

The Nikon F Camera



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Code numbers:

Nikon Photomic FTN Body, chrome

Nikon Photomic FTN Body, black

Nikon Photomic FTN Body for Motor Drive, chrome

Nikon Photomic FTN Body for Motor Drive, black

No. 100-05-001

No. 100-05-041

No. 100-05-021

No. 100-05-061

Nikon F Body, chrome

Nikon F Body, black

Nikon F Body for Motor Drive, chrome

Nikon F Body for Motor Drive, black

No. 100-01-003

No. 100-01-043

No. 100-01-022

No. 100-01-062

A. General Introduction

The Nikon F combines the merits of the earlier Nikon S series rangefinder models with the numerous innovations in functions and features that make it a 35mm single-lens reflex camera of outstanding quality, precision, versatility and durability.

The major features of the Nikon F camera include:

- Titanium-foil focal plane shutter
- Color-coded flash synch control
- Hot-shoe contact for Nikon cordless flash unit
- Interchangeable viewfinders and focusing screens cover 100% of the picture field
- Built-in center-weighted through-the-lens exposure meter (Photomic FT_N)
- Film advance lever, operated in a single sweep or several short strokes
- Depth-of-field preview control
- Mirror lock-up
- Camera back is interchangeable with Motor Drive backs

The camera body is composed of 918 component parts. These parts are precision designed, processed, finished and assembled under strictest quality control to bring out the outstanding performance of the Nikon F camera. The outside of the camera is finished in handsome satin chrome and black leatherette. The satin chrome finish gives the camera body a graceful and dignified appearance, and what is more, scratches do not easily show. The Nikon F body is also available in black finish.

B. Specifications (Nikon Photomic FT_N)

Type:

35mm single-lens reflex.

Shutter:

Dimpled titanium-foil focal plane.

Shutter speeds from 1 to 1/1000 sec. plus B and T.

Built-in self-timer 3 to 10 sec.

Synchronization:

FP and X synchs adjustable with synch selector according to the shutter speed to be used. M- and MF-class bulbs also usable.

X synch at 1/60 sec. or slower. PC-plug socket provided.

Hot-shoe contact for Nikon cordless flash unit.

Viewing/focusing:

Eye-level pentaprism finder with built-in exposure meter covers 100% of the picture field. Interchangeable with four other finders.

Shutter speed indication visible in lower finder viewfield. Type A Focusing Screen with matte/Fresnel field and central split-image rangefinder. Interchangeable with 17 other screens.

Depth-of-field preview button provided.

Exposure metering:

Through-the-lens center-weighted measurement at full opening.

CdS exposure meter powered by two 1.3V mercury batteries.

Meter needle visible in and atop the finder.

Range of metering: EV2 – EV17 at ASA 100 (e.g. f/1.4, 1/2 sec. – f/11, 1/1000 sec.).

ASA sensitivity setting: 6 – 6400.

Maximum aperture setting: f/1.2 – f/5.6.

Meter diaphragm coupling: f/1.2 – f/32.

Couples with both diaphragm and shutter speed dial.

Other features:

135° film-winding lever (throw-angle 15°; multi-stroke winding also possible).

Removable back allows adaptation of motor drives.

Mirror lock-up.

Various accessories to comply with any photographic situation.

Automatic "0" resetting frame counter.

Crank-type film rewinding.

Lenses:

Standard: 50mm f/2, 50mm f/1.4 and 55mm f/1.2 Nikkor Auto lenses.

Nikon F bayonet mount. More than 40 Nikkor interchangeable lenses available.

Dimensions (body):

147 x 102 x 67mm (5-25/32 x 4-1/32 x 2-5/8 in)

Weight (body):

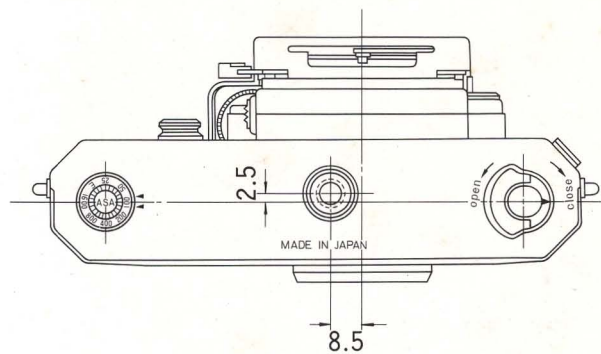
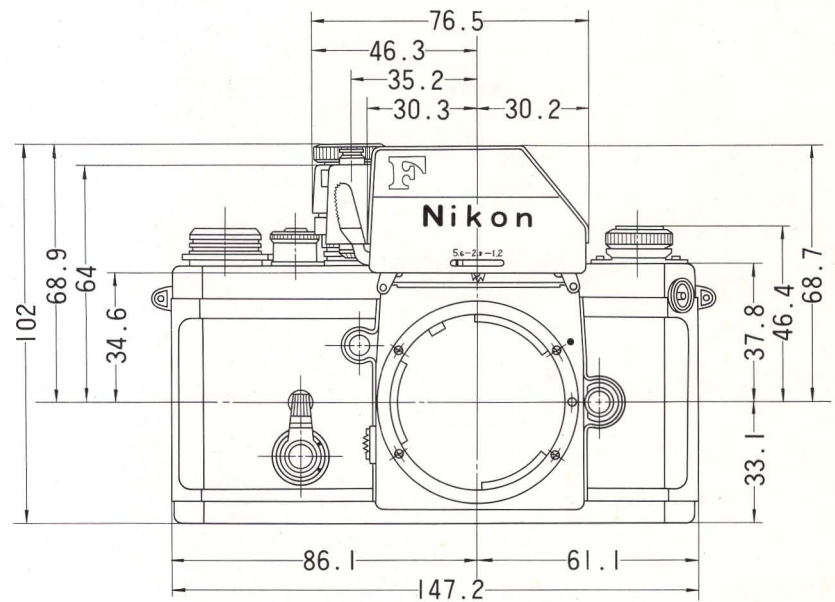
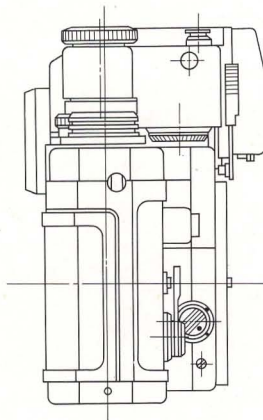
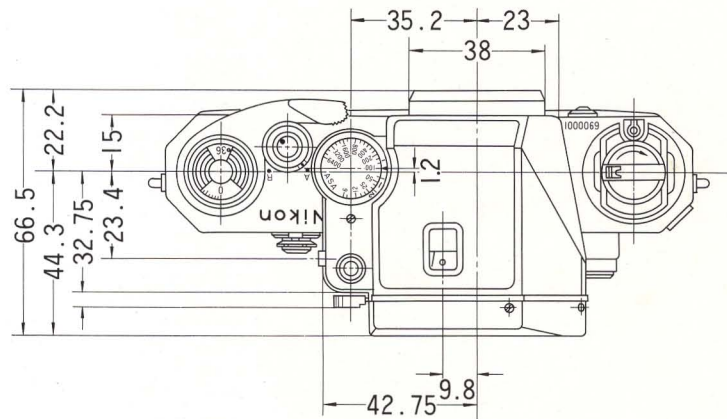
860g (1.9 lb)

Remarks:

Eye-level finder version instead of the Photomic FT_N finder offered as companion model (called "Nikon F").

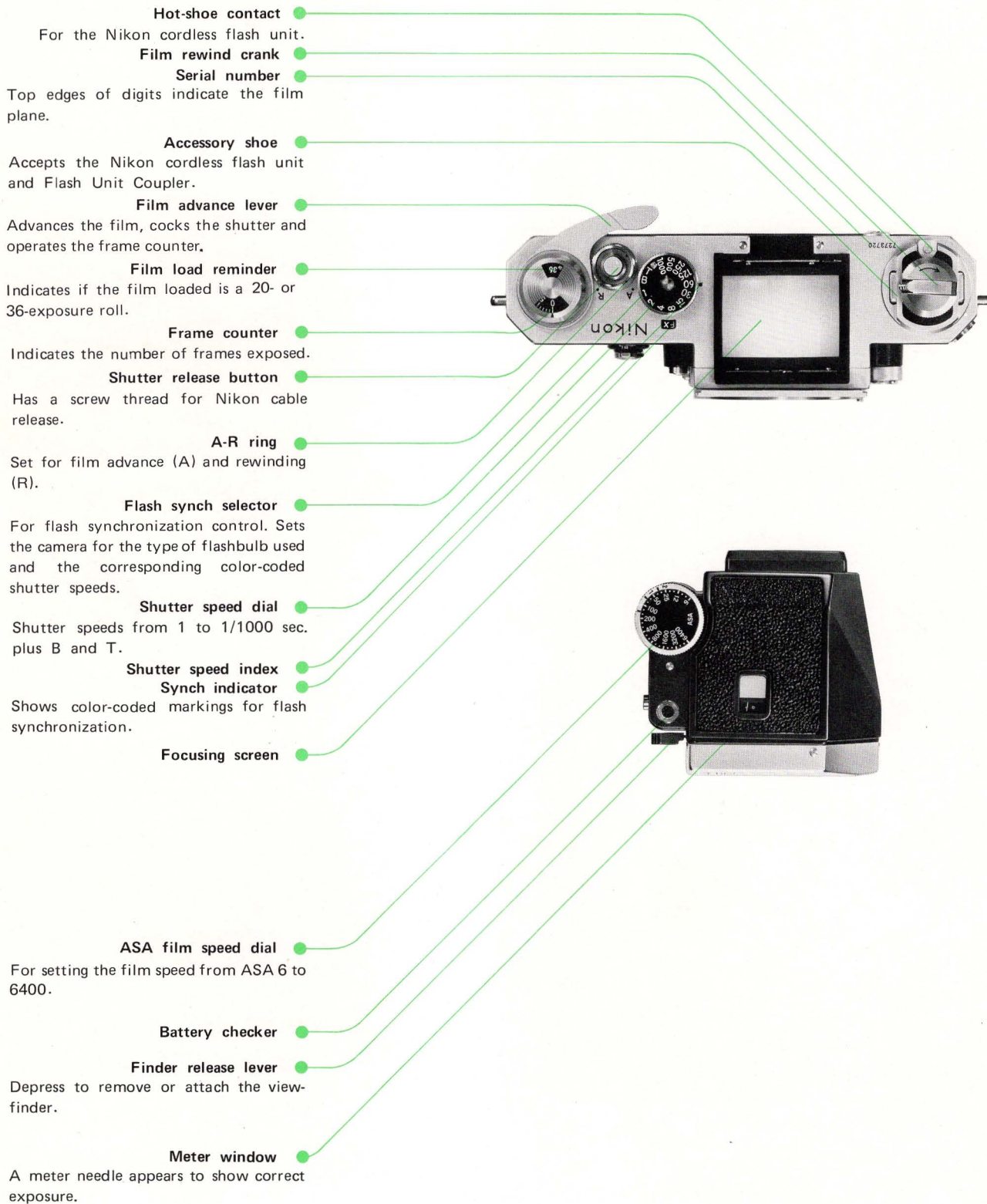
Available in satin chrome or black finish.

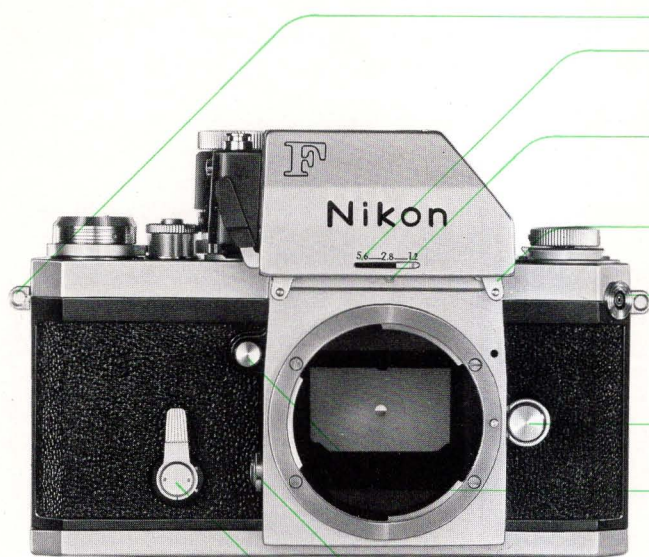
Nikon Photomic FTN



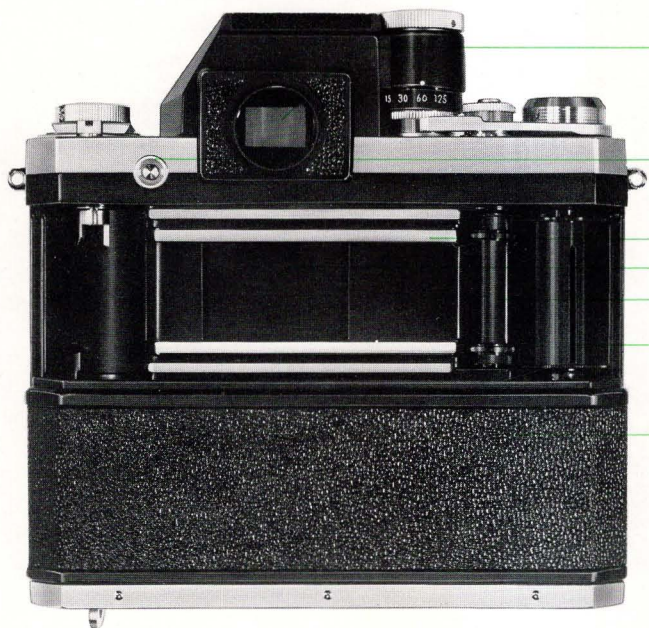
(m/m)

C. Nomenclature





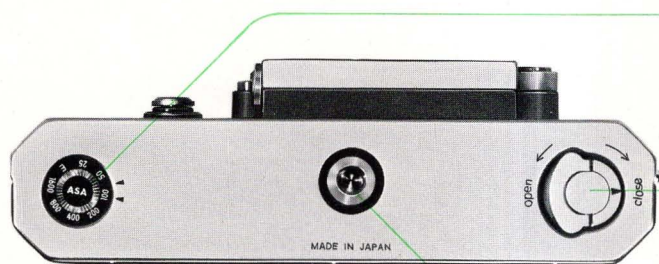
- **Neck strap eyelet**
- **Maximum aperture scale**
For checking if the meter is set for maximum aperture of the lens in use.
- **Meter coupling pin**
Fits the coupling prong on the lens aperture ring.
- **Clamp**
- **Sync terminal**
Accepts a standard synch cord.



- **Lens-lock release button**
Press to unlock the lens for removal.
- **Depth-of-field preview button**
Press to stop down the diaphragm to the preset aperture.
- **Mirror lock**
Locks the mirror out of optical path.
- **Self-timer**
Set for delayed exposures of up to 10 seconds.
- **Finder eyepiece**
Accepts various screw-in accessories.

- **Finder release button**
Depress to release the finder and focusing screen.
- **Film guide rails**
- **Titanium-foil shutter curtains**
- **Sprockets**
- **Take-up spool**

- **Camera back**
Can be replaced with motor drive backs.



- **Film-speed reminder dial**
Serves as reminder of the type of film loaded. Set for color or black-and-white film and film speeds from ASA 25 to 1600.

- **O/C key**
Turn to open and close the camera back.

- **Tripod socket**

D. Features

1. Viewfinders

The Nikon F features an interchangeable finder system. The Nikon F body equipped with the Photomic FT_N finder as the standard viewfinder is referred to as the Nikon Photomic FT_N, and that provided with the Eye-Level Finder is called the Nikon F. These two viewfinders are interchangeable with each other and three other finders available for the Nikon F body—the Action Finder, Waist-Level Finder and 6X* Focusing Finder. Each finder can be removed from the camera body simply by pressing the viewfinder release button.



The Nikon cameras are acknowledged to be one of the few 35mm SLRs with a truly accurate viewfinder system. It shows 100% of the picture area to be recorded on the film, allowing precise framing right to the edges, and offering a distinct advantage in scientific and precise reproduction work.

The eye-level and Photomic finders offer image magnification of 0.8X with a normal lens of 50mm focal length set at infinity.

The viewfinder eyepiece forms a virtual image of a subject in focus at a distance of about one meter (−1 diopter) from the observer. This diopter has been employed on an empirical finding that an average person accommodates his eye most easily to a subject image at this distance when viewing it through a small opening like an eyepiece frame. Even for those who wear glasses, the high eyepoint of about 18mm from the finder eyepiece makes possible comfortable viewing of the entire viewfield. These optical features are the same as those of the Nikon F2 and Nikkormat cameras.



The unique feature of the Photomic FT_N finder is its through-the-lens, center-weighted exposure metering which provides accurate exposure control almost under any picture-taking conditions. The meter is designed to measure the entire picture field but favors the central 12mm focusing spot, concentrating more than half of its total light sensitivity on this 1/8 of the total picture field area. The exposure readings are taken at full aperture.

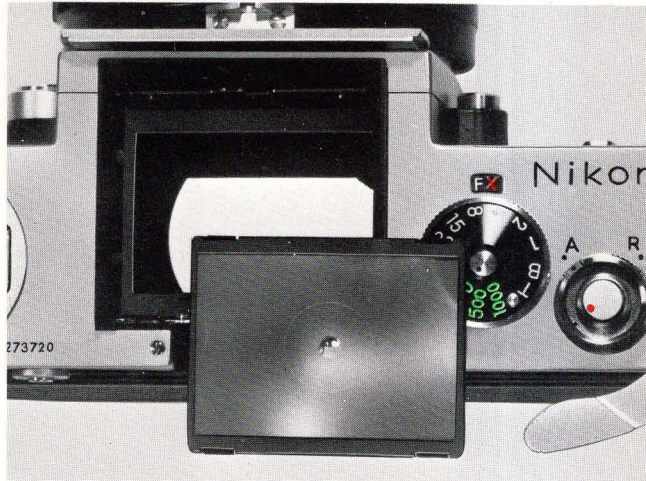
Since the exposure metering is performed at full opening, the maximum aperture of a lens in use has to be set into the meter. After mounting the lens, twist the aperture ring all the way to the minimum aperture, then to the opposite direction as far as it will go.

The metering range is from EV2 through EV17 (at ASA 100). ASA sensitivity setting extends from 6 to 6400. The meter is powered by two 1.3V mercury batteries housed in the finder. To check the batteries, depress the built-in battery checker on the finder. If the needle in the window on top of the finder swings to the center circle or beyond, the batteries are in working order.

The meter needle and the shutter speed settings are visible in the viewfinder above the picture field.

* Originally designed for Nikon F2. To mount the 6X Focusing Finder on the Nikon F, the nameplate must first be removed.

2. Focusing Screens

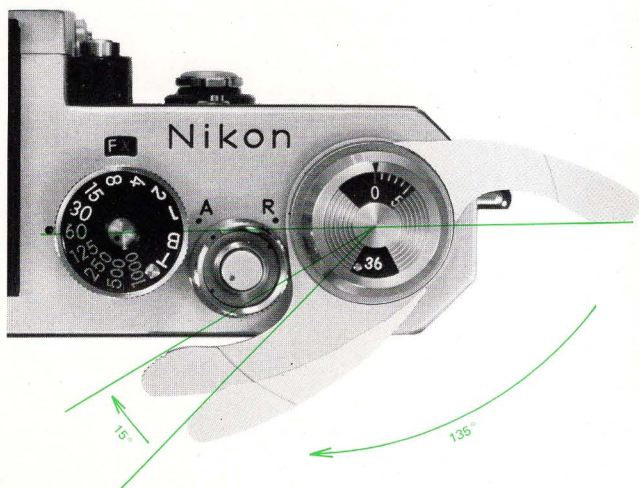


The Nikon F camera accepts 18 interchangeable focusing screens, classified from Type A to Type P (with variations of the G and H types). Any of these screens may be used in combination with the five interchangeable viewfinders.

No single screen can be expected to provide optimum viewing conditions for all the Nikkor lenses in all photographic situations. A selective use of the wide range of these interchangeable screens ensures flexibility and easy and accurate viewing, with each offering a definite advantage in specific applications.

The Nikon F and the Nikon Photomic FTN are provided with the Type A screen as standard equipment. It is a matte/Fresnel screen with a split-image rangefinder spot in a central 12mm-diameter reference circle.

3. Film Advance Lever

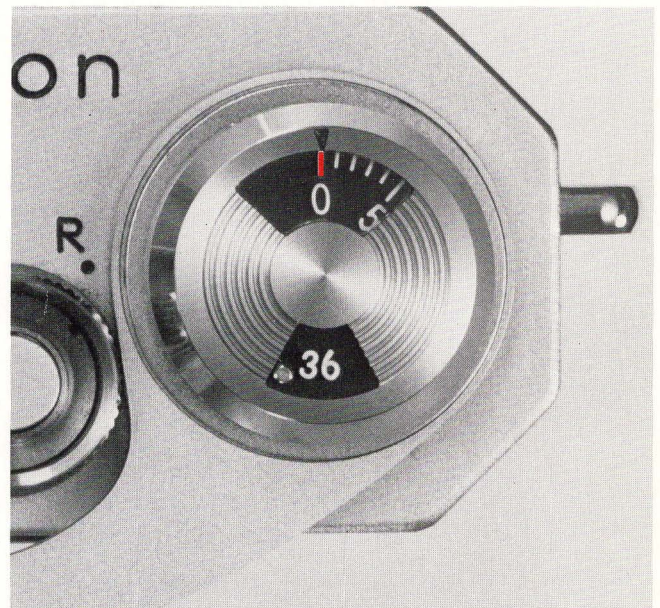


With a stroke angle of 135°, the film advance lever winds the film, cocks the shutter and operates

the frame counter simultaneously in a single sweep or in a series of short strokes. A built-in locking device prevents the shutter tripping before it is fully cocked. The lever swings back to its original position when released.

A 15° clearance angle affords ample room for the thumb, facilitating smooth winding of film. The lever is also milled along the thumb grip perimeter for non-slip operation.

4. Frame Counter and Film Load Reminder

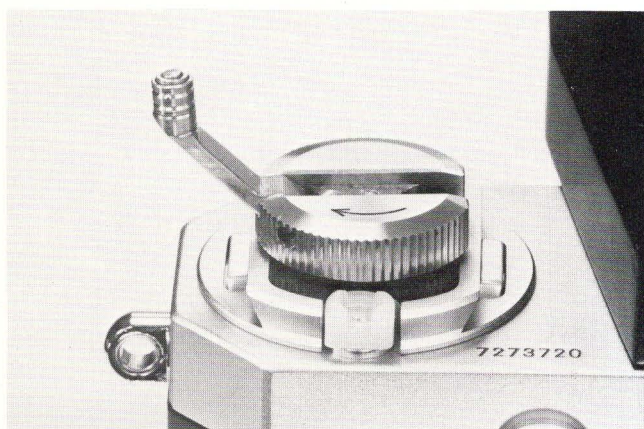


Both indicators are located in the hub of the film advance lever. Numbered at intervals of 5, with index marks for each exposure, the frame counter automatically indicates the number of frames exposed. It resets itself to two frames before "0" as the camera back is removed. On the other side of the frame counter is the film load reminder which serves to remind the photographer whether the film loaded is a 20- or 36-exposure roll. It is set manually by means of an indicator pin.

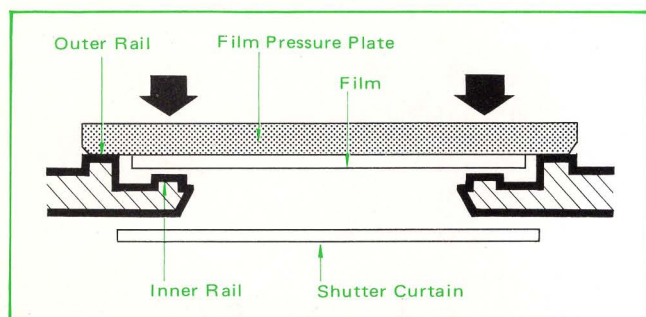
5. Film Rewind Crank

The film rewind crank is for rapid rewinding of film. It may be folded into the rewind knob when not in use. A red dot on top of the shutter release button rotates while the film is being rewound, and stops when the tongue of the film is pulled out of the take-up spool. At the base of the film rewind knob is an accessory shoe featuring an insulated contact for the Nikon cordless flash

unit. The accessory shoe also accepts the Fisheye Finder and the Flash Unit Coupler.



6. Film Guide Rails and Pressure Plate



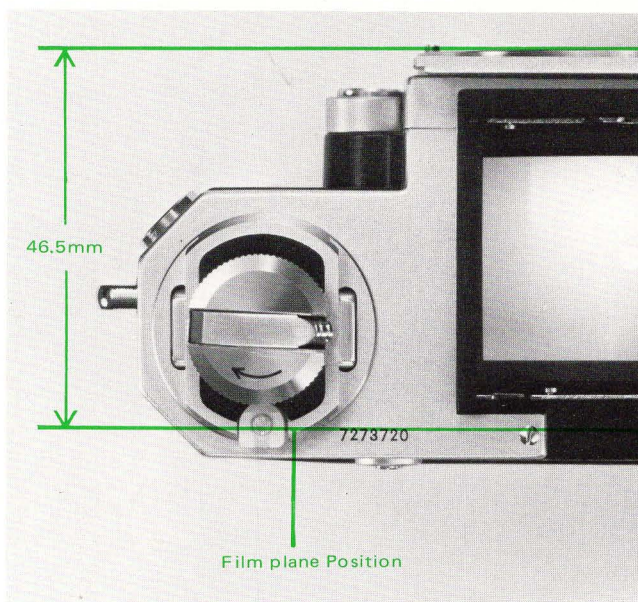
High speed (large aperture) lenses, used as standard lenses for the Nikon F, possess a shallow depth of field, and consequently show narrow tolerance limits with respect to film flatness. For this shallow depth of field, Nikon engineers have given special consideration to the maintenance of film flatness in the camera body.

Two sets of film guide rails, with their surfaces precision ground, are positioned just in front of the film, the inner rails being slightly lower than the outer rails. The outer rails come into contact with the oversized pressure plate as the camera back is closed. The film pressure plate is precision finished to ensure utmost flatness, and anodized for surface hardness.

The film is brought under the take-up spool so that the film perforations are engaged firmly by the sprockets. The slit in the take-up spool is equipped with a small lug which catches the film leader securely.

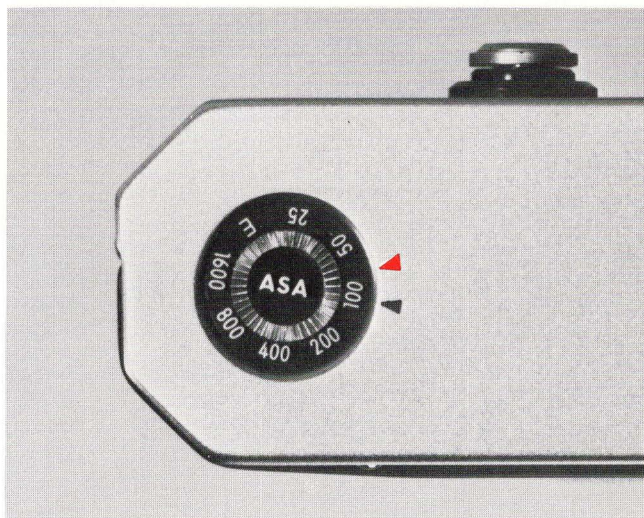
The two film guide rails and the film pressure plate together thus form a narrow slot through which a film is transported, maintaining the unmatched flatness of the film plane, and ensuring smooth film transport without risk of scratching. (The same consideration has been given to the Nikon F2 and Nikkormat cameras.)

7. Serial Number and Film Plane Indication



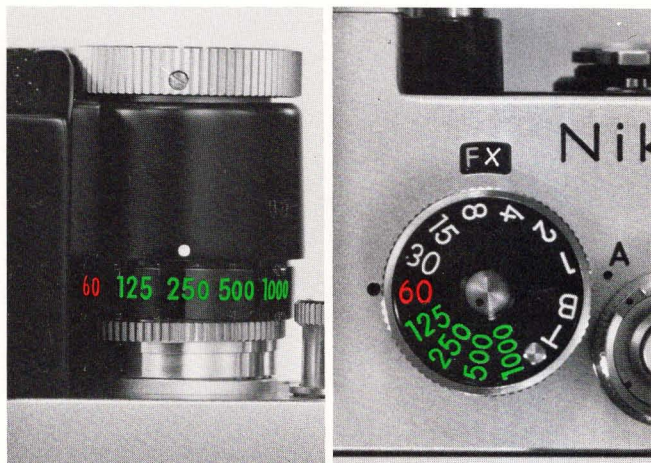
The position of the film plane is not indicated, but it coincides with the top line of the serial number engraved on the top plate of the camera. It is at a distance of 46.5mm from the lens mount surface. It is very important when exact film-to-subject distance must be measured, especially in close-up work. (The same with the Nikon F2 camera.)

8. Film Speed Reminder



Located on the baseplate of the camera, the film speed reminder can be set for "E" (empty) and ASA speeds from 25 to 1600. In addition, there are two index points—the black index for black-and-white film and the red index for color film.

9. Shutter Speed Dial



Shutter speeds: 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, 1/1000 second plus B and T.

Provided with click-stops, the shutter speed dial can be turned 360° in either direction (when the Photomic FTN finder is not attached).

The shutter speeds are marked clearly in large figures with fluorescent paint and color-coded to match the color-coding on the synch selector. The 1/60 second setting is calibrated in red to indicate the maximum speed at which X synchronization takes place. The higher speeds are marked in green.

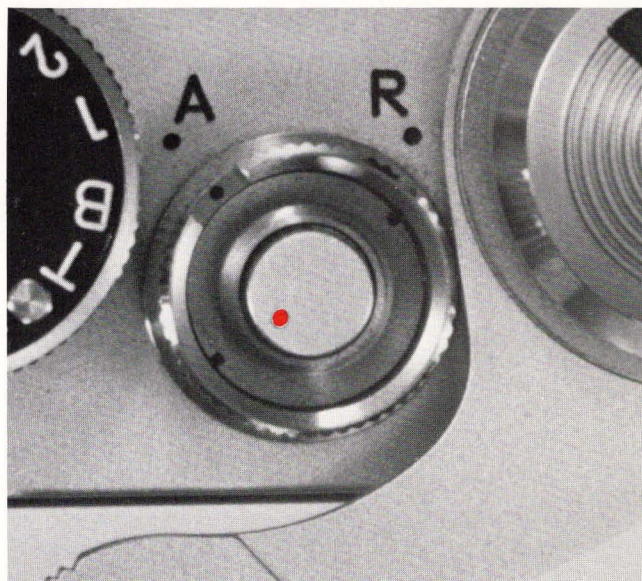
The dial may be set before or after winding the shutter. It does not turn while the shutter is being cocked or released. Located in the recessed center of the shutter speed dial is a black dot which rotates as the shutter is wound and lines up with the preset speed in the nine o'clock position. When the shutter is released, the black dot turns back to the seven o'clock position. By checking the position of this dot, the photographer can check whether or not the shutter has been wound. The dial is also provided with a pin for direct coupling with the shutter dial on the Photomic FTN finder.

10. Shutter Release Button

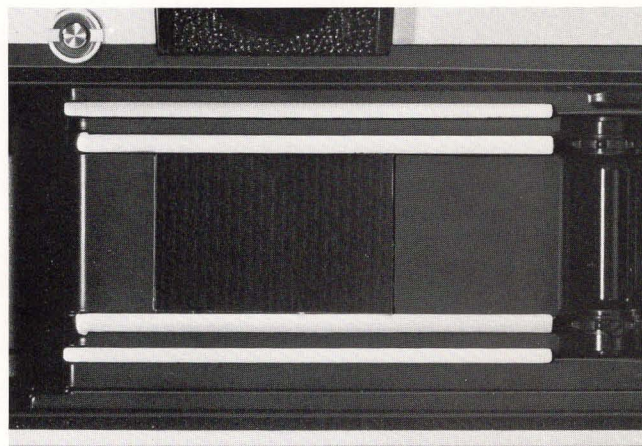
The shutter is designed to be released by the pressure of the finger that is neither too light nor too heavy. The ring at the base of the shutter release button is threaded for the Nikon Cable Release. Around the shutter release button is a fingerguard, which also serves as the A-R ring. The ring is set at "A" for advancing the film and at "R" for rewinding the film. The red dot on the shutter release button rotates 360° when

the film is advanced one full frame, a helpful feature for making double exposures, as it permits accurate rewinding of one frame.

Moreover, the dot stops revolving when the film sprockets become disengaged, a warning to the photographer to stop rewinding before the tongue disappears into the film cassette.



11. Shutter



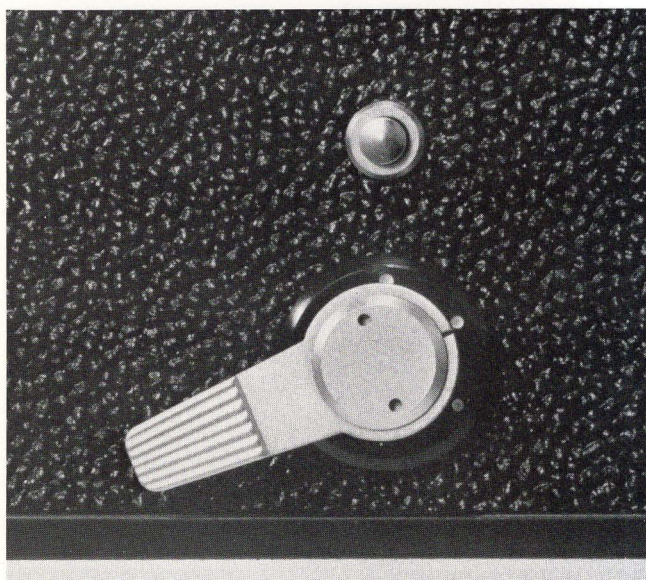
As the shutter release button is pressed, the mirror lifts up and the lens diaphragm, coupled to this mirror action, stops down to the preset taking aperture. Then, the shutter runs and a moment later, the raised mirror returns to its precise focus-viewing position and the diaphragm re-opens automatically.

These sequential actions occur with high accuracy and speed. At the shutter speed of 1/1000 second, they take only 100 milliseconds. The fast action of the shutter mechanism restricts the darkening of the finder field to only a fraction of a second. The shutter curtain takes 14 milliseconds to

travel across the film gate. X synchronization takes place at speeds up to 1/60 second. The curtain, made of titanium-foil, shows high resistance against heat and corrosion, low heat conductivity, small thermal dilatation, high fatigue strength with good bending properties and non-magnetization. The surfaces of the curtains are dimpled for high tensile strength with minimum elongation.

The Nikon designed precision ball bearings incorporated on the main shaft further guarantee smooth and friction-free operation of the shutter.

12. Self-Timer



Provided with white indicator dots for 3, 6 and 10 seconds, the built-in self-timer of the Nikon F trips the shutter at any time delay between 3 and 10 seconds.

Since the self-timer can be set before or after winding the shutter, independent of the shutter release mechanism, it is ready for making delayed exposures at any time. If the photographer decides not to use the self-timer after having set it, he must first press the shutter release button to make the exposure and then turn off the self-timer by pressing the self-timer release button before advancing another frame to avoid unnecessary exposure of film.

13. Flash Synchronization

The Nikon F camera is designed to synchronize with different classes of flashbulbs at virtually all shutter speeds, and with electronic flash units

at speeds up to 1/60 second. The switch-in time can be set for the particular type of flashbulb or electronic flash unit used by raising and rotating the synch selector ring around the shutter speed dial. (The Photomic finder must be removed when this adjustment is made.)

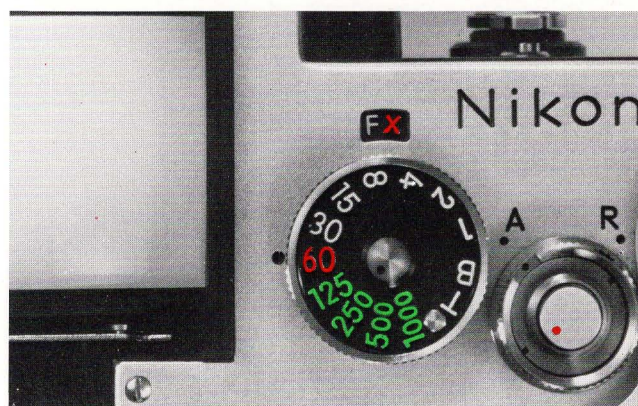
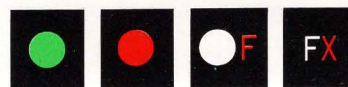
Shutter speed Flashbulb	1000	500	250	125	60	30	15	8	4	2	1	B
FP	●	●	●	●	●	OF	OF	OF	OF	OF	OF	OF
M	—	—	—	●	●	OF	OF	OF	OF	OF	OF	OF
MF	—	—	—	—	—	OF	OF	OF	OF	OF	OF	OF
X	—	—	—	—	FX	FX	FX	FX	FX	FX	FX	FX

● Synch Selector

The synch selector can be set to any of the four positions, each representing a permissible range of shutter speeds for synchronization with flashbulbs and electronic flash units.

The preset position is indicated in the selector window as a color-coded marking that corresponds with the color of numbers on the shutter speed dial.

The selector can be set at any of the four positions when the flash is not used, since the selector is independent of the shutter mechanism.



14. Synch Terminal and Hot-Shoe Contact

Since the switch-in-time can be adjusted with the selector, the Nikon F has only one synch terminal located on the front edge, on the right side of the camera. The terminal accepts the standard PC terminal cords. In addition, there is an insulated

hot-shoe contact in the accessory shoe for the Nikon cordless flash unit. For other clip-on type flash units, the Flash Unit Coupler must first be fitted over the rewind crank and the synch cord plugged into the flash terminal.

Caution: Do not touch the hot-shoe contact near the rewind crank when using an electronic flash unit, to avoid any risk of a slight electric shock.



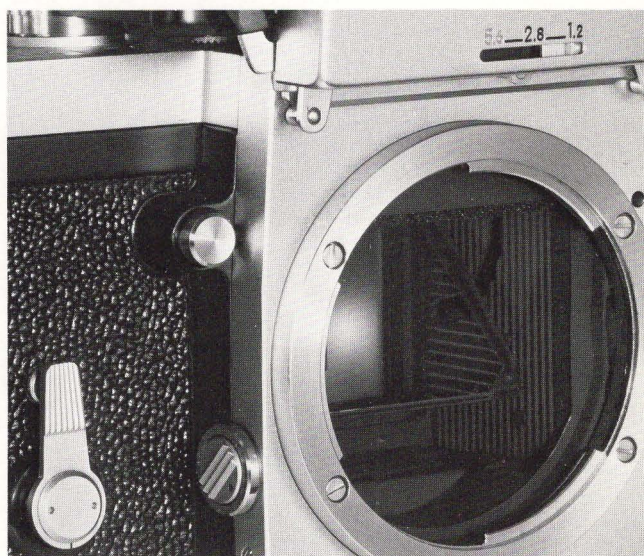
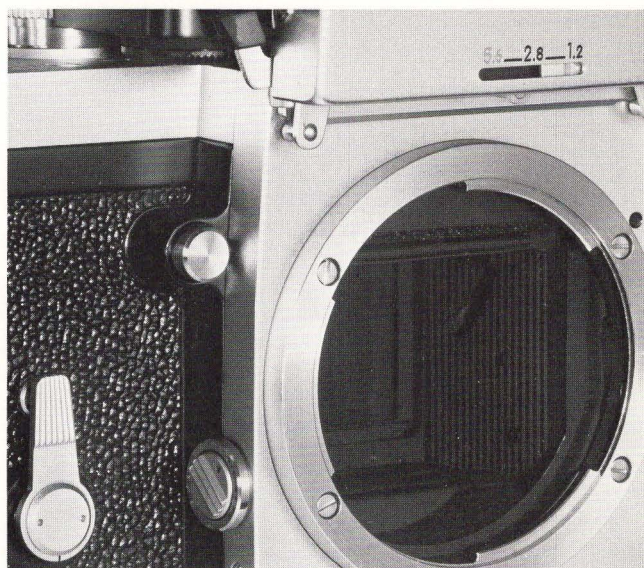
15. Reflex Mirror

As the shutter release button is pressed, the mirror is raised and the lens diaphragm, coupled to this mirror action, stops down from its maximum aperture to the preset "taking" aperture. After the moment of exposure, the mirror flips back to its precise focusing/viewing position.

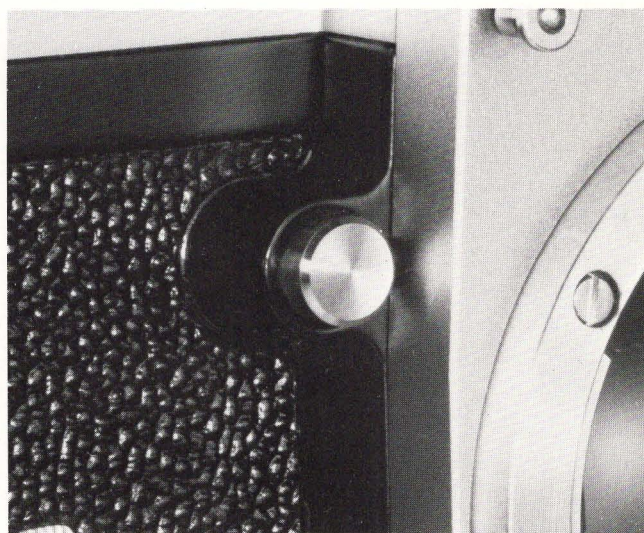
The mirror can also be locked up, out of the lens-to-film path, by turning the small lock button toward the red dot on the left side of the camera scutcheon, and then releasing the shutter.

To return the mirror to its original focusing/viewing position, turn the lock button downward until the black dot on the button lines up with the black dot on the camera body. This should be done after the shutter is released—the mirror will not return to its original position until exposure is made.

The mirror must be locked up when using some Fisheye lenses or when the motor drive unit is mounted for a continuous sequence shooting at the speed of 4 frames per second.



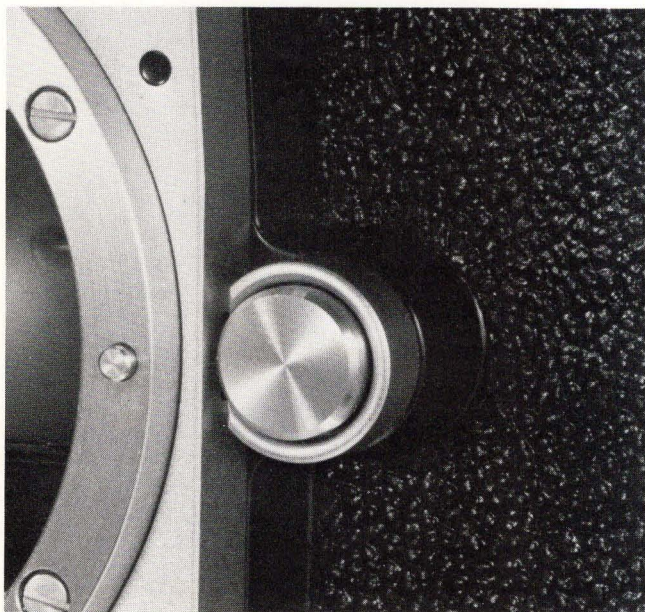
16. Depth-of-Field Preview Button



Located on the left side of the camera front scutcheon, the depth-of-field preview button enables the photographer to check how much background or foreground is in or out of focus. As the button is pressed, the lens diaphragm stops down to the preset aperture for a preview of the depth of field.

The depth-of-field control is independent of the shutter mechanism. The preview control button also serves to check the normal functioning of the automatic diaphragm in a lens.

17. Lens-Lock Release Button



The lens-lock release button is located on the right side of the camera scutcheon. The locking device is designed for firm mounting and positioning, and easy removal of a lens.

To remove a lens from the camera body, press the button and turn the lens by its grip in a clockwise direction until the dot on the lens ring lines up with the corresponding dot on the scutcheon.

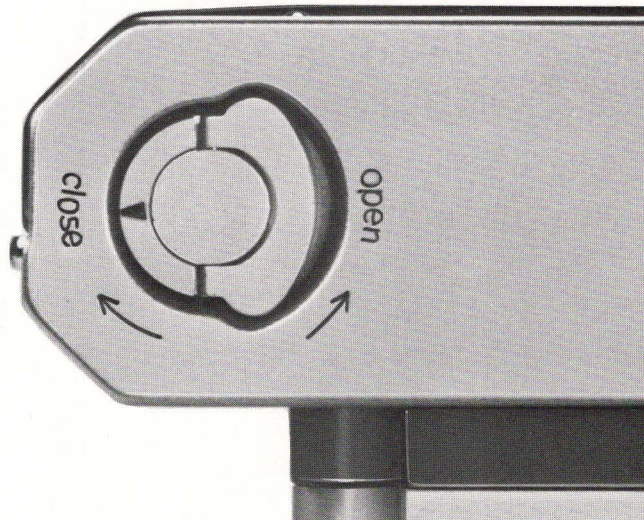
18. Lens Mount Flange

The broad lens mount flange (44mm in diameter inside the bayonet tabs) minimizes vignetting at the corners of the picture. A specially treated hard-wearing steel is used on the lens mount flange.

The precise construction and machining of the flange ensures secure seating, correct alignment and accurate focus for every interchangeable lens offered by the Nikon system.

19. Camera Back

The camera back can be attached to or removed from the Nikon F body by turning the O/C key on the baseplate to the "close" or "open" position. The precise and sturdy construction of the camera back ensures secure fitting. It is made dust-proof by the overlapping of the portions that fit together. The camera back is detached from the body for the purpose of film loading or mounting the Nikon Motor Drive Back F36 or F250.



20. Tripod Socket

The tripod socket (1/4" threaded) is located in the center of the base plate of the camera body for good balance and stability.

