for your precious moments

Information

PENTAX

PENTAX Corporation
2-36-9, Maeno-cho, Itabashi-ku
Tokyo 174-8639, Japan
TEL: (81)-3-3960-5151
FAX: (81)-3-3960-5226

September 14, 2006

PENTAX K10D

A High-Performance Lens-Interchangeable Digital SLR Camera, Combining 10.2 Effective Megapixels with the Latest Technologies for Superior-Quality Image Reproduction

PENTAX Corporation is pleased to introduce the PENTAX K10D lens-interchangeable digital SLR camera. This new digital SLR camera combines 10.2 effective megapixels with a host of advanced technologies — including the PENTAX-original Shake Reduction (SR) system — to deliver high-quality digital SLR photography and responsive operations to advanced amateurs and experienced hobbyists.

Developed as the result of PENTAX's pursuit of higher-quality, finer-resolution digital images, the K10D combines 10.2 effective megapixels with an array of advanced features and a series of improvements at every stage of digital SLR photography. PENTAX believes that, while some of these technologies and improvements may not be actually reflected in the product's specifications, they do make a significant difference in the final images. Important features include the PENTAX-developed Shake Reduction (SR) system to minimize the adverse effects of camera shake, a newly developed A/D converter designed to convert a large volume of data more faithfully and swiftly, and a new high-performance imaging engine designed exclusively for the K10D.

The K10D also comes equipped with a host of features and functions designed to assist the photographer in various aspects of high-quality digital SLR photography. They include a new Dust Removal (DR) system to keep dust off the CCD surface, a PENTAX-original exposure system for faithful reproduction of the photographer's creative intentions, and a dependable dust-resistant, weather-resistant body construction. All combined, the K10D delivers exceptionally high image quality and responds brilliantly to the exacting demands of advanced photographers.

Major Features

1. High-quality image reproduction

[1] 10.2 effective megapixels for true-to-life, rich-gradation images:
The K10D features a large, high-performance 23.5mm x 15.7mm CCD with 10.2 effective megapixels as its image sensor, assuring the reproduction of true-to-life, rich-gradation images.

[2] PENTAX-original Shake Reduction mechanism for blur-free images:
The K10D is equipped with the PENTAX-developed Shake Reduction (SR) system, 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 mechanism shifts the position of the CCD 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 equivalent to 2.5 to 4 shutter-speed 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-} and K_{AF2-}mount lenses; screw-mount lenses (with an adapter); and 645- are 67-system lenses (with an adapter). Some functions may not be applicable with certain lenses.*

[3] Newly developed A/D converter for truthful image data conversion:
The K10D incorporates a high-performance A/D converter, which faithfully converts the analog data collected by the CCD image sensor into digital data. With the highest resolving power (22 bits, or 4.2 million gradations) among all existing digital cameras, it offers a digital-conversion capacity 1,024 times greater than conventional 12-bit, 4,096-gradation A/D converters.

[4] Newly designed PRIME imaging engine:
The K10D incorporates the new PRIME (PENTAX Real Image Engine) as its imaging engine. Designed exclusively for PENTAX digital SLR cameras, this new imaging engine produces high-definition, true-to-life images through well-balanced control of CCD signals, including saturation, brightness, white balance, sharpness and contrast. Its new memory (DDR2: Double Data Rate 2) also serves to enhance speedy image processing and high-speed data transfer.

2. Dust Removal system to keep dust off the CCD surface
The K10D features the new Dust Removal (DR) system to prevent dust from sticking to the surface of the CCD image sensor (or low-pass filter). Applied to the CCD surface through a vapor deposition process of a fluorine compound, the PENTAX-original Super Protect (SP) 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 CCD at high speed. The dust that is shaken off the CCD will fall onto an adhesive sheet positioned at the bottom of the SR unit, eliminating any possibility of its returning to the CCD surface.

3. Original exposure system for faithful reproduction of creative intentions

[1]Hyper Program function:
The K10D's Hyper Program function allows the user to instantly switch to the Shutter-Priority AE (Tv) mode or Aperture-Priority AE (Av) mode from the Program AE mode, with a simple turn of the electronic dials on the grip (one on the front for index-finger control, and the other on the back for thumb control). To return to the Program AE mode, simply press the green button positioned next to the shutter release button.

[2] Hyper Manual function:
When shooting in Manual mode, a single push of the green button allows the user to instantly set the proper exposure for the subject.

[3] Sensitivity-Priority mode:
The K10D features a new Sensitivity-Priority AE (Sv) mode, which is designed to automatically select the optimum combination of aperture and shutter speed for a user-selected sensitivity. The sensitivity can be shifted instantly (in 1/2 or 1/3 steps) by turning the electronic dial. Since this mode eliminates the need to recall a menu screen

for sensitivity changes, the photographer can react more quickly to changing photographic conditions.

[4] Shutter & Aperture-Priority mode:
Another exposure mode offered by the K10D is Shutter & Aperture-Priority AE (TAv) mode, which is designed to automatically select the most appropriate sensitivity for a user-selected shutter-speed & aperture combination.

4. Dust-resistant, weather-resistant construction
The K10D boasts a reliable dust-proof, water-resistant construction, with special seals applied to 72 different parts of the camera body, including the shutter release button and switches/levers/dials. This dependable body makes it possible to use the K10D in the rain or at dusty locations without worries.

5. Bright, clear viewfinder
Featuring a glass pentaprism, the K10D's viewfinder offers a 95-percent field of view and a 0.95-times magnification for easy viewing of the subject and effortless confirmation of focus and composition. Coupled with the acclaimed Natural-Bright-Matte II focusing screen, it delivers a large, bright subject image.

6. Compatibility with supersonic motor-driven lenses
The K10D is designed to be compatible with supersonic motor-driven autofocus lenses (currently under development), which are expected to provide smoother, quieter autofocus operation than conventional lenses.

7. Auto sensitivity control up to ISO 1600
The K10D's auto sensitivity control function automatically sets the optimum sensitivity up to ISO 1600, based on such data as the subject's brightness level and the lens' focal length. Since this function allows the use of higher shutter speeds in poor lighting situations (such as indoor sports events and night scenes), it helps the photographer to effectively reduce camera shake and prevent blurred images. For specialized applications, the sensitivity can be set manually from ISO 100 to ISO 1600.

8. Continuous shooting at approximately three images per second
To trace the movement of an active subject or capture a sequence of the subject's expressions, the K10D offers a continuous shooting mode that allows the photographer to capture a series of images at a maximum speed of approximately three images per second. In the JPEG recording format, the user is allowed to take as many images in succession as wished, until the capacity of an SD memory card runs out.

9. Reliable shutter unit
The K10D's shutter unit is designed to withstand nearly 100,000 releases, while assuring high-precision operation over the entire shutter-speed range — up to a top speed of 1/4000 second. It also features a flash synchronization speed of 1/180 second for more versatile flash photography.

10. 11-point wide-frame AF
The K10D's sophisticated SAFOX VIII autofocus system features 11 sensor points (with nine cross-type sensors positioned in the middle) to automatically focus on the subject with utmost precision, even when it is positioned off center. The in-focus sensor point is automatically superimposed in red in the viewfinder for at-a-glance confirmation.

11. Extra-large, wide-view LCD monitor
The K10D incorporates an extra-large 2.5-inch color LCD monitor on its back panel. Its wide-view design allows the photographer to check the monitor image from 140 degrees both vertically and horizontally, ensuring effortless image viewing even from a diagonal position. With approximately 210,000 pixels, it also offers digital zooming of playback images up to 20 times for easy confirmation of the image's focusing status and details.

12. Powerful rechargeable batteries for extended shooting
The K10D features new, large-capacity lithium-ion rechargeable batteries, which can capture approximately 500 images** when fully recharged.

*** Under testing conditions prescribed by the CIPA standards (flash illumination used in 50% of images).*

15. Other features
- Choice of 16-segment multi-pattern metering, center-weighted metering and spot metering to accommodate various photographic applications
- High-rigidity stainless-steel chassis
- 32 custom functions to personalize camera operations
- Extended bracket function to capture three images of the same subject at different contrast, saturation, sharpness or white-balance levels
- Compatibility with conventional SD memory cards and newly introduced SDHC memory cards
- Choice of two preview functions (digital/optical)
- Simultaneous recording of RAW and JPEG images
- Manual fine adjustment of white balance
- Date folder to simplify the arrangement and search of recorded images
- Six built-in digital filters (Black-and-white, Sepia, Slim, Soft, Brightness and Color) for easy editing of recorded images

- Remote shutter release from the front and back sides of the camera using optional remote controller
- **PENTAX PHOTO Laboratory 3** RAW data processing software and **PENTAX PHOTO Browser 3** browser software, included on the accompanying CD-ROM
- Compatibility with PictBridge, DPOF, Exif Print and PRINT Image Matching III systems

[**Exclusive Optional Accessory]**

D-BG2 Battery Grip

Developed for exclusive use with the PENTAX K10D, this battery grip can be used in combination with the camera's rechargeable lithium-ion batteries to greatly extend the battery life. With an extra shutter-release button, preview lever, electronic dial, AE-lock button and green button, it makes vertical-position shooting simple and effortless. It also features the same dust-proof, water-resistant construction as the K10D camera body.

- Marketing date (tentative): Mid October, 2006 (at the launch of the K10D)
- Power source: Exclusive lithium-ion battery (D-LI50 type)
- Dimensions: 140 (W) x 43 (H) x 73.5 (D) mm (excluding protrusions)
- Weight: 235g (without battery)

K10D Specifications

Type		TTL autofocus, auto-exposure digital SLR digital-still camera with built-in retractable P-TTL auto pop-up flash
Effective Pixels		10.2 megapixels
Sensor	**Total pixels**	10.75 megapixels Interline interlace CCD with a primary color filter 23.5mm x 15.7mm
Color Depth		8 bit (JPEG) or 12 bit (RAW)
Recorded Pixels		JPEG: [10M]3872 x 2592 pixcels, [6M] 3008 x 2000 pixels, [2M] 1824 x 1216 pixels RAW: [10M] 3872 x 2592 pixels
Sensitivity		Auto, Manual (100 to 1600 (1/3EV steps or 1/2 EV steps):Standard Output Sensitivity)
Recording Formats		JPEG (Exif 2.21), RAW, DCF (Design rule of Camera File system), DPOF (Digital Print Order Form), PRINT Image Matching III
Image Formats		Compressed: JPEG - Baseline (★★★: Best , ★★: Better, ★: Good) Compressed: RAW (PEF, DNG)
Storage Media		SD memory card, SDHC memory card
Lens Mount		PENTAX K_{AF2} bayonet mount
Usable Lens		PENTAX K_{AF2}-, K_{AF}-, and K_A-mount lenses. * Power zoom function available. K-mount lenses usable with restrictions. S-mount lenses, 67/645 lenses usable with adapter and with restrictions.
Focusing System		
	Type	TTL Phase-matching 11-point wide autofocus system (SAFOX VIII)
	Mode	AF-single (with focus lock); AF-continuous and Manual focus available
	Focus Point	Auto, Select, Center
	AF assist lamp	Avaiable (by Built-in Flash)
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
	Metering Range	EV 1 - 21.5 (at Standard Output Sensitivity 200 with 50mm F1.4 lens)
	Modes	(1) Green (2) Program AE (3) Sensitivity-Priority AE (4) Shutter-Priority AE (5) Aperture-Priority AE (6) Shutter and Aperture- Priority AE (7) Metered Manual (8) X speed (9) Bulb
	Exposure Compensation	±3 EV (1/2EV steps), ±2 EV (1/3EV 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	Availiable
Playback		One Shot, Index (9 thumb nails), Enlargement (up to 20X, scroll available), Image Rotation, Folder view, Slideshow , Histogram, Bright Portion
	Digital Filter	B&W (4 type), Sepia (3 type), Color (18 type), Soft (three-level amount adjustable), Slim (+/- 8 level amount adjustable), Brightness (at playback mod
White Balance		Auto, Daylight, Shade, Cloudy,Tungsten Light, Fluorescent Light (W, D, N), Flash, Manual setting
Shutter		
	Type	Electronically controlled vertical-run focal plane shutter
	Speed	1/4000 - 30 sec. and bulb
Drive Modes		Single-frame advance, continuous advance, self-timer (12 sec., 2 sec.), auto bracket and remote control (0sec., 3sec.)
	Continuous shooting	Approx. 3 fps, sequence: untill the memory card becomes full (JPEG), 10 frame (RAW), 6 frames (RAW+JPEG)
Viewfinder		
	Type	Pentaprism type
	Focusing screen	Natural-Bright-Matte II focusing screen
	Field of view	95%
	Magnification	0.95X (with 50mm F1.4 lens, infinity, $-1m^{-1}$)
	Diopter adjustment	$-2.5 - +1.5m^{-1}$
	Viewfinder Indication	(1) AF frame; (2) Spot metering frame; (3) AF point
	Viewfinder LCD Indication	(1) Shake Reduction; (2) Flash status; (3) Shutter speed; (4) Aperture; (5) Focus indicatoer; (6) Manual focus; (7) EV bar; (8) EV compensation; (9) Flash exposure compensation; (13) AE lock indicator; (14) ISO warning; (15) Number of recordable images/EV compensation/confirm sensitivity
Mode Dial Indication		(1) Green (2) Program AE (3) Sensitivity-Priarity AE (4) Shutter-Priority AE (5) Aperture-Priority AE (6) Shutter and Aperture- Priority AE (7) Metered Manual (8) X speed (9) Bulb (10) User
External LCD Panel Indication		(1) Shutter speed; (2) Aperture; (3) Flash mode (Flash-On, Flash-Off, Red-eye reduction, Auto, Slow-speed sync); (4) Drive mode (Shingle frame, Continuous, Self-timer, Remote control); (5) EV bar; (6) Auto bracket; (7) Flash exposure compensation (8) EV compensation; (9) Battery level; (10) White balance; (11) ISO warning; (12)RAW / RAW+JPEG; (13) Number of recordable images/EV compensation/PC(Pb); (14) Multi-exposure
LCD Monitor		2.5 inch, low-temperature polysilicon TFT color LCD monitor (Approx. 210,000 pixels), brightness adjustable, Wide angle view
Built-in Flash		
	Type	Built-in retractable P-TTL auto pop-up flash
	Guide number	11(Standard Output Sensitivity 100/m), 15.6 (Standard Output Sensitivity 200/m)
	Angle of view coverage	28mm wide-angle (equivalent to 35mm)
	Flash Exposure Compensation	-2 EV to -1 EV(1/2EV steps)
Flash Synchronization		With RTF and via hot shoe Sync speed: 1/180 sec. set automatically with RTF or PENTAX dedicated flash unit at recharge completion
Self-timer		Electonically controlled type with two-second or 12-second delay. Cancellation possible.
Preview Method		Digital Preview / Optical Preview
Custom Function		32 custom-programmable functions available
Main switch		(1) ON; (2) OFF; (3) Preview
Time	**World Time**	71 cities (28 time zones)
Language		English, French, German, Spanish, Swedish, Netherlandish, Italian, Russian, Korean, Chinese (Traditional/Simplified), Portuguese, Japanese
PictBridge	**Print mode**	Single image print, All images print, DPOF auto print
Interfaces		USB 2.0 (HI-SPEED)
Video Output		Compatible with NTSC and PAL formats
Power Sources		Rechargeable D-LI50 lithium-ion battery Optional AC adapter also available.
Dimensions		141.5(W) x 101(H) x 70(D)mm (5.6 x 4.0 x 2.76 inches)
Weight		790g (27.9 oz.) loaded and ready with battery and SD memory card 710g (25.0 oz.) without battery and SD memory card.

K10D

System requirements

PENTAX PHOTO Browser 3 / PENTAX PHOTO Laboratory 3

PC

OS	Windows 2000, and XP HomeEdition/Professional
CPU	Pentium 4 or later (Pentium 4 2.0GHz or later)
Memory capacity	512MB or more（Recommend to 1.0GB or more）
Hard disk capacity	250MB or more（Recommend to 500MB or more）
Language	English, French, German, Spanish, Italian, Russian, Korean, Chinese (Traditional / Simplified), Japanese

Macintosh

OS	Mac OS X 10.2 or later
CPU	PowerPC G4 or later（Recommend to PowerPC G5, Intel CORE can ran at Rosetta）
Memory capacity	512MB or more（Recommend to 1.0GB or more）
Hard disk capacity	Over 250MB (Over 500MB)
Language	English, French, German, Spanish, Italian, Russian, Korean, Chinese (Traditional / Simplified), Japanese

For smooth operation, suggested system requirments are shown in parentheses.

USB

PC

OS	Windows 2000/XP（Home Edition・Professional）was pre-installed

Macintosh

OS	Mac OS X 10.2 or later was pre-installed at Macintosh PC