back to my "Orphancameras" manuals /flash and light meter site

Only one "donation" needed per manual, not per multiple section of a manual !
The large manuals are split only for easy download size.

STEP UP

FLASH PHOTOGRAPHY

USING THE BUILT-IN FLASH
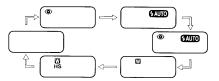
This section explains how to set the built-in flash modes and notes concerning the built-in flash.

SETTING THE FLASH MODE

Press the flash mode button until the desired flash mode appears on the LCD panel.

The flash mode will be displayed on the LCD panel as shown below.

• Auto pop-up flash [AUTO] can only be selected in the Auto Picture Mode and Picture Mode.

🔖 Memo Flash mode display

The flash fires in accordance with the flash mode indicated on the LCD panel.

Icon displayed	Flash mode	Flash status
	Flash ON	Flash fires when you press the shutter release button.
◉ ⚡	Flash ON + Red-eye reduction	When the flash is fired in the flash ON mode, red-eye reduction takes effect.[1]
⚡AUTO	Auto pop-up	If the Auto Picture Mode or Picture Mode is set, the flash pops up automatically when necessary.
⚡AUTO + ◉	Auto Pop-up + Red eye reduction	When the flash is fired in the auto-pop up flash mode, red-eye reduction takes effect. [1], [2]
🅦	Wireless	Set when using a dedicated wireless flash. ☞ p.100
🅦 +HS	Wireless + High-speed sync	Set when using high-speed sync with a dedicated wireless flash. ☞ p.99

[1]: If red-eye reduction is used while the AF360FGZ, etc. is set as a slave unit, the preflash for red-eye reduction will trigger the slave unit to fire. When using a slave unit, do not use red-eye reduction.
[2]: The auto pop-up mode will work in any mode except Auto Picture Mode or Picture Mode. (☞ p.86).

STEP UP FLASH PHOTOGRAPHY

📙Memo Reducing Red Eye

Red eye occurs in flash pictures when the flash reflects off the eye's retina. Although red eye cannot be totally prevented, it can be reduced by the following methods:

- Take the picture in a well-lit place.
- When using a zoom lens, use the wide-angle end and a close distance.
- If you are using an external flash unit, keep it apart from the camera lens as far as possible.

ADVANCED TECHNIQUES WITH THE BUILT-IN FLASH

This section explains how to calculate the built-in flash's effective range and the compatibility with F and FA lenses.

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

Calculate the effective flash range as follows:

For far distances   Guide No. ÷ Current aperture
For near distances   Far distance result ÷ 5[*1]
[*1]: This formula using "5" as the divider applies only to the built-in flash.

📙Memo

The flash cannot be used at distances shorter than 0.7 m. Doing so will result in irregular or obstructed flash coverage and flash overexposure.

The Guide No. will be as follows depending on the ISO film speed.

ISO Film Speed	Guide No.
ISO25	5.5
ISO50	7.8
ISO100	11
ISO200	15.6
ISO400	22

With ISO 100 film and an f/2.8 aperture, calculate the effective flash range as follows:

For far distances   Guide No. 11 ÷ f/2.8 = approx. 3.9 m
For near distances 3.9÷5 = approx. 0.8
The effective flash range is therefore approx. 0.9 m - 4.3 m.

Memo **Calculating the flash aperture from the effective flash range**

Use the effective flash range to calculate the flash aperture as follows:

Guide No. ÷ flash range = Flash aperture

If the result is a number (such as 3) that is not a lens aperture value, set it to the next smaller aperture value (2.8).

STEP UP   FLASH PHOTOGRAPHY

◆ F and FA Lens Compatibility with the Built-in Flash

The compatibility of F and FA lenses with the built-in flash is explained here.

Memo

If an F or FA lens incompatible with the built-in flash is used, depressing the shutter release button halfway down when the flash is ready will have the [⚡] blink on the LCD panel and in the viewfinder as a warning. (☞p.32)
If you take a flash picture with an incompatible lens, the corners of the picture may look dark or there may be a dark, semi-circular area on the lower part of the picture
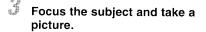
F and FA Lens Compatibility with the Built-in Flash

○ = Compatible   △ = Vignetting will occur under the usage conditions
✕ = Incompatible because of vignetting
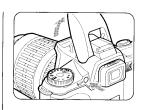
Lens name	Compatibility
F Zoom 17-28mm f/3.5-4.5	✕
FA Zoom 20-35mm f/4AL	△ Vignetting will occur at focal length between 20-24mm.
FA Zoom 24-90mm f/3.5-4.5AL (IF)	△ Vignetting may occur if the focal length is 24-28mm.
FA* Zoom 28-70mm f/2.8AL	△ Vignetting may occur if the focal length is less than 35 mm or the camera-to-subject distance is closer than 1 m with the focal length of 40 mm.
FA Zoom 28-70mm f/4AL	○
FA Zoom 28-90mm f3.5-5.6	○
FA Zoom 28-105mm f/3.2-4.5 AL (IF)	○
FA Zoom 28-200mm f/3.8-5.6AL (IF)	△ Vignetting may occur if the focal length is 28 mm or the camera-to-subject distance is closer than 1 m with the focal length of 35 mm.

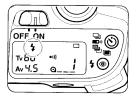| Lens name	Compatibility
F or FA Zoom 35-80mm f/4-5.6	○
FA Zoom 70-200mm f/4-5.6	○
FA* Zoom 80-200mm f/2.8 ED (IF)	○
F or FA Zoom 80-200mm f/4.7-5.6	○
FA Zoom 80-320mm f/4.5-5.6	○
F or FA Zoom 100-300mm f/4.5-5.6	○
FA Zoom 100-300mm f/4.7-5.8	○
FA* Zoom 250-600mm f/5.6ED(IF)	×
FA 20mm f/2.8	×
FA* 24mm f/2 AL(IF)	×
FA 28mm f/2.8	○
FA 31mm f/1.8 AL Limited	○
FA 35mm f/2AL	○
FA 43mm f/1.9 Limited	○
FA 50mm f/1.4,f/1.7	○
FA 77mm f/1.8 Limited	○
FA* 85mm f/1.4 (IF)	○
FA 135mm f/2.8 (IF)	○
FA* 200mm f/2.8 ED (IF)	○
FA* 300mm f/2.8 ED (IF)	×
FA* 300mm f/4.5 ED (IF)	○
FA* 400mm f/5.6 ED (IF)	○
FA* 600mm f/4 ED (IF)	×
FA Macro 50mm f/2.8	○
FA Macro 100mm f/2.8	○
FA Macro 100mm f/3.5	○
FA* Macro 200mm f/4.0 ED (IF)	○
FA Soft 28mm f/2.8	○
FA Soft 85mm f/2.8	○

STEP UP　FLASH PHOTOGRAPHY

POP-UP THE BUILT-IN FLASH MANUALLY

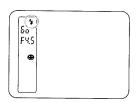*1* Push the flash pop-up button to activate the flash.
[🔆AUTO] disappears from the LCD panel.

2 The built-in flash starts charging automatically. When it is fully charged, [🔆] appears on the LCD panel.

3 Focus the subject and take a picture.

4 After using the flash, retract the built-in flash by pressing it down into the camera body.
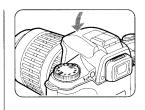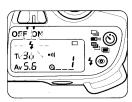
Memo

- The flash is always discharged even if the subject is not required flash light.
- The shutter cannot be released until the flash is fully charged.
- If the built in flash is used continuously, the battery may become warm, but it does not mean the battery is faulty; it is one of the battery's characteristics.
- When the built-in flash is used, using a lens hood is NOT recommended as it may obstruct the path of the light coming from the flash, causing vignetting in the picture corners.
- With the built-in flash popped-up, an external flash cannot be attached to the hot shoe. If you would like to use an external flash together with the built-in flash, see the flash connections on page 102.
- If the flash pop-up button is pressed while the flash is popped up, the camera enters the Flash ON mode in which the built-in flash discharges at all times.
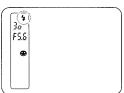
Memo **Flash recommended information**

The flash-recommended indicator [💲] on the LCD panel blinks and the indicator in the viewfinder turns to orange color when you attempt to photograph a subject in low light to warn you the camera shake.

STEP UP   FLASH PHOTOGRAPHY

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Memo

- In the Shutter-Priority AE Mode and Metered-Manual Mode, the flash-recommended indicator blinks only when attempting to photograph a subject in a backlit situation.
- The indicator in the viewfinder turns to green when the flash is fully charged.
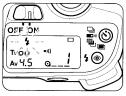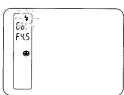
Note Inappropriate lens warning when the built-in flash is used

When using an inappropriate F- or FA-lens, [⚡] will blink in the viewfinder and on the LCD panel when the shutter release button is depressed halfway down. For more details on COMPATIBILITY OF F AND FA LENSES WITH THE BUILT-IN FLASH, see page 90, 91.

Memo

- Taking a picture while this warning is displayed may cause vignetting in the picture corners or semi-circular vignetting at the bottom of the picture.
- When lenses other than an F or FA are used, this warning will not appear.

USING EXTERNAL FLASH

When the built-in flash cannot provide enough illumination, use a Pentax-dedicated. With an external flash unit, TTL auto wireless flash and high-speed sync photograph can be taken with AF360FGZ.

FLASH FUNCTIONS

The features available with the built-in flash or a dedicated, external flash are described below.
Check which type your external flash unit is and see which functions it has.

Camera Functions	TYPE A	TYPE B	TYPE C	TYPE D	TYPE E	TYPE F
Red-eye reduction	○	○	○	×	○*1	×
Automatic firing of the flash	○	○	○	○	○	○
When the flash is ready, the camera switches to the flash sync speed automatically.	○	○	○	○	○	○
Auto Picture Mode, Picture Mode or Shutter-priority AE mode, the aperture is set automatically.	○	○	○	○	○*2	○*2
Flash confirmation in the viewfinder	×	○	○	○	×	×
TTL auto flash ☞p.97	○	○*4	○	○	○*3	×
P-TTL auto flash ☞p.96	×	○*5	×	×	×	×
Slow-speed sync ☞p.105	○	○	○	○	○	○
AF illuminator	○	○	○	○	×	×
Trailing shutter curtain sync flash*6	○*7	○	○	○	×	×
Contrast-control-sync flash mode*8	×	○	○	×	×	×
Multiple-burst flash, slave flash	×	○	○*9	×	×	×
High-speed sync	×	○	×	×	×	×
Wireless flash	×	○	×	×	×	×

STEP UP

FLASH PHOTOGRAPHY

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TYPE A: Built-in flash
TYPE B: AF360FGZ
TYPE C: AF500FTZ, AF330FTZ
TYPE D: AF400FTZ, AF240FT
TYPE E: AF400T, AF280T, AF220T, AF200T, AF080C, AF140C, AF201SA
TYPE F: AF200S, AF160, AF140

*1: Available with the AF280T and AF400T, only when the flash confirmation indicator in the viewfinder is off and TTL auto is set.
*2: With Type E flash units (except AF201SA), use the MS (Manual Sync) or M (Manual) mode. With Type F flash units, use Aperture-Priority AE, manual, or bulb. Picture mode and Shutter-Priority AE cannot be used because the aperture changes.
*3: With the AF201SA, TTL auto cannot be used.
*4: With Pentax A, F and FA lenses, P-TTL auto flash can be used.
*5: With Pentax A, F and FA lenses.
*6: The shutter speed will be 1/60 sec. or slower.
*7: With Type B or C, and D flash units, trailing shutter curtain sync flash is possible.
*8: The shutter speed will be 1/60 sec. or slower.
*9: Exception of AF330FTZ.

USING P-TTL AUTO FLASH MODE

The optimum flash amount is fired to match the subject brightness.
P-TTL auto flash, which pre-fires the flash using the six-segment metering, allows more precise control.
P-TTL is available with external wireless flash.
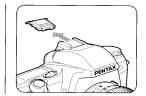
Memo

P-TTL auto flash is only available in combination with the AF360FGZ.

Attaching the flash unit

1. **Remove the hot shoe cover FK from the camera.**

Memo

Store the hot shoe cover in the strap's pocket. ☞p.12

Set the flash unit to P-TTL auto mode

① Attach the flash unit to hot shoe.

② Turn on the flash unit's power switch.

③ Set the flash mode switch to P-TTL auto.

Memo

- With the AF360FGZ, the flash mode is always set to P-TTL auto; with any other flash unit, it is set to TTL auto.
- For instructions on how to operate the flash unit, refer to the flash unit's operating manual.

Taking a flash picture

① Check that the flash is ready.

② Focus the subject and take the picture.

Memo

- When the flash is ready (fully charged), the [⚡] will light in the viewfinder when the shutter release button is depressed halfway down.
- An external flash can also be made to automatically fire. Note that the flash will not fire against an lighter subject especially during day-time sync shooting.

USING HIGH-SPEED SYNC WITH THE AF360FGZ

With the AF360FGZ, you can use a flash sync speed faster than 1/125 sec. High-speed sync mode can also be used while the flash unit is attached to the camera or in a wire-less configuration.

With high-speed sync.

STEP UP

FLASH PHOTOGRAPHY

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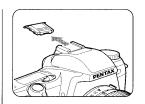# ◆ Using High-speed sync Flash on the Camera
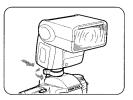
1 Attaching the flash unit

① Remove the Hot Shoe Cover FK from the camera.

Memo

Store the Hot Shoe Cover in the strap's pocket. ☞ p.12

② Attach the flash unit to hot shoe.

2 Set the flash unit to the HS mode.

① Set the flash unit's sync mode switch to HS (high-speed sync).

Memo

For instructions on how to operate the flash unit, refer to the flash unit's operating manual.

3 Taking a picture.

① Check that the flash is ready.

② Focus the subject and take the picture.

Memo

- When the flash is ready (fully charged), the [⚡] will light in the viewfinder when the shutter release button is depressed halfway down.
- The high-speed sync is only available when the shutter speed is faster than 1/125 sec.
- The high-speed sync flash mode does not work in the Auto Picture Mode and Picture Mode.

◆ Using Wireless high-speed sync flash

1 Positioning the flash

①Place the flash unit at the desired location.
②Set the flash unit's power switch to [WIRELESS].
③Set the flash unit's sync mode switch to HS (high-speed sync).
④Set the wireless mode switch to S (Slave).

Memo

- For instructions on how to operate the flash unit, refer to the flash unit's operating manual.
- For wireless Flash, refer to page 100.

2 Set the camera to the HS mode.

①Press the flash pop-up button to enable the built-in flash to be used.
② press the flash mode button until [🔲 HS] is displayed.

③Check that both the built-in flash and external flash unit are ready.
④Focus the subject and take the picture.

Memo

- When the built-in flash is ready (fully charged), the [⚡] will light in the viewfinder when the shutter release button is depressed halfway down.
- The high-speed sync is only available when the shutter speed is faster than 1/125 sec.

STEP UP   FLASH PHOTOGRAPHY

WIRELESS FLASH (AF360FGZ ONLY)

With the AF360FGZ, you can fire a flash without having a cord connection between the camera and flash unit. The high-speed sync mode can also be used with wireless flash. ☞ p.99

Positioning the flash

① Place the flash unit at the desired location.

② Set the flash unit's power switch to [WIRELESS].

③ Set the wireless mode switch to S (Slave).

Memo

For instructions on how to operate the flash unit, refer to the flash unit's operating manual.

Set the camera to the wireless mode.

① Press the flash pop-up button to enable the built-in flash to be used.

② Press the flash mode button until [🔟] is displayed.

③ Check that both the built-in flash and external flash unit are ready.

④ Focus the subject and take the picture.

Memo

When the built-in flash is ready (fully charged), the [🔩] will light in the viewfinder when the shutter release button is depressed halfway down.

Memo Wireless Flash Control (P-TTL flash mode)

When the AF360FGZ is used for wireless flash, the following process is executed between the built-in flash and AF360FGZ before the flash is fired.

Depress the shutter release button completely.

①The built-in flash fires a pre-flash (the camera's flash mode is transmitted).

②The external flash unit fires a pre-flash (the subject's lighting condition is checked).

③The built-in flash fires a pre-flash (the required flash output is transmitted to the external flash).

 * If HS (high-speed sync) has also been set, the built-in flash will fire another pre-flash to transmit the flash duration time.

④The AF360FGZ Flash unit fires the flash.

Memo Channel Control

For wireless control, channel (e.g. CH1) for the AF360FGZ must be set on the camera. Attach the AF360FGZ to the camera, turning on the camera and depressing the shutter release button halfway down.

USING BOTH THE BUILT-IN FLASH AND EXTERNAL FLASH

To use both the built-in flash and dedicated external flash simultaneously, follow the procedure below.

To use both the built-in flash and a dedicated external flash simultaneously, the following accessories (sold separately) are required.
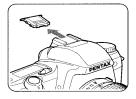
Hot Shoe Adapter FG, Off-Camera Shoe Adapter F, Extension Cord F5P

STEP UP

FLASH PHOTOGRAPHY

1 Attaching the flash unit

①**Remove the Hot Shoe Cover Fk from the camera.**

Memo
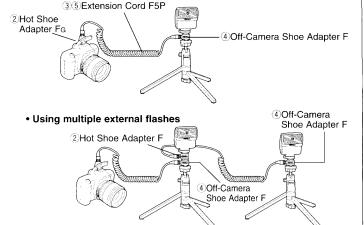
Store the hot shoe cover in the strap's pocket. ☞ p.12

②**Attach the Hot Shoe Adapter FG to the camera.**

③**Connect the Extension Cord F5P to the Hot Shoe Adapter FG.**

④**Attach the Off-Camera Shoe Adapter F to a tripod.**

⑤**Connect the Extension Cord F5P to the Off-Camera Shoe Adapter F.**

⑥**Attaching a Flash Unit to the Off-Camera Shoe Adapter F.**

⑦**Press the flash pop-up button.**

Memo

The AF500FTZ can be connected directly to Extension Cord F5P without requiring Off-Camera Shoe Adapter F.

③⑤Extension Cord F5P
②Hot Shoe Adapter FG
④Off-Camera Shoe Adapter F

- **Using multiple external flashes**

④Off-Camera Shoe Adapter F
②Hot Shoe Adapter F
④Off-Camera Shoe Adapter F

USING CONTRAST-CONTROL-SYNC FLASH MODE

Using the dedicated external flash 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.

Memo

Contrast-control-sync flash is possible with the combination of following flash units: AF360FGZ, AF330FTZ, AF500FTZ, and the built-in flash.

◆ Using the built-in flash and a dedicated external flash.

1 Positioning the flash unit

①Place the flash unit apart from the camera.

Memo

Do not use accessories (such a hot shoe grip) having a different number of contacts. It may cause the TTL auto flash to function improperly.

②Set the flash unit's sync mode to Contrast-control-sync.

Memo

For instructions on how to set the sync mode, refer to the flash unit's operating manual.

2 Taking a picture

①Press the flash pop-up button to enable the built-in flash to be used.

②Check that the flash is ready.

③Focus the subject and take the picture.

STEP UP

FLASH PHOTOGRAPHY

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Memo

- Between the built-in flash and external flash, the flash ratio will be 1:2 respectively (summed up when the external flashes are more than one).
- When the contrast-control-sync flash mode is used, the maximum flash sync speed will be 1/60 sec.

◆ Using Multiple External Flash Units (with no built-in flash)

1 Setting the flash units

① **Set up the external flash units apart from the camera.**

Memo

If a hot shoe grip is used, would cause the TTL metering to function improperly. For instructions for connection, see ☞p.102

② **Set the required flash units' sync mode to Contrast-Control-Sync Flash mode.**

Memo

Output ratio of the flash is 2 for contrast-control-sync mode to 1 for the other flash mode.
For instructions on how to set the contrast-control-sync mode, refer to the flash unit's operating manual.

2 Taking a picture

① **Check that all of flash units are ready.**

② **Focus the subject and take the picture.**

Memo External multiple sync flashes

Note the following when you use two or more flashes in sync.
- ● Use the flashes in the following combinations referring to the "Flash functions" (☞ p.95).
  - Combine the same type (Type B to F) of flashes.
  - If you use different type combination of flashes, combine Type C and Type D or Type E and Type F.
- ● Any type of combinations of the built-in flashes can be used.

USING SLOW-SPEED SYNC

When you photograph someone in front of a sunset or dark background, using slow-speed sync flash will result in the proper exposure of both the subject and background. Slow-speed sync can be set with the built-in flash or with any dedicated external flash unit.

Memo

With slow-speed sync, a slow shutter speed is used. Use a tripod to prevent camera shake.

◆ Using Metered Manual Mode

Setting the flash unit

① **If you will use the built-in flash, press the flash pop-up button.**

Memo

If you will use an external flash, turn on the power.

Setting the Metered Manual Mode

① **Turn the lens aperture ring to set the aperture value.**

② **Set the shutter speed.** ☞ p.67

Memo

Check that the flash is ready and that the flash exposure setting is correct.

③ **Focus the subject and take the picture.**

STEP UP

FLASH PHOTOGRAPHY

◆ Using Shutter-Priority AE

1 Setting the Shutter-Priority AE Mode
☞ refer to page 65

2 Setting the Flash unit

Memo

Do not turn on the power of the built-in flash or external flash before setting step 1 above. Otherwise, the background may not be exposed properly.

① **If you will use the built-in flash, press the flash pop-up button.**

Memo

If you will use an external flash, turn on the power.

3 Focus the subject and take the picture.

PRECAUTIONS FOR USING FLASH

Cautions for using flash are explained below.

◆ Using the built-in flash and a dedicated external flash

- If you use the built-in flash and a Pentax-dedicated external flash simultaneously and set the external flash to trailing shutter curtain sync, the built-in flash will also be set to trailing shutter curtain sync.
- Before taking the picture, make sure both the built-in flash and external flash are ready (fully charged).

◆ Using a non-Pentax flash unit

- Using a non-Pentax flash unit may cause a malfunction. Pentax-dedicated flash units are recommended.
- When using studio type flash with the camera, note the polarity of the flash contacts. Some studio type flash units may have reversed polarity which will not work with the camera. For details, consult the manufacturer of the flash.
- When using studio type flash, set a flash sync speed one stop slower than the camera's normal sync speed. This is to prevent a partial flash exposure (part of the picture looks dark).

STEP UP FLASH PHOTOGRAPHY

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APPENDIX

PENTAX FUNCTIONS

The camera provides 11 Pentax Functions so you can set the camera according to your shooting preferences.
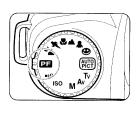
BASIC SETTING OF PENTAX FUNCTIONS

Follow the procedure below to set a Pentax Function.

1 Display Pentax Function No.

① Turn the mode dial to PF.

② Move the select switch to display the Pentax Function No. You wish to set.
The Pentax Function No. will be displayed on the LCD panel

Example:
Selection of Remote controller operation time.

Pentax Function No.

⑪⑪⑪

2. Display the setting No.
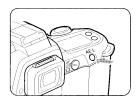
① Press the AE lock button and display the setting No.

The setting No. will be displayed on the LCD panel.

Memo

The LCD panel shows that Pentax Function No. F3

The setting number on the panel shows function no. F3 (the setting number for the operating time of the remote controller is set to "2").

Setting No.

② Turn the mode dial to "AUTO PICT".
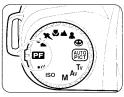
Memo Resetting the Pentax Functions to the Default Settings

① Set the mode dial to [PF].
② Hold down the AE lock button for 2 sec. or longer. [PF] and [CL] will be displayed on the LCD panel, and all the Pentax Functions will be reset to default setting.
③ Set the mode dial to [AUTO PICT].
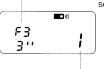
SETTING A PENTAX FUNCTION

The settings for each Pentax Function are explained below.
To display the Pentax Function No. and setting No.. see
Basic Setting of Pentax Functions. ☞p.111

1 Set the mode dial to PF

2 Pentax Function No. :Select with the
select swich.

3 Setting No. : Select with the AE lock
button.

◆ [F1] Selection of range of auto bracketing
correction value

This is used to select the range of the correction value
when using the auto bracketing function.
● Pentax Function No. [F1]
● Setting No.
[1]...1/2 step (EV)
[2]...1/3 step (EV)
[3]...2/3 step (EV)
[4]...1 step (EV)
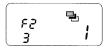
◆ [F2] Selection of re-set to single frame after
auto bracketing exposure.

This is used to select whether the camera automatically
returns to single frame shooting after auto bracketing
exposure.
● Pentax Function No. [F2]
● Setting No.
[1]...Returns to single frame
shooting
[2]...Remains in auto bracketing

◆ [F3] Selection of shutter release delay time with the remote controller

This is used to select the delay time when taking pictures using the remote controller.
- Pentax Function No. [F3]
- Setting No.
- [1]...picture taken after 3 seconds
- [2]...picture taken immediately

```
           ■ᐧ))
F3
3"         1
```

◆ [F4] Selection of whether or not auto focusing is used during remote control photography

This is used to select whether or not auto focusing is used when taking a picture using the remote controller.
- Pentax Function No. [F4]
- Setting No.
- [1]..Auto focusing not used
- [2]..Auto focusing used
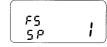
```
           ■ᐧ))
F4
- -        1
```

◆ [F5] Selection of exposure metering mode during AE Lock

This is used to select either spot metering or multi-segment metering mode during the AE Lock.
- Pentax Function No. [F5]
- Setting No.
- [1]...Spot metering
- [2]...Multi-segment metering

```
F5
SP         1
```

◆ [F6] Selection of whether or not AE lock is used when the subject is focused

This is used to select whether or not AE lock is used when a subject is focused with shutter release button is depressed halfway down.
● Pentax Function No. [F6]
● Setting No.
[1]. .AE lock not used
[2]. .AE lock used
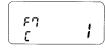
```
F6       l
--
```

◆ [F7] Selection of autofocus method in the Action Program Mode

This is used to select whether focusing be made continuously or focus be locked when a subject is focused in the Action Program mode except auto pictures.
● Pentax Function No. [F7]
● Setting No.
[1]...Continuous focusing
[2]...Focus lock

```
F7       l
C
```

◆ [F8] Selection of illumination method of LCD panel

This is used to select the timing at which the panel lighting is illuminated during display.
● Pentax Function No. [F8]
● Setting No.
[1]...Illuminated automatically when shutter button is depressed halfway down when the subject being photographed is dark

```
F8       l
At
```

[2]...Illuminated when the electronic preview button is pressed
[3]...Not illuminated

◆ [F9] Selection of mode dial illumination pattern when power is turned on

This is used to select the illumination pattern of the mode dial when the power is turned on.
- Pentax Function No. [F9]
- Setting No.
- [1]...Pattern A (regular illumination)
- [2]...Pattern B (irregular illumination)
- [3]...Not illuminated

```
F9      1
L 1
```

◆ [F10] Selection of the state of the end of the film when rewinding film

This is used to select whether or not the leader on the end of the film is to be wound up when the film has been rewound.
- Pentax Function No. [F10]
- Setting No.
- [1]...Film completely rolled up
- [2]...End left unwound ☞ p.35

```
F 10      1
    ⊙
```

◆ [F11] Selection of how built-in flash be fired in wireless mode

This is used to select whether the flash unit be fired in master mode or controlled mode.
- Pentax Function No. [F11]
- Setting No.
- [1]...Fire in master mode (built-in flash unit is fired)
- [2]...Controlled fire (built-in flash unit is not fired)

```
 ▣
F11      1
5 E
```

■ CAMERA FUNCTIONS AVAILABLE WITH VARIOUS LENSES

FUNCTION Lens [Mount type]	FA lens [K$_{AF}$/K$_{AF2}$]	F lens [K$_{AF2}$]	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)	○	○	○	○	○
3 - points AF	○	○	×	×	×
Auto Picture, Picture	○*4	○*4	○*5	×	×
Aperture-Priority AE	○	○	○	○	○
Shutter-Priority AE	○*4	○*4	○	×	×
Metered Manual	○	○	○	○	○
Multi(6)-segment metering	○	○	○*6	×*7	×*7
Approx. f-stop indication	○	○	×	×	×

✎NOTE

*1. Lenses with a maximum aperture of f/2.8 or larger. (See AF Adapter operating 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. Exception of Pentax-FA Soft 85mm f/2.8 and FA-soft 28mm f/2.8.
*5. Standard operation mode only.
*6. With A50mmf/1.2, the center-weighted metering or Spot metering is used instead of the multi-(6) segment metering mode.
*7. Multi(6)-segment metering, if selected, will be switched to center-weighted metering.

APPENDIX

ACCESSORIES (OPTIONAL)

A number of dedicated accessories are available for this camera.

■ AA-BATTERY PACK F_G

Battery grip powered by size-AA batteries and dedicated to the MZ-6/ZX-L.

Memo Battery Life (Using 24-exposure film rolls)

The number of 24-exposure film rolls that can be taken with a new set of alkaline batteries is indicated below.

	Number of film rolls at 20°C/68°F
General existing light photography	about 180 rolls
Flash photography (using flash 50% of the times)	about 35 rolls
Flash photography (using flash 100% of the times)	about 20 rolls
Bulb exposure time	about 18 hours

■ CABLE SWITCHES

Cable Switch CS-205

length: 0.5 m

■ FLASH ACCESSORIES

AF360FGZ

TTL auto flash unit with Guide No. 36. Features include slave-sync flash, multiple-flash, and leading/trailing curtain-sync flash. High-speed sync and wireless flash can be used.

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.

AF220T

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

AF201SA

An auto flash (not TTL) with the guide number of 20 in meters (ISO 100).

AF140C

TTL macro flash unit with the guide number of 14 in meters (ISO 100).

Off–Camera Shoe Clip CL-10

Enables the AF360FGZ to be used as a wireless flash.

Hot Shoe Adapter F, Extension Cord F5P and Off-Camera-Shoe Adapter

The adapters and cord which allow the external flash to be used off the camera, while maintaining full electric coupling to the camera.

■ VIEWFINDER, LENS AND CLOSE-UP ACCESSORIES

Magnifier FB
Magnifies the image at the center of the viewfinder.

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.

Memo

While attached, it may obstruct the opening/closing of the camera back. First detach the Refconverter A before opening/closing the camera back.

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

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

Memo
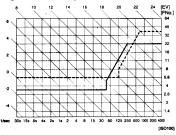
- Since the camera's autofocus mechanism uses a semi-transparent mirror, using a non-circular polarizing filter may throw off the autofocusing and exposure metering precision. When using autofocus, a circular polarizing filter is recommended instead. This will also maintain exposure metering precision.
- When you attach/detach Adapter K (for the 645 lens) to the camera, the adapter's screw should not contact the camera body. If necessary, change the screw's position.
- The hot shoe cover attached to the hot shoe unit is used exclusively with the MZ-6/ZX-6 and MZ-7/ZS-7. The use of other hot shoe covers will prevent operation of the auto pop-up function of the flash.

Auto Extension Tube K
A set of three tubes. A close-up accessory placed between camera and lens. Supports automatic aperture and metering with maximum aperture.

PROGRAM DIAGRAMS

① Standard Operation Mode
Night-scene Program Mode without Flash

With FA 28-90mm f3.5-5.6

② Portrait Program Mode

With FA 28-90mm f3.5-5.6

③ Landscape Program Mode

With FA 28-90mm f3.5-5.6

④ Close-up Program Mode

With FA 28-90mm f3.5-5.6
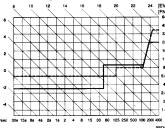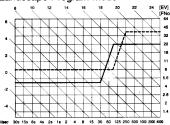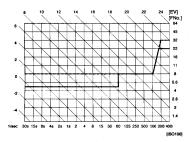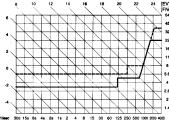
⑤ Action Program Mode

With FA 28-90mm f3.5-5.6

APPENDIX

TROUBLE SHOOTING

Before requesting service, please check the following points.

◆ Nothing is displayed on the LCD panel.

Check 1:	**Power is OFF.**
Countermeasure	Turn the main switch to ON (☞ 22).
Check 2:	**Batteries are not inserted or inserted backwards.**
Countermeasure	Check the insertion direction of the batteries and insert the batteries correctly (☞ 13).
Check 3:	**The batteries are exhausted.**
Countermeasure	Replace the batteries with new ones (☞ 13, 38).

◆ Shutter does not trip.

Check 1:	**Power is OFF.**
Countermeasure	Turn the main switch to ON (☞ 22).
Check 2:	**Batteries are not inserted or are inserted backwards.**
Countermeasure	Check the insertion direction of the batteries and insert the batteries correctly (☞ 13).
Check 3:	**The "Battery Warning" is blinking.**
Countermeasure	Replace the batteries with new ones (☞ 13, 38).
Check 4:	**The mode dial is set to the [PF] [■))] or [ISO] position.**
Countermeasure	Set the mode dial to a position other than the [■))] position, [PF] position or [ISO] position.
Check 5:	**The built-in flash is charging.**
Countermeasure	Wait until charging is finished (☞ 31).

◆ Subject is out of focus.

Check 1:	**The subject to be focused on is not inside the AF frame.**
Countermeasure	Cover the subject you wish to photograph within the AF frame before shooting (☞ 27).
Check 2:	**The picture-taking distance is too close.**

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Countermeasure   Move away from the subject to be photographed (☞76).

Check 3:   **The subject is not suited for autofocus (☞77).**

Countermeasure   Use focus-lock to focus on a subject which is about the same distance as the subject to be photographed (page 81), or set the focus mode switch to the [MF] position and then use the matte screen to focus manually (☞79)

Check 4:   **The focus mode switch is at the [MF] position.**

Countermeasure   Use the focusing indicator and matte screen to adjust the focus manually (see page 79). Or set the focus mode switch to the [AF] position before taking pictures (☞75).

◆ Exposure counter is not displayed or does not advance.

Check 1:   **[E] is blinking on the LCD panel.**

Countermeasure   Film has not been loaded properly. Load the film again (☞20).

◆ The built-in flash does not fire.

Check 1:   **The built-in flash is charging.**

Countermeasure   Wait until charging is finished (☞31).

Check 2:   **The "Battery Warning" symbol is blinking.**

Countermeasure   Replace the batteries with new ones (☞13, 38).

Check 3:   **The flash mode is set to [A] (auto flashing mode).**

Countermeasure   If the subject to be photographed in the auto flash mode is bright, the flash will not light. Set to the flash ON mode to cause lighting even for bright subjects (☞84).

◆ Imprinting data on negative is faint.

Check 1: **Imprinting data information on a picture is faint.**

Countermeasure Replace the data back's battery (CR2025) (☞ p.40).

◆ AE lock do not work.

Check 1: **The camera is set to Manual Exposure.**

Countermeasure Set the exposure mode to the Auto Picture Mode or Picture Mode. (☞ 25, 56).

◆ The built-in flash does not pop up automatically.

Check 1: **The camera is not set to the Auto Picture Mode or Picture Mode.**

Countermeasure Set the exposure mode to the Auto Picture Mode or Picture Mode.(☞ p.25, 56).

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SPECIFICATIONS TABLE

● Type	TTL autofocus, multi-mode auto-exposure 35mm SLR with built-in TTL auto flash (RTF)
● Format	24 × 36mm
● 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 (Standard 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 1/4000-30 sec.(stepless),(2)Manual 1/4000-30 sec.(3)Bulb,
● Lens Mount	Pentax KAF bayonet mount (K-mount with AF coupler, lens information contacts).
● Compatible Lens	Pentax KAF2-, KAF-,KA-, and K-mount lenses are usable. Autofocus is possible using AF Adapter with KA-and K-mount lenses.
● Autofocus System	TTL phase-matching multi-(3 points) autofocus system switchable to Spot focusing, AF operational brightness range: EV −1 to 18(at ISO 100 with f/1.4 lens), Focus lock available using shutter release button/AF button, Focus Mode: AF.S(single), AF.C(predictive AF), Manual[MF]. AF illuminator
● Viewfinder	Fixed pentamirror, Natural-Bright-Matte focusing screen, Field of view:92%, Magnification:0.7X(with 50mm f/1.4 lens at infinity), Diopter: −2 to +1m^{-1}
● 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 [4] 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 [♣], [✱] AE Lock indicator

● External LCD panel Indication	Shutter speed, Aperture value, [4] = Built-in flash ready indication, [4] = blinking slowly flash recommended warning, [4] = blinks rapidly Inappropriate lens warning, [⊛] = Red-eye reduction flash mode, [AUTO] = Auto pop-up flash function, Automatic flash function, ISO indication, [⊙_ _ _] = Film status information, [▯] = Battery exhaustion warning, Exposure counter, [⠤⠤⠤] = PCV signal indication, [⊠] = Exposure compensation, Exposure compensation value, [⟳] = Self-timer, [▩]= Auto bracketing mode, [▱] = Consecutive shooting, [▥] = Multiple exposure, [▥]=Wireless flash mode, [HS]= High-speed flash sync
● Preview Button	Electronically controlled type and possible to use in all exposure modes
● Self-timer	Electronically-controlled type with delay time of 12 sec. Start by depressing of shutter release button, Operation confirmation : Possible to set PCV beep tone. Cancelable after operation.
● Auto bracketing	·Three frame consecutive shots with exposure bracketing in 0.5 EV step. Increment, Possible to use with exposure compensation
● Mirror	Quick-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
● AE Lock:	Set by AE lock button, current exposure value remains for 20 sec. With the shutter release button pressed halfway down, the exposure value remains continuously.

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● Flash	Series-control, Retractable TTL Auto Flash (RTF), Guide number:11 (ISO100/m), Illumination angle covers 28mm lens angle of view, Flash-sync-speed in the range from 1/125 to a slower speed, Slow-speed-sync flash, Contrast-control-flash sync (ISO range=25-800), Auto pop-up, Red-eye reduction flash function
● Flash sync	Hot shoe with X-contact with couples with Pentax dedicated auto flashes, ISO range=25-800, Flash-sync-speed in the range from 1/125 to a slower speed. Possible to use high-speed sync, wireless flash mode, P-TTL mode with AF360FGZ.
● Pentax function	11 user-defined functions
● Power source	Two 3V lithium batteries (CR-2 or the equivalent)
● Battery Exhaustion Warning	Battery exhaustion symbol [▮] is lit. (The shutter is locked and no indication in the viewfinder when starts blinking)
● Dimension and Weight	135.5mm(W) × 92mm(H) × 63mm(D) (5.3" × 3.6" × 2.5") 400g (14.1 oz) body only without batteries
● Supplied Accessories	Hot Shoe Cover Fк, Release Socket Cap , Camera Strap Fк Eye Cup Fк, Finder Cap
Data Back FJ Cover (optional)	Crystal quartz controlled; LCD with digital clock, auto calendar up to 2049.
● Data printout	7-segment, 6-digit LCD
● Printout confirmation	"–"indication blinks for a few seconds on LCD panel.
● Printing mode	① Year/month/day, ② day/hour/minute, ③ "---", ④ month/day/year, ⑤ day/month/year
● ISO range	ISO 25–1600 (automatic setting)
● Power source	CR2025 (lithium battery)
● Number of prints	Approx. 5,000

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