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***Nikon***

**FG**

**INSTRUCTION MANUAL**

# NOMENCLATURE



23 Hot-shoe contact

24 Accessory shoe

25 Film rewind crank

26 Film rewind knob

27 ASA/ISO film speed index

28 Film rewind fork

29 ASA/ISO film speed dial

30 Film cartridge chamber

31 Shutter curtains

32 Film guide rails

33 Viewfinder eyepiece

34 Film rewind button

35 Motor drive coupling

36 Motor drive positioning hole

Shutter release button 37

Audio warning lever 38

Frame counter 39

Film plane indicator 40

Film takeup spool 41

Film pressure plate 42

Film sprocket 43

Data back contacts 44

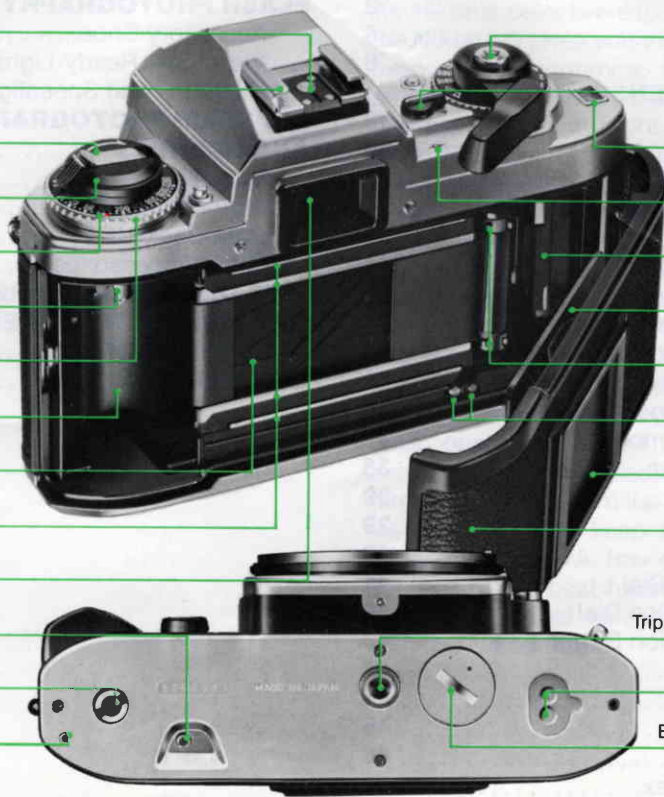
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# FOREWORD

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As Nikon's selective-exposure 35mm SLR camera, the Nikon FG gives you the choices not only of total-exposure programming but also aperture-priority automatic exposure as well as full manual control. Compact and lightweight, the FG additionally offers such advanced photographic features as an exposure compensation dial, an exposure compensation button and an audio warning system, plus its own matching electronic flash with TTL measurement, automatic motor drive and automatic data back. And of course with the FG, you've full admission into the comprehensive Nikon System of over sixty interchangeable lenses and a host of accessories and equipment. To get the most out of your FG, study the instructions in this manual carefully. Every basic operation and all controls and features are explained in detail. Practise using your FG without film until you are familiar with the simple operating instructions, then keep this manual on hand for ready reference. A few minutes now is your assurance of the best future results as you enter the exciting world of selective-exposure photography with the Nikon FG.

# BASIC OPERATION



## 1. Remove the battery clip <sup>49</sup>.

Use a coin to twist the lid counter-clockwise to unscrew it.



## 2. Install the battery or batteries.

Wipe battery terminals clean and insert either one 3V lithium battery, two 1.55V silver-oxide batteries, or two 1.5V alkaline manganese batteries into the battery clip, making sure each "+" sign is up.

**Caution:** Keep batteries away from infants and small children. In case a battery is accidentally swallowed, call a doctor immediately as the material inside the batteries can cause serious problems.



## 3. Replace the battery clip.

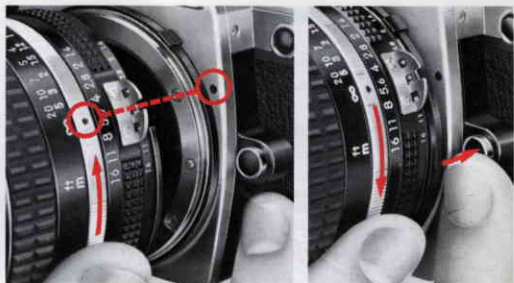
Slip the battery clip back into the camera body and screw it clockwise tightly in place.



#### 4. Check the battery power.

Looking through the viewfinder 33, depress the shutter release button 37 halfway and confirm that any of the red LEDs (light emitting diodes) light up steadily or blink continuously for 16 seconds after you have taken your finger off the button. This means battery installation is proper and power is sufficient. If no LEDs light up or if they turn off immediately when you take your finger off the button, replace the battery (ies).

**Note:** To check battery power, set the shutter speed/mode selector dial 3 to any setting except M90 and B.



#### 5. Mount the lens.

Grasp the lens by its mounting ring, then line up the aperture/distance scale index 11 on the lens and the mounting index 17 on the camera body and twist the lens counterclockwise until it clicks into place. Make sure the aperture/distance scale index is exactly on top.

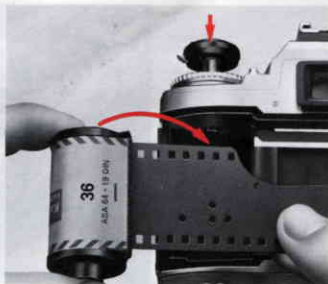
To remove, while pushing the lens release button 18, turn the lens clockwise.

# BASIC OPERATION—continued



## 6. Open the camera back 40.

Pull up the film rewind knob 26 as far as it will go and the camera back will pop open.

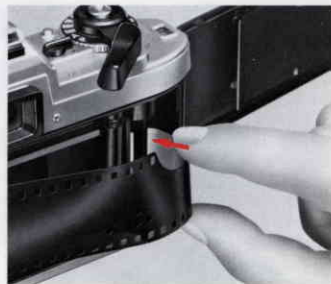


## 7. Load the film.

Drop the film cartridge into the film cartridge chamber 30 so the film leader points towards the takeup spool 41, and while rotating the rewind knob push it back down to secure the cartridge in place.

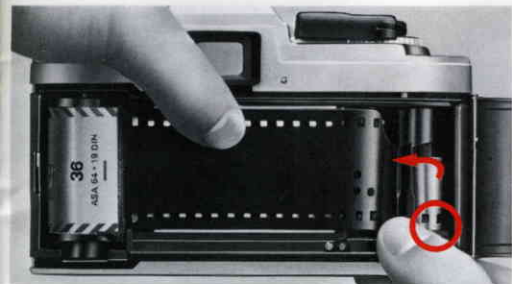
### Notes:

- 1) All 35mm film can be used.
- 2) Avoid loading film in direct sunlight. If there is no shade available, turn your back to the sun and use your own shadow to shield the camera.



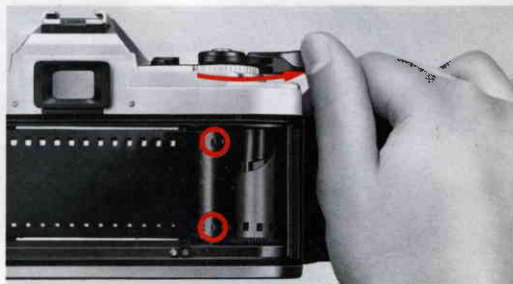
## 8. Insert the film leader in the takeup spool.

Pull the leader across the camera and insert it into any one of the slots in the takeup spool.



## 9. Engage the film's perforations with the sprocket teeth.

Advance the takeup spool slightly with your finger to engage the film's perforations with the teeth of the takeup spool and the sprocket <sup>43</sup>. Confirm the film is located properly between both guide rails <sup>32</sup> and that there is no film slack.



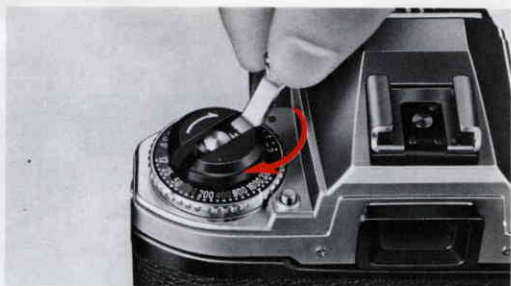
## 10. Advance the film with the film advance lever <sup>1</sup>.


Alternately wind the film advance lever and depress the shutter release button until the perforations on both film edges are securely engaged with the sprocket teeth and the film is advanced properly.

# BASIC OPERATION continued



- 11. Close the camera back.**  
Snap the camera back shut.



- 12. Take up the film slack.**  
Fold out the film rewind crank  and rotate it gently in the direction of the arrow until you feel a slight resistance. Then fold the crank back in.



### 13. Make blank exposures until the frame counter <sup>(39)</sup> shows "1."

To dispose of the first few frames exposed during film loading, continue to alternately advance the film and depress the shutter release button until the frame counter shows "1." Check that the rewind knob is rotating, indicating the film has been loaded correctly and is being advanced. If the knob does not rotate, reload the film.

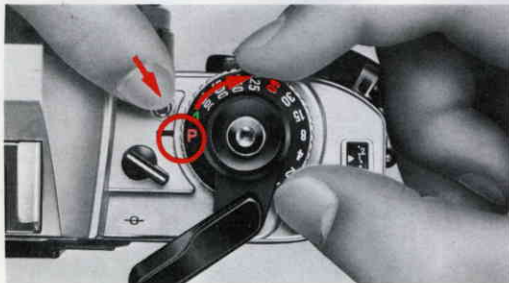
**Note:** Do not take pictures prior to frame "1" as the meter does not function until the counter reaches "1." Up to "1," the 1/60 and 1/125 sec. LEDs in the viewfinder will blink, showing the shutter is automatically set at 1/90 sec.

### 14. Set the ASA/ISO film speed dial <sup>(29)</sup>.

Lift up the ASA/ISO film speed dial and rotate it in either direction until the index dot is opposite the film speed in use. Make sure the exposure compensation dial is set at "0." These actions are essential to activate the camera's exposure meter for correct exposure of the film being used.

**Note:** Film speed is printed on the film package and cartridge.

## BASIC OPERATION—continued



### 15. Set the shutter speed/mode selector to P.

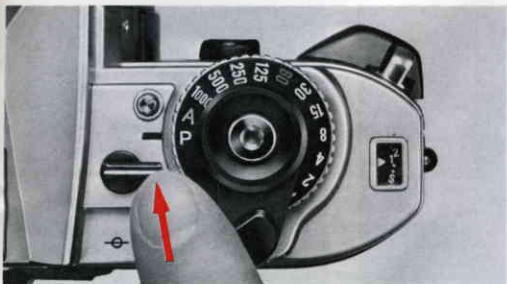
While depressing the A/P setting lock button ②, turn the shutter speed/mode selector until P is opposite the index. The built-in locking mechanisms at P and A ensure that the dial cannot be accidentally shifted from either the P or A position during shooting.

**Note:** The Nikon FG camera has two more shooting modes besides P (Program): A (Auto) and manual. For details of shooting at these modes, see pages 28~34 for A (Auto) and pages 35~37 for manual.




### 16. Set the lens f/stop to its minimum aperture opening (i.e., the largest f/number).

Turn the aperture ring of the lens until the largest f/number is opposite the aperture index. If the aperture is not set to f/11 or larger, both warning LEDs in the viewfinder will blink alternately, warning of improper setting.




## 17. Turn the audio warning lever to switch it on.

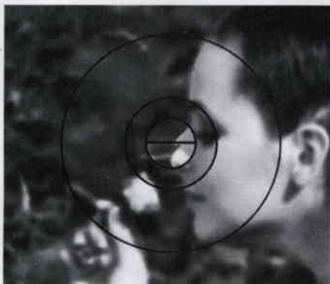
Turn the lever as far as it will go, uncovering the audio warning mark () .



## 18. Hold the camera steady.

Fold out the film advance lever to the stand-off position. With your right hand grasping the hand-grip  steadily and your right index finger resting comfortably on the shutter release button, position your right thumb between the camera body and the lever. Then cradle the camera in the left hand with the thumb and fingers holding the lens focusing ring. The camera may be switched from horizontal- to vertical-format shooting in this position.

## BASIC OPERATION—continued



Out of focus

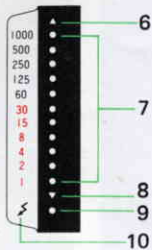
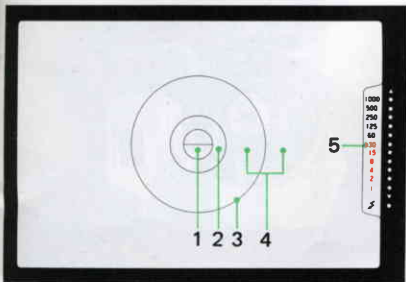


In focus

### 19. Compose and focus on the subject.

While looking through the viewfinder, compose your photo with the main subject in the center to assure correct exposure. Then turn the focusing ring  $\text{\textcircled{2}}$  of the lens until the subject looks clear. The FG employs the standard Type K focusing screen for all-purpose photography. For precise pinpoint focusing for subjects with distinct contours, use the central split-image rangefinder and turn the focusing ring until the split image becomes whole. For rapid focusing and for subjects with indistinct outlines, use the micro-

prism collar and turn the focusing ring until the shimmering image becomes sharp. When doing close-ups or macrophotography or shooting with telephoto lenses of maximum apertures of approx.  $f/4.5$  or smaller, the split-image spot and microprism collar are likely to darken. Therefore, use the matte outer field and turn the focusing ring until the image becomes sharp.



1. 3mm dia. split-image spot
2. 1mm-wide microprism collar
3. 12mm dia. area
4. Fine matte/Fresnel outer field
5. Shutter speed scale
6. Top warning LED
7. Shutter speed LEDs
8. Bottom warning LED
9. Flash ready-light
10. Thunderbolt mark

**Notes:**

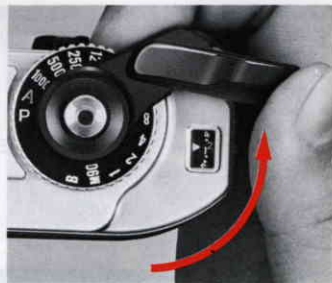
- 1) The meter reads the light over the entire focusing screen but is distinctly biased toward the central 12mm dia. area.
- 2) Frame coverage is approx. 92% which means actual photographs will be slightly larger than the finder image.

## BASIC OPERATION—continued



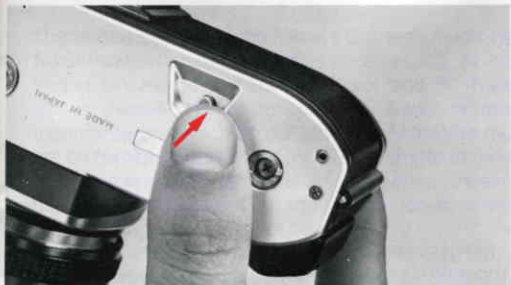
### 20. Take the photograph.

Look through the viewfinder and press the shutter release button halfway to turn on the exposure meter. When the audio warning does not sound, depress the button all the way to take the picture. In this case, the proper shutter speed to match scene brightness is displayed by the LED inside the viewfinder. If the warning sounds, check the viewfinder information. If either the top or bottom warning LED blinks, the available light is too bright or too dim for the meter's range and correct exposure is not possible without adjustment. Use either a neutral density filter to reduce the amount of light reaching the film or artificial light to increase the subject's brightness. If the LED at 1/30 sec. or below lights up, shutter speed is too slow and blur may result. In this case, use a tripod to prevent blurred images. When you correct the exposure, the audio warning will stop.



### 21. Advance the film.

Stroke the film advance lever to transport the film to the next frame.



## 22. At the end of the roll, push the rewind button .

After the last exposure, the film advance lever will not move. Depress the film rewind button on the camera base plate to disengage the film sprocket drive so you can rewind the exposed film back into its cartridge.



## 23. Rewind the film.

Fold out the film rewind crank and turn it gently in the direction of the arrow until you feel an increased tension. Give it a few more turns until the tension is gone and the crank turns freely, indicating the film leader is rewound completely back into the cartridge.



### 24. Remove the film cartridge.

Open the camera back by pulling up the rewind knob and take out the film cartridge. Avoid unloading in direct sunlight. If there is no shade available, turn your back to the sun and use your own shadow to shield the camera.

# NIKON AND NIKKOR LENSES FOR THE NIKON FG

The lenses usable for the Nikon FG are all the AI-type Nikon/Nikkor lenses, including most of the AI converted lenses, certain Reflex Nikkor and PC Nikkor lenses. Non-AI Nikkor lenses and lenses of other manufacturers which do not have the AI feature must not be forcibly mounted on the FG. Attempts to mount such lenses will damage the camera's indexing mechanism. Note that in addition to non-AI lenses, the following lenses cannot be used:

- AI-converted 55 mm f/1.2 (No. 184711~970110)
- AI-converted 28 mm f/3.5 (No. 625611~999999)
- AI-converted 35 mm f/1.4 (No. 385001~400000)
- Fisheye Nikkor 6mm f/5.6 (all lenses)
- Fisheye Nikkor 10mm f/5.6 OP (all lenses)
- Reflex Nikkor 1000 mm f/11 (No. 143000 or smaller)
- Reflex Nikkor 2000 mm f/11 (No. 200310 or smaller)
- PC Nikkor 28 mm f/4 (No. 180900 or smaller)
- PC Nikkor 35 mm f/2.8 (No. 906200 or smaller)
- Zoom Nikkor 180~600 mm f/8 ED  
(No. 174180 or smaller)
- Zoom Nikkor 200~600 mm f/9.5  
(No. 301922 or smaller)
- Zoom Nikkor 360~1200 mm f/11 ED  
(No. 174127 or smaller)
- Focusing Unit AU-1

## When using the Teleconverter TC-200

Exposure compensation, which is required when using Nikon AI-type cameras with lenses having a maximum aperture faster than f/2, is not necessary when using the FG in its P or A mode. In the A mode, however, note that the actual shutter speed will be faster than that indicated in the viewfinder by less than one step. Therefore, before shooting, be sure that the shutter speed LED(s) in the viewfinder indicates a speed slower than 1/500 sec. In the manual mode, exposure compensation using the ASA/ISO film speed dial is necessary. See the TC-200's instruction manual for complete details.

# CONTROLS IN DETAIL



## Shutter Speed/Mode Selector Dial ③

The Nikon FG offers programmed mode operation, aperture-priority automatic mode operation, and manual control of all shutter speeds from 1 to 1/1000 sec., including M90 and B (Bulb) settings. To set the desired shooting mode or shutter speed, rotate the shutter speed/mode selector dial until the desired setting click-stops opposite the index line. Note that at A and P settings, a locking mechanism is provided to prevent accidental shifts of the setting. To rotate the dial to or from the A or P setting, depress the lock button ② provided. The shutter speed/mode selector dial has the following settings: B, M90, eleven speeds

from 1 to 1/1000 sec., A and P. Intermediate settings cannot be used.

### **P (Programmed)**

Used for completely automatic programmed mode shooting. The optimum combination of shutter speed and aperture value is automatically set by the FG's microcomputer, depending upon scene brightness and the film speed in use. The electronically controlled shutter speed is stepless between 1 and 1/1000 sec.

### **A (Auto)**

Used for aperture-priority automatic mode shooting. The f/stop is set manually and the FG's microcomputer selects the matching electronically controlled shutter speeds steplessly between 1 and 1/1000 sec. depending on the scene's brightness and the film speed in use.

### **Manual**

Used for full manual control of both f/stop and shutter speed. All of the eleven shutter speeds indicated on the dial are electronically set, with accuracy assured by a quartz oscillator controlling shutter timing. Each number shown on the scale is reciprocal, i.e., 2 means 1/2 second, and 125 means 1/125 second. A one-step change will either halve or double the exposure, e.g., a shutter speed of 1/125 sec. lets in twice as much light as a setting of 1/250 sec., and half as

much light as 1/60 sec.

**Note:** When you set the shutter speed/mode selector dial to either M90 or B, the exposure meter does not work and the viewfinder LEDs don't light.

## **M90 (1/90 sec.)**

At this setting, the shutter operates mechanically at 1/90 sec., and is used mainly when the battery is drained and other shutter speed modes are not operable, and for flash photography with an electronic flash.

## **B (Bulb)**

At this mechanical setting, the shutter curtains ⑩ remain open as long as you press the shutter release button. B is used for long time exposures.

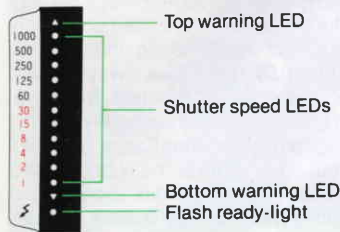
**Note:** When the shutter speed/mode selector dial is set somewhere between 1 sec. and M90 and the shutter release button ⑩ is accidentally depressed, the shutter curtains remain open. If the film is rewound in this situation, every frame will be re-exposed, damaging the pictures taken. Therefore, before rewinding make sure that the selector dial is not in this intermediate position.

## **Exposure Measuring System**

The Nikon FG employs TTL (through-the-lens) center-weighted full-aperture exposure measurement which measures the amount of light passing through the lens with the aperture fully open, thus always assuring a bright finder image during shooting. Exposure measurement emphasis is placed especially on the brightness in the 12mm dia. central area (refer to page 15), although the meter reads the light over the entire focusing screen. Thus, correct exposure is assured when shooting with the main subject situated in this central area.

On both P and A modes, the FG employs instantaneous stopped-down exposure measurement. This measurement system sets the optimum combination of shutter speed and aperture at the actual split-second moment of picture taking, assuring accurate exposures even if the light changes at the very last instant. A sensitive SPD (silicon photodiode) is used to measure light intensity.

# CONTROLS IN DETAIL—continued



## LED Viewfinder Indications

Red LEDs (light emitting diodes) located opposite the shutter speed scale at the right-hand side of the viewfinder light up when the shutter release button is depressed halfway. These function in three capacities—for exposure information, for improper exposure warning, and for convenient flash shooting.

### Exposure information on P or A



### on manual



☼ = Blinking LED  
● = Steadily lighting LED

## Exposure information

On P or A, a steady LED indicates the shutter speed automatically set. Two adjacent LEDs indicate set speed is intermediate between the two. On manual, a steady LED indicates the shutter speed set manually and the blinking LED(s) signals the correct speed to match the selected aperture.

### Notes:

- 1) At M90 and B, there is no LED display.
- 2) Shutter speed selection is stepless on P and A; however on manual, intermediate speeds cannot be set.

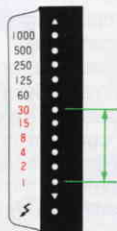
Possible overexposure



Possible underexposure



Shutter speed is too slow



Flash ready-light



## Improper exposure warning information

On P or A, a blinking top warning LED indicates possible overexposure. In this case, use a neutral density filter or change to a slower speed film. A blinking lower warning LED signals possible underexposure, necessitating an electronic flash or a change to the B setting for long exposure. On P, A and manual, an LED lighting at 1/30 sec. or below indicates shutter speed is too slow for hand-held shooting and a tripod is necessary to steady the camera or a high-speed film or electronic flash should be used.

**Note:** When using a tripod with a large head, use Nikon's tripod adapter to mount the FG; otherwise contact between lens barrel and head may make it difficult to operate the lens.

## Flash ready-light information

An LED opposite the thunderbolt mark enables you to confirm flash readiness without removing your eye from the viewfinder <sup>33</sup>.

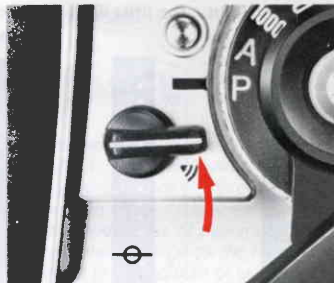
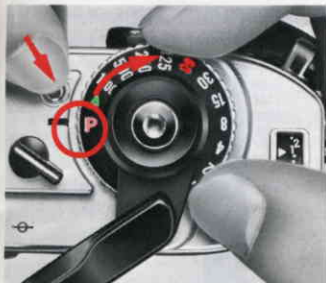
# CONTROLS IN DETAIL—continued

## How To Determine Shooting Modes

Correct exposure—whether your photo comes out just right and neither too dark (underexposed) nor too light (overexposed)—depends on two factors in relation to your film: light and time. These factors are controlled by *f*/stop (aperture opening) and shutter speed. The FG offers three different ways (modes) to expose photos—P (Program), A (Auto) and manual. Depending on photographic conditions and your own personal requirements, choose any one of these three. On P, exposure measurements are totally handled by the camera, so all you do to take perfect pictures is focus and shoot. On A, still enabling automatic exposure, *f*/stop selection is under your control, allowing you to create special depth-of-field effects, and the FG matches with the correct shutter speed. (For details on depth of field, refer to page 32.) On manual, both *f*/stop and shutter speed selection are controlled by you, giving you the chance to achieve special effects and to grow in your photographic skills.

## P—programmed exposure mode

A new feature with the Nikon FG, the P mode not only greatly simplifies operation, but also lets you concentrate completely on picture composition and further, gives you greater opportunities to shoot, especially in quickly changing situations or for candid shots, because no exposure calculation is necessary. On P, the optimum combination of stepless shutter speed and stepless *f*/stop is determined by the FG's microcomputer at the instant of exposure, according to a scientifically pre-arranged program. Perfect exposure is thus assured for every shot.



### P mode operation

- (1) While depressing the A/P setting lock button, turn the selector dial to P.
- (2) Set the f/stop of the lens to its minimum aperture opening (i.e., the largest f/number).
- (3) Turn on the audio warning system.
- (4) While looking through the viewfinder, depress the shutter release button halfway to turn on the exposure meter.

If the audio warning does not sound, exposure is correct—just focus and shoot. One lighted LED in the viewfinder signals what shutter speed is set. Two lighted LEDs indicate the set shutter speed is intermediate between the two lighted LEDs.

If the audio warning does sound, improper exposure may result and you must check the LED viewfinder indications (explained on the following page) for necessary adjustments.

# CONTROLS IN DETAIL—continued

Too much light

Too little light

Shutter speed  
is too slow

f/stop is not set at f/11  
or a larger f/number.

During blank exposure both 1/60  
and 1/125 sec. LEDs light up.



- Either upper or lower warning LED blinks. A blinking upper LED means too much light; try either a neutral density filter or change to a slower speed film. A blinking lower LED means too little light; use an electronic flash or switch from P to a long exposure at B setting.
- The LED lights up at 1/30 sec. or below. Shutter speed is too slow for hand-held shooting and picture blur may result. Use a tripod to steady the camera, change to high-speed film, or use an electronic flash.

## Notes:

- 1) If the f/stop is not set at f/11 or a larger f/number, both warning LEDs blink alternately. Reset the f/stop to its minimum aperture setting (the largest f/number). When using a teleconverter, PK ring or AI-converted lens, be sure to set the aperture to its minimum opening since the warning LEDs will not blink in warning.
- 2) If you do not wish to turn on the audio warning system, check the LEDs in the viewfinder before shooting to confirm if any adjustments are necessary in order to assure correct exposure.
- 3) During blank exposures before the frame counter reaches "1," both the 1/60 and 1/125 sec. LEDs will light up as the shutter is automatically set at 1/90 sec. Do not take pictures before "1" as the exposure meter does not operate until "1."

## Programmed exposure measurement graph

The graph represents the optimum combinations of f/stop and shutter speed, for the brightness of any scene, which were determined through intensive statistical and empirical studies and fed into the FG's computer brain for its pre-arranged exposure program. Thus, when actual exposure measurement takes place at the time of shooting, the ideal combination for actual conditions is selected and perfect exposure results for every shot.

(Graph—green line represents the curve for the f/1.4 lens. For lenses with other apertures, the graph is read from that particular aperture opening until intersection with the diagonal line and then in the same downward line, e.g., the black line for the f/4 lens.)

### Notes:

1) On P, the following lenses will cause slower shutter speeds than those indicated in the viewfinder while correct exposure is assured. Therefore, in cases where more exact shutter speed information is desired, A or manual mode is recommended:

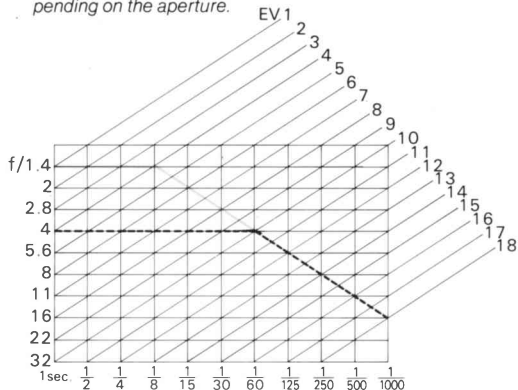
- 50mm f/1.2 Nikkor (No. 250525 or smaller)
- 58mm f/1.2 Noct-Nikkor (No. 175000 or smaller)
- ED 50~300mm f/4.5 Zoom Nikkor (No. 179500 or smaller)
- Every AI-converted 85mm f/1.8 Nikkor
- Every AI-converted 105mm f/4 Micro Nikkor
- Every AI-converted 85~250mm f/4 Zoom Nikkor

2) On P, the following lenses and accessories cannot be used as they do not have an aperture coupling device. Use

these lenses on A or manual modes.

- All Reflex Nikkors
- All PC Nikkors  
(when perspective is shifted, use manual mode)
- Bellows attachment
- Extension Ring Set K

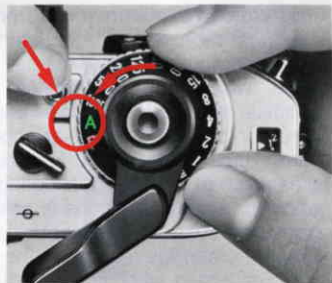
- 3) On P, when using teleconverters or AI-converted lenses of maximum apertures of f/4.5 or smaller, shutter speeds available are limited to very slow ones. Therefore, A or manual mode is recommended.
- 4) On P, when using AI-converted lenses of maximum aperture larger than f/2.8, the metering range for the higher EV values will be reduced down to a maximum of two EVs depending on the aperture.



# CONTROLS IN DETAIL—continued

## A—automatic exposure mode

With the FG set on A, you select the f/stop and the computer matches it with the correct stepless shutter speed. The A mode is especially useful for creating special effects in depth of field while still using the camera on automatic mode to assure perfect exposure (aperture-priority selection). Deeper depth of field (or greater focus zone in foreground and background around subject) is achieved as you stop down the lens to its smaller aperture openings (larger f/numbers). Shallower depth of field (softly blurred both in front and behind your main subject) results from larger aperture openings (smaller f/numbers) and emphasizes the main subject.



### A mode operation — aperture-priority selection

- (1) Depress the A/P setting lock button and rotate the dial until the "A" click-stops opposite the index line.



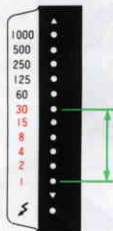
- (2) Set the desired f/stop on the lens.
- (3) Turn on the audio warning system.
- (4) While looking through the viewfinder, depress the shutter release button halfway to turn on the exposure meter. If the audio warning does not sound, the scene brightness is within the FG's metering range—focus and shoot. The shutter speed automatically set is indicated in the viewfinder by either one LED or two LEDs. If the audio warning sounds, LEDs in the viewfinder will indicate one of the conditions described on the next page.

# CONTROLS IN DETAIL—continued

## Overexposure

## Underexposure

## Picture blur



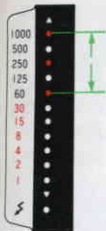
- The top warning LED blinks to warn of overexposure.
- The bottom warning LED blinks to warn of underexposure.
- The LED lights up at 1/30 sec. or below to warn of picture blur.

In these cases, to adjust exposure, rotate the lens aperture ring to a larger or smaller value as indicated below until the blinking LED disappears and an LED(s) lights up steadily opposite 1/60 sec. or faster.

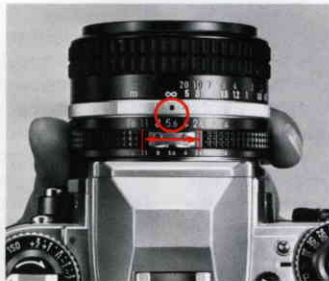
- Overexposure—Rotate to a larger f/number. If after this the LED still blinks, use a neutral density filter or change to a slower speed film.
- Underexposure—Rotate to a smaller f/number. If after this the LED still blinks, use an electronic flash or switch from A to B (Bulb) setting for long exposures. If the LED at 1/30 sec. or below lights up

- after adjustment, picture blur may result—use a tripod, higher speed film or electronic flash.
- Picture blur—Rotate to a smaller f/number. If the shutter speed does not increase above 1/30 sec., use a tripod to steady the camera, change to a higher speed film or use an electronic flash.

**Note:** If the audio warning system is not turned on, check the LEDs in the viewfinder for improper exposure conditions before shooting.



Set the desired speed by turning the lens aperture ring.



### A mode operation—shutter speed priority selection

For shooting moving subjects, the FG also enables you to select the shutter speed on A mode to either freeze the action and produce sharp outlines with a faster shutter speed, or to cause an intentional blur by choosing a slower shutter speed. To operate the FG as a shutter-speed priority automatic camera,

depress the shutter release button halfway and match the lighted LED with the speed you desire by turning the lens aperture ring  $\text{\textcircled{A}}$ . Improper exposure is indicated by LEDs and the audio warning system as in aperture-priority selection.

# CONTROLS IN DETAIL—continued

## Depth of field

Depth of field refers to the clear focus zones in front of and behind the main subject when you focus the lens. With the FG's aperture-priority automatic exposure, you have full control over depth of field by varying the f/stop. The following are important points to remember.

(1) By stopping down the aperture to smaller openings (larger f/numbers), depth of field becomes deeper and not only your main subject but foreground and background will also be in clear focus. On the contrary, by opening up the aperture to larger openings (smaller f/numbers), depth of field becomes shallower and both fore- and background will be out of focus, thus enabling you to emphasize the main subject.

- (2) The farther the subject from the camera, the deeper the depth of field; the closer to the camera, the shallower the depth of field.
- (3) Usually, background clarity is sharper than that of the foreground; thus, in shallow depth-of-field situations, you can expect your foreground images to be less clear than those behind the subject.
- (4) The shorter the focal length of the lens, the deeper the depth of field.
- (5) With Nikkor or Nikon Series E lenses, depth of field is indicated by pairs of colored lines on the lens which correspond to the colors of the f/number. Therefore, depth-of-field range can be obtained by the corresponding distance scale.



Lens set at  $f/1.4$   
Only main subject is in focus



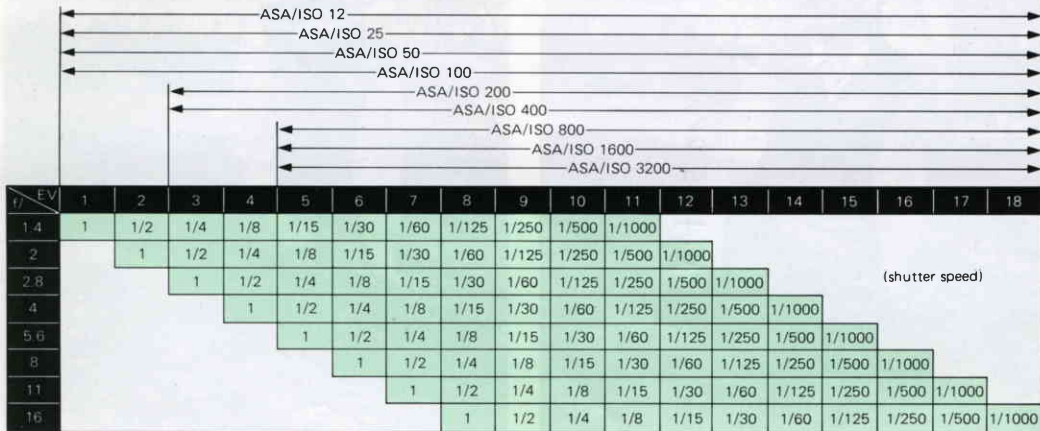
Lens set at  $f/16$   
Most objects near to far are in focus

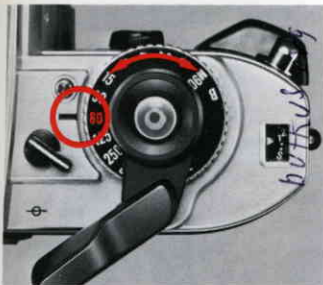
# CONTROLS IN DETAIL—continued

## EV Range

The FG's meter may be used only within the meter's exposure value (EV) range which determines the possible combinations of aperture and shutter speed, depending on the film speed in use. The chart shows the relationships between the f/stop, shutter speed and film speed, indicating the functioning shutter

speeds (for metering purposes) with any film speed/aperture combination. Careful attention to this chart will assure precise exposure, automatically, over the complete exposure control and meter range capabilities of your Nikon FG.





## Manual exposure mode

Manual operation allows you to shoot at your choice of any combination of the f/stops and eleven shutter speeds on the camera's dials. (Note that you cannot set shutter speed between numbered settings.) By varying these combinations, you can achieve not only correct exposure but also such special effects as under- or overexposure, blurred action, etc. Manual is also valuable to develop your photographic instincts and skills, and is additionally recommended when an electronic flash other than the SB-15, SB-10 or SB-E is used.

## How to select f/stop and shutter speeds

Exposure is determined by the combination of the shutter speed and f/stop (aperture opening). As the numbers on either the f/stop or shutter speed dials increase by one value, the amount of light entering the film is reduced by approximately one half. For example, the amount of light at 1/125 sec. is about one-half that at 1/60 sec., and the amount of light at f/16 is one-half that at f/11. Brighter scenes require either faster shutter speeds or smaller aperture openings (larger f/numbers) or a combination of both which will give the same amount of exposure; darker scenes require the reverse. For example, 1/250 sec. at f/8 is the same as either 1/500 sec. at f/5.6 or 1/125 sec. at f/11.

## Shutter speed/aperture combination to give the same exposure.

Shutter speed (sec.)	1/1000	1/500	1/250	1/125	1/60
Aperture (f/number)	4	5.6	8	11	16