

HD PENTAX-D FA 150-450mmF4.5-5.6ED DC AW
OPERATING MANUAL

Thank you for purchasing the HD PENTAX-D FA 150-450mmF4.5-5.6ED DC AW lens. This lens is an interchangeable lens for PENTAX SLR cameras. Its image circle covers the 35mm film format, and it also obtains optimum image clarity with PENTAX digital SLR cameras.

Please read this operating manual carefully before using the lens to ensure that it is used properly. In addition, also refer to your camera operating manual.

To use this lens, please keep the firmware of the camera up to date.

• Illustrations shown herein may differ from the actual appearance.

Specifications and external dimensions are subject to change without notice.

Refer to your camera operating manual for details about mounting and removing the lens.



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FOR SAFE USE OF YOUR LENS

Although we have carefully designed this lens for safe operation, please pay special attention to items marked with the following symbols when using the lens.

Warning This symbol indicates precautions that if not followed, could result in serious injury to the user.

Caution This symbol indicates precautions that if not followed, could result in minor or medium injury to the user or damage to the equipment.

Warning
Never look at the sun through the lens mounted on the camera for a long time. Serious damage to your eyes or total loss of eyesight may occur, particularly when looking directly through the lens.

Caution
Do not leave the lens in direct sunlight without a lens cover or lens cap. Direct sunlight passing through the lens will be intensified, and should it focus on flammable materials, fire may occur.

Precautions When Using the Lens

Storage and mildew prevention

- Take the lens out of the protective case or camera bag, and store it in a dry, well-ventilated place.
- Avoid storing the lens in a poorly ventilated place such as a closet, wardrobe, drawer, vehicle, or where insect repellent or medicine is kept.
- Avoid storing the lens in areas of high temperature and humidity, where there is a risk of mildew growth. Store the lens with a desiccant (anti-mildew agent) in a dry cabinet, airtight container, or plastic bag.

Precautions and lens maintenance

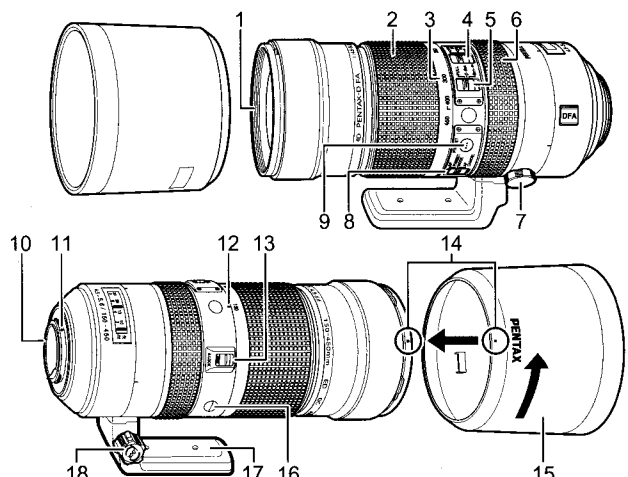
- Never use any organic solvent such as thinner, alcohol, or benzene, etc. to remove dust on the lens.
- The lens is a precise optical instrument. Be careful not to let it fall, or subject it to strong shocks or pressure. Use a cushion or similar pad to protect the lens from the vibrations of motorcycles, automobiles, boats, etc.
- Avoid subjecting the lens to rapid changes in temperature, otherwise condensation can occur both inside and outside of the lens. Put the lens in a plastic bag or camera bag, and take it out after the lens has reached ambient temperature.
- When the lens is not attached to the camera body, attach both the supplied lens cap and lens mount cap to protect it from dust.
- Do not leave the camera with the lens cap off attached to a tripod or other rigid camera support. The inner parts of the camera can be damaged by direct sunlight.

* Have the lens inspected by a dealer every one or two years to maintain its high performance.

Features of This Lens

- This lens uses our proprietary multi coating: "HD Coating (High Definition Coating)", which has higher transmission of light with less reflection than existing coatings. This coating prevents flare and realizes to achieve image quality with excellent contrast.
- Equipped with "Quick-shift Focus System" (can be switched with the focus mode switch), you can focus manually even while autofocus is operating, not just after autofocusing.
- Circular aperture (up to F8) keeps light sources and other fuzzy points perfectly round.
- This lens has a dust-proof and water-resistant construction with each part individually sealed.
- SP (Super Protect) coating applied to the front surface of the lens to effectively repel water and grease and easily wipe off dust and stain.
- Equipped with the preset button and AF button to allow expansion of autofocus functions (*) by switching modes.
"AF Button and Preset Button" (reverse side)
 (*) Available when using with cameras that support expanded autofocus functions. For details of the compatible cameras, refer to our website below.
<http://www.ricoh-imaging.co.jp/english/products/lens/k/telephoto/hdpentax-dfa-150-450/>

Names of Parts



- | | |
|---------------------------------|------------------------------|
| 1 Front-ring thread | 10 Lens mount |
| 2 Zoom ring | 11 Mounting index |
| 3 Focal length scale | 12 Zooming index |
| 4 Focus mode switch | 13 Zoom lock switch |
| 5 Focus range limiter | 14 Lens hood attaching index |
| 6 Focusing ring | 15 Lens hood |
| 7 Camera orientation lock screw | 16 AF button* |
| 8 Mode selector switch | 17 Tripod mount |
| 9 Preset button | 18 Mounting screw |

* Mounted in four locations at 90° intervals

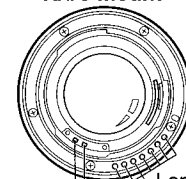
About the Lens Mount

The lens mount of this lens is called "KAF3-mount". With power supply contacts and lens information contacts, this lens mount enables autoexposure and DC motor in the lens. When using the camera that does not support an internal motor, autofocus is not available.

CAUTION

Be careful not to damage or dirty the lens information contacts and the power supply contacts on the mount surface of the lens. Otherwise, failure or malfunction may result.

KAF3-mount



Lens information contacts

Power supply contacts

* This lens does not have an aperture ring. Aperture settings are controlled automatically as if set to the auto "A" position, so accessories without an auto "A" setting cannot be used with this lens.

About the Lens Hood

Using a lens hood is recommended to block stray light from entering the lens. The internal reflection of stray light degrades image quality.

<How to attach>

Align the index on the lens hood with the attaching index on the lens, and push both parts straight toward each other. Attach the lens hood on the lens by turning the hood in the clockwise direction, as viewed from the front of the lens, to lock it until it clicks into position.

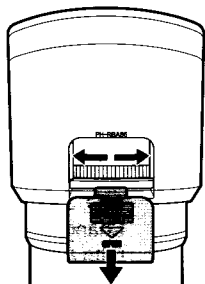
* When the lens hood is not in use, it can also be turned around and attached in the reversed position.

The included lens hood has a PL filter window which facilitates the manipulation of the circular polarizing filter when the lens hood is attached.

<How to use>

1. Remove the PL filter window cap by sliding it in the direction as shown in the illustration.
2. Turn the outer rim of the circular polarizing filter from the PL filter window as shown in the illustration.
3. Attach the PL filter window cap.

* When shooting, be sure the PL filter window cap is in place to achieve maximum effect of the lens hood.



About Lens Filters (commercially available)

Screw a commercially available 86 mm diameter filter to the front of the lens.

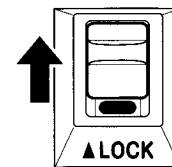
CAUTION

- Since a filter becomes a part of the optical system when attached to the lens, handle it with due care to protect it from dust, dirt and scratches.
- Use a circular polarizing filter if you attach a filter to a PENTAX digital SLR camera. If you use a normal polarizing filter, exposure and autofocus are less-accurate.

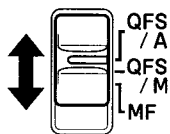
About the Zoom Lock Switch

This lens is equipped with a zoom ring lock. This prevents the lens from extending under its own weight while you are carrying the camera.

Set the zoom ring to the shortest focus (150 mm), move the lock switch in the direction of the arrow. The lock is engaged and the zoom ring is immovable when the red line is visible.



Focusing



Focus Mode Switching

Use the focus mode switch to switch between autofocus and manual focus.
Place the switch at QFS/A or QFS/M to use autofocus.
Place the switch at MF to use manual focus.

* Set the camera's focus mode to autofocus (AF).

Using the Quick-shift Focus System

On cameras that support this function, you can adjust the focus position by holding down the shutter release button halfway (or holding down the AF button) in autofocus mode and then turning the focusing ring.

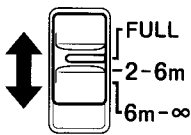
QFS/A : After focusing with the autofocus, you can adjust the focus manually.

QFS/M : You can adjust the focus manually while the autofocus is operating.

CAUTION

Keep pressing the shutter release button (or AF button) after you achieve proper focus and before taking a picture. If you let go of the shutter release button before taking a picture, autofocus will operate again when you press the shutter release button again.

Focus Range Limiter



You can use the autofocus more effectively by switching the focus range limiter to limit the operating range of the autofocus to close range (2 to 6 m) or to far range (6 m to ∞).

* When it is at "FULL", the limiter is canceled, and the autofocus range is from 2 m to ∞.

* The limiter does not operate in manual focus.

AF Button and Preset Button

Available only when using with cameras that support expanded autofocus functions.

You can assign the following operation modes to the AF button (1) by changing the mode selector switch (3) position.

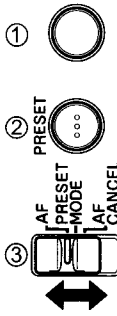
AF : Activates autofocus.

PRESET MODE: Returns to a focus position previously recorded on the lens' memory. (Focus Preset Mode)

AF CANCEL : Temporarily cancels autofocus operation on the camera's side. Also fixes the focus position by pressing the AF button after focusing.

About Focus Preset Mode

- To record a focus position, after focusing, hold down the PRESET button (2). You will hear a beep when it is recorded.
- Press the AF button to return to the recorded focus position (AF stops at the point where you release the button while returning).



CAUTION

The focus position may shift when you turn the camera off or change the focal length by zooming.

Tripod Mount

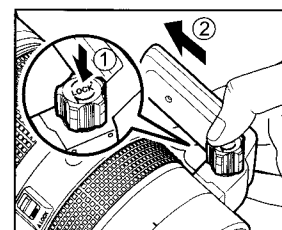
This lens is equipped with a tripod mount (removable), and can be set on a tripod.

Switching Between Horizontal and Vertical Shooting

Loosen the camera orientation lock screw and turn the camera by 90° left or right. Then tighten the camera orientation lock screw.

Removing the Tripod Mount

- Loosen the mounting screw.
- While pressing on the mounting screw (1), slide the tripod mount in the direction of the arrow (2), as shown in the diagram to the right.



To attach the tripod mount, slide it in the opposite direction of the arrow until it clicks, then firmly tighten the mounting screw.

CAUTION

- Attach only to a stable tripod.
- Attach the tripod mount securely to the lens in the proper way and firmly tighten the mounting screw otherwise the camera may shake or the lens may fall off. We also recommend using a fast shutter speed.

For customers in 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 to 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 radio 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 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.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

*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.

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



The CE Mark is a Directive conformity mark of the European Union.

Main Specifications

Focal Length (in 35 mm format equivalent)	150 - 450 mm (230 - 690 mm)
Lens Construction	18 elements in 14 groups
Angle of View	10.7°-3.6° (when attached to PENTAX digital SLR cameras) 16.5°-5.5° (when attached to PENTAX 35 mm SLR cameras)
Maximum Aperture	F4.5-5.6
Minimum Aperture	F22-27
Mount	KAF3
Minimum Focusing Distance	2 m/6.6 ft.
Maximum Magnification	0.22x
Filter Diameter	86 mm
Maximum Diameter x Length	Approx. 95 mm/3.7 in. x Approx. 241.5 mm/9.5 in.
Weight	Approx. 2000 g/70.5 oz. (with hood approx. 2130 g/75.1 oz.) (with hood and tripod mount approx. 2325 g/82 oz.)
Package Contents	Lens case HS120-270, Lens hood PH-RBA86, Lens cap O-LC86, Lens mount cap K, Tripod mount O-TM80

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