Using the Aperture-Priority AE Mode

Purpose

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 increased depth of field, or a portrait against a blurred background.

How to set

1. **Set the lens aperture ring to [A].**
2. **Set the mode dial to [AV].**
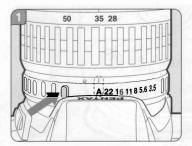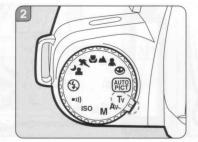3. **Select the desired aperture by moving the select switch.**

* When the shutter release button is depressed halfway down, the shutter speed and aperture value will be displayed in the viewfinder and on the LCD panel. The bar underneath the aperture value indicates that you can change the aperture setting.
• The Aperture-Priority AE Mode can also set when the lens aperture rung is set the desired f-stop other than [A]. Set the mode dial to either [AUTO PICT], [☺], [▲],[▲], [♣], [✖] or [✦].
• The approximate aperture indication appears in the viewfinder. It may not the same indication as you select the lens aperture.
• When lenses other than an F or FA series are used,no aperture indication will appear

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

ADVANCED OPERATIONS

Using the Shutter-Priority AE Mode

Purpose

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

How to set
1. Set the lens aperture ring to [A].
2. Set the mode dial to [Tv].
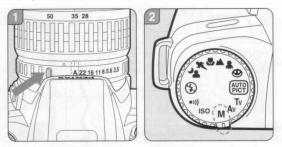3. Select the desired shutter speed by moving the select switch.

* When the shutter release button is depressed halfway down, the shutter speed and aperture value will be displayed in the viewfinder and on the LCD panel. The bar underneath the shutter speed indicates that you can change the shutter speed.
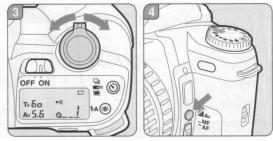
* Exposure Warning
If the subject is too bright or too dark, the shutter speed and aperture setting in the viewfinder blink. When the subject is too bright, choose a faster shutter speed. If it is too dark, choose a slower shutter speed. When the shutter speed indication stops blinking, you can take the picture. If both selected shutter speed and aperture blink, it means that the exposure is out of metering range, unable to obtain a correct exposure even if the shutter speed is adjusted. Select a darker subject if the subject is too bright. Use a flash if it is too dark.
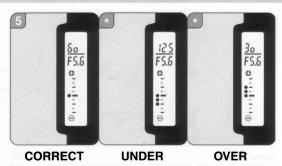
ADVANCED OPERATIONS

Using the Metered Manual Mode

Purpose

The manual exposure mode is a convenient exposure mode for taking pictures using the same shutter speed and aperture setting combination, or taking creatively under- or over-exposed photographs.

How to set
1. **Set the lens aperture ring to [A].**
2. **Set the mode dial to [M].**
3. **Move the select switch to change the shutter speed.**
4. **Move the select switch while holding the exposure compensation button to change the aperture.**
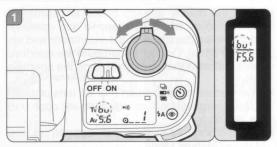
CORRECT   **UNDER**   **OVER**

5. The dot displayed in the center of the bar graph indicates the correct exposure.

* When the dots are displayed to the [+] side on the bar graph, it indicates overexposure and when the dots are displayed to the [-] side, it indicates underexposure.

• Moving one dot on the bar graph indicates 0.5 step (0.5EV).

• When under or over exposure is set beyond + 2 or - 2 steps (3EV), [+] or [-] indicator will blink.

• When the shutter release button is depressed halfway down, the shutter speed and aperture value will be displayed in the viewfinder and on the LCD panel. The bar underneath the aperture value indicates that you can change the aperture setting.

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

• The memory lock does not operate in the Metered Manual Mode.

• The indicator in the viewfinder turns to orange when the shutter speed changes to a slower shutter speed which causes camera shake.
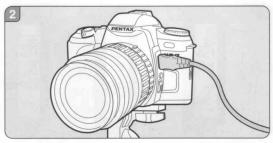
* Exposure Warning

If the subject is too bright or too dark, both shutter speed and aperture setting will blink in the viewfinder as a warning as shown. It means that the exposure is out of metering range, unable to obtain a correct exposure even if the aperture is adjusted. Select a darker subject or use a flash if it is too dark.

ADVANCED OPERATIONS
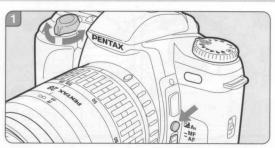
Bulb Exposure Mode

Purpose

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

How to set

1. **With the Metered Manual Mode set, move the select lever to change the shutter speed until [bu] appears in the viewfinder and on the LCD panel.**
2. **When using this mode, use a steady tripod to prevent camera shake and attach the optional "Cable Switch F" after removing the Release Socket Cap F.**

• The shutter remains open as long as the shutter release button held down.
• Up to approx. 8 hours of time exposure are possible with a new lithium battery at room temperatures.
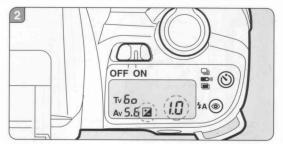• The indicator in the viewfinder turns to orange.

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

How to set
1. **While holding down the exposure compensation button, move the select switch to the desired compensation value.**
2. **The bar graph which indicates the compensation value appears in the viewfinder and [☒] is displayed on the LCD panel.**
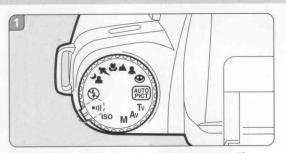
- When the dot is displayed to the [+] side, it indicates overexposure and when the dot is displayed to the [-] side, it indicates underexposure.
- Exposure compensation does not work in the Auto Picture Mode, Metered Manual Mode and Bulb Exposure Mode.
- The exposure compensation range is -3EV to +3EV in 0.5EV stops.

How to cancel
Set the compensation value to [0]. The exposure compensation cannot be canceled even if the power is turned OFF or any other exposure mode is set.

ADVANCED OPERATIONS
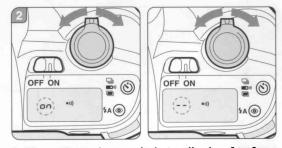
The audible PCV signal can be turned off.

How to cancel
1. Set the mode dial to [▪)))].

2. Move the select switch to display [▪)))] on the LCD panel.

• You can change the audible PCV signal on or off when the self-timer, remote control, memory lock function is in use or when the focus is in-focus.
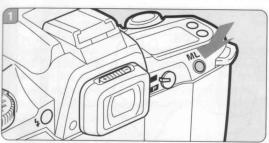• The shutter cannot be released when the mode dial is set to [▪)))].
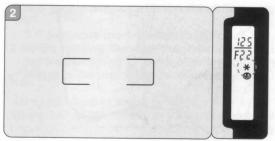
Purpose

The memory lock function enables an exposure level lock function to get a correct exposure from a neutral mid-tone area of a high-contrast scene.
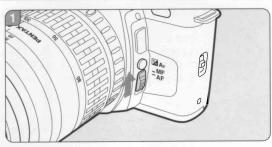
To set the Memory Lock:

1. **Position the area to be measured in the viewfinder metering area and depress the memory lock button [ML].**
2. **[*] is displayed in the viewfinder and audible PCV signal can be heard. The measured exposure level is memorized for 20 seconds.**
3. **Recompose the image in the viewfinder and take the picture.**
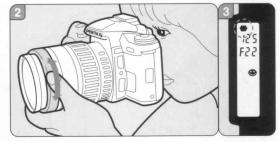
- If the shutter release button is depressed halfway down while the memory lock timer is operating, the memorized meter reading will remain even if the memory lock button is released.
- When the memory lock button is depressed, the audible PCV signal is heard. This PCV signal can be turned off. See page 62.
- The auto-popup built-in flash function does not work while the memory lock is used.
- The memory lock function dose not operete in the Auto Picture Mode.

ADVANCED OPERATIONS

MANUAL FOCUSING

Using a manual-focus lens
When mounting a non-autofous lens with a maximum aperture of f/5.6 or larger (f/1.2 to f/5.6), you can use the manual focus mode to focus the lens with the aid of the in-focus indicator [●] in the viewfinder.

How to focus
1. **Set the focus mode switch to [MF].**
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 the photograph.**

• When the subject comes into focus, an audible PCV signal is heard. The audible PCV signal can be canceled. See page 62.

When the autofocus mode or the in-focus indicator is unsuitable for focusing

When the autofocus function or the viewfinder's in-focus 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 (shift), or Reflex lens are in use.
d) An old type screw-mount lens fitted with an optional "Mount Adapter K".

Focus on the subject with the aid of the matte field
1. Set the focus mode switch to [MF].
2. While looking through the viewfinder, turn the focusing ring to the right or left until the image in the viewfinder is clearest.

Using the snap-in focus function
When the subject comes to the point where the lens was prefocused, the shutter is automatically released.

How to use
1. Use a non-autofocus lens.
2. Set the focus mode switch to [AF].
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 systems stay active.
5. The camera releases the shutter automatically when the subject comes into focus at the point selected.

ADVANCED OPERATIONS

ADVANCED OPERATIONS

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, set the focus mode switch to [MF] and use the manual focus mode to focus the lens on the subject with the aid of the matte field in the viewfinder (see page 65).

Subjects which may fool the autofocus system include:

a) Extremely low-contrast subjects such as a white wall in the autofocus frame[[ ]].
b) Subjects which don't reflect much light in the autofocus frame [[ ]].
c) Subjects which are moving too fast.
d) Multiple subjects in the foreground and background of the autofocus frame [[ ]].
e) Subjects positioned against reflected light or strong backlight or with extremely bright backgrounds.

Using a Polarizing Filter

When using an ordinary polarizing filter; the 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 proper autofocus operation.

Notes on accessories

The following conditions do not allow autofocusing or manual focusing with the in-focus indicator in the viewfinder. Use the manual focus mode to focus on the subject with the aid of the matte field surrounding the autofocus frame.

a) When using special effect filters or "Magic Image Attachment" or "Stereo Adapter".
b) 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 (4.9ft), 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 in-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.

• The FA Soft 85mm f/2.8 lens is not required above procedures.

When using the Auto Picture Mode or Picture Mode.

- 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.
- The shutter speed automatically changes to approximately 1/100 sec. or 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. When a Pentax non-AF lens is used or the Action Program Mode [✖] is used, the camera uses the shutter speed of 1/100 second. Note that the slowest shutter speed in the Night-scene Program Mode [✦] is 1 second.

When using the Shutter-Priority AE Mode
- When taking a fast moving subject, you can increase a subjectis blur effect.
- Shutter speeds slower than 1/100 of second can be set.
- In this mode, the aperture automatically changes according to the ambient brightness, making flash photography easy.

When using the Aperture-Priority AE Mode
- In this mode, the shutter speed automatically changes with the ambient brightness, making flash photography easy. The shutter speed changes in the range of 1/100 sec. to a slower shutter speed which does not cause camera shake. The slowest shutter speed depends on the focal length of the lens in use. The shutter speed of 1/100 sec. is automatically set when a Pentax non-autofocus lens is in use.When a Pentax non-AF lens is used or the Action Program Mode [✖] is used, the camera uses the shutter speed of 1/100 second.

Metered Manual Mode
- When using the built-in flash in the Metered Manual Mode, any combination of aperture and shutter speed slower than 1/100 can be set. In this mode, the exposure of the background can be controlled by the manual exposure while the flash properly exposes the foreground subject.

ADVANCED OPERATIONS

ADVANCED OPERATIONS

Calculating the flash effective distance according to the camera-to-subject distance.

Maximum flash distance = Guide Number ÷ Selected aperture
Minimum flash distance = Maximum flash distance ÷ 5*

When the distance to the subject is less than 0.7m (2.3ft), the flash cannot be used. If the flash is used within that distance, it causes vignetting in the picture corners, light is distributed unevenly and the picture may be overexposed.

• The value 5 used in the formula above was obtained from the built-in flash.

The guide number (GN) depends upon the film speed used as shown below.

ISO25 → GN5.5	ISO200 → GN15.6
ISO50 → GN7.8	ISO400 → GN22
ISO100 → GN11	

If an ISO100 film is used at an aperture of f/2.8, the flash effective distance is obtained as follows:

Guide Number (11) ÷ f/2.8 = 3.9m
3.9 ÷ 5 = 0.8m
Thus, the flash effective distance is from approx. 0.8m to 3.9m.

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

Aperture = Guide Number ÷ Camera-to-subject distance

If the calculated aperture value is different than an indicated f-stop on the aperture ring, for instance f/3, choose the next smallest aperture ring number (f2.8 in this case).

COMPATIBILITY OF F AND FA LENSES WITH THE BUILT-IN FLASH
[O = **compatible** x = **incompatible because of vignetting**]

Lens Name	Compatibility	Lens Name	Compatibility
F Fish-Eye Zoom 17-28mm f/3.5-4.5	x	FA 20mm f/2.8	x
FA Zoom 20-35mm f/4	Δ *1	FA* 24mm f/2	x
FA Zoom 28-70mm f/4	O	FA 28mm f/2.8	O
FA* Zoom 28-70mm f/2.8	x	FA 35mm f/2	O
FA Zoom 28-80mm f/3.5-5.6	Δ *2	FA 50mm f/1.4	O
FA Zoom 28-105mm f/4-5.6 (IF)	Δ *3	FA 50mm f/1.7	O
FA Zoom 28-200mm f/3.8-5.6	Δ *4	FA* 85mm f/1.4	O
F or FA 35-80mm f/4-5.6	O	FA 135mm f/2.8	O
FA Zoom 70-200mm f/4-5.6	O	FA* 200mm f/2.8	O
FA* Zoom 80-200mm f/2.8	Δ *5	FA* 300mm f/2.8	x
FA Zoom 80-320mm f/4.5-5.6	O	FA* 300mm f/4.5	O
F Zoom 80-200mm f/4.7-5.6	O	FA* 400mm f/5.6	O
FA Zoom 100-300mm f/4.5-5.6	O	FA* 600mm f/4	x
F or FA *Zoom250-600mm f/5.6	x	FA MACRO 50mm f/2.8	O
FA Soft 28mm f/2.8	O	FA MACRO 100mm f/2.8	O
FA Soft 85mm f/2.8	O	FA MACRO 100mm f/3.5	O
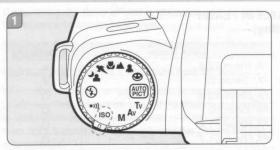
*1 : Vignetting will occur at focal lengths between 20-28mm.
*2 : Vignetting will occur at focal lengths between 28-35mm when the camera-to-subject distance is closer than 3m. With the focal length set at 35mm, it will occur when the camera-to-subject distance is closer than 1m.
*3 : Vignetting will occur at focal lengths between 28-40mm.
*4 : Vignetting will occur at focal lengths between 28-70mm.
*5 : Vignetting will occur at focal lengths between 80-90mm.

ADVANCED OPERATIONS

SETTING THE FILM SPEED (ISO) MANUALLY

This camera automatically reads the film speed from the film's DX code. However, the film speed setting can be changed. If you use a non-DX coded film, set the film speed manually.
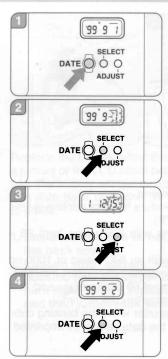
How to set
1. Set the mode dial to [ISO].
2. Move the select switch until the desired ISO is displayed on the LCD panel.
3. After the ISO is set, set the mode dial to any other position other than [ISO].

• To change the ISO, turn the select switch to the left for a smaller number (lower film speed or right for a larger number (higher film speed).
• The shutter cannot be released with the mode dial set at [ISO].
• [ISO] is displayed when the film speed is set manually.

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

Note:
Carefully press the button with the protrusion part of the camera's strap clamp.
Do not press the buttons with an object having a sharp tip.
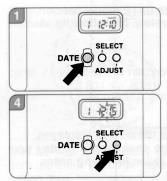
Adjusting the year/month/day
1. **Press the DATE button repeatedly until the date is displayed.**
2. **Press the SELECT button to make the year, month or day you want to change blink. The digits blink in the following order.**
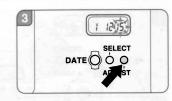
Year - Month - Day - Year

3. **Change the date with the ADJUST button.**

• The digit increases by one each time the ADJUST button is depressed. Holding the button for about 2 to 3 seconds will change the digits continuously.

4. **Press the SELECT button to stop the digit from blinking, after you have changed the date. The adjusted date has been entered.**

**ADVANCED OPERATIONS**

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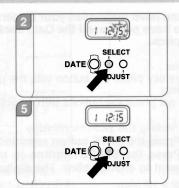
ADVANCED OPERATIONS

Adjusting the hour/minute
1. Press the DATE button repeatedly until the time is displayed.
2. Press the SELECT button to make the hour, minute or second (:) you want to change blink. The digits blink in the following order.
Hour - Minutes - : - Hour
3. Change the data (hour or minute) with the ADJUST button.
4. To change the second (:), press the SELECT button until " : " will blink, and then press the ADJUST button in sync with a time signal to set the second to zero.
5. Press the SELECT button to stop the adjusted hour/minute from blinking.

Operational precautions
• The working temperature for data printing is 0°C - 50°C (32°F - 122°F).
• Use DX-coded films with ISO rating from 25 - 1600.
• If high-speed film with an ISO rating of 1000 or faster is used, the imprinted characters may blur.
• If film with ISO rating of 50 or slower is used, the printed characters may be dark or dim.
• If you release the shutter while the blinking data is being corrected, the data cannot be imprinted.
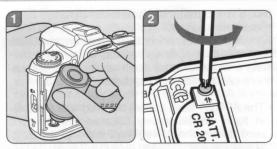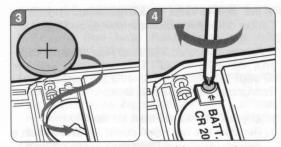
Replace the battery when the data information on a picture or the LCD panel becomes weak or invisible. The battery will last for approximately 3 years. The data back uses one 3V lithium battery, type CR2025.

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

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

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

ADVANCED OPERATIONS

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

A Pentax dedicated TTL Auto Flash like the PENTAX AF FTZ or AF T series flash unit (ie: AF500FTZ, AF330FTZ, AF220T or AF280T) incorporate the TTL Flash Mode.

Using the TTL Auto Flash Mode
1. **Remove the hot shoe cover FK and attach a Pentax dedicated flash unit to the camera.**
2. **Turn the flash ON.**
3. **Set the flash mode to the TTL Auto Mode.**
4. **Confirm that the flash is fully charged.**
5. **Focus on the subject and release the shutter.**

• When the flash is fully charged, the ready lamp on the flash unit lights up. When the shutter release button is depressed halfway down, [🕏] appears in the viewfinder indicating the flash is ready.

Note:
Read the operating manual of the flash unit for more details.
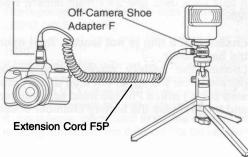
Using the built-in flash and the external flash simultaneously
An external flash cannot be used when the built-in flash is in its popped up position. When the built-in flash and the external flash are used simultaneously, use the following optional accessories.

• The AF400T flash cannot be used with the built-in flash simultaneously because the 4P sync cord B from the AF400T will interrupt the function of the built-in flash.

Hot Shoe Adapter FG

Off-Camera Shoe Adapter F

Extension Cord F5P

Red-eye reduction flash function

The red-eye reduction flash function with an external flash attached can also be used depending on what type of an external flash is attached, and it may have any restrictions for usage. See page 76 more details. The red-eye reduction flash function can be used only when the external flash is set to the TTL Auto Mode.

Trailing-Shutter-Curtain Flash function

When using the built-in flash and the external flash simultaneously, the trailing-shutter-curtain-flash function for the built-in flash also operates when the external flash is set to the trailing-shutter-curtain-flash function. Before shooting, confirm that both flash units are fully charged.

Contrast-Control-Sync Flash Photography

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

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.

- The ratio of the amount of flash light is 1 (built-in flash) : 2 (dedicated flash unit).
- Do not combine an accessory with a different number of contacts such as a "Hot Shoe Grip" as a malfunction may occur.
- In the Contrast-Control-Sync Flash Mode, the top flash sync speed is 1/60 of second.

Multi-burst flash with the Pentax dedicated flash

When discharging more than 2 Pentax dedicated flashes, make sure that they are of the same type, combine the type B with Type C or Type D with Type E. Refer to the overview of Flash Function on page 78. The built-in flash can be operated with any type of Pentax TTL dedicated flash unit except AF400T

Overview of Flash Function

CAMERA FUNCTION	TYPE A	TYPE B	TYPE C	TYPE D	TYPE E
Red-eye reduction flash function	O	O	x	O*1	x
After the flash is charged, the camera automatically switches to the flash-sync speed.	O	O	O	O	O
Automatic aperture setting in the Auto Picture Mode, Picture Mode or Shutter-Priority AE Mode	O	O	O	O*2	O*2
Flash confirmation in the viewfinder	O	O	O	x	x
TTL auto flash	O	O	O	O*3	x
Slow-speed sync in the Shutter-Priority AE Mode or Metered Manual Mode	O	O	O	O	O
AF spotbeam	x	O	O	x	x
Trailing-shutter-curtain sync flash *4	*5	O	O	x	x
Contrast-control-sync flash mode *4	x	O	O	x	x

TYPE A : Built-in flash
TYPE B : AF500FTZ (*6), AF330FTZ
TYPE C : AF400FTZ, AF240FT
TYPE D : AF400T, AF280T, AF220T, AF200T, AF080C, AF140C, AF200SA, AF201A
TYPE E : AF200S, AF160, AF140

Notes:
*1. When using the AF280T or AF400T with the flash confirmation OFF and TTL mode set, the red-eye reduction function operates.
*2. When using a Type D flash (except AF200SA) in the MS (Manual Sync) or M (Manual) Mode or when using a Type E flash, set the camera's exposure mode to the Aperture-Priority AE Mode, Metered

Manual or Bulb. The Auto Picture Mode, Picture Mode and Aperture-Priority AE Modes cannot be used because the actual required aperture value may change.
*3. Only the AF200SA flash does not operate.
*4. Only the Metered Manual Mode can be used.
*5. The shutter speed is 1/60 of second or slower.
*6. Trailing-shutter-curtain sync flash combined with TYPE B or TYPE C flash.

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

Without Daylight-Sync

With Daylight-Sync

Purpose

In daylight conditions, when a portrait picture is taken with a person's face cast in shadow, discharging the flash will eliminate the shadow.

1. **Depress the red-eye reduction flash button to delete [🗲AUTO] from the LCD panel.**
2. **Confirm either the built-in or external flash is fully charged.**
3. **Take a picture.**

- If the background is too bright, it may be overexposed.
- When taking a daylight-sync photograph with [🗲AUTO] displayed on the LCD panel, the flash may not discharge.

ADVANCED OPERATIONS

Purpose

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

How to set

With the Night-scene Program Mode set

1. Set the mode dial to [★].
2. Set the lens aperture ring to [A].
3. The built-in flash pops up automatically.
4. Before shooting, confirm that the flash is fully charged.

• In this mode, the shutter speed automatically changes with ambient brightness. The shutter speed changes in the range from 1/100 sec. to 1 second
• When the flash does not pop-up in the step 3, push the flash pop-up button to activate the flash.

How to set

With the Metered Manual Mode set

1. **Depress the flash pop-up button to activate the built-in flash.**
2. **Set the camera's exposure mode to the Metered Manual Mode.**
3. **Select an appropriate shutter speed (slower than 1/100 of second) and aperture combination for a correct exposure.**
4. **Before shooting, confirm that the flash is fully charged.**

Note

• The slow-speed-sync can also be used with the Shutter-Priority AE Mode set. Confirm that the exposure warning (Blinking aperture setting) is not appearing in the viewfinder.
• In the slow-shutter-sync shooting, use of a tripod is recommended to prevent camera shake.

A number of dedicated accessories are available for this camera.

- **Cable Switch F**
  A shutter release cord designed for use with the MZ-7/ZX-7, Z-10/PZ-10, ZX-50/MZ-50, MZ-5N/ZX-5N, Z1-P/PZ-1P.

- **Magnifier F$_B$**
  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 of 50 in meters (ISO 100). It features the slave sync flash function, multiple flash burst, contrast-control-sync flash, leading/trailing-curtain-sync flash mode.

- **AF330FTZ**
  A TTL Auto Zoom flash with a built-in AF spotbeam and guide number of 33 in meters (ISO 100). It features the contrast-control sync flash, leading/trailing-curtain-sync flash mode.

- **AF220T**
  A TTL Auto flash with a guide number of 22 in meters (ISO 100).

- **Macro Flash AF140C**
  A TTL macro flash unit with the guide numbers 14 in meters (ISO 100).

- **AF Adapter 1.7X**
  An adapter for autofocus photography using a non-autofocus lens with a maximum aperture of f/2.8 or larger.

- **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.

- **AA-Battery Pack F$_G$**
  The battery pack which takes four AA batteries can attach at the bottom of the camera, instead of using the lithium batteries.

- **Data Back FG**
  Allowing you to print one of the following modes on the film both standard format mode and panorama format mode.
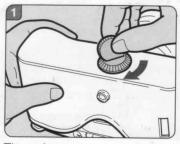
Year / month / day, day / month / year, month / day / year, day / hour / minute, --------- (blank)
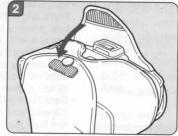
Notes on accessories
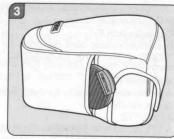
- "Auto Bellows A" cannot be used in combination with the double cable release. Use "Cable switch F" instead. When taking a vertical photograph, position the camera with the grip facing upward. In this case, however, the cable switch F cannot be used, so shooting in a vertical position is not recommended.
- 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.
- When the refconverter A is used, it may interfere with the camera when you open or close the back cover. Remove the refconverter A before opening or closing the back cover.

CAMERA CASE

The soft case is available as an option and consists of a front and a back cover.
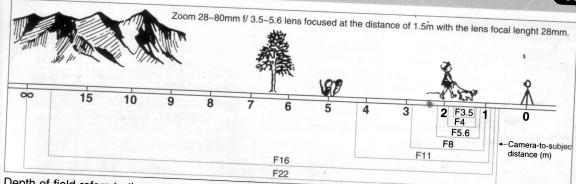
1. **Open the front cover and place the camera body in the back cover.**
2. **Attach the front case.**
3 **There is a pocket on the front case so you can store the lens cap.**

- Do not store the filter in the pocket. The filter could break if bumped.
- Choose one of the front cases in accordance with the table to the right.
- The back case is the same back case indicated with the Soft case S,M and L.

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

Case	Applicable F, FA-lens
FKS	20mm, 24mm, 28mm, 35mm, 43mm limited, 50mm f/1.4, f/1.7, 135mm, Fish-Eye Zoom 17-28mm, Zoom 20-35mm, Zoom 28-70mm f/4, Zoom 28-80mm f/3.5-5.6, Zoom 35-80mm, Macro 50mm, Macro 100mm f/3.5, Soft 28mm, Soft 85mm
FKM	85mm f/1.4, Zoom 28-105mm, Zoom 28-200mm
FKL	Macro 100mm f/2.8, Zoom 70-200mm, Zoom 80-200mm f/4.7-5.6

ADVANCED OPERATIONS

DEPTH OF FIELD

Zoom 28~80mm f/ 3.5~5.6 lens focused at the distance of 1.5m with the lens focal lenght 28mm.

| ∞ | 15 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

F3.5
F4
F5.6
F8
F11
F16
F22

← Camera-to-subjec distance (m)

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.

OTHERS

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. 16
	The low battery warning [▯] is blinking.	Replace the battery.	P. 12
	The battery is improperly installed.	Install the battery properly.	P. 12
	The mode dial is set at [ISO] or [■)))]	Set the mode dial to another position.	P. 46
	Self-timer mode is being set.	Cancel the self-timer mode.	P.39
	The built-in flash is being charged.	Wait until the flash is fully charged.	P.34
Indicators do not appear on the LCD panel.	The main switch is [OFF].	Turn ON the main switch	P.16
	No battery has been installed.	Install the battery.	P.12
	The battery is improperly installed.The battery is dead.	Install the battery properly. Replace the battery.	P.12 P.12
The camera does not focus.	AF frame is not placed over the subject.	Move the camera until the AF frame [⊏ ⊐] covers the subject.	P.30
	The subject is too close.	Increase the camera-to-subject distance.	P.30
	The focus mode is set to [MF].	Set the focus mode switch to [AF].	P.28
	The subject is difficult to autofocus.	Focus manually by using the matte field	P.65

Symptoms	Causes	Remedies	Remedies
Memory lock and exposure compensation function do not operate.	The Auto picture mode or metered manual mode is being used.	Set the mode dial to another position.	P.24, 61
[●] in the viewfinder blinks	The subject is too close or difficult to autofocus.	Focus manually by using the matte field.	P.65
The built-in flash does not charge.	The mode dial is being set to [▯].	Replace the battery.	P.12
The built-in flash does not activate when the flash-pop-up button is depressed.	The exposure mode is being set other than the Auto Picture Mode or Picture Mode.	Set the mode dial to another position.	P.26
The built-in flash does not pop-up automatically	The mode dial is set to other than Auto Picture Mode or Picture Mode.	Set the exposure mode to Auto Picture or Picture Mode.	P.25.46
The built-in flash does not discharge even if the flash is upped position.	When [AUTO] appears on the LCD panel, the built-in flash does not discharge because the flash light is not required.		P.25
The power zoom system does not function.	The camera does not have the power zoom function.		P.27

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

OTHERS

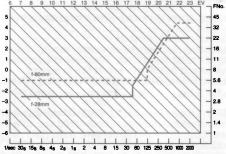www.orphancameras.com

SPECIFICATIONS

Type:	TTL autofocus, auto-exposure 35mm SLR with built-in TTL auto flash (RTF)
Format:	24x36mm (approx. 13x36 in panorama format)
Usable Film:	35mm perforated cartridge film. DX-coded film with ISO 25-5000; non-DX coded films with ISO 6-6400
Exposure Modes:	Auto Picture Mode, Picture Mode (Green Operation Mode, Portrait Program Mode, Landscape Program Mode, Close-up Program, Action Program Mode, Night-scene Program Mode), Shutter-Priority AE Mode, Aperture-Priority AE Mode, Metered Manual Mode, Bulb Mode, TTL Flash Mode
Shutter:	Electronically controlled vertical-run focal-plane shutter, Electromagnetic release, Speed range:(1)Auto 1/2000-30 sec.(stepless),(2)Manual 1/2000-30 sec.(3)Bulb, Shutter lock by setting Main switch in OFF position.
Lens Mount:	Pentax K$_{AF}$ bayonet mount (K-mount with AF coupler, lens information 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.
Autofocus System:	TTL phase-matching multi(3-point) autofocus system, AF operational brightness range: EV-1 to 18(at ISO 100 with f/1.4 lens), Focus lock available using shutter release button, Focus Mode: AF (predictive AF provided), Manual [MF]
Power Zoom:	Not available.
Viewfinder:	Pentamirror finder, Natural-Bright-Matte focusing screen, Field of view:92%, Magnification:0.7X (with 50mm f/1.4 lens at ∞), Diopter: -2 to +1m^{-1}, Panorama format frame
Viewfinder Indication:	Focus Information: In-focus (Green lamp [●] is lit, front or back focus signals and unable-to-focus indicator (Green lamp blinks), Shutter speed indication, Aperture indication, Flash ready indication [⚡] is lit, Bar graph(exposure compensation),Over or Under exposure indication in Metered Manual Mode, exposure compensation indication, Green Operation Mode [●], Portrait Program Mode [⚉], Landscape Program Mode [▲], Close-up Program Mode [♣], Action Program Mode [✹], Night-scene Program Mode [⚉], [✱] memory lock indicator
External LCD panel Indication:	Shutter speed, Aperture value, [⚡] = Built-in flash ready indication, [⚡] = blinking slowly flash recommended warning, [⚡] = blinks rapidly Inappropriate lens warning, [◉] = Red-eye reduction flash mode, [AUTO] = Auto-popup flash function, Flash disable function [⊕], ISO indication, [⊙___] = Film status information, [▯] = Battery exhaustion warning, Exposure counter, [•)))] = PCV signal indication, [🔢] = Exposure compensation, Exposure compensation value, [⟳] = Self-timer, [■□)))] = Instant release with remote control unit, [■□)))3s] = 3 sec. delay shutter release with remote control unit, [⛃] = Consecutive shooting, [▦] = Multiple exposure

Self-timer	Electronically-controlled type with delay time of 12 sec. Start by depressing of shutter release button, Operation confirmation: By PCV beep tone. Cancelable after operation
Mirror:	Instant-return mirror with AF secondary mirror
Film Loading:	Film advances automatically to 1st frame after back cover is closed, Film information window is provided
Film Wind & Rewind:	Auto wind/rewind by built-in motor, Consecutive or Single advance mode, Approx.2 frames/sec.(consecutive mode), Auto rewinding starts at end of roll, Film rewind/completion of rewinding is displayed on the LCD panel, Mid-roll rewind button will rewind film in mid-roll
Exposure Meter:	TTL multi(6)-segment metering, Metering range from EV0 to EV21 at ISO100 with 50mm f/1.4 lens
Exposure Compensation:	± 3EV in 0.5EV step increments
Flash:	Series-control, Auto-popup TTL Auto Flash (RTF), Guide number:11 (ISO100/m), Illumination angle covers 28mm lens angle of view, Flash-sync-shutter in the range from 1/100 sec. to a slower speed, Day-light-sync flash, Slow-shutter-sync flash, Contrast-control-sync flash (ISO range = 25 - 800), Automatic flash function, Red-eye reduction flash function
Flash sync:	Hot shoe with X-contact with couples with Pentax dedicated auto flashes, ISO range = 25-800, Red-eye reduction flash function
Power Source:	Two 3V lithium batteries (CR2 or equivalent)
Battery Exhaustion Warning:	Battery exhaustion symbol [0] is lit (blinking when the shutter is locked; no indication on the right-hand edge of the viewfinder.)
Dimension and Weight:	135.5mm(W)x92.0mm(H)x63.5mm(D) (5.3´x3.6´x2.5´) 380g (13.4 oz) body only without batteries
Date Model Dimension and weight:	135.5mm(W)x92.0mm(H)x63.5mm (5.3´x3.6´x2.5´) 395g (13.9 oz)
Supplied Accessories:	Hot Shoe Cover FK, Release Socket Cap F, Camera Strap FK, Eye Cup FK, Finder Cap
Back cover:	Interchangeable for replacing with Data Back FG

OTHERS

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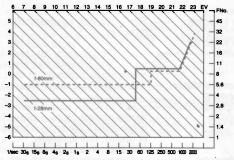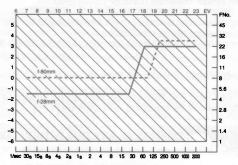
Green Operation Mode ⬡

At ISO 100 with FA28 - 80mm f/3.5 - 5.6 lens

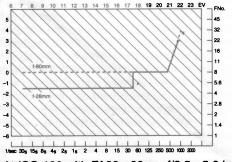**Portrait Program Mode** 👤

At ISO 100 with FA28 - 80mm f/3.5 - 5.6 lens
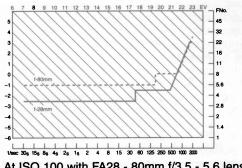
Landscape Program Mode ▲

At ISO 100 with FA28 - 80mm f/3.5 - 5.6 lens

OTHERS

Close-up Program Mode 🌷

At ISO 100 with FA28 - 80mm f/3.5 - 5.6 lens

Action Program Mode 🏃

At ISO 100 with FA28 - 80mm f/3.5 - 5.6 lens

OTHERS