

***Nikon***

**INSTRUCTIONS**



1



2

**Caution!**

When using a tripod with a long thread length, be careful not to forcibly screw in the thread further than the depth of the socket.

## FRONT VIEW

1. Automatic exposure counter
2. Film load reminder
3. Single stroke film advance lever
4. Shutter release button (with screw thread for attaching cable release)
5. A-R ring for setting film advance (A) and film rewind (R)
6. Shutter speed selector dial
7. Synchro selector ring for flash synchronization control
8. Synchro indicator for flash synchronization
9. Eye level penta prism viewfinder
10. Accessory shoe
11. Film rewind crank
12. Terminal for flash and electronic flash
13. Lens aperture (f-number) pre select ring
14. Aperture indicator dot
15. Distance indicator with Depth of field scale

16. Release button for removing lens
17. Lens focusing ring with distance scale
18. Mirror-lock knob
19. Calibrated, dual purpose self timer
20. Depth-of field preview control button
21. Diaphragm slot for coupling diaphragm to exposure meter

## REAR VIEW

22. Finder-lock release button
23. Finder eyepiece window
24. Film speed (ASA speed) reminder dial
25. Tripod socket
26. Lock for removing and replacing camera back

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## CAUTION!

- When the camera is carried in the eveready case, be sure to fasten the locking nut screw, fitted on the bottom of the case, so that the camera will not drop out.
- Don't exert any force against the shutter curtain of the camera, which is made of extremely thin titanium foils, as it may damage the curtain.
- When the camera is not in use, the shutter and the self-timer should not be kept in a wound position for any long period of time
- Do not lose the guarantee card which bears the serial numbers of the camera and lens. It is also advisable to keep a record of these serial numbers in the event that you lose the camera or lens.

## SPECIFICATIONS

Nikon F is a 35mm single lens reflex camera with interchangeable finders and lenses.

**Picture size :** 24 mm x 35 mm

**Lens mount :** Nikon F mount (bayonet)

### Focusing and viewing

Depth of-field preview control : Stops the lens diaphragm down to the pre selected aperture.

Viewfinder : Interchangeable eye level finder with pentaprism supplied as standard equipment

Finder screen : Interchangeable type A screen supplied as standard equipment

### Shutter :

Shutter : Titanium curtains Focal plane type

Shutter speeds : 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, 1/1000, Bulb and Time

### Film advance and

shutter winding lever : Operated with one stroke

Exposure counter : Automatically returns to S (start) with the camera back opened.

Self timer : Built in. Starts by depressing the shutter release button.

Calibration 3, 6, 10 sec

**Flash synchronization :** For all speeds up to 1/1000 sec. with provision for electronic flash up to 1/60 sec.

**Camera back :** Interchangeable with motor drive back.

**Dimensions :** 147 x 98 x 54 mm

**Weight :** 685 g (body without lens)

## LENS CHARACTERISTICS

High grade optical glass may sometimes contain small bubbles. These bubbles in a lens do not interfere with lens quality nor do they affect picture quality. Coated lens surfaces may sometimes show slight "slicks" when viewed by reflected light. These "slicks" have no effect on transmitted light and will not affect picture quality. A careful cleaning will usually remove them.

## EVEREADY CASE



Eveready case, soft or semi-soft type, holds the Nikon F camera (with Photomic T<sub>x</sub> or FT<sub>x</sub> Finder) and with every type of the normal or wide angle lens. The hard leather type case can accept the camera with the 85mm f 1.8 lens, too.

After putting camera into the case (Fig 3), fasten the locking screw nut found on the bottom.

This nut is threaded so that the camera can be attached to a tripod without removing the case.

The camera can be used while in the eveready case merely by detaching snap-off front part.

## LOADING THE CAMERA





Turn the lock on the camera bottom to the "open" position (Fig 4)  
The camera back is then unlocked and may be completely removed by sliding it off with the thumb (Fig 5)

The take up spool is fixed and cannot be taken out, assuring more uniform film take up and easier film loading

Place a film cartridge or loaded cassette (See p. 30) in the left chamber, so that the projection of the cassette fits into the guide notch.

Insert the end of the leader of the film into the slot on the take up spool (Fig 6), so that the projection in the take up slot catches the perforation of the film (Fig 7)

Rotate the spool in the direction of the film cartridge so that the film passes under the spool and the emulsion side is wound face out

Replace the camera back and lock it Turn the A R ring (Fig 8) on the shutter release button to "A" (Advance) position\*, and shoot one or two "blank" exposures which will dispose of the portion of the film exposed during loading While doing this, note that the rewinding knob rotates in the direction opposite to the arrow on the knob, indicating that the film is correctly loaded and is being advanced If it does not move as indicated after the first "blank" exposure, gently wind it in the direction of the arrow to take up the film slack in the cartridge

\* It is important that the A R ring on the shutter release button be turned to "A" before the "blank" shots are made.



## EXPOSURE COUNTER, FILM LOAD REMINDER



The Exposure Counter (Fig. 9) on the camera automatically returns to one or two spaces before zero when the camera back is removed. After loading the camera, shoot two or three "blank" shots, until the counter registers 1. The camera is now ready for the first shot. Thereafter, the counter will automatically advance consecutively up to 36

This figure indicates whether you have loaded a 20 or 36 exposure magazine. Move the indicator pin located to the left of "36" (Fig. 9) to change the indicator to "20".

## FILM SPEED REMINDER DIAL



The Film-Speed Reminder Dial (Fig. 10) on the bottom of the camera serves as a reminder of the speed of film (ASA), with which the camera is loaded. It can be set for either color or black and-white film "E" represents "Empty" and may be used to indicate that the camera is not loaded.

## PRESELECTING LENS APERTURE

Interchangeable NIKKOR Auto lenses are designed so that the diaphragm automatically closes down to the preselected aperture when the shutter button is depressed. The diaphragm automatically reopens to full aperture immediately after the shutter has been fired. Consequently, the finder image is seen bright and clear at all times except for the instant the shutter is released.

To preset the aperture, turn the aperture ring on the lens barrel until the desired f-number is opposite the black indicator dot on the milled ring (Fig. 11). The diaphragm can be preset for intermediate openings—between markings—and will still function automatically without disturbing the setting.

A button (depth-of-field preview control) is provided on the front of the camera to permit closing down the diaphragm manually to the preselected aperture. When this button is released, the diaphragm automatically opens to full aperture (See p. 17).



## SHUTTER SETTING

All 13 click-stop shutter speed settings are on a single selector dial (Fig. 12), which can be set before or after the shutter is wound.

Speeds are: 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, 1/1000, B and T.

The shutter speed setting desired is made by aligning the speed with the black dot on the camera body. The dial turns a full 360° in either direction and can be set from fastest to slowest speeds without obstruction.

Numbers on the speed selector dial represent the actual shutter speed. For example, 125 on the dial represents 1/125 second.

### ■ Bulb exposure

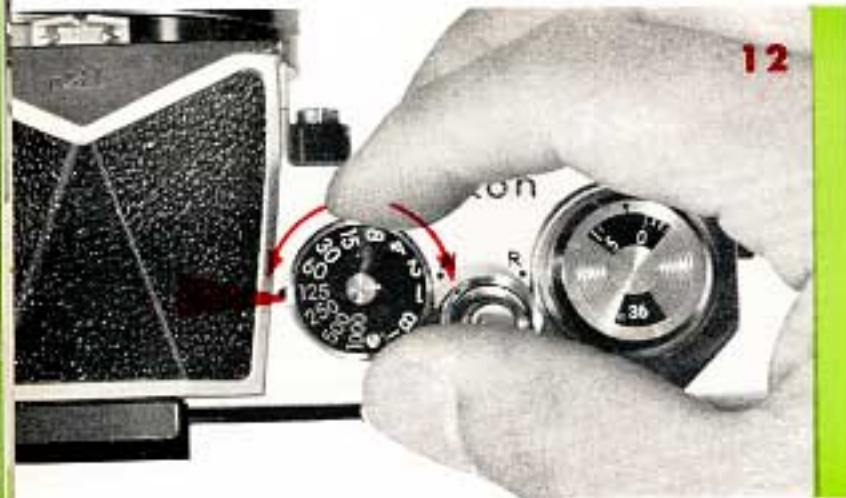
When the dial is set at "B", the shutter will remain open as long as the shutter release button is held depressed.

### ■ Time exposure

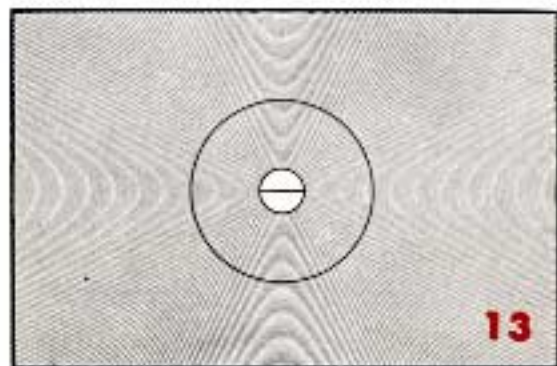
When the dial is set at "T", the shutter will remain open even after your finger is removed from the shutter release button. To close the shutter, turn the dial to the right or to the left.

For greater convenience when using flash, the dial is color-coded to coincide with the color coding of the Synch Control (See "Flash Synchronization" p. 24 for details).

Note that there is a pin on the top of the shutter speed selector dial to permit direct coupling of speed dial to exposure meter.



## FOCUSING



If you look through the eyepiece of the eye level viewfinder, you will see a brilliant finder image reflected in the Fresnel type screen. The center of the finder field is a circular, split image range finder section (Fig 13)

When out of focus a subject is seen as a split-image (Fig 14) in the center and at the same time is blurred in the remaining area of the finder screen. If the subject is in sharp focus, the split image in the center becomes complete and continuous (Fig 15) and the image appears sharp in the remaining area. To bring your subject into sharp focus, turn the focusing ring (Fig 16) on the lens to the right or to the left.

To determine the exact distance from the camera to the subject on which you have focused, look at the figure on the distance scale, opposite the black indicator line.

The Nikon F is designed so that its reflex mirror is "in position" at all times, permitting continuous, uninterrupted viewing and focusing (except for the instant the shutter is released). The mirror returns to precise focusing viewing position the instant the exposure is made, even with the camera held upside down.

## MAKING THE PICTURE



With a single stroke of the advance lever (**Fig. 17**), the film is advanced, the shutter is wound, and the film counter operates.

If the advance lever has not been wound completely, the shutter cannot be depressed. Wind it once more this time, fully, then the shutter will operate correctly.

Now focus by rotating the focusing ring, compose your picture in the viewfinder, and then shoot by gently depressing the shutter release. For speeds slower than 1/30 second, a tripod or some other support and a cable release should

be used to avoid any possibility of jarring the camera.

When the advance lever is released, it will not swing back completely into position but will leave a small clearance for greater convenience in advancing the film for the next exposure.

### **Note**

There is a black dot in the center of the shutter speed dial. When the shutter is wound, this dot lines up with the black dot on the outside of the dial. This serves as a convenient indicator to show that the shutter has been wound.

An automatic shutter release lock prevents accidental firing of flash before the shutter is wound. Once the shutter is released, the shutter release button cannot be depressed again until the film has been advanced and the shutter wound.

## PICTURE COMPOSING

First, determine and then set the combination of shutter speed and lens aperture you want

Place your left hand under the camera (**Fig 18**), with your thumb and forefinger on the focusing ring of the lens. Grasp the camera with your right hand, cradling the lower right hand corner of the camera in the palm of your hand. Use your thumb to advance the film and your forefinger for the shutter release button.

Since the "taking" lens of the single lens reflex camera is also used as the viewing lens, the finder shows the exact picture that will appear on your film. Regardless of focal length of the lens being used or the shooting distance, no accessory finder\* is required, even if the lens is changed, and no problem of parallax arises at whatever distance the picture is taken.

\* When the Fisheye NIKKOR lens is used, the mirror must be raised because of the deep seating of the lens in the camera. Consequently the individual accessory viewfinder is available for the use of this lens.



## DEPTH-OF-FIELD



Depth-of-field is the range of distance between the nearest and the farthest limits of a subject, within which acceptable image sharpness is attained. The sharpest image is at the point on which the lens is focused. Depth of field varies with the lens opening (f number) and with the focused distance. The smaller the lens opening used, the greater the depth of field; conversely, the larger the lens opening used, the smaller the depth of field. Depth-of-field also increases as the distance from the camera to the subject increases.

NIKKOR lenses have color-coded depth of field scales engraved on the lens barrels opposite to the distance scales, permitting easy reading of depth of field for the

selected aperture. Each set of differently colored lines, one to the right and the other to the left of the middle black indicator line, represents a different f number, the color of which matches the colored f-number figure on the aperture scale.

For example, when you are taking a picture using the 50mm f/1.4 lens, with the distance scale setting at 30 ft. and with f/8 opening (f/8 is shown in pink), the depth of field indicated by the pink-colored lines on either side of the black indicator line will be between 15 ft. and  $\infty$  (Fig. 20). This means that a picture taken at f/8 with a lens focused at 30 ft. will show a range of acceptable sharpness between 15 ft. and  $\infty$ . The sharpest point will be at the 30 ft.



## DEPTH-OF-FIELD PREVIEW CONTROL

The button located on the camera front (Fig. 21), is the instant-action preview control. Press the button and the diaphragm closes down to the aperture you selected. This permits you to see the depth of field (See p. 16) at "taking" aperture, or it permits you to select the "taking" aperture you want on the basis of depth of field. Release the button and the diaphragm instantly reopens. The preview control is independent of the shutter release and cannot cause accidental exposure. When using the preview control, note that the split image portion of the finder will slightly darken if the preselected aperture is smaller than  $f/4.5$ .

### Caution!

Do not release the shutter, while the depth-of-field preview button is being depressed. This will cause the inside reflex mirror to remain in the "up" position. If this should happen, make a blank exposure and the mirror will return to normal viewing position.



## INTERCHANGEABLE VIEWFINDER SCREENS

Eight types (A - H) of viewfinders are available which are exchanged with each other to suit your convenience, i.e. depending on what type of lens is used and what subject is to be photographed.

It is recommended to use the type A, J or B for general photography. The type A screen, supplied with the Nikon F cameras as the standard equipment, permits unsurpassed focusing accuracy by its split image rangefinder at the center, so far as the speed of the lens being used is not slower than f.4.5.

To change the screen, first remove the viewfinder by depressing the finder lock button on the camera back. Then depressing the lock button again, gently turn the camera upside down. The screen will drop into your hand.


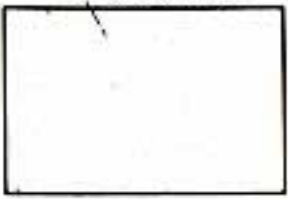

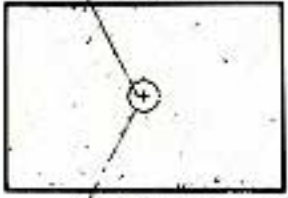
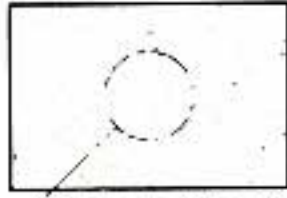
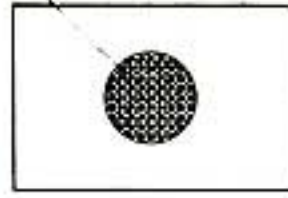
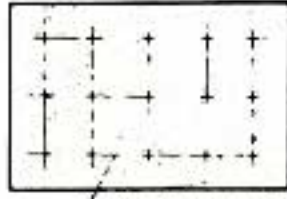
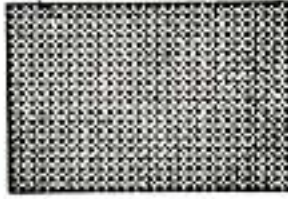
To replace the other screen, depressing the lock button, insert the screen into the camera, facing the flat mat surface of the screen downward and its side marked "Nikon F" toward the lens.

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### Caution

- Keep the screen surfaces free from dirt, finger marks, etc.
- The lower layers of all the screens are made of acrylic resin. Handle them with special care so as not to give scratches or warps.

Type	Designation	Features	Type	Designation	Features
A	<p>Split-image</p> <p>Split image (3mm dia)</p>  <p>Circle line (12mm dia)</p>	<p>Fresnel lens with mat surface. Split-image rangefinder in the clear center spot permits accurate focusing. Good for general photography. With a lens aperture smaller than f 4.5, use the mat surrounding area, because of darkened split-image.</p>	D	<p>Plain-mat</p> <p>Mat (full area)</p> 	<p>Plain mat. Good for situations, where Fresnel lines also offer obstruction. Provides uninterrupted, uniform finder image. Not recommended for normal and wideangle lenses, because of the image appearing shaded off at the corners.</p>
J	<p>Microprism-mat</p> <p>Microprisms (4mm dia)</p>  <p>Circle line (12mm dia)</p>	<p>Image in the microprism spot at the center splits not only in the vertical but also in the horizontal direction, when the lens is out of focusing. Surrounding area is mat with Fresnel lines. Good for general photography.</p>	C	<p>Cross-hairs</p> <p>Cross-hairs</p>  <p>Clear (4mm dia)</p>	<p>Plain mat and clear center spot with crosshairs. Focusing is performed by checking parallax between crosshairs and subject image, moving the eye to the right and to the left. For use in photomicrography or astrophotography.</p>
B	<p>Mat-Fresnel</p>  <p>Circle line (12mm dia)</p>	<p>Same as Type A, but without split-image spot. For general use, where no split-image is needed or it offers rather obstruction. Especially recommended for use with Medical NIKKOR Auto 200 mm f 5.6, Reflex NIKKOR 1000 mm f 11, etc.</p>	G	<p>Microprism-clear</p> <p>Microprisms (12mm dia)</p>  <p>(1 4)</p>	<p>Central microprism spot is surrounded by a clear area with Fresnel lines, thus showing bright screen image, but not depth of field. 4 types are available from No 1 for wideangle to No 4 for telephoto lenses, to avoid the possibility of vignetting.</p>
E	<p>Checkered</p>  <p>Checkered pattern</p>	<p>Same as Type B, but with etched vertical and horizontal lines accurately spaced and crossed each other. Suitable for reproduction work or for use with PC-NIKKOR 35mm f 2.8 in architectural and interior photography.</p>	H	<p>Full-area</p> <p>Microprisms (full area)</p>  <p>(1 4)</p>	<p>Microprisms cover the whole screen area permitting focusing at every part of the viewfield. Bright image is seen. Choose the adequate type in the same way as Type G, depending upon the picture angle of the lens being used.</p>

## Finder Screen Selector Chart

Type of Lens		Type of Screen	A	J	B	E	D	C	G1	G2	G3	G4	H1	H2	H3	H4
Wideangle	20 mm	f 3.5	⊙	⊙	⊙	⊙			⊙				⊙			
	24 mm	f 2.8	⊙	⊙	⊙	⊙				⊙				⊙		
	28 mm	f 3.5	⊙	⊙	⊙	⊙			⊙				⊙			
	35 mm	f 2.8	⊙	⊙	⊙	⊙			⊙				⊙	⊙		
	35 mm	f 2	⊙	⊙	⊙	⊙			⊙	⊙			⊙	⊙		
Normal	45 mm	f 2.8	⊙	⊙	⊙	⊙			⊙				⊙			
	50 mm	f 2	⊙	⊙	⊙	⊙			⊙	⊙			⊙	⊙		
	50 mm	f 1.4	⊙	⊙	⊙	⊙				⊙				⊙		
	55 mm	f 1.2	⊙	⊙	⊙	⊙				⊙				⊙		
	85 mm	f 1.8	⊙	⊙	⊙	⊙				⊙			⊙	⊙		
Telephoto	105 mm	f 2.5	⊙	⊙	⊙	⊙				⊙			⊙	⊙		
	135 mm	f 3.5	⊙	⊙	⊙	⊙	⊙	⊙		⊙				⊙		
	135 mm	f 2.8	⊙	⊙	⊙	⊙	⊙	⊙		⊙				⊙		
	200 mm	f 4	⊙	⊙	⊙	⊙	⊙	⊙		⊙				⊙	⊙	
Zoom	300 mm	f 4.5	⊙	⊙	⊙	⊙	⊙	⊙			⊙			⊙	⊙	⊙
	43-86 mm	f 3.5	⊙	⊙	⊙	⊙				⊙			⊙	⊙		⊙
	50-300 mm	f 4.5	⊙	⊙	⊙	⊙					⊙	⊙			⊙	⊙
Tele zoom	85-250 mm	f 4	⊙	⊙	⊙	⊙					⊙	⊙			⊙	⊙
	200-600 mm	f 9.5 10.5	⊙	⊙	⊙	⊙	⊙	⊙*			⊙	⊙			⊙	⊙
Micro	55 mm	f 3.5	⊙	⊙	⊙	⊙				⊙				⊙		
PC	35 mm	f 2.8	⊙*	⊙	⊙	⊙										
Telephoto For Bellows	105 mm	f 4	⊙	⊙	⊙	⊙								⊙		
Medical	135 mm	f 4	⊙*	⊙	⊙	⊙									⊙	
	200 mm	f 5.6	⊙*	⊙	⊙	⊙								⊙		
Telephoto	400 mm	f 4.5	⊙	⊙	⊙	⊙	⊙				⊙	⊙			⊙	⊙
	600 mm	f 5.6	⊙	⊙	⊙	⊙	⊙	⊙*			⊙	⊙			⊙	⊙
	800 mm	f 8	⊙*	⊙	⊙	⊙	⊙	⊙*			⊙	⊙			⊙	⊙
	1200 mm	f 11	⊙*	⊙*	⊙	⊙	⊙	⊙*			⊙	⊙			⊙	⊙
Reflex	500 mm	f 5	⊙*	⊙	⊙	⊙	⊙	⊙						⊙		⊙
	1000 mm	f 11	⊙*	⊙*	⊙	⊙	⊙	⊙*			⊙	⊙			⊙	⊙

The left chart has been prepared to assist you in choosing the suitable type of screen for the lens being used

⊗ - Excellent

Uniformly bright image field is obtained from edge to edge. However, for the lens marked ⊗ in addition, use the surrounding matted area, because the central split-image, microprism or crosshairs portion as is the case with the A, J or C type screen, cannot be used for focusing

○ = Usable

These screens provide little obstruction in practical use, although they do not exhibit so satisfactory viewfield over the entire area, because of slight vignetting or moiré phenomenon (only in the case of microprisms). The defects affect by no means the image registered on the film.

For the combinations represented by blank [ ] the screen is unusable, because of image darkening or considerable moiré over the screen area.

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## CHANGING THE VIEWFINDER

The eye level viewfinder with penta prism can be interchanged with the Waist level Finder (Fig. 23), Photomic T<sub>N</sub>, FT<sub>N</sub> Finder (p 29) or Action Finder. To change the finders, depress the finder-lock release button located on the back of the camera with a pointed piece (Fig. 24), and then lift the finder. To replace a finder, put it back into position on the camera and then press down gently until a click is heard.

**Note:** Do not use a metal pointed object to push the finder lock release button. Use either a wooden or a plastic tipped thing.

## CHANGING LENSES



To remove the lens, hold the camera as shown in **Fig. 25**; depress the lock button and turn the lens barrel clockwise until the black dot on the aperture indicator of the milled ring of the lens lines up with the black dot on the camera body. To mount a lens\*, lining up the black dot on the lens with the black dot on the camera body, press in gently and turn the lens counterclockwise until the lens clicks into position.

### Caution

When the lens is removed, the opening in the camera body should not be exposed to the sun, especially when the camera is loaded. Protect the inside of the camera by using a body cap

whenever the camera is carried or kept with the lens removed.

When the lens is carried separately, protect it against damage and dust by using a case and the front and rear caps.

\* When mounting the Fisheye-NIKKOR (super wideangle), do not forget to lock the reflex mirror in the up position.

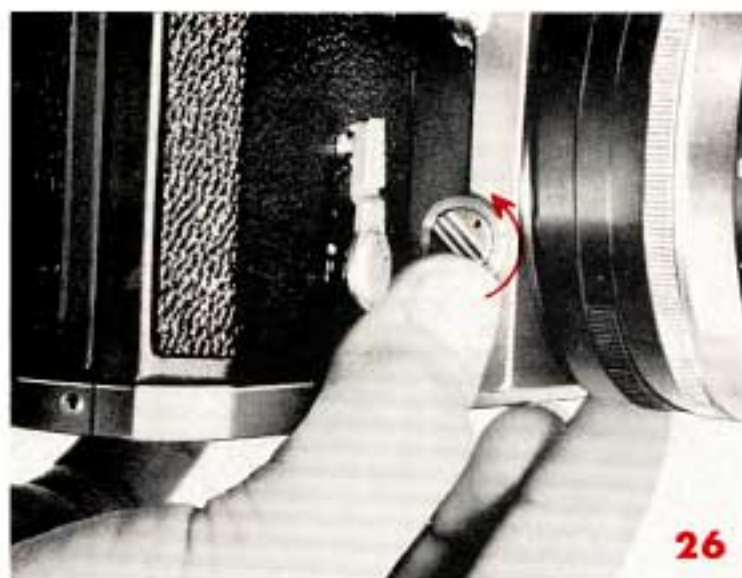
## LOCKING THE MIRROR UP

Locking up of the mirror inside the camera is necessary when using the Fisheye NIKKOR lens, because of its deep seated mount. It is also important for continuous shooting with the Nikon Electric Motor Drive, for a sequence of copying work or for photomicrography.

To lock the mirror in the "up" position, turn the knob (Fig. 26) counterclockwise until the black dot on the knob meets the red dot on the camera body. Wind the shutter and then shoot (a blank exposure is made). The reflex mirror will move up out of the way, and will not return after the shutter has operated.

To return the mirror to its original focusing and viewing position, turn the knob clockwise until the black dot on the knob meets the black dot on the camera body. This should be done after the shutter is released.

Otherwise, the mirror will not return to the position until the next exposure is made. Note that if the knob is turned after the film advance lever is wound up, the mirror does not return until the shutter is released (a blank shot is made).



## FLASH SYNCHRONIZATION

When using Nikon Flash Unit BC 7, fit it to the camera directly by sliding the foot of the unit from the rear of the camera into the camera accessory shoe (Fig. 27). Electrical connection with the flash synch. terminal is made instantaneously, eliminating the need for connecting cord.

In case of other regular flash units which cannot be fitted to the camera directly, use the unit adapter (Fig. 28).

Synch cord is inserted into the synch socket on the left side of the camera. For positive synchronization, set the synch selector according to the flash bulb and shutter speed used. In case of Nikon Photomic T<sub>M</sub>, FT<sub>N</sub> camera, remove its finder from the camera beforehand. See the table on page 25. Lift up the milled selector ring on the outer edge of the shutter speed dial (Fig. 29), and turn it until the desired colored dot and/or figure appears in the selector window (Fig. 29) adjacent to the dial, then drop the ring into place.

By counterclockwise rotation of the selector ring, the above markings come into view in the following sequence:





When using FP, M or MF class bulb, select the color of the dot that matches the colored numbers on the shutter speed dial.

Class	Flash Bulb		Shutter Speed												
	Type of Base	Make		1000	500	250	125	60	30	15	8	4	2	1	B
		G E.	Sylvania												
FP	Bayonet	No. 6 No. 6B	FP26 FP26B		●										
M	Bayonet	No 5 No. 5B	Press 25 Press 25B	—	—	—	●	●							
	Miniature (M2)	M 5 M 5B	M 3 M 3B	—	—	—	—	—					●	F	
MF	Miniature (M2)	M2 M2B	M 2 M 2B	—	—	—	—	—							
	AG 1	AG-1 AG-1B	AG-1 AG-1B	—	—	—	—	—							
X	Electronic Flash														FX

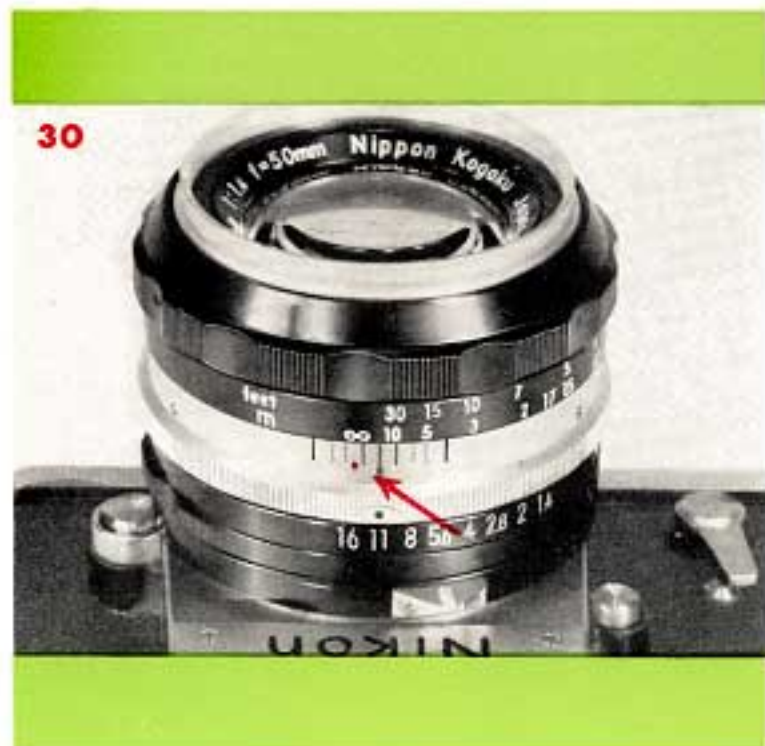
## Electronic Flash

Most electronic flashes are instantaneous, and have no firing delay. With an electronic flash unit of this type, set the speed dial at 60 (or slower) and the synch selector at FX, as shown in the table. For units which have a firing delay, the shutter should be set at 30 or slower.

The bulbs with additional mark B, are used for color film of daylight type.

## INFRA-RED PICTURES

When taking infra red pictures, the distance obtained by focusing on the screen has to be adjusted before shooting. This is done by rotating the lens slightly, until the focused point on the distance scale is changed to align with the red dot on the lens barrel. For example, in **Fig. 30**, the 50mm f/1.4 lens in this case focused at infinity has been rotated slightly so that the infinity marking is now aligned with the red dot.



## SELF-TIMER

The calibrated, dual-purpose self-timer allows you to trip the shutter in approximately 3, 6, or 10 seconds, or any intermediate time delay. It can be set before or after winding the shutter.

To set the self timer, push the lever down (Fig. 31)\*. To start the timer, depress the release button beneath the lever. When the pre-determined time delay has elapsed, the shutter is automatically released. Setting the indicator line to the nearest white dot will give approximately 3 second delay, the next dot, approximately 6 second delay, and setting the lever to the third dot gives approximately 10 second delay. Note that the timer does not operate unless the lever is set to the first dot (or any position beyond this dot).

The self timer is also an ingenious aid for hand held exposure at slow shutter speed. Wind the shutter. Set the self timer for 3 seconds. Press the release button, and then use the delay to steady the camera with both hands.

The self timer should not be used for B or T setting.

If you decide not to use the self timer after it has been wound, take the picture at the speed you want, using the shutter button. Then depress the release button of the self timer and let it "turn off".

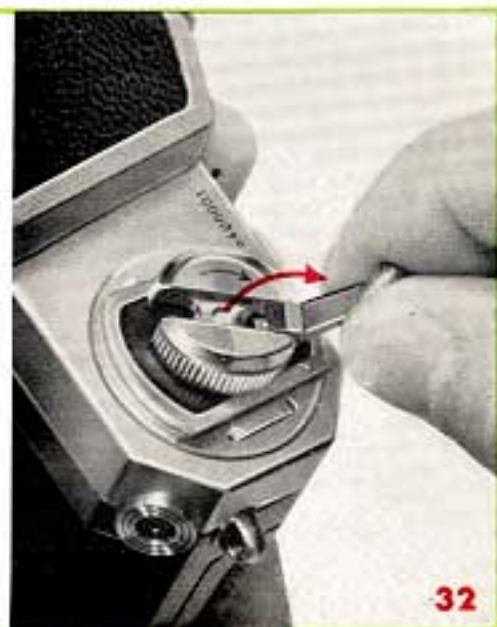
\* Once the lever has been set, it can be moved backward with no restraint.



## UNLOADING THE CAMERA

The exposed film must be rewound back into its original cartridge or the film magazine. To rewind the film turn the A/R ring on the shutter release button to the "R" (rewind) position, lift up the film rewind crank (Fig. 32) from its position on the rewind knob and turn it in the direction of the arrow

As the film is rewound, a slight resistance will be felt and the black dot on the shutter release button will revolve. Keep on winding until the resistance stops and the dot stops its motion. The film is now completely in the magazine and the camera back may be opened to remove the film from the camera.



## DOUBLE EXPOSURE

Here is the procedure to be followed in making an intentional double exposure. Make the first exposure. Then set the A/R ring around the shutter release button to "R".

Turn the rewind knob in the direction of the arrow until the shutter release button makes one complete rotation (or slightly more). This can be determined by the rotation of the red dot on the shutter button. Set the ring back to "A" and wind the shutter for the second exposure. It is not necessary to use the same shutter speed as before.

**Note** The double exposure procedure also operates the automatic exposure counter, with the result that the counter number will read one or two more than the actual number of frames exposed.

## EXPOSURE METER FOR NIKON F

### Model 3 (Fig. 33)

Designed to be attached onto the top of the camera and couples to both the camera's shutter speed and aperture diaphragm of lens (NIKKOR Auto). Correct exposure setting is obtained by bringing two pointer needles into coincidence with each other. With wide measuring range. Booster and incident light opal plate are provided.

### Photomic-T<sub>N</sub> or FT<sub>N</sub> Finder (Fig. 34)

The finder, attached in place of the interchangeable viewfinder, couples to both the shutter speed of the camera and to the aperture diaphragm of every lens except Fish-eye NIKKOR, permitting correct exposure setting by centering the pointer needle appearing in the viewfinder field and in the outside window on the top of the finder. Through-The-Lens system being adopted, the finder measures the light actually passing the camera lens, whichever short or long focus the lens may be, and automatically compensates the exposure factors which otherwise are needed in the use of filters or in close up photography. It features two built-in condenser lenses provided in front of two CdS cells, which minimize the influences of back light entering from behind the eyepiece of the finder. Powered by two mercury batteries, each 1.3V.



## FILM CASSETTE



The Nikon F camera will accept any standard daylight loading cartridge containing a ready-cut length of 35mm film. The Nikon cassette (or magazine) can be loaded with a ready cut film or fed from a stock of 35mm film. The cassette (**Fig. 35**) consists of outer and inner shells and a spool. The figures on the bottom of the outer shell show ASA speeds and are used to indicate the speed of the film in the cassette. The white and red dots on the edge are the indices. The white dot is for black-and-white film, and the red for color film. When the film has been exposed, the mark "E" should be set.



### To Open the Cassette

Hold the cassette in your left hand, with the bottom showing the ASA speeds away from you. Depress the small button with a right hand finger, and turn the inner shell of the cassette clockwise (**Fig. 36**) until the side openings of both shells meet and the inner shell simultaneously pops out slightly, ready to be pulled out (**Fig. 37**).



## To Load the Cassette (In the dark room)

Trim the end of the film so as to form a tongue to be fed into the spool. This must be made not too wide but long enough, for it has to be pulled out of the other side of the spool slit when the film has been exposed and cut away. To load the spool, first hold it in your left hand with the projecting end toward you. Thread the film tongue until it projects about 0.4 inch from the slot with the right hand (Fig 38), emulsion surface downward, through the large opening of the slot in the spool. When the inside teeth grip the film, wind the film on the spool (emulsion surface in).

Insert the loaded spool into inner shell, so that the projecting end fits the opening at the opposite end. Then hold the outer shell in your left hand and slide it over the inner shell. Be sure that the film end extends out of the outer shell (Fig 39).

Push the top of the inner shell until it seats. Then, turn it counterclockwise within the outer shell until you hear two clicks. The cassette has now been loaded, and is perfectly light tight, and is ready to be placed in the film chamber of the camera.

## To Unload the Cassette (In the dark room)

The loaded cassette should be opened as described before, the spool taken out, the film unrolled and cut off at the spool (Fig 40).

The film end remaining in the slot should be pulled out in the opposite direction from which it was inserted.



## LENS HOODS

The use of lens hood is recommended at all times even when the lens is not turned toward the light, or where there is no stray light present. Two types of lens hoods – snap-on and screw-in – are available for NIKKOR lenses. (See p. 35–37)

### Snap-on lens hood

Snap-on lens hoods combine “Slip-on” speed and “Screw-in” security. By depressing the buttons ( - located on either side of the hood – (Fig. 41), the hood is attached or detached. The hood will also fit directly over a screw-in filter, permitting use of both units with the lens at a time. The hood can also be “stored” in reverse position on the lens (Fig. 42).

### Screw-in lens hood

Screw-in hoods can be used with screw-in filters or drop-in filters. However, the screw-in filter is recommended since the hood, in combination with the drop-in filter, may not always give satisfactory results with wideangle lenses because of possible vignetting.





# NIKKOR FILTERS

NIKKOR Filters are precisely ground, polished optical flats, hard coated on both sides.

## Filter mount

They are supplied either in screw-in or drop-in type mount. The former is screwed directly into the lens front and the latter is put under the screw-in lens hood or attached to the lens by means of an adapter ring and insert ring.

## Filter size

Choose the correct size of NIKKOR filter for your lens consulting the interchangeable lens table on p. 35-37. The use of NIKKOR filters is recommended as satisfactory results may not always be obtained with other makes of filters. (Possible vignetting, scratching of lens surface, etc.)

## Filter factor

Filters reduce the amount of light transmitted, therefore an increase in exposure is necessary when using them. This increase is expressed as a factor. Thus, a filter with a factor 2 means that double the normal exposure is required; e.g. use 1/30 instead of 1/60 second, or alternatively change the aperture from, say, f/8 to f/5.6. Correct filter factors also depend upon color of lighting and color sensitivity of the film in use.

When the Photomic-TM or FTN Finder is used, the compensation by the filter factor is not necessary in determining the exposure.

	Type	Designation	Exposure factor		Equivalent to Wratten	
			Daylight	Tungsten light		
Black and white film	Yellow	Light	1.5	1	K1	
		Medium	1.7	1.2	K2	
		Deep	2	1.4	K3	
	Orange	O56	3.5	2	23A	
	Red		6	5	A	
	Green	Light	X0	2	1.7	X1
		Deep	X1	5	3.5	X2
	Black and white color film	Ultra violet	L39		1	2B
		Polarizing	Polar		2-4	Polar
Neutral Density			ND 4x		4	
		ND 8x		8		
		ND 10x		10	ND	
		ND 400x		400		
Color film	Skylight	L1A		1	1A	
	Amber	Light	A2	1.2	81A	
		Deep	A12	2	85	
	Blue	Light	B2	1.2	82A	
		Medium	B8	1.6	80C	
		Deep	B12	2.2	80B	

## EYESIGHT CORRECTION LENSES

One of these lenses, attached in place of the protecting glass of the finder eyepiece, gives the far-sighted or near-sighted a sharp image through the finder:

-5, -4, -3, -2, 0, +1, +2, +3 (dptr)

Select the power by viewing the finder image combined with that (-1 dptr.) of the finder.



## FINDER EYECUP

Can be attached onto the protecting glass of the finder eyepiece.

Prevention of extraneous light by the use of the eyecup not only serves to avoid the influence of the light upon the built in exposure meter but also ensures crispness of the finder image.

# INTERCHANGEABLE NIKKOR LENSES FOR NIKON F

	Type	Lens group	system element	Picture angle	Minimum aperture	Aperture diaphragm	Closest focus distance	Weight	Hood	Filter	Remarks
Wideangle	NIKKOR Auto 20mm f/3.5	9	11	94°	f/22	Automatic	0.3m and 1 ft	390g	Screw in	72mm	
	NIKKOR Auto 24mm f/2.8	7	9	84°	f/16	Automatic	0.3m and 1 ft	290g	Screw in	52mm	
	NIKKOR Auto 28mm f/3.5	6	6	74°	f/16	Automatic	0.6m and 2 ft	215g	Screw in	52mm	
	NIKKOR Auto 35mm f/2.8	6	7	62°	f/16	Automatic	0.3m and 1 ft	200g	Screw in	52mm	
	NIKKOR Auto 35mm f/2	6	8	62°	f/16	Automatic	0.3m and 1 ft	285g	Screw in	52mm	
Normal	NIKKOR Auto 50mm f/2	4	6	46°	f/16	Automatic	0.6m and 2 ft	205g	Screw in Snap on	52mm	
	NIKKOR Auto 50mm f/1.4	5	7	46°	f/16	Automatic	0.6m and 2 ft	325g	Screw in Snap on	52mm	
	NIKKOR Auto 55mm f/1.2	5	7	43°	f/16	Automatic	0.6m and 2 ft	420g	Screw in Snap on	52mm	
Telephoto	NIKKOR Auto 85mm f/1.8	4	6	28° 30'	f/22	Automatic	1m and 3.5 ft	420g	Screw in	52mm	
	NIKKOR Auto 105mm f/2.5	3	5	23° 20'	f/22	Automatic	1.2m and 4 ft	375g	Screw in Snap-on	52mm	
	NIKKOR Auto 135mm f/3.5	3	4	18°	f/32	Automatic	1.5m and 5 ft	470g	Screw-in Snap-on	52mm	
	NIKKOR Auto 135mm f/2.8	4	4	18°	f/22	Automatic	1.5m and 5 ft	620g	Built-in	52mm	
	NIKKOR Auto 200mm f/4	4	4	12° 20'	f/32	Automatic	2m and 7 ft	630g	Built in	52mm	
	NIKKOR Auto 300mm f/4.5	5	6	8° 10'	f/22	Automatic	4m and 13 ft	1060g	Built in	72mm	

	Type	Lens system group element	Picture angle	Minimum aperture	Aperture diaphragm	Closest focus distance	Weight	Hood	Filter	Remarks	
Telephoto	NIKKOR Auto 400mm f 4.5	4	4	6° 10'	f 22	Automatic	5m or 16 ft	1900g	Built in	122mm	Used with Focusing Unit
	NIKKOR Auto 600mm f 5.6	4	5	4° 10'	f 22	Automatic	11m or 35 ft	2400g	Built in	122mm	Used with Focusing Unit
	NIKKOR Auto 800mm f 8	4	5	3°	f 22 (f 64)	Automatic (Manual)	19m or 61 ft	2300g	Built in	122mm	Manual diaphragm (f/8- f.64) also provided Used with Focusing Unit
	NIKKOR 1200mm f 11	5	5	2°	f 64	Manual	43m or 139 ft	3100g	Built in	122mm	Used with Focusing Unit
Reflex	Reflex NIKKOR 500mm f 5	4	5	5°	*	With ND filters	15m and 50 ft	1600g	Screw in	39mm	Vertical format change- over provided
	Reflex NIKKOR 500mm f 8	4	5	5°	**	With ND filters	4m and 13 ft	1000g	Screw in	39mm	Vertical format change over provided
	Reflex NIKKOR 1000mm f 11	5	5	2° 30'	***	With ND filters	8m and 25 ft	1900g	Slip on	34.5mm	Vertical format change over provided
Zoom	Zoom NIKKOR Auto 43-86mm f 3.5	7	9	53° 28° 30'	f 22	Automatic	1.2m and 4ft	410g	Screw in	52mm	
	Zoom NIKKOR Auto 50-300mm f 4.5	13	20	46° 8° 10'	f 22	Automatic	2.5m and 8.5 ft	2270g	Screw in	95mm	Revolving tripod socket
	Zoom NIKKOR Auto 85-250mm f 4	9	16	28° 30' -10°	f 16	Automatic	4m or 13ft (With attachment lens 2.2m or 7.5ft)	1900g	Screw in	Series IX	
	Auto NIKKOR Telephoto Zoom 200mm f 9.5-600mm f 10.5	7	13	12° 20' -4° 10'	f 32	Automatic	4m or 13ft (With attachment lens 2.3m or 7.5ft)	2800g	Screw in	Series IX	Revolving tripod socket

\* Equivalent to f 12.5 with 6.3X ND filter.

\*\* Equivalent to f.20 with 6.3X ND filter.

\*\*\* Equivalent to f.35 with 10X ND-filter.

## FOR SPECIAL PURPOSE

Type	Lens system		Use	Minimum aperture	Aperture diaphragm	Closest focus distance	Weight	Hood	Filter	Remarks
	group	element								
Fisheye-NIKKOR 7.5mm f/5.6	6	9	Picture angle 180° Circular picture of 23mm in dia	f/22	Manual	—	315g	—	Built in	Used with mirror-up. With individual finder.
Fisheye NIKKOR 10mm f/5.6 180° OP	6	9	Picture angle 180° Orthographic, Circular picture of 20mm in dia	f/22	Manual	—	400g	—	Built-in	Used with mirror-up. With individual finder.
PC-NIKKOR 35mm f/2.8	7	8	Enables avoiding the image convergence pro- duced by unparallelism of lens to subject	f/32	Preset	0.3m and 1 ft	335g	Screw-in	52mm	Max shift: 11mm. (with click-stop at every 30°)
GN Auto NIKKOR 45mm f/2.8	3	4	Provided with guide number coupler for convenience in flash photography	f/32	Automatic	0.8m and 3 ft	135g	Screw-in	52mm	Guide-numbers for 10- 80m or 32-250ft used also for general photography.
Micro-NIKKOR Auto 55mm f/3.5	4	5	Permits continuous focus- ing from infinity up to 1/2 reproduction ratio	f/32	Automatic	24 1cm or 9 1/2 in	235g	—	52mm	With M-ring up to 1/1 repro ratio.
NIKKOR 135mm f/4	3	4	Exclusively used on the Bellows.	f/22	Preset	—	260g	Snap-on	52mm 43mm	Continuous focusing from infinity to 1x with Bellows PB-4 infinity to 0.7x with Bellows 3.
Medical NIKKOR Auto 200mm f/5.6	4	4	11 different magnifica- tions 1/15-3x by attach- ing 6 auxiliary lenses	f/45	Automatic	—	670g	—	—	With built in speed light.

## CARE OF CAMERA AND LENS

The exterior of the camera body should be cleaned with a piece of soft linen.

To clean the inside, use a soft lens brush or a handblower with care. Don't use frayed cloth. Keep the film pressure plate clean.

To clean lens and reflex mirror surfaces, first remove dust with a feather or handblower, and then use soft washed out linen or lens tissue.

When cleaning the mirror surface, be careful not to apply too much pressure. Alcohol should be used sparingly for cleaning the lens surfaces, as an excess of it may reach the balsam layer and impair the quality of the lens.

As the finder screen is made of synthetic glass, handle it with special care so as not to scratch its surface

Don't oil the camera mechanism. The Factory used special oil which cannot be mixed with ordinary oil.

Don't try to dismantle the lens. If there is any question concerning your equipment, refer to your Dealer or to the Manufacturer.

## LIST OF ACCESSORIES FOR NIKON F

- Electric Motor Drive Model F 36
- Electric Motor Drive Model F 250
- Battery case for Motor Drive
- Cordless Battery Power Pack
- Relay box for use with Motor Drive
- Pistol grip with built in microswitch
- Wireless control for Motor Drive
- Bulk film loader
- Electronic flash unit for Motor Drive
- Cable release
- Flash unit BC 7
- Flash unit coupler
- Speedlight unit
- Bellows focusing attachment
- Slide copying adapter for the above
- Extension rings E<sub>1</sub> and K set
- Close up attachment lenses
- Microscope adapter
- Microflex for taking photomicrograph
- Macro photographic equipment for microscope
- Repro copy outfit model PF
- Panorama head
- Bubble level
- Focusing adapter for 135mm lens in Nikon S or screw mount
- Lens front cap
- Camera body cap
- Pistol grip
- Eveready cases
- Compartment cases
- Eye level viewfinder
- Waist level viewfinder
- Photomic T<sub>N</sub> Finder
- Photomic FT<sub>N</sub> Finder
- Action Finder
- Angle Finder
- Leather case for Photomic T<sub>N</sub> or FT<sub>N</sub> Finder
- Interchangeable viewfinder screens (Type A H4)
- N F adapter tube
- BR1 ring for use NIKKOR 135mm f 4 in short mount on the Bellows
- BR2 ring for using the lens in the reverse position on the Bellows
- Filters
- Lens hoods
- Film cassette
- Finder eyepiece correction lenses
- Finder eyecup



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