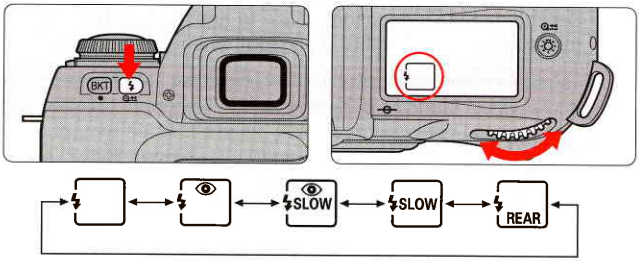
■ Five flash sync modes are available with the N80/N80QD.
Set the flash sync mode by rotating the Main-Command Dial while pressing the flash sync mode button ⚡.



: Front-Curtain Sync

Set the flash sync mode to Front-Curtain Sync for normal flash photography. The camera's shutter speed is automatically set to 1/60 to 1/125 sec. for flash photography in Auto-Multi Program or Aperture-Priority Auto exposure mode.(With an optional Speedlight SB-26, SB-25 and SB-24, set the Speedlight's sync mode selector to NORMAL.)

: Slow Sync

Normally, the camera's shutter speed is automatically set to 1/60 to 1/125 sec. for flash photography in Auto-Multi Program or Aperture-Priority Auto exposure mode. However, for shooting nighttime scenes, Slow Sync uses a slower shutter speed (down to 30 sec.) to bring out background details using all of the available light.

: Rear-Curtain Sync

The Speedlight fires at the end of the exposure, turning available light into a stream of light that follows the flash-illuminated moving subject. When Rear-Curtain Sync is set in Auto-Multi Program or Aperture-Priority Auto exposure mode, Slow Sync is automatically set. (With an optional Speedlight SB-26, 25 and 24, set the Speedlight's sync mode selector to REAR.)

: Red-Eye Reduction

The Red-Eye Reduction lamp lights for approx. 1 sec. before the flash fires in order to reduce the red-eye effect in photos of people or animals. (With an optional Speedlight SB-28/28DX, SB-27 or SB-26, the Red-Eye Reduction lamp of the Speedlight lights.)

: Red-Eye Reduction with Slow Sync

Red-Eye Reduction and Slow Sync mode are simultaneously set. Set the exposure mode to Auto-Multi Program or Aperture-Priority Auto. (With an optional Speedlight SB-28/28DX, SB-27 or SB-26, the Red-Eye Reduction lamp of the Speedlight lights.)

NOTE: Flash Sync Modes

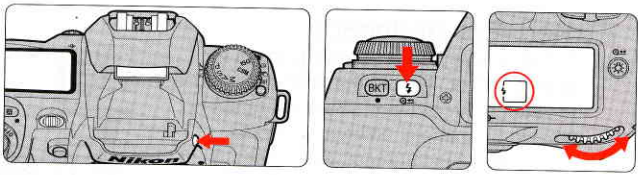
- When Red-Eye Reduction or Red-Eye Reduction with Slow Sync is selected, the Red-Eye Reduction lamp lights for approx. 1 sec. before the flash fires. Do not move the camera or let the subject move until the shutter is released. (Red-Eye Reduction is not recommended in shooting situations where shutter release is your top priority.)
- With some lenses, light from the Red-Eye Reduction lamp may not reach the subject's eyes. In some cases, red-eye effect may not be reduced effectively due to the location of subject.
- With Slow Sync and Red-Eye Reduction with Slow Sync, keep the camera steady to prevent picture blur since the shutter speed is slow. Use of a tripod is recommended.
- Rear-Curtain Sync cannot be used with a studio flash system since the correct synchronization cannot be obtained.

■ Operation described in this section applies when the built-in Speedlight and D- or G-type AF Nikkor are attached.

1 Set the metering system.

- Set the metering system to Matrix or Center-Weighted Metering.

2 Release the built-in Speedlight by pressing the flash lock-release button, and set the flash sync mode by rotating the Main-Command Dial while pressing the ⚡ button.



- Speedlight starts to charge when it is released and ϟ appears in the viewfinder when Speedlight is fully charged.
- Press the Speedlight down gently until it clicks into place to retract it. (To conserve power, keep the Speedlight retracted when it is not in use.)

3 Set exposure mode and confirm shutter speed and aperture.

- Note that Automatic Balanced Fill-Flash with TTL Multi Sensor is executed with the exposure mode set to Auto-Multi Program, Shutter-Priority Auto or Aperture-Priority Auto, and Standard TTL with the Manual.
- Available shutter speed and aperture in each exposure mode

Exposure mode	Available shutter speed	Available aperture	Page
Auto-Multi Program	Automatically set (1/125-1/60 sec.*1)	Automatically set	50
Shutter-Priority Auto	1/125-30 sec.*2		52
Aperture-Priority Auto	Automatically set (1/125-1/60 sec.*1)	Desired setting*3	54
Manual	1/125-30 sec.*2, bulb		56

*1 *Shutter speed is prolonged up to 30 sec. with Slow Sync, Rear-Curtain Sync and Red-Eye Reduction with Slow Sync.*

*2 *Shutter speed shifts automatically to 1/125 sec. when the shutter speed is set to faster than 1/125 sec. and the flash is fired (or attached optional Speedlight is turned on). In this case, 125 appears in the viewfinder and the selected shutter speed display blinks in the LCD panel.*

*3 *Flash shooting distance range depends on the ISO film speed of the film in use and aperture selected. In Aperture-Priority Auto or Manual exposure mode, set the aperture according to the flash shooting distance range table on page 83.*

4 Confirm ϟ appears in the viewfinder, make sure the subject is within the flash shooting distance range and shoot.

- The shutter cannot be released unless ϟ appears without blinking in the viewfinder.
- ϟ in the viewfinder blinks approx. 3 sec. after full flash output. This may indicate underexposure has occurred. Check the focus distance, aperture or flash shooting distance range and shoot again.
- When the conditions for AF-Assist Illumination are met (page 43), the AF-Assist Illuminator automatically turns on to guide autofocus.
- In Auto-Multi Program, the camera automatically controls maximum available aperture according to the film speed. See page 87.
- Continuous shooting (▣) cannot be used in flash shooting.

■ Flash shooting distance range for built-in Speedlight

Flash shooting distance changes according to the film speed in use and aperture setting.

ISO Film speed	25	50	100	200	400	800	Flash shooting distance range m/ft.
Guide number m/ft.	6/20	8.5/28	12/40	17/56	24/79	34/112	
Aperture value	—	—	1.4	2	2.8	4	2-8.5/6.6-28
	—	1.4	2	2.8	4	5.6	1.4-6/4.6-20
	1.4	2	2.8	4	5.6	8	1-4.2/3.3-14
	2	2.8	4	5.6	8	11	0.7-3/2.3-10
	2.8	4	5.6	8	11	16	0.6-2.1/2.0-6.9
	4	5.6	8	11	16	22	0.6-1.5/2.0-4.9
	5.6	8	11	16	22	32	0.6-1.1/2.0-3.6
	8	11	16	22	32	—	0.6-0.8/2.0-2.6

- The maximum flash shooting distance can also be calculated by dividing the guide number by the aperture value selected.

Example: When f/2.8 is selected with ISO 100 film using the camera's built-in Speedlight, the maximum flash shooting distance will be;

$\frac{12}{2.8}$ = approx. 4.2m or $\frac{40}{2.8}$ = approx. 14 ft.

■ Usable lenses with built-in Speedlight

- 28mm to 300mm CPU lenses can be used with the built-in Speedlight.
- Make sure to remove the lens hood.
- The built-in Speedlight cannot be used at shooting distance less than 0.6m.
- Vignetting occurs at the edges of the frame resulting in underexposure with the following zoom lenses, which have limitations in usable focal length or shooting distance:

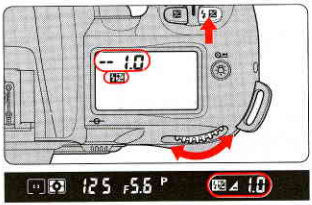
Lens	Limitations
AF-S 17-35mm f/2.8 ED	35mm focal length at 1.5m or longer shooting distance.
AF 18-35mm f/3.5-4.5 ED	28mm or longer focal length; and at 28mm, at 1m or longer shooting distance
AF 20-35mm f/2.8	28mm focal length at 2m or longer shooting distance or 35mm focal length at 0.7m or longer shooting distance
AF 24-85mm f/2.8-4	28mm or longer focal length; and at 28mm, at 1m or longer shooting distance
AF 24-120mm f/3.5-5.6	28mm or longer focal length; and at 28mm, at 0.8m or longer shooting distance
AF-S 28-70mm f/2.8 ED	50mm or longer focal length; and at 50mm, at 0.8m or longer shooting distance
AF 28-85mm f/3.5-4.5	28mm or longer focal length; and at 28mm, at 2m or longer shooting distance
AF 35-70mm f/2.8	35mm or longer focal length; and at 35mm, at 0.8m or longer shooting distance.
AF Micro 70-180mm f/4.5-5.6 ED	70mm or longer focal length; and at 70mm, at 0.7m or longer shooting distance

* 28mm to 200mm non-CPU Nikkor lenses (AI-S, AI, AI-modified Nikkor) and Series-E lenses except 200mm f/2 lens can be used with the built-in Speedlight. However following lenses have limitations in usable focal length or shooting distance:
  - AI-S/AI 25-50mm f/4 (40mm or longer focal length; and at 40mm, at 0.8m [2.6 ft.] or longer shooting distance)
  - AI-S 28-85mm f/3.5-4.5 (35mm or longer focal length)
  - AI 35-70mm f/3.5 (35mm or longer focal length; and at 35mm, at 1m [3.3 ft.] or longer shooting distance)
  - AI 28-45mm f/4.5 (28mm or longer focal length; and at 28mm, at 1m [3.3 ft.] or longer shooting distance)
  - AI-modified 50-300mm f/4.5 (200mm or longer focal length)
  - AI-S/AI 50-300mm f/4.5 (135mm or longer focal length)
  - AI-S 80-200mm f/2.8 (105mm or longer focal length)
  - AI-modified 80-250mm f/4 (135mm or longer focal length)

Flash Exposure Compensation

■ Flash exposure compensation lets you intentionally change the correct exposure computed by the Speedlight and the camera. For example, you can highlight the main subject by increasing the flash output or prevent the main subject from becoming too bright by decreasing the flash output.

1 Set flash exposure compensation by rotating the Main-Command Dial while pressing the ⚡ button until the desired compensation value appears (–3 EV to +1 EV in 1/2 steps).



Electronic analog exposure display

–0.5 EV compensation

+1 EV compensation

- When the flash exposure compensation is set, ⚡ appears in the LCD panel and viewfinder. The compensation value can be checked by pressing the ⚡ button.
- Normally, you should compensate exposure to the + side when the background is brighter than your main subject, or to the – side when the background is darker.

2 Release the built-in Speedlight by pressing the flash lock-release button, and set the flash sync mode and exposure mode.

3 Compose picture, focus and confirm ϟ appears in viewfinder. Then make sure the subject is within the flash shooting distance range and shoot.

- To cancel flash exposure compensation, rotate the Main-Command Dial while pressing the ⚡ button to reset the compensation value to 0.0. Alternately, you can perform Two-Button Reset (page 76). (Turning the power switch off does not cancel the flash exposure compensation function.)

Usable Optional Speedlights

■ In the table, ① indicates D- or G-type Nikkor lenses (except IX-Nikkor), ② indicates CPU Nikkor lens other than D- or G-type (except AF Nikkor for F3AF) and ③ indicates non-CPU Nikkor lenses.

Speedlight \ Flash mode	Lens	TTL			A	M		REAR		
		3D Multi-Sensor Balanced Fill-Flash*1	Multi-Sensor Balanced Fill-Flash	Standard TTL flash*2	Non-TTL Auto	Manual	Repeating Flash	Rear-Curtain Sync	Red-Eye Reduction	Monitor Pre-Falsh*3
SB-28, SB-28DX (Cordless)	①	○		○	○	○	○	○	○	○
	②		○*1	○	○	○	○	○	○	○
	③			○	○	○	○	○	○	
SB-27 (Cordless)	①	○		○	○	○		○	○	○
	②		○*1	○	○	○		○	○	○
	③			○	○	○		○	○	
SB-26*4 (Cordless)	①	○		○	○	○	○	○	○	○
	②		○*1	○	○	○	○	○	○	○
	③			○	○	○	○	○	○	
SB-25 (Cordless)	①	○		○	○	○	○	○	○	○
	②		○*1	○	○	○	○	○	○	○
	③			○	○	○	○	○	○	
SB-24 (Cordless)	①②		○*1	○	○	○	○	○	○	
	③			○	○	○	○	○	○	
SB-23, SB-29*6 SB-21B*6 (Cordless)	①②		○*5	○		○		○	○	
	③			○		○		○	○	
SB-22s, SB-22, SB-20, SB-16B, SB-15 (Cordless)	①②		○*5	○	○	○		○	○	
	③			○	○	○		○	○	
SB-11*7, SB-14, SB-140*8	①②		○*5	○	○	○		○	○	
	③			○	○	○		○	○	

*1 *Select metering system other than Spot.*

*2 *Standard TTL is performed with Spot Metering. Also, selecting Manual exposure mode automatically changes the TTL Auto Flash mode to Standard TTL with Speedlights other than SB-28/28DX, 27, 26, 25 and 24 that are equipped with TTL Auto Flash.*

*3 *When Spot metering is selected, Monitor Pre-Flash will not be fired.*

*4 *Wireless Slave Flash can be performed with the SB-26. Shutter speed is automatically controlled to slower than 1/90 sec. when the Wireless Slave Flash selector is set to D.*

*5 *Select exposure mode other than Manual or metering system other than Spot.*

*6 *With the SB-29 and SB-21B, autofocus can only be used when an AF Micro-Nikkor (60mm, 105mm, 200mm and 70-180mm) is attached.*

*7 *TTL auto flash is possible with TTL Remote Cord SC-23. In A or M flash mode, attach SU-2 to SC-13 with SB-11 and SB-14, or attach SU-3 to SC-13 with SB-140. SC-11 or SC-15 can also be used; however, the ready-light does not appear in the viewfinder and the shutter speed does not change automatically.*

*8 *Ultraviolet photography can be performed only when SB-140 is set to M. (Infrared photography cannot be performed.)*

■ Notes on using the optional Speedlight

- See your Speedlight manual for details. If the camera groups are defined in the manual of the Speedlight with TTL auto flash, see the section for camera group I.
- Flash sync speed is 1/125 sec. or slower when using an optional Speedlight.
- Available film speeds for TTL auto flash are ISO 25 to ISO 1000.
- With the SB-26, 25 or 24, flash sync mode set on the Speedlight overrides the setting on the camera body.
- When Red-Eye Reduction or Red-Eye Reduction with Slow Sync is set on a camera attached with the SB-28/28DX, 27 or 26, the Red-Eye Reduction lamp of the Speedlight lights up.
- Even when the optional Speedlight with the AF-Assist Illuminator is attached, AF-Assist Illuminator does not emit light unless the conditions for AF-Assist Illumination are met (page 43).
- With SK-6 and SB-24 are attached, AF-Assist Illuminators of the camera body and the Speedlight do not emit light.
- In Auto-Multi Program, the camera automatically controls the maximum available aperture as follows in relation to the film speed:

ISO film speed		25	50	100	200	400	800	1000
Maximum available aperture	Built-in Speedlight	2	2.4	2.8	3.3	4	4.8	—
	Optional Speedlight	2.8	3.3	4	4.8	5.6	6.7	6.7

* When film speed increases by one step, the maximum available aperture is stopped down by 1/2 f/stop. If you are using a lens with a maximum aperture smaller than that listed above, the automatically controlled aperture range is from the lens' maximum to minimum aperture.

- Use the optional Accessory Shoe Adaptor AS-15 to use the sync terminal
- When flash exposure compensation is set, ⚡ appears in the viewfinder without the compensation value.
- FEE in the LCD panel and **P** in the viewfinder blink and the shutter cannot be released when the exposure mode is set to **P** and attached Speedlight is not set to TTL Auto Flash. Set the Speedlight flash mode to TTL, or set the camera's exposure mode to **S**, **A** or **M**.
- To cancel Monitor Pre-Flash when using the SB-28/28DX, 27, 26 or 25, select Spot metering.

NOTE: Flash attachments made by manufacturers other than Nikon

Use only Nikon Speedlights. Other units may damage the camera's electrical circuit due to incompatible voltage requirements (not compatible with 250V or higher), electric contact alignment or switch phase.

About Depth of Field and Focus Tracking

This camera is equipped with autofocus where focusing is automatically executed by the camera. Basics of the relationship between focus and depth of field and Focus Tracking are explained in this section.

■Depth of field

When focusing, depth of field should be considered. Depth of field is the zone of sharpest focus in front of and behind the subject on which the lens is focused. It varies according to shooting distance, focal length and, above all, aperture. Smaller apertures (larger f-numbers) will produce a deeper depth of field where the background and foreground become sharper; larger apertures (smaller f-numbers) will produce a shallower depth of field where the background becomes blurred. Similarly, shorter shooting distance or longer focal length will produce a shallower depth of field, and longer shooting distance or shorter focal length will produce a deeper depth of field. Note that depth of field tends to be shallower in front of and deeper behind the subject in focus.

■Focus Tracking

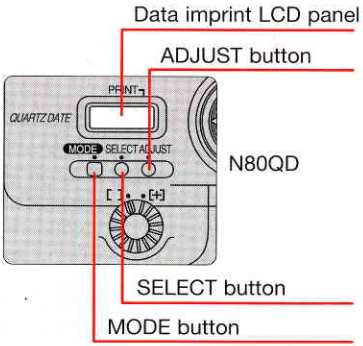
When the focus mode selector is set to Single Servo AF (**S**) or Continuous Servo AF (**C**) and the shutter release button is lightly pressed or AE-L/AF-L button (when AF start in **CSM** *f* *f* is selected) is kept pressed, the camera automatically switches to Focus Tracking when a moving subject is detected. Focus Tracking enables the camera to analyze the speed of the moving subject according to the focus data detected, and to obtain correct focus by anticipating the subject's position—and driving the lens to that position—at the exact moment of exposure.

In Single Servo AF, Focus Tracking is activated with a subject that has been moving in advance to the focus detection, and focus is locked when the subject stops moving and ● appears in the viewfinder. In Continuous Servo AF, camera continues to track subject (even with a subject which started moving in the middle of the focus detection) and focus is not locked.

DATA BACK

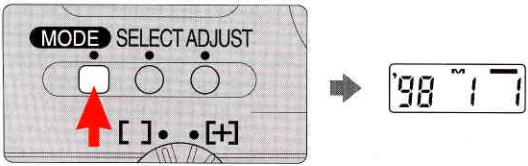
Imprint the date and/or time on photographs with the data back of the Nikon N80QD.

■ The N80QD allows you to imprint Year/Month/Day, Day/Hour/Minute (24-hour clock), Month/Day/Year or Day/Month/Year on your picture (in any exposure mode).

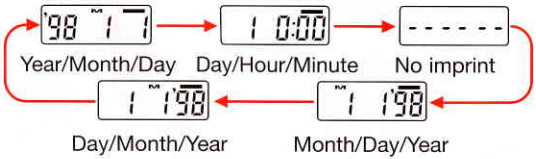


■ Adjusting date and time (Example: year 2000, April 21, 15:30)

1 Push MODE button to select one of the date displays.

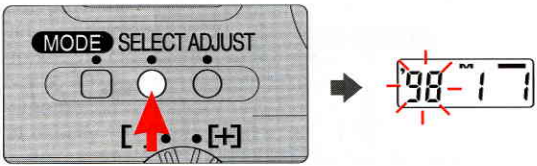


• Each time you push the MODE button the display changes as follows:



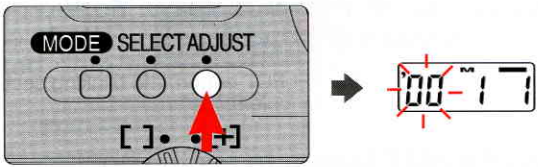
• To set date choose display other than Day/Hour/Minute. With Day/Hour/Minute display, only time can be set.

2 Push SELECT button so year section starts blinking.



- Each time you push the SELECT button the blinking section moves in the order of year, month and day. ' indicates the year section (last two digits) and ᴍ indicates the month section. (ᴍ is not imprinted on the picture.)

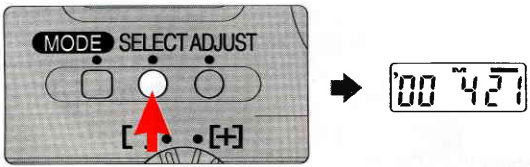
3 Push ADJUST button to set the year to "00".



- Each time you push the ADJUST button the year section changes as follows (between 1998 to 2049):

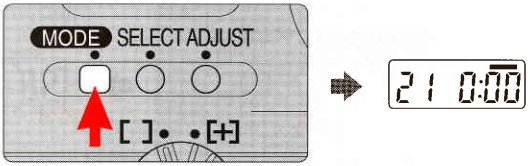
- To change the numerical indication rapidly, hold the ADJUST button down for more than 1 sec.

4 Set the month and day following steps 2 and 3. When the setting is complete, push the SELECT button so the newly adjusted date display appears without blinking.

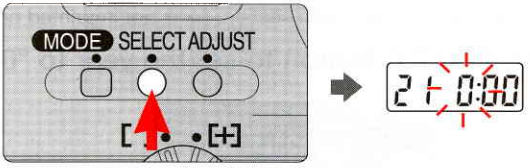


- Push the SELECT button until the date display stops blinking. When the data imprint indicator — appears in the data imprint LCD panel, date setting is complete.

5 Push MODE button to select Day/Hour/Minute display.

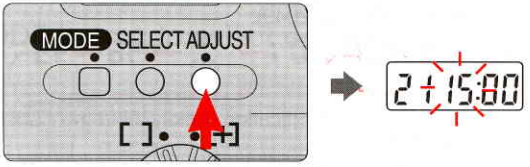


6 Push SELECT button so hour section starts blinking.

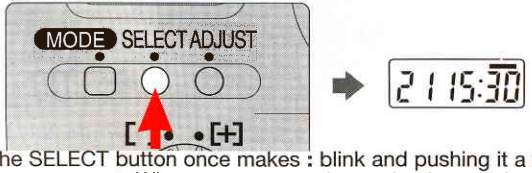


- Each time you push the SELECT button, the blinking section moves in the order of hour, minute and : (colon).

7 Push ADJUST button to set the hour to "15".



8 Set the minute following steps 6 and 7. When the setting is complete, push the SELECT button twice so the newly adjusted time display appears without blinking.

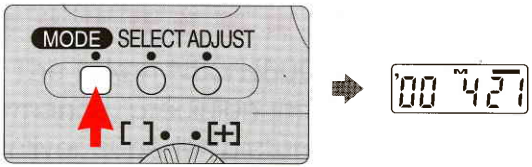


- Pushing the SELECT button once makes : blink and pushing it a second time makes — appear. When — appears, the setting is complete.

- To set time to the precise second, push the SELECT button once at the step 8 so : indication blinks. When the actual time coincides with the time you have set, push the ADJUST button. The clock starts from 00 sec. (Seconds are not displayed in the LCD panel.)
  Example: To set the clock to 13:00:00:
  Set the clock to 13:00. Push the SELECT button so : indication blinks. When the time becomes exactly 13:00:00, push the ADJUST button to start the clock at exactly 13:00:00.
- Batteries in the camera body also power the Quartz Date. Set the date and time after installing batteries for the first time. When changing batteries, date and time remain in the Quartz Date memory up to approx. 15 minutes without batteries. If the date and time data are lost, reset them.

■ Imprinting date/time

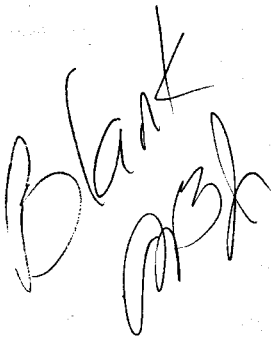
Push MODE button to select date/time display and fully depress the shutter release button to take a picture with the imprinted date/time.



- The data displayed on the data imprint LCD will be imprinted on the picture. Select -- -- -- (no imprint) to cancel data imprint. Compatible film speeds for data imprinting are ISO32-3200.
- Data imprint indicator — blinks for approx. two to three sec. immediately after the shutter is released (when a film is loaded).

Imprinted date/time

The illustration at right indicates the position of the imprinted date/time on the film. It may be difficult to read against bright colors such as white or reddish hues.


Blank
PBK

MISCELLANEOUS

The Nikon N80/N80QD is a high-performance, precision instrument, designed to deliver superior pictures. You'll want to take good care of your camera to ensure the best possible performance. Take time to review this section thoroughly, as doing so will add to your picture-taking pleasure. We've also included information about optional accessories and a detailed section with technical specifications. Please read these areas carefully.

Optional Accessories

■ A variety of optional accessories, including power source and Speedlight are available for the N80/N80QD.

Battery Pack MB-16

- With the Battery Pack MB-16, four 1.5V AA-type alkaline-manganese, lithium, NiCd or Ni-MH batteries can be used to power the N80/N80QD. When AA-type lithium batteries are used, usable number of film rolls increases and maintains stable performance at low temperatures. (Film advance speed in continuous shooting remains the same [as that of batteries installed only in the camera body] with the MB-16.)

Eyepiece correction lenses

- Eyepiece correction lenses enable near- or far-sighted photographers to adjust the eyepiece diopter to suit their vision, and can be attached easily by inserting onto the viewfinder eyepiece. Nine optional eyepiece correction lenses provide viewfinder diopter settings of –5, –4, –3, –2, 0, +0.5, +1, +2 and +3m^{-1} (combined diopter with setting on camera body). We recommend that you actually look through the viewfinder with various correction lenses attached before making a purchase, since viewfinder diopter differs from one person to another. Use the optional eyepiece correction lens when you need eyepiece correction over –1.8 to +0.8m^{-1} that can be adjusted using the N80/N80QD's diopter adjustment lever.

Lenses

- A wide variety of lenses — 14mm to 600mm wideangle, telephoto, zoom, Micro or DC (Defocus image Control) — is available for the N80/N80QD.

Filters

- Nikon filters can be divided into three types: screw-in, drop-in and rear-interchange. With the N80/N80QD, the filter factor need not be considered except for the R60 filter. Compensate exposure +1 EV when using the R60. Note that when special filters available from manufacturers other than Nikon are used, autofocus or the electronic rangefinder may not operate properly.
- Use circular-polarizing filter C-PL instead of polarizing filter Polar. The linear polarizing filter cannot be used with the N80/N80QD.
- Use NC filter when using the filter to protect the lens.
- Moiré may occur when shooting a subject against bright light or if a bright light source is in the frame. In this case, remove the filter before shooting.

Cable release AR-3

- When the Cable Release AR-3 is attached to the release terminal of the N80/N80QD, camera shake can be reduced when shooting with slow shutter speed such as in night scene photography, astronomical photography or close-up photography.

Speedlight SB-28/SB-27

- Speedlight SB-28/SB-27 normally uses four AA-type alkaline-manganese batteries with a guide number of 36 (SB-28) and 30 (SB-27) (manual flash, 35mm zoom-head position, ISO 100, m, 20°C/68°F). Optional external power source SD-7 and SD-8A or Power Bracket SK-6A (SB-28 only) can also be used.
- 3D Multi-Sensor Balanced Fill-Flash, which enables natural-looking overall exposures and a better balance between ambient light and the fill-flash (even when a highly reflective object is located within the frame or the background is non-reflective), is compatible with the SB-28/SB-27. Also, the AF Assist Illuminator enables autofocus operation in a dark environment.
- Automatic power zoom continuously changes the zoom-head position according to the lens' focal length. Also, a variety of flashes, including Slow Sync, Rear-Curtain Sync, non-TTL auto flash or manual flash are compatible with the SB-28/SB-27. With SB-28, Repeating Flash is also available.

Wireless Slave Flash Controller SU-4 (with SG-2)

- TTL multi-flash, where a Speedlight to which Wireless Slave Flash Controller SU-4 (with SG-2) is attached is fired simultaneously with the Speedlight attached to the N80/N80QD, can also be used. Use the Diffuser SG-2 supplied with the SU-4. The Diffuser SG-1 cannot be used. If the SG-1 is supplied with your SU-4, contact an authorized Nikon dealer or service center.
- When using the built-in Speedlight of the N80/N80QD as a master flash, cancel the Monitor Pre-Flash by selecting Manual exposure mode or Spot metering.

Soft case (CF-59/CF-60)

- Two camera cases, CF-59 (for standard lens) and CF-60 (for telephoto lens) are available for this camera.

  CF-59: Camera body fits inside case with AF 28-200mm f/3.5-5.6D IF or smaller lens attached.

  CF-60: Camera body fits inside case with AF 75-240mm f/4.5-5.6D or smaller lens attached.

Neckstraps/Handstrap AH-4

- Braid-type AN-4B (black) and AN-4Y (yellow), wide braid-type neckstrap AN-6Y (yellow) and AN-6W (burgundy) neckstraps are available.
- Handstrap AH-4 helps you to hold the camera firmly and easily, and shoot in quick-motion.

• Cleaning camera body

Use a blower brush to remove dirt and dust from the camera body and clean it with a soft, clean cloth. After using the camera near seawater, wipe the camera body with a soft, clean cloth slightly moistened with pure water to remove salt, and then dry it with a dry cloth. **NEVER use organic solvents like thinner or benzene.** They may damage the camera.

• Cleaning mirror and lens

Use a blower brush to remove dirt and dust from the mirror or lens. To remove fingerprints or smudges from the lens' surface, use a soft, clean cotton cloth or lens tissue moistened with ethanol (alcohol) or lens cleaner.

• Do not subject the camera or lens to strong vibration or shock

Do not drop the camera body and lens or hit them against a hard surface as this may damage their precision mechanism.

• Do not touch the shutter curtains

The shutter is made of very thin curtains. Do not hold, poke, or blow strongly with a blower brush. Doing so may scratch, deform or tear the shutter curtains.

• Avoid strong electric or magnetic fields

The camera may not function properly in strong electric or magnetic fields such as near a transmitter tower. Avoid using the camera in such locations.

• Store the camera in a cool, dry place

Store the camera in a cool, dry place to prevent mold and mildew.
Keep it away from naphthalene or camphor (moth repellent), electrical appliances that generate magnetic fields or an excessively hot place such as inside a vehicle during the summer or near a heater.

• Avoid extreme temperature change

An extreme temperature change can cause condensation inside the camera body. When taking the camera to a very hot place from a very cold place or vice versa, place it inside an airtight container such as a plastic bag and leave it inside a while to expose the camera gradually to the temperature change.

• Avoid water or moisture

Keep the camera away from water or moisture. When using the camera near water, guard against splashes, especially salt water spray.

• Remove the batteries and store the camera with a desiccant

If you do not intend to use the camera for a long time, remove the batteries to protect the camera from battery leakage.

- In a humid environment, store the camera inside a plastic bag with a desiccant to keep out dust, moisture and salt. Note, however, that storing leather cases in vinyl bags may cause the leather to deteriorate. Keep the batteries in a cool, dry place away from heat or humidity.
- Change the desiccant occasionally since it does not absorb moisture effectively after a while.
- Leaving the camera unused for a long period of time may cause mold to grow and result in malfunction. Turn the power on and release the shutter a few times once per month.
- To maintain the built-in Speedlight in peak condition, fire it a few times every month. This will enable you to use the flash for many years.

Nikon cannot be held responsible for any malfunction resulting from the use of the camera other than as specified in this manual.

Notes on Batteries

WARNING

Do not leave

Keep batteries out of children's reach.
If someone accidentally swallows batteries, call a doctor immediately.

• Use two CR123A or DL123A lithium batteries

Use two CR123A or DL123A lithium batteries.

- Change the batteries well before the end of their life and prepare spare batteries before important photographic occasions.

• Turn the camera power off when changing batteries

Turn the camera power off before changing batteries and insert the batteries with ⊕ and ⊖ ends positioned correctly.

- Stains on the battery poles may cause lack of contact. Wipe the batteries well with a dry cloth before installing.

• Use fresh batteries at low temperatures

Battery power diminishes at extremely low temperatures and the camera may not function properly with old batteries. Use a fresh set of batteries at low temperatures, keep spare batteries warm, and use them alternately.

- Film advance speed lowers and number of usable film rolls becomes less at low temperatures. However, battery power may recover when the temperature returns to normal.

• Do not throw batteries into a fire or short circuit batteries

Do not throw batteries into a fire. Do not short, disassemble, heat or charge batteries.

Troubleshooting

LCD panel	Viewfinder	Cause	Remedy	Page
FEE blinks	FEE blinks	• Lens is not set to its minimum aperture.	• Set lens to minimum aperture.	18
FEE blinks	**P** blinks	• Attached Speedlight is not set at TTL Auto flash in P mode.	• Set the Speedlight flash mode to TTL, or set the camera's exposure mode to S, A or M.	87
▭ appears	—	• Batteries are nearing exhaustion.	• Have fresh ones ready.	17
▭ blinks	—	• Batteries are just about exhausted.	• Turn the power off and replace batteries with new ones.	17
▭ and Err blink	Err blinks	• Batteries are exhausted during film rewind.	• Replace batteries with new ones or recharge batteries and turn the power on again. If this warning appears frequently, contact authorized Nikon dealer or service center.	17
F-- blinks	F-- blinks	• Non-CPU lens is attached or lens is not attached.	• Attach CPU lens (except IX-Nikkor). With a non-CPU lens, set the exposure mode to M and set the aperture with lens' aperture ring.	18, 34
Err and E blink	Err and E blink	• Film is not correctly advanced.	• Reload film.	21
DX, and Err blink	Err blinks	• Film speed is set to DX and non-DX-coded film is loaded.	• Load DX-coded film or set the film speed manually.	21, 36
E blinks when exposure meter is turned on	E blinks when exposure meter is turned on	• Film remains in the camera after film rewind is complete.	• Remove the film cartridge.	29

LCD panel	Viewfinder	Cause	Remedy	Page
End blinks	End blinks	• The end of the film roll has been reached (When **CSM** *1* is selected).	• Rewind film by pressing the two film rewind buttons ⊙⇐.	29, 36
—	● blinks	• Autofocus is not possible.	• Focus manually.	47
H *1* appears	H *1* appears	• Overexposure warning (subject is too bright).	• In P mode, use ND filter. • In S mode, select faster shutter speed. • In A mode, select smaller aperture (larger f-number). (If the warning indication remains after performing above remedies in S or A mode, use ND filter as well.)	50-55 52 54
Lo appears	Lo appears	• Underexposure warning (subject is too dark.).	• In P mode, use flash. • In S mode, select slower shutter speed. • In A mode, select larger aperture (smaller f-number). (If the warning indication remains after performing above remedies in S or A mode, use flash as well.)	50-55 52 54
—	Electronic analog exposure display blinks	• Subject brightness is beyond camera's exposure range.	• When the subject is bright, use ND filter and when the subject is dark, use flash. The electronic analog exposure display remains blinking when the Speedlight is used.	57
buLb blinks	buLb blinks	• Shutter speed is set to buLb in S mode.	• Cancel the buLb by selecting 30 sec. or faster shutter speed, or select M mode to perform Long Time Exposure.	52, 65

LCD panel	Viewfinder	Cause	Remedy	Page
Shutter speed indication blinks	125 appears	• Shutter speed faster than sync speed is selected in S or M mode.	• Release the shutter as it is to take a flash picture. (Shutter speed automatically shifts to 1/125 sec.)	82
—	ϟ blinks for 3 sec. after flash	• Flash has fired at full output and underexposure may have occurred.	• Shoot again after confirming focus distance, aperture or flash shooting distance range.	79, 83
Err blinks	Err blinks	• Malfunction detected.	• Release shutter again. If the warning indication remains, or this warning appears frequently, contact authorized Nikon dealer or service center.	
o_ _ and frame counter blink	o_ _ and frame counter blink	• Camera back is opened during film rewind.	•Close the camera back immediately and restart rewinding film by pressing the two ⊙⁺ buttons.	36

In certain cases, due to static electricity or poorly loaded batteries, the N80/N80QD's microcomputer may turn the camera off, even with fresh, properly installed batteries. For the same reason, the film may not advance properly. In each of these cases, to resume operation, simply turn the power off, then turn it on again. Or, remove and reinstall the batteries.

Specifications

Type of camera	**Integral-motor** autofocus 35mm single-lens **reflex** with electronically controlled focal-plane **shutter** and built-in **Speedlight**
Exposure modes	**P**: Auto-Multi Program (Flexible Program possible) **S**: Shutter-Priority Auto **A**: Aperture-Priority Auto **M**: Manual
Picture format	24 x 36mm (**standard** 35mm film format)
Lens mount	Nikon F mount (with AF coupling, AF contacts)
Lens	• D- or G-type AF Nikkor: All functions possible • PC **Micro-Nikkor** 85mm f/2.8D: All functions except autofocus **and** exposure modes other **than** Manual **possible** without shifting and/or tilting the lens • AF Nikkor other **than** D/G-type **(except** AF Nikkor for F3AF): **All** functions except 3D Matrix Metering **possible** • AI-P **Nikkor**: All functions except 3D Matrix Metering and autofocus possible • IX-Nikkor: Cannot be used • Non-CPU: Usable in Manual exposure mode (exposure meter cannot be used) Electronic Rangefinder usable **with** lens with maximum aperture of f/5.6 or faster
Viewfinder	Fixed eye-level pentaprism, built-in diopter adjustment (**–1.8m**$^{-1}$ to +0.8m^{-1})
Eyepoint	17mm (at –1.0m^{-1})
Focusing screen	Clear Matte Screen II with focus **brackets and** On-Demand Grid Lines able to display
Viewfinder frame coverage	Approx. 92%
Finder magnification	Approx. 0.75x **with** 50mm lens set to infinity (at –1.0m^{-1})
Diopter adjustment	–1.8m^{-1} to +0.8m^{-1}
Viewfinder information	Focus indications, metering system, AE lock, **shutter** speed, aperture, exposure mode, electronic analog exposure display/exposure compensation display, exposure compensation, frame counter/ exposure compensation value, ready-light, multiple exposure, focus area, flash exposure compensation, five sets of focus brackets (area)/Spot Metering area, 12mmø reference circle for Center-Weighted metering, On-Demand Grid Lines able to display
Reflex mirror	Automatic, instant-return type

Lens aperture	Instant-return type, with depth-of-field preview button
Autofocus	TTL phase detection, Nikon Multi-CAM900 autofocus module • Detection range: EV –1 to EV 19 (ISO 100, at normal temperature)
Lens servo	• Single Servo AF (**S**), Continuous Servo AF (**C**), Manual focus (**M**) • Focus Tracking automatically activated in subject's status in Single Servo AF (**S**) or Continuous Servo AF (**C**)
Focus area	One of five focus areas can be selected
AF Area mode	• Single Area AF • Dynamic AF (Dynamic AF Mode with Closest Subject Priority is available)
Focus lock	Focus is locked by pressing ● button or lightly pressing shutter release button in Single Servo AF
Metering system	TTL full-aperture exposure metering system Three metering systems selectable (limitations with lens used) • 3D Matrix Metering • Center-Weighted Metering: Approx. 75% of the meter's sensitivity concentrated on the 12mm dia. circle • Spot Metering: 4mm dia. circle (approx. 1% of entire frame)
Metering range	3D Matrix Metering: EV 0-21 Center-Weighted Metering: EV 0-21 Spot Metering: EV 3-21 (at normal temperature, ISO 100, f/1.4 lens)
Exposure meter coupling	CPU
Exposure compensation	Exposure compensated in ±3 EV range, in 1/2 steps
Auto Exposure Lock	Detected exposure value locked by pressing ● button
Auto Exposure Bracketing	Bracketing range: ±2 EV; number of shots: two or three; bracketing steps: 0.5, 1, 1.5 or 2 EV
Film speed setting	• DX or manual selectable • Film speed range: DX: ISO25-5000, Manual: ISO 6-6400 in 1/3 steps

Shutter	Electronically controlled vertical-travel focal-plane shutter
Release terminal	Available on the shutter release button
Shutter speeds	• In **P**, **A**: 30 to 1/4000 sec. • In **S**: 30 to 1/4000 sec. (in 1/2 steps) • In **M**: 30 to 1/4000 sec. (in 1/2 steps), **bulb**
Sync contact	X-contact only; flash synchronization up to 1/125 sec.
Built-in Speedlight	Activated by pressing Speedlight lock-release button, guide number: 12/40 (at ISO 100, m/ft.); flash coverage: 28mm or longer lens; film speed range: ISO 25 to ISO 800
Flash control	Controlled by five-segment TTL Multi Sensor • Automatic Balanced Fill-Flash with TTL Multi Sensor: 3D Multi-Sensor Balanced Fill-Flash compatible with built-in Speedlight, SB-28/28DX, 27, 26, 25 and D- or G-type Nikkor lens; Multi-Sensor Balanced Fill-Flash with built-in Speedlight or Speedlight such as SB-29, 28/28DX, 27, 26, 25, 24, 23, 22s, 22, 20 and AF Nikkor other than D- or G-type or Ai-P Nikkor lens (except for AF Nikkor for F3AF) • Standard TTL: With built-in Speedlight, SB-29, 28/28DX, 27, 26, 25, 24, 23, 22s, 22, 20 and non-CPU Nikkor lens; or with built-in Speedlight, SB-29, 28/28DX, 27, 26, 25, 24, 23, 22s, 22, 20 and exposure mode set to Manual or metering system to Spot • Film speed range: ISO 25-1000
Flash sync mode	Front-Curtain Sync (normal sync), Red-Eye Reduction, Red-Eye Reduction with Slow Sync, Slow Sync, Rear-Curtain Sync
Ready-light	Lights up when flash fully charged with built-in Speedlight, SB-28/28DX, SB-27, SB-26, SB-23, etc.; blinks (3 sec. after flash) for full output warning
Accessory shoe	Standard ISO-type hot-shoe contact (sync contact, ready-light contact, TTL auto flash contact, monitor contact, GND), safety lock provided
Self-timer	Electronically controlled; timer duration: 10 sec.
Depth-of-field preview button	Stop-down lens aperture by pressing depth-of-field button
Film loading	Film automatically advances to first frame when camera back is closed (shutter and reflection mirror not activated)

Film advance	• Automatic advance with built-in motor; [S], [□] selectable • Film advance speed (with Manual focus, Manual exposure mode, shutter speed 1/125 sec. or faster, 36-exposure film) [S]: One frame advance [□]: Continuous shooting Approx. 2.5 fps (fresh batteries)
Film rewind	• Automatic rewind with built-in motor • Rewind speed with 36-exposure film and fresh batteries: High-speed film rewind: approx. 15 sec., Quiet film rewind: approx. 23 sec.
Multiple exposure	Activated using film advance mode dial
LCD panel information (illuminator built-in)	DX indication, shutter speed/exposure compensation value, aperture, exposure compensation, flash exposure compensation, Auto Exposure Bracketing, Bracketing bar graphs, Custom, Flexible Program, flash sync mode, AF Area mode, focus area, battery power, frame counter
Date/time imprint function (N80QD only)	Built-in clock: 24-hour type with timing accuracy within ±90 seconds a month; leap year adjustment until 2049 Usable film: ISO 32 to 3200 DX-coded film Display mode: Year/Month/Day, Day/Hour/Minute, No Imprint, Month/Day/Year and Day/Month/Year
Camera back	Hinged back with film confirmation window; AF Area mode selector, focus area selector N80QD: Data imprint LCD panel/buttons
Power source	Two CR123A or DL123A lithium batteries; optional Battery Pack MB-16 is also available (for four AA-type alkaline-manganese, lithium, NiCd or Ni-MH batteries)
Power switch	Power ON and OFF position
Exposure meter	Auto meter shut-off 6 sec. after power turned on if no operations are performed; activated by lightly pressing shutter release button after power is turned on
Battery power confirmation	In LCD panel, with exposure meter on • [▰] for sufficient power • [▱] indicates batteries are nearing exhaustion • Blinking [▱] indicates batteries are just about exhausted

Usable number of 36-exposure film rolls per set of two fresh 3V lithium batteries

	At 20°C/68°F	At –10°C/14°F
Without flash	Approx. 50	Approx. 35
With flash for half of all exposures	Approx. 15	Approx. 10

After lightly pressing the shutter release button for 6 sec., autofocus operation using an AF Zoom-Nikkor 28-80mm f/3.5-5.6D lens, covering the full range from infinity (∞) to the closest distance and back to infinity (∞) before each shot, with a shutter speed of 1/125 sec. or faster, after the exposure meter automatically turns off (2 sec., or 6 sec. with flash), the same operation follows for the next shot.

	At 20°C/68°F	At –10°C/14°F
Without flash	Approx. 40	Approx. 30
With flash for half of all exposures	Approx. 12	Approx. 10

After lightly pressing the shutter release button for 6 sec., autofocus operation using an AF Zoom-Nikkor 28-105mm f/3.5-4.5D IF lens, covering the full range from infinity (∞) to the closest distance and back to infinity (∞) before each shot, with a shutter speed of 1/125 sec. or faster, after the exposure meter automatically turns off (2 sec., or 6 sec. with flash), the same operation follows for the next shot.

Duration of Long Time (Bulb) exposure

Battery / Temperature	Two 3V lithium
+20°C (68°F)	Approx. 6 hours

Tripod socket

1/4 (diameter, JIS standard)

Custom Setting	18 Custom Setting menus are available (1) Automatic film rewind at the end of film roll (2) Reset to DX film speed setting for new film (3) Bracketing order (4) On-Demand Grid Lines superimposition display (5) Illumination for superimposition (6) Focus area selection (7) Auto Exposure Lock when shutter release button is lightly pressed (8) Auto film loading when camera back is closed (9) Closest-subject-priority Dynamic AF in Single Servo AF (10) Closest-subject-priority Dynamic AF in Continuous Servo AF (11) AE-L/AF-L button (12) Command Dial functions (13) Film rewind (14) Multiple exposure (15) Time delay for auto meter-switch-off (16) Self-timer duration (17) LCD illuminates by pressing any function button (18) AF-Assist Illuminator activation
Two-Button Reset	Pressing the BKT and WB buttons simultaneously and holding them for more than 2 sec. resets various settings to their original initial settings (with some exceptions)
Dimensions (W x H x D)	N80: Approx. 141.5 x 98.5 x 71mm (5.6 x 3.9 x 2.8 in.) N80QD: Approx. 141.5 x 98.5 x 71.5mm (5.6 x 3.9 x 2.8 in.)
Weight (without batteries)	N80: Approx. 515g (18.2 oz.) N80QD: Approx. 520g (18.3 oz.)
Optional exclusive accessories	Battery Pack MB-16, Soft case CF-59/60

All specifications apply when fresh batteries are used at normal temperature (20°C/68°F).

Specifications and design are subject to change without notice.

	Function	Options
1	**Automatic film rewind at the end of film roll**	0: Activated (initial setting) 1: Disabled
2	**Reset to DX film speed setting for new film**	0: Activated (initial setting) 1: Disabled
3	**Bracketing order**	0: Metered value, under, over (initial setting) 1: Under, metered value, over
4	**On-Demand Grid Lines superimposition display**	0: Not displayed (initial setting) 1: Displayed
5	**Illumination for superimposition**	0: Automatically illuminated for low light (initial setting) 1: Canceled 2: Always illuminated
6	**Focus area selection**	0: Normal selection (initial setting) 1: Enables successive rotation of focus area selection
7	**Auto Exposure Lock when shutter release button is lightly pressed**	0: Disabled (initial setting) 1: Activated
8	**Auto film loading when camera back is closed**	0: Enabled (initial setting) 1: Disabled
9	**Closest-subject-priority Dynamic AF in Single Servo AF**	0: Enabled (initial setting) 1: Disabled
10	**Closest-subject-priority Dynamic AF in Continuous Servo AF**	0: Disabled (initial setting) 1: Enabled
11	**AE-L/AF-L button**	0: AE/AF simultaneous lock (initial setting) 1: Auto Exposure lock only 2: Autofocus lock only 3: Auto Exposure lock (remains locked until button is pressed again) 4: AF operation only starts by pressing AE-L/AF-L button

	Function	Options
12	**Command Dial functions**	0: Main-Command Dial for shutter speed; Sub-Command Dial for aperture setting (initial setting) 1: Main-Command Dial for aperture; Sub-Command Dial for shutter speed setting
13	**Film rewind**	0: High-speed film rewind (initial setting) 1: Quiet film rewind
14	**Multiple exposure**	0: Single shutter release operation (initial setting) 1: Continuous shutter release operation
15	**Time delay for auto meter-switch-off**	4 : 4 sec. 6 : 6 sec. (initial setting) 8 : 8 sec. 16 : 16 sec.
16	**Self-timer duration**	2 : 2 sec. 5 : 5 sec. 10 : 10 sec. (initial setting) 20 : 20 sec.
17	**LCD illuminates by pressing any function button**	0: Disabled (initial setting) 1: Activated
18	**AF-Assist Illuminator activation**	0: Activated (initial setting) 1: Disabled

To create Custom Setting: Set the exposure mode/Custom Setting dial to **CSM**. Rotate the Main-Command Dial to select menu number and rotate the Sub-Command Dial to select desired option number. See pages 70-75 for details.