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[back to my "Orphancameras" manuals /flash and light meter site](#)

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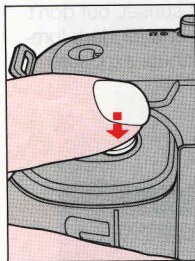
The large manuals are split only for easy download size.

CENTER-WEIGHTED METERING FOR SPECIAL EXPOSURE SITUATIONS

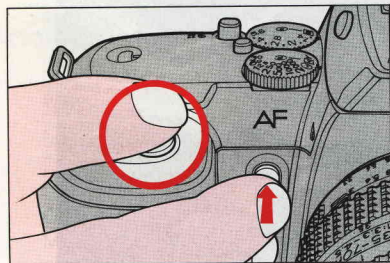
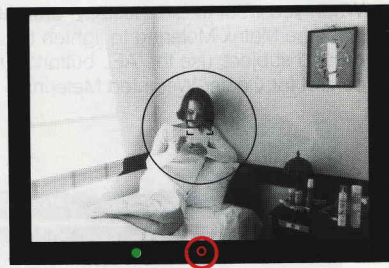
AEL (Auto Exposure Lock) button



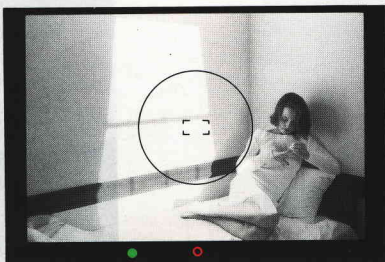
1. Center main subject inside viewfinder and/or move in closer so the 12mm circle is covered by the subject.



2. Lightly press shutter release button.

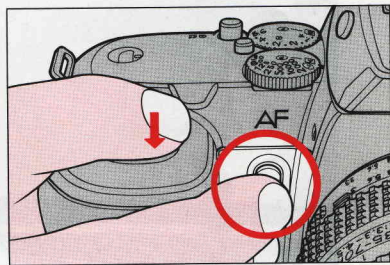


3. While lightly pressing shutter release button, depress the AEL button and hold it in.

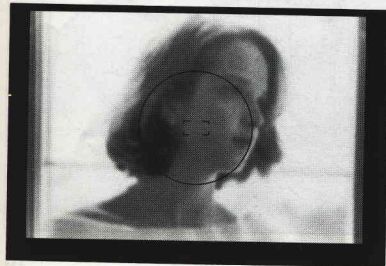


4. Recompose and shoot.

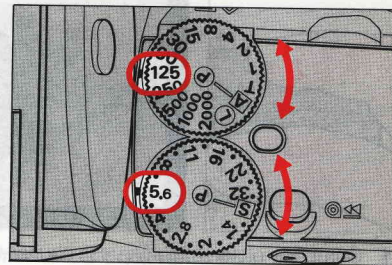
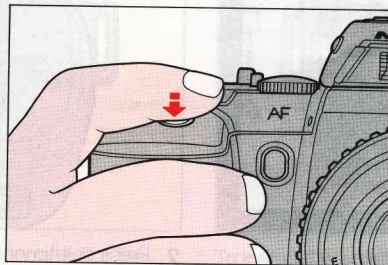
- When recomposing may change the subject-to-camera distance, refocus by briefly removing your finger from the shutter release button and lightly pressing it again.



Manual exposure mode



1. Center main subject inside viewfinder and/or move in closer so the 12mm circle is covered by the subject. Lightly press the shutter release button.



2. Adjust the shutter speed and aperture for correct exposure.

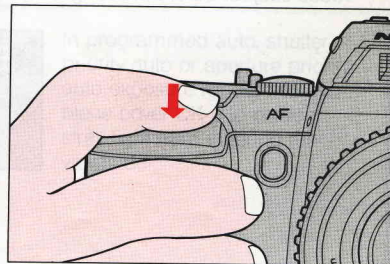


3. Confirm the exposure indicator LED lights up.

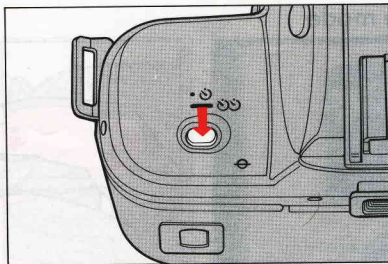
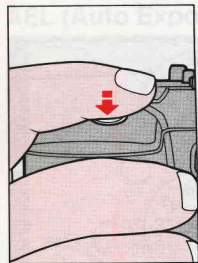


4. Recompose and shoot.

- When recomposing may change the subject-to-camera distance, refocus by briefly removing your finger from the shutter release button and lightly pressing it again.



SELF-TIMER



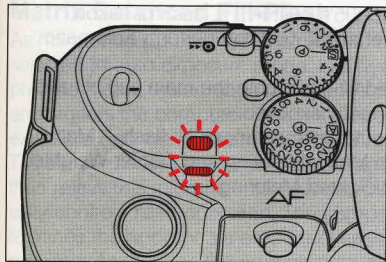
1. Compose picture, lightly press shutter release button, then confirm focus and exposure.

- In self-timer operation, the shutter is released whether subject is in focus or not. To assure a focused image, focus subject before pressing self-timer button.

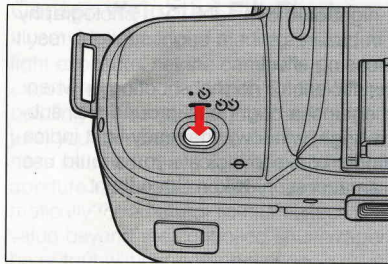
2. Press self-timer button to start self-timer operation.

For one-shot self-timer: Press self-timer button and remove finger within two seconds (before self-timer indicator starts blinking).

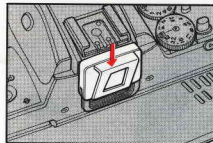
For two-shot self-timer: Press self-timer button for three seconds or longer, confirm self-timer indicator LED has started blinking, then remove finger from the button.



3. Shutter will be released after approx. 10 seconds. For the first seven seconds, self-timer indicator LED blinks; for the final three seconds, the LED lights up, warning you to get ready. For two-shot self-timer operation, the second shot will be taken five seconds after the first.



To cancel the self-timer after activating: Press self-timer button again.



In programmed auto, shutter-priority auto or aperture priority-auto exposure mode, use eyepiece cover DK-5 to prevent stray light from entering the viewfinder.

FLASH PHOTOGRAPHY

Generally performed at night or in dim light, flash photography also removes shadows in pictures shot in bright sunlight, resulting in a more natural, pleasing effect.

When existing light is insufficient for normal shooting or when shooting a dark subject against a bright background (i.e., subject positioned against a bright window), the ready-light indicator LED inside the viewfinder blinks to indicate you should use the built-in TTL flash or an accessory Nikon Speedlight.



AUTOMATIC BALANCED FILL-FLASH

With either the Nikon N5005's built-in TTL flash or Nikon dedicated Speedlight set at TTL you can perform automatic balanced fill-flash.

With automatic balanced fill-flash, both the main subject and the background are correctly exposed.

There are two types of automatic balanced fill-flash — Matrix Balanced Fill-Flash with Matrix Metering and Center-Weighted Fill-Flash with Center-Weighted Metering.

Matrix Balanced Fill-Flash

As mentioned on page 37, Matrix Metering is automatically selected in auto exposure mode. In TTL auto flash photography, the Matrix Meter reads the scene's light levels/light pattern and signals the computer, which then calculates available-light exposure settings. When the shutter is released, the camera's TTL sensor senses the available light and flash illumination, then relays this information to the computer, which automatically controls flash operation. The computer automatically determines the appropriate amount of flash output compensation required. As soon as the right amount of flash illumination is output (with automatic compensation), the computer turns off the flash. The result is a well-balanced photo with correct exposure for both the background and foreground subject. All this takes place automatically and much quicker than it can be explained.

Center-Weighted Fill-Flash

If you want to choose the brightness level for a basic available-light exposure, set the camera's exposure mode to manual exposure mode to perform Center-Weighted Fill-Flash. By pointing the center-weighted area at different parts of the picture, you can choose the desired brightness level. If the brightness value you have selected is within the controlled shutter/aperture range*, flash output compensation will be made automatically for a natural fill-flash effect. If you select a brightness value beyond the controlled shutter/aperture range, flash will be output without compensation.

* See page 62.

The following shows operation with the built-in TTL flash. For flash photography operation with an accessory Nikon Speedlight, see the Speedlight instruction manual. For accessory Nikon Speedlight compatibility, see page 64.

USING BUILT-IN TTL FLASH

- Do not touch the flash when firing it; normal operation can make it quite hot.
- *Never fire the flash more than 20 consecutive times at intervals of 5 sec. or shorter. Firing continuously more than 20 times may impair flash performance. After each major flash shooting, let the flash rest at least 10 minutes before firing again.*
When you continuously fire the flash, the camera's handgrip may become hot due to normal operation. In this case, it will take longer for the ready-light come on because the flash automatically stops charging for a while.
- When battery voltage decreases due to low temperature or weak batteries, the ready-light may turn off even after it lights up once. Before shooting, make sure the ready-light is on.
- When the built-in TTL flash is up, an accessory Speedlight will not fire. When using a Speedlight, store the built-in TTL flash in the down position.
- Before shooting, make sure your subject is within the flash shooting distance range.
- Usable film speed range for the built-in TTL flash is ISO 25 to ISO 800.
- For usable lenses, see page 61.

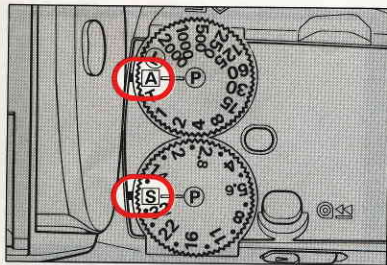
Notes on selecting aperture

In aperture-priority auto and manual exposure mode

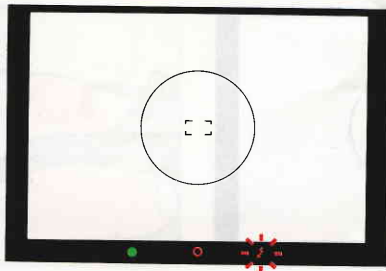
- The larger the aperture (the smaller the f-number) you select, the greater the maximum shooting distance, whereas the smaller the aperture (the larger the f-number), the less the maximum shooting distance.
- When subject distance remains the same, as the aperture increases, the depth of field becomes smaller. The smaller the aperture, the greater the depth of field.

In shutter-priority auto exposure mode

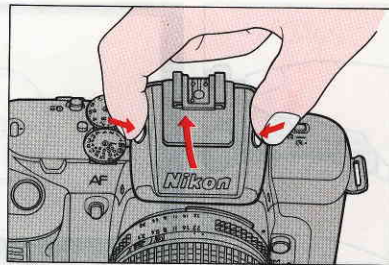
- With a slower shutter speed, a smaller aperture is automatically selected, causing a shorter shooting distance range.
- If shutter speed remains the same, as background brightness increases, the aperture becomes smaller. To perform flash shooting in daytime, Nikon recommends that you switch to aperture-priority auto or manual exposure mode in order to select a wider aperture for greater flash shooting distance.



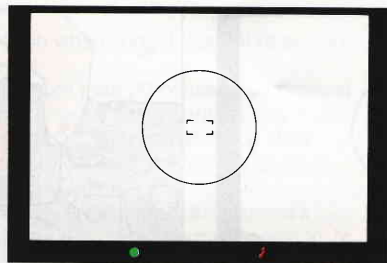
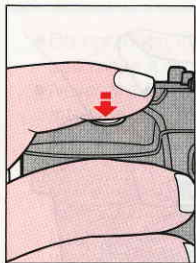
Operation in programmed auto exposure mode



1. If subject brightness is insufficient, the viewfinder ready-light blinks to suggest that you use a flash.



2. Press both flash lock-release buttons. The built-in TTL flash will pop up and automatically turn on.



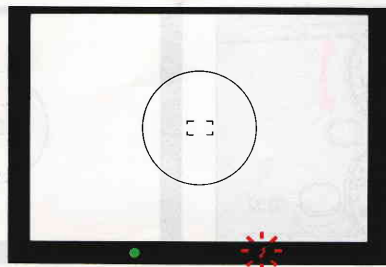
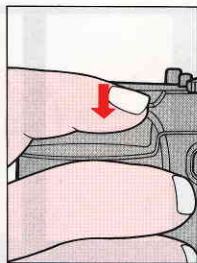
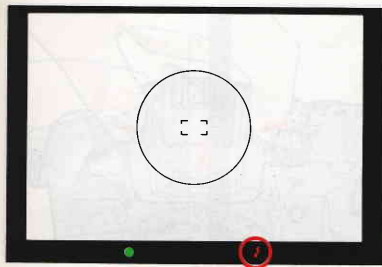
3. Compose picture and lightly press shutter release button.
 - Do not use AEL button in Matrix Balanced Fill-Flash.
 - For controlled shutter speed/aperture, see table on page 62.

4. Make sure the subject is within the flash shooting distance range.

Guide for flash shooting distance range (at ISO 100):

| | |
|---|---------------------------------|
| For subjects backlit by the sun | 0.6m~0.8m (2.0 ft.~2.6 ft.) |
| For outdoor subjects on sunny day | 0.6m~1.5m (2.0 ft.~4.9 ft.) |
| For outdoor subjects on cloudy day or in shadows | 0.7m~2.1m (2.3 ft.~6.9 ft.) |
| For indoor subjects | 0.7m~4.3m (2.3 ft.~14.1 ft.) |

The listed ranges should only be used as a guide. To choose desired flash shooting distance range, switch exposure mode to aperture-priority auto or manual.

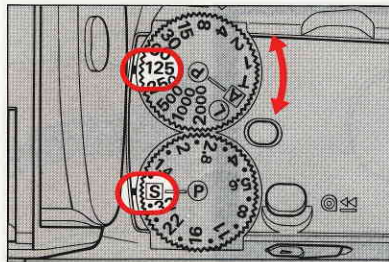


5. Confirm ready-light is on, then fully depress shutter release button to take a shot with the flash.

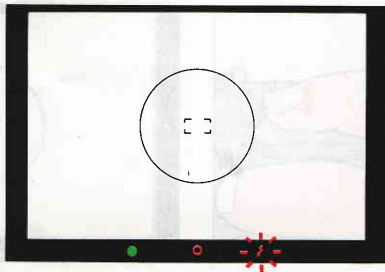
- With ready-light off, the flash is charging and shutter remains locked.

If ready-light blinks for a few seconds after shooting:

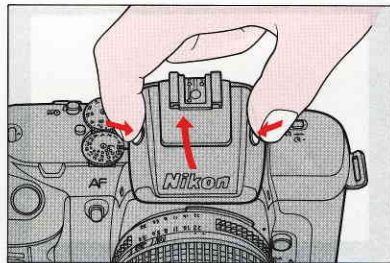
The flash has fired at its maximum output and light might be insufficient. Confirm shooting distance and, if necessary, move closer to subject, or switch exposure mode to aperture-priority auto to select a wider aperture.



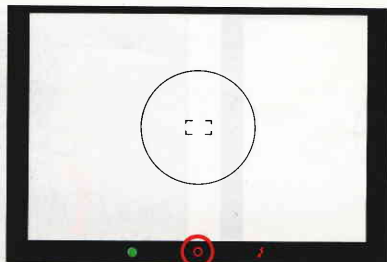
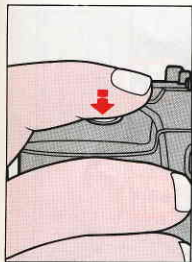
Operation in shutter-priority auto exposure mode



1. If subject brightness is insufficient, the viewfinder ready-light blinks to suggest that you use a flash.



2. Press both flash lock-release buttons. The built-in TTL flash will pop up and automatically turn on.



3. Compose picture and lightly press shutter release button. Confirm exposure indicator LED for background exposure.

| | |
|--------------------|---|
| ○ lights up | Correct exposure |
| + or + ○ light up* | Background may be overexposed. Select faster shutter speed |
| - or - ○ light up* | Background may be underexposed. Select slower shutter speed. If - remains with a shutter speed of 1 sec., background will be underexposed |

* With a flash, the shutter will not lock even if + or - lights up.

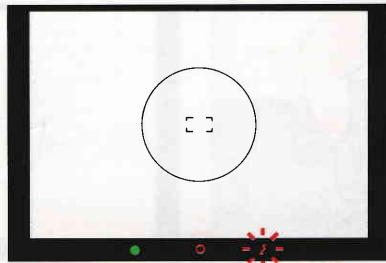
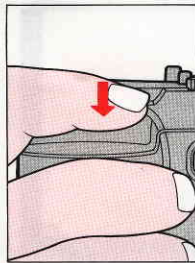
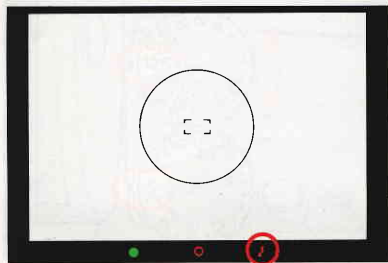
- For controlled shutter speed/aperture, see the table on page 62.
- Do not use AEL button in Matrix Balanced Fill-Flash.

4. Make sure subject is within the flash shooting distance range.

Guide for flash shooting distance range (at ISO 100):

| | |
|---|--|
| For subjects backlit by the sun | 0.6m~0.8m (2.0 ft.~2.6 ft.) at 1/125 sec. |
| For outdoor subjects on sunny day | 0.6m~1.5m (2.0 ft.~4.9 ft.) at 1/125 sec. |
| For outdoor subjects on cloudy day/in shadows | 0.7m~2.1m (2.3 ft.~6.9 ft.) at 1/125 sec. |
| For indoor subjects | 0.7m~4.3m (2.3 ft.~14.1 ft.) at 1/30 sec. |

The listed ranges should only be used as a guide. To choose desired flash shooting distance range, switch exposure mode to aperture-priority auto or manual.

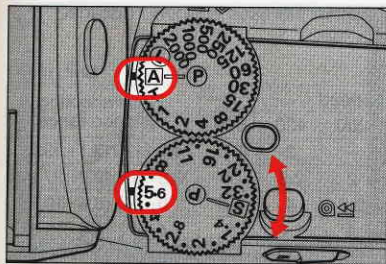


5. Confirm ready-light is on, then fully depress shutter release button to take a shot with the flash.

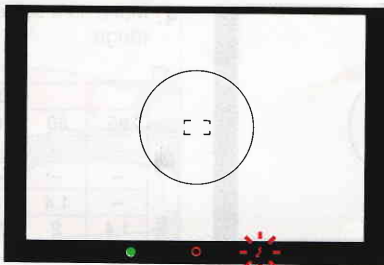
- *With ready-light off, the flash is charging and shutter remains locked.*

If ready-light blinks for a few seconds after shooting:

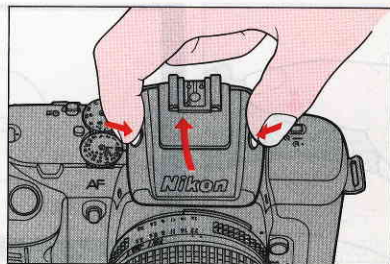
The flash has fired at its maximum output and light might be insufficient. Confirm shooting distance and, if necessary, move closer to the subject or switch exposure mode to aperture-priority auto to select a wider aperture.



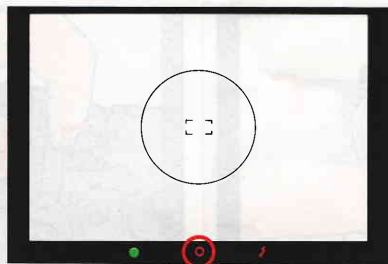
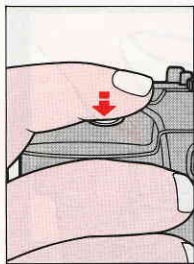
Operation in aperture-priority auto exposure mode



1. If subject brightness is insufficient, the viewfinder ready-light blinks to suggest that you use a flash.



2. Press both flash lock-release buttons. The built-in TTL flash will pop up and automatically turn on.



- 3.** Compose picture and lightly press shutter release button.
Confirm exposure indicator LED for background exposure.

| | |
|--------------------|--|
| ○ lights up | Correct exposure |
| + or + ○ light up* | Background may be overexposed. Select smaller aperture (larger f-number) |
| - or - ○ light up* | Background may be underexposed. Select wider aperture (smaller f-number) |

* With a flash, shutter will not lock even if + or - lights up.

- For controlled shutter speed, see page 62.
- Do not use AEL button in Matrix Balanced Fill-Flash.

- 4.** Make sure subject is within the flash shooting distance range.

Unit: m (ft.)

| | ISO film speed | | | | | | Flash shooting distance range |
|----------|----------------|-----|-----|-----|-----|-----|-------------------------------|
| | 25 | 50 | 100 | 200 | 400 | 800 | |
| Aperture | — | — | — | — | 2 | 2.8 | 4.0~12 (13.1~39.4) |
| | — | — | — | 2 | 2.8 | 4 | 2.8~8.5 (9.2~27.9) |
| | — | 1.4 | 2 | 2.8 | 4 | 5.6 | 2.0~6.0 (6.6~19.7) |
| | 1.4 | 2 | 2.8 | 4 | 5.6 | 8 | 1.4~4.2 (4.6~13.8) |
| | 2 | 2.8 | 4 | 5.6 | 8 | 11 | 1.0~3.0 (3.3~9.8) |
| | 2.8 | 4 | 5.6 | 8 | 11 | 16 | 0.7~2.1 (2.3~6.9) |
| | 4 | 5.6 | 8 | 11 | 16 | 22 | 0.6~1.5 (2.0~4.9) |
| | 5.6 | 8 | 11 | 16 | 22 | — | 0.6~1.1 (2.0~3.6) |
| | 8 | 11 | 16 | 22 | — | — | 0.6~0.8 (2.0~2.6) |

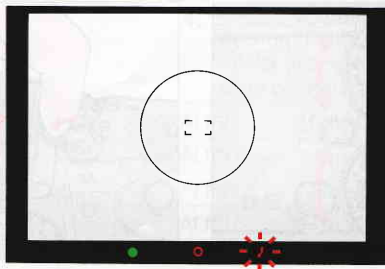
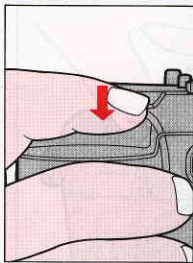
You can also estimate the maximum shooting distance by guide number.

$$\frac{\text{guide number}}{\text{full aperture}} = \text{Maximum shooting distance}$$

i.e., if an f/4 lens is used at ISO 100:

$$\frac{12}{4} = 3\text{m or } \frac{39}{4} = \text{approx. } 9.8\text{ ft.}$$

Guide number for each ISO is shown on page 62.

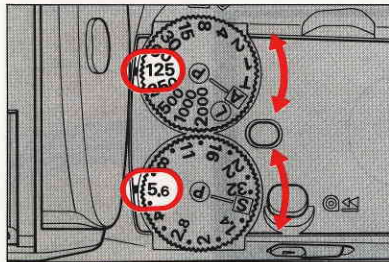


5. Confirm ready-light is on, then fully depress shutter release button to take a shot with a flash.

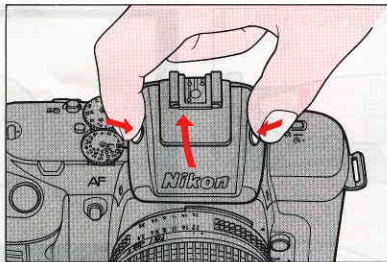
- With ready-light off, flash is charging and shutter is locked.

If ready-light blinks for a few seconds after shooting:

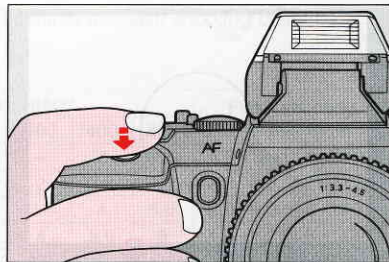
The flash has fired at its maximum output and light might be insufficient. Confirm shooting distance and, if necessary, move closer to subject or select a wider aperture.



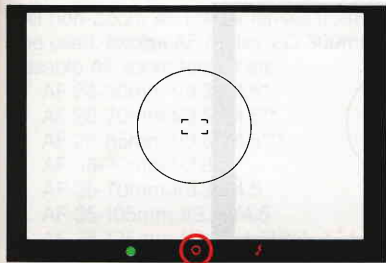
Operation in manual exposure mode



1. Press both flash lock-release buttons. The built-in TTL flash will pop up and automatically turn on.
 ● *In manual exposure mode, the ready-light does not appear to recommend flash use.*



2. Look through the viewfinder, center camera on the area where you desire a correct exposure and lightly press the shutter release button.



3. Confirm exposure indicator LED.

| | | |
|----------------------|--|--|
| ○ lights up | Correct exposure | |
| + lights up | Background may be overexposed. (Over +1EV) | Select faster shutter speed and/or smaller aperture (larger f-number) |
| + and ○ lights up | Background may be overexposed. (+1/3EV ~ +1EV) | |
| - and ○ lights up | Background may be underexposed. (-1/3EV ~ -1EV) | Select slower shutter speed and/or wider aper- ture (smaller f-number) |
| - lights up | Background may be underexposed. (Below -1EV) | |

• For controlled shutter speed, see the table on page 62.

4. Make sure subject is within the flash shooting distance range. With ISO 100 film, for example, flash shooting distance range will be:

| | |
|----------|----------------------------------|
| At f/2 | 2.0m ~ 6.0m (6.6 ft. ~ 19.7 ft.) |
| At f/2.8 | 1.4m ~ 4.2m (4.6 ft. ~ 13.8 ft.) |
| At f/4 | 1.0m ~ 3.0m (3.3 ft. ~ 9.8 ft.) |
| At f/5.6 | 0.7m ~ 2.1m (2.3 ft. ~ 6.9 ft.) |
| At f/8 | 0.6m ~ 1.5m (2.0 ft. ~ 4.9 ft.) |
| At f/11 | 0.6m ~ 1.1m (2.0 ft. ~ 3.6 ft.) |
| At f/16 | 0.6m ~ 0.8m (2.0 ft. ~ 2.6 ft.) |

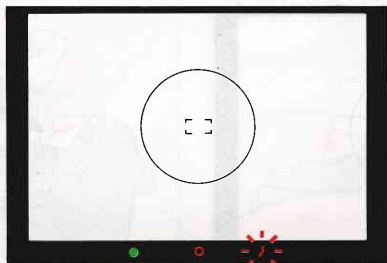
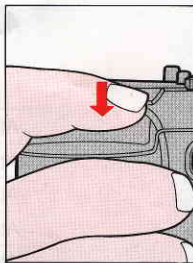
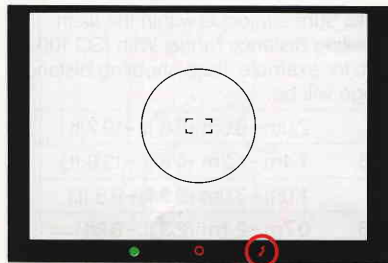
For other film speeds, see the table on page 56. You can also estimate maximum shooting distance using the guide number.

$$\frac{\text{guide number}}{\text{full aperture}} = \text{Maximum shooting distance}$$

i.e., if an f/4 lens is used at ISO 100:

$$\frac{12}{4} = 3\text{m} \text{ or } \frac{39}{4} = \text{approx. } 9.8 \text{ ft.}$$

Guide number for each ISO is shown on page 62.



5. Recompose as desired, confirm ready-light is on, then fully depress shutter release button to take a shot with the flash.
- *With ready-light off, flash is charging and shutter remains locked.*

If ready-light blinks for a few seconds after shooting:

The flash has fired at its maximum output and light might be insufficient. Confirm shooting distance and, if necessary, move closer to subject or select a wider aperture.

USABLE AF NIKKOR LENSES

- All non-Zoom AF Nikkor lenses from 28mm to 300mm can be used, except AF Nikkor ED 300mm f/2.8 IF.

- Usable AF zoom lenses are:

AF 24-50mm f/3.3-f/4.5*

AF 28-70mm f/3.5-f/4.5**

AF 28-85mm f/3.5-f/4.5***

AF 35-70mm f/2.8****

AF 35-70mm f/3.3-f/4.5

AF 35-105mm f/3.5-f/4.5

AF 35-135mm f/3.5-f/4.5*****

AF 70-210mm f/4

AF 70-210mm f/4-f/5.6

AF 75-300mm f/4.5-f/5.6

AF 80-200mm f/2.8*****

* Cannot be used at a focal length shorter than 28mm, or when shooting a subject within 1m (3.3 ft.) at 28mm focal length.

** Cannot be used when shooting a subject within 1m (3.3 ft.) at a focal length shorter than 35mm.

*** Cannot be used at a focal length shorter than 35mm, or when shooting a subject within 2m (6.6 ft.) at 35mm focal length.

**** Cannot be used at a focal length shorter than 50mm.

***** Vignetting may occur when shooting a subject within 2m (6.6 ft.) at 35mm focal length.

***** Cannot be used when shooting a subject within 2m (6.6 ft.) at 80mm focal length.

- Do not use a lens hood; it could cause slight vignetting.
- Use only AF Nikkor lenses.

Note that zoom lenses cannot be used for macro focusing.

BUILT-IN FLASH SPECIFICATIONS

Guide number

Unit: m (ft.)

Angle of coverage

28mm to 300mm

| ISO film speed | | | | | |
|----------------|----------|---------|---------|---------|----------|
| 25 | 50 | 100 | 200 | 400 | 800 |
| 6 (20) | 8.5 (28) | 12 (39) | 17 (56) | 24 (79) | 34 (112) |

Controlled shutter speed/aperture in auto exposure mode

| Camera's exposure mode | Controlled shutter speed | Controlled aperture |
|------------------------|---|---|
| Programmed auto | If focal length in use is 60mm or shorter: 1/(focal length) sec., to 1/125 sec. If focal length in use is longer than 60mm: 1/60 to 1/125 sec. | Between available maximum aperture* and smallest aperture |
| Shutter-priority auto | As set on dial (1/125 sec. to 1 sec.)** | Between available maximum aperture* and smallest aperture |
| Aperture-priority auto | If focal length in use is 60mm or shorter: 1/(focal length) sec., to 1/125 sec. If focal length in use is longer than 60mm: 1/60 to 1/125 sec. | As set on dial |
| Manual | As set on dial (1/125 sec. to 1 sec. or T)** | As set on dial |

* Depends on film speed. See table at right.

** If you set shutter speed dial to 1/250 or higher, shutter speed automatically switches to 1/125 sec., the camera's synchronization speed.

Controlled maximum aperture in programmed and shutter-priority auto exposure mode:

| ISO film speed Lens in use | 25 | 50 | 100 | 200 | 400 | 800 |
|-------------------------------|-------|-------|-------|-------|-------|-------|
| With f/1.4 lens | f/2 | f/2.4 | f/2.8 | f/3.4 | f/4 | f/4.8 |
| With f/3.3 lens | f/3.3 | f/3.3 | f/3.3 | f/3.4 | f/4 | f/4.8 |
| With f/4.5 lens | f/4.5 | f/4.5 | f/4.5 | f/4.5 | f/4.5 | f/4.8 |

SPEEDLIGHT COMPATIBILITY CHART

| Nikon Speedlight | Connecting | Speedlight's flash exposure mode | | | |
|---|-----------------------|---|------------------------------|-----------------------|-----------------|
| | | TTL auto | | Non-TTL auto flash*** | Manual flash*** |
| | | Matrix Balanced Fill-Flash* | Center-Weighted Fill-Flash** | | |
| SB-24 SB-23 SB-22 SB-20 SB-16B SB-15 | Direct | Yes | Yes | Yes (except SB-23) | Yes |
| SB-21B | Direct | Yes**** | Yes**** | No | Yes |
| SB-21A***** | Via AS-6 | No | No | No | Yes |
| SB-11 SB-14 SB-140 | Via SC-23 | Yes | Yes | Yes | Yes |
| | Via SC-13 or AS-15 | No | No | Yes | Yes |
| SB-17 SB-16A***** | Via AS-16 | No | No | Yes | Yes |
| Medical-Nikkor 120mm f/4 IF | SC-22 (Provided) | Guide Number System (For details, see the lens' instruction manual.) | | | |

* Possible when N5005 camera is set at programmed, shutter-priority or aperture-priority auto exposure mode.

** Possible when the N5005 camera is set at manual exposure mode.

*** Possible when the N5005 camera is set at aperture-priority auto or manual exposure mode.

**** Although possible with the SB-21B, Matrix Balanced Fill-Flash and Center-Weighted Fill-Flash are not recommended for close-up photography. With the N5005 camera, use SB-21 at manual flash exposure mode.

***** The difference between SB-21A and SB-21B, or between SB-16A and SB-16B, is the type of controller attached. (For details, see Speedlight instruction manual.)

Nikon N5005 is designed for autofocus photography with AF Nikkor lenses (except AF-Nikkor lenses for F3AF). To take full advantage of the N5005's conveniences, it is recommended that you should use AF Nikkor lenses.

However, the following lenses can be used with the Nikon N5005 for manual focusing and manual exposure control, in line with the conditions listed at right.

MOUNTABLE NON-AF NIKKOR LENSES

AI-P Nikkor lenses

All AI-type Nikkor lenses (including AI-S and AI-modified)

Nikon Series E lenses

Reflex Nikkor lenses 500mm f/8

1000mm f/11 (No. 142360 or smaller, or
No. 143001 or larger)

2000mm f/11 (No. 200311 or larger)

PC-Nikkor lenses

28mm f/3.5

28mm f/4 (No. 180901 or larger)

35mm f/2.8 (No. 851000 or smaller, or
No. 906201 or larger)

Medical-Nikkor 120mm f/4

Teleconverters (except TC-16/TC-16A; they cannot be mounted)

Use of other lenses may damage the camera.

When mountable non-AF Nikkor lenses are used:

- Exposure indicator LEDs do not appear. Use external exposure meter, then set the exposure using lens aperture ring and shutter speed dial. Ignore the aperture set on camera's aperture dial.
- If the shutter speed dial is set at L or A, or the aperture dial is set at S, the self-timer indicator LED blinks and the shutter locks.
- Standard TTL flash is possible with built-in TTL flash or accessory Nikon Speedlight SB-24, SB-23, SB-22, SB-20, etc. To use flash or Speedlight, set shutter speed dial to 1/125 sec., or slower, then set the aperture using the lens' aperture ring. For Speedlight settings and shooting distance range, see Speedlight's instruction manual. Except for flash recommendation, ready-light functions as normal. Automatic balanced fill-flash is not possible.
- When using the N5005 with an AI-P-Nikkor lens, automatic exposure control is available but automatic focusing is not.

Lens compatibility

| | Focusing | | | Exposure Control | | | |
|---|-----------|---|--------|--|-----------------------|------------------------|--------|
| | Autofocus | Manual w/electronic focusing confirmation | Manual | Programmed auto | Shutter-priority auto | Aperture-priority auto | Manual |
| AF Nikkor lenses (except AF Nikkor lenses for F3AF) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| AI-P Nikkor lens | × | △ ¹⁾ | ○ | ○ | ○ | ○ | ○ |
| AI-type Nikkor lenses | × | △ ¹⁾ | ○ | Camera's exposure meter does not operate and exposure indicator LEDs do not appear. Set exposure using the lens aperture ring and camera's shutter speed dial. | | | |
| Series E lenses | × | ○ | ○ | | | | |
| Reflex Nikkor lenses ⁴⁾ | × | × | ○ | | | | |
| PC-Nikkor lenses ⁴⁾ | × | △ ²⁾ | ○ | | | | |
| Medical-Nikkor 120mm f/4 | × | ○ | ○ | | | | |
| Teleconverters (except TC-16/TC-16A) | × | △ ³⁾ | ○ | | | | |

1) With maximum aperture of f/5.6 or faster.

2) Unless lenses are **shifted**.

3) With maximum effective aperture of f/5.6 or faster.

4) Some lenses cannot be used.

The following accessories cannot be used with the Nikon N5005.

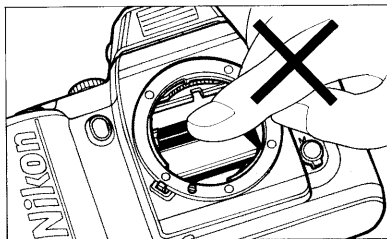
- Cords that connect to remote terminal
- Accessories that connect to sync terminal
- Cable releases
- Neckstrap AN-1 (leather)
- Others:

PF-1~PF-3, PH-3, PB-2, PK-1~PK-3, PN-1, K2, BR-2

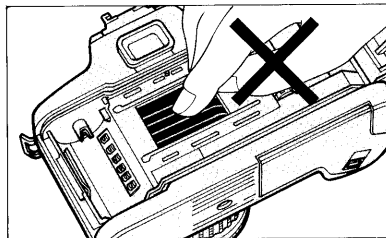
Accessories exclusively designed for other cameras

- If accessories such as close-up attachments are mounted directly on the lens mount of the N5005, exposure indicator LEDs do not appear. Set aperture using lens aperture ring.
- Filters with a larger exposure factor may affect the Matrix Metering. Use Center-Weighted Metering (with AEL button or manual exposure mode).
- PK-1, PK-11, BR-4 and K1 Rings cannot be mounted directly on AF Nikkor lenses.
- Polarizing filters cannot be used for autofocus or auto exposure; use a circular polarizing filter.
- Special filters, such as soft focus filters, cannot be used for autofocus or for manual focus with electronic focusing confirmation.

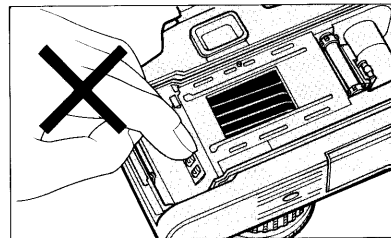
CAMERA CARE TIPS



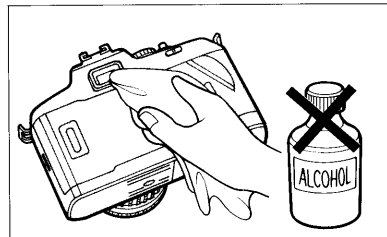
1. Never touch the reflex mirror, focusing screen or AF contacts. Remove dust with a blower brush.



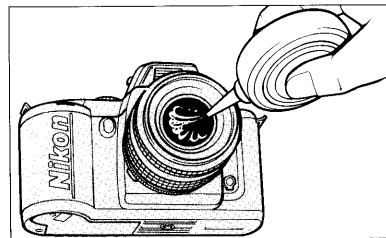
2. Never touch the shutter curtains.



3. Never touch the DX-contacts. Keep clean with blower brush.



7. Clean the viewfinder eyepiece with a soft, clean cloth. Do not use alcohol.

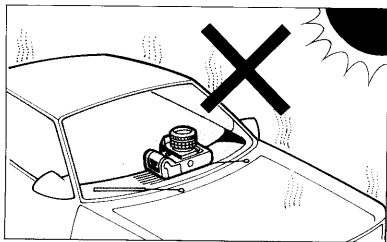


8. Clean glass surfaces such as the lens with a blower brush; avoid using lens tissue as much as possible. To remove dirt and smudges, use soft cotton moistened with pure alcohol and

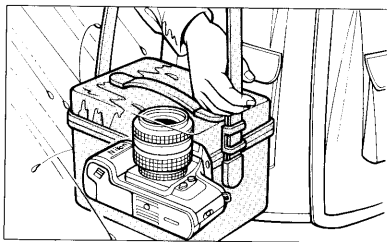
wipe in a spiral motion from center to periphery. Be careful not to leave traces.

Caution

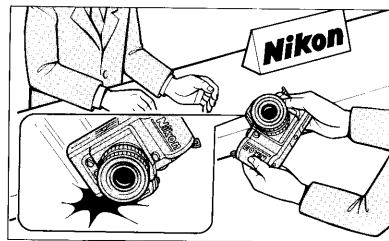
A spray gun-type blower may damage the glass if used to clean the lens, especially when ED glass is used for the front lens element. To avoid damage, hold the blower upright with its nozzle more than 30cm (12 in.) from the lens surface and keep the nozzle moving so the stream of air is not concentrated in one spot.



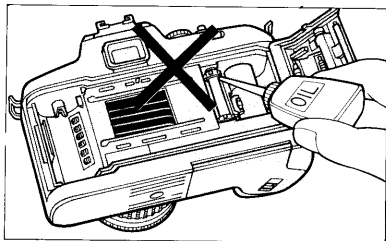
- 4.** Do not leave the camera in an excessively hot place.



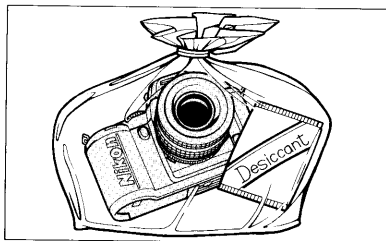
- 5.** If the camera is exposed to rain or mist, or after shooting near the sea, wipe with a clean, soft cloth.



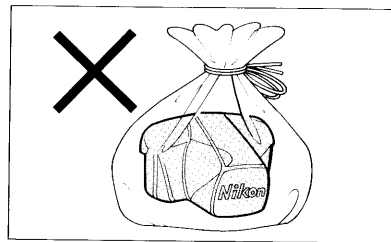
- 6.** If the camera malfunctions, take it immediately to an authorized Nikon dealer or service center.



- 9.** Do not lubricate the camera.



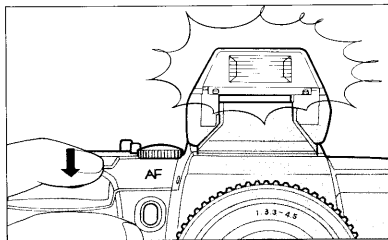
- 10.** Store the camera in a cool, dry place away from naphthalene or camphor (moth repellents). In a humid environment, store the camera inside a vinyl bag with a



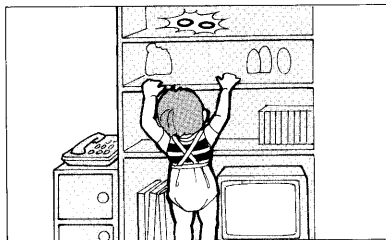
desiccant to keep out dust, moisture and salt.

Note, however, that storing the leather case in a vinyl bag may cause the leather to deteriorate.

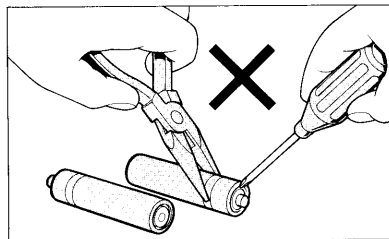
NOTES ON BATTERIES



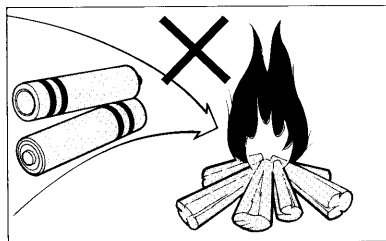
11. If camera has not been used for a long time, recycling time of the built-in flash may be longer. To maintain the flash's condenser in peak condition, thereby enabling you to use the flash for many years, fire the flash a few times every month.



1. Keep batteries out of children's reach. If swallowed, call a doctor immediately.



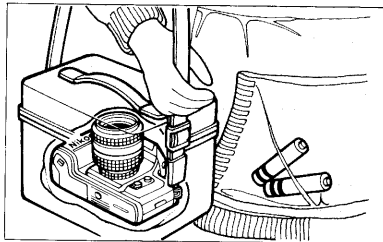
2. Never disassemble, short-circuit or heat batteries.



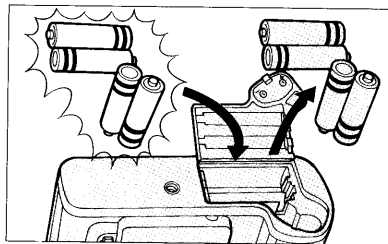
6. Do not throw used batteries into a fire.



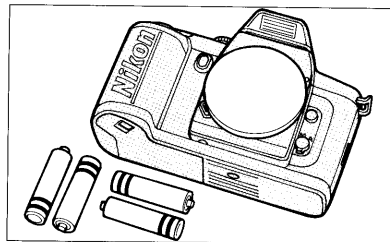
7. If battery chamber is contaminated by battery leakage, take the camera to an authorized Nikon dealer.



- 3.** Battery power falls off in extremely low temperatures — make sure batteries are new and keep the camera body wrapped in something warm.



- 4.** When replacing batteries, be sure to replace all batteries at the same time. Always use fresh batteries of the same brand.



- 5.** When not using the camera for a long period, remove batteries.

Compared with regular batteries, NiCd batteries provide greater efficiency at low temperatures. Before charging NiCd batteries, thoroughly read the instructions for batteries and battery charger.

SPECIFICATIONS

| | | |
|-----------------------------------|--|---|
| Type of camera | Integral-motor autofocus 35mm single-lens reflex with built-in TTL flash | |
| Picture format | 24mm x 36mm (standard 35mm film format) | |
| Lens mount | Nikon bayonet mount | |
| Lens | AF Nikkor lenses (except AF-Nikkor 80mm f/2.8, ED 200mm f/3.5 IF, and autofocus converter TC-16/TC-16A), and non-AF Nikkor lenses (with limitation) available | |
| Focus modes | Autofocus, and manual focus with focusing confirmation | |
| Autofocus | | |
| Autofocus detection system | TTL phase detection system using Nikon Advanced AM200 sensor | |
| Autofocus detection range | Approx. EV -1 to EV 19 (at ISO 100) | |
| Autofocus actuation method | Single servo | |
| Autofocus lock | Possible | |
| Focus tracking | Automatically activated with a moving subject | |
| Focusing confirmation | Available in manual focus mode with an AF Nikkor, mountable Nikkor and Series E lens with a maximum aperture of f/5.6 or faster. | |
| Exposure metering | Matrix Metering (for ensuring correct automatic operation in programmed, shutter-priority and aperture-priority auto exposure modes); Center-Weighted Metering (for manual exposure mode or when using the AEL button in auto exposure mode) | |
| | | Activated by lightly pressing shutter release button; stays on for approx. 8 sec. after lifting finger from button |
| | Exposure meter switch | |
| | Metering range | EV 0 to EV 19 at ISO 100 with f/1.4 lens |
| | Exposure modes | Programmed auto, shutter-priority auto, aperture-priority auto and manual exposure modes |
| | Programmed auto exposure control | Nikon Auto Multi-Program; both shutter speed and aperture are set automatically |
| | Shutter-priority auto exposure control | Aperture automatically selected to match manually set shutter speed |
| | Aperture-priority auto exposure control | Shutter speed automatically selected to match manual set aperture |
| | Manual exposure control | Both aperture and shutter speed are set manually |
| | Shutter | Electronically controlled vertical-travel focal-plane shutter |
| | Shutter release | Electromagnetic |
| | Shutter speeds | 1/2000 to 30 sec. on programmed and aperture-priority auto exposure modes; 1/2000 to 1 sec. on shutter-priority auto and manual exposure modes; T setting for long-time exposure provided |
| | Viewfinder | Fixed eye-level pentaprism type; 0.8x magnification with 50mm lens set at infinity; 92% frame coverage |

| | | | |
|-------------------------------|--|------------------------------|--|
| Eyepiece cover | Model DK-5 prevents stray light from entering viewfinder | Self-timer | Electronically controlled; approx. 10 sec. exposure delay; blinking LED indicates self-timer operation; two-shot self-timer is possible; cancellable |
| Focusing screen | Nikon BriteView screen with central focus brackets for autofocus operation | Reflex mirror | Automatic, instant-return type |
| Viewfinder information | Green focus indicator LED for focusing, red exposure indicator LED shows over- and underexposure warning, and correct exposure; red flash ready-light for flash photography | Camera back | Hinged back; film cartridge confirmation window and film advance indicator |
| Auto exposure lock | Available via pressing the AEL button while the meter is on (Center-Weighted Metering selected when the AEL button is pressed) | Accessory shoe | Standard ISO-type with hot-shoe contact, ready-light contact, TTL flash contact, monitor contact |
| Film speed range | ISO 25 to 5000 for DX-coded film | Built-in TTL flash | Guide number: 12 (meters) or 39 (feet) at ISO 100 and 20°C; angle of coverage: 28mm lens or longer; Matrix |
| Film speed setting | Automatically set by DX-coded film (ISO 100 is automatically set for all non-DX-coded films) | | Balanced Fill-Flash is possible in auto exposure modes; Center-Weighted Fill-Flash is possible in manual exposure mode |
| Film loading | Film automatically advances to frame one when shutter release button is depressed once; film advance indicator rotates to show that film is loaded and being advanced properly | Flash synchronization | In programmed auto or aperture-priority auto, shutter operates 1/125 to 1/60 sec. (or 1/[focal length] sec. with lens focal length less than 60mm); in shutter-priority auto or manual exposure mode, automatically set to 1/125 sec. when shutter is manually set at 1/125 sec. or faster; if shutter is manually set at 1/125 sec. or slower, shutter fires as set |
| Film advance | Film automatically advances one frame at approx. 0.4 sec. when shutter is released; film advance stops automatically at end of film roll | | |
| Frame counter | Accumulative type; automatically reset when camera back is opened | | |
| Film rewind | Automatically rewound by built-in motor | | |

Flash indication

Flash ready-light blinks when flash is recommended (scene darker than EV 10 at ISO 100, or a scene with brightness of EV 10 or higher at ISO 100 where the center portion is darker than other areas by more than EV 2) and lights up when built-in TTL flash or accessory Nikon Speedlight is ready to fire

Autofocus flash photography

Possible only with Nikon Autofocus Speedlight SB-24, SB-23, SB-22 and SB-20

Power source

Four AA-type batteries

Number of 36-exposure film rolls per set of fresh batteries (approx.)

For autofocus operation with AF Zoom-Nikkor 35-70mm f/3.3-f/4.5 lens covering the full range from infinity (∞) to the closest distance and back to infinity (∞) before each shot, at 1/125 sec. or faster shutter speed

| Batteries | With AF Nikkor 35-70mm f/3.3-4.5 | | | |
|-----------------------------------|----------------------------------|--------------------|-------------------|--------------------|
| | Without flash | | With flash | |
| | at 20°C (68°F) | at -10°C (14°F) | at 20°C (68°F) | at -10°C (14°F) |
| AA-type alkaline-manganese (LR06) | 78 | 20 | 19 | 4 |
| NiCd (KR-AA) | 38 | 22 | 11 | 6 |
| Zinc-carbon (SUM-3) | 20 | 5 | 2 | — |

Dimensions (WxHxD) 154 x 102 x 65 mm
or 6.1 x 4.0 x 2.6 in.

Weight (body only) Approx. 647g
or 22.8 oz.

With fresh alkaline batteries at normal temperature (20°C [68°F]).

Specifications and design are subject to change without notice.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications set forth in Part 15 of the FCC Rules. If this equipment does cause interference to radio or television reception which can be determined by turning the equipment on and off, use the equipment in another location and/or utilize an electrical outlet different from that used by the receiver.

AEL (Auto Exposure Lock)

AEL is recommended for shooting small dark subjects against a bright background or for shooting dramatic sunset scenes. When AEL is used in auto exposure mode, camera automatically switches to Center-Weighted Metering.

AF illuminator

When existing light is below a certain level and the camera is set for autofocus mode, the SB-24/SB-23/SB-22/SB-20's AF illuminator turns on automatically and provides enough subject contrast to enable the N5005's autofocus system to function as though it were daytime.

Balanced fill-flash operation

A method of flash photography that keeps flash brightness in balance with the ambient light. (See "Fill-flash.") With the built-in TTL flash or Nikon-dedicated TTL-controlled Speedlights, the N5005 performs automatic balanced fill-flash, called Matrix Balanced Fill-Flash, so both subject and background are correctly exposed, to produce a well-balanced picture. (For automatic balanced fill-flash, see page 46.)

Center-Weighted Metering

In manual mode, or when the AEL button is used in auto exposure modes, the camera automatically switches to Center-Weighted Metering. This secondary metering system places special emphasis on brightness within the 12mm-diameter central area of the viewfinder, making the N5005 exceptionally versatile for a wide variety of subjects.

Depth of field

The zone of acceptable sharpness in front of and behind the subject on which the lens is focused. Depth of field can be increased by using small apertures (larger f-numbers) or short focal-length lenses, or by taking the picture from farther away. To reduce depth of field, use larger apertures (small f-number), long focal-length lenses, and/or near subjects.

DX code

Film information code printed on the film cartridge. The N5005 automatically senses the film speed (ISO 25 to 5000) of DX-coded film the instant it is loaded.

EV

Exposure Value. A number representing the available combinations of shutter speed and aperture that give the same exposure effect when the scene brightness and ISO remain the same.

At ISO 100, the combination of a one-second shutter speed and an aperture of f/1.4 is defined as EV1.

The camera's meter may be used only within EV range of the exposure meter. For example, with the N5005, exposure metering range is from EV 0 to EV 19 at ISO 100 with f/1.4 lens.

Exposure control

Programmed auto: Camera controls both shutter speed and aperture for correct exposure.

Shutter-priority auto: User selects shutter speed and camera chooses aperture for correct exposure.

Aperture-priority auto: User selects aperture and camera chooses shutter speed for correct exposure.

Manual: User select both shutter speed and aperture with the meter's recommendations for correct exposure.

Fill-flash

A method of flash photography that combines flash illumination and ambient light.

Subjects lit from behind or near a window normally appear too dark in photographs, so it is recommended you use a flash for fill-in lighting.

(See "Balanced fill-flash.")

Flash synchronization

The timing of the flash so it fires coincident with the operation of the camera's shutter.

f-number

Number that indicates brightness of film plane image.

Increasing/decreasing f-number is equivalent to opening/stopping down lens aperture. The f-number series is 1.4, 2, 2.8, 4, 5.6, 8, 11, 16, 22, 32, etc. Changing one step to the next larger number (i.e., from f/11 to f/16) decreases image brightness by 1/2; moving to nearest lower number doubles the brightness.

Guide number

The number given to a flash bulb or electronic flash unit to indicate its power. A guide number may be quoted in meters or feet, and depends on the speed of the film being used. Guide numbers quoted assuming a relatively efficient reflector surrounds the flash source, e.g., an average-sized room.

ISO film speed

The international standard for representing film sensitivity (speed with which it reacts to light). The higher the number, the greater the sensitivity, and vice versa. A film speed of ISO 200 is twice as fast as ISO 100, and half the speed of ISO 400 film.

LED

Light-Emitting Diode. For the N5005, used to provide indications inside the viewfinder and self-timer indication.

Matrix Metering system

An advanced camera light metering system using a multi-segment sensor and computer; available Nikon SLR models F-401x/N5005, F-601/N6006, F-601m/N6000, F4, F-801s/N8008s and F-801/N8008. A basic version is used with the Nikon F-401/N4004 and F-401s/N4004s models. Matrix Metering is an exclusive Nikon feature.

SLR

Single Lens Reflex. A type of camera in which you look through the camera's lens as you view through the camera finder. Other camera functions, such as light metering and flash control, also operate through the camera's lens.

TTL

Through-The-Lens. Most SLR cameras have built-in meters that measure light after it has passed through the lens, a feature that enables exposure readings to be taken from the actual image about to be recorded on film, whatever the lens' angle of view and regardless of whether a filter is used.

TTL auto flash

The camera's light sensor measures flash light, as reflected by the subject on the film and shuts off the flash when measurement indicates correct exposure. Because the sensor that controls the flash receives light through the lens, TTL auto flash can be used for bounce photography, fill-in flash, multiple flash photography, etc. An additional advantage of TTL auto flash is that you can use a wide range of aperture settings, while ensuring correct exposure.

| Exposure mode | | Programmed auto | Shutter-priority auto | Aperture-priority auto | Manual |
|---|----------------------------|---|-----------------------|------------------------------------|----------------|
| Focus indicator LED | ● lights up | In focus | | | |
| | ● blinks | Autofocus impossible | | | |
| | ● disappears | Rear/front focus (shutter does not lock in manual focusing) | | | |
| Exposure indicator LEDs (without flash) | ○ lights up | Correct exposure | | | |
| | ○ blinks | Camera shake warning | — | Camera shake warning | — |
| | + lights up | Too bright for auto exposure | | | Over (+1EV ~) |
| | — lights up | Too dark for auto exposure | | | Under (~ -1EV) |
| | + - blink alternately | Lens aperture not set to minimum | | | |
| | + ○ light up | — | Over (+1~+1/3 EV) | | |
| | ○ - light up | — | Under (-1/3~-1EV) | | |
| Ready-light LED | ⚡ blinks (before shooting) | Flash recommended (when built-in flash or external speedlight is OFF) | | | — |
| | | SB-19 is set to B or B (EM) | | SB-19 is set to B or B (EM) | |
| | ⚡ disappears | Recharging (shutter does not lock with external speedlight) | | | |
| | ⚡ lights up | Recharged | | | |
| | | External speedlight not set to TTL | | External speedlight not set to TTL | |
| | ⚡ blinks (after shot) | Insufficient light for correct exposure | | | |

 Shutter is locked