Ricoh

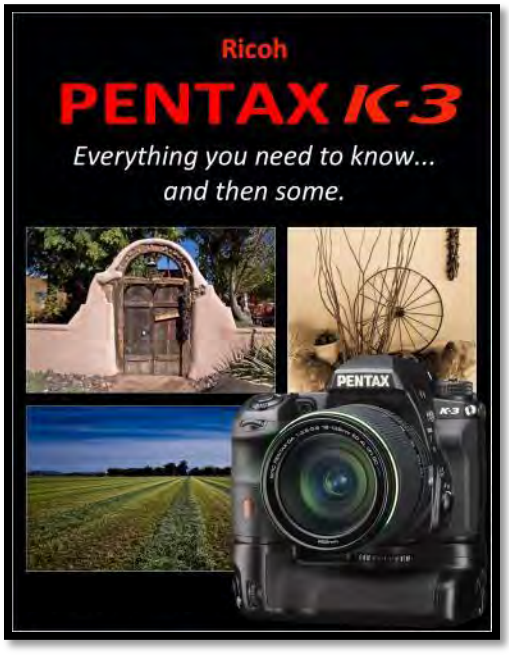
PENTAX K-3

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

June 2015 ***K-3II*** Release. ***K-3II***

Table of contents and Foreword

I am pleased that you purchased one of our ***Pentax K-3 – 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/K-5II and K-5IIs are still available and so are the K-50 and K-500. ***Pentax*** has just announced the ***K-3*** It's amazing to me how ***Pentax*** keeps breaking barriers. The ***K-3*** has 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-3*** 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-3*** as well as other DSLRs in general.

We offer the ***K-3*** e-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 me.

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

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Yvon Bourque

PENTAX *K-3*

Everything you need to know…

and then some.

Foreword

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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-3*.** 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-3***. The ***K-3*** uses a new 24.4 megapixels CMOS sensor, adapted by Pentax engineers for the ***K-3***, 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 (Ricoh) ***Pentax*** introducing the ***K-3,*** 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.

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The new ***Pentax K-3*** is aimed at amateurs to advanced amateur photographers but can certainly be used by entry-level photographers on one hand and Professional photographers on the other hand. 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-3.*** It is often said that the glass are the most important factor in taking great photographs. There are many reasons to choose the ***K-3*** 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-3*" is dedicated to the general specifications of the ***K-3*** and the review of the many functions of the camera in general.

Chapter 2 "How to use your *K-3*" explains the multiple functions of the ***K-3***, 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, 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-3*** in ways that will make the competition rethink their approach. It will not be long before other manufacturers try to mimic the ***K-3.***

Chapter 3 "Processing your *K-3* 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 "Silkypix" 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+ 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-3***. 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. The ***K-3*** has outstanding video capabilities.

Addendum is comprised of additional ***K-3*** 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. We also have a website showcasing our e-books. You can download useful information, samples or purchase an e-book for your Pentax DSLR.

Other Pentax e-books are available at http://www.ebooks4cameras.com/

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Click on the image above to go to our website/blog.

Chapter 1

Know your *K-3*

Nomenclature

1. Self-timer lamp	Blinks for self-timer. Serves as remote control receiver.
2. Front e-dial	Changes set values. (Customizable)
3. Main switch	Move to turn camera on or off and to see preview. (Customizable)
4. AF Assist Light	Lights up when AF is difficult to attain in darker scenes.
5. Lens mount index	Reference point to install lenses.
6. Mirror	Mirror lifts up during exposure. APS-C sensor is under the mirror.
7. AF coupler	Handles the AF drive between the lens and the camera.
8. Lens info contacts	Exchanges info between the lens and the camera for exposure.
9. Lens unlock button	Press to remove or install a lens.

10. LCD monitor	Displays exposed pictures, allows access to menus.
11. AE metering/Delete	Press to change metering mode or delete current picture.
12. Playback button	Toggle switch between Playback and Capture mode.
13. Viewfinder	Viewing through the lens method instead of live view.
14. Live View/REC button	Displays Live View images or start/stop movie recording.
15. Diopter adjustment	Adjust the viewfinder to your eye.
16. Rear e-dial	Changes values. (Customizable for each menu)
17. AF button	Focus without pressing shutter release halfway. (Customizable)
18. AE Lock button	Locks exposure value. In Playback, saves the last JPEG as RAW.
19. Green button	Resets the values being adjusted to defaults.
20. Stills/Movie switch	Toggle between stills shooting and movie shooting.
21. Four-way controller	Four-way controller right ▶ or Custom Image in direct keys.
22. Card access	Flashes when writing to memory card.
23. AF Point/Memory card	Changes AF point or toggles between SD1/SD2 in Playback mode
24. Menu button	Press to display menus. Press again to return to previous screen.
25. Info Button	Press to change the display style on the monitor.
26. Four-way controller	Four-way controller down ▼ or Flash Mode in direct keys.
27. OK button	Press to acknowledge selected item.
28. Four-way controller	Four-way controller left ◀ or White Balance in direct keys.
29. Four-way controller	Four-way controller up ▲ or Drive Mode in direct keys.

LCD Panel available information in details:

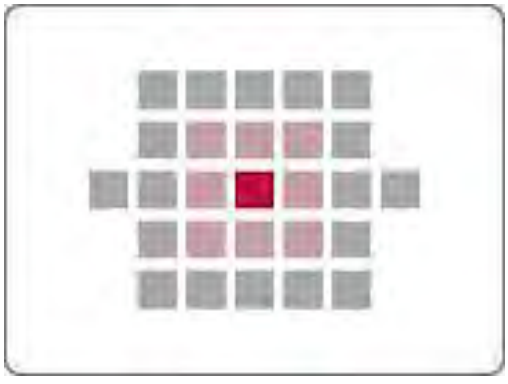
SPECIFICATIONS:

Camera Type	Digital SLR with Interchangeable lenses
Lens Mount	Pentax K
Camera Format	APS-C / (1.5x Crop Factor)
Pixels	Actual: 24.71 Megapixel Effective: 23.35 Megapixel
Max Resolution	24MP: 6016 x 4000 @ 3:2
Other Resolutions	14MP: 4608 x 3072 @ 3:2 6MP: 3072 x 2048 @ 3:2 2MP: 1920 x 1080 @ 16:9
Aspect Ratio	3:2, 16:9
Sensor Type / Size	CMOS, 23.5 x 15.6 mm
File Formats	**Still Images:** DNG, JPEG, RAW **Movies:** AVI, MOV, MPEG-4 AVC/H.264
Bit Depth	14-bit
Dust Reduction System	Yes
Noise Reduction	Yes
Memory Card Type	SD, SDHC, SDXC, Eye-fi, Flucard
Image Stabilization	Sensor-Shift

Focus Type	Auto & Manual
Focus Mode	Single-servo AF (S), Continuous-servo AF (C), Manual Focus (M) , Focus Lock AF Area Mode
Autofocus Points	Phase Detection: 27

❖ **Select-area expansion*:**

Choose one of 27 AF points to focus on the subject, and the **K-3** automatically tracks the subject and refocuses 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 S (eight points), M (24 points) and L (26 points).



* This mode is not available in the AF.S (single) focus mode.

❖ **Auto tracking**:**

The ***PENTAX*** Real-time Scene Analysis System accurately detects the color, shape and movement of a subject, and keeps monitoring it throughout the imaging process. With the help of this innovative system, the ***K-3*** automatically shifts the AF point to trace the subject's movement with great speed and precision. Thanks to a wide AF area covered by 27 AF points, it maintains the sharp focus on the subject, even when it's moving at high speed or when you are using the high-speed continuous shooting mode.

** This function is available when the camera's AF mode is set to AF.C (continuous) or AF.A (auto).

❖ **AF customization:**

Every photographer has his or her own preferred AF settings for specific subjects, photographic conditions and subject-tracking maneuvers. The ***K-3*** accommodates these preferences with its extensive list of AF customization menus.

❖ **Wireless LAN remote control operation:**

The ***K-3*** accepts the optional O-FC1 FLUCARD FOR PENTAX 16GB to provide wireless LAN functions** using a smartphone or tablet computer. You can release the ***K-3's*** shutter and change exposure settings from a distance while checking the Live View image, and download and browse captured images on your smartphone/tablet monitor.

** These functions are available with smartphones and tablet computers supported by iOS and Android operating systems.

❖ **3.2-inch Air Gapless LCD monitor:**

The ***K-3's*** Air Gapless LCD monitor has a special resin layer applied between the protective panel and the LCD screen to effectively cut down the reflection and dispersion of light and assure excellent visibility even under bright sunshine. Its 3.2-inch screen displays a large subject image at 3:2 aspect ratio, while the protective panel is made of tempered glass to keep it free of scratches and abrasions.

Chapter 2

How to use your *K-3*

Howdy Texas!

Selective focusing

This image is de-saturated, giving a hint of colors.

How to use your *K-3 (Quick Start)*

You may be a professional photographer, you may be an advanced amateur or perhaps you are just getting into digital photography. This camera has so many features that it is up the user to decide how much of the technology is needed to suit his or her needs. On one hand, it can be a fully auto-everything camera, giving effortless and excellent results every time. On the other hand, it can be a fully manual camera, challenging your photographic skills, but with the benefit of advance electronics double checking your settings, just in case. The reality is that it can be customized to fill anyone's photographic requirements. Photography has never been this good.

In this chapter, we start from the very beginning and work our way to the advanced features of this camera. Just pick and choose which sections suit your skills or preferences. No matter your level of expertise, you're bound to learn something new.

You finally received your ***K-3*** and you are understandably excited, or you are contemplating purchasing a ***K-3***. Either way, this book can help. We believe that anyone looking for a DSLR in the ***K-3***„*s*price range will see what a great value the ***K-3*** really is. It is, in my opinion, a semi-pro camera available at a reasonable price.

If you haven't done so, you should perhaps read the preceding chapter first. You can learn and appreciate some of the camera strongest features.

As you read this book, refer to the nomenclature in Chapter 1 often until you are thoroughly familiar with all parts of your camera.

Navigate through menus of the camera with the four-way controller shown here and illustrated in this book as ▲ for up, ▼ for down, ◀ for left and ▶ for right. The same buttons (Direct keys) are also used to access the Drive modes ▲, the White Balance settings ◀, the Flash modes ▼ and the Custom image ▶. The **OK** (acknowledgement) button is in the center.

☺ *indicates special notes or comments*.

(00) = Nomenclature item description. See Chapter 1.

☺ To recap, while in the "standby mode" *(camera ready to shoot)*, pressing the **INFO** button toggles between the **Control Panel**, the **Shooting Info Display Selection Screen** and the **Standby Mode Status Screen.**

Battery

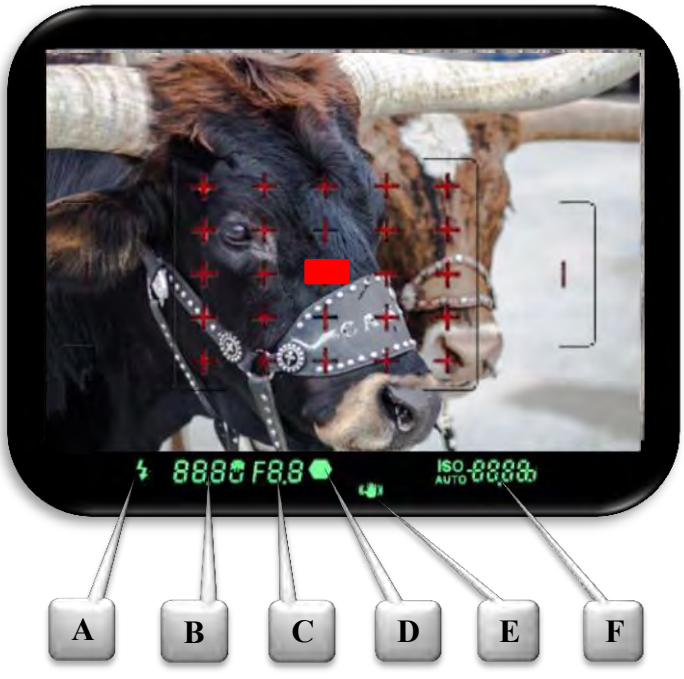
The camera uses a Pentax rechargeable lithium-ion battery D-L190. Other manufacturers may offer comparable batteries at a cheaper price. Make sure it is compatible with the camera and the charger before using an off-brand battery. In this writer's opinion, it is always safer to use OEM equipment. You should recharge the battery before you use it for the first time.

Connect the AC plug cord to the battery charger **(D-BC90)**, and then plug the AC cord to a power outlet. Slip the battery in the charger face down. The battery will lock in place. The Pentax Charger shows a green LED while the battery is charging. The LED goes off when the battery is fully charged.

Although many other options and settings are still available, the current settings are fine for almost any photographic situation. In fact, the current settings are similar to a very good point-and-shoot camera…only better. That is to say, that you could leave these settings as they are and just use the ***K-3*** as a point and shoot camera. Your pictures should always be of high quality with little effort.

You are now ready to take pictures in the **AUTO** mode. Try shooting your first picture(s) outside during daylight. That will work best. Chances are that the lighting will be sufficient and the flash will not be needed. Find your subject and while looking in the viewfinder, press the shutter release button halfway while composing your picture. The camera autofocus comes on, and confirms when in focus, with a beep and a red illuminated box in the viewfinder.

The information is displayed in the viewfinder:



A. If the lighting is insufficient, the flash indicator blinks. You may need to use the flash by pressing the flash up button.

B. The ***K-3*** sets the shutter speed the automatically.

C. The ***K-3*** sets the Aperture the automatically.

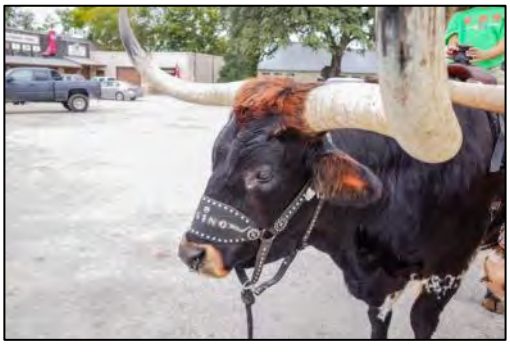
D. The Focus indicator is on when you are in focus. You also hear a confirmation beep and the focus point illuminates.

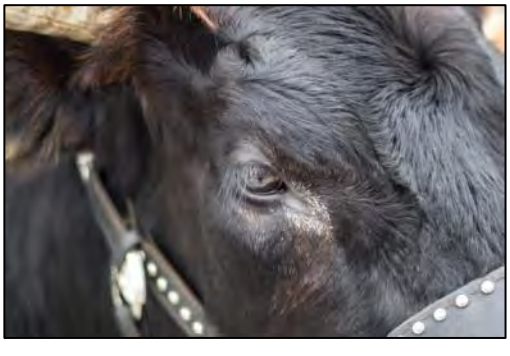
E. If the Shake Reduction (SR) is on, it will appear in the viewfinder.

F. With the Electronic Level activated, it is shown in the viewfinder.

G. Auto ISO is activated and the ISO number is shown in the viewfinder.

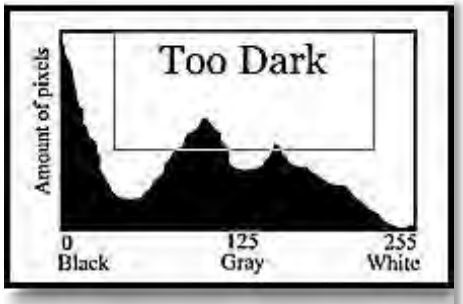
You have taken your first picture(s) with the K-3. Yeah!

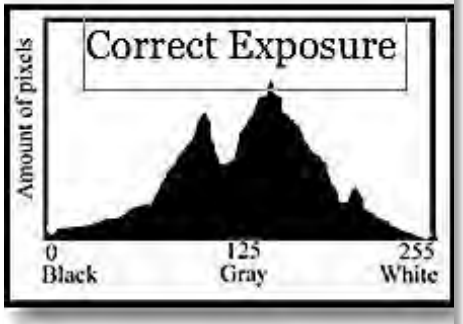



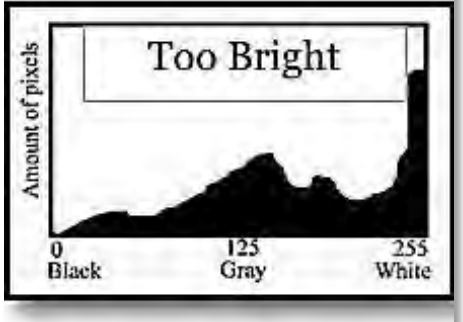


Histograms

Histograms are a digital way to see if an image is properly exposed, shown as a graph. The gadget-oriented and technical photographers will not keep an image if the exposure histogram is not perfect. An image with a less than perfect histogram may still be a prize winning picture because of its composition or subject. With that said; use the histogram as a tool to learn how to take properly exposed pictures. The composition, in our opinion, is much more important.







Essentially, the exposure histogram shows the overexposed and underexposed area of your image. The histogram horizontal scale measures the brightness, from totally black (0) on the left to totally white (255) on the right. The vertical scale measures the amount of pixels of any given shade. There is no perfect histogram as images in nature are not perfectly lighted. There are shadows and bright areas. What is important is that if the black areas of the picture create a spike on the left side, part of the image is underexposed. If a spike occurs on the right side, part of the image is overexposed. The human brain is better equipped to distinguish a good image from a bad one, many times better than a digital histogram. The ***K-3*** also shows RGB (red, green and blue) histograms. This is a way to show the distribution of color intensity. Again, humans can decipher colors much better than any digital device invented thus far. So the bottom line is that it is good to use histograms to check your image quality, but we would recommend using exposure bracketing instead as the extra shots won't cost you anything but time and space on your memory card. You can instantly delete the pictures you don't like.

To access the White Balance screen, press the **(WB)** button while in Capture mode.

Use the four-way controller ◀ toward the WB.

White Balance Settings

☺ (*See Fine-Tuning at the end of the White Balance settings*)

Setting to AWB

In the White Balance screen, move ◀ ▶ with the four-way controller to the Auto White Balance icon. At that point, you can press the OK button and the White Balance will be set to AUTO. It is surprisingly accurate and can be used most of the time. The settings are somewhere between 4,000K and 8,000K.

Setting to Multi Auto White Balance

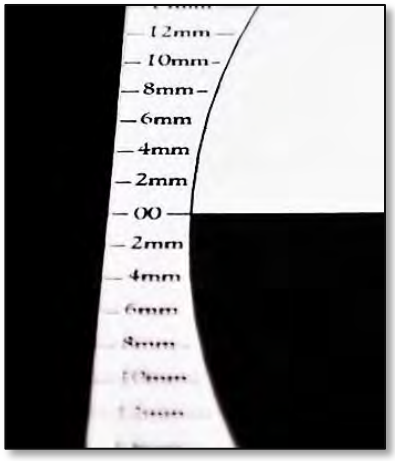
In the White Balance screen, move ◀ ▶ with the four-way controller to the Auto White Balance icon then ▼ to Multi Auto White Balance. In this White Balance setting, even if various light sources are present at the shooting location, the ***K-3*** adjusts the White Balance according to the light source of each area.

The middle picture is the way it should be. The picture on the top shows a front- focusing problem, and the picture on the bottom shows a back-focusing problem.

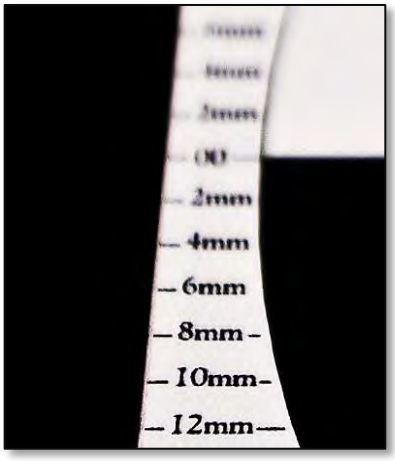
This image seems to be front focused.

This image seems to be focused properly.

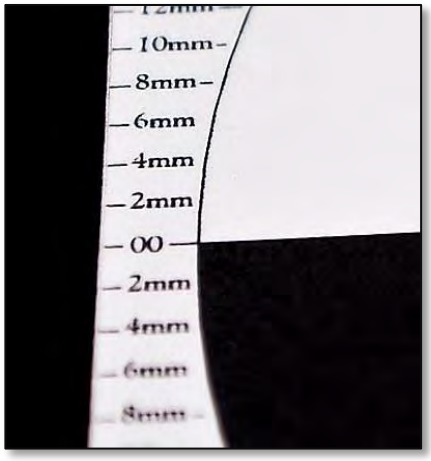
This image seems to be back focused.



Acceptable Focusing

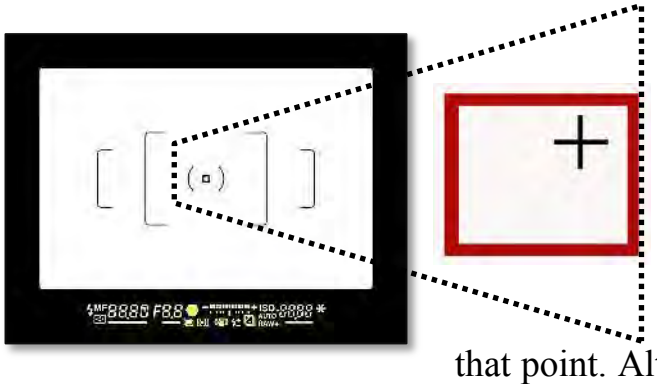


Front Focusing Problem



Back Focusing Problem

A Word About Autofocus Sensors



Sensors are either vertical, horizontal or cross type. The Pentax ***K-3*** has 27 cross type sensors and two vertical sensors. Vertical sensors detect the sharpest horizontal contrast within its area of coverage and lock the focus on that point. Alternatively, the horizontal sensors detect the sharpest vertical contrast within its area of coverage and lock the focus on that point. You guessed it; the cross type sensors detect the highest vertical or horizontal contrast and lock the focus on that point. Since we use the center focus point of our camera, which is a cross type sensor, our chart was deliberately designed without any vertical lines in the center so that the focus can only lock at the intersection of the black and white portion of our target. Note that in your viewfinder, the little red square indicates the focus area but the cross sensor is not necessarily dead center. It merely shows you the area of the sensor, but is not an exact focus point as the sensor will lock on the point of maximum contrast.

Cut here

Auto-Focus Adjustment Chart # 1

Close-up / Macro Lenses

Metric Scale / Millimeter English Scale / Inches

Back Focus

Center Line

Front Focus

Fold here

Fold here

Cut here

Cut here

Cut here

Cut here

Cut Here

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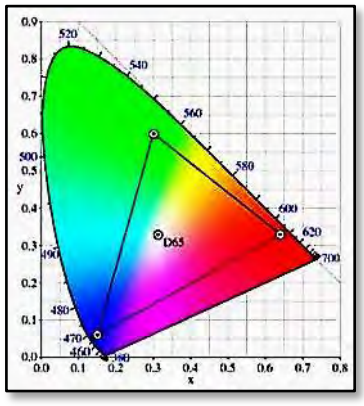
Color Space

A complete book could be written about color space definition. The color space will probably not be very important for most of us but the ***K-3*** has two color spaces available; sRGB and Adobe RGB.



In general, the color range or gamut for diverse input and output devices such as digital cameras, computer monitors, and printers are different. This color range is also called the color space. A defined color space tends to help standardize how colors will appear on one's computer monitor. For example, an image that appears on one monitor should theoretically be the same as what appears on another monitor. In color theory, the gamut or color range of a device is the portion of the visible color space that can be revealed, perceived, or reproduced. The basis for all color spaces is RGB (Red, Green and Blue).

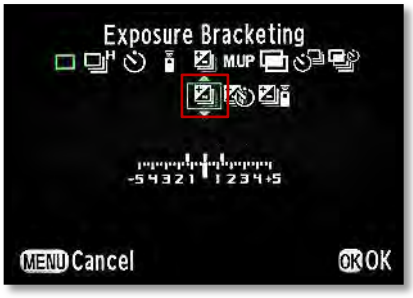
The most common color space is sRGB. The sRGB color space is an RGB (**R**ed, **G**reen and **B**lue) color space popularized by HP® and Microsoft® because it approximates the color gamut of most computer display devices. It has become the standard color space for displaying images on the internet. The sRGB color gamut shows about 35% of the visible colors. Adobe RGB was designed by Adobe® to show most of the colors achievable on CMYK (**C**yan, **M**agenta, **Y**ellow, and Blac**k**) printers, but by using RGB primary colors on a device such as a computer monitor. The Adobe RGB working space covers roughly 50% of the visible colors, and as a result, is an improvement over the sRGB gamut.

In the end, the goal is to reproduce the colors in the pictures taken with your camera in a way that it will look the same on the camera LCD monitor, a computer monitor, or on a printing device, as it looked in real life.

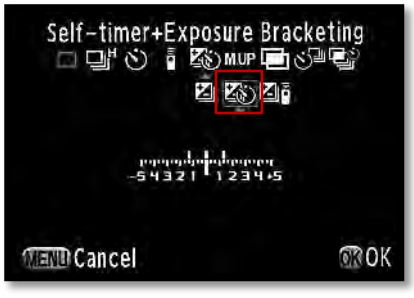
A computer monitor or camera LCD monitor uses an additive color system. This is to say that all colors reproduced on the screen are emanating from Red, Green or Blue light emitting sources. All other colors are reproduced by mixing the RGB sources. Adding all of the RGB colors produces white. Black is reproduced by the

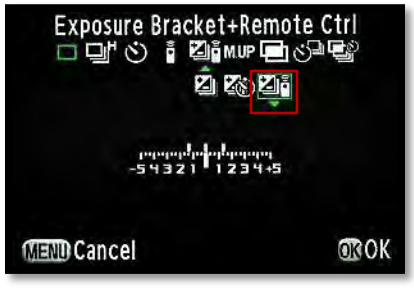
Note that you can set the ***K-3*** to take all shots with one push of the shutter release. It is found in the **Custom Setting** menu page 2, under custom setting No. 9, One-Push Bracketing. It can be set to on or off.

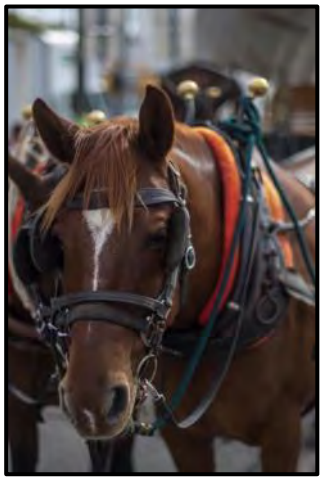
The exposure bracketing sequence setting is as follow: Once in the Exposure Bracketing screen, push the four-way controller down ▼ and set the number of images with the front e-dial and the bracketing increments with the rear e-dial.



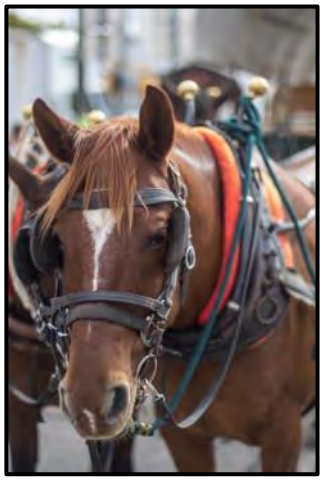
You can set the bracketing to start with the Self-timer or with a remote control.







Under Exposure

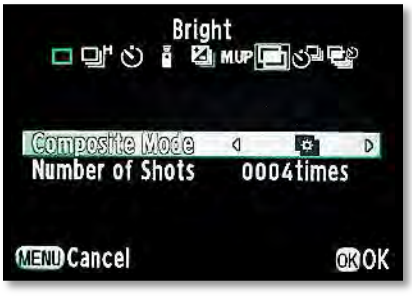


Normal Exposure

Over Exposure

Multiple exposures

You can take multiple exposures on the same frame. The ***K-3*** allows from 2 to 2000 exposures on the same frame. That's crazy. I would like to see a 2000 multi exposure. Wait! Time lapse photography! Read more on that later.



- You can also select Average where the composite final image will have an average exposure.
- You can select Additive where the composite final image will have cumulatively added exposure.
- You can select Bright where the composite final image will combine only the bright parts.

Using a tripod for instance, you can have a person move up ten times within the viewable area of your image and at the end; it will look like the same person is at 10 different positions within the picture, although they would appear like ghosts. With double exposures, a person could mimic having a twin with him or her in the picture, etc. In the old days, you had to calculate the exposure for the total number of exposures, and for the most part, it never worked properly. Kids will love the effects of them being in the same picture several times. You can put a moon in the night sky, enlarged by a zoom lens, over a city or landscape, giving the impression of a large rising moon. It's a creative tool and as a creative tool, it's only limited by your imagination. It's nice to know that you have that option already imbedded in the electronics of the camera.

You can set Multi-exposure in single shutter release, Multi-exposure+Continuous, Started by Self-Timer, or started by Remote Control.

Using multiple exposures on the *K-3* instead of neutral density filters

I read all kind of questions on various forums and blogs about using neutral density filters. The use of neutral density filters can diminish the light reaching the sensor, and in turn, allowing a slower shutter speed during bright daylight. I assume that you know why this is useful, but here is a brief scenario. It's mid-afternoon with the sun directly above the scene. The scene is of a waterfall or of water rushing in a riv-

(Tv) Shutter Priority Mode

You can set the shutter speed to freeze action or slow speed to heighten movement. The aperture is automatically set for proper exposure.
To set the camera to Shutter Priority Mode, turn the mode dial to **Tv**.
The shutter speed is adjusted with the front e-dial.

The shutter speed and the aperture are displayed on the screen and the viewfinder.

The EV compensation button can be used to change the EV compensation in this mode. If the subject is over or under exposed, the aperture will blink on the screen and the viewfinder. 

If the subject is too bright, try using one or more neutral density filter(s). If the subject is too dark, try using a flash or a tripod if the subject is still.

☺ *When using a lens with an aperture ring, set the aperture to the "**A**" position.*

(Av) Aperture Priority Mode

This mode lets you set the desired aperture, allowing the control of the depth of field. Selective focusing can easily be achieved in this mode.

To set the camera to aperture Priority Mode, turn the mode dial to **Av**. Adjust the aperture with the rear e-dial.

The shutter speed, aperture, and the sensitivity are displayed on the screen and the viewfinder.

The EV compensation button can be used to change the EV compensation in this mode. If the subject is over or under exposed, the shutter speed will blink on the status screen, the viewfinder, and the LCD panel.

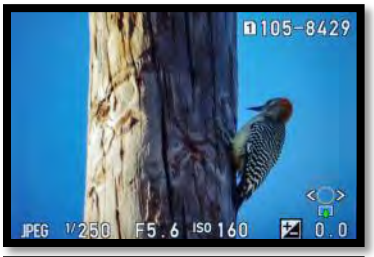
Chapter 3

Processing your K-3 images

Camera Processing of Images

RAW and **JPEG** images can be processed and manipulated in-camera. This enables you to process your images without the use of a computer.

Editing Images (One image or multiple images)



Make sure that you have images recorded on the memory card. Press the Playback button [▶] to activate the Playback screen. Using the four-way controller ▲ ▼ ◀ ▶ navigate to the image you want to edit until displayed on the LCD monitor. Press the four-way controller ▼ down. The camera displays the Playback mo de palette.

The Playback mode palette is one of the most powerful features of this DSLR. Working without a computer or external software, you can perform the following enhancements and modifications to one image or to multiple images.

Image Rotation	Rotate your image(s)
Digital Filter **	Add various digital filter effects to your images
Color Moiré Correction	Eliminates Moiré
Resize **	Change the number of recorded pixels or quality
Cropping	Crop you image to your desired taste
Index	Joins multiple images to create a photo montage
Protect	Protect image(s) from being erased
Slideshow	Play the images sequentially as a slide presentation
Save as Manual WB	Copy the White Balance from one image as manual WB
Save Cross Processing	Saves Cross Processing as favorite
RAW development *	Convert RAW image(s) to JPEG or TIFF format
Movie Edit	Divides movie or extract segment
Image Copy	Copies image between cards in SD1 and SD2 slots
Eye-Fi Image Transfer	Transfer selected images from Eye-Fi card

☺ ** Indicates that the effect is available for RAW files only.*

☺ *** - Indicates that the effect is available for JPEG files only.*

Chapter 4

The Pentax System

Short Pentax history

Ever since Pentax introduced their first 35mm SLR in 1952, the Asahiflex I, backward compatibility has been a strong reason for owning a Pentax camera. This is still true today. Here is a partial list of Pentax innovations:

In 1952, the Asahiflex I was the first Japanese camera introduced to the world. Unlike its competitors, the camera was not a replica of German technology.

In 1954, the Asahiflex II was the world's first instant return mirror system.

In 1957, The Asahi Pentax model used a pentaprism in the viewfinder of a Pentax single lens reflex (SLR) camera, introducing the concept of eye-level viewing. It was the first camera to be marketed under the Pentax name.

In 1964, Pentax introduced its Spotmatic camera featuring the first through-the-lens (TTL) metering system in a Pentax camera.

In 1971, the Pentax ES SLR camera, the world's first SLR camera with a TTL aperture-priority AE control, was introduced. Pentax also introduced the Super-Multi Coating (SMC) system for the Asahi Optical Takumar lens series. Other manufacturers followed suit.

Lens Compatibility

Worldwide, millions of Pentax lenses are available. Let's look at the lens mounts produced by Pentax over the years, and see what functions are still usable when using them on your ***K-3.*** The current lens mount KAF2, is a version of the Pentax K-mount. The K mount has undergone a number of evolutions over the years as new functionality was added.

M42 screw-mount: The original screw mount standardized in the U.S. by Pentax. Lenses with the M42 screw-mount can be used on the ***K-3*** with adapters and with some limited compatibility.

K mount: The original K mount is a simple bayonet connection with three tabs, introduced with the K series of cameras.

KF mount: This was Pentax's first attempt at an autofocus system.

KA mount: It allows the lens aperture to be set by the body.

KAF2 mount: This added two extra contacts to the inside of the mounting ring for power zooming. On the ***K-3***, these power contacts can also power SDM lenses.

All **K** mount lenses will mount effortlessly on the ***K-3***. However, the "**A**" series of manual lenses will lose the autofocus function but most other functions will work. The "**M**" series of manual lenses will mount but in addition to the lack of autofocus, the aperture will not work properly in all modes. Most of the problems can be overcome with the use of the ***K-3.***

M42 lenses (screw mount) fit on the ***K-3*** with an adapter.

*Although the above picture does not show all Pentax lenses, it shows a combination of newer and older lenses, all compatible with the **K-3**.*

DA Lenses

The Pentax **DA** series of lenses are manufactured exclusively for the Pentax Digital SLR cameras. The lenses are smaller on account of the APS-C sensor size. The image circle is smaller and matches the sensor size. They cannot be used on 35mm cameras.

DA 10-17mm f/3.5 – f/4.5 ED [IF]

DA 12-24mm f/4.0 ED AL[IF]

DA 14mm f/2.8

DA 16-45mm J f/4.0 ED/AL

DA 17-70mm f/4 Al [IF] SDM

DA 18-55mm f/3.5 – 5.6 AL II

DA 18-55mm f/3.5 – 5.6 AL WR

DA 18-250mm f/3.5 – 6.3 ED AL [IF]

DA 18-135mm f/3.5 – 5.6 ED AL [IF] DC WR

DA 35mm f/2.4 AL

DA 50-200mm f/4 – 5.6 ED

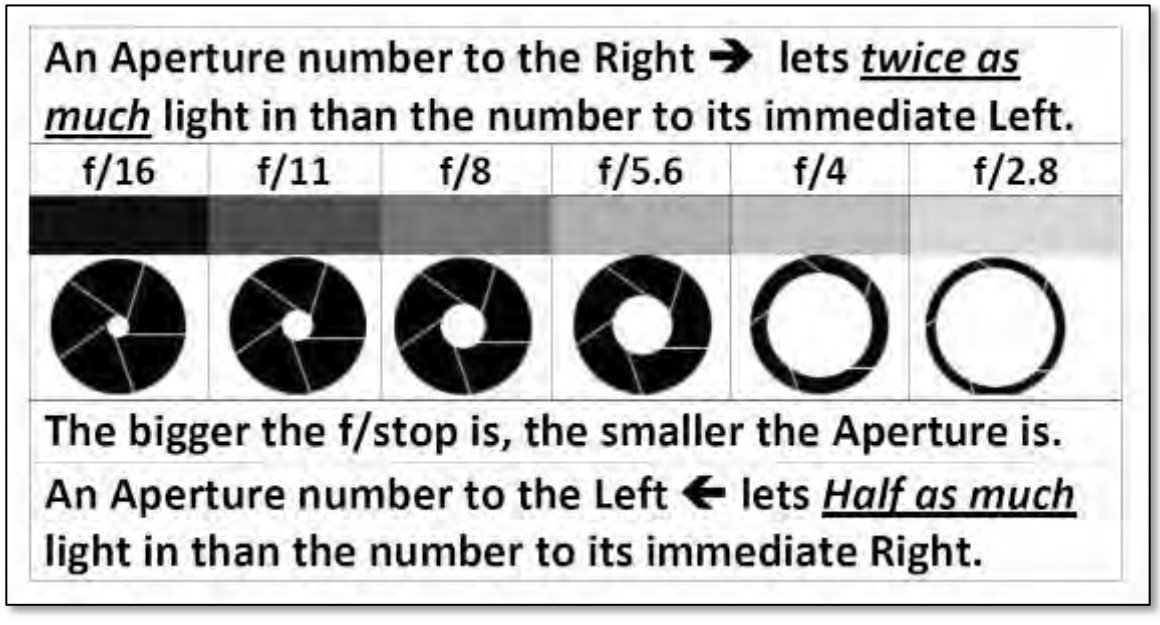
DA 50-200mm f/4 – 5.6 ED WR

Chapter 5

Photography Techniques

Apeture scale explained

The aperture, being the lens diaghphram opening, lets more or less light pass through the lens. The *f/number (aperture opening)* is proportional to the ratio between the lens focal length and aperture diameter, which is proportional to the square root of the aperture area. Big lingo, but what does it mean for you? Well, lenses are usually marked with the *f/numbers* ranging from the largest aperture to the smallest aperture. For example, a typical lens could have an aperture range of *f/2.8 to f/16*. The lens would be marked as follow : *f/16, f/11, f/8, f/5.6, f/4, f/2.8*. In this example, the largest aperture would be *f/2.8* while the smallest would be *f/16*. Have you noticed something a little surprising here? The larger the number is, the smaller the aperture is. You need to remember that. Furthermore, each *(f-stop)* number to the right lets twice the amount of light in as the *(f-stop)* number to its left and each *(f-stop)* number to the left lets half the light in as the *(f-stop)* number to its right. For example, *f/4* lets twice as much light in as f/5.6 but only one half the light of *f/2.8*, and so on. One unit of increment in aperture is called a stop.



An ***f/***stop number to the right lets **twice as much** light in than the number to its left.					
f/16	***f/11***	***f/8***	***f/5.6***	***f/4***	***f/2.8***
An ***f/***stop number to the left lets **half as much** light in than the number to its right.					

Leading lines.

- Lines such as a fence, road, railroad etc, leads the viewer's eyes to the important elements of your composition.

Black & White

❖ It is a little difficult to emphasize on taking black & white pictures, when modern DSLR cameras do such a good job with colors. Shooting, or rather, turning your photo to black & white or even sepia tone can make an otherwise bland photo, interesting. Black & White pictures have gained popularity in the past few years. Perhaps it is because of the nostalgia it projects. Because you only have two colors to worry about, (black & white) you can play with the contrast, the clarity, the vibrance, the saturation and the luminance of colors. In Photoshop Lightroom, which I use, although the luminance is in color, it acts like a filter for black & white photography. Adjusting the blue will darken or lighten the sky. Adjusting the yellow and green will make the foliage darker or lighter and so on. Give it a try.

Shooting at night with a tripod

- Shooting at night, with the camera mounted on a tripod can give rewarding results. Big cities have a lot of illuminated signs and moving cars, making a long exposure exciting.

Chapter 6

HD Video Recording

The ***K-3*** can capture beautiful, true-to-life movie clips in up to 16:9 fullHD proportions (1920x1080 pixels) at a frame rate of 24p, 25p, 30p, 50i, and 60i frames per second. It also records in HD (1080x720) at 24p, 25p, 30p, 50p and 60p.

 *The numbers (24p, 25p, 30p, 50i and 60i) represent how many times the video frame is displayed per second. The letters indicate if the video frame is displayed using an interlaced (i) or progressive (p) format.*

Interlaced video displays even and odd scan lines as separate fields; the even scan lines are drawn on the screen, then the odd scan lines are drawn on the screen. Two of these even and odd scan line fields make up one video frame.

- *The 24p video frame rate is closer to that of film in theatrical motion pictures.*
- *The video frame rates 50i and 60i are recommended for normal recording.*
- *The 25p video frame rate is used in countries outside of the United States and Canada.*
- *The 50p video frame rate has double information per unit time. This is great for creating slow motion clips.*

Progressive video content displays both the even and odd scan lines (the entire video frame) at the same time.

The ***K-3*** also provides greater possibilities in visual presentation in movies, especially through the application of custom images and digital filters. With its large image sensor, with performance rivaling professional video cameras, high-performance imaging engine, and a wide selection of acclaimed Pentax interchangeable lenses, you can easily capture unique, eye-catching movie clips.

Movie recording

Pentax really raised the bar as far as movie recording. Not only does the ***K-3*** record in fullHD at all frames-per-seconds, the camera can record sound from the built-in microphone. The onboard microphone is monaural, but an external stereo microphone can be used. You wouldn't want to record any serious movie anyway, with the onboard microphone, as the camera focus and audible noise would also be

Addendum

Appendix

Lens Compatibility Chart

LENS MOUNT ⇨ FUNCTION ⇩	All - LENSES DA / D FA / FA FA J / FA	F - LENSES	A - LENSES
Autofocus	Available	Available	Not Available
Manual Focus	Available	Available	Available
Eleven Auto Focus Points	Available	Available	Center Only
Power Zoom	KAF2 Lenses	Not Available	Not Available
Aperture Priority Auto Exposure	Available	Available	Available
Shutter Priority Auto Exposure	Available	Available	Available
Manual Exposure	Available	Available	Available
P-TTL Auto Flash *	Available	Available	Available
16 Multi-Segment Metering	Available	Available	Available
Auto Focal Length with SR	Available	Available	Not Available

* With Built-in flash, AF360FGZ, AF540FGZ, AF540FGZ II, AF360FGZ II and AF200FG flash units.

The chart above can be a little confusing and does not reflect Pentax's 100% backward compatibility claim with all their lenses produced in the last fifty years. I am referring to the twenty-four million lenses sold worldwide. The fact is that all lenses can indeed be used, with the use of adapters, and a little creative use of the Pentax ***K-3***.

1. *The K-Mount Manual lenses can be used. See Chapter 4.*
2. *The M42 Screw-mount lenses can be used. See Chapter 4.*
3. *The Medium Format lenses (645 & 6x7) can be used. See Chapter 4.*

PENTAX K-3II

Here what's new with the Pentax *K-3II*.

Extracted from Ricoh/Pentax.

Performance

Note: The features unique to the ***K-3II*** are emphasized in blue.

Building upon the legacy of the award-winning ***K-3***, the PENTAX ***K-3 II*** offers outstanding image quality and operability to meet a photographer's greatest demands. It features an impressive 24.35 effective megapixel AA Filter-less APS-C CMOS sensor, along with a high-performance 27-point AF system and 8.3 frames per second of continuous shooting. The addition of the newly developed Pixel Shift Resolution System delivers more truthful color reproduction and finer details while significantly lowering the level of high-sensitivity noise. With the updated PENTAX Real-time Scene Analysis System, supported by the 86K-pixel RGB light-metering sensor, the ***K-3 II*** has the most responsive subject tracking of all PENTAX DSLRs. Thanks to its new high-precision gyro-sensor, the ***K-3 II*** assures more effective camera-shake compensation up to 4.5EV steps. The ***K-3 II***'s newly integrated, built-in GPS and Electronic Compass extends the range of your photo shooting outing, while the built-in ASTRO-TRACER function simplifies astrophotography by eliminating the need of an extra accessory to capture celestial objects such as stars, nebulas and planets. With a weather-resistant and dust proof magnesium alloy body, this exceptional field camera allows you to get closer to the action in the most extreme conditions.

24 effective megapixels in an APS-C sized CMOS sensor

Designed for the demanding photographer, the ***K-3II*** features a 24.35 effective megapixel AA Filter-less APS-C sized CMOS sensor for outstanding image quality. The Prime III image-processing engine assures high quality image output up to ISO 51200.

SAFOX II 27-point AF System

The SAFOX II autofocus module maximizes 27 AF sensors and a vast light sensitivity range of –3EV to +18EV. This focus module includes 25 cross sensors and three AF sensors designed to detect the light flux of an F2.8 lens, making it easy to obtain pinpoint focus on the subject when using a large-aperture lens. The Expanded AF area allows for accurate focusing, even on moving subjects.