

*Ricoh*  
**PENTAX K-S2**

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



*May 2015 Release*

© 2015-Yvon Bourque

# *Pentax K-S2*




## **Foreword** **And** **Table of contents**

I am pleased that you purchased one of our ***Pentax K-S2 – Everything you need to know.....and then some*** e-book. As a 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.

We offer the ***K-S2*** e-book in a downloadable PDF e-book form only. We save production costs and you save money, and you get your book much faster. Almost all devices can read PDF files.

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: [brgyvn@gmail.com](mailto:brgyvn@gmail.com)*

## How to use this e-book.

As you read this e-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 ISO settings ▲, the Flash modes ◀, and the White Balance ▼. The **OK** (acknowledgement) button is in the center.



*Indicates special notes or comments.*



*Indicates outside link when internet is available*



*Indicates link within the e-book*

## Foreword and Table of contents

# **PENTAX K-S2** Everything you need to know... and then some.

*All rights reserved. Printed in the United States of America. No part of this e-book may be used or reproduced on any form or by any means, or stored in database or retrieval system, without prior written permission. Making copies of any part of this e-book for any purpose other than your own personal use is a violation of the United States and International copyright laws.*

*Text © 2015, Yvon Bourque*

*Photography © 2013, 2014, 2015, Yvon Bourque, except where noted.*

*This e-book is sold as is, without any warranty of any kind, either expressed or implied, respecting the contents of this e-book, including but not limited to implied warranties for e-book's quality, performance, merchantability, or fitness for any particular purpose. The author nor dealers or distributors shall be liable to the purchaser or any other person or entity with respect to any liability, loss, or damage caused or alleged to have been caused directly or indirectly by this e-book.*

*All terms or Company names mentioned in this book that are known to be trademarks or service marks have been carefully and appropriately noted. The author cannot attest to the accuracy of this information.*

*The contents of this e-book are strictly the view of the writer. The explanation and suggestions, as to the operation of the equipment as such, is derived from the author's own experience and conclusions. The accuracy of the instructional articles has not been verified by the respective manufacturers. This e-book is not associated with Ricoh - Pentax or its affiliates.*

*The author is not endorsing any equipment manufacturers nor is the author being compensated by any manufacturer for the editorial content of this e-book. Any text resembling any other published material is coincidental as this e-book is focused on the teachings of the use of the equipment, which is derived from the manufacturer's instructions. The e-book is written, whenever possible, in a non-technical manner and is geared toward entry level and amateur photographers, although some material may be useful to professional photographers.*

*Pentax is a trademark of Ricoh and its affiliates*

*Photoshop, Lightroom and Elements are trademarks of Adobe®*

All rights reserved  
Copyright © 2015 – Yvon Bourque

**About me:**



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

Decades later, the road has led me into other directions. With the responsibilities of a career and family, my plans were altered, but only slightly. The enthusiasm of the young boy and the love of photography are stronger than ever. I never abandoned my photography dreams. One of my biggest frustrations was that I never had enough time for more.

I have used all types of photographic formats, but now, I use Digital SLR cameras almost exclusively. “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”.

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

Where does a tireless hobbyist go from here? Like all other areas of our modern life, photography has gone digital. As an artist, I am fascinated with all of the digital possibilities. I recently retired and finally replaced my Engineering career shingle for one stating Yvon Bourque, Photographer. “With perseverance, all is possible.”

My first Pentax e-book was the K10D. I have written e-books for all Pentax DSLRs since, except for the 645 and the K-S1. If you own a 645, you are likely a Pro and the K-S1 had too many unnecessary blinking lights to be taken seriously. The **K-S2** changes all of that.

## Foreword

I wrote this book for all users of the Pentax **K-S2**. No matter what your experience level is, you will find something useful in this book.

Just 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, 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 improved model.

The market, as this book is written, has stabilized, although still growing, and the norm in a non-professional DSLR is now around 12 to 25 megapixels, and 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 now available from most DSLRs makers. The 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. *News Flash:; Pentax will have a FF DSLR before the end of 2015.* The **K-S2** uses a new 20 megapixel CMOS sensor, adapted by Pentax engineers for the **K-S2**, 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 introducing the Pentax **K-S2** the gap between Pentax and these two giants is narrower and there is no doubt that Pentax brand will be, once again, taking a greater share of the market with good products. Pentax took a while before producing its first Digital Single Lens Reflex (DSLR). Some changes have happened. 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-S2** 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 as a backup camera. It's a camera that will help expand

## Foreword and Table of contents


















your photographic proficiency. 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. With the WI-FI capabilities, the weather resistant construction and the new articulating LCD screen, Pentax is leaving the competition behind. All Pentax lenses ever made will work with the **K-S2**. It is often said that the glass are the most important factor in taking great photographs. There are many reasons to choose a Pentax for your digital photography endeavors.

- ☎ 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.





## Foreword and Table of contents

<b>Foreword and Table of contents</b>  	<b>Chapter 1</b>   <i>Know your K-S2</i>	<b>Chapter 2</b>   <i>How to use your K-S2</i>
<b>Chapter 3</b>   <i>Processing your K-S2 images</i>	<b>Chapter 4</b>   <i>The PENTAX system</i>	<b>Chapter 5</b>   <i>Photographic Techniques</i>
<b>Chapter 6</b>   <i>Movie Recording</i>	<b>Addendum</b>   <i>Revisions</i>	<b>Appendix</b>   <i>Glossary</i>



## TABLE OF CONTENTS

<b>FOREWORD</b>	
<b>CHAPTER 1 • KNOW YOUR K-S2</b>	<b>21</b>
Nomenclature	22
Information in the Viewfinder	27
Viewfinder available information in details	28
<b>Specifications</b>	29
Model Description	29
Image Capture Unit	29
File Formats	29
Viewfinder	30
Live View	30
LCD Monitor	31
White Balance	31
Autofocus System	31
Metering	32
Shutter	33
Drive Modes	33
Flash	34
Capture Setting	34
Movie	35
Playback	36
Customization	37
Power Supply	38
Interfaces	39
Wireless LAN	39
NFC	39
Dimensions and Weight	39
Included accessories	39
<Windows> System Requirements	40
<Apple IOS> System Requirements	40
What is so special about the Pentax <b>K-S2</b> ?	41
First Pentax DSLR with an articulated LCD monitor	41
Performance and image quality	41
Wi-Fi and NFC ready	42
Optical Viewfinder with near 100% field of view	42
In-body shake reduction (SR)	43
Safox X	43
Accurately capture the subject you're aiming for	44
Expanded Area AF	44

## Foreword and Table of contents

Approx. 5.5 fps high-speed continuous shooting	45
Double e-dials	45
Shooting Modes	45
Standard zoom lens	46
Weather-resistant/dustproof body	46
20M CMOS image sensor	47
AA (anti-aliasing) Filter Simulator	47
PRIME M II	48
Maximize lens performance	48
Clarity Enhancement	48
Maximum ISO 51200	49
77 Multi-segment metering	49
Articulated LCD monitor	49
Air gapless monitor	50
Wi-Fi and NFC ready	50
“Image Sync” Free dedicated app	51
Remote shooting	51
Full HD movie	51
4K Interval Movie Record	51
External mic support	52
Star Stream movie shooting	52
GPS unit compatible	52
Selfies	53
Custom Image	53
Digital Filter	54
Scene Mode	54
A-HDR mode	55
Versatile drive function	56
Multi-exposure	56
Interval Shooting/Composite	56
Continuous shooting compatible self-timer	56
Other Functions	56
In-camera RAW processing	56
Buffer RAW	56
Built-in Flash	56
Dynamic Range Settings	57
(Highlight Correction/Shadow Correction)	57
High-ISO Noise Reduction	57
Auto Picture mode	57
Digital Camera Utility 5 (Silkypix)	57
Shooting modes	58
Green Auto	58

## Foreword and Table of contents

(P) Program Mode	58
(Sv) Sensitivity Priority Mode	58
(Tv) Shutter Priority Mode	59
(Av) Aperture Priority Mode	59
(TAv) Shutter & Aperture Priority Mode	59
(M) Manual Mode	60
(USER) Modes	60
A-HDR Mode	61
SCN Mode	61
Links	62

<b>CHAPTER 2 • HOW TO USE YOUR K-S2</b>	<b>63</b>
How to use your <b>K-S2</b> (Quick Start)	65
The Standby Mode (ready to shoot) Status Screen	66
The Control Panel	66
Shooting Info Display Selection Screen	67
Battery	68
Battery Installation / Removal	68
Installing / removing memory card	69
Installing / removing lenses	70
Turning the camera On/Off	71
Focusing Method	71
AF Modes	72
Adjusting the viewfinder diopter	73
Language	74
Date and time	74
Sound effects	75
Taking pictures now	77
E-dial programming	77
Picture quality	79
Shake reduction	80
White balance	81
<b>AUTO</b> Mode	81
You have taken your first picture(s)	82
The Menus	83
Setting playback display	84
Histograms	86
Rotating Images	87
Image file format	87
RAW File Explained	88
Shooting and Saving in RAW	88
Shooting and Saving in JPEG	89

## Foreword and Table of contents

Differences Between RAW and JPEG	89
Why Shoot JPEG?	89
Why Shoot RAW?	90
Summary RAW/JPEG	91
Button Customization	91
RAW/Fx Button Customization	91
Bracketing	93
Optical Preview	93
Digital Preview	93
Shake Reduction	93
AF Active Area	93
AF/AE-L Button Customization (for still images)	94
AF/AE-L Button Customization (for movies)	94
Wi-Fi Button and Customization	95
Setting Sensitivity (ISO)	95
High-ISO Noise Reduction	96
Slow shutter speed noise reduction	97
D-Range Settings	97
Setting EV and ISO Incremental Steps	98
White Balance Adjustments	99
White Balance Menu	100
White Balance Settings	101
Setting to AWB	101
Setting to Multi Auto White Balance	102
Setting to Daylight White Balance	102
Setting to Shade White Balance	102
Setting to Cloudy White Balance	103
Setting to Fluorescent-Daylight Color White Balance	103
Setting to Tungsten White Balance	103
Setting to Flash White Balance	104
Setting to CTE White Balance	104
Setting to Manual White Balance	104
Setting to Color Temperature White Balance	105
Fine-Tuning White Balance	105
Metering System	107
Linking AE and AF Points	108
Meter Operating Time	108
AE-L with AF Locked	108
Built-in Flash	109
Flash Compensation Output	110
EV Steps	110
Sensitivity Steps	110

## Foreword and Table of contents

Allowing Flash Shooting While Charging	111
Built-in Flash Distance and Aperture	112
Calculating Maximum Flash Distance from a Set Aperture	112
Calculating Aperture from a Set Shooting Distance	113
Flash Modes	113
Flash On	113
Flash-on + Red-Eye	114
Slow-Speed Sync	114
Slow-Speed Sync + Red-Eye	114
Trailing Curtain Sync	115
Using the Flash in (Tv) Shutter Priority Mode	115
Using the Flash in (Av) Aperture Priority Mode	115
Daylight-Sync or Flash Fill	116
Autofocus System	116
AF Assist Light	117
TTL Phase-Matching AF Options (Shooting Through the Viewfinder)	118
AF Active Area	119
Contrast Detection AF Options (Shooting through the Live View Monitor)	120
Contrast AF Face Detection	121
Contrast AF Tracking	121
Contrast AF Multiple AF Points	121
Contrast AF Select	122
Contrast AF Spot	122
Focus Peaking	123
Catch-in Focus	123
Autofocus Fine Adjustments	124
Autofocus Accuracy, Back & Front Focusing Problems	124
Solution	126
K-S2 Camera Settings	128
Understand the Results	130
A Word about Autofocus Sensors	131
Difference Between 45° and 30° Charts (AF Fine Adjustment)	132
The <b>K-S2</b> Custom Settings Number 27	132
About the Charts	133
Download the High Resolution Charts	133
Live-View	134
Color Space	135
(AE-L) Button – Memorizing Exposure	136
Exposure Bracket Mode	137
Multiple Exposures	139
Using Multiple Exposures on the <b>K-S2</b> instead of Neutral Density Filters	140

## Foreword and Table of contents

Remote Control	142
Drive Modes	143
Single-Frame Shooting	143
Continuous Shooting (H, M and L) High, Medium and Low	143
Self-timer	144
Self-Timer of 12 Sec.	144
Self-Timer of 2 Sec.	144
Self-Timer + Continuous	144
Wireless Remote Control	145
Remote Control	145
Remote 3 Sec Delay	145
Remote Continuous Shooting	145
Exposure Bracketing	146
Multi-Exposure	146
Interval Shooting	146
Interval Composite	147
Shake Reduction	147
Dust Removal	149
Sensor Cleaning	150
Pixel Mapping	150
Anti-Aliasing Filter Simulation	151
Screen View of each Menu First Page	152
Rec. Menu	153
Movie Menu	153
Playback Menu	154
Set-up Menu	154
Custom Settings Menu	155
More on Exposure Modes	156
(P) Program Mode	156
(Sv) Sensitivity Priority Mode	157
(Tv) Shutter Priority Mode	158
(Av) Aperture Priority Mode	158
(TAv) Shutter & Aperture Priority Mode	159
(M) Manual Mode	160
( B) Bulb Mode	160
(USER) U1 and U2 Modes	162
Saving Settings in U1 and U2	162
(A-HDR) Advanced-High Dynamic Range	163
HDR (High Dynamic Range) using the Menu	164
(SCN) Scene Mode	166
Wi-Fi Capabilities	167
Facebook Image Sharing	167

## Foreword and Table of contents

Wi-Fi Remote Camera Operation	171
Other <b>K-S2</b> Functions not fully explained in previous pages	172
Programmable Embedded Copyright	172
Modern DSLR cameras are...micro-chips and optical elements	173
Clarity Enhancement	173
Lens Correction	174
Electronic Distortion Adjustment	174
Peripheral Illumination Correction	174
Lateral Chromatic Aberrations Adjustment	174
Diffraction Correction	175
Anti-Aliasing Filter Simulation	175
Status Screen Color Scheme	175

<b>CHAPTER 3 • PROCESSING YOUR K-S2 IMAGES</b>	<b>179</b>
In-Camera Image Processing	180
Editing Images (Captured Images)	180
Image Rotation	181
Digital Filters (After Shooting)	181
Color Moiré Correction	183
Resize	183
Cropping	183
Protect	184
Slideshow	184
Save as Manual White Balance	184
Save cross processing settings as favorite	185
RAW development	185
Movie edit	185
Custom Images (Before Shooting)	186
Digital Filters (Before Shooting)	188
Using Digital Imaging Software	189
Image Post-Processing Software	190
In-Camera Manipulated Image Examples	191
Printing Images	192
Printing your Images	192
Pentax Supplied Software (Silkypix™ 5)	193

<b>CHAPTER 4 • THE PENTAX SYSTEM.</b>	<b>195</b>
Short Pentax History	196
The Pentax DSLRs	198
Optional Accessories for the <b>K-S2</b>	205
External Flash Units	205



## Foreword and Table of contents

AF201FG	205
AF540FGZ II	205
AF360FGZ II	206
AF200FG	206
AF360FGZ	207
AF540FGZ	207
AF160FC	208
Remotes	208
Remote Control F	208
Remote Control Waterproof 0-RC1	209
AC Adapter	209
The Accessory Unit 0-GPS1	210
Viewfinder Loupe	210
Right-Angle Viewfinder	211
Lens Compatibility	212
DA Lenses	214
DA Limited Lenses	221
DA * Lenses	225
D FA lenses	231
FA & FA Limited Lenses	234
FA J Lenses	236
FA Lenses	236
K-Mount Manual “A” Lenses	240
K-Mount Manual “M” Lenses	242
Set up your Pentax <i>K-S2</i> to use older M-series and Screw mount lenses. (Important)	243
M42 Screw-Mount Manual Lenses	245
Medium Format Lenses	246
<b>CHAPTER 5 • PHOTOGRAPHY TECHNIQUES</b>	<b>249</b>
Aperture Scale Explained	251
Shutter Speed Scale Explained	252
ISO Value Scale Explained	252
Combining all three elements with the <i>K-S2</i>	253
Adjustments to consider	253
Photography Techniques	254
Selfies	256
Rule of Thirds	257
Close-up, Macro, Micro	258
Flowers	259
Leading Lines	260
Panoramic Pictures	261
Black & White	263

## Foreword and Table of contents

Selective Focusing	264
Children	265
Slow Speed Blurring	266
How and when to use ND Filters	267
Star Stream	271
Back Lighting	271
Silhouette	272
Travel Photography	273
Shooting at Night with a Tripod	274
Bad Weather	275
Industrial Landscape	276
Get Closer	277
Automobiles	278
Patterns	279
Changing your point-of-view	280
Action	281
Wildlife	282
Furry Friends	283
Sepia Colors	284
National and State Parks	285
Most importantly, take pictures of family and friends	286
<b>CHAPTER 6 • VIDEO RECORDING</b>	<b>287</b>
Movie Recording	289
Settings for Movie Recording	289
Let's record a Movie	292
Editing Movie	294
Interval Movie	294
Interval Composite	295
Star Stream	297
<b>ADDENDUM</b>	<b>299</b>
The 0-GPS1 details	300
GPS Calibration	301
Electronic Compass	301
Astrotracer Function	302
Future Revisions	304
<b>APPENDIX</b>	<b>305</b>
Lens Compatibility Chart	306
Pentax Lens Mount Facts	307
Glossary	309

This book is organized in the following way:



- **Foreword and Table of contents**



- **Chapter 1 “Know your *K-S2*”** is dedicated to the general specifications of the *K-S2* and the review of the many functions of the camera in general.



- **Chapter 2 “How to use your *K-S2*”** explains the multiple functions of the *K-S2*, 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-S2* in ways that will make the competition rethink their approach. It will not be long before other manufacturers try to mimic the *K-S2*.



- **Chapter 3 “Processing your *K-S2* 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.



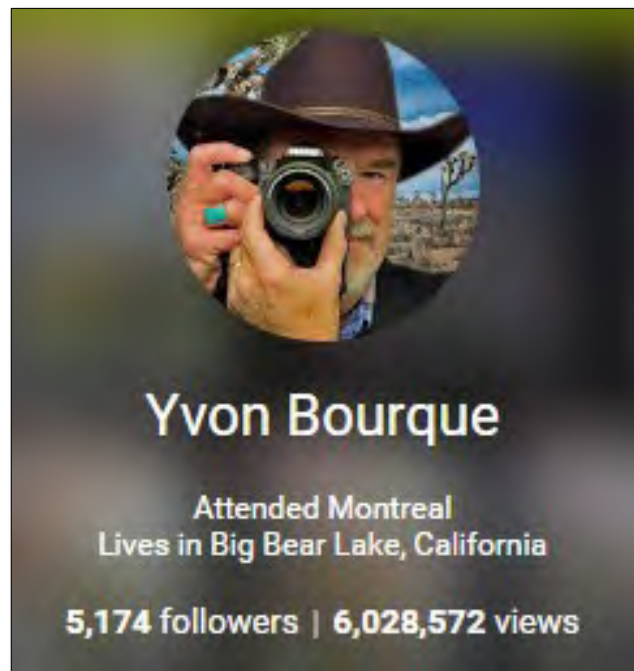
- **Chapter 6 “HD Movie recording”** is dedicated to the HD video capabilities of the **K-S2**. This new generation of DSLRs with still pictures and HD video capabilities is changing the digital photography landscape. It opens up new possibilities. It is going to be very popular for documenting and photojournalistic approach to your undertakings. The **K-S2** has outstanding video capabilities.



- **Addendum** is comprised of additional **K-S2** functions, last minute changes, upgrades to software or firmware and any revisions added after the initial release of Edition 1.



- **Appendix** includes a lens compatibility chart, Various Pentax mount types through the years, and a glossary of Digital Photography commonly used terms.



We are on [Google+](#) Come and join us.

# Chapter 1



## Know your *K-S2*

## Nomenclature

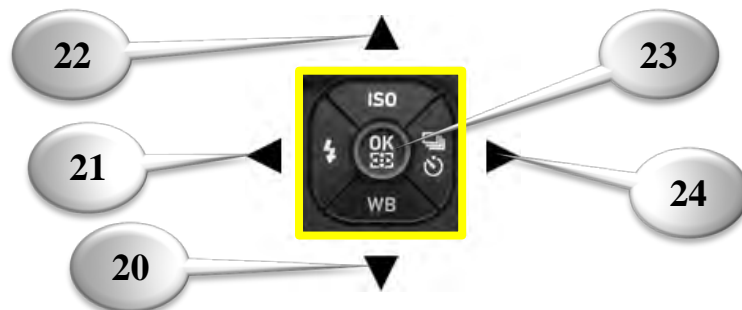


1. <b>Self-timer lamp</b>	Blinks for self-timer. Serves as remote control receiver.
2. <b>Front e-dial</b>	Changes set values. (Customizable)
3. <b>Main switch</b>	Move to turn camera on/ off and to see preview. (Customizable)
4. <b>AF Assist Light</b>	Lights up when AF is difficult to attain in darker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





<b>10. Articulating Monitor</b>	Displays exposed pictures, allows access to menus.
<b>11. Live View / Delete</b>	Press for Live View or delete current picture.
<b>12. Viewfinder</b>	Viewing through the lens method instead of live view.
<b>13. Rear e-dial</b>	Changes values. (Customizable for each menu)
<b>14. AF / AE L button</b>	Alternate Focus button or Auto-focus lock
<b>15. Card access</b>	Flashes when writing to memory card.
<b>16. Playback button</b>	Toggles between Playback and Capture mode
<b>17. Four-way controller</b>	Main camera controller array – See below for more details
<b>18. Menu button</b>	Press to display menus. Press again to return to previous screen.
<b>19. Info Button</b>	Press to change the display style on the monitor



<b>20. Four-way controller</b>	▼	Four-way controller Down or WB in direct keys
<b>21. Four-way controller</b>	◀	Four-way controller Left or Flash Mode in direct keys
<b>22. Four-way controller</b>	▲	Four-way controller Up or ISO in direct keys.
<b>23. OK button</b>	OK	Press to acknowledge selected item.
<b>24. Four-way controller</b>	▶	Four-way controller Right or Drive Mode in direct keys

# Chapter 2



## How to use your *K-S2*





Selective Focusing



Modified to look like on canvas in Photoshop Element

✿ Many of the **K-S2** features and functions are available directly from the Status Screen, without having to navigate through pages of menus. This was introduced with the K-7 generations and some users of the earlier PENTAX DSLRs will appreciate this convenient feature.

### The Standby Mode (ready to shoot) Status Screen



Turn the camera on and rotate the mode dial to Av. The following screen appears, it is the Status Screen. In this example, the Mode being used is Av. A snapshot of the current settings is shown. The front e-dial is not used and the rear e-dial changes the aperture. The File Format is JPEG. You still have 518 same size images you can add to the SD card. The AF is set to AFA. The Custom image is set at Natural. AE-Metering is Multi-Segment and the shake reduction is on. The battery is fully charged. This initial screen is a cursory view of the current settings. You can quickly decide if this mode will work for your next picture, or change the mode using the Mode Dial.

### The Control Panel



It doesn't stop here. You can get in the heart of the settings by pressing the INFO button. This brings yet another screen, the **Control Panel**. You can navigate through this screen with the four-way controller and changes the highlighted parameters shown. If you noticed, we did not have to go through any menu yet. With the **K-S2**, the menus are mostly used to change overall settings. That is a big improvement over older PEN-

TAX DSLRs. It's almost like having dedicated buttons for all settings. When taking pictures, the scene conditions can change rapidly. You may need to modify some setting quickly to adjust to the scene's condition. This faster method of activation can make the difference between getting or missing a great photo opportunity. The items that "cannot be changed" in this camera setting are not highlighted and therefore cannot be selected.




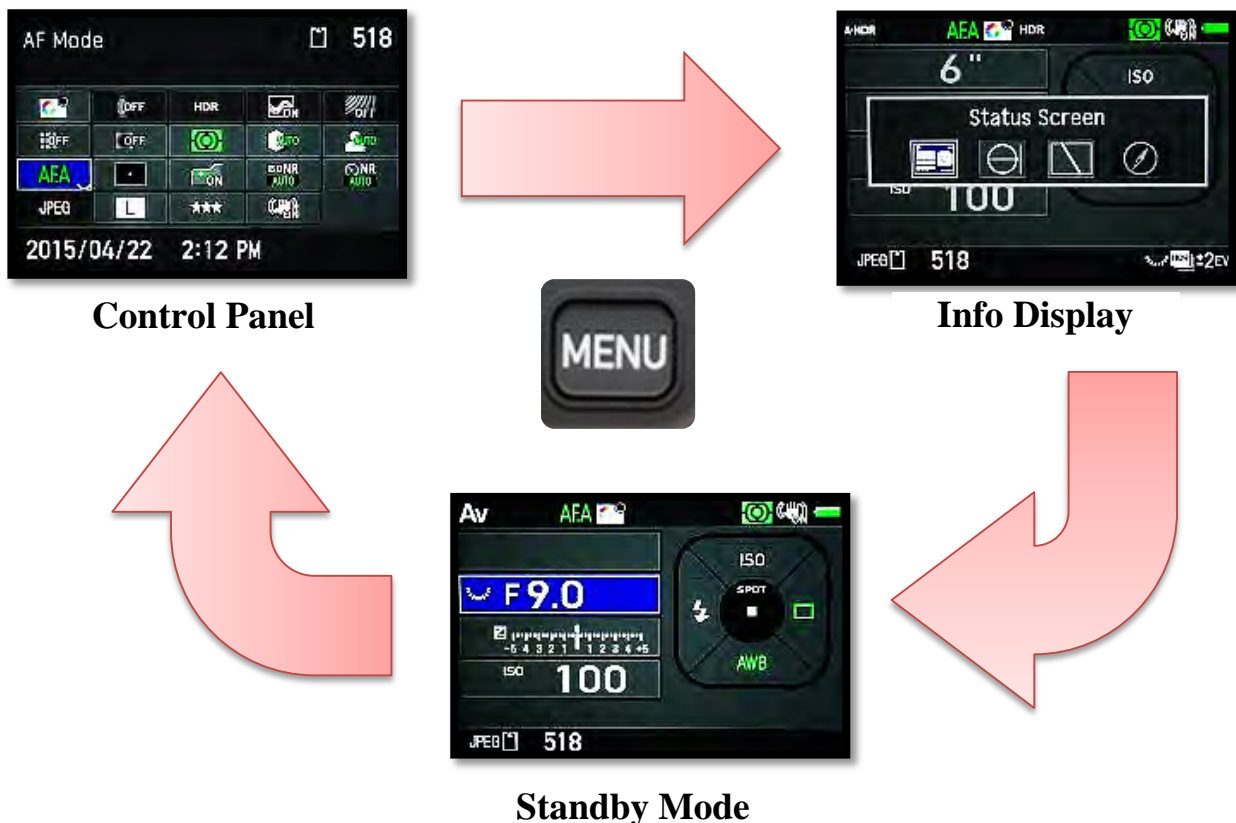
## Shooting Info Display Selection Screen



Pressing the INFO button again brings the screen to the left. Use the four-way controller to navigate horizontally ◀▶. From left to right, the first box allows all of the shooting information to be displayed on the Status Screen. The second box allows the electronic level to be displayed and operational. The third box turns the information on the Status Screen off, and finally the fourth box shows the latitude, longitude, altitude and time, but

is available only when the optional GPS unit O-GPS1 is attached.

 To recap, while in the “standby mode” (camera ready to shoot), pressing the **INFO** button toggles between the **Control Panel**, the **Info Display** and the **Standby Mode**.

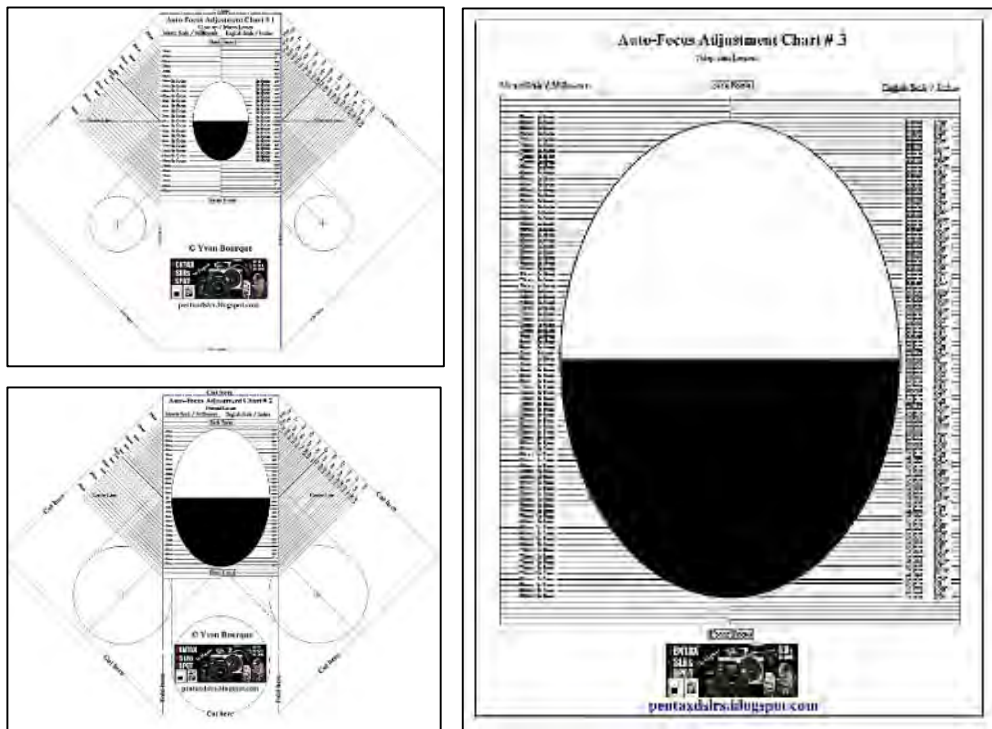


## About the Charts.

Although the Charts have given me good results, you should fully understand how they help analyzing the Auto Focus accuracy. Read the above paragraphs several times until you completely grasp the procedures. You can adjust the focus of all Pentax lenses, as they are non-permanent changes. You can reset the Auto Focus to factory defaults at any time. As for the other Pentax camera models that do not have the “AF Fine Adjustment”, you should only have a Pentax trained technician adjust the Auto Focus of your lenses or DSLR cameras.

Print the charts on your own printer for the best quality possible. It is best to print on heavy mat paper.

You can get printable high resolution charts here: [📶 High Resolution Charts](#)



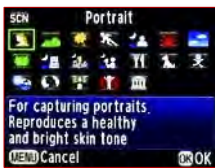
## (SCN) Scene Mode



- New with the *K-S2*, you can set the Mode Dial to SCN. In this mode, you can let the camera presets take over a typical scene.
- To set the camera to SCN, turn the mode dial to SCN.
- Everything is on auto in this mode, except for the Ev compensation.



Here are the various scenes.



Portrait



Landscape



Macro



Moving Object



Night Scene Portrait



Sunset



Blue Sky



Forest



Night Scene



Night Scene HDR



Night Snap



Food



Pet



Kids



Surf & Snow



Backlit Silhouette



Candlelight



Stage Lighting



Museum

## Wi-Fi Capabilities

✿ *This feature alone is worth the price of the **K-S2**.*

In my opinion, this is the biggest improvement brought to us with the **K-S2**, and the second one is the articulating monitor screen.



First thing you should do is to download the “Image Sync” app.

The Apple iOS version is found in the [Apple App Store under Pentax Image Sync](#). The Android version is found under [Pentax Image Sync - Android Apps on Google Play](#)

Once the app is installed on your device (I assume a smart phone or tablet) you can start using the device to control the **K-S2** and to upload images to your device and share your images.

## Facebook Image Sharing

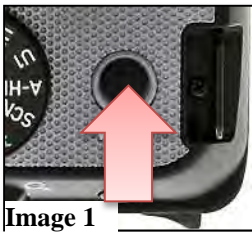


Image 1



Image 3

Let's start with uploading images and sharing them on Facebook. Press the Wi-Fi button on your camera (Image 1). It should say Wi-Fi enabled on the camera monitor. Enable Wi-Fi on your device (Image 2) (I am using a iPhone 5s).



Image 2



Image 4



Image 5

PENTAX\_xxxxxx is an available network. Enter the password assigned in the Set-up menu page 3 (Image 3). Start the Image Sync app on your device (Image 4). The next screen is similar to the (Image 5).



## Chapter 2



© Yvon Bourque 2015 – All Rights reserved.

# Chapter 3



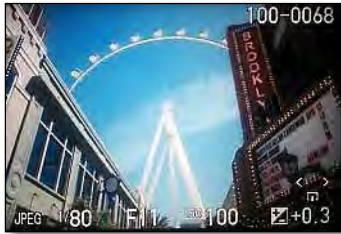
## Processing your K-S2 images






## In-Camera Image Processing

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

### Editing Images (Captured 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 it is displayed on the LCD monitor. Press the four-way controller  down. The camera displays the Playback mode 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
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



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



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

## Image Rotation

Navigate through the options to your desired effect. Press the OK button once the green box surrounds what action you want to take. In this first example, we have chosen to rotate an image.

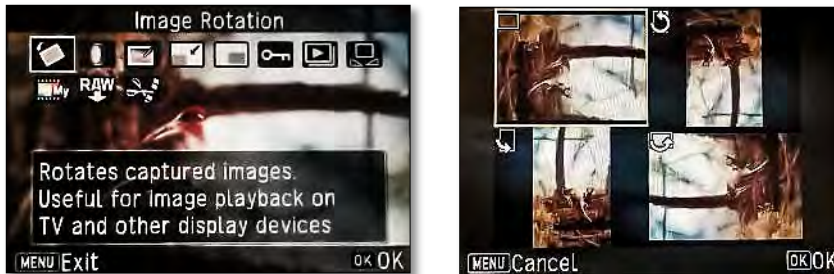


Image can be rotated in increments of 90 degrees.

## Digital Filter(s) (After Shooting)

✿ *Digital filters can only be saved as JPEG files.*

The following filters effects are all a matter of taste and I suggest you play around and find the ones you like best. I like the in-camera filters for a quick manipulation of a JPEG image to send immediately over the Internet. If you want to manipulate your images, the results can be more professional looking when using software like the Adobe series of Digital Imaging programs. Furthermore, a desktop computer will likely have more crunching power than the mini-computer in your camera. That said, it's

amazing to me that you can actually process your images, in-camera, all without the use of a computer. You can also bring the memory card, with the filters applied to some images, to a Kiosk for printing your images. Costco, for example, can process your digital images (files) instantly and print 4" x 5" pictures or even to all sizes of enlargements.



## Chapter 3



**Base Parameter Adj**



**Extract Color**



**Replace Color**



**Toy Camera**



**Retro**



**High Contrast**



**Shading**



**Invert Color**



**Unicolor Bold**



**Bold Monochrome**



**Tone Expansion**



**Sketch**



**Water Color**



**Pastel**



**Posterization**



**Miniature**



**Soft**



**Starburst**



**Fish-Eye**



**Slim**



**Monochrome**



# Chapter 4



## The Pentax System

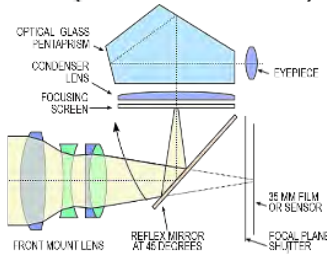
## Short Pentax History

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.

### SLR (SINGLE LENS REFLEX)



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.



**This is a Full Frame Lens**

- **HD PENTAX-D FA\* 70-200mm F2.8ED DC AW**
- Fast, F2.8 lens
- High Performance Optical Design with Aero Bright Coating II and HD coating
- All weather construction
- Improved Quick Shift Focus System



**This is a Full Frame Lens**

- **HD PENTAX-D FA 150-450mm F4.5-5.6ED DC AW**
- 3x zoom ratio
- High performance Optical Design with HD coating
- New Auto Focus Present Button
- All Weather construction

## FA & FA Limited Lenses

The PENTAX FA lens series were originally designed for film SLR cameras, but they are also fully compatible with digital SLR cameras. The FA series features full-frame image coverage with full automatic and manual aperture control.



- **smc PENTAX FA 50mm F1.4**
- Standard
- Indoor photography, portraiture, low light photography, still life, weddings



- **smc PENTAX FA 31mm F1.8 Limited**
- Wide-angle
- Low light photography and wedding, nature, landscape, indoor photography



# Chapter 5



## Photography Techniques

Although this book is intended to be used with the *Pentax K-S2*, there are some basic photography techniques we should touch upon. Keep in mind that this chapter will not make you an expert in photography by itself. Like all other skills we learn, practice is what makes us excel in any of our undertakings. There are many books on photo techniques on the market that you can get to further learn the craft and art of photography. For years, Kodak has regularly published photography books targeted to the beginners all the way on up to the professional photographers.

Photography, is about light. It's about light reaching a media, film or digital sensor, and turning the results into an image that we can see, on a computer screen for example, or printed on paper.

Other than the actual lighting conditions of a scene, there are three major entities that directly affect how the light reaches the recording media. The Aperture (*lens opening*), the shutter speed (*the speed at which the shutter opens and closes*) and the media sensitivity also known as ISO number (*the amount of light recorded on the media for a given exposure*). Too much light reaching the media, and the image will be washed out. Too little light reaching the media, and the image will be too dark.

This is to say that the balance between these three settings must be just right. Technically speaking, a large aperture will let a lot of light in, and therefore the shutter speed and/or the recording media will need to be adjusted accordingly. Let's assume for a moment that the sensitivity is set at ISO 200 and cannot be changed. We now have to balance the aperture and shutter speed to get the correct amount of light in. Again, assuming that an aperture of  $f/4$  at a shutter speed of  $1/125^{\text{th}}$  of a second would be adequate, the same results could be achieved with an aperture of  $f/5.6$  at a shutter speed of  $1/60^{\text{th}}$  of a second. In other words, increasing the aperture by one  $f/\text{stop}$  and decrease the shutter speed by one step, the same amount of light would reach the film or sensor. The difference between the two is the composition (depth of field or clarity of moving subjects). Since we are dealing with digital single lens reflex (*DSLR*) cameras, from now on let's use the word "sensor" for media.

## Selfies



Selfie



The making of selfie



**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

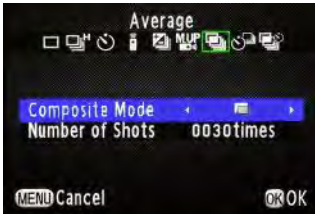
the nostalgia it projects. Because you only have two colors to worry about, (black & white) you can play with the contrast, the clarity, the vibrance, the saturation and the luminance of colors. In Photoshop Lightroom, which I use, although the luminance is in color, it acts like a filter for black & 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.



if you have a Pentax DSLR and more specifically a Pentax K-S2, you can discard the use of ND filters to attain similar results.

**ND filters may not be required with the K-S2**

(Article I published on November of 2014).



Using the four-way controller, press the up button to the Drive Mode. Set the drive mode to Multi-Exposure or Multi-Exposure+Continuous. *(When using Continuous, pressing the shutter release once will automatically trigger the number of shots chosen.)* Set the Composite Mode to Average and then set the number of shots you want. You should use a remote control if

possible. Use a tripod.

*Your K-S2 screen will look like the image above left in the Drive Mode, when ready to shoot.*



*In this first example, I took my first picture at 1/180th sec, and took only one exposure. The image is crystal clear.*



## Most importantly, take pictures of family and friends

- Pictures of sunsets and mountains can be taken any time. Family and friends are the most important pictures you can take. They grow up, they move away, etc.,. They represent who you are.



# Chapter 6



## Movie Recording



The **K-S2** can capture beautiful, true-to-life movie clips in up to fullHD proportions (1920x1080 pixels) at a frame rate of 24p, 25p, 30p frames per second. It also records in HD (1280 x720) at 50p and 60p.

☼ *Remember that the **K-S2** is primarily a still image camera. If your intentions are to produce professional video clips or full length movies, this camera is not for you. However, it takes great video compared to smart phones and amateur videocam with their small sensors. A complete e-book could be written on movie making. For that reason, this chapter explains the video functionality of the **K-S2** but does not go into details on movie making skills. Perhaps this could be a separate e-book, someday, for all Pentax DSLRs..*

📶 The movies are recorded in [MPEG-4AVC/H.64 \(MOV\)](#)

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

- *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-S2** 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.





**Location photograph without using Star Stream**



**Same Location using Interval Star Stream**

# Addendum



✿ *This chapter contains additional information not covered in previous chapters and/or revisions to this e-book.*

## The O-GPS1 details



This module is attached to the flash hot shoe on top of the camera. It is designed mainly to geo-tag your images with information in the EXIF section of the file. This information allows you to know the coordinates where your image was taken. The O-GPS1 gets its information from geo-positioning satellites that are in orbit around the earth.

✿ *There is a little orange LED light on the left side of the control panel. When it's blinking, your battery is depleted and needs to be replaced.*

Install the GPS the same way you install a flash unit.

Turn the unit on by pressing small black button on its control panel for about one second. A blue LED light will appear on the control panel, and it should begin to blink. This means the unit is acquiring signals from GPS satellites. When the proper signals are acquired, the blue light will go from blinking to steady. This process may take from a few seconds to a few minutes, depending on when it was last turned on and how far it has been moved from its last active location.

If all you want is latitude, longitude and elevation in your EXIF data, you are ready to go. If you also want to know in what direction of the compass the camera was pointed, then you should calibrate the device while it and the camera are turned on.

✿ *If you don't calibrate it, the compass direction info will probably be inaccurate to some degree. I've found that the coordinate information itself seems accurate without*



# Appendix



**Shutter** Blades, a curtain, or other movable cover in a camera that controls the time during which light reaches the film or CCD.

**Shutter Priority** An exposure mode on an automatic or autofocus camera that lets you select the desired shutter speed. The camera sets the aperture for proper exposure.

**Single-Lens-Reflex (SLR) Camera** A type of camera that allows seeing through the camera's lens when composing a picture.

**Slow Sync** A flash technique for using the flash at a slow shutter speed. Using a slower shutter speed with the flash brings out the background details in the picture. Use of a slow shutter speed with Rear-Curtain Sync is particularly effective for illustrating the movement of a stream of light.

**Soft Focus** Produced by use of a special lens or filter that creates soft outlines.

**Stopping Down** Changing the lens aperture to a smaller opening.

**Telephoto Lens** that makes a subject appear larger on film than does a normal lens at the same camera-to-subject distance. A telephoto lens has a longer focal length and narrower field of view.

**TTL auto flash** The camera's light sensor measures flash illumination, as reflected by the subject and shuts off the flash where measurement indicates a correct exposure.

**Time Exposure** A long exposure made in seconds or minutes.

**Tone** The degree of lightness or darkness in any given area of an image

**Tripod** A three-legged supporting stand used to hold the camera steady. The *K-S2* uses shake reduction, minimizing the need for a tripod.

**Ultra wide-angle lens** Extra-wide angle lens, usually with an angle of view greater than 90°.

**Underexposure** A condition in which too little light reaches the film or sensor, producing a dark image.

**UV** Ultra violet ray. Beyond the visible spectrum. It is invisible electromagnetic radiation of the sunlight.

**White balance** While shooting, adjustment of color temperature to match the light source so the subject appears to have correct color.

\*\*\*\*\*



**This is a new era in photography.**