PENTAX K-30

"Everything you need to know... and then some"

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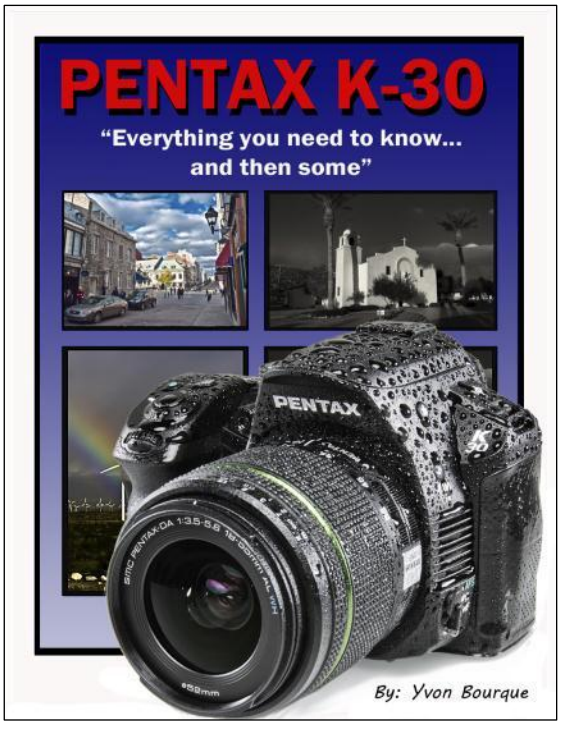
By: Yvon Bourque

Table of contents and Foreword

I am pleased that you purchased one of our ***Pentax K-30 – Everything you need to know…..and then some*** e-book. As an enthusiastic photographer for many years, I have had many Pentax cameras. My first "new" camera was a Pentax Spotmatic, purchased when I was still in Junior High.

When Pentax stepped into the Digital SLR market, I was delighted. Their first few DSLRs (The *ist series) were the smallest DSLRs on the market but were not particularly special with the 6MP CCD. When the K10D was introduced, everything changed and Pentax was suddenly a major player. The K10D was a breakthrough, in my opinion. It had the capabilities of Professional DSLRs with the price of entry-level DSLRs. It had some unique features found nowhere else at any price. In January of 2008, Pentax announced the K20D. It was not a revolution as the K10D was, but it certainly was an evolution of the revolution. The K200D and the K2000/KM, the K-x all followed with no exceptional or marginal improvements. On May 2009, Pentax made history again by introducing the Pentax K-7. On October 2010, the K-5 is announces as the flagship of the company.



As I write this e-book, the K-5 is still available. Pentax has just announced the K-30. It's amazing to me how Pentax keeps breaking barriers. The K-30 has a front and rear e-dials, which are usually only found on much more expensive cameras. It is also weather sealed and at the current selling price, it's unique.

This book is not about me as a photographer. It is about you and what information you will need when using this marvel of engineering that the K-30 is. The book complements the Pentax user's manual and explains in simple terms how to use the camera. It contains techniques, shortcuts, explanations, tips, examples and photographic information applicable to the K-30 as well as other DSLRs in general.

We offer the K-30 book in a downloadable e-book form only. We save production costs and you save money, and get you book much quicker.

Your feedback is always important to us.

Yvon Bourque

I always appreciate comments from my readers, including those who let me know about typos, misspellings, and grammatical errors. However, please understand that English is not my first language. You can always let me know by emailing me directly at: brqyvn@gmail.com

Yvon Bourque

PENTAX *K-30*

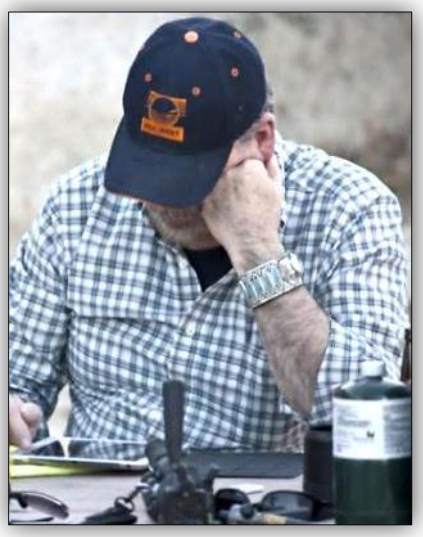
Everything you need to know…

and then some

Foreword

Table of contents and Foreword

About the Author:

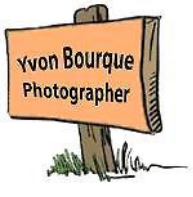


Back when most of his classmates were dealing with growing up, the author was nurturing a serious enthusiasm for photography. Son of a Montreal carpenter, he enrolled in photography courses, soaked up theory, bought his first camera, shot rolls of film, and learned how to develop and print. All this was before leaving junior high school. He had many dreams and like many aspiring young photographers, he dreamed of getting assignments from National Geographic and traveling the world over.

Decades later, the road has led him into other directions. With the responsibilities of a career and family, his plans were altered, but only slightly. The enthusiasm of the young boy and the love of photography are still strong. He never abandoned his photography dreams. One of his biggest frustrations is that he does not have enough time for more.

He has used all types of photography formats, but now, uses Digital SLR cameras almost exclusively. He states "Technology is good. The freedom to unleash one's creativity has never been greater. You either follow the flow of progress, or you are left behind".

His work has given him the opportunity to travel across the United States, Canada, Mexico and the Caribbean. His photography career never took-off as he had dreamed, but as a second career, he has spent countless hours during the past decades capturing not only the beauty and the people of America but other countries as well. He has won numerous awards, written articles and books on his beloved subject, and sold his work throughout the places he lived.



Where does a tireless hobbyist go from here? Like all other areas of our modern life, photography has gone digital. As an artist, he is fascinated with all of the new digital possibilities. He is finally contemplating the idea of replacing his present career shingle for one stating Yvon Bourque, Photographer. "With perseverance, all is possible."

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Foreword

I wrote this book for all users of the Pentax ***K-30***. No matter what your experience level is, you will find something useful in this book.

Less than a few decades ago, most amateur and professional photographers alike were using film cameras for their picture taking. Within the film cameras, several formats were used. The general public and a good number of professionals used the 35mm format. A select few preferred using medium and large format cameras mainly because of the size of the negatives. Larger negatives rendered better pictures, better colors and fantastic enlargements. Film cameras had evolved to very sophisticated instruments and took great pictures. It's no wonder that almost every family owned a 35mm camera.

When the first digital cameras started to appear, the quality was less than desirable, but the potential was certainly there. For several years, many photography magazines were debating whether or not the digital cameras would replace film based cameras. Over time, the quality has so improved, that today, in our opinion, digital cameras exceed the quality of film based cameras. Of course, we are comparing the 35mm and medium format film cameras with the new breed of Digital Single Lens Reflex (DSLR) cameras. It has taken many years to get where we are today, but digital is here to stay. Some of you probably never used a film camera before.

It wasn't all that long ago when a top DSLR with a sensor in the 2 megapixels range was costing the consumers nearly five thousand dollars or more. For a while, as soon as you spent thousands of dollars for a top-of-the-line DSLR, it was replaced within months with a new and better model. I am sure that some of you remember these times of tribulation.

The market, as this book is written, has stabilized, and the norm in a non-professional DSLR is now around the 12 to 25 megapixels, 25 megapixels and above for most professional DSLR cameras. All are enough to produce very good enlargements up to about 16" x 20" and beyond. Full size (roughly 36mm x 24mm, or the same size as a 35mm frame) sensors are available on many DSLRs. The perceived advantage of full frame is that you can use your 35mm format lenses without any correction factor. Pentax is using a smaller sized sensor (APS-C roughly 24mm x 16mm) requiring a correction factor of around 1.5 to 35mm format lenses. If you

shoot with telephoto lenses, it works to your advantage as a 200mm f/2.8 lens acts like a 300mm f/2.8 telephoto at no additional cost. We know that a 300mm f/2.8 telephoto lens is very expensive. The downside is that wide angle lenses will no longer perform as such, but the maximum aperture will remain. Today most companies manufacture super-wide lenses that, when converted to a 1.5x factor, still gives you a nominal wide angle comparable to a 20mm on up in the 35mm format. Wide angle lenses are cheaper than telephotos. In our opinion, full-frame sensors are overrated, especially with the new **K-30**. The **K-30** uses a Pentax/Sony 16.3 megapixels CMOS sensor, adapted by Pentax engineers for the **K-30**, drastically reducing the digital noise at high ISO. It also allows sizeable cropping.

Unless you want to print your pictures billboard size at 300dpi resolution, the current CMOS sensor will be sufficient to produce stunning pictures and enlargements that were only dreamed of a few years ago. The CMOS sensors use less power and produce very little digital noise at higher ISO.

In the past few years, we have seen many brand names in the camera field disappear. Some acquisitions and mergers took place and some companies just abandoned the competitive digital photography market altogether.

In the past decade, two companies appear to have dominated the market; and indeed still do. There is no doubt that they manufacture good products, but the brand loyalty and recognition may have played an important role in their success.

With Pentax introducing the **K-30***,* the gap between these two giants is narrower and there is no doubts that Pentax will once again take a greater share of the market with good products. Pentax took a while before producing its first Digital Single Lens Reflex (DSLR). Some changes are about to happen. Pentax is not new to changing the photographic world. Pentax pioneered the Single Lens Reflex (SLR) camera in 1952 with the introduction of the Asahiflex I camera. In 1954, the Asahiflex II was introduced with the first instant mirror return. In 1964, Pentax did it again by introducing its Pentax Spotmatic camera featuring the first through-the-lens (TTL) metering system in a Pentax camera. A version of the Pentax TTL system is now found in virtually all 35mm SLR cameras and applied to the design of DSLRs as well. Many of us learned photography by using the ever popular Pentax K1000.

The new Pentax **K-30** is aimed at amateurs to advanced amateur photographers but can certainly be used by entry-level photographers as well. It's a camera that will help expand your photographic expertise. It can be as easy to operate as a point and shoot, but it also has all of the professional features that you will demand as your experience grows. All Pentax lenses ever made will work with the **K-30**. It is often said that the glass are the most important factor in taking great photographs. There are many reasons to choose the **K-30** for your digital photography endeavors. We have dedicated a whole section on the camera's features alone.

This book is organized in the following way:

Foreword and Table of contents

Chapter 1 "**Know your K-30**" is dedicated to the general specifications of the **K-30** and the review of the many functions of the camera in general.

Chapter 2 "**How to use your K-30**" explains the multiple functions of the **K-30**, and includes many pictures and illustrations. It clarifies the use of the camera's functions from screen menus to actual buttons and switches. There are no simple icons on this camera mode dial except for scene mode, which really makes it easy to shoot like a Pro, without being a Pro. The advantage of this camera is that you can tailor its operability to your liking or photographic skills. The three basic shooting elements; Aperture, Shutter Speed and the Sensitivity (ISO) are all adjustable with the **K-30** in ways that will make the competition rethink their approach. It will not be long before other manufacturers try to mimic the **K-30**.

Chapter 3 "Processing your K-30 Images" is a brief review on how to manipulate your images within the camera as well as with a computer. This topic alone is worthy of a book by itself, and there are indeed many books on Digital Imaging readily available. Pentax software and other digital imaging software such as Photoshop®, Lightroom®, and Elements®, as well as Apple's Aperture® are briefly visited. The possibilities are endless and are only limited by your ability or desire to manipulate and post-process your images.

Chapter 4 "**The Pentax System**" is dedicated to the Pentax System. Pentax is truly the only manufacturer with 100% backward compatibility. It includes all lenses ever manufactured by Pentax, both 35mm and medium formats. There are about twenty five million plus genuine Pentax lenses out there. There are probably that many more lenses manufactured by companies such as Tamron ™, Sigma ™, Tokina ™ and other brands. Currently available accessories are also covered and explained in this chapter.

Chapter 5 "**Photography Techniques**" is full of techniques and example pictures along with some suggestions on composition.

Chapter 6 "HD Video recording" is dedicated to the HD video capabilities of the **K-30**. This new generation of DSLRs with still pictures and HD video capabilities is changing the digital photography landscape. It opens up new possibilities. It is going to be very popular for documenting and photojournalistic approach to your undertakings.

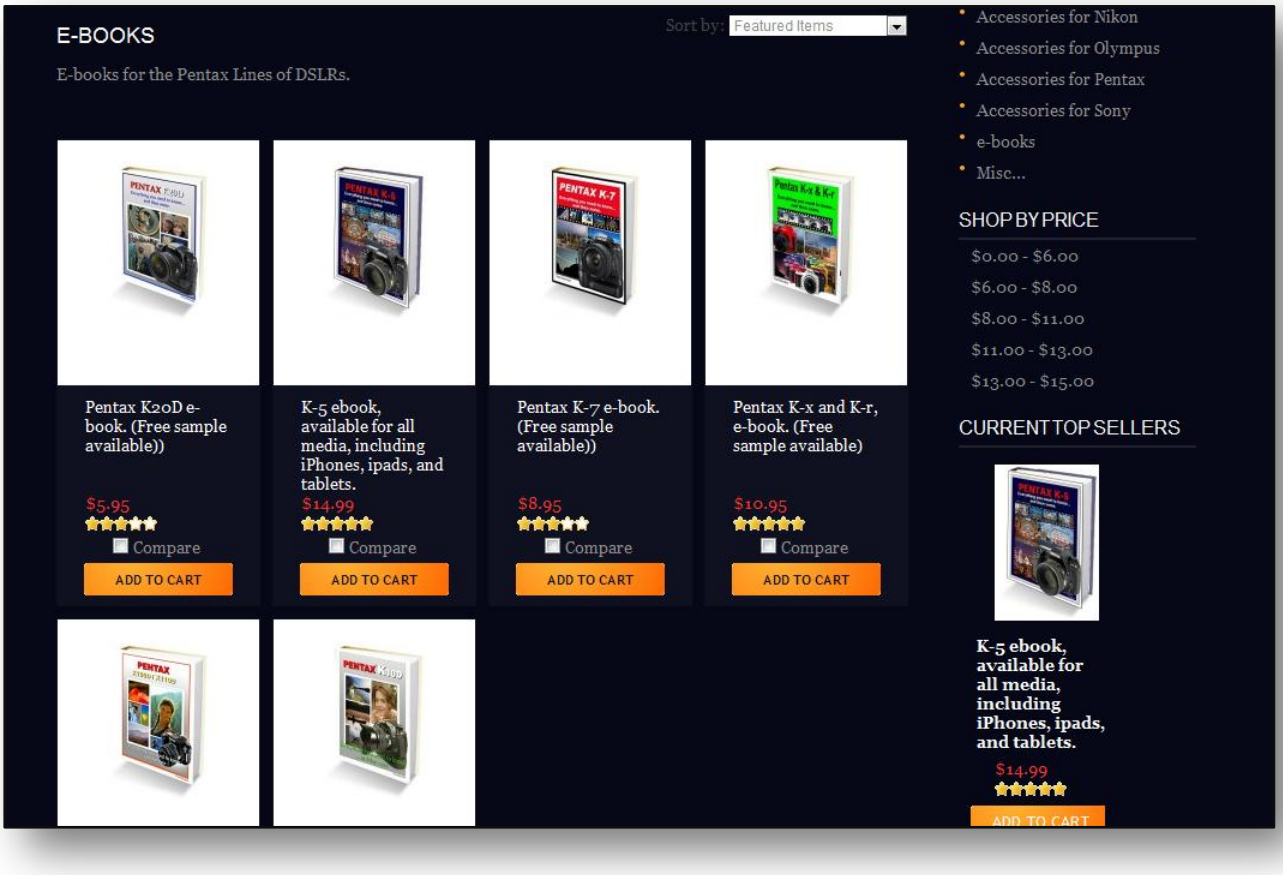
Addendum is comprised of additional **K-30** functions, last minute changes, revisions to software or firmware and any additional information found to be useful at the time of writing.

Appendix section includes menu setting tables, factory default tables, lens compatibility chart, mount types, and an index to guide you through this book.

Check our Pentax Blog, “The Blogspot”; we constantly post articles about Pentax products and photography in general.

[The Blogspot]

We also have a website showcasing our e-books. You can download useful information, samples or purchase an e-book for your Pentax DSLR.



Pentax e-books

Rusted old Ford truck near Montreal - © Yvon Bourque

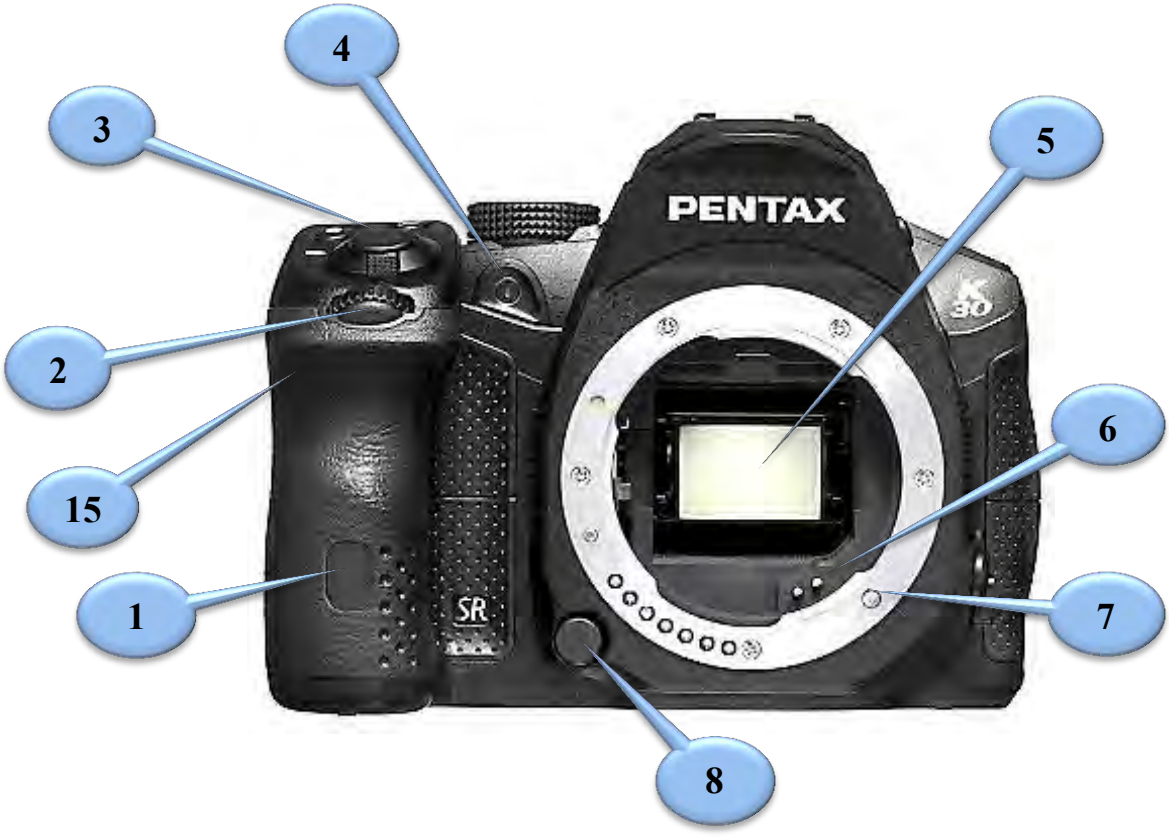
Chapter 1

Know your K-30

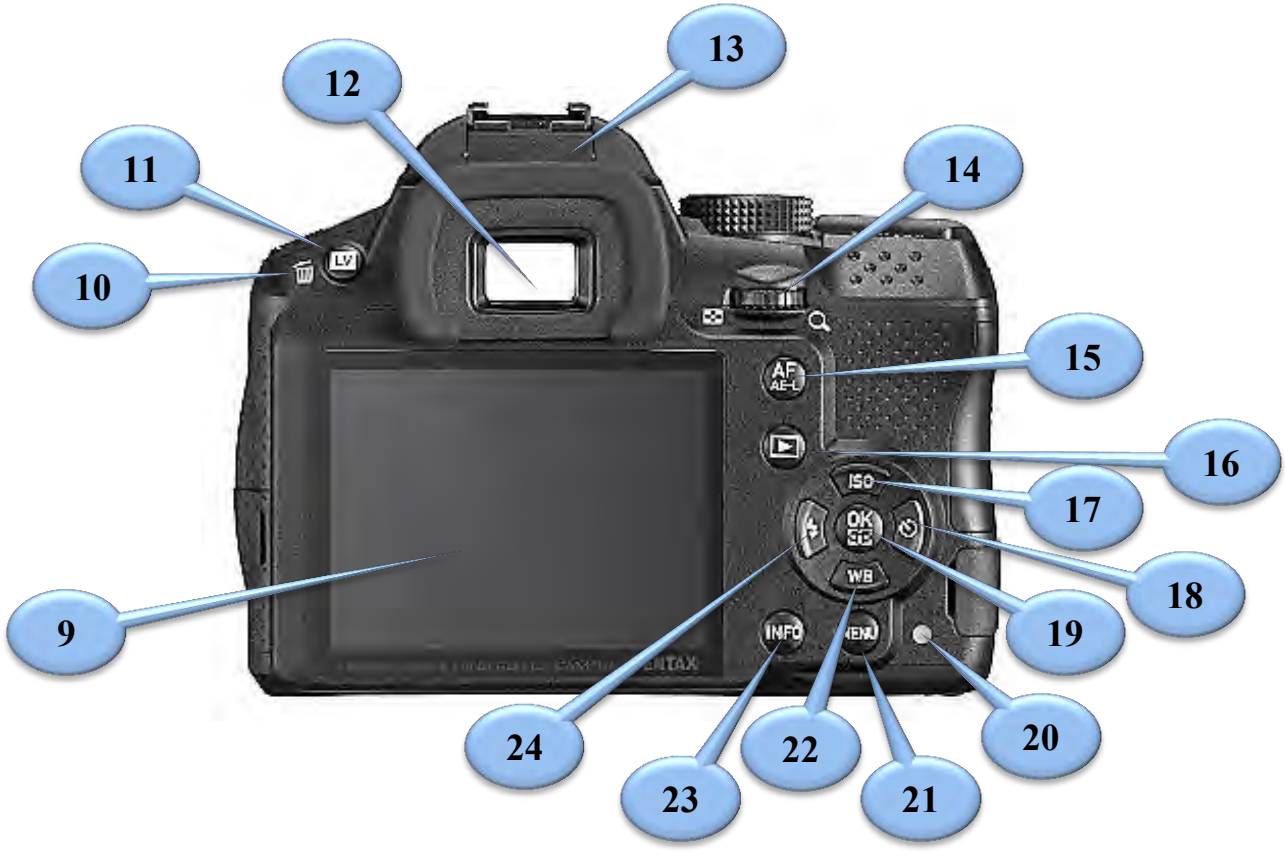

PENTAX


PENTAX
PENTAX 16-50
PENTAX 18-135
PENTAX
PENTAX 50-200
PENTAX 35

Nomenclature



1.	**Self-timer lamp**	Blinks for self-timer. Serves as remote control receiver.
2.	**Front e-dial**	Changes set values. (Customizable)
3.	**Shutter release**	Press halfway to compose image, press fully to take picture
4.	**AF Assist Light**	Lights up when AF is difficult to attain in darker scenes
5.	**Mirror**	Allows Through The Lens (**TTL)** metering and focusing
6.	**SDM contacts**	Allows AF with the Supersonic Drive Motor (**SDM)** lenses Also used for power zoom on some older FA lenses
7.	**AF coupler**	Handles the AF drive between the lens and ***K-30***
8.	**Lens unlock button**	Press to install or remove lens

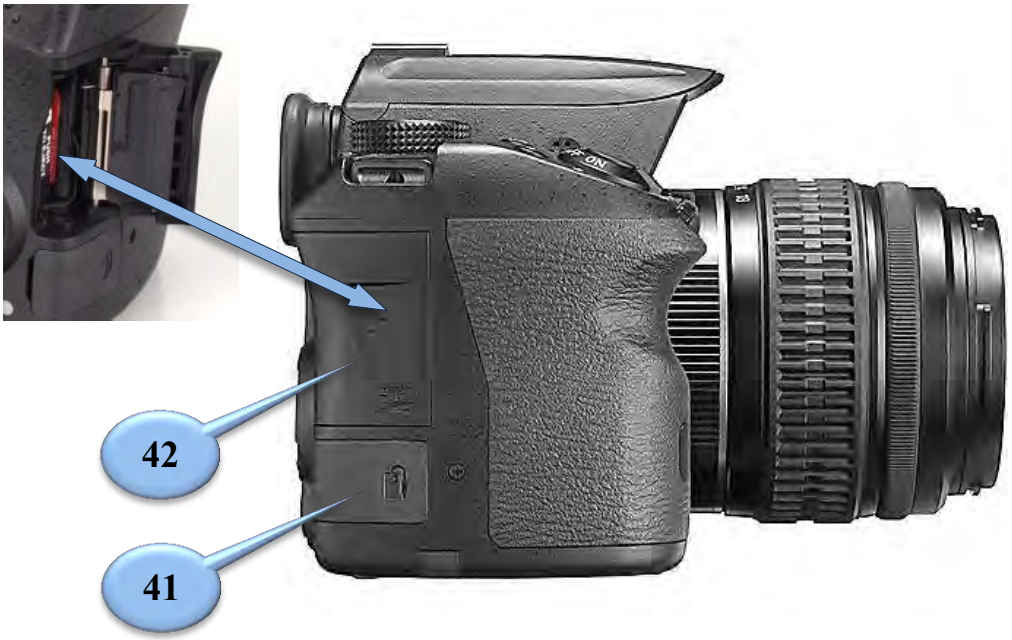


9. 3" LCD monitor	Displays exposed pictures, allows access to menus
10. ERASE button	Press to delete current picture
11. Live-view button	Initiate Live-view mode
12. Viewfinder	If you don't know what this is for, abandon photography ☺
13. Diopter adjustment	Adjusts the viewfinder to suit your eyesight
14. Rear e-dial	Changes set values. (Customizable)
15. AF/AE-L Button	Select to work as AF button or to lock the exposure value
16. Play button ▶	Press to see pictures on LCD screen
17. Four-way Controller	Four-way controller as up button ▲ or to change ISO
18. Four-way Controller	Four-way controller as right button ▶ or to change shooting mode
19. OK button	Press to save setting from menu / Selects metering point.
20. Card access lamp	Illuminates or blinks when SD card is accessed.
21. Menu	Press to activate Menu modes on the LCD monitor.
22. Four-way Controller	Four-way controller down as button ▼ or change White Balance
23. Info button	Press to view info of current photo on the LCD.
24. Four-way Controller	Four-way controller as left button ◀ or to access Flash settings

25. Strap Lugs (2)	Loop for the camera strap
26. Built-in flash	Retractable P-TTL with guide number 12 @ 100/m
27. Main switch	Rotate to turn the camera on or off
28. Green button	Resets the values being adjusted
29. EV compensation	Press to adjust EV compensation with the rear e-dial
30. Mode dial	Changes the exposure mode
31. Hot shoe	To mount external flash
32. Diopter adjustment	Adjusts the viewfinder to suit your eyesight

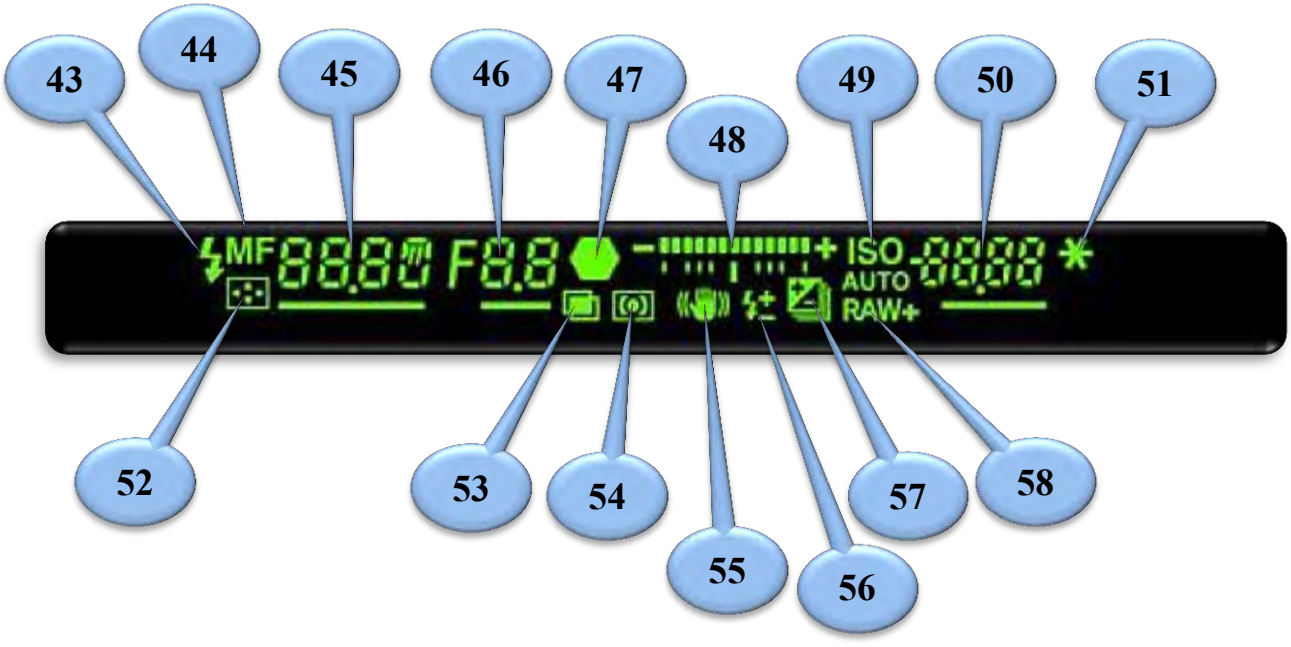
33. Battery housing	Batteries are housed here.
34. 1/4” Tripod Socket	Attachment for tripod.
35. Battery	Lithium-ion D-LI109 rechargeable battery
36. AA battery adapter	Allows the use of easy to find AA batteries

37. Focus mode lever	Switches between AF single, continuous and manual
38. Raw/Fx button	For activating assignable function
39. UP button	Press the UP button to pop the built-in flash up.
40. USB video terminal	Connects the camera to a computer
41. Cable release terminal	Connection for remote control
42. Memory card slot/cover	Uses SD, SDHC and SDXC Memory cards

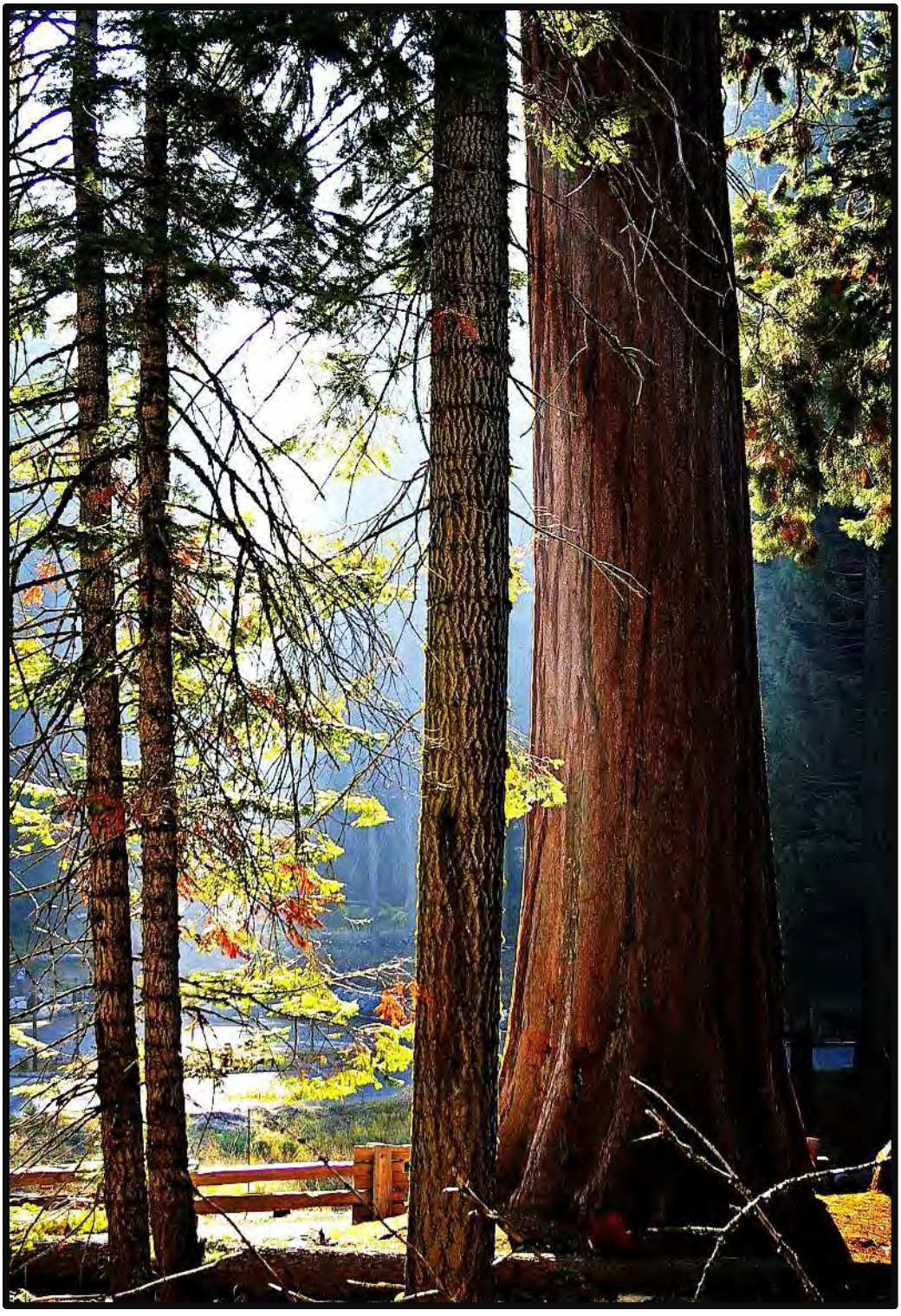


Information you see in the viewfinder

Viewfinder available Information in details:



43. Flash status	Appears when flash is available and blinks if flash recommended
44. Manual Focus	Appears when manually focusing
45. Shutter speed	Shutter speed, underlined when adjustable with e-dial
46. Aperture Value	Aperture, underlined when adjustable with e-dial
47. Focus Indicator	Appears when image is in focus
48. EV Bar	Shows EV compensation values
49. ISO display	Shows the ISO in Manual or Auto
50. Sensitivity	Shows the ISO being used / Number of recordable images left
51. AE Lock	Appears during AE Lock
52. AF point	Appears when AF Selections is enabled
53. Multi-exposure	Appears when Multi-exposure enabled.
54. Metering method	Shows metering method, Multi-segment, Center-weighted or Spot
55. Shake reduction	Appears when Shake reduction enabled.
56. Flash exposure comp	Appears when flash compensation used.
57. EV compensation	Appears when EV comp available or used, or when bracketing.
58. RAW/Raw+	Appears when shooting RAW or RAW+



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K-30 TECHNICAL SPECIFICATIONS

TYPE	Digital SLR
SENSOR	Type: CMOS w primary color filter, integrated Shake/Dust Reduction sensor movement system Size: 23.7 x 15.7mm (APS-C) Color depth: 8 bits/channel JPG, 12 bits/channel RAW Effective pixels (total pixels): 16.3 MP (16.5 MP) Dust Removal: Sensor movement w SP coating on low pass filter Pixel mapping: Yes
LENS	Type/construction: PENTAX KAF2 bayonet stainless steel mount Usable lenses: PENTAX KAF3, KAF2, KAF, and KA (K mount, 35mm screw mount, 645/67 med format lenses useable w adapter and/or restrictions) SDM function: Yes Power zoom function: n/a
FOCUS SYSTEM	Type: SAFOX IXi+ TTL phase-detection 11 point (9 cross) wide autofocus system w light wavelength sensor and diffraction lens Sensitivity range: EV -1 to 18 (ISO 100) Focus modes: AF.A (auto), AF.S (single, w focus lock, focus/shutter priority selectable), AF.C (continuous, w focus/FPS priority selectable), Manual Focus point adjustment: Auto 11 pt, Auto 5 pt, User-Selectable (w Expanded Area AF), Center AF assist: Yes via dedicated LED AF assist lamp Focus peaking: Yes (n/a while video is actively recording)
VIEWFINDER	Type: Pentaprism Coverage (field of view): 100% Magnification: 0.92X (w 50mm F1.4 at infinity) Standard focusing screen: Natural-Bright-Matte III (interchangeable) Diopter adjustment: -2.5m to 1.5m Depth of field preview: Optical (diaphragm stop-

	down), digital
LCD MONITOR	Type: 3.0” TFT color LCD w brightness/color adjustment and AR coating Resolution: 921,000 dots Wide angle viewable: Yes
FLASH	Type: Retractable P-TTL popup flash Guide number: 12m (ISO 100) Coverage: 28mm wide angle equivalent Flash modes: On, Redeye, Slow Sync, Slow Sync + Redeye, Trailing Curtain Sync, Wireless Flash exposure compensation: -2 to 1 EV (1/2 steps)
EXTERNAL FLASH	Type: Hot shoe (P-TTL), high speed sync and wireless w PENTAX dedicated flash Synchronization speed: 1/180 sec
STORAGE MEDIA	Internal memory: n/a Removable memory: SD, SDHC, SDXC
INTERFACES	Ports: USB 2.0 hi-speed, AV out, cable switch Video out: NTSC, PAL Microphone: Built-in monaural
POWER SUPPLY	Power source: Rechargeable Li-Ion battery D-LI109 (included), AA battery holder D-BH109 for 4* AA batteries (sold separately) Recordable images: Li-Ion approx. 480 (410 w 50% flash, CIPA), AA lithium approx. 1600 (1000 w 50% flash, CIPA) Playback time: Li-Ion approx. 270 min, AA lithium approx. 620 min Movie recording time: 25 min max time per clip AC adapter available: Yes (sold separately)
PHYSICAL SPECS	Body dimensions (W x H x D): 5.1 x 3.8 x 2.8” Body weight Without battery or removable memory: 20.8 oz Loaded and ready: 22.9 oz (Li-Ion) Primary construction material(s): Reinforced polycarbonate over stainless steel chassis Operating temperature: 14-104°F (-10 to 40°C) Ruggedized features: Fully weather sealed throughout

	body, cold proof
LANGUAGE SUPPORT	English, French, German, Spanish, Portuguese, Italian, Dutch, Danish, Swedish, Finnish, Polish, Czech, Hungarian, Turkish, Greek, Russian
IMAGE STABILIZATION	Type: Sensor-shift SR w rotational compensation (3 stops max)
METERING SYSTEM	Type: TTL open aperture 77 segment metering Sensitivity range: EV 0 to 22 (ISO 100, 50mm F1.4) Metering patterns (multi, center, spot): Multi 77, Center, Spot Exposure compensation: +/- 5 EV (1/3 and 1/2 steps) Exposure lock: Yes Exposure bracketing: 3 frames, up to +/- 2 EV in 1/3 or 1/2 steps
ISO SENSITIVITY	Auto: 100-12800 (1/1, 1/2, 1/3 steps), expandable to 100-25600, auto range selectable Manual: 100-12800 (1/1, 1/2, 1/3 steps), expandable to 100-25600
WHITE BALANCE	Type: Image sensor detection w light wavelength sensor assist Auto preset modes: Auto, Daylight, Shade, Cloudy, Fluorescent (D, N, W, L), Tungsten, Flash, CTE Manual mode(s): 3 manual and 3 Kelvin temperature presets, copy WB settings from a captured image available WB fine adjustment: +/- 7 steps A-B axis or G-M axis
SHUTTER	Type: Electronically controlled, vertical-run, focal plane shutter Shutter speed: 1/6000 to 30 sec (1/3 or 1/2 steps), Bulb
CAPTURE MODES	Mode selection: Hyper Program (P), Sensitivity Priority (Sv), Shutter Priority (Tv), Aperture Priority (Av), Shutter & Aperture Priority (TAv), Hyper Manual (M), Bulb (B), User (U1, U2), Scene (SCN), Auto Picture (AUTO), Movie Auto Picture modes: Standard, Portrait, Landscape, Macro, Moving Object, Night Scene Portrait, Night Scene, Blue Sky, Forest

	Scene modes: Portrait, Landscape, Macro, Moving Object, Night Scene Portrait, Sunset, Blue Sky, Forest, Night Scene, Night Scene HDR (JPG), Night Snap, Food, Pet, Kids, Surf & Snow, Backlight Silhouette, Candlelight, Stage Lighting, Museum Custom Image modes: Bright, Natural, Portrait, Landscape, Vibrant, Radiant, Muted, Bleach Bypass, Reversal Film, Monochrome, Cross Processing Green simplified mode available: n/a Face detection available: Yes PASMB: P, A, S, M, B (extended modes Sv, TAv) Date stamp: n/a Digital filters (capture): Extract Color, Toy Camera, Retro, High Contrast, Shading, Invert Color, Color Dynamic range adjustment: Highlight, shadow Digital level: Viewfinder (horizontal), LCD (horizontal, vertical), SR auto-level function File/Folder customization: Folder name (standard, date), file name (standard, customizable), embed copyright
DRIVE MODES	Mode selection: Single, Continuous (Hi, Lo), Self-Timer (12s, 2s), Remote (0s, 3s, continuous), Auto Bracketing (3 frames, standard, timer, remote) Continuous FPS - Continuous Hi: Approx 6.0 FPS (30 JPG, 8 RAW) - Continuous Lo: Approx 3.0 FPS (unlimited JPG, 10 RAW) Multi-exposure: 2-9 shots, auto exposure adjustment Interval: 999 shots, 3 sec to 24 hr interval, time delay HDR: Auto, HDR 1, HDR 2, HDR 3, pixel alignment, exposure bracket +/- 1-3 EV (1/1 steps) Cable switch: Yes (available separately)
PLAYBACK MODES	Mode selection: One Shot (no data, basic data, full data, color channel histogram, bright/dark indication, copyright info), Multi Image Display (4, 9, 16, 36, 81 thumbnails), Magnification (up to 16X, scrollable,

	quick magnification), Image Rotation, Calendar Film-strip, Display, Folder, Slideshow, Select & Delete, Movie Playback (no data, basic data, full data), Save RAW Data From JPG (if available in buffer memory) Mode pallet: Image Rotation, Digital Filter, Resize, Cropping, Slideshow, Save as Manual WB, RAW Development, Index Print, Image Comparison, Protect, DPOF, Movie Edit, Extract JPG from Movie Digital filters (playback): Monochrome, Extract Color, Toy Camera, Retro, High Contrast, Shading, Invert Color, Color, Tone Expansion, Sketch Filter, Watercolor, Pastel, Posterization, Miniature, Soft, Starburst, Fisheye, Slim, Base Parameter Adj
FILE FORMATS	Recorded resolutions: 16M (4928x3264), 12M (4224x2816), 8M (3456x2304), 5M (2688x1792) Quality levels: *** Best, ** Better, * Good File formats: RAW (DNG), JPG (EXIF 2.3), DCF 2.0 compliant, DPOF, PIM III Color space: sRGB, AdobeRGB
CUSTOM FUNCTIONS	Functions available: 23

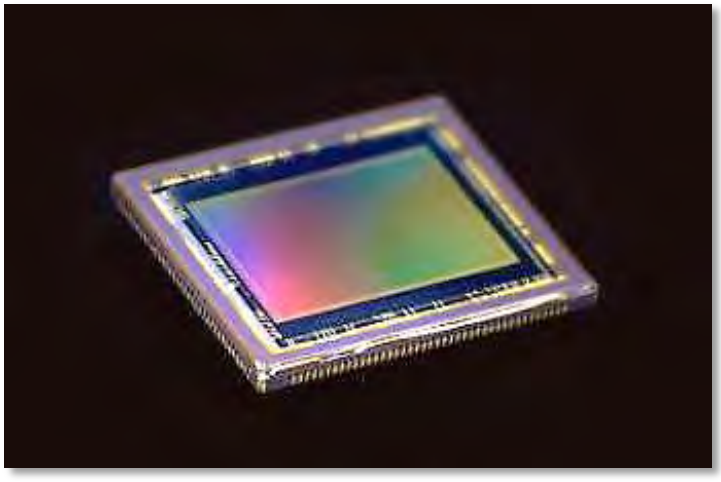
Here what's Special about the K-30

Quick rundown:

- Rugged cold proof design is ideal for use in sub-freezing, wet, snowy winter conditions (-10C, 14F).
- Large 3 inch LCD with brightness and color adjustments is wide angle viewable, and features 921,000 dots of resolution.
- Low profile glass pentaprism viewfinder, with interchangeable focusing screens, achieves a 100% optical field of view for framing accuracy in a highly compact form factor.
- Freeze the action with a fast 6 frames per second continuous shooting mode and 1/6000 second maximum shutter speed.
- Programmable front and rear e-dials enable PENTAX renowned Hyper Program and Manual modes, as well as other rapid no-look settings changes.
- In-camera HDR shooting modes feature multiple blending options to bring out the detail in wide gamut still imaging.
- Highly compact yet durable body features comfortable ergonomics such as a deep grip, oversized buttons, and concave 4-way controller for streamlined, intuitive operation.
- Full 1080p HD video capture at 30 frames per second (60 FPS for 720p) features efficient h.264 compression, flexible exposure control, and HDR finishing options for stunning video quality.
- Live View focus peaking highlights in-focus surfaces for fast and highly accurate manual focus acquisition or precise autofocus confirmation.
- Highly accurate 77 segment metering system produces beautifully exposed images and video, even in complex lighting situations.
- ISO speeds up to 25600 maximize shutter speeds and flash effective range while minimizing image noise in low lighting.
- Traditional shooting modes feature PENTAX Sensitivity Priority (Sv) and Shutter and Aperture Priority (TAv) for outstanding flexibility, while powerful automatic modes like Auto Picture and Scene modes take the guesswork out of great photography.
- Compatible with both rechargeable Li-Ion and AA batteries (via optional AA battery holder) for plentiful power at home or while travelling

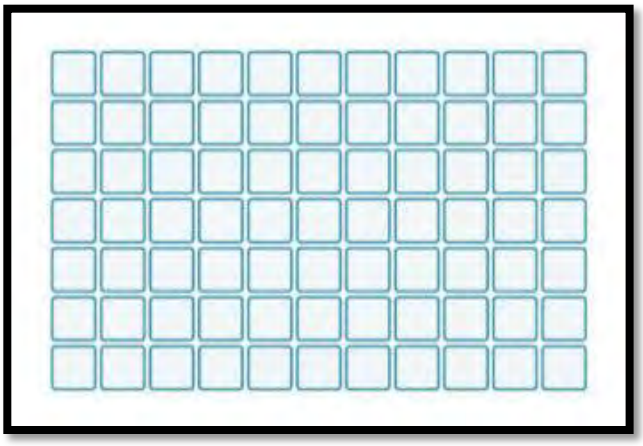
A little more details on the most significant features of the Pentax K-30:

❖ A compact body that is one of the smallest in the photo enthusiast category to reduce bulk and allow users to travel light while maintaining durability and build quality (up to 25 percent smaller than other cameras in the same class). It is undoubtedly the best Pentax entry-level DSLR yet. As the successor of the **K-r**, you can be assured that it has advanced features not found on other brand of DSLRs. It's a Pentax Tradition.



❖ A 16.3 megapixel CMOS sensor to minimize noise, with four channel-readout output for fast image capture, and the ability to capture HD quality movies. It is a great combination of resolution and file size, allowing very large (poster size and larger) prints and cropping flexibility.

❖ A 77-segment metering system quickly and accurately determines exposure for even the most complex and dynamic lighting situations.



❖ The updated HD Movie capture features adjustable quality and resolution settings, aperture control, as well as mechanical Shake Reduction.

❖ The **K-30** can capture MPEG-4 AVC /H.264

❖ (1920×1080) @ 30 fps, 25 fps, 24 fps, (1280×720) @ 60 fps, 50 fps, 30 fps, 25 fps, 24 fps. (640×480) @ 30 fps, 25 fps, 24 fps.

❖ A Dedicated AF-assist lamp further improves autofocus response and accuracy in low light conditions.

❖ An Electronic Level function ensures that images have truly level horizons to minimize post-capture editing.

❖ An innovative in-camera Lens Correction function that electronically adjusts for Distortion and Lateral Chromatic Aberrations to maximize image quality with DA series lenses.

❖ An updated High Dynamic Range (HDR) image capture mode captures three images then combines them in camera to widen the exposure gamut to bring out details in all exposure areas of images.

❖ A composition adjustment feature in Live View allows minor shifts in the framing and composition of images using the Shake Reduction mechanism without having to physically move the camera. This feature is ideal for tripod use.

❖ A programmable embedded copyright function preserves artistic integrity and image ownership during capture via a keypad that may record ownership in metatag data.

❖ A striking 3 inch LCD with 921,000 dot resolution is perfect for detailed image or movie capture and review using the Live View function.

❖ A weather, dust and cold resistant body makes the **K-30** the perfect camera for use in any environment, inside the studio or when travelling in any weather.

❖ Fast 6 frame-per-second shooting with the PRIME M Image. PRIME M image processing engine is optimized for HD video capture, smooth live view, low chromatic noise, and low energy consumption.

❖ A top shutter speed of 1/6000 sec freezes even the fastest action in well-lit settings.

❖ Live View mode, with contrast AF, Face Detection, and optional histogram, grid, and bright/dark area display, allows you to quickly compose your images without having your eye against the viewfinder.

❖ Live View focus peaking highlights in-focus surfaces for fast and highly accurate manual focus acquisition or precise autofocus confirmation.

❖ Low profile glass pentaprism viewfinder, with interchangeable focusing screens, achieves a 100% optical field of view for framing accuracy in a highly compact form factor.

❖ The new PENTAX Advanced SAFOX IXi+ autofocus engine, with AF assist lamp and light source detection sensor, features improved optical components, including a diffraction lens, for responsive autofocus in any lighting.

- The PENTAX-original Shake Reduction system with rotational sensor movement improving the sharpness of your images at the moment of capture.
- The **K-30's** Dust Reduction system, features a piezo-ceramic vibration action to the sensor's low-pass filter for dust-fee image capture.
- Rechargeable Li-Ion or AA battery compatible. Both rechargeable Li-Ion and AA batteries (via optional AA battery holder) are plentiful power at home or while travelling
- Advanced image capture settings, digital filters, and HD Video aspect ratio provide outstanding flexibility and creativity while minimizing the need for computer image manipulation.
- Custom Image modes with advanced parameter settings allow users to customize the processing mode to suit personal creative style.
- Multiple exposure settings, including **AUTO**, Program, Sv, Tv, Av, TAv, M, Bulb, USER 1 and USER 2, and Movie modes, provide extensive creative control over the exposure for photographers of all experience levels.
- Advanced white balance settings include highly customizable white balance fine tuning, color temperature adjustment, and post image capture manual white balance selection for perfect pictures in even the most difficult lighting.
- Dynamic Range setting with adjustable shadow correction brings out hidden or lost details in both highlights and shadows for even the highest-contrast, dynamic lighting.
- Advanced capture options include multi-exposure and interval shooting for creative special effects and time-lapse photography

Highlighting Some of the K-30 General Features

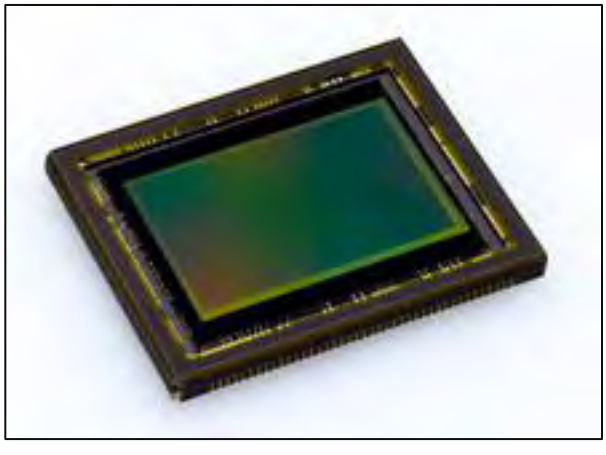
If you evaluate a digital photograph by its composition, the **K-30** like its predecessor the **K-r,** has many features to help you capture the right moment. The **K-30** is entry-level dreams come true. The camera has many characteristics of the professional cameras and has some features found in no other camera, anywhere, at any price. It is the best entry-level Pentax DSLR ever produced at the time of writing. This is not a point-and-shoot camera, although its price is much more reasonable than similarly equipped DSLR cameras. You can see that the mode dial is comprised of professional mode choices. Gone are the auto-picture icons, portrait mode, a landscape mode, moving object mode etc. What you have on the **K-30** are serious exposure settings. As you can see, the camera is fully customizable to your preferences or shooting style.

So, before we get into the detailed operation of this wonderful camera, read about the following **K-30** features. It will give you a better understanding of the unconstrained capabilities and adaptability of the camera. If you are upgrading from the **K-r** or want a back-up camera to your **K-5**, you will master the **k-30** quickly. If you are upgrading from one of the previous DSLR models, there will be a bit of a learning curve.

Resolution

The 23.7 x 15.7mm **CMOS** sensor records photos with a resolution of up to 16.3 megapixels. This is enough to produce astonishing 16" x 20" pictures and beyond, with quality only dreamed of in the 35mm film era. Most people only print that large once in a while; but it's nice to know that you can. The **k-30** has the best image quality at high ISO than any previous DSLR models in its price range. If the highest resolution is more than what you'll ever really need, the camera shooting mode can be adjusted to shoot at 16.3 MP, 12MP, 8MP, and 5MP. Lower megapixels make the internal and external processing images much faster, but the quality is diminished proportionally.

The Sony CMOS sensor



According to Pentax, in designing the **K-30** Digital SLR, it was decided to use Sony's CMOS sensor with significant design improvements. It adds four channel output for fast image capture, and the ability to capture HD quality movies. It is the ideal combination of resolution and file size, allowing very large (poster size and larger) prints and cropping flexibility.

CMOS, (**C**omplementary **M**etal-**O**xide-**S**emi-conductors), are a major class of integrated circuits, and CMOS technology is used in a number of electronics including image sensors. With a CCD sensor, light is not amplified at the photo diode; rather, the charge is carried in sequence and converted to voltage. This creates more heat on the sensor, which can lead to increased noise.

Exclusive Image Processor

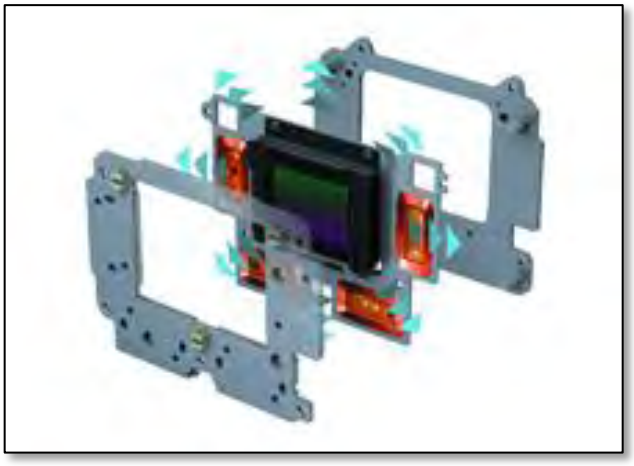
The **PRIME M** processor (**Pentax R**eal **IM**age **E**ngine) significantly speeds up the image processing when compared to the older line of Pentax DSLRs. The PRIME M engine offers faster data-processing speed for higher quality images with richer gradation and more accurate color rendition. The system also offers high-speed movie data transmission. It allows you to shoot continuously at a higher rate, up to 6 images per second, which is very good considering the 16.3 MP file size of the CMOS sensor. In addition, it allows you to process RAW images in-camera without the need of a computer.

Dust Removal System

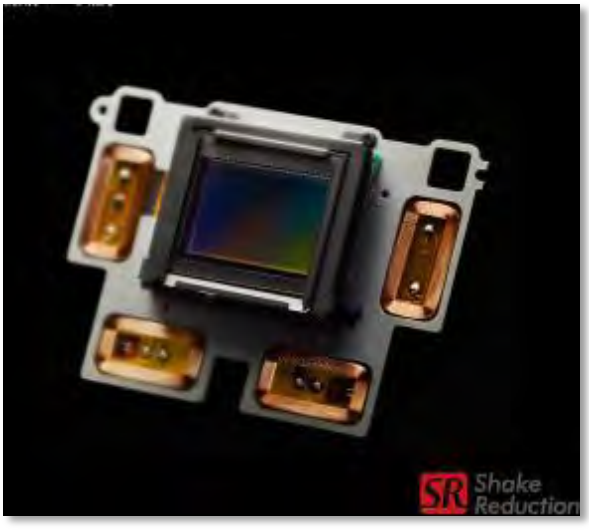
This Dust Removal system ensures that dust on the sensor is a thing of the past, for the most part anyway. The **K-30** is equipped with a Dust Removal mechanism to more effectively remove dust and minimize spots on recorded images even after changing lenses in dust-prone outdoor settings. Using a piezo-ceramic vibration action, the system shifts or vibrates the low-pass filter located in front of the CMOS image sensor at supersonic speed to remove dust more efficiently

How does that help you? Post processing and retouching of images, with spots caused by dust, may no longer be necessary. The **K-30** has additional tools to further eliminate dust specks that have a tendency to stick in very humid conditions. With interchangeable lenses, dust will be introduced in the body, possibly each time you change lens. To help even more, the **K-30** has a Pixel mapping feature and any dead pixels found are fixed using interpolation with adjacent pixels. Brilliant!

Exceptional Shake Reduction System (SR II)



The **K-30** features the Pentax-developed SR (Shake Reduction) mechanism, which compensates the ad-adverse effect of camera shake by 2.5 to 4 shutter stops, assuring sharp, blur-free images even under demanding shooting conditions. This innovative mechanism is compatible with all Pentax lenses ever produced. This allows complete shift freedom, including rotationally of the image-sensor regardless of the camera's inclination. The mechanism also provides friendly functions such as Automatic Level Adjustment and small Angle Adjustment (up/down, right/left and clockwise / counterclockwise) to help photographers compose images exactly to their specifications. Lenses compatible with this mechanism are the Pentax K-, KA-, KAF-, KAF2- and KAF3-mount lenses; screw-mounted lenses (with an adapter); and 645- and 67-system lenses (with an adapter). *Some functions may not be available with certain lenses.*



Dust and Humidity Resistance

We can say farewell to the camera enemies; dust and humidity. First and most importantly, the Pentax **K-30** is built around a solid chassis. The DSLR camera feels very professional and very solid. The use of non-slip material at all strategic locations, makes holding the camera comfortable and safe. The camera has seals protecting the internals from dust, humidity, rain and snow. This feature alone is not available anywhere on cameras in the **K-30**'s price range. This feature is usually found on professional cameras costing many times more. It makes me wonder what exactly defines a "Pro" camera! Is it a camera that costs thousands? Is it a camera that allows one to make money? In the glory days of film based cameras, professional cameras were the big and complicated cameras that required extensive training to operate. Today, digital technology has certainly reduced the gap between consumers and professional photographers. The **K-30** is definitely not your father's camera.

File Formats

Most DSLR now have the capability of saving the digital photos data in JPEG files, RAW files and RAW + JPEG. Saving in JPEG is quick and the final photo is generally of excellent quality. Many photographers, including myself, prefer shooting in RAW mode and adjust the photo's white balance, color, saturation, hue, sharpness, and contrast. Superior results can be achieved that way, but it is time consuming. Why not save in RAW and JPEG and decide later which photo you want to manipulate further? It is difficult to modify JPEG files extensively, especially in the shadow areas. RAW files give a much broader range of manipulation.

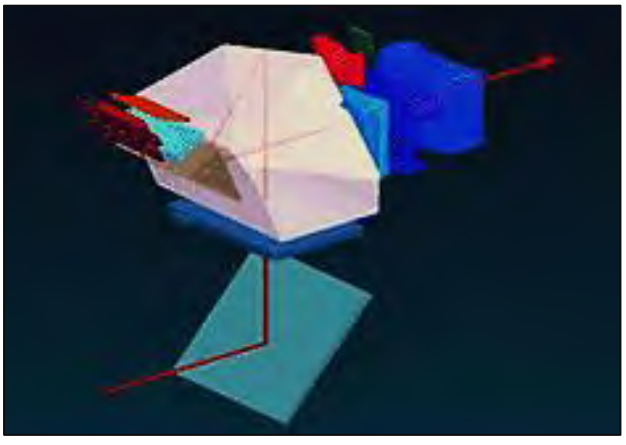
With the **K-30,** it is possible to shoot in RAW or RAW + JPEG on demand, without going through extensive menus. The camera has a programmable RAW/Fx button, located on the side of the lens mount; this unique button can be configured to switch in and out of RAW only, RAW+JPEG or JPEG modes for a single shot or continuously. How sweet is that?

Every company has its own proprietary RAW file format. This makes it difficult for us, the photographers, as the RAW files can only be manipulated with the respective manufacturer's software. Pentax is one of the few companies to use DNG as its RAW format. This format was introduced by Adobe® as a universal RAW file format. DNG stands for **D**igital **N**e**G**ative. Using this format, you can save your digital photos directly into Photoshop®, Lightroom® and Elements®, making your workflow so much easier.

Pentax did not stop there; they designed the **K-30** with In-camera RAW development possibility. That's right, the **K-30** allows you to develop images shot as RAW file to a JPEG file with a wide range of selectable adjustments such as resolution, compression, white balance, sensitivity, color intensity, saturation, sharpness, contrast and more, all without using a computer. You can see the development of your image right on the large 3 inch LCD monitor. A good 24 inch monitor is still a better choice, but in the field, this feature opens many new possibilities.

Pentaprism Viewfinder

The trade name Pentax is derived from the words "**Penta**prism" and "Reflex." In 1957, the Asahi Pentax model stunned the world with its incredible design advances.



It was the first time a pentaprism had been utilized in the viewfinder of a Pentax single lens reflex (SLR) camera, thus introducing the concept of eye-level viewing. It was the first camera to be marketed under the name Pentax. It was enthusiastically received with praise for its upright and laterally correct viewfinder image. Pentax viewfinders have always been superior to other 'cropped sensor' DSLRs and the **K-30** is no difference. It utilizes a glass pentaprism and renders a 0.92x magnification with a 100% field of view.

The viewfinder also allows viewing of all the important image information such as: focus point indication in red, in-focus indicator, focus mode status, shutter speed, aperture, exposure compensation, number of image remaining, shake reduction status and the current ISO setting.

The standard eyecup is removable and the supplied eyepiece cover can be attached to stop stray light from entering the chamber during long exposures. A viewfinder loupe model 0-ME53 is available as an option. With this viewfinder loupe attached, the finest details are easily visible. The 1.2x magnification helps if you wear glasses. The 0-ME53 is bigger than the standard eyecup and consequently, you will not smear the LCD with your nose.

A Diopter adjustment slider is located above the viewfinder and allows adjustment from $-2.5m^{-1}$ to $+1.5m^{-1}$.

Focusing System

The **K-30**'s new **SAFOX Ixi+** wide-frame autofocus system features 11 sensor points (with nine cross-type sensors positioned in the middle). By adding the light source type to its data range, and driven by a greatly improved algorithm, Pentax improved the AF system assuring reliable, responsive autofocus operation superior in speed and accuracy to the previous systems. The **K-30** also incorporates an AF-assist spotbeam projector to improve auto focusing accuracy in the dark.

There are two autofocus modes and one manual mode so you have total control of the camera focusing abilities.

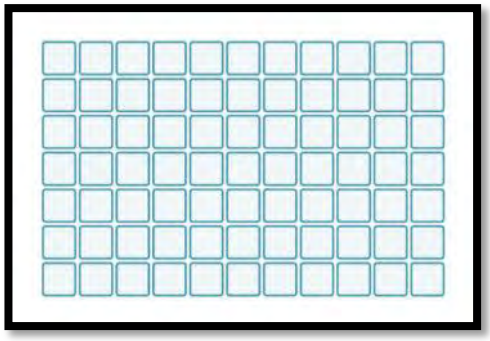
Indeed, the The **K-30** offers a choice of two autofocus modes; **A**uto**F**ocus **S**ingle (**AF-S**) and **A**uto**F**ocus **C**ontinuous (**AF-C**), which maintains focus of a moving subject as long as the shutter release button is pressed halfway or the dedicated AF button is activated. The camera autofocus system can be activated by pressing the shutter release halfway. (It can be set on or off) It can also be activated by pressing the AF button located on the back of the camera about where your thumb is positioned when holding the camera.

The **M**anual **F**ocus (**MF**) mode gives you complete control over focusing. The **K-30** has 100% backward compatibility with all of the 24 million plus lenses ever manufactured by Pentax. Using a non-autofocus lens is permitted, and, by pressing the shutter release button halfway while manually focusing, the focus indicator will appear and a beep (optional) will be heard to confirm that focus is achieved. With manual lenses, only center focus is available.

The **K-30** permits the adjustment of the AF focusing position for all lenses used or for selected lenses (up to 20 lenses). This adjustment is available in the Custom Setting menu, and you can always reset the adjustment to the factory defaults.

Metering System

A 77-segment multi-pattern metering system is used for the **K-30**. It greatly improves light-metering accuracy. By accurately analyzing various types of data (such as the image's composition and format between upright and horizontal, and the subject's distance and magnification) transmitted from the sensors in the camera body, this system greatly improves the accuracy of exposure control.



(1) The **Multi-segment metering:** Accurately assesses the balance between the bright and dark areas within the segments automatically.

(2) The **Center-weighted metering:** Measures the entire screen with an emphasis on the center and determines the proper exposure.

(3) The **Spot metering:** Analyzes the center of the screen and determines the proper exposure.

The meter operating time is adjustable from 3 seconds, 10 seconds or 30 seconds.

The **A**uto**F**ocus (**AF**) point and the **A**uto **E**xposure (**AE**) point can be linked during multi-segment metering.

Exposure Modes

The **K-30** has nine exposure modes, plus two **User** definable modes. Basically, three major components are the ingredients needed for a well exposed picture; the aperture, the shutter speed and the media sensitivity. In the 35mm format era, the film was the media and the film ISO was the sensitivity. It was difficult to change film before the entire roll was exposed and the ISO was locked-in for the duration. It was impractical. With the advent of digital cameras, the media is a CCD or CMOS and the ISO is adjustable at will. Pentax went one step further and developed a new exposure mode: **S**ensiti**v**ity Priority. (**Sv**) I believe it is one of the few cameras with this feature. There is also a **Movie** mode. The exposure modes are explained in details tail in Chapter 2.

AUTO

Automatically sets shutter speed and aperture to the optimal mode from the following**:**

Standard	Default, if none of the following apply.
Portrait	For portraits and pictures of people. Renders natural skin tones.
Landscape	For landscapes, while increasing saturation.
Macro	Used when very close to subject, like flowers, etc.
Moving Objects	Used when there is fast action such as sporting events.
Night Scene	Used for capturing night scenes like people at dusk or at night.
Sunset	Renders vivid sunsets or sunrises.
Blue Sky	Produced a darker blue, similar to a polarizer filter.
Forest	Enhances green and produces overall vivid colors.

Theoretically, you could start shooting in this mode right away. All the factory defaults are set to work in this mode when you receive the camera. However, you will want to customize the camera to your preferences.

Movie

The Movie mode is obviously for recording movies. Continuous movies can be taken for up to 4 GB or 25 minutes. In the Movie mode, Live View on the LCD screen is automatically displayed.

P) Program Mode:

Automatically sets shutter speed and aperture to the proper exposure according to the **Program Line *** when taking pictures. While maintaining proper exposure, it allows the use of the front e-dial and rear e-dial to change the shutter speed or aperture. Pressing the ISO setting button and the ISO setting can changed with the rear e-dial. This could be the only mode available and it would still make this camera outstanding.

(Sv) Sensitivity Priority Mode:

Automatically sets shutter speed and aperture to the proper exposure according to the set sensitivity. What a concept. Pentax was the first to use such mode. Sv stands for Sensitivity values.

(Tv) Shutter Priority Mode:

This lets the user set the shutter speed. This is useful for freezing action, or shots expressing movement. Tv stands for Time values, not Television☺.

(Av) Aperture Priority Mode:

This lets the user set the Aperture. This is useful for selective focusing. It affects blurring or sharpening of the background. Large aperture renders a blurry background and small aperture enlarges the depth of field. Av stands for Aperture values.

(TAv) Shutter & Aperture Priority Mode:

Automatically sets the sensitivity (ISO) so that the shutter speed and aperture give the proper exposure according to the brightness of the subject. TAv stands for Time and Aperture values.

(M) Manual Mode:

This lets the user set the shutter speed and the aperture to capture the picture with creative intent. You're the boss here and can override the camera to your liking.

M stands for manual mode.

(B) Bulb Mode:

Lets you take pictures at long exposure such as night photography. You will likely need a sturdy tripod and the optional cable switch model CS-205 to control the long exposure without camera shake.

(USER) Modes:

If the preceding exposure modes are not enough, the **K-30** allows the user to customize the exposure by choosing the following features and retrieve them simply by setting the mode dial to **USER U1 or U2**.

The following settings can be stored; Capture mode (***P, Sv, Tv, Av, TAv, M, B***), Sensitivity, White Balance, Flash Mode and Flash Exposure Compensation, Drive Mode, Exposure Bracketing, Exposure Compensation Value, Digital Filter, Custom Image, HDR Capture, File Format, JPEG Recorded pixels, JPEG Quality, Color Space, AE Metering, AF.A, AF point, Lens Correction, D-Range Settings, High-ISO NR, Slow Shutter Speed NR, Shake Reduction, Horizon Correction, E-Dial Programming, Button Customization, All Custom Settings.

(SCN) Scene Mode:

When using the SCN mode, you can choose from the following shooting scenes:

Portrait, Landscape, Macro, Moving Objects, Night Scene Portrait, Sunset, Blue Sky, Forest, Night Scene, Night Scene HDR, Night Snap, Food, Pet, Kids, Surf & Snow, Backlight Silhouette.

All of the above Exposure Modes are explained in details in Chapter 2 or Chapter 6 for Movie recording.

*** Program Line setup**

Settings	Characteristics
AUTO AUTO	Camera determines the appropriate settings.
Normal Normal	Basic Program Automatic Exposure. (default setting)
Hi-speed Priority	Program Automatic Exposure that prioritizes high shutter speeds.
DOF Priority (deep)	Program Automatic Exposure that closes the aperture as much as possible for a deep depth of field.
DOF Priority (shallow)	Program Automatic Exposure that opens the aperture as much as possible for a shallow depth of field.
MTF MTF Priority	Program Automatic Exposure that prioritizes the best aperture settings for the attached lens when a DA, DA L, D FA, FA J or FA lens is used.

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