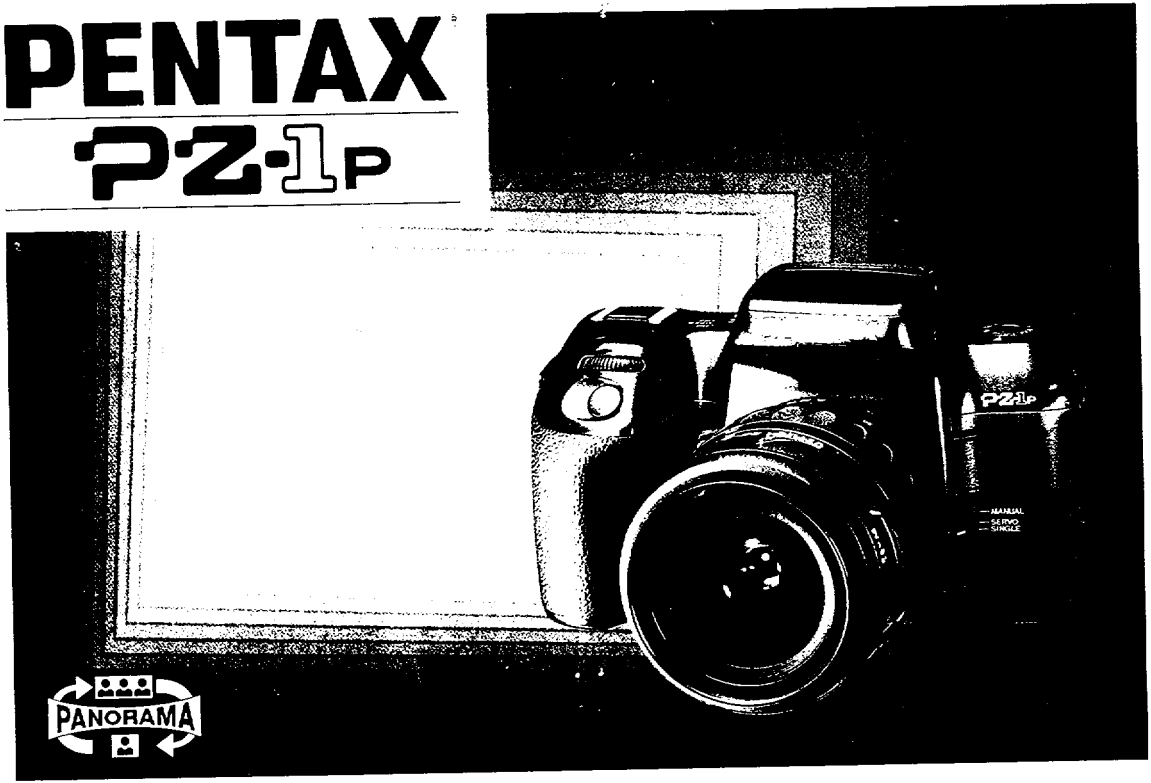
PENTAX

PZ-1P



Congratulations on your purchase of this camera and welcome to the exciting world of Pentax autofocus SLR photography! This camera is an autofocus 35mm SLR camera featuring 15 different Pentax exclusive functions, a power zoom mechanism, and one-touch switching to the Shutter-priority AE mode or the Aperture-priority AE mode from the Programmed AE mode. The built-in flash in this camera has a variety of features including the exposure compensation and auto bracketing photography. Its also possible to use the trailing-shutter-curtain sync flash mode. Combined with the intelligent Power Zoom lenses, the Image size tracking, Zoom clip mode and Zoom effect shooting capabilities are made possible.

Other major features are:

- Predictive autofocus
- 3 different metering systems
  - Multi(8)-segment metering
  - Spot metering
  - Center-weighted metering
- User-set function
- Enable to use the auto bracketing mode in the Manual exposure mode.

Please read this operating manual thoroughly before use.

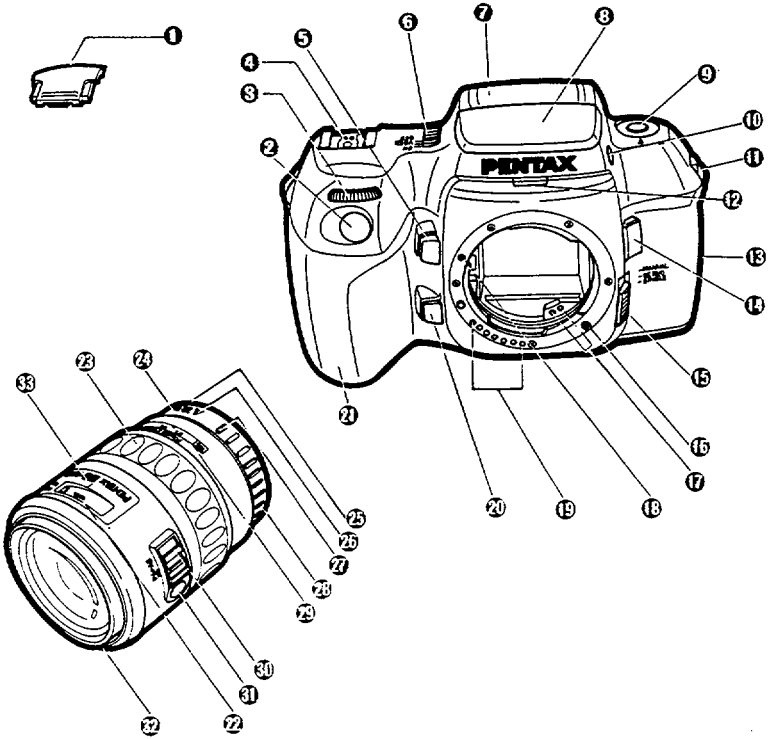
The names of the working parts are shown on the front and back flaps, so keep them unfolded for quick reference.

Icon indicators used in this manual

Operation direction	⬅
Automatic operation	◆■■➡
Attention	◌
Lamp blinking	✳
Correct	○
Incorrect	✕

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 responsibilities or liability for difficulties resulting from the use of lenses and accessories made by other manufacturers.

NAMES OF WORKING PARTS



1. Hot shoe cover FD (p.107)
2. Shutter release button (p.15)
3. TV direct dial
4. Hot shoe (p.107)
5. Preview button (p.117)
6. Main switch (p.15)
7. LCD panel (p.2)
8. RTF built-in flash (p.31)
9. Mode set button
10. Flash pop-up button (p.32)
11. Strap lug (p.9)
12. Self-timer lamp (p.67)
13. Back cover release lever (p.16)
14. Release socket cap FD (p.57)
15. Focus mode switch (p.27)
16. AF coupler
17. Power supply contacts
18. Lens mount index (p.12)
19. Lens information contacts
20. Lens lock button (p.13)
21. Hand grip
22. Distance scale window
23. Power zoom ring (p.24)
24. Aperture/zoom index
25. Aperture scale
26. Aperture-A index (p.22)
27. Aperture-A lock button (p.22)
28. Aperture ring (p.22)
29. Zoom scale window (p.24)
30. Auto zoom switch (p.78)
31. Zoom set button (p.80.82)
32. Focusing ring (p.35)
33. Distance scale index

PRACTICAL SHOOTING GUIDE

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Flash photography

Zooming the lens

Exposure modes

Portrait photography

Landscape photography

Others

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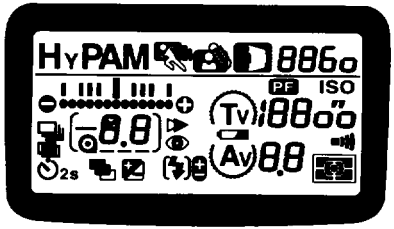
LCD PANEL INDICATION



HyP : Hyper Programmed AE (p.45)
P : Programmed AE (p.22)
A(Av) : Aperture-Priority AE (p.53)
: Exposure Compensation (p.47,59,71,and 95)
ISO : ISO Film Speed (p.106)
(Tv) : T_v Direct Dial Indication
A(Tv) : Shutter-Priority AE (p.51)
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: Exposure Compensation indication with flash light (p.95)
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: PCV Audible Signal (p.100)
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: Film Status Information (p.19)
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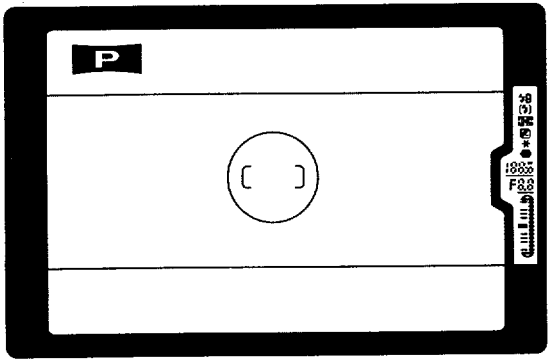
: Auto Bracketing indication (p.71)
: Multi-Exposure indication (p.64)

Illumination for LCD panel
By pressing the exposure compensation button and metering mode switch button simultaneously, the LCD panel will stay illuminated for about 10 seconds.

VIEWFINDER INDICATION



[ ] : Autofocus Frame (p.28)
: Built-in RTF Information (p.31)
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8000 : T_v Value (Shutter Speed)
: Exposure Compensation with flash (p.95)
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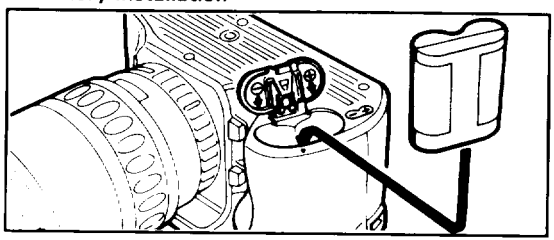
F32 : A_v Value (Aperture Value)
: Panorama Indicator (p.76)
: Bar-Graph (p.47,59,71,95)
: Multi(8)-Segment Metering Mode (p.40)

- The horizontal lines in the viewfinder indicate the panorama format frame.
- The circle surrounding the autofocus frame indicates the spot metering area.
- When you shoot a picture in standard format, make sure that the panorama indicator [▬] does not appear in the viewfinder.

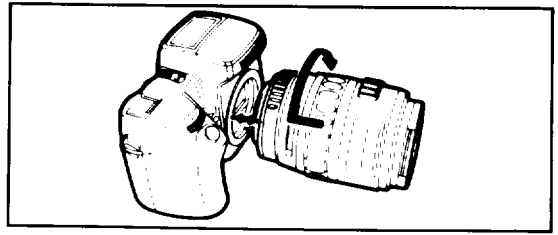
EASY TO USE! (For beginners)

1. Battery installation



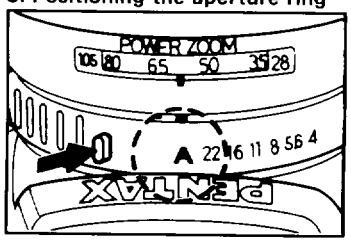
Open the battery chamber cover and put in a battery (2CR5), according to the markings (+, -) on the battery chamber cover. (See page 10.)

2. Mounting the lens



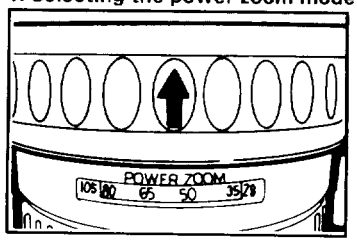
Align the red indexes on the lens and camera and turn the lens to the right until it seats with a click. (See page 12.)

3. Positioning the aperture ring



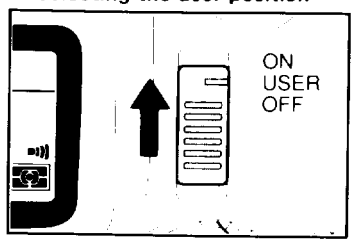
While holding the aperture-A-lock button, turn lens aperture ring to the **A** position. (See page 22.)

4. Selecting the power zoom mode



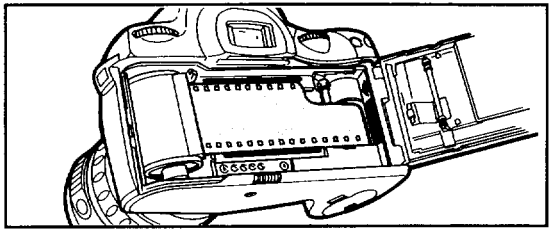
Push the power zoom ring forward until it clicks and the words **POWER ZOOM** appear beneath the power zoom ring and set the Auto Zoom Switch to **P**. (See page 24.)

5. Selecting the user position



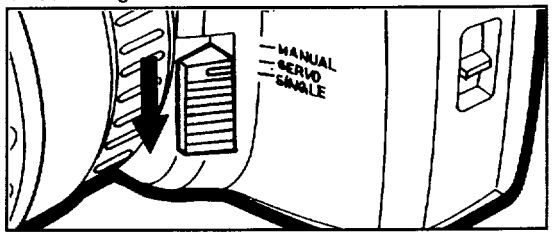
Set the main switch to the **USER** position. (See page 15.)

6. Film loading



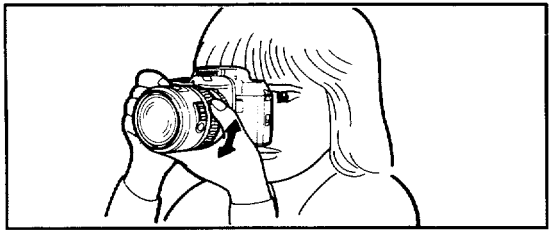
Open the back cover of the camera, insert a roll of film, align the end of the film leader with the red mark, and close the back cover. The film should advance to the first frame automatically.(See page 16.)

7. Selecting the autofocus mode



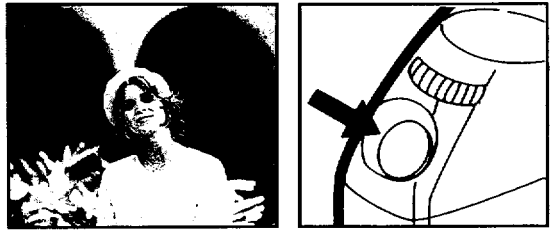
Set the focus mode switch to [**SINGLE**]. (See page 27.)

8. Composing the scene with the power zoom ring



While looking through the viewfinder, turn the power zoom ring to the right or left until you obtain the desired composition. (See page 24.)

9. Focus on the subject and shoot



Aim the AF frame [( )] towards subject, depress the shutter release button halfway down to lock focus, and then depress it fully to take a photo.(See page 28.)

CAMERA AND LENS MOUNTS

Lens Mount and Camera Body Compatibility Chart

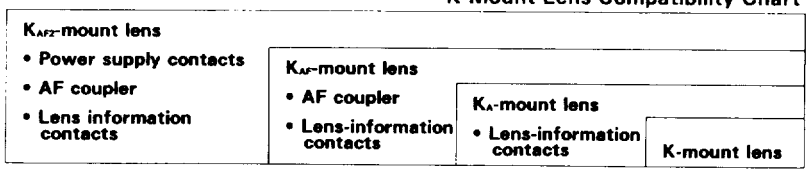
Mount type	Lens type	Camera name
(A) K_{AF2}-mount	Pentax-FA lens	Z-1_P/PZ-1_P, Z-1/PZ-1 Z-10/PZ-10,Z-20,PZ-20
(B) K_{AF}-mount	Pentax-F lens	SFX_N/$SF1_N$,SF7/SF10,SFX/SF-1
(C) K_A mount	Pentax-A lens	Super-A/Super Program, $P30_N$/$P3_N$,$P30_T$
(D) K-mount	Pentax-M lens and Pentax lens	LX,K1000
(E) Screw mount	SMC TAKUMAR lens,	ESII,SP

(A) through (D): basically K-mount (bayonet) lenses.
(A) and (B): autofocus lenses.
(C) through (E): non-AF (manual-focus) lenses.
(E): Can be fitted to this camera with the optional Pentax "Mount Adapter K".
(A) through (C): Have "A"(auto)" position on the lens aperture ring.

Pentax FA lenses incorporate new contacts to exchange information between the camera and lens for power zoom. Pentax FA lenses operate on existing K-mount cameras. Pentax FA lenses incorporate new contacts as follows :

- Power supply contacts
- AF coupler
- Lens-information contacts

K-Mount Lens Compatibility Chart



CAMERA FUNCTIONS AVAILABLE WITH VARIOUS LENSES

Function / Lens [Mount type]	FA lens [K_{AF2}]	F lens [K_{AF}]	A lens [K_A]	M lens [K]	S lens [Screw]
Autofocus (Lens only)	○	○	×	×	×
(Lens with AF Adapter 1.7X)	–	–	○*1	○*1	×
Manual focus (with FI) *2	○*3	○*3	○*3	○*3	×
(with Matte field)	○	○	○	○	○
Power zoom	○*4	×	×	×	×
Zoom clip	○*4	×	×	×	×
Image size tracking	○*4	×	×	×	×
Auto zoom effect	○*4	×	×	×	×
Hyper-Programmed AE	○	○*5	○	×	×
Programmed AE	○	○*5	○	×	×
Aperture-Priority AE	○	○	○	○*6	○*6
Shutter-Priority AE	○	○*5	○	×	×
Hyper Manual	○	○	○	○*6	○*6
Programmed TTL Auto Flash	○	○*5	○	×	×
TTL Auto Flash	○	○	○	○	○
Multi(8)-segment metering	○	○	○	×*7	×*7
Approx. f-stop indication	○	○	×	×	×

Notes:

* 1. Lenses with a maximum aperture of f/2.8 or larger. (See AF Adapter instruction manual.)
* 2. Manual focusing using the focus indicator (FI) [⬭] in the viewfinder.
* 3. Lenses with a maximum aperture of f/5.6 or larger.
* 4. Pentax-FA zoom lenses only.
* 5. Exception of Pentax-F Soft 85mm/f2.8.
* 6. Lenses without lens information contacts, the aperture cannot be set with A_V direct dial.
* 7. For lenses made earlier than Pentax-M (lenses without lens information contacts), center- weighted metering or spot metering is used instead of the multi(8)-segment metering pattern. However, when the main switch is set to the [**USER**] position, only the center-weighted metering system can be used.

HOW TO USE THIS OPERATING MANUAL

This manual is organized into the following sections, allowing you to optimize the use of the camera:

I. BASIC OPERATION (PREPARATION)

II. BASIC OPERATION (SHOOTING)

III. ADVANCED OPERATIONS

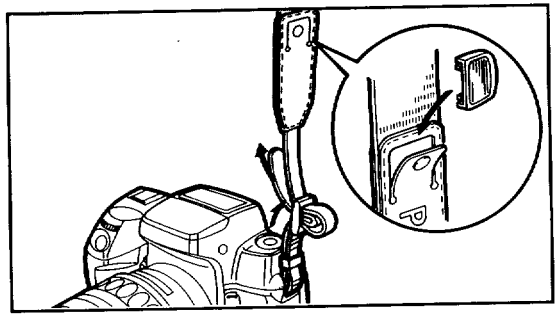
IV. SOME BASIC PRINCIPLES OF PHOTOGRAPHY

V. OTHER

- If you want to begin taking pictures with this new camera as soon as possible, read sections I and II, " BASIC OPERATION(PREPARATION)" and " BASIC OPERATION (SHOOTING)." These sections introduce only the basic functions of this camera - details can be found in the following sections.
- Be sure to read "BATTERY PRECAUTIONS" (page 119), "TAKING CARE OF YOUR CAMERA" and "WARRANTY POLICY" (page 128) before using your camera.

I. BASIC OPERATION (PREPARATION)

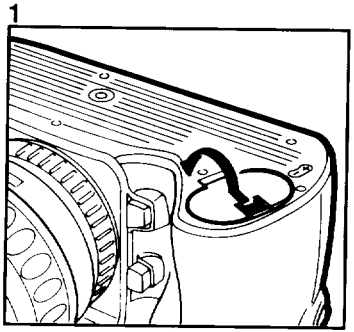
(1) ATTACHING THE CAMERA STRAP

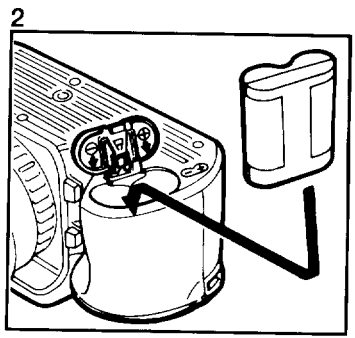


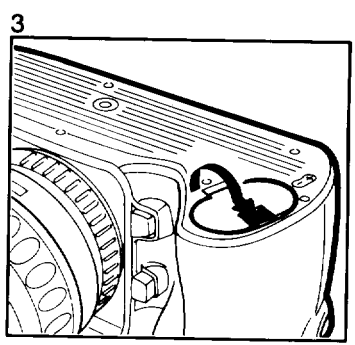
Fit the strap on the camera as illustrated.

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

(2) INSTALLING THE BATTERY







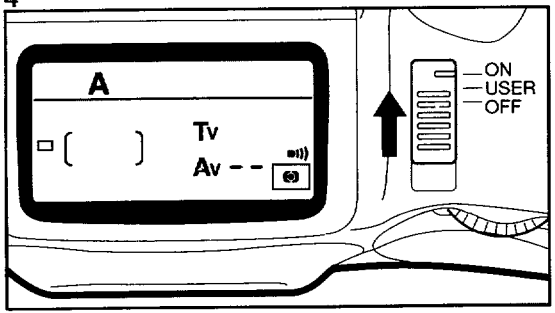
1. Open the battery chamber cover by sliding the release lever in the direction of the arrow.

2. Insert the battery, making sure the plus/minus markings match the markings (+ , −) on the battery chamber cover.

3. To close the battery chamber cover, slide the release lever in the direction of the arrow while holding down the battery chamber cover.

* Use one 6V lithium battery (2CR5) or equivalent.

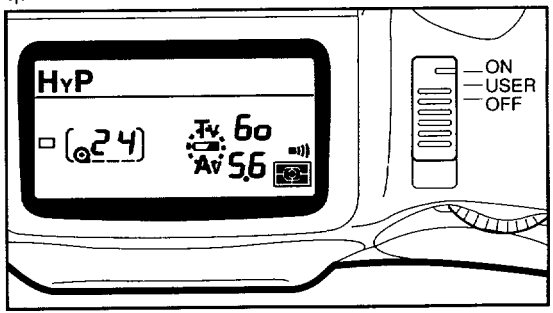
4



4. Set the main switch to [**USER**] or [**ON**] and check that the LCD panel shows the information as shown above.

* The LCD display as shown above may be different if a lens is attached.

*



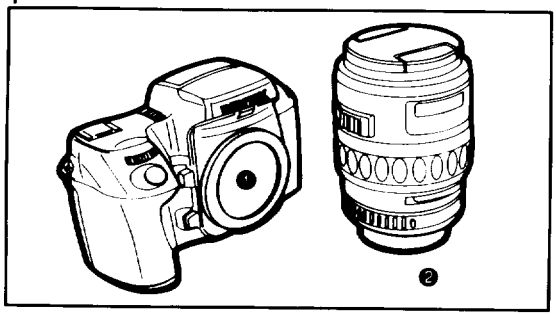
* Low Battery Warning

When the battery is nearly exhausted, the battery symbol [▭] appears on the LCD panel to warn you. Replace the battery as soon as possible.

* When the low battery warning [▭] starts blinking, the shutter cannot be released and all indications in the viewfinder disappear.
* When the battery is replaced, all camera settings except the exposure counter, Pentax function settings, the User-set function, and film speed [**ISO**] return to initial settings.

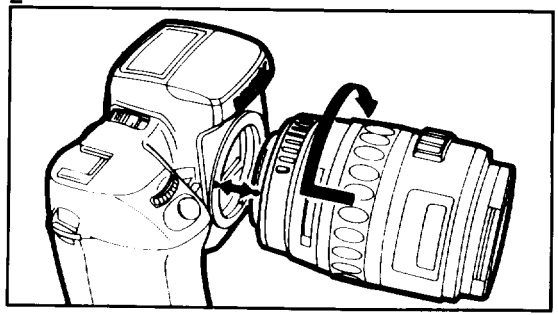
(3) MOUNTING THE LENS

1



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

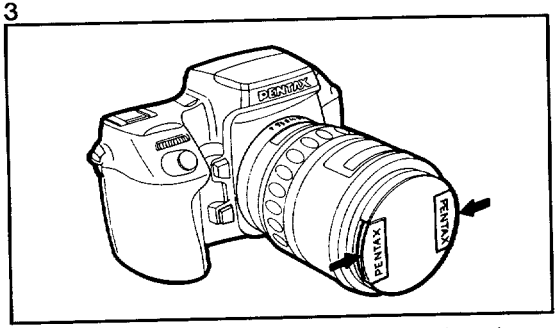
2



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 you hear a click.

* 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.
* Prevent unexpected operation of the FA zoom lens while you are mounting it, ensure that the main switch is at **OFF**.

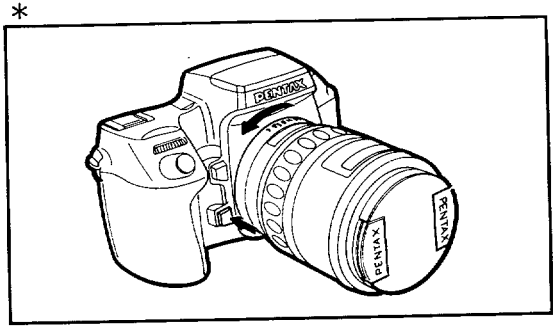
3



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

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

*

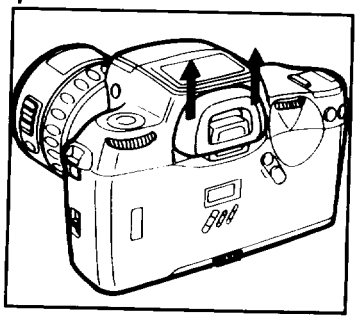


How to remove
To remove the lens, turn it to the left while depressing the lens-lock-release button.

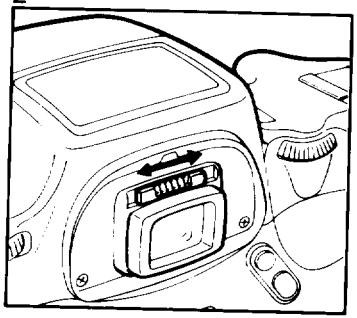
* To protect the contacts and AF coupler of the lens against damage after removal, be sure to set it down with the mount side facing upward.

(4) ADJUSTING THE VIEWFINDER DIOPTER

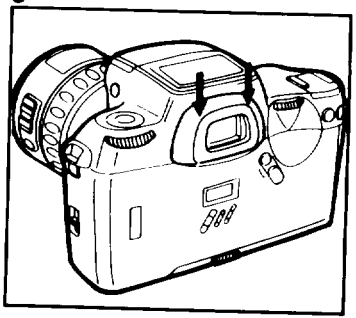
1



2



3



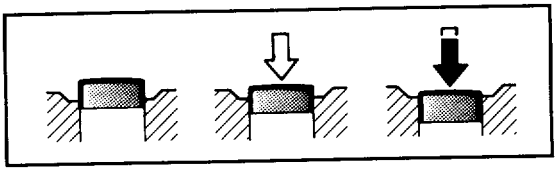
1. Detach the Eyecup F_D from the accessory mounting grooves of the viewfinder as shown in the illustration.
2. Aim the camera at a bright object. While looking through the viewfinder, move the diopter adjustment lever to the left or right until the autofocus frame [ ] appears in the sharpest focus.
3. After adjustment, reattach the Eyecup F_D into the accessory mounting grooves of the viewfinder.

* To attach the Eyecup F_D, slide it down the grooves on both sides of the viewfinder.
* The diopter adjustment range is - 1.5D to 2.5D (diopters).

(5) USING THE SHUTTER RELEASE BUTTON

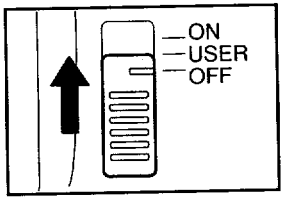
The shutter release button has two positions. Depressing it down half way (first position) turns on the exposure meter and the autofocus mechanism. Depressing it down fully (second position) allows you to release the shutter. When taking a picture, gently depress the shutter release button down to prevent camera shake.

* Before loading a roll of film, slowly depress the shutter release button to learn where the first position is.
* The exposure meter stays on for about 10 seconds after the button is released from the halfway position. Depressing the shutter release button down halfway keeps the exposure meter activated.



Not pressed | Pressed halfway down (first position) | Pressed fully down (second position)

(6) MAIN SWITCH OPERATION



The main switch has three positions.

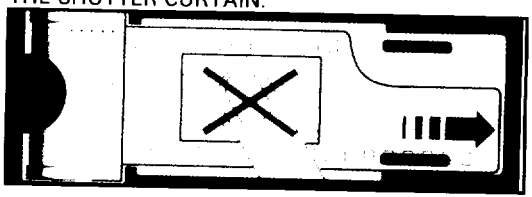
[**ON**]: Full-feature position.
All functions of this camera available. However, available exposure modes differ depending on the Pentax function as you selected. See page 100.

[**USER**]: User position.
Easy picture taking mode only for Programmed AE mode. When the lens aperture ring is set to other than A position, only the Aperture-priority AE mode is available. For other available functions, see page 21. However, the desired exposure modes and other functions can be set when [**USER-SET**] function is set at this position.

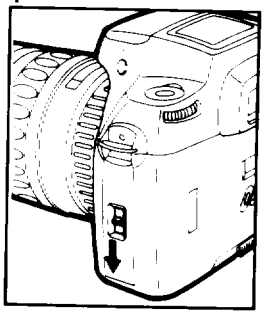
[**OFF**]: OFF position (for when the camera is not in use).

(7) FILM LOADING

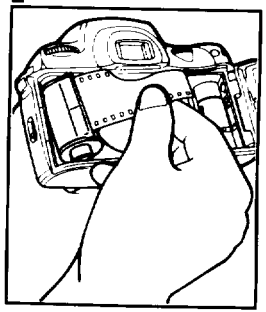
* We suggest that first you operate the camera with no film loaded to become familiar with its operation.
* THE SHUTTER CURTAINS ARE FINE-PRECISION MATERIAL. DO NOT TOUCH THEM WITH YOUR FINGERS OR ANY OTHER OBJECT WHILE LOADING FILM.
* When DX-coded film is used, the correct film speed is automatically set for the camera. This camera can set a DX-coded film speed within the range ISO 25 to 5000.
* If you use a Non-DX coded film, manually set the ISO film speed. See page 106.
* Before loading a film for the first time after purchase, open the back cover and remove the protective card as shown in the photo. MAKE SURE NOT TO TOUCH THE SHUTTER CURTAIN.



1



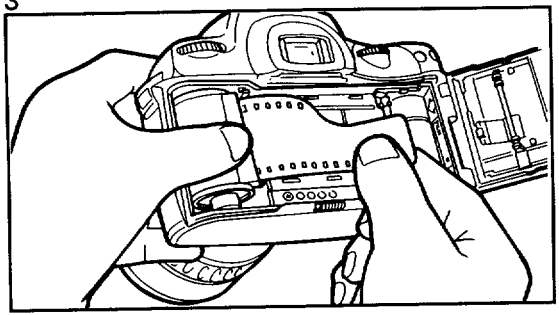
2



1. To open the camera's back cover, slide the back cover release lever in the direction of the arrow.
2. Hold the film cartridge with the protruding end down. Slide the top end in the film chamber first and then push its protruding end in.

* Always load or unload a film in the shade or by using your body to shade the camera.

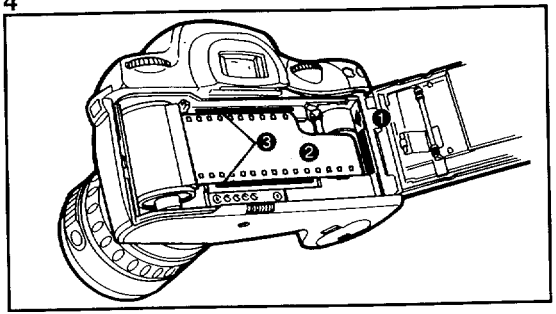
3



3. Hold the film cartridge with your fingers and pull the film leader out far enough from the cartridge to reach the take-up spool as shown in the illustration. Ensure that your fingers or the end of the film leader does not touch the shutter curtain. 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 gently with a soft, dry cloth.

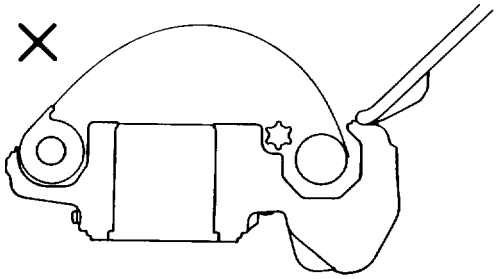
4



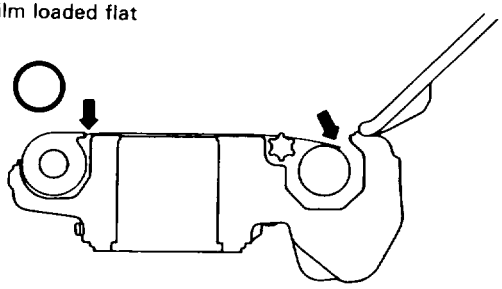
4. Align the film leader with the film leader end mark ❶ as shown.

* Ensure that the film is placed properly between the film guides ❸. Make sure that the film perforations properly engage with the sprocket teeth ❷ .
* If the film leader is extremely bent, straighten it or cut off the bent portion.

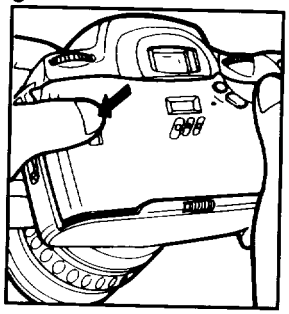
Film loaded with slack

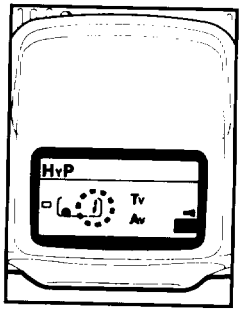


Film loaded flat



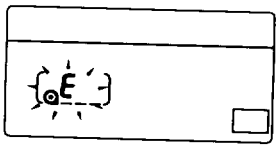
5





5. Close the back cover and set the main switch to [**USER**] or [**ON**] position. The film automatically advances to the first frame. Check that [1] and [ ] are displayed on the LCD panel.

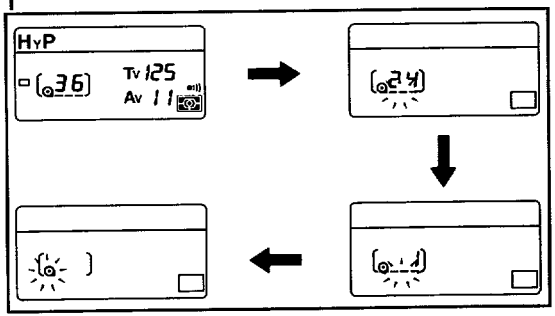
* The film counter indication advances one each time the shutter is released.



* If the film is not properly loaded, [E] on the LCD blinks, it indicates that the film has not loaded properly. Open the back cover and load the film once again.

(9) UNLOADING FILM

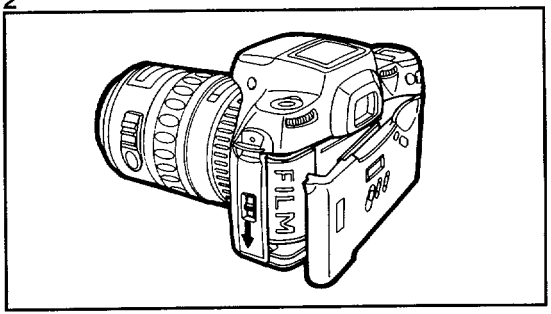
1



1. After the last frame of the roll is exposed, the camera rewinds the film automatically.

* When automatic rewinding is not specified with the Pentax function No.12 selection 1 (no automatic rewind),rewind the film as explained in "Rewinding a Film in Mid-Roll"on the next page. Then remove the film.
* During rewinding, [———] blinks on the LCD panel and the exposure counter counts frame numbers in reverse.
* When the film is fully rewound, [◎] blinks and the exposure counter disappears. Before opening the back cover, check that [◎] is blinking.

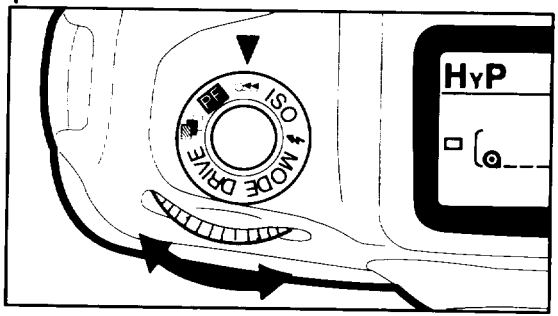
2



2. Open the back cover and remove the film.

* When removing the film from the camera, protect it from exposure to direct sun light.
* A roll of 24-exposure film takes about 10 seconds to be rewound.
* The shutter may be released a frame or more even after the specified number of frames have been used up as indicated by number of frames on the film canister. However, those extra frames may be lost in the processing.
  When you take important pictures, rewind the film when the film reaches the end of the frame.
* Using the Pentax function, you can leave the rewound the film leader outside of the film cartridge. See page 104.

1

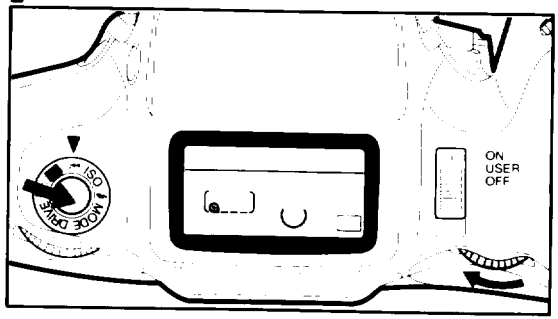


Rewinding a Roll of Film in Mid-Roll

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

* This function does not work when the main switch is in the [**OFF**] position.

2



1. Set the mode dial to [⊙◂◂_].
2. While holding down the mode set button, turn the A_V direct dial two clicks in the direction of the arrow.

* Before opening the back cover, check that [⊙] is blinking.

II. BASIC OPERATION (SHOOTING)

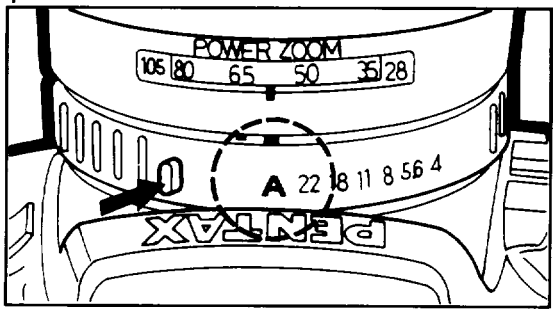
This camera offers an advanced range of automatic exposure modes and drive modes. For easy picture-taking, set the main switch in the [**USER**] position. In the User position, the camera automatically selects the best combination of aperture and shutter speed setting, allowing you to take pictures simply by depressing the shutter release button.

Available functions with the [**USER**] position are mentioned to the right. Any other functions are not available. However, when the [**USER-SET**] function is selected in the camera's main switch USER position, your desired functions can be set. See details on page 74.

Available functions in the user position:

Exposure mode	Programmed AE (Aperture ring is set at **A** position.) Aperture-Priority AE (Aperture ring is set NOT at **A** position.)
Drive mode	Single frame film advance
Light metering mode	Multi(8)-segment metering
Built-in flash mode	Leading-shutter-curtain-sync flash
Flash exposure compensation	not available
Exposure compensation	not available
Auto bracketing mode	not available
Program line	normal

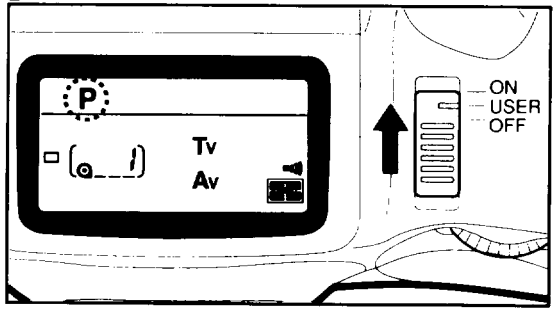
1



1. Turn the aperture ring to [**A**] as shown in the illustration.

* To move the lens aperture ring to "A" (Auto) or to a manual f/stop setting, hold down the aperture-A lock button to turn the aperture ring.

2



2. Set the main switch to [**USER**].

* [**P**] appears on the LCD panel to indicate that the Programmed AE is selected.

(2) USING ZOOM LENSES

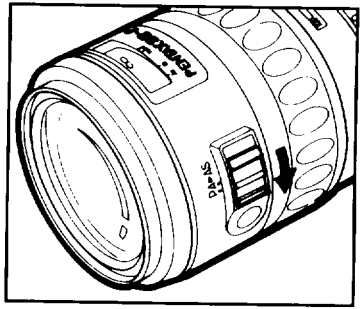
Telephoto

Wideangle

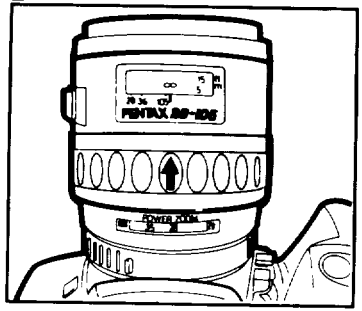
Using the zoom function makes the subject appear larger (telephoto) or smaller (wide angle) in the viewfinder.
Turn the zoom ring to the desired position and depress the shutter release button to take a picture.

* The smaller the number shown in the zoom scale window, the wider the angle. Conversely, the larger the number, the more magnified the image appears.
* Using a Pentax-FA zoom lens with this camera allows you to use the power zoom (motorized zoom) function.
* When mounting an existing Pentax-F Zoom lens, this camera can be used only in the manual mode.

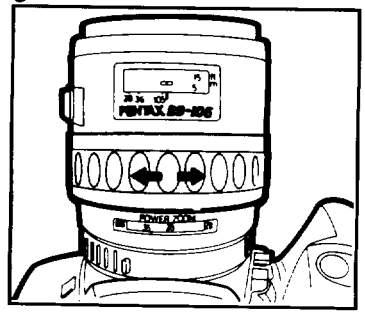
1



2



3



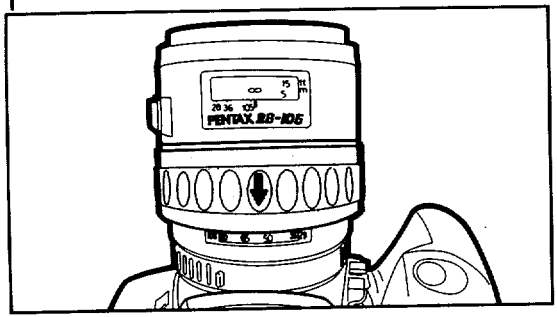
Using the Power Zoom Function

* Only Pentax-FA zoom lenses offer the power zoom function.

1. Pentax-FA zoom lenses have an auto-zoom switch. Set this switch to [**P**]. For some lenses, set the auto-zoom switch to [**PZ**].
2. Push the power zoom ring forward until the words [**POWER ZOOM**] appear beneath the power zoom ring.
3. Turning the power zoom ring to the right brings the subject closer (telephoto) and turning it to the left makes the subject appear smaller (wide angle). To stop zooming, release the power zooming ring.

* Three zooming speeds are available. Turning the power zoom ring fully to the right or left, zooms the lens quickly. Turning it slightly gives you slow operation. At an intermediate position, the lens zooms at medium speed.
* Zooming the lens with the power zoom function automatically focuses the lens on the subject. (This function can be canceled with the Pentax Function No.13.) However, for final focusing, depress the shutter release button halfway down to focus the subject.
* When the main switch is turned off while a Pentax-FA zoom lens is in use, the lens automatically retracts to its shortest physical length.

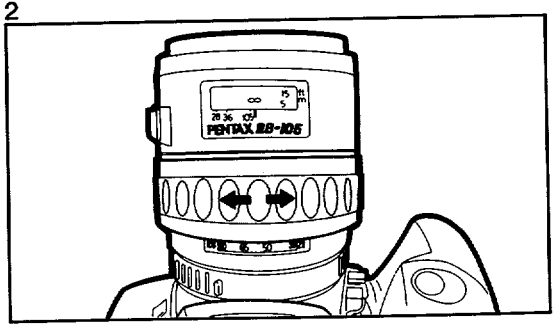
1



Using the manual zoom function

* When the zoom ring is pulled towards the camera body, the zooming mode is switched to manual; zooming can be operated manually using the same ring. When switched to manual zooming,FA Zoom lenses work in a manner similar to the existing Pentax F lenses.

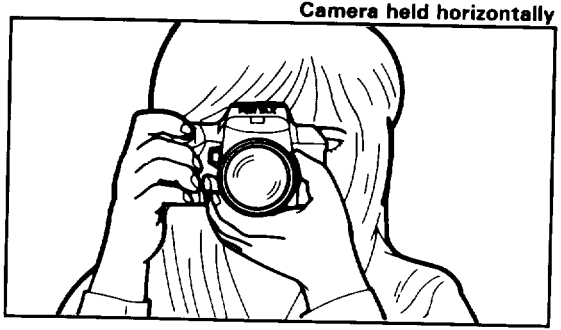
2



1. Pull the power zoom ring toward the camera body until the words [**POWER ZOOM**] are hidden.
2. Turning the power zoom ring to the right makes the subject appear larger (telephoto) and turning it to the left makes the subject appear smaller (wide angle).

(3) HOLDING THE CAMERA

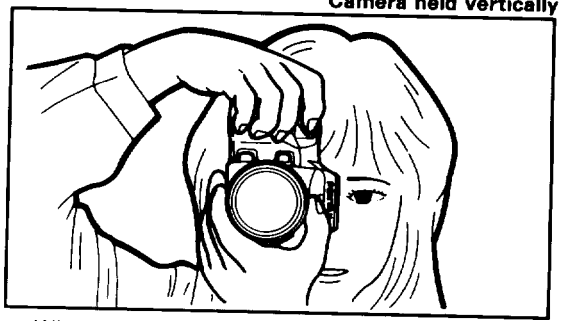
Camera held horizontally



For best results, be sure to hold the camera correctly.

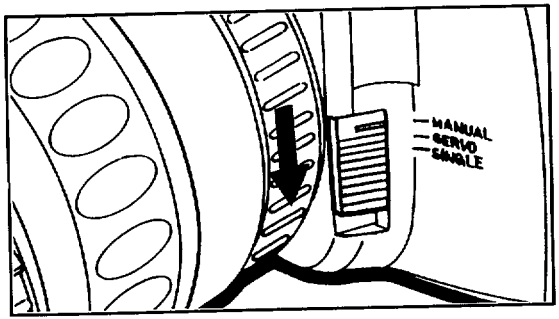
* While taking a picture, hold your breath and gently depress the shutter release button. (Sudden force on the shutter release button will cause camera shake, making the picture blurred.)
* To reduce camera shake,support your body or the camera on a solid object – a table, tree, or the wall of a building, for instance.
* When taking a picture at slow shutter speeds of 1/30 second or slower, or when using a telephoto lens, a tripod and optional "Cable switch F" are recommended.

Camera held vertically



* When using a ultra-telephoto lens, a tripod that is heavier than total weight of the camera and lens is recommended to avoid camera shake.

(4) SELECTING AN AUTOFOCUS MODE



The focus mode switch has three positions, as shown in the illustration. For autofocus operation, set the focus mode switch to [**SINGLE**] or [**SERVO**]. For basic shooting, set the mode switch to [**SINGLE**] mode.

About Focus Modes Switch

- [**SINGLE**]
  When you depress the shutter release button, the lens automatically focuses. As soon as the subject is in focus, the shutter is released. For normal use, select this position. The shutter cannot be released if the subject is out of focus.

- [**SERVO**]
  If the shutter release button is held at the halfway position,the lens focuses continuously to follow the subject. The predictive autofocus function is effective in this mode.

- [**MANUAL**]
  You can focus on a subject manually. Select this position when the subject is difficult to focus. (See page 37.)

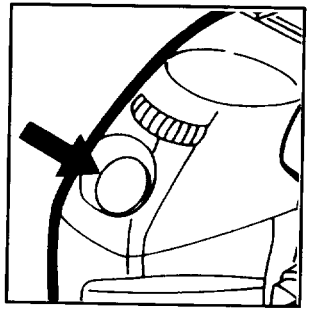
(5) AUTOFOCUSING

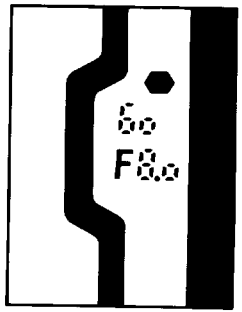
1

1. Aim the AF frame [ ] in the center of the viewfinder toward the subject.
2. When the shutter release button is depressed halfway down,the lens automatically focuses.

* If your composition does not allow the AF frame [ ] to be aimed on the subject, use the focus-lock technique to focus on the subject. See page 30.
* When the subject is in focus, the green indicator [○] in the viewfinder lights up with the audible PCV signal.
* The audible PCV signal can be turned off by the Pentax function No.1. See page 100.

2





* During an autofocus operation, the focusing ring should not be obstructed with your fingers, hands, or any other object.

If [○] blinks continuously, it indicates that the subject is hard to achieve focus for the following reasons.

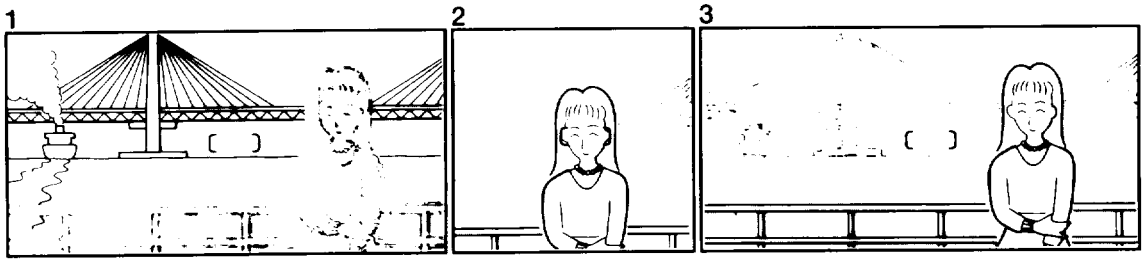
❶ The subject is too close.
❷ The subject is difficult to focus for the autofocus system. See page 37.

* To take a picture, depress the shutter release button down fully.
* When using the SMC Pentax-F Soft 85mm f/2.8 lens, set the aperture between f/2.8 and f/4.5. See page 38.

Predictive AF Mode
When the focus mode switch is set to [**SERVO**,] the camera senses subject movement during the autofocus operation. The camera will automatically switch the focus mode to predictive autofocus mode to measure the speed of a fast-moving subject, and predict where it will be at the moment of shutter release, to maintain sharp focus on wherever the subject may move.

Shooting in the Single Autofocus Mode
(Focus Mode Lever at [**SINGLE**].)
* The shutter cannot be released until the subject comes into focus.
* Depress the shutter release button down halfway. While [⬭] is on, the-camera-to-subject distance is fixed (focus lock). See "Using the Focus Lock Function." See page 30.
* Once [⬭] is lit in the viewfinder, the focus is fixed. To focus on an other subject, lift your finger off the shutter release button. Aim the camera again, and then depress the shutter release button to the halfway position.
* If the focus mode switch is set at [**SINGLE**] with the drive mode at the consecutive mode, the camera focuses only the first picture. From the second picture, the pictures are taken consecutively with the focus locked at the first picture.

Shooting in the Servo Autofocus Mode
(Focus Mode Switch at [**SERVO**].)
* The shutter can be released whether or not your subject is in focus. If the shutter release button is held in the halfway position, the camera continuously focuses on anything within the AF frame [( )].
* The Servo Autofocus mode allows sharp pictures to be taken of moving subjects because of the predictive autofocus function.
* The focus lock function is not active.

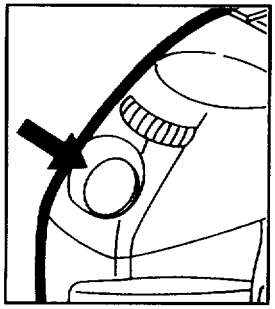


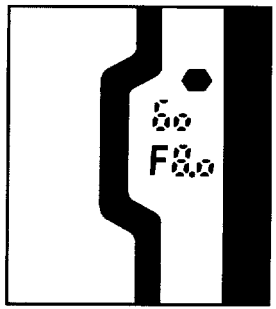
Focus Lock Function

The camera focuses with the AF frame in the center of the viewfinder. When the main subject is off the AF frame, use the focus-lock technique to bring the main subject into focus.

1. When the composition does not allow the AF frame [ ] in the center of the viewfinder to be placed over the most important subject in the picture, the camera will focus on the background as shown in the illustration.
2. To prevent this, aim the AF frame towards the subject and keep depressing the shutter button halfway down. The in-focus indicator remains on, indicating that the focus is temporarily locked.
3. While maintaining pressure on the shutter release button halfway down, reaim the camera or recompose the picture, then depress the shutter release button all the way to release the shutter.

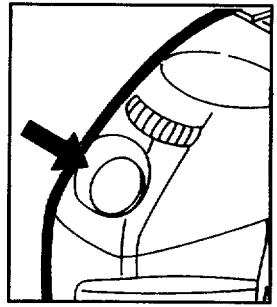
* The focus-lock does not act when the focus mode switch is at [**SERVO**].
* Lifting your finger off the shutter release button clears the in-focus indicator [○] in the viewfinder and cancel the focus lock function.
* After taking a picture, the focus is locked if the shutter release button is kept halfway depressed instead of lifting up your finger from the shutter release button. In this halfway depressed position, you can release the shutter as many times as you wish in the focus-locked situation.

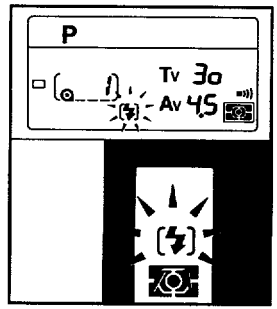




When the shutter release button is depressed halfway down, the shutter speed and aperture setting are displayed in the viewfinder and on the LCD panel. To release the shutter, gently depress the shutter release button fully down. The camera automatically winds the film and the exposure counter indication advances by one.

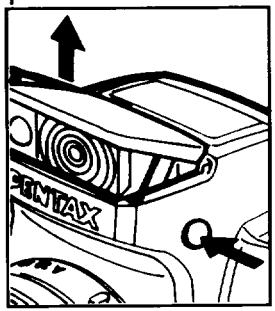
* When [⚡] blinks in the viewfinder and on the LCD panel,the use of the built-in flash is recommend.
* When you shoot a picture in standard format, make sure that the panorama indicator [▭] disappears in the viewfinder.



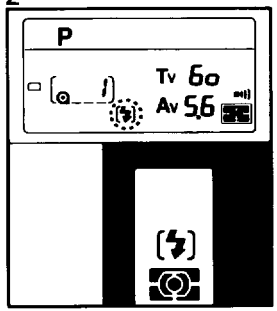


The Flash-Recommended Indicator [⚡]
When a subject is shot in dark or in a backlit situation in the Hyper Programmed, Programmed(when the main switch is at **USER**) or the Aperture-Priority AE mode, the flash recommended indicator [⚡] in the viewfinder and on the LCD panel blink when the shutter release button is depressed halfway down. In the Shutter-Priority AE and Hyper Manual Mode, the flash-recommended indicator appears only when a subject is shot in a backlit situation.

1

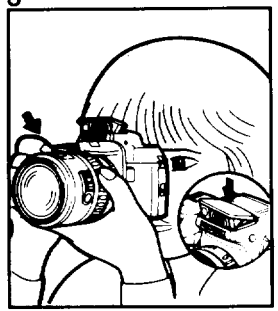


2



1. Push the flash pop-up button to activate the flash.
2. The flash unit starts charging automatically. When it is fully charged, [⚡], the flash-sync-speed and the aperture appear in the viewfinder and on the LCD panel.
3. Depress the shutter release button fully, and the flash unit discharges. After using the flash, retract the built-in flash by pressing it down into the camera body.

3



With ISO 100 film

Maximum Lens Aperture	Effective Range
f/1.4 - 2.8	About 1 - 5m (3.2 - 16.5ft)
f/3.5	About 0.8 - 4m (2.29 - 13.1ft)
f/4.7	About 0.7 - 3m (2.29 - 9.8ft)
f/5.6	About 0.7 - 2.5m (2.29 - 8.2ft)

Effective Range for Programmed TTL Auto Flash (at ISO 100)

The effective range of the flash depends on the maximum aperture of the lens in use. A lens with a maximum aperture of f/1.4 is marked as 1:1.4 on its barrel.

* In the Hyper Programmed AE or Programmed AE mode when the main switch is set [**USER**] position, the built-in flash functions as a programmed TTL auto flash.

* The minimum distance for the Programmed TTL flash is always approx. 0.7m even a lens with a maximum aperture of f4.5 or smaller is in use.
* When a subject is shot at a distance closer than 0.7m, correct exposure cannot be obtained, and you will see vignetting in the picture corners.

Notes on Flash Usage

Inapproprlate Lens Warning

When using the F- or FA- lenses mentioned below, [⚡] will blink in the viewfinder and on the LCD panel when the shutter release button is depressed halfway down after the flash has been fully charged.

- Lenses wider than 28mm
- Lenses with the focal length 300mm or longer (except when using the FA Zoom 100-300mm at a focal length of 300mm)

Even if using lenses focal length range between 28 - 300mm, some F and FA lenses may light up this warning.

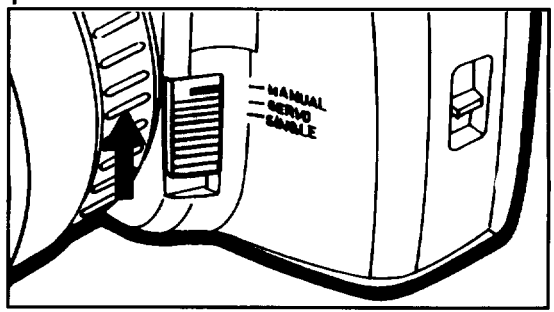
Taking a picture while this warning is displayed will cause vignetting in the picture corners or semi-circular vignetting at the bottom of the picture. Keep in mind that the lens other than an F or FA in use, this warning will not be displayed.

* Do not use a lens hood as it may obstruct the light coming from the flash.
* Shooting subjects with F 24-50mm zoom lens at the focal length between 28 - 35mm does not cause vignetting in the picture corners, though the inappropriate lens warning [⚡] appears.
* Shooting subjects at a distance closer than 1m with an FA Zoom 28 - 105mm lens in the wide-angle range (35-40mm) length may cause vignetting in the picture corners. Take the picture at a distance of 1m or longer in this case.
* The vignetting will occur all focal length range of the FA 28 - 70mm lens. Do not use this lens with the built-in flash.
* Shooting with FA80 - 200mm zoom lens, using the focal lengths longer than 135mm will not occur the vignetting.
* This camera includes a Red-eye Reduction flash function, which reduces the red-eye phenomenon by using preflash. See page 90.

III. ADVANCED OPERATION

(1) MANUAL FOCUSING

1



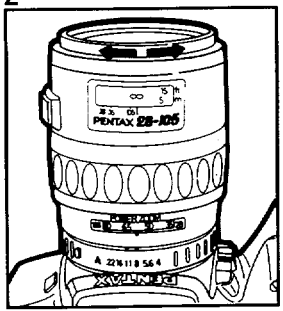
With a Manual-Focus Lens

When mounting an existing K_A- or K mount lens (non-autofocus lens) with a maximum aperture of f/5.6 or larger (f/1.2 to f/5.6), use the manual focus mode to focus the lens with the aid of the in-focus indicator [○] in the viewfinder.

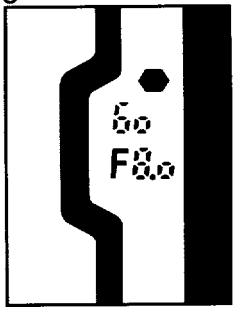
How-To-Manual Focus

1. Set the focus mode switch to [**MANUAL**].

2



3



2. While looking through the viewfinder, turn the focusing ring to the right or left while holding the shutter release button halfway down.
3. When the subject comes into focus, the in-focus indicator [⬡] lights up in the viewfinder.
   Depress the shutter release button fully to take a picture.

* When the subject comes into focus, the in-focus indicator [⬡] lights up in the viewfinder and an audible PCV signal is heard. The audible PCV signal can be canceled by using the Pentax Function No.1.
* When using a K_{AF}- or K_{AF2}-mount lens, you can also use this method if the focus mode switch is set to [**MANUAL**].
* If an old type screw-mount lens is used with a Mount Adapter K, the in-focus indicator [⬡] in the viewfinder cannot be used.

Using the Snap-in Focus Function

If the focus mode switch is at [**SINGLE**] when a K_A- or K-mount lens is used together with the optional "Cable Switch F", "snap-in focus" is possible where the shutter is automatically released when a subject comes into focus.

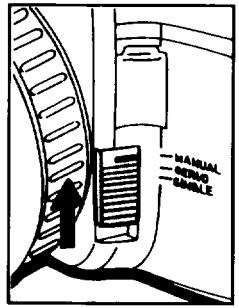
1. Use a K_A- or K-mount lens.
2. Set the focus mode switch to [**SINGLE**].
3. Focus at the point where you wish to capture the subject.
4. Using the optional "Cable Switch F", keep the trigger release button depressed so that the autofocus and metering system stay active.
5. The camera releases the shutter automatically when the subject comes into focus at the point selected.

When autofocus cannot be used

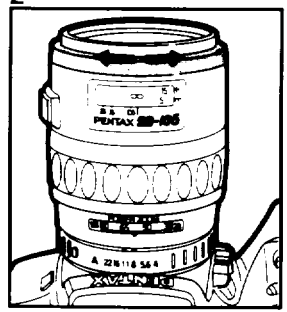
When the autofocus function or the viewfinder's infocus indicator [○] cannot be used for focus confirmation for the following reasons, focus on the subject in the manual focus mode with the aid of the matte field in the viewfinder as you would with a non-AF SLR camera.

a) The in-focus indicator blinks because the subject is difficult to autofocus.
b) The maximum aperture of the lens in use is smaller than f/5.6.
c) A bellows 100mm f/4, Shift 28mm f/3.5(shifted), or Reflex lens in use.
d) An old type screw-mount lens is fitted with an optional "Mount Adapter K".

1



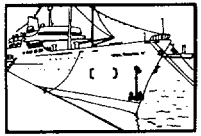
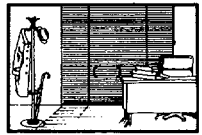
2

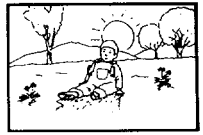


How to Focus on the Subject

1. Set the focus mode switch to [**MANUAL**].
2. While looking through the viewfinder, turn the focusing ring to the right or left until image in the viewfinder is clearest. Then, depress the shutter release button fully to take a picture.

(2) HARD-TO-AUTOFOCUS SUBJECTS



The autofocus system is highly precise, but not perfect. Depending on the brightness, contrast, shape, and size of your subject, the autofocus system may not operate. In such a case, use the focus-lock technique on a subject near the actual one and equidistant from the lens, or set the focus mode switch to [**MANUAL**] and use the manual focus mode to focus the lens on the subject with the aid of the matte field in the viewfinder. Subjects which may fool the autofocus system include:

a) Extremly low-contrast subjects such as a white wall in the AF frame [( )].
b) Subjects which don't reflect much light in the AF frame [( )].
c) Subjects which are moving too fast.
d) Subjects with horizontal lines or with finely complex or detailed patterns in the AF frame [( )].
e) Multiple subjects in the foreground and background of the AF frame [( )].
f) Subjects positioned against reflected light or strong backlight or with extremly bright backgrounds.

Notes on Accessories

The following conditions do not allow autofocusing or manualfocusing which uses the in-focus indication in the viewfinder. Use the manual-focus mode to focus on the subject with the aid of a matte field surrounding the AF frame.

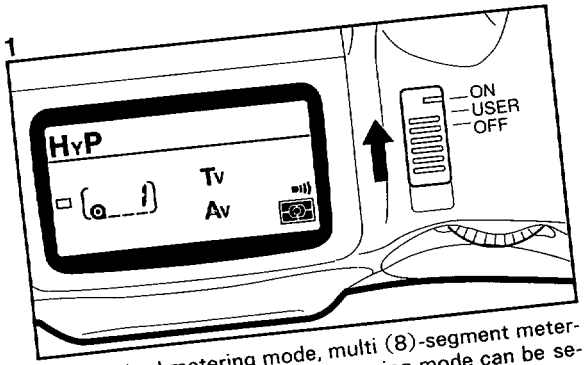
a) When using special effect filters or "Magic Image Attachment" or "Stereo Adapters"
b) When using an ordinally polarizing filter: a half mirror incorporated into the autofocus system reduces the effectiveness of the autofocus function when used in combination with an ordinary polarizing filter. Use a circular polarizing filter for autofocus operation.
c) When using Extension Tubes or an Auto Bellows for close-up photography.

Note on the SMC Pentax F SOFT 85mm f 2.8 lens

When shooting at a distance closer than approx. 1.5m, set the lens to a manual f-stop setting between f/2.8 and f/4.5. A smaller aperture (f/5.6 to f/32) may cause the autofocus system and the viewfinder's focus indicator to malfunction. To remedy this problem, temporarily set the lens to f/4.5. After focusing on the subject, lock focus, and set the lens to the required f-stop.

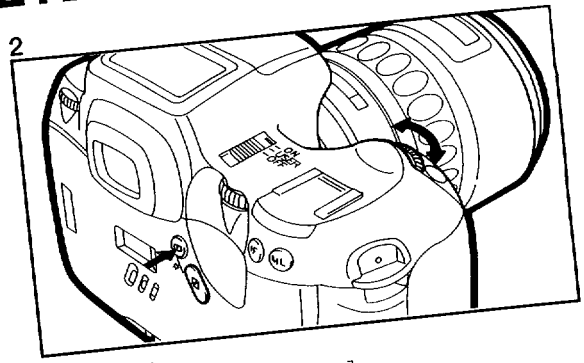
(3) SWITCHING METERING MODES

1



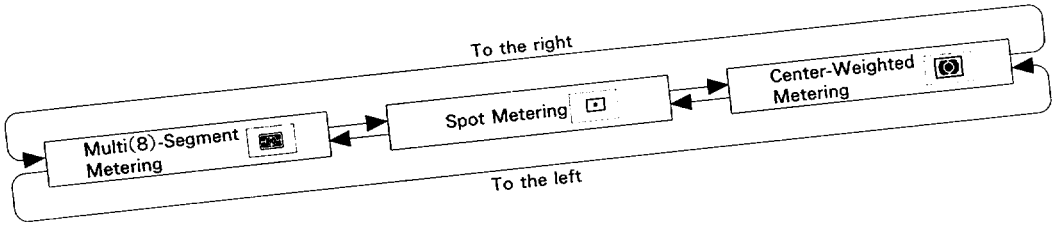
Your desired metering mode, multi (8)-segment metering, spot or center weighted metering mode can be selected.

2

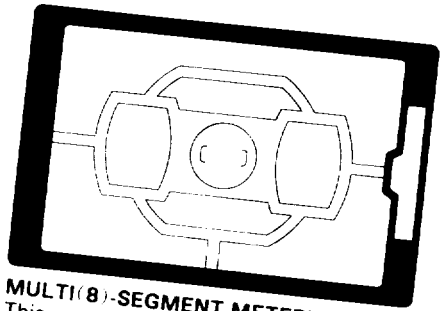


How to set

1. Set the main switch to [**ON**].
2. While depressing the Metering mode switch button on the back cover of the camera [⊡], turn the T_V direct dial until your desired metering mode appears on the LCD panel.

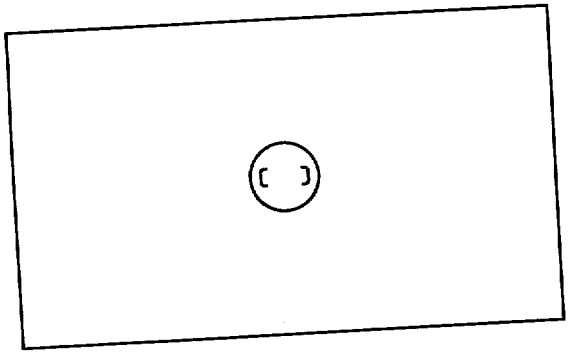


* When the main switch is set at [**USER**], the multi-segment metering mode is selected automatically and no other metering modes can be used.
* When a lens with no lens information contacts (lenses made before M lenses) is used, use either the center-weighted metering or the spot metering. The milti-segment metering mode cannot be set. If the main switch is set at [**USER**], only the center weighted metering can be used. However, the spot metering can be used if [**USER-SET**] function is selected at the main switch is at [**USER**] position. See page 74.

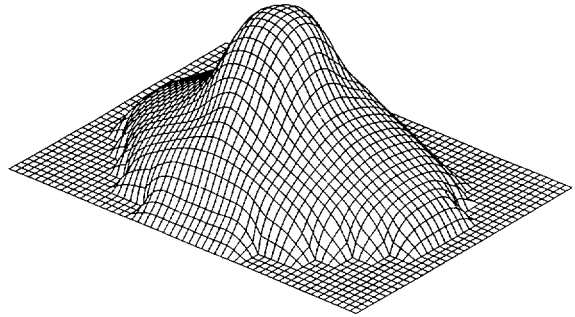


MULTI(8)-SEGMENT METERING

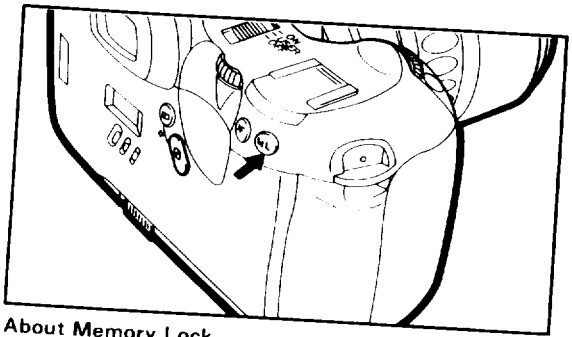
This camera incorporates a high-precision eight-segment TTL metering system. Light values are measured in eight segments within the image field, enabling an optimal exposure to be made under a variety of lighting conditions. With conventional averaged metering systems, underexposure of the subject results from the brightness of the background affecting the overall metering. With multi(8)-segment metering, the camera records the brightness in eight zones within the image field and uses these measurements to choose an exposure that will not underexposed the subject. The multi(8)-segment metering system also calculates exposure values for a scene to automatically compensate for high-contrast and other difficult lighting conditions. Even a beginner can achieve excellent results with ease.



About Spot Metering
The spot metering measures light in only the small area in the center of the viewfinder. When shooting using the spot metering mode, place the part of the subject you wish to measure in the center of the viewfinder. However, if the brightness difference between the spot area and the surrounding spot area is too great, the exposure should be determined in consideration of the overall brightness. Otherwise, the picture will come out improperly exposed.



About Center-Weighted Metering
In the center-weighted metering mode, the camera does not automatically compensate the measuring light such as a backlit situation as when the multi(8)-segment metering mode is in use.
The metering pattern in the illustration above, the higher part of the pattern (in the center of the viewfinder) indicates more sensitive than the lower part.



About Memory Lock

The memory lock function enables an exposure level to be memorized before shooting. The memory lock function is very effective when used along with spot metering. Use the memory lock function to get a correct exposure when the subject occupies only a small part of the viewfinder.

Position the area to be measured fully in the spot metering area and press the memory lock button [**ML**].

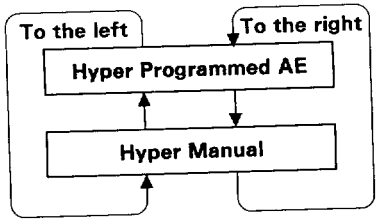
* As soon as the memory lock button [**ML**] is pressed, a 10 second timer starts and the camera stores the measured exposure level until the time expires.
* If the shutter release button is depressed halfway down while the memory lock timer is operating, the memorized meter reading will be remained even if the memory lock button is released.
* By using the Pentax function, you can set the exposure level so that it is locked after the autofocus operates. Set the focus mode switch to [**SINGLE**], and depress the [**ML**] button.
* The audible PCV signals can be heard when the memory lock button [**ML**] is depressed. This function can be canceled by the Pentax function No.1.
* During memory lock operation, [*] is displayed in the viewfinder.
* To cancel memory lock, depress the memory lock button [**ML**] again while the memory is locked.

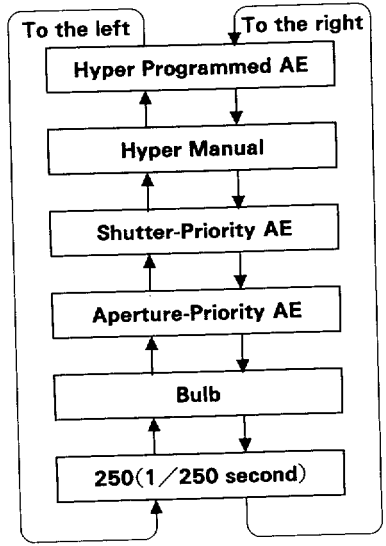
(4) SELECTING AN EXPOSURE MODE

Set the main switch to [ON] (full-feature position).

With the lens aperture ring set at [A] position.
Two exposure modes can be selected as shown below in accordance with the rotation of the TV direct dial while holding down the mode set button. For details of each exposure mode, see page 100.

If the Pentax function No.2 selection 1 (all exposure modes can be set) is selected, six exposure modes can be set as shown in the illustration to the right. Upon delivery from the factory, the selection of all Pentax function are set to zero(0). Only the Hyper Programmed AE mode and the Hyper Manual Mode can be set.

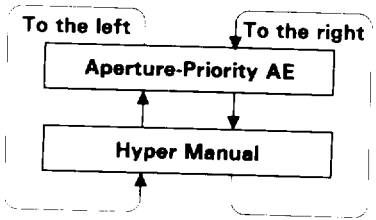


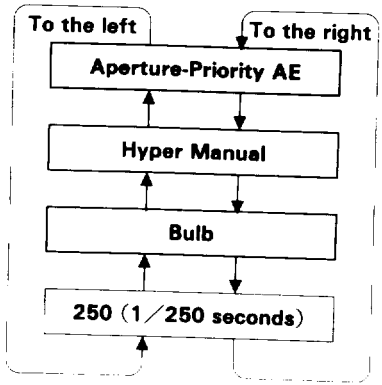


With the lens aperture ring set at other than [A] position.

Two exposure modes can be selected as shown below. Similar manner to when the lens aperture ring set the at [A] position.

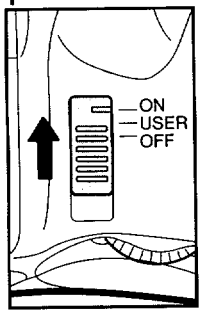
* If the Pentax Function No.2 selection 1 is set, four exposure modes can be selected as shown in the illustration to the right. Upon delivery from the factory, the selection of all Pentax functions are set to zero (0). Only the Aperture-Priority AE and the Hyper Manual modes can be selected.

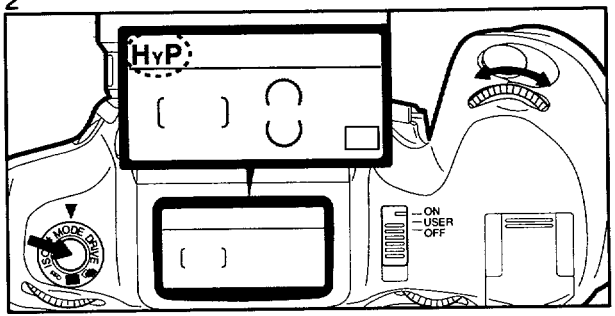


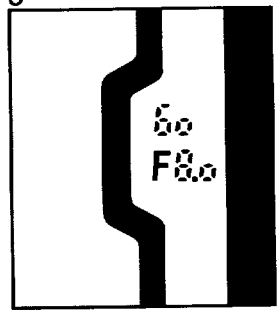


Turn the lens aperture ring from [A] (auto) to a manual f-stop setting in the following cases.

- When checking the depth of field using the preview button.
- When using accessories such as the Extension Tube Set which do not allow the automatic diaphragm control for exposure.
- When using old type flash unit which does not allow the use of the [A] position of the lens aperture ring.







1) Using the Hyper Programmed AE Mode

This mode is basically a Programmed AE mode which can switch to the Shutter-Priority AE mode or Aperture-Priority AE mode with a single action.

Turn the aperture ring to [A] (auto) position.

1. Set the main switch to [**ON**].
2. Set the mode dial to [**MODE**]. While holding down the Mode set button, turn the T_v direct dial until [**HyP**] appears on the LCD panel.
3. When the shutter release button is halfway depressed, the shutter speed and aperture setting will be displayed in the viewfinder and on the LCD panel.

* You can changed the program line from the Normal program to the High-speed-shutter-priority, Depth-of-field-priority, or MTF (Modulation Transfer Function) program. For more details see page 96.

Changing the Shutter Speed

Turning the T_v direct dial while in the Hyper Programmed AE mode will select the Shutter Priority AE mode directly. See page 51.

* You can set the shutter speed only within the available aperture range. Using the Pentax function, you can cancel the shutter speed shift. See page 101.
* If the proper aperture setting cannot be automatically selected because it is out of the available aperture range, the shutter speed automatically changes. The [∩] mark on the LCD panel and the bar underneath the shutter speed indication in the viewfinder blink. You can cancel the shutter speed shift by using the Pentax function No.5. See page 101.
* Depressing the [IF] button will return you to the Hyper Programmed AE mode. At this time, the audible PCV signal is heard. The audible PCV signal can be canceled by the Pentax function No.1.

Exposure Warning

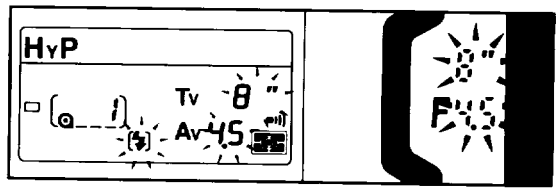
If the subject is too bright or dark, the shutter speed and aperture setting in the viewfinder and on the LCD panel blink. Use an ND (neutral density) filter if the subject is too bright. Use a flash if the subject is too dark.

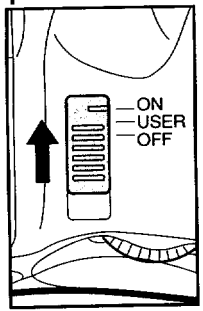
Changing the Aperture

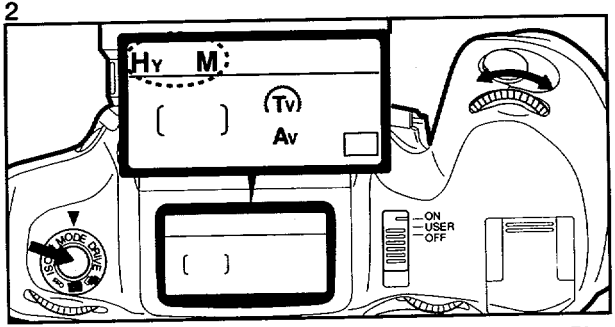
Turning the A_v direct dial while in the Hyper Programmed AE mode will select the Aperture-Priority AE mode directly. See page 53.

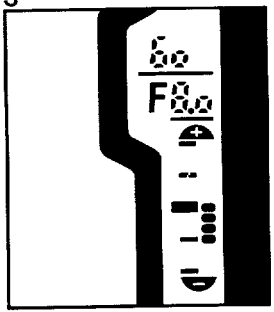
* You can set the aperture only within the available shutter speed range. Using the Pentax function, you can cancel the aperture shift. See page 101.
* If the shutter speed cannot be selected automatically because it is out of the available shutter speed range, the aperture changes automatically. [∪] on the LCD panel and the bar underneath the viewfinder blink. You can cancel the aperture shift by using the Pentax function No.5. See page 101.
* Depressing the [IF] button will return you to the Hyper Programmed AE mode. At this time, the audible PCV signal is heard. It can be canceled by using a Pentax function No.1.

*









2) Using the Hyper Manual Mode

When the shutter release button is halfway depressed, the metering mode starts function. A proper exposure can be obtained by selecting a combination of shutter speed and aperture according to the meter's indication. You can set your desired exposure value for your requirements.

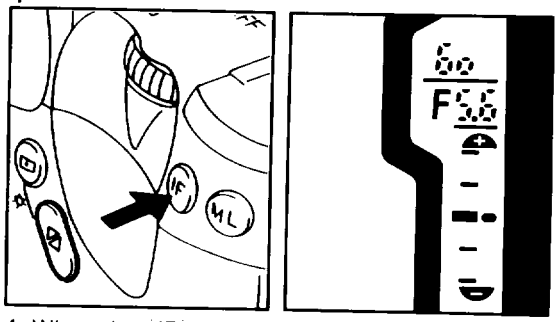
The Hyper Manual Mode of this camera is a convenient manual exposure mode that enables you to obtain the correct exposure with a depress of the [**IF**] button.

With the Aperture Ring at [A]

1. Set the main switch to [**ON**].
2. Set the Mode dial to [**MODE**]. While holding down the Mode set button, turn the T_V direct dial until [H_VM] appears on the LCD panel.
3. When the shutter release button is halfway depressed, a shutter speed, an aperture setting and bar graph will be displayed in the viewfinder and on the LCD panel.

* The [∩], [∪] on the LCD panel and the bars underneath the shutter speed and the aperture value in the viewfinder indicate that you can change these settings.

4



4. When the **IF** button is depressed, the shutter speed and the aperture setting are automatically adjusted and the correct exposure is immediately obtained.

* Moving the dot into the center of the bar graph indicates that the proper exposure is obtained. Turn the A_v direct dial to change the aperture setting or T_v direct dial to change the shutter speed to obtain your desired exposure value.
* Depressing the **IF** button will shift the aperture setting and shutter speed according to the program line. (This program line can be changed by using the Pentax function No.6.) At this time, the audible PCV signal is heard. It can be canceled by the Pentax function No.1.
* When the shutter release button is depressed while depressing the [**IF**] button, the shutter speed and aperture setting will be changed to obtain the correct exposure even if the the brightness of the subject is changed. The exposure is adjusted in a similar manner to as when the Programmed AE mode is set.
* When the dots on the bar graph in the viewfinder are displayed to the ⊕ side (▲ in the viewfinder), it indicates that exposure biases to overexposure. When the dots are displayed to the ⊖ side (▼ in the viewfinder), it indicates that the exposure biases to underexposure.
  When the exposure biases beyond + or - 2EV, ⊕ or ⊖ (▲ or ▼ in the viewfinder) will blink.
* The one dot on the bar graph indicates 0.3EV step.
* If the subject is too bright or dark and the out of the metering range, the shutter speed and aperture setting blink in the viewfinder and the LCD panel. Use a neutral density (ND) filter if the subject is too bright or a flash if it is too dark.

Hyper Manual Mode Combined with Memory Lock Function

When the Hyper Manual mode is selected with the aperture ring at [**A**], the camera will memorized the exposure level if the [**ML**] button is depressed. See the explanation of the Memory Lock Function on page 42. If the shutter speed is changed by turning the T_v direct dial, the aperture also changes to maintain the same exposure value. If the aperture is changed using the A_v direct dial, the shutter speed also changed to maintain the same exposure value.

How to use

1. Set the aperture ring to the [**A**] position.
2. Set the exposure mode to the Hyper Manual mode.
3. Depressing the [**ML**] button memorizes the exposure value.
4. Change the shutter speed with the T_v direct dial and the aperture setting with the A_v direct dial.

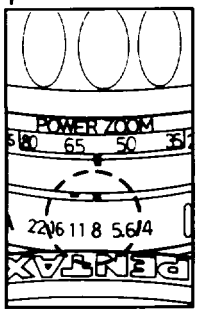
For instance

The Memory lock button is depressed with the shutter speed of 1/125 sec. and aperture setting of f/8.

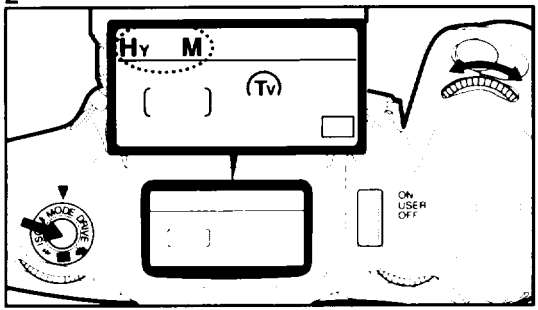
- When the shutter speed changes to 1/250 sec. with the T_v direct dial, the aperture setting changes to f/5.6 automatically.
- When the shutter speed changes to 1/60 sec. with the T_v direct dial, the aperture setting changes to f/11 automatically.
- When the aperture setting changes to f/5.6 with the A_v direct dial, the shutter speed changes to 1/250 sec. automatically.
- When the aperture setting changes to f/11 with the A_v direct dial, the shutter speed changes to 1/60 sec. automatically.

As mentioned above, after the Memory lock is set, the exposure value is unchanged even if the shutter speed or the aperture setting is changed.

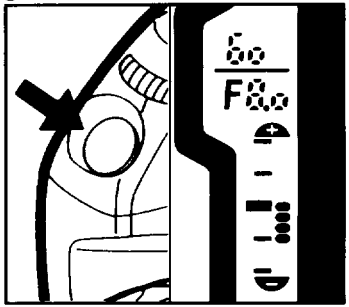
1



2



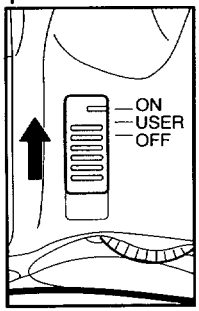
3

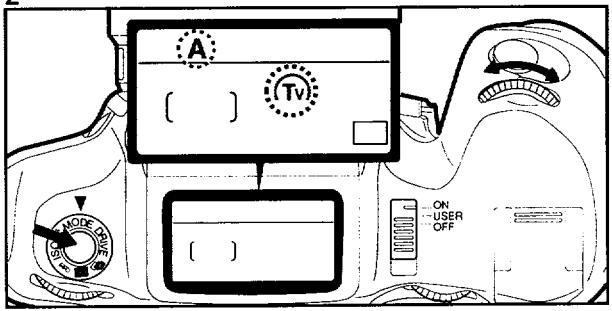


When the Lens Aperture Ring is at a position other than "A" (auto)

1. Set the aperture ring to the desired position (other than [**A**]).
2. Set the mode dial to [**MODE**]. While holding down the mode set button, turn the T_v direct dial until [**H_v M**] appears on the LCD panel.
3. When the shutter release button is depressed halfway down, the shutter speed, the approximate aperture setting and the bar graph are displayed in the viewfinder and on the LCD panel. Adjust the aperture value by the lens aperture ring and the shutter speed by the T_v direct dial.

* Adjust the exposure as when the aperture ring is set to [**A**]. But if the [**IF**] button is depressed, only the shutter speed is changed. See page 48.
* When the lens in use other than an F or FA lens, the approximate aperture setting does not appear in the viewfinder and on the LCD panel.
* When the shutter is released while the [**IF**] button is depressed, the shutter speed changes according to the brightness of the subject. It can be used in a similar manner to as when the Aperture-Priority AE mode is set.
* By depressing the preview button, you can close the lens down to the aperture you have set, allowing you to check the depth of field in the viewfinder. When the exposure value is set and the preview button is depressed, the exposure will not be set correctly.





3) Using the Shutter-Priority AE Mode

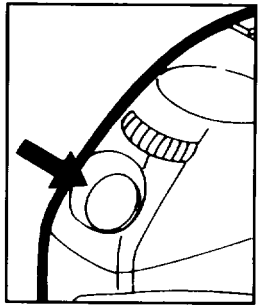
When the desired shutter speed is selected, the appropriate shutter speed is automatically set by the camera for a proper exposure according to the brightness of the subject. This mode is suitable for freezing the action with a fast shutter speed or capturing a flowing dynamic image with a slow shutter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

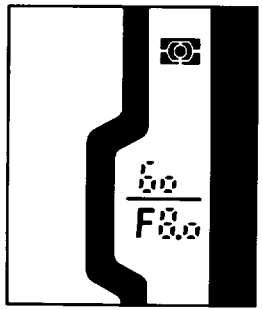
To select the shutter-priority AE mode, select the Pentax function No.2 selection 1.(with this setting, all exposure modes will be selected) See page 100.

Turn the aperture ring to "A" (auto).

1. Set the main switch to [**ON**].
2. Set the mode dial to [**MODE**]. While holding down the mode set button, turn the T_v direct dial until [**A**] and [T_v] appear on the LCD panel.
3. Select the desired shutter speed using the T_v direct dial.

4

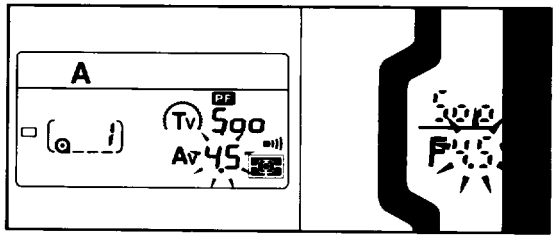




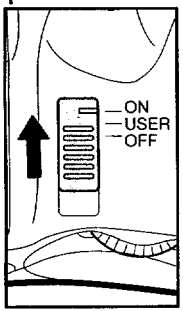
4. When depressing the shutter release button down halfway, the shutter speed and the aperture will be displayed on the LCD panel and in the viewfinder.

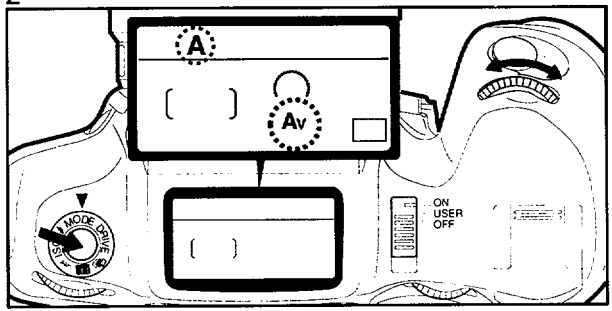
* | ∩ | on the LCD panel and the bar underneath the shutter speed in the viewfinder indicate that you can change the shutter speed.
* Using the Pentax function, you can change the shutter speed increment from 1.0 EV to 0.5 EV step. See page 100.

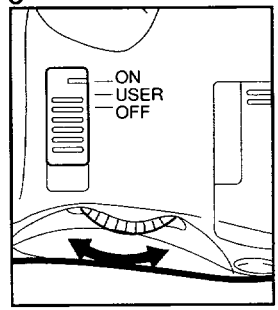
*



* **EXPOSURE WARNING**
If the subject is too bright or dark, the selected aperture will blink in the viewfinder and on the LCD panel as a warning as shown. When the subject is too bright, choose a faster shutter speed. If it is too dark, choose a slower shutter speed. When the aperture indication stops blinking, you can take a picture. If both selected shutter speed and aperture blink, it means that the exposure is out of metering range: use an ND (neutral density) filter if the subject is too bright or a flash if it is too dark.







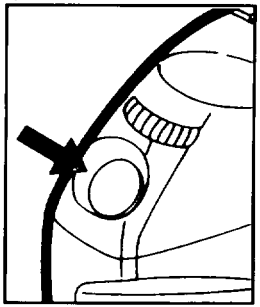
4) Aperture-Priority AE Mode

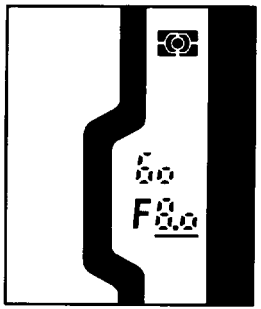
When the desired aperture is selected, an appropriate shutter speed is automatically set by the camera for a proper exposure. This mode is ideal for shooting landscapes with an increased depth of field, or a portrait against a blurred background. To set the Aperture-Priority AE mode with the lens aperture ring set at **A**, select the Pentax function No. 2 selection 1. (with this setting, all exposure modes can be selected. See page 100.

Turn the aperture ring to "A" (auto).

1. Set the main switch to [**ON**].
2. Set the mode dial to [**MODE**]. While holding down the mode set button, turn the **Av** direct dial until [**A**] and [**Av**] appear on the LCD.
3. Change the aperture using **Av** direct dial.

4

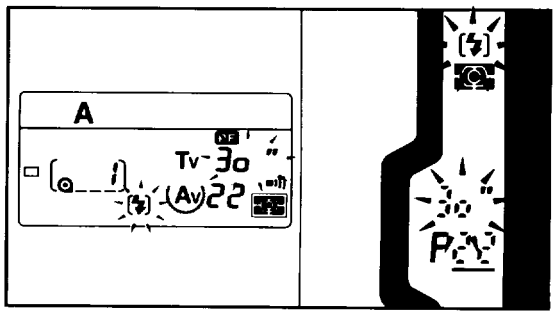




4. When the shutter release button is halfway depressed, the shutter speed and aperture setting will be displayed on the LCD display and in the viewfinder.

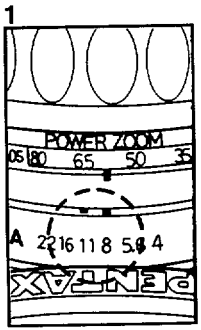
* ∪ and the bar underneath the aperture indicate that you can change the aperture setting.

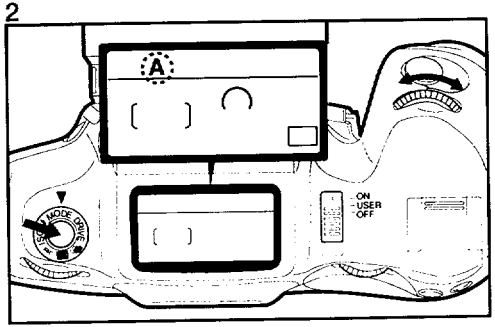
*

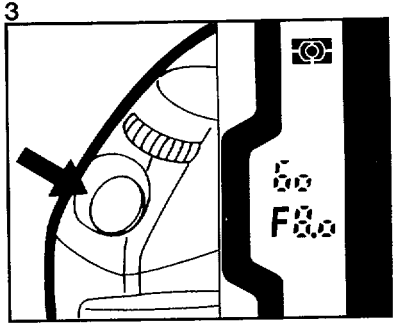


* **EXPOSURE WARNING**

If the subject is too bright or 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; when it is too dark, choose a large aperture. When the shutter speed indication stops blinking, you can take a picture. If both shutter and aperture blink, it means that the exposure is out of metering range: use an ND (neutral density) filter if the subject is too bright or a flash if it is too dark.







When the Lens Aperture Ring is at a position other than [A] (Auto).

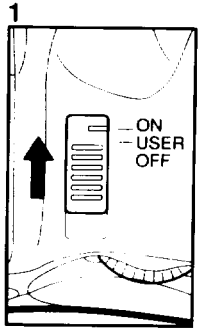
With the aperture ring set at a manual f-stop setting, you can select the Aperture-Priorirty AE mode.

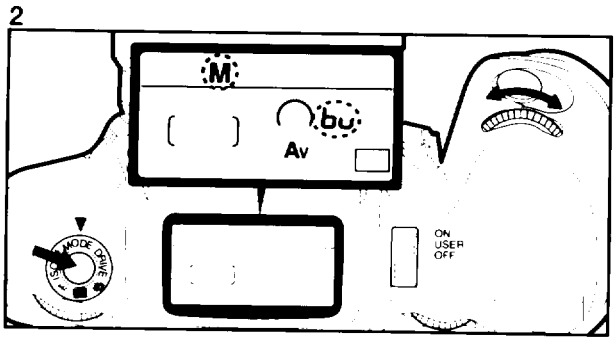
1. Turn the lens aperture ring to a position other than "A".
2. Set the mode dial to [**MODE**]. While holding down the mode set button, turn the T_V direct dial until [**A**] is displayed on the LCD panel.
3. When the shutter release button is depressed halfway down, the approximate aperture value and the shutter speed will be displayed on the LCD panel and in the viewfinder.

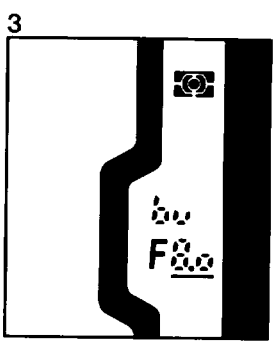
* When other than an F or FA lens in use, no approximate aperture indication will appear on the LCD panel nor in the viewfinder.
* When the main switch is set to the [**USER**] position with the aperture ring at a position other than [**A**], the Aperture-Priority mode is selected automatically.
* By depressing the preview button, you can close the lens down to the aperture you have set, allowing you to check the depth of field in the viewfinder. When the exposure value is set with the preview button depressed, the exposure will not be set correctly.

*** EXPOSURE WARNING**

The exposure warning is as explained on page 54.







5 Manual Bulb Mode

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

To set this mode, select the Pentax function No.2 selection 1.(With this Pentax function, all exposure modes can be selected. See page 100.)

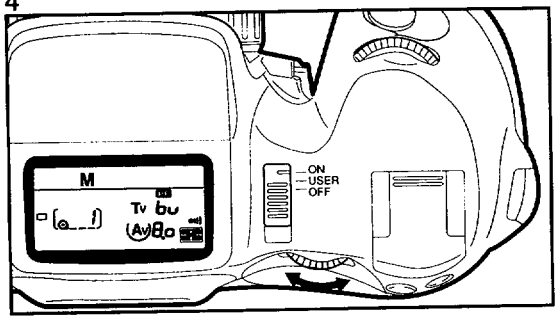
* Up to approx. 6 hours of time exposure are possible at room temperatures with a new lithium battery.
* While depressing the shutter release button, approximate exposure time appears on the upper right corner of the LCD panel.

When the Lens Aperture Ring is set at "A"

1. Set the main switch to the **ON** position.
2. Set the mode dial to **MODE**. While holding down the mode set button, turn T_v direct dial until the **M** and **bu** appear on the LCD panel.
3. When the shutter release button is depressed halfway down, **bu** and the appropriate aperture are displayed in the viewfinder.

* ∪ on the LCD panel and the bar underneath the aperture in the viewfinder indicate that you can change the aperture with the A_v direct dial.

4

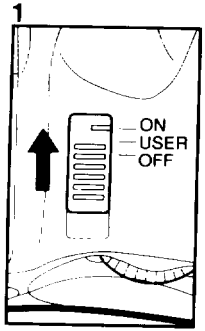


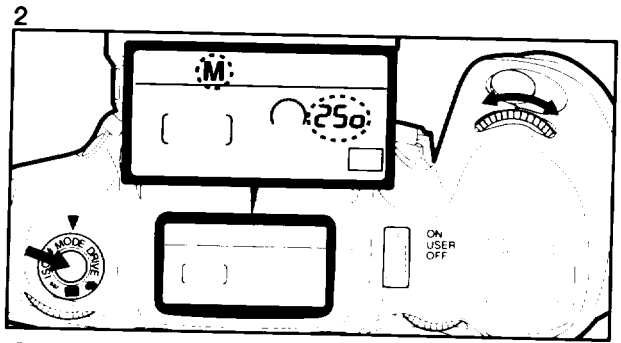
4. Set your desired aperture setting with the A_V direct dial.

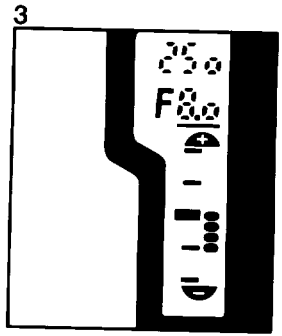
When the Lens Aperture Ring is at a position other than "A"(auto)

1. Turn the lens aperture ring to a position other than [**A**].
2. Set the mode dial to [**MODE**]. While holding down the mode set button, turn the T_V direct dial until [**M**] and [bu] appear on the LCD panel.
3. When the shutter release button is depressed halfway down, the [bu] is displayed in the viewfinder and the approximate aperture is displayed on the LCD panel and in the viewfinder.

* When other than an F lens or FA lens is in use, no approximate aperture will appear.
* By depressing the preview button, you can close the lens down to the aperture you have set, allowing you to check the depth of field in the viewfinder.
* When using this mode, use a steady tripod and attach the optional "Cable Switch F" after detaching the Release socket cap F_D.







6 Using 250 Shutter Speed 1 250 second)

This mode can be used when a non-dedicated flash unit or only specified shutter speed (1/250 sec.) desired.

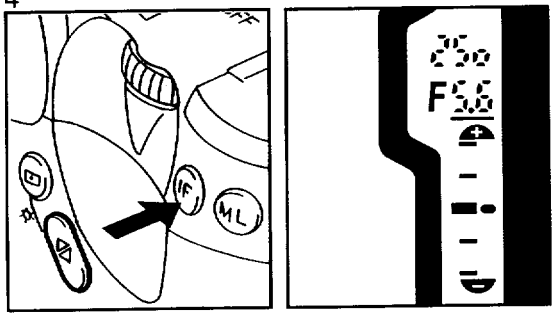
To set the 250 (1/250 sec.) mode, select the Pentax function No.2 selection 1. See page 100.

With the lens aperture ring set at A position.

1. Set the main switch to [**ON**].
2. Set the mode dial to [**MODE**]. While holding down the mode set button, turn the T_v dial until the [**M**] and [**250**] appear on the LCD panel.
3. When the shutter release button is depressed halfway down, the aperture and the bar graph are displayed on the LCD panel and in the viewfinder.

* [∪] on the LCD panel and the bar underneath the aperture in the viewfinder indicate that you can change the aperture value by the A_v direct dial.

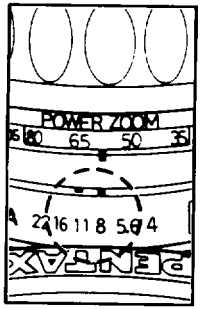
4



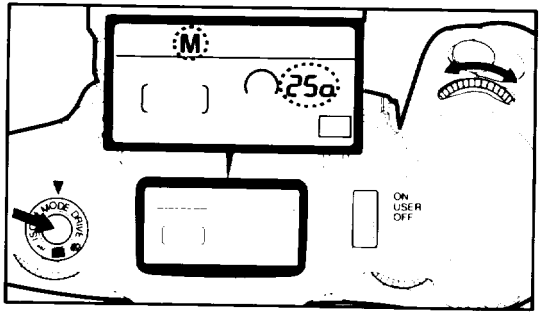
4. When the [IF] button is depressed, immediately adjust the aperture value to obtain the correct exposure.

* Moving the dot to the center indicates that the proper exposure is obtained. After the correct exposure is obtained, turn the A_V dial to change the aperture to obtain your desired exposure value.
* The audible PCV is heard when the [IF] button is depressed. It can be canceled by the Pentax function No.1.
* The shutter is released while depressing the [IF] button, the aperture automatically changes to obtain the correct exposure even if the brightness of the subject changes. It can be used in a similar manner to as when the Aperture-Priority AE mode is set.
* When the dots are displayed on the [⊕] side ([▲] in the viewfinder) on the bar graph, it indicates over exposure and when displayed on the [⊖] side ([▼] in the viewfinder), it indicate under exposure. Moving one dot on the bar graph changes 0.3EV step.
  However, when over or under exposure is set beyond the ⊕ or ⊖ 2EV, the [⊕] ([▲] in the viewfinder) or [⊖] ([▼] in the viewfinder) blinks on the LCD panel.
* If the subject is too bright or dark and out of the metering range, both shutter speed and aperture value blink on the LCD panel and in the viewfinder. Use an ND (neutral density filter if the subject is too bright or a flash if it is too dark.

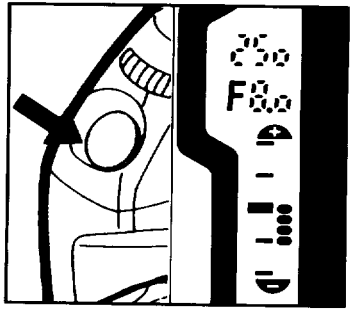
1



2



3

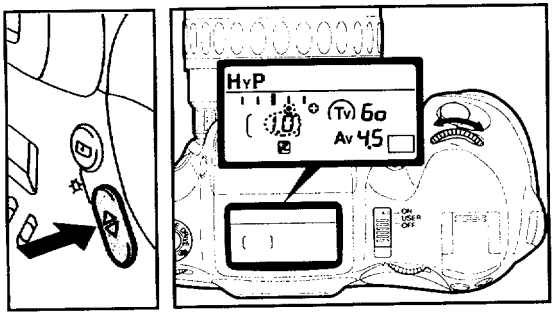


When the Lens Aperture Ring is set a Position Other than A.

1. Turn the lens aperture ring to the desired f-stop other than A position.
2. Set the mode dial to [**mode**]. While holding down the mode set button, turn the T_v direct dial until the **M** and the **250** appear on the LCD panel.
3. When the shutter release button is depressed halfway down,the [Bar Graph] and the approximate aperture setting are displayed on the LCD panel and in the viewfinder.

* When a lens other than an F or FA is in use, no approximate aperture indication will appear on the LCD panel nor in the viewfinder.
* Moving the dot to the center by the lens aperture ring indicates that the proper exposure will be obtained. Turn the lens aperture ring to obtain your desired exposure value.
* The bar graph indication and the warning the are same as when the lens aperture ring is set the **A** position. See page 59.
* By depressing the preview button, you can close down to the aperture you have set, allowing you to check the depth of field in the viewfinder. When the exposure is set with the preview button depressed, the exposure will not be set correctly.

(5) ABOUT EXPOSURE COMPENSATION



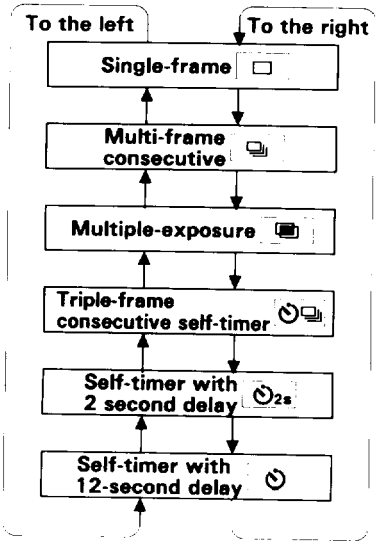
The exposure compensation allows you to deliberately overexposure (brighten) or underexposure (darken) a subject.

How to set

While depressing the exposure compensation button [⊡], select the desired compensation value by turning the T_v direct dial.

* Exposure compensation range is possible in the range from +4 EV to −4EV in 0.3EV step. Using the Pentax function, the exposure compensation step can be selected either 0.3EV or 0.5EV step. See page 100.
* Moving one dot on the bar graph indicates 0.3EV step when the compensation step is set to 0.3EV. 0.5 EV when the compensation step is set 0.5EV. However, the compensation value is set beyond ⊕ or ⊖ 2 EV (+ or − 3EV with 0.5 EV step set), [⊕] indicator ([▲] in the viewfinder) or [⊖] indicator ([▼] in the viewfinder) blink on the LCD panel.
* When the exposure compensation is in use, the bar graph and [⊡] are displayed on the LCD and in the viewfinder.
* When the Hyper manual or 250 is set, under or over exposure is displayed when the metering switch is activated. But, when the metering switch is turned off, only the exposure compensation value indicated by the dot is displayed on the LCD panel.
* Even when the main switch is set to the [**OFF**] position,the exposure compensation is not canceled.
* The exposure compensation does not work in the [**USER**] position. But if the USER-SET function is set at the [**USER**] position, it will work.

(6) SELECTING A DRIVE MODE



Types of Drive Modes

[▭] : One picture is taken at each press of shutter release button.

[▭▭] : Pictures can be taken consecutively while holding down the shutter release button. See page 63.

[▣] : Allows you to expose one frame up to nine times. See page 64.

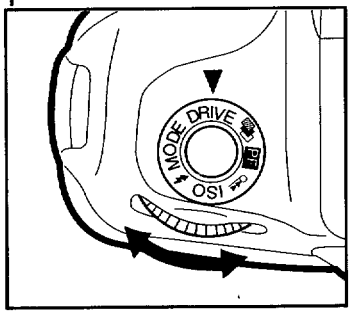
[⏲▭▭] : Three pictures are taken consecutively with the self-timer. See page 69.

[⏲2s] : A picture is taken with a 2-second-delay self-timer. See page 68.

[⏲] : A picture is taken with a 12-second-delay self-timer.See page 66.

* When the main switch is set at [**USER**], only the Single-frame mode can be set.
However, if the user-set function is set at the USER position, other desired drive modes can be set. See page 75.

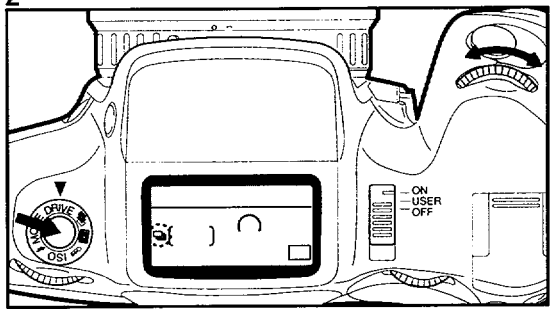
1



1) Consecutive Photography
A picture can be taken consecutively while the shutter release button is held down.

1. Set the mode dial to [**DRIVE**].

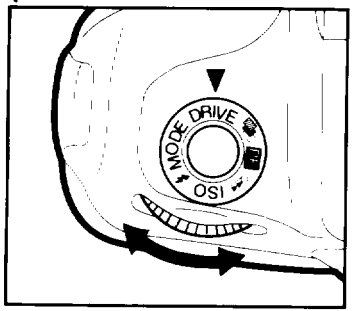
2



2. While depressing the mode set button, turn the T_v direct dial until [⧉] appears on the LCD panel.

* When the focus mode switch is set at [**SINGLE**], the camera focuses only the first picture. From the second picture, the pictures are taken consecutively with first focus remained. If you release the finger from the shutter release button and depress it halfway down, the camera will refocus.
* The shutter cannot be released while the flash unit is being charged. (This can be changed with the Pentax function No.10.)

1

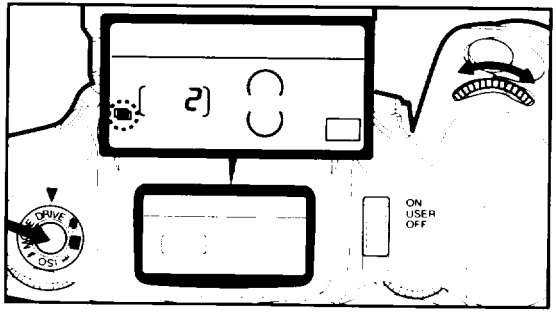


2) Multi Exposure Shooting

This mode allows the photographer to expose images on the same frame in a variety of imaginative ways. When using the multi-exposure mode, you can usually obtain best results with using the flash and a dark background such as a night scene.

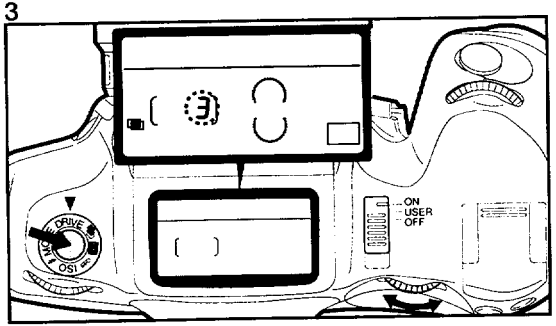
1. Set the mode dial to [**DRIVE**].

2



2. While holding down the mode set button, turn the T_v direct dial until [▣] appears on the LCD panel.

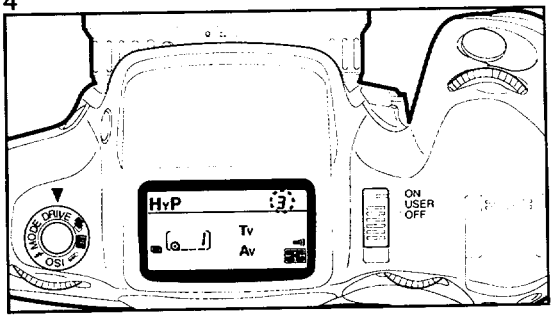
3



3. While holding down the mode set button, turn the A_V direct dial to set the multi-exposure count.
4. The selected multi-exposure count appears on the LCD panel as shown in the illustration 4 when a finger lifts up from the mode set button.

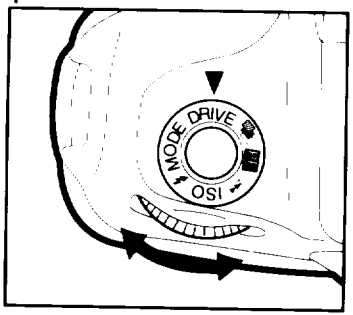
* Up to nine images can be taken in one frame.

4



* This number is decremented each time the shutter is released.
* While pictures are being taken in the multi-exposure mode, [▣] blinks on the LCD panel.
* To cancel the multi-exposure mode, change to other drive mode or set the main switch to [**OFF**] or [**USER**] position. When the multi-exposure mode is canceled by turning the main switch OFF, the single frame [□] is automatically selected when the main switch is set to the [**ON**] position.
* After all the exposures are taken, the drive mode is switched to the single-frame mode automatically.

1

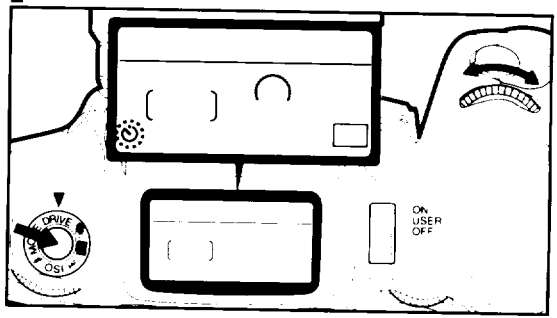


3 Self-timer mode

The Self-Timer mode delays the shutter release, and is useful for taking group shots including the photographer.

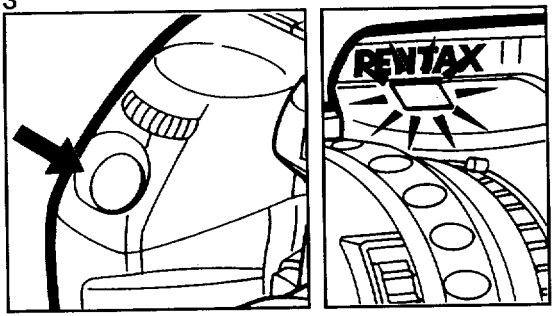
1. Set the mode dial to [**DRIVE**].

2



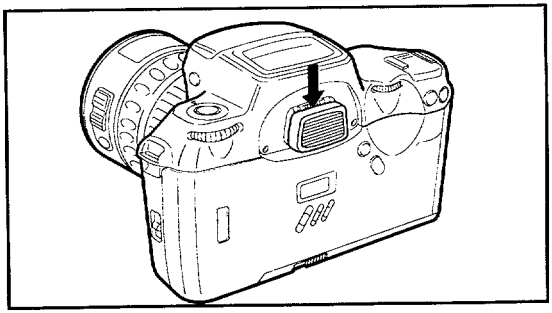
2. While holding down the mode set button, turn the T_V direct dial until [⏲] appears.

3



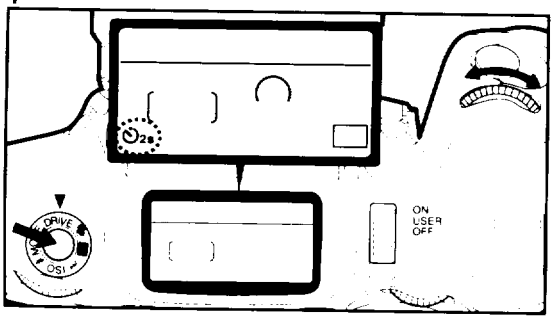
3. Focus on the subject first with the AF frame by depressing the shutter release button halfway down, and then depress the shutter release button fully. The shutter will be released about 12 seconds later.

* When the Self-Timer is in operation, the self-timer lamp and audible PCV signal are delivered at a faster rate for the last two seconds, letting you know when the shutter is released. By using the Pentax function No.1, the audible PCV can be canceled.
* To stop the Self-timer operation after it has been activated before the shot is taken, move the main switch to the [**OFF**] position. However, the self-timer mode remains.



* If you back away from the viewfinder during a Self-Timer operation, underexposure may result due to light entering the camera through the viewfinder. Attach the supplied finder cap or use the memory lock function (See page 42) in an AE mode.

1



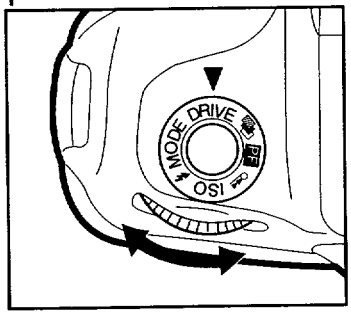
4 2-Second Delay Self-Timer Mode

When shooting objects at close range or copying pictures, you can use the 2-second-delay self-timer instead of using the Cable Switch F to prevent camera shake.

1. Set the mode dial to [**DRIVE**]. While holding down the mode set button, turn the **TV** direct dial until [$\mathbb{O}_{2s}$] appears.
2. Focus on the subject and depress the shutter release button in a similar manner to as when using the 12 second-delay self-timer is used. Depress the shutter release button fully down to start the Self-Timer.

* If you back away from the viewfinder during a Self-Timer operation, under exposure may result due to light entering the camera through the viewfinder. Attach the supplied finder cap or use the memory lock function (See page 42.) when taking Self-Timer photography to prevent stray light entering the camera.
* When the shutter release button is depressed fully down, the 2-second-delay self-timer starts its operation. At this time, the mirror stays up before the shutter is released to prevent camera shake.
* When the 2-second-delay self-timer starts, the self-timer lamp blinks and an audible PCV signal is delivered at a faster rate. The audible PCV signal can be canceled by the Pentax Function No.1.
* When using the flash, confirm that it is fully charged before the Self-Timer starts.
* To cancel the Self-Timer operation after it has been activated before the shot is taken, move the main switch to the [**OFF**] position. The drive mode is automatically set to the single-frame mode.

1

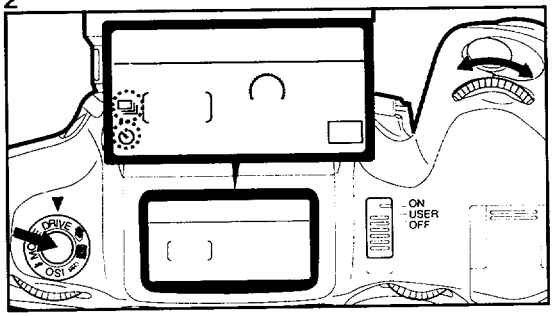


5) Triple-Frame Self-Timer Mode

In the triple-frame self-timer mode, three consecutive pictures are taken about 12 seconds after the shutter release button is depressed. This mode allows you to get two additional prints of a group shot, or three different pictures of yourself, for instance.

1. Set the mode dial to [**DRIVE**].

2



2. While holding down the mode set button, turn the T_V direct dial until [ ] appears on the LCD panel.

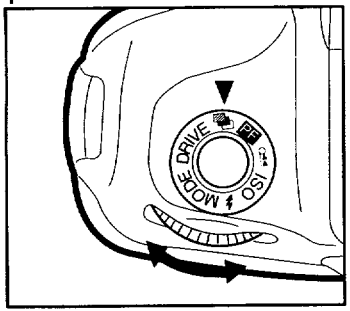
* Start the triple-frame self-timer mode in a similar manner to 12-second-delay self-timer. The timer releases the shutter in the following manner.

- 12 seconds later (First frame) → 2 seconds later (Second frame) → 2 seconds later (Third frame)

* The camera focuses only the first picture and it is locked. But the exposure is automatically adjusted at each shutter release.
* After the three pictures are taken, the Single-Frame Mode [□] is set automatically.
* When using the flash, the second and the third pictures are taken 2 second after the flash has charged. If the flash takes 16 seconds or more to charge, this mode will be canceled.
* To cancel the self-timer operation after it has been activated before a picture is taken, move the main switch to the [**OFF**] position. When the main switch is set to the [**ON**] position, the single-frame mode [□] is selected automatically.
* If you back away from the viewfinder during a Self-Timer operation, under exposure may result due to light entering the camera through the viewfinder.

(7) AUTO BRACKETING MODE

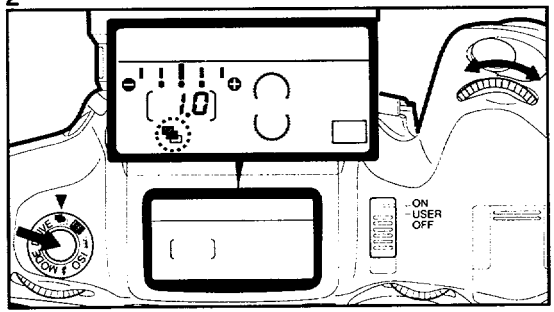
1



When you take a picture that requires the exposure compensation and may be difficult to obtain the correct exposure, use the auto bracketing mode to make three bracketed exposures with different exposure levels. This mode can also be used when the exposure mode is set at the [Hyper Manual] mode. Also, when the flash is in use, it is possible to use the auto bracketing exposure mode. Before you release the shutter, confirm that the flash is fully charged.

* The auto bracketing mode does not work when the camera's main switch is set at the [**USER**] position. However, the [**USER-SET**] function will operate when the main switch is set to [**USER**].

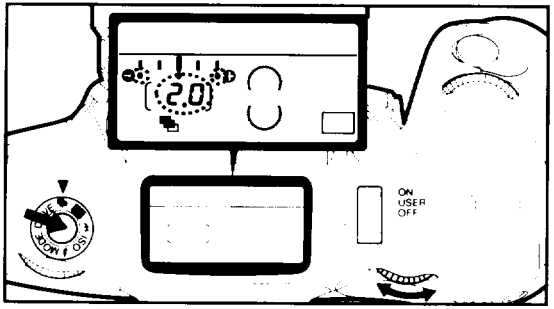
2



1. Set the mode dial to [ ].
2. While holding down the mode set button, turn the T_V direct dial until the bar graph and [ ] appear on the LCD panel.

* To cancel the auto bracketing mode, while holding down the mode set button, turn the T_V dial until [ ] disappears from the LCD panel.
* When the auto bracketing mode is selected, the bar graph and the exposure compensation range are displayed on the LCD panel. When the shutter release button is depressed halfway down, the bar graph is displayed in the viewfinder. With the exposure mode set either the [**Hyper Manual**] or [**250**] mode, (underexposure) or overexposure indicated by the dots will be displayed on the LCD panel when the metering switch is activated.

3



3. To set the auto bracketing range, turn the A_V dial while holding down the mode set button.

* Auto bracketing is possible in the range from − 4 EV to + 4 EV in 0.3EV step.
  Using the Pentax function, you can change from 0.3EV to 0.5EV step. See page 100.
* Moving one dot on the bar graph indicates 0.3EV step. When 0.5 EV step is set, moving one dot indicates 0.5EV step.
* When the auto bracketing is set beyond the range from − 2EV to + 2EV (− 3EV to + 3EV if EV step is set 0.5EV), [⊕] and [⊖] on the LCD panel blink (▲ or ▼ in the viewfinder).

4. When the shutter release button is depressed fully down, the camera automatically takes three pictures according to the memorized auto bracketing value.

* The first picture is taken at the exposure level the LCD indicates, the second is underexposed, and the third is overexposed.
* When the exposure mode is set to the Hyper Manual with the lens aperture ring set at the **A** position, the aperture and the shutter speed are changed according to the Pentax function No.6.
* The selected auto bracketing range remains until you remove the battery.

* When the shutter release button is depressed halfway down after the first picture is taken, [▣] blinks on the LCD panel to indicates that the camera is ready to take the second picture at any time. If your finger lifts up from the shutter release button, [▣] blinks for about 20 seconds and then stays on to indicate that the camera is ready to take another shot in the auto braketing mode.
* When the auto bracketing is combined with the self-timer mode, the first picture is taken at the correct exposure, the second is underexposure, and the third is overexposure automatically.
* When the auto bracketing range is set very narrow, it will have no effect when using negative film (especially in negative color auto development).
* In the auto bracketing mode, the camera automatically measures the exposure for each shot.
* The focus is locked at the first picture and are remains until three pictures are taken.

Auto bracketing exposure with flash

When the auto bracketing mode is selected with the built-in flash or a Pentax dedicated flash is in use, the auto bracketing mode is possible by varying the amount as the discharged flash light. This function is useful when the different exposures are required on the main subject with the same exposure level as the background.

* Before taking pictures, confirm that the flash is fully charged.
* This auto brackenting mode works properly depending on the distance to the subject or the aperture setting. If the distance to the subject is relatively too far, the flash is discharged fully to obtain the correct exposure for the first picture, but overexposure cannot be made for the 2nd picture because the flash capacity may be used up.

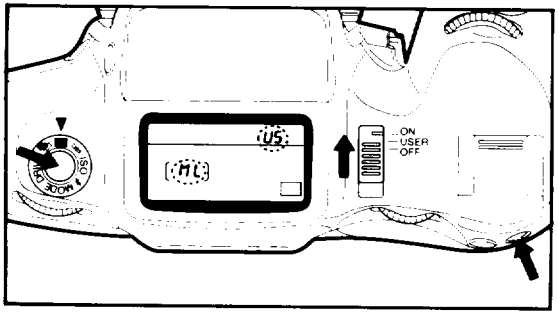
Auto Bracketing Mode combined with the Exposure Compensation Function

You can combine the auto bracketing mode with exposure compensation function (See page 61) to compensate only in the overexposure (+) or the underexposure (−) direction.

Example: Bracketing in the overexposure direction.

1. Select the auto bracketing mode and set the exposure compensation step at 0.3EV.
2. While depressing the exposure compensation button on the camera back, turn the T_v direct dial to shift the overall exposure range by 0.3EV in the overexposure (+) direction.
3. At this setting, the first picture is overexposed by 0.3EV, the second picture is exposed the correct exposure and the third frame is overexposed by 0.6EV.

(8) USER-SET FUNCTION IN THE USER POSITION



USER-SET FUNCTION is a useful function that allows you to select the desired functions (For details, see page 75.) and memorize them. You can obtain the memorized functions just set the main switch to [**USER**]. The initial setting of the [**USER**] position allows only the functions listed on page 21 can be used. But by using [**USER-SET**] function, more functions can be used as listed on page 75.

How to memorize the desired functions

1. Move the main switch to [**ON**].
2. Select the desired exposure mode (see page 43.), drive mode (see page 62.), metering mode (see page 39.) and the built-in flash mode (see page 90,91.) which you want memorize into the USER-SET FUNCTION.

* The auto bracketing [ ] is possible in the USER-SET FUNCTION. See page 72.

3. To memorize the functions, set the mode dial to [ ]. While holding down the mode set button, depress the [**ML**] button for 2 seconds until [ML] and [US] appear on the LCD panel.

How to set the memorized functions

Just move the main switch to [**ON**]. All memorized functions are obtained without touching the button and dial.

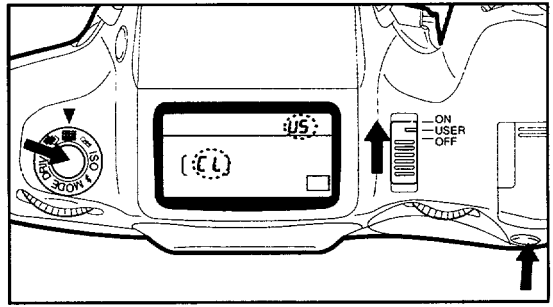
* After memorized the USER-SET FUNCTION, any other functions cannot be selected with the main switch at the USER position.

If you want to change the function, follow the setting procedures as mentioned on page 74.

* The memorized function remains even if the battery is removed.

USER-SET FUNCTION

Exposure mode	One of the exposure modes can be selected with the lens aperture set at **A** position or not at A position.
Drive mode	One of the drive modes can be selected.
Metering mode	One of the metering modes (Multi-segment, Center-weighted or Spot) can be selected.
Built-in flash	One of the flash mode (Leading-shutter-curtain-sync,Trailing-shutter-curtain-sync or Red-eye-reduction) can be selected.
Exposure compensation	Available if User-set function is set.
Exposure compensation	ditto
Auto bracketing	available
Program line	One of the Program lines (Normal,High-Shutter-Speed-Priority, Depth-of-field-Priority, MTF Program) can be selected.



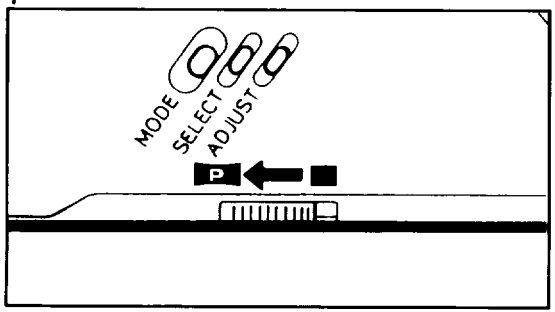
Initializing the User-set function

1. Move the main switch to [**USER**].
2. Set the mode dial to the [PF].
3. While holding down the mode set button, depress the [**IF**] button for 2 seconds until the [CL] and [US] appear on the LCD panel.

* At this time, the audible PCV signal is heard.
* Be careful if the [**IF**] button is depressed for 2 seconds with the main switch is in the [**ON**] position, the Pentax functions are initialized.

(9) PANORAMIC FORMAT PICTURE

1

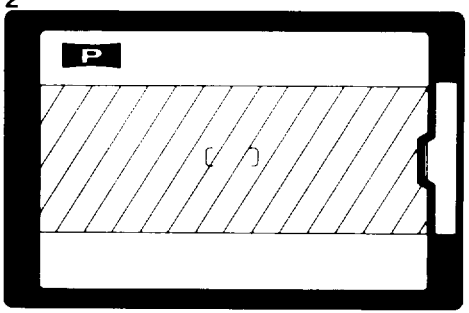


You can switch between the panoramic format and standard format picture taking mode in the middle of the roll by moving the panorama mode selector switch. The panoramic format picture allows horizontally positioned dynamic pictures to be taken (13 × 36mm on film).

1. Switching to the Panorama format picture
   Move the panorama mode selector switch to [P] to select the panoramic format mode.

* Ensure that the panorama mode selector switch is moved fully to the position you selected.

2



2. Taking a panoramic format picture
   Compose the scene within the panoramic format frame indicated by the oblique lines.

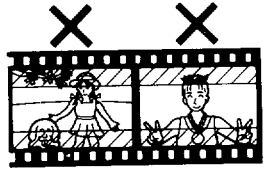
* When the shutter button is depressed halfway down, the panorama indicator [▬] will light up.

* What appears on the extreme edges of the panoramic frame may be cut off in the development process. Compose your picture with a margin of safety.

NOTES ON THE DEVELOPMENT OF PANORAMIC FORMAT PICTURE

* When developing the film, if you have taken only panoramic format pictures on the entire roll of film, tell the clerk at the processing lab to develop the film with only the panoramic format. If there are both panoramic and standard format pictures on the film, ask the clerk to develop the film with both standard and panoramic format.
* The development of panoramic format pictures is more time-consuming and expensive process than that of standard pictures. Please consult the processing lab for more details.
* Panorama format processing facilities differ depending on the area and requirement. Your local film processor or camera dealers will advise you on all options available to you.
* With panoramic format pictures, only the middle area of the frame is exposed. The number of exposures available in the panoramic format is equivalent to that of the standard photo size.

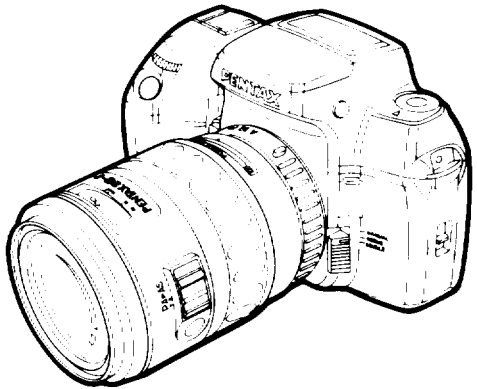
* When the panoramic format picture is printed with a standard size format, the black cropped areas will appear at the top and bottom of the picture.
* Check to be sure the panorama signal [▭] in the viewfinder disappears when you take a standard format picture. If not, the top and bottom of the picture you want to expose will be cut off as shown in diagram below.



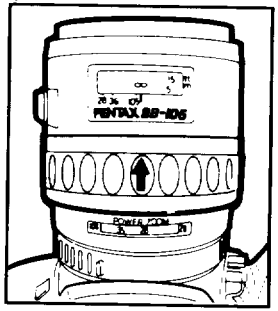
(10) EXTENDED POWER ZOOM FUNCTIONS

With a Pentax-FA Zoom lens, the following Auto Zoom Functions are made possible:

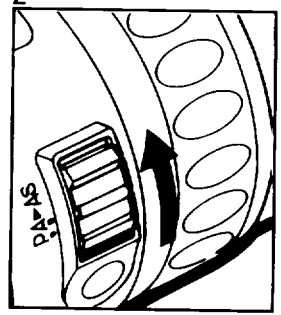
1. Zoom Clip Mode
2. Image Size Tracking Mode
3. Auto Zoom Effect Mode



1



2

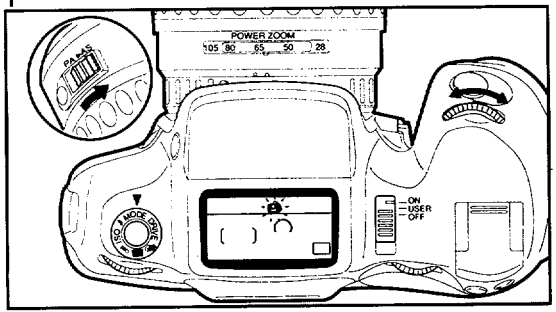


Preparing for using the Auto Zoom Function

1. Push the power zoom ring in the direction of the arrow until the words "**POWER ZOOM**" appear beneath the zoom ring as shown in the illustration.
2. Set the lens auto zoom switch to "**A**". For some lenses, set the auto zoom switch to "**AZ**".

* Now you are ready to use the Auto Zoom functions. For details of the available functions, see the subsequent pages.

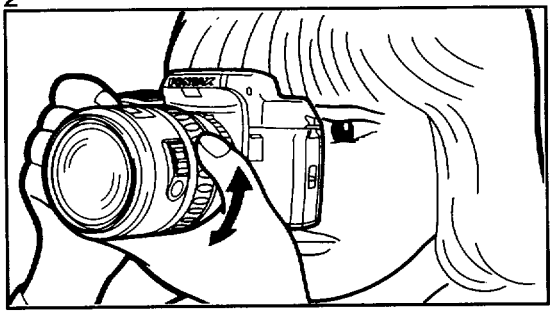
1



① Zoom Clip Mode

With the zoom clip mode, you can preset a focal length for the desired picture area and you can recall that preset focal length instantly with a single touch of the zoom set button on the lens. The zoom clip mode is useful for action photography such as sports and snapshots.

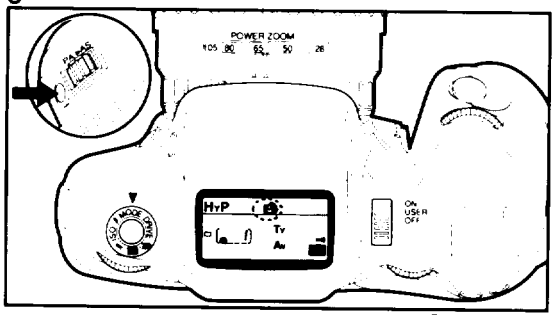
2



1. While holding down the auto zoom switch on the lens barrel toward [**AS**], turn the T_v direct dial until [📷] blinks on the LCD panel.
2. While looking through the viewfinder, turn the zoom ring to set the desired focal length.

* When the lens is power zoomed, the focus is also adjusted automatically. No indication and no audible PCV signal will operate. The autofocusing with power zoom function can be canceled by the Pentax Function No.13.

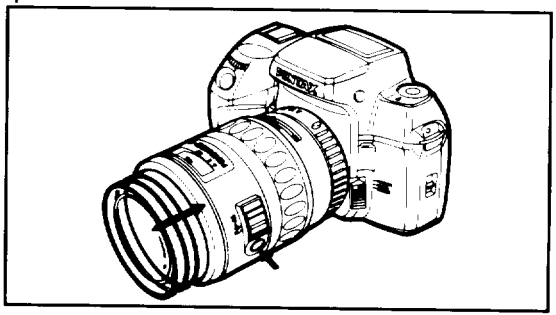
3



3. Depress the lens zoom set button. [ ] stops blinking to indicate that the desired focal length has been entered.

* The entry of another focal length clears a previous focal length.
* The focal length stored in memory is not cleared even if the main switch is set to the [**OFF**] position. However, when the battery is removed or replaced, the stored focal length is cleared.

4



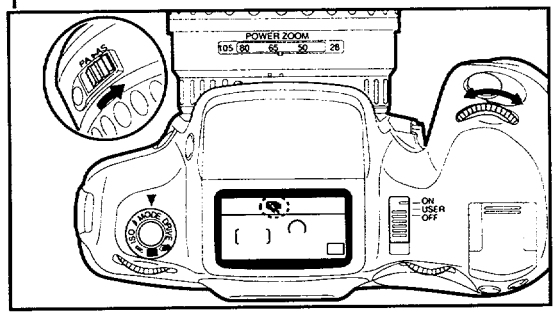
4. Depress the Zoom Set Button to recall the focal length from the memory. Then depress the shutter release button fully to take a picture.

* When the Zoom Set Button is depressed, the lens focuses automatically. However, no [ ] indicator nor no PCV signal will function for focus confirmation.
* To cancel the zoom clip mode, return the Auto Zoom Switch to [**P**]. Some lenses, set the auto zoom switch to [**PZ**].
* If the lens is removed or changed while the camera's main switch is set at the [**ON**] or [**USER**] position, the stored focal length will be cleared from memory. To prevent this, set the camera's main switch to [**OFF**] before removing the lens.

② Image Size Tracking Mode

When you set up a composition through the viewfinder and store the image size (magnification value) in the camera, the lens automatically zooms to maintain this image size (magnification value) regardless of the distance to the subject.
For instance, you can shoot a child moving towards you or away from you without a change in the image size.

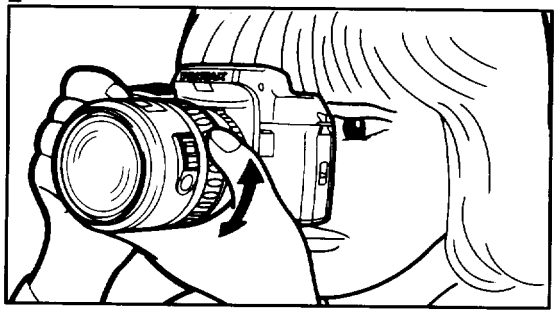
1



1. While holding the auto zoom switch on the lens barrel toward [**AS**], turn the T_V direct dial until [ ] appears on the LCD panel.

* When the focus mode switch is set to [**MANUAL**], this mode cannot be used.
* To cancel the image size tracking mode, return the auto zoom switch to [**P**]. For some lenses, return it to [**PZ**].

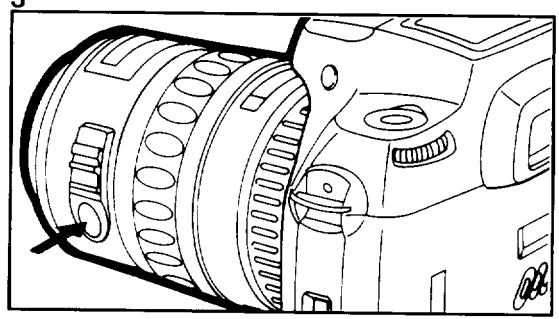
2



2. While looking through the viewfinder, turn the zoom ring to set the desired focal length.

* At this time, the lens zooms while maintaining sharp picture focus. However, no [○] indicator nor no PCV signal will operate.
Autofocusing while the power zooming can be canceled by the Pentax function No.13.

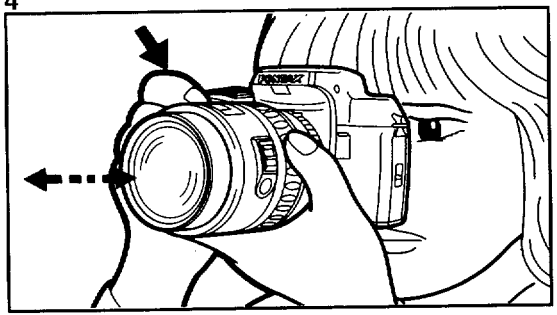
3



3. When the lens zoom set button is depressed, the lens focuses automatically and the image size you set has been entered.

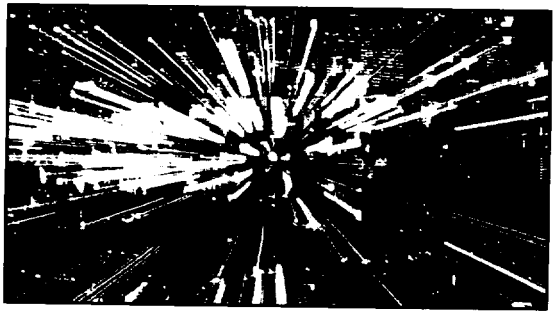
* The entry of another focal length clears a previous focal length. When the focus is made, [○] lights up and the PCV signal is heard.(The PCV signal can be canceled by the Pentax function No.1.)

4



4. While the shutter release button is depressed halfway down, the lens automatically zooms to maintain the same image size. When the camera stops zooming, depress the shutter release button fully down.

* Releasing the shutter before completion of zooming operation may not yield a preset image size: to get the desired image size, release the shutter only after the lens finishes zooming.
* The image size stored in memory is not cleared even if the camera's main switch is set to [**OFF**].
* If the lens is removed or replaced while the camera's main switch is set at [**ON**] or [**USER**], the stored image size will be cleared from memory. To prevent this, set the camera's main switch to [**OFF**] before removing the lens.
* Setting the lens focal length to the middle of its range for the desired image size will provide the most versatility. For instance, set the 28-80mm lens to around 50mm.
* When the battery is removed, keep in mind that a preset image size is cleared.
* Shooting the fast moving subject, the image size may not come out the same.
* If the camera-to-subject distance is too close or far, the preset image size may not be obtained as this mode works effectively only within the constraints of the focal length range. In addition, since the preset image size works only on the lens currently in use, the preset image size may not be obtained if the lens is replaced with another.

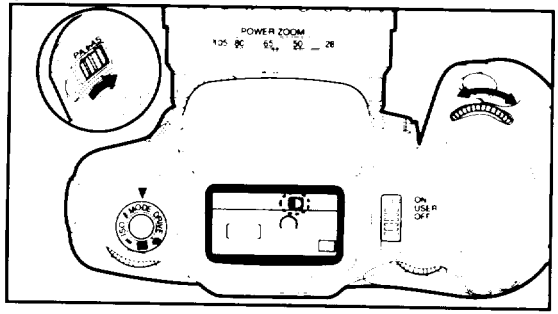


3 Zoom Effect Mode

In the zoom effect mode, the lens zooms automatically from wide-angle to telephoto during an exposure, creating a special effect in which the subject diffuses radially outward.

Using the Pentax function No.14, you can reverse the zooming direction.

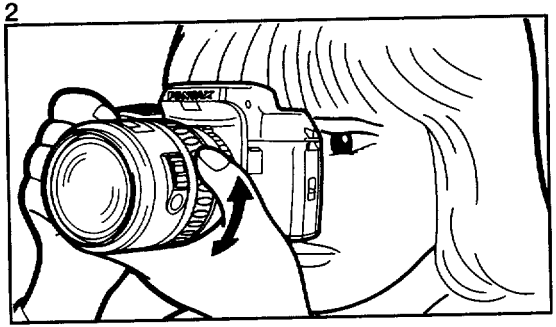
1



1. While holding the auto zoom switch toward [**AS**], turn the T_V direct dial until [◘] appears on the LCD panel. For some lenses, set the auto zoom switch to [**AS**].

* To cancel the zoom effect mode, move the auto zoom switch to [**P**].
* In the zoom effect mode, the leading-shutter-curtain sync flash is selected when the dedicated flash is in use with the trailing-shutter-curtain sync flash mode set, even if the trailing-shutter- curtain sync flash has been selected.
* When the built-in flash is used in the zoom effect mode, both leading-shutter-curtain sync and trailing-shutter-curtain sync flash modes can be used.

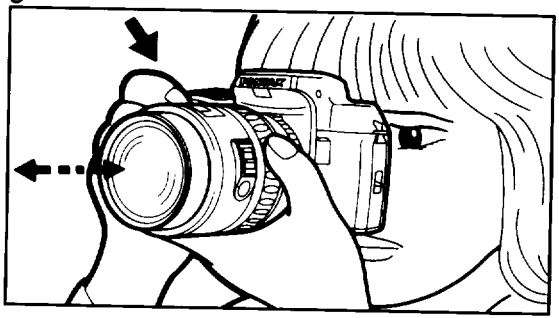
2



2. Set the power zoom ring to a wide-angle position to create distinctive effects.

* To emphasize the effect, choose an exposure setting with as slow a shutter speed as possible.
* In the Hyper Programed AE or Programmed AE mode with the main switch set only at the [**USER**] position, an exposure is automatically chosen which makes the shutter speed as slow as possible.
* When half the designated exposure time has elapsed, the zooming starts automatically. For instance, if the shutter speed is 1 second, zooming starts 0.5 second after the shutter is released.

3



3. Depress the shutter release button fully. The lens zooms according to the selected shutter speed, creating a dynamic zoom effect.

* A fast shutter speed reduces the zooming time and almost no zoom effect is obtained. For instance, a 28-105mm zoom lens takes about 1 second to zoom from the 28mm position to the 105mm position. That is, a shutter speed of at least 2 seconds is required for a full zoom effect to be produced. If the shutter speed is too slow, the shutter remains open after zooming has been finished, creating two images of one subject in two different sizes on a single frame.
* If the zooming range is too large, the image becomes difficult to see due to excessively increased blur.
* Use of a tripod is recommended to prevent camera shake.

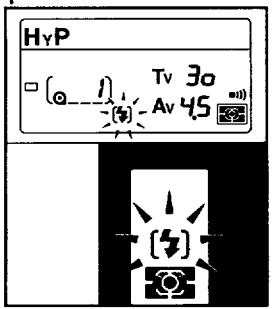
Manual Zoom Effect

If power zooming during exposure is enabled using the Pentax function No.15 selection 1 (See page 105.), the focal length can be changed with the power zoom ring during exposure. Interesting images can be created by adjusting the zooming speed and timing manually.

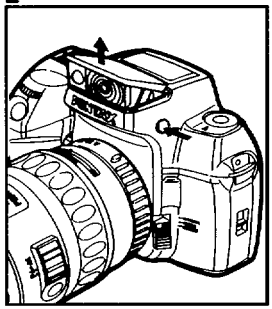
* To create manual zoom effects, set the auto zoom switch to [**P**] (as for the ordinary power zoom function). For some lenses, set the auto zoom switch to [**PZ**].

(11) USING THE BUILT-IN FLASH (RTF)

1



2

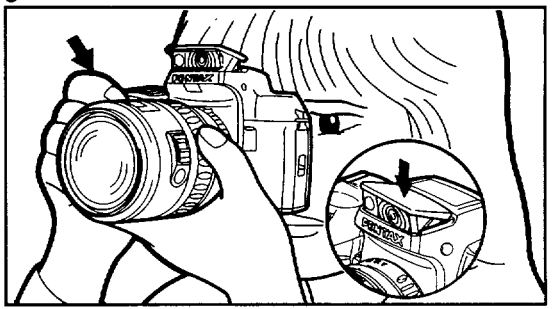


When using the camera's built-in flash in a dark or backlit situation, the camera automatically chooses an optimum combination of shutter speed and aperture according to the subject brightness, allowing you to take a flash photograph with ease.

1. Select the Hyper Programmed AE mode and depress the shutter release button halfway down. In a dark or backlit situation, [⚡] on the LCD panel and in the viewfinder will blink to recommend the use of flash.
2. Depress the flash pop-up button to activated the built-in flash.

* The built-in flash starts charging automatically. When it is fully charged, [⚡] appears on the LCD panel. In addition, [⚡] lights up in the viewfinder when the shutter release button is depressed halfway down.

3



3. Depress the shutter release button fully to take a flash photograph.

* The shutter speed changes in the range of 1/250 sec. to a slower speed which does not cause camera shake. The slowest shutter speed depends on the focal length of the lens fitted to the camera (FA and F lenses only). When a lens made before the Pentax A-series is used, the camera uses the shutter speed of 1/60 sec.
* After taking a flash photograph, retract the built-in flash into the camera body by pushing it in the arrow direction as shown in the illustration.

* When the focus mode switch is set to [**SERVO**], the flash does not charge while the shutter release button is depressed halfway down.
* The shutter cannot be released while the flash charges. Using the Pentax function No.10, you can cancel the shutter release while the flash is being charged.

Shutter-Priority AE Mode
Using the flash at the shutter speed of 1/250 second to freeze images of fast moving subjects or slower (slow-shutter -sync.). In the Shutter-Priority AE mode, the aperture setting automatically changes according to the ambient brightness, making flash photography easy.

* When the Hyper Programmed AE mode is changed to the Shutter-Priority AE mode by turning the T_v direct dial, the shutter speed range can be set from 1 - 250 second to the speed that results in the minimum aperture setting.
* If automatic shift of shutter speed is canceled using the Pentax function No.5 selection 1, any available shutter speed in the range of 1/250 sec. to 30 sec. can be used. See page 101.

Aperture-Priority AE or Hyper Manual Mode
To take pictures with a selected in-focus depth of field, or change the distance of the subject, the flash can be discharged at a specific aperture. In the Aperture-Priority AE mode, the shutter speed changes with the ambient brightness, making flash photography easy.

Aperture -Priority AE
* The shutter speed changes in the range from 1/250 sec.to a slower shutter speed which does not cause camera shake. The slowest shutter speed automatically changes depends on the focal length of the lens attached on the camera.
* When a lens made before the Pentax A-series is used, the camera uses the shutter speed of 1/60 sec. In the Hyper-manual mode with the [**IF**] button depressed, the slow shutter speed is set at 1/60 sec.

* When the Hyper Programmed AE mode is changed to the Aperture-Priority AE mode with the A_V direct dial, any aperture can be set within the shutter speed range depending on the focal length of the lens mounted on the camera. If the automatic shift of shutter speed is canceled using a Pentax function No.5 selection 1, any available aperture between the minimum to the maximum can be selected. See page 101.

Hyper Manual Mode

* When using the built-in flash in the Hyper-Manual mode, any combination usage of the aperture and the shutter speed slower than 1/250 sec. can be selected.
* If the Pentax function No.7 selection 1 is set (See page 102), a shutter speed changes to slower which can be used as a slow-shutter-speed flash synco mode.

Calculating Flash Effective Distance According to the Selected Aperture

Maximum flash distance = GN ÷ Selected aperture
Minimum flash distance = Maximum flash distance ÷ 4.9
When the distance to the subject is less than 0.7m, flash cannot be used. If the flash is used within that distance, it causes vignetting the picture corners, light is distributed unevenly and the picture may be overexposured. The value 4.9 used in the formula above was obtained from the built-in flash.

Guide Number is referred to as GN.

Calculating the aperture according to the camera-to-subject distance

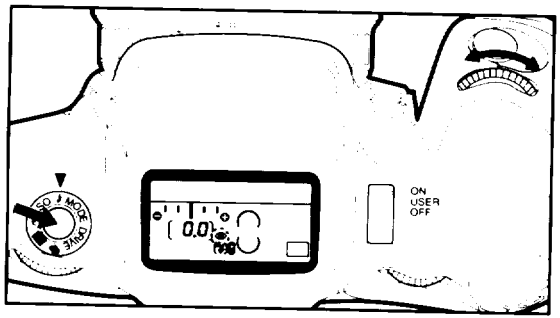
If the calculated aperture value is the one other than an f-stop on the aperture ring, for instance f/3, choose the next smallest aperture ring (f2.8 in this case).
The guide numbers depend upon the film speed used as shown below.

ISO 25 → GN 7	ISO 200 → GN 20
ISO 50 → GN 10	ISO 400 → GN 28
ISO 100 → GN 14	

If an ISO 100 film is used at an aperture of f/3.5, the flash effective distance is obtained as follows:

GN14 ÷ f3.5=4
4 ÷ 4.9= Approx.0.8m

Thus, flash effective distance range is from approx. 0.8m to 4m.



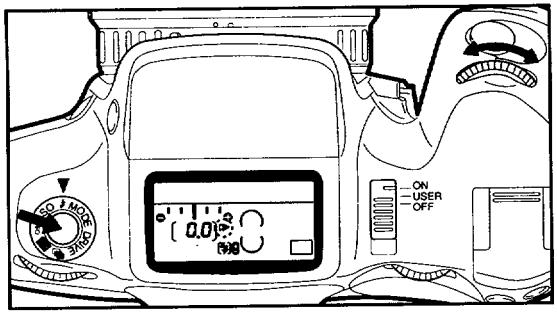
Red-eye Reduction Flash Function
This camera includes a red-eye reduction flash function, which reduces the red-eye phenomenon by preflash. With this mode, the preflash is discharged just before the shutter is released to close the pupil of the eyes. It can reduce the red-eye effect.

How to Set
Set the mode dial to the [⚡]. While holding down the mode set button, turn the **Tv** direct dial until the [👁] appears on the LCD panel.

* In the [**USER**] position, the Red-eye reduction flash function cannot be used. However, by setting the USER-SET function in the [**USER**] mode, it can be used. See page 74.

* When the AF500FTZ is attached and the Slave Flash Function is in use, the Red-eye reduction flash function cannot be used as the slave flash is discharged when the preflash is discharged.
* When a dedicated flash unit is in use and is discharged , the red-eye reduction display on the LCD panel is disregarded.

Red-Eye Phenomenon in Flash Shooting
Shooting portraits with flash in a dark environment often results in the subject's eyes to turn out reddish in the print. This phenomenon, commonly known as " Red-Eye", is caused by the reflection of the electronic flash in the retina. It can be reduced by taking a photo in a brighter light condition or by shooting with a wider angle lens at a closer distance when using a zoom lens, or by employing the red-eye reduction flash feature. When using a Pentax dedicated flash unit off the camera, it may also help to position the flash as far away from the camera as possible.



Trailing-Shutter-Curtain Sync Flash with the Built-In Flash

In the trailing-shutter-curtain sync flash, the flash discharges the instant the second curtain begins its travel. In normal electronic flash photography, the flash discharges at the instant the first curtain completes it travel. This mode will freeze the subject with a blur appearing before the subject under a slow shutter condition.

How to Set

Set the mode dial to the [ϟ]. While holding down the mode set button, turn the T_V direct dial until the [▶] appears.

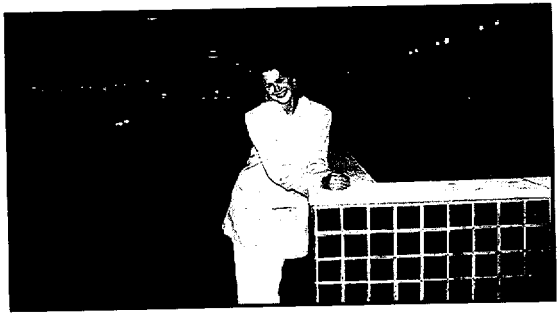
* The trailing-shutter-curtain flash function does not work when the camera's Main Switch is set at the [**USER**] position. However, by selecting the USER-SET FUNCTION in the USER position, it can be used.
* When only dedicated flash is in use, the leading-shutter-curtain sync flash mode does not operates even if [▶] is displayed on the LCD panel.
* When combining the Built-in-flash (camera side) along with the trailing-shutter-curtain sync flash mode with the a Pentax dedicated flash unit with the leading-curtain synch flash mode (normal mode), when both flashes are discharged at the same time, the Pentax dedicated flash automatically switches to the trailing-shutter-curtain sync flash.
* If a dedicated flash which is not equipped with the trailing-curtain-sync mode is discharged together with the built-in flash with the trailing-shutter-curtain sync flash mode, both flash units discharge in the leading-curtain sync flash mode.
* To cancel the trailing-curtain-sync flash mode, the same procedure is required as when it was set to remove [▶] from the LCD panel.
* The fastest flash-sync shutter speed is 1/125 sec. when the built-in flash is in use with the trailing-curtain-sync flash mode.

Without Daylight Sync

With Daylight Sync

Daylight-Synchro-Shooting

When shooting in the backlit situation or the subject is cast in the shadow, discharging the flash will expose the subject without any shadow. In the Hyper Programmed AE, Programmed AE(the main switch is set at USER), Shutter-Priority AE mode, Aperture-Priority AE mode,the shutter speed or aperture changes according to the ambient brightness, making Daylight-Sync flash photography easy, which would otherwise require complicated exposure control.



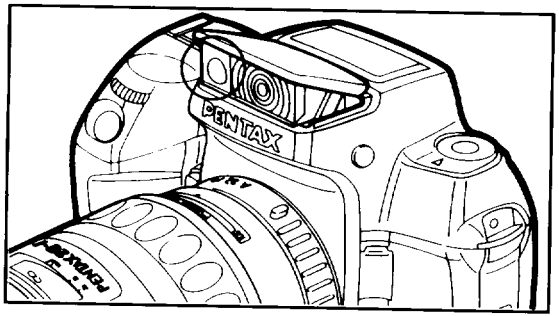
Slow-Speed-Sync Shooting
It is possible to photograph subjects and background in balanced away by using the flash to properly expose the foreground subject and a slow-shutter-speed to expose the low light background. The Slow-speed-sync flash operation works in the Hyper Manual Mode and the Shutter-Priority AE Mode.

Hyper Manual Mode
1. Depress the flash pop-up button to activate the built-in flash.
2. Set the camera's exposure mode to the Hyper Manual Mode.
3. Select an appropriate shutter speed/aperture combination for correct exposure. See page 47.
4. Take a picture.

* If the Pentax function No.7 selection 1 is set, the correct exposure for background is obtained by depressing the [**IF**] button. See page 102.
* If the Pentax function No.7 selection 0 is set and the [**IF**] button is depressed, the low light background may not be exposed properly because of the shutter speed is slowed down to the speed that does not cause camera shake.

Shutter-Priority AE
1. Set the camera's exposure mode to the Shutter-priority AE mode.
2. Set the desired shutter speed slower than 1/250 second.
3. Depress the flash pop-up button to activate the built-in-flash.
4. Take a picture.

* Use of a tripod is recommended to prevent camera shake.

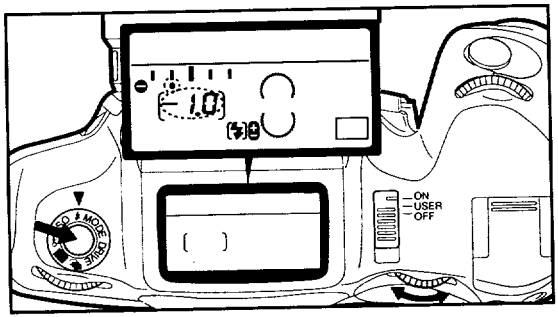


About the AF Spotbeam

The accuracy of the autofocus system is reduced in the dark. When the shutter release button is depressed halfway down after popping up the flash, a red beam (AF spotbeam) is projected to help the camera accurately focus on any subject within a 1m to 4m range

* The AF spotbeam can be used when the focus mode switch is set to [**SINGLE**].
* If you do not wish to use flash, first lock the focus with the flash released, and then retract the built-in flash.
* If a dedicated flash unit in use projects an AF spotbeam as in case with the AF330FTZ, the AF spotbeam in the built-in flash does not operate.
* The AF spotbeam will not project in a bright place.

(12) EXPOSURE COMPENSATION WITH FLASH



Exposure compensation with electronic flash is possible by using the exposure compensation function combined with the built-in RTF flash or a dedicated TTL accessory flash. The amount of light released by the flash will be adjusted automatically according to the amount of compensation you set.

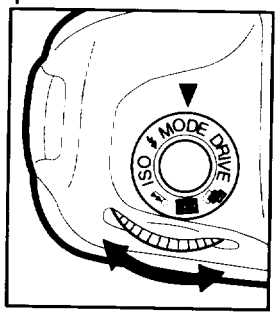
How to set

Set the mode dial to [ϟ]. While holding down the mode set button, turn the AV direct dial to select desired exposure compensation value.

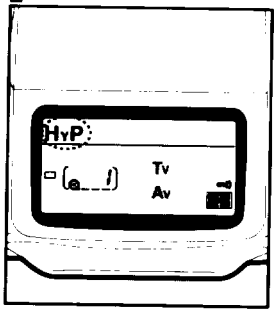
* When the mode button is depressed, the compensation value, the bar graph, [ϟ] and [⊖] are displayed on the LCD panel.
* The exposure compensation range is from -3EV to +1EV in 0.3EV step . Using the Pentax function, the exposure step can change from 0.3EV to 0.5EV. See page 100.
* Moving one dot on the bar graph indicates 0.3EV step (0.5EV when the compensation step is set to 0.5EV).
* When the compensation beyond − 2EV, [⊖] on the bar graph on the LCD blinks ([⊖] in the viewfinder).
* Exposure compensation by discharging the flash light can be made with the built-in flash, a dedicated flash or the both combined.
* The exposure compensation does not operate when the camera's main switch is set at the [**USER**] position. However, it can be used by setting the USER-SET function in the USER position. See page 74.
* To cancel this compensation, set the compensation value to [0.0].
* When exposure compensation is in operation, [⊖] is displayed on the LCD panel and in the viewfinder.
* The compensation cannot be canceled even if the main switch is set at the OFF position or setting to other exposure mode.
* The compensation value may not be set correctly depending on the brightness of the subject or the distance of the subject.
* If the exposure compensation with flash is combined with the exposuse compensation without using the flash , it makes possible to adjust the brightness of the subject on the background and the brightness of the subject respectively.

(13) SELECTING THE DESIRED PROGRAMMED LINE

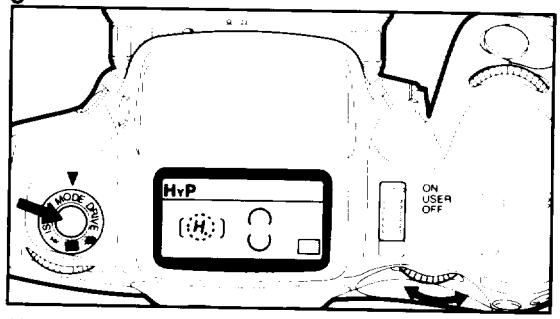
1



2



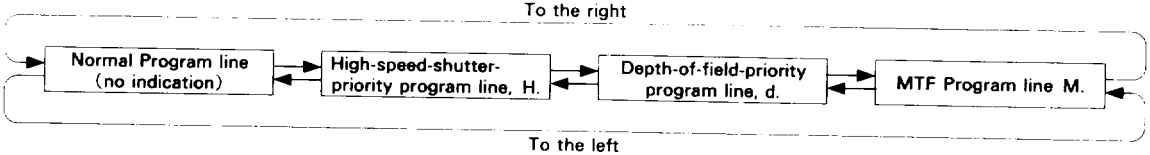
3



This camera has a total of 4 programmed lines including the Normal program, High-speed-shutter-priority program, Depth-of-field-priority program and MTF program modes allowing you to select the one specific for your photographic purposes.

How to set

1. Set the mode dial to [MODE].
2. Set the exposure mode to the Hyper Programmed AE mode. See page 45.
3. While holding down the mode set button, turn the A_V direct dial to select the exposure mode in the following order.



Normal program line
Normal program line for general photography.

High-speed-shutter-priority program line
High-speed-shutter-priority program line is programmed to choose the fastest possible shutter speed.

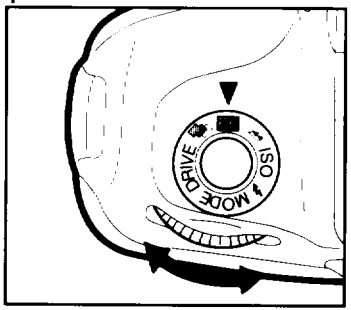
Depth-of-field-priority program line
The program depth line is designed to obtain the greatest depth field possible.

MTF program line
The MTF program line is effective when combined with a Pentax AF lens. It is programmed to choose the aperture at which the lens is sharpest. The MTF program line varies with the lens type. The necessary data is stored in the FA lens in use.

* Refer to page 126 and 127 for each program line.
* The program line cannot be selected if the main switch is set at the [**USER**] position. When the [**USER-SET**] function mode is set, the program line can be selected at the Hyper programed AE mode.

(14) PENTAX FUNCTIONS

1

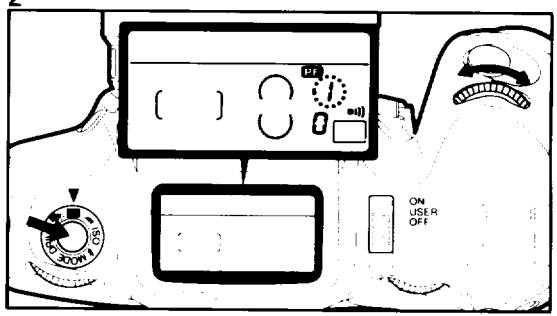


This camera incorporates 15 Pentax functions which can be used to customize camera functions to your taste and convenience.

How to set Pentax Functions

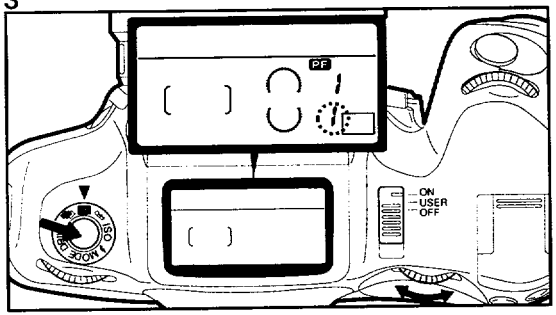
1. Set the mode dial to [PF].

2



2. While holding down the mode set button, turn the T_V direct dial until desired Pentax Function Number appears.

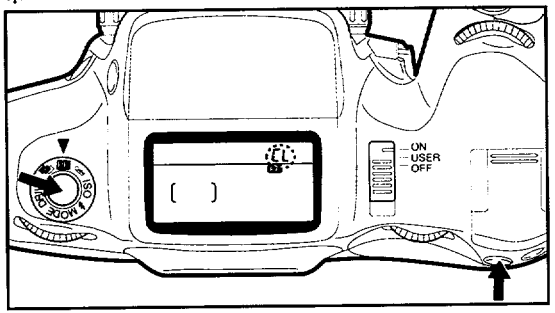
3



3. While holding down the mode set button, turn the A_V direct dial to set the selection number of each Pentax function.

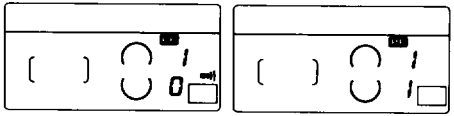
* The selection of the Pentax function is either 0 or 1. For further details, see the description of each Pentax function.
* Upon delivery from the factory, the selection of all Pentax functions is set to zero (0).

*

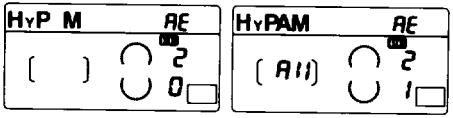


* **Initializing Pentax functions**
1. Set the main switch to [**ON**].
2. Set the mode dial to [PF].
3. While holding down the mode set button, depress the IF button for 2 seconds until [CL] appears on the LCD panel. At this time, the audible PCV signal is heard.

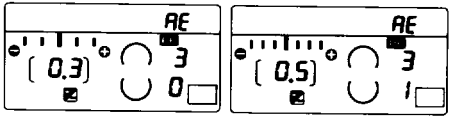
Pentax Function No.1.
Turning On or Off the PCV Signal
Details:
When the subject is in focus, the self-timer is being used, IF button or ML button is depressed, or the image size tracking mode is being used, the PCV signal is heard.
Selection:
0 PCV beeps **1** = PCV does not beep



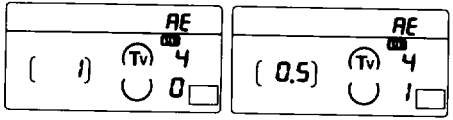
Pentax Function No.2
Selecting Exposure Modes
Details:
Exposure mode can be selected when the main switch is set at [**ON**].
Selection:
0 = When the lens aperture ring is set at A, the Hyper Programmed AE mode and the Hyper Manual mode can be selected. When the lens aperture ring is set other than A position,the Aperture-Priority AE mode and Hyper Manual mode can be selected.
1 = All exposure modes can be selected.



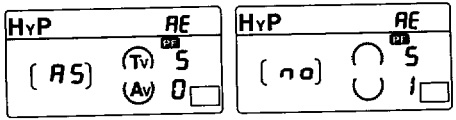
Pentax Function No.3
Selecting the exposure compensation step
Details:
Selecting an exposure compensation step of 0.3 or 0.5EV.
Selection:
0 0.3EV
1 0.5EV



Pentax Function No.4
Selecting the shutter speed step
Details:
Select a shutter speed step of 1EV or 0.5EV.
Selection:
0 1EV step
1 0.5EV step

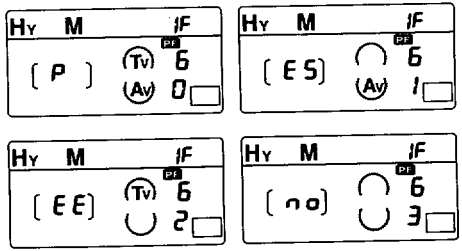


Pentax Function No.5
Selecting the type of automatic T_v/A_v shift in the Hyper Programmed AE mode.
Details:
Choose whether the shutter speed (T_v) and the aperture setting (A_v) should shift automatically for a correct exposure, or only a warning should be indicated without A_v and T_v being shifted (in this case the correct exposure will not be obtained). This occur when the shutter speed or aperture value assigned by the Hyper function exceeds the coupling range in the Hyper Programmed AE mode.
Selection:
0 = The shutter speed (T_v) and aperture setting (A_v) will shift automatically.
1 = A warning will be issued and the shutter speed (T_v) and aperture setting (A_v) will not shift automatically.

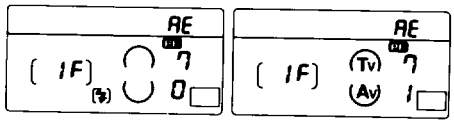


Pentax Function No.6
Selecting the type of T_v/A_v shift mode when the [IF] button is depressed in the Hyper Manual mode.
Details:
Select the method used to set the correct exposure with the [IF] button depressed when the aperture ring is set to [A] in the Hyper Manual mode.
Selection:
0 = The correct exposure is obtained according to the program line.
1 = The aperture value (A_v) is fixed and the shutter speed (T_v) is shifted to obtain the correct exposure.
2 = The shutter speed (T_v) is fixed and the aperture value (A_v) is shifted to obtain the correct exposure.
3 = Both shutter speed and aperture setting are not shifted. ([IF] button is disregarded.)

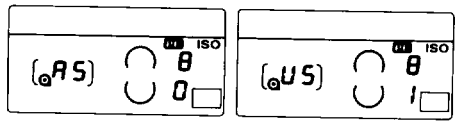
Note: when the lens aperture ring is set to other than A, when the [IF] button is depressed, the shutter speed is always shifted. However, when the selection 3 is selected, the shutter speed does not shift even if the [IF] button is depressed.



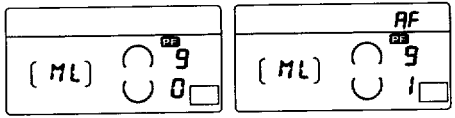
Pentax Function No.7
Selecting the shift of the shutter speed (T_v) and the aperture value (A_v) in the Hyper Manual or 250 (1/250 sec.) when the (IF) button is depressed with the built-in flash is in use.
Details:
When the built-in flash or a Pentax dedicated TTL flash is in use with the Hyper Manual or 250 exposure mode, depress the IF button after the flash is charged to obtain the correct exposure shifting the shutter speed and the aperture setting in accordance with the programmed line or for obtaining the correct exposure for the background.
Selection:
0 The shutter speed and the aperture shift to obtain the correct exposure for background.
1 The shutter speed and the aperture setting shift according to the flash programmed line.



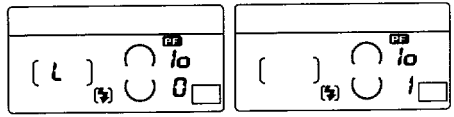
Pentax function No.8
Selecting the method of film speed setting
Details:
To choose whether the film speed (ISO) is set automatically according to the DX coding or manually set by user.
Selection:
0 = Automatic setting of film speed (ISO) according to the DX coding has priority.
1 = Manual setting of film speed (ISO) by the user has priority.
If the selection **1** is set, the previous set ISO will be set automatically when a new roll of film is leaded.



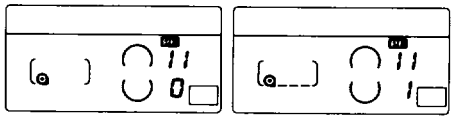
Pentax Function No.9
Selecting function of the [ML] button.
Details:
When the focus mode switch is set to [**SINGLE**] and the [**ML**] button is depressed, this function determines whether the subject is focused automatically (and the focus is locked) before the exposure level is fixed or only the exposure is fixed.
Selection:
0 = When the [**ML**] button is depressed, only exposure level is fixed without autofocusing.
1 = When the [**ML**] button is depressed, the exposure level is fixed after autofocusing (and the focus is locked.).



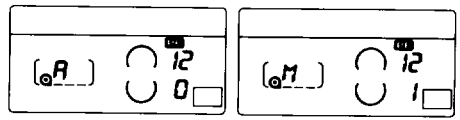
Pentax Function No.10
Selecting whether or not the shutter will release befor the built-in flash is fully charged.
Details:
Selects whether the shutter can be released before the built-in flash is fully charged or the release is locked until charging is complete.
Selection:
0 = The shutter release is locked until the built-in flash charges completely.
1 = The shutter can be released before the built-in flash charges completely.



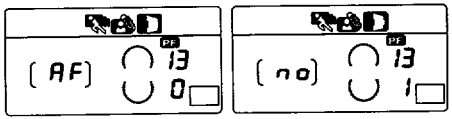
Pentax Function No.11
Adjusting the film rewind
Details:
Chooses whether the film leader is rewound completely into the cartridge or is left slightly left outside of the film cartridge.
Selection:
0 The film is rewound completely into the film cartridge.
1 The film leader is left outside of the film cartridge.



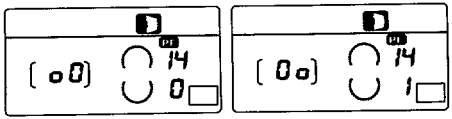
Pentax Function No.12
Selecting the film rewind mode
Details:
Chooses whether the film rewinds automatically or manually when it reaches the end of the roll.
Selection:
0 Automatic start of rewinding
1 Manual start of rewinding
Note:
If manual rewinding [**1**] is selected, the exposure count and film transport mark blink when the end of the film reached. Manually rewind the film according to the direction for "Rewinding the film in Mid-Roll" See page 20.



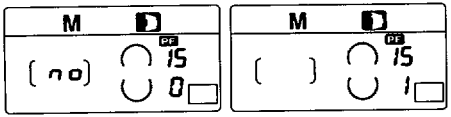
Pentax Function No.13
Selecting autofocusing when the power zoom is used.
Details:
Chooses whether the lens automatically zooms when the power zoom operates.
Selection:
0 = The lens focuses when power zoom operates.
1 = The lens does not focus when power zoom operates.



Pentax Function No.14
Selecting the zoom direction in the zoom effect mode
Details:
Chooses whether the lens automatically zoom from wide-angle to telephoto or vice versa.
Selection:
0 = The lens zooms from wide-angle to telephoto.
1 = The lens zooms from telephoto to wide-angle.

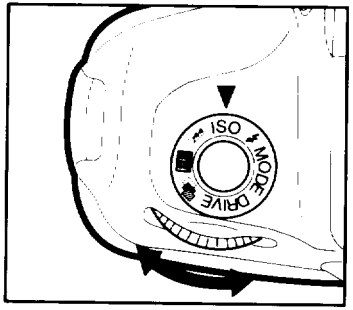


Pentax Function No.15
Selecting power zoom operation
Details:
Chooses whether the power zoom ring can be used during an exposure (while the shutter is opened) after depressing the shutter release button fully down or the power zoom cannot be used while the exposure is being made.
Selection:
0 = Power zoom ring disabled.
1 = Power zoom ring enable during exposure.
Note:
When the selection is set to **1**, set the auto zoom switch to [**P**], if the power zoom is operated during the exposure. For some lenses, set the auto zoom switch to [**PZ**].



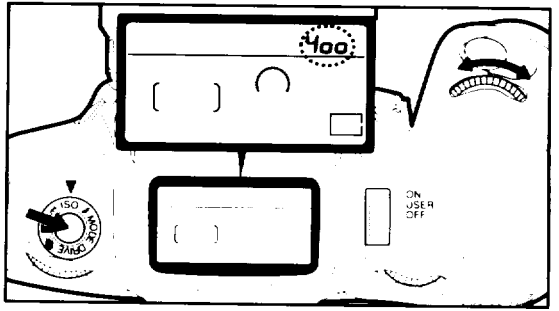
(15) SETTING THE FILM SPEED (ISO) MANUALLY

1



This camera automatically reads the film speed from a loaded film's DX code. However, the film speed setting can be changed. If you use a non-DX coding film, set the film speed manually.

2



How to change the film speed

1. Set the mode dial to "**ISO**".
2. While holding the mode set button, turn the T_V direct dial until desired film speed appears on the LCD panel.

* To display the current film speed (ISO), depress the mode set button after setting the mode dial to "**ISO**".
* If the film speed read by the DX coded film cartridge and the manually set film speed is different, "**ISO**" appears on the LCD panel.
* If a non-DX coded film is used, the previously-set film speed is used.
* The automatic film speed reading function can be canceled with the Pentax function No.8.

(16) USING A PENTAX DEDICATED EXTERNAL FLASH

If the built-in flash is not powerful enough, a Pentax dedicated external flash should be used.

Using the TTL Auto Flash

1. Remove the hot shoe cover and attach a Pentax dedicated flash unit.
2. Set the flash to TTL Auto mode. Ensure the camera is in the Hyper Programmed AE, Programmed AE (only the camera's mode is set at USER), or Aperture-Priority AE mode.
3. Turn ON the flash.
4. Ensure that the the flash is fully charged. After the flash ready lamp is lit, if you depress the shutter release button halfway down, [ϟ] lights up in the viewfinder.
5. Focus on the subject and takes a flash photograph.

* The shutter speed varies automatically from 1/250 sec. to a slower shutter speed that does not cause camera shake depending on the focal length mounted on the camera. However, when a lens made before the Pentax A series lens in use, the slowest shutter speed becomes 1/60 of a second.
* When the camera is in the Shutter-Priority AE mode or the Hyper Manual mode, allowing you to select the shutter speed/aperture combination to change the in-focus range or increase a blur effect. If the camera is in the shutter-Priority mode, only the shutter speed is can be changed.

Multi-burst flash with the Pentax dedicated flash

When discharging more than 2 Pentax dedicated flash, make sure they are the same type of the flashes (refer to the overview of Flash Function on page 108.), combine the TYPE B with TYPE C or TYPE D with TYPE E. The built-in flash can be operated with any type of Pentax TTL dedicated flash unit.

Overview of Flash Function

CAMERA FUNCTION	TYPE A	TYPE B	TYPE C	TYPE D	TYPE E
After the flash is charged, the camera automatically selects the flash-sync speed.	○	○	○	○	○
Automatic aperture setting in the Hyper Programmed AE, Programmed AE or Shutter-Priority AE mode	○	○	○	○	
Flash confirmation signal in the viewfinder		○	○		
TTL auto flash	○	○	○	○(Note1)	
Slow-speed sync in Hyper Manual or Shutter-Priority AE mode	○	○	○	○	○
AF spotbeam	○	○	○		
Trailing-shutter-curtain flash sync (note 2)	○	○	○		
Contrast-control flash mode (note 3)		○			

TYPE A: Built-in flash
TYPE B: AF330FTZ, AF500FTZ (note 4)
TYPE C: AF400FTZ, AF240FT
TYPE D: AF400T, AF280T, AF200T, AF080C, AF140C, AF200SA
TYPE E: AF200S, AF160, AF140

Notes:
1. Only the AF200SA flash does not operate.
2. The shutter speed is 1/125 sec. or slower.
3. The shutter speed is 1/60 sec. or slower.
4. Multi-burst and slave-synch flash with AF500FTZ are possible.

* When using a Type D flash except AF200SA in the MS (Manual Synch) or M (Manual) mode or a Type E flash, set the aperture according to the calculator chart on the back of the flash unit.
* If the camera is set in the Hyper-Programmed AE mode , the Programmed AE mode (with the USER-SET position) or the Shutter-Priority AE mode, the Type D flash cannot be used as the aperture setting changes.

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

AF500FTZ and AF330FTZ

- The aperture and shutter speed vary automatically according to the ambient brightness, making daylight-synch-flash possible. The aperture and shutter speed vary in a same manner to the camera's built-in flash See page. 87
- If focusing on a subject is difficult in low light, the camera automatically projects an AF spotbeam to accurately measure the distance to the subject.
- These flash units have an auto zoom feature. The angle of its discharge automatically changes according to the focal length of the FA or F lens in use.
- The AF500FTZ features a wireless slave-sync flash function.
- Multiple flash burst on a single frame is possible with AF500FTZ.
- These flash units feature the contrast control system.
- In the Hyper-Programmed, Programmed (when the main switch is set to USER.), Shutter-Priority, or Aperture-Priority AE mode, even when the flash unit is set to Manual, TTL auto flash mode will be set automatically.
- When the flash is charged and left unused for about 3 minutes,the power automatically switches off to save battery power.
  Depressing the shutter release button halfway down will restart charging of the flash unit.

AF240FT and AF400FTZ

- The aperture and shutter speed vary automatically according to the ambient brightness, making day-light-synch-flash possible. The aperture and shutter speed vary in a same manner to the camera's built-in flash. See page 88.
- Both of these units feature built-in infrared spotbeam to assist the autofocus system in dim light and low-contrast conditions.
- In the Hyper Programmed AE, Programmed AE (when the main switch is set to USER.), Shutter-Priority AE or Aperture-Priority AE, TTL auto flash control system will be set automatically.
- When the flash is charged and left unused for about 3 minutes, the power automatically switches off to save battery power. Depressing the shutter releaase button halfway down will restart charging of the flash unit.

AF200T, AF280T, and AF400T

- If the TTL auto mode is selected, these flash units can be used for daylight-sync shooting, because the shutter speed is adjusted (1/250 to 1/60 sec.) according to the ambient brightness.
- When using the Three-Level Auto (red, green, and yellow settings) mode, the aperture value is adjusted as shown in the table and the shutter speed also varies within the shutter speed range of 1/250 to 1/60 sec.

	AF200T	AF280T	AF400T
Red	f/2.8	f/4	f/4
Green	f/5.6	f/8	f/8
Yellow			f/11

with ISO 100

Notes on Pentax Dedicated Flash Units

When the built-in flash is used in combination with a Pentax dedicated flash unit, the dedicated flash unit has a priority function control over the built-in flash. Ensure that the flash units are fully charged before releasing the shutter.

However, if the built-in flash with the trailing-shutter-curtain sync flash mode and the dedicated flash unit with the trailing-shutter-curtain sync flash mode are combined, both flash units operate in the trailing-shutter-curtain sync flash mode.

Contrast-Control Flash Photography

Using the AF330FTZ or AF500FTZ in combination with the built-in flash allows twin-flash photography (contrast-control flash photography). This is based on the difference between the amount of light discharged from two units. The AF330FTZ or AF500FTZ gives out twice as much as the built-in flash unit.

1. Put the AF500FTZ or AF330FTZ in the contrast control sync flash mode.
2. Ensure that both flash units are fully charged and then shoot.

- When the AF500FTZ or AF330FTZ is used off the camera, the effect of contrast control is increased. Use an optional "Hot Shoe Adapter F" (two sets with the AF330FTZ) and "Extension Cord F 5P" to connect the dedicated flash unit to the camera. Do not combine an accessory with a different number of contacts such as a malfunction may occur.
- In the contrast control sync flash mode, the camera operates in a similar manner to as when the leading-curtain sync flash mode is selected except that the camera uses 1/60 sec. of top flash speed.

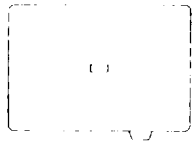
(17) ACCESSORIES (OPTION)

A number of dedicated accessories are available for this camera. For details, please see our brochures.

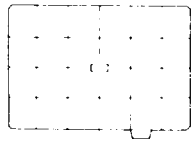
- **Cable Switch F**
  A shutter release cord designed for use with the Z-1/PZ-1, Z-1$_P$/PZ-1$_P$, Z-20/PZ-20/, Z-10/PZ-10, SFX$_N$/SF1$_N$, and SF7/SF10 and SFX/SF1.
- **Magnifier F$_8$**
  A viewfinder accessory for magnifying the central area of the viewfinder.
- **AF500FTZ**
  A TTL Auto Zoom flash with a built-in AF spotbeam and large guide number 50 in meters. It features slave-sync flash function, multiple flash burst, contrast sync flash, leading/trailing-curtain-sync flash mode.
- **AF330FTZ**
  A TTL Auto Zoom flash with a built-in AF spotbeam and guide number 33 in meters. It features contrast control sync, leading/trailing-curtain-sync flash mode.
- **Hot Shoe Adapter F and Extension Cord F5P**
  An adapter and cord which allow the 240FT, AF330FTZ, AF400FTZ and AF500FTZ to be used off the camera, while maintaining full electronic coupling to the camera.
- **AF Adapter 1.7X**
  An adapter for autofocus photography using KA- or K-mount lenses with a maximum aperture of f/2.8 or larger.
- **Macro flash AF140C**
  A TTL macro flash unit with the guide number 14 in meters.
- **Grip Strap F$_{DP}$**
  A special hand grip for holding a camera firmly and securely.
- **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 provides in sizes of 49mm, 52mm, 58mm, 67mm and 77mm.

•**Focusing Screens**

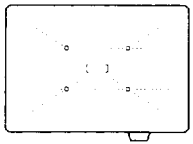
FF-60(Matte field with AF frame)
for general photography



FG-60 (Matte field with cross hairs)
Designed to guide picture compositions.

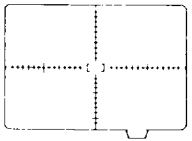


FK-60 (Matte field with golden section lines)
Designed for determining the image of a subject in a frame (scaled in millimeters).



FS-60 (Matte field with spot metering circle)
With circle for spot metering.

FI-60 (Matte field with scales)
Designed for determining the image size of a subject in a frame(scaled in millimeters).



FM-60 (Matte field with panorama and spot metering frame-standard screen)
With panorama format compensation frame and circle for spot metering

FP-60 (Matte field with panorama frame)
With panorama format compensation frame

Notes on Accessories

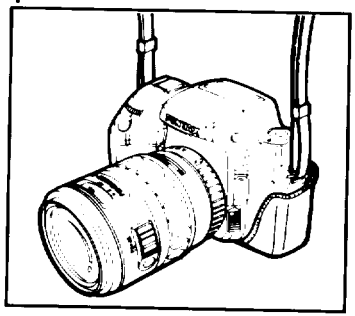
- "Auto Bellows A" cannot be used in combination with the double cable release. When taking a vertical photograph, position the camera with the grip facing upward.

- When vertically positioning the camera with the tripod mount of the Pentax-F* 300mm f/4.5ED (IF) lens with the grip facing downward, the tripod mount may hit the camera body. Position the camera with the grip facing upward.

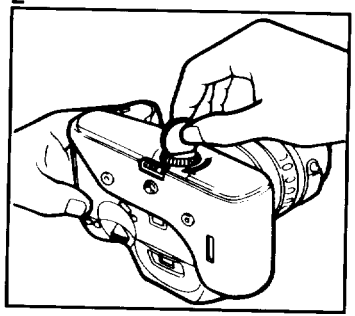
- When attaching the "ADAPTER K FOR 645 LENS" to the camera body, the camera shift lock screw of the lens may hit the camera body. To avoid this, change the position of the fixing screw.

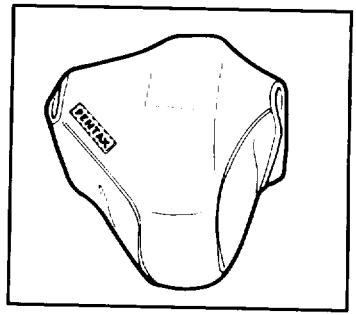
- The camera mounting base on the Macro Focus Rail III and copy stand has a leveling protrusion may scratch the camera body. Do not use these accessories.

1



2





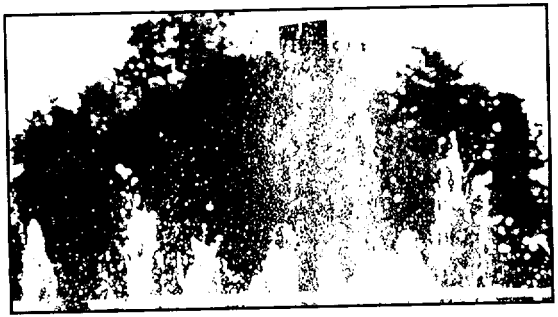
The soft case is available as an option and consists of a front cover and a back cover.

1. Open the front cover and place the camera body in the back cover.
2. Fasten the back cover to the camera body by tightening the fitting screw in the tripod socket.

Soft case comes in three sizes, S, M and L

Case	Applicable F, FA-lens
S	50mm f/1.4, Zoom 35-70mm, etc.
M	Zoom 28-80mm, Zoom 35-105mm, Zoom 35-80mm, etc.
L	Macro 100mm, Zoom 28-105mm, Zoom 70-200mm, Zoom 28-70mm, etc.

(19) EFFECT OF APERTURE AND SHUTTER SPEED



High shutter speed

Slow shutter speed

A correct exposure is established by a combination of shutter speed and aperture setting according to the subject brightness. Actually, there are many correct combinations of shutter speed and aperture for a particular subject brightness. Different shutter speed and aperture settings produce different effects.

Effect of Shutter Speed

The shutter speed determines the film exposure time, or the amount of light striking the film as the shutter stays open for its designated time. If the subject is moving, its image will be blurred at a slow speed. In contrast, choosing a high shutter speed allows a frozen image to be taken of a moving subject. A high shutter speed also prevents camera shakes. It is possible to enhance the motion of a wave or a waterfall by blurring the movement using a slow shutter speed.

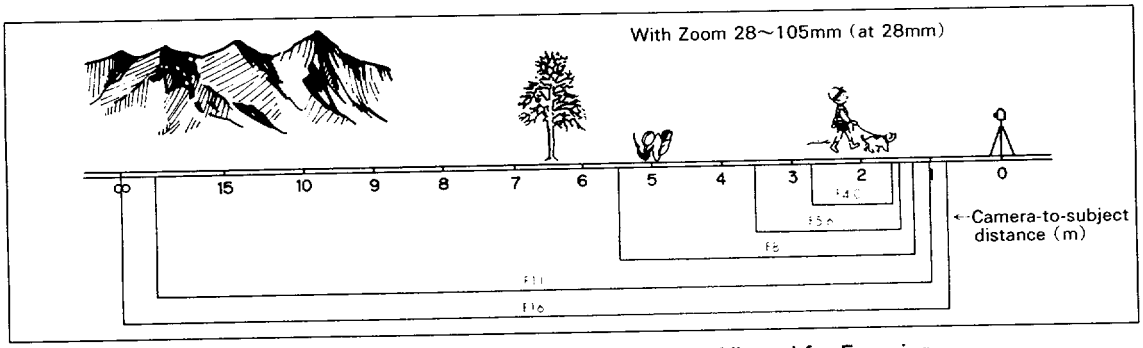
Closed-down aperture

Open aperture

Effect of Aperture

The aperture increases or reduces the amount of reflected light from an object which passes through the lens, controlling how much light strikes the film. If the aperture is opened up to increase the amount of light, objects in front of and behind an in-focus subject will not be focused. That is, the range of focus (depth of field) becomes small. If the aperture is closed down to reduce the amount of light, the depth of field increases. For instance, if you shoot a person against a landscape with the aperture open, the landscape in front of and behind the person will be blurred,making the person appear to rise out of the landscape. By contrast, closing down the aperture increases the in-focus range.

(20) DEPTH OF FIELD



Depth of field refers to the range around the optimum focusing point of the subject in which the elements at different distances are in focus. The depth of field increases as the aperture is closed down, the focal length of the lens becomes shorter, or the subject is positioned farther away.

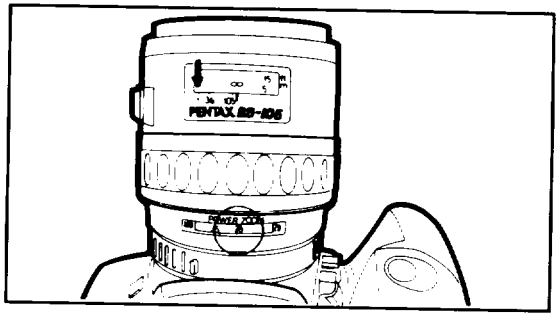
The Range Allowed for Focusing

The in-focus range varies depending on the aperture in use. Zoom lenses do not have a depth-of-field scale for mechanical considerations.

The Preview Button

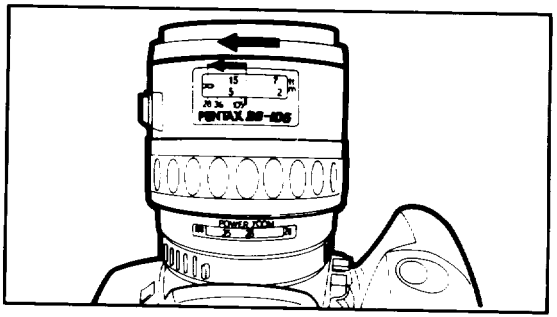
If the lens aperture ring is set to a other than "A" position, the depth-of-field preview can be confirmed by depressing the preview button. The aperture you have set will be closed down. With the preview button depressed, the exposure will not be set correctly.

(21) INFRARED INDEX



When an infrared film and an "R2" or "O2" filter are used, the focal point is different from that of ordinary film (exposed in visible light) is used. The autofocus system cannot compensate for this difference automatically. After focusing on the subject as usual, set the focus mode switch to "**MANUAL**" and turn the focusing ring to the left by the distance indicated on the infrared index.

As shown in the illustration, if 28 is read from the zoom scale,adjust the distance scale to 28 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 does not give a correct exposure. Use the Meter manual exposure mode.

(1) PRECAUTIONS FOR BATTERY

- Use one 6V lithium battery (2CR5 type).
- The misuse of a battery can cause hazards such as leakage,overheating, explosions, etc. The battery should be inserted with the "+" and "−" sides facing correctly.
- Never try to disassemble, short or recharge the battery. Also,do not dispose of the battery in fire, as it may exploded.
- 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.
- When the camera is in a bag, ensure the main switch is off:otherwise, battery power may be wasted if the shutter release button is accidentally pushed.
- If the built-in flash is used continuously, the battery may become warm, but it does not mean that the battery is faulty; it is one of the battery's characteristics.

Battery Life (using 24-exposure film rolls)

General existing light photography	About 80 rolls
Flash photography (using flash 50% of the time)	About 25 rolls
Flash photography (using flash 100 of the time)	About 14 rolls
Bulb exposure time	About 6 hours

The 2CR5 battery was used under Pentax testing conditions. Actual battery life/performance may vary drastically depending on usage as temperature and freshness of the battery.

(2) PRECAUTIONS FOR YOUR CAMERA

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

Precaution when taking pictures

- Do not use the camera in a place where the camera may come in contact with rain or water because the camera is not weatherresistance. Should the camera get wet from rain or splashing water, wipe it off immediately with a dry soft cloth.
- Do not drop the camera or allow it to hit a solid object. If the camera suffers a severe shock or impact, take it to a Pentax service center for inspection.
- Be careful not to subject it 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, take it out of the bag after the 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.
- When a macro or telephoto lens is used, the upper portion of the viewfinder may be darkened by the mirror. This darkening,however, does not appear on the development.

Precaution 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 mothballs or in a area where chemicals are handled. Store it in a place with good air circulation to prevent the growth of fungus.

Precaution for taking care

- Use a blower and lens brush to remove dust accumulated on the lens or viewfinder.
- Never use solvents such as paint thinner, alcohol or benzine to clean the camera.
- Electrical problems may often be caused by water, dirt or dust at points of electrical contact. Also check for battery leak-age, 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.
- Never touch the shutter curtain or mirror with your finger or any other object.

Other precautions:

- Temperature range at which this camera function properly is 50°C to -10°C (122°F to 14°F).
- A camera which has been submerged in water cannot usually 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 made necessary due to usage of this product in an industrial or commercial application may not be covered under the term of the Pentax warranty.
- Repairs made necessary as a rebuilt of the camera being subjected to any of the conditions warned about in this precautions section, or any other precaution or warning throughout this instruction manual, are not covered under the terms of the warranty and changes may be assessed.

LCD (Liquid-crystal display) Backup Circuit

Even if the battery is removed before the film reaches its end,the exposure number and film speed stay in memory.

LCD (Liquid-crystal display) Display

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

(3) TROUBLESHOOTING

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 [**OFF**].	Turn ON the main switch.	P.15
	The low battery warning [▭] appears.	Replace the battery.	P.10
	The battery is improperly installed.	Install the battery properly.	P.10
Indicators do not appear on the LCD panel.	The main switch is not [**ON**].	Turn ON the main switch.	P.15
	No battery has been installed.	Install the battery.	P.10
	The battery is improperly installed.	Install the battery properly.	P.10
	The battery is dead.	Replace the battery.	P.10
The camera does not focus.	AF frame is not placed over the subject.	Move the camera until the AF frame [ ] covers the subject.	P.28
	The subject is too close.	Increase the camera-to-subject distance.	P.28
	The focus mode switch is set to [**MANUAL**].	Set the focus mode switch to [**SINGLE**] or [**SERVO**].	P.27
	The subject is difficult to autofocus.	Use the focus-lock technique or focus manually using the matte field.	P.30 P.36
[◯] blinks in the viewfinder.	The subject is too close or is difficult to autofocus.	Use the focus-lock technique or focus manually using the matte field.	P.30 P.36
The built-in flash does not charge.	The battery is dead.	Replace the battery.	P.10
	The shutter release button was pressed while the focus mode switch was set to [SERVO].	Release the shutter release button.	P.88
The focus cannot be locked.	The focus lever is set to [**SERVO**].	Set the focus lever to [**SINGLE**].	P.27
Drive mode cannot be set except the single frame mode.	The main switch is set to [**USER**].	Set the main switch to [**ON**].	P.15
The autobracketing mode cannot be set.	The main switch is set to [**USER**].	Set the main switch to [**ON**].	P.15
The Hyper-Progammed AE mode cannot be set.	The main switch is set to [**USER**].	Set the main switch to [**ON**].	P.15

Symptoms	Causes	Remedies	Reference
The Hyper-Manual mode cannot be set.	The main switch is set to [**USER**].	Set the main switch to [**ON**].	P.15
The exposure compensation cannot be set.	The main switch is set to [**USER**].	Set the main switch to [**ON**].	P.15
The zoom-clip mode cannot be set.	The lens is set at manual zoom mode.	Push the power zoom ring of the lens forward until the words POWER ZOOM appear.	P.78
	The auto zoom switch on the lens is set [**P**].	Set the auto zoom switch to [**A**].	P.78
The image-size tracking mode cannot be set.	The lens is set at manual zoom mode.	Push the power zoom ring of the lens forward until the words POWER ZOOM appear.	P.78
	The auto zoom switch on the lens is set to [**P**].	Set the auto zoom switch [**A**].	P.78
	The focus mode switch is set to [**MANUAL**].	Set the focus mode switch to [**SINGLE**] or [**SERVO**].	P.81
The power zoom system does not function.	The lens is in the manual zoom mode.	Push the power zoom ring forward until the words [**POWER ZOOM**] appear.	P.24
While shooting the power zoom system operates automatically.	The image-tracking mode is selected.	Cancel the image-size tracking mode.	P.81
The zoom effect cannot be set.	The lens is in the manual zoom position.	Push the power zoom ring of the lens forward until the words POWER ZOOM appear.	P.78
The zoom effect does not work.	The power zoom ring is turned to the telephoto side (larger number).	Turn the power zoom ring to the wide-angle side (smaller number).	P.85
The lens focuses when zooming.	The camera focuses automatically when the power zoom is operated.	It is possible to cancel this function by the Pentax function.	P.105

It is possible that static electricity may cause camera malfunctions. Should this occur, remove the battery from the camera and then reinstall. If the malfunction disappears the camera is not defective and you can continue to use the camera mormally.

4) SPECIFICATIONS

Type: Through-the-lens (TTL) autofocus, auto-exposure 35mm SLR with built-in TTL auto flash (RTF)

Format: 24x36mm (13x36 in panoramic format)

Usable Film: 35mm perforated cartridge film. DX-coded film with ISO 25-5000; non-DX coded film with ISO 6-64000

Exposure Mode: (1)Hyper Programmed AE; (2)Programmed AE; (3)Shutter-Priority AE; (4)Aperture-Priority AE; (5)Hyper Manual; (6)Manual (Bulb); (7)250 (1/250sec.)

Shutter: Electrically controlled vertical-run focal-plane shutter.
Electronic-magnetic release. Shutter speed range: (1)Auto:1/8000-30sec.(Stepless); (2)Manual: 1/8000-30sec. (3)Bulb. Shutter lock by turning main switch off.

Lens mount: Pentax K_{AF2} bayonet mount (K-mount with AF coupler, lens information contacts and power contacts)

Compatible lens: Pentax K_{AF2}, K_{AF}, K_A, and K-mount lenses are usable. Autofocus is possible using AF Adapter with K_A-mount lenses are usable.

Autofocus System: TTL phase-matching system (SAFOX II). AF operational brightness range: EV-1 to 18 (at ISO 100 with f/1.4 lens). Focus lock available using shutter release button in AF single mode, Focus mode:AF single, AF servo (predictive AF provided) and Manual

Power Zoom: 3 speed Intelligent Power Zoom lens with built-in motor. (1)Power zoom; (2) Image-Size Tracking; (3) Zoom-Clip; (4) Auto Zoom Effect when combined with an FA zoom lens.

Viewfinder: Pentaprism finder, Interchangeable Natural-Bright-Matte focusing screen, Field of view:92%, Magnification:0.8X (with 50mm lens at ∞), Diopter adjustment: −2.5 to +1.5diopters. Panorama format frame, Spot metering area frame

Viewfinder LED & LCD indication: Focus information:in-focus(green lamp [⬭] is lit), front or back focus signals and unable-to-focus indicator(green lamp blinks)/Shutter speed in range from 1/8000 to 30sec/Aperture value from f/1.2 to 90/Dedicated flash ready indication[ϟ] is lit,RTF ready indication [🗲] is lit, Flash-recommended display or inappropriate lens warning [🗲] blinking/Bar graph (exposure compensation value, discharging flash light compensation value, autobracketing value/manual mode:over exposure and underexposure indication), [🔋] discharging flash light compensation value indication, [▣] exposure compensation indication, [✱] memory lock, [▦] multi-segment(8) metering indication, [⊡] spot metering indication, [◉] center-weighted metering indication, [▭] panorama indication

External LCD Panel indication: [HyP] = Hyper Programmed AE, (P) = Programmed AE, (A) = Shutter-Priority AE, Aperture-Priority AE, [HyM] = Hyper Manual, (Bu) = Bulb,(250) = Shutter speed of 1/250 sec, [🏃] = Image-Size Tracking, [🏃] = Zoom Clip, [◧] = Auto Zoom Effect, Shutter speed = 1/8000 -30s, Aperture value = 1.2-90, film speed = 6-6400, ISO indication,Bulb timer = 1s-59s, 1m-59m(blinking 1-59), Exposure compensation value with flash = −3 to +1, Autobracketing/Exposure compensation value = −4 to +4, Multi-exposure counter = 2 to 9, Bar graph = Exposure compensation value, Exposure compensation with flash, Auto exposure compensation value, Over or under exposure indication in manual mode, [🗲] = Exposure compensation, [⊙___] = film status information, [▬] = Battery exhaustion warning, Film counter = 0 - 99, [👁] = Red-eye reduction flash mode, [🗲] = Built-in RTF flash ready indication, [🗲] blinking slowly) = Flash-recommended display, [🗲] blinks rapidly) = inappropriate lens warning, [🔋] = Exposure compensation value with flash, [▶] trailing-shutter-curtain sync flash, [▣]

= Multi(8)-segment metering, [⊙] = Center-weighted metering, [⊡] = Spot metering, [PF] = Pentax function, [ )))] = PCV signal indication, [▭] = Single-frame shooting, [▭▭] = Consecutive shooting, [⏲] = Self-timer shooting, [⏲2s] = Self-timer with 2-sec delay, [⏲▭] = Triple-frame self-timer, [▣] = Autobracketing, [ⓜ] = T_v value, [Ⓐv] = A_v value, [T_v] = T_v indication, [A_v] = A_v indication, [▣] = Multi-exposure, Illuminator for LCD panel (10 sec)

Self-timer: Electronically-controlled type with delay time of 12 sec. Start by depression of shutter release button, Operation confirmation:By red lamp blinking, PCV beep tone and LCD panel (Self-timer indication counts in reverse), Cancelable after operation, 2-sec. mode, 3 consecutive exposures

Mirror: Quick-return mirror with AF secondary mirror

Film Loading: Film advance automatically to 1st frame after the back cover is closed. Film information window is provided

Film Wind & Rewind: Auto wind/rewind and auto rewind stop by built-in motor, Consecutive or Single advance mode, Approx.4 frames/sec.(continuous mode), Auto rewinding starts at end of roll, Film rewind/completion of rewinding is displayed on the LCD panel, Mid-roll rewind provided

Exposure Meter: TTL multi(8)-segment metering, Metering range from EV0 to EV20 at ISO 100 with 50mm f/1.4 lens, Center-weighted and Spot metering mode can be set

Exposure Compensation: +/− 4EV in 0.3EV step increments, Bar-graph indication in the range from -2EV to +2EV in 0.3EV increments.

Auto bracketing: Three frame consecutive shots with exposure bracketing from +/− 0.3EV to +/− 4EV, Possible to use with exposure compensation,Auto bracketing with manual exposure, Auto bracketing with discharging the flash light

Memory Lock: Set by ML button, Exposure value remains locked as long as ML button is depressed. With the shutter release button is halfway depressed, the exposure value remains continuously

Flash: Series-control Retractable TTL Auto Flash (RTF), Guide number:14(ISO 100/m), Illumination angle:covers 28mm lens angle of view,Flash-sync-speed:1/250 sec or slower, Day-light-sync flash,Trailing-shutter-curtain sync, Red-eye-reduction function, Exposure compensation with the flash, Contrast-control-flash sync, ISO range=25-800

Flash Sync: Hot shoe with X-contact which couples with Pentax dedicated auto flashes, Possible to compensate the exposure with variable discharge of the flash light

Power Source: One 6V lithium battery (2CR5)

Battery Exhaustion Warning: Battery exhaustion symbol [▭] is lit. (blinking when the shutter is locked; no indication on the right-hand edge of the view-finder.)

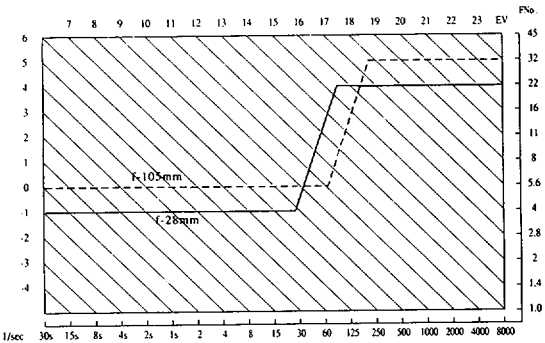
Pentax function: 15 user-defined functions

Back cover: Interchangeable

Dimensions & Weight: 152.0mm(W)×95.5mm(H)×74.0mm(D) (6″ ×3.8″ ×2.9″)/650g(22.9oz) Body only without lithium battery

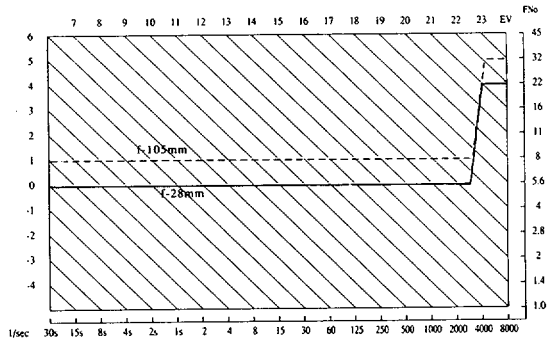
Supplied Accessories: Hot shoe cover FD, Release socket cap FD, Camera strap FD, Eye cap FD, Finder cap

Program Line (Depth-of-field-priority Program)



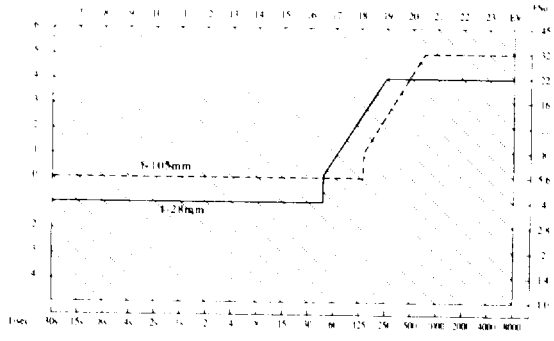
At ISO 100 with FA28 - 105mmf／4 - 5.6 lens

Program Line (MTF Program)



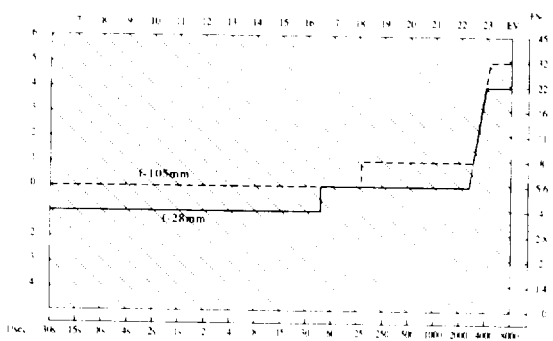
At ISO 100 with FA28 - 105mmf／4 - 5.6 lens

Program Line (Normal Program)



At ISO 100 with FA28 - 105mm f/4 - 5.6 lens

Program Line (High-shutter-speed-priority Program)



At ISO 100 with FA28 - 105mm f/4 - 5.6 lens

All Pentax cameras purchased through authorized bona fide photographic distribution channels are guaranteed against defects of material or workmanship for 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 chemical corrosion, operation countrary to operating instructions, or modification by an unauthorized repair shop. The manufacture 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 hereinbefore provided. No refunds will be made on repairs performed by non-authorized Pentax service facilities.

Procedure During 12-month Warranty Period

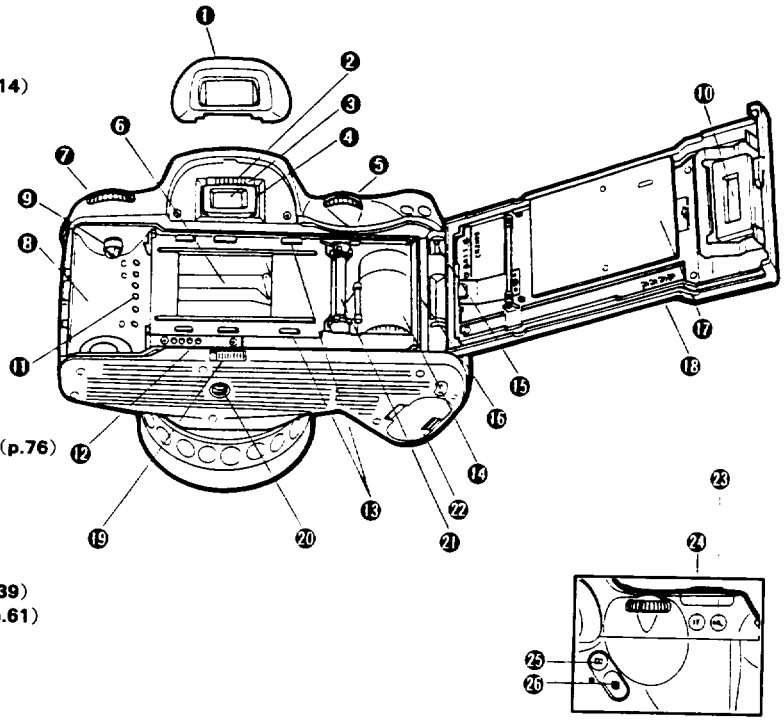
Any Pentax which provides defective during the 12-month warranty period should be returned to the dealer from whom you purchased the equipment or to the manufacturer in your country, send the equipment or to the manufacturer. If there is no representative of the manufacturer in your country, send the 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 manufacture 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 procedures and warranty policy.

In any case, however, shipping charges and customs clearance fees are to be borne by the sender. To prove the date of your purchase when required, please keep the receipts 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.

This warranty policy does not apply to Pentax products purchased in the U.S.A., UK. or Canada. The local warranty policies available from Pentax distributors in those countries supersede this warranty policy.

SPECIFICATIONS ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTIFI-CATION OR ANY OBLIGATION ON THE PART OF THE MANUFACTURE.

❶ Eyecup FD (p.14)
❷ Diopter adjustment lever (p.14)
❸ Viewfinder eyepiece
❹ Viewfinder accessory groove (p.14)
❺ A_V direct dial
❻ Shutter curtains
❼ Mode dial
❽ Film chamber
❾ Rewind shaft
❿ Film information window
⓫ DX-information pin (p.17)
⓬ Date back contacts
⓭ Film guide
⓮ Take-up spool
⓯ Back cover release pin
⓰ Film leader end mark (p.17)
⓱ Pressure plate
⓲ Back cover
⓳ Panorama Mode Selector Switch (p.76)
⓴ Tripod socket
㉑ Sprocket (p.17)
㉒ Battery chamber cover (p.10)
㉓ Memory lock button (p.42)
㉔ IF button
㉕ Metering mode switch button (p.39)
㉖ Exposure compensation button (p.61)



Asahi Optical Co., Ltd. 11-1, Nagata-cho 1-chome, Chiyoda-ku, Tokyo 100, JAPAN
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Pentax U.K. Limited. Pentax House, Heron Drive, Langley, Slough SL3 8PN, U.K.
Pentax France S.A. Z.I. Argenteuil, 12, rue Ambroise Croizat, 95100 Argenteuil, FRANCE
Pentax Benelux B.V. (for Netherlands) Spinveld 25, 4815 HR Breda, NETHERLANDS
(for Belgium & Luxemburg) Weiveldlaan 3-5, 1930 Zaventem, BELGIUM
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