RICOH
imagine. change.

PENTAX K-1 Mark II

PENTAX K-1 II

The PENTAX K-1 Mark II: the new standard of the 35mm full-frame K series

Rich colors and subtle shades, and a beautiful bokeh and a well-defined sense of depth. When the photographer's inspiration is truly reflected in all these elements, photographs will become more than mere records — they will evolve into truly impressive works of art.

The PENTAX K-1 Mark II has been created as the flagship model that will fulfill this goal. It features a new, advanced image-processing system to deliver the beautiful image quality which all photographers demand. It produces images that are rich in color and gradation, high in resolution, and superb in bokeh rendition.

The Pixel Shift Resolution System II — the PENTAX-original super-solution technology — now accommodates handheld photography. The AF system featuring a new algorithm assures high-precision focusing even with moving subjects.

While inheriting the PENTAX K-1's development concept, the PENTAX K1 Mark II has advanced technologies to near perfection. When your creativity is in complete harmony with the camera, your photography will truly come alive.

PENTAX
K-1 II

Top sensitivity of ISO 819200 enhances image quality, and expands the creative boundaries of high-resolution digital SLR photography

State-of-the-art imaging processing system
Greatly improved image quality, even in high-sensitivity photography

NEW

To reproduce lively colors and rich gradations close to memory colors in all sensitivity ranges, the PENTAX K-1 Mark II newly incorporates an original accelerator unit, which efficiently processes image signals output by the image sensor before sending them to the imaging engine. This process upgrades both image resolution and color reproduction in a high-sensitivity range, while drastically reducing noise compared to the PENTAX K-1. It also helps bring the camera's top sensitivity up to ISO 819200 (at standard output sensitivity) for high-grade, super-high-sensitivity photography.
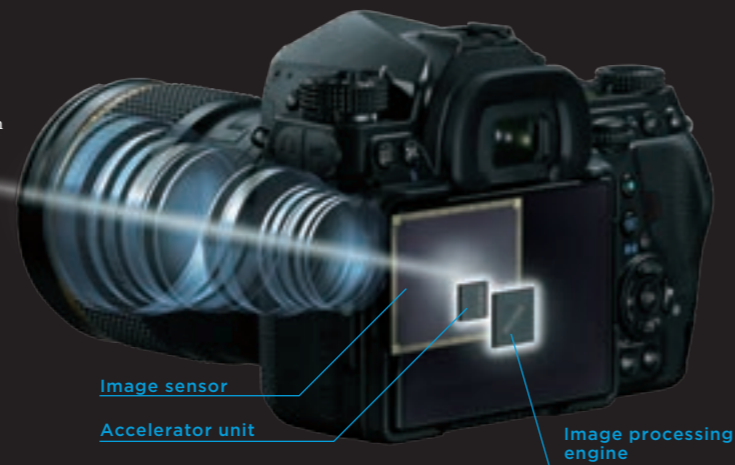
Accelerator unit

Image sensor

Accelerator unit

Image processing engine

PRIME IV
High-performance imaging engine to assure high-resolution image reproduction

The PENTAX K-1 Mark II's PRIME IV imaging engine is the culmination of PENTAX's high-speed, high-quality image processing technologies. In addition to highly efficient noise processing, it features Fine Sharpness and Extra Sharpness functions to process the subject's outlines more naturally and more delicately, and the PENTAX Real-time Scene Analysis System, which has adopted a breakthrough deep learning technology. It also effectively compensates for the distortion, vignetting and chromatic aberration caused by specific lens properties, while efficiently correcting the fringe effect.*

* Available in combination with D FA-, DA-, DA L- and FA-series lenses. Some of these lenses may not be compatible with these functions.

PRIME IV
PENTAX Real Image Engine IV

35mm full-frame image sensor
A large, high-performance image sensor to capture all lighting data

The PENTAX K-1 Mark II's 35mm full-frame image sensor features a large imaging area and a wide pixel pitch to deliver lively, true-to-life images with rich gradation. It also assures superb noise reduction performance to capture the subject truthfully with fine details and subtle shades. Its shallow depth of field allows you to control the sense of depth and bokeh (defocus) effect at will.
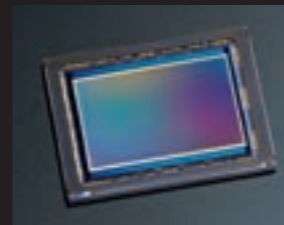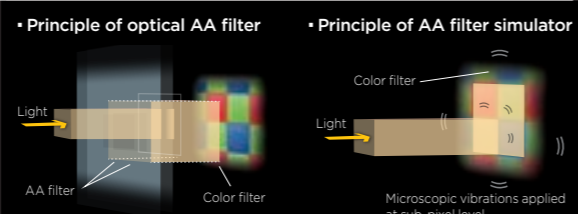
Approximately 36.4 effective megapixels
AA-filter-free design to optimize resolving power

The PENTAX K-1 Mark II features an AA (anti-aliasing)-filter-free design to optimize image resolving power. This design produces true-to-life images by faithfully depicting the fine details of the subject. It retains excellent resolution, even when the image is cropped during shooting, or the captured image is trimmed during processing. It allows you to capture the decisive moment in a sharp, clear image.

AA filter simulator
State-of-the-art mechanism to optically minimize moiré and false color

The PENTAX-original AA (anti-aliasing) filter simulator* effectively minimizes moiré and false color by using the camera's SR mechanism to apply microscopic vibrations to the image sensor during exposure. It provides the option of choosing the AA-filter effect for well-balanced images or the AA-filter-free mode for greater resolving power.

• Principle of optical AA filter   • Principle of AA filter simulator

Color filter

Light

Light

AA filter   Color filter

Microscopic vibrations applied at sub-pixel level

* This function works most effectively with a shutter speed of 1/1000 second or slower.
* This function may not be used in some shooting modes, or may not be combined with certain functions.

HD PENTAX-D FA 28-105mmF3.5-5.6ED DC WR
Aperture: F11; Shutter speed: 1/500sec.; Exposure compensation: +0.7EV; Sensitivity: ISO 200; White balance: Daylight; Custom Image: Bright

HD PENTAX-D FA 15-30mmF2.8ED SDM WR Aperture: F8; Shutter speed: 1/125sec.; Exposure compensation: +0.7EV; Sensitivity: ISO 100; White balance: Daylight; Custom Image: Landscape

The advanced Pixel Shift Resolution System II
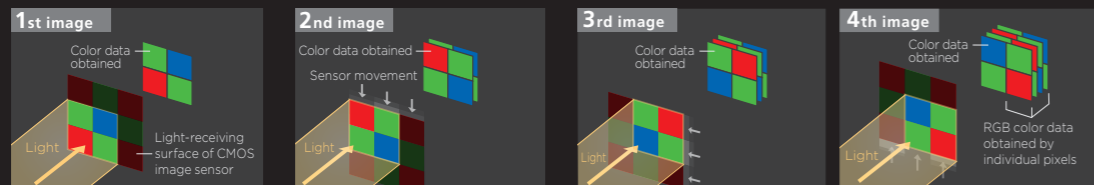# for super-high-resolution images

A PENTAX technology to produce high-quality images beyond the power of total pixels

PENTAX's Pixel Shift Resolution System II* is the super-solution technology which realizes image resolving power and color reproduction far better than that of the conventional Bayer system. By taking advantage of the camera's SR mechanism, it captures four images of the same scene by slightly shifting the image sensor for each image, obtaining all RGB color data and luminance data from each pixel, then synthesizing them into a single, super-high-resolution composite image. It not only improves image resolving power, but also prevents the generation of false color, reduces high-sensitivity noise, and greatly improves image quality.

Real Resolution:OFF

Real Resolution:ON

* When using this system, the user is advised to stabilize the camera firmly on a tripod during shooting, and set the drive mode to self-timer or remote control, or use the mirror lock-up function.
* The desired effect may not be obtained when the subject is on the move or camera shake occurs.

< Conceptual illustrations of Pixel Shift Resolution System >

1st image

Color data obtained

Light-receiving surface of CMOS image sensor

Light

2nd image

Color data obtained

Sensor movement

Light

3rd image

Color data obtained

Light

4th image

Color data obtained

RGB color data obtained by individual pixels

Light

RAW-format filing compatibility

The images captured by the Pixel Shift Resolution System can be saved as RAW-format files. You can develop these files within the camera body while adjusting various parameters or turning the Pixel Shift Resolution effect on and off to create the desired image.

Motion Correction function
An effective tool in outdoor shooting

When shooting an image with the Pixel Shift Resolution System, you can select the Motion Correction function. When this function is activated, the camera automatically detects the amount of subject motion during continuous shooting and minimizes negative effects during the synthesis process.*

* Movement may not be sufficiently corrected when the subject is moving in certain directions and/or patterns. This function does not guarantee that the movement will be properly corrected for all subjects.

Innovative Dynamic Pixel Shift Resolution mode   NEW
Greater flexibility in handheld shooting

In addition to conventional shooting modes, the Pixel Shift Resolution System II features a new Dynamic Pixel Shift Resolution mode*, an innovative technology that takes advantage of slight fluctuations of the subject's position during handheld shooting. The camera closely analyzes four captured images and detects camera shake during handheld shooting before synthesizing them into a super-high-resolution composite image.** By combining this mode with the camera's SR mechanism, you can use the advanced Pixel Shift Resolution System II more flexibility, even in difficult shooting conditions such as shooting at poorly lit locations or without using a tripod.

Dynamic Pixel Shift Resolution mode

* When using a tripod, the user is advised not to activate the Dynamic Pixel Shift Resolution mode.
** Captured images may not be properly synthesized with certain subjects or under certain conditions. By capturing images in the RAW or RAW+ format, the user can process the images unsuitable for the synthesizing process as normal RAW-format images within the camera body.

HD PENTAX-D FA 24-70mmF2.8ED SDM WR
Aperture: F11; Shutter speed: 0.3sec.; Exposure compensation: -1.0EV; Sensitivity: ISO 100; White balance: Daylight; Custom Image: Landscape; Pixel Shift Resolution: ON (Motion Correction ON)

HD PENTAX-D FA 28-105mmF3.5-5.6ED DC WR Aperture: F11; Shutter speed: 1/250sec.; Exposure compensation: +7.0EV; Sensitivity: ISO 100; White balance: Daylight; Custom Image: Bright; Pixel Shift Resolution: ON (Motion Correction ON)

Outdoor-oriented monitor with red-lit monitor display function

Easy, pushbutton control of monitor brightness

The camera's outdoor-oriented monitor, which provides easy setting of the brightness level, has been upgraded. In addition to positive settings to assure the correct brightness level in bright locations, it now provides negative settings to improve visibility in dark locations. It also features a red-lit monitor display function to facilitate monitor viewing when your eyes have become accustomed to a dark location during astronomical or nighttime photography.

Outdoor View Setting : –2

Outdoor View Setting : +2

Operation Assist Light

Supporting camera operations in the dark

Four Operation Assist Lights are strategically positioned around the camera body: at the upper side of the lens mount, behind the LCD monitor, at the memory card slot, and at the cable switch terminal. With a push of the illumination button, you can turn them on* to facilitate lens and memory card changes, control button operations, and attachment and removal of a cable switch, for more efficient, comfortable shooting of nighttime outdoor scenes and poorly lit indoor subjects.

* The LED lights can be switched on and off individually. They are all set to the off mode at default setting.

Above lens mount

Behind LCD monitor

At memory card slot

At cable switch terminal
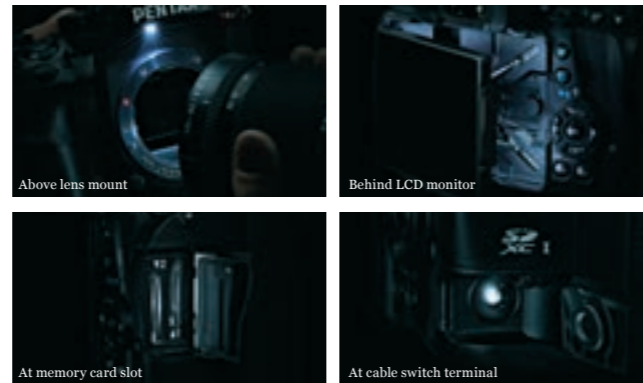
Dependable dustproof, weather-resistant construction

A completely environment-resistant imaging system, with a weather-resistant lens

A combination of the K-1 Mark II's 87 sealing parts and the optional D-BG6 Battery Grip's watertight body prevents the intrusion of water and dust into their interior. When an AW- or WR-series lens is mounted,* the K-1 Mark II and its lens forms a remarkable digital imaging system totally resistant to demanding environmental factors.

* AW stands for All Weather (dustproof and weather-resistant construction), while WR stands for Weather Resistant (simplified weather-resistant construction).

–10°C cold-resistant construction

Unmatched reliability proven under vigorous testing conditions

Anticipating use in cold locations, PENTAX has subjected the K-1 Mark II to exacting environmental tests at temperatures as low as –10°C, and gathered a vast array of data on operational precision, response and stability of mechanisms and circuits, as well as fluctuations in battery voltage.* As the result, the K-1 Mark II assures solid, trouble-free operation even at freezing temperatures.

Note: Battery performance declines as the temperature goes down. When shooting in cold environments, the user is advised to carry spare batteries and keep them warm by storing them in an inside pocket.

The extra-durable body overcomes challenging field conditions, such as poor weather, darkness and freezing temperatures

SR II in-body shake reduction mechanism

Five-axis, five shutter step camera shake compensation

The PENTAX-original sensor-shift-type shake reduction mechanism to provide optimum compensation for all lenses used in handheld shooting. The SR II (Shake Reduction II) features a five-axis mechanism to compensate for camera shake caused by horizontal and vertical shift* (often generated in macro photography) and camera shake caused by roll, which is difficult to handle by lens-installed shake reduction mechanisms, in addition to more common camera shake caused by pitch and yaw. The SR II unit is controlled with great precision as soon as the camera's power is turned on, and provides a wide compensation range — as much as five shutter steps** — to expand the limits of handheld shooting.

* During Live View shooting, this mechanism does not compensate for camera shake caused by horizontally and vertical shift.
** Measured in conformity to CIPA standards, using an HD PENTAX-D FA 28-105mm F3.5-5.6ED DC WR lens at a focal length of 105mm.

SR : OFF   SR : ON

SR : OFF   SR : ON

5axes / **5**steps

Shake reduction along five axes
1 2 Pitch and yaw 3 Roll
4 5 Horizontal and vertical shift

SR Shake Reduction II

Compatible with panning shots

When taking a panning shot, this mechanism efficiently controls the SR unit to detect only the direction of the camera's movement, while compensating for all other affecting vectors. Because of this, the K-1 Mark II captures beautiful, high-resolution images both in normal shooting and panning photography, without requiring any switching operation.

DR II (Dust Removal II) mechanism

Effective removal of foreign particles from the image sensor

Using its piezoelectric element, this innovative mechanism applies ultrasonic vibrations to the optical glass panel placed in front of the image sensor. This effectively removes all dust particles clinging to the image sensor surface, and prevents annoying dust spots from appearing on a captured image.

DRII *Dust Removal II*

Absorption-type IR-cut glass
UV/IR-cut filter
CMOS image sensor
Piezoelectric element
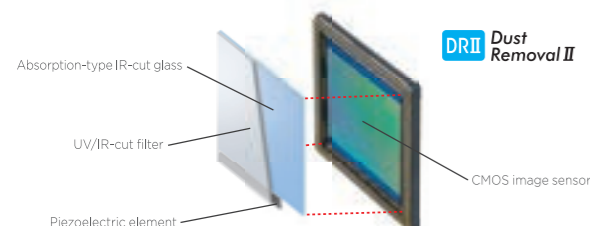
High-rigidity, extra-durable body

A shell structure shielding a metallic chassis with a magnesium alloy casing

The K-1 Mark II's exterior casing is made of highly rigid, lightweight magnesium alloy, which provides excellent shock-resistance and electromagnetic shielding performance. By coupling it with a high-rigidity metallic chassis housing the core components, the K-1 Mark II forms a compound structure to assure outstanding durability and exceptional reliability.

High-precision AE / AF operation at –3EV illumination

Extra-accurate auto-exposure and autofocus control, even in the dark

An illumination level of –3EV makes it difficult to see a subject with the naked eye, and almost impossible to make accurate focus with manual focusing. Even under such low-illumination conditions, the K-1 Mark II assures high-precision auto-exposure and autofocus operations.* Thanks to its upgraded algorithm, its autofocus response time for poorly illuminated subjects is greatly reduced. Coupled with its super-high-resolution imaging power, the K-1 Mark II delivers exceptional shooting performance in dark locations.

* Light metering measured at ISO 100 and with a 50mm F1.4 lens; focusing measured at ISO 100, at room temperature and with 25 middle sensors.

Extra-durable shutter unit

Withstanding 300,000 shutter releases for professional use

After a series of exacting performance tests, the K-1 Mark II's shutter unit has proven its exceptional durability by withstanding a total of 300,000 shutter releases. It assures outstanding operational precision and exceptional durability required for exacting professional work.

Dual card slot

Large-volume image data filing on two SD memory cards

The K-1 Mark II's card slot accepts two SD memory cards, with a choice of three data filing modes: "Serial" to store a large volume of data successively from one card to another; "Duplicate" (simultaneous filing) for simplified data backup, and "RAW / JPEG Division" to separate data files based on the recording format. It is also possible to copy an image stored on one card to another.
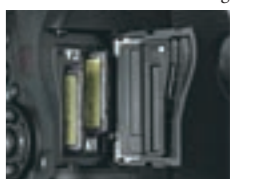
Smart Function
Single-action function control

The K-1 Mark II's Smart Function is a camera operation system harmonizing an array of features with ease of operation. This functional camera operation system lets you swiftly choose and set the desired function using just two dials positioned on the camera's upper panel, without needing to refer to the menu screen on the LCD monitor.

• Functions controllable by Smart Function

Function Dial	Setting Dial
●	Viewfinder shooting: Void Live View shooting: Enlarge display
+/−	Exposure compensation value shift
ISO	ISO sensitivity shift
CH/CL	Switching between Continuous Shooting (with a choice of three drive modes) and Single Frame Shooting
BKT	Bracketing value shift in bracket shooting
HDR	Change of HDR shooting mode
Grid	Viewfinder shooting: ON/OFF Live View shooting: change of grid pattern
SR	Still-image shooting: ON/OFF of SR mechanism Movie recording: ON/OFF of Movie SR mechanism
Crop	Change of Crop setting
Wi-Fi	ON/OFF

Function Dial

Setting Dial

Built-in GPS module and Electronic Compass
Automatic recording of shooting position data

Electronic Compass

By making full use of its GPS module, Electronic Compass and SR mechanism, the K-1 Mark II simplifies the astronomical photography of celestial bodies, without the help for an equatorial telescope. Based on the latitude data obtained from GPS satellites and other affecting factors (the camera's direction and horizontal / vertical tilt) obtained by its various sensors, the K-1 Mark II calculates the movement of celestial bodies, then synchronizes the movement of its image sensor with that of celestial bodies with great precision. Since it captures stars without a streaking effect even during extended exposures, you can record faint stars, which are difficult to detect with the naked eye, as point images.

❶ Latitude
❷ Longitude
❸ Altitude
❹ Universal Time Coordinated
❺ GPS signal status
❻ Camera's directionof shooting (Azimuth)

Electronic Compass screen

### GPS Log to track the photographer's movement

The K-1 Mark II's GPS Log function automatically keeps track of the photographer's movement at fixed intervals. By loading a log file on your computer, you can trace the route you have traveled using a mapping application such as Google Earth™.

Flexible Tilt-Type LCD monitor
Innovative mechanism to tilt the monitor to any desired angle along the optical axis

Aiming at aligning the photographer's line of sight precisely with the camera's optical axis while providing a flexible angle adjustment, PENTAX has designed an ideal LCD monitor for the K-1 series by creating an innovative mechanism that supports the monitor with four stays. This monitor has reached two difficult goals that conventional monitors have failed to attain: no deviation from the optical axis; and unrestricted tilt in all directions, horizontally or vertically. You can even tilt it up to a nearly 90-degree angle for low-angle and waist-level photography.
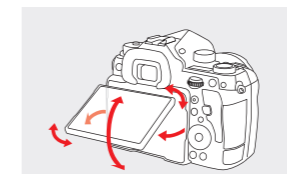
• Vertical tilt: approx. 44°
• Horizontal tilt: approx. 35° (Waist-level shooting: approx. 90°)

Air Gapless LCD monitor

The K-1 Mark II's Air Gapless LCD monitor uses a special resin layer applied between the protective panel and the LCD screen to effectively cut down internal reflections. Coupled with the Outdoor View Setting function, it assures excellent visibility even under bright sunshine.
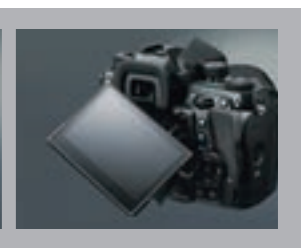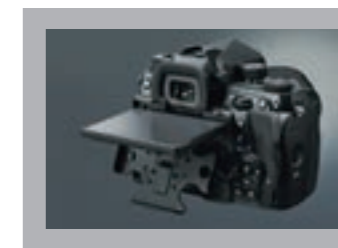
Innovative shooting-support features help you capture eye-catching masterpieces

Astrotracer
Effortless tracking and photographing of celestial bodies without an equatorial

ASTROTRACER

By making full use of its GPS module, Electronic Compass and SR mechanism, the K-1 Mark II simplifies the astronomical photography of celestial bodies, without the help for an equatorial telescope. Based on the latitude data obtained from GPS satellites and other affecting factors (the camera's direction and horizontal / vertical tilt) obtained by its various sensors, the K-1 Mark II calculates the movement of celestial bodies, then synchronizes the movement of its image sensor with that of celestial bodies with great precision. Since it captures stars without a streaking effect even during extended exposures, you can record faint stars, which are difficult to detect with the naked eye, as point images.

Notes:
• The user is advised to use a tripod to stabilize the camera.
• The user is advised to read the operating manual thoroughly before shooting.
• ASTROTRACER cannot be used with some shooting modes, such as interval shooting and interval composite shooting.

HD PENTAX-D FA 15-30mmF2.8ED SDM WR (F2.8/60sec/ISO3200)

Auto Horizon Correction and Composition Adjustment
Convenient tools to compose well-balanced images

By taking advantage of its SR mechanism, the K-1 Mark II helps you compose well-balanced, flawless images. The Auto Horizon Correction function* rotates the image sensor to compensate for the camera's horizontal tilt, making it useful in handheld shooting. The Composition Adjustment function** allows you to make minute adjustment of image composition with a shift of the image sensor. It comes in handy for Live View shooting using a tripod.

* Maximum compensation angle: approx. ±2° (approx. ±1° with SR mechanism activated)
** Maximum compensation range: ±1.5mm (±1mm along the axis of rotation) or ±1°

Digital level
Accurate detection of camera tilt without removing the eye from the subject

The K-1 Mark II's Digital Level displays bar scales at the right side and bottom of the viewfinder to indicate the horizontal and vertical tilt of the camera, allowing you to confirm the horizontal and vertical alignment of the subject without taking the eye off the subject. You can also display the Digital Level on the LCD monitor during viewfinder shooting, Live View shooting and movie recording.
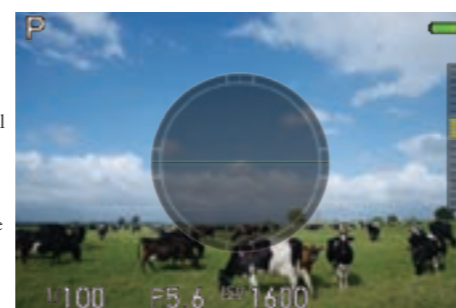
Sample of Digital Level display (during Live View shooting)

Live View shooting, with an option of electronic shutter mode
An array of handy tools to assist creative photography

In the Live View mode, the PENTAX K-1 Mark II provides a wide range of picture-taking tools. The Flexible Tilt-type LCD monitor lets you clearly view the on-screen image from different angles to optimize shooting comfort. In addition to the conventional focal-plane shutter mode, it also offers the option of the electronic shutter mode, effective in macro and scenic photography in minimizing the vibrations caused by shutter release of the camera's mechanical shutter unit.

Main Live View shooting functions

▪ A choice of AF modes: Face Detection, Auto Tracking, Multi-segment Auto, Select and Spot
▪ Focus Assist to emphasize the outline of the in-focus area
▪ A choice of grid display from five patterns and two colors (white and black)
▪ Zoom display with a maximum magnification of 16 times for easy confirmation of focus condition

Other features
An array of tools for creative visual expression

▪ **Bulb-timer function**
This function lets you set the bulb timer for exposure durations from 10 seconds to 20 minutes, improving operability in bulb shooting.

▪ **1:1 cropping mode**
In addition to the three cropping modes (Auto, FF and APS-C), the camera also provides a 1:1 cropping mode. The viewfinder also displays a 1:1 picture frame to facilitate image composition.
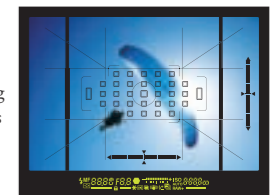
A well-defined view of the subject and intuitive operation let you focus on the subject

Optical viewfinder with a nearly 100% field of view

Assuring a clear view of the field and ease of focus

The K-1 Mark II's optical viewfinder provides a nearly 100-percent field of view and a 0.7-times magnification to deliver a sharp, crisp view of the subject and a large, well-defined image field, both of which are the benefits of the 35mm full-frame SLR camera. This viewfinder also provides a clear view of the image field free of aberrations, even at the edges. Its Natural-Bright-Matte III focusing screen* makes it easy to identify the in-focus point, even during manual-focus operation.
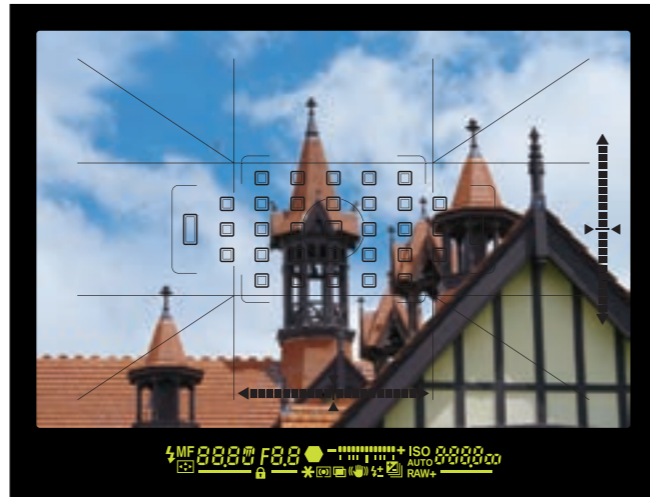
* The focusing screen is fixed on the camera body, and is not interchangeable.
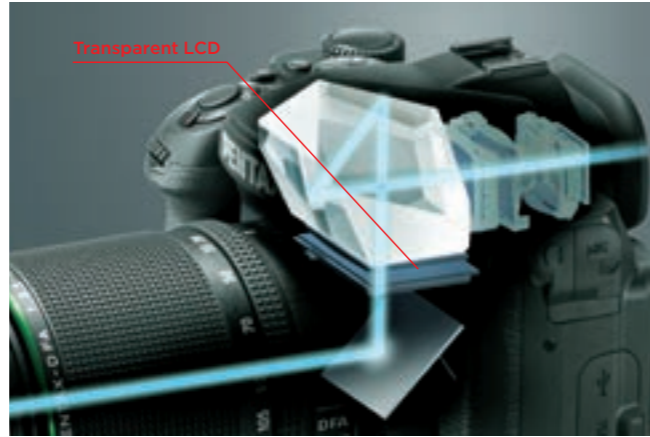
Transparent LCD

Transparent viewfinder display

At-a-glance confirmation of the camera's operational status

The K-1 Mark II's transparent LCD viewfinder display allows you to select desired data, such as a grid display, and monitor it in the viewfinder. It comes in handy when correcting the camera's tilt using the digital level or rearranging the image composition using a grid pattern, without taking the eye off the subject.

Selection of data on viewfinder display

Transparent data to be displayed in the viewfinder (grid pattern, Digital Level, AF frame and spot-metering frame) can be turned on and off independently to accommodate varying shooting conditions and preferred shooting styles.

Digital Level

The Digital Level displays the K-1 Mark II's horizontal and vertical tilt with two bar scales. Compared with the conventional type that utilizes an exposure bar scale, it not only makes it easier to identify the camera's tilt, but also allows you to check the tilt and exposure status simultaneously. As a result, it greatly improves the camera's operability during viewfinder shooting.

Note: All viewfinder display data, except the crop frame, is simulated to explain the function.
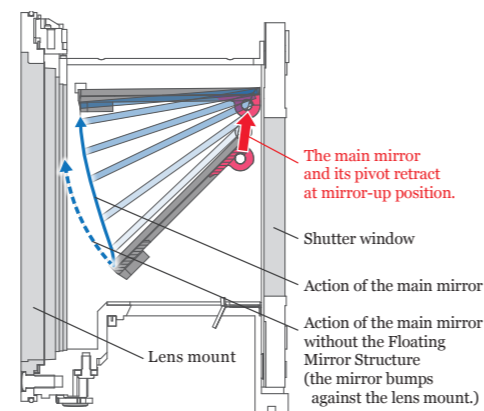
Compact, solid body

Remarkable maneuverability, despite a 35mm full-frame design

PENTAX's development concept has been to design a compact body and optimize the ease of handling in the field. The PENTAX K-1 Mark II faithfully inherits this concept. In addition to optimizing the positioning of the finder unit to keep the camera's height to a minimum, PENTAX has also designed an original mechanical unit containing the shutter charge and mirror driving mechanisms. PENTAX's advanced high-density packaging technology has succeeded in creating a compact, maneuverable body for this new camera.

PENTAX
APS-C-size
SLR camera

PENTAX 35mm
full-frame
SLR camera
(K-1 Mark II)
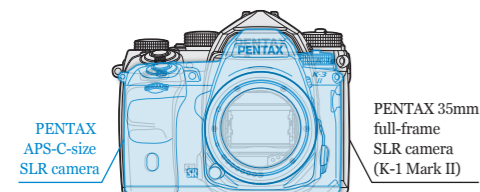
Floating Mirror Structure

In order to accommodate the 35mm full-frame image sensor and the large viewfinder with a nearly 100-percent field of view, it was necessary to increase the size of the main mirror and mirror box. To minimize the size of the mirror box, PENTAX has developed a new mechanism that retracts the main mirror as it swings upwards.

The main mirror and its pivot retract at mirror-up position.

Shutter window

Action of the main mirror

Action of the main mirror without the Floating Mirror Structure (the mirror bumps against the lens mount.)

Lens mount

Conceptual image of the Floating Mirror Structure

Customization

Creating your personal K-1 Mark II by customizing camera operations to your preference

The K-1 Mark II provides a wide range of customization settings to optimize the ease and comfort of camera operations. These settings have been designed to expand the functions of the USER Mode and the Fx (function) buttons, improve accessibility to desired functions on the control panel, and prevent accidental operational errors.

USER Mode

Five different combinations of the most frequently used functions can be assigned to this mode to handle specific subjects or creative intentions.

Control panel

This panel displays a list of the functions and their status on the LCD panel, while allowing you to change the contents and/or order of listed functions to suit your shooting style.

Customization buttons

1 **Fx1 button** : One function from seven options can be assigned (default: RAW)
2 **Fx2 button** : Another function from seven options can be assigned (default: Outdoor View Setting)
3 **AF button** : One of the functions governing AF operation can be signed.
4 **Preview lever** : An optical or digital preview mode can be assigned.
5 **E-dial + Green button** : A set of exposure mode can be assigned.

Custom Functions

A total of 26 Custom Functions are available with the K-1 Mark II.

Lock button

In order to prevent accidental setting changes, the K-1 Mark II provides a lock button to temporarily inactivate control buttons and dials. It offers you a choice of two lock functions: Type 1 to prevent unintended exposure setting changes; and Type 2 to prevent operational setting changes.

Type	Lockable buttons and dials		
Type1			
Type2			

HD PENTAX-D FA 150-450mmF4.5-5.6ED DC AW
Aperture: F6.3; Shutter speed: 1/500sec.; Exposure compensation: ±0.0EV; Sensitivity: ISO 800; White balance: Daylight; Custom Image: Bright
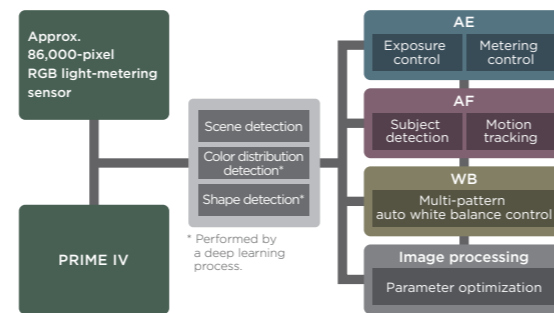
Advanced picture-taking functions lets you capture a decisive moment without failure

PENTAX Real-time Scene Analysis System
Optimizing the performance of AE and AF systems and the ease of image composition

Supported by the approximately 86,000-pixel RGB light-metering sensor and the PRIME IV imaging engine, the PENTAX Real-time Scene Analysis System analyzes such factors as brightness distribution in the image field, the subject's primary color and its motion with great accuracy and efficiency. In addition, by adopting a breakthrough artificial intelligence technology called deep learning to its image detection algorithm,* this system assesses each individual scene more accurately, while optimizing the accuracy and performance of the light-metering, exposure-control and autofocus systems, and selecting the most appropriate finishing touch for a given scene or composition.

* This RICOH-original technology is available during viewfinder shooting when the exposure mode is set to Scene Analyze Auto and the Custom Image mode is set to Auto Select.

Diagram labels:
- Approx. 86,000-pixel RGB light-metering sensor
- PRIME IV
- Scene detection
- Color distribution detection*
- Shape detection*
- * Performed by a deep learning process.
- AE: Exposure control / Metering control
- AF: Subject detection / Motion tracking
- WB: Multi-pattern auto white balance control
- Image processing: Parameter optimization

HD PENTAX-D FA 150-450mmF4.5-5.6ED DC AW
Aperture: F8; Shutter speed: 1/1250sec.; Exposure compensation: ±0.0EV; Sensitivity: ISO 800; White balance: Daylight; Custom Image: Landscape; AF mode: Continuous (Framerate priority)

SAFOX 12
Advanced AF system, with an expanded AF detection area

In order to optimize the ease of image composition over the large 35mm full-frame image field, the PENTAX K-1 Mark II features the latest SAFOX 12, equipped with a light source sensor, to expand the AF detection area. To accommodate the longer optical path required for the expanded AF area, the camera features an innovative design in which incoming light is turned back within the AF module. Thanks to the optimization of the condenser lens, it also provides a total of 33 AF sensor points. This state-of-the-art module boasts both compact dimensions and exceptional image-forming performance.

Improved AF performance
Thanks to the incorporation of the latest AF algorithm, the PENTAX K-1 Mark II assures high-speed autofocus operation, from the activation of the AF system to the capture of the subject in focus. It captures the subject's motion with great precision, even when the colors of the subject and the background are nearly identical. It also provides outstanding tracking performance with subjects which move laterally or vertically within the image field. The camera's overall AF performance has been upgraded to a new level.

86,000-pixel RGB light-metering sensor
### High-precision scene analysis based on the subject's color, shape and motion

The K-1 Mark II's approximately 86,000-pixel RGB light-metering sensor not only delivers outstanding resolving power, but also detects colors with great precision. After accurately measuring the subject's shape, primary color and motion, it feeds the obtained data to the PENTAX Real-time Scene Analysis System for extra-accurate scene analysis.
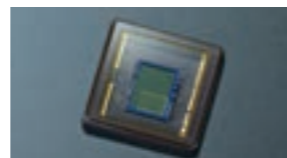
33-point AF system with 25 cross-shaped sensors
Assuring reliable, unfailing focus on the subject

The K-1 Mark II's sophisticated 33-point AF system has a high-density distribution of AF sensors to effectively monitor crucial areas of the image field, while providing 25 cross-shaped sensors to assure extra-accurate focus on the subject.

- Cross-shaped sensor
- Linear sensor
- F2.8 luminance flux linear sensor
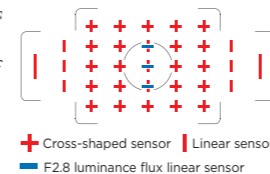
AF system with F2.8 luminance flux linear sensors
Three center sensors are designed to detect the luminance flux of an F2.8 lens for high-precision autofocusing. When using a very fast lens with a shallow depth of field, these sensors can greatly improve the focusing accuracy.

Zone Select
This mode lets you select a set of nine points forming a square, which can be shifted as desired by moving the center point. It detects a subject placed within this square, optimizes the focus, and tracks its movement — all automatically.
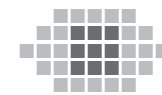
Select-area expansion
This mode lets you select one of 33 AF points to focus on the subject, and makes the K-1 Mark II automatically track the subject and refocus on it with the help of the neighboring points, even when it moves away from the initial point. You can select the desired expansion area from nine, 25 or 33 points.*
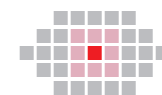
* The number of AF points may decrease if the selected expansion area includes an area or areas outside the AF frame.

Auto tracking with PENTAX Real-time Scene Analysis System
Supported by the PENTAX Real-time Scene Analysis System, the K-1 Mark II's Auto Tracking function accurately detects the subject's motion based on various factors including color, then keeps pinpoint focus on the subject throughout the imaging process by automatically shifting the in-focus point.

1/8000-second high-speed shutter
Exceptional operational accuracy and remarkable durability

The K-1 Mark II features an electronically controlled, vertical-run shutter to optimize the performance of the 35mm full-frame image sensor. With a top speed of 1/8000 second, it allows you to open up the aperture, even in bright locations, and take full advantage of the bokeh (defocus) effect created by the large image sensor. It also provides a flash synchronization speed of 1/200 second. Symbolizing the K-1 Mark II's field camera concept, this unit is designed to be compact and lightweight, with a well-balanced combination of high-precision operation and outstanding durability.

High-speed drive mode
Flawless continuous shooting at approximately 4.4 images per second

The K-1 Mark II provides high-speed continuous shooting at a top speed of approximately 4.4 images per second (at CH setting). You can also switch instantly to an optional speed setting of three images per second (CM) or 0.7 images per second (CL) using the main menu or Smart Function. In the APS-C Crop mode, the drive speed can be boosted to as high as approximately 6.4 images per second to assure quick response to fast-moving subjects.

Large image recording capacity in continuous shooting
A maximum of 100 images captured at a high-quality 36-megapixel level

Thanks to its large-capacity buffer memory, the K-1 Mark II lets you record a large number of images during continuous shooting: approx. 70 JPEG images (or approx. 17 RAW images) at CH setting; approx. 100 JPEG images (or approx. 20 RAW images) at CM setting, or approx. 100 JPEG images (or approx. 100 RAW images) at CL setting.*

* These figures are an approximate number of images recordable in the 35mm full-frame format, in the JPEG L-size Best format, and at ISO 100.

Scene Analyze AUTO
Original scene-detection technology, developed through the adopting of artificial intelligence technology

Supported by the PENTAX Real-time Scene Analysis System, the K-1 Mark II's Scene Analyze AUTO mode automatically optimizes exposure settings, and selects the most appropriate finishing touch for your subject. When using the optical viewfinder, it is also assisted by an algorithm that adopts the deep learning artificial intelligence technology, and makes an extensive analysis of a given scene based on the enormous volume of data accumulated from previous scenes.

Multi-mode AE system
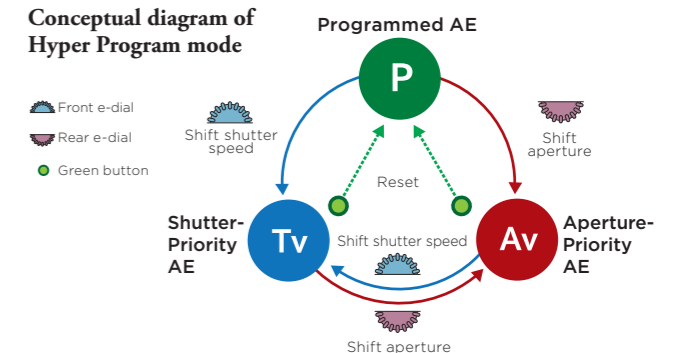### A choice of distinctive auto-exposure modes

In addition to the conventional Program (P), Aperture-Priority (A) and Shutter-Priority (Tv) modes, the K-1 Mark II also provides the PENTAX-original Sensitivity-Priority (Sv) and Shutter-speed / Aperture-Priority (TAv) modes, both of which assure proper exposure on the subject by factoring the ISO sensitivity more prominently into exposure-control operation. This multi-mode system assures more flexible control of exposure settings to express the subject's motion or the depth of field. It also provides a wide exposure compensation range of ±5EV (in still-image shooting) to expand a range of exposure control.

Hyper Program and Hyper Manual
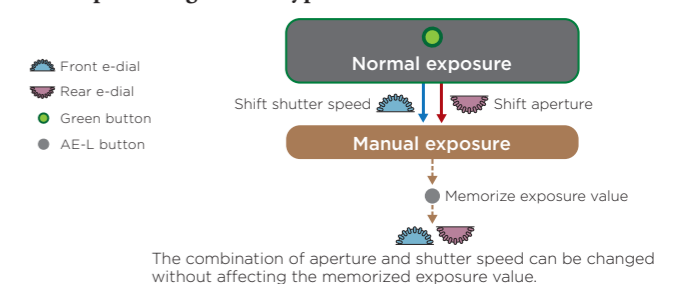### Flexible control of the depth of field and the subject's motion

In the Program (P) mode, the K-1 Mark II features the PENTAX-developed Hyper Program mode, which allows you to set a desired shutter speed and aperture using the front and rear e-dials, while retaining a proper exposure level. This eliminates the need for turning the model dial when switching to the Tv or Av mode.

Conceptual diagram of Hyper Program mode
- Front e-dial
- Rear e-dial
- Green button
- Programmed AE — P
- Shift shutter speed
- Shift aperture
- Reset
- Shutter-Priority AE — Tv
- Shift shutter speed
- Aperture-Priority AE — Av
- Shift aperture

In the Hyper Manual (M) mode, one push of the green button instantly sets the same aperture and shutter-speed settings as those of the P mode for proper exposure. Then, you can adjust the exposure to a desired level using the front and rear e-dials. With the AE-lock function, you can even shift aperture and / or shutter-speed settings while retaining the initial exposure level.

Conceptual diagram of Hyper Manual mode
- Front e-dial
- Rear e-dial
- Green button
- AE-L button
- Normal exposure
- Shift shutter speed
- Shift aperture
- Manual exposure
- Memorize exposure value

The combination of aperture and shutter speed can be changed without affecting the memorized exposure value.

When you set the Smart Function to the ISO mode, you can enjoy more flexible control of the three primary exposure parameters — aperture, shutter speed and ISO sensitivity — in both the P and M modes, using a combination of the front and rear e-dials and the setting dial.

Image composition and shooting functions optimize your creativity and inspiration

Custom Image
Effortless expression of the ideal tone and shade for each subject

The K-1 Mark II's Custom Image function allows you to apply the preferred finishing touch to your image, based on your subject or creative intentions. With the addition of Auto Select, in which the camera automatically detects the type of scene or subject and selects the best finishing touch for you, and Flat, which produces a base image most tolerant to retouching, the K-1 Mark II provides a total of 13 Custom Image modes.* Each mode provides minute adjustment of parameters such as saturation, shade, key, contrast and sharpness.**

 * The Custom Image mode is fixed to Auto Select when the camera's exposure mode is set to AUTO.
** Adjustable parameters may vary depending on the selected Custom Image mode.

Flat

A selection of Custom Image modes
Auto Select	Muted
Bright	Flat
Vibrant	Natural
Radiant	Portrait
Reversal Film	Landscape
Monochrome	Bleach Bypass
Cross Processing	

Bright

Clarity control and Skin Tone correction*
Compensation of the subject's texture, while retaining the image's overall sharpness

The Clarity control function is an image-processing technology effective in reproducing the glossy texture of metals and the clearness of the sky or splashing water. By adjusting the smoothness of a silky or shiny surface, it lets you control the quality of texture and the degree of clarity. The Skin Tone correction function** restores a tender texture and a healthy tone of the subject's skin, while keeping the high-resolution rendition in its hair and clothing and in the background. It depicts your subject with smooth texture and healthy skin tones.

 * Both of these functions are technologies developed by RICOH Co., Ltd.
** The Skin Tone correction function can be activated only when the Face Detection mode is selected.

Clarity:-4

Clarity:0

Clarity:+4

Skin Tone correction: OFF

Skin Tone correction: ON

HDR
Faithful reproduction of highlights and shadows

The K-1 Mark II's HDR (High Dynamic Range) mode* delivers an image similar to that detected by the naked eye, by minimizing white-washed highlights and pitch-black shadows, even with extreme high-contrast scenes. It also allows you to set a range of exposure shifts or use the Automatic Position Adjustment function.** Since this mode can save original image files in the RAW format, you can develop them by changing HDR settings or turning the HDR mode off. By using a PC and the included software, you can also divide a single RAW-format file into three separate RAW-format images, and save them as independent files.

HDR[Type3]

 * This HDR function cannot be used in some shooting modes, and is not compatible with some other functions.
** The Automatic Position Adjustment function is fixed at the OFF mode when the Interval or Interval Movie shooting mode is selected.

Multiple exposure
Three ways to synthesize highly creative images

The K-1 Mark II lets you capture the desired number of images — from two to 2,000 — to synthesize a single composite image, with three synthesis modes: average, additive and comparative brightness. In Live View shooting, the K-1 Mark II displays a translucent image of the already captured image on its LCD monitor, allowing you to make precise alignment of the images.
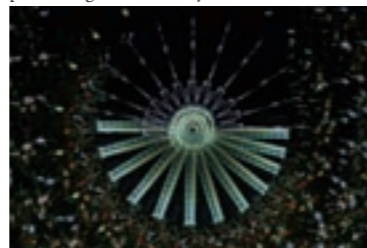
Additive mode

CTE
For expressing the colors of the mind, rather than truthful color reproduction

In contrast to the standard auto white balance mode, which is designed to suppress the effect of a light source color on the image's color reproduction, the CTE (Color Temperature Enhancement) mode emphasizes the image's dominant color based on the color temperature.
It is useful in dramatizing sunrise and sunset scenes or snow-covered landscapes under the cloudy sky. It is also effective in preventing color fading or the loss of colors such as dark greens and faint pinks.
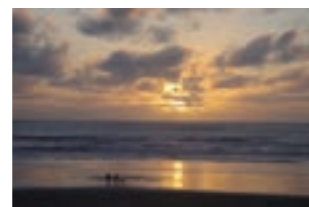
AWB
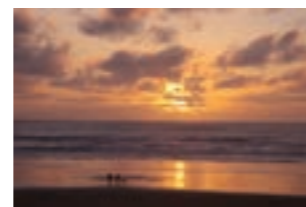
CTE

In-body RAW data development
Application of the desired finishing touches without the need for a computer

The PENTAX K-1 Mark II develops RAW-format files within the camera body without the help of a PC, and lets you save them as JPEG- or TIFF-format files. This assures greater flexibility in creating a captured image that is more faithful to your creative intentions, without requiring a PC. Thanks to a host of adjustable parameters, it also allows you to add the desired finishing touch to your image regardless of a location, until you are truly satisfied with the result.

4K-compatible Interval Movie shooting
Documenting a constantly changing subject in high resolution

The K-1 Mark II's Interval Movie mode allows you to record still images of a slowly changing subject at a fixed interval, and link them into a single movie file. You can play back the 4K-resolution (3840 x 2160 pixels) movie file,* as if fast-forwarding the time on the screen. The K-1 Mark II also provides the Star Stream function, which lets you draw the magical traces of stars in a movie.

* When playing back the movie file on a device other than the K-1 Mark II, the user is advised to use a PC operating environment supporting 4K-resolution movie playback.

Wi-Fi compatibility
Remote control of the camera using a smartphone

By wirelessly connecting the PENTAX K-1 Mark II with your smartphone,* you can capture images from a distance, browse them on the smartphone screen, and transfer them to another device.** You can not only set various shooting functions and change their settings, but also adjust the focus, release the shutter, and confirm the captured images.

 * Access the RICOH IMAGING official website or contact our customer service center for compatible smartphone operating systems.
** The dedicated Image Sync application is required for remote shooting and browsing operations. Image Sync can be downloaded free of charge from App Store (for iPhones) or Google Play™ (for Android™ smartphones).

IMAGE Transmitter 2 compatibility
Tethered photography from a personal computer

By installing the optional IMAGE Transmitter 2 tethering software on your PC and connecting it with the K-1 Mark II via USB terminal, you can operate the K-1 Mark II, automatically transfer and save recorded images, and check photographic data on your computer. This greatly improves the efficiency of studio shooting.
Note: For proper use, the software must be upgraded to the latest version. Please access our official website for details.

Movie recording
Full HD movies with a beautiful bokeh effect

The K-1 Mark II records lively, true-to-life movies. Thanks to a shallow depth of field provided by its 35mm full-frame design, it effectively produces a beautiful bokeh effect. You can also record sound in stereo using a stereo microphone (commercial product, not included with the K-1 Mark II), or monitor it during recording using headphones (commercial product, not included with the K-1 Mark II).

Exclusive software for high-quality finish and browsing
Digital Camera Utility™ 5

Supported by the acclaimed SILKYPIX® image development engine, this software allows you to browse through captured images and develop them into RAW-format files on a computer.

smc PENTAX-D FA MACRO 100mmF2.8 WR
Aperture: F4.5; Shutter speed: 1/50sec.; Exposure compensation: +0.7EV; Sensitivity: ISO 200; White balance: Daylight; Custom Image: Bright

Exceptional optical performance to deliver well-defined images

The K-1 Mark II inherits PENTAX's time-proven K mount. It accepts not only D FA-series lenses optimized for digital imaging, but also FA- and FA Limited-series lenses to accommodate a wide range of creative intentions and applications.

DFA★ DFA High-resolution, high-performance lens series optimized for 35mm full-frame format

D FA★-series lenses are designed for uncompromising optical performance, while D FA-series lenses assure well-balanced imaging power. They effectively compensate for various aberrations even at the edges of the K-1 Mark II's wide image field, while optimizing resolving power and contrast across the image.

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

This large-aperture, ultra-wide-angle zoom lens captures a dynamic image of sweeping landscape with its overwhelming perspectiv Thanks to its minimal distortion, it is also ideal for photographing starry skies.

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

With its maximum aperture of F2.8, this large-aperture, standard zoom lens assures remarkable resolving power and rich contrast. It is effective in creating distinctive visual expressions, such as beautiful bokeh and pan-focus effects.

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

Covering wide-angle to medium-telephoto ranges, this versatile standard zoom lens is perfect for capturing most everyday scenes. Its compact, lightweight design also makes it handy for traveling.

smc PENTAX-D FA
MACRO 100mmF2.8 WR

This high-performance macro lens provides a sufficient working distance and an extremely shallow depth of field, even in life-size macro photography. It allows you to pinpoint the focus on a primary element of the subject.

HD PENTAX-D FA★
70-200mmF2.8ED DC AW

Developed as a new-generation Star-series lens, this large-aperture telephoto zoom lens assures optimal imaging performance to capture every scenesor subject faithfully to your creative intention.

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

This high-resolution, super-telephoto zoom lens brings a distant subject closer for a dynamic composition, and captures an athlete or wildlife in a sharp, crisp image.

smc PENTAX-D FA
MACRO 50mmF2.8

Designed for life-size macro photography, this compact, lightweight macro lens can also be used as a compact, large-aperture, unifocal standard lens.

FA Limited Distinctive lenses to broaden the scope of photography

FA Rich gradation and true-to-life color reproduction

Compatible with the 35mm full-frame format, these high-grade lenses provide unique focal lengths deduced from the experiences of many professionals and outstanding imaging power with a truthful sense of perspective. Its exterior casing is made of high-grade machined aluminum for a beautiful finish and durability.

smc PENTAX-FA 31mmF1.8AL Limited

smc PENTAX-FA 43mmF1.9 Limited

smc PENTAX-FA 77mmF1.8 Limited

smc PENTAX-FA 35mmF2AL

smc PENTAX-FA50mmF1.4

System accessories

This accessory nearly doubles the K-1 Mark II's recording capacity, while enhancing holding comfort and operability in vertical-position shooting.

D-BG6 Battery Grip

- AA-battery (lithium or nickel-hydrogen) holder included, in addition to a rechargeable lithium-ion battery holder
- Additional strap lugs to suspend the camera in vertical position
- Dustproof, weather-resistant structure with 47 sealing parts, providing the same level of environmental resistance as that of the K-1 Mark II camera body

Equipped with an extra shutter release button and front/rear e-dials, this accessory assures outstanding operability, even during vertical-position shooting.

DA★ DA Limited DA

From ultra-wide angle to super telephoto, an entire selection of high-performance DA-series lenses can be used on the K-1 Mark II without any modification. They deliver exceptional image quality, despite their compact, lightweight design.

Crop mode

Automatic switching of an image area with attachment of a lens

When a DA★ -, DA Limited- or DA-series lens is mounted on the K-1 Mark II, its Crop mode automatically switches an image area to the APS-C size covering the middle section of the image field, while displaying the cropping frame in the viewfinder. It not only assures high-resolution images with approximately 15.36 effective megapixels, but also provides an efficient AF sensor coverage of the image area for more flexible image composition during autofocus operation. When you select the FF (Full Frame) setting of the Crop mode, you can even capture a 35mm full-frame image with a DA-series lens.*

* With certain lenses and/or under certain photographic conditions, a captured image may suffer a drastic drop in brightness and/or resolution in the areas outside the APS-C image area. This setting does not provide compensation of various lens aberrations.

Cropping frame
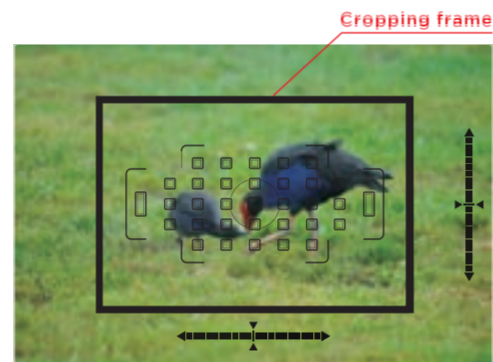
Viewfinder display in the Crop mode (APS-C image area)
Note: This image displays all AF sensors for an explanatory purpose.

A high-power, weather-resistant, dustproof flash unit compatible for movie recording

Auto Flash AF540FGZ II

A high-performance dust and weather-resistant flash unit featuring an LED light

Auto Flash AF360FGZ II

Compact, lightweight flash with a dust and weather-resistant construction

Auto Flash AF201FG

DA★ / DA Limited / DA Lenses

Fish-eye zoom	smc PENTAX-DA FISH-EYE10-17mmF3.5-4.5ED[IF]	Ultra-wide-angle	smc PENTAX-DA 14mmF2.8ED[IF]
Ultra-wide-angle zoom	smc PENTAX-DA 12-24mmF4ED AL[IF]		HD PENTAX-DA 15mmF4ED AL Limited
Standard zoom	smc PENTAX-DA★ 16-50mmF2.8ED AL[IF] SDM	Wide-angle	HD PENTAX-DA 21mmF3.2AL Limited
	HD PENTAX-DA 16-85mmF3.5-5.6ED DC WR	Standard	smc PENTAX-DA 35mmF2.4AL
	smc PENTAX-DA 17-70mmF4AL[IF] SDM	Semi-standard	HD PENTAX-DA 40mmF2.8 Limited
	HD PENTAX-DA 18-50mmF4-5.6 DC WR RE		smc PENTAX-DA 40mmF2.8 XS
	smc PENTAX-DA 18-55mmF3.5-5.6AL WR	Telephoto	smc PENTAX-DA 50mmF1.8
	HD PENTAX-DA 20-40mmF2.8-4ED Limited DC WR		smc PENTAX-DA★ 55mmF1.4 SDM
Telephoto zoom	smc PENTAX-DA★ 50-135mmF2.8ED[IF] SDM		HD PENTAX-DA 70mmF2.4 Limited
	smc PENTAX-DA 50-200mmF4-5.6ED WR		smc PENTAX-DA★ 200mmF2.8ED[IF] SDM
	HD PENTAX-DA 55-300mmF4.5-6.3ED PLM WR RE		smc PENTAX-DA★ 300mmF4ED[IF] SDM
	HD PENTAX-DA 55-300mmF4-5.8ED WR	Super-telephoto	HD PENTAX-DA 560mmF5.6ED AW
	smc PENTAX-DA★ 60-250mmF4ED[IF] SDM	Standard/Macro	HD PENTAX-DA 35mmF2.8 Macro Limited
High-magnification zoom	smc PENTAX-DA 18-135mmF3.5-5.6ED AL[IF] DC WR		
	smc PENTAX-DA 18-270mmF3.5-6.3ED SDM		

Note: The classification, such as wide-angle, standard and telephoto, is based on the angle of view in the Crop mode (APS-C image area).

Lens aberration-compensated DA-series lenses usable in the 35mm full-frame format

The following DA-series lenses cover the 35mm full-frame image area. When the Crop mode is set to FF (Full Frame), the K-1 Mark II's lens aberration compensation function is extended to cover certain aberrations, such as diffraction, in the 35mm full-frame image area.*

- smc PENTAX-DA 200mmF2.8ED[IF] SDM ■ smc PENTAX-DA 300mmF4ED[IF] SDM ■ HD PENTAX-DA 560mmF5.6ED AW
* Please note that this function does not guarantee the quality of image outside the APS-C image area.

Rechargeable Lithium-ion Battery D-LI90
Spare battery

Battery Charger Kit K-BC90
For easy recharging of the D-LI90 battery

AC Adapter Kit K-AC167
Power supply from standard outlets, for extended shooting and playback

Waterproof Remote Control O-RC1
Weather-resistant remote controller.
*Battery cannot be replaced.

Cable Switch CS-205
A shutter-release accessory handy for extended exposures

Image transfer software Image Transmitter 2*
Remote camera operation from a computer

PROFESSIONAL PENTAX

PENTAX

Strap O-ST1401
General purpose strap made of wide and soft material

Image Sensor Cleaning Kit O-ICK II
A cleaning stick for quick, easy removal of dust on the image sensor

* For use with the PENTAX K-1 Mark II, the IMAGE Transmitter 2 must be upgraded to the latest version. Please access our official website for details.

For further lens and accessory information, please see our product site.

Nomenclature
Note: Cameras shown without a body mount cap, hot shoe cover and triangle ring.

Speaker
EV compensation button
Wi-Fi lamp
Illumination button
ISO button
Shutter Release button
Main switch
AF assist light
Front e-dial
LED light for lens mount
Lens mount index
Self-timer lamp/
Remote control receiver
Lens unlock button
Lens information setting

Hot shoe
Dial indicator
Microphone
Mode dial lock button
Mode dial
Mode dial lock release lever
Microphone terminal
Headphone terminal
Strap lug
X-sync socket
Terminal cover
Lock button

RAW/Fx1 button
AF mode button
Focus mode switch
Mirror
AF coupler

Image plane indicator
GPS button
Diopter adjustment dial
Eyecup Fᴛ
Viewfinder
Live View button
AE Metering/Delete button
LED light for backside controls
(located on backside of the monitor)
Flexible tilt monitor
USB terminal (microB)
HDMI terminal (type D)
DC input terminal
Four-way controller
INFO button
Battery grip contacts
Fx2 button

Microphone
Function dial
Capture mode selector switch
LCD panel
Setting dial
Rear e-dial
AF button
AE lock button
Green button
Playback button
Self-timer lamp/Remote control receiver
Dual slot for SD Memory Cards
Change AF Point/Card slot switch button
OK button
Cable switch terminal
Card access lamp
MENU button

1 Cropping frame
2 Spot metering frame
3 AF point
4 Grid Display
5 AF frame
6 Electronic Level (vertical tilt)
7 Electronic Level (horizontal tilt)
8 Flash indicator
9 Focus Method
10 Shutter speed / Remaining processing time for Slow Shutter Speed NR / AF Mode / Number of shots for Bracketing
11 Aperture value / Bracket value
12 Focus indicator
13 EV bar scale
14 ISO / ISO AUTO
15 Sensitivity / Exposure compensation value / Image storage capacity / Focusing area selection
16 Change AF Point
17 Operation controls disabled
18 AE Lock
19 AE Metering
20 Multi-exposure
21 Shake Reduction
22 Flash Exposure Compensation
23 EV Compensation / Bracketing
24 File Format

1 Shutter speed / Number of shots for Bracketing / USB connection mode / Sensor cleaning in progress
2 Aperture value / Bracket value
3 Sensitivity / EV Compensation
4 Card slot number
5 Battery level

System requirements:
The following system requirements must be met in order to connect the PENTAX K-1 Mark II to a personal computer, and use the Digital Camera Utility 5 software on the computer.

[Windows] • OS: Windows 10 (FCU/CU) (32 bit/64 bit), Windows 8.1 (32 bit/64 bit), Windows 8(32 bit/64 bit), Windows 7(32 bit/64 bit), Windows Vista (32 bit/64 bit) • CPU: Intel Core 2 Duo or later • Memory: 4GB or more • Hard disk space: approx. 100MB or more (at installation and start-up); approx. 15MB (JPEG) or 50MB (RAW) per file (for data save) • Monitor: 1280 x 1024 dots or better, 24-bit full-color

[Macintosh] • OS: Mac OS X 10.13/10.12/10.11/10.10 • CPU: Intel Core 2 Duo or later • Memory: 4GB or more • Hard disk space: approx. 100MB or more (at installation and start-up); approx. 15MB (JPEG) or 50MB (RAW) per file (for data save) • Monitor: 1280 x 1024 dots or better, 24-bit full-color

Note: The operating system must be pre-installed in the computer, and updated to the latest version. The system requirements above do not necessarily guarantee proper operation with all computers.

Storage capacity of 35mm full-frame format (standard) * With 8GB memory card
(Shots)

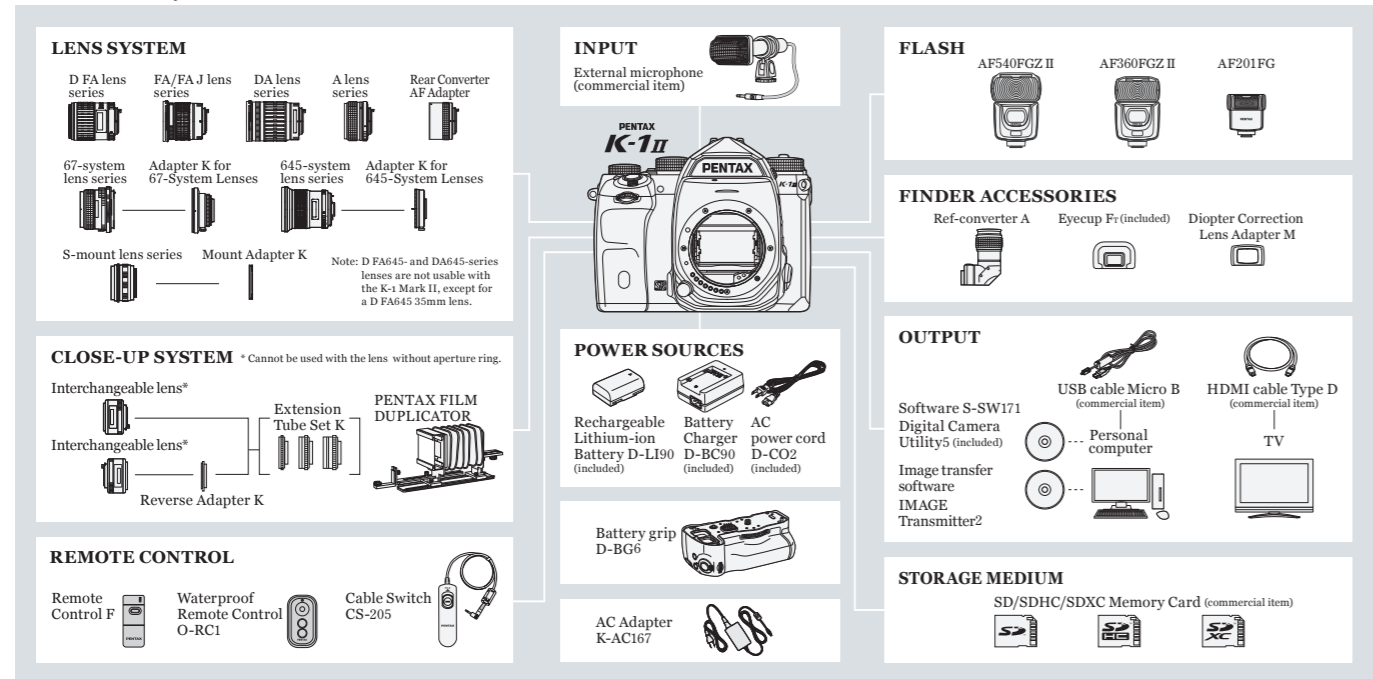| Recorded pixels	RAW		JPEG			
	(7360×4912)	L:36M(7360×4912)	M:22M(5760×3840)	S:12M(4224×2816)	XS:2M(1920×1280)	
Quality level	PEF	★★★	★★	★	★★★	★★	★	★★★	★★	★	★★★	★★	★
8GB	101	351	676	1164	572	1096	1874	1054	2013	3364	4723	8469	12927

Movie recording capacity (standard) * With 8GB memory card (Hours: Minutes: Seconds)

Recorded pixels	Full HD (1920×1080)				HD (1280×720)	
	60i	50i	30p	25p	24p	60p	50p
8GB	00:32:15	00:38:21	00:32:15	00:38:21	00:39:51	00:32:15	00:38:21

* You can record up to 25 min. or 4GB movie for one shooting. * Testing your camera' refers to confirmed operation by RICOH IMAGING for customer convenience but is not a guarantee by RICOH IMAGING to the customer. * Use a high-speed SD memory card when recording movies. If the writing speed cannot keep up with the recording speed, recording may be interrupted.

Tested SD/SDHC/SDXC memory cards

[Panasonic/Toshiba/Sandisk]
SD memory card capacity: 1 GB, 2 GB
SDHC memory card capacity: 4 GB, 8 GB, 16 GB, 32 GB
SDXC memory card capacity: 64 GB

[Sandisk]
SDXC memory card capacity: 128 GB, 256 GB, 512 GB

[February 2018]

K-1 Mark II System Chart
* There are limitations when combining lenses and accessories. For details, contact your nearest service center.

LENS SYSTEM
D FA lens series
FA/FA J lens series
DA lens series
A lens series
Rear Converter AF Adapter
67-system lens series
Adapter K for 67-System Lenses
645-system lens series
Adapter K for 645-System Lenses
S-mount lens series
Mount Adapter K
Note: D FA645- and DA645-series lenses are not usable with the K-1 Mark II, except for a D FA645 35mm lens.

CLOSE-UP SYSTEM * Cannot be used with the lens without aperture ring.
Interchangeable lens*
Extension Tube Set K
PENTAX FILM DUPLICATOR
Interchangeable lens*
Reverse Adapter K

REMOTE CONTROL
Remote Control F
Waterproof Remote Control O-RC1
Cable Switch CS-205

INPUT
External microphone (commercial item)

POWER SOURCES
Rechargeable Lithium-ion Battery D-LI90 (included)
Battery Charger D-BC90 (included)
AC power cord D-CO2 (included)
Battery grip D-BG6

FLASH
AF540FGZ II
AF360FGZ II
AF201FG

FINDER ACCESSORIES
Ref-converter A
Eyecup Fᴛ (included)
Diopter Correction Lens Adapter M

OUTPUT
Software S-SW171 Digital Camera Utility5 (included)
Image transfer software IMAGE Transmitter2
USB cable Micro B (commercial item)
Personal computer
HDMI cable Type D (commercial item)
TV

STORAGE MEDIUM
SD/SDHC/SDXC Memory Card (commercial item)

AC Adapter K-AC167

Specifications

Model Description	**Type…**TTL autofocus, auto-exposure SLR digital-still camera **Lens Mount…**PENTAX KAF2 bayonet mount (AF coupler, lens information contacts, K-mount with power contacts) **Compatible Lens…**KAF4, KAF3, KAF2 (power zoom compatible), KAF, KA mount lens
Image capture unit	**Image Sensor…**Primary color filter, CMOS. Size: 35.9 x 24.0 (mm) **Effective Pixels…**Approx. 36.40 megapixels **Total Pixels…**Approx. 36.77 megapixels **Dust Removal…**Image sensor cleaning using ultrasonic vibrations "DR II" **Sensitivity (Standard output)…**ISO AUTO/100 to 819200 (EV steps can be set to 1EV, 1/2EV or 1/3EV) **Image Stabilizer…**Sensor-shift shake reduction (SRII: Shake Reduction II)(5-axis) **AA Filter Simulator…**Moiré reduction using SR unit. OFF/Type1/Type2/Bracket(2 images)Bracket (3 images)
File formats	**File format…**RAW (PEF/DNG), JPEG (Exif 2.3), DCF2.0 compliant **Recorded Pixels…**[35mm full-frame] JPEG: L(36M:7360x4912), M(22M:5760x3840), S(12M:4224x2816), XS (2M:1920x1280) RAW: (36M:7360x4912) [APS-C size] JPEG: L(15M:4800x3200), M(12M:4224x2816), S(8M:3456x2304), XS(2M:1920x1280) RAW: (15M:4800x3200) **Quality Level…**RAW (14bit): PEF, DNG, JPEG:★★★ (Best),★★(Better),★★(Good), RAW + JPEG simultaneous capturing available **Color Space…**sRGB, AdobeRGB **Storage Medium…**SD, SDHC and SDXC Memory Card (Conforms to USH-I standards) **Dual SD slot…**Sequential Use, Save to Both, Separate RAW/JPEG, Image copy between slots possible **Storage Folder…**Folder Name: Date (100_1018,101_1019…) or User assigned folder name (Default "PENTX") **Recording File…**File Name: "IMGP****" or User assigned file name, File name numbering: Sequential, Reset
Viewfinder	**Type…**Pentaprism Finder **Coverage (FOV)…**Approx. 100% **Magnification…**Approx. 0.70x (50mmF1.4 at infinity) **Eye-Relief Length…**Approx. 20.6mm (from the view window), Approx. 21.7mm (from the center of lens) **Diopter adjustment…**Approx. −3.5m to + 1.2m⁻¹ **Focusing Screen…**Fixed Natural-Bright-Matte III focusing screen **Viewfinder Overlay…**AF Points, Grid Display, Electronic Level, AF Frame, Spot Metering Frame, Crop
Live view	**Type…**TTL method using image sensor **Focusing Mechanism…**Contrast detection (Face detection, Tracking, Multiple AF points, Select, Spot) Focus Peaking: ON/OFF **Display…**Field of View approx. 100%, Magnified view (up to 16x), Grid Display (4x4 Grid, Golden Section, Scale display, Square 1, Square 2, Grid Color: Black/White), Histogram, Bright area warning, Composition Adjustment
LCD monitor	**Type…**Wide viewing angle TFT color LCD, Air-gapless glass. Flexible tilt-type. **Size…**3.2 inch (aspect ratio 3:2) **Dots…**Approx. 1037K dots **Adjustment…**Brightness, Saturation and Colors adjustable **Outdoor View Setting…**Adjustable ±2 step **Night Vision LCD Display…**ON/OFF
White Balance	**Type…**Method using a combination of the image sensor and the light source detection sensor **White Balance…**AUTO WB, Multi Auto WB, Daylight, Shade, Cloudy, Fluorescent Light (D:Daylight Color, N:Daylight White, W:Cool White, L:Warm White), Tungsten Light, CTE, Manual WB (up to 3 settings), Color Temperature Configuration (up to 3 settings), Copying the white balance setting of a captured image **Fine Adjustment…**Adjustable ±7 steps on A-B axis or G-M axis
Autofocus System	**Type…**TTL: Phase-matching autofocus **Focus Sensor…**SAFOX 12, 33 point (25 cross type focus points in the center) **Brightness Range…**EV−3 to 18 (ISO 100 / at normal temperature) **AF mode…**Single AF (AF.S), Continuous AF (AF.C) **AF Point Selection…**Spot, Select, Expanded Area (S, M, L), Zone select, Auto (33 AF points) **AF Assist Light…**Dedicated LED AF assist light
Metering	**Type…**TTL open aperture metering using 86K pixel RGB sensor, Multi-segment, Center-weighted and Spot metering **Metering Range…**EV−3 to 20 (ISO100 at 50mm F1.4) **Exposure Mode…**Scene Analyze Auto, Program, Sensitivity Priority, Shutter Priority, Aperture Priority, Shutter & Aperture Priority, Manual, Bulb, Flash X-sync Speed, USER1, USER2, USER3, USER4, USER5 **EV Compensation…**±5EV (1/2EV steps or 1/3EV steps can be selected) **AE Lock…**Button type (timer type: two times the meter operating time set in Custom Setting); Continuous as long as the shutter button is halfway pressed
Shutter	**Type…**Electronically controlled vertical-run focal plane shutter * Electronic shutter when using Pixel Shift Resolution **Shutter Speed…**Auto:1/8000 to 30 sec., Manual:1/8000 to 30 sec. (1/3EV steps or 1/2EV steps), Bulb (Timed exposure setting possible from 10sec. to 20min.) **LV Electronic shutter mode…**ON/OFF
Drive modes	**Mode Selection…**[Still Image]: Single Frame, Continuous (H, M, L), Self-timer (12s, 2s, Continuous), Remote Control (0s., 3s., Continuous), Bracketing (2, 3 or 5 frames), Mirror-up (Possible to use with Remote Control), Multi-Exposure (Possible to use with Continuous, Self-timer or Remote Control), Interval Shooting, Interval Composite, Interval Movie Record, Star Stream [Movie]:Remote Control * Bracketing, Interval Shooting, Interval Composite, Interval Movie Record and Star Stream are possible to use with Self-timer/Remote Control. **Continuous Shooting…**[35mmfull-frame] Max. approx. 4.4 fps, JPEG (L:★★★ at Continuous H): up to approx. 70 frames, RAW: up to approx. 17 frames, Max. approx. 3.0 fps, JPEG L:★★★ at Continuous M): up to approx. 100 frames, RAW: up to approx. 20 frames, Max. approx. 0.7 fps, JPEG (L:★★★ at Continuous L): up to approx. 100 frames, RAW: up to approx. 100 frames [APS-C size] Max. approx. 6.4 fps, JPEG (L:★★★ at Continuous H): up to approx. 100 frames, RAW: up to approx. 50 frames, Max. approx. 3.0 fps, JPEG L:★★★ at Continuous M): up to approx. 100 frames, RAW: up to approx. 70 frames, Max. approx. 1.0 fps, JPEG (L:★★★ at Continuous L): up to approx. 100 frames, RAW: up to approx. 100 frames *Continuous shooting frame under ISO100 **Multi-Exposure…**Composite Mode(Additive/Average/Bright) Number of Shots (2 to 2000 images) **Interval Shooting…**[Interval Shooting] Interval: 2s. to 24h./ Standby Interval: Min.·1s. to 24h., Number of shots: 2 to 2000 images, Start Interval: Now/Self-timer/Remote Control/Set Time [Interval Composite] Interval: 2s. to 24h./ Standby Interval: Min.·1s. to 24h., Number of shots: 2 to 2000 images, Start Interval: Now/Self-timer/Remote Control/Set Time, Composite Mode: Additive/Average/Bright, Save Process: On/Off [Interval Movie] Recorded Pixels: 4K/FullHD/HD, File Format: Motion JPEG (AVI), Interval:2s. to 24h./ Standby Interval: Min·1s. to 24h., Number of shots: 8 to 2000 images (8 to 500 images at 4K), Start Interval: Now/Self-timer/Remote Control/Set Time [Star Stream] Recorded Pixels: 4K/FullHD/HD, File Format: Motion JPEG (AVI), Interval: Min·1s. to 24h., Number of shots: 8 to 2000 images (8 to 500 images at 4K), Start Interval: Now/Self-timer/Remote Control/Set Time, Fade-out: Off/Low/Medium/High
External Flash	**Flash Modes…**Auto Flash Discharge, Auto Flash + Red-eye Reduction, Flash On, Flash On + Red-eye Reduction, Slow-speed Sync, Slow-speed Sync + Red-eye, P-TTL, Contrast-control-sync, High-speed sync, Wireless sync * Contrast-control-sync and High-speed sync requires 2 or more dedicated external flash **Sync Speed…**1/200sec. **Flash Exposure Compensation…**−2.0~+1.0EV
Capture Settings	**Custom Image…**Auto Select, Bright, Natural, Portrait, Landscape, Vibrant, Radiant, Muted, Flat, Bleach Bypass, Reversal Film, Monochrome, Cross Processing **Cross Process…**Random, Preset 1-3, Favorite 1-3 **Digital Filter…**Extract Color, Replace Color, Toy Camera, Retro, High Contrast, Shading, Invert Color, Unicolor Bold, Bold Monochrome **Clarity…**Adjustable ±4 **Skin Tone…**Type1/Type2 **HDR…**Auto, HDR1, HDR2, HDR3, Advanced HDR, Exposure bracket value adjustable, Automatic composition correction function **Pixel Shift Resolution…**Available, Motion Correction ON/OFF, Dynamic Pixel Shift Resolution (Image Stabilization On) **Lens Correction…**Distortion Correction, Peripheral Illumin. Correction, Lateral Chromatic Aberration Correction, Diffraction Correction **D-RANGE Compensation…**Highlight Correction, Shadow Correction **Noise Reduction…**Slow Shutter Speed NR, High-ISO NR **GPS…**GPS Logging (Logging Interval, Logging Duration, Memory Card Options), GPS Time Sync **Electronic Compass…**Available **Astrotracer…**Possible **Horizon Correction…**SR On: correction up to 1 degrees, SR Off: correction up to 2 degrees **Composition Adjustment…**Adjustment range of ±1.5mm up, down, left or right (1mm when rotated); Rotating range of 1 degree **Electronic Level…**Displayed in viewfinder (Horizontal and vertical); Displayed on LCD monitor (Horizontal and vertical)
Movie	**File Format…**MPEG-4 AVC/H.264 (MOV) **Recorded Pixels…**Full HD(1920x1080, 60i/50i/30p/25p/24p) HD (1280x720, 60p/50p) **Sound…**Built-in stereo microphone, external microphone (Stereo recording compatible) Recording Sound Level adjustable, Wind Noise Reduction **Recording Time…**Up to 25 minutes or 4GB ; automatically stops recording if the internal temperature of the camera becomes high. **Custom Images…**Auto Select, Bright, Natural, Portrait, Landscape, Vibrant, Radiant, Muted, Flat, Bleach Bypass, Reversal Film, Monochrome, Cross Processing **Cross Processing…**Random, Preset 1-3, Favorite 1-3. **Digital Filter…**Extract Color, Replace Color, Toy Camera, Retro, High Contrast, Shading, Invert Color, Unicolor Bold, Bold Monochrome
Playback	**Playback View…**Single frame, Multi-image display (6,12, 20, 35, 80 segmentation), Display magnification (up to 16 , Display and quick magnification available), Grid display (4x4 Grid, Golden Section, Scale display, Square 1, Square 2, Grid Color: Black/White), Rotating, Histogram (Y histogram, RGB histogram), Bright area warning, Auto Image Rotation, Detailed information, Copyright Information (Photographer, Copyright holder), GPS information (latitude, longitude, altitude, Coordinated Universal Time) , Orientation , Folder Display, Calendar Filmstrip Display, Slide Show, **Delete…**Delete single image, delete all, select & delete, delete folder, delete instant review image **Digital Filter…**Base Parameter Adj, Extract Color, Replace Color, Toy Camera, Retro, High Contrast, Shading, Invert Color, Unicolor Bold, Bold Monochrome, Tone Expansion, Sketch, Water Color, Pastel, Posterization, Miniature, Soft, Starburst, Fish-eye, Slim, Monochrome **RAW Development…**[RAW file select]: Select Single Image, Select Multiple Images, Select a folder [RAW Development Parameter]:White Balance, Custom Image, Sensitivity, Clarity, Skin Tone, Digital filter, HDR, Pixel Shift Resolution, Shadow Correction, High-ISO NR, Distortion Correction, Peripheral Illumin. Corr., Lateral Chromatic Aberration Correction, Diffraction Correction, Color Fringe Correction, File Format (JPEG/TIFF), Aspect Ratio, JPEG Recorded Pixels, JPEG Quality, Color Space **Edit…**Image Rotation, Color Moiré Correction, Resize, Cropping (Aspect ratio and Slant adjustment available), Movie Edit (Divide or delete selected frames), Capturing a JPEG still picture from a movie, Saving RAW data in buffer memory, Image Copy
Customization	**USER Mode…**Up to 5 settings can be saved **Custom Functions…**26 items **Mode Memory…**17 items **Button Customization…**Fx1 Button, Fx2 Button (One Push File Format, Outdoor View Setting, Flash Mode, Pixel Shift Resolution, Shake Reduction, Horizon Correction, Electronic Level) AF Button (AF1/ AF2/ Cancel AF) Preview Dial (Optical Preview/Digital Preview) Various settings for the action of the e-dials in each exposure mode can also be saved. **AF Customization…**[AF.S]: Focus-priority/Release-priority [1st Frame Action in AF.C]: Release-priority/Auto/Focus-priority [Action in AF.C Continuous]: Focus-priority, Auto, FPS-priority [Hold AF Status]: OFF, Low, Medium, High [AF in Interval Shooting]: Locks focus at 1st exposure, Adjusts focus for each shot [AF with Remote Control]: Off/On **Operation Control Lock…**[Type1]: E-Dial, EV Compensation, ISO, Green Button, AE Lock [Type2]: 4-way controller, Change AF Point/Card slot switch button OK Button, Menu Button **Text Size…**Standard, Large **World Time…**World Time settings for 75 cities (28 time zones) **Language…**English, French, Germany, Spanish, Portuguese, Italian, Dutch, Danish, Swedish, Finnish, Polish, Czech, Hungarian, Turkish, Greek, Russian, Korean, Traditional Chinese, Simplified Chinese, Japanese **AF Fine Adjustment…**±10 step, Uniform adjustment, Individual adjustment (up to 20 can be saved) **Illumination Settings…**LCD Panel (High/Low/Off), Backside Controls (High/Low/Off), Lens Mount (On/Off), Card Slot/Connector (On/Off) **Indicator Lamps…**Wi-Fi (High/Low/Off), GPS (High/Low/Off), Self-timer (On/Off), Remote Control (On/Off) **Copyright Information…**Names of "Photographer" and "Copyright Holder" are embedded to the image file. Revision history can be checked using the provided software.
GPS/Electronic Compass	**Satellites…**GPS, QZSS, SBAS(WAAS/EGNOS/GAGAN/MSAS) **Reception Frequency…**L1 1575.42MHz **Recorded Information…**Latitude, Longitude, Altitude, Time (UTC), Direction **Geodesics…**World Geodetic System (WGS84) **GPS Logging…**KML format, Logging Interval: 5/10/15/30sec. /1min., Logging Duration: 1-24hr. (Up to 9hours at Logging Interval 5sec. Up to 18hrs. at Logging Interval 10sec.) **Electronic Compass…**Azimuth calculation using triaxial geomagnetic sensor and triaxial acceleration sensor, True north standard
Power supply	**Battery Type…**Rechargeable Lithium-ion Battery D-LI90 **AC Adapter…**AC Adapter Kit K-AC167 (Optional) **Battery Life…**Number of recordable images: Approx. 670 images Playback time: Approx. 340 minutes * With a fully-recharged Rechargeable Lithium-ion Battery, 23°C. Tested in compliance with CIPA standard. Actual results may vary depending on the shooting condition.
Interfaces	**Connection Port…**USB2.0 (micro B), External power supply terminal, External cable switch terminal, X-sync socket, HDMI output terminal (Type D) , Stereo microphone input terminal, Headphone terminal **USB Connection…**MSC/PTP
Wireless LAN	**Standards…**IEEE 802.11b/g/n **Frequency (Center Frequency)…**2412MHz~2462MHz (1ch~11ch) **Security…**Authentication: WPA2, Encryption: AES
Dimensions and Weight	**Dimensions…**Approx. 136.5mm (W) x110mm (H) x 85.5mm (D) (excluding protrusions) **Weight…**Approx. 1010g (Including dedicated battery and SD Memory Card), Approx. 925g (body only)
Operating Environment	**Temperature…**−10°C~40°C (14°F~104°F) **Humidity…**85% or less (no condensation)
Accessories	**Included…**Strap O-ST162, ME Viewfinder Cap, Rechargeable Lithium-ion Battery D-LI90, Battery Charger D-BC90, AC plug cord, Software (CD-ROM) S-SW171 <Mounted to the camera> Eyecup Fᴛ, Hot shoe cover Fᴋ, Sync socket 2p cap, Body mount cap KII, Battery Grip terminal cover **Software…**Digital Camera Utility 5