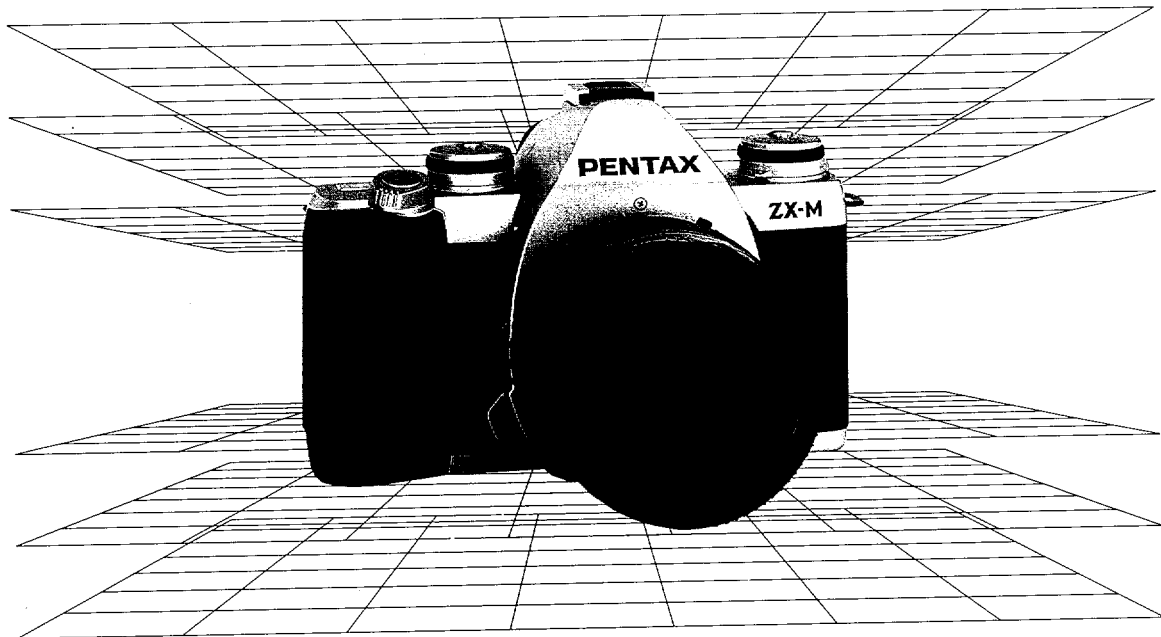


PENTAX®

ZX-M

OPERATING MANUAL



FOR SAFE USE OF YOUR CAMERA

Although we have carefully designed this camera for safe operation, please be sure to follow precautions given on this page.

⚠ WARNING This mark indicates precautions that, if not followed, could result in serious injury to the operator.

⚠ CAUTION This mark indicates precautions that, if not followed, could result in minor or medium injury to the operator or damage to the equipment.

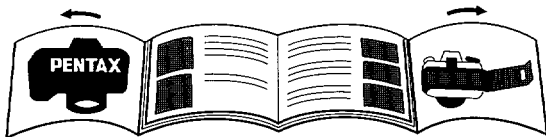
⚠ WARNING

- Wrapping the strap around your neck is dangerous. Make sure that small children do not get the strap caught around their neck.
- Do not look directly at the sun through the camera, as viewing the sun for an extended period may damage your eyes.
- Be sure to store batteries out of the reach of children. Seek medical assistance immediately if accidentally swallowed.

⚠ CAUTION

- Never try to disassemble, short or recharge the battery. Also, do not dispose of the battery in fire, as it may explode.
- Remove the batteries from the camera immediately if they become hot or begin to smoke. Be careful not to burn yourself during removal.

Read this instruction manual carefully to get a full explanation of operations before use.



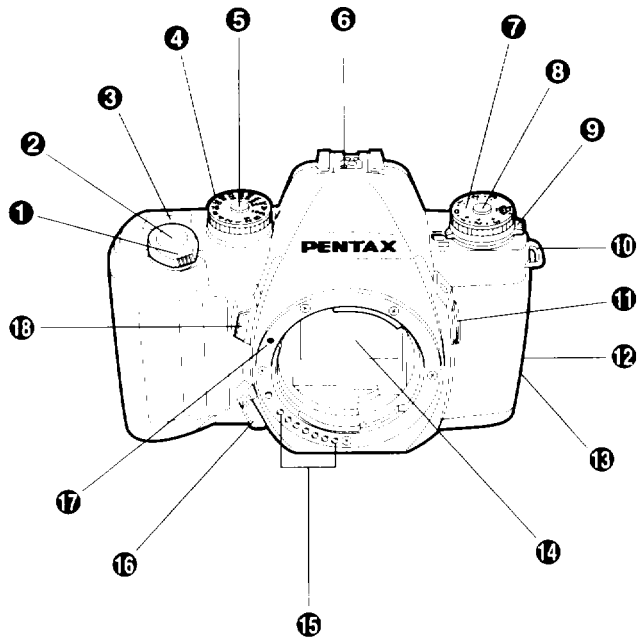
The names of the camera's working parts are listed on the front and back flaps in this operating manual. Keep the flaps unfolded for quick reference while reading this manual.

Lenses and accessories produced by other manufacturers are not made to our precise specifications and therefore may cause difficulties with or actual damage to your Pentax camera. We do not assume any responsibility or liability for difficulties resulting from the use of lenses and accessories made by other manufacturers.

Icon indicators used in this manual

Operation direction	
Automatic operation	
Attention	
Lamp blinking	
Correct	
Incorrect	

NAMES OF WORKING PARTS I



- ① Main switch (p.12)
- ② Shutter release button
- ③ LCD panel (p.3)
- ④ Shutter dial
- ⑤ Shutter dial lock button
- ⑥ Hot shoe (p.39)
- ⑦ Exposure compensation dial (p.15, 33)
- ⑧ Exposure compensation release button (p.15, 33)
- ⑨ Drive mode dial (p.23)
- ⑩ Strap lug (p.7)
- ⑪ Electronic cable release socket (p.32)
- ⑫ Back cover release lever (p.12)
- ⑬ Mid-roll rewind button (p.17)
- ⑭ Mirror
- ⑮ Lens information contacts
- ⑯ Lens unlock button (p.11)
- ⑰ Lens mount index (p.10)
- ⑱ Preview button (p.35)

PRECAUTIONS FOR YOUR CAMERA

Your Pentax camera is a high-precision mechanism. Handle it with great care.

Precautions when taking pictures

- Do not use the camera where it may come in contact with rain, water, or any other liquid, because the camera is not weather, water, or liquid resistant. Should the camera get wet from rain, splashing water, or any other liquid wipe it off immediately with a dry soft cloth.
- Do not drop the camera or allow it to hit solid objects. If the camera suffers a shock or impact, take it to a Pentax service center for inspection.
- Be careful not to subject the camera to strong vibrations, shock or pressure. Use a cushion to protect the camera when carrying it in a motorcycle, car, boat, etc.
- Condensation on the interior or exterior of the camera may be extremely harmful to the camera mechanism as it may cause rust. Furthermore, if the camera is taken from warm temperature to a subfreezing one or vice versa, the formation of icelets may cause damage. In such a case, put the camera into a case or plastic bag so that any changes in temperature difference is minimized. Do not remove it from the bag until temperature has stabilized.

- Regular size color prints may cut off what appears on the extreme edges of the film frame. Compose your picture with a margin of safety at the edges.

Precautions for storage

- Avoid leaving the camera for extended periods in places where the humidity and temperature are very high, such as in a car.
- Do not store the camera in a closet with moth balls or in an area where chemicals are handled. Store it in a place with good dry air circulation to prevent the growth of fungus.

Precautions for proper care

- Never touch the shutter curtain or mirror with your finger or any other object.
- Use a blower and lens brush to remove dust accumulated on the lens or viewfinder.
- Never use solvents such as paint thinner, alcohol or benzene to clean the camera.
- Electrical problems may often be caused by water, dirt or dust at points of electrical contact. Also check for battery leakage, traces of dirt or grease, or corrosion due to salinity or gas. If you cannot correct the problems, have your camera inspected at a Pentax service center. Repairs of this nature are not covered under the terms of the warranty and charges may be assessed.

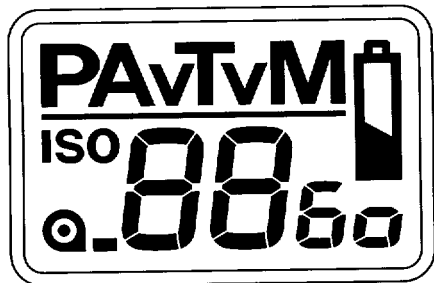
Other precautions

- The temperature range at which this camera functions properly is -10°C to 50°C (14°F to 122°F).
- A camera which has been submerged in water usually cannot be repaired. If such an accident should occur, it is advisable to contact a Pentax Service Center immediately.
- To maintain optimum performance, it is recommended that the camera be inspected every one or two years. If the camera has not been used for an extended period, or is being prepared for an important photographic session, it is recommended that you have the camera inspected or test shoot with it.
- Repairs deemed necessary due to usage of this product in an industrial or commercial application may not be covered under the terms of the Pentax warranty.
- The PENTAX warranty provides only for the repair of defects in materials or workmanship. Damage of any kind cannot be repaired at no charge under the terms of the warranty. If the difficulty is caused as a direct result of the product being used in conditions as outlined in the "Precautions for Your Camera" section or any other operation contrary to the instructions outlined in this manual, charges will be assessed and a repair quotation will be provided.

PRECAUTIONS FOR BATTERY USAGE

- Use two 3V lithium batteries (CR2 type).
- Misuse of the battery can cause hazards such as leakage, overheating, explosion, etc. The battery should be inserted with the "+" and "-" sides facing correctly.
- Battery performance may be temporarily hindered in low temperatures, but will recover in normal temperatures.
- Keep a spare battery on hand for replacement convenience when shooting outdoors or while traveling.
- Replace the batteries at the same time. Do not mix battery brands, types or old batteries with new, as this may cause overheating or explosion.

LCD PANEL INDICATION

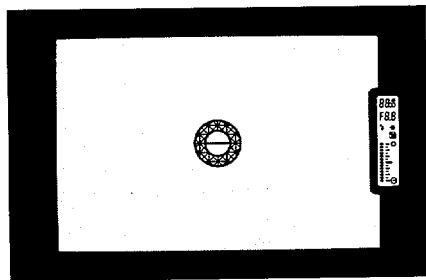


- P** : Programmed AE (p.19, 26)
- Av** : Aperture-Priority AE (p.27)
- Tv** : Shutter-Priority AE (p.29)
- M** : Metered Manual Mode (p.30)
- 88** : Frame Counter (p.14)
- ⊙** : Film Status Information (p.14)
- ↓** : Battery Exhaustion Warning (p.9)
- ISO** : Film Speed Setting Signal (p.15)
- 88₆₀** : Film Speed Information (p.15)

LCD (Liquid-Crystal Display)

When the LCD is exposed to high temperatures over approximately 60°C it may blacken, but when the temperature normalizes, it should return to normal.

VIEWFINDER INDICATION



- ⊙** : Microprism (p.21)
- ⊖** : Split-image (p.21)
- 888** : Shutter Speed (p.26, 28, 29, 31)
- F8.8** : Aperture Value (p.26, 28, 29, 31)
- ⚡** : Flash Status Information (p.39)
- ☒** : Exposure Compensation (p.33)
- ▬** : Bar Graph (p.31, 33)
- *** : Memory lock (p.34)

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CAMERA FUNCTIONS AVAILABLE WITH VARIOUS LENSES

Some of the special functions (Power zoom, Image-size tracking, Zoom clip, auto-zoom effect) cannot be used with this camera.

Function	Lens [Mount type]	FA lens [K _{AF2}]	F lens [K _{AF}]	A lens [K _A]	M lens [K]	S lens [Screw]
Programmed AE		O*1	O*1	O	X	X
Aperture-Priority AE		O	O	O	O	O
Shutter-Priority AE		O*1	O*1	O	X	X
Metered Manual		O	O	O	O	O
Auto Flash		O	O	O	O	O
Multi (2)-segment metering		O	O	O	X*2	X*2
Approx. f-stop indication		O	O	X	X	X

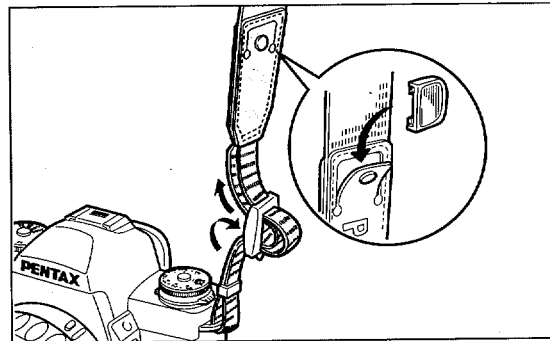
Notes:

*1. Exception of Pentax-FA Soft 85mm f/2.8 and FA-soft 28mm f/2.8.

*2. Center-weighted metering is used instead of the multi-(2) segment metering mode.

I GENERAL OPERATION

1 ATTACHING THE CAMERA STRAP

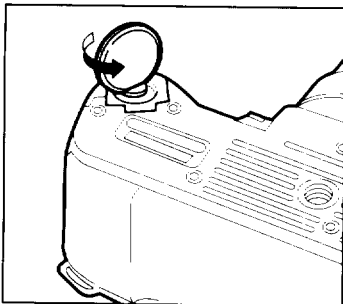


Fit the strap on the camera as illustrated.

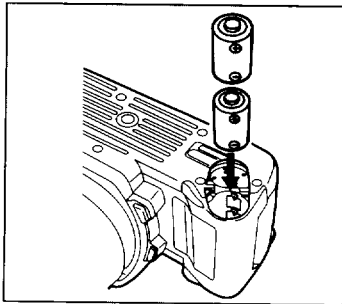
- There is a pocket on the strap so you can store the finder cap, release socket cover, hot shoe cover or any other small accessory as illustrated.

2 LOADING THE BATTERIES

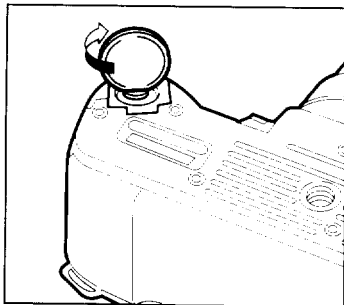
1



2



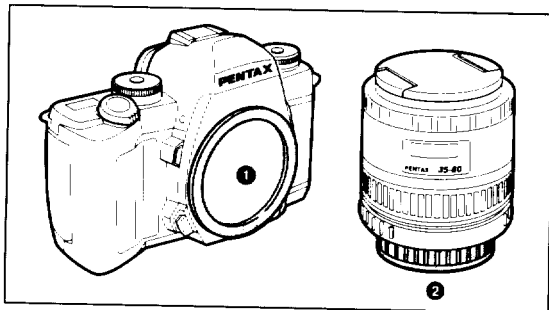
3



- 1 **Open the battery chamber cover by using a coin or similar object.**
 - 2 **Load two batteries (CR2 type) according to the markings (+, -) in the battery chamber.**
 - 3 **Turn the battery chamber cover screw in the direction of the arrow to lock it securely.**
- Misuse of the battery can cause hazards such as leakage, overheating, explosions, etc. The battery should be inserted with the "+" and "-" sides facing correctly.
 - The optional "AA-Battery Pack FG" is also available for this camera instead of using the lithium batteries.
 - Replace the batteries at the same time. Do not mix battery brands, types or old batteries with new, as this may cause overheating or explosion.
 - Keep spare batteries on hand for replacement convenience when shooting outdoors or while traveling.

3 ATTACHING THE LENS

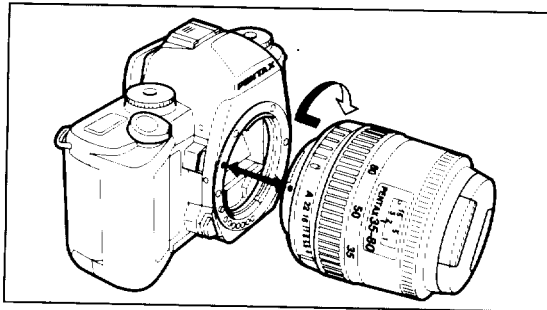
1



1 Remove the body mount cap ❶ and rear lens cap ❷ as shown in the illustration.

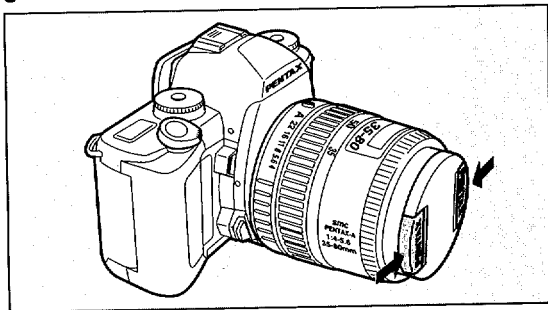
- The body mount cap is designed to protect the camera against scratches and dust at the factory.
- For storage, the optional accessory "Body Mount Cap K" is available.

2



2 Align the red dots on the camera and lens mount, attach the lens to the camera body, and turn it fully to the right until it clicks into place.

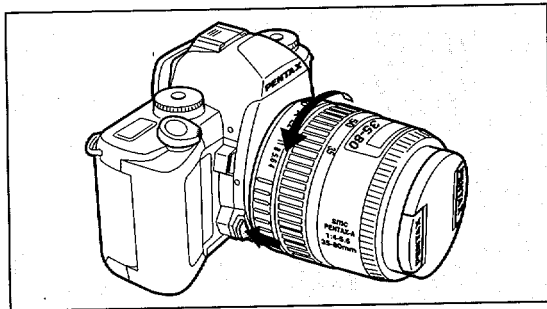
3



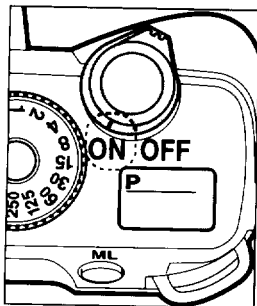
3 To remove the front lens cap, squeeze the tabs on both sides in the direction of the arrow.

- We assume no responsibility nor liability for damages resulting from the use of lenses made by other manufacturers.
- The camera body and lens mount incorporate lens information contacts. Dirt, dust, or corrosion may cause damage to the electrical system. Clean the contacts with a soft, dry cloth.

*



*** To remove the lens, turn it to the left while depressing the lens unlock button.**

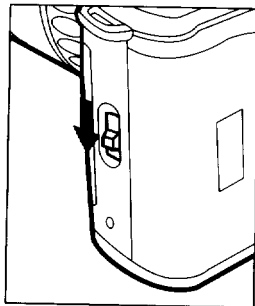


Set the main switch to the ON position.

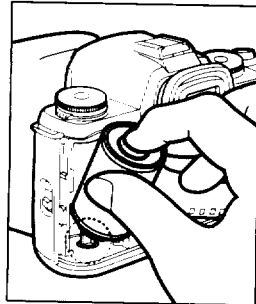
Note:

The LCD panel shown above is an example. The actual display that you see may be different if a lens is attached or if you have made other camera settings.

1

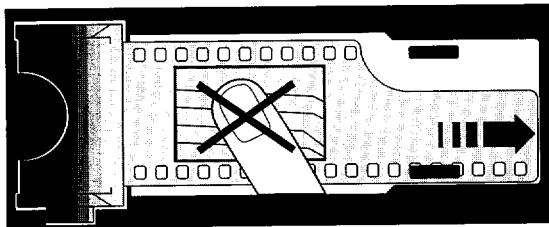


2



- 1 To open the back cover, slide the back cover release lever in the direction of the arrow.
- 2 Place the film cartridge in the film chamber as shown in the illustration.

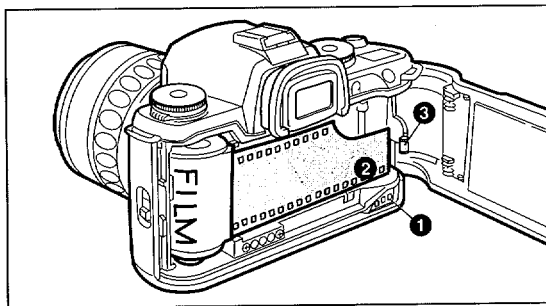
- Always load and unload film in the shade or by using your body to shade the camera.
- Pull the film leader out only far enough to reach the take-up spool.



THE SHUTTER CURTAINS ARE FINE-PRECISION MATERIAL. DO NOT TOUCH THEM WITH YOUR FINGERS OR ANY OTHER OBJECT WHILE LOADING FILM.

- If you have pulled out too much film, push it back into the cartridge to reduce the slack.
- The DX information pins in the film chamber are used to read film speed. Keep them clean and free from scratches. To remove smudges, wipe them gently with a soft, dry cloth.

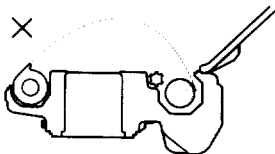
3



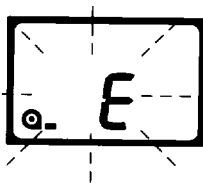
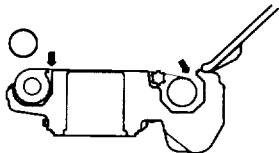
3 Align the film leader with the film leader end mark ① as shown.


- Make sure that the film perforations properly engage on the sprocket teeth ②.
- Make sure that the film leader is positioned under the film retainer ③ as shown in the illustration.

× Film loaded with slack No!

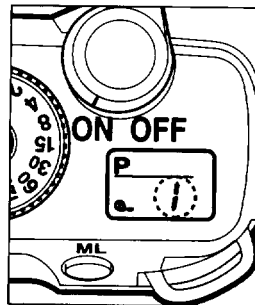
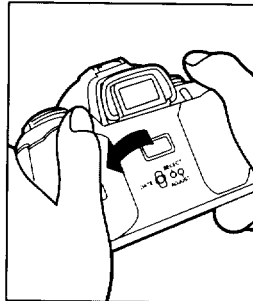


○ Film loaded flat Yes!





- If the film is not loaded properly, [ E] on the LCD panel blinks, indicating that the film is not loaded properly. Open the back cover and load the film once again.

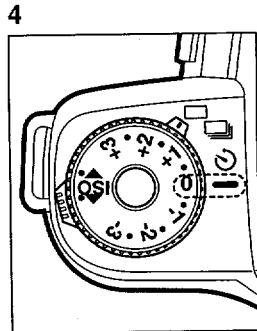
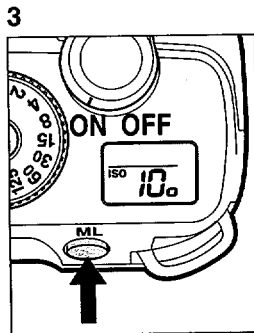
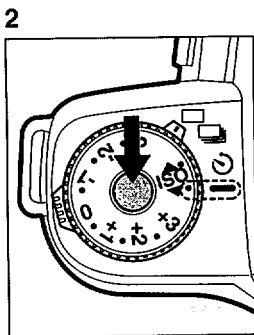
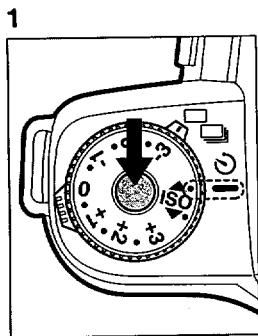
4



4 Close the back cover and, if you have not already done so, set the main switch to the [ON] position. The film automatically advances to the first frame.

- Check that [] and [] are displayed on the LCD panel.
- The film counter indication advances one each time the shutter is released.

6 FILM SPEED (ISO) SETTING



Automatic film speed setting

This camera is designed to use DX-coded films with ISO ratings from 25 to 5000. When DX-coded film is used, the correct film speed is automatically set for the camera. If you use a non-DX coded film, set the film speed manually.

To set the ISO film speed manually:

- 1 To change the ISO to a larger number (higher film speed), turn the exposure compensation dial to [▲] while holding down the exposure compensation dial release button.
- 2 To change the ISO to a smaller number (lower film speed), turn the exposure compensation dial to [▼] while holding down the exposure compensation dial release button.

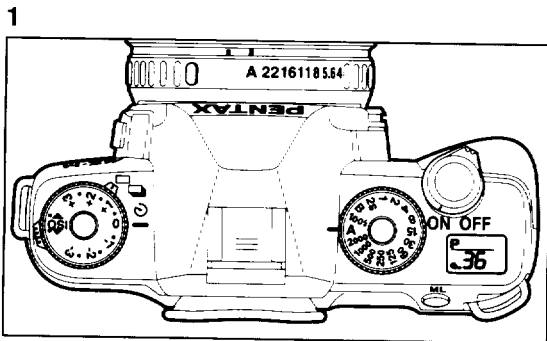
3 Depress the memory lock button until the desired ISO is indicated on the LCD panel.

4 After the ISO is set, move the exposure compensation dial to [0].

Note:

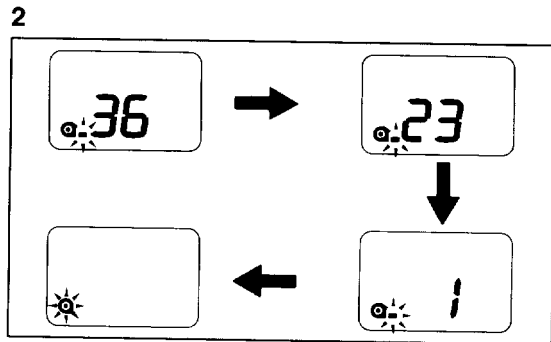
- The shutter cannot be released with the exposure compensation dial set at [▲] or [▼].
- When the ISO film speed is set manually, [ISO] appears on the LCD panel.

7 REWINDING AND UNLOADING THE FILM



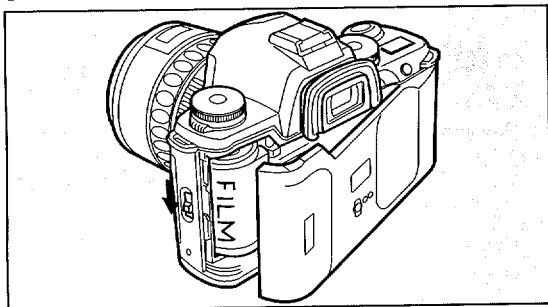
1 The film automatically rewinds at the end of the roll.


- During rewinding, [] blinks on the LCD panel, indicating that the film is being rewind, the exposure counter counts frame numbers in reverse.



2 When the film is fully rewound, only [] blinks on the LCD panel.

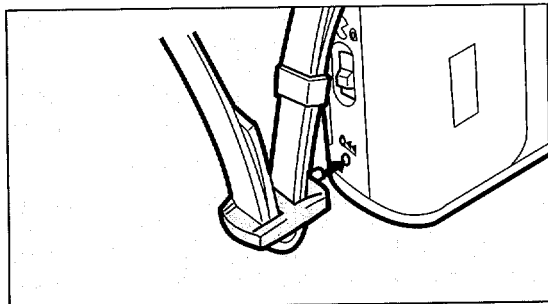
3



3 Before opening the back cover, check that [] is blinking. Open the back cover and remove the film.


- Never open the back cover until the whole film roll is completely rewind.
- When removing the film from the camera, protect it from exposure to direct sun light.
- A roll of 24-exposure film takes about 13 seconds to rewind.
- The shutter may be released a frame or more after the specified number of frames have been used as indicated by the number of frames on the film cartridge. However, those extra frames may be lost in processing. When you take important pictures, rewind the film when the film reaches the number of frames indicated on the film cartridge.

*



* REWINDING A ROLL OF FILM IN MID-ROLL

If you wish to unload the film before exposing all the frames, use this function.

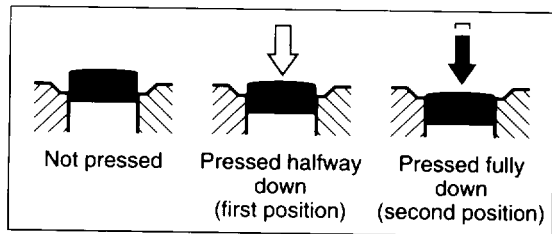
- 1 Set the main switch to the [ON] position.
- 2 Depress the mid-roll rewind button by using the protruding part of the strap clamp.
- 3 Before opening the back cover, check that [] is blinking.
- 4 Open the back and remove the film.

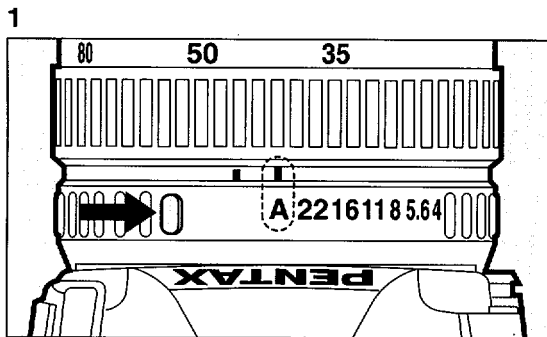
- Do not depress the button with an object having a sharp tip.

8 USING THE SHUTTER RELEASE BUTTON

The shutter release button has two positions. Depressing it down halfway (first position) turns on the exposure meter and the shutter speed and aperture setting are displayed. Depressing it fully (second position) releases the shutter. When taking a picture, depress the shutter release button gently to prevent camera shake.

- To prevent camera shake, depress the shutter release button gently.
- The LCD indication stays on for about 10 seconds after the button is released from the halfway position. Depressing the shutter release button down halfway keeps the LCD indicator on.

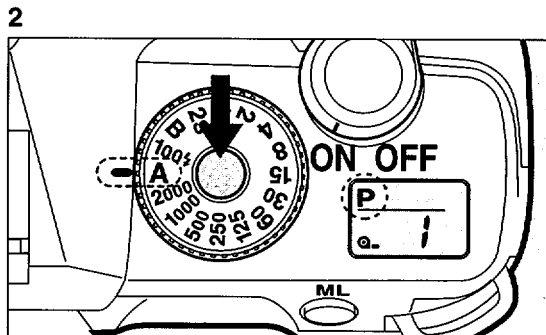




1. SETTING THE APERTURE ON THE LENS

Any aperture can be selected by simply turning the aperture ring.

- To move the lens aperture ring to the [A] position, turn the aperture ring while holding down the aperture-A lock button on the lens. The lens aperture ring can be released from the [A] position in the same manner.



2. SETTING THE SHUTTER SPEED ON THE CAMERA

Any shutter speed can be selected by simply turning the shutter speed dial.

- To set the shutter dial to the [A] position, turn the shutter speed dial while holding down the shutter dial lock button. The shutter dial can be released from [A] in the same manner.
- [P] appears on the LCD panel to indicate that the Programmed AE Mode is set.

10 HOLDING THE CAMERA

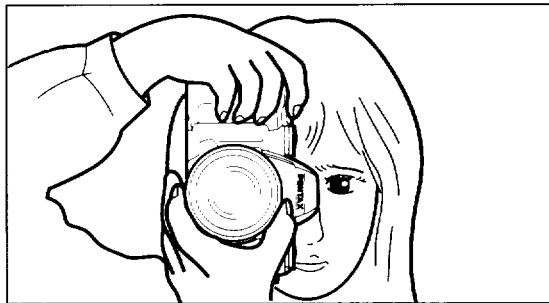
Camera held horizontally



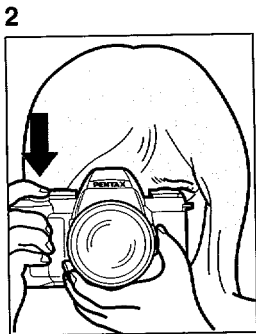
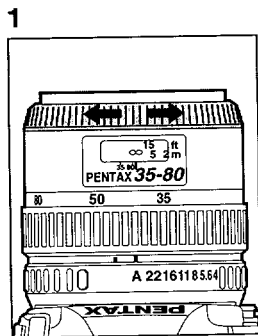
For best results, be sure to hold the camera correctly as shown in the illustrations.

Hold the camera firmly, with your left hand supporting the camera and lens as shown in the illustrations.

Camera held vertically



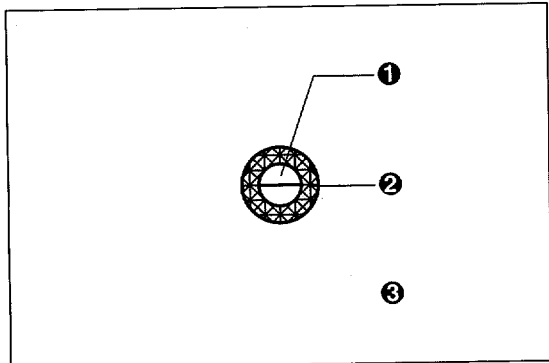
- Although there are individual differences among photographers, in general the shutter speed for a hand held camera is the inverse of the focal length. For example, 1/50 of second when the focal length is 50mm, and 1/100 of second when it is 100mm. A tripod should be used for shutter speeds slower than this.
- When using an ultra-telephoto lens, a tripod that is heavier than the total weight of the camera and lens is recommended to avoid camera shake.



1 Proper focusing is easily done by looking through the viewfinder and turning the focusing ring on the lens.

2 Depress the shutter release button halfway down. The shutter speed and aperture value are displayed in the viewfinder. Depress the shutter release button to take a picture.

- The focusing screen in the viewfinder is divided into three fields - the split-image field in the center, surrounded by the microprism ring field, and the rest of the screen is a matte field to assist in accurate focusing.



You can use any of the three fields for focusing:

1 Split-image field

Turn the focusing ring until the two images in the split-image circle at the center of the focusing field are perfectly aligned.

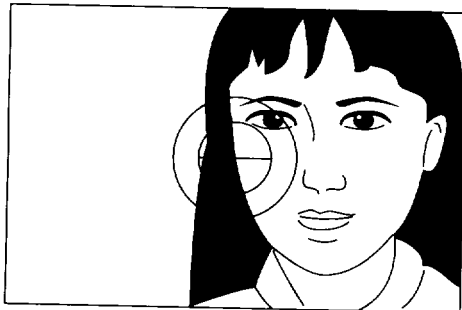
2 Microprism field

Turn the focusing ring until the glitter disappears from inside the collar.

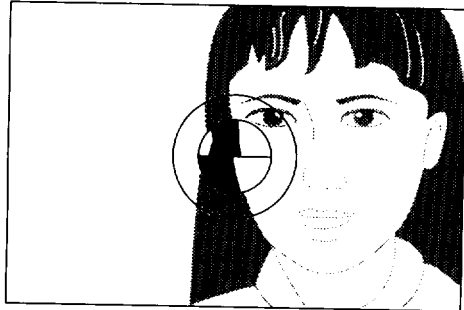
3 Matte field

Turn the focusing ring until the image on the matte field appears sharp and crisp.

IN FOCUS

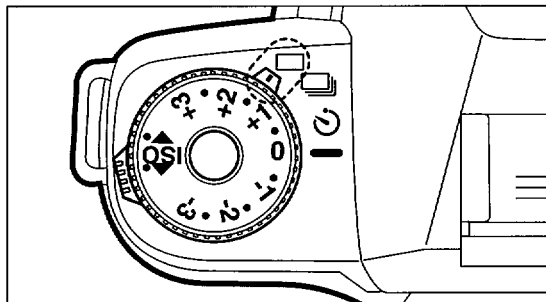


OUT OF FOCUS



Note: Diopter adjustment for viewfinder eyepiece

- People who wear eyeglasses sometimes find it difficult to focus accurately while wearing their glasses. Eyeglass wearers might find it beneficial to use the optional accessory diopter correction lens M so that the camera can be easily used and focused without the need for their glasses.

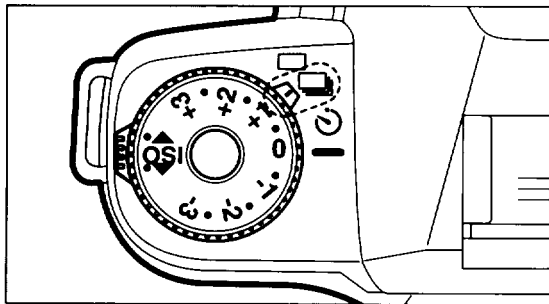


Single Frame Drive Mode

Set the drive mode dial to [□].

- One picture is taken each time the shutter release button is depressed.

II ADVANCED OPERATIONS

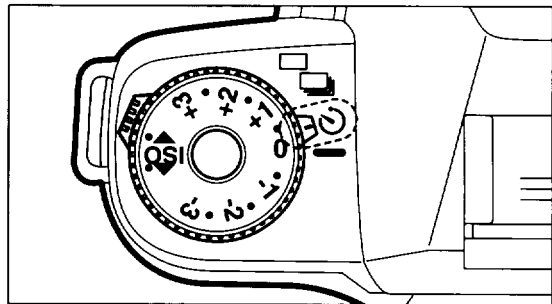


Consecutive-Frame Mode

Set the drive mode dial to [].

- Consecutive pictures can be taken by holding down the shutter release button.

1

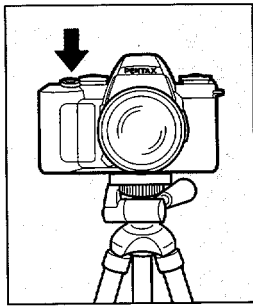
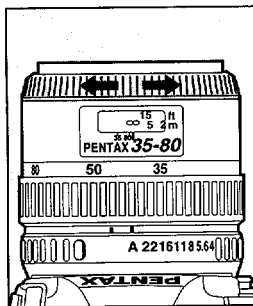


Self-Timer Mode

1 Set the drive mode dial to [].


- The shutter will be released about 12 seconds after the shutter release is depressed.
- The self-timer mode delays the shutter release, and is useful for taking group shots that include the photographer.

2

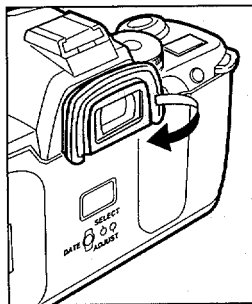


2 Focus on the subject and then depress the shutter release button fully.

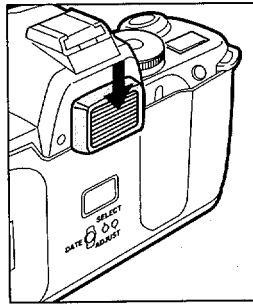
To Cancel

To cancel the self-timer operation after it has been activated, move the drive mode dial to any position other than [].

*



*

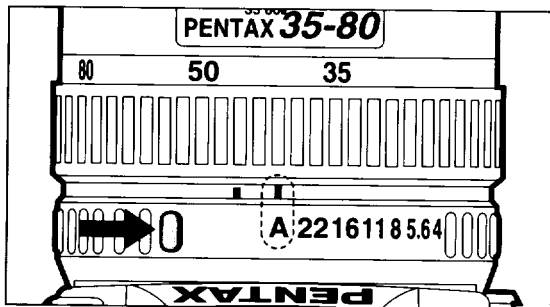


* Underexposure may occur if light enters the viewfinder during self-timer operation. If you intend to move away from the viewfinder, attach the supplied finder cap as shown in the illustration.

* When using accessories such as the finder cap, remove the Eyecup FH. The Eyecup FH comes from the factory fitted to the camera's viewfinder accessory grooves.

2 SELECTING THE EXPOSURE MODE

1

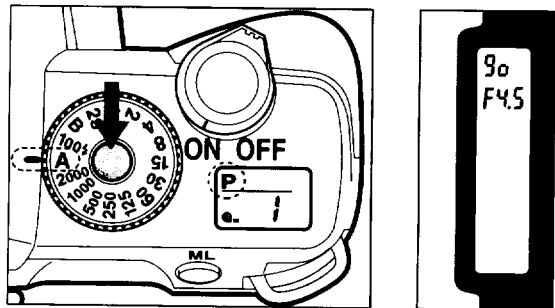


Programmed Auto-Exposure (AE) Mode

Purpose:

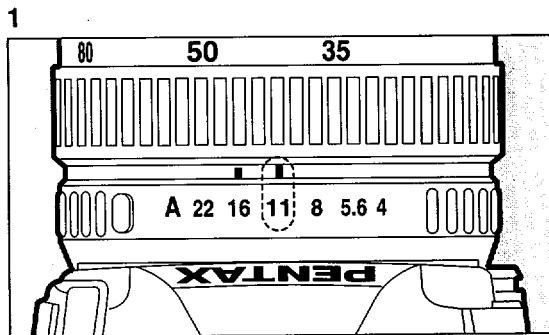
For easy picture taking, use this mode. In the Programmed AE mode, the camera automatically selects the best combination of aperture and shutter speed allowing you to take pictures by simply depressing the shutter release button.

2



1. Turn the lens aperture ring to the [A] position as shown in the illustration.
2. Turn the shutter dial to [A] while holding down the shutter dial lock button.

- [P] appears on the LCD panel to indicate that the Programmed AE Mode is set.
- When the shutter release button is depressed halfway down, the shutter speed and the aperture value will be displayed in the viewfinder.

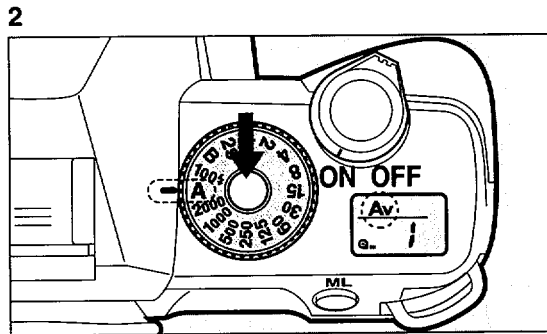


Aperture - Priority AE Mode

Purpose:

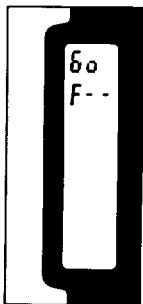
Allows the user to directly control the lens aperture. This mode is ideal for shooting landscapes with increased depth of field, or a portrait against a blurred background. When the desired aperture is selected, an appropriate shutter speed is automatically set by the camera for a proper exposure.

1. Set the lens aperture ring to the desired f-stop other than [A].



2. Set the shutter dial to [A]. [Av] appears on the LCD panel.

3

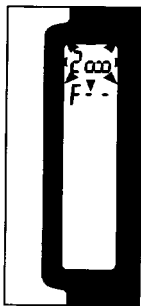


3. When the shutter release button is depressed halfway, the shutter speed will be displayed in the viewfinder.

Note:

- When an F or FA lens is used, an approximate aperture indication will appear in the viewfinder when the shutter release button is depressed halfway. When lenses other than an F or FA series are used, no approximate aperture indication will appear in the viewfinder.
- When a lens with no lens information contact is used, the center-weighted metering mode is automatically set.
- If the SMC Pentax 50mm f/1.2 lens is used with the lens aperture ring set at a position other than the [A] position, the center-weighted metering mode will be set instead of the multi-segment metering mode. As the

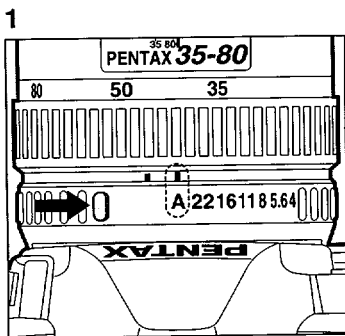
*



exposure will come out 1 stop overexposed, set the lens aperture ring to [A] or adjust the exposure deliberately to 1 stop under.

*** Exposure Warning**

If the subject is too bright or too dark, the selected shutter speed will blink in the viewfinder and on the LCD panel as a warning as shown. When the subject is too bright, choose a smaller aperture, if available; when it is too dark, choose a larger aperture, if available. When the shutter speed indication stops blinking, you can take the picture. If both shutter and aperture blink, it means that the exposure is out of metering range, unable to obtain a correct exposure even if the aperture is adjusted. Select a darker subject if it is too bright, or use a flash if it is too dark.

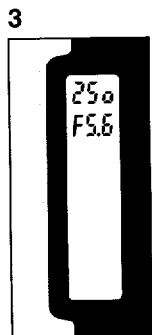
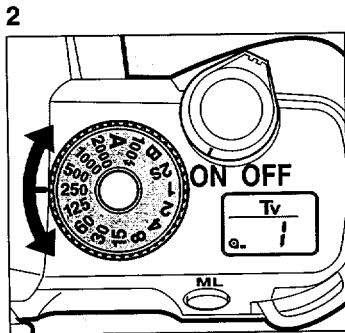


Shutter-Priority AE Mode

Purpose:

Allows the user to directly control the shutter speed. This mode is suitable for freezing the action with a fast shutter speed or capturing a flowing dynamic image with a slow shutter speed. When the desired shutter speed is selected, the appropriate aperture is automatically set by the camera for a proper exposure according to the brightness of the subject.

1. Set the lens aperture ring to [A].
2. Set the shutter dial to a shutter speed other than [A]. [Tv] appears on the LCD panel.



3. When the shutter release button is depressed halfway down, the shutter speed and the aperture value will be displayed in the viewfinder.

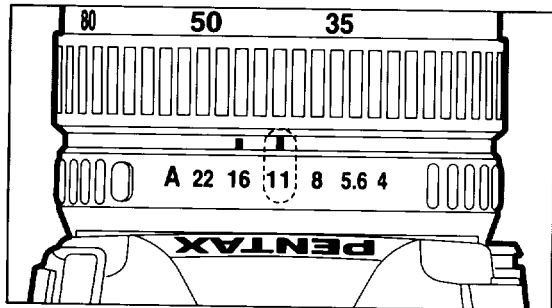
Note:

In flash photography, when you use the flash sync shutter speed of 1/100 second or a non-dedicated external flash unit, set the shutter dial to the [100 $\frac{1}{2}$] (1/100 of second) position.

*** Exposure Warning**

If the subject is too bright or too dark, the shutter speed and aperture setting in the viewfinder blink.

1

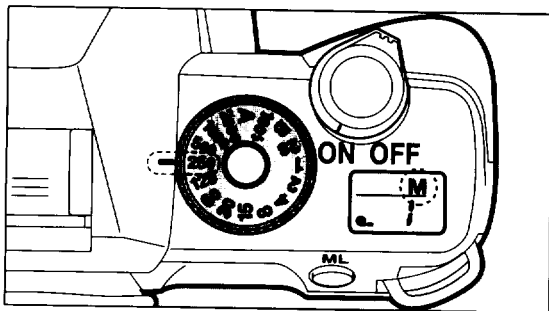


Metered Manual Mode

Purpose:

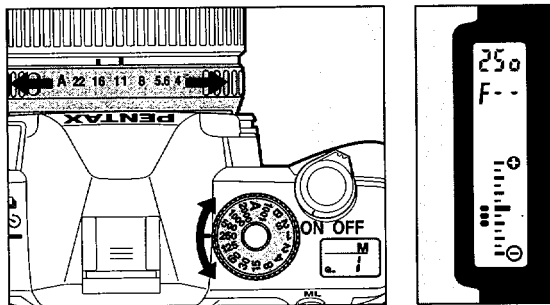
Allows the user direct control over all exposure settings. The Metered Manual Mode is a convenient exposure mode for taking pictures using the same shutter speed and aperture setting combination, or taking creatively under or over exposed photographs.

2



1. Set the lens aperture ring to the desired f-stop setting.
 2. Set the shutter dial to the desired shutter speed. [M] appears on the LCD panel.
- When the shutter release button is depressed halfway, the shutter speed, approximate aperture and bar graph will be displayed in the viewfinder.

3



3. Turn either the shutter dial or lens aperture ring until a dot is displayed in the center of the bar graph at the right side of the viewfinder.

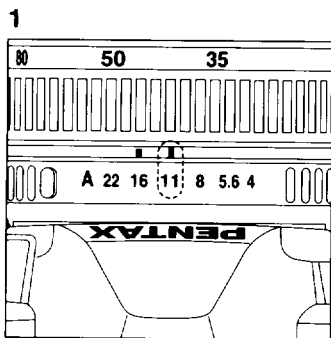
Note:

When a lens other than an F or FA lens is used, no approximate aperture indication will appear in the viewfinder.

- When the dots are displayed to the [+] side on the bar graph, it indicates overexposure and when the dots are displayed to the [-] side, it indicates underexposure. Moving one dot on the bar graph indicates 0.5 step (0.5EV). However, when under or over exposure is set beyond + 3 or 3 steps (3EV), [+] or [-] indicator will blink.
- In flash photography, when you use the flash sync shutter speed of 1/100 second or a non-dedicated external flash unit, set the shutter dial to the [100 $\frac{1}{2}$] (1/100 of second) position.

Note:

When a lens with no lens information contacts is used, the center-weighted metering mode is automatically set. When using a SMC Pentax 50mm f/1.2 lens with the lens aperture ring set other than the A position, the center weighted metering mode will be set instead of the multi-segment metering mode. As the exposure will come out 1 stop over, set the lens aperture ring to [A], or adjust the exposure deliberately to 1 stop under.



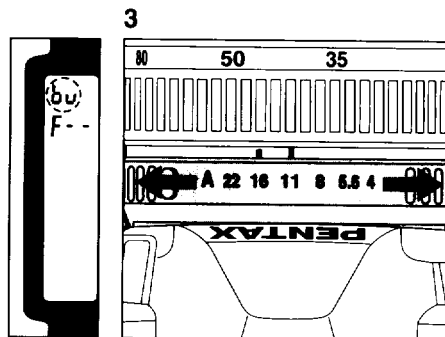
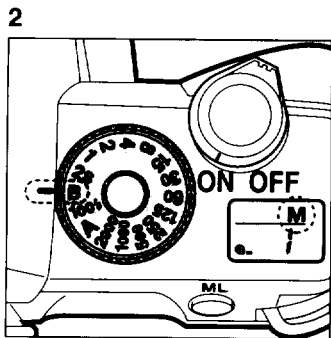
Bulb Exposure Mode

Purpose:

This mode is useful for the long exposures required for shooting night scenes and fireworks. The shutter remains open as long as the shutter release button is held down.

1. Set the lens aperture ring to the desired f-stop other than [A].
2. Set the shutter dial to [B]. [M] appears on the LCD panel and [bu] appears in the viewfinder.

* When the shutter release button is depressed halfway, an approximate aperture is displayed in the viewfinder only when the FA lens is attached.

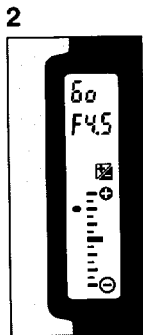
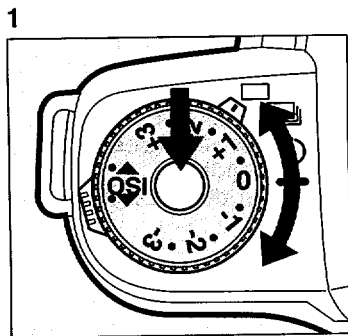


3. Set the desired aperture on the lens aperture ring.

Note:


- When using this mode, use a steady tripod to prevent camera shake and attach the optional "Cable Switch F" after removing the Release Socket Cap F. Up to approx. 8 hours of time exposure are possible with new lithium batteries at room temperature.

3 EXPOSURE COMPENSATION



Purpose:

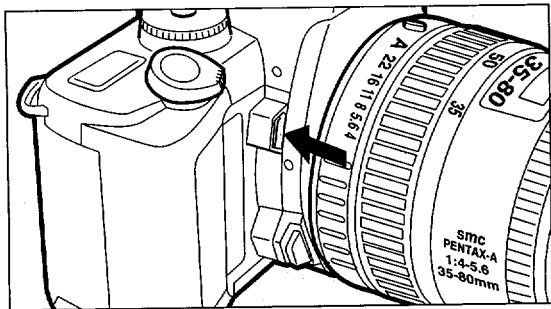
The exposure compensation allows you to deliberately overexposure (brighten) or underexposure (darken) a subject, or compensate for difficult lighting conditions which may fool the camera's built-in exposure meter.

1. Turn the exposure compensation dial to the desired compensation value while holding down the exposure compensation dial release button.
2. The bar graph which indicates the compensation value and [] appear in the viewfinder.

Notes:

- Exposure compensation does not work in the Bulb Exposure Mode.
- The exposure compensation range is 3EV to +3EV in 0.5EV steps.
- Moving one dot on the bar graph indicates 0.5EV step
- When exposure compensation is used in the Metered Manual Mode, the dots on the bar graph indicate under or overexposure, it is not indicating the exposure compensation value.

5 DEPTH-OF-FIELD PREVIEW BUTTON



Purpose:

To determine before taking a picture how much of the scene will actually be in focus at the aperture selected or indicated.

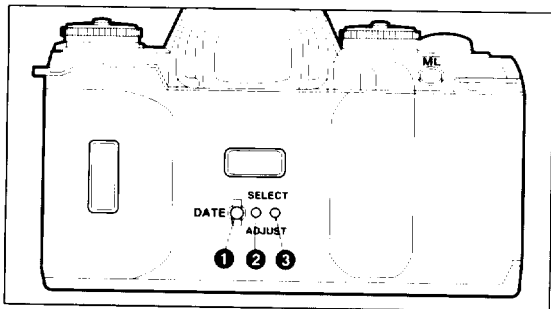
While looking through the viewfinder, press the preview button.

- The image seen in the viewfinder may appear dark, but the actual depth-of-field can be seen.

Notes:

- If the lens aperture is set to an f-stop other than [A] position, the camera will close down to the aperture you have set while depressing the preview button.
- This preview button can also be used even if the lens aperture ring is set to the [A] position.

6 DATA BACK (optional)



If you have purchased your camera as the "Date" version, or if you have purchased the Data Back separately, the following section applies.

- ① DATE button
- ② SELECT button
- ③ ADJUST button

Notes:

- Carefully press the button with the protrusion part of the camera's strap clamp. Do not press the buttons with an object having a sharp tip.

Adjusting the year / month / day

1. Press ① the DATE button repeatedly until the date is displayed.
2. Press ② the SELECT button to make the year, month, or day you want to change blink. The digits blink in the following order.
Year - Month - Day - Year
3. Change the date with ③ the ADJUST button. The digit increases by one each time the ADJUST button is depressed. Holding the button for about 2 to 3 seconds will change the digits continuously.
4. Press ② the SELECT button to stop the digit from blinking, after you have changed the date. The adjusted date has been entered.

Adjusting the hour / minute

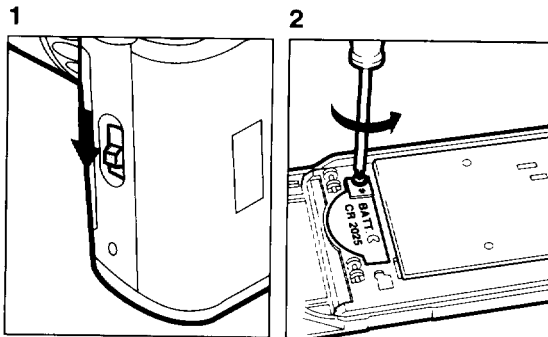
1. Press ❶ the DATE button repeatedly until the time is displayed.
2. Press ❷ the SELECT button to make the hour, minute or second (:) you want to change blink. The digits blink in the following order.

Hour - Minute - : - Hour

3. Change the data (hour or minute) with ❸ the ADJUST button . The digits increases one each time you press the ADJUST button. Holding the button for 2 to 3 seconds will change the digits continuously.
4. To change the second (:), press ❷ the SELECT button until " : " blinks, and then press the ADJUST button in sync with a time signal to set the second to zero.
5. Press ❷ the SELECT button to stop the adjusted hour / minute from blinking.

Operating precautions

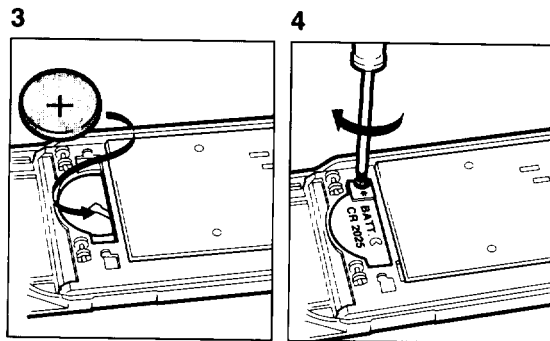
- The working temperature for data printing is 0°C - 50°C (32°F - 122°F).
- Use DX-coded films with ISO rating from 25 - 1600.
- If high-speed film with an ISO rating of 1000 or faster is used, the imprinted characters may blur.
- If film with ISO rating of 50 or slower is used, the printed characters may be dark or dim.
- If you release the shutter while the blinking data is being corrected, the data cannot be imprinted.



Replacing the Battery

Replace the battery when the data information on a picture or the LCD panel becomes weak or invisible. The battery will last for approximately 3 years. The data back uses one 3V lithium battery, type CR2025.

1. Ensure that a film is not loaded, then open the back cover.
2. Loosen the battery cover fixing screw (located near the upper left side of the pressure plate) with a Phillips-head screwdriver, and then remove the battery chamber cover.



3. Replace the old battery with a new battery with the + side facing up.
4. Reinstall the battery chamber cover, and tighten the battery chamber fixing screw.

Note:

If the data indication does not appear on the LCD panel, it means that the battery has not been installed properly. After the battery has been replaced, adjust the data again

7 USING PENTAX DEDICATED AUTO FLASH UNITS

Pentax dedicated auto flashes (except FTZ-series flashes) can be used with this camera, regardless of whether it is set to the Programmed AE, Aperture-priority AE or Metered Manual Mode. TTL auto flash mode cannot be used in this camera.

Note:

Read the operating manual of the flash unit for more details regarding flash effective range, and aperture selections.

Using a PENTAX Dedicated Flash

- 1. Remove the hot shoe cover FC and attach a Pentax dedicated flash unit to the camera.**
- 2. Set the flash mode to AUTO position. Do not set the flash unit to TTL position.**
- 3. Turn ON the flash. When the flash is fully charged, the ready lamp on the flash unit lights up.**
- 4. Depress the shutter release button halfway down. If the flash is fully charged, [∇] appears in the viewfinder indicating the flash is ready.**
- 5. Focus on the subject and release the shutter.**

Overview of Flash Function

CAMERA FUNCTION	TYPE A	TYPE B
After the flash is charged, the camera automatically switches to the flash-sync speed.	O	O
Automatic aperture setting in the Programmed AE Mode or Shutter-Priority AE mode.	O*1	O*1
Slow-speed sync in the Shutter-Priority AE Mode or Metered Manual Mode	O	O*2

TYPE A: AF400T, AF280T, AF220T, AF200T,
AF080C, AF140C, AF200SA, AF201SA

TYPE B: AF200S, AF160, AF140,

Using other types of a flash

Use of non-Pentax flash units may damage the camera. For the best results, use a Pentax dedicated flash unit.

Notes:

1. When using a Type A flash (except AF200SA and AF220T) in the MS (Manual Sync) or M (Manual) modes or when using a Type B flash, set the camera's exposure mode to the Aperture-Priority AE Mode, Manual or Bulb. The Program and Aperture-Priority AE Modes cannot be used because the actual required aperture value may change.
2. Only the manual mode can be used.

8 SLOW SHUTTER SPEED SYNC SHOOTING

441



Purpose:

It is possible to balance the exposure of a foreground subject against a dimly-lit background by using the flash to properly expose the foreground subject and a slow-shutter-speed to expose the low light background.

In the Metered Manual Mode

- 1. Attach the flash unit to the camera.**
- 2. Set the camera's exposure mode to the Metered Manual Mode.**
- 3. Select an appropriate shutter speed (slower than 1/100 of second) and aperture combination for a correct exposure.**
- 4. Focus the subject and release the shutter.**

In the Shutter-Priority AE Mode

- 1. With the power switch of the flash unit off position, attach the flash unit to the camera.**
- 2. Set the camera's exposure mode to the Shutter-Priority AE Mode.**
- 3. Set the desired shutter speed. If a shutter speed over 1/100 is selected, the camera will automatically re-set the shutter to a maximum speed of 1/100.**

Note:

If the aperture in the viewfinder blinks, a correct exposure will not be obtained for the background. Adjust the shutter speed until the blinking stops.

4. Turn the flash on.

Note:

If the power is on before the flash unit is attached to the camera, correct exposure will not be obtained for the background.

5. Take a picture.

Note:

In the slow-speed-sync shooting, use of a tripod is recommended to prevent camera shake.

9 ACCESSORIES (OPTIONAL)

A number of dedicated accessories are available for this camera.

- **Cable Switch F**

A shutter release cord designed for use with the camera equipped with the release socket. See the Cable Switch F operating manual for more details.

- **Magnifier FB**

A viewfinder accessory for magnifying the central area of the viewfinder.

- **PENTAX Dedicated Flashes**

- **AF200SA**

Hot-shoe mount, thyristor auto flash with a Guide Number of 20 (ISO 100, m)

- **AF201SA**

Hot-shoe mount series-control Auto flash, Guide Number: 20 (ISO 100, m)

- **AF260SA**

Hot-shoe mount, thyristor auto flash with a Guide Number of 26 (ISO 100, m)

- **AF280T**

Hot-shoe mount, thyristor auto flash with a Guide Number of 28 (ISO 100, m), with tilting and rotating head for flash.

- **AF400T**

Grip mount, thyristor auto flash with a Guide Number of 40 (ISO 100, m), with tilting and rotating head for flash.

- **Refconverter A**

Right angle finder which attaches to the grooves on both sides of the viewfinder. The viewfinder magnification is able to switch from 1X to 2X.

- **Filters**

Skylight, Cloudy, UV, Y2, O2, R2, and Circular Polarizing Filter are available. Each filter is available in sizes of 49mm, 52mm, 67mm and 77mm.

- **AA Battery Pack F_c**

A battery pack which takes four AA batteries can attach at the bottom of the camera, instead of using the lithium batteries.

- **Correction Lens Adapter-M**

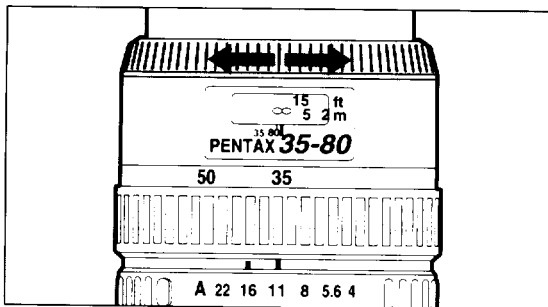
A clip-on prescription eyepiece for eyeglass wearers. Specially ground corrective lenses are available in 8 diopters from -5 to +3

Notes on accessories

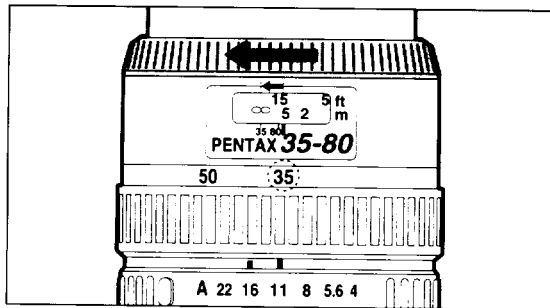
- "Auto Bellows A" cannot be used in combination with the double cable release. When taking a vertical photograph, position the camera with the grip facing upward.
- When attaching the "ADAPTER K FOR 645 LENS" to the camera body, the camera shift lock screw of the lens may hit the camera body. To avoid this, change the position of the fixing screw.

11 INFRARED INDEX

1



2






When infrared film and an "R2" or "O2" filter are used, the focal point is different from that of ordinary film exposed in visible light.

Focusing

1. Focus on a subject as usual.
2. Turn the focusing ring to the left by the distance indicated on the infrared index.

- As shown in the illustration, if 35 is read from the zoom scale, adjust the distance scale to 35 on the infrared index (red line).
- To set the proper exposure level for infrared pictures, refer to the instructions accompanying the film. The Programmed AE Mode, Aperture Priority Mode, or Shutter Priority Mode will not give a correct exposure for Infrared film. Use the Metered Manual Mode.

What appears troublesome may be easily remedied. Here are some problems that may occur and their remedies. Before contacting a Pentax service center, check the following items.

Symptoms	Causes	Remedies	Reference
The shutter does not release.	The main switch is set to [OFF].	Set the main switch to [ON].	P. 12
	The low battery warning [] appears.	Replace the battery.	P. 8
	The battery is improperly installed.	Install the battery properly.	P. 8
	The exposure compensation dial is set to [] or [].	Set the exposure compensation dial to another position.	P. 33
	The self-timer is being used	Cancel the self-timer mode.	P. 24
Indicators do not appear on the LCD panel.	The main switch is the [OFF] position.	Turn the main switch to [ON].	P. 12
	No batteries are installed.	Install the batteries.	P. 8
	The batteries are improperly installed.	Re-install the batteries properly.	P. 8
	The batteries are dead.	Replace the batteries.	P. 8

In rare cases, the camera may not operate correctly due to static electricity. This can be remedied by taking the batteries out and putting them back in again.

SPECIFICATIONS

- Type** — Multi-Exposure Mode 35mm SLR
- Format** — 24x36mm
- Usable Film** — 35mm perforated cartridge film. DX-coded film with ISO 25-5000; non-DX coded films with ISO 6-6400
- Exposure Modes** — Programmed AE Mode, Shutter-Priority AE Mode, Aperture-Priority AE Mode, Metered Manual Mode, Bulb Mode,
- Shutter** — Electronically controlled vertical-run focal-plane shutter, Electromagnetic release, Speed range: (1) Auto 1/2000-30 sec. (stepless), (2) Manual 1/2000-2 sec. (3) Bulb,
- Lens Mount** — Pentax K_{A2} bayonet mount (K-mount with lens information contacts)
- Compatible Lens** — Pentax K_{AF2}-, K_{AF}-, K_A-, and K-mount lenses are usable.
- Viewfinder** — Pentamirror finder, Matte field and split-image spot with microprism collar focusing screen, Field of view: 92%, Magnification:0.77X (with 50mm lens at infinity), - 1.0 diopter eyepiece
- Viewfinder Indication** — Shutter speed indication, Aperture indication, Flash ready indication, [$\frac{1}{2}$]Bar graph (exposure compensation), Over or Under exposure indication in Manual Exposure Mode, [☒] exposure compensation indication, [\star] memory lock indicator
- External LCD panel Indication** — [P]=ProgrammedAE Mode, [Tv]=Shutter-Priority AE Mode, [Av]=Aperture-Priority AE Mode, [M]=Manual Exposure Mode, Film speed=6 - 6400, ISO indication, [☉]=Film status information, [☑]=Battery exhaustion warning, Film counter=0-99
- Preview Button** — Electronically controlled. Useable in all exposure modes
- Self-timer** — Electronically-controlled type with delay time of 12 sec. Start by depressing of shutter release button, Operation confirmation: by PCV beep tone. Cancelable after starting.
- Mirror** — Quick-return mirror
- Film Loading** — Film advances automatically to 1st frame after back cover is closed, Film information window is provided
- Film Wind & Rewind** — Auto wind/rewind by built-in motor, Consecutive or Single advance mode, Approx.2 frames/sec.(consecutive mode), Auto rewinding starts at end of roll, Film rewind/completion of rewinding is displayed on the LCD panel, mid-roll rewind button will rewind film in mid-roll

Exposure Meter — With FA-, F-, or A-series lenses: TTL multi (2)-segment metering, Metering range from EV1 to EV17.5 at ISO100 with 50mm f/1.4 lens
With M-series, screw-mount, or any other lens that does not have information contacts: Center-weighted metering.

Exposure Compensation — +/- 3EV in 0.5EV step increments

Flash sync — Hot shoe with X-contact with couplings for Pentax dedicated auto flashes (except FTZ-series flashes), ISO range=25-800

Flash sync speed — 1/100 sec. or slower

Power Source — Two 3V lithium battery (CR2 or equivalent)

Battery Exhaustion Warning — Battery exhaustion symbol [] is lit (blinking when the shutter is locked).

Dimension and Weight — 135.0mm (W) x 90.5mm (H) x 55mm (D) (5.3"x3.6"x2.2") 305g (10.8 oz) body only without batteries

Date Model

Date mechanism — Crystal quartz controlled LCD with digital clock, auto calendar up to 2019. 7-segment, 6-digit liquid crystal display

Imprinting mode — Year / Month / Day, Day / Month / Year, Month / Day / Year, Day / Hour / Minute, and " ----- " (blank)

Dimension and Weight — 135.00mm (W) x 90.5mm (H) x 55mm (D) (5.3"x3.6"x2.2") 320g (11.3 oz)

Supplied Accessories — Hot Shoe Cover FC, Release Socket Cap F, Camera Strap FG, Eye Cup FH, Finder Cap

Back cover — Interchangeable for replacing Data Back FJ

SPECIFICATIONS ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTIFICATION OR ANY OBLIGATION ON THE PART OF THE MANUFACTURER.

WARRANTY POLICY

All Pentax cameras purchased through authorized bona fide photographic distribution channels are guaranteed against defects of material or workmanship for a period of twelve months from date of purchase. Service will be rendered, and defective parts will be replaced without cost to you within that period, provided the equipment does not show evidence of impact, sand or liquid damage, mishandling, tampering, battery or chemical corrosion, operation contrary to operating instructions, or modification by an unauthorized repair shop. The manufacturer or its authorized representatives shall not be liable for any repair or alterations except those made with its written consent and shall not be liable for damages from delay or loss of use or from other indirect or consequential damages of any kind, whether caused by defective material or workmanship or otherwise; and it is expressly agreed that the liability of the manufacturer or its representatives under all guarantees or warranties, whether expressed or implied, is strictly limited to the replacement of parts as herein before provided. No refunds will be made on repairs by non-authorized Pentax service facilities.

Procedure During 12-month Warranty Period

Any Pentax which proves defective during the 12-month warranty period should be returned to the dealer from whom you purchased the equipment or to the manufacturer. If there is no representatives of the manufacturer in your country, send the equipment to the manufacturer, with postage prepaid. In this case, it will take a considerable length of time before the equipment can be returned to you owing to the complicated customs procedures required. If the equipment is covered by warranty, repairs will be made and parts replaced free of charge, and the equipment will be returned to you upon completion of servicing. If the equipment is not covered by warranty, regular charges of the manufacturer or of its representatives will apply. Shipping charges are to be borne by the owner. If your Pentax was purchased outside of the country where you wish to have it serviced during the warranty period, regular handling and servicing fees may be charged by the manufacturer's representatives in that country. Notwithstanding this, your Pentax returned to the manufacturer will be serviced free of charge according to this procedure and warranty policy.

In any case, however, shipping charges and customs clearance fees to be borne by the sender. To prove the date of your purchase when required, please keep the receipt or bills covering the purchase of your equipment for at least a year. Before sending your equipment for servicing, please make sure that you are sending it to the manufacturer's authorized representatives or their approved repair shops, unless you are sending it directly to the manufacturer. Always obtain a quotation for the service charge, and only after you accept the quoted service charge, instruct the service station to proceed with the servicing.

The local warranty policies available from Pentax distributors in some countries can supersede this warranty policy. Therefore, we recommend that you review the warranty card supplied with your product at the time of purchase, or contact the PENTAX distributor in your country for more information and to receive a copy of the warranty policy.

STATEMENT OF FCC COMPLIANCE

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

Changes or modifications not approved by the party responsible for compliance could void the user's authority to operate the equipment.

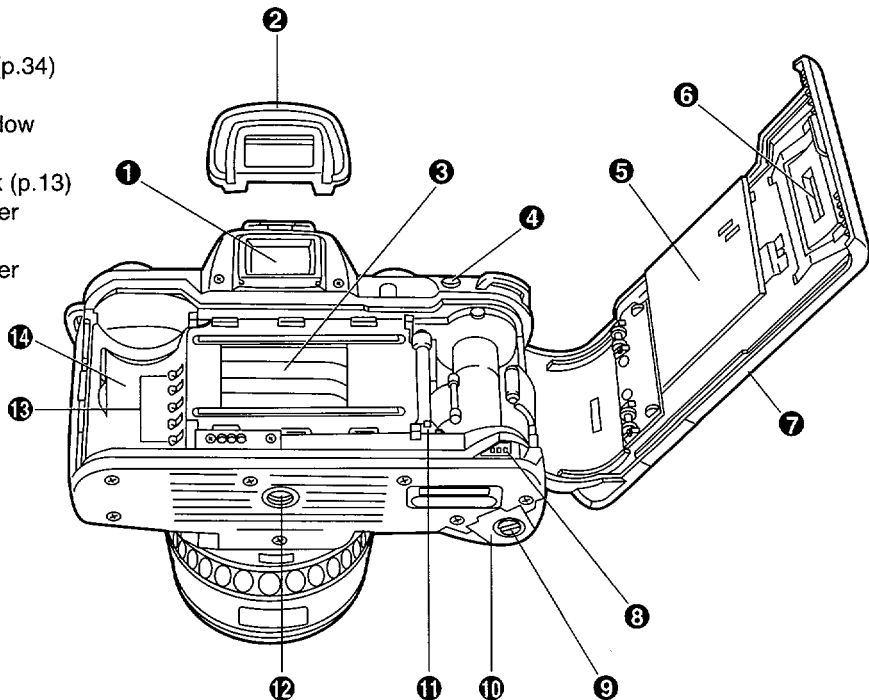
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does not cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

This class B digital apparatus meets all requirements of the Canadian Interference - Causing Equipment Regulations.

NAMES OF WORKING PARTS II

- ① Viewfinder eyepiece
- ② Eyecup F_H
- ③ Shutter curtain
- ④ Memory lock button (p.34)
- ⑤ Pressure plate
- ⑥ Film information window
- ⑦ Back cover
- ⑧ Film leader end mark (p.13)
- ⑨ Battery chamber cover screw (p.8)
- ⑩ Battery chamber cover (p.8)
- ⑪ Sprocket (p.13)
- ⑫ Tripod socket
- ⑬ DX-information pin (p.15)
- ⑭ Film chamber





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