# Information

## PENTAX K-m
## An Easy-to-Operate, Entry-Class Digital SLR Camera
## Featuring Shake Reduction, Scene-Specific Shooting Modes
## and an Array of User-Friendly Functions
## in a Compact, Lightweight Body

HOYA CORPORATION PENTAX Imaging Systems Division is pleased to announce the launch of the PENTAX K-m digital SLR camera. Designed primarily for beginning digital SLR photographers, this new entry-class model offers simplified, user-friendly operation, and an easy-to-maneuver compact, lightweight body.

The PENTAX K-m was developed as an entry-class digital SLR camera offering simple, straightforward operation, making it possible for first-time digital SLR users and family photographers to enjoy high-quality digital SLR photography with little trouble or confusion.

It features an upgraded version of the PENTAX-original Auto Picture mode, which automatically detects the type of subject or scene, and sets the proper shooting mode for the photographer. It also features a host of advanced features and sophisticated functions — including the innovative in-body Shake Reduction mechanism — to assist the photographer. It also offers a compact, lightweight body, designed by incorporating PENTAX's advanced downsizing technologies, accumulated over the years of digital SLR development, into different body parts. As a result, the PENTAX K-m assures simple operation and outstanding operability, even for inexperienced first-time digital SLR users.

Along with the PENTAX K-m, PENTAX will also launch two DA L-series interchangeable zoom lenses: the smc PENTAX-DA L 18-55mmF3.5-5.6AL and the smc PENTAX-DA L 50-200mmF4-5.6ED. Designed for exclusive use with PENTAX digital SLR cameras, these DA L-series lenses are designed to be more compact and lightweight than conventional counterparts, without sacrificing any of the exceptional optical performance common to all PENTAX lenses.

*Note:*
*The smc PENTAX-DA L 18-55mmF3.5-5.6AL and smc PENTAX-DA L 50-200mmF4-5.6ED lenses will be marketed only as a part of the PENTAX K-m Lens Kit or PENTAX K-m Double Zoom Kit.*

**Main Features**

**1. Compact, lightweight body for enhanced portability and maneuverability**
Despite the incorporation of a large-sized image sensor (23.5mm by 15.7mm), the PENTAX K-m offers a compact, lightweight body to assure remarkable portability and maneuverability. This was made possible by the development of a compact, lightweight and high-rigidity stainless-steel chassis, the downsizing of the Shake Reduction mechanism and circuit boards, the employment of latest high-density packaging technologies assuring most efficient positioning and layout of various parts, and the repositioning of the battery compartment. The camera grip has also been redesigned to assure firm, comfortable hold of the camera body.

**2. Simplified operation system for easy camera handling**
The PENTAX K-m features a newly designed control system, which positions most of buttons and levers on the camera's grip side, making it easier for first-time digital SLR users stepping up from their compact models to operate the camera. What's more, the functions of each button or lever are instantly displayed on the camera's LCD monitor with a single press of the help button to facilitate camera operation — especially for those who are unfamiliar with digital SLR cameras.

**3. PENTAX-original Shake Reduction mechanism for sharp, blur-free images**
The PENTAX K-m comes equipped with the PENTAX-developed SR (Shake Reduction) mechanism, which effectively reduces camera shake for sharp, blur-free images even under demanding shooting conditions — such as when using a telephoto lens, shooting in the dark or at night without supplementary flash illumination, or using extended exposures for sunset scenes. This innovative SR mechanism shifts the position of the image sensor vertically and horizontally at high speed using magnetic force, while adjusting the shifting speed in proportion to the amount of camera shake detected by a built-in sensor. It offers an outstanding compensation effect — up to the equivalent of approximately four shutter steps. As a result, it does not require special anti-shake lenses, and can be used with almost all existing PENTAX interchangeable lenses.

*** *Lenses compatible with this mechanism are: the PENTAX K-, $K_A$-, $K_{AF}$-, $K_{AF2}$-, and $K_{AF3}$-mount lenses; screw-mount lenses (with an adapther); and 645- and 67-system lenses (with an adapter). Some functions may not be applicable with certain lenses.*

**4. Comprehensive Dust Removal system with prevention, removal and confirmation devices**

The PENTAX K-m features the user-friendly DR (Dust Removal) system to prevent dust from appearing on captured images. Applied to the CCD image sensor surface (or low-pass filter) through the vapor deposition process of a fluorine compound, the PENTAX-original SP (Super Protect) coating effectively removes dust and stains from the surface. In the next step, dust that still remains on the surface will be shaken off when the SR system shifts the image sensor at high speed. Finally, the dust that is shaken off the image sensor will fall onto an adhesive sheet positioned at the bottom of the SR unit, eliminating any possibility of it returning to the image sensor surface. This DR system even offers a Dust Alert function, which allows the user to confirm the dust-adhesion status of the CCD in advance.

**5. Auto Picture mode for automatic selection of optimum shooting mode**

The PENTAX-developed Auto Picture mode is programmed to automatically select the most appropriate shooting mode — from such choices as Portrait, Landscape and Macro — for a given subject. With the PENTAX K-m, this user-friendly mode is further upgraded, with automatic detection of situations requiring the Night Scene Portrait mode. Since all camera settings, including aperture, shutter speed, white balance, saturation, contrast and sharpness, are automatically adjusted by the camera for optimum results, the user can concentrate on image composition and shutter opportunity.

**6. High-quality image**

The PENTAX K-m combines a large, high-performance CCD image sensor (23.5mm by 15.7mm) with the sophisticated PRIME (PENTAX Real Image Engine) as its imaging engine. With its approximately 10.2 effective megapixels, it produces beautiful, fine-detailed images with subtle gradations and delicate texture description. It also features a Custom Image function, which offers a choice of six finishing touches to help the user create intended images.

**7. High-speed continuous shooting at approx. 3.5 frames per second**

The PENTAX K-m lets the user keep shooting images at the speed of approximately 3.5 frames per second (in the JPEG recording format), allowing the user to capture a sequence of a fast-moving subject with great ease.

## 8. High-precision 5-point AF system

The PENTAX K-m incorporates a five-point wide-area AF system (SAFOX VIII with five cross-type sensors) to assure dependable, high-precision autofocusing. Using the five sensors positioned in a cross pattern over the image field (one in the middle, two at sides, and two at top and bottom), this system automatically and unfailingly selects the optimum sensor for a given subject. It also allows the user to fix the AF detection point at the middle sensor. Thanks to a thorough review of the AF algorithm, this AF system also offers improved autofocusing speed under poor-lighting conditions, in which conventional AF systems take longer to focus on the subject.

## 9. Auto sensitivity control up to ISO 3200

The PENTAX K-m's auto sensitivity control function automatically sets the optimum sensitivity between ISO 100 and ISO 3200, based on such data as the subject's brightness level and the lens' focal length. Since this function allows the user to take advantage of faster shutter speeds in poor lighting situations (such as indoor sports events and nighttime scenes), it helps the photographer to effectively reduce camera shake and subject shake and prevent blurred images.

## 10. Effective gradation compensation

The PENTAX K-m's dynamic-range expansion function allows the user to expand a dynamic range (or a range of gradation reproduction) to minimize white-washed areas in the image. On the other hand, its shadow compensation function minimizes pitch-black areas lacking details. Combined, they help the user to produce beautiful, rich-gradation images when shooting high-contrast subjects.

## 11. Large, easy-to-view 2.7-inch LCD monitor

The PENTAX K-m features a large 2.7-inch color LCD monitor with approximately 230,000 dots on its back panel. This monitor's wide-view design allows the photographer to check the on-screen image from approximately 170 degrees both vertically and horizontally. It even offers digital zooming of playback images up to 16 times for easy confirmation of the image's focusing status and details.

## 12. Bright, clear viewfinder

Thanks to a combination of a lightweight penta-mirror prism, a PENTAX-original finder optics and the acclaimed Natural-Bright-Matte focusing screen, the PENTAX K-m's viewfinder delivers a large, bright subject image with an approximately 96-percent field of view and an approximately 0.85-times magnification.

## 13. Digital filters for unique visual expressions

The PENTAX K-m's built-in digital filters let the user effortlessly add some creative and artistic touches to recorded images — without the use of a PC. The user can select one of 14 different digital filters — including the new Toy Camera and Retro filters — to create a desired visual effect.

## 14. Other features

1) 10 Scene modes, switchable with simple icon selection
2) Energy-efficient power supply, recording approximately 1,650 images with four AA-size lithium batteries
3) Status screen, displaying camera settings on the LCD monitor on the camera's back panel for at-a-glance confirmation
4) Index function, for five different types of display and printing modes
5) Choice of 16-segment multi-pattern metering, center-weighted metering and spot metering to accommodate various photographic applications
6) Simultaneous recording of RAW- and JPEG-format images
7) Compatibility with SD and SDHC memory cards as external data-recording media
8) In-body development of RAW-format images
9) Compatibility with SDM-equipped lenses for quiet, smooth autofocus operation
10) PENTAX PHOTO Laboratory 3 RAW data processing software and PENTAX PHOTO Browser 3 browser software included

## Main Features of the smc PENTAX-DA L 18-55mmF3.5-5.6AL Lens

1. A compact standard zoom lens with focal lengths from 27.5mm to 84.5mm (in the 35mm format) covering wide-angle to medium-telephoto ranges
2. Latest optical design featuring high-performance aspherical lens element and super-low dispersion glass element for effective compensation of various aberrations

## Main Featurs of the smc PENTAX-DA L 50-200mmF4-5.6ED Lens

1. A super-compact, ultra-lightweight telephoto zoom lens with focal lengths from 76.5mm to 307mm (in the 35mm format)
2. ED (Extra-low Dispersion) glass optical element for effective compensation of chromatic aberrations over the entire zoom range and enhanced image-description performance

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# K-m  Main Specifications

| | | |
|---|---|---|
| **Effective Pixels** | | approx.10.2 megapixels |
| **Image Sensor** | Total pixels | approx.10.75 megapixels |
| | Type | Interline interlace CCD with a primary color filter |
| | Size | 23.5mm x 15.7mm |
| **Color Depth** | | 8 bit (JPEG) or 12 bit (RAW) |
| **Recorded Pixels** | | JPEG: [10M] 3872 x 2592 pixels, [6M] 3008 x 2000 pixels, [2M] 1824 x 1216 pixels |
| | | RAW: [10M] 3872 x 2592 pixels |
| **Sensitivity(Standard output sensitivity)** | | Auto, Manual : 100～3200 (1EV steps or 1/2EV steps or 1/3EV steps) , Bulb mode : up to ISO1600 |
| **Recording Formats** | | RAW（Original）, JPEG (Conforms to Exif 2.21), |
| | | Conforms to DCF (Design rule of Camera File system) 2.0 |
| **Image Formats** | | Compressed: JPEG - Baseline  (Three star: Best , Two star: Better, One star: Good) |
| | | Compressed: RAW ( PEF ) , Non compressed: RAW ( DNG ) |
| | | RAW+JPEG : avaiable |
| **Storage Media** | | SD , SDHC memory card |
| **White Balance** | | Auto, Daylight, Shade, Cloudy,Tungsten Light, Fluorescent Light (W, D, N), Flash, |
| | | Manual setting, with WB fine adjustment |
| **Viewfinder** | Type | Fixed molded penta-mirror type |
| | Focusing screen | Natural-Bright-Matte II focusing screen |
| | Field of view | approx. 96% |
| | Magnification | approx. 0.85X (with 50mm F1.4 lens, infinity, $-1m^{-1}$) |
| | Diopter adjustment | approx. -2.5 - $+1.5m^{-1}$ |
| **LCD Monitor** | Type | TFT color LCD monitor , brightness adjustable, Wide angle view |
| | Size | 2.7 inch |
| | Dots | approx. 230,000 dots |
| **Preview Method** | | Digital preview *This function can be allocated to Help button by Menu. |
| **Playback** | | One Image, Index (4 or 9 or 16 thumb nails), Enlargement (up to 16X, scroll available), |
| | | Image Rotation, Folder view, Slideshow ,Histogram, Bright/Dark area, Resize, Trimming, Index |
| **Digital Filter** | Rec. mode | Toy camera, High contrast, Soft, Star burst, Retro, Extract color |
| | Playback | Toy camera, High contrast, Soft, Star burst, Retro, Extract color, Illustration(Pastel, Water color), |
| | | HDR, B&W, Sepia, Color, Slim, Brightness, Custom |
| **Focusing System** | Type | TTL Phase-matching 5-point wide autofocus system (SAFOX) |
| | Focus Mode | AF.A(auto), AF.S(single, with focus lock), AF-C(continuous)*, Manual focus |
| | | * Auto Picture and Picture mode : only when the Action mode is selected. |
| | | * Scene mode : only when the Kids, Pet, Stage lighting and Night snap mode is selected. |
| | | * P/Sv/Tv/Av/M/B : AF.A, AF.S or AF.C selectable |
| | Focus Point | Wide, Spot |
| | AF assist lamp | avaiable (by Built-in Flash) |
| **Image Stabilizer** | Type | Image sensor shift mechanism , Max 4 stops |
| **Dust Removal** | Type | Image sensor moving mechanism and SP coating with Dust Alert |
| **Exposure Control** | Metering System | TTL open-aperture 16-segment metering (coupled with lens and AF information) |
| | Metering Mode | (1) Multi-segment metering (2) Center-weighted metering (3) Spot metering |
| | Exposure Range | EV 0 - 21 (at Standard Output Sensitivity 100 with 50mm F1.4 lens) |
| | Modes | (1) Auto Picture mode, (2) Picture mode, (3) Scene mode, (4) Program AE, (5) Sensitivity-Priority AE, |
| | | (6) Shutter-Priority AE, (7) Aperture-Priority AE, (8) Metered Manual, (9) Bulb |
| | Exposure Compensation | ±2 EV (0.5EV steps or 0.3EV steps) |
| | Auto-bracketing | 3 frames within range of ±0.5EV, ±1.0EV, ±1.5EV (0.5EV steps) |
| | | or ±0.3EV, ±0.7EV, ±1.0EV (0.3EV steps) |
| | AE Lock | This function can be allocated to AF button by Menu. |
| **Shutter** | Shutter Type | Electronically controlled vertical-run focal plane shutter |
| | Shutter Speed | 1/4000 - 30 sec. and bulb |
| **Drive Modes** | | Single-frame , Continuous (Hi, Lo), Self-timer (12s, 2s), Remote control (0s, 3s), Auto bracket |
| | Continuous shooting | Max. approx. 3.5fps ,  sequence : 5 frame (JPEG and Continuous (Hi)) 4 frame (RAW) |
| | | approx. 1.1fps ,  sequence : until the memory card becomes full (JPEG and Continuous (Lo)) 7 frame (RAW) |
| **Built-in Flash** | Type | Built-in retractable P-TTL auto pop-up flash |
| | Guide number | approx. 11 (Standard Output Sensitivity 100/m) |
| | Angle of view coverage | 28mm wide-angle (equivalent to 35mm) |
| **Flash Synchronization** | | Hot shoe, sync-speed: 1/180 sec., P-TTL, high-speed-sync, |
| | | wireless-sync with PENTAX dedicated flash |
| **Data Folder** | Folder Name | Date (100_MMDD・・・) / PENTX (100PENTX, 101PENTX・・・) , |
| **Power Sources** | | Four AA (lithium, alkaline, and rechargeable Ni-MH)  batteries |
| | | Optional AC adapter also available. |
| **Battery Life** | Number of recordable images | approx. 1650 (Normal Recording)*2 , 1000 (50% use Flash)*1 |
| | Playback time | approx. 750 minutes*2 |
| **Interfaces** | | USB2.0 (HI-SPEED)/Video |
| **Lens Mount** | | PENTAX $K_{AF2}$ bayonet mount |
| | Usable Lens | PENTAX $K_{AF3}$-, PENTAX $K_{AF2}$-, $K_{AF}$-, and $K_A$-mount  lenses. |
| | | * Power zoom function not available. K-mount lenses usable with restrictions. S-mount lenses, |
| | | 67/645 lenses usable with adapter and with restrictions. |
| **Dimensions** | | approx. 122.5(W) x 91.5(H) x 67.5(D)mm  (4.8 x 3.6 x 2.7 inches) |
| **Weight** | | approx. 525g (18.5 oz.) without battery and SD memory card. |
| | | approx. 590g (20.8oz.) loaded and ready with lithium battery and SD memory card |
| | | approx. 625g (22.0oz.) loaded and ready with alkaline battery and SD memory card |

*1 Recofding capacity shows approximate number of shots recorded during CIPA-compliant testing.  Actual performance may vary depending on operating conditions.

*2 According to the result of PENTAX in-house testing.

# *K−m*
## Storage capacity

| Recorded Pixels | RAW 3872 x | RAW 3872 x 2592 | JPEG | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 3872 x 2592 | | | 3008 x 2000 | | | 1824 x 1216 | | |
| Quality Level | PEF | DNG | ★★★ | ★★ | ★ | ★★★ | ★★ | ★ | ★★★ | ★★ | ★ |
| 128MB | 7 | 7 | 29 | 44 | 75 | 50 | 73 | 125 | 116 | 200 | 339 |
| 256MB | 14 | 14 | 58 | 86 | 147 | 97 | 143 | 245 | 227 | 390 | 662 |
| 512MB | 29 | 29 | 115 | 171 | 293 | 193 | 284 | 487 | 450 | 774 | 1313 |
| 1GB | 59 | 58 | 231 | 343 | 586 | 387 | 570 | 974 | 902 | 1549 | 2627 |
| 2GB | 120 | 119 | 469 | 698 | 1181 | 787 | 1159 | 1982 | 1807 | 3073 | 5121 |
| 4GB | 236 | 235 | 921 | 1371 | 2320 | 1547 | 2277 | 3893 | 3549 | 6034 | 10057 |
| 8GB | 481 | 478 | 1874 | 2791 | 4723 | 3148 | 4634 | 7923 | 7224 | 12280 | 20468 |

## DA L Lenses Specifications

| | smc PENTAX-DA L 18-55mmF3.5-5.6AL | smc PENTAX-DA L 50-200mmF4-5.6ED |
|---|---|---|
| Lens mount | PENTAX K$_{AF}$ mount | |
| Lens Construction | 11 elements in 8 groups | 11 elements in 10 groups |
| Angle of View | 76-29° | 31.5-8.1° |
| | (wiith PENTAX D-SLR camera body) | |
| Aperture control | Automatic | |
| Minimum Aperture | F22-38 | F22-32 |
| Number of Diaphragm Blades | 6 | 6 |
| Minimum Focusing Distance | 0.25 (0.82 ft.) | 1.1    3.6 ft |
| Filter size | 52mm | 52mm |
| Maximum Magnification | 0.34X | 0.24X |
| Dimensions (Maximum Diameter x Minimum Length) | 68.0mm x 67.5mm (2.7 inch x 2.7 inch) | 66.5mm x 78.5mm (2.6 inch x 3.1 inch) |
| Weight | approx. 200 g / 7.1 oz | approx. 235 g / 8.3 oz |
| Lens Hood | PH-RBA52mm  Optional | PH-RBB52mm  Optional |