

ANNA DADAN

European  
bestseller  
now in English

DIGITAL PHOTOGRAPHY

ANNA DADAN



# DIGITAL PHOTOGRAPHY

**PUBLISHED BY DADAN PRESS™**

**FIRST EDITION IN ENGLISH: MAY 2012**

**COPYRIGHT © 2012 by ANNA DADAN**

Project Management, Composition, Cover design: Anna Dadan

Translation: Paweł Staromłyński, Adam Nemś

---

Proofreading: Michał Dadan, Paweł Staromłyński

DTP: Marta Milińska

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without written permission from the publisher, except for the inclusion of brief quotations in a review.

### **Trademarks**

All terms mentioned in this book that are known to be trademarks or service marks have been appropriately capitalized. Dadan Press™ cannot attest to the accuracy of this information. Use of term in the book should not be regarded as affecting the validity of any trademark of service mark.

Photoshop is a registered trademark of Adobe Systems Incorporated.

Neat Image is a registered trademark of AB Software.

Windows is a registered trademark of Microsoft Corporation.

All other trademarks and service marks are properties of their respective owners and have been used only for identification purposes.

### **Warning and Disclaimer**

This book is designed to provide information about digital photography. Every effort has been made make it as complete and accurate as possible, but no warranty to fitness is implied.

This information is provided on an as-is-basic. The author and Dadan Press™ shall have neither the liability nor responsibility to any person or entity with respect to any loss or damages arising from the information contained in this book or from the use of additional content that may accompany it.

The cover design incorporates a photograph by Konradbak, published in the Dreamstime service.

Printed and bound in the United States of America

**[www.annadadan.com](http://www.annadadan.com)**

**For my beloved husband**

---

# The author

---



**Anna Dadan** (actually Anna Owczarż-Dadan) is the author of over 30 books devoted to, among other things, computer graphics and digital photography, some of which became bestsellers (e.g. *Photoshop 7/7 CE. Kurs, Fotografia cyfrowa. Ilustrowany przewodnik*). She has been interested and has been working in these fields for many years now. However, her true passion is editing digital images. Thanks to her cooperation with Adobe, she has the possibility to obtain first-hand information. Her knowledge and experience have proven useful to several thousand people, and the number is continually growing.

Anna is also a publisher of instructional courses for programs such as Photoshop and Photoshop Elements.

Being an owner of a graphics and photo editing studio, in her free time she does photo retouch, creates advertisement projects and graphics used by software producers in their products; she also designs website elements. She cooperates with several publishers (mainly with **Helion S.A**, **Help**, and **Dadan Press™** – which she owns) and **PSD Magazyn** (the only magazine in Poland devoted entirely to 2D graphics, focusing mainly on Photoshop software).

Her books are also available outside of Poland (in the US, among other countries). She received the **Best of the Best** award from Helion publishing house for her work and achievements.

More information on books and courses by the author can be found on her website:

**[www.annadadan.com](http://www.annadadan.com)**

# Acknowledgements

---

When you write a book on digital photography and you want to describe all the issues, you need a lot of pictures that you yourself do not have or – sometimes out of modesty – you are afraid to show them to other people (there's no accounting for taste). Then, you need to borrow them or buy from more courageous photographers. Some people were of an immense help for me and I wish to thank them here.

First of all, I wish to thank Brenda Bazylewski from ISTOCKPHOTO ([www.istockphoto.com](http://www.istockphoto.com)), thanks to whom I became the only Polish author that had the privilege of using, without any limitations, the resources provided by hugely talented photographers from all over the world. Only the authors of books recognized by ISTOCKPHOTO have the honor of doing so, therefore I wish to thank them once again. The fact that you have chosen me is of a great importance to me. I also wish to thank Beata Starczewska from DigiTouch ([www.digitouch.pl](http://www.digitouch.pl)) for the pictures and all the help in preparing the first release of the book. Ms. Beata, thank you for selling the pictures from your company's collection for the price that had not ruined this young author.

Other people, thanks to whom I received various materials used in this publication, are: Ms. Małgorzata Bielawska from Foto-technika (pictures of tripods, heads, quick-fits), Ms. Aneta Czerwińska and Mr. Bartłomiej Pasternak from Canon Polska (photographs of Canon cameras and equipment), Mr. Szymon Kropka from ComDis Poland (photographs and advice on memory cards and readers), Mr. Adrian Penier from Fujifilm Polska Distribution sp. z o.o. (photographs of cameras and accessories), Ms. Alicja Kwaśna from Nikon Polska sp. z o.o. (photographs of cameras and accessories in the first release), and Mr. Przemysław Rombel from Biuro RCS (photographs). I sincerely thank you for all the help.

Fabulous people from companies producing paper for prints helped me in gathering materials that I could use while preparing the Appendix with information on printing materials. These people are: Witold Holań, Katarzyna Kasinowicz and Anna Jarmuszkiewicz from Canson Polska sp. z o.o., Sławomir Rotter – CEO of Armor Polska sp. z o.o., Mr. Piotr Kochanek from InkTec Polska sp. z o.o. and Paulina Jurga from A.U.H. Foto-Falter sp. z o.o., the representative of Konica Minolta (instant, professional help). Thanks to those people, I saved a lot of time and did not have to spend hours on collecting materials. I was able to focus solely on writing. I thank all those people.

Additionally, I would also like to thank Erik Sowder from Expoimaging, Inc. for pictures of Ray Flash device and Roberta Skeckowski from LumiQuest for photographs of softboxes and overlays for flash lamps.

The companies involved in preparing the latest release of the book:



[www.Istockphoto.com](http://www.Istockphoto.com)



[www.canon.pl](http://www.canon.pl)



[www.lumiquest.com](http://www.lumiquest.com)



[www.comdis.com.pl](http://www.comdis.com.pl)



[www.foto-technika.pl](http://www.foto-technika.pl)



[www.pretec.com](http://www.pretec.com)



[www.i-tec.pl](http://www.i-tec.pl)



[www.canson.pl](http://www.canson.pl)



---

[www.expoimaging.com](http://www.expoimaging.com)



# Table of Contents

---

The author

Acknowledgements

Chapter 1: Before you buy a pig in a poke...

What you need to pay attention to, when buying a camera

Size is not all

Camera Lens

Image sensor

White Balance

Screen (LCD screen, LCD display)

Memory Card

The ability to save in at least two different file formats

Energy consumption

Shutter and aperture ranges

Theme pre-sets

Flash modes

Chapter 2: Effective use of camera to create perfect images

Defining picture size

Focus is crucial, but always?

Small depth of field

---

Large depth of field

Really sharp images. Tips

First – get yourself a tripod

Buy the brightest lens you can afford

Use appropriate aperture

Avoid touching the shutter release button

Use mirror lock-up option

Changing field of vision and its application in photography

Wide field of vision

Standard field of vision

Narrow field of vision

Controlling exposure settings

Improper exposure

Proper exposure

Histogram in a camera. What is it for?

Make setting exposition parameters easier – aperture priority or shutter priority?

Bracketing as a help to achieve proper exposure

White Balance

Flash

Framing photos – mind the parallel

Close, closer, even closer

Macro photography

Close range photography

How to use theme pre-sets

## Chapter 3: Overall tips regarding the art of photography

The main theme – think what you want to photograph

The skill of using light properties

Light shade and types of light

Light direction

Frame composition

Foreground and background in photography

The Rule of Thirds

The skyline

An additional desired element within a non-central composition

Space for motion

Perspective

Choosing frames

Viewpoint

Leading lines

Borders and their natural examples

Using the features of photographed objects to give the photograph a unique atmosphere

Harmony of colors

Color contrast

Low-Key and High-Key

Shapes of objects

Emphasizing the main theme by using colors

## Panoramic photography

# Chapter 4: The most popular themes in photography – how to make your pictures better

## What you should pay attention to, when photographing people

### How to create portraits

Angle of view

Composition, frame and aperture

Lighting

Surroundings and background

## Group photographs

### Environmental and creative portraits

Environmental portrait

Creative portrait

Full naturalness – how to take good non-posed pictures

How to photograph children

How to create acts

## Landscape. What you need to pay attention to, when taking a picture

Viewpoint and camera position

Skyline in landscape photography

Seasons and their influence on landscape character

Special “star” effect

## How to photograph animals

# Photographing architecture

---

The influence of lighting and viewpoint on pictures of architectural objects

Conscious use of the sky to achieve desired effects

Searching for architectural details to emphasize the object's character

## How to photograph meteorological phenomena

Rain

Storm

Snow

Night and evening photography. How to portray the charm of these times of the day in photographs

Photographing sunsets

## How to photograph objects in motion

## Chapter 5: Uploading and storing photos

### Devices used for uploading photographs to a PC

Connection cable and docking station

Card reader

Uploading data from your camera to a PC with Windows XP or Vista operating system

Protecting your photos

Organizing pictures

## Chapter 6: Correcting photographs Solving the most common problems

Should photos be edited?

---

How to eliminate grain from a photo

How to crop photographs

How to crop an image in accordance with the Rule of Thirds

How to straighten pictures

How to eliminate red-eye effect

How to correct improper exposure effects – overexposed and underexposed pictures

- Overexposed photographs

- Underexposed photographs

Color correction – how to eliminate all discolorations and make the colors in your pictures more saturated

- Eliminating discolorations

- Correcting color saturation

How to add the flash lamp effect

How to change color of a particular fragment of a photograph

- Changing color of a particular element of a photograph

- Changing colors of particular fragments to emphasize a desired element

How to correct white balance

How to merge pictures to create a panorama

How to sharpen photographs

# Chapter 7: Printing

---

## Preparing your pictures for printing is not so easy

Size and resolution of a photograph – how to get photographic accuracy of your prints

Optimal print resolution

Changing image resolution

## Print settings

## Appendix

What can be done to cut down costs of prints

Influence of particular types of paper on final effects of printing

Papers for people dealing with artistic photography

The quality of prints is not only about paper...



# Chapter 1: Before you buy a pig in a poke...

If you have already become a happy owner of a “digicam”, you don’t need to waste time reading this chapter. You should advance to the next one – unless you want to verify the capabilities of your camera (be careful if you suffer from high blood pressure – many people experience the increase of the blood pressure when they get to know more about their recent purchase, usually based on advice from a smiling photo equipment retailer...). If you do not own a digital camera and you plan to buy one, bravo! The decision to read this book was a perfect first step. Start from reading the following chapter carefully. It provides information on what you should pay attention to when buying a photo camera, and what traps you can expect. Furthermore, you will find many useful hints, inter alia, on the formats in which the files are saved, the “magic” of megapixels and compression.

## What you need to pay attention to, when buying a camera

When buying a digital camera, you should take numerous factors into consideration. Some of them influence the quality of pictures, others increase the abilities to take pictures and some others are simply about the comfort of using the equipment. The factors described below are the most important ones.

### **Size is not all**

Most people, when asked about the very first thing they think of when judging a digital camera, answer that it’s the maximum size of an image they can achieve with it – quite often, in my opinion, misnamed as resolution. Unfortunately, some people decide about buying a camera basing only on the number of megapixels.

### **Tip**

**Megapixel equals more-or-less 1 million pixels.**

Naturally, it is quite important, but not always. **Pixel** is the smallest component of an image.

Numerous pixels joined together create an image (e.g. a photo), and the size of the image describes how many pixels the photo was composed of. The more, the bigger the size of the photo, and the more detailed it is. It influences the ability to picture very small details and to achieve smooth gradient transitions. The number of pixels composed to create a picture influences the quality, as it determines the maximum size of a print. Even if a camera does not have many megapixels, it often allows to achieve decent effects. A 2 megapixel camera gives you the ability to take good quality photos that may be easily printed in a 4x6" size. A 3 megapixel camera allows you to make a good quality print in a 5x7" size. The more megapixels, the bigger good quality print you can get. However, you need to remember that if we have a 6 megapixel camera and a 3 megapixel camera, and the size of the print we want to have is 5x7", it does not mean that the picture taken with the 6 megapixel camera must be of better quality. The 3 megapixel camera records a sufficient number of details for the picture to look good. Hence, the further quality is influenced by the camera lens. Before you decide on your choice, think twice about the destination of the photos you are going to take. If you don't plan to print billboard-like images, you are not a graphic artist who takes pictures to use them within his/her projects, and 4x6" prints are good enough for you – a 3 megapixel camera is absolutely sufficient.

## Camera Lens

Technical parameters of a lens are far more important than resolution or the number of megapixels. This element greatly influences the quality of pictures taken. While choosing a digicam, you need to pay attention to the issues below.

**Focal length.** In general, the greater the zoom, the better – it gives you more possibilities in terms of performing close-ups. It is a good idea to buy a camera with at least a 3x zoom to be able to take close-ups (so-called optical zoom). While choosing a camera, never decide basing exclusively on the size of optical zoom – always check the focal length range, if it is appropriate for you. Let's compare two cameras with different focal length ranges: a 18-55 mm camera and a 35-105 mm camera – both with 3x optical zoom. Both enable to take photos with 3x optical zoom. However, because of the different focal lengths, the picture taken with the first camera would seem wider (useful in photographing e.g. buildings from a small distance) while the second picture would seem narrower (the camera will zoom in the objects that are further from the photographer). In case of reflex cameras, lenses are exchangeable. Hence, one can buy fixed lenses or lenses with zoom that are useful for particular needs. So why not buy a lens with the biggest focal length range – just like in a compact digicam? You can, but the quality of such exchangeable lenses is quite often questionable (especially those cheap and of medium price ones). The quality of such lens may be lower than that of compact

digital cameras, and we do not want to spend more money on a reflex camera to get pictures of similar quality. That is why it is reasonable to buy two lenses with zoom – e.g. 18-70 and 70-200 mm (so-called telephoto lens). To take a wide angle photo we could use a converter, unless we take mainly photos of interiors where the best possible quality counts. In pictures 1.1 and 1.2 you can find examples of 15-85 and 75-300 mm lenses with zoom that enable taking both wide angle pictures and pictures with large close-ups, ensuring a very good quality. In image 1.3 you can find an example of single lens with focal length range similar to those in 1.1 and 1.2.



1.1., 1.2., 1.3. Examples of Canon lenses. By courtesy of Canon Polska ([www.canon.pl](http://www.canon.pl))

## Tip

A 4 megapixel camera is enough for most home uses (assuming, that we are going to print 6x8" photos). For smaller prints, 3 megapixels is enough.

## Tip

While choosing a camera, you should never base on so-called digital zoom. The parameter is nothing more than a gimmick from photographic equipment manufacturers. It is useless and usually causes only problems. Pictures taken with the use of a digital zoom are of a very poor quality.

**Optical system** (dominated by Nikon and Canon cameras; examples – Nikon CoolPix 5700 and Canon Eos 7D – presented in pictures 1.4 and 1.5) greatly influences the quality of pictures taken. The influence is especially visible in case of photographs taken with zoom lenses with a large focal length.

range. In such cases, we can observe a geometry deformation of registered pictures. You can also observe a kind of “fringes” of color along boundaries of photographed objects (e.g. tree branches with a sky background) or in areas of abrupt color changes – this type of distortion is called chromatic aberration.



1.4., 1.5. By courtesy of Canon Polska and Nikon Polska ([www.canon.pl](http://www.canon.pl), [www.europe-nikon.com/pl\\_PL](http://www.europe-nikon.com/pl_PL))

**The material a lens is made of, and maximum aperture.** I definitely suggest buying a lens made of glass. They ensure better image sharpness and are more scratch-resistant. A large aperture (e.g.  $f/1.8$  or  $f/2.6$ ) enables you to choose short times of shutter release, which allow to avoid blurred images and make taking photos in bad light conditions easier – and enable the focus systems to work properly – the larger the aperture, the shorter the time a camera needs to set focus. In image 1.6 you can find an example of a fixed focal length lens with a large aperture made by Canon.



1.6. By courtesy of Canon Polska ([www.canon.pl](http://www.canon.pl))

## Tip

In most lenses with zoom, the aperture decreases with an increase of focal length. If you see a lens described as follows: 38 – 114 mm f 1:2.8 – 4.7, you can decide if it has a sufficient aperture or not. The description informs you that with the smallest focal length for the model (in this case 38 mm), which means the smallest optical zoom, the maximum aperture is 2.8, whereas with the largest focal length for the device (the biggest optical zoom) the maximum aperture is 4.7. In best (the brightest) lenses, the latter number, informing about the aperture while using the maximum optical zoom available for a particular lens model (in this case it is 4.7), should be as close as possible to the lowest value of an aperture range available for the camera. The number may be, for instance, f/2.0–f/22. When asked, a seller should provide all the important information on the range. Hence, the latter value should be e.g. 3.5. Markings like 38 – 114 mm f 1:2.8 – 4.7 inform that the lens is not really that “bright”.

## Image sensor

An image sensor (image 1.7) in a digital camera is a counterpart of a film for an analog camera. It is an electronic photosensitive microprocessor placed behind a lens, (to put it simply) – processing light into electric impulses which are, in turn, processed by camera electronics into a photograph. When this book was being written, apart from classic sensors CCD and CMOS (faster, consuming less energy but producing more image noise in comparison with CCD – used mainly in Canon cameras), there were also Foveon X3 sensors (manufactured by Foveon) available on the market. Their modern technology enables you to reproduce colors better. Unfortunately, they are used only in a few models. It is possible that the situation will change in the future. Hence, if you choose between a camera with classic CCD sensor or Foveon X3, I suggest trying the latter one.



1.7. Image sensor (CMOS APS-H) of a Canon Eos-1D Mark IV camera. By courtesy of Canon Polska ([www.canon.pl](http://www.canon.pl))

When choosing a camera, you should also pay attention to sensor size, as it may differ. Most reflex cameras have a sensor smaller than the 35 mm film frame, known from traditional photography. It influences the quality of a picture (inter alia, greater noise when using higher ISO), decreases the

range of wide angle lenses to choose from for reflex cameras, and forces its users to recalculate focal length of lenses that have been used before in traditional photography.

In general, when we choose between two 16 Mpx cameras, the better choice is the one with physically bigger sensor.

Until now, a “full frame” was a perfection for digital photographers they could only dream of. Using sensors smaller than so-called “full frame” in cameras forces their users to recalculate the focal length given on a lens body to learn about the actual focal length (and actual field of vision known from traditional photography). A focal length given on a body refers to cameras in which the sensor size corresponds to a “full frame” 35 mm size. You can find more information on this topic later in the book.

Nowadays, there are digital “full frame” reflex cameras available, where the size of the sensor corresponds to a frame of 35 mm size (e.g. Canon Eos 5D Mark II, Canon Eos-1Ds Mark III, Nikon D3, Sony A900). Such choice is an ideal but still quite expensive solution (starting from \$2,500 for a body).

## **White Balance**

A CCD sensor has a big defect – in different light conditions the photosensitive element may reproduce colors incorrectly. That is why it is necessary to set white balance. Unfortunately, not many cameras provide this function. When buying a camera, make sure that the chosen model, beside the mentioned option, also enables you to choose from white balance presets (e.g. for artificial light, fluorescent light or natural light etc.). You can find more information about this function in chapter 2.

## **Screen (LCD screen, LCD display)**

A screen is one of the elements that make digicams stand out from analog cameras. When buying a camera, it is advised to pay attention to the screen size (the bigger, the better) and its resolution. A bigger screen allows you to control focus better and to watch the photos saved on a memory card. The higher the screen resolution, the easier and more comfortable it is to frame a scene (image 1.8) – digital reflex cameras are an exception from this rule because (in many cases) the screen is used only to watch pictures already taken (image 1.9). It is a wise decision to choose a model that has a variable LCD screen – it increases the framing possibilities (you can frame a scene holding the camera e.g. above your head)(image 1.10).



1.8., 1.9. Cameras made by Canon. PowerShot S90 and Eos 500D. By courtesy of Canon Polska ([www.canon.pl](http://www.canon.pl))



1.10. A Canon PowerShot G11 camera. By courtesy of Canon Polska ([www.canon.pl](http://www.canon.pl))

## Memory Card

A memory card is an important element of each digital camera. The pictures you take are saved on it. Memory cards differ in terms of capacity, size and damage resistance. The higher the capacity, the more freedom in taking pictures. Most cameras by default are equipped with small capacity cards (if at all). That is why you should look for a bigger card right after you buy a camera. The minimum is 1GB, and the preferred choice is 4GB. You should also pay attention to the sort of cards that are supported by the particular camera model. There are various memory card types, like: CF (Compact Flash), Memory Stick, Multi Media Card, Secure Digital, xD-Picture Card. The cheaper, the better. It is always advised to buy only quality products, though.

- **[click Gang of One: Memoirs of a Red Guard \(American Lives\)](#)**
- [read online Dialogue: Techniques and Exercises for Crafting Effective Dialogue \(Write Great Fiction Series\) pdf, azw \(kindle\), epub](#)
- [click My T-Rex Has a Toothache pdf, azw \(kindle\), epub](#)
- [Visions of Venice in Shakespeare \(Anglo-Italian Renaissance Studies\) pdf, azw \(kindle\)](#)
- [download online Authentic Recipes from Malaysia online](#)
  
- <http://diy-chirol.com/lib/Gang-of-One--Memoirs-of-a-Red-Guard--American-Lives-.pdf>
- <http://www.freightunlocked.co.uk/lib/Chicago.pdf>
- <http://qolorea.com/library/My-T-Rex-Has-a-Toothache.pdf>
- <http://twilightblogs.com/library/Het-janussyndroom--Van-In--Book-33-.pdf>
- <http://tuscalaural.com/library/Slaying-the-Tiger--A-Year-Inside-the-Ropes-on-the-New-PGA-Tour.pdf>