

This manual is for reference and historical purposes, all rights reserved.

This page is copyright© by M. Butkus, NJ.

This page may not be sold or distributed without the expressed permission of the producer

I have no connection with any camera company

On-line camera manual library

This is the full text and images from the manual. This may take 3 full minutes for the PDF file to download.

If you find this manual useful, how about a donation of \$3 to: M. Butkus, 29 Lake Ave., High Bridge, NJ 08829-1701 and send your e-mail address so I can thank you. Most other places would charge you \$7.50 for a electronic copy or \$18.00 for a hard to read Xerox copy.

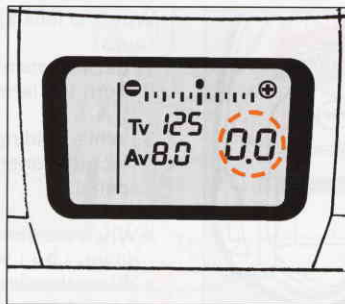
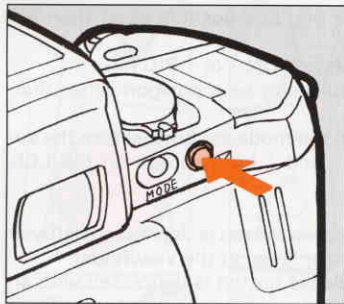
This will allow me to continue to buy new manuals and pay their shipping costs.

It'll make you feel better, won't it?

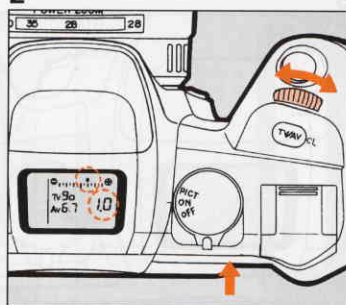
**If you use Pay Pal or wish to use your credit card,
click on the secure site on my main page.**

(4) ABOUT EXPOSURE COMPENSATION

1




2




Purpose

The exposure compensation allows to deliberately over-exposure (brighten) or underexposure (darken) a subject.

How to Set

1. When the hyper button [] is depressed, the compensation value and the bar graph will be displayed on the LCD panel.
2. While depressing the hyper button, turn the select dial to set the desired compensation value.

- The exposure compensation does not work in the Green Operation Mode, Manual Exposure Mode and Bulb Exposure Mode.
- The exposure compensation range is in the range from -3EV to $+3\text{EV}$ in 0.5EV step.
- When the exposure compensation is in use, the bar graph and dot are displayed on the LCD panel. [] is displayed in the viewfinder.
- Moving one dot on the bar graph indicates 0.5EV step.

How to Cancel

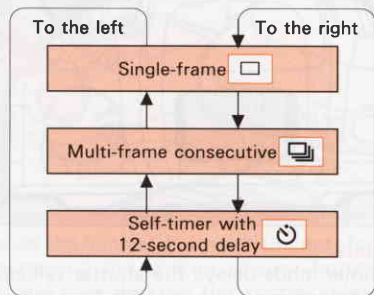
To cancel the exposure compensation, reset the compensation value to 0.0 by depressing the Tv/Av button while holding down the hyper button.

- The exposure compensation will not be canceled even if the main switch is set to [**OFF**].

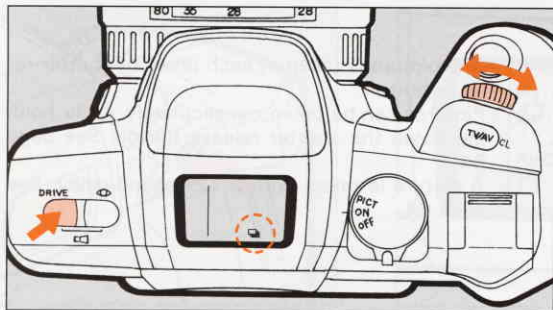
(5) SELECTING A DRIVE MODE

This drive mode has a total of three drive modes as shown.

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 64.
- [⌚] : A picture is taken with a 12-second-delay. See page 64.



1) Consecutive Photography

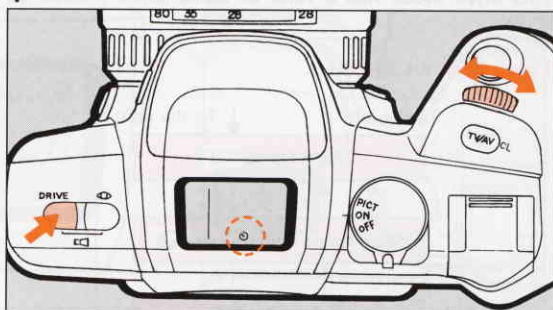
Pictures can be taken consecutively while the shutter release button is held down.

How to Set

While holding down the drive button, turn the select dial until [] appears on the LCD panel.

- The camera focuses on the subject frame by frame in this mode.
- The shutter cannot be released while the built-in flash is being charged.

1



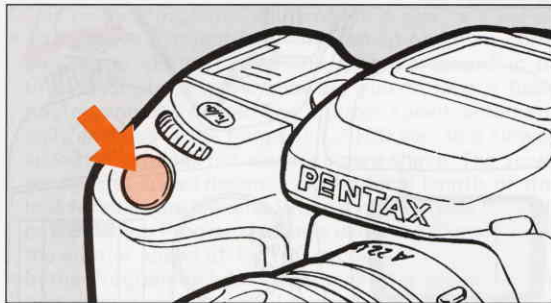
2) Self-Timer Mode

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

How to Set

1. While holding down the drive button, turn the select dial until [] appears on the LCD panel.

2



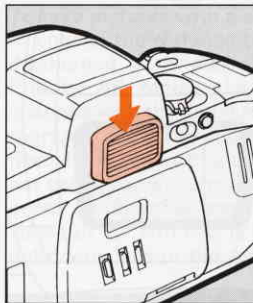
2. Focus on the subject first with the autofocus frame by depressing the shutter release button halfway down, and then depress the shutter release button fully. The self-timer is now activated.

- The shutter will be released about 12 seconds later.
- When the self-timer is in operation, the audible PCV signal is heard at a faster rate for the last two seconds.

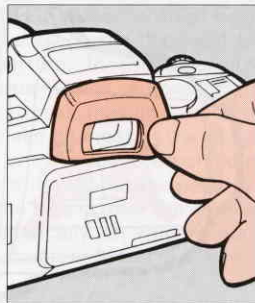
How to Cancel

To cancel the self-timer operation after it has been activated before a picture is taken, move the main switch to the [**OFF**] position.

*



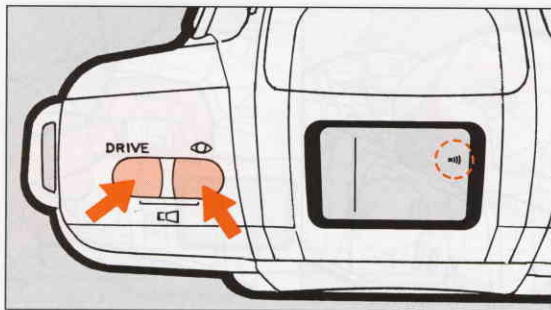
*



- * If you back away from the viewfinder during self-timer operation, underexposure may result due to light entering the camera through the viewfinder. Attach the supplied finder cap as shown in the illustration.
- * When using accessories such as the "Correction Lens M" and "Findercap", remove the Eyecup Fc. The Eyecup Fc comes from the factory fitted to the camera's viewfinder accessory groves.
- When you want use an Eyecup in combination with a "Correction Lens M", combine the optional "Eyecup M II" with "Correction Lens for 67".

(6) TURNING OFF THE AUDIBLE PCV SIGNAL

1

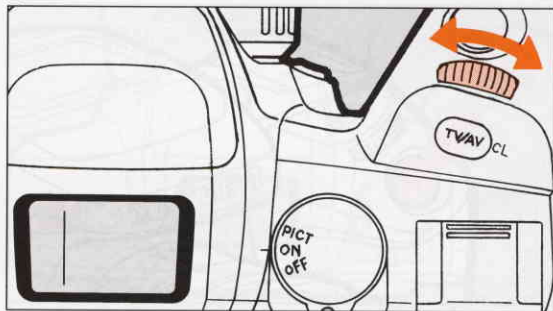


The audible PCV signal when the subject is in focus can be turned off.

How to Set

1. Depress the red-eye reduction button and the drive button simultaneously so that only [] appears on the LCD panel.

2



2. While holding these two buttons down, turn the select dial to erase [] from the LCD panel.

- To return the audible PCV signal, turn the select dial while holding down the red-eye reduction button and drive button simultaneously.

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

With the Picutre Mode including the Green Operation Mode or the Programmed AE Mode in use

- 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 in the range of $1/100$ 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. When a non-AF lens is used, or the Action Program Mode is used, the camera uses the shutter speed of $1/100$ second.
- In the Programmed AE Mode, a shutter speed/aperture combination can be changed by turning the select dial. The Program-Shift works in the aperture range that couples with a shutter speed of $1/100$ sec. or slower. For further details on the program shift, see page 51.

Shutter-Priority AE Mode

The shutter speed can be changed in the range from $1/100$ to a slower shutter speed when the built-in flash is used. In the Shutter-Priority AE shutter speed Mode, the aperture automatically changes according to the ambient brightness, making the flash photography easy.

Aperture-Priority AE Mode

To take pictures with a selected in-focus depth of field, or change the distance to the subject, the flash can be discharged at a desired aperture. In the Aperture-Priority AE Mode, the shutter speed automatically changes with the ambient brightness, making flash photography easy. The shutter speed changes in the range from $1/100$ 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 non-autofocus lens or the Action Program Mode is in use.

- When using the built-in flash in the Manual Exposure Mode, any combination usage of the aperture and shutter speed slower than $1/100$ can be selected.

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

Maximum flash distance Guide Number \div Selected aperture

Minimum flash distance Maximum flash distance \div 5 *

When the distance to the subject is less than 0.7m (2.3ft), 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 numbers (GN) depend upon the film speed used as shown below.

ISO25 \rightarrow GN6.5	ISO200 \rightarrow GN18
ISO50 \rightarrow GN9.2	ISO400 \rightarrow GN26
ISO100 \rightarrow GN13	

If an ISO100 film is in used at an aperture of f2.8, the flash effective distance is obtained as follows:

$$\text{Guide Number (13)} \div f/2.8 = 4.6\text{m}$$
$$4.6 \div 5 = 0.92\text{m}$$

Thus, the flash effective distance is from approx. 0.92m to 4.6m.

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

Aperture = Guide Number \div 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).

Built-in Flash effective range for Programmed TTL Auto Flash with ISO 400 film used

Maximum Lens Aperture	Effective Range
f/1.4	approx. 0.9 - 6.5m (3.0 - 21.3ft)
f/2	approx. 0.8 - 5.8m (2.6 - 19.0ft)
f/2.8	approx. 0.7 - 4.6m (2.3 - 15.1ft)
f/3.5, f/4.7	approx. 0.7 - 4.6m (2.3 - 15.1ft)
f/5.6	approx. 0.7 - 4.6m (2.3 - 15.1ft)

COMPATIBILITY OF F AND FA LENSES WITH THE BUILT-IN FLASH

[○ = compatible × = incompatible because of vignetting]

Lens name	Compatibility
FA*24mm f/2	×
F.FA 28mm f/2.8	○
F.FA 50mm f/1.4	○
F.FA 50mm f/1.7	○
FA*85mm f/1.4	○
F.FA 135mm f/2.8	○
FA*200mm f/2.8	○
FA*300mm f/2.8	×
F.FA*300mm f/4.5	×
F.FA*600mm f/4	×
F.FA MACRO 50mm f/2.8	○
F.FA MACRO 100mm f/2.8	○
F Soft 85mm f/2.8	○

Lens name	Compatibility
F Zoom 24-50mm f/4	○ * 1
FA*Zoom 28-70mm f/2.8	×
FA Zoom 28-80mm f/3.5-4.7	△ * 2
F Zoom 28-80mm f/3.5-4.5	△ * 3
FA Zoom 28-105mm f/4-5.6	△ * 4
F Zoom 35-70mm f/3.5-4.5	○
F Zoom 35-80mm f/4-5.6	○
F Zoom 35-105mm f/4-5.6	○
F Zoom 35-135mm f/3.5-4.5	○
FA Zoom 70-200mm f/4-5.6	○
F Zoom 70-210mm f/4-5.6	○
FA*Zoom 80-200mm f/2.8	△ * 5
F Zoom 80-200mm f/4.7-5.6	○
FA Zoom 100-300mm f/4.5-5.6	○
F.FA* Zoom 250-600mm f/5.6	×

- * 1 : The focal length between 28-35mm, vignetting will not occur though the inappropriate lens warning appears.
- * 2 : Vignetting will occur at the focal length between 28-35mm. With the focal length set at 35mm, it will occur when the camera-to-subject distance is closer than 1.5m.
- * 3 : Vignetting will occur at the focal length between 28-35mm. With the focal length set at 35mm, it will occur when the camera-to-subject distance is closer than 1.2m.
- * 4 : Vignetting will occur at the focal length between 28-35mm. With the focal length set at 35mm, it will occur when the camera-to-subject distance is closer than 3m. With the focal length set at 40mm, it will occur when the camera-to-subject distance is closer than 1m. Vignetting will not occur at the focal length from 50mm to telephoto side.
- * 5 : Vignetting will occur at the focal length between 80-135mm.



Without Daylight-Sync



With Daylight-Sync

Daylight-Synchro Shooting

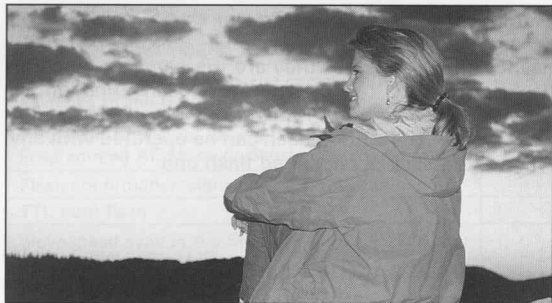
Purpose

In bright daylight conditions, when a portrait picture is taken with a person's face cast in shadow, discharging the flash will expose the face without any shadow.

How to Set

Daylight-synchro photography is obtained in the same manner as the normal flash photography, so you simply depress the shutter release button.

- If the background is too bright, it may be overexposed.



Slow-Speed-Sync Shooting

Purpose

It is possible to photograph subjects and background in a balanced way 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 Manual Exposure Mode set

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

How to Set

With the Shutter-Priority AE Mode set


1. Set the camera's exposure mode to the Shutter-Priority AE Mode.
 2. Set the desired shutter speed.
- When the aperture in the viewfinder and the LCD panel blink, a correct exposure will not be obtained for the background. Adjust the shutter speed until it stops blinking.
3. Depress the flash-pop up button to activate the built-in flash.
 4. Take a picture.
- In the Slow-Speed-Sync Shooting Mode, use of a tripod is recommended to prevent camera shake.

(8) 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 F_F and attach a Pentax dedicated flash unit.
2. Turn ON the flash.
3. Set the flash to the TTL Auto Mode.
4. Ensure that the flash is fully charged.
5. Focus on the subject and take a flash photograph.

- 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 to discharge.
- Using the dedicated flash in each exposure mode is the same manner as use of the built-in flash, see page 67 to 71.

Multi-burst flash with the Pentax dedicated flash

When discharging more than 2 Pentax dedicated flashes, make sure that they are the same type of the flashes (refer to the overview of Flash Function on page 73.), 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 switches to the flash-sync speed.	○	○	○	○	○
Automatic aperture setting in the Picture Mode, Programmed AE Mode or Shutter-Priority AE mode.	○	○	○	○ * 1	○ * 1
Flash confirmation signal in the viewfinder		○	○		
TTL auto flash	○	○	○	○ * 2	
Slow-speed sync in the Shutter-Priority AE Mode or Manual Exposure Mode	○	○	○	○	○ * 3
AF spotbeam		○	○		
Trailing-shutter-curtain flash sync (* 4)	* 5	○	○		
Contrast-control flash mode (* 4)		○			

TYPE A : Built-in flash

TYPE B : AF500FTZ (* 6), AF330FTZ

TYPE C : AF400FTZ, AF240FT

TYPE D : AF400T, AF280T, AF200T, AF080C,
AF140C, AF200S_A

TYPE E : AF200S, AF160, AF140,

Notes:

- * 1. When using a Type D flash (except AF200S_A) in the MS (manual sync) or M (manual) modes, or when using a Type E flash : set the camera's exposure mode to the Aperture-Priority AE, Manual or Bulb Mode. The Program, and Shutter-Priority AE modes cannot be used because the actual required aperture value may change.

* 2. Only the AF200S_A flash does not operate.

* 3. Only the manual mode can be used.

* 4. The shutter speed is 1/60 or slower.

* 5. Trailing-shutter curtain sync combined with TYPE B or TYPE C flash.

* 6. Multi-burst and slave-synch flash are possible.

Using other type of a flash

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

AF500FTZ and AF330FTZ

- These flash units feature a built-in infrared spotbeam to assist the autofocus system in dim light and low-contrast conditions.
- The auto zoom function will automatically adjust the angle of discharge according to the lens focal length only when an F or FA lens is used.
- The AF500FTZ features a wireless slave-sync flash function.
- The flash effective range appears on the LCD panel only when an A, F, or FA lens is in use.
- Multiple flash burst on a single frame is possible with the AF500FTZ.
- These flash units feature the contrast control synch flash. See page 75 for more details.
- In the Picture Mode including the Green Operation Mode, Programmed AE, Shutter-Priority AE, or Aperture-Priority AE, even when the flash unit is set to the Manual, the TTL 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 units.

AF240FT, AF400FTZ

- These flash units feature a built-in infrared spotbeam to assist the autofocus system in dim light and low-contrast conditions.
- In the Picture Mode, Programmed AE, Shutter-Priority AE, or Aperture-Priority AE, even when the flash unit is set to the manual position, the TTL Auto Flash Mode will be set automatically on the flash unit.
- When the flash unit is charged and left unused for about 5 minutes, the power automatically switches off to save battery power. Depressing the shutter release 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 according to the ambient brightness. The slower shutter speed varies according to the lens focal length. However, when a non-autofocus lens is in use or the Action Program Mode is in use, the shutter speed is set to 1/100 of second. The aperture value will also be fixed but is changed depending on what ISO film is loaded.

- When using the Three-Level Auto (red, green, and yellow settings) mode, the aperture value is adjusted as shown in the table. When the flash is fully charged, the shutter speed also varies within the shutter speed range of $1/100$ to a slower speed which does not cause camera shake. The slowest shutter speed varies according to the lens focal length. When a non-autofocus lens or the Action Program Mode is in use, the shutter speed will be set to $1/100$ of second.

	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, if the trailing-shutter-curtain sync mode is set for the dedicated flash unit, the built-in flash also operates in the trailing-shutter curtain sync. mode. Ensure that both flash units are fully charged before releasing the shutter.

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.

- Put the AF500FTZ or AF330FTZ in the Contrast-Control Sync Flash Mode.
- 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).
- When the AF500FTZ or AF330FTZ is used off the camera, the effect of contrast control is increased. Use an optional "Hot Shoe Adapter F" (uses two pcs. for the AF330FTZ) and "Extension Cord 5P" to connect the dedicated flash unit to the camera. 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.

(9) 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-70/PZ-70, Z-1_P/PZ-1_P, Z-1/PZ-1, Z-20/PZ-20, Z-10/PZ-10.

- **Magnifier F₈**

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-control 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 flash sync, leading/trailing-curtain-sync flash mode.

- **Hot Shoe Adapter F and Extension Cord F5P**

An adapter and cord which allow the AF240FT, 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 K_A- or K-mount lenses with a maximum aperture of f/2.8 or larger.

- **Macro Flash AF140C**

A TTL macro flash unit with a guide number 14 in meters.

- **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, 67mm and 77mm.

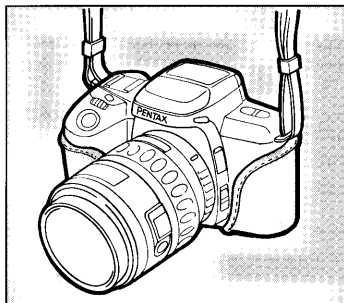
Notes on Accessories

- "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/4.5 ED(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.

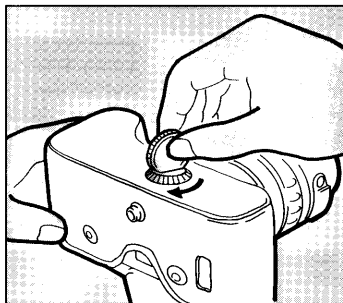
- When mounting the Reflex 1000mm f/11 or 2000mm f/13.5 lens to the camera body, the camera position shift lock screw of the lens may strike the camera body. To prevent this, change the position of the screw.
- When the AF200S_A, AF200T, AF280T, AF240Z, AF240FT or AF400FTZ is attached to the camera's hot shoe, the camera's main switch and Tv/Av button may be difficult to access.

(10) CAMERA CASE (SOFT CASE F_c)

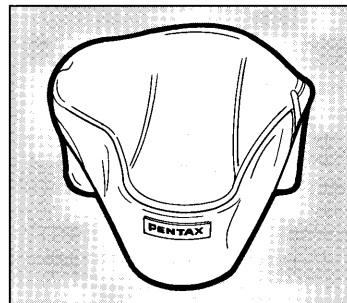
1



2



3



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. Fasten the back cover to the camera body by tightening the fitting screw in the tripod socket.
- The front case of Z-70/PZ-70 camera is the same front case (F_cS, F_cM or F_cL) as the Z-10/PZ-10 and Z-20/PZ-20 cameras. Choose one of the front cases in accordance with the table to the right.

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

Case	Applicable F, FA-lens
F _c S	28mm, 50mm f/1.4, f/1.7, Zoom 35-70mm, Zoom 35-80mm
F _c M	24mm, Macro 50mm, 135mm, Zoom 28-80mm, Zoom 35-105mm,
F _c L	85mm f/1.4, Macro 100mm, Zoom 28-105mm, Zoom 70-200mm, F Zoom 80-200mm

(11) EFFECT OF APERTURE AND SHUTTER SPEED

www.brohan cameras.com



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 shake. 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

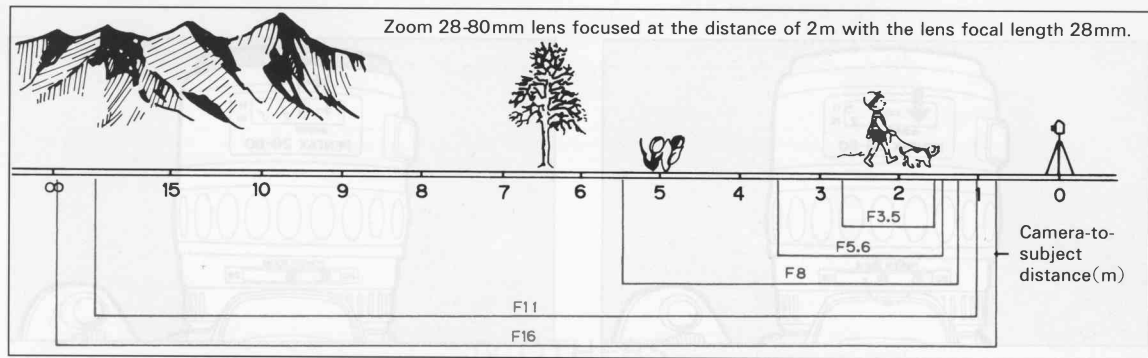


Open aperture

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.





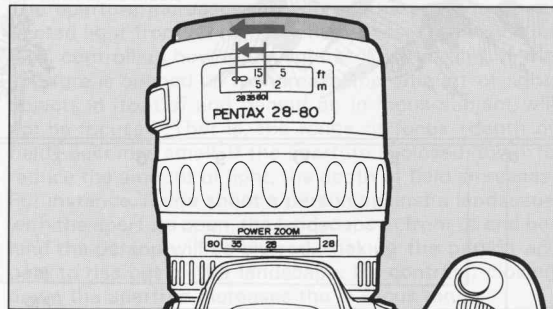
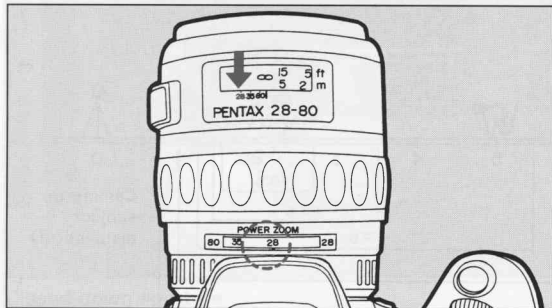
Depth of field refers to the range around the optimum focusing point of the subject in which the elements at different distances are in focus. The depth of field increases as the aperture is closed down, the focal length of the lens becomes shorter, or the subject is positioned farther away.

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.

(13) INFRARED INDEX



When infrared film and an R2" or "O2" filter are used, the focal point is different from that of ordinary film (exposed in visible light) is used. The autofocus system cannot compensate for this difference automatically.





1. Focus on a subject as usual.
2. Set the focus mode switch to **[MF]** and turn the focusing ring to the left by 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).
- In the autofocus mode, the focus cannot be compensated for infrared photography.
- 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 Manual Exposure Mode.

IV OTHERS



















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.18
	The low battery warning  appears.	Replace the battery.	P.14
	The battery is improperly installed.	Install the battery properly.	P.14
	The self-timer mode is being set.	Cancel the self-timer mode.	P.64
	The built-in flash is being charged.	Wait until the flash is fully charged.	P.35
Indicators do not appear on the LCD panel.	The main switch is not [ON].	Turn ON the main switch.	P.18
	No battery has been installed.	Install the battery.	P.14
	The battery is improperly installed.	Install the battery properly.	P.14
	The battery is dead.	Replace the battery.	P.14
The camera does not focus.	AF frame [] is not placed over the subject.	Move the camera until the AF frame [] covers the subject.	P.32
	The subject is too close.	Increase the camera-to-subject distance.	P.32
	The focus mode is set to [MF].	Set the focus mode switch to [AF].	P.31
	The subject is difficult to autofocus.	Use the focus-lock technique or focus manually using the matte field.	P.34 P.44
[ >] blinks in the viewfinder.	The subject is too close or difficult to autofocus.	Use the focus-lock technique or focus manually using the matte field.	P.34 P.44
The built-in flash does not charge.	The battery is dead.	Replace the battery.	P.14

Symptoms	Causes	Remedies	Reference
The exposure compensation cannot be set.	The main switch is set to the Green Operation Mode.	Set the main switch to [ON].	P.38
	The exposure mode is set to the manual exposure.	Set the exposure mode other than the manual exposure mode.	P.48 P.49
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.28
The lens focuses when zooming.	The camera focuses automatically when the power zoom is operated.		

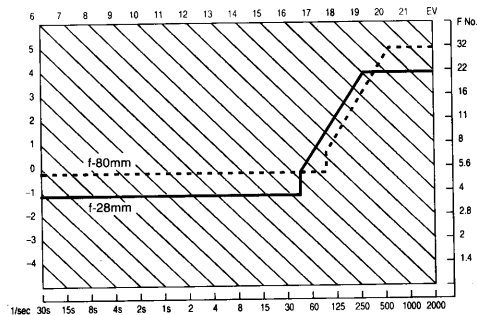
SPECIFICATIONS

Type:	TTL autofocus, auto-exposure 35mm SLR with built-in TTL auto flash (RTF)
Format:	24x36mm
Usable Film:	35mm perforated cartridge film. DX-coded film with ISO 25-5000; non-DX coded films are set to ISO 100.
Exposure Mode:	Picture Mode (Green Operation Mode, Portrait Program Mode, Landscape Program Mode, Action Program Mode, Close-up Program Mode), Programmed AE Mode (Program-Shift is available), Shutter-Priority AE Mode, Aperture-Priority AE Mode, Manual Exposure Mode, Bulb Mode
Shutter:	Electronically controlled vertical-run focal-plane shutter, Electromagnetic release. Speed range:(1)Auto 1/2000-30 sec.(steppless),(2)Manual 1/2000-30 sec.(3)Bulb, Shutter lock by turning the 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.
Autofocus System:	TTL phase-matching system, AF operational brightness range: EV0 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:	3-Speed Intelligent Power Zoom lens with built-in motor with FA zoom lens
Viewfinder:	Penta-mirror finder, Natural-Bright-Matte focusing screen, Field of view:92%, Magnification:0.77X(with 50mm lens at ∞), Diopter: -1diopter.
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 Manual Exposure Mode, [] exposure compensation indication,
External LCD panel Indication:	[] = Green Operation Mode, [] = Portrait Program Mode, [] = Landscape Program Mode, [] = Action Program Mode, [] = Close-up Program Mode, [P] = Programmed-AE Mode, [A] = Shutter-Priority / Aperture-Priority AE Modes, [M] = Manual Exposure Mode, [bu] = Bulb Exposure, [] = Film status information, [] = Battery exhaustion warning, [] = Built-in flash ready indication, [] = blinking slowly flash recommended warning, [] = blinks rapidly inappropriate lens warning, [] = Self-timer shooting, [] = PCV signal information, [Av] = Av value, [Tv] = Tv value, [] = Red-eye reduction flash mode, [] = Single frame shooting mode, [] = Consecutive shooting mode, Exposure compensation value = -0.3 to +0.3, Shutter speed indication = 2000 to 30", Aperture value indication = f/1.2 to 90, Bar graph = Exposure compensation value, Over or under exposure indication in manual mode,

- 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 :** Quick-return mirror with AF secondary mirror
- Film Loading:** Film advances automatically to 1st frame after back cover is closed, Film information is provided
- Film Wind & Rewind:** Auto wind/rewind and rewind stop by built-in motor, Consecutive or Single advance mode, Approx.1.8 frames/sec.(consecutive mode), Auto rewinding starts at end of roll, Film rewind/completion of rewinding is displayed on the LCD panel, Auxiliary rewind button will rewind film in mid-roll
- Exposure Meter:** TTL multi(2)-segment metering, Metering range from EV1 to EV21 at ISO100 with 50mm f/1.4 lens
- Exposure compensation:** + / - 3EV in 0.5EV step increments
- Flash :** Series-control, Retractable TTL Auto Flash (RTF), Guide number:13 (ISO100/m), Illumination angle: Covers 28mm lens angle of view, Automatic switch to flash-sync-speed in the range from 1/100 to a slower speed, Day-light-sync flash, Slow-speed-sync flash, Contrast-control-flash sync (ISO range=25-400),
- Flash sync :** Hot shoe with X-contact with couples with Pentax dedicated auto flashes, ISO range=25-800
- Power Source:** One 6V lithium battery (2CR5 or equivalent)
- Battery Exhaustion Warning:** Battery exhaustion symbol [] is lit (blinking when the shutter is locked; no indication on the right-hand edge of the viewfinder.)
- Dimension and Weight:** 146.0mm(W)x93.0mm(H)x66.5mm(D) (5.7"x3.7"x2.6") 450g(15.9 oz) body only without lithium battery
- Supplied Accessories:** Hot Shoe Cover F_r, Release Socket Cap F_r, Camera Strap F_b, Eye Cup F_r, Finder Cap

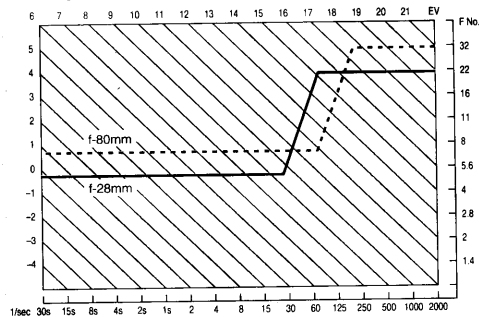
SPECIFICATIONS ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTIFICATION OR ANY OBLIGATION ON THE PART OF THE MANUFACTURER.

Normal / Green Operation Mode Program Line



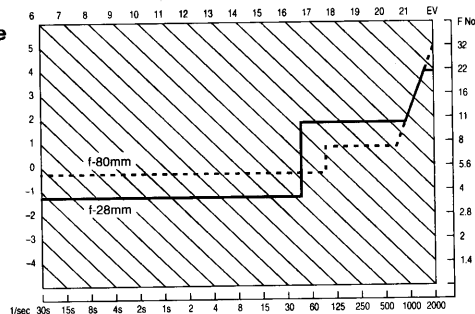
At ISO 100 with FA28 - 80mm f/3.5 - 4.7 lens

Landscape Mode Program Line



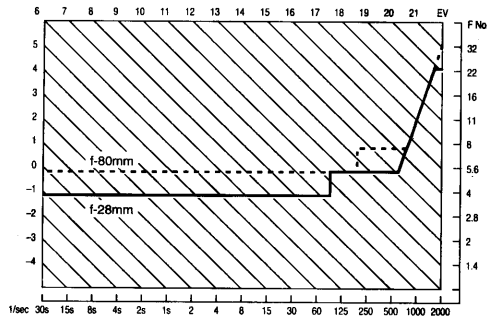
At ISO 100 with FA28 - 80mm f/3.5 - 4.7 lens

Portrait Program Mode Program Line



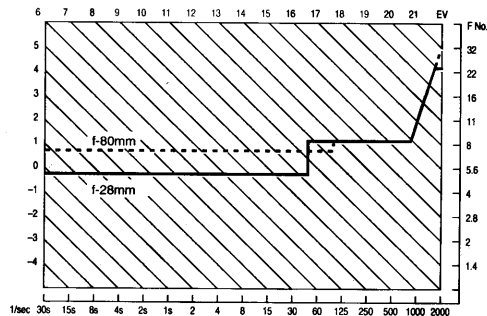
At ISO 100 with FA28 - 80mm f/3.5 - 4.7 lens

Action Program Mode Program Line



At ISO 100 with FA28 - 80mm f/3.5 - 4.7 lens

Close-up Program Mode Program Line



At ISO 100 with FA28 - 80mm f/3.5 - 4.7 lens

OTHERS

NAMES OF WORKING PARTS II

- 34 Rewind shaft
- 35 Shutter curtains
- 36 Eyecup F_F (p.65)
- 37 Viewfinder eyepiece
- 38 Viewfinder accessory groove (p.65)
- 39 Hyper button (p.59,62)
- 40 Mode set button (p.25)
- 41 Film information window
- 42 Pressure plate
- 43 Back cover (p.19)
- 44 Back cover release pin
- 45 Film leader end mark (p.20)
- 46 Take-up spool (p.20)
- 47 Sprocket (p.20)
- 48 Battery chamber cover (p.14)
- 49 Tripod socket
- 50 Date back contacts
- 51 DX-information pin (p.20)
- 52 Film chamber

