

# Contents

Author's Note and Acknowledgments	13
Introduction	15
1. Preliminary Setup	18
Charging and Inserting the Battery	19
Inserting the Memory Card	21
Setting the Language, Date, and Time	25
2. Basic Operations	27
Taking Pictures	27
Fully Automatic: Intelligent Auto Mode	27
Basic Variations from Fully Automatic	30
Focus	31
Manual Focus	35
Exposure	37
Exposure Compensation	37
Flash	39
Motion Picture Recording	41
Viewing Pictures	43
Basic Playback	43
Playing Movies	46
3. The Recording Modes	49
Preliminary Steps Before Shooting Pictures	50
Intelligent Auto Mode	51
Program Mode	54
Aperture Priority Mode	56
Shutter Priority Mode	61
Manual Exposure Mode	65
Scene Mode	67
Portrait	69
Soft Skin	70
Self-Portrait	70
Scenery	70
Panorama Assist	71
Sports	72
Night Portrait	72
Night Scenery	72
Food	73
Party	73
Candle Light	73

## PHOTOGRAPHER'S GUIDE TO THE PANASONIC LUMIX LX5

Baby 1 and Baby 2	73
Pet	74
Sunset	74
High Sensitivity	75
Hi-Speed Burst	76
Flash Burst	77
Starry Sky	77
Fireworks	78
Beach	78
Snow	79
Aerial Photo	79
My Color Mode	79
Expressive	82
Retro	82
Pure	83
Elegant	83
Monochrome	84
High Dynamic	84
Dynamic Art	86
Dynamic (B&W)	87
Silhouette	87
Pin Hole	88
Film Grain	88
Custom	89
4. The Recording Menu	91
Film Mode	94
Picture Size	99
Extra Optical Zoom	100
Digital Zoom	102
Quality	102
Sensitivity	104
ISO Limit Set	106
ISO Increments	107
White Balance	107
White Balance Bracket	110
Face Recognition	111
Autofocus Mode	112
Face Detection	112
AF Tracking	113
23-Area	113
1-Area	114
Pre AF	115
AF/AE Lock	116
Metering Mode	116

## PHOTOGRAPHER'S GUIDE TO THE PANASONIC LUMIX LX5

Intelligent Exposure	119
Multiple Exposure	120
Minimum Shutter Speed	121
Burst	122
Intelligent Resolution	123
Intelligent Zoom	124
Digital Zoom	124
Step Zoom	125
Stabilizer	125
Autofocus Assist Lamp	126
Flash	127
Flash Synchro	129
Flash Adjustment	130
Red-eye Removal	131
Optional Viewfinder	132
Conversion	133
Auto Bracket	133
Aspect Bracket	134
Clock Set	135
5. Other Controls	136
Aspect Ratio Switch	136
Autofocus Switch	137
Flash Switch	137
Mode Dial	138
Shutter Button	138
Zoom Lever	139
Power Switch	139
Play Button	140
Rear Dial	140
Exposure Compensation	141
Program Shift	141
Quick Menu/Trash Button	143
Quick Menu Function	143
Trash Function	145
AF/AE Lock Button	145
Five-Button Array	146
Top Button: Focus	147
Right Button: ISO	148
Down Button: Fn	148
Left Button: Self-Timer	149
Center Button: Menu/Set	150
Display Button	150
6. Playback	153
The Playback Menus	154

## PHOTOGRAPHER'S GUIDE TO THE PANASONIC LUMIX LX5

The Playback Mode Menu	155
Normal Play	155
Slide Show	156
[Play] All	156
Play Picture Only/Video Only	158
Category Selection	158
Favorite	159
Other Playback Modes	160
Mode Play	160
Category Play	160
Favorite Play	161
The Playback Menu	161
Calendar	162
Title Edit	162
Video Divide	163
Text Stamp	164
Resize	165
Cropping	166
Leveling	166
Rotate Display	167
Favorite	168
Print Set	169
Protect	170
Face Recognition Edit	170
Copy	171
7. The Setup Menu	172
Clock Set	173
World Time	173
Travel Date	174
Beep	174
Volume	175
Custom Set Memory	175
Fn Button Set	179
LCD Mode	179
Display Size	180
Guide Line	180
Histogram	181
Recording Area	183
Remaining Display	183
Highlight	183
Lens Resume	184
Manual Focus Assist	184
Economy	185
Play on LCD	185

## PHOTOGRAPHER'S GUIDE TO THE PANASONIC LUMIX LX5

Auto Review	185
Start Mode	186
Number Reset	187
Reset	187
USB Mode	187
TV Aspect	188
HDMI Mode	188
VIERA Link	188
Scene Menu	189
Menu Resume	189
User's Name Recording	190
Version Display	190
Format	191
Language	191
Demo Mode	192
8. Motion Pictures	193
Basics of LX5 Videography	194
Choosing the Shooting Mode	194
The Motion Picture Menu	199
Film Mode	200
Recording Mode	201
Recording Quality	201
Exposure Mode	202
Sensitivity	203
ISO Limit Set	203
ISO Increments	203
White Balance	203
AF Mode	203
Continuous AF	204
AF/AE Lock	204
Metering Mode	204
Intelligent Exposure	204
Intelligent Resolution	205
Intelligent Zoom	205
Digital Zoom	205
Stabilizer	205
AF Assist Lamp	205
Conversion	205
Wind Cut	206
Recording Time	206
Dealing with Purple Lines	207
Recommendations for Recording Video	208

## PHOTOGRAPHER'S GUIDE TO THE PANASONIC LUMIX LX5

9. Other Topics	210
Macro (Closeup) Shooting	210
Using RAW Quality	212
Using Flash	214
Infrared Photography	217
Street Photography	219
Making 3D Images	221
Digiscoping and Astrophotography	223
Connecting to a Television Set	227
Appendix A: Accessories	229
Cases	229
Batteries	230
AC Adapter	230
Viewfinders	232
Add-on Filters and Lenses	234
External Flash Units	237
Cable Release Adapter	240
Appendix B: Quick Tips	241
Appendix C: Resources for Further Information	246
Index	250

## Author's Note and Acknowledgments

In October 2009, I published my first camera book, *Photographer's Guide to the Leica D-Lux 4*, which I followed in July 2010 with a similar book about Panasonic's Lumix DMC-LX3, which is in most respects identical in features and operation to the D-Lux 4. When the Panasonic Lumix DMC-LX5 began shipping in the United States at the end of August 2010, I could not resist turning my attention to that camera for another book, because of my familiarity with its predecessor. (There was no DMC-LX4, because the number 4 is considered unlucky or undesirable in some parts of Asia.)

I began this book in September 2010, as soon as I was able to get my hands on an LX5, so all of the information here is based on an early production model of the camera. All of the photographs illustrating the camera's features are ones that I took with my LX5; the photographs showing the LX5 itself were taken with my Sony Alpha DSLR-A850.

With respect to the contents of the book, I have tried my best to provide accurate information, but inevitably there may be mistakes or typographical errors. I would greatly appreciate hearing from any readers who find such errors, or who have comments on the book. Please provide any comments at <http://www.whiteknightpress.com>. I will try to post errata and updates on that site from time to time.

In writing this book, I have been fortunate enough to have assistance from a number of dedicated users of Panasonic cameras who read a draft and provided tremendously useful comments. I am extremely grateful to them for their insights

## PHOTOGRAPHER'S GUIDE TO THE PANASONIC LUMIX LX5

and suggestions for improving the text. I am particularly indebted to Gary Babcock, Michael Benedik, Clare Din, Thomas Falzone, Guy Parsons, and Ragnar Våga Pedersen.

Finally, as always, my most supportive and encouraging partner in this endeavor has been my wife, Clenise, who not only edited the final text, but who provides inspiration, both photographic and personal, every single day.

## Introduction

This book is a guide to the operation, features, and capabilities of the Panasonic Lumix DMC-LX5, one of the most sophisticated “point-and-shoot” digital compact cameras available today. I chose this camera to write about partly because of my experience with its predecessor, the DMC-LX3/Leica D-Lux 4, but also because this camera stands out from the broad run of compact cameras for several reasons.

Consider the list of features you don't find every day in a compact camera that is not a DSLR (digital single-lens reflex): RAW shooting mode; complete manual control of exposure and focus; burst capability for continuous shooting; a large, 3-inch (7.6 cm) diagonal and very sharp (more than 460,000 pixels) LCD screen; a high-quality Leica-branded lens with a wider-angle-than-ordinary 24mm equivalent focal length and a faster-than-ordinary  $f/2.0 - f/3.3$  maximum aperture; HD (high-definition) motion picture recording with advanced features; excellent overall image quality, owing in part to the high quality of its “intelligent” exposure and focus controls and image processing; and excellent performance in low light, owing in part to its fine performance at high ISO (light sensitivity) levels.

Moreover, the LX5 has a CCD (charge-coupled device) light sensor considerably larger than those of most other “point-

## PHOTOGRAPHER'S GUIDE TO THE PANASONIC LUMIX LX5

and-shoot” cameras, resulting in greater image quality.

The LX5 also has a solid feel, partly because of its metal body and classic appearance. Many photographers will welcome the inclusion of physical switches to control many functions, so they don't have to navigate through menus to change the aspect ratio, focus mode, ISO, and other settings. And, in addition to its useful pop-up flash, the camera is equipped with a hot shoe, which accepts powerful external flash units that communicate with the camera for automatic flash control.

Also, the LX5 includes the basic functions that all cameras in its class have: self-timer, macro (closeup shooting) mode, a wide range of shutter speeds (1/4000 second to 60 seconds), and many different “scene” modes (portrait, night scenery, fireworks, scenery, food, pet, beach, baby, etc.).

Is anything lacking in the LX5? Some people would prefer a lens that goes beyond the 90mm equivalent of its maximum optical zoom; others would like a built-in optical viewfinder. Of course, the camera does not accept interchangeable lenses, and is equipped with a digital sensor, which, although larger than average for a camera of this type, cannot provide the image quality of the larger sensors found on DSLRs. It could use better audio recording features to support its video capability.

But given that no camera can meet every possible need, the LX5 is an outstanding example of an advanced compact camera. It received an enthusiastic welcome by many photographers upon its release, sometimes to supplement a DSLR for occasions when it's inconvenient to carry a heavy load of gear, and sometimes as the photographer's only equipment to record vacation and family scenes. If you carry this camera with you, you will be ready to record a breaking news event (with still photos or movies), to capture an especially appealing scenic view that catches your eye, to grab spontaneous “street photography” shots, or to experiment with the camera's many fea-

## PHOTOGRAPHER'S GUIDE TO THE PANASONIC LUMIX LX5

tures to try new combinations of color effects, shutter speeds, and other settings from the LX5's wide array of possibilities.

This camera's quality and features have made it a winner by many measures. However, the documentation that comes with it does not always do justice to its capabilities. In addition, the documentation is split between a brief printed pamphlet and a much longer, but less convenient document that is provided on the CD-ROM that ships with the camera. I find it's a lot easier to learn about a camera's features from a single book, with illustrations, taking the time to explain the features fully and clearly. That is the purpose of this book.

My goal is to provide a solid introduction to the LX5's controls and operation along with tips and advice as to when and how to use the various features. This book does not provide advanced technical information. If you already understand how to use every feature of the camera and when to use it and are looking for new insights, I have included some references in the Appendices that can provide more detailed information. This book is geared to the beginning to intermediate user who is not satisfied with the documentation provided with the camera, and who is looking for a reference guide that provides some additional help in mastering the camera's features.

One final note: As I write this in fall 2010, Leica has started shipping the D-Lux 5, its version of the Lumix LX5. I plan to publish a revised version of this book covering the D-Lux 5 before the end of 2010 if possible. However, because that camera is practically identical in features and operation to the LX5, the information in this book about the LX5 should be useful to D-Lux 5 owners as well.

## Chapter 1: Preliminary Setup

I will assume your LX5 has just arrived at your home or office, perhaps purchased from an internet site. The box should contain the camera itself, lens cap, lens cap string, battery, battery case, battery charger, neck/shoulder strap, USB cable, A/V cable, SilkyPix and PHOTOfunSTUDIO software on one CD, the longer user's manual on another CD, and one or two other pieces of paper, such as a warranty card.

One of the first things you should do with your new camera is attach the lens cap string, a small loop supplied in a plastic envelope that is easy to overlook. Loop it through the small opening on the lens cap and then through the neck-strap bracket closest to the lens. Now your lens cap will be attached to the camera and can't be misplaced.

Some people don't like the removable lens cap provided with the LX5, because the cap has to be removed when you take a picture, may bother you as it dangles while you aim and focus, and has to be put back on the lens when you're done. I haven't found the cap to be a problem, because I'm used to cameras with removable lens caps. I see the point, though, because many other small cameras have built-in lens covers that automatically open up when you turn on the camera and close back down when the camera is turned off.

Some users of this camera deal with the lens cap situation by

attaching the lens cap string to the right-side neck strap bracket rather than the left, so it's easy to hold the cap in the right hand while shooting, to keep it from flapping around.

If the lens cap situation really bothers you, there are “automatic” lens caps available for the LX5, as there were for the earlier model, the LX3. This sort of cap has leaves that open up as the lens extends, so the cap can stay on and open and close as needed. I have not tested one myself, but you can find them by searching on eBay for “LX5 automatic lens cap.” One company that offers this sort of product is at [www.jjc.cc](http://www.jjc.cc).

As for the neck strap, it is quite useful when you're carrying the camera outside of its case, but I have found the strap to be a nuisance when placing the LX5 into its case, because of the strap's bulk. You might want to look for a wrist strap instead, which gives you a way to keep a tight grip on the camera but doesn't make it difficult to stow the camera safely in a case.

### **Charging and Inserting the Battery**

The LX5 ships with a single rechargeable Lithium-ion battery, the DMW-BCJ13PP. You can't use batteries from earlier models, such as the LX3. This battery has to be charged in an external charger; you can't charge it in the camera, even if you connect the camera to the optional AC adapter. So it's a very good idea to get yourself an extra battery. I'll talk about that later. For now, let's get the battery charged.

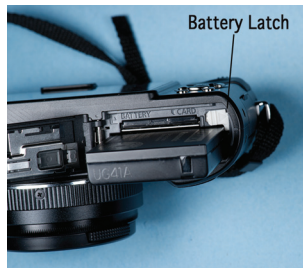
You can only insert the battery into the charger one way; look for the set of four goldish-colored metal contact strips on the battery, then look for the corresponding set of contacts (three, not four) inside the charger, and insert the battery so the two sets of contacts will connect up.

## PHOTOGRAPHER'S GUIDE TO THE PANASONIC LUMIX LX5



With the battery inserted, plug the charger into any standard AC outlet or surge protector. The green light comes on to indicate that the battery is charging. When the green light turns off, after about two and a half hours, the battery is fully charged and ready to use.

Once you have a charged battery, look for the little gray latch on the memory card/battery door on the bottom of the camera. Push the latch to the left to spring the door, and let it open up. To insert the battery, look for the sets of metal contacts on the battery and inside the battery compartment, and guide the battery accordingly. You may need to use the right side of the battery to nudge the gray latching mechanism inside the battery compartment to the right, to allow the battery to slide in.



Slide it all the way in until the gray internal latch catches above the battery and locks it in place. Then close the battery compartment door, slide the external latch back to the right, and you're done.

## Inserting the Memory Card

The LX5 does not ship with any memory card. With this camera, unlike some others, this is not a fatal omission, because the LX5 has built-in memory that will let you take a few photographs even with no memory card inserted. The amount of built-in storage capacity is only about 40 megabytes (MB), which is pretty minuscule compared to storage cards of today that can hold up to 64 gigabytes (GB), or about 1,500 times



more. But if you're in a situation where you need to take a picture and don't have an available card, 40 MB is a lot better than nothing.

(If you do record some images to the built-in memory, you can later copy them to a removable memory card; see the discussion of the Copy command at the end of Chapter 6.)

You shouldn't rely on the built-in memory if you don't have to, so you need to insert a separate memory card. The LX5 uses three varieties of card: Secure Digital (SD), Secure Digital High-Capacity (SDHC), and Secure Digital Extended Capacity (SDXC). The image above shows all three of these, from left to right, along with a special type of SD card, the Eye-Fi card, which I'll discuss a little later.

All three types of SD card are small, about the size of a large postage stamp. The standard card, SD, comes in capacities from 8 MB to 2 GB. The high-capacity card, SDHC, comes in sizes from 4 GB to 32 GB. The newest type, SDXC, at this writing is available only in a 48 GB or 64 GB size, though its maximum capacity theoretically is 2 Terabytes, or about 2,000 GB. What type and size of SD card you should use depends on your needs and intentions. If you're planning to record a good

## PHOTOGRAPHER'S GUIDE TO THE PANASONIC LUMIX LX5

deal of high-definition (HD) video or many RAW photos, you need the biggest card you can afford. There are several variables to take into account in computing how many images or videos you can store on a particular size of card, such as the aspect ratio you're using (1:1, 3:2, 4:3, or 16:9), picture size, and quality. To cut through the complications, here are a few samples of what can be stored on a given card. If you're taking RAW images at the highest quality in the 4:3 aspect ratio (that is, the image is 4 units wide for every 3 units high), you can store just 2 images in the built-in memory, but you can store 9 of the largest JPEG images in Fine quality or 400 images of the smallest size and lowest quality. I often use a 16 GB SDHC card. Given the conditions just mentioned, it can store 1,260 RAW images, 3,680 of the largest Fine-quality JPEG images, or 123,540 of the lowest-quality images.

If you're interested in video, here are some guidelines. You can fit only 2 or 3 minutes of HD video on a 512 MB card, but you can store one or 2 hours of it (depending on format) on a 16 GB card. (Note: you can't record much video at all to the built-in memory; you can record about one and a half minutes in the lowest quality; you can't record in any other quality of video to the built-in memory.)

One other consideration is the speed of the card. I'm currently using a 16 GB SanDisk Extreme card, Class 10, rated at a transfer level of 30 MB/second, well beyond the minimum transfer speed for that class of 10 MB/second. That speed is more than enough to get good results for recording images and video with this camera. You should try to find a card of Class 6 or higher if you're going to record HD video.

Also, you need to realize that, if you have an older computer with a built-in card reader, or just an older external card reader, it may not read the newer SDHC cards. In that case, you would have to either get a new reader that will accept SDHC

## PHOTOGRAPHER'S GUIDE TO THE PANASONIC LUMIX LX5

cards, or download images from the camera to your computer using the camera's USB cable.

Using the newest variety of card, SDXC, can be even more problematic; at this writing there are compatibility issues with some computers. I recently tried a 64GB SDXC card, and my MacBook Pro could not read it at all at first, even when I left it in the camera and connected the camera to the computer by USB cable. I eventually found an SD card reader, the Sonnet 21-in-1 ExpressCard/34 Memory Card Reader & Writer, that could read all the images and movies from the SDXC card on my MacBook Pro, with a software driver provided on the company's web site at [www.sonnettech.com](http://www.sonnettech.com). I was fortunate that my computer has an ExpressCard/34 slot, which not that many Mac computers have nowadays. As an added benefit, after I downloaded the driver from the [sonnettech.com](http://www.sonnettech.com) site, my computer was able to read the files from the SDXC card when the camera was connected to the computer by its USB cable, without even using the ExpressCard reader.

The situation with Windows is less troublesome: The images on the card were easily readable by a notebook PC using Windows 7, when the camera was connected by the USB cable or with any SDXC-compatible card reader. As I write this, though, SDXC cards cost at least \$200.00, and usually more, so I don't recommend getting one until the prices come down, unless you absolutely need the 48 GB or 64 GB storage capacity, and can deal with the compatibility issues.

Finally, if you will have access to a wireless (Wi-Fi) network where you use your camera, you may want to consider getting an Eye-Fi card. This special type of storage device looks very much like an ordinary SDHC card, but it includes a tiny transmitter that lets it connect to a wireless network and send your images to your computer on that network as soon as the images have been recorded by the camera.