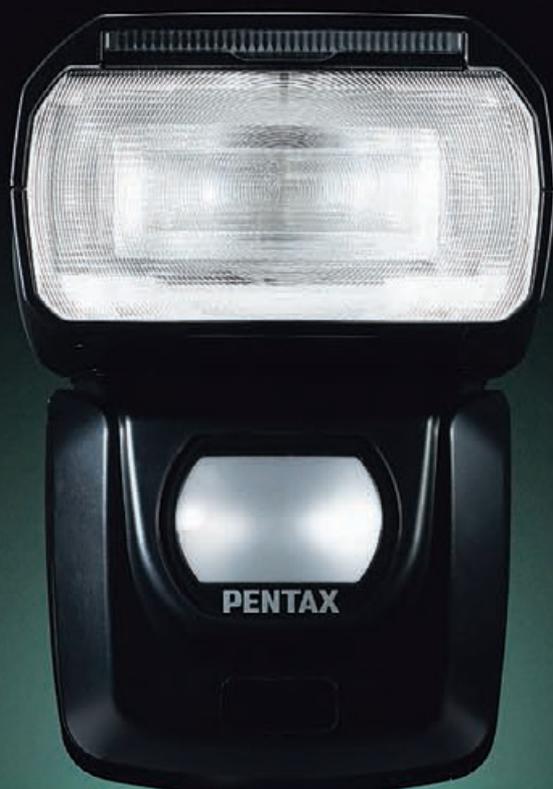


**RICOH**  
imagine. change.

**PENTAX K-mount**  
Lenses & Accessories



LENSES and ACCESSORIES



# PENTAX lenses capture the diverse expressions of light

Nearly two centuries have passed since Frenchman Joseph Niépce captured the world's first photographic image. Although the mainstream of photography has shifted from silver halide film to digital, the essence of the camera remains unchanged: to capture the light as truthfully as it is.

PENTAX has developed a series of state-of-the-art photographic lenses as part of its relentless pursuit to deliver the ultimate in photographic images. This work is based on the belief that lenses are the key element in creating photographic expression that has a powerful impact on the viewer's emotions.

In its quest to optimize the possibilities and excitement of photographic expression, PENTAX not only places great importance on the numerical values related to optical performance, but also treasures the specific characteristics of each individual lens, which leave a powerful impact on the viewer's sensibilities.

For 35mm full-frame and APS-C-format SLR cameras

35mm Full Frame / APS-C

High-performance lens series optimized for characteristics of digital imaging

**DFA\*** **DFA**

The image circle (the circular area where the light coming through the lens forms the image on the image sensor) of these two series covers a 35mm full-frame image area. When mounted on a PENTAX digital SLR camera body, they deliver exceptional resolution, contrast, color reproduction and operability. The super-high-performance D FA\*-series lenses suppress various aberrations to a minimum, while the D FA-series lenses provide well-balanced optical performance. These series can also be used on APS-C-format digital SLR cameras.

Single-focus lens series designed for optimum descriptive power

**FA Limited** **FA**

These series consist of single-focus lenses renowned for their brilliant color reproduction, rich gradation and superb sense of depth. The FA-series lenses are long-selling models favored by many leading professionals. The FA Limited-series lenses provide unique focal lenses drawn from professional advice and incomparable imaging power proven over repeated performance assessments of actual images. These series can also be used on 35mm film-format cameras.

For APS-C-format SLR cameras

APS-C

Compact, lightweight lens series providing exceptional imaging power and operability

**DA\*** **DA Limited** **DA**

These compact, lightweight series are optimized for the image circle of APS-C-format cameras, and deliver high-resolution, high-contrast images with minimal flare and ghost images. They provide a wide selection of high-performance lenses, including the super-high-performance DA\* series, and the DA Limited series that creates rich, artistic visual expressions. These lenses can also be used on 35mm full-frame digital SLR cameras in the Crop mode.

SR and SR II in-body shake reduction mechanisms are the key to creative lens design



PENTAX K-series digital SLR cameras incorporate an SR (Shake Reduction) mechanism in their body. Because this mechanism effectively compensates for camera shake on the camera body side, it meant that PENTAX lens designers no longer needed to install anti-shake optics or mechanism within the lens body. They could instead creatively and flexibly design new lenses for optimal image power and compact size. The new-generation SR II five-axis mechanism even compensates for camera shake caused by roll, something difficult to handle by lens-installed shake reduction mechanisms.



High-performance D FA Star-series lenses, created through an uncompromising quest for the ultimate in digital imaging



HD PENTAX-D FA\* 70-200mmF2.8ED DC AW



High-image-quality lens series optimized for 35mm full-frame format, delivering rich gradation and fine image description



HD PENTAX-D FA 24-70mmF2.8ED SDM WR

Super-high-performance 35mm full-frame lenses with exceptional image quality and outstanding operability, developed by applying the latest optical technologies

The D FA Star series is designed for the ultimate in image quality. To gain the Star (★) designation, a lens must excel in every aspect of imaging performance at all focal lengths and shooting distances — not only in its overall imaging performance, but also in sharpness, contrast, color rendition, and texture reproduction. In addition, it must be a large-aperture lens with the highest brightness level. PENTAX even considers such optical qualities as the bokeh (defocus) effect, clearness and image definition in its lens evaluation, further incorporating human sensibilities into the lens design process. To achieve this goal, PENTAX invested all its technologies and resources into lens production, including the latest lens design, optimum lens coatings, special optical glass materials and aspherical lens elements. PENTAX also harmonizes performance with functionality: it mastered the fitting of large-aperture optics into a compact lens barrel through the adoption of a smooth AF mechanism driven by a motor installed in the lens, and a dustproof, weather-resistant structure that withstands harsh environmental conditions.



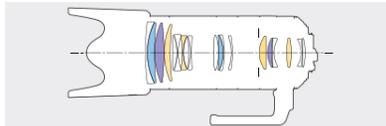
HD PENTAX-D FA\* 70-200mmF2.8ED DC AW

When mounted on an APS-C-format digital SLR camera: equivalent to 107mm to 307mm (in the 35mm format)



- Dustproof & weather-resistant
- DC
- Quick-Shift Focus
- SP coating
- Aero Bright Coating II
- HD Coating
- Round Diaphragm

This large-aperture telephoto zoom lens has a maximum aperture of F2.8 over its entire zoom range. Thanks to advanced coating technologies including the newly developed Aero Bright Coating II and HD Coating, it delivers clear, high-contrast images with minimal flare and ghost images, even in backlit scenes. With the incorporation of four Anomalous Dispersion glass elements, two ED (Extra-low Dispersion) glass elements and two Super ED glass elements to assure excellent compensation of chromatic aberration, this lens assures remarkable imaging performance across the entire image field — from the center to the edges — at all focal lengths.



A selection of high-performance lenses perfect for latest PENTAX digital SLR cameras

This series is designed for exclusive use with PENTAX digital SLR cameras that feature a new optical system optimized for a high-pixel image sensor. It delivers crisp, fine-detailed images, thanks to the latest lens coating technologies that minimizes the deterioration of contrast caused by flare and ghost images. Since it provides an image circle covering the 35mm full-frame image field, all lenses of this series can be used on any PENTAX K-mount digital SLR camera body. This series lets you enjoy the superb imaging power and excellent operability made possible by PENTAX's advanced lens technologies.

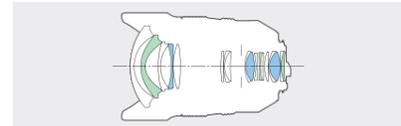
HD PENTAX-D FA 15-30mmF2.8ED SDM WR

When mounted on an APS-C-format digital SLR camera: equivalent to 23mm to 46mm (in the 35mm format)



- Weather-resistant
- SDM
- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm

This ultra-wide-angle zoom lens features an extra-wide angle of view for sweeping landscapes, and a well-defined sense of depth. It incorporates a set of ED glass elements and AL (aspherical lens) elements to effectively minimize distortion, while optimizing resolution and contrast even with an open aperture. Its HD Coating helps minimize the deterioration of contrast caused by flare and ghost images. Incorporating such advanced features as Round Diaphragm to minimize the streaking effect of point light sources, SDM (Supersonic Direct-drive Motor), Quick-Shift Focus system, and a weather-resistant structure, this lens is ideal for capturing everything from snapshots to star-filled landscapes.



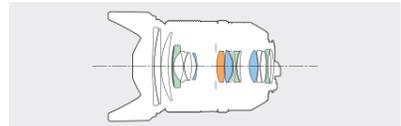
HD PENTAX-D FA 24-70mmF2.8ED SDM WR

When mounted on an APS-C-format digital SLR camera: equivalent to 37mm to 107mm (in the 35mm format)



- Weather-resistant
- SDM
- Quick-Shift Focus
- HD Coating
- Round Diaphragm

This standard zoom lens provides a zoom ratio of approximately 2.9 times to cover the ultra-wide-angle to standard ranges. It can be used not only for everyday scenes, but also for more specialized applications demanding an exaggerated perspective or extra-wide depth of field. It features three ED glass elements, one Anomalous Dispersion glass AL element, and three AL elements to deliver well-illustrated, fine-detailed images that are rich in contrast and resolution across the entire image field, while compensating various aberrations to a minimum. Coupled with HD Coating, Round Diaphragm, high-speed AF system with quiet operation, and weather-resistant structure, it assures the excellent performance required for a standard-use lens.



# DFA



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



SMC PENTAX-D FA MACRO 100mmF2.8 WR

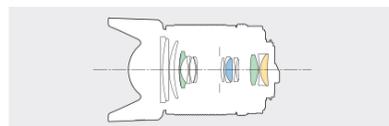
## HD PENTAX-D FA 28-105mmF3.5-5.6ED DC WR

When mounted on an APS-C-format digital SLR camera: equivalent to 43mm to 161mm (in the 35mm format)



- Weather-resistant
- DC
- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm

This high-magnification zoom lens is designed to be compact and lightweight to optimize the imaging power and operability of a PENTAX 35mm full-frame digital SLR camera. Its versatile design makes it useful in a wide variety of applications, from scenic and indoor photography to snapshots and portraits. Incorporating AL elements, an ED glass element and an Anomalous Dispersion glass element, it delivers high-resolution images while compensating various aberrations to a minimum. Coupled with a weather-resistant structure, HD Coating assuring well-defined, high-contrast images even in backlight, and the Round Diaphragm creating a beautiful bokeh effect, this lens performs superbly in many different situations.



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

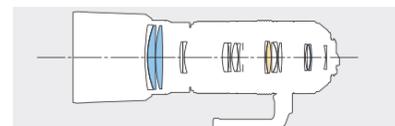
When mounted on an APS-C-format digital SLR camera: equivalent to 230mm to 690mm (in the 35mm format)



- Dustproof & weather-resistant
- DC
- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm

Despite its three-times zoom ratio, this super-telephoto zoom lens is ideal for hand-held shooting of a distant subject, such as wild birds, aircraft or sporting events. Featuring ED glass and Anomalous Dispersion glass elements, its state-of-the-art optics effectively compensates various aberrations to a minimum. Its HD Coating effectively minimizes flare and ghost images in backlight to assure clear, high-contrast images. Its lens barrel features four AF buttons\* — one each at 90-degree positions — to assure speedy, reliable AF operation regardless of the camera's setup.

\* Compatible cameras are the K-1, KP, K-3II, K-3, K-70, K-S2 and K-S1. With the K-3 and K-S1, the camera's firmware must be updated to the latest version.



## Single-focus macro lens optimized for digital imaging, and ideal for life-size macro photography

PENTAX-D FA-series macro lenses capture dynamic images of the tiny shapes and subtle colors concealed in the microscopic world, beautifully recreating the images of such micro subjects on the camera's image sensor up to life-size magnification. PENTAX has optimized the lens coating, curvature and position of every optical element to meet the specific characteristics of digital imaging. The result is a series of macro lenses that deliver clear, fine-detailed images even in undesirable conditions such as backlight, while suppressing the generation of flare and ghost images to a minimum. The D FA MACRO 50mm lens provides an aperture ring for use with PENTAX film-format cameras.

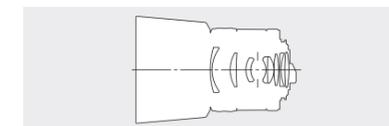
## SMC PENTAX-D FA MACRO 50mmF2.8

When mounted on an APS-C-format digital SLR camera: equivalent to 76.5mm (in the 35mm format)



- Quick-Shift Focus
- Camera motor AF
- Aperture ring

Designed to be compact and lightweight, this macro lens assures optimum performance in digital imaging, with a minimum focusing distance of 0.195 meters for life-size macro photography. An advanced floating lens system delivers sharply focused images with minimal aberrations, regardless of the shooting distance. In addition to macro photography, it also produces sharp, bright images in normal shooting applications, such as scenic photography. Its focus clamp mechanism lets you lock the in-focus point at any desired distance, while its wide focus ring improves the efficiency of manual-focus operation.



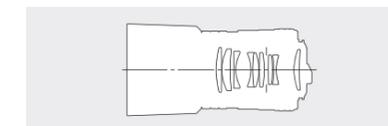
## SMC PENTAX-D FA MACRO 100mmF2.8 WR

When mounted on an APS-C-format SLR camera: equivalent to 153mm (in the 35mm format)



- Weather-resistant
- Quick-Shift Focus
- SP coating
- Round Diaphragm
- Camera motor AF

Thanks to its working distance greater than that of the Macro 50mm lens, this lens offers life-size macro photography at a minimum focusing distance of 13 centimeters between the surface of its front lens and the subject. Its weather-resistant body is made of high-grade aluminum alloy, and features no aperture ring to reduce the size and weight. Thanks to a sophisticated FREE (Fixed Rear Element Extension) system, it produces sharp, high-contrast images at all shooting distances. At larger apertures (between open aperture and F5.6), it provides the Round Diaphragm to create a beautiful bokeh effect in the background.



A superb image rendition and the subtle expression of ambience — visual elements treasured over generations



SMC PENTAX-FA 43mmF1.9 Limited



SMC PENTAX-FA 77mmF1.8 Limited

## High-grade single-focus lenses assuring well-defined images with rich gradation and truthful color reproduction

Since FA Limited- and FA-series lenses provide an image circle covering the image field of a 35mm full-frame image sensor, they can also be used on 35mm film-format cameras. They have been highly acclaimed for rich gradation and deep color reproduction over the years. The FA Limited series offers unique focal lengths — based on the advice received from many experienced professionals — and exceptional optical performance. This series is also designed to provide distinctive visual expressions unique to each lens, based on a review of numerous images captured during repeated shooting tests. Featuring high-grade, machined aluminum-alloy bodies, they make the perfect partners for PENTAX digital SLR cameras. These high-grade single-focus lenses will become treasured part of your photographic gear for years to come.

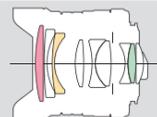
### SMC PENTAX-FA 31mmF1.8AL Limited

When mounted on an APS-C-format digital SLR camera: equivalent to 47.5mm (in the 35mm format)



Camera motor AF Aperture ring

With a focal length of 31mm, this lens adds a unique sense of personality and ambience to your images. Its optics combines a large F1.8 maximum aperture with a glass-molded AL element, a high refractive index low dispersion glass element and an Anomalous Dispersion glass element to produce clear, sharply focused images with a natural perspective. It also features an advanced floating lens system to assure optimum imaging performance at all shooting distances. In every aspect, it satisfies PENTAX's stringent standards for an exclusive Limited-series model. It also features an integrated flower-shaped hood, which provides easy attachment and removal of a circular polarizing filter.



### SMC PENTAX-FA 43mmF1.9 Limited

When mounted on an APS-C-format digital SLR camera: equivalent to 66mm (in the 35mm format)



Camera motor AF Aperture ring

Incorporating Ghostless Coating for clear, crisp images, and high-refraction glass elements for compensation of various aberrations, this high-performance lens delivers outstanding imaging power. Its single-focus design provides many benefits, including: a large maximum aperture of F1.9; superb image rendition rich in sharpness, contrast and a sense of depth; close-up shooting from a minimum distance of 0.45 meters; and a natural, smooth bokeh effect created by eight aperture blades. Measuring a mere 27 millimeters in length, this slim lens offers outstanding portability, allowing you to constantly keep it on the camera as a regular-use lens.



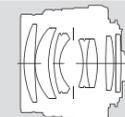
### SMC PENTAX-FA 77mmF1.8 Limited

When mounted on an APS-C-format digital SLR camera: equivalent to 118mm (in the 35mm format)



Camera motor AF Aperture ring

Featuring a host of advanced technologies such as high-refraction optical elements and Ghostless Coating, this medium-telephoto lens delivers well-defined, rich-gradation images with a fine expression of shadow areas. The combination of a large F1.8 maximum aperture and a natural bokeh effect created by nine aperture blades adds a distinctive ambience and a well-defined sense of depth to the captured image. It also incorporates the FREE system, which shifts only the front group of the optics during focusing operation, while the rear group remains fixed. This high-grade lens assures solid image-forming performance from a minimum focusing distance of 0.7 meters to infinity.



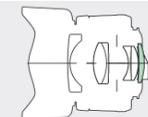
### SMC PENTAX-FA 35mmF2AL

When mounted on an APS-C-format digital SLR camera: equivalent to 53.5mm (in the 35mm format)



Camera motor AF Aperture ring

This single-focus lens produces beautiful images with rich gradation and deep color reproduction. Featuring a hybrid AL element, optics treated with Ghostless Coating and a large, flower-shaped hood, it eliminates flare and coma aberration at the edges of the image field — problems common with large-aperture, wide-angle lenses. It also effectively reduces various aberrations, and delivers sharp, high-contrast images across its entire image field and at all shooting distances, making it an ideal partner for PENTAX digital SLR cameras. The included flower-shaped hood provides a window for easy control of a circular polarizing filter.



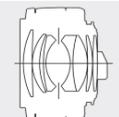
### SMC PENTAX-FA 50mmF1.4

When mounted on an APS-C-format digital SLR camera: equivalent to 76.5mm (in the 35mm format)



Camera motor AF Aperture ring

Thanks to its Modified Gauss-type optics, this high-performance standard lens provides a large, bright maximum aperture of F1.4 without compromising its optical design, and is regarded as the yardstick for all PENTAX interchangeable lenses. When mounted on digital SLR camera, it also captures brilliant images of all subjects, from portraits and still life to scenery. Because of its large aperture, it can be effectively used in applications such as indoor shooting at a location where use of a flash is restricted, and portraiture with a beautifully defocused background taken at open aperture.





SMC PENTAX-DA★ 300mmF4ED[IF] SDM

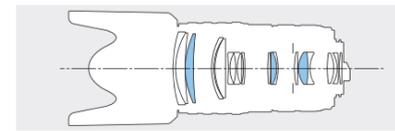
### SMC PENTAX-DA★ 50-135mmF2.8ED[IF] SDM

When mounted on an APS-C-format digital SLR camera: equivalent to 76.5mm to 207mm (in the 35mm format)



- Dustproof & weather-resistant
- SP coating
- SDM
- Camera motor AF
- Quick-Shift Focus

This high-performance zoom lens harmonizes a large F2.8 aperture with a compact body and ease of operation. Featuring three ED glass elements, it minimizes chromatic aberration, which affects image-forming performance. It delivers sharp images with very little color bleeding, even in the most minute details. It also helps to make the subject stand out by producing a smooth transition of gradations in the background. It can be used in a wide range of applications, including portraiture with a beautifully defocused background, stage performance shooting with the help of quiet SDM-driven autofocus operation, and outdoor photography.



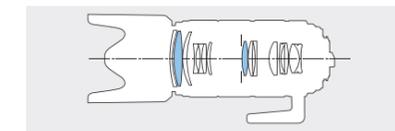
### SMC PENTAX-DA★ 60-250mmF4ED[IF] SDM

When mounted on an APS-C-format digital SLR camera: equivalent to 92mm to 383mm (in the 35mm format)



- Dustproof & weather-resistant
- SP coating
- SDM
- Camera motor AF
- Quick-Shift Focus

With an approximately 4.2-times zoom ratio, this lens covers the medium-telephoto to super-telephoto ranges, making it ideal for a wide range of subjects including portraiture, stage performance, sports events and outdoor activities. Featuring two ED glass elements, it delivers sharp images with brilliant color reproduction and minimal chromatic aberration. It also maintains the same F4 maximum aperture over the entire zoom range. Since its IF system eliminates the weight shift during focusing operation, you can combine it with the camera's SR (Shake Reduction) mechanism to remove the camera from a tripod for worry-free handheld shooting.



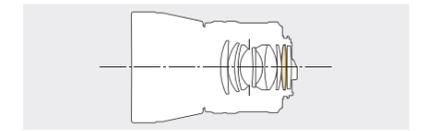
### SMC PENTAX-DA★ 55mmF1.4 SDM

When mounted on an APS-C-format digital SLR camera: equivalent to 84.5mm (in the 35mm format)



- Dustproof & weather-resistant
- SP coating
- SDM
- Aero Bright Coating
- Quick-Shift Focus
- Round Diaphragm

This high-performance medium-telephoto lens features Aero Bright Coating to improve transmissivity to an unprecedented level, Anomalous Dispersion glass elements to minimize color bleeding, and state-of-the-art optics to optimize contrast and sharpness. Thanks to its large maximum aperture of F1.4 and Round Diaphragm (up to F2.8), it produces clear, high-resolution, high-quality images with a beautiful bokeh effect, lively colors and distinctive ambience. Its outstanding image power is ideal for portraiture.



## Super-high-performance lens series accommodating high-pixel image sensors, and meeting exacting user demands for imaging performance and reliability

The Star lens series embodies PENTAX's ideal for image quality and performance. The DA Star series is optimized for the image circle of APS-C-sized image sensors, while attempting to downsize the body. Its state-of-the-art optical design takes specific characteristics of digital SLR cameras into consideration. To accommodate high-pixel image sensors, it features a host of advanced technologies, such as ED glass and AL elements, to reduce various aberrations to a minimum. The result is high-contrast, high-resolution images from open aperture. Its operability and reliability are further enhanced by features such as smooth AF operation driven by a lens-installed motor, and a dustproof, weather-resistant structure withstanding harsh environmental conditions.



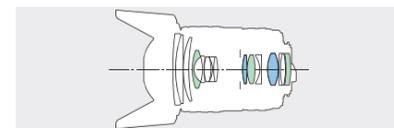
### SMC PENTAX-DA★ 16-50mmF2.8ED AL[IF] SDM

When mounted on an APS-C-format digital SLR camera: equivalent to 24.5mm to 76.5mm (in the 35mm format)



- Dustproof & weather-resistant
- SP coating
- SDM
- Camera motor AF
- Quick-Shift Focus

Featuring compact optics with two ED glass elements and three AL elements, this standard zoom lens produces high-resolution, high-contrast images with rich, brilliant color reproduction, while effectively compensating for chromatic and other aberrations. This high-performance zoom lens is also optimized for digital imaging, as it delivers well-illustrated, distortion-free images even at the ultra-wide-angle end, and provides a maximum aperture of F2.8 over the entire zoom range. To enhance holding comfort during shooting, it features the IF (Inner Focus) system, which keeps the total lens length unchanged to retain the optimum balance during focusing operations.



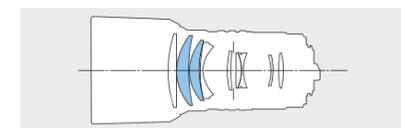
### SMC PENTAX-DA★ 200mmF2.8ED[IF] SDM

When mounted on an APS-C-format digital SLR camera: equivalent to 307mm (in the 35mm format)



- Dustproof & weather-resistant
- SP coating
- SDM
- Camera motor AF
- Quick-Shift Focus
- FF lens aberration correction

Incorporating ED glass elements into its second and third lenses, this telephoto lens reduces chromatic and other aberrations to a minimum, while delivering well-defined, high-resolution images with a beautiful bokeh effect and fine-detailed shadows. Its super-telephoto design creates unique visual effects, such as a shallow depth-of-field and a compressed perspective. Thanks to its large maximum aperture of F2.8, it can be comfortably used in handheld shooting. Its IF system also reduces the minimum focusing distance to a mere 1.2 meters, making it a useful tool in close-up photography.



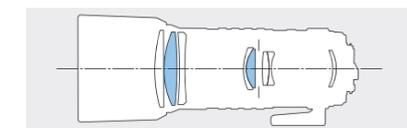
### SMC PENTAX-DA★ 300mmF4ED[IF] SDM

When mounted on an APS-C-format digital SLR camera: equivalent to 460mm (in the 35mm format)



- Dustproof & weather-resistant
- SP coating
- SDM
- Camera motor AF
- Quick-Shift Focus
- FF lens aberration correction

Incorporating ED glass elements in its second and fifth lenses, and featuring the IF system in its optics, this super-telephoto lens effectively minimizes various aberrations which cause the deterioration of image quality. Despite its drastically downsized body, it delivers clear, high-contrast images. Thanks to such advanced technologies as SDM featured in its AF driving mechanism, it also assures smooth, comfortable operation, making it perfect for such active subjects as stage performers and athletes. It comes with a rotating tripod mount for quick, easy attachment to and removal from a tripod.



## Compatibility with a 35mm full-frame digital SLR camera

The DA★, DA Limited- and DA-series lenses can be used with the PENTAX K-1 35mm full-frame digital SLR camera to capture APS-C-format images using the camera's Crop mode. By switching the camera's Crop mode setting to FF, you can also capture 35mm full-frame images.\*

\* With certain lenses and/or under certain shooting conditions, a captured image may suffer a drastic drop in brightness and/or resolution in the areas outside the APS-C image area.

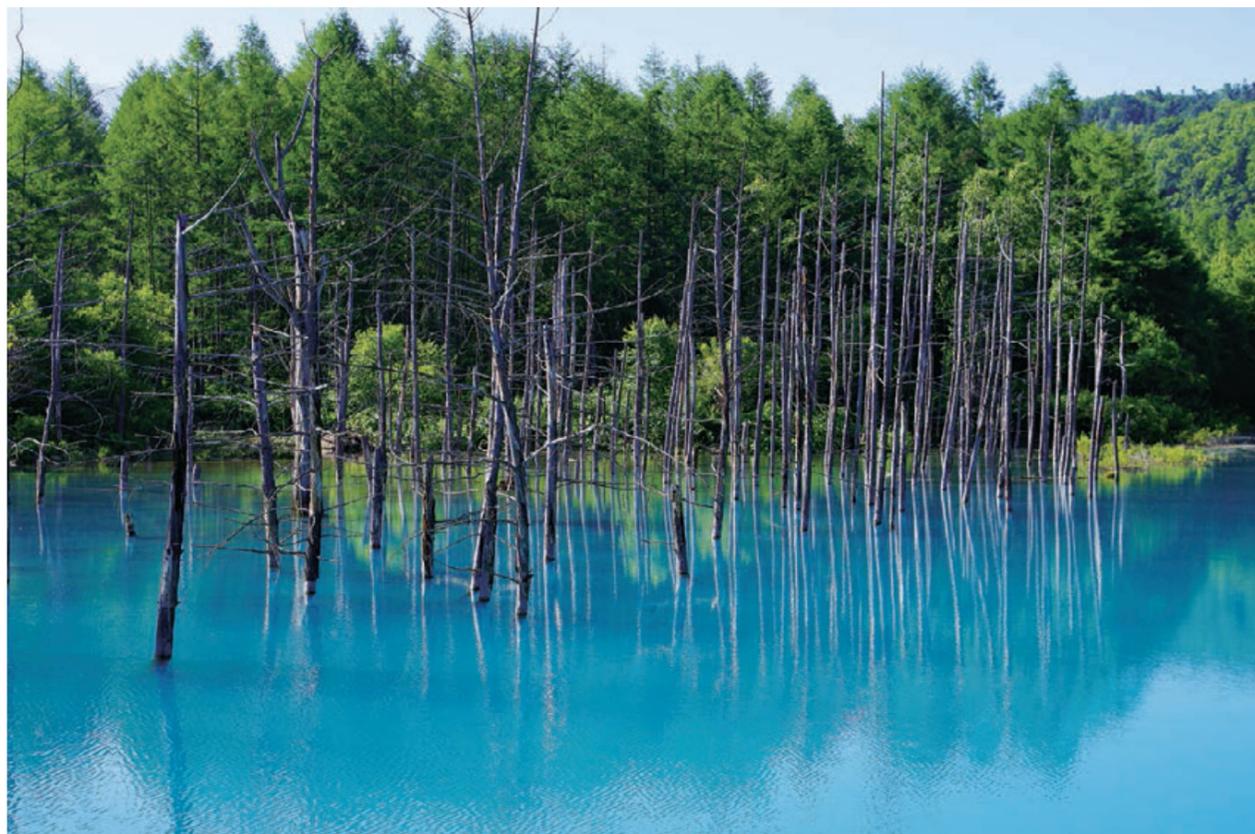
### FF lens aberration correction

The following DA-series lenses cover the 35mm full-frame image area. They are also compatible with the PENTAX K-1's lens aberration correction function.\*\*

- SMC PENTAX-DA★ 200mmF2.8ED[IF] SDM
- SMC PENTAX-DA★ 300mmF4ED[IF] SDM
- HD PENTAX-DA 560mmF5.6ED AW

\*\* This function does not guarantee the quality of the image outside the APS-C image area.

Creating a distinctive visual expression beyond mere numerical values, with excellent reproduction of depth and perspective



HD PENTAX-DA 40mmF2.8 Limited

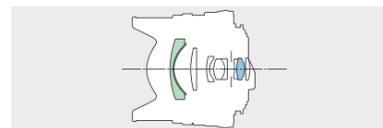
## HD PENTAX-DA 15mmF4ED AL Limited

When mounted on an APS-C-format digital SLR camera: equivalent to 23mm (in the 35mm format)



- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm
- Camera motor AF

This ultra-wide-angle lens features HD Coating to minimize reflections and deliver high-contrast images. Regardless of the position of a light source, it assures outstanding imaging power, while its extra-wide perspective allows for flexible image framing. Thanks to an AL element and an ED glass element, it produces well-defined, high-resolution images with minimal distortion and chromatic aberration. Its front surface is treated with SP Coating to protect it from staining. It also comes with a flower-shaped retractable hood and a screw mount for 49mm filters.



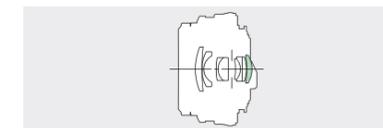
## HD PENTAX-DA 21mmF3.2AL Limited

When mounted on an APS-C-format digital SLR camera: equivalent to 32mm (in the 35mm format)



- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm
- Camera motor AF

Measuring a mere 25 millimeters in length, this slim lens is ideal for day-to-day use. Its short focal length creates a pan-focus effect perfect for capturing casual snapshots of everyday life. Featuring a hybrid AL element, Floating Lens system, HD Coating and Round Diaphragm, it assures exceptional imaging power to produce beautiful images with a truthful sense of depth and the distinctive ambience unique to Limited-series lenses. It provides a screw mount for 43mm filters on the inner side of the hood.



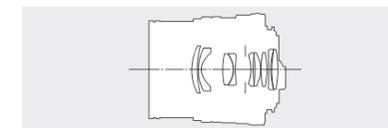
## HD PENTAX-DA 35mmF2.8 Macro Limited

When mounted on an APS-C-format digital SLR camera: equivalent to 53.5mm (in the 35mm format)



- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm
- Camera motor AF

With a minimum focusing distance of 0.139 meters, this macro lens is ideal for capturing life-size close-up images. Its Round Diaphragm captures the subject in a sharp, high-resolution image with a true-to-life sense of depth, while creating a subdued rendition in out-of-focus areas. Its FREE system compensates various aberrations to a minimum at all shooting distances, from close-up to infinity. It can also be used as a regular-use standard lens. It comes with a compact, built-in retractable hood.



High-grade lens series combining a machined aluminum-alloy body with state-of-the-art optics and high-grade lens coatings

Exclusively designed for APS-C-format digital SLR cameras based on the assessment of repeated test shootings, the DA Limited series delivers well-defined, distinctive images with a unique sense of depth indescribable by numerical values. In addition to the latest HD Coating anti-reflection technology, it also features SP (Super Protect) Coating, which effectively repels water and oil and protects the lens from scratches. Its Round Diaphragm produces a beautiful bokeh effect. To add a sense of quality and exclusivity, all the components — from the lens barrel to the cap and hood — are made of high-grade aluminum alloy and machined to perfection.

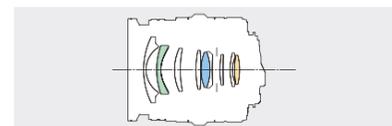
## HD PENTAX-DA 20-40mmF2.8-4ED Limited DC WR

When mounted on an APS-C-format digital SLR camera: equivalent to 30.5mm to 61.5mm (in the 35mm format)



- Weather-resistant
- DC
- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm

This two-times zoom lens covers the range from wide angle to medium telephoto, and provides a natural perspective close to that of the human eye, making it suitable for day-to-day use to capture a variety of subjects including landscapes and portraits. It features an ED glass element to compensate for chromatic aberration, while producing sharp, well-defined images over the entire zoom range. It provides smooth, quiet autofocus operation using a DC motor. Thanks to its dustproof, weather-resistant structure, it makes a perfect partner with a weather-resistant PENTAX digital SLR camera.



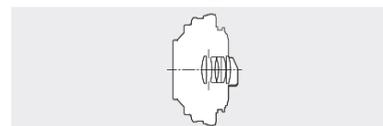
## HD PENTAX-DA 40mmF2.8 Limited

When mounted on an APS-C-format digital SLR camera: equivalent to 61mm (in the 35mm format)



- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm
- Camera motor AF

Weighing only 89 grams and measuring a mere 15 millimeters in length, this ultra-thin, super-lightweight pancake lens provides an angle of view perfect for scenery and portraiture. It features HD Coating to produce well-defined, fine-detailed images with a truthful sense of depth, while preventing the loss of contrast caused by flare, which is generated under adverse shooting conditions such as when the subject is positioned against backlight or a light source is placed within the image field. Its Round Diaphragm creates a beautiful bokeh effect. It not only accepts a 49mm filter, but also provides a screw mount for 30.5mm filters on the inner side of the hood to prevent an increase in overall lens length.



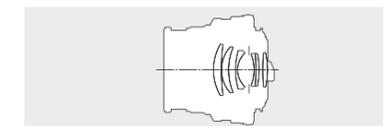
## HD PENTAX-DA 70mmF2.4 Limited

When mounted on an APS-C-format digital SLR camera: equivalent to 107mm (in the 35mm format)



- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm
- Camera motor AF

Despite its telephoto design, this lens measures only 26mm in length. Combining a focal length equivalent to 107mm in the 35mm format, a shallow depth of field made possible by an F2.4 maximum aperture and a natural bokeh effect created by the Round Diaphragm, this lens is the perfect choice for portraiture. It is also suitable for cutting out a section of sweeping scenery. Since it produces a subdued image rendition at open aperture but delivers sharp, high-resolution images at closed-down apertures, it lets you control the subject's texture or a sense of depth at will. It includes a compact, retractable hood.





SMC PENTAX-DA FISH-EYE 10-17mmF3.5-4.5ED(IF)



HD PENTAX-DA 16-85mmF3.5-5.6ED DC WR

## A combination of a compact lens barrel and optics delivering beautiful digital images

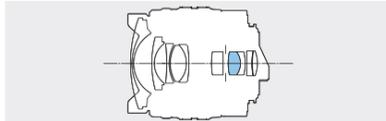
The DA series features compact, high-performance optics and an image circle optimized for APS-C-sized image sensors. Coupled with a plain-structured lens barrel free of an aperture ring, this series consists of compact, lightweight lenses with outstanding operability and portability. From lens coatings to the curvature and positioning of each optical element, every property of these lenses is optimized for digital imaging. They deliver sharp, well-defined images free of flare and ghost images, even under adverse shooting conditions such as backlight.

### SMC PENTAX-DA FISH-EYE 10-17mmF3.5-4.5ED(IF)



Quick-Shift Focus SP coating Camera motor AF

Providing a 180-degree angle of view at a focal length of 10mm, this fish-eye zoom lens creates a unique perspective where the center of the image is enlarged and the outer edges are curved. Since it provides a minimum focusing distance of a mere 2.5 centimeters from the surface of its front lens to the subject, it can produce eye-catching close-up images with an exaggerated sense of perspective and strong deformation effects. It provides all the properties that are unique to an ultra-wide-angle lens, including a drastic change in angle of view in response to a small shift in focal length; a strong sense of perspective; greatly deformed subjects; and a pan-focus effect in which the entire image area is captured in focus.



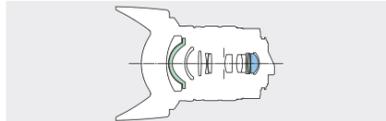
### SMC PENTAX-DA 12-24mmF4ED AL(IF)

When mounted on an APS-C-format digital SLR camera: equivalent to 18.5mm to 37mm (in the 35mm format)



Quick-Shift Focus Camera motor AF

With its two-times zoom ratio covering the ultra-wide-angle range, this zoom lens serves a variety of creative expressions, from capturing sweeping views far broader than the human eye, to a drastically emphasized subjects created by a strong sense of perspective. Featuring high-grade materials and state-of-the-art technologies including an ED glass element, two AL elements and the IF system, this lens boasts the latest optical design to assure sharp, well-defined images with minimal distortions in a compact, lightweight body.



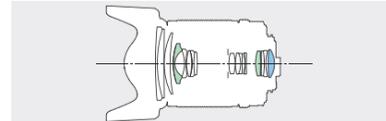
### HD PENTAX-DA 16-85mmF3.5-5.6ED DC WR

When mounted on an APS-C-format digital SLR camera: equivalent to 24.5mm to 130mm (in the 35mm format)



Weather-resistant DC Quick-Shift Focus SP coating HD Coating Round Diaphragm

This standard zoom lens has an approximately 5.3-times zoom ratio covering the ultra-wide-angle to telephoto ranges. In addition to normal shooting, it provides unique visual effects, such as an emphasized perspective exclusive to an ultra-wide-angle lens and a wide depth of field in the telephoto range. It incorporates three high-grade AL elements and one ED glass element to minimize spherical and chromatic aberrations for bright, crisp images. Thanks to the latest optical design technology, it optimizes the power of a high-pixel image sensor to deliver well-defined, fine-detailed images.



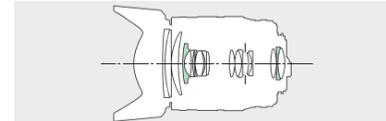
### SMC PENTAX-DA 17-70mmF4AL(IF) SDM

When mounted on an APS-C-format digital SLR camera: equivalent to 26mm to 107mm (in the 35mm format)



SDM Quick-Shift Focus SP coating

With its approximately 4.1-times zoom ratio, this high-magnification zoom lens covers the most commonly used ranges between wide angle and telephoto, allowing for flexible framing and effortless control of bokeh. Its optics features two AL elements to reduce various aberrations to a minimum, while producing high-contrast, high-resolution images over the entire zoom range. Thanks to the SDM-driven autofocus mechanism and the IF system, this high-performance standard zoom assures smooth, flawless operation.



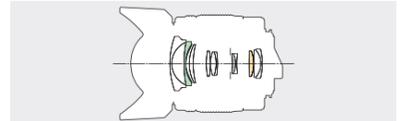
### SMC PENTAX-DA 18-55mmF3.5-5.6AL WR

When mounted on an APS-C-format digital SLR camera: equivalent to 27.5mm to 84.5mm (in the 35mm format)



Weather-resistant Quick-Shift Focus SP coating Camera motor AF

This compact, cost-efficient standard zoom lens features a weather-resistant structure for use in poor weather conditions, such as in the mist or drizzle. With its three-times zoom ratio, it covers the most frequently used focal-length ranges to capture diverse subjects, including landscapes, snapshots and portraits. Featuring a high-precision hybrid AL element and an Anomalous Dispersion glass element, its optics is optimized for high-pixel digital imaging, with a well-balanced compensation of various aberrations. Since it prevents the loss of brightness at the edges of the image area, it captures a bright, well-depicted image across the entire image field.



# DA

## HD PENTAX-DA 18-50mmF4-5.6 DC WR RE

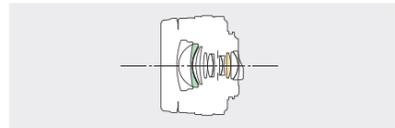
When mounted on an APS-C-format digital SLR camera: equivalent to 27.5mm to 76.5mm (in the 35mm format)



- Weather-resistant
- DC
- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm

Thanks to a newly designed retractable mechanism,\* this standard zoom lens boasts a slim design (approx. 41mm in the stored position) with a weather-resistant structure. Featuring HD Coating, Anomalous Dispersion glass elements and AL elements in its optics, it delivers well-defined, high-contrast images with minimal aberrations, even under adverse shooting conditions such as backlight. It also provides smooth, quiet autofocus operation using a lens-installed DC motor and high-accuracy manual-focus operation using the PENTAX-developed Power Focus system.\*

\* Refer to pages 25 and 26 for detailed information on the retractable mechanism and the Power Focus system.



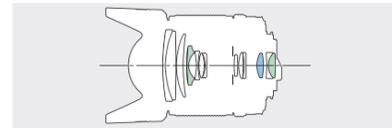
## Smc PENTAX-DA 18-135mmF3.5-5.6ED AL[IF] DC WR

When mounted on an APS-C-format digital SLR camera: equivalent to 27.5mm to 207mm (in the 35mm format)



- Weather-resistant
- DC
- Quick-Shift Focus
- SP coating
- Round Diaphragm

This high-power zoom lens has an approximately 7.5-times zoom ratio to cover the wide-angle to telephoto ranges. It incorporates a DC motor for smooth, quiet autofocus operation. Despite a compact, lightweight body measuring only 76 millimeters in length, this multi-purpose lens features a weather-resistant structure to perform superbly in all shooting conditions. Thanks to PENTAX-original optical system featuring an ED glass element and two AL elements, it delivers high-contrast, high-resolution images at all focal lengths. The Round Diaphragm, available between open aperture and an aperture closed down by 1.5 stops, produces a beautiful bokeh effect.



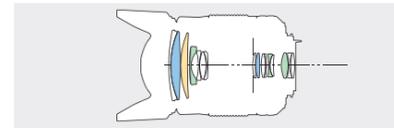
## Smc PENTAX-DA 18-270mmF3.5-6.3ED SDM

When mounted on an APS-C-format digital SLR camera: equivalent to 27.5mm to 414mm (in the 35mm format)



- SDM
- Round Diaphragm

This high-power zoom lens boasts a zoom ratio of 15 times, covering the range between wide-angle broader than a 28mm angle of view and super-telephoto beyond the 400mm angle of view. Thanks to this extra-wide zoom ratio, it covers the range normally covered by two separate zoom lenses, so you can capture a wide variety of subjects and scenes — scenery, portraiture, snapshots, sports events and stage performances — without a lens change. Its SDM-driven focusing system assures smooth, quiet autofocus operation, while its optics featuring two ED glass elements delivers high-resolution images across the entire zoom range.



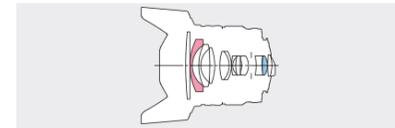
## Smc PENTAX-DA 14mmF2.8ED[IF]

When mounted on an APS-C-format digital SLR camera: equivalent to 21.5mm (in the 35mm format)



- Quick-Shift Focus
- Camera motor AF

With its 90-degree angle of view, this compact, ultra-wide-angle lens produces impressive images with a perspective broader than human vision, and a sweeping field of view. Featuring an ED glass element and a high-refraction, low-dispersion glass element in its optics, it delivers bright, fine-detailed images rich in color and free of distortion. Thanks to its IF system, its overall length is unchanged during focusing operation. With a minimum focusing distance of 0.17 meters, you can move in on the subject and capture close-up images with an exaggerated sense of depth.



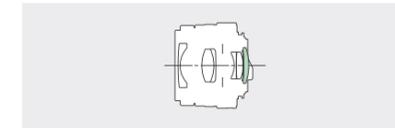
## Smc PENTAX-DA 35mmF2.4AL

When mounted on an APS-C-format digital SLR camera: equivalent to 53.5mm (in the 35mm format)



- SP coating
- Camera motor AF

This ultra-compact, cost-efficient single-focus lens has a plastic lens mount to reduce weight, so you can mount it on a PENTAX digital SLR camera and carry it along as a regular-use lens. It features newly designed optics with an AL element to effectively compensate for coma and other aberrations. With a large F2.4 maximum aperture, it delivers sharp, high-contrast images and a dramatic visual expression — qualities typical of a single-focus lens. Because of its standard lens characteristics, such as a natural perspective and a beautiful bokeh effect, this lens can be used in a wide range of applications to fully enjoy the art of photography.



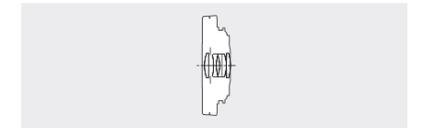
## Smc PENTAX-DA 40mmF2.8 XS

When mounted on an APS-C-format digital SLR camera: equivalent to 61mm (in the 35mm format)



- SP coating
- Round Diaphragm
- Camera motor AF

This ultra-thin, single-focus lens was designed by world-famous industrial designer Marc Newson. Called a biscuit lens because of its short length (9.2 millimeters), it provides exceptional maneuverability, portability and storage efficiency. Adopting the optical design of the acclaimed Smc PENTAX-DA 40mm F2.8 Limited lens, it assures exceptional image resolution and rich contrast even at open aperture. Based on numerous assessment tests of captured images, it also adds a distinctive ambience — a visual factor unexplainable by numerical values. This unique lens delivers a dramatic creative expression totally unexpected from such a slim body.



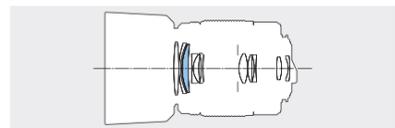
## Smc PENTAX-DA 50-200mmF4-5.6ED WR

When mounted on an APS-C-format digital SLR camera: equivalent to 76.5mm to 307mm (in the 35mm format)



- Weather-resistant
- Quick-Shift Focus
- SP coating
- Camera motor AF

Despite its 307mm telephoto coverage (in the 35mm format), this zoom lens features an extremely compact body. It also provides flawless operation in capturing large images of distant subjects. When coupled with the camera's Shake Reduction (SR) mechanism, it makes handheld telephoto shooting simple and effortless, so you can capture subjects such as athletes, animals and portraits against a defocused backdrop or scenery. Thanks to its weather-resistant structure, it can be used for outdoor shooting in the mountains or by the water. Its optics incorporates an ED glass element for well-defined images.



## HD PENTAX-DA 55-300mmF4.5-6.3ED PLM WR RE

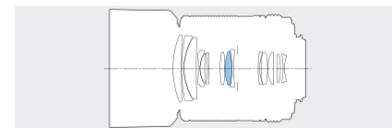
When mounted on an APS-C-format digital SLR camera: equivalent to 84.5mm to 460mm (in the 35mm format)



- Weather-resistant
- PLM
- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm

With the adoption of a rear-focus system driven by a pulse motor (PLM), this telephoto zoom lens excels assures outstanding autofocus speed. In addition to smooth AF Tracking operation during video recording,\* its electromagnetic diaphragm control system assures flawless, high-precision exposure control.\*\* This versatile lens can be used in a variety of applications including outdoor photography, thanks to such advanced features as an ED glass element for high-contrast, high-resolution, fine-detailed images; a minimum focusing distance of 0.95 meters; a weather-resistant construction; and a compact, lightweight body (89mm in total length) with a retractable structure. It also comes equipped with the Power Focus mechanism.

\* When mounted on the PENTAX K-70 camera body.  
\*\* Please refer to page 24 for the electromagnetic diaphragm control system.



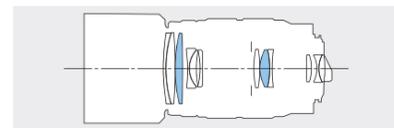
## HD PENTAX-DA 55-300mmF4-5.8ED WR

When mounted on an APS-C-format digital SLR camera: equivalent to 84.5mm to 460mm (in the 35mm format)



- Weather-resistant
- Quick-Shift Focus
- SP coating
- HD Coating
- Camera motor AF

With its approximately 5.5-times zoom ratio, this high-power zoom lens covers the medium-telephoto to super-telephoto ranges. Featuring two ED glass elements in its optical system, it effectively compensates for chromatic aberration across the entire zoom range. Thanks to the PENTAX-developed HD Coating, it delivers high-contrast, fine-detailed images free of flare and ghost images even under demanding lighting conditions such as backlight. Since its weather-resistant construction prevents the intrusion of water into the lens interior, it provides trouble-free telephoto shooting in a variety of outdoor settings.



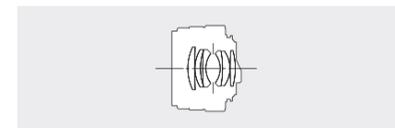
## Smc PENTAX-DA 50mmF1.8

When mounted on an APS-C-format digital SLR camera: equivalent to 76.5mm (in the 35mm format)



- SP coating
- Round Diaphragm
- Camera motor AF

This medium-telephoto lens boasts a large maximum aperture, high image quality and a compact, lightweight body. The combination of an F1.8 maximum aperture and the Round Diaphragm produces a beautiful bokeh effect to make the subject stand out. Since this combination also allows for the use of higher shutter speeds in dark locations, it can effectively reduce camera shake and subject shake. Utilizing the latest optical design, it can compensate for astigmatism and produce sharp images with a beautiful bokeh effect even at open aperture. Its plastic lens mount helps reduce the overall weight, making it a handy choice in portrait and snapshot photography.





HD PENTAX-DA 560mmF5.6ED AW

## HD PENTAX-DA 560mmF5.6ED AW

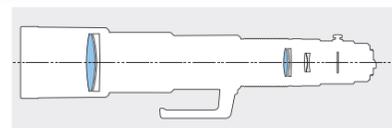
When mounted on an APS-C-format digital SLR camera: equivalent to 859mm (in the 35mm format)



This super-telephoto lens captures distant subjects in pinpoint focus. It not only brings the subject closer, but creates the unique visual effect of compressing the distance between the subject and the background to produce dramatic, condensed images.

An astronomical-telescope-type optical system provides crisp, fine-focused images, while effectively compensating for chromatic aberration using two ED glass elements. Coupled with HD Coating, its PENTAX-original optical system delivers sharp, well-defined images. It also comes with a removable filter frame to mount the circular polarizing filter (40.5mm size, included).

- Dustproof & weather-resistant
- DC
- Quick-Shift Focus
- SP coating
- HD Coating
- Round Diaphragm
- FF lens aberration correction



Note:  
The HD PENTAX-DA560mmF5.6ED AW lens may not produce a sufficient shake reduction effect even when it is mounted on a PENTAX digital SLR camera equipped with the Shake Reduction (SR) mechanism.

# Close-up Accessories

An assortment of accessories to capture large views of very small subjects

## Close-up Ring K Set



This set consists of three rings (No. 1: 9.5mm in length, No. 2: 19mm, and No. 3: 28.5mm), which can be used together or independently, for high-magnification, close-up photography. When mounted on the SMC PENTAX-FA 50mmF1.4 lens, the combination of the No. 1 and No. 3 rings extends a maximum magnification from 0.15 times to 0.88 times with the lens mounted forwards. A combination of the three rings assures an extremely high maximum magnification of 1.74 times, when the lens is mounted backwards using a reverse adapter.

- Notes:
- These accessories must be used in combination with aperture-ring-equipped lenses.
  - These accessories may not provide sufficient performance when mounted on certain lenses.
  - When using these accessories, the camera and/or lens must be operated in manual-focus mode.
  - Certain cameras may impose some restrictions on the performance of these accessories.

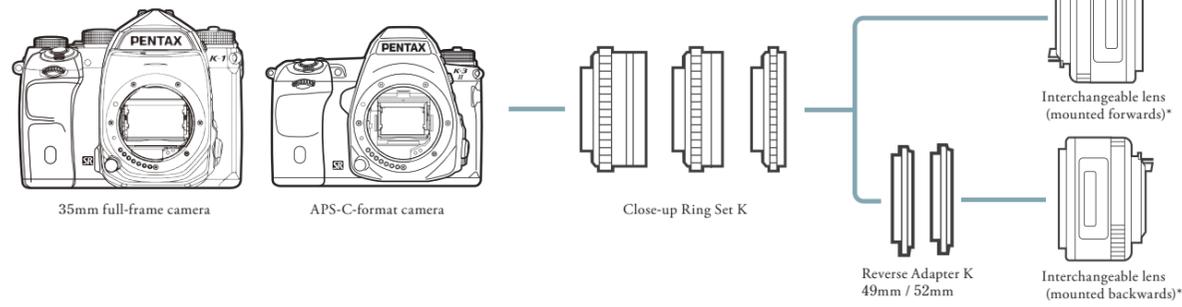
## Reverse Adapter K49mm / 52mm



This ring is used to mount a lens backwards on the camera's lens mount or a close-up ring. By mounting the lens backwards, you can capture sharply focused images without affecting focusing accuracy in high-magnification photography.

### Close-up accessory system

When using a lens with an aperture ring



## Magnifications with close-up accessories

(when mounted on the SMC PENTAX-FA 50mmF1.4 lens)

Close-up Ring Set K	Lens mounted forwards		Lens mounted backwards (1)=No. 1, (2)=No. 2, (3)=No. 3	
	(1)	(2)	(3) / (1) + (2)	(1) + (3)
	0.33	0.52	0.70	0.88
			1.06*	1.19*
			1.38*	1.56
			1.74	
				1.74

\* When using the SMC PENTAX-FA 50mmF1.4 lens, close-up photography at these magnifications is not recommended because of insufficient image-forming performance.

# Adapters

A selection of adapters to expand lens applications and make best use of available resources including the 645-system, 67-system and screw-mount lenses

PENTAX's K-mount system remains extremely versatile, even after the transformation of SLR cameras to autofocus operation and the digital format. It allows you to use manual-focus lenses from the early K-mount era on your PENTAX SLR camera. With the help of adapters, it also allows you to make better and wider use of your valuable assets, such as 645-system, 67-system and screw-mounted lenses.\* In fact, the total of more than 27 million PENTAX interchangeable lenses can still be used on the latest digital SLR models. What's more, its entire selection of PENTAX interchangeable lenses offers the huge benefit of compatibility with the PENTAX-original SR (Shake Reduction) mechanism installed in camera bodies.

\* These lenses must be operated in manual-focus mode.

## Adapter K for 645-system Lenses



This adapter is used to mount 645-system lenses\* onto K-mount camera bodies to take advantage of their exceptional imaging power. Even though the lens's focal length and maximum aperture are unchanged, the camera's metering system operates only in stopped-down metering mode, while its AE (auto-exposure) system is set to Aperture-priority AE mode.

\* This adapter does not accept D FA645- and DA645-series lenses (except for the D F645 35mm lens).

## Adapter K for 67-system Lenses



This adapter is used to mount high-performance, professional-use 67-system lenses onto K-mount camera bodies. Since the lens uses only the center portion of its large image circle to form an image, its outstanding imaging power is further enhanced. The camera's metering system operates in stopped-down metering mode.

## Mount Adapter K



This adapter is used to mount PENTAX screw-mount lenses, such as those used on the PENTAX SP, onto K-mount camera bodies. The camera's metering system operates in stopped-down metering mode, while its AE system is set to Aperture-priority AE mode.

# Rear Converter and AF Adapters

Useful accessories to expand the creative boundaries of existing lenses

## HD PENTAX-DA AF REAR CONVERTER 1.4x AW

APS-C



Dustproof & weather-resistant

HD Coating

This conversion lens can be used in autofocus operation. Mounted between a lens and a camera body, it extends the focal length of the main lens by 1.4 times without changing its minimum focusing distance,\* allowing you to capture distant subjects more easily. Its autofocus system works with both lens-installed motors (SDM, DC or PLM) and camera-installed motors. Its state-of-the-art optics provides exceptional optical performance, and allows for a compact, lightweight body measuring approximately 20 millimeters in length. Thanks to its HD Coating, it assures extremely high light transmission to deliver well-defined, high-contrast images free of flare and ghost images even in backlit scenes. With a dustproof, weather-resistant structure, it operates superbly under harsh outdoor conditions. By coupling this converter with PENTAX's dustproof, weather-resistant camera body and lens, you can enjoy worry-free shooting even in demanding weather conditions.

\* When this converter is mounted between a 35mm full-frame SLR camera body and a D FA-series lens, the image size is automatically cropped to the APS-C format.  
\* Refer to pages 21 and 22 of this brochure for usability of this converter.



SMC PENTAX-DA 300mmF4ED[IF] SDM



HD PENTAX-DA AF REAR CONVERTER 1.4x AW

## Rear Converter A 1.4x-S



Mounted between a camera body and a lens, this conversion lens extends the focal length of the main lens by 1.4 times. Although the lens's maximum aperture is closed down by one stop, the converter expands the creative possibilities by performing the task of two separate lenses. This makes it extremely useful when you want to limit the amount of photographic equipment you're carrying, such as when traveling. Since it retains the minimum focusing distance of the main lens, it lets you capture a larger image of the subject in close-up photography. The camera's focusing system operates only in manual-focus mode.

## Rear Converter A 2x-S



This conversion lens extends the focal length of the main lens by two times. It allows you to make more effective use of your existing lenses by converting a standard telephoto lens into a super-telephoto lens, for instance. Although the lens's maximum aperture is closed down by two stops, it couples with the camera's diaphragm control mechanism to provide AE operation in Programmed AE and Shutter-priority AE modes. It also retains the minimum focusing distance of the main lens. Even though the camera's focusing system operates only in manual-focus mode, this conversion lens can be used with almost all PENTAX interchangeable lenses (excluding some super-telephoto and special-application lenses).

## Rear Converter A 1.4x-L

This 1.4-times conversion lens is designed for exclusive use with the SMC PENTAX-DA\* 200mmF2.8[IF] SDM lens.



## Rear Converter A 2x-L

This two-times conversion lens is designed for exclusive use with the SMC PENTAX-DA\* 200mmF2.8[IF] SDM lens.



## SMC PENTAX-F AF Adapter 1.7x



Mounted between an AF-equipped camera body and a manual-focus lens, this adapter enables autofocus operation. By shifting the optical elements incorporated in its optics using the IF and Rear Focus systems, it assures pinpoint AF accuracy. In principle, it can be used with all lenses with a maximum aperture of F2.8 or larger. It extends the focal length of the main lens by 1.7 times, while closing down the lens's maximum aperture by approximately 1.5 stops. It provides AE operation in Programmed AE, Aperture-priority AE and Shutter-priority AE modes.

Notes:

- The rear converters may not provide a sufficient shake reduction effect when mounted between an SR-equipped camera body and a telephoto lens.
- Refer to pages 21 and 22 for the compatibility of these rear converters.

# Lens Specifications

## 35mm full-frame and APS-C-format lenses

35mm Full Frame / APS-C	Model	Diagonal angle of view when mounted on 35mm full-frame camera (°)	Diagonal angle of view when mounted on APS-C-format camera (°)	Lens construction (groups/elements)	Minimum aperture (F)	Minimum focusing distance (m)	Maximum magnification (x)	Filter size (mm)	Maximum diameter × length (mm)	Weight (g)	Rear converter compatibility				Lens hood	Lens cap	Lens case	
											HD PENTAX-DA AF REAR CONVERTER 1.4× AW <sup>(1)</sup>		1.4×-S	2×-S				
											Phase-matching	Contrast-detection						
	HD PENTAX-D FA 15-30mmF2.8ED SDM WR	SDM	111-72	86-50	13·18	22	0.28	0.20	—	98.5×143.5	1,040	○ <sup>(2)</sup>	○ <sup>(2)</sup>	○	○	Fixed	O-LW98A	S120-160 Included
	HD PENTAX-D FA 24-70mmF2.8ED SDM WR	SDM	84-34.5	61-23	12·17	22	0.38	0.20	82	88.5×109.5	787	○ <sup>(2)</sup>	○ <sup>(2)</sup>	○	○	PH-RBD82 Included	O-LC82	S120-150 Included
	HD PENTAX-D FA 28-105mmF3.5-5.6ED DC WR	DC	75-23.5	53-15.5	11·15	22-38	0.5	0.22	62	73×86.5	440	△ <sup>(2)</sup>	△ <sup>(2)</sup>	○	○	PH-RBC62 Included	O-LC62	S80-120 Optional
	HD PENTAX-D FA* 70-200mmF2.8ED DC AW	DC	34.5-12.5	23-8.1	16·19	22	1.2	0.13	77	91.5×203	1,755	○ <sup>(2)</sup>	△ <sup>(2)</sup>	○	○	PH-RBM77 Included	O-LC77	HS110-230 Included
	HD PENTAX-D FA 150-450mmF4.5-5.6ED DC AW	DC	16.5-5.5	10.7-3.6	14·18	22-27	2.0	0.22	86	95×241.5	2,000	△ <sup>(2)</sup>	△ <sup>(2)</sup>	○	○	PH-RBA86 Included	O-LC86	HS120-270 Included
	SMC PENTAX-D FA MACRO 50mmF2.8	Camera motor AF	47	31.5	7·8	32	0.195	1.00	49	67.5×60	265	○	○	○	○	PH-RBC49 Included	F49mm	S80-80 Included
	SMC PENTAX-D FA MACRO 100mmF2.8 WR	Camera motor AF	24.5	16	8·9	32	0.303	1.00	49	65×80.5	340	○	○	○	○	PH-RBE49 Included	O-LC49	S80-120 Included
	SMC PENTAX-FA 31mmF1.8AL Limited	Camera motor AF	70	49	7·9	22	0.3	0.16	58	65×68.5	345	○	○	○	○	Fixed	FA31/1.8Limited	FA31mmLimited Included
	SMC PENTAX-FA 35mmF2AL	Camera motor AF	63	44	5·6	22	0.3	0.17	49	64×44.5	195	○	○	○	○	PH-RBA49 Included	F49mm	S80-80 Included
	SMC PENTAX-FA 43mmF1.9 Limited	Camera motor AF	53	36.5	6·7	22	0.45	0.12	49	64×27	155	○	○	○	○	MH-RA49 Included	Limited49mm	FA77mmLimited Included
	SMC PENTAX-FA 50mmF1.4	Camera motor AF	47	31.5	6·7	22	0.45	0.15	49	65×37	220	○ <sup>(3)</sup>	○	○	○	PH-RA49,PH-SA49,RH-RC49 Optional	F49mm	S70-70 Optional
	SMC PENTAX-FA 77mmF1.8 Limited	Camera motor AF	31.5	21	6·7	22	0.7	0.14	49	64×48	270	○	○	○	○	Hood built-in	Limited49mm	FA77mmLimited Included

## APS-C-format lenses

APS-C	Model	Diagonal angle of view when mounted on 35mm full-frame camera (°)	Diagonal angle of view when mounted on APS-C-format camera (°)	Lens construction (groups/elements)	Minimum aperture (F)	Minimum focusing distance (m)	Maximum magnification (x)	Filter size (mm)	Maximum diameter × length (mm)	Weight (g)	Rear converter compatibility				Lens hood	Lens cap	Lens case	
											HD PENTAX-DA AF REAR CONVERTER 1.4× AW* <sup>(1)</sup>		1.4×-S	2×-S				
											Phase-matching	Contrast-detection						
	SMC PENTAX-DA FISH-EYE10-17mmF3.5-4.5ED[IF]	Camera motor AF	—	180-100	8·10	22-32	0.14	0.39	—	68×71.5	320	△	○	○	○	Fixed	DA FE10-17	S80-80 Included
	SMC PENTAX-DA 12-24mmF4ED AL[IF]	Camera motor AF	—	99-61	11·13	22	0.3	0.12	77	84×87.5	430	○	○	○	○	PH-RB177 Included	O-LC77	S100-120 Optional
	SMC PENTAX-DA* 16-50mmF2.8ED AL[IF] SDM	SDM Camera motor AF	—	83-31.5	12·15	22	0.3	0.21	77	84×98.5	565	○	○	○	○	PH-RB177 Included	O-LC77	S100-140 Included
	HD PENTAX-DA 16-85mmF3.5-5.6ED DC WR	DC	—	83-19	12·16	22-38	0.35	0.26	72	78×94	488	○ <sup>(2)</sup>	△ <sup>(2)</sup>	○	○	PH-RBA72 Included	O-LC72	S90-140 Optional
	SMC PENTAX-DA 17-70mmF4L[IF] SDM	SDM	—	79-23	12·17	22	0.28	0.31	67	75×93.5	485	○	△	○	○	PH-RBM67 Included	O-LC67	S90-140 Optional
	HD PENTAX-DA 18-50mmF4.5-6.3DC WR RE	DC	—	76-31.5	8·11	22-32	0.3	0.23	58	71×41	158	△ <sup>(2)</sup>	△ <sup>(2)</sup>	×	×	PH-RB158 Included	O-LW67A <sup>(4)</sup> /O-LC58 <sup>(5)</sup>	S80-80 Optional
	SMC PENTAX-DA 18-55mmF3.5-5.6AL WR	Camera motor AF	—	76-29	8·11	22-38	0.25	0.34	52	68.5×67.5	235	△	○	○	○	PH-RBC52 Included	O-LC52	S80-120 Optional
	SMC PENTAX-DA 18-135mmF3.5-5.6ED AL[IF] DC WR	DC	—	76-11.9	11·13	22-38	0.4	0.24	62	73×76	405	△	○	○	○	PH-RBC62 Included	O-LC62	S80-120 Optional
	SMC PENTAX-DA 18-270mmF3.5-6.3ED SDM	SDM	—	76-6	13·16	22-45	0.49	0.26	62	75.8×89	453	△	△	○	○	PH-RBD62 Included	O-LC62	S80-120 Optional
	HD PENTAX-DA 20-40mmF2.8-4ED Limited DC WR	DC	—	70-39	8·9	22-32	0.28	0.20	55	71×68.5	283	○	○	○	○	MH-RA55 Included	O-LW65A	P70-150 Included
	SMC PENTAX-DA* 50-135mmF2.8ED[IF] SDM	SDM Camera motor AF	—	31.5-11.9	14·18	22	1.0	0.17	67	76.5×136	685	○	○	○	○	PH-RBK67 Included	O-LC67	S90-160 Included
	SMC PENTAX-DA 50-200mmF4-5.6ED WR	Camera motor AF	—	31.5-8.1	10·11	22-32	1.1	0.24	49	69×79.5	285	△	△	○	○	PH-RBD49 Included	F49mm	S80-120 Optional
	HD PENTAX-DA 55-300mmF4.5-6.3ED PLM WR RE <sup>(1)</sup>	PLM	—	29-5.4	11·14	22-32	0.95	0.30	58	76.5×89	442	△ <sup>(2)</sup>	○ <sup>(2)</sup>	×	×	PH-RBK58 Included	O-LC58	S80-120 Optional
	HD PENTAX-DA 55-300mmF4-5.8ED WR	Camera motor AF	—	29-5.4	8·12	22-32	1.4	0.28	58	72×111.5	466	△	○	○	○	PH-RB158 Included	O-LC58	S80-160 Included
	SMC PENTAX-DA* 60-250mmF4ED[IF] SDM	SDM Camera motor AF	—	26.5-6.5	13·15	32	1.1	0.15	67	82×167.5	1,040	○	○	○	○	PH-RBK67 Included	O-LC67	S100-200 Included
	SMC PENTAX-DA 14mmF2.8ED[IF]	Camera motor AF	—	90	11·12	22	0.17	0.19	77	83.5×69	420	○	○	○	○	PH-RBH77 Included	O-LC77	S100-120 Included
	HD PENTAX-DA 15mmF4ED AL Limited	Camera motor AF	—	86	6·8	22	0.18	0.15	49	63×39.5	189	Incompatible	Incompatible	○	○	Hood built-in	DA15/4Limited	DA70mmLimited Included
	HD PENTAX-DA 21mmF3.2AL Limited	Camera motor AF	—	68	5·8	22	0.2	0.17	49 or 43	63×25	134	Incompatible	Incompatible	○	○	MH-RBB43 Included	DA21/3.2Limited	DA21mmLimited Included
	SMC PENTAX-DA 35mmF2.4AL	Camera motor AF	—	44	5·6	22	0.3	0.17	49	63×45	124	○	○	○	○	PH-SA49,RH-RC49 Optional	O-LC49	S70-70 Optional
	HD PENTAX-DA 35mmF2.8 Macro Limited	Camera motor AF	—	44	8·9	22	0.139	1.00	49	63×46.5	214	○	○	○	○	Hood built-in	DA35Macro Limited	DA70mmLimited Included
	SMC PENTAX-DA 40mmF2.8 XS	Camera motor AF	—	39	4·5	22	0.4	0.13	27	62.9×9.2	52	Incompatible	Incompatible	○	○	—	Lens Front Cover 27	DA40mmLimited Optional
	HD PENTAX-DA 40mmF2.8 Limited	Camera motor AF	—	39	4·5	22	0.4	0.13	49 or 30.5	63×15	89	○	○	○	○	MH-RE49 Included	DA40/2.8Limited	DA40mmLimited Included
	SMC PENTAX-DA 50mmF1.8	Camera motor AF	—	31.5	5·6	22	0.45	0.15	52	63×38.5	122	○	○	○	○	RH-RA52 Optional	O-LC52	S70-70 Optional
	SMC PENTAX-DA* 55mmF1.4 SDM	SDM	—	28.6	8·9	22	0.45	0.173	58	70.5×66	375	○ <sup>(3)</sup>	○	○	○	PH-RBH58 Included	O-LC58	S90-100 Included
	HD PENTAX-DA 70mmF2.4 Limited	Camera motor AF	—	23	5·6	22	0.7	0.12	49	63×26	131	○	○	○	○	MH-RF49 Included	DA70/2.4Limited	DA70mmLimited Included
	SMC PENTAX-DA* 200mmF2.8ED[IF] SDM	SDM Camera motor AF	12.5	8.1	8·9	22	1.2	0.20	77	83×134	825	○	○	○	○	PH-RBK77 Included	O-LC77	S120-160 Included
	SMC PENTAX-DA* 300mmF4ED[IF] SDM	SDM Camera motor AF	8.2	5.4	6·8	32	1.4	0.24	77	83×184	1,070	○	○	○	○	PH-RBK77 Included	O-LC77	S120-210 Included
	HD PENTAX-DA 560mmF5.6ED AW	DC	4.4	2.9	6·7	45	5.6	0.10	112	130.3×521.7	3,040	△	○	○	○	Hood built-in	Exclusive (available on order)	Exclusive (available on order)

When mounted on an APS-C-format digital SLR camera body, the lens's angle of view is extended by approximately 1.5 times in terms of the 35mm format.

SDM : Autofocus operation driven by lens-installed supersonic direct-drive motor DC : Autofocus operation driven by lens-installed DC motor PLM : Autofocus operation driven by lens-installed pulse motor  
Camera motor AF : Autofocus operation driven by camera-installed motor

Camera motor AF : When mounted on an AF-equipped camera body, the lens operates in autofocus mode. When mounted on a camera body without an AF system, it operates in manual-focus mode.

SDM DC : Cameras compatible with lens-driven AF operation: K-1, KP, K-3II, K-3, K-70, K-S2, K-S1, K-50, K-30, K-5II, K-5IIs, K-5, K-01, K-7, K-r, K-x, K-m, K20D, K200D, K10D FW Ver.1.30, K100D Super  
D FA\*, D FA, DA\*, DA Limited- and DA-series lenses have no aperture ring (except for the D FA MACRO 50mm lens). The aperture must be set on a camera body. These lenses cannot be used on a PENTAX SLR camera body without Programmed AE mode.

\* The HD PENTAX-DA55-300mmF4.5-6.3ED PLM WR RE lens has a KAF4 mount featuring Electromagnetic Diaphragm Control Mechanism.

\* Compatible models: K-1, KP, K-70, K-3II, K-3, K-S2, K-S1, K-50. For proper operation, the camera's firmware must be updated to the latest version. Use of the latest firmware is strongly recommended.

(1) Take the following precautions when using the HD PENTAX-DA AF Rear Converter 1.4× AW.

• When mounted on a lens marked "△" in the phase-matching column, this converter may not provide accurate focus with a camera equipped with a phase-matching AF system. When mounted on a lens marked "△" in the contrast detection column, this converter may not provide accurate focus with a camera equipped with a contrast-detection AF system. When mounted on a lens marked "Incompatible," the lens may interfere with the converter's operation and cause operational failure. Avoid mounting such lenses.

• When mounted, this converter closes down the lens's maximum aperture by one stop.

• Cameras compatible with AF operation: KP, K-3II, K-3, K-S2, K-S1, K-50, K-30, K-5II, K-5IIs, K-5, K-01, K-7/K-r (some cameras may require firmware updates).

• This converter may not provide accurate focus with the K-7's contrast-detection AF system.

(2) Cameras compatible with AF operation: KP, K-3II, K-3, K-S2, K-S1, K-50, K-30, K-5II, K-5IIs, K-5, K-01

(3) The maximum aperture is set at F2.4.

(4) Lens cap for exclusive use with the supplied lens hood (The optional PH-PB158 Lens Hood must be mounted to use this cap.)

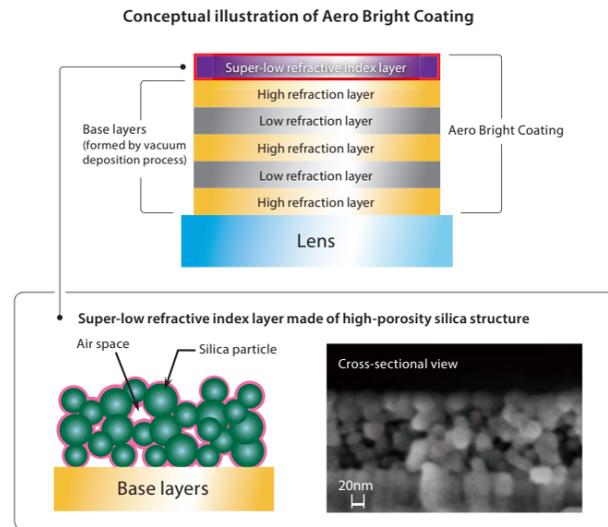
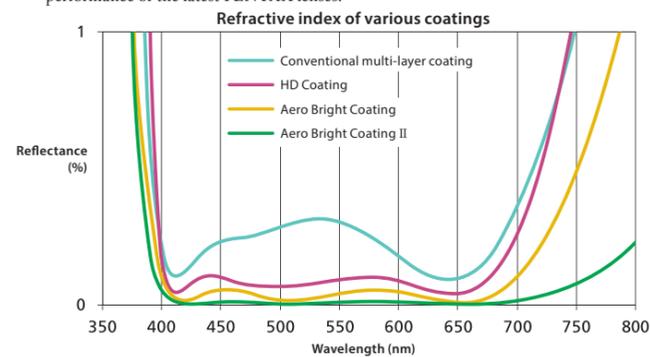
(5) This lens cap can be used when the optional PH-PB158 Lens Hood is removed.

## For bright, clear images

### Aero Bright Coating II

Aero Bright Coating II

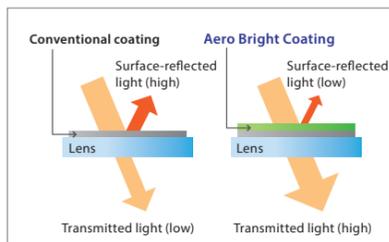
Featuring a new layer formation process based on nanotechnology, this state-of-the-art, high-grade lens coating process uses silica aerogel as the main component to realize a super-low refractive index. By increasing the amount of air trapped in the silica aerogel layer, this new-generation process successfully forms a highly transparent, super-low refraction coating superior to that of the original Aero Bright Coating. Since it transmits undisturbed light, it greatly enhances the optical performance of the latest PENTAX lenses.



### Aero Bright Coating

Aero Bright Coating

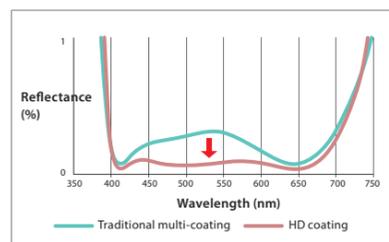
Aero Bright Coating is a lens coating developed from nanotechnology. It applies a silica aerogel coating layer with a uniform porous structure over a regular multi-layer coating. By trapping low-refraction air between stable silica nanoparticles, it forms a super-low refraction, high-transparency coating. It also drastically reduces surface reflections, while minimizing flare and ghost images.



### HD Coating

HD Coating

The manufacturing process for traditional vacuum deposition coating posed problems. Uneven membrane thickness and variations in the refractive index tend to occur due to difficulties in enhancing membrane density. To solve this, HD coating is created via a specialized method to achieve a high-density membrane with nanometer precision. This method reduces reflectance across the entire visible spectrum. It also produces a very hard and durable coating.



### Multi-layer coating, Ghostless Coating and internal reflection prevention

PENTAX interchangeable lenses are treated with an original multi-layer coating to reduce the surface reflection to approximately 1/10 of single-layer coatings. This coating increases the transmissivity of light over the entire visible light range, while almost completely eliminating harmful UV light. It also reduces flare and ghost images under adverse lighting conditions such as backlight to deliver sharp, high-quality images.

Some lenses are also treated with the PENTAX-exclusive Ghostless Coating, which reduces reflections from specific types of light and minimizes the generation of ghost images. PENTAX selects the best possible coating for each lens by carefully assessing key factors such as the configuration of the lens and the characteristics of the glass.

PENTAX also applies a combination of flocking and painting processes to the interior of lens barrels to prevent internal reflections, while incorporating a light shielding mechanism to one optical element in each lens group to prevent scattering of light. All these features work collectively to minimize flare and ghost images.



Ghost image caused by backlight

Image captured with a Ghostless Coating lens

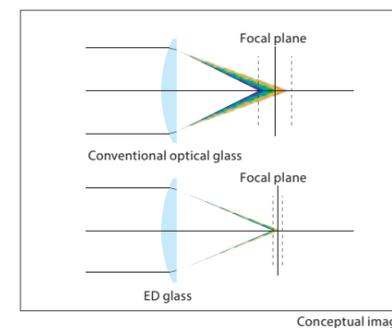
## For clear, natural image rendition

### AL (Aspherical Lens) elements

Optical lenses are affected by various types of aberrations, which prevent them from delivering ideal imaging performance. One of these is spherical aberration, in which light rays fail to converge on a single focal point, resulting in blurring of the point image. AL (Aspherical Lens) elements can be used to minimize this aberration, as well as to reduce the number of component elements needed, allowing for the design of a compact, high-performance lens. In addition to glass-molded AL elements, PENTAX has also developed hybrid AL elements by laying special transparent resin over optical glass, as well as resin-molded AL elements. PENTAX selects the best AL element for each lens, based on factors such as the configuration, aperture size and application.

### Special optical glass elements

The refraction rate of glass varies depending on the wavelength of light. Because of this, natural light may fail to converge on a single focal point because it contains light of varying wavelengths. For instance, when an image is enlarged on a computer screen, you may notice purple blurring around red dots. This is called chromatic aberration. With conventional lenses using optical glass elements, it becomes increasingly difficult to correct this aberration as the focal length becomes longer. To minimize chromatic aberration, PENTAX makes use of three different types of glass with low light spectral dispersion in its optical elements: ED glass, Anomalous Dispersion glass and high refractive index low dispersion glass. By selecting the most appropriate glass types for a specific lens, PENTAX assures optimum imaging performance for every single lens, from wide-angle to telephoto.



### Large, exclusively designed hood

PENTAX interchangeable lenses are equipped with a host of innovative features, such as original multi-layer coatings and devices used to prevent reflections inside the lens barrel. The large, exclusively designed hood comes in handy in eliminating flare and ghost images when shooting under difficult lighting conditions, such as backlight. The hood is either included or built into most PENTAX lenses to provide the maximum light shielding effect.

### Floating Lens system

In conventional lenses, aberrations are corrected by balancing the factors involved, based on frequently used shooting distances. However, this may cause aberrations at other shooting distances. PENTAX's Floating Lens system solves this problem by changing the gap between some optical elements in relation to the shooting distance. With conventional lenses, it improves their imaging power in close-up photography, and shortens the minimum focusing distance. Especially with large-aperture, wide-angle lenses, it assures outstanding imaging performance by correcting the field curvature problem observed in close-range shooting. With macro lenses designed for close-up photography, it improves image-forming performance in long-range shooting. The basic mechanism of the Floating Lens system is also incorporated into the IF (Inner Focus) system.

### FREE system

FREE stands for Fixed Rear Element Extension. It is a type of Floating Lens system in which only the front group of the optics shifts during focusing operation, while the rear group remains stationary. This prevents fluctuations in imaging performance, which tend to occur in open-aperture shooting, and assures exceptional image quality at all shooting distances, both near and far.

### Electromagnetic Diaphragm Control Mechanism (available with KAF4-mount lenses)\*

This mechanism digitally controls the aperture blades to assure high-precision exposure control. Unlike mechanical control systems, in which the blades are driven using force supplied by the camera body with lever action, this electromagnetic mechanism incorporates the aperture blades and the driving motor as a unit in the lens barrel. Aperture settings are changed using the electric power and digital signals supplied by the camera body. This assures extremely accurate diaphragm control, with minimal operational noise and vibration. The aperture blades are also smoothly and flawlessly driven. Even when the lighting level fluctuates during video recording, the mechanism instantly shifts the aperture blades into the correct position to avoid unexpected changes in exposure level and prevent annoying diaphragm-driving sound from being recorded, making it possible to record natural, flawless video clips.

\* For shooting with a KAF4-mount lens featuring the Electromagnetic Diaphragm Control system, the camera's firmware must be updated to the latest version. Use of the latest firmware is strongly recommended.

Cameras compatible with KAF4-mount lenses: K-1, KP, K-3II, K-3, K-S2, K-S1 and K-50. If an incompatible camera is used, the diaphragm control mechanism is locked, causing inaccurate exposure control.



Electromagnetic Diaphragm Control Unit

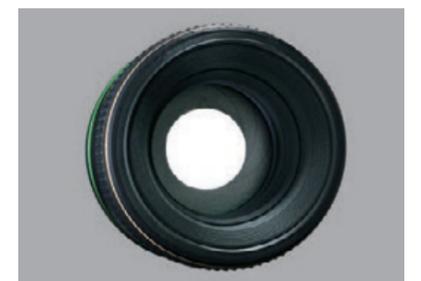
### Round Diaphragm

Round Diaphragm

Lenses with polygonal irises tend to suffer a streaking light effect caused by refraction when shooting point light sources. PENTAX's Round Diaphragm, however, produces an image in which point light sources appear to be enveloped in gentle, circular light. Even with ordinary subjects, the round iris produces a natural bokeh effect in the background, and captures the highlights as beautifully blurred, perfectly round light spots.



Round Iris Diaphragm



SMC PENTAX-DA\* 55mmF1.4 SDM

# PENTAX Lens Technology

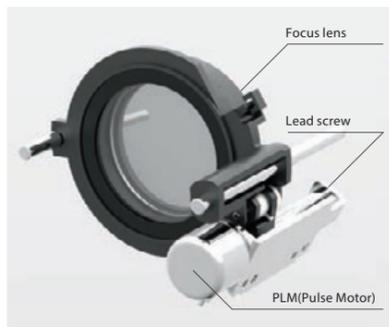
## For comfortable, flawless operation

### SDM, DC and PLM (Lens-installed motor-driven AF system)



Lenses with "SDM" (Supersonic Direct-drive Motor), "DC" (Direct Current motor) or "PLM" (Pulse Motor) in their names feature an AF system driven by a motor installed in the lens barrel. Compared with AF systems driven by motors installed in the camera body, this system assures quieter, smoother autofocus operation. The SDM system provides a braking mechanism to assure high-speed, high-precision control of speed and position. The PLM system assures quiet operation free of the operational noise caused by rotating gears, because it is directly linked with a lead screw to drive the lens mechanism. It produces video clips with minimal operational noise, as well as providing AF-tracking operation during video recording.\*

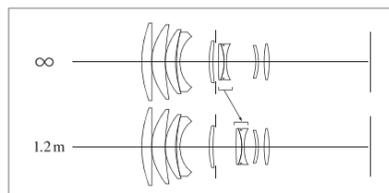
\* With PLM-installed lenses, the A.F.C. (AF Continuous) mode during video recording is available only in combination with the PENTAX K-70 camera body. (As of February 2017)



PLM-driven focusing mechanism

### IF (Inner Focus) system

Conventional interchangeable lenses employ an all-group shifting system, in which all elements of the optics shift during focusing. The IF system, however, shifts only part of the optics during focusing. Since this can reduce the lens's overall weight — which it not only assures faster AF speed, but also shortens the minimum focusing distance to improve imaging performance in close-up photography. It also eliminates the change in the lens length, maintaining the ideal weight balance regardless of subject or shooting distance — a great advantage, especially with super-telephoto lenses.



SMC PENTAX-DA\* 200mmF2.8ED[IF] SDM

### Multi-group zooming system

In most zoom lenses, one lens group shifts to change the focal length while another shifts to correct focus, because accurate focus has to be maintained on the subject even after the focal length has changed. It means that two lens groups are shifted simultaneously. Unlike these lenses, most PENTAX zoom lenses feature a more sophisticated multi-group system, in which three to five lens groups are shifted all at once to improve imaging performance and operability over the entire zoom range, assure a higher magnification, and reduce body size. They also feature an array of other advanced technologies, including an inner zoom mechanism that shifts only the inner lens groups to keep the total lens length unchanged, and a nonlinear movement zoom mechanism in which each lens group performs complex movements.



SMC PENTAX-DA\* 60-250mmF4ED[IF] SDM

### Quick-Shift Focus system



This user-friendly system lets you effortlessly change the focus mode from autofocus to manual without any switching action. Simply by turning the focus ring during AF operation, it instantly switches to manual-focus mode to allow for extra-fine focus adjustment — a feature that is extremely useful in close-up photography. To further improve the system's operability and versatility, PENTAX has equipped some lenses with a new triple-mode system: the QFS/A (Autofocus-priority) mode allows manual focus adjustment after the AF operation is completed; the QFS/M (Manual-priority) mode lets you shift the in-focus point even when the AF system is still in action; and the MF (Manual Focus) mode lets you instantly switch to manual focusing with a single twist of the lens's focus ring.



HD PENTAX-D FA\* 70-200mmF2.8ED DC AW

### Power Focus mechanism

This system detects the amount of the zoom ring's rotation, then sends electrical signals to drive a motor installed in the lens barrel. Since this generates very little backlash (caused by play between or unevenness of the gears), it assures stable, high-precision manual-focus operation. It becomes inoperable when the camera's power switch is turned off.

- Lenses equipped with Power Focus mechanism: HD PENTAX-DA 18-50mmF4-5.6 DC WR RE, HD PENTAX-DA 55-300mmF4.5-6.3ED PLM WR RE
- Cameras compatible with Power Focus-equipped lenses: K-1, KP, K-3II, K-S2, K-S1, K-3, K-50, K-5II, K-5IIs, K-30, K-01, K-5, K-r, K-7, K-x, K-m, K20D, K200D, K10D F W Ver.1.30, K100D Super

Notes:  
 • With the K-5II, K-5IIs, K-5, K-r, K-7 and K-x, manual-focus operation is unavailable in the video recording mode.  
 • To ensure stable, dependable operations, we advise switching to the video recording mode after the camera's power switch has been turned on in the shooting mode.

### Focus preset mode

This convenient mode memorizes a desired in-focus position, and lets you recall it instantly. It allows you to capture once-in-a-lifetime shutter chances with active subjects, such as athletes, who change their position by the moment.



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

### Focus range limiter

This function lets you regulate the focus range to shorten the time required for autofocus operation.



HD PENTAX-D FA\* 70-200mmF2.8ED DC AW

### Operation window for circular polarizing filter

To facilitate the use of a circular polarizing filter, most PENTAX lenses are designed with a non-rotating front end, which remains stationary during zooming and focusing operation. In addition, large lens hoods feature an operation window at their bottom to assure easy control of a circular polarizing filter without the need to remove the hood from the lens.



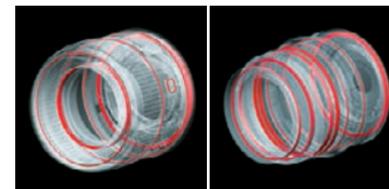
HD PENTAX-D FA\* 70-200mmF2.8ED DC AW

## For greater reliability

### Dustproof, weather-resistant construction



PENTAX faced a series of demanding tasks to perfect these structures. Some lenses required a special structure with an air vent because of their extended lengths, while others demanded more effortless, flawless operation. Each challenge was overcome. PENTAX plans to make these dependable structures a standard feature of not only high-grade lenses but also all interchangeable lenses in the future.



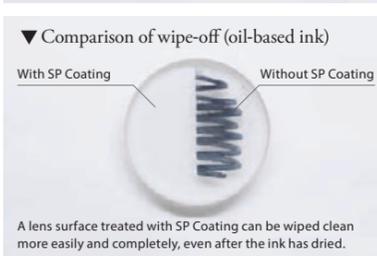
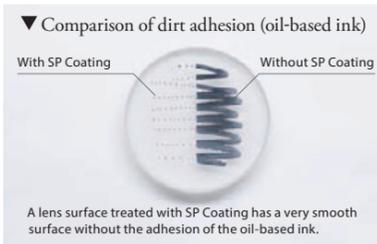
SMC PENTAX-DA\* 55mmF1.4 SDM

HD PENTAX-DA 20-40mmF2.8-4ED Limited DC WR

### SP (Super Protect) Coating



This PENTAX-exclusive coating provides outstanding repellent performance against water and grease. Applied to the front surface of the first lens element, it not only protects the lens from dust, water and grease, but also makes it easier to wipe these substances off the lens surface. It is also highly resistant to abrasion and scratch, helping to keep the lens in prime condition. Applied to many PENTAX lenses, this coating has proven to be extremely effective in protecting the lens surface.



A lens surface treated with SP Coating can be wiped clean more easily and completely, even after the ink has dried.

### Retractable mechanism

Conventional SLR-camera lenses are designed to keep their optics constantly in working condition, whether in action or storage. This design, however, sets limits on the downsizing of the lens. PENTAX has come up with the innovative idea of a retractable structure to solve this problem. When the lens is not in use, the lens barrel slides in to eliminate gaps within the optics, making the overall length shorter than other models with the same focal length. This innovative design also improves the lens's portability without sacrificing its optical performance. This type of lens also features a lock button to prevent accidental retraction.

Precautions for the retractable mechanism of HD PENTAX-DA 18-50mmF4-5.6 DC WR RE and HD PENTAX-DA 55-300mmF4.5-6.3ED PLM WR RE lenses

When these lenses are mounted on one of the following cameras, the camera shutter will be released without correct focus on the subject, even when the lens is in retracted, storage position. (The camera also fails to indicate the in-storage signal on its display panel.)  
 K-50, K-5II, K-5IIs, K-30, K-01, K-5, K-r, K-7, K-x, K-m, K20D, K200D, K10D F W Ver.1.30, K100D Super  
 Note: The K-3 and K-S1 require a firmware update to use these lenses.

### PENTAX K mount

Every lens mount designed for PENTAX interchangeable lenses since 1975 has been based on the bayonet-type K mount. This PENTAX-exclusive mount harmonizes a large aperture with ease of lens change, high precision and exceptional durability. These outstanding features make it easy to incorporate advanced diaphragm control and autofocus mechanisms into a new lens, while retaining full compatibility with existing lenses. Despite differences in their performance and function, PENTAX designs both cameras and lenses to ensure utmost versatility.

### Uniform color balance

All PENTAX interchangeable lenses provide a uniform color balance and deliver the identical, vibrant color tones, even when one lens is replaced with another. Since the days of film-format cameras, this principle has held true because PENTAX wants always to deliver beautiful, high-quality images with its lenses, whether old or new.

### Quality Control

All PENTAX interchangeable lenses are subjected to the stringent inspections throughout their production process — from design to manufacturing. After their production, they are measured for such specifications as resolving power, contrast, color and aberrations using PENTAX-developed measuring instruments, and objectively evaluated for their numerical values. The lenses which have failed to meet PENTAX's strict quality standards are sent back for fine-tuning. Thanks to this dependable quality-control system, every PENTAX lens delivers the optimum quality and performance to our users.

## Lens references

### DA\* 60-250mm F4 ED [IF] SDM

Series	Focal length	Maximum aperture	Features
Title (symbol)	Meaning of title (symbol)		

### Series

★ Star	A Star lens series produced through the use of the latest optical technologies. It delivers the ultimate in digital images, and assures optimum image quality, operability and durability.
Limited	A lens series delivering a truthful sense of depth and excellent imaging power that can't be described by mere numerical values. Its machined aluminum-alloy body adds a sense of exclusivity.
D FA	A lens series designed for 35mm full-frame digital SLR cameras, with compatibility with APS-C-format models.
DA	A compact, lightweight lens series designed for APS-C-format digital SLR cameras. The series is optimized for digital imaging, and provides a wide selection of models.
DA L	A lightweight version of the DA series with a plastic mount, available only as a part of camera kits and not sold independently.
FA	A lens series designed for 35mm film-format SLR cameras. This long-selling series has been highly acclaimed by professionals because of its exceptional color reproduction.
FA J	A compact, lightweight lens series developed by removing an aperture ring from the FA-series models.

### Function

AW	A lens featuring a dustproof, weather-resistant structure (AW stands for All Weather).
WR	A lens featuring a weather-resistant structure (WR stands for Weather Resistant).
SDM	A lens featuring an AF mechanism driven by SDM (Supersonic Direct-drive Motor).
DC	A lens featuring an AF mechanism driven by DC (Direct Current) motor.
PLM	A lens featuring an AF mechanism directly linked to a lead screw and driven by PLM (Pulse Motor).
[IF]	A lens featuring the IF (Inner Focus) system.
AL	A lens featuring aspherical lens elements for effective compensation of spherical aberration.
ED	A lens featuring ED (Extra-Low Dispersion) glass elements for effective compensation of chromatic aberration.
MACRO/Macro	A lens providing magnification in macro photography.
RE	A lens featuring a retractable mechanism.

Note:  
 In some lenses, function titles may be omitted from their names, even if they feature such functions.

# The Fundamentals of Lens

Basic factors that make photography more exciting and enjoyable

## Depth of field

Depth of field refers to the in-focus area in front of and behind the subject when it is captured in focus. The shorter the lens's focal length, the deeper the depth of field; the longer the focal length, the shallower. For this reason, you should choose a wide-angle lens when you want to capture the entire image field in focus, or select a telephoto lens when your goal is to throw the background out of focus. The depth of field can be made deeper by closing down the aperture, or shallower by opening it up. Depth of field also becomes deeper when you focus on a distant subject, or shallower when you focus on a close one.



Image captured at open aperture (F2.8)



Image capture at smaller aperture (F16)

## Perspective

Perspective is a visual effect that makes a closer object appear to be larger while making a distant object look smaller. A wide-angle lens emphasizes perspective by widening the distance between the subject in the foreground and the background. Conversely, a telephoto lens reduces perspective by bringing the background closer to the subject in the foreground. A super-telephoto lens with an extra-long focal length creates an extremely compressed perspective. Perspective is also affected by the distance to the subject. By photographing the subject at a close distance using a wide-angle or ultra-wide-angle lens, you can capture an eye-catching image with exaggerated perspective.



Image capture with wide-angle lens (APS-C: 18mm; 35mm full-frame: 27.5mm)



Image capture with telephoto lens (APS-C: 77mm; 35mm full-frame: 118mm)

## Angle of view

The size of a subject or image area is decided by the focal length of a lens. The angle of view expresses this in terms of degrees. The angle of view refers to an angle known as the diagonal angle of view, which is created by the lens's principal point and a diagonal line connecting the two opposing corners of the image field. Since angle of view is inversely proportional to the focal length, you should choose a wide-angle lens for sweeping scenery, or a telephoto lens to bring a distant subject closer. In the APS-C format, the angle of view is narrower (by approximately two-thirds) than that of the 35mm full-frame format.

## F number (lens brightness)

The brightness of a lens is indicated by a numerical value obtained by dividing the focal length of a lens by its effective aperture. This numerical value is called the F number. The smaller this number, the brighter the lens; the larger the number, the dimmer. In other words, the larger the aperture, the brighter the lens. If the aperture is identical, the shorter the focal length, the brighter the lens. Especially when shooting in poorly illuminated locations, a bright lens provides some crucial advantages, including a clear view of the subject in the viewfinder, and the use of faster shutter speeds. It can also produce a beautifully defocused background.

## Magnification

Magnification is calculated by dividing the size of an image projected on the image sensor by the actual size of a subject. The maximum magnification of a lens refers to the magnification which captures the subject in the largest possible image from the closest possible distance. PENTAX provides a group of macro lenses, some of which feature a maximum magnification of life size for close-up photography. In life-size photography, a subject one centimeter long forms an image of the same length on the image sensor, making it possible to capture fine details in a large image.

# Angle of View

Angle-of-view changes in relation to focal length, from ultra-wide angle to super telephoto

Focal length and angle of view in 35mm full-frame format (with a D FA\*, D FA, FA Limited or FA lens)



15mm/111°    24mm/84°    50mm/47°    70mm/34.5°    100mm/24.5°    200mm/12.5°    400mm/6.2°

Focal length and angle of view in APS-C format (with a DA\*, DA Limited or DA lens)

The focal length equivalent in the 35mm format is indicate in parentheses.



15(23)mm/86°    24(37)mm/61°    50(76.5)mm/31.5°    70(107)mm/23°    100(153)mm/16°    200(307)mm/8.1°    400(614)mm/4.1°

Note: If the focal length is identical, an APS-C-format lens provides an angle of view approximately 1.5 times wider than that of a 35mm full-frame lens.

# ACCESSORIES

PENTAX's extensive accessory system enhances the creativity of digital SLR photography



PENTAX provides a selection of exclusive accessories to accommodate a wide range of subjects and shooting styles — from flexible control of lighting to add-on functions and finder options. Every accessory is designed to be a perfect partner of your PENTAX digital SLR camera.

# Auto Flash

A range of auto flashes for flexible control of lighting and creative visual expression



HD PENTAX-D FA 24-70mmF2.8ED SDM WR / AF201FG

## Auto flash units featuring an advanced, high-precision Auto Flash mode

Flash units are valuable accessories which not only provide supplementary illumination in dark locations, but also feature a range of creative applications, such as bounce flash, multiple flash and wireless control. PENTAX has a selection of auto flash units, ranging from a high-capacity model to more versatile, compact, lightweight models. Each one of them provides advanced P-TTL auto flash control to assure high-accuracy exposure control. In combination with PENTAX digital SLR cameras, they greatly expand the world of photographic creativity.

Note:  
Due to camera and flash compatibility issues, some combinations may result in some functions not being available.

## Major features of auto flashes

### Auto zoom Auto zoom

The flash unit automatically adjusts the angle of discharge in relation to the lens's angle of view.\* This prevents disappointing results in wide-angle shooting when the image's peripheral areas are underexposed due to insufficient lighting.

\* The flash's illumination range becomes shorter as the lens's focal length shortens.

### Synchronization mode

PENTAX auto flashes provide a choice of four synchronization modes, including the default setting of leading-curtain sync mode.

#### • Leading-curtain sync mode

The flash makes a discharge immediately after the leading shutter curtain opens. This mode provides the shortest time lag before the flash discharge.

#### • Trailing-curtain sync mode

The flash discharges a moment before the trailing shutter curtain closes. This mode is useful when you want to create a trace of the moving subject behind it.

#### • High-speed sync mode High-speed sync

The flash allows for the use of a shutter speed faster than the camera's flash synchronization speed. This mode makes it possible to use a larger aperture for a natural bokeh effect in the background, even when you want to use flash illumination to erase subject shadows caused by backlight.

#### • Contrast-control sync mode Contrast-control sync

In multi-flash settings, this mode lets you adjust the balance of illumination between the camera's built-in flash and external flash units, allowing you to control the shape, position and intensity of shadows.

### Discharge mode

PENTAX auto flashes provide four discharge modes, including P-TTL Auto Flash featuring fully automatic discharge of proper illumination.

#### • P-TTL Auto Flash mode P-TTL Auto Flash

When the flash makes a preliminary discharge, the camera reads the illumination level of reflected light using its light-metering sensor. Based on the obtained data, the flash automatically adjusts its discharge to the proper level. Since only a fraction of a second is needed between the preliminary discharge and the main discharge, the flash provides high-accuracy auto-flash operation with minimal time lag.

#### • Manual flash mode

The flash allows you to manually set the desired level of illumination, based on such factors as shooting distance, lens aperture and ISO sensitivity.

#### • Wireless mode Wireless

Using the camera's built-in flash or a camera-mounted flash unit (AF540FGZII or AF360FGZII) as a master unit or controller, this mode lets you remotely control the timing of the discharge and level of illumination for a slave unit positioned away from the camera. It even allows advanced P-TTL Auto Flash operation of a slave unit without requiring an extension cable.\*

\* Refer to page 31 for details of wireless P-TTL Auto Flash operation.

#### • Multi mode

The flash makes a series of discharges during an exposure. You can set the level of illumination and the number and interval of discharges to your preference. By combining this mode with a slow shutter speed, you can track the subject's movement in a single image.

## AF540FGZ II Auto Flash



• LCD control panel in backlight mode



Dustproof & weather-resistant P-TTL Auto Flash Wireless  
High-speed sync Auto zoom Contrast-control sync

With a maximum guide number of 54 (at ISO100/m), this high-capacity, clip-on auto flash features a dustproof, weather-resistant structure to deliver dependable performance even under demanding outdoor conditions, such as at dusty locations and in the rain. Since it features a powerful white-LED flash head and an AF-assist light for shooting in the dark, it can be used not only for close-range movie recording, but also for still-image shooting with extended exposures. It provides nine custom functions to personalize its operation, including on/off switching of the LED light when used as a catch light, and setting of the LED light's discharge mode in still-image shooting.

This auto flash features a dustproof, weather-resistant structure identical to that of the camera body, with 28 sealing parts applied across the unit, including the hot shoe. Its power switch, control dials and buttons, and battery compartment are all completely sealed to provide an airtight structure. It even has a tightening knob to eliminate gaps between its hot shoe and the camera's contacts. A light twist of this knob assures solid connection of the electrical contacts, while preventing the intrusion of foreign substances.

## AF360FGZ II Auto Flash



Dustproof & weather-resistant P-TTL Auto Flash Wireless  
High-speed sync Auto zoom Contrast-control sync

With a maximum guide number of 36 (at ISO100/m), this auto flash features a dustproof, weather-resistant structure with 28 sealing parts across its body, including the hot shoe, to assure dependable, worry-free flash photography even under adverse outdoor conditions. Its white-LED flash head can also be used as a handy light source in movie recording. It provides other useful features, such as a reduced recharge time, a tilt head mechanism (horizontally and vertically) for bounce flash applications, and simple operations to assure easy access to the desired lighting effect. With nine custom functions, this flash unit provides a range of creative applications and performs superbly in a variety of settings.

## AF201FG Auto Flash

Dustproof & weather-resistant P-TTL Auto Flash

This compact, lightweight auto flash features a maximum guide number of 20 (at ISO100/m) and a dustproof, weather-resistant structure with 18 sealing parts across its body, including the hot shoe. It provides simplified operation: a single turn of the discharge mode dial, which also functions as the power switch, makes it ready for flash photography. It also provides other useful features, including: a tilt head mechanism which moves a maximum angle of 135 degrees for bounce flash applications, to capture soft, natural images; and a removable wide-angle panel to cover an angle of view as wide as 13mm (when mounted on an APS-C-format digital SLR camera).



# Flash Accessories

An assortment of flash accessories to maximize the potential of creative photography

## Hot Shoe Adapter Fg



Attached to the camera's hot shoe, this adapter connects the camera with a remotely positioned flash unit using the Extension Cord F5P. It allows for simultaneous use of the camera's built-in flash.

## Extension Cord F5P

(F5P: 0.5m, F5P(L) : approx. 3m)



This five-point extension cord is used to connect the camera with a remotely positioned flash unit (AF 540FGZ II, AF360FGZ II or AF201FG). It must be used in combination with the Hot Shoe Adapter F or FG and the Off-camera Shoe Adapter F.

## Hot Shoe Adapter F



Bottom: flash sync contacts

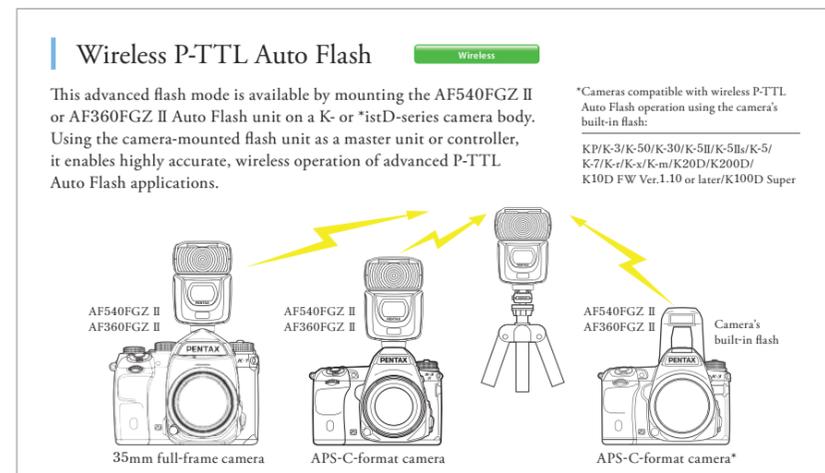
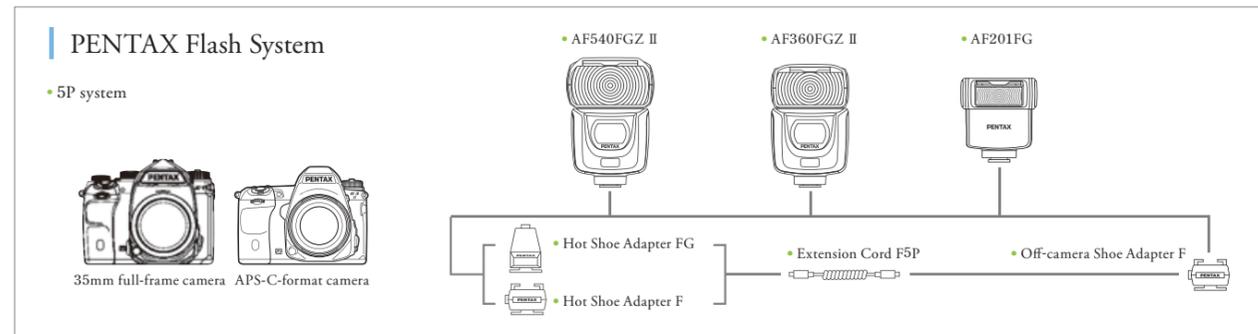
Attached to the camera's hot shoe, this adapter provides extra flash sync contacts for connection of the Extension Cord F5P. It provides a hot shoe on its top.

## Off-camera Shoe Adapter F

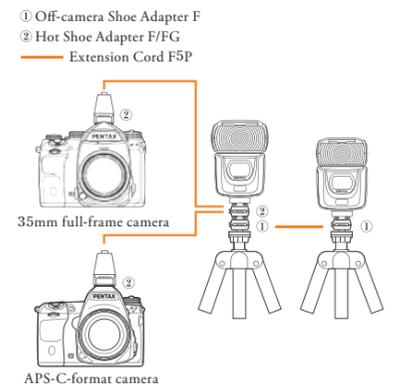


Bottom: tripod socket

This adapter is used to mount an external flash unit on a tripod away from the camera. It provides a connector for the Extension Cord F5P.



## Multi-flash system



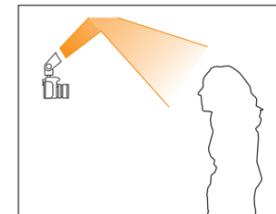
Note: Refer to the flash specification chart on page 32 for compatible flash units.

# Flash Lighting

Useful lighting techniques to expand your creative world

## Bounce flash

If you apply flash illumination directly on your subjects, it may cause unnatural, unwanted visual effects, such as dark shadows or flat textures. The most effective technique to soften the lighting is bounce flash, where you reflect the flash illumination off a ceiling or wall by changing the angle of a flash head to create a soft, indirect lighting effect. With PENTAX's auto flash units, you can take advantage of advanced P-TTL Auto Flash operation to automatically set the proper exposure for your subject.



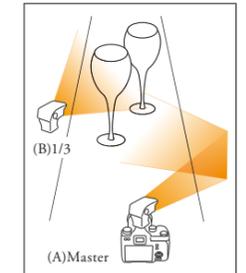
The flash illumination is bounced off the ceiling. The subject's face is captured as a natural, three-dimensional image with subtle shadows.



The flash illumination is applied directly to the subject. The entire face is expressed as a flat, pale image.

## Multi-flash lighting

By illuminating the subject from several different angles, this technique lets you create the desired visual effect, and produce an image with an intended sense of depth. It offers a variety of possibilities: emphasizing the subject's outlines using light cast from behind; creating faint shadows using diagonal lighting; or combining direct and indirect lighting for the desired visual effect. Thanks to the highly accurate P-TTL Auto Flash system, the combination of a PENTAX digital SLR camera and a PENTAX auto flash unit simplifies such advanced flash applications as contrast-control sync and wireless sync.



Side lighting is used to dramatize carbonic acid bubbles and make them stand out. The illumination of the camera's built-in flash (A) is bounced off the right-side wall to create a soft-lit image of the glass. At the same time, another flash unit (B) is triggered wirelessly from the back of the subject.

## Flash Specifications (for APS-C-format SLR cameras)

	P-TTL Auto	External-metering auto flash	Manual guide number [ISO100·m]	Manual guide number [ISO200·m]	Discharge angle	Wide-angle panel (built-in)	Bounce flash	Discharge level compensation	AF-assist light	Size and weight (approx.)	Power source	Other functions
AF 540 FGZ II	Availabl	-	21(13mm) 32(16mm) 35(19mm) 39(24mm) 45(34mm) 50(48mm) 54(58mm)	30(13mm) 45(16mm) 49(19mm) 55(24mm) 64(34mm) 71(48mm) 76(58mm)	Discharge angle adjustable at six settings with automatic or manual zooming of flash head  Angle-of-view coverage of 16mm, 19mm, 24mm, 34mm, 48mm and 58mm	Availabl Angle-of-view coverage of a 13mm lens	Up(-90°) Down(-10°) Left(-135°) Left(-180°)	-4.0EV ~ +2.0EV (in 1/3EV or 1/2EV steps)	Availabl**	76mm(W) x 113mm(H) x 108mm(D)  350g (flash body only)	Four AA-cell batteries	<ul style="list-style-type: none"> <li>Exclusive use with digital SLR cameras</li> <li>Dustproof, weather-resistant structure</li> <li>Automatic camera-format switching</li> <li>Customization with nine custom functions</li> <li>Wireless sync mode</li> <li>High-speed sync mode</li> </ul>
AF 360 FGZ II	Availabl	-	14(13mm) 21(16mm) 22(19mm) 25(24mm) 30(34mm) 33(48mm) 36(58mm)	19.8(13mm) 29.7(16mm) 31.1(19mm) 35.4(24mm) 42.4(34mm) 46.7(48mm) 50.9(58mm)	Discharge angle adjustable at six settings with automatic or manual zooming of flash head  Angle-of-view coverage of 16mm, 19mm, 24mm, 34mm, 48mm and 58mm	Availabl Angle-of-view coverage of a 13mm lens	Up(-90°) Down(-10°) Left(-135°) Left(-180°)	-4.0EV ~ +2.0EV (in 1/3EV or 1/2EV steps)	Availabl**	68mm(W) x 111mm(H) x 106mm(D)  290g (flash body only)	Four AA-cell batteries	<ul style="list-style-type: none"> <li>Exclusive use with digital SLR cameras</li> <li>Dustproof, weather-resistant structure</li> <li>Automatic camera-format switching</li> <li>Customization with nine custom functions</li> <li>Wireless sync mode</li> <li>High-speed sync mode</li> </ul>
AF 201 FG	Availabl	-	20	28	Angle-of-view coverage of a 16mm lens	Availabl Angle-of-view coverage of a 13mm lens	Up(-135°) Down(-10°)	-	-	65mm(W) x 72.5mm(H) x 31mm(D)  141g (flash body only)	Two AAA-cell batteries	<ul style="list-style-type: none"> <li>Exclusive use with digital SLR cameras</li> <li>Dustproof, weather-resistant structure</li> <li>Automatic power-off (180 sec.)</li> <li>Trailing-shutter sync mode</li> </ul>

\* The discharge level is also adjustable on the camera body.

\*\* For use with 645D, K-5 II, K-5 II s, K-5, K-30, K-50 or K-r camera bodies, the camera's firmware must be updated to the latest version.

## Finder Accessories

A range of accessories to optimize the viewfinder image to your preference

### Refconverter A



Attached to the viewfinder eyepiece, this converter lets you view the image at the right angle, with a choice of 1X and 2X magnifications for extra-accurate focusing. It comes in handy when holding the camera at waist level in low-angle, close-up shooting, or when the camera is fixed on a tripod and pointed downward to capture a subject placed on the floor. It also provides a diopter adjustment mechanism.

### O-ME53 Magnifying Eyecup (for exclusive use with APS-C-format SLR cameras)



This eyecup enlarges the viewfinder image by approximately 1.8 times. When mounted on a PENTAX KP camera body with a 0.95-times magnification, it provides a combined magnification of approximately 1.12 times, allowing you to observe a larger view of the entire image field for easier focusing.

### Diopter Correction Lens Adapter M ( $-5m^{-1}$ to $+3m^{-1}$ )



When your eyesight is beyond the camera's diopter correction range, you can attach this adapter\* to the camera's viewfinder to adjust the viewfinder's diopter to your eyesight.

\* This accessory cannot be used in combination with the camera's eyecup.

### Eyecup M



Attached to the camera's viewfinder eyepiece, this accessory allows non-eyeglass wearers to eliminate the gap between the eye and the eyepiece for easy image observation.\*

\* This accessory cannot be installed on the K-1, KP, K-70, K-S2, K-x, K-m, K200D, K100D, or K100D Super

### Eyecup M II



When attached to the camera's viewfinder eyepiece, this accessory allows you to eliminate the gap between the eye and the eyepiece for easy observation of the image. It also allows the attachment of a 67-system diopter correction lens.\*

\* This accessory cannot be installed on the K-1, KP, K-3II, K-3, K-5II, K-5IIs, K-5, K-70, K-S2, K-S1, K-50, K-30, K-7, K20D, K10D, K200D, K-r, K-x or K-m camera body.

### 67-system Diopter Correction Lenses ( $-5m^{-1}$ to $+2m^{-1}$ )

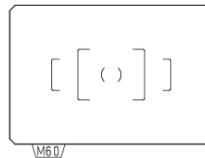
When mounted on the Eyecup M II, these lenses widen the camera's diopter correction range by working together with its diopter correction mechanism.

### Focusing screens

(for use with KP, K-3II, K-3, K-5II, K-5IIs, K-5, K-70, K-S2, K-S1, K-50, K-30 and K-7 cameras)

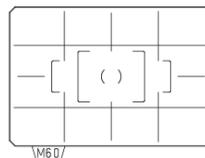
These interchangeable focusing screens provide easy detection of the in-focus area, and allow for extra-fine focus adjustment in manual-focus operation.

#### MF-60 (Standard)



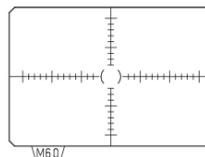
Features AF and spot-metering frames.

#### ML-60 (AF Divided Matte)



Features cross lines to assist in image composition.

#### MI-60 (AF Scale Matte)



Features crosshairs with scales.

#### ME-60 (Plain Matte)



Ideal for manual-focus operation.

## Battery Accessories

Battery grips and power-supply accessories to upgrade camera performance

### D-BG6 Battery Grip (for K-1)

Dustproof & weather-resistant



Featuring an extra set of control buttons and dials for vertical-position shooting, this grip assures a firm camera hold. Its dustproof, weather-resistant structure makes it highly dependable under a variety of shooting conditions. Its battery compartment holds a rechargeable lithium-ion battery that nearly doubles the number of recordable images. It also includes an AA-cell battery tray.



D-BG6 installed on a camera



Exclusive rechargeable battery tray (included with the D-BG6)\*  
\* Image holding rechargeable battery and SD memory card



AA-cell battery tray (included with the D-BG6)\*\*  
\*\* Image holding AA-cell batteries

### D-BG7 Battery Grip (for KP)

Dustproof & weather-resistant



Featuring an extra set of control buttons and dials for vertical-position shooting, this grip assures a firm camera hold both horizontally and vertically in combination with the included Grip L. In addition to the D-LI109 battery — the same battery used on the camera body — it also accepts the large-capacity D-LI90 battery for extended shooting sessions.



D-BG7 installed on a camera



Exclusive rechargeable battery tray (included with the D-BG7)\*  
\* Image holding rechargeable battery and SD memory card

### D-BG5 Battery Grip (for K-3II and K-3)

Dustproof & weather-resistant



This grip holds a rechargeable battery identical to the one carried by the camera and an extra SD memory card. Powered by the twin-battery system paired with the camera's battery, it nearly doubles the number of recordable images. It also includes a spare battery tray to hold six AA-cell batteries. It features the same dustproof, weather-resistant structure of the camera body.



D-BG5 installed on a camera

### D-BH109 AA-battery Holder (for K-50, K-30 and K-r)

This battery holder accepts four AA-cell batteries (lithium, NiMH or alkaline), which are readily available almost anywhere around the world. With a set of lithium batteries, it can record approximately 1,250 images\* without flash discharge (with the PENTAX K-50).

\* Measured in compliance with CIPA standards, using a set of fresh lithium batteries and at a temperature of 23°C. Actual results may vary depending on the shooting conditions.



D-BH109 holding lithium AA-cell batteries

### D-LI90 Rechargeable Lithium-ion Battery



With a large capacity of 1,860mAh, this compact battery captures approximately 760 images\* (with the PENTAX K-1) when fully recharged.

\* Measured in compliance with CIPA standards, using a fresh battery and at a temperature of 23°C. Actual results may vary depending on the shooting conditions.

### D-LI109 Rechargeable Lithium-ion Battery



This compact, lightweight battery captures approximately 390 images\* (with the PENTAX KP), with flash discharge used for 50 percent of images.

\* Measured in compliance with CIPA standards, using a fresh battery and at the temperature of 23°C. Actual results may vary depending on the shooting conditions.

### K-BC90 Battery Charger Kit



This kit charges the D-LI90 Rechargeable Lithium-ion Battery.

### K-BC109 Battery Charger Kit



This kit charges the D-LI109 Rechargeable Lithium-ion Battery.

# GPS Unit and Remote Control



O-GPS1 ASTROTRACER / SMC PENTAX-DA\*300mmF4ED[IF] SDM / K-70 (F4/20sec./ISO12800)

## O-GPS1 GPS Unit

(for use with the KP, K-3, K-5II, K-5IIs, K-5, K-70, K-S2, K-S1, K-50, K-30 and K-r cameras)



Weather-resistant

Mounted on the camera's hot shoe, this weather-resistant GPS unit provides cable-free data transmission to the camera, which then records latitude, longitude, altitude, UTC (Universal Time Coordinated) and the camera's direction onto captured images. It also provides three GPS-assisted functions: (1) Electronic Compass for accurate display of the camera's direction on the camera's LDC monitor; (2) Simple Navigation for accurate calculation of the direction and distance from the current position to the destination (available with the KP, K-3, K-70, K-S2, K-S1, K-50 and K-30 cameras); and (3) ASTROTRACER for effortless tracing and photographing of celestial bodies. Based on the obtained data and using a pair of sensors installed in its body, the unit calculates the movement of celestial bodies, and captures them as solid points, rather than blurry streaks, even during extended exposures. The result is astronomical photography producing beautiful images.

## Remote Control F

This remote controller releases the shutter of a PENTAX SLR camera\* from a distance, with a choice of release modes (immediate release or three-second delay) and continuous shooting operations.



\* This accessory is not usable with the PENTAX KP.

## CS-205 Cable Switch

Connected to the release socket of a PENTAX SLR camera,\* this switch is used to operate the camera's shutter. (Cord length: approx. 50cm)

\* This accessory cannot be used with the KP, K-70, K-S2, K-S1, K-01, K-r, K-x or K-m camera bodies.



## O-RC1 Waterproof Remote Control

Water-resistant

Featuring a water-repellent structure, this wireless remote controller can be used safely in drizzle.\* With a push of its release button, it releases the camera's shutter immediately or after a three-second delay. It can also access some cameras (K-1, K-3II, K-3, K-5II, K-5IIs, K-5 and K-7) from their backside. It also provides a strap hole.



\* This accessory is not usable with the PENTAX KP.

Notes:  
 • The battery cannot be replaced.  
 • New functions cannot be assigned to the two function buttons.  
 • Due to its water-repellent structure, this accessory cannot be used in the water or at a location affected by the water pressure.

## CS-310 Cable Switch (for KP and K-70)

Connected to the camera's mic/cable switch terminal, this accessory is used to operate the camera's shutter. (Cord length: approx. 1m)



# Other Accessories

## Grip S O-GP167 (for use with the KP)



This is the standard Grip S packaged with PENTAX KP.  
 \*An Allen wrench is included.

## Grip M O-GP1671 (for use with the KP)



You can easily replace the standard Grip S with this optional grip M\* to accommodate a particular lens or suit your preference of holding comfort or shooting style.  
 \* An Allen wrench is included.

## Grip L O-GP1672 (for use with the KP)



You can easily replace the standard Grip S with this optional grip L\* to accommodate a particular lens or suit your preference of holding comfort or shooting style.  
 \* An Allen wrench is included.

## IMAGE Transmitter 2 tethering software (for K-1 and KP)



This software enables tethered photography, in which you can control exposure settings and release the camera's shutter while observing a live image on your computer screen. You can also transfer and save recorded images to a desired file on the computer. This greatly improves the efficiency of studio shooting.

Note: For proper use, software must be updated to the latest version. Please access our official website for details.

## O-FC1 FLUCARD FOR PENTAX 16GB (for K-3 II, K-3 and K-S1)



Featuring wireless LAN functions, this SDHC card lets you transmit data to a mobile device such as a smartphone, select a Live-view display mode and autofocus point on the smartphone screen through a web browser, and release the camera's shutter from a distance. Images saved on the memory card can also be reviewed.

• Compatible OS: iOS6 or later, Android™ 4.2 or later

## O-ICK1 Image Sensor Cleaning Kit



This accessory is used to remove any dust clinging to a PENTAX digital SLR camera's image sensor. Using the adhesive power of a special urethane rubber, it even removes the dust which the camera's DR (Dust Removal) mechanism fails to shake off, without any scratching of the image sensor's surface. It includes cleaning sheets to wipe off the dust removed by the urethane rubber.

• Please read the operation manual thoroughly before using this kit, and observe all instructions on the cleaning procedures.

## K-AC132 AC Adapter Kit



This kit supplies power to the camera from an AC electrical outlet, making it useful for extended shooting and playback sessions.

## K-AC167 AC Adapter Kit (for KP)



For power supply from household electrical outlets.

## K-AC168 AC Adapter Kit (for K-70)



Supplying power to the camera from an AC electrical outlet, this kit is handy for extended shooting and playback sessions.

## K-AC128 AC Adapter Kit (for K-S2, K-S1, K-50, K-30)



Power supply from standard outlets, for extended shooting and playback.

## Hot Shoe Cover Fx

## Body Mount Cap K

# Camera Cases and Straps

An assortment of fashionable, functional camera cases and straps for easy, safe carrying of the camera

# Duplicator

For digitalizing valuable pictures on film, using a digital SLR camera

## Camera cases

PENTAX offers a selection of camera cases exclusively designed for its digital SLR cameras. They protect your valuable camera from dirt and scratches.

### O-CC160 Camera Case

(for KP, K-3II, K-3, K-5II, K-5IIs, K-5 and K-7)



This case has an exterior made of highly water-repellent nylon fabric, with an inside pocket for storing the lens cap.

### O-CC90 Camera Case

(for KP, K-3II, K-3, K-5II, K-5IIs, K-5 and K-7)



This case features a diagonal zipper for easy opening and closing, even when suspended in the cross-shoulder position.

## Camera case compatibility chart

Mounted interchangeable lens	Compatible camera body	
	KP, K-3II, K-3, K-5II, K-5IIs, K-5, K-7	KP, K-3II, K-3, K-5II, K-5IIs, K-5, K-30, K-7
SMC PENTAX-DA FISH-EYE 10-17mmF3.5-4.5ED[IF]	○	○
SMC PENTAX-DA 12-24mmF4ED AL[IF]	△	△
SMC PENTAX-DA* 16-50mmF2.8ED AL[IF] SDM	△	△
HD PENTAX-DA 16-85mmF3.5-5.6ED DC WR	△	△
SMC PENTAX-DA 17-70mmF4AL[IF] SDM	△	△
HD PENTAX-DA 18-50mmF4-5.6 DC WR RE	△	△
SMC PENTAX-DA 18-55mmF3.5-5.6AL WR	△	△
SMC PENTAX-DA 18-135mmF3.5-5.6ED AL[IF]DC WR	△	△
SMC PENTAX-DA 18-270mmF3.5-6.3ED SDM	△	△
HD PENTAX-DA 20-40mmF2.8-4ED Limited DC WR	△	△
HD PENTAX-D FA 28-105mmF3.5-5.6ED DC WR	△	△
SMC PENTAX-DA 50-200mmF4-5.6ED WR	△	△
HD PENTAX-DA 55-300mmF4.5-6.3ED PLM WR RE	△	△
HD PENTAX-DA 55-300mmF4.5-8ED WR	△	△
SMC PENTAX-DA 14mmF2.8ED[IF]	△	●
HD PENTAX-DA 15mmF4ED AL Limited	△	●
HD PENTAX-DA 21mmF3.2AL Limited	△	●
SMC PENTAX-DA 35mmF2.4AL	△	●●○
HD PENTAX-DA 35mmF2.8 Macro Limited	△	●
SMC PENTAX-DA 40mmF2.8XS	△	○
HD PENTAX-DA 40mmF2.8 Limited	△	△
SMC PENTAX-DA 50mmF1.8	△	●
SMC PENTAX-DA* 55mmF1.4 SDM	△	△
HD PENTAX-DA 70mmF2.4 Limited	△	△
SMC PENTAX-D FA MACRO 50mmF2.8	△	△
SMC PENTAX-D FA MACRO 100mmF2.8 WR	△	■(K-30) ○
SMC PENTAX-FA 31mmF1.8AL Limited	●	●
SMC PENTAX-FA 35mmF2AL	△	△
SMC PENTAX-FA 43mmF1.9 Limited	△	●
SMC PENTAX-FA 50mmF1.4	△	●○
SMC PENTAX-FA 77mmF1.8 Limited	△	●

○: Includes cap ●: Includes filter and cap ○: Includes filter, rubber hood and cap  
 ■: Includes cap and reverse-mounted hood △: Includes filter, reverse-mounted hood and cap  
 ▲: Includes filter, exclusive hood and cap - : Unobtainable  
 Note: For compatibilities not listed above, please consult your local PENTAX Customer Center.

PENTAX duplicators make duplicates of film-format pictures by photographing them, rather than scanning them using a negative/positive conversion process. They let you effortlessly and speedily save your valuable collection of silver-halide films as digital images.

## Main features

- Greatly reduced work time, in comparison to the time required by scanning processes.
- Simplified shooting and editing operation, using your own digital camera.

- Compatibility with a wide range of film formats.
- Recording of photographic data imprinted on the film's edges, in addition to the image area, for convenient data management.

For 35mm and 69 (Brownie) formats

## PENTAX Film Duplicator



Sample setup

## Basic specifications

Outer dimensions	approx. 530mm (L) x 165mm (W) x 230mm (H) • Minimal dimensions for packaging or storing
Maximum working length	approx. 900mm
Maximum bellows length	approx. 328mm
Weight	approx. 2,200g
Accessories	Mount holder 35mm (for 35mm-format mounted slides)

### Notes:

- An appropriate mount holder is required for duplicating mounted film images.
- A sleeve base mount and an appropriate sleeve holder are required for duplicating unmounted film images.
- This duplicator is not designed to duplicate 70mm-format film.
- The maximum outer diameter of a usable lens is 90 millimeters. This duplicator does not accept lenses exceeding this diameter.
- This duplicator does not accept a camera measuring more than 95 millimeters from its bottom to the optical axis (center of the lens).
- Additional image processing software is required to edit the duplicated images, such as calibrating colors.

• In addition to the PENTAX duplicator, the following equipment is required to perform duplication work:

- Lens-interchangeable digital SLR camera: A camera with more than 1.18 megapixels for an A4-size image, or more than 24.0 megapixels for a 356 mm x 432mm image, is recommended to produce 300dpi prints.
- Lens: A high-resolution model suitable for close-up photography. A macro lens is recommended.
- Auto flash: A model compatible with the camera in use, and exposure control provided by the camera side.
- Holder: Available as an optional accessory designed for each film type. The PENTAX Film Duplicator 4x5 requires no holder.

## Optional accessories

For PENTAX Film Duplicator

- Mount Holder 35mm\*
- Mount Holder 645/66
- Mount Holder 67/69
- Sleeve Mount Holder 35mm
- Sleeve Mount Holder 645
- Sleeve Mount Holder 66/67/69

\* Included.

For PENTAX Film Duplicator 4x5

- Mount Holder 4x5\*  
(Three types of film adapters included)

\* Included.

Common accessories

- Quick Shoe Plate\*\*
- Quick Shoe Base\*\*

\*\* The camera can be attached without these accessories. However, the accessories make installing and removing the camera from the duplicator simpler and faster.

For 35mm, 69 (Brownie) to 4x5 formats

## PENTAX Film Duplicator 4x5



Sample setup

## Basic specifications

Outer dimensions	approx. 650mm (L) x 248mm (W) x 325mm (H) • Minimal dimensions for packaging or storing
Maximum working length	approx. 1,210mm
Maximum bellows length	approx. 570mm
Weight	approx. 5,200g
Accessories	Film holder 4x5 (three types of film adapters included)

### Notes:

- The maximum outer diameter of a usable lens is 110 millimeters. This duplicator does not accept lenses exceeding this diameter.
- This duplicator does not accept a camera measuring more than 105 millimeters from its bottom to the optical axis (center of the lens).
- Additional image processing software is required to edit the duplicated images, such as calibrating colors.
- This duplicator is not designed to make duplicates of mounted film.

## Straps

### O-ST128 Hand Strap



This strap improves your camera handling in active shooting.

### O-ST842 Free-length Strap



With its single-action length adjustment mechanism, this strap can be used for cross-shoulder suspension.

### O-ST1401 Strap



This versatile strap has a shoulder pad approximately 50 centimeters long to improve camera handling when it is wrapped around the wrist. Measuring approximately four centimeters wide and made of soft material, this pad reduces strain when the camera is suspended from the shoulder.



### Casual Strap Canvas



Width: approx. 35mm

### Casual Strap Denim



Width: approx. 35mm

### Color Slim Strap Green



Maximum width: approx. 25mm

### O-ST120



Width: approx. 30mm

### O-ST132 Strap



Width: approx. 30mm

### O-ST162 Strap



Width: approx. 38mm

