

PENTAX®

ZOOM 90·WR

ZOOM 90·WR DATE

OPERATING MANUAL



Welcome to the world of Pentax zoom compact photography! Your compact, light weight camera with weather-resistant capability is a great companion to preserve your favorite memories. Its built-in 38-90mm zoom lens gives you the freedom to frame everything from breathtaking landscapes to family portraits, even detailed close-ups. The built-in auto flash helps you capture subjects in a dimly-lit place or indoor scenes with clarity and brilliance, and functions as a fill-in flash for daylight flash-sync photography. Since most of the operations - including film loading, film speed setting, winding/rewinding, focus and exposure control - are automatic, you can take great pictures with little effort. The DATE model makes it easy to remember the dates when you took pictures.

- Please read this manual carefully before operating the camera to take consistently superior pictures.
- Pay special attention to the cautions and notes in this Operating Manual. Pictures and illustrations shown herein may differ from the camera's actual appearance.

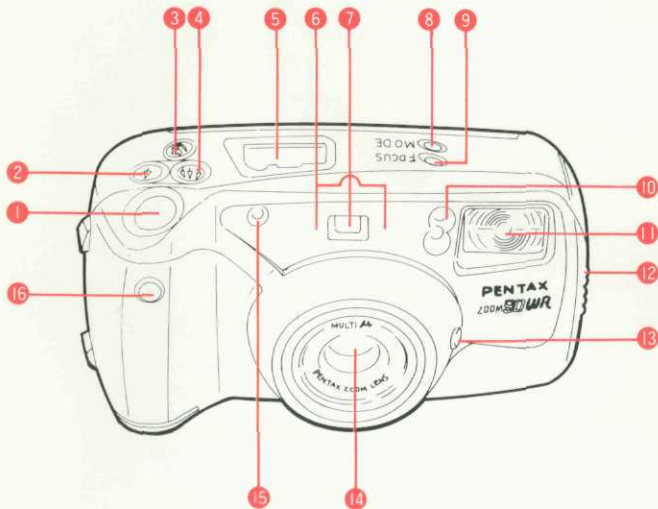
The names of the camera's working parts are listed on the front and back flaps of this manual. Keep the flaps unfolded for quick reference while reading the manual.

Icon indicators used in this manual

Operation direction	
Automatic operation	
Attention	
Lamp lighting	
Lamp blinking	
Correct	
Incorrect	



NAMES OF WORKING PARTS



- 1 Shutter release button
- 2 Zooming button (telephoto)
- 3 Macro button
- 4 Zooming button (wide-angle)
- 5 LCD panel
- 6 Autofocus window
- 7 Viewfinder window
- 8 Mode button
- 9 Focus button
- 10 Light sensor window
- 11 Built-in flash
- 12 Remote controller
- 13 Infinity-landscape button
- 14 Lens
- 15 Self-timer lamp
- 16 Remote control receiver (front)

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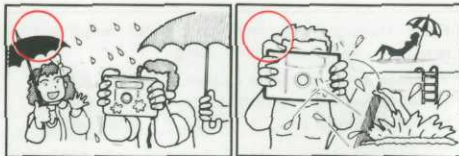
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CAUTIONS

- The electric circuitry inside the camera contains high voltage working parts. Never attempt to disassemble the camera.
- Be careful not to drop it or subject the camera to strong vibrations, shock or pressure.
- Do not apply force to the zoom lens; do not place the camera with the lens facing down.
- Make sure not to obstruct the autofocus window, lens, light sensor window, built-in flash with your fingers or hair.
- Avoid leaving the camera for extended periods where temperature and humidity are high such as in a car.
- Never use solvents such as paint thinner, alcohol or benzine to clean the camera.
- Read through the instructions on weather-resistant capability before using.
- The misuse of batteries causes hazards such as leakage, heating, explosions, etc. Batteries should be inserted with the “+” and “-” sides facing correctly.
- Do not mix battery brands, types or old battery with new ones. Otherwise, overheating or fire might result.
- Never try to break up, short or recharge the batteries. Also, do not dispose of the battery in fire, as the battery may explode.
- Keep the batteries out of reach of children, infants and pets.

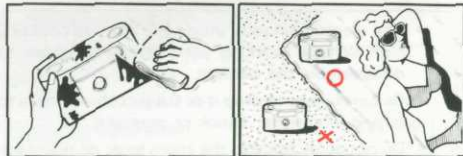
WEATHER-RESISTANT CAPABILITY



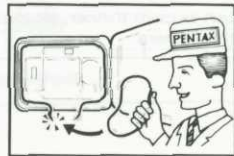
This camera is weather-resistant and can be used without having to be bothered by rain or water spray.



However, it is not designed for underwater photography.



- After use wipe off any dirt or water droplets on the camera with a clean, soft and dry cloth.
- Sand or mud entering the camera may damage the camera. If used at the beach or other sandy or dirty area, do not place it directly on the sand or dirty area.

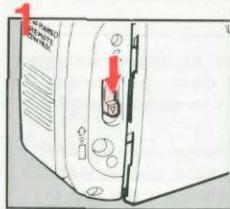


- Remove any dirt or sand from the weather-resistant seals. If the lens barrel or the seals are damaged, they will not keep the camera weather-resistant. Have your factory authorized service agent replace these seals as soon as possible.

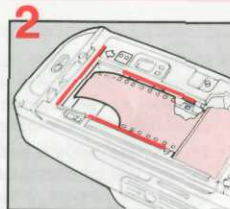
- If there is dirt or saltwater droplets on the camera after use, remove the dirt off the camera or wash it clean in slowly running tap water or in a vessel filled with water **after making sure that the main switch is turned off and the back cover and battery chamber cover are closed. Wash it in water for a maximum of 2-3 minutes. NEVER press the zooming button to zoom the lens while the camera is in water to be washed clean.**
- This camera is not designed to withstand water pressure. Never leave the camera in water for a long time or wash it clean in a vessel where the hydraulic pressure is high.

- Never use solvents such as soapy water, detergent or alcohol to clean the camera. Otherwise, the camera's weather-resistant capability will be impaired.
- The camera inside is not weather-resistant. The camera will be damaged if sand, dust or water enters the camera while changing the film or replacing the batteries. Note that in this case repairs of such damages will be chargeable to you even during the warranty period.

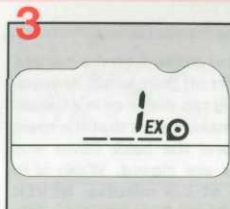
OUTLINE OF BASIC OPERATIONS



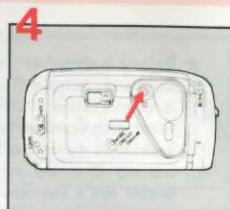
1 Open the back cover (see page 10).



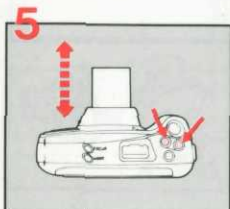
2 Load the film and close the back cover (see page 10).



3 The film will automatically advance to the first frame (see page 11).



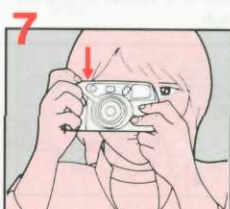
4 Push the main switch to switch on power (see page 6).



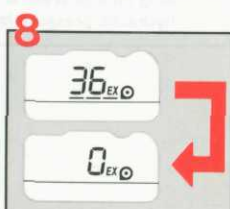
5 Frame your subject and operate the zooming button to compose the shot (see page 8).



6 Focus on your subject (see page 14).



7 Press the shutter release button. In dark conditions, the flash discharges automatically (see page 15).

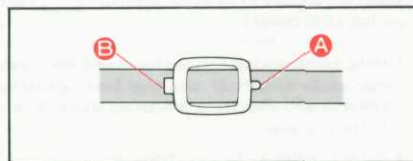
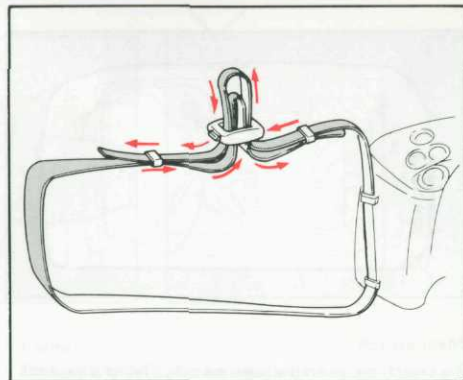


8 When the film reaches its end, the camera will automatically rewind it (see page 19).

PREPARATIONS BEFORE TAKING PHOTOGRAPHS

You should be aware of certain fundamentals to make it easier to use this camera in the best way.

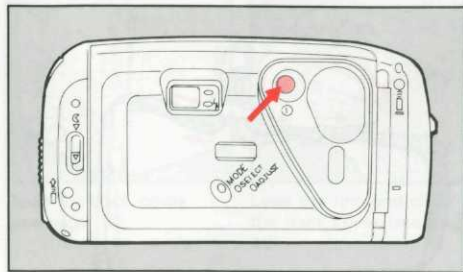
1. STRAP ATTACHMENT



Fit the strap on the camera as illustrated. Use the clamp's protrusion **A** to press the auxiliary rewind button or the ADJUST button on the date model. Use protrusion **B** to open the battery chamber cover.

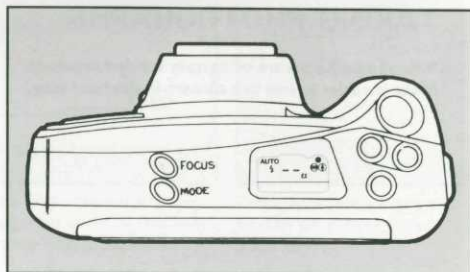
- To prevent the camera from swaying excessively while walking, adjust the strap so the camera rides above your waist.

2. MAIN SWITCH AND BATTERY CHECK




Main switch

To switch on, push the main switch. The lens extends slightly to the wide-angle 38mm setting and LCD panel is on. To switch off, push the main switch again. Make sure the camera is switched off when not in use. Use two 3V lithium batteries, type DL123A or CR123A.

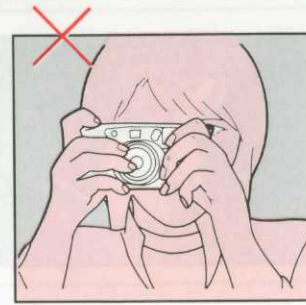
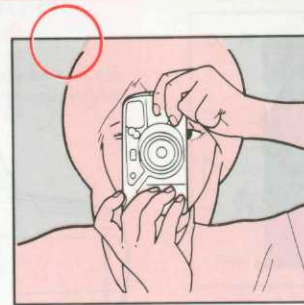
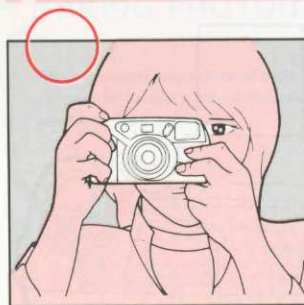


Battery check

After you turn the main switch ON, the lens slightly extends and you are ready to shoot. [See page 40 when the battery exhaustion symbol () appears on the LCD panel.]

- If the camera is left unused for over 3 minutes when the main switch is on, the lens automatically retracts and the power switches itself off to save battery power.
- Refer to page 41 for directions on battery insertion.

3. HOW TO HOLD THE CAMERA



When shooting, hold the camera securely with both hands. Keep the camera as still as possible, and gently press the shutter release button. (If too much force is applied, the camera is likely to shake, and the picture will be blurred.) Try to brace your elbows against your body, or support yourself and the camera against a stable, stationary object, such as a wall. When using the flash with the camera positioned vertically, hold the camera so that the flash is above the lens.

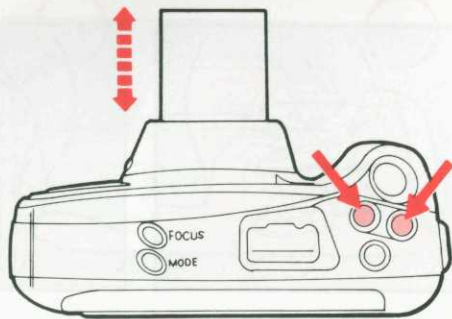
Caution:



Do not hold the zoom lens because it moves back and forth when zooming.

Note:

- Make sure not to obstruct the autofocus window, lens, light sensor window or built-in flash with your fingers or hair.

4. OPERATING 38-90 mm ZOOM LENS



When you press the zooming button (), the lens frames the subject more closely, moving towards the 90mm telephoto setting. When you press the zooming button (), the lens moves towards the wider-angle 38mm setting. When the lens zooms to the desired setting, release the zooming button and press the shutter release button all the way down to take pictures.

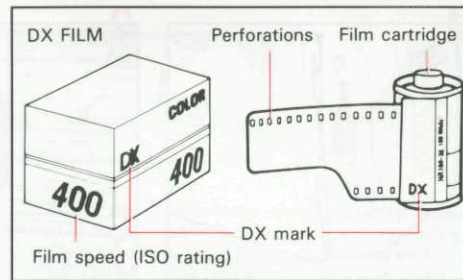
Note:

- When you press either zooming button, the lens focal length is displayed on the LCD panel. The lens focal length is also displayed when the shutter

TAKING PHOTOGRAPHS

After familiarizing yourself with operations on the camera by reading this instruction manual, you're ready to insert the film.

1. USABLE FILM



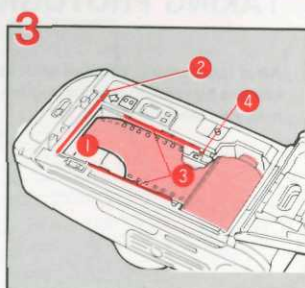
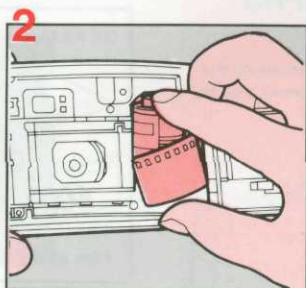
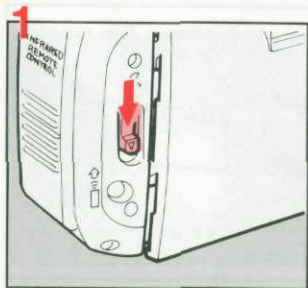
Automatic film speed setting

This camera is designed to use DX-coded films with ISO ratings from 25 to 3200. When any of these films are loaded, the proper film speed is automatically set for the camera.

Notes:

- When buying DX-coded films, make sure the package bears the "DX" mark.
- Non-DX coded film cannot be used.
- Use high-speed film with an ISO rating of 1000 or higher mainly for shooting indoors or in dimly-lit conditions.

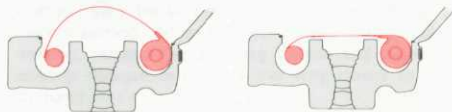
2. FILM LOADING Make sure the power is off before inserting the film.



- 1 Slide the back cover release lever down in the direction of the arrow to open the back cover as illustrated.
- 2 Place the film cartridge in the film chamber by fitting its flat side on top of the rewind shaft first and then slide the top end into the camera.
- 3 Pull the film leader out far enough from the cartridge to reach the take-up spool ①. Align the tip with the film leader end mark (↩) ②.

Notes:

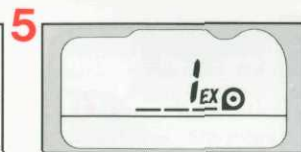
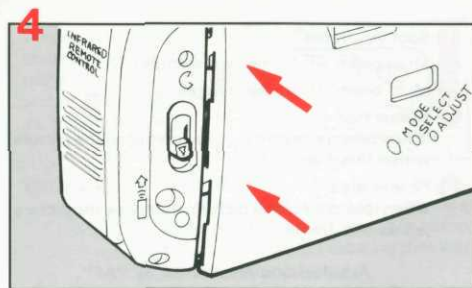
- Make sure the film is properly placed between the guide rails ③.
- If there is dirt on the film detection section ④, film cannot be wound properly.



✗ Slack NO!

○ Flat YES!

- Make sure the film is taut as illustrated. Take up any slack in the film by pushing it back into the cartridge.
- If the end of the film leader is extremely bent, straighten it or cut off the bent portion.

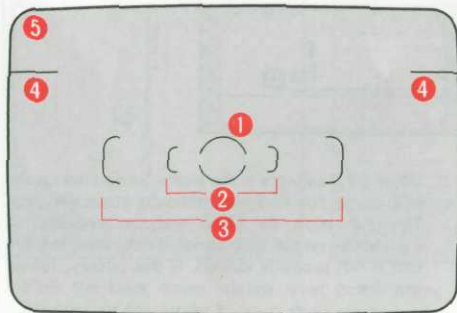


- 4 Make sure there is no sand or water on the seal or your hands before closing the back cover. Make sure that the two tabs in the back cover firmly lock in place when the back cover is closed. The camera will not be weather-resistant if the cover is imperfectly closed and it may also let in light. The film automatically advances to the first frame.
- * Even if no film is loaded, the motor operates for a second or two after the back cover is closed.

- 5 When (;) appears in the exposure counter on the LCD panel, the film automatically stops winding. The indication as shown above appears. If (E) blinks on the LCD panel, it indicates that the film is not properly loaded. If this occurs, reload the film.
- * The exposure counter indication will remain on even if the main switch is turned off.

3. VIEWFINDER DISPLAYS AND SHOOTING RANGES

First, switch on power by pressing the main switch.

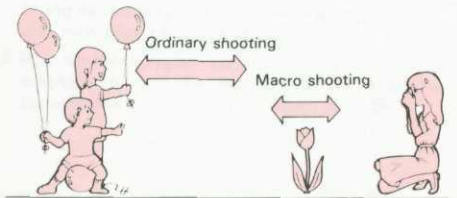


- 1 Spot AF frame
- 2 Multi-beam AF frame (wide-angle)
- 3 Multi-beam AF frame (telephoto)
- 4 Macro frame
When taking a macro picture, compose the picture within this frame.
- 5 Picture area
When taking a normal picture, compose the picture within this frame.

Autofocus is referred to as "AF".

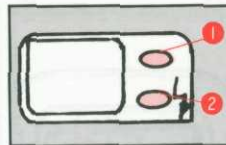
Shooting ranges (effective camera-to-subject distance)

- The ordinary setting allows a shooting range from ∞ (infinity) to 0.8 meter (2.6 ft).
- The macro setting allows a shooting range from 0.8 meter (2.6ft) to 0.5 meter (1.6ft). No subjects closer than 0.5 meter (1.6ft) can be clearly photographed.



4. GREEN/RED LAMPS

When you press the shutter release button halfway, the lamps 1 and/or 2 light up or blink as shown above.



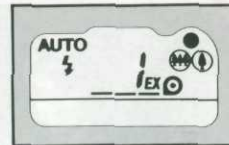
- 1 Green lamp: When the subject is in focus, it lights up to indicate that you can take pictures; when the subject is not in focus, it will blink, indicating that you cannot take pictures.
- 2 Red lamp: When the flash is ready to discharge, it will light up. When the flash is being charged, it will blink.

Notes:

- If the subject is too close, the green lamp blinks. Adjust the camera-to-subject distance so that the green lamp lights up, then release the shutter.
- If the subject is even closer, the green lamp may light up.

5. ORDINARY PHOTOGRAPHY

When the power is switched on by pressing the main switch, the camera automatically selects the Auto and Single-Frame Shooting modes and the LCD



panel indication appears as shown above. These modes are used for taking ordinary pictures. The built-in flash will discharge automatically when the subject is poorly illuminated or backlit.

- When the LCD panel displayed is other than the one as shown above, which indicates the other modes are set, switching power OFF and then ON restores the Auto and Single-Frame Shooting modes.
- When the built-in flash automatically discharges, the shutter speed ranges from approx. 1/40th sec. [wide-angle] to approx. 1/55th sec. [telephoto] (when ISO100 film is used). So be very careful to hold the camera steady to eliminate the possibility of fuzzy pictures due to camera movement while the shutter is open.

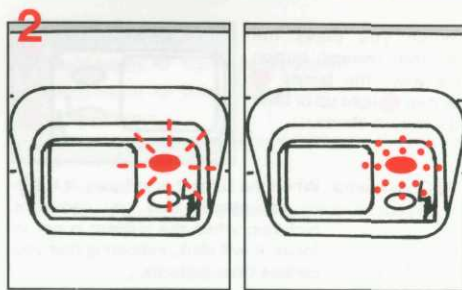
6. TAKING PICTURES Shooting distance: 0.8m(2.6ft) - ∞ (infinity)



- 1 After zooming the lens and composing your shot, focus on the subject with the multi-beam AF frame.

Notes:

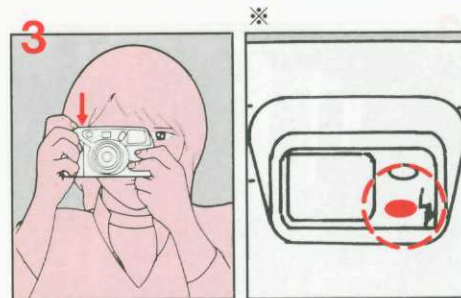
- When the power is switched on, the multi-beam AF mode is automatically set.
- The lens focuses on the closest subject in the multi-beam AF frame.
- The shutter cannot be released while the lens is zooming.



- 2 Press the shutter release button halfway with your subject in focus, and the green lamp lights up. If the subject is closer than 0.8 meter (2.6ft), the green lamp blinks and the shutter cannot be released. In this case, lengthen the camera-to-subject distance.

Notes:

- If you wish to focus on another subject, lift your finger off the shutter release button and press the shutter release button halfway again.
- When the green lamp blinks, the macro symbol (Ⓜ) on the LCD panel also blinks to recommend use of the macro mode (see page 20.).



- 3 Press the shutter release button all the way down, and the shutter is released. Then, the film automatically advances to the next frame.

Notes:

- When the shutter is released, the self-timer lamp lights up momentarily to indicate that a picture has been taken.
- Water drops or dirt on the lens protective glass, autofocus window and light sensor window will prevent you from taking good pictures. Clean them before taking pictures.

※ Automatic Flash Emission

When taking pictures in low light or backlit situations, the flash automatically discharges. When the shutter release button is pressed halfway in the low light, the red lamp lights up, indicating the flash is ready to discharge. If the red lamp blinks, this indicates that the built-in flash is being charged. Therefore, make sure the red lamp lights continuously before taking pictures.

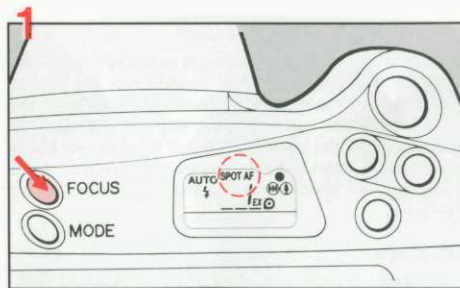
Red-eye

Shooting portraits with the flash may result in "red-eye", the red dot in your subject's eye. This camera includes red-eye reduction flash function, which suppresses the red-eye phenomenon by using preflash. See page 23 for details.

Flash-effective ranges (Nega-color film used)

Lens	ISO	100	200	400
38mm (Ⓜ)		0.8-5m	0.8-7m	0.8-10m
90mm (Ⓜ)		0.8-3m	0.8-4.2m	0.8-5.9m
Macro (Ⓜ)		0.5-0.8m	0.5-0.8m	0.5-0.8m

7. SPOT AF SHOOTING



Select the spot AF mode to focus on a particular spot in the frame.

1 Switch to Spot AF mode

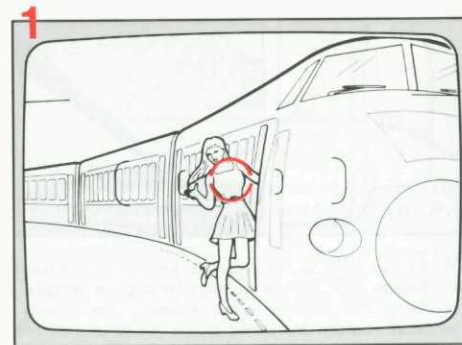
Push the FOCUS button to switch to the Spot AF mode. The [SPOT AF] indication is displayed on the LCD panel, letting you know that the Spot AF mode has been set. To clear this mode, push the FOCUS button again.



2 Focus on the subject.

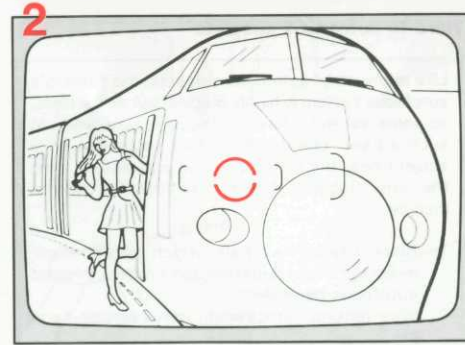
Focus on the subject with the Spot AF frame (○) (for Spot AF) in the center of the viewfinder.

- When the main subject of your picture is off the AF frame in the center of the viewfinder, use the focus-lock technique (see page 17).
- The lamp and picture-taking indications are similar as explained for multi-beam AF.



FOCUS-LOCK SHOOTING

1 Focus on the subject with the AF frame (○). When the shutter release button is pressed halfway down, the green lamp on the right-hand side of the viewfinder lights up and the exposure and focus are temporarily locked.



2 While pressing the shutter release button halfway, re-aim the camera or recompose the picture, then release the shutter.

Notes:

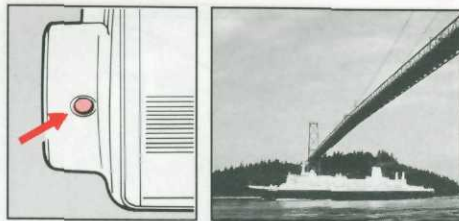
- You can release focus lock simply by lifting your finger off the shutter release button.
- When in the Consecutive Shooting mode (), the focus lock function cannot be used.

8. INFINITY-LANDSCAPE SHOOTING

Hard-to-autofocus subjects

Like many other autofocus cameras, the camera's autofocus system is highly precise, but not perfect, so some subjects may not focus as you wish. In such a case, use the focus-lock technique on a subject near the actual one and equidistant from the lens. Subjects which may fool the system include:

1. Black objects like hair, which don't reflect much light (and therefore don't reflect infrared autofocus beams).
2. Wire netting, latticework, iron exercise-bars, etc.
3. Flickering light sources such as neon signs, fluorescent lamps, TV images, sunlight coming through trees, etc. and subjects illuminated by these light sources.
4. Glossy and reflective surfaces like glass, mirrors, car bodies, etc.
5. Fast-moving objects, like trains in motion.
6. Water jets, water surface, smoke, flame, fireworks, etc., which have no distinct or consistent form, or a subject in mist.

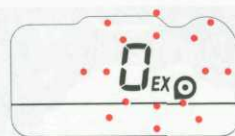


When you wish to take a sharp picture of a distant landscape or a distant subject through a window, releasing the shutter while keeping the infinity-landscape button depressed allows you to take distant scenery with clarity.

- * If the green lamp lights up after you press the shutter button halfway while keeping the infinity-landscape button pressed, the infinity-landscape mode is locked even if you raise your finger off the infinity-landscape button.
- To use the infinity-landscape mode, first press the infinity-landscape button and then the shutter release button while pressing the infinity-landscape button.
- When taking pictures in low light, switch to slow-shutter-speed mode (Flash-OFF mode) (see page 24).

9. UNLOADING FILM

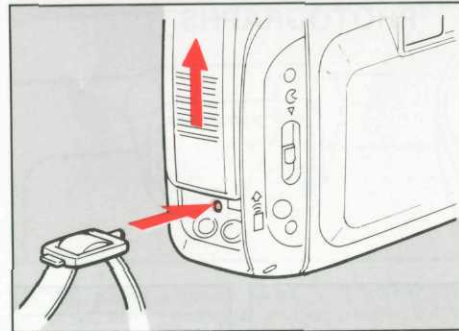
(Be sure to remove the film from the camera in the shade or by using your body to shade the camera.)



After you have exposed the last frame of the roll, the lens retracts, and the film rewinds automatically. Then, the motor stops, and (EX) blinks as shown to indicate that the film has been rewound. Open the back cover, and remove the cartridge from the chamber by pulling its top with your finger.

Notes:

- The shutter may be released a frame or two even after the specified number of frames have been used up as indicated by the possible numbers of shots shown on the film canister. If this occurs, those frames may not be developed.
- Never open the back cover until the whole film roll is rewound.
- 24-exposure roll of film take about 20 seconds to be rewound.
- During rewinding, the exposure counter counts frame numbers in reverse.
- The entire roll of film including the film leader is always rewound into the cartridge to prevent any parts of the film being exposed to light.

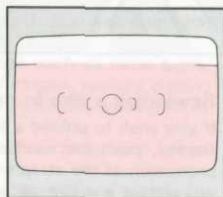
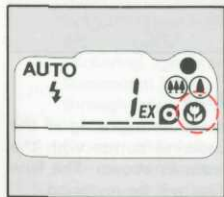


Rewinding a film in mid-roll

If you wish to unload a film before exposing all the frames, push the auxiliary rewind button with the protrusion of the strap's clamp as shown. The lens will retract and the roll of film will be rewound.

TAKING BETTER PHOTOGRAPHS

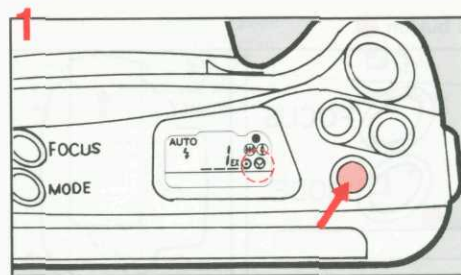
TAKING MACRO PICTURES



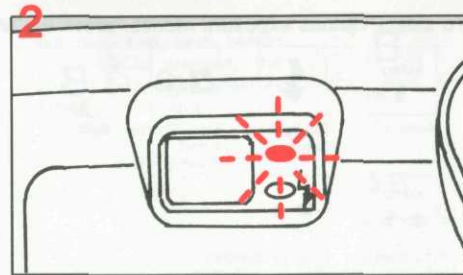
This shooting mode is used to take close-up pictures. When the macro symbol (🔍) appears on the LCD panel, you can take macro pictures. When shooting a subject about 0.5-0.8 meter (1.6-2.6 ft) away, compose the shot within this macro frame.

Notes

- In macro photography, the autofocus frame is not in the center of the viewfinder. So use the focus-lock technique described in "Focus-lock shooting" on page 17 when taking macro pictures.
- The green lamp blinks when the distance is closer than 0.5m, but may light up when the camera-to-subject distance is even shorter.



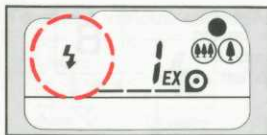
- 1 Press the macro button to set the Macro mode, and the lens moves forward and the (🔍) symbol appears on the LCD panel. To cancel the Macro mode, just press either zooming button (📏) or (📏). The ordinary shooting mode is then restored.



- 2 The macro shooting range is 0.5-0.8 meter (1.6-2.6ft). Press the shutter release button halfway, making sure the green lamp lights up, and then release the shutter.

If you press the shutter release button halfway down while composing the subject at a distance of more than 0.8m (2.6ft) in macro mode, the macro mode will automatically shift to the 90mm telephoto setting. Press the shutter release button all the way down to shoot. The macro mode is restored after the picture is taken.

DAYLIGHT-SYNCHRO SHOOTING



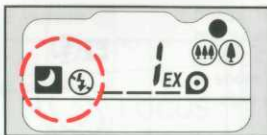
Press the mode button until the (⚡) appears on the LCD panel. The flash will discharge both in dark and bright conditions.

When the portrait is taken even if the subject is not in backlit situation, the front of your subject may be cast in shadow. In such a case, use the Daylight-Synchro Shooting mode (Flash-ON mode) within the appropriate flash-effective range to take pictures. This will ensure that a picture is beautifully exposed without any shadow. The flash will always discharge in this mode.

Notes:

- Make sure the red lamp on the right-hand side of the viewfinder eye-piece lights up when the shutter release button is pressed halfway down before shooting. A red lamp blinking indicates that the flash is being charged.
- Make sure you're within the flash-effective distance range even when you use the built-in flash as a fill-in flash in daytime.

TAKING PICTURES AT SLOW SHUTTER SPEED



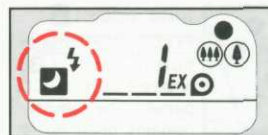
Slow Shutter Speed (Flash-OFF)

Press the mode button until the (🌙 ⚡) symbol appears on the LCD panel.

In this mode, the flash does not discharge, and a picture is taken at a slow shutter speed up to approx. 1/5 second. Use it in places where using flash is prohibited, such as in theaters, museums, etc. Furthermore, this mode is also useful when you wish to take a lit picture with a natural effect.

Notes:

- When shooting in darkness, the shutter speed gets slower, and camera shake is more likely to blur your picture, so use a tripod.
- If the shutter release button is pressed halfway down and the symbol (🌙 ⚡) on the LCD panel blinks, switch to Auto Shooting mode to take the picture. Otherwise, you cannot take a good picture due to insufficient light.



Slow-Speed-Synchro Shooting (Flash-On)

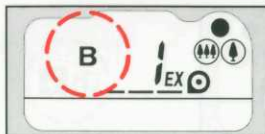
If the red-eye reduction flash button (⚡) is pressed in the Slow Shutter Speed mode, the Slow-Speed-Synch flash mode is set. It is possible to take a picture of subjects and background in a balanced way as shown in the photo by using the built-in flash to properly expose the foreground subject and the slow-shutter-speed to expose the low light background.



BULB, BULB-SYNCHRO SHOOTING

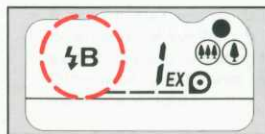


Bulb mode,
approx. 4 sec. (ISO100)



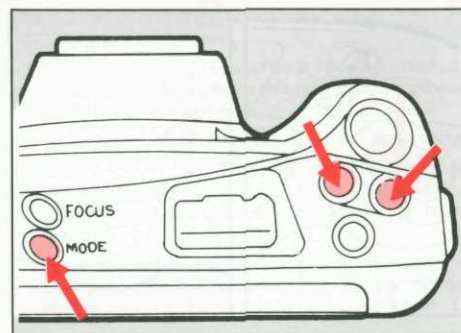
Bulb mode (B)

Press the mode button until (B) appears on the LCD panel. The shutter remains open up to 10 min. as long as the shutter release button is held down. This mode is useful for long exposures required for shooting fireworks and night scenes, for instance. When using this mode, the camera should be mounted on a tripod so that the camera will be steady.



Bulb-synchro mode (⚡B)

If the red-eye reduction flash button (⚡) is pressed in the Bulb mode, Bulb-synchro mode is set. This lets you use the flash in addition to the Bulb mode, so you can take a portrait with a night scene in the background, for example.



Bulb-Timer mode

When shooting in the Bulb or Bulb-Synchro mode, a shutter speed of 1, 2, 3, 4, 5, 6, 7, 8, 10, 15, 20, 30, 40, 50, 60, 90 sec., 2, 3, 4, 5, 6, 7, 8, 10 minutes can be set. [Example: 1S = 1 sec., 2M = 2 min.]

To select the shutter speed in the Bulb or Bulb-Synchro mode, first select the Bulb or Bulb-Synchro mode. Then, while pressing the mode button as shown in the illustration, and while the symbol (B) is blinking on the LCD panel, press either zooming button to select the required shutter speed. (Each time the zooming button is pressed, the shutter speed advances by one setting. If the zooming button is kept depressed, the shutter speed setting will be fast forwarded.)

If the zooming (⬆) button is pressed, the indication advances to the 10 min. setting.

If the zooming (⬇) button is pressed, the indication decreases to the 1 sec. setting.

Notes:

- If the timer setting is blank in the Bulb-Timer mode, this indicates the camera is in the Bulb mode. To switch the exposure mode from the Bulb (B) or the Bulb Synchro mode (⚡B) to the next, press the mode button twice in quick succession.
- To cancel the Bulb-Timer mode before the shutter is released completely, press the main switch. In this instance, the power is not switched off.
- Use the Bulb-Timer mode if you wish to take consecutive pictures in the Bulb mode.