

Pentax DA 18-250mm f/3.5-6.3 ED AL IF

Pentax DA 18-250mm f/3.5-6.3 ED AL IF Lens Instruction Manual

Model: DA 18-250mm f/3.5-6.3 ED AL IF

1. INTRODUCTION

This manual provides essential information for the proper use and care of your Pentax DA 18-250mm f/3.5-6.3 ED AL IF Lens. Designed for exclusive use with Pentax and Samsung digital SLR cameras, this versatile lens offers an approximate 14x zoom ratio, covering a wide range of focal lengths from wide-angle to super-telephoto.

Key features include:

- **14x Zoom Range:** Covers 18-250mm, making it suitable for various photographic applications.
- **Advanced Optics:** Features ED (Extra-low Dispersion) elements and two aspherical elements to minimize chromatic and spherical aberrations, ensuring high image quality.
- **Close Focusing:** Capable of focusing as close as 18 inches (0.46 meters) throughout the entire zoom range.
- **Internal Focus (IF) Mechanism:** Prevents the front lens element and lens barrels from rotating or extending during focusing, which is beneficial for using polarizing filters and lens hoods.



Figure 1: Front view of the Pentax DA 18-250mm f/3.5-6.3 ED AL IF Lens. This image shows the front element and the lens markings, including the filter diameter ($\phi 62\text{mm}$) and focal length range.

2. SETUP AND INSTALLATION

2.1 Attaching the Lens to Your Camera

1. **Prepare the Camera:** Ensure your camera is turned off. Remove the body cap from the camera and the rear lens cap from the lens. Avoid touching the camera's sensor or the lens's rear element.
2. **Align the Mounts:** Align the red or white index mark on the lens barrel with the corresponding index mark on your camera's lens mount. The Pentax DA 18-250mm lens uses a Pentax KAF2 mount.
3. **Attach the Lens:** Insert the lens into the camera's mount and rotate it clockwise (when viewed from the front) until it clicks securely into place. Do not force the lens.
4. **Remove Front Cap:** Remove the front lens cap. Your lens is now ready for use.



Figure 2: Rear view of the Pentax DA 18-250mm lens, illustrating the KAF2 mount. This image shows the metal mount and electronic contacts for communication with the camera body.

2.2 Attaching the Lens Hood (PH-RBB 62mm)

A lens hood helps to prevent stray light from entering the lens, reducing flare and ghosting. It also offers some physical protection to the front element.

- Align the lens hood with the front of the lens.
- Rotate the hood until it locks into position. Ensure it is securely attached and does not obstruct the view.

3. OPERATION

3.1 Zooming

To adjust the focal length, rotate the zoom ring on the lens barrel. The lens covers a range from 18mm (wide-angle) to 250mm (super-telephoto). The focal length markings are indicated on the lens barrel.



Figure 3: Side view of the Pentax DA 18-250mm lens, highlighting the zoom ring and focal length markings. This image shows the lens extended to a longer focal length.

3.2 Focusing

This lens supports both autofocus (AF) and manual focus (MF).

- **Autofocus:** Set your camera to AF mode. The lens uses a screw-drive mechanism from the camera body for autofocus. Press the shutter button halfway to activate autofocus.
- **Manual Focus:** Set your camera to MF mode. Rotate the focusing ring on the lens barrel to achieve sharp focus. Note that the focusing ring may feel sensitive, and some users report a grinding noise during manual focus.

The internal focus mechanism ensures that the front element does not rotate during focusing, which is convenient for using circular polarizers or graduated neutral density filters.

3.3 Aperture Control

The aperture is controlled automatically by the camera. The lens features a fully automatic diaphragm with 7 aperture blades. The minimum aperture ranges from f/22 to f/45, depending on the focal length.

3.4 Lens Creep

Due to its zoom range, this lens may experience "lens creep," where the lens barrel extends or retracts under its own weight when pointed upwards or downwards. Some users find the zoom lock useful to prevent this, though this specific model may not have a dedicated lock. Handle the lens carefully to maintain your desired focal length.

4. MAINTENANCE AND CARE

4.1 Cleaning the Lens

- **Dust:** Use a blower brush to remove dust from the lens surfaces.
- **Smudges/Fingerprints:** For stubborn marks, use a clean, soft microfiber cloth specifically designed for optical lenses, along with a small amount of lens cleaning fluid. Apply the fluid to the cloth, not directly to the lens.
- **Avoid Abrasives:** Never use abrasive materials, solvents, or harsh chemicals to clean the lens.

4.2 Storage

- Store the lens with both front and rear caps attached to protect the elements from dust and scratches.
- Keep the lens in a cool, dry place, away from direct sunlight and extreme temperatures.
- If storing for extended periods, consider using a dehumidifying agent to prevent mold growth.

5. TROUBLESHOOTING

- **Lens Not Focusing:**
 - Ensure the camera is set to the correct focus mode (AF or MF).
 - Check for sufficient light. In very low light, autofocus may struggle.
 - Verify the lens is securely mounted to the camera body.
- **Blurred Images:**
 - Check your shutter speed. Use a faster shutter speed or a tripod in low light to prevent camera shake.
 - Ensure the lens elements are clean.
 - Confirm focus is achieved before taking the shot.
- **Vignetting (Dark Corners):**
 - Vignetting can be more noticeable at wider focal lengths and wider apertures. This is a characteristic of some lenses.
 - Ensure no accessories (e.g., multiple filters, incorrect lens hood) are obstructing the lens's view.
- **Lens Creep:**
 - This is a known characteristic of some superzoom lenses. Support the lens with your hand when pointing the camera up or down to maintain the desired focal length.

6. SPECIFICATIONS

Feature	Description
Model Name	Pentax DA 18-250mm f/3.5-6.3 ED AL IF
Focal Length	18-250mm (equivalent to 27.5mm to 383mm in 35mm format)
Maximum Aperture	f/3.5 (at 18mm) - f/6.3 (at 250mm)
Minimum Aperture	f/22 - f/45
Lens Construction	ED element and two aspherical elements
Angle of View	76 to 6.5 degrees
Minimum Focus Distance	1.48 feet (0.45 meters) / 18 inches
Maximum Magnification	0.28x
Filter Diameter	62mm
Diaphragm Blades	7 (fully automatic)
Lens Mount	Pentax KAF2
Focus Type	Screw drive from camera (Internal Focus)
Dimensions (Diameter x Length)	Approximately 3 inches x 3.4 inches (76mm x 86mm)
Weight	16 ounces (455 grams) (without hood)
Compatible Cameras	Pentax and Samsung Digital SLR Cameras

7. WARRANTY AND SUPPORT

Specific warranty information for this product is typically provided at the time of purchase or included with the product packaging. Please refer to your purchase documentation or the manufacturer's official website for details regarding warranty coverage, terms, and conditions.

For technical support, service, or inquiries, please contact Pentax customer service or visit their official support channels. Keep your proof of purchase handy when seeking support.

Manufacturer: Pentax