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# Canon

**FD Lenses** INSTRUCTIONS

**Objectifs FD** NOTICE D'EMPLOI

**FD Objektiv** BEDIENUNGSANLEITUNG

**Objetivos FD** INSTRUCCIONES

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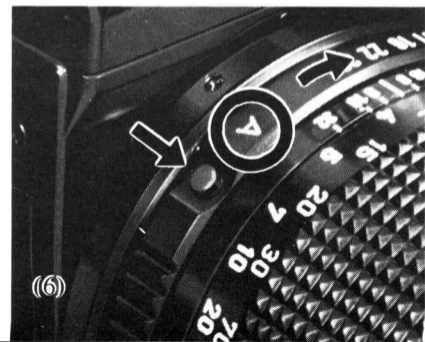
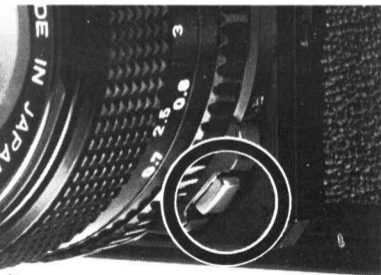
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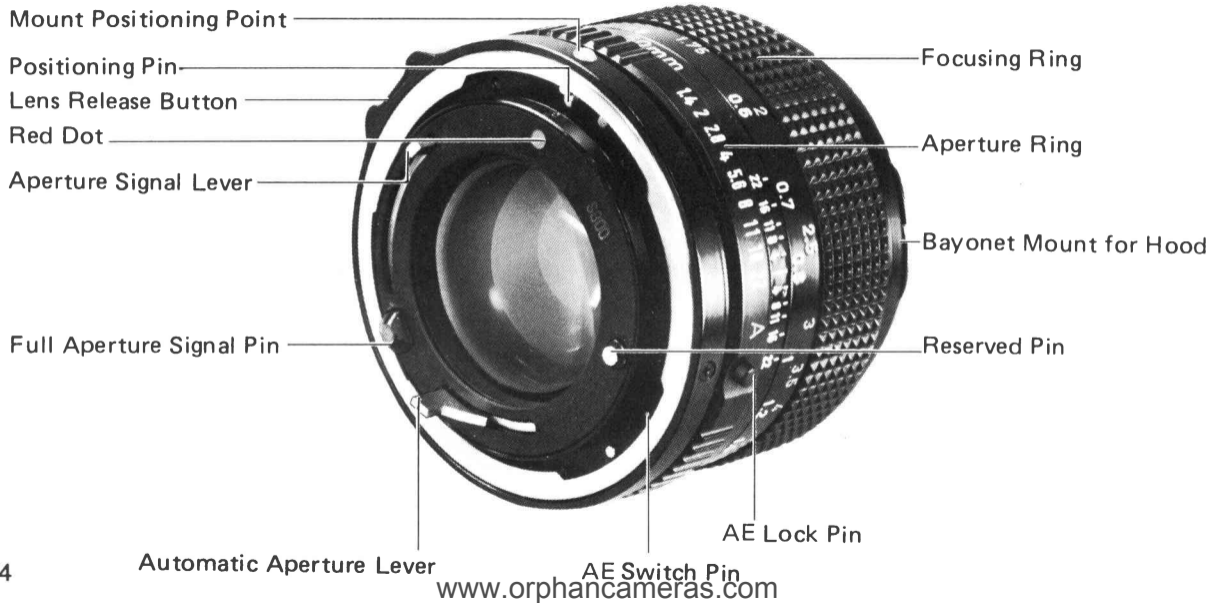
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- Unfold this and last page for easy reference while reading.
- Pendant la lecture de cette notice, dépliez les pages de couverture.
- Zum Lesen der Anleitung empfehlen wir Ihnen, die beiden Seiten am Anfang und Ende der Anleitung auszuklappen.
- Despliegue esta página y la última mientras esté leyendo estas instrucciones.



# Canon New FD Lenses Instructions



### **Aperture Signal Lever**

This lever moves in a 1:1 ratio with the rotation of the lens aperture ring to transmit the preset aperture to the camera meter when performing full-aperture metering. In an AE camera, the camera transmits the preset aperture to the lens via this lever.

### **Full Aperture Signal Pin**

This pin automatically transmits the speed of the lens to the camera the moment the lens is mounted for automatic meter coupling. It also serves to compensate for error in full-aperture metering.

### **Automatic Aperture Lever**

This lever couples with the automatic diaphragm lever in the camera body to close the lens down to the preset aperture automatically at shutter release.

### **AE Lock Pin**

When this pin is depressed, the lens aperture ring can be turned past the minimum aperture to the "A" mark for AE photography. It acts as a safety pin to prevent the lens from being set to "A" by mistake. Use of the "A" setting is restricted to the following Canon cameras when used for AE photography which requires the "A" setting; the New F-1, A-1, AE-1 PROGRAM, AE-1, EF and F-1.

### **Reserved Pin**

This pin is designed for use with possible future additions to Canon's SLR system.

### **AE Switch Pin**

When the lens aperture ring is set to the "A" mark, the AE switch pin comes out to signal to an AE camera that the aperture is to be controlled automatically.

**E**

## INTRODUCTION

**E** This instruction booklet describes the operation and handling of Canon's new FD lenses. These lenses are a new breed of smaller, lighter, easier-to-handle FD lenses. While they have all the usual FD signals, they generally have smaller minimum apertures and closer minimum focusing distances for ever wider shooting versatility. The minimum aperture of these lenses is generally f/22 or smaller. With the single exception of the FD 50mm f/1.8 lens, all new FD lenses are also multi-layer coated for maximum elimination of ghost and flare.

Included in this series is one lens, the Fish-eye 7.5mm lens, which does not have the FD signals and, therefore, requires stopped-down metering.

For a clear understanding of the new FD lenses, please read this instruction booklet carefully.

## HANDLING THE LENS

### Lens Cap and Rear Dust Cap

The lens is provided with protective caps for both front and rear. Both should always be attached when the lens is dismounted. For protection when the lens is mounted but not in use, please make sure that the front cap is attached.

Most lenses come with a clip-on lens cap which is easily attached and removed by pressing in the tabs on both sides of the cap (1). This type of cap can also be attached to a double-screw type filter screwed into the lens. A few lenses come with a screw-in cap or a lid-type cap. The lid-type simply slips over the front of the lens and can be simply pulled off. Unscrew a screw-in cap by turning it counterclockwise.

The rear dust cap is identical for every lens. It must be removed before mounting the lens. To remove it, either turn the lens clockwise or the cap itself counterclockwise until it stops and pull the cap out (2). To replace the rear

dust cap, first align the arrow on its top with the red dot at the rear of the lens. Then, applying slight pressure, turn the cap clockwise until it is tight.

The rear lens cap specified for these lenses has serrated edges. Do not use a rear lens cap which lacks the serrated edges.

### **Mounting onto the Camera**

1. Remove the lens' rear dust cap and the camera's body cap.
2. Align the red mount positioning point on the lens with the red dot above the camera mount (3).
3. In that position, apply slight pressure to the lens and rotate it clockwise until it stops and the lens release button pops out with a click (4).

Do not press the lens release button while mounting the lens.

Only when the lens release button pops out can you be sure that the lens is completely locked on and that it will function properly. In low temperatures, the click sound may not be audible; visually confirm that the lens release button has popped out.

**E**



**E** As a rule, the lens and camera body should be perfectly aligned for mounting. However, on rare occasions, such as when it is very dark or when you are in a great hurry, perfect alignment can be difficult. For easier mounting under these circumstances, Canon has given the mount positioning point a rounded design. Simply find the point with your finger and align it as closely as possible with the red dot on the camera. Then turn the lens only slightly back and forth until it drops into position and, applying slight pressure to the lens, continue to turn it to the right until you hear the click that indicates that the lens release button has popped out. This imprecise procedure is possible when mounting new FD lenses onto most cameras and accessories. However, when mounting the lens onto the Canon Pellix or automatic accessories, such as Extension Tubes FL and FD-U or Extenders FD2x-A, FD2x-B or FD1.4x-A, perfect alignment is required. In any case, excessive sloppiness will make mounting impossible, so please be as accurate as possible.

Please note that, if the aperture ring of the lens is set to "A" before mounting, mounting may be impossible on certain non-AE cameras and accessories.

For further details, please see p.11.

## **Dismounting**

To dismount the lens, turn it counterclockwise, while pressing the lens release button, until it stops (5). Then pull the lens out.

When changing lenses, take special care not to damage the protruding pins and levers on the rear. With the exception of the Fish-eye 7.5mm lens, always put a lens down with the rear facing up and attach the rear dust cap immediately.

When the lens is dismounted, the diaphragm blades are locked in a half-closed position and will not move even if you turn the aperture ring.

## **Hood**

A few lenses have built-in hoods. For most lenses, a bayonet-mount hood is optionally available. Please use only that hood which is specified for the lens in question. The indentations on this type of hood fit into the projections of the bayonet mount at the front of the lens, and the

hood is secured by turning it until it is tight. The BW-52B and BW-52C hoods require proper positioning before mounting. Align the red dot on one of these hoods with the notch in the bayonet mount at the front of the lens and then turn the hood until it is tight (7). A bayonet-mount hood can be reverse-mounted on standard and some wide-angle lenses, and, in these cases, will fit perfectly into the camera's case.

## **Filter**

Most new FD lenses accept a 52mm-diameter filter (58 or 72mm for large-diameter lenses) which screws into the front of the lens. Do not use more than one of this type of filter at a time on a lens having a focal length shorter than 35mm. The use of two or more filters may cause vignetting around the edges of the image.

Lenses with a 52mm filter thread may be fitted with a 55mm screw-in filter by placing a 52-55 Step-up Ring (optional) between the filter and lens (8). When this com-

bination is used on the FD 24mm f/2 lens, vignetting is possible if the lens is used at minimum aperture (f/22) while focused at infinity. On the FD 200mm f/4 lens, it makes extending the built-in hood impossible. With this combination, it is also impossible to mount an accessory lens hood.

**E** The Canon Holder for Gelatin Filters, which clamps onto the front of most lenses with adapters, is optionally available.

The two Canon Fish-eye lenses have built-in filters. The Fish-eye 7.5mm f/5.6 lens has six built-in filters with the following filter factors: SKY (1X), Y3 (2X), O1 (3X), R1 (6X), CCA4 (1.5X) and CCB4 (1.5X). To change filters, rotate the filter ring while pressing the filter lock pin located towards the rear of the lens until the filter ring click-stops at the desired filter (9).

The Fish-eye FD 15mm f/2.8 lens has four built-in filters with the following filter factors: SKY (1X), Y3 (2X), O1 (3X) and R1 (6X). To change filters, rotate the filter ring while

pushing it towards the rear of the lens (10).

For normal photography, the filter rings of these Fish-eye lenses should be set to SKY.

The FD 14mm f/2.8L is constructed with a built-in gelatin filter holder at the lens's rear end. To insert a gelatin filter, simply cut the filter to the same dimensions (1-1/8" (29mm) × 1-1/8" (29mm)) as the white brackets on the rear end of the lens. Then slide the filter into the holder.

Whether using a screw-in, built-in or gelatin filter on an FD lens, exposure correction with filter factors is unnecessary when the lens is mounted on a camera with a through-the-lens meter (including all recent Canon models).

Some filters other than Canon filters may touch the lens surface when used with the FD 17mm f/4, FD 24mm f/1.4L or FD 28mm f/2.8. If this should occur, avoid usage of these filters to prevent damaging the lens surface.

## OPERATION

### Setting the Lens for AE Photography

If, according to the instructions for a Canon AE SLR, the lens aperture ring must be set to "A" for AE photography, this can be done by turning the aperture ring from the minimum aperture to "A" while pressing the AE Lock Pin (6). Follow the reverse procedure to remove the lens from "A."

Use of the "A" setting is restricted to the following Canon cameras when used for AE photography which requires the "A" setting; the New F-1, A-1, AE-1 PROGRAM, AE-1, EF and F-1. The aperture ring should always be off "A" when the lens is used with any other cameras or accessories— including while mounting and dismounting. It is simply impossible to mount the lens onto certain cameras and accessories, such as early AT-1 models and M Extension Tubes, when it is set to "A."

### Manual Diaphragm Control

Manual diaphragm control is necessary whenever a non-automatic accessory is inserted between the camera and lens for close-up shooting and the Canon Macro Auto Ring and/or Double Cable Release are not attached. In manual diaphragm control, the diaphragm will open and close directly with rotation of the lens aperture ring. A new FD lens is set for manual diaphragm control by pushing the automatic aperture lever (located at the rear of the lens ) to the right and locking it in that position with a separate manual diaphragm adapter (11). When the manual diaphragm adapter is attached, never mount the lens directly on the camera or directly on accessories designed for automatic diaphragm control, such as the Auto Bellows or Bellows FL.

Setting the lens for manual diaphragm control is also necessary when the lens is reverse-mounted with a Macrophoto Coupler FL or a Macrophoto Adapter MA for close-up photography. In this case, the Macro Hood must

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also be mounted onto the rear of the lens to unlock the diaphragm blades. Again, this setting is not necessary if the Macro Auto Ring and Double Cable Release are attached for automatic diaphragm control.

For further information concerning the use of an FD lens on your particular Canon SLR, please refer to the camera's instructions.

### **Notes on Focusing**

Focus as usual through the viewfinder by turning the focusing ring.

When using telephoto and super telephoto lenses in extreme temperatures, focusing shifts may occur which will invalidate the distance scale. Due to the focusing shifts, these lenses have an allowance for focusing past infinity. Under these conditions, and even when shooting a far-distant subject, it is especially important to focus through the viewfinder rather than estimating the shooting distance by eye.

With black-and-white infrared film, it is necessary to make a slight adjustment in focus using the infrared index. After focusing through the viewfinder, make the correction by turning the focusing ring to align the focused distance with the infrared index, which is indicated in red. Its position is based on the use of film with a peak sensitivity of 800nm and a red filter (such as Wratten 87).

The Fish-eye 7.5mm lens lacks a focusing ring. This is because its short focal length makes depth of field so deep that focusing is not necessary.

## LENS ACCESSORY

### Canon Extenders

Each Canon extender is an accessory which has five signals. When using extender FD 2x or FD 1.4x, the focal length of the prime lens increases 2x or 1.4x respectively. With extenders FD 2x and FD 1.4x, the effective aperture of the prime lens changes so that each f/stop on the lens aperture scale actually stands for an aperture which is two f/stops and one f/stop smaller respectively.

- FD 2x Type A is for FD telephoto lenses whose focal lengths are 300mm or longer. It can be used with an FD zoom lens which has 300mm within its focal length range. However, if using the Canon Macro Lens FD 200mm f/4 with an FD extender, it is recommended to use the FD 2x Type A.

- FD 2x Type B is for any FD lens whose focal length is less than 300mm, including any FD zoom lens whose maximum focal length does not reach 300mm.

However, if using an FD 300mm f/2.8L with an FD Extender

2x, it is recommended to use the type B.

● FD 1.4x Type A is for any fixed focal length FD lens whose focal length is 300mm or longer.

**E** Since they do not affect the minimum focusing distance of the prime lens, it is possible to focus closer and magnify the subject more than would be possible with a fixed focal length lens equal in focal length to the prime lens/extender combination.

## CARE AND STORAGE OF THE LENS

The first thing to keep in mind is to avoid touching the lens surface. Even with this precaution, the lens should be cleaned regularly. Especially when used outdoors, it is possible for dust and other foreign particles to adhere to the lens surface without your noticing it. Obtain cleaning materials manufactured especially for camera lenses, such as a blower brush and lens-cleaning tissue and fluid. Never use a handkerchief, eyeglass tissue, facial tissue or any other cloth which might permanently scratch the lens, and never use a cloth treated with a chemical which might totally ruin the lens coating.

The first step in cleaning the glass surface of the lens is to blow off dust particles with a blower brush. It is not advisable to use a cloth for this purpose since it is very liable to scratch the lens. Then, if you have accidentally smudged the lens with fingerprints or whatever, put only one or two drops of the lens-cleaning fluid on the lens tissue, not the lens!, and, starting at the center of the lens, lightly wipe it while working towards the outer edges in a circular motion. To clean the lens body, first blow off dust with a second blower brush. You may use a silicone cloth or chamois leather, if necessary, to wipe off smudges. Never use a silicone cloth or chamois leather on the glass surface of the lens!

The lens should be cleaned particularly well immediately after using it at the beach. Nothing can harm a lens more than sand and salt water, and even salt water on the breeze may have an effect.

For best performance, it is best to use the lens regularly. If, for some reason, it is necessary to store the lens for quite a long period, first remove it from any soft case or camera bag. Then wrap it in a clean, soft cloth and store it in a cool, dry, dust-free place.

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It is also very important to keep the lens away from great heat; storing it in the rear window shelf or glove compartment of an automobile is absolutely taboo. After storing a lens for a long time, mount it on the camera and take several blank shots to make sure everything is in working order.

With these few precautions, Canon's new FD lenses will serve you long and well. Should you have any problems, please refer them to the nearest authorized Canon service facility.

Subject to change without notice.