On-line camera manual library
This is the full text and images from the manual. This may take 3 full minutes for the PDF file to download.

FLASH SYNC MODE
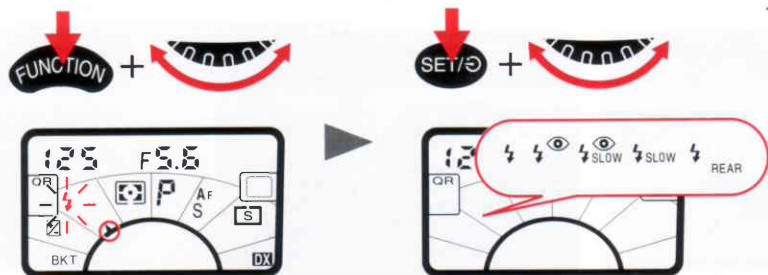

For flash photography with the built-in flash, the N70 offers five flash sync modes. Hold FUNCTION button and rotate command dial until the Function Area indicator appears in the Flash Sync Mode Area and ⚡ blinks in the area. Then hold SET/☉ button and rotate command dial until desired symbol appears. Set ⚡ for Normal Sync*, ⚡👁 for Red-Eye Reduction, ⚡👁SLOW for Red-Eye Reduction with Slow Sync, ⚡SLOW for Slow Sync, or ⚡REAR for Rear-Curtain Sync.

* After removing your finger from SET/☉ button to complete setting, ⚡ disappears.

⚡ **Normal Sync**
For most flash-shooting situations.

For built-in flash operation, see page 86 to 96.

✦ ⦿ Red-Eye Reduction

When shooting people or animals in dim light using a flash, the subject's eye may sometimes appear red in color pictures or white in B&W pictures. The Red-Eye Reduction function reduces the possibility of "red-eye".

✦ ⦿ Red-Eye Reduction with SLOW Slow Sync

Lets you can set Red-Eye Reduction and Slow Sync simultaneously.

✦ SLOW Slow Sync

When flash pictures are taken at high shutter speeds in dim light, the background may come out dark. To improve background exposure, use Slow Sync. Setting Slow Sync extends the automatic controlled shutter speed range down to 30 sec., enabling background details to come out.

✦ Rear-Curtain Sync

REAR When Rear-Curtain Sync is set, flash fires at the end of the exposure, turning available light into a stream of light that follows the flash-illuminated moving subject.

QR (QUICK RECALL) FUNCTION

Settings for film advance mode, focus area, focus mode, metering system, exposure mode (including Vari-Program), flash sync mode and exposure compensation function can be memorized on the N70's microcomputer for easy recall. Four numbers are provided: 0 for the permanent default settings; 1, 2 and 3 for the custom settings.


To memorize

1 Confirm film advance mode, focus area, focus mode, metering system, exposure mode (including Vari-Program) and flash sync mode set on the camera. If necessary, change settings as desired.
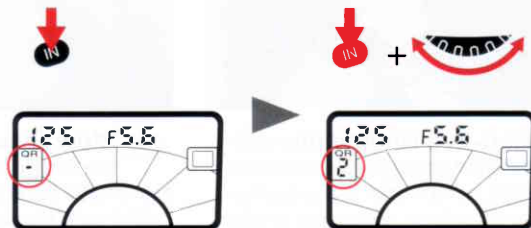
2 Press **IN** button and confirm "-" appears in the QR window of LCD panel. While holding **IN** button, rotate command dial until your desired custom setting number (from 1 to 3) appears in the QR window. Remove finger from **IN** button.
• If you have already customized the QR number and selected the same number to memorize another customized setting, the previous settings will be cleared.
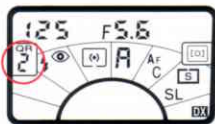
To recall

While pressing **OUT** button*, rotate command dial until "0" or the number representing your previously memorised settings appears. Remove finger from **OUT** button.

** If any QR number is shown in the QR window, "-" appears when you press **OUT** button.*

- For AF mode, make sure the focus mode selector is set at **AF**. With focus mode selector set at **M**, AF mode cannot be recalled.
- Recalling QR number 1, 2 or 3 cancels Flexible Program function. All Mode Exposure Bracketing, Flash Output Level Compensation and Flash Exposure Bracketing are not canceled.

About No. 0

QR No. 0 is for the following factory-set initial settings and cannot be customized.

Film advance mode:	Single frame (Ⓢ)
Focus area:	Wide (▢)
Focus mode:	Single Servo AF
Metering system:	Matrix (▣)
Exposure mode (including Vari-Program):	Auto-Multi Program (**P**)
Flash sync mode:	Normal (If accessory Nikon Speedlight attached is set at Rear-Curtain Sync, Rear-Curtain Sync will be performed.)
Flexible program setting:	Cancel
Exposure compensation function	Cancel
All Mode Exposure Bracketing	Cancel
Flash Exposure Bracketing	Cancel

Once you have recalled one of the QR numbers (0, 1, 2 or 3), adjusting film advance mode, focus area, focus mode, metering system, exposure mode, flash sync mode or exposure compensation value will make the QR number disappear from the QR window. (This does not cancel memorisation. To recall the settings again, simply press **OUT** button.)

SPECIAL FUNCTIONS

This chapter explains advanced photographic techniques and applications including exposure compensation methods. It also shows you how to use the self-timer and how to perform long time exposure.

EXPOSURE COMPENSATION

Exposure compensation is a photographic technique that enables you to vary the final exposure settings from those measured by the camera's light meter. Nikon's 3D Matrix Metering employs methods of exposure calculation that automatically apply exposure compensation, depending upon scene brightness and contrast, and distance information. As a result, your subject, whether it is centered in the viewfinder or not, is given corrected exposure in most lighting situations. We do not recommend using any manually or automatically applied exposure compensation when using Matrix Metering. If you identify an extreme condition under which Matrix may have some difficulty, such as a severely backlit scene or one with extremes of contrast, we recommend using your camera's other built-in meters, Center-Weighted or Spot. Ultimately, only you know what the subject or a part of it requires in terms of exposure measurement. That's why the N70 camera incorporates three meters plus a variety of exposure compensation systems. The photographer's creativity is always the final deciding and controlling factor. To use the various exposure compensation functions, please refer to the following.
• Using auto exposure lock function with AE-L button (pages 74 to 75)
• To obtain meter reading for a particular subject in Manual exposure mode (pages 76 to 77)
• Modifying exposure control by exposure compensation function (pages 78 to 79)
• All Mode Exposure Bracketing (pages 80 to 81)
Results will vary, depending on conditions, so you will want to experiment with each method.

About reflectance
When using the Center-Weighted or Spot Meter, always keep in mind that the exposure indicated will assume that the subject's reflectance is equivalent to 18%. If the subject varies from this reflectance, you must make an adjustment to exposure. Generally speaking, a white subject will have about a 90% reflectance, and an adjustment of 2.5 f/stops (further open) will bring the exposure back to the equivalent of an 18% reading. As another rule of thumb, when shooting a landscape, the light meter reading from green grass is roughly equivalent to 18% reflectance.

AUTO EXPOSURE LOCK FUNCTION WITH AE-L BUTTON.

In the auto exposure mode, when you want to control exposure based on the brightness of a specific area within the scene, use Auto Exposure Lock function. For Auto Exposure Lock function, it is recommended that you should switch the metering system to Center-Weighted or Spot.
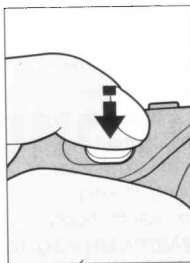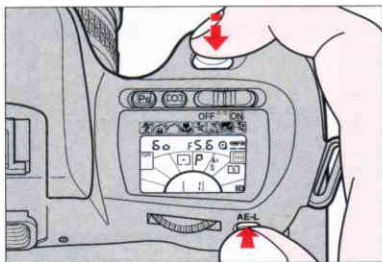

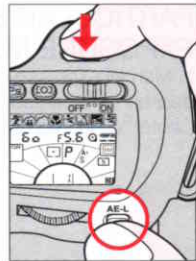2 Lightly press shutter release button, and confirm shutter speed and aperture in viewfinder.

1 Center main subject inside viewfinder and/or move in closer until reference circle for Center-Weighted metering or Spot metering is fully covered by the subject.

3 Keep shutter release button lightly pressed, push AE-L button and hold it in to lock auto exposure.

- While AE-L button is held in, the flash recommended light (green ⚡) does not light up.
- While AE-L button is held in, shutter speed indication does not blink for picture-blur alert even if a shutter speed is set at 1/50 sec. or slower.
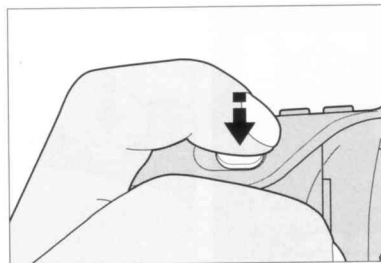

4 Recompose picture and shoot.

- In Single Servo AF mode, if recomposing the picture could change subject-to-camera distance, refocus by briefly removing your finger from shutter release button and lightly pressing it.
- Continuous Servo AF is not recommended if the subject becomes off-centered after recomposing with AE-lock.

TO OBTAIN METER READING FOR A PARTICULAR SUBJECT IN MANUAL EXPOSURE MODE

In Manual exposure mode, if you want to set exposure as desired on a particular subject, switch metering system to Center-Weighted or Spot and use the following method.

2 Lightly press shutter release button.

1 Center main subject inside viewfinder and/or move in closer until reference circle for Center-Weighted metering or Spot metering is fully covered by the subject.

3 Adjust shutter speed and aperture until electronic analog display shows desired exposure.

4 Recompose picture and shoot.

- In Single Servo AF mode, if recomposing the picture could change subject-to-camera distance, refocus by briefly removing your finger from shutter release button and lightly pressing it.
- Continuous Servo AF is not recommended if the subject becomes off-centered after recomposing.

EXPOSURE COMPENSATION FUNCTION

To modify exposure control (i.e., from the ISO standard) use the exposure compensation function. You can modify exposure control from -5EV to +5EV in 1/3 steps is possible. In flash photography, flash output level is also compensated. *After taking your photographs, be sure to reset the control to "0" to resume normal operation.*
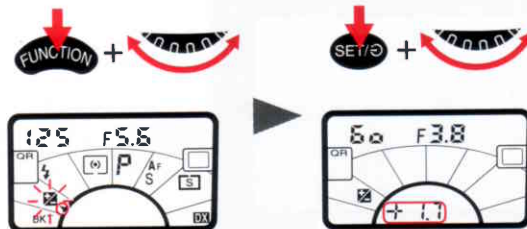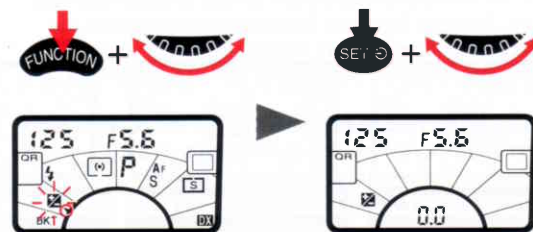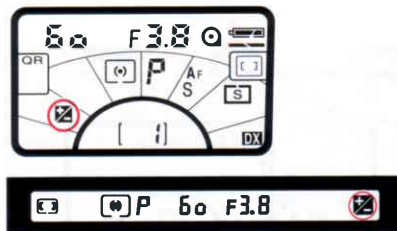
(Center-Weighted Metering)

Without compensation

With compensation

1 Hold FUNCTION button and rotate command dial until the Function Area indicator indicates blinking ✦ in the Exposure Compensation Area. Then hold SET/⟳ button and rotate command dial until desired compensation value appears in place of frame counter on LCD panel. ✦ also appears inside viewfinder.
(In the example above, +1²/₃ compensation is set.)

2 To complete setting, remove your finger from SET/⟳ button. Once set, exposure compensation remains fixed until reset. Although 🔀 stays on to indicate that exposure compensation is on, the compensation value disappears from the readout when you remove your finger from SET/⟳ button. Inside the viewfinder, 🔀 appears.

To confirm compensation value on the LCD panel, Hold FUNCTION button and rotate command dial so that the Function Area indicator indicates blinking 🔀, then press SET/⟳ button.

3 After shooting, be sure to reset amount of compensation to "0" to resume normal operation.
• You can cancel exposure compensation function by setting QR number to "0". In this case camera resets to the factory-set initial settings (page 70).

ALL MODE EXPOSURE BRACKETING

In situations where you might find it difficult to obtain a proper exposure, All Mode Exposure Bracketing lets you shoot the same subject at three different exposures, with a varying exposure compensation degree of 0.3 EV, 0.5 EV, 0.7 EV or 1 EV.

If you set a compensation degree of 0.5 EV, for example, you will take three pictures, the first shot having a -0.5 EV compensation, the second shot having no compensation and the third shot with a compensation of 0.5 EV.
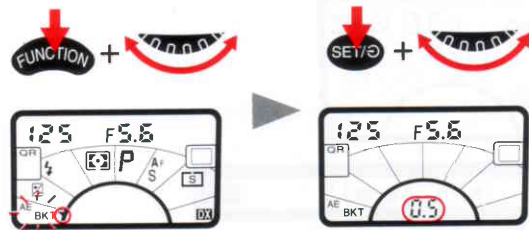
1 While pressing FUNCTION button, rotate command dial until the Function Area indicator indicates blinking **AEBKT** in the Bracketing Area. Then hold SET/⟳ button and rotate command dial until your desired compensation degree appears in place of frame counter.
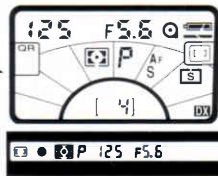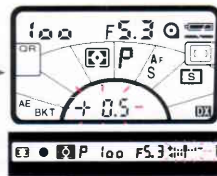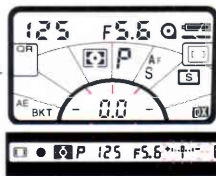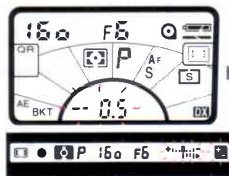
- If Flash Exposure Bracketing has already been set, setting All Mode Exposure Bracketing cancels Flash Exposure Bracketing.
- When "bulb" is set, setting All Mode Exposure Bracketing locks shutter and makes bulb indication blink in LCD panel and viewfinder.
- When All Mode Exposure Bracketing is set, "bulb" cannot be set.
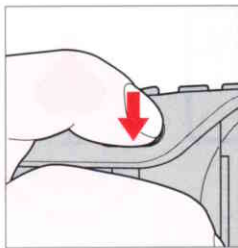
80

2 Remove your finger from SET/☉ button to complete setting.

3 Compose picture, confirm focus and exposure then fully depress shutter release button.

Inside the viewfinder, ☒ and the electronic analog display showing direction of compensation blink.

With film advance mode at Ⓢ or ₛⒸ: Fully depress shutter release button three times to take the three shots.

With film advance mode at ꜀⤶ or ⤶: Fully depress shutter release button and hold it in until three shots are taken.

4 After three shots are taken, All Mode Exposure Bracketing is automatically canceled.

If you want to take one more set of exposure bracketing shooting with the same degree of compensation, press FUNCTION button then SET/☉ button.

• If film reaches end of roll during shooting, rewind film, load a new roll of film, fully depress shutter release button to advance film to frame 1, then fully depress shutter release button again to resume operation.

- In Programmed Auto exposure mode, shutter speed and aperture will vary.
  In Shutter-Priority Auto exposure mode, aperture will vary.
  In Aperture-Priority Auto and Manual exposure mode, shutter speed will vary.
- When using All Mode Exposure Bracketing with Exposure Compensation function, the compensated value will be added. For example, If exposure has been compensated at +1 EV and you set All Mode Exposure Bracketing with 0.5 EV degree, the first shot will be taken with +0.5 EV compensation, the second shot with +1 EV compensation and the third shot with +1.5 EV compensation.
- In flash shooting, All Mode Exposure Bracketing compensates background exposure, not affecting flash light output level.
- Turning the camera's power off cancels All Mode Exposure Bracketing.
- If you set self-timer immediately after setting All Mode Exposure Bracketing, you can perform self-timer shooting without bracketing. After self-timer shooting, fully depress shutter release button to perform All Mode Exposure Bracketing.

SELF-TIMER OPERATION
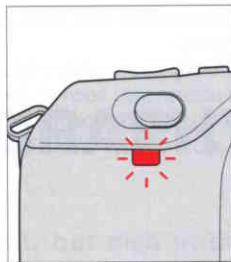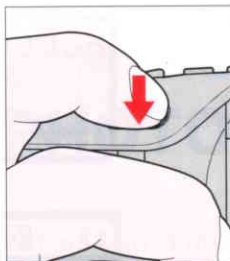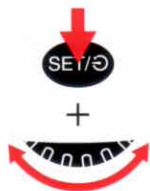
1 Press self-timer (SET/☉) button and confirm that ☉ starts blinking in LCD panel. While pressing SET/☉ button, rotate command dial one click so that ☉ stops blinking. Then remove finger from SET/☉ button.
• To cancel self-timer, press SET/☉ button and rotate command dial so that ☉ disappears.

2 Look through the viewfinder, lightly press shutter release button, and confirm focus and exposure.

3 Fully depress shutter release button. The self-timer LED starts blinking. The shutter will release after 10 seconds. The self-timer LED blinks for eight seconds, then stops blinking to tell you get ready for the shot.

To cancel self-timer operation before shooting: Turn the camera's power off.
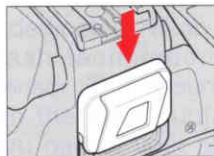
• When using any Auto exposure mode, attach the eyepiece cover (provided) to the viewfinder eyepiece before setting self-timer. The eyepiece cover prevents stray light from entering viewfinder and affecting exposure.
• In Single Servo AF mode, self-timer operates only when in-focus indicator (●) appears inside viewfinder.
• Regardless of film advance mode setting, continuous shooting is not performed.
• At bulb setting, shutter will release at around 1/30 sec.

LONG TIME EXPOSURE USING bulb SETTING

At bulb setting, shutter remains open as long as shutter release button remains depressed.

To avoid camera shake, which may cause picture blur, use a tripod. Use of remote control accessories such as Nikon Remote Cord MC-12B, Modulite Remote Control Set ML-2, etc. is also recommended to avoid camera shake.
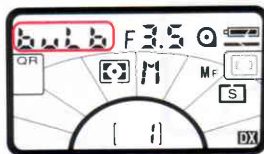
1 Hold FUNCTION button until the Function Area indicator shows Exposure Mode Area and exposure mode symbol starts blinking. Then hold SET/⟳ button and rotate command dial until M for Manual exposure mode appears on LCD panel and viewfinder.

2 Remove your finger from SET/⟳ button, rotate command dial until bulb appears in LCD panel and viewfinder.

3 Fully depress shutter release button and hold it as long as desired.

FLASH PHOTOGRAPHY

Flash can be used not only in dim light, but also in bright conditions to fill in shadows with extra light. This technique is called "fill-flash."

With the N70's built-in flash or any dedicated Nikon Speedlight, you can perform advanced fill-flash technique, Automatic Balanced Fill-Flash with TTL Multi-Sensor. This assures a correct and well-balanced exposure of both the main subject and the background. Make fill-flash a standard part of your photography. You can make better flash pictures than ever before.

USING BUILT-IN FLASH

When subject brightness is insufficient, the flash-recommended light (green ⚡) lights up inside the viewfinder when you lightly press shutter release button to activate the exposure meter.

You can use the built-in flash anytime, regardless of ambient lighting. For example, if your subject is backlit, you can use the built-in flash to illuminate your subject and fill in shadows.

AUTOMATIC BALANCED FILL-FLASH WITH TTL MULTI SENSOR—3D MULTI-SENSOR BALANCED FILL-FLASH AND MULTI-SENSOR BALANCED FILL-FLASH

Combined with a D-type AF Nikkor lens, in automatic exposure mode, the N70's built-in flash performs 3D Multi-Sensor Balanced Fill-Flash. In 3D Multi-Sensor Balanced Fill-Flash operation, just after you depress shutter release button and before the shutter is activated, the built-in flash will fire a series of weak pre-flashes (Monitor Pre-flashes) that are detected by the camera's TTL Multi Sensor, then analyzed for brightness and contrast. Additionally, Distance Information from the D-type AF Nikkor lens in use, along with other exposure control information, is integrated, thus automatically compensating flash output level so that flash output and ambient light are balanced. The Monitor Pre-flashes enable 3D Multi-Sensor Balanced Fill-Flash to ensure correct exposure even in difficult situations, including scenes with a very reflective object such as a mirror or a white wall, and scenes with a very dark backgrounds.

3D Multi-Sensor Fill-Flash is performed with all the meters—Matrix, Center-Weighted and Spot.

When the camera and the built-in flash are used with a non-D-type AF Nikkor lens, Multi-Sensor Balanced Fill-Flash, which offers the same flash output control system but without Distance Information, is performed.

CENTER-WEIGHTED/SPOT FILL-FLASH

If you are using a lens without CPU (a lens other than AF Nikkor and AI-P-Nikkor), in automatic exposure mode, Center-Weighted Fill-Flash with Center-Weighted Metering and Spot Fill-Flash with Spot Metering are performed as Automatic Balanced Fill-Flash. Flash output is properly compensated to produce a natural fill-flash effect.

STANDARD TTL FLASH

In Manual exposure mode, standard TTL Flash will be performed, regardless of metering system and lens in use. To cancel Monitor Pre-flashes, perform Standard TTL Flash by setting exposure mode to Manual.

Using 3D Multi-Sensor Balanced Fill-Flash with two subjects at greatly different distances.
If you first focus on one subject and then, with the focus locked, recompose the shot on another subject, it may result in an incorrect exposure. This is because the focusing distance for the first subject only was sent to the camera's computer. To correct this, refocus on the second subject or cancel the 3D Multi-Sensor Balanced Fill-Flash to activate the Standard TTL Flash.

Important!
- Do not touch the flash when it is firing; normal operation can cause it to heat up.
- Never fire the flash more than 20 consecutive times at intervals of 5 sec. or shorter. This may impair flash performance. If you fire the flash 20 consecutive times at intervals of 5 sec. or shorter, let the flash rest at least 10 minutes before firing again.
  When you continuously fire the flash, the camera's handgrip may become hot; this is normal. Continuous firing will result in a longer interval before the ready-light lights up because it takes longer for the flash to recharge automatically.
- When the built-in flash is activated, an accessory Speedlight will not fire. When using a Speedlight, keep the built-in flash in the locked down position.
- For usable lenses with built-in flash, see page 96.

Built-in flash specifications
Usable film speed: ISO 25 to ISO 800
Guide number: 14 (m) or 46 (ft.) at ISO 100 at 20°C/68°F
Angle or coverage: 28mm or longer lens

BUILT-IN FLASH OPERATION
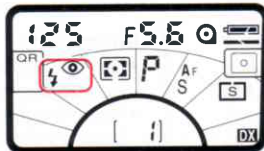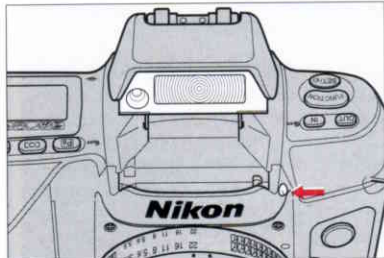
1 Press the flash lock-release to release and activate the built-in flash.

- If continuous shooting (ᴴ⬚ or ⬚) is set on the camera, it automatically switches over to single-frame shooting (Ⓢ) when the built-in flash pops up. In this case, ᴴ⬚ or ⬚ blinks in LCD panel.
- If Wide Area focus is set on the camera, it automatically switches over to Spot Area focus when the built-in flash pops up. In this case, ⬚ blinks in LCD panel, and ⊙ appears inside the viewfinder.

2 Set metering system to Matrix (▣) and set exposure mode as desired. Then set flash sync mode as desired.(See page 68). In the example illustration, Red-Eye Reduction mode is set.

3 Set shutter speed and aperture. (See table on page 91).

For Slow Sync
- Set exposure mode to Programmed Auto (P) or Aperture-Priority Auto (A).
- Slow Sync is automatically set with Night Scene Program and Motion Effect Program.
- Use a tripod to prevent camera shake.

For Rear-Curtain Sync
- Since Rear-Curtain Sync is especially effective at a slow shutter speed, Slow Sync is automatically set at the same time that Rear-Curtain Sync is set in Programmed or Aperture-Priority Auto exposure mode.
- When selecting a slower shutter speed, use a tripod to prevent camera shake.

▣ ● ▣P 125 F5.6
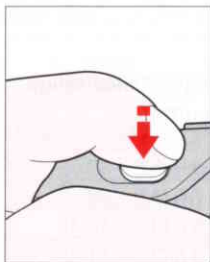
4 Compose and lightly press shutter release button. Confirm that ready-light (red 𝟝) lights up.

• If electronic analog display is shown in Shutter-Priority, Aperture-Priority Auto or Manual exposure mode, background may be underexposed. To obtain correct exposure for background:

In Shutter-Priority Auto exposure mode: Set a slower shutter speed.

In Aperture-Priority Auto exposure mode: Set flash sync mode to Slow Sync to extend the automatically controlled shutter speed range, or set a wider aperture.

In Manual exposure mode: Set a slower shutter speed and/or a wider aperture.
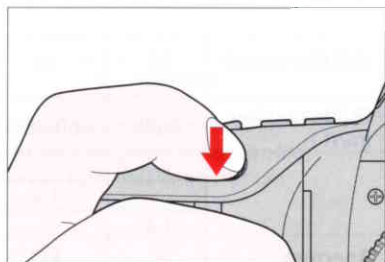
5 Make sure the subject is within the flash shooting distance range (page 90), then fully depress shutter release button to take a shot with flash. After shooting, check ready-light again. If it blinks for a few seconds after shooting, the light might have been insufficient. Confirm shooting distance and if necessary, move closer to the subject or select a wider aperture.
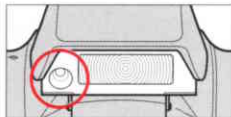
With Red-Eye Reduction
Before shutter release, the red-eye reduction lamp lights up for approx. one second to make the subject's eye pupils become smaller, thus reducing the appearance of red-eye.