winder AW-1

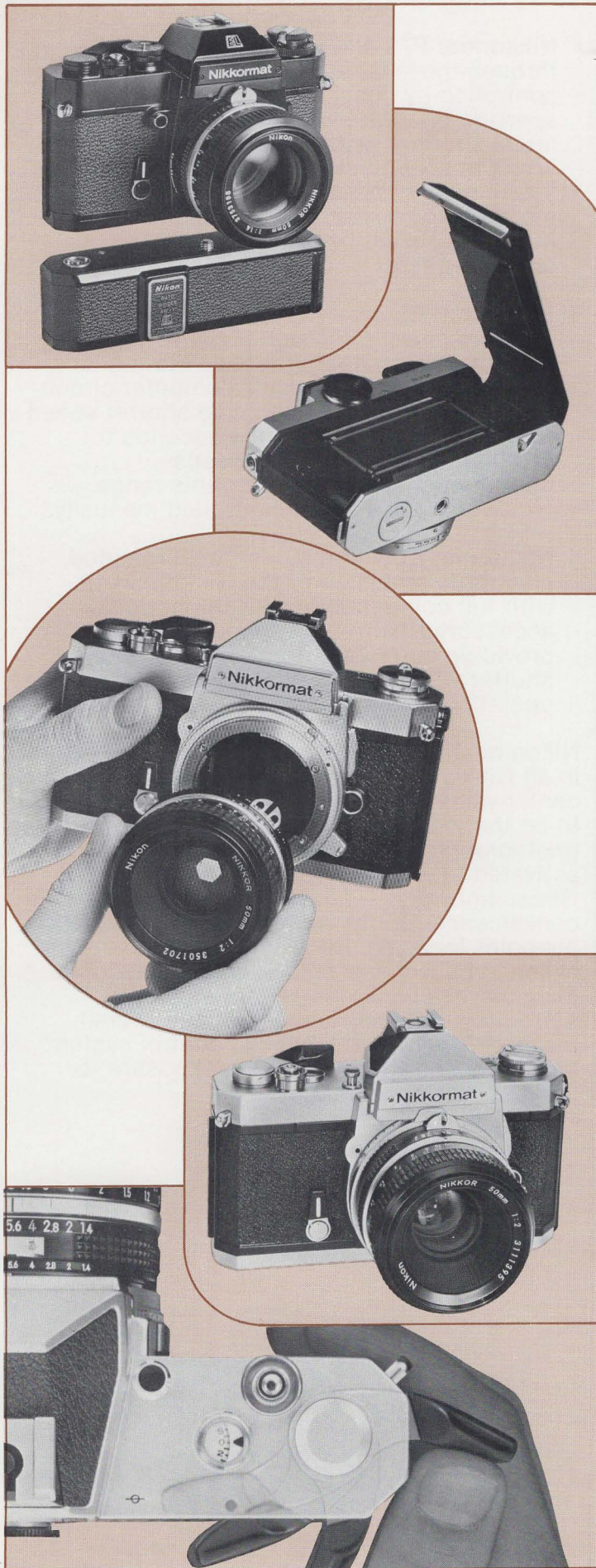
Dimensions: Camera body, 5.7" x 3.7" x 2.1" (145.2mm x 93.5mm x 54.5mm).

Weight: 27.7 oz. (780g).

All specifications subject to change without notice.

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Nikkormat Cameras: An Introduction



Nikkormat single-lens-reflex cameras are built to Nikon standards of advanced technology and rugged precision. Moderately priced, they offer economical entry into the Nikon system. They accept all interchangeable Nikkor lenses and most Nikon accessories. Features common to all current Nikkormat models include:

- **Center-Weighted Through-the-Lens CdS Metering** with more than 55 Nikkor lenses.
- **Rugged All Metal, Vertical-Travel, Focal Plane Shutter** with speeds to 1/1000th second.
- **Full Flash Capability** with "X" synch to 1/125th second, "M" synch to 1/1000th, built-in hot shoe and PC outlet; special flash safety features.
- **Large, Bright Viewfinder** shows comprehensive exposure information including shutter speeds, meter needle and reference markers.
- **Fast, Easy Operation** to capture every photographic opportunity.

There are two basic series of Nikkormat cameras. The *Nikkormat FT3* provides the convenience and accuracy of automatic maximum aperture indexing and full-aperture metering with all AI-Nikkor lenses, from 6mm to 600mm (Note: Most previous Auto-Nikkors can be converted for AI operation. Please see "Nikkor Lens AI-Conversion Service" in *Nikkor Lenses* catalog section.) Other models in the Nikkormat family (including the FT2, EL, and ELW) are designed for manual aperture indexing as the lens is attached and provide full-aperture metering with all Nikkor lenses with meter-coupling shoe (including all AI-Nikkor lenses). And, each of the various camera models offers its own, specific advantages, as detailed on the following page.

Nikkormat Cameras: An Introduction



Nikkormat FT3



Nikkormat EL




Nikkormat ELW with AW-1 Auto Winder

- **Nikkormat FT2 and FT3** feature accurate, through-the-lens, match-needle metering, controlled by simply adjusting the lens aperture or shutter speed. Their rugged metal shutters provide speeds from 1 to 1/1000th second plus "B." While the most economical of Nikon-system cameras, these models are so reliable and versatile that many are owned by professional photographers.
- **Nikkormat EL** provides fully automatic, aperture-priority, through-the-lens exposure control. The photographer selects the lens opening, and the camera's computer circuit automatically sets the precise shutter speed for correct exposure from 4 seconds to 1/1000th second, with speeds continuously variable within this range. Exposure may also be controlled manually.
- **Nikkormat ELW** combines the automated, electronic precision of the Nikkormat EL with full compatibility with the optional accessory Nikon Auto Winder AW-1, providing automatic film transport and shutter winding for added convenience and operating speed.

Nikon quality and design ingenuity are evident in all Nikkormat cameras. All share the Nikon center-weighted meter system, acknowledged to be the most reliable in the vast majority of photographic situations. The meter switch is activated by the film transport lever—also a Nikon innovation—for added speed and convenience. Bright, comfortable viewing and pin-point focusing are assured by the famous Nikon Type K finder screen with 3-way focus check: central split-image rangefinder, surrounding microprism collar, and overall matte Fresnel field. A special control system holds the film truly flat during exposure for sharpest possible images.

All specifications subject to change without notice.

Nikon, Inc., Garden City, N.Y. 11530. Subsidiary of Ehrenreich Photo-Optical Industries, Inc. Other offices in Niles, Ill., and San Francisco, Calif. 

Nikkormat FT3



- Instant Lens Interchangeability
- Center-Weighted Metering
- Nikon System Versatility

Nikkormat FT3 is an easy-handling precision camera that combines fast, uncomplicated operation with a full complement of built-in features, ruggedly reliable performance, and versatility far beyond its economical price. Ideal for any beginning SLR photographer, the FT3 also meets the needs of advanced hobbyists and even professionals—by itself or as an inexpensive extra body for anyone's personal Nikon system.

Constantly Picture-Ready

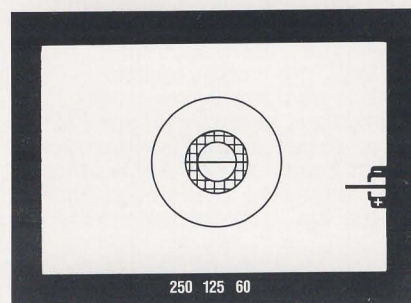
The FT3 is designed to permit all picture-taking operations with the camera held at eye-level. Focusing, lens aperture and shutter adjustments are quickly made with the left hand; film advance and shutter release (also depth-of-field preview when desired) with the right.

Center-Weighted Meter System

Designed by Nikon and acknowledged as the most consistently accurate for through-the-lens exposure control. Two sensitive CdS cells observe the entire picture area but derive more than half of their exposure information from the central 12mm-diameter area, where the main subject is usually located. This helps compensate for overly bright or dark backgrounds and, in most situations, provides accurate exposure with a single reading. The "weighted" area is precisely and uniformly centered in every FT3 camera, and readings are equally reliable whether the camera is held in horizontal or vertical position. The meter switch is activated by the film advance lever.

Automatic Maximum Aperture Indexing (AI)

With AI-Nikkor lenses, the FT3 meter is programmed automatically as the lens is attached to the camera with a quarter-turn. The photographer is then immediately ready for full-aperture metering. AI-Nikkors thus are instantly interchangeable. Stop-down metering, equally accurate, is provided with all other reflex-viewing lenses and other image-forming attachments. (Most earlier Auto-Nikkors can be converted for AI operation; refer to *Nikkor Lens AI Conversion* page in Nikkor Lenses catalog section.)



Exposure Check Through The Finder

Correct exposure is indicated when meter needle is centered in bracket visible in the finder. Minus and plus markings indicate under and over-exposure settings. Selected shutter speed appears at bottom of finder flanked by next higher and lower speeds.

... And From Above

Meter needle along with plus and minus markers is seen also in window on top of camera; helpful when camera is in low-level position, held overhead (upside down), or for closeup applications.

Nikkormat FT3

Nikon "K" Finder Screen

Combines optimum brightness and focusing ease. For quick, positive focus, you can use the central split-image rangefinder the surrounding micropism collar, or any part of the entire finder area. Fresnel-type screen is evenly bright to edges, with no sacrifice in focusing accuracy. Circular outline shows "weighted" metering area. Eyepiece accepts all Nikon system screw-on finder accessories.

High-Speed Flash Synch

FT3 vertical-travel metal shutter (1 second to 1/1000th plus "B") provides electronic flash synch to 1/125th, reducing risk of "ghost" images that might be caused by bright, existing light at slower speeds; also synchs with "M" bulbs to 1/1000th sec. No synch adjustment is required for different types of flash.

Hot Shoe Plus PC Terminal

Shoe accepts Nikon and other flash units with standard cordless synch contact. Safety switch automatically turns shoe contact off when unit is removed, so there's no risk of annoying shock. For cord-type units and for off-camera flash, there is a single standard terminal, threaded for slip-proof Nikon screw-in cords (also accepts other PC cords).

Multi-Function Advance Lever

The plastic-tip-cushioned lever (derived from the Nikon space cameras) advances the film, cocks the shutter and counts the exposures with a short 135° sweep. It also switches the meter system on, at the 20° stand-off position, and off when returned flush with the camera.

Special Film Flattening System

Nikon design goes to extreme lengths to assure maximum film flatness for sharpest possible pictures with the FT3: (1) stabilizer prevents film cartridge from wobbling; (2) film travels on extra-long, precision-ground, recessed rails, (3) is held flat by over-size, polished pressure plate, aided by (4) special "anti-bellying" roller, and finally (5) winds onto fixed takeup spool emulsion-side out, further counteracting its natural "curl." Hinged back is structurally rigid and locks securely with a double catch.

Depth-Of-Field Preview

Permits checking pictorial effect at selected shooting aperture at touch of a button.

Self-Timer

Releases shutter automatically after approximately 10-second delay

Nikkormat FT3 is supplied in satin chrome (Product No. 1832) or professional black finish (Product No. 1837).

Technical Specifications

Camera Type: 35mm slr with through-the-lens CdS metering and interchangeable lenses.

Lensmount: Stainless-steel Nikon bayonet accepts all Nikkor lenses 6mm-2000mm and all Nikon-mount accessories. Flange/film distance 46.5mm. Automatic diaphragm coupling.

Exposure Control: Through-the-lens, match-needle readout with aperture or shutter priority

Meter System: CdS cells concentrate 60% of sensitivity on central 12mm area shown by circle in finder; operates at full aperture with all AI-Nikkor lenses; stopdown measurement with non-AI lenses, attachments, or instruments. Automatic maximum aperture indexing with all AI-Nikkor lenses.

Meter Ranges: ASA 12-1600; EV 3 to 17 (with ASA 100 film and f1.4 lens). Full-aperture coupling range: f1.2-f32.

Shutter: All-metal vertical-travel focal plane; speeds "B", 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, and 1/1000th second.

Flash Synchronization: "X" synch at "B" to 1/125th second; "M" synch at "B", 1 1/30th, 1/250-1/1000th second; automatic synch adjustment as shutter speed is set.

Flash Contacts: Built-in hot shoe with automatic safety switch; single PC outlet accepts Nikon screw-on or conventional PC cords.

Viewfinder: Built-in pentaprism finder with 1.0 diopter correction; information display includes meter needle, under/over exposure indicators, shutter speed in use, and adjacent higher and lower speeds. Needle on camera top permits exposure check from above.

Focusing Screen: Fixed Nikon Type K screen with 3mm-diameter split-image rangefinder 1mm micropism circle plus overall matte Fresnel area; large circle shows center-weighted measurement area.

Reflex Mirror: Oversize instant-return type with independent locking control.

Film Loading: Multi-slotted take-up spool hinged back and additive automatic-reset exposure counter for fast loading.

Film Transport: Single-stroke lever advances film, winds shutter switches meter on, and counts exposures in 135° action; may be left at "ready" position 20° from camera body to activate meter when folded flush, lever turns meter off

Film Rewind: Rewind-release button on camera baseplate; fold-out rewind crank pulls up to open camera back.

Battery Type: Two 1.5v silver oxide batteries (Eveready S76 or equivalent) power meter

Other Features: Depth-of-field preview; stainless-steel reinforced neckstrap eyelets; built-in self timer with variable delay to approximately 10 seconds.

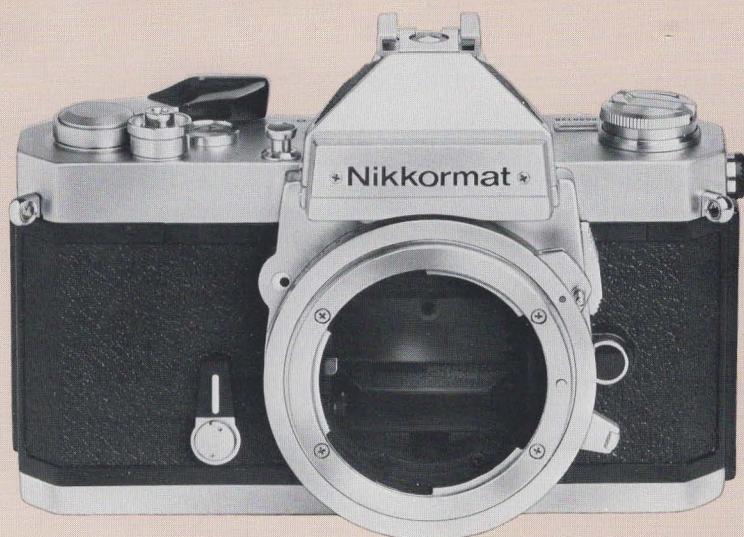
Dimensions: Camera body 5.8" x 3.8" x 2.1" (148mm x 96mm x 54mm).

Weight: 27 7 oz. (780g).

All specifications subject to change without notice.

Nikon, Inc., Garden City, N.Y. 11530. Subsidiary of Ehrenreich Photo-Optical Industries, Inc. Other offices in Niles, Ill., and San Francisco, Calif. 1979

Nikkormat FT2



- **Center-Weighted Through-The-Lens Metering**
- **Nikon Quality**
- **Nikon System Versatility**

Nikkormat FT2 combines the consistent accuracy of Nikon center-weighted metering with the surpassing excellence of Nikkor optics in a moderately priced yet rugged, fast-handling camera of exceptional versatility. This is a full-fledged member of the Nikon System . . . a precision camera you'll feel at home with immediately and that will keep pace with your growing photographic skills.

Center-Weighted Meter System

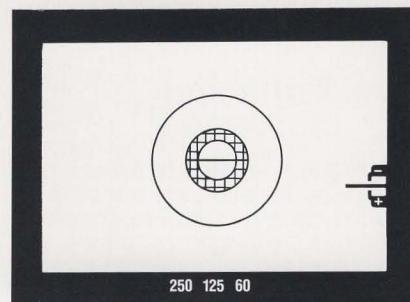
The most consistently accurate system for through-the-lens exposure control. Two CdS cells, reading directly off the viewing screen, observe the entire picture area but concentrate on the central 12mm-diameter area, where the main subject is usually located. Thus, overly bright or dark backgrounds will be compensated for. Nikon precision technology assures that weighted portion is uniform and accurately centered in every camera. Readings are equally reliable whether FT2 is held in vertical or horizontal position.

Fast One-Step Metering

The meter needle, displayed in the viewfinder can be centered by adjusting either shutter speed or lens aperture. Meter switch is built into advance lever. Meter operates at full aperture with all Nikkor lenses with meter-coupling shoe, including all AI-Nikkors.

ASA Setting Lock

Located on shutter speed control lever lock prevents accidental changing of ASA setting. Meter can be programmed for films ASA 12 to 1600.



Exposure Check Through Finder

Correct exposure is indicated when meter needle is centered in bracket visible in the finder. Minus and plus markings indicate under- and overexposure settings. Selected shutter speed appears at bottom of finder flanked by next higher and lower speeds.

. . . And From Above

Meter needle along with plus and minus markers is seen also in window on top of camera; helpful when camera is in low-level position or held overhead (upside down) and for closeup applications.

Nikkormat FT2

Nikon "K" Finder Screen

Combines optimum brightness and focusing ease. For quick, positive focus, you can use the central split-image rangefinder, the surrounding microprism collar, or any part of the entire finder area. Fresnel-type screen is evenly bright to edges, with no sacrifice in focusing accuracy. Circular outline shows "center weighted" metering area. Eyepiece accepts all Nikon-system screw-on finder accessories.

High-Speed Flash Synch

FT2's vertical-travel, all-metal shutter provides electronic flash synch to 1/125th second, reducing risk of "ghost" images that might be caused by bright, ambient light at slower speeds; also synchs with "M" bulbs at "B" 1 1/30th and 1/250-1/1000th sec. No synch adjustment is required for different types of flash; adjustment is made automatically when shutter speed is set.

Hot Shoe Plus PC Terminal

Nikon and other standard flash units synchronize with FT2 shutter when slipped onto camera hot shoe located on top of the prism. Safety switch automatically turns shoe contact off when unit is removed, eliminates risk of annoying shock. For cord-type units and off-camera flash, there is a single standard terminal threaded for Nikon screw-in cords (also accepts other PC cords).

Special Film Flattening System

FT2 design goes to great lengths to assure maximum film flatness for sharpest possible pictures: (1) stabilizer prevents film cartridge from wobbling; (2) film travels on extra-long, precision-ground, recessed rails; (3) film is held flat by oversize, polished pressure plate, aided by (4) special roller and finally (5) winds onto fixed take-up spool emulsion-side out, further counteracting its natural "curl". Hinged back is structurally rigid and locks securely with a double catch.

Nikkormat FT2 is supplied in satin chrome (Product No. 1830) or professional black finish (Product No. 1835).

Technical Specifications

Camera Type: 35mm SLR with through-the-lens CdS metering and interchangeable lenses.

Lensmount: Stainless-steel Nikon bayonet accepts all Nikkor lenses 6mm-2000mm and all Nikon-mount accessories. Flange/film distance 46.5mm. Automatic diaphragm coupling.

Exposure Control: Through-the-lens, match-needle readout with aperture or shutter priority.

Meter System: CdS cells concentrate 60% of sensitivity on central 12mm area shown by circle in finder; operates at full aperture with all meter-coupled Auto-Nikkor and AI-Nikkor lenses; stop-down measurement with uncoupled lenses, attachments, or instruments.

Meter Ranges: ASA 12-1600; EV 3 to 17 (with ASA 100 film and f1.4 lens). Full-aperture coupling range: f1.2-f32.

Shutter: All-metal vertical-travel focal plane; speeds "B", 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, and 1/1000th second.

Flash Synchronization: "X" synch at "B" to 1/125th second; "M" synch at "B" 1-1/30th, 1/250-1/1000th second; automatic synch adjustment as shutter speed is set.

Flash Contacts: Built-in hot shoe with automatic safety switch; single PC outlet accepts Nikon screw-on or conventional PC cords.

Viewfinder: Built-in pentaprism finder with 1.0 diopter correction; information display includes meter needle, under/over exposure indicators, shutter speed in use, and adjacent higher and lower speeds. Needle on camera top permits exposure check from above.

Focusing Screen: Fixed Nikon Type K screen with 3mm-diameter split-image rangefinder, 1mm microprism circle plus overall matte Fresnel area; large circle shows center-weighted measurement area.

Reflex Mirror: Oversize instant-return type with independent locking control.

Film Loading: Multi-slotted take-up spool hinged back and additive automatic-reset exposure counter for fast loading.

Film Transport: Single-stroke lever advances film, winds shutter switches meter on, and counts exposures in 135° action; may be left at "ready" position 20° from camera body to activate meter; when folded flush, lever turns meter off.

Film Rewind: Rewind-release button on camera baseplate; fold-out rewind crank pulls up to open camera back.

Battery Type: Two 1.5v silver oxide batteries (Eveready S76 or equivalent) power meter.

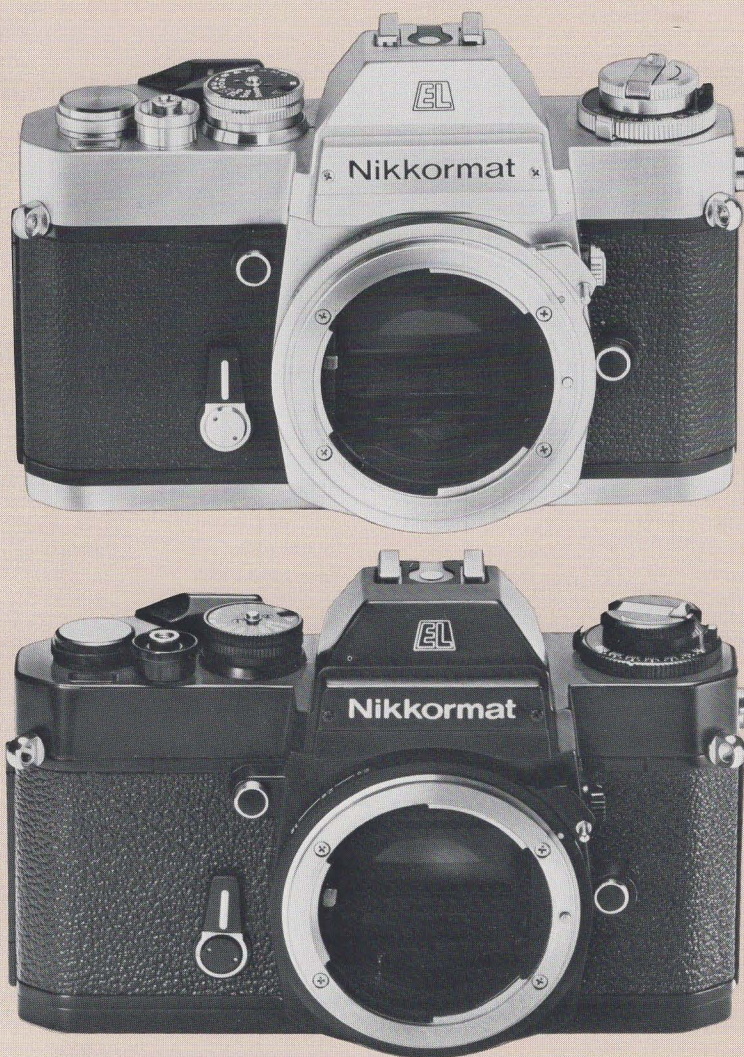
Other Features: Depth-of-field preview; stainless-steel reinforced neckstrap eyelets; built-in self-timer with variable delay to approximately 10 seconds.

Dimensions: Camera body 5.8" x 3.8" x 2.1" (148mm x 96mm x 54mm).

Weight: 27.5 oz. (780g).

All specifications subject to change without notice.

Nikkormat EL



- Automatic Exposure Accuracy
- Electronic Shutter Control
- Nikon System Capabilities

The Nikkormat EL is designed for photographers who prefer the convenience of automatic exposure control but also insist on Nikon quality and versatility. The EL's through-the-lens meter automatically selects and sets the exact shutter speed for perfect exposure, steplessly and continuously from 4 full seconds to 1/1000th second. Because it is an aperture-priority system, this automatic precision may be enjoyed with more than 55 reflex-viewing Nikkor lenses, with bellows units, extension rings, even microscopes and telescopes.

Automatic Exposure Control

Move shutter dial to automatic position, choose desired lens aperture—and take the picture! When you press the shutter release, the through-the-lens meter relays its exposure command to the camera's electronic circuit, which selects the correct shutter speed automatically. Speeds are continuously variable from 4 seconds to 1/1000th. The meter gives full-aperture measurement with all meter-coupled Auto-Nikkor lenses (including all AI-Nikkors); also permits stop-down metering with uncoupled lenses or accessories. And, the center-weighted system is equally reliable with camera held in vertical or horizontal position. Manual operation may be selected at any time by moving shutter dial off "A" and adjusting shutter speed or lens aperture for match-needle exposure control.

Exposure Memory Lock

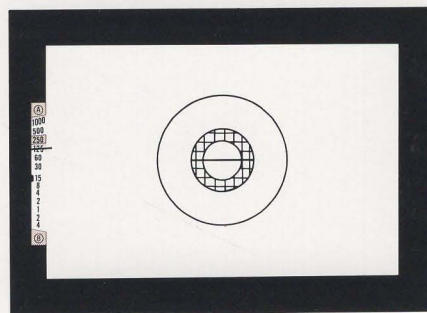
In automatic operation, the photographer can "lock in" specialized exposure readings by moving the self-timer lever towards the lens; indicated speed is retained as long as lever is held. This provides valuable control for selective closeup readings, or when deliberate under- or over-exposure is desired.

Nikon Center-Weighted Metering

Most consistently accurate of all metering systems. Reads entire picture area but concentrates more than half of its sensitivity on the central 12mm-diameter portion, shown by circle in finder. Assures correct exposure under virtually any conditions. ASA range 25-1600; sensitivity range EV 1 18 (1 sec. at f1.4-1/1000th sec. at f16) with ASA 100 film and f1.4 lens.

3-Way Focus Check

Permits fast, accurate focusing even in dim light or with wide-angle lenses. Central split-image rangefinder is surrounded by microprism collar and overall Fresnel-type groundglass. Finder provides exceptional edge-to-edge viewing brilliance; also shows shutter speed in use plus complete shutter-speed display under/over-exposure zones, auto and match-needle markers.



Nikkormat EL

Electronically Controlled All Metal Shutter

Provides speeds from 4 seconds to 1/1000th, continuously variable in automatic mode, and "B." Speeds are timed electronically by unique integrated circuit encompassing nearly 100 solid-state components, assuring outstanding speed accuracy. Shutter is linked to meter system by Nikon-designed Functional Resistance Element (FRE) with gold-plated contacts for lasting reliability. Shutter and meter are powered by 6v silver-oxide battery. Mechanical speed of 1/90th second available in case of battery depletion. LED battery check on back of camera.

Full Flash Capability

"X" synch at speeds to 1/125th second; "M" synch at all speeds. Locking synch selector on shutter dial. Built-in hot shoe, with safety switch for positive shock prevention, for Nikon and other cordless flash units. PC outlet accepts Nikon screw-in or conventional PC cords.

Convenient Operation

Plastic-tip-cushioned transport lever advances film, winds shutter, counts exposures and switches meter on in single 135° stroke; automatically returns to 30° stand-off "ready" position with meter on; when returned flush with body, turns meter off. Hinged back and multi-slotted take-up spool speed film loading. Superior film flatness, vital for edge-to-edge sharpness, is achieved with combination of extra-long pressure plate and film rails, cartridge stabilizer and emulsion-side-out winding onto take-up spool.

Other Features

Built in self-timer; depth-of-field preview; oversize instant-return mirror with lock control, folding film-rewind crank; stainless steel reinforced neckstrap eyelets. Nikkormat EL is supplied in satin chrome finish (Product No. 1822) or professional black finish (Product No. 1826).

Technical Specifications

Camera Type: Automatic 35mm SLR with through-the-lens CdS metering and interchangeable lenses.

Lensmount: Stainless-steel Nikon bayonet accepts all Nikkor lenses 6mm-2000mm and all Nikon-mount accessories. Flange/film distance 46.5mm. Automatic diaphragm coupling.

Exposure Control: Automatic through-the-lens with aperture priority; manual match-needle with aperture or shutter priority.

Meter System: CdS cells concentrate 60% of sensitivity on central 12mm area shown by circle in finder; operates at full aperture with all meter-coupled Auto-Nikkor and AI-Nikkor lenses; stop-down measurement with non-coupled lenses, attachments, or instruments.

Meter Ranges: ASA 25-1600; EV 1 to 18 (with ASA 100 film and f1.4 lens). Full-aperture coupling range: f1.2-f32.

Automatic Exposure Memory Lock: Built in, operated via self-timer lever.

Shutter: Electronically-timed, all-metal vertical-travel focal plane; speeds "B", 4, 2, 1 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, and 1/1000th second in manual mode; continuously variable 4-1/1000th second in automatic mode. Shutter operates at 1/90th second in manual mode if battery is depleted.

Flash Synchronization: "X" synch at "B" to 4-1/125th second; "M" synch at "B" 4-1/1000th second; locking synch selector on shutter speed dial.

Flash Contacts: Built-in hot shoe with automatic safety switch; single PC outlet accepts Nikon screw-on or conventional PC cords.

Viewfinder: Built-in pentaprism finder with -1.0 diopter correction; information display includes meter needle, under/over-exposure indicators, auto/manual signal, shutter speed in use, and complete shutter speed scale.

Focusing Screen: Fixed Nikon Type K screen with 3mm-diameter split-image rangefinder, 1mm micropism circle plus overall matte Fresnel area; large circle shows center-weighted measurement area.

Reflex Mirror: Oversize instant-return type with independent locking control.

Film Loading: Multi-slotted take-up spool hinged back and additive automatic-reset exposure counter for fast loading.

Film Transport: Single-stroke lever advances film, winds shutter, switches meter on, and counts exposures in 135° action, may be left at "ready" position 30° from camera body, to activate meter; when folded flush, lever turns meter off and locks shutter release.

Film Rewind: Rewind-release button on camera baseplate; fold-out rewind crank pulls up to open camera back, after safety catch is released.

Battery Type: One 6v silver oxide battery (Eveready 544 or equivalent) powers meter and shutter; battery tester built in.

Other Features: Depth-of-field preview; stainless-steel reinforced neckstrap eyelets; built-in self-timer with variable delay to approximately 10 seconds.

Dimensions: Camera body 5.7" x 3.7" x 2.1" (145.2mm x 93.5mm x 54.5mm).

Weight: 27.5 oz. (780g).

All specifications subject to change without notice.

Nikkormat ELW and Auto Winder AW-1



- Automatic Exposure Control
- Automatic Firepower Capability
- Nikon System Versatility

The Nikkormat ELW is a significant addition to the Nikon System of photography. By itself, it provides completely automatic exposure control with more than 55 reflex-viewing Nikkor lenses from 6mm to 2000mm. Attaching the optional Nikon Auto Winder AW-1 adds fully automatic film winding and shutter recock; makes possible up to two exposures per second.

Auto Winder AW-1

Screws directly to camera baseplate—easily attached or removed in seconds. As the photographer lets up on the shutter button, the Auto Winder advances film, cocks shutter and counts exposure—all in approximately 1/2 second, permitting up to two exposures per second depending on shutter speed in use.

The Auto Winder is powered by 6 AA alkaline batteries, good for up to approximately 150 rolls of 36-exposure film. A built-in external LED signal flashes when film is advanced. Film is rewound manually via the camera's rapid-rewind crank; a rewind button and tripod socket are provided on the Auto Winder Baseplate. The Nikon Auto Winder adds only 1.6" (41mm) in height and 9.9 oz. (281g) in weight to the camera.

Automatic Through-The-Lens Exposure Control

The ELW provides aperture-priority automation. With shutter speed dial at "A" position, just select your lens aperture and shoot. The through-the-lens meter relays its exposure command to electronic circuit in camera, which "programs" shutter speed within stepless range from 4 seconds to 1/1000th second. Gives full-aperture measurement with all Auto-Nikkor lenses incorporating meter-coupling shoe (including all AI-Nikkor lenses); also permits stop-down metering (via depth-of-field preview button) with uncoupled lenses or with bellows units, extension rings, even microscopes and telescopes. With shutter dial off "A" position, Nikkormat ELW provides match-needle exposure control either the shutter speed or lens aperture may be adjusted to align indicators in viewfinder for correct exposure.

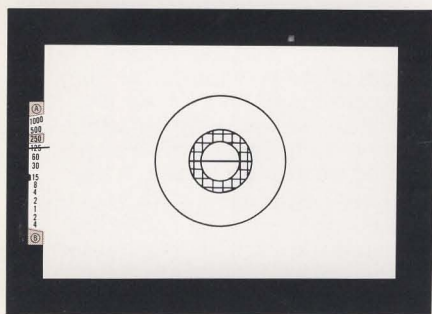
Exposure "Memory" Lock

In "auto" mode, moving self-timer lever towards lens locks shutter on speed indicated in finder; valuable for close-up readings or selected, small subject areas or deliberate under/over-exposure effects.

Center-Weighted Meter System

Most consistently accurate system for through-the-lens exposure control. Observes entire picture area but concentrates 60% of sensitivity on central 12mm-diameter area, shown by circle in viewfinder. Result is correct exposure in most shooting situations. Readings are equally reliable whether ELW is held in vertical or horizontal position. ASA range 25-1600. Sensitivity range EV 1 (1 second at f1.4) to EV 18 (1/1000th second at f16) with ASA 100 film.

Nikkormat ELW and Auto Winder AW-1



Full Visual Control Through Finder

Brilliant pentaprism finder shows shutter speed in use plus complete shutter-speed display under/over-exposure signals; auto/manual indicator Nikon "K" screen contains split-image rangefinder plus surrounding microprism ring and overall matte Fresnel field for fast, accurate viewing and focusing under all light conditions and with all lenses. Accepts all Nikon-system eyepiece accessories.

Electronically-Timed Metal Shutter

In "auto" mode, shutter speeds are set steplessly from 4 sec. to 1/1000 sec., in manual, choose any marked speed, including "B". Both shutter and meter are powered by single 6v silver oxide battery, with mechanical 1/90th sec. speed available if battery is depleted. LED battery tester is built-in.

Full Flash Capability

Vertical shutter travel permits "X" synchronization to 1/125th second, "M" synch to 1/1000th; these high synch speeds eliminate ambient light "ghost" images. PC outlet accepts Nikon screw-in or conventional flash cords. Built-in hot shoe provides cordless flash synch with hot shoe units; safety switch activates shoe only when flash is inserted, protects against annoying shock.

Dual Meter Switches

(a) Moving film transport lever 30° from camera body switches meter on; when lever is flush with body meter is switched off (b) Separate switch around shutter release button serves as meter switch and shutter lock when transport lever is in flush position, for use with Auto Winder; also convenient for left-eye users at all times.

Other Features

Built-in self-timer. Depth-of-field preview button. Mirror lock. Oversize pressure plate plus extra-long film rails, guide roller, and cassette stabilizer assure superior film flatness for sharpest pictures. Nikkormat ELW (Product No. 1827) and Auto Winder AW-1 (Product No. 8) are supplied exclusively in professional black finish.

Technical Specifications

Camera Type: Automatic 35mm slr with through-the-lens CdS metering and interchangeable lenses, and provision for accessory Auto Winder

Lensmount: Stainless-steel Nikon bayonet accepts all Nikkor lenses 6mm-2000mm and all Nikon-mount accessories. Flange/film distance 46.5mm. Automatic diaphragm coupling.

Exposure Control: Automatic through-the-lens with aperture priority; manual match-needle with aperture or shutter priority

Meter System: CdS cells concentrate 60% of sensitivity on central 12mm area shown by circle in finder; operates at full aperture with all meter-coupled Auto-Nikkor and AI-Nikkor lenses; stop-down measurement with uncoupled lenses, attachments, or instruments.

Meter Ranges: ASA 25-1600; EV 1 to 18 (with ASA 100 film). Full-aperture coupling range: f1.2-f32.

Automatic Exposure Memory Lock: Built in, operated via self-timer lever

Shutter: Electronically-timed, all-metal vertical-travel focal plane; speeds "B", 4, 2, 1 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, and 1/1000th second in manual mode; continuously variable 4-1/1000th second in automatic mode. Shutter operates at 1/90th second in manual mode if battery is depleted.

Flash Synchronization: "X" synch at "B" and 4-1/125th second; "M" synch at "B" and 4-1/1000th second; locking synch selector on shutter speed dial.

Flash Contacts: Built-in hot shoe with automatic safety switch; single PC outlet accepting Nikon screw-in or conventional PC cords.

Viewfinder: Built-in pentaprism finder with 1.0 diopter correction; information display includes meter needle, under/over-exposure indicators, auto/manual signal, shutter speed in use, and complete shutter speed scale.

Focusing Screen: Fixed Nikon Type K screen with 3mm-diameter split-image rangefinder, 1mm microprism circle plus overall matte Fresnel area; large circle shows center-weighted measurement area.

Reflex Mirror: Oversize instant-return type with independent locking control.

Film Loading: Multi-slotted take-up spool, hinged back and additive automatic-reset exposure counter for fast loading.

Film Transport: Single-stroke lever advances film, winds shutter switches meter on, and counts exposures in 135° action, may be left at "ready" position 30° from camera body to activate meter; when folded flush, lever turns meter off and locks shutter release. Control around shutter release button serves as secondary meter/shutter lock control.

Film Rewind: Rewind-release button on camera baseplate; fold-out rewind crank pulls up to open camera back.


Battery Type: One 6v silver oxide battery (Eveready 544 or equivalent) powers meter and shutter; battery tester built in.

Other Features: Depth-of-field preview; stainless-steel reinforced neckstrap eyelets; built-in self-timer with variable delay to approximately 10 seconds.

Dimensions: Camera body 5.7" x 3.7" x 2.1" (145.2mm x 93.5mm x 54.5mm).

Weight: 27.5 oz. (780g).

All specifications subject to change without notice.

Nikon, Inc., Garden City, N.Y. 11530. Subsidiary of Ehrenreich Photo-Optical Industries, Inc. Other offices in Niles, Ill., and San Francisco, Calif. 

Technical Specifications of Nikon-System SLR Cameras

Camera Model	Nikon F2	Nikon F2A Photomic	Nikon F2AS Photomic	Nikon F2 Photomic	Nikon F2SB Photomic	Nikon FM	Nikon EL2
Camera Type	35mm slr	35mm slr	35mm slr	35mm slr	35mm slr	35mm slr	35mm slr
Focal Plane Shutter	Horizontal Titanium	Horizontal Titanium	Horizontal Titanium	Horizontal Titanium	Horizontal Titanium	Vertical Metal	Vertical Metal
Shutter Speed Range	10—1/2000th Sec. + B	10—1/2000th Sec. + B	10—1/2000th Sec. + B	10—1/2000th Sec. + B	10—1/2000th Sec. + B	1—1/1000th Sec. + B	8—1/1000th Sec. + B
Continuously Variable Speeds	10—2, 1/80—1/2000th Sec.	10—2, 1/80—1/2000th Sec.	10—2, 1/80—1/2000th Sec.	10—2, 1/80—1/2000th Sec.	10—2,1/80—1/2000th Sec.		8—1/1000th Sec.
X Flash Synch	To 1/80th Sec.	To 1/80th Sec.	To 1/80th Sec.	To 1/80th Sec.	To 1/80th Sec.	To 1/125th Sec.	To 1/125th Sec.
FP/M Flash Synch	FP to 1/2000th	FP to 1/2000th	FP to 1/2000th Sec.	FP to 1/2000th Sec.	FP to 1/2000th Sec.	M to 1/30th Sec.	M to 1/1000th Sec.
Built-In Safety Hot Shoe	Exclusive F2 Type	Exclusive F2 Type	Exclusive F2 Type	Exclusive F2 Type	Exclusive F2 Type	Standard	Standard
Threaded PC Outlet	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Flash Ready Light in Finder	Yes	Yes	Yes	Yes	Yes		
Chromed-Steel Bayonet Lensmount	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Flange/Film Distance	46.5mm	46.5mm	46.5mm	46.5mm	46.5mm	46.5mm	46.5mm
Automatic Diaphragm Coupling	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Accepts Nikkor Lenses 6mm-2000mm	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Aperture Indexing w/AI-Nikkors or Modified AI-Nikkor		Automatic (AI)	Automatic (AI)	Manual	Manual	Automatic (AI)	Automatic (AI)
Metering w/AI-Nikkors or Modified AI-Nikkor		Full-Aperture	Full-Aperture	Full-Aperture	Full-Aperture	Full-Aperture	Full-Aperture
Metering w/non-AI Nikkors w/coupling shoe		Stopdown	Stopdown	Full-Aperture	Full-Aperture	Stopdown	Stopdown
Metering w/Uncoupled Lenses/Accessories		Stopdown	Stopdown	Stopdown	Stopdown	Stopdown	Stopdown
Automatic Exposure Control System			Optional w/EE Unit DS-12		Optional w/EE Unit DS-2		Yes
Manual Exposure Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Center-Weighted Meter System		Yes	Yes	Yes	Yes	Yes	Yes
Meter Type		Dual CdS	Dual Silicon Photo Diode	Dual CdS	Dual Silicon Photo Diode	Dual Gallium Photo Diode	Dual Silicon Photo Diode
EV Range w/ASA 100 film & f1.4 Lens		1 to 17	-2 to 17	1 to 17	-2 to 17	1 to 18	1 to 18
ASA Film Speed Range		6—6400	12—6400	6—6400	12—6400	12—3200	12—3200
Meter Readout in Finder		Match-Needle	5-Stage LED Display	Match-Needle	5-Stage LED Display	5-Stage LED Display	Needle
Meter Readout on top of Camera		Yes	Yes	Yes	Yes		
Exposure Memory Lock			W/EE Unit DS-12		W/EE Unit DS-2		Yes
Exposure Compensator							1 to +2 EV
Pentaprism Finder	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Finder Screen	Interch. Nikon Type K	Interch. Nikon Type K	Interch. Nikon Type K	Interch. Nikon Type K	Interch. Nikon Type K	Nikon Type K	Nikon Type K
Shutter Speed in Finder		Yes	Yes	Yes	Yes	Yes	Yes
Lens Aperture in Finder		Yes—Nikon ADR System	Yes—Nikon ADR System	Yes	Yes	Yes—Nikon ADR System	
Accepts Screw-In Eyepiece Accessories	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Independent Mirror Control	Yes	Yes	Yes	Yes	Yes		Yes
Depth-of-Field Preview	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Built-In Self Timer	2—10 Sec.	2—10 Sec.	2—10 Sec.	2—10 Sec.	2—10 Sec.	2—8 Sec. w/override	Yes
Apollo Film Transport Lever	Yes—120° Ratchet	Yes—120° Ratchet	Yes—120° Ratchet	Yes—120° Ratchet	Yes—120° Ratchet	Yes—135°	Yes—135°
Accepts Motor Drive/Auto Winder	MD-2/3	MD-2/3	MD-2/3	MD-2/3	MD-2/3	MD-11	AW-1
Multi-Exposure Provision	Yes	Yes	Yes	Yes	Yes	Yes	
Film Memo Holder	Yes	Yes	Yes	Yes	Yes	Yes	
5-Point Film Flatness System	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Battery Type	(2) 1.5v Silver Oxide	(2) 1.5v Silver Oxide	(2) 1.5v Silver Oxide	(2) 1.5v Silver Oxide	(2) 1.5v Silver Oxide	(2) 1.5v Silver Oxide	(1) 6v Silver Oxide
Shutter Speeds w/o Battery	All	All	All	All	All	All	B, 1/90th Sec.
Interchangeable Viewfinders	8	8	8	8	8		
Interchangeable Finder Screens	20	20	20	20	20		
Interchangeable Film Backs/Magazines	5	5	5	5	5		
Dimensions, Camera Body	6.0x3.9x2.2"	6.0x4.0x2.6"	6.0x4.0x2.5"	6.0x4.0x2.6"	6.0x4.0x2.6"	5.6x3.5x2.4"	5.7x3.7x2.1"
Weight, Camera Body	25.8 Oz.	29.3 Oz.	29.6 Oz.	29.6 Oz.	30.0 Oz.	21.2 Oz.	27.5 Oz.
Product No., Chrome	1600	1670	1675	1650	1655	1682	1623
Product No., Black	1605	1673	1678	1653	1656	1686	1628

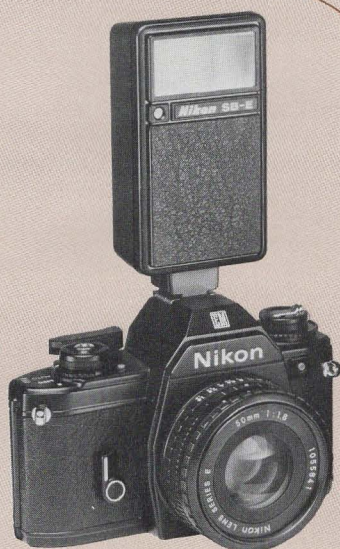
Technical Specifications of Nikon-System SLR Cameras

Camera Model	Nikkormat ELW	Nikkormat EL	Nikkormat FT3	Nikkormat FT2
Camera Type	35mm slr	35mm slr	35mm slr	35mm slr
Focal Plane Shutter	Vertical Metal	Vertical Metal	Vertical Metal	Vertical Metal
Shutter Speed Range	4—1/1000th Sec. + B	4—1/1000th Sec. + B	1—1/1000th Sec. + B	1—1/1000th Sec. + B
Continuously Variable Speeds	4—1/1000th Sec.	4—1/1000th Sec.		
X Flash Synch	To 1/125th Sec.	To 1/125th Sec.	To 1/125th Sec.	To 1/125th Sec.
FP/M Flash Synch	M to 1/1000th Sec.	M to 1/1000th Sec.	M to 1/1000th Sec.	M to 1/1000th Sec.
Built-In Safety Hot Shoe	Standard	Standard	Standard	Standard
Threaded PC Outlet	Yes	Yes	Yes	Yes
Flash Ready Light in Finder				
Chromed-Steel Bayonet Lensmount	Yes	Yes	Yes	Yes
Flange/Film Distance	46.5mm	46.5mm	46.5mm	46.5mm
Automatic Diaphragm Coupling	Yes	Yes	Yes	Yes
Accepts Nikkor Lenses 6mm—2000mm	Yes	Yes	Yes	Yes
Aperture Indexing w/AI-Nikkors or Modified AI-Nikkor	Manual	Manual	Automatic (AI)	Manual
Metering w/AI-Nikkors or Modified AI-Nikkor	Full-Aperture	Full-Aperture	Full-Aperture	Full-Aperture
Metering w/non-AI Nikkors w/coupling shoe	Full-Aperture	Full-Aperture	Stopdown	Full-Aperture
Metering w/Uncoupled Lenses/Accessories	Stopdown	Stopdown	Stopdown	Stopdown
Automatic Exposure Control System	Yes	Yes	No—Manual	No—Manual
Manual Exposure Control	Yes	Yes	Yes	Yes
Center-Weighted Meter System	Yes	Yes	Yes	Yes
Meter Type	CdS	CdS	CdS	CdS
EV Range w/ASA 100 film & f1.4 Lens	1 to 18	1 to 18	3 to 17	3 to 17
ASA Film Speed Range	25—1600	25—1600	12—1600	12—1600
Meter Readout in Finder	Needle	Needle	Match-Needle	Match-Needle
Meter Readout on top of Camera			Yes	Yes
Exposure Memory Lock	Yes	Yes		
Exposure Compensator				
Pentaprism Finder	Yes	Yes	Yes	Yes
Finder Screen	Nikon Type K	Nikon Type K	Nikon Type K	Nikon Type K
Shutter Speed in Finder	Yes	Yes	Yes	Yes
Lens Aperture in Finder				
Accepts Screw-In Eyepiece Accessories	Yes	Yes	Yes	Yes
Independent Mirror Control	Yes	Yes	Yes	Yes
Depth-of-Field Preview	Yes	Yes	Yes	Yes
Built-In Self Timer	Yes	Yes	Yes	Yes
Apollo Film Transport Lever	Yes—135°	Yes—135°	Yes—135°	Yes—135°
Accepts Motor Drive/Auto Winder	AW—1			
Multi-Exposure Provision				
Film Memo Holder				
5-Point Film Flatness System	Yes	Yes	Yes	Yes
Battery Type	(1) 6v Silver Oxide	(1) 6v Silver Oxide	(1) 1.5v Silver Oxide	(1) 1.5v Silver Oxide
Shutter Speeds w/o Battery	B, 1/90th Sec.	B, 1/90th Sec.	All	All
Interchangeable Viewfinders				
Interchangeable Finder Screens				
Interchangeable Film Backs/Magazines				
Dimensions, Camera Body	5.7x3.7x2.2"	5.7x3.7x2.2"	5.8x3.8x2.1"	5.8x3.8x2.1"
Weight, Camera Body	27.5 Oz.	27.5 Oz.	26.5 Oz.	26.5 Oz.
Product No., Chrome		1822	1832	1830
Product No., Black	1827	1826	1837	1835

All specifications subject to change without notice.

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Nikon EM



- Ultra-compact, lightweight design
- Full electronic exposure automation
- Exclusive 'fail-safe' features
- Matched auto flash, motor drive and lenses
- Easiest, most economical entry into Nikon System

The Nikon EM brings Nikon-quality photography within the reach of all. Smallest and lightest of all Nikon SLRs, it is also the easiest to use—perfect for the beginning SLR photographer, while offering system-wide capabilities (including matched motor drive, thyristor flash and compact Nikon Series E lenses) that appeal to more advanced SLR users as well. Special, sophisticated Nikon-designed electronic and production technology makes it possible to offer the EM at a remarkably modest price. Yet, from silver-coated pentaprism to gold-plated motor drive contacts, it unmistakably reaffirms the heritage of quality that is paramount to the Nikon system.

Reliable, electronic automation

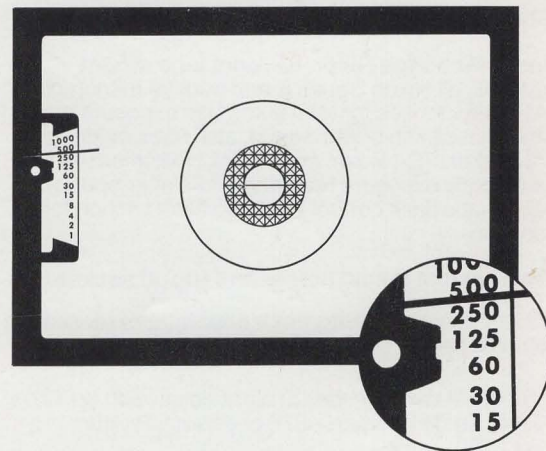
With the Nikon EM, the photographer need only focus and shoot. Instantly, the Silicon Photo Diode meter relays its exposure command to a Nikon-designed monolithic Integrated Circuit, which automatically sets the optimum shutter speed for best exposure. For ultimate accuracy, speeds are stepless and continuously controlled from 1/1000th through 1 second. Based on the proven Nikon center-weighted principle, the SPD meter features virtually instantaneous response with wide-range accuracy.

with system-wide versatility

The EM's aperture-priority technology assures excellent, automatic results with all Nikon Series E lenses, AI-Nikkor, PC-Nikkor and Reflex-Nikkor lenses, plus such important accessories as Nikon extension rings, bellows units, slide copiers, even microscopes and telescopes. At all times, the photographer enjoys maximum depth-of-field control. For special situations (backlighting, subject in shade, etc.) the EM shutter may be 'programmed' for a 2 EV exposure increase merely by pressing the exposure compensation button.

Brilliant, data-filled finder

Silver-coated pentaprism shows exceptionally large, bright image with full-field sharpness. The Nikon 'K' screen (patterned after Nikon cameras built for U.S. astronauts) offers 3 focusing aids for fast, pinpoint sharpness control: central split-image rangefinder, surrounding micropism ring, and overall matte/Fresnel surface. Information readouts include complete shutter speed scale, meter needle indicating automatic speed in use, under/over exposure warning zones, and special LED signal for flash photography.



. with exclusive SONIC™ safeguard

The unique SONIC™ system (Sound & Optical Nikon Indicator Circuits) provides a twofold alert if the automatic shutter speed is beyond best-exposure range. *You hear* a pulsing "beep" if the required speed is below 1/30th second (too slow for hand-held shooting), or above 1/1000th. And, *you see* the meter needle swing into a red warning zone at either end of the shutter speed scale. Both are activated by depressing the shutter button halfway.

Once you have been alerted—unmistakably—by the SONIC system, you simply turn the lens aperture ring until the needle points to the desired speed and the "beep" stops. It's a sure-fire safeguard against both incorrect exposures and image blur from camera movement.

Rugged metal shutter

Travels vertically for maximum efficiency, permitting X-synch at 1/90th second as well as reliable motorized operation as fast as 2 frames per second. Speeds are stepless from 1 to 1/1000th second in automatic mode. Additionally, shutter operates even without batteries at mechanically-controlled speeds of 1/90th second and 'B', permitting manual use if the long-life silver oxide batteries should unexpectedly fail—a vital safeguard lacking in many costlier "automatics."

Full range of advanced features

- **Constant-torque advance lever** winds film and shutter and counts exposures in single 144° stroke or multiple strokes; unique folding design permits comfortable viewing through either right or left eye.
- **Built-in hot shoe** provides automatic X-synch speed setting and exposure data exchange with accessory Nikon SB-E electronic flash, plus cordless synch with any standard hot-shoe flash.
- **Automatic meter on/off switching:** turns on with slight pressure on shutter button; automatic time delay turns meter off several seconds after pressure is released to assure maximum battery life.
- **Fast, easy film loading** with multi-slotted take-up spool and hinged back—plus, exclusive electronic sensor automatically sets shutter to 1/1000th second until frame "1" eliminating delay in loading possible with other automatic systems.
- **Self-timer** with approximate 10-second delay; may be 'cancelled' prior to exposure if desired.
- **Battery tester** with external LED indicator.

Plus

- **Instant-change Nikon bayonet lens mount** accepts all Nikon Series E and original manufacture AI-Nikkor lenses for total automatic exposure and automatic flash performance; also uses modified AI-Nikkor PC-Nikkor, and Reflex Nikkor lenses for automatic exposure metering and single-aperture automatic flash control. (Refer to flash section for details)
- **Built-in film memo holder and tripod socket.**
- **Motor drive and auto flash capabilities** (described on next page).

Nikon EM camera body in black finish, with (2) 1.5v Silver Oxide batteries (S76 or equiv.), Product No. 1700.

Technical Specifications

Camera Type: Ultra-compact automatic 35mm slr with through-the-lens Silicon Photo Diode center-weighted meter interchangeable lenses, and accessory thyristor flash and motor drive.

Lensmount: Metal Nikon bayonet accepts all reflex-viewing Nikon Series E, AI-Nikkor and non-meter-coupled special Nikkor lenses 6mm—2000mm, plus most Nikon-mount accessories, *not for use with non-AI Auto-Nikkor lenses*. Flange/film distance 46.5mm. Automatic diaphragm and AI (Automatic Indexing) coupling.

Exposure Control: Automatic through-the-lens with aperture priority; manual control at 1/90th second and 'B' (independent of battery power).

Meter Systems: Center-weighted Silicon Photo Diode meter concentrates major sensitivity on central area outlined by circle in finder; operates at full aperture with Nikon Series E and AI-Nikkor lenses; stopdown measurement with PC-Nikkors, Reflex-Nikkors, and other uncoupled (non-auto) lenses and accessories. Automatic maximum aperture indexing with all Series E and AI-Nikkor lenses.

SONIC™ Exposure Alert: Automatically provides twofold warning, audible "beep" if required shutter speed is slower than 1/30th second or faster than 1/1000th, plus visible indication in finder with meter needle swinging into red zones below 1 second and above 1/1000th. Activated by pressing shutter release halfway.

Meter Ranges: ASA 25-1600; EV 2 to 18 (with ASA 100 film and f1.8 lens). Full-aperture coupling range f1.2—f32.

Shutter: Electronically-timed, vertical-travel focal plane; speeds continuously variable 1/1000th sec.—1 sec. in auto mode; shutter operates at mechanically-controlled M90 (1/90th) or B even if batteries are depleted.

Flash Synchronization: 'X' synch at 1/90th second. Automatic flash synch changeover, shutter speed setting, and eyepiece LED ready-light activation with accessory Nikon Thyristor Flash SB-E (or SB-10).

Flash Contact: Built-in hot shoe with special contacts for SB-E flash data relay and shutter programming, compatible (without these special functions) with other standard ISO hot shoe units.

Viewfinder: Silver-coated pentaprism with minus 1.0 diopter eyepiece; information display includes complete shutter speed scale with indicator for speed in use; SONIC™ Sound & Optical Nikon Indicator Circuits; under/over-exposure, and LED ready light for full automatic functions with Nikon SB-E flash or limited function with Nikon SB-10.

Focusing Screen: Fixed Nikon Type K screen with 3mm-diameter split-image rangefinder, 1mm micropism circle plus overall matte/Fresnel area, large circle denotes central metered area.

Reflex Mirror: Oversize, coated instant-return-type with special damping mechanism.

Film Loading: Multi-slotted take-up spool, hinged back and additive automatic exposure counter; electronic sensor programs shutter to fastest speed during loading.

Film Transport: Ratchet-action lever advances film, winds shutter, and counts exposures in single or multiple strokes totalling 144° may be left at 'ready' position or folded flush with camera top without affecting meter/shutter operation.

Film Rewind: Rewind-release button on camera baseplate; fold-out rewind crank pulls up to open camera back. Operates with motor drive attached.

Battery Type: Two 1.5v silver oxide batteries (Eveready S76 or equivalent) power meter shutter, LED and SONIC signals; LED battery tester built-in

Other Features: Meter turned on by slight pressure on shutter release, automatically turns off approx. 20 seconds after pressure is removed; audible and visual exposure safeguards via exclusive Nikon SONIC system; built-in neckstrap eyelets, built-in cancellable self timer with approximate 10-sec. delay; memo holder on camera back stores film carton tab or other data, accepts accessory Nikon motor drive MD-E and Thyristor Flash SB-E.

Dimensions: Camera body, 5.3" x 3.38" x 2.13"
(135mm x 86mm x 54mm).

Weight: 16.2 oz. (460g)

Product No.. 1700

Nikon F3



The world's first truly professional 35mm Automatic SLR

- **Perfect combination of state-of-the-art electronics and superb mechanical performance**
- **High performance for heavy duty use in all professional applications**
- **Unprecedented motor drive and flash facilities**

Born of the legendary Nikon F and F2 series, the Nikon F3 elevates 35mm slr photography to new heights of precision, performance and professionalism. Its unique built-in meter provides accurate electronic automation with all its interchangeable viewfinders and focusing screens, with every reflex-viewing Nikkor lens ever made—even in flash photography. And, while both smaller and lighter than its predecessors, the F3 is equally rugged and reliable—as shown by its selection by NASA as the operational 35mm slr scheduled for the Space Shuttle project. The F3 space camera incorporates minor modifications required for in-space use, but is essentially the same F3 your customers can buy from you.

Unique electronic and mechanical reliability

Central to the F3's remarkable capabilities are its advanced electronic components, designed by Nikon for superior reliability and accuracy. Among these are:

- **Flexible printed circuit (FPC)**, incorporating multiple Large-Scale Integrated circuit (LSI) microprocessors for automatic control of all key functions.
- **Quartz crystal oscillator**, assuring the most precise manually selected speeds ever in a 35mm slr with accuracy and consistency second to none; also provides quartz-timed meter/viewfinder display shutoff 16 seconds after pressure is removed from shutter release, and 10-second electronic self-timer delay with external LED 'countdown' indication; self-timer also acts as intervalometer for motor operation.
- **Liquid Crystal Display (LCD)** digital shutter speed and meter readouts; easy to read and consuming far less battery power than other systems; also serves as battery check.
- **Functional Resistance Element (FRE)**, a thin metallic film variable resistor sealed against dust and humidity, incorporating gold and other precious metals to relay exposure data to the F3 meter system. It is the most reliable variable resistor in 35mm cameras.

But, while these space-age electronics provide the potential for the finest photography ever it takes the excellence of Nikon mechanical construction to translate that potential into professionally reliable performance!

The F3 features a lightweight die-cast metal body with an 'armor-plate' front cover that protects the built-in electronics. A titanium shutter of proven ruggedness, with extraordinary high-speed accuracy. Film/shutter transport with ball-bearing races for friction-defying smoothness and durability. Pneumatic mirror damping. And, special refinements such as gold-plated meter and motor contacts.

The result is an integration of electronic and mechanical technologies with uncompromising quality controls at every step, achieving highest performance under the most challenging conditions.

The Automation

Combines aperture-priority versatility with electronic accuracy using sophisticated Large-Scale Integrated circuitry. With shutter speed dial in A position, speeds are automatically steplessly and continuously selected from 1/2000th to 8 seconds according to the lens aperture in use. This system assures maximum accuracy and versatility. Full manual control plus electronic 'memory lock' and +2 to -2 EV exposure compensator provide extensive creative control; with each, the adjusted shutter speed is displayed by the viewfinder LCD. An ingenious Nikon temperature compensation circuit maintains critical accuracy even in temperature extremes. The standard eye-level finder model DE-2 has a built-in eyepiece shutter for use with self-timer remote control or other specialized applications.

Nikon F3

The Meter

An improved version of Nikon's famous center-weighted system, it gives extremely accurate readings with every F3/lens/finder/screen combination, even with polarizers, and requires no compensation for any of them. About 92% of the light which is transmitted by the taking lens is passed to the viewfinder while the other 8% travels through thousands of microscopic non-silvered areas on the main reflex mirror to a secondary mirror which in turn focuses that light on the Silicon Photo Diode meter cell housed in the camera body. This results in center-weighted metering with about 80% of the meter's sensitivity concentrated in the central picture area (defined by a 12mm circle on most finder screens) and the remaining 20% extending out towards the edges. This provides consistently accurate exposures under virtually all light conditions in both auto and manual modes. Readings are also reliable in both horizontal and vertical compositions, over the broad range of EV 1 to 18 (with ASA 100 film and f1.4 lens) and the F3's finder image is virtually unaffected. In fact it's the brightest Nikon finder ever. With main power switch in 'On' position, the meter turns on when the shutter release button is touched, and switches off automatically 16 quartz-timed seconds after pressure is removed, extending battery life.

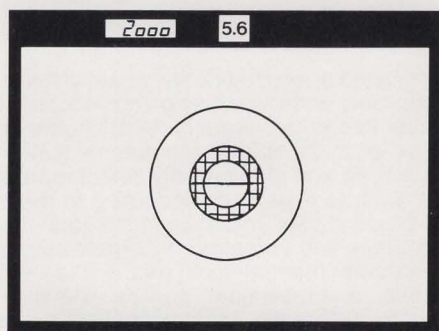
The Finder

Displays all exposure data with all finders and screens for full visual control:

- **LCD manual exposure readout** (\overline{M}^+ = overexposure, \overline{M}^- = underexposure, \overline{M}^0 = correct exposure);
- **LCD shutter speed readout** visible in both auto and manual modes;
- **LCD auto under/over-exposure signals** (when required shutter speed is beyond available range +2000 or 8⁻);
- **AI-Nikkor lens aperture**, shown by Nikon Aperture Direct Reading (ADR) system,
- **LED flash ready light/exposure verification signal** for dedicated Nikon thyristor units.

One of the many Nikon innovations, the LCD's assure maximum battery life, display clarity and cold-weather stability. Special timing circuits control the display so the user will not be distracted by constantly flashing numbers. A built-in illuminator provides easy visibility of LCD/ADR readouts in dim light.

The Nikon F3 combines this complete data display with virtually 100% framing accuracy equalled only by its Nikon predecessors, again with all finders and screens.



The Shutter

To the legendary ruggedness and durability of its Titanium shutter, the F3 adds the highest accuracy and repeatability ever offered by Nikon. In manual mode the F3 uses a quartz crystal which oscillates at 32 KHz and provides the time base for shutter speeds of accuracy superior to any mechanical timing mechanism. And, it enhances this performance with Nikon precision engineering, using microminiature ball bearing races and low-mass titanium-foil curtains for extra-fast travel speed. An exclusive Nikon braking mechanism helps prevent vibration and eliminates shutter bounce. The F3's smooth short stroke and electromagnetic release also helps prevent vibration. For 'fail-safe' assurance, an auxiliary shutter release on the camera's front permits mechanical triggering without battery power at 1/60th and 'T' a 'first' for any SLR with an electromagnetic shutter release.

The Flash


The combination of the Nikon F3 and either of its dedicated thyristor units offers automatic, through-the-lens flash exposure control with every interchangeable finder screen reflex-viewing lens and optical accessory. During exposure, the F3 meter reads the actual film plane image and regulates flash output accordingly resulting in important benefits:

- **Highest exposure accuracy** because the flash sensor reads through the camera lens. There's never any concern about the sensor's field of view as with conventional thyristor units. Because the sensor reads through the lens it automatically provides exposure compensation for filters, tele-converters, bellows, extension rings (even with Micro Nikkors) or reversed lenses.
- **Widest depth-of-field control** with full 'stepless' choice of apertures limited only by film speed and distance—e.g., any f/stop from f2 to f22 and anywhere in between stops with ASA 100 film.
- **Extra-fast, error-free operation.** Flash units automatically exchange data with camera's LSI microprocessors, eliminating need for separate flash programming, and activate in-finder LED ready light, which also confirms correct exposure after each picture.
- **Reliable light output**, assured by use of high performance Xenon flash tube and efficient silicon controlled rectifier and series circuitry.

Two special units for the F3 are available. The compact, cordless **Nikon SB-12** mounts on the F3's hot shoe and offers an ASA 100 Guide No. of 82. This unit also automatically programs the shutter for 1/80th synch speed. The handle-mount **SB-11** uses connecting cord SC-12 to provide automatic through the lens exposure control via the F3 hot shoe, offers extra-high power (Guide No. of 118 at ASA 100), and automatic exposure control for bounce and off-camera flash. With accessory Remote Sensor model SU-2 the SB-11 flash provides automation with a choice of 3 apertures or manual control with any Nikon system camera. Both flash units feature battery-saving Nikon thyristor circuitry and are comprehensively described in the 'Nikon F3 Thyristor Flash' catalog section.

In addition to 'dedicated' performance with the above units, the Nikon F3 accepts any Nikon F2 or ISO-type hot shoe flash via accessory Flash Couplers AS-3 and AS-4. Also, its built-in PC outlet (threaded for slip-proof Nikon or conventional PC cords) permits use of virtually any plug-in flash.

All specifications subject to change without notice.

Nikon Inc. Garden City, N.Y. 11530. Subsidiary of Ehrenreich Photo-Optical Industries, Inc. Other offices in Niles, Ill., and San Francisco, Calif. 

Nikon F3

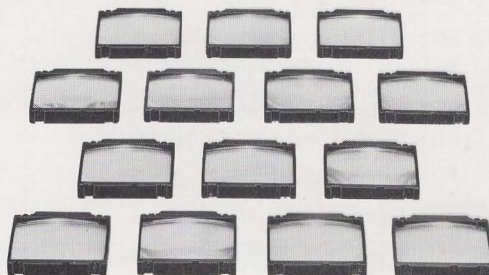
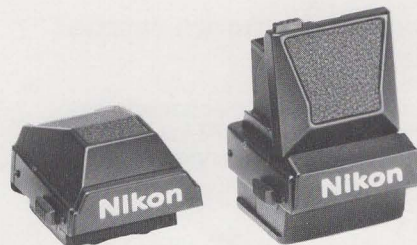


The Motor

Specially designed for the Nikon F3, the compact Nikon Motor Drive model MD-4 with its optional Nicad battery pack permits continuous firing up to 6 fps with mirror up, 5.5 fps with reflex viewing—the fastest rates ever attained in a production motor drive. In continuous mode, the rate is automatically the fastest permitted by the shutter speed in use, with the maximum rate achieved at speeds of 1/125th second or faster. Single exposures are also possible, as are multi-exposures using the F3's handy top-mounted control.

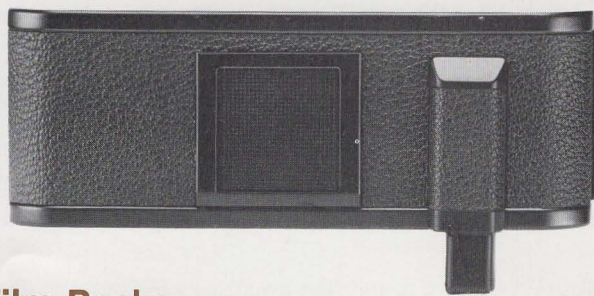
The MD-4's integral battery compartment accepts 8 AA alkaline cells or a special Nikon Nicad pack. The motor batteries also power all electronic camera functions, and when using the Nicad pack permit reliable operation at temperatures as low as -20°C (-4°F). Approximately 70 36-exposure rolls are possible with Nicad power up to 140 rolls with AA alkaline cells, thanks to the MD-4's efficient, low drain circuitry and the F3's specially-designed low-resistance gearing and ball-bearing film/shutter winding mechanism.

The MD-4's anatomical grip has a built-in electromagnetic shutter release and Single/Continuous/Lock selector. Remote terminal is provided, as are contacts for Nikon F3 bulk film backs, data backs and external power sources. A subtractive exposure counter permits firing bursts of any predetermined length and assures extra protection against film tearing in extreme cold. The power rewind mechanism rewinds 36-exposure loads in as little as 4.5 seconds. Engineered for optimum balance and handling ease, the Nikon F3/MD-4 combination lifts Nikon leadership in motorized photography to new heights. (See 'Nikon F3 Motor Drive System' catalog section for details.)



Viewfinders and Focusing Screens

The F3's four new finders permit extremely quick, easy interchange—allow all automatic exposure and data-display facilities to be used—and maintain the unique Nikon standard of virtual-100% framing accuracy. They comprise Standard Eye-Level Finder DE-2, Action Finder DA-2, 6X Focusing Finder DW-4, and Waist-Level Finder DW-3. (These and the F3's 20 focusing screens are detailed in the catalog pages titled 'Nikon F3 Viewfinders and Focusing Screens'.)



Film Backs

A new series of camera backs will add further versatility to F3 photography. In addition to the standard back, they will include the Camera Back MF-6 for auto-rewind stop when used with the MD-4 plus models offering extended film capacity including units interfacing with F3 electronics for automated, on-film data imprinting. (Please refer to 'Nikon F3 Motor Drive' catalog section for details.) Each incorporates an improved film positioning system with no fewer than 7 elements (including exclusive guide roller for smooth motorized transport) to assure ultimate film safety and flatness for edge-to-edge image sharpness.

Nikon F3

Other Nikon F3 Features

Chromed-steel bayonet lensmount

(the same as a Nikon F and F2) accepts every F-mount Nikkor lens; full-aperture metering with all AI-Nikkor and modified AI lenses, stopdown operation with others.

Newly designed smooth ratchet film transport

with special balanced gear train and microminiature ball bearing mechanism for minimal friction and consistently low torque requirements. Operates with single or multi-stroke operation.

Automatic quick-load mechanism

sets shutter to 1/80th second during film loading when camera is on auto or at speed higher than 1/80 on manual, preventing unwanted delays while advancing to Frame 1

Quartz-timed-electronic self-timer

activates external 'countdown' LED signal pulsing twice per second for initial 8 seconds, then 8 times per second during last 2 seconds; may be 'cancelled' prior to exposure.

Multi-exposures

in precise registration with convenient top-mounted control, also operates with Motor Drive.

Shutter speed dial controls all speeds

safety lock at A, X-80, and 'T' settings; 'T' utilizes mechanical triggering to conserve camera batteries.

Built-in

depth-of-field preview mirror lock, film memo holder, PC type cable release socket and standard tripod socket.

The Nikon F3 camera is supplied exclusively in professional black finish, complete with Eye-Level Prism Finder DE-2, Type K Focusing Screen, standard camera back, and meter batteries. Product No. 1690.

Technical Specifications

Camera Type: Automatic 35mm SLR with built-in through-the-lens Silicon Photo Diode meter and LSI microprocessors; accepts interchangeable lenses, viewfinders, focusing screens, film backs, thyristor flash units and motor drive.

Lensmount: Chromed-steel Nikon bayonet accepts all Nikon system lenses and all Nikon F-mount accessories. Flange/film distance: 46.5mm. Automatic diaphragm coupling, Aperture Indexing (AI), and Aperture Direct Readout (ADR).

Exposure Control: Automatic electronic with through-the-lens aperture priority. Electronic quartz timed manual control with aperture or shutter priority; automatic through-the-lens metering in flash mode with aperture priority using dedicated Nikon flashes. Meter turns on at touch of electromagnetic shutter release, automatically turns off 16 quartz-timed seconds after pressure is removed.

Meter System: SPD cell in base of mirror chamber concentrates 80% of sensitivity on central 12mm area shown by circle in finder with 20% out towards edges, measures light passing through mirror reflected by secondary mirror; operates at full aperture with all AI-Nikkor lenses; stopdown measurement with non-AI-lenses, attachments, or other optical devices. Automatic maximum aperture indexing with all AI lenses. Built-in electronic 'memory lock' and exposure compensator (+2 to -2 EV in 1/3-EV steps).

Meter Ranges: ASA 12—6400; EV 1 to 18 (with ASA 100 film and f1.4 lens). Full-aperture coupling range f1.2-f32.

Shutter: Titanium-foil curtain, horizontal-travel focal plane with dual electronic timing systems: stepless in auto mode from 1/2000th to 8 seconds, controlled by exclusive Nikon LSI microprocessors; quartz-controlled manual speeds 'B', 8, 4, 2, 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/80, 1/125, 1/250, 1/500, 1/1000, and 1/2000th second.

Flash Synchronization: Using Nikon SB-12 flash, shutter automatically sets to 1/80 second with camera in auto mode. In manual mode, shutter automatically sets to 1/80 second if manual setting is higher than 1/80th. If slower speed is manually set, camera will remain at that speed (permitting use for sun-synch). With non-dedicated flash, set manual speed to 1/80 or slower or use locked in X-synch setting.

Flash Contacts: Built-in exclusive 3-contact F3 hot shoe with automatic safety switch and data contacts; single PC outlet accepts Nikon screw-in or conventional PC cords.

Flash Metering: With dedicated Nikon units, camera's SPD meter provides automatic light control with through-the-lens measurement of film-plane image during exposure, plus in-finder LED ready-light and exposure verification.

Viewfinder: Interchangeable eye-level pentaprism DE-2 supplied with — 1.0 diopter eyepiece and built-in eyepiece shutter; accepts total of four F3 finders, each with virtual-100% frame coverage and full exposure automation/data readout capabilities.

Viewfinder Information: LCD readouts for shutter speed, over/ underexposure and auto/manual mode; AI-Nikkor lens aperture through Nikon Aperture Direct Readout (ADR), and multi-function LED flash ready-light/exposure verification signal. Built-in illuminator provides easy visibility of LCD and ADR data in dim light.

Focusing Screen: Standard Nikon F3 Type K Screen (supplied) with 3mm-diameter split-image rangefinder, 1mm microprism circle plus overall matte/Fresnel area, interchangeable with 19 other Nikon F3 screens. No exposure compensation required with any F3 finder/ screen combination. New brighter design.

Reflex Mirror: Oversized instant-return type with independent mirror lockup control and Nikon sealed pneumatic air-damping system for virtual-zero vibration, temperature-stable titanium mirror frame.

Film Loading: Improved multi-slotted take-up spool, hinged back (with safety lock) and additive automatic-reset exposure counter for fast loading; with F3 in auto mode, electronic circuitry sets shutter to 1/80th second until exposure counter reaches frame #1 (unless slower speed is manually set), eliminates delays otherwise possible due to auto-set slower speeds.

Film Transport: Ratchet-action lever advances film, winds shutter and counts exposures in 140° action, may be left at 'ready' position 30° from camera body or folded flush without affecting meter/finder operation. (Film advance lever **does not** control meter.)

Film Rewind: Rewind-release button on camera baseplate; foldout rewind crank; power rewind with motor drive MD-4.

Multiple Exposure Control: By moving control on camera top while operating film transport lever (exposure counter is automatically disengaged); also operates with Nikon motor drive.


Battery Type: Two 1.5v silver oxide batteries (Eveready EPX-76 or equivalent) power meter, shutter and finder, LCD display automatically tests batteries; special mechanical shutter settings ('T' 1/60th) and release button permit operation without battery power.

Other Features: Electronic self-timer with external LED signal pulsing throughout 10-second cycle; depth-of-field preview; stainless-steel reinforced neckstrap eyelets; memo holder on camera back holding film box tab or other data; built-in cable release and tripod sockets.

Dimensions: Camera body with Eye-Level Finder DE-2: 5.85Lx3.8Hx2.59"W (148.5x96.5x65.5mm).

Weight: 24.69 oz. (700g)

All specifications subject to change without notice.

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Nikon F3 Motor Drive System



Nikon MD-4 Motor Drive

Fastest production-model motor drive in 35mm history the Nikon MD-4 also brings new reliability and convenience to virtually every aspect of motorized photography. The MD-4, for use with F3 only, is compact and light and mounts quickly: simply unscrew the camera's rewind shaft cover, place it in the motor's handy storage slot, and attach the motor with a few turns of the large, knurled thumbwheel. The internal battery chamber accepts AA alkaline battery holder or Nikon quick-charge Nicad unit for firing to 6-fps with mirror up, 5.5-fps with reflex viewing.

In continuous mode, the MD-4 automatically fires at the fastest rate permitted by shutter speed and power source in use; single exposures are also possible, as are multi-exposures in precise registration (with convenient operation through the F3's top-mounted multi-exposure control). The MD-4 automatically shuts off power at end of film roll. For extra protection when using thin-base films in cold weather where they are susceptible to freezing, the motor's built-in subtractive exposure counter can be set to switch the motor off when the counter reaches '0', also permitting bursts of any predetermined length.

When the MD-4 is used with the F3, it automatically disengages the meter batteries in the F3 body and uses the motor power supply to power the F3 meter and shutter.

Because the Nikon MD-4's high-capacity batteries automatically supply energy to all camera functions, they appreciably expand camera's capability and provide exceptional performance even in extreme cold. The Nikon Nicad pack will power the F3 at as low as -20°C (-4°F). The comfortable anatomical handgrip contains a Single/Continuous/Lock selector and electromagnetic shutter release button. This release automatically turns on the F3 meter and LCD and, when pressure is removed, automatically shuts them off 16 quartz-timed seconds later. As long as light pressure is applied to the shutter release the meter will remain on. Dual LED's on the motor back confirm all operating functions including film advance, film end, automatic film rewind-stop with MF-6 camera back, firing rates, and battery condition.

The MD-4 offers input terminals for remote control operation using Nikon intervalometers, wireless radio and Modulite remote control units and remote triggering cords; also for interfacing with Nikon F3 bulk film and data backs and for external power sources. Its automatic film rewind features dual control slides that virtually preclude inadvertent rewinding. The MD-4's external gold-plated contacts interface with the Nikon F3 electronics with corrosion-resistant integrity. Special Nikon innovated low-drain circuitry combines with the unique low-torque gearing and ball-bearing design of the F3 film/shutter advance to allow up to 140 rolls of 36-exposure film on a single set of AA alkaline batteries.

Designed and engineered for ideal balance and responsiveness, the Nikon MD-4 Motor Drive weighs just 16.93 oz. (480g), without batteries, and measures 5.76Lx4.52Hx2.78"W (146.4x114.7x70.7mm). Nikon MD-4 Motor Drive complete with Battery Holder MS-3, without batteries, Product No. 120.

Maximum Firing Rates:

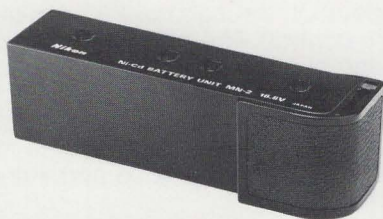
MD-4 Power Supply	Power Source	Mirror Up 1/125-1/2000	Reflex Viewing 1/125-1/2000	Capacity of 36 Exp. Rolls (Incl. Power Rewind)	Rewind Time (36 Exp.)
MN-2 Nicad Unit	Built-in NC Cells	6.0 fps	5.5 fps	70	4.5 sec.
MA-4 AC/DC Converter	100-120v AC, 50-60Hz.	5.5 fps	5.0 fps	unlimited	5.0 sec.
MS-3 Battery Holder	8 AA alkaline cells	4.0 fps	3.8 fps	140	8.0 sec.

* All specifications are approximate and will vary depending on battery condition. At shutter speeds slower than 1/125th, framing rate is variable and is automatically determined by the shutter speed in use. Framing rate will always be maximum permissible for shutter speed in use.

Nikon F3 Motor Drive System

Nikon MD-4 Accessories

(exclusively for use with Nikon F3)



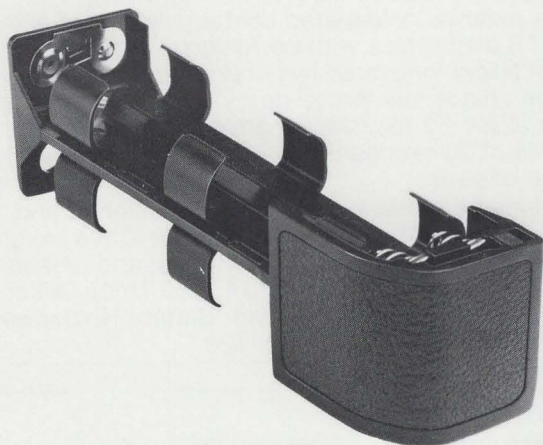
Nicad Battery Unit MN-2

Self-contained module incorporates Nicad Cells delivering up to 70 rolls per charge; recharges in approx. 3-4 hours using accessory MH-2 NC Charger Product No. 125.



Nicad Battery Charger MH-2

Recharges MN-2 Nicad Battery Unit to 80% capacity in approx. 3 hours. To 100% in approx. 4 hours. Voltage control is automatically adjusted by selected power cord in use. External 'Charging' and 'Completion' signals. Product No. 126.



AA Battery Holder MS-3

Holds 8 1.5V AA cells. Drop-in design permits pre-loading and rapid interchange for almost uninterrupted shooting. Supplied with motor Product No. 127



AH-2 Tripod Adapter

Repositions tripod mount at MD-4 center for convenient use in tripod, copystand, and similar applications. Product No. 129.



MC-10 Remote Cord

10' (3m) cord with integral handgrip and shutter release button for convenient remote triggering of Nikon F3 with MD-4. Cord activates meter and auto meter turn off circuit. Product No. 131




MF-6 Auto Rewind Stop Camera Back

Provides auto rewind stop for MD-4 motor with leader remaining outside film cartridge. Valuable when film is processed using daylight-load and automated processing systems. May be used as alternative camera back without motor with no loss of camera functions or capabilities. Built-in film memo holder and thumb grip for even firmer handling Product No. 124.

Note: Additional Nikon F3 film backs for extended capacity and automated on-film data imprinting will be announced soon.

All specifications subject to change without notice.

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Nikon F3 Motor Drive System

Nikon Motor Drive Accessories

Following are compatible with MD-4 and other Nikon motor drives as designated.



Nikon Repeating Electronic Flash SB-6

Unique high-performance unit permits flash photography at up to 3.8 frames per second, as well as adjustable stroboscopic bursts of 5-40 flashes per second for multi-image effects. Six-step manual output from full to 1/32nd power permits choice of ASA 100 Guide Nos. 148, 105, 72, 52, 36 and 26. Works on AC, DC, or NC power sources. Product No. 290.

(Refer to latest Nikon Price List for complete product listing).

Note: Cannot be mounted on F3 (even with AS-3 shoe). With F3, mount the SB-6 separately and use PC cord connector



MA-4 AC/DC Converter

Powers Nikon MD-4 or MD-1/2/3 using 100, 117, 220 or 240v AC current; gives smooth, ripple-free 15 volts at 400ma output. Built-in voltage stabilization, overload protection remote outlet and shutter release button. Requires 10' connecting cord MC-11 for F3, MC-2 cord for MD-1/2/3. Product No. 42.

MC-11 & MC-2 Connecting Cords

Connects motor to MA-4 AC/DC converter 10' length. For MD-4 use MC-11 Product No. 132. (For MD-1/2/3 use MC-2, Product No. 25.)



Pistol Grip Model 2

Attaches to tripod socket on camera, motor or lens. Permits triggering of MD-1/2/3/4/12 with accessory cord MC-3. Valuable for hand-held steadiness with long tele, reflex and zoom lenses. Can also be used with AR-6 cable release to fire camera from shutter release button. Product No. 45.



MC-3 Connecting Cord for Pistol Grip 2

Connects pistol grip model 2 to motor's remote control terminal for smooth, responsive triggering; activates F3 finder display Product No. 28.

MR-2 Motor Release

For all Nikon motor drives with remote terminal. Provides alternate shutter release button gives automatic meter on/off operation with Nikon F3/MD-4 and Nikon FE/FM with MD-12. Also usable without auto meter control for Nikon F and F36 motor with 3 pin terminal. Accepts accessory Nikon AR-2 or AR-4 cable releases. Product No. 662.

Nikon F3 Interchangeable Viewfinders

Created specifically for use with the F3, these finders feature newly designed, secure 'drop-in' mounting with one-hand removal for easy and quick interchange. With all of them, the F3 provides full exposure automation and data display, as well as the virtual 100% framing accuracy exclusive with Nikon plus improved brightness.



Eye-Level Finder DE-2

The standard Nikon F3 finder incorporating silver-coated pentaprism for brilliant, unreversed, eye-level viewing. 0.8x apparent image magnification with 50mm lens; 1 diopter eyepiece (interchangeable). Built-in eyepiece shutter. Product No. 2382.

Note: DE-2 finder accepts standard Nikon 19mm-threaded eyepiece accessories including Right Angle Finder DR-3, 2X Eyepiece Magnifier DG-2, rubber eyecup, and 9 eyepiece correction lenses. For details, refer to 'Nikon Viewfinder Accessories' catalog section.



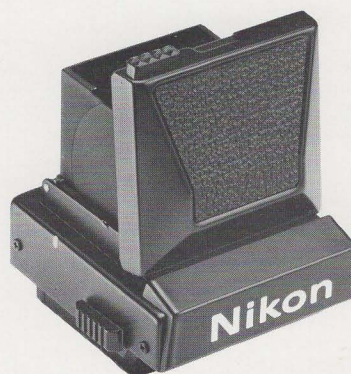
Action Finder DA-2

Ingenious silver-coated pentaprism with extra-large eyepiece permitting full image/exposure data visibility up to 2.4" (60mm) from eyepiece. Widely preferred for sports coverage and conditions where it is impossible or impractical to place eye close to finder—as when camera is in underwater housing, or photographer must wear special goggles or other eyewear. -1 diopter eyepiece; 0.7x apparent magnification with 50mm lens. Product No. 2385.



6X Focusing Finder DW-4

5-element, 3-group optics magnify image/data field a full 6X for ultra-critical focusing, especially important in close-up and photomacrography. Permits aerial-image focusing with Type C or M screens. Excellent edge-to-edge sharpness makes this finder also a superior slide or negative inspection loupe. Adjustable focusing from -5 to +3 diopters. Built-in folding rubber eyecup. Product No. 2384.



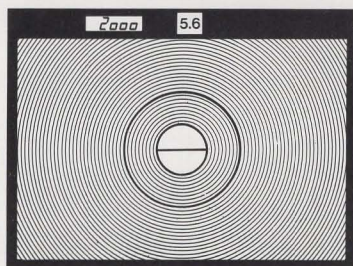
Waist-Level Finder DW-3

The most compact Nikon F3 viewfinder with one-touch open/close mechanism. Ideal for low-angle (or overhead) viewing, tripod and copystand work. Built-in flip-up 5X magnifier for critical focusing/metering accuracy. Product No. 2383.

Nikon F3 Interchangeable Focusing Screens

The choice of individual F3 screens provides unmatched viewing and focusing in any application and accommodates any personal preference. Complete F3 exposure automation and data readout functions are maintained with all screens without any requirements for exposure compensation. They are newly designed for use with Nikon F3 and mounted in durable metal frames with handy tabs for instant, easy interchangeability. All offer improved brightness and the virtual 100% framing accuracy unique to Nikon.

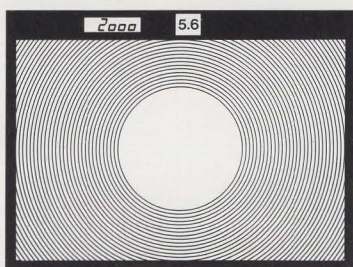
TYPE A



Matte Fresnel field with 3mm split-image rangefinder spot and 12mm reference circle. For general photography with lenses to 400mm telephoto, f4.5 or faster.

Product No. 2552.

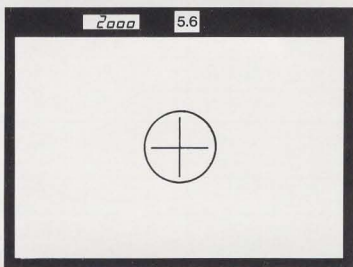
TYPE B



Matte Fresnel field with 12mm fine groundglass center. For general photography, especially suited for use with long-focus lenses and lenses of small maximum aperture (f5.6-f11).

Product No. 2553.

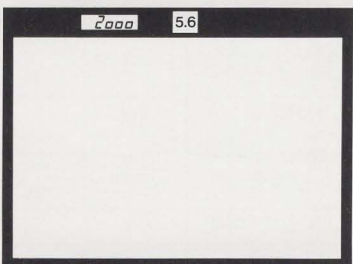
TYPE C



Fine ground matte field with 4mm clear spot and cross-hair reticle. Especially suitable for photomicrography and other applications involving high magnification where aerial image and parallax focusing can be used with 6X magnifying finder or 2X eyepiece magnifier.

Product No. 2554.

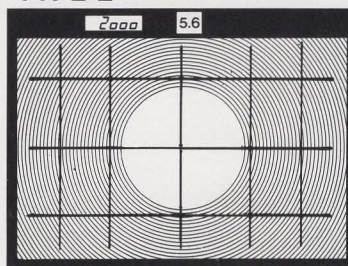
TYPE D



All-matte, fine-ground surface. For use with long focal-length lenses and in close-ups.

Product No. 2555.

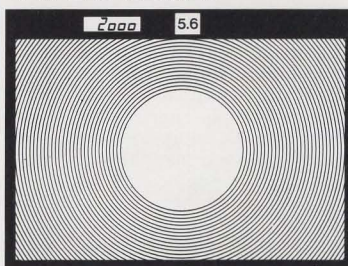
TYPE E



Matte Fresnel field with multiple vertical and horizontal reference lines, 12mm reference circle, and fine-ground matte spot. For architectural photography and other applications requiring accurate image placement or alignment.

Product No. 2556.

TYPE G SERIES



Clear Fresnel field with 12mm diameter microprism focusing spot. Provides extremely brilliant image for viewing and focusing in poor light. Available in 4 models with individual Fresnel patterns to match specific lenses, as shown on lens/screen selector chart.

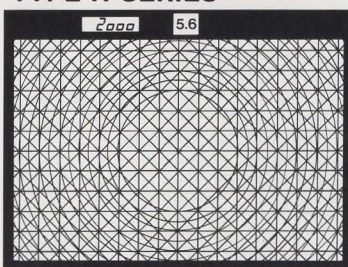
G1 Product No. 2557.

G2, Product No. 2558.

G3, Product No. 2559.

G4, Product No. 2560.

TYPE H SERIES



Clear Fresnel field with microprism pattern over entire screen area. Permits rapid focusing on any part of screen image, with optimum edge-to-edge brightness. Excellent for use in poor light with moving subjects. Available in 4 models for specific Nikkor lens types (see selector chart).

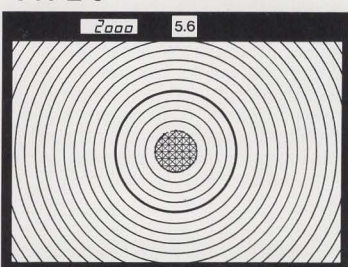
H1 Product No. 2561.

H2, Product No. 2562.

H3, Product No. 2563.

H4, Product No. 2564.

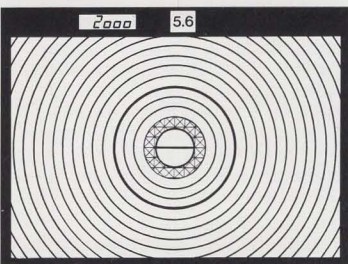
TYPE J



Matte Fresnel field with 4mm microprism focusing spot and 12mm reference circle. For general photography with any Nikkor lens.

Product No. 2565.

TYPE K

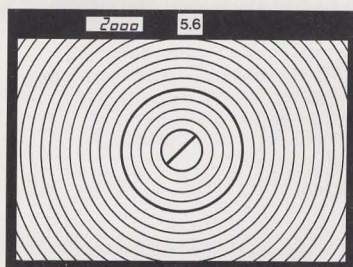


Matte Fresnel field with 3mm central split-image rangefinder spot surrounded by 1mm-wide microprism ring and 12mm reference circle. For general photography with any lens, supplied as standard with all Nikon cameras.

Product No. 2551.

Nikon F3 Interchangeable Focusing Screens

TYPE L



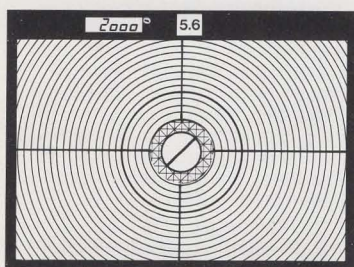
Similar to Type A but with split-image spot set at 45° angle. Facilitates focusing on horizontal line.
Product No. 2566.

TYPE M



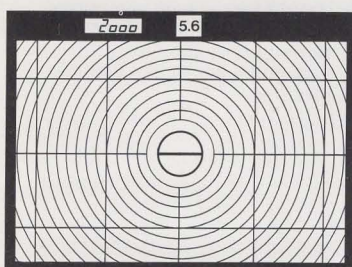
Clear field with double cross-hair reticle and scales in 1mm increments. For aerial-image focusing in photomicrography and other high-magnification work with 6X focusing finder or 2X eyepiece magnifier.
Product No. 2567

TYPE P



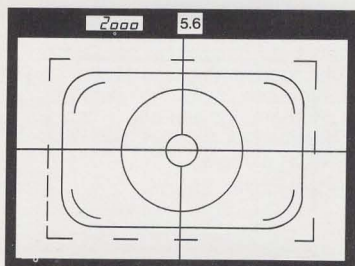
Matte Fresnel field with split-image spot at 45° angle surrounded by 1mm-wide microprism ring plus vertical and horizontal lines and 12mm reference circle. For general photography with all Nikkor lenses.
Product No. 2568.

TYPE R



Combines features of Types A and E. 3mm-diameter range-finder spot works best with lenses having maximum apertures f3.5 to f5.6. Excellent for architectural and multi-exposure photography, where precise image placement is vital.
Product No. 2569.

TV-FORMAT SCREEN



Has central 3mm split-image rangefinder and overall matte Fresnel field. Special, engraved lines show standard TV frame plus safe action and safe title areas, insure that entire image recorded will be visible in commercials or closed circuit TV broadcasts.
Product No. 2570.

Focusing Screen Selector Chart

Nikkor Lenses	Recommended	Acceptable
6mm f2.8 Fisheye	A,B,D,E,G-1,G-2,H-1,H-2,J,K,L,P TV	C,R
8mm f2.8 Fisheye	A,B,D,E,G-1,G-2,H-1,H-2,H-3,J,K,L,P,TV	C,R
13mm f5.6	B,E,H-2,J,R	A,G-2,K,L,P,TV
15mm f3.5, f5.6	B,E,H-2,J,R	A,G-2,K,L,P,TV
16mm f2.8 Fisheye	A,B,E,G-1,H-1,J,K,L,P,R,TV	
18mm f4	A,B,E,G-1,H-1,J,K,L,P,R,TV	
20mm f3.5, f4	A,B,E,G-1,H-1,J,K,L,P,R,TV	
24mm f2, f2.8	A,B,E,G-2,H-2,J,K,L,P TV	R
28mm f2	A,B,E,G-1,G-2,H-2,J,K,L,P,TV	H-1,R
28mm f2.8	A,B,E,G-1,H-1,J,K,L,P,TV	R
28mm f3.5	A,B,E,J,K,L,P,R,TV	G-1,G-2,H-1
28mm f4 PC	B,E	A,J,K,L,P,R,TV
35mm f1.4, f2	A,B,E,G-2,H-2,J,K,L,P,TV	G-1,H-1,R
35mm f2.8	A,B,E,G-1,H-1,J,K,L,P,TV	H-2,R
35mm f2.8 PC	B,E	A,J,K,L,P,R,TV
50mm f1.2, f1.4	A,B,E,G-2,H-2,J,K,L,P,TV	R
50mm f1.8, f2	A,B,E,G-1,G-2,H-1,H-2,J,K,L,P,TV	R
55mm f2.8, f3.5 Micro	B,E	A,G-2,H-2,J,K,L,P,TV
58mm f1.2 Noct	A,B,E,G-2,H-2,J,K,L,P TV	H-1,R
85mm f2	A,B,E,G-2,H-2,J,K,L,P TV	H-1,R
105mm f2.5	A,B,E,G-2,H-2,J,K,L,P,TV	H-1,R
105mm f4 Micro	B,E,H-3	A,G-3,G-4,J,K,L,P,R,TV
135mm f2.0, f2.8	A,B,E,G-2,H-2,J,K,L,P,TV	C,D,R
135mm f3.5	A,B,E,G-2,H-2,J,K,L,P,R,TV	C,D
180mm f2.8	A,B,E,G-3,J,K,L,P,TV	C,D,H-2,H-3,H-4,R
200mm f2, f4, f4 Micro	A,B,E,G-2,H-2,J,K,L,P,R,TV	C,D
200mm f5.6 Medical	B,E,H-2	A,J,K,L,P,R,TV
300mm f2.8, F4.5 & ED	A,B,E,G-3,H-3,J,K,L,P,R,TV	C,D,H-2,H-4
400mm f3.5, f4.5	A,B,E,G-3,H-3,J,K,L,P,R,TV	C,D,G-4,H-4
400mm f5.6 & ED	B,E,G-3,H-3,J,R	C,D,G-4,H-4
500mm f8 Reflex	B,E	A,C,D,J,K,L,P,R,TV
600mm f4,f5.6 & ED	B,D,E,G-4,H-4,J,R,TV	A,C,K,L,P TV
800mm f8 & ED	B,D,E,G-3,G-4,H-4	A,C,H-3,J,K,L,P,R,TV
1000mm f11 Reflex	A,B,E,J,K,L,TV	C,D,H-3,H-4,P,R
1200mm f11 & ED	B,D,E	A,C,G-4,H-3,J,K,L,P,R,TV
2000mm f11 Reflex	B,D,E,G-4,H-4	A,C,G-3,J,K,L,P,R,TV
25-50mm f4 Zoom	A,B,E,J,K,L,P,R,TV	H-1
35-70mm & 43-86mm f3.5 Zoom	A,B,E,H-2,J,K,L,P,R,TV	G-2
50-300mm f4.5 Zoom & ED	A,B,E,G-3,J,K,L,P,R,TV	G-3,H-3
80-200mm f4.5 Zoom	A,B,E,H-2,H-3,J,K,L,P,R,TV	G-3
180-600mm f8, 200-600mm f9.5 & 360-1200mm f11 Zoom	B,D,E,G-4,H-4	A,C,H-3,J,K,L,P,R,TV

All specifications subject to change without notice.

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