PENTAX™

ELECTRONIC FLASH UNIT

AF-200FG

OPERATING MANUAL

EN

FOR THE SAFE USE OF YOUR FLASH UNIT

Although we have carefully produced this flash unit for safe operation, please be sure to especially follow warnings and cautions given on page 1.

⚠ WARNING

This symbol indicates that violating this item could cause serious personal injuries.

⚠ CAUTION

This symbol indicates that violating this item could cause minor or medium personal injuries, or material losses.

⃠ is a symbol indicating items that are prohibited.

⚠ is a symbol emphasizing a warning.

⚠ WARNING

The flash contains electronic circuits that operate at high voltages. Do not attempt to disassemble the flash unit yourself, as there is danger of an electric shock.

If internal parts of the flash unit becomes exposed due to impact, etc., do not touch them as there is danger of an electric shock.

Do not expose the flash unit to water or moisture as there is danger of an electric shock.

⚠ CAUTION

Do not use the flash near anyone's eyes, as it may hurt them. Be particularly careful with the flash around infants.

The following may lead to an explosion or fire.

- Shorting the batteries
- Exposing the batteries to flames
- Dismantling the batteries
- Attempting to recharge non-rechargeable batteries

Remove the batteries from the camera immediately if they become hot or begin to smoke. Be careful not to burn yourself during removal.

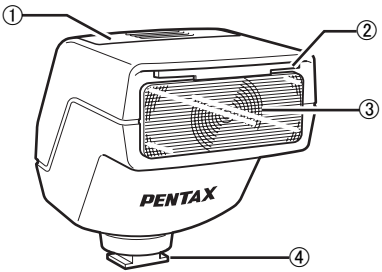
Precautions for Your Flash Unit

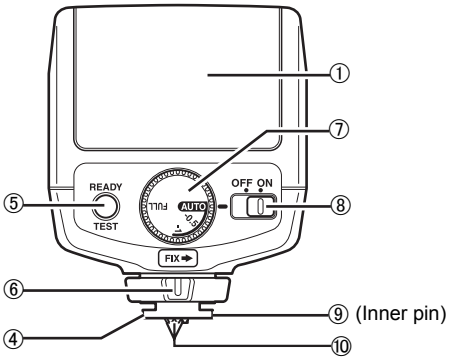
- Never use organic solvents such as paint thinner, alcohol or benzene to clean the flash unit.
- Avoid leaving the flash unit for extended period in places where the humidity and temperature are very high such as in a car.
- Be careful not to subject the flash unit to strong vibrations, shock or pressure. Use a cushion to protect the flash unit when carrying it in a motorcycle, car, boat, etc.
- Do not use the flash unit where it may be directly exposed to rain, water, etc.
- Replace all the batteries at the same time. Do not mix battery brands, type or an old battery with a new one. It may cause explosion or overheating.
- When using the flash unit off the camera, do not try to attach any metallic object to the electric contacts or to mount incompatible accessories. Otherwise, the TTL auto mechanism may be damaged or rendered inoperable.
- Do not attach any accessories having either fewer or different (layout other than PENTAX standard) electrical contacts for the hot shoe or grip. Otherwise, some functions may not work properly.
- PENTAX will not be held responsible for any accidents or damage, etc. caused due to the use of this product with cameras and accessories made by companies other than PENTAX.
- Periodic checks are recommended every 1 to 2 years in order to maintain high performance. If the unit has not been used for an extended period of time, or is being readied for an important shoot, it is recommended that you take a test flash with the test button and test shoot with it. Test flash is also important to maintain optimum performance.
- Avoid contact with garbage, dirt, sand, dust, water, toxic gases, salt, etc. When the flash unit is subjected to rain or moisture, wipe it off with a dry soft cloth.

- Remove the batteries when not using the flash unit for extended periods. Otherwise, battery leakage might result and cause damage to the circuitry and proper operation of the flash unit.
- Battery performance may temporarily be hindered in low temperatures. Batteries should be kept warm in temperatures below freezing for proper performance.
- When photographing black subjects or white subjects, use exposure compensation.

Contents

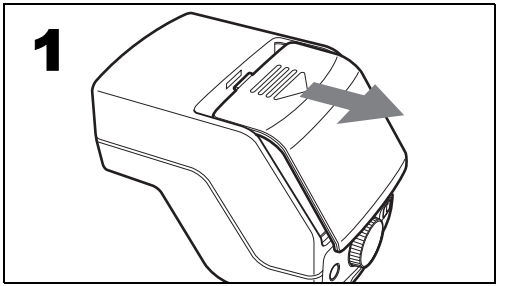
Names of Parts

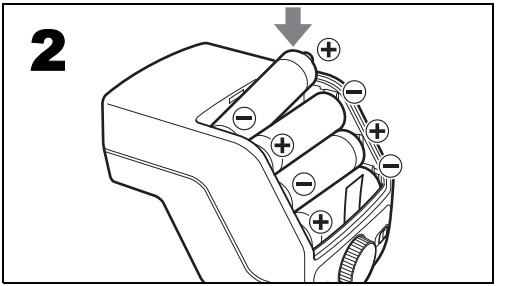




① Battery chamber cover
② Wide-angle panel
③ Flash head
④ Shoe foot
⑤ Test button/ Ready lamp
⑥ Locking lever
⑦ Mode dial
⑧ Power switch
⑨ Shoe lock pin
⑩ Flash signal contacts

Inserting the Batteries





1 Slide the battery chamber cover as shown in the figure and remove it.

2 Insert the above four AA batteries sequentially from lower one making sure the plus/minus markings ⊕, ⊖ match the diagram inside the battery chamber and close the battery chamber cover.

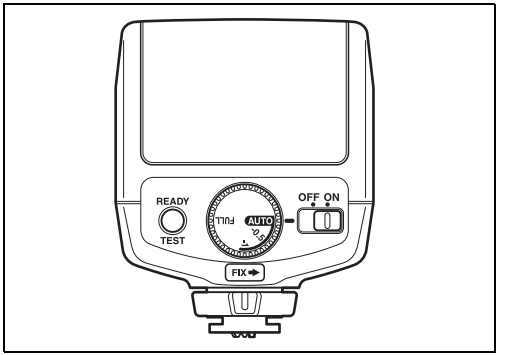
- **If you thread the ribbon in the battery chamber under the batteries beforehand when inserting the batteries, you can remove the batteries easily by pulling the ribbon when removing the batteries.**

■Types of Batteries

This flash unit uses four AA batteries of the same type, as shown below.
Alkaline battery (LR6)
Lithium battery (FR6)
Nickel-Metal Hydride battery (Ni-MH)
(Nickel manganese (Ni-Mn) and nickel cadmium (Ni-Cd) batteries cannot be used.)

- **For information about recycling times and total number of flashes, refer to “Specifications” on page 20.**
- **If the ready lamp does not light up when you turn on the power (page 8), the batteries may be exhausted or not inserted correctly. Verify the orientation of the batteries or, if the indicators and ready lamp still do not light up, replace them with new batteries.**
- **If charging time takes more than 20 seconds, the batteries are exhausted and should be replaced with new batteries.**
- **If you let the flash unit discharge successively using lithium batteries, the batteries will overheat, activating a safety circuit that temporarily disables the flash unit. If this occurs, rest the flash unit so that the temperature of the batteries returns to normal.**

Turning the Power On



Sliding the power switch to the (ON) position will turn on the power. The ready lamp will light up when the flash is charged. Sliding it to the (OFF) position will turn off the power.

Test Flash

Check that the ready lamp is lit, then press the test button (TEST). The test flash will discharge.

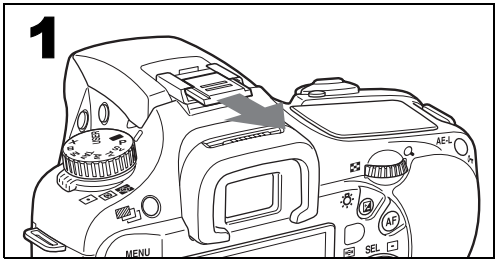
Auto Power Off Function

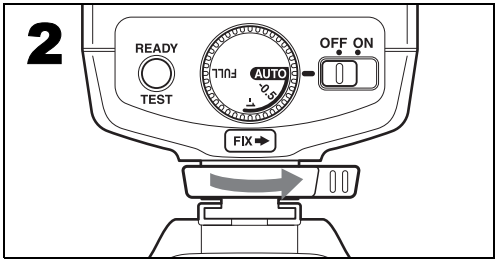
When the flash unit is left unused for about 3 minutes with the power switch set to the (ON) position, it automatically turns off to save the power.

Quick Start Function

If the flash unit is mounted on autofocus cameras, press the shutter release button half way to turn on the power.

Mounting to Camera





1 Remove the hot shoe cover from the camera.

2 Attach the flash unit to the camera.

① Turn the locking lever of the flash unit in the direction opposite to that indicated by (**FIX→**).

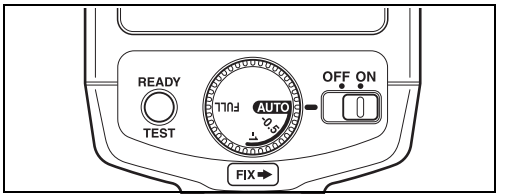
② Slide the hot shoe foot of the flash unit into the camera's hot shoe from the back of the camera forward.

③ Turn the locking lever of the flash unit in the direction indicated by (**FIX→**) to lock it.

- **PENTAX digital single lens reflex cameras can accept a shoe lock pin. When attaching the flash unit, turn the locking lever in the (FIX→) direction and lock the flash unit to the camera with the shoe lock pin. When releasing the flash unit, be sure to do so after turning the locking lever in the direction opposite to that indicated by (FIX→) and loosening the shoe lock pin. Otherwise, the hot shoe will be damaged.**

Mode Dial Functions

Using the mode dial located on the rear side of the AF200FG, you can set the following flash modes.



Auto flash mode (P-TTL Auto/ TTL Auto)

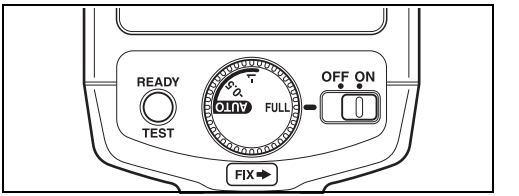
When the mode dial is set to (AUTO), (–0.5), or (–1), the operating mode of the flash unit is automatically switched to P-TTL Auto or TTL Auto by communicating with the camera you use.

P-TTL Auto flash

A pre-flash is discharged before the main flash so that the metering sensor in the camera can measure the condition of the subject and adjust the output of the main flash properly. This mode gives more accurate results than the conventional TTL mode.

TTL Auto flash

The metering sensor in the camera measures the amount of light coming through the lens and adjusts the flash output properly.



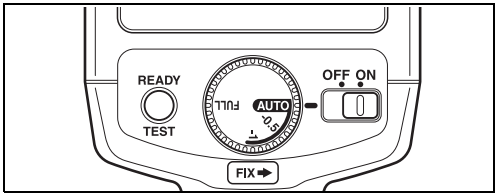
Manual flash mode (full output)

When the mode dial is set to (FULL), the flash unit always discharges at its full output regardless of the ambient light condition.

Determine the Guide No. of the flash unit based on the ISO sensitivity setting of the camera, then calculate the aperture value according to the flash range.

This mode is available on all the cameras for which you can set the desired aperture.

Auto flash shooting



Procedure

1. Slide the Power switch to (ON).
2. Set the mode dial to (AUTO).
3. Confirm that the subject is within the effective flash range and the ready lamp is lit, and take a picture.

● **The correct flash output is obtained in P-TTL auto mode only when the flash unit is used with auto-focus lenses.**

Set the lens aperture to the position A in P-TTL Auto mode

When the lens you use is equipped with the lens aperture ring, set the position of the ring to A (You do not need to do this for the DA or FAJ lens). Otherwise, the flash unit cannot function in P-TTL Auto mode. When you use the cameras that support both P-TTL and TTL modes (*ist DS2, *ist DS, *ist D) , if the aperture of the lens is in a position other than A, you can shoot in TTL Auto flash mode. Be aware that for the cameras that only support P-TTL Auto flash, the flash unit does not adjust the flash output but discharges at full output, if the aperture of the lens is in a position other than A.

About TTL Auto flash mode

With single lens reflex cameras (film cameras) other than PENTAX digital single lens reflex cameras, you can perform auto flash shooting if they support TTL Auto. (However, the 645 format cameras before SF series and of the early type do not support the TTL Auto)

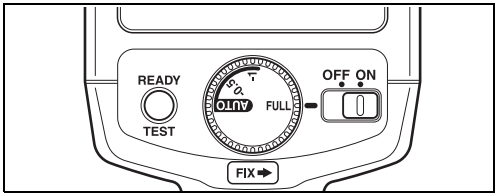
■Approximate effective flash range in P-TTL Auto flash

ISO sensitivity	Flash Coverage Angle	Aperture (F value)								
		1.4	2	2.8	4	5.6	8	11	16	22
ISO 100	Normal	2.1-14.3	1.5-10.0	1.1-7.1	0.7-5.0	0.7-3.6	0.7-2.5	0.7-1.8	0.7-1.3	0.7-0.9
	With the wide-angle panel	1.6-10.7	1.1-7.5	0.8-5.4	0.7-3.8	0.7-2.7	0.7-1.9	0.7-1.4	0.7-0.9	0.7-0.7
ISO 200	Normal	3.0-20.0	2.1-14.0	1.5-10.0	1.0-7.0	0.7-5.0	0.7-3.5	0.7-2.5	0.7-1.8	0.7-1.3
	With the wide-angle panel	2.2-15.0	1.6-10.5	1.1-7.5	0.8-5.3	0.7-3.8	0.7-2.6	0.7-1.9	0.7-1.3	0.7-1.0
ISO 400	Normal	4.2-28.6	3.0-20.0	2.1-14.3	1.5-10.0	1.1- 7.1	0.7-5.0	0.7-3.6	0.7-2.5	0.7-1.8
	With the wide-angle panel	3.2-21.4	2.2-15.0	1.6-10.7	1.1- 7.5	0.8- 5.4	0.7- 3.8	0.7- 2.7	0.7- 1.9	0.7- 1.4
ISO 800	Normal	6.1-40.7	4.2-28.5	3.0-20.4	2.1-14.3	1.5-10.2	1.1- 7.1	0.8- 5.2	0.7-3.6	0.7-2.6
	With the wide-angle panel	4.5-30.0	3.1-21.0	2.2-15.0	1.6-10.5	1.1- 7.5	0.8- 5.3	0.7- 3.8	0.7- 2.6	0.7- 1.9
ISO 1600	Normal	8.5-57.1	5.9-40.0	4.2-28.6	3.0-20.0	2.1-14.3	1.5-10.0	1.1- 7.3	0.7-5.0	0.7-3.6
	With the wide-angle panel	6.4-42.9	4.5-30.0	3.2-21.4	2.2-15.0	1.6-10.7	1.1- 7.5	0.8- 5.5	0.7- 3.8	0.7- 2.7

(Unit: m)

* You can check the approximate range of distances within which the flash unit can adjust the flash output (and the appropriate exposure is available) based on the combination of the ISO sensitivity setting on the camera and the aperture value from the above table when the mode dial is set to (AUTO). (The values in "Wide Panel" line indicate the range when the wide-angle panel is used.) Note that the minimum range that will give correct exposure is 0.7 meters.

Manual flash shooting



Procedure

1. Slide the Power switch to (**ON**).
2. Set the mode dial to (**FULL**).
3. Measure the distance to the subject (between the AF200FG and subject) and determine the aperture value using the following procedure. (The Guide No. varies depending on the ISO sensitivity. Refer to the table on page 14.)

Example: If the subject distance (between the AF200FG and subject) is 2.5 m, sensitivity is ISO 100, and the wide-angle panel is not in use, the calculation will become as follows:

The Guide No. will be 20.

$$\text{Aperture} = \frac{\text{Guide No.}}{\text{Subject distance}} = \frac{20}{2.5} = 8$$

4. Set the lens aperture to the calculated value.
5. Confirm that the ready lamp is lit. Then take a picture.

■Approximate flash distance in Manual flash

ISO sensitivity	Flash Coverage Angle	GN	Aperture (F value)								
			1.4	2	2.8	4	5.6	8	11	16	22
100	Normal	20	14.3	10.0	7.1	5.0	3.6	2.5	1.8	1.3	0.9
	With the wide-angle panel	15	10.7	7.5	5.4	3.8	2.7	1.9	1.4	0.9	0.7
200	Normal	28	20.0	14.0	10.0	7.0	5.0	3.5	2.5	1.8	1.3
	With the wide-angle panel	21	15.0	10.5	7.5	5.3	3.8	2.6	1.9	1.3	1.0
400	Normal	40	28.6	20.0	14.3	10.0	7.1	5.0	3.6	2.5	1.8
	With the wide-angle panel	30	21.4	15.0	10.7	7.5	5.4	3.8	2.7	1.9	1.4
800	Normal	57	40.7	28.5	20.4	14.3	10.2	7.1	5.2	3.6	2.6
	With the wide-angle panel	42	30.0	21.0	15.0	10.5	7.5	5.3	3.8	2.6	1.9
1600	Normal	80	57.1	40.0	28.6	20.0	14.3	10.0	7.3	5.0	3.6
	With the wide-angle panel	60	42.9	30.0	21.4	15.0	10.7	7.5	5.5	3.8	2.7
3200	Normal	113	80.7	56.5	40.4	28.3	20.2	14.1	10.3	7.1	5.1
	With the wide-angle panel	85	60.7	42.5	30.4	21.3	15.2	10.6	7.7	5.3	3.9

(Unit: m)

* The appropriate shooting distance (distance at which the appropriate exposure is available) is determined based on the combination of the ISO sensitivity setting and the aperture value on the camera when the mode dial is set to (FULL). (The values in "Wide Panel" line indicate the distance when the wide-angle panel is used.) Note that the minimum range that will give correct exposure is 0.7 meters.

Application Shooting of Auto Flash

■Slow-speed Sync Mode

When using a normal flash to shoot a portrait, etc., in a night or evening setting, the background will appear very dark because a normal flash light cannot sufficiently light it. However, it is possible to balance both subject and background by using the flash to properly expose the foreground subject and a slow shutter speed to expose the low light background.

If your camera supports this mode, you can perform auto flash shooting. Before shooting, confirm the following.

1. **Whether your camera supports slow-speed sync mode.**
2. **Whether the shooting mode of your camera supports slow-speed sync mode.**

● **Also refer to the operation manual of the camera.**

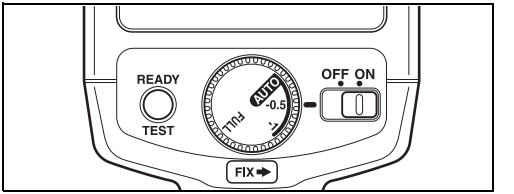
Camera Model	Shooting Modes Not Supported by Slow-speed Sync Mode	Notes
K100D, *ist DS/DS2, *ist DL/DL2	AUTO PICT, , , , , , P (Programmed AE), SCN (*ist DL2), Av (Aperture priority) modes	You can shoot in slow-speed sync mode for up to one second in mode.
K10D	Green mode	Set the flash mode of the camera to slow-speed sync mode when the camera is in P (Hyper Program) , Av (Aperture priority) or Sv (Sensitivity priority) mode.
*ist D	Green, P (Hyper Program) and Av (Aperture priority) modes	You can shoot in slow-speed sync mode when the camera is in P (Hyper Program) mode if you can set the shutter speed to 1/150 sec or faster using the Av dial or Tv dial.

- Be sure to make the shutter speeds slower than the X-sync speed.

■Compensating Flash Output

When shooting in P-TTL auto flash mode, you can compensate the flash output using the mode dial on the flash unit.

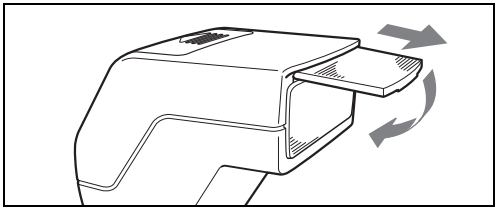
* If the camera also has the flash output compensation function, and flash output compensation is set both on the camera and the flash unit, the flash output compensation amount will be combined.
  Refer to the camera operation manual for details.



AUTO:	Discharges at the normal output (flash output compensation is not set on the flash unit)
– 0.5:	Reduces the flash output by 0.5 EV.
– 1:	Reduces the flash output by 1 EV.

■Using the Wide-angle Panel

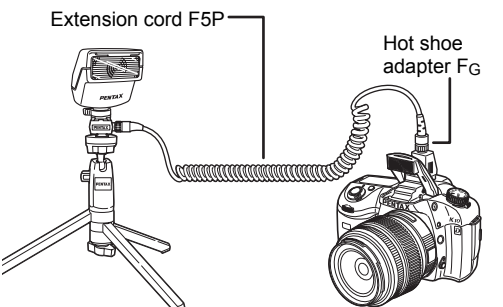
The AF200FG has a built-in wide-angle panel. Pull out the wide-angle panel as shown in the figure.
The wide-angle panel disperses the flash light and expands flash coverage angle for the wider angle lenses.
As the wide-angle panel reduces the effective flash range, do not use it when not necessary.



■Connecting the AF200FG with the Extension Cord

By combining the optional accessories with the flash unit, you can perform auto flash shooting with the flash unit held away from the camera.
You can enjoy various auto flash shooting features in combination with the built-in flash, such as making shadows by lighting a subject from the side, illuminating the background, etc.
When you use the AF200FG held away from the camera connected with an extension cord, use the optional extension cord F5P/F5P L. Connect the extension cord F5P/F5P L to the camera with the optional hot shoe adapter F_G or the optional hot shoe adapter F, and connect it to the flash unit with the off-camenra shoe adapter F (refer to the diagram on the right).

- **When you use the AF200FG in combination with the built-in flash unit of the cameras, attach the hot shoe adapter F_G. If you use the hot shoe adapter F, the built-in flash unit will not pop up from the camera.**
- **If you attach a tripod on the bottom of the camera when setting up the flash unit held away from the camera, use the off-camera shoe adapter F. When you set up the camera on things such as a tabletop or a chair, etc., use the optional off-camera shoe clip CL-10.**
- **If you set the camera such as the K10D, etc. to trailing curtain sync mode, the setting becomes invalid when you use the camera with the AF200FG.**



Optional Accessories

A number of dedicated accessories are available for this flash unit.

Off-camera Shoe Clip CL-10

Setting clip for using the AF200FG held away from the camera.

Hot Shoe Adapter F_G

Adapter for using the AF200FG as a separate flash unit using the extension cord F5P/F5P L. It can be used in combination with the built-in flash unit.

Off-camera shoe adapter F

Adapter for attaching an external flash unit, etc. on a tripod separated from the camera. It comes with a connector for the extension cord F5P/F5P L.

Hot Shoe Adapter F

Adapter for connecting the camera and extension cord F5P/F5P L. It also has a hot shoe on its top.

Extension Cord F5P – 0.5m/1.5m/L (Approx. 3m)

5P synchro cord to use a flash unit for single lens reflex camera, such as the AF540FGZ, AF360FGZ or AF200FG, held away from the camera. It is used in combination with the hot shoe adapter F_G or F, and/or the off-camera shoe adapter F.

Hot Shoe Grip 67II

Adapter for positioning a flash unit such as the AF540FGZ, AF360FGZ or AF200FG alongside the 67II camera body. It connects to the 67II's 5P sync terminal with the included 5P Sync Cord.

Specifications

Type — Clip-on, TTL auto flash unit with series control

Cameras supporting the Auto flash shooting

- Digital SLR series
- 35mm (Film) Autofocus SLR after Z series
- 645N, 645N Ⅱ, and 67 Ⅱ

Guide No. — Maximum 20 (ISO 100/m)

ISO	Format	Normal	With the wide-angle panel
	35mm	28mm	24mm
	645	55mm	45mm
	67	70mm	60mm
	DIGITAL	19mm	16mm
100	(FULL)	20	15
200	(FULL)	28	21
400	(FULL)	40	30
800	(FULL)	57	42
1600	(FULL)	80	60
3200	(FULL)	113	85

Recycling time/Total number of flashes

Battery type	Recycling time	Total number of flashes
AA Alkaline (LR6)	Approx. 4 sec.	Approx. 300
AA Nickel-Metal Hydride (Ni-MH/2700mAh)	Approx. 4 sec.	Approx. 400
AA Lithium (FR6)	Approx. 4 sec.	Approx. 450

Flash Coverage Angle	Vertical Angle: 26.5°, Horizontal Angle: 35°(When the wide-angle panel is used: Vertical Angle: 30°, Horizontal Angle: 39°)
Color temperature	Daylight (Suited for daylight color film)
Effective flash range	Approx. 0.7 m - approx. 3.6 m (Guide No. 20, ISO 100, f/5.6)
ISO sensitivity setting	ISO 100 - 1600 (In P-TTL mode)
Flash modes	P-TTL auto, TTL auto, manual (FULL)
Flash output compensation	–0.5 or –1.0EV (switches with the mode dial)
Power saving	Automatic power-off
Red-eye reduction	Operates with auto-focus cameras equipped with red-eye reduction feature.
Wide-angle panel	Pull out manually.
Power source	Four AA batteries, (Alkaline (LR6), Nickel-Metal Hydride (Ni-MH), or Lithium (FR6))
Dimensions and weight	68 mm (W) × 83.5 mm (H) × 93 mm (T) (2.7" × 3.3" × 3.7"), Approx. 190 g (6.8 oz.) without batteries

Appendix

Table of dedicated functions at Auto flash shooting

Camera type	K10D, K100D, *ist DL2, *ist DL		*ist DS2, *ist DS, *ist D	
Flash Mode	P-TTL auto flash mode	TTL auto flash mode	P-TTL auto flash mode	TTL auto flash mode
Leading curtain sync	Yes	No	Yes	Yes
Trailing curtain sync	No	No	No	No
High-speed sync	No	No	No	No
Slow-speed sync	Yes	No	Yes	Yes
Automatic switching to X-sync speed when flash is charged	Yes	Yes	Yes	Yes
Flash ready display in viewfinder	Yes	Yes	Yes	Yes
Auto check display	No	No	No	Yes
Red-eye reduction	Yes	Yes	Yes	Yes
Flash output compensation using the mode dial on the flash unit	Yes	No	Yes	No

Yes: Available
No : Not available

* For the *ist DS2, *ist DS or *ist D camera, the flash mode is switched from P-TTL to TTL, if the aperture of the lens is in a position other than A.

* The setting of trailing curtain sync mode on the K10D camera becomes invalid when you use the camera with the AF200FG.

Warranty Policy

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

Procedure During 12-month Warranty Period

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

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

This warranty policy does not affect customer's statutory rights.
The local warranty policies available from PENTAX distributors in some countries can supersede this warranty policy. Therefore, we recommend that you review the warranty card supplied with your product at the time of purchase, or contact the PENTAX distributor in your country for more information and to receive a copy of the warranty policy.

For customers in the USA

STATEMENT OF FCC COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Changes or modifications not approved by the party responsible for compliance could void the user's authority to operate the equipment.
This equipment has been tested and found comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does not cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

For customers in Canada

This Class B digital apparatus complies with Canadian ICES-003.

Pour les utilisateurs an Canada

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.