

Canon EOS R8 Experience

The Still Photography Guide to
Operation and Image Creation with the
Canon EOS R8 Mirrorless Camera

an e-book by:
Douglas J. Klostermann



PREVIEW of:
Canon EOS R8 Experience

*The Still Photography Guide to Operation and
Image Creation with the Canon EOS R8*

by
Douglas J. Klostermann

Full Stop. *good writing for better photography*

All rights reserved. This e-book is licensed for your personal, non-commercial enjoyment only and may not be re-sold, file-shared, distributed, sub-licensed, or given away. This book can be read on your personal devices. Otherwise no part of this book may be reproduced or transmitted in any form or by any means, electronically or in print, without expressed permission from the author. Every effort has been made to make this e-book as accurate as possible, but no warranty of fitness is implied. The information is provided on an as-is basis. The author and/ or publisher shall have no liability or responsibility with respect to any loss or damages arising from the information provided in this e-book including but not limited to the use of any of the materials or methods described, the products, retailers, Internet web sites, or links provided. Please read and follow all instructions and use, safety and handling precautions expressed in the manuals provided with your equipment and software, and which take precedence over any content in this work.

All contents of this work including cover design, text, and photographs, with the exception of products, brands, software, contents of menus and screenshots, and logos, are copyright by the author. All products, brands, software, contents of menus and screenshots, and logos are property of the respective companies and websites. Terms which are trademarks or service marks in this e-book are used in an editorial and/ or educational manner, and should not be regarded as affecting the validity of any trademark or service mark. “*Canon*” is a trademark of *Canon Inc.* “*Adobe*,” “*Photoshop*,” and “*Lightroom*” are trademarks of *Adobe Systems Inc.* The author and the contents of this book are not affiliated with or endorsed by *Canon Inc.*

Douglas Klostermann is a participant in the *Amazon Services LLC Associates Program*, an affiliate advertising program designed to provide a means for sites to earn advertising fees by advertising and linking to amazon.com. (Links are provided to products and accessories mentioned in this guide.)

Cover design and photograph by the author. All photographs by the author, unless noted.

Special thanks to **Newtonville Camera** of Newton, Mass.

<https://newtonville.camera>



Canon EOS R8 Experience

The Still Photography Guide to Operation and Image Creation with the Canon EOS R8

By: Douglas J. Klostermann

PDF Version 1.0 - **PREVIEW**

July 2023

Published by Full Stop Media, LLC

Full Stop. *good writing for better photography*

Arlington, Mass. USA

www.fullstopbooks.com

Copyright 2023 Douglas J. Klostermann / Full Stop Media, LLC - all rights reserved

Author's blog: <http://blog.dojoklo.com/>

Facebook Group: <https://www.facebook.com/FullStopDSLRGuides>

CONTENTS

1. GETTING STARTED with the CANON EOS R8	8
1.1 Introduction to the EOS R8.....	8
1.2 Take Control of Your Camera	12
1.3 Using This Guide	14
1.4 Quick Start for Previous Canon Users	19
1.5 Maximizing Resolution with the EOS R8.....	26
1.6 Batteries and Memory Cards.....	27
2. CAMERA CONTROLS	29
2.1 EOS R8 Camera Controls	29
2.2 Viewfinder Display, Quick Control Screens, and Touch Screen.....	39
3. MENU SETTINGS.....	45
3.1 Introduction to Setting Up the EOS R8.....	45
3.2 Menu Setup Spreadsheet.....	47
3.3 Photo Shooting Menus	48
3.3a Photo Shooting 1 Menu	49
3.3b Photo Shooting 2 Menu	55
3.3c Photo Shooting 3 Menu	62
3.3d Photo Shooting 4 Menu	67
3.3e Photo Shooting 5 Menu	73
3.3f Photo Shooting 6 Menu	78
3.3g Photo Shooting 7 Menu	83
3.3h Photo Shooting 8 Menu	87
3.3i Photo Shooting 9 Menu	92
3.3j Photo Shooting 10 Menu	100
3.4 Autofocus (AF) Menus.....	104
3.5 Playback Menus	124
3.6 Communication Functions Menu (Wi-Fi Menu).....	149
3.7 Set-up Menus	154
3.8 My Menu	173
4. CUSTOM FUNCTIONS MENU SETTINGS	177
4.1 Custom Functions C.Fn 1.....	177
4.2 Custom Functions C.Fn 2.....	182
4.3 Custom Functions C.Fn 3.....	185
4.4 Custom Functions C.Fn 4.....	189
4.5 Custom Functions C.Fn 5.....	191
5. CUSTOM CONTROLS - ADVANCED.....	193
5.1 Shutter Button Half-Press.....	194
5.2 Movie Shooting Button	196
5.3 Multi-Function (M-Fn) Button.....	197
5.4 AF-ON Button	199
5.5 AE Lock Button	202
5.6 AF Point Selection Button.....	204
5.7 Cross Keys	205

5.8 Q / SET Button.....	206
5.9 Lens Function Button.....	209
5.10 Speedlite Menu Direct Button.....	210
5.11 Main Dial.....	210
5.12 Quick Control Dial.....	211
5.13 Lens Control Ring.....	212
5.14 Movie Shooting Options for Buttons.....	213
6. PLAYBACK and IMAGE FILE FORMATS	215
6.1 Image Playback.....	215
6.2 Image File Formats - JPEG, HEIF, and RAW	220
6.3 File Sizes and Maximum Burst Rate	224
7. AUTOFOCUSING Part 1	226
7.1 Using Autofocus	226
7.2 Autofocus - AF Point Selection.....	230
7.3 Touch and Drag AF	233
7.4 Autofocus - AF Areas	236
7.4a Spot AF.....	238
7.4b 1-Point AF.....	238
7.4c Expand AF Area.....	240
7.4d Expand AF Area: Around.....	241
7.4e Flexible Zone AF.....	242
7.4f Whole Area AF.....	245
7.5 Eye Detection, Subject Detection, and Subject Tracking.....	245
7.6 Autofocus - AF Operations	249
8. AUTOFOCUSING Part 2	258
8.1 Autofocus Cases and Subject Tracking Parameters.....	258
8.2 Back Button Focusing.....	262
8.3 Manual Focus	267
9. DRIVE MODES	272
10. EXPOSURE Part 1	276
10.1 Introduction to Aperture, Shutter Speed and ISO	276
10.2 Aperture-Priority AE Mode (Av) and Shutter-Priority AE Mode (Tv).....	283
10.3 Flexible-Priority AE Mode (Fv)	290
10.4 Manual Exposure Mode (M)	293
10.5 ISO and Auto ISO.....	297
10.6 Full Stops.....	302
10.7 Additional Shooting Modes.....	304
11. EXPOSURE Part 2 - METERING MODES.....	317
11.1 Evaluative Metering	318
11.2 Partial Metering	319
11.3 Spot Metering	320
11.4 Center-Weighted Average Metering.....	322
11.5 Metering Modes and Exposure Lock.....	324
11.6 Manual Metering.....	325
11.7 Metering Modes and Exposure	326

12. EXPOSURE Part 3	329
12.1 Exposure Lock	329
12.2 Histograms.....	333
12.3 Exposure Compensation	338
12.4 Auto Exposure Bracketing	343
12.5 HDR (High Dynamic Range) and HDR PQ Shooting Modes.....	347
12.6 Multiple Exposure Mode	353
13. ADDITIONAL CAMERA FUNCTIONS	358
13.1 Auto Lighting Optimizer and Highlight Tone Priority	358
13.2 White Balance	360
13.3 Picture Styles.....	366
13.4 Interval Timer Shooting	373
13.5 Sensor Cleaning	373
14. THE IMAGE TAKING PROCESS	375
14.1 Still Subjects	375
14.2 Moving Subjects	377
14.3 Putting it all into Practice	379
15. EXTERNAL FLASH	381
15.1 External Speedlite Control Settings.....	381
15.2 Flash Function Settings	385
16. Wi-Fi and BLUETOOTH FUNCTIONS	390
17. VIDEO - AN INTRODUCTION	408
17.1 Movie Shooting Menus.....	409
17.1a Movie Shooting 1 Menu	410
17.1b Movie Shooting 2 Menu	416
17.1c Movie Shooting 3 Menu	421
17.1d Movie Shooting 4 Menu	422
17.1e Movie Shooting 5 Menu	427
17.1f Movie Shooting 6 Menu	429
17.1g Movie Shooting 7 Menu	434
17.1h Movie Shooting 8 Menu	444
17.1i Additional Movie Menu Items.....	448
17.2 Video Settings	450
17.3 Manual Exposure Settings for Video	458
17.4 Movie Playback and Editing	461
18. COMPOSITION	464
19. LENSES	474
19.1 Lens Notations.....	474
19.2 Fixed Maximum Aperture vs. Variable Maximum Aperture Lenses	479
19.3 RF Lenses and Mount Adapters.....	480
20. PHOTOGRAPHY ACCESSORIES and BOOKS	483
20.1 Canon EOS R8 Accessories	483
20.2 Photography Accessories.....	485
20.3 Digital Photography Books	488

21. CONCLUSION 490
 Updates to the Text 491
 About the Author..... 494

1. GETTING STARTED with the CANON EOS R8

1.1 Introduction to the EOS R8

Following the success of the previous full-frame EOS R models including the EOS RP, Canon has introduced an improved enthusiast-level full-frame camera, the EOS R8. The camera shares the fast DIGIC X processor, high resolution 24.2 MP CMOS sensor, powerful AF system, and video quality of the EOS R6 Mark II. The camera's 4,897 AF points cover nearly the entire frame, which will allow you to automatically detect, focus on, and track subjects, faces, and eyes throughout most of the scene. The intelligent subject detection function can automatically detect people, animals including cats, dogs, birds, and horses, and vehicles including motorsport cars and motorcycles, aircraft, and trains. Eye detection can now be set to prioritize the left or right eye, and the HDR shooting mode includes an option for capturing moving subjects. The EOS R8 also offers a rapid 40 frames per second continuous shooting speed when using the electronic shutter, an articulating touch screen, and built-in Wi-Fi and Bluetooth.



Figure 1.1 - The Canon EOS R8 with the RF 24-105mm F4 L IS USM lens.

The EOS R8 includes familiar Canon controls and menus, plus new or modified controls for quickly accessing and changing settings, such as the M-Fn Button and the versatile

Canon EOS R8 Experience

Flexible-Priority AE (Fv) Shooting Mode which enables you to control any of the exposure parameters. Plus the EOS R8 boasts several advanced video capabilities, including 4K video using the entire width of the sensor (oversampled from 6K), *Dual Pixel AF* for tracking moving subjects, HDR movies, and the High Frame Rate movie option for creating slow motion video.

The EOS R8 offers great image quality at high ISO settings for low-light shooting, with the native ISO range of 100 to 102,400, expandable up to 204,800 (High) and down to 50 (Low). Plus, it offers Time-Lapse movie shooting, in-camera processing features such as Multiple Exposures, Focus Bracketing, and HDR shooting, and lens correction features for chromatic aberration, distortion, and diffraction. The cRAW file format enables you to capture files that are 40% smaller than RAW files, yet display no noticeable loss of image quality in most shooting situations. And the HDR PQ option allows you to save HEIF format images, with expanded dynamic range. A new *Hybrid Auto* shooting mode will capture short videos with each still image, which are then combined into a "digest movie."

The *Auto White Balance* setting offers the option of either maintaining or eliminating the warm tones of incandescent lighting. The responsive touch screen can be used to quickly navigate menus, change settings, review images, and to position the focus point during both Live View and viewfinder shooting. When capturing images with the high-resolution sensor, small camera movements can negatively impact image sharpness, so Canon has included an electronic *Silent Shutter* option that eliminates any movement or sound, and a *Bulb Timer Exposure Time* setting so that the camera doesn't need to be touched during Bulb exposures. The DIGIC X processor allows for faster frame rates and extended burst rates, including 40 fps when using the electronic shutter. The *RAW Burst Mode* can capture a 30 fps burst, with 0.5 second pre-shooting buffering. The processor also allows for faster video rates and the ability to buffer and pre-record video for up to five seconds.

The electronic viewfinder of mirrorless cameras differs from the optical viewfinder of a dSLR. The high-resolution (2.36 million dot) OLED viewfinder, with 100% coverage, will enable you to preview the exposure, white balance, Picture Style settings, and depth of field of the final image as you shoot, as well as to make use of a virtual horizon level to help keep your images straight. You can also access the Quick Control Screen and a customizable M-Fn menu while looking in the viewfinder, so that you can change numerous camera settings without taking the camera from your eye. And you can utilize focus peaking and scene-magnification in the viewfinder, as well as the Focus Guide rangefinder function, to assist with manual focusing.

While many of the controls of the EOS R8 will be familiar to Canon shooters, there are some notable additions. The Multi-Function Button (M-Fn Button) on the top of the camera can be used to quickly access and change eight shooting settings of your choice, without having to remove your eye from the viewfinder while shooting. The Cross Keys are used to position the autofocus point, area, or zone. The rear touch screen can also be used to position the active autofocus point while shooting. And video

shooting is accessed by turning the Still Photo Shooting / Movie Recording Switch to the Movie Mode icon.



Figure 1.2 - 1925 Franklin Sport Runabout - Heritage Museum, Sandwich, Massachusetts - Canon EOS R8, Shutter speed 1/80, Aperture f/4.0, ISO 10,000.

The Flexible-Priority AE (Fv) Shooting Mode, first introduced on the EOS R, allows you to control any of the exposure parameters, including the shutter speed, aperture setting, ISO setting, and exposure compensation, or to quickly set any of the parameters to *Auto* and let the camera control them. You can choose to control all of the parameters yourself, as with Manual (M) Mode, or to control some of them and let the camera control the others, as with Av and Tv Modes, or allow the camera to control all of them by setting them all to *Auto*, similar to Auto+ Mode, all while remaining in the same Fv Shooting Mode.

The 4,897-point autofocus system offers face and eye detection, plus a subject detection function which can be set for people, animals, or motorsport vehicles, with the option to focus on key details of vehicles. Subject tracking is now available for use with all of the autofocus AF area modes, and the new *Flexible Zone AF* area modes allow you to customize the size and shape of the active autofocus area.

For capturing video, the EOS R8 offers HD and 4K UHD video with a choice of frame rates and compression options. The 4K setting will make use of the full width of the sensor, and will generate a 4K movie oversampled from 6K. Video recording also offers a *Focus Breathing Correction* option, which corrects for an effect where the angle of

view changes as the lens focal length changes when zooming. Video also offers zebra stripes and false color display, to assist with obtaining the proper exposure. A *Recording Emphasis* feature can be enabled to display a blinking red border around the frame when recording is in progress.

The camera can capture HDR PQ video, with an expanded dynamic range. The 10-bit Canon Log gamma output option will capture a wide dynamic range when recording to the memory card or to an optional external device, retaining details in both the shadows and the highlights, with the *View Assist* feature to help visualize the final, processed footage. Audio features include built-in stereo microphones with *Wind Filter* and *Audio Noise Reduction* options. 8.3 MP video still *Frame Grabs* can be saved from 4K video files, and the *High Frame Rate* option allows you to shoot HD videos at 179.82/150.00 fps and 119.88/100.00 fps, which can then be played back in slow motion.

The EOS R8 makes use of the RF lens mount, and a growing number of RF lenses are designed for the EOS R system. They have a 54mm mount, which sits close to the sensor plane, a 12-pin electronic communication system with the camera, and optical image stabilization. The RF lenses all include a Control Ring which can be customized to quickly change one of the shooting settings including shutter speed, aperture, ISO, and exposure compensation. These lenses also communicate lens information directly to the viewfinder, allowing you to view the current focal length.

Three different lens mount adapters enable you to use EF and EF-S lenses with the EOS R8. The *Mount Adapter EF-EOS R* is the basic adapter that allows you to connect EF and EF-S lenses. The *Control Ring Mount Adapter EF-EOS R* includes a Control Ring, similar to the ring on the RF lenses, which can be used to change various shooting settings. The *Drop-in Filter Mount Adapter EF-EOS R* allows you to insert a circular polarizing filter or variable ND filter. This makes it possible to use these types of filters with any lens, including ultra-wide-angle lenses and tilt-shift lenses.

With its high-resolution, high-quality image sensor, 4,897-point autofocus system with face, eye, and subject detection and tracking, up to 40 frames per second continuous shooting speed, DIGIC X processor, and high ISO capabilities in low light, the Canon EOS R8 enables photographers to consistently capture sharp, clean, and well-exposed images. The EOS R8 is clearly a powerful, advanced tool for digital photography and is fully capable of capturing professional quality images in most any situation you wish to use it.

But the EOS R8 is merely a tool. It is up to you to make use of its features and capabilities to create the images you envision. While the camera's manual will tell you about the settings and controls, how to change them, and their intended functions, this guide will build upon that and explain when and why you may want to use and customize them. Every button, feature, menu item, and Custom Function setting of the EOS R8 is there for a reason: to help you capture the images you want. Some of them are more useful to different types of photographers and shooting situations and you don't necessarily need to learn and use them all immediately, but this guide will help to give you the knowledge to confidently use the ones that turn your Canon EOS R8 into

an image capturing tool that works best for you and the photography situations you work in.

1.2 Take Control of Your Camera

Since the Canon EOS R8 is a tool to take the images *you* want to take, you obviously can't always allow the camera to make decisions for you. You have to take control of the camera to ensure that you capture exactly the images you intend - by autofocusing precisely where you want, setting the aperture or shutter speed that you want, and obtaining the exposure you want. While it is an intelligent camera, the EOS R8 cannot read your mind and your intentions and does not know that you wish to focus on and properly expose a detail of a fallen tree, while making the closer details and the background appear out of focus, with the leaves and twigs captured still and not blurred from the motion of the wind, in a shaded setting, on a sunny day (see *Figure 1.3*). You have to tell the camera to do all of this through the various controls and settings, such as the autofocus AF Area (focus on a specific part of the tree), the Exposure Metering Mode (properly expose for the tree bark and the scene), the Aperture setting (the out-of-focus near leaves and background), the Shutter Speed (freeze the motion of the leaves and twigs), the ISO setting (relatively low-light setting) and the White Balance setting (sunny day).



Figure 1.3 - Fallen Birch Tree, Whipple Hill, Lexington, Mass. - Autofocus, exposure metering mode, aperture, shutter speed, ISO, and white balance all considered in capturing this image. Shutter speed 1/500, Aperture f/2.8, ISO 1250.

Canon EOS R8 Experience

One has to think about all this stuff for every photo? Well, yes, that is what digital photography is all about! At least if you wish to consistently create the well-made, interesting, and compelling images you envision. And that is why the EOS R8 has all the buttons, controls, settings, Custom Functions, and features for you to make use of.

Learning to use and get the most from a highly advanced mirrorless camera like the EOS R8 takes time, practice, patience, mistakes, and experimentation. If you have switched or upgraded from a previous model such as the original EOS R, one of the 7D models, the 90D or one of its predecessors, or a Rebel model, you are in for a treat. The additional features and capabilities will more easily help you to capture photographs that you may have been limited in consistently attaining before. The versatile and accurate autofocus system, highly customizable camera controls, plus the advanced exposure metering system and high ISO capabilities of the EOS R8 will help you capture sharp, detailed images of subjects and moments that previously you may have missed.



Figure 1.4 - Great Blue Heron Taking Flight, Arlington, Mass. - Shutter speed 1/1600, Aperture f/4.0, ISO 640.

If you are relatively new to digital photography and are still in the process of learning all the controls of an advanced digital camera and the exposure concepts of digital photography, you have perhaps ventured into the proverbial deep end of the pool by choosing the advanced EOS R8! But don't worry, this book will help guide you through the features, controls, and capabilities. Be sure to take it slowly and patiently as you

learn the features and concepts that I will explain. With practice and experience you will soon be shooting with confidence and can begin to take advantage of your camera's more advanced functions. Even if you are an intermediate photographer, don't expect to just pick up all the new information at once, in one or two readings of a single book. In fact, you wouldn't want to, as the never-ending journey of learning and mastering photography is a big part of what it's all about! Try not to become frustrated if you don't quite understand something or aren't always getting the results you desire. Instead learn the controls, functions, settings, and concepts bit by bit, try them out in real life shooting situations, and return to this guide, the manual, and other photography books to address questions and problems you encounter. Continue to learn and to photograph often and it should all begin to come together, sometimes slowly and sometimes in rapid bursts of discovery and understanding.

1.3 Using This Guide

There are many different ways to use an advanced digital camera and its controls to capture images, and many diverse situations in which photographers work. I'm going to concentrate on the techniques that I believe are the most practical, useful, and effective for the majority of photographers using the EOS R8, while also explaining how settings can apply to specialized uses. The settings and techniques I discuss will apply to various types of photography including general photography, nature, action, portrait, and travel photography. Once you have a firm grasp of the controls, settings, and basic techniques you will have the tools and knowledge to address different issues, specific situations, and challenging scenes. I encourage you to then experiment and continue to learn, and to find the techniques that work best and are most comfortable or intuitive for you.

The EOS R8 is a highly sophisticated tool that deserves to be used to its full potential, and that involves taking control of your camera and its functions, which means taking it off *Auto+* and *Program AE* Shooting Modes, and off automatically selected autofocus points (when not needed). While this may be more challenging at first, these are the techniques that are necessary to take full advantage of the capabilities of any mirrorless or dSLR camera, including the EOS R8, and will lead you to having more control and consistency over your image making. Hopefully this will inevitably lead to better images!

This guide is most effective when used with the camera in your hands. That is the best way to directly follow and understand the controls, functions, and settings as they are being explained. It is also intended to be used in addition to the camera's manual, not to completely replace it, so every bit of information in the *Canon EOS R8 Advanced User Guide* will not be repeated here. Among the official manual's often brief descriptions and sometimes frustratingly incomplete explanations, there is some very valuable information, as well as the basics for buttons, controls, and how to access and change all the settings. And I will refer to the manual for very specialized or rarely used functions that are well-explained there. In this guide, the references to the *Canon EOS R8 Advanced User Guide*, including page numbers, are based on version CT2-D272-B

of the Canon manual. A PDF version of the *Canon EOS R8 Advanced User Guide* can be obtained from the Canon website:

<https://cam.start.canon/en/C013/>



Figure 1.5 - Shop Sign, Concord, Massachusetts - Shutter speed 1/800, Aperture f/4.0, ISO 100.

The site also contains links to additional manuals, software, and apps. If you have an iPad or tablet you will find that it is helpful to download the manual onto your device for reading and reference (along with this e-book). As you can see, there is a lot to make sense of regarding terminology and controls, so I recommend that you familiarize yourself with the controls and displays of the camera body, as shown on pages 29-34 of the *Canon EOS R8 Advanced User Guide* and explained in the following chapter of this book, as well as read through the Canon manual at some point and attempt to understand or absorb as much as possible. Yes, some of it may be complicated and confusing at first, but this guide will explain and clarify the numerous buttons, controls, menus, functions, and settings and explain how, when and why you will want to use them in your photography.

Also be sure to read and follow all the official use, safety, and handling instructions and precautions explained in the manuals provided with the camera and software, including those on pages 23-28 of the *Canon EOS R8 Advanced User Guide*. Additional cautions throughout the Canon manual are important to read because they explain things such as the high internal temperature that the camera can reach due to prolonged Live View

3. MENU SETTINGS

3.1 Introduction to Setting Up the EOS R8

The Menus and Custom Settings of the EOS R8 allow you to have greater, more precise control over how your camera functions. They are an important part of what makes this camera a much more powerful and exacting tool than entry-level digital cameras, and they allow you to customize your camera to work for you, to work how *you* work. Using them you can also fine-tune settings and operations including white balance, metering, exposure, and autofocusing. I highly recommend that you carefully go through these menus and change the settings to the options that allow you to use the camera in the manner that works best for you and your shooting needs, and to change them accordingly for different types of shooting situations.



Figure 3.1 - Old Hill Burying Ground, Concord, Massachusetts - Shutter speed 1/1250, Aperture f/4.0, ISO 100.

Some of the Menu items are only used when shooting, reviewing, or processing images, but several of them should be set up in advance. Below are explanations and recommended typical settings for the Menu Settings and the Custom Settings of the Canon EOS R8. I realize that reading these sections at the beginning of this book presents a conflicting situation in that these menu items need to be explained first so that you can initially set up your camera, but you may not yet have the knowledge to fully understand all these menu items until you read through the rest of this guide! So

don't get overwhelmed if you don't yet understand the settings or terminology used to describe the Menus and Custom Settings and their options. You will likely wish to return to them later after you have begun to better understand your camera and its controls and start to determine how you want to work.

And I understand that it is not as compelling to read through these lists of menu items and camera control settings as it is to read the more-flowing instructional text later in the book. But you will begin to learn much about the EOS R8 as you patiently work through the Menus and the Custom Settings chapters. As I mentioned earlier, this section will often refer to upcoming chapters and sections, but it is not necessary for you to jump ahead. This is merely a “heads-up” that the menu item or function that you are currently setting up will be explained in detail later in the guide, in the applicable section of the text (such as **Autofocusing** or **Metering Modes**, etc.).

Also, if you don't yet understand some of the settings or why you might wish to change them, leave those on the default or recommended settings for now. If you have worked with a recent Canon EOS R model, a recent Canon 7D or 5D model, or even a 70D/80D/90D before using the EOS R8, you will find that many of these Menus and Custom Settings options are similar, and you may wish to continue to use most of the same settings that you have determined work best for you. However there are several new additions with the EOS R8, including those that apply to a mirrorless camera and to the autofocus system.

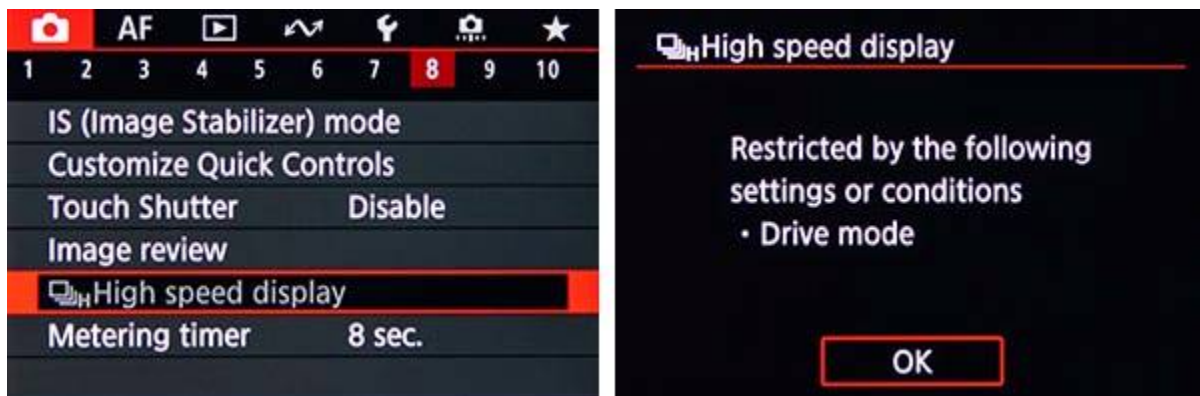


Figure 3.2 - If a menu item is greyed-out and inaccessible (left), you can press the SET Button to learn what is causing the conflict (right). However, you will still need to determine that, in this example, the Shooting Mode Dial needs to be set to B - Bulb.

Important Note About Menu Conflicts: As with most current dSLR and mirrorless cameras, the EOS R8 has a few menu setting conflicts that may drive you crazy if you are not aware why they are occurring. Most notably, some settings will be inaccessible in the menus and you will not be able to select them if a “conflicting” setting is enabled. These are not actually arbitrary quirks, but are typically due to logical conflicts or camera limitations. The EOS R8 has helpfully added explanations of some of the conflicts when certain menu items are accessed, as well as other types of tips and warnings (see *Figure 3.2*). Examples include certain functions like *Multi Shot Noise*

Reduction, which is not accessible when the camera is set to capture files in the RAW or RAW+JPEG image format. You must then set the *Image Quality* to one of the JPEG-only settings in order to access that setting. The use of *Auto Exposure Bracketing*, *White Balance Bracketing*, or *Long Exposure Noise Reduction* will also conflict with other settings including *Multi Shot Noise Reduction*. Similarly, the use of *Auto Exposure Bracketing*, *White Balance Bracketing*, *Multi Shot Noise Reduction*, or *Multiple Exposure* will conflict with using the built-in HDR function. And *Multiple Exposure* cannot be set if *White Balance Bracketing*, *Multi Shot Noise Reduction*, or *HDR* is set. If the *Dual Pixel RAW* item in the *Shooting 1 Menu* is enabled, you will not be able to access the *High-Speed Continuous +* or *High-Speed Continuous* drive mode options.

While it is obviously not realistic for you to remember all of these conflicts, you can begin to see a pattern in the examples above. If you do encounter an inaccessible menu item, remember to check your *Image Quality* setting (RAW vs. JPEG), and then make sure the above-mentioned functions are disabled, such as *Dual Pixel RAW*, *Bracketing*, *HDR*, or *Multi Shot Noise Reduction*, as many of the same ones simply conflict with each other. And I will mention these conflicts in the explanations of the applicable settings throughout this guide.

Important!: Set the Shooting Mode to Av, Tv, or M before you go through the menu settings below, because all the options don't appear in the Menus if your camera is set on Auto+.

To navigate the menus, use the Info Button to quickly jump between the primary menu tabs (*Shooting*, *AF*, *Playback*, etc.), use the top Main Dial or left and right Cross Keys to access each individual menu within a tab (*Shooting 1*, *Shooting 2*, etc.), and use the top-rear Quick Control Dial or the up and down Cross Keys to navigate the items listed in each menu. Press the SET Button to access a menu item's options. Or you can use the touch screen to navigate the menus.

Also, you will likely wish to disable a couple settings right away - the *Mode Guide* and the *Feature Guide* in the *Setup 2 Menu*. If these options are enabled, descriptive screens or text will appear when changing the Shooting Mode or when using the Quick Control Screens.

3.2 Menu Setup Spreadsheet

In conjunction with this book, I have also created a comprehensive *Canon EOS R8 Menu Setup* spreadsheet, with recommended settings for the applicable Menus, all of the Custom Functions, plus some shooting and exposure settings (see *Figure 3.3*). It has complete and separate camera setup recommendations for different types of shooting, including:

General / Travel / Street
Landscape / Architecture
Action / Sports
Moving Wildlife / Birds

Canon EOS R8 Experience

Studio / Portraits

Concert / Performance

The *Canon EOS R8 Menu Setup* spreadsheet can be downloaded at the link below. Use the discount promo code shown just below for \$3.99 off, so that you can download the spreadsheet for free:

Promo Code: EOSR8MENU

<http://www.fullstopbooks.com/setup-guides/>

Shooting 1 Menu	General / Travel / Street (*1)	Landscape / Architecture
Image Quality (*3)	RAW or cRAW, and/or Fine-Large JPEG	RAW or cRAW
Dual Pixel RAW (*4)	Disable	Disable
Photo Shooting Cropping / Aspect Ratio	Full Frame, or use 1.6x for more "virtual zoom"	Full Frame
Crop/Aspect Ratio>Shooting Area	(user preference, Masked or Outlined)	(user preference, Masked or Outlined)
Digital Tele-Converter	(can be used for a digital zoom)	(can be used for a digital zoom)
Shooting 2 Menu		
Exposure Compensation/AEB	(use as needed)	(use as needed)
Photo Shooting ISO Speed Settings		
>ISO Speed (submenu of above)	(set as needed)	(set as needed)
>ISO Speed Range (submenu)	50-12,800, or user preference	50-12,800, or user preference
>Auto ISO Range (submenu)	100-6400, or user preference	100-6400, or user preference
>Minimum Shutter Speed (submenu)	Auto	(don't use Auto ISO, select your ISO)
HDR Shooting HDR PQ	(use for HDR PQ shots)	(use for HDR PQ shots)
HDR Mode	(use for HDR shots)	(use for HDR shots)
Auto Lighting Optimizer	Disable and Disabled in M or B Modes	Disable and Disabled in M or B Modes
Highlight Tone Priority	Disable	Disable
Shooting 3 Menu		
Anti-Flicker Shooting	Enable for lighting that flickers such as fluorescents	Disable
High-Frequency Anti-Flicker Shooting	Enable for lighting that flickers such as LED	Disable
External Speedlite Control	(see guide)	(see guide)
Metering Mode	Evaluative	Evaluative, or user preference
Shooting 4 Menu		
White Balance	Auto, or set for situation	(set for lighting)
Custom White Balance		(use to set a Custom White Balance if desired)
White Balance Shift / Bracketing	(advanced, use as needed)	(advanced, use as needed)
Color Space (*5)	sRGB (*5)	sRGB (*5)
Picture Style	Standard, or user preference for JPEG images	Fine Detail, or user preference for JPEG images
Clarity	0, or user preference for JPEG images	0, or user preference for JPEG images
Shooting Creative Filters	(user preference - for filter effects)	Off
Shooting 5 Menu		
Lens Aberration Correction (*6)		
Lens Aberration Correction > Peripheral Illumination (*6)	On	On
Lens Aberration Correction > Distortion Correction (*6)	On	On
Lens Aberration Correction > Digital Lens Optimizer (DLO) (*7)	On	On
Lens Aberration Correction > Chromatic Aberration (*7)	On (will be enabled but not displayed when DLO is enabled)	On (will be enabled but not displayed when DLO is enabled)
Lens Aberration Correction > Diffraction Correction (*7)	On (will be enabled but not displayed when DLO is enabled)	On (will be enabled but not displayed when DLO is enabled)
Long Exposure Noise Reduction (*8)	Auto, or user preference	Auto, or user preference
High ISO Speed Noise Reduction (*8)	Standard	Standard

Figure 3.3 - A small detail of the Canon EOS R8 Menu Setup Spreadsheet.

The suggested settings on the spreadsheet are further explained in this chapter and throughout this guide, so it is best to use the spreadsheet hand-in-hand with the explanations in this book. And as you read through the Menus and Custom Function settings, perhaps make notes of how you may wish to set them or adjust them for the different types of scenes and situations you photograph. Please keep in mind that the reason the Canon EOS R8 offers so many menu items and customization options is that photographers have different needs and work in different ways, and it is best to determine which settings *you* need or prefer rather than simply rely on the suggested settings from another photographer or website.

3.3 Photo Shooting Menus

Note that the Photo Shooting Menus are available when the Still Photo Shooting / Movie Recording Switch is turned to still photos, and the Movie Shooting Menus are accessed by turning the switch to the video icon.

3.3a Photo Shooting 1 Menu



Figure 3.4 - Photo Shooting 1 Menu.

Image Quality

You are putting a lot of effort into taking your images, and the EOS R8 provides an exceptional sensor on which to record them. You should take advantage of this and make sure the files are of the best possible quality. Set to either the *RAW* setting if you “shoot RAW” (capture images in the RAW format), or set for the highest quality JPEG setting (*JPEG Large-Fine*) if you shoot JPEG. Or choose both combined (*RAW + JPEG*) if you need both types of files (see *Figure 3.5 - Left*). Use the lower quality settings only if you have a specific need for small images and files, such as if you only require a small image for online use. The EOS R8 also offers the HEIF file format, which is used when capturing HDR PQ images. HDR PQ is enabled in the *Shooting 2 Menu > HDR Shooting HDR PQ*.

The EOS R8 allows you to choose between standard RAW and cRAW. The cRAW format provides smaller-sized RAW files. A lossy compression algorithm is used, resulting in files that are about 30% to 50% smaller than a typical full-size RAW image file. With their smaller file size, they are intended to allow photographers to save more images on their memory cards and to ease the processing workflow, such as transferring, opening, and working on files. Yet, as a RAW file they contain more data than a JPEG and allow for greater latitude in processing. Although some image information is lost with a cRAW file, tests have shown that the difference in image quality compared to a RAW file is very difficult to detect in most shooting situations.

<https://www.the-digital-picture.com/Canon-Cameras/Canon-C-Raw-Image-File-Format.aspx>

The differences and the pros-and-cons of each format will be explained in the **Image File Formats - JPEG, HEIF, and RAW** section of Chapter 6. In the *Image Quality* menu item, use the top Main Dial to select the RAW format, and the left and right Cross Keys to select the JPEG and HEIF quality. If you wish to only capture one format, set the other format on the dash (-) icon to disable it.

The image quality settings can also be accessed via the image quality icons on the shooting settings Quick Control Screen (see *Figure 3.5 - right*), or by pressing the Q Button during shooting to access the Live View Quick Control Screen on the rear Screen or in the Viewfinder. With the Live View Quick Control Screen, use the top Main Dial or Cross Keys to change the JPEG / HEIF setting, and press the Info Button or icon to access the RAW settings (see *Figure 3.6*).



Figure 3.5 - Image Quality Settings - Left: Select the desired RAW format and/ or the highest quality JPEG format. Right: You can also use the shooting settings Quick Control Screen to change the Image Quality Settings.



Figure 3.6 - Left: Accessing the Image Quality settings on the Live View Quick Control Screen. On the Live View screen, press the INFO Button or icon to choose the RAW Image Quality (right).

Dual Pixel RAW

This is a Canon feature that was first introduced on the Canon 5D Mark IV (see *Figure 3.7 - left*). It takes advantage of the Dual Pixel technology of the image sensor to allow different post-processing options in Canon's Digital Photo Professional (DPP) software,

including *Image Micro-adjustment*, *Bokeh Shift*, and *Ghosting Reduction*. When *Dual Pixel RAW* is set for *Enable* in this menu, and you are shooting RAW or cRAW images, the EOS R8 will capture these special types of images (see *Figure 3.7 - right*). Typically you will want to disable this feature, unless you intend to make use of these small adjustments.



Figure 3.7 - Left: Enabling Dual Pixel RAW. Right: An image captured with Dual Pixel RAW, as shown on the Shooting Information Display during playback, as indicated by the "DPR" at the lower center of the screen.

The Dual Pixel technology of the sensor involves each pixel consisting of two photodiodes, and as Canon explains:

"This sensor design means the sensor can receive an A and B signal from the subject and detect any phase differences between the two signals, allowing them to attain focus as part of the Dual Pixel AF system. When capturing the image, the sensor obtains the picture info from the combined A and B image signals. This technology makes both focusing and image shooting possible with the same sensor."

"During Dual Pixel RAW shooting, a single RAW file saves two images into the file. One image consists of the A+B combined image data and the other only the A image data. This means the Dual Pixel RAW files contains both the normal image and also any parallax information, which can be measured and subject distance information extrapolated. As Dual Pixel RAW images contain two images, they are therefore double the file size of normal RAW images."

<http://www.canon-europe.com/cameras/eos-5d-mark-iv/dual-pixel-raw/>

These two images in one file allow for the unique adjustments in the DPP software. *Image Micro-adjustment* allows you to slightly adjust the focus of the image in post-processing, to attempt to attain maximum sharpness at the in-focus area of the scene if focus is slightly off. *Bokeh Shift* enables you to slightly adjust the out-of-focus areas, for example an out-of-focus object partially in front of the subject. *Ghosting Reduction* helps to reduce haze or flaring on an image, caused by internal lens reflections.

Canon EOS R8 Experience

You will need to set the Image Quality to RAW or cRAW, and then enable Dual Pixel RAW in this menu. The *High-Speed Continuous Shooting+* and *High-Speed Continuous Shooting* drive modes are not available when capturing Dual Pixel RAW images, and the continuous shooting speed and maximum burst rate will be reduced. For best results when making use of Dual Pixel RAW adjustments, Canon recommends capturing the images at a focal length of 50mm or more, an aperture setting of f/5.6 or wider (f/4, f/2.8, etc.), and an ISO setting of 1600 or lower. They also suggest the following subject distances, based on the lens focal length:

50mm focal length - 1 to 10 m (3.3 to 32.8 ft)

100mm focal length - 2 to 20 m (6.6 to 65.6 ft)

200mm focal length - 4 to 40 m (13.1 to 131.2 ft)

Note that you can only apply one of the Dual Pixel RAW adjustments to an image, and Dual Pixel RAW cannot be used with Multiple Exposure, HDR shooting, RAW burst mode, focus bracketing, electronic shutter, or one-touch image quality (when a camera button is assigned to temporarily change the image quality).

When working in Canon DPP, access the *Tools* menu and select the *Start Dual Pixel RAW Optimizer* item to open that window. The palette on the right side of the screen will allow you to select among the available processing options (see *Figure 3.8*).



Figure 3.8 - The Dual Pixel RAW Optimizer window of Canon's Digital Photo Professional (DPP) software, showing the available adjustments at right.

In practice, many reviewers have found that these Dual Pixel RAW adjustments are often very minor, and typically not worth the effort and the very large file sizes of the images. However it is an interesting technology that may be improved on over time and

may offer more significant adjustments in future camera models. Again, leave this disabled unless you intend to experiment with it.

Still Image Cropping / Aspect Ratio

You can use various image aspect ratios when capturing images either *FULL* (standard, 3:2 full-sensor, 35mm size), *1.6x crop* (APS-C sensor size), *1:1* (square), *4:3* (used in point-and-shoot and Four-Thirds cameras), or *16:9* (wide-screen ratio), (see *Figure 3.9 - left*). The active area will be displayed or indicated with the image view on the rear Screen and in the Viewfinder so that you can preview the selected image area and ratio. For example, with the 1.6x crop setting the scene will appear “zoomed-in” in order to fill the entire display (see *Figure 3.9 - right*). You can use the *Shooting area* option of this menu to either mask or to outline the cropped area for the other aspect ratio settings (see *Figure 3.10*). Press the Info Button when viewing this menu to access the Shooting Area options. When using an EF-S lens, the 1.6x crop setting will automatically be used, and the other options will not be available.

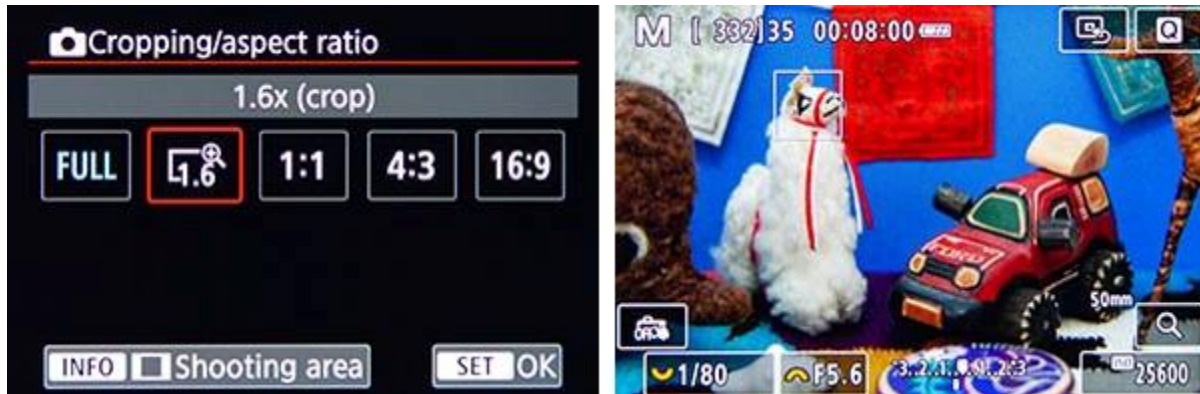


Figure 3.9 - Left: The Still Image Cropping/Aspect Ratio options. Right: The 1.6x Crop setting, as displayed on the rear Screen. Notice that the entire scene will appear “zoomed-in” on the displays, with this setting.

When shooting in JPEG format, the image file will be saved at the designated ratio. When shooting in RAW format, the full image (3:2) will be saved and the selected aspect ratio will be part of the image metadata that will be applied when opening the image in the Canon Digital Photo Professional (DPP) software, except when using the 1.6x crop setting. With the 1.6x crop setting, only the 1.6x cropped area of the image will be recorded, even when shooting in RAW. Note that when capturing images at ratios other than *FULL* 3:2, the images will make use of fewer than 24.2 megapixels, as only a portion of the sensor will be used to record the image. Generally you will likely wish to keep this on *FULL* in order to take advantage of the entire sensor, and you can always then crop your images in post-processing, unless you are working on a project where you desire all your images to be of a specific alternate ratio.

Note that these alternate aspect ratio options do not apply to movie shooting or the Multiple Exposure feature. You can view a chart on page 917 of the *Canon EOS R8*

6. PLAYBACK and IMAGE FILE FORMATS

6.1 Image Playback

You can instantly review the image you just captured on the rear Screen, and press the Playback Button to view all of the images and movies currently on the memory card, and more closely inspect an image and the shooting settings used. You can then use the image playback Quick Control Screen to perform some editing functions to the images, such as rotating an image, resizing a JPEG, adding a rating, cropping an image, processing a RAW file to output a JPEG image. The EOS R8 also offers the option of a “one-button zoom” feature to quickly inspect an image at 100%, and the option to overlay a variety of grids to help review the composition.

Viewing and Zooming - To view the images (and movies) currently on the memory card, press the Playback Button. Turn the top-rear Quick Control Dial or swipe the touch screen to navigate to previous or subsequent images, and press the Magnify Button and then turn the top Main Dial to have a closer look. Use the top Main Dial for image jump, to jump 10 images at a time. You can also change this to jump by other criteria such as rating, protected images, or movies only.

As first introduced on the 5D Mark III, the EOS R8 has the single Magnify Button rather than the zoom-in and zoom-out buttons. During image playback, press the Magnify Button, then turn the top Main Dial to zoom in or out on an image (see *Figure 6.1*). Use the *Magnification* item of the *Playback 3 Menu* to set the desired initial Magnification level when the Magnify Button is pressed. Setting it for *Actual size (from selected point)* will allow you to simply press the Magnify Button and view the last image at 100% magnification, at the area of the active AF Point, so that you can quickly inspect focus. Setting it for *1x (no magnification)* will then allow you to use the dial to zoom-in as desired. You can also select 2x, 4x, 8x, or 10x magnification options, and choose to zoom in at the center of the frame, or the area of focus.



Figure 6.1 - Image Playback - Left: Press the Playback Button to view the captured images. Right: Press the Magnify Button and turn the top Main Dial to zoom-in and inspect the details and the focus of an image.

When viewing a magnified image, use the Cross Keys or touch screen to pan around the image, and use the top-rear Quick Control Dial to view previous or subsequent images at the same magnification level. This can be handy for inspecting and comparing a detail or area of focus of similar images. After pressing the Magnify Button you can use the top Main Dial to zoom-out to an index screen with multiple (4, 9, 36, or 100) image thumbnails (see *Figure 6.2*). Use the top-rear Quick Control Dial or the Cross Keys to navigate the thumbnails. If you press the Magnify Button to deactivate the zoom, you can then use the top Main Dial to navigate the index thumbnails screen by screen. Press the Magnify Button again to return to zoom. Recall that you used the *Image Jump* item of the *Playback 3 Menu* to set how the Main Dial functions during individual image playback - it can be used to jump forward or back 10 images or a custom number of images, or jump by date, folder, movies, stills, protected images, or rating. This can help you to quickly navigate through your images. Note that you can also zoom-in on an image that appears immediately after the image is taken (Image Review), by pressing the Magnify Button.



Figure 6.2 - Image Playback - Left: Zoom-out during image playback to view an index screen with multiple images. Right: Continue to zoom-out to view up to 100 thumbnails.



Figure 6.3 - Using the Playback Grid to help evaluate the framing and composition of images. Left: The 6x4 Playback Grid, showing that the car is centered but not properly aligned with the vertical or horizontal grid. Right, the 3x3 grid, showing that the card is aligned horizontally.

Canon EOS R8 Experience

You can turn on the *Playback grid* display in the *Playback 4 Menu*, either 3x3 for the “rule of thirds” grid (see *Figure 6.3*), the denser 6x4 grid to perhaps better evaluate horizontals, verticals, and the horizon, or the 3x3 plus diagonal grid lines.

Information Displays - When viewing a single image during playback, press the Info Button repeatedly to view various information display screens that show camera and shooting settings. You can view just the image with no information, or the image with basic information such as the image number and exposure settings (see *Figure 6.4*). You can also view the Shooting Information Display screen which will show a thumbnail of the image with the brightness histogram plus shooting information (see *Figure 6.5 - left*).



Figure 6.4 - Image Playback - Two of the various playback display options which can be viewed by pressing the Info Button during image playback: Basic Information Display (left), and no information (right).

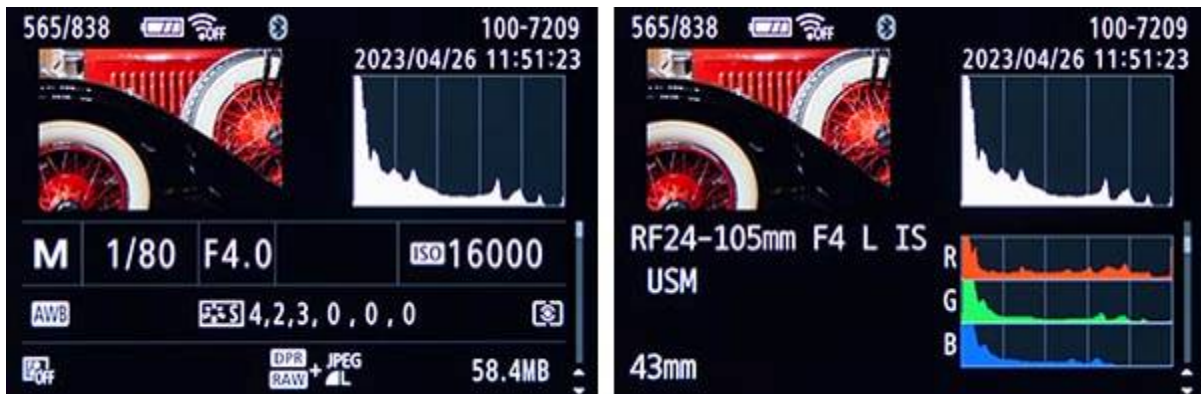


Figure 6.5 - Image Playback - Shooting Information Display, with detailed information (left), and with the RGB Histograms and lens information (right). Press up or down on the Cross Keys to view different information at the lower part of this screen.

As with other recent Canon models, you can then press up or down on the Cross Keys to view additional information at the bottom of the screen, including the RGB Histograms with lens information, or white balance, Picture Style, noise reduction, lens correction, and GPS information (see *Figures 6.5* and *6.6*). Remember that the

Playback information display item of the *Playback 4 Menu* can be used to choose which information is displayed on each of the playback screens, each time you press the Info Button or press up and down with the Cross Keys.



Figure 6.6 - Image Playback - Shooting Information Display, with additional camera settings (left), and with GPS information from a connected smartphone (right).

Highlight Alert - If you have enabled the *Highlight Alert* item of the *Playback 4 Menu*, then as you view the images on the displays, the overexposed areas of the images will blink (see *Figure 6.7 - left*). This indicates that those areas of the image have no detail remaining, and that the Histogram data has spiked or been cut-off at the right side of the graph (see *Figure 6.7 - right*). This will be explained in the **Histograms** section of the **Exposure Part 3** chapter.



Figure 6.7 - Left: Large areas of the white car have been overexposed (due to the use of exposure compensation here), and thus the blinking Highlight Alert shows them mid-blink, in black. Right: The overexposed areas are also represented by the spike along the right side of the Brightness Histogram graph.

AF Point Display - If you have enabled the *AF Point Display* item of the *Playback 4 Menu*, then as you view your images on the displays, the AF Point or Points that were used for autofocus will be superimposed on the image as small red squares. Note that these AF Points are only visible during playback, and will not appear on the actual

images. You can see the red square of the AF Point on the spare tire of the car in *Figure 6.4*.

Playback Quick Control Screen - When viewing a single image, press the Q Button to access the Playback Quick Control screen, which will allow you to quickly access *Protect*, *Rotate*, *Rating*, *Creative Filters*, *Resize*, *Cropping*, *Image Jump*, *Image Search*, *Send Image to Smartphone*, *Creative Assist*, and *Play Linked Digest Movie* (see *Figures 6.8* and *6.9*). You can access these items by pressing up and down on the Cross Keys to navigate to the icon, then turning either dial or pressing left and right with the Cross Keys to change the setting. Or you can use the touch screen icons. This screen makes it much easier to access and change these settings, rather than having to search in the menus to find these items.



Figure 6.8- Quick Control Screen for image playback, with the Rating option selected.



Figure 6.9 - Use the Playback Quick Control Screen to access the Image Jump function (left), and the Resize feature (right).

During image playback, you can press the Erase Button to delete an image. If you have captured RAW plus JPEG/HEIF images on the same memory card, you will be

prompted to select to delete both versions, or just the RAW version, or just the non-RAW version.

6.2 Image File Formats - JPEG, HEIF, and RAW

You are putting a lot of effort into taking your images, so you should make sure the files are of the best possible quality. I recommend that you select the Image Quality of either the highest quality (Fine) and largest (L) JPEG setting if you shoot JPEG (capture JPEG images), or the RAW or cRAW setting if you shoot RAW. Or select JPEG plus RAW if you need both types of files. The EOS R8 includes the Compact RAW (cRAW) option. The cRAW option will save a lossy-compressed RAW image, which will be about 40% smaller than a standard RAW image. However, tests have shown that there will be no noticeable effect on the image quality, except with images that are dramatically underexposed by 4 or more stops. The EOS R8 also offers the 10-bit HEIF format (High Efficiency Image File), used when capturing HDR PQ images. As with JPEG files, HEIF are lossy, compressed files, though they have some advantages over the JPEG format.

Select the Image Quality in the *Photo Shooting 1 Menu* or through the Quick Control Screens (see *Figures 6.10* and *6.11*). If you prefer or need image files that are smaller in size and pixel dimension, such as for immediate output for use on the Internet, choose a smaller JPEG or HEIF size, or the cRAW setting - though note that you can always quickly and easily resize (reduce) a full-size, full-quality JPEG image in-camera using the Playback Quick Control Screen, or you can make use of the *RAW Image Processing* item of the *Playback 2 Menu* or the Playback Quick Control Screen to output a JPEG image of any size from a RAW image.



Figure 6.10 - Image Quality - Use the shooting settings Quick Control Screen (left) to access the Image Quality setting options (right). The Image Quality setting is used for selecting the RAW and the JPEG / HEIF file format, and the desired quality to save your image files. Turn the top Main Dial to select the RAW option, and use the left and right Cross Keys (or the top-rear Quick Control Dial) to select the JPEG / HEIF option, as indicated by the icons on the right side of the screen.

7. AUTOFOCUSING Part 1

7.1 Using Autofocus

One of the essential steps in taking a successful and sharp photo is controlling where the camera autofocuses. If you allow the camera to autofocus by automatically choosing the focus point(s) (such as in *Auto+* Shooting Mode or with *Whole Area AF*) it typically focuses on the closest object, face, or vehicle. This may or may not be what you want to focus on, so you should almost always select where the camera focuses by selecting the desired autofocus AF Point. Or if the situation or subject does not allow you to quickly or easily focus by selecting a specific point, you can instead decide to use an *Expand AF Area* or a *Flexible Zone* as the autofocus area mode.



Figure 7.1 -1962 Chevrolet Corvette - Heritage Museum, Sandwich, Massachusetts - Canon EOS R8, Shutter speed 1/100, Aperture f/4.0, ISO 4000.

By selecting an AF Point, Area, or Zone, you are telling the camera exactly where to autofocus, or where to look to find a moving subject to start tracking. For example, if you are capturing an image of a bird in a tree, you will want to locate the AF Point over the bird, so that the camera will focus on that subject and not on some branches or leaves that are located closer to the camera. However, the EOS R8 boasts several autofocus improvements which can allow it to automatically locate and follow specific types of subjects, including people and their faces and eyes, animals including cats, dogs, birds, and horses, and motorsport cars and motorcycles, aircraft, and trains including key

details on the vehicles. While you will still need to initially locate the active AF Point, Area, or Zone over the intended subject, these features can enable the camera to assist in focusing and tracking a subject.

The autofocus system of the EOS R8 plays a large role in allowing you to capture exactly the shot you intend. In the non-Auto Shooting Modes (P, Av, Tv, Fv, M, and Bulb-B) you can, and should, take control of the autofocus system. The autofocus system is made up of the autofocus related controls, the autofocus AF Operations (also called the AF Mode), the autofocus AF Areas (also called the AF Area Modes), the autofocus AF Points and Zones, and the autofocus related menu and Custom Function items which customize how the AF system works. You will select an AF Operation typically based on if the subject is still (or perhaps only moving slightly or relatively slowly), or if you wish to continuously track and retain focus on a subject that moves both throughout the frame, as well as closer or farther. And you will choose an AF Area based on how large of an area you want the camera to look at to locate or track your intended subject. This can range from a single AF Point, to a wider Zone, to all the available AF Points in the whole frame. You can set the AF Operations and AF Areas in a variety of combinations based on what and how you are shooting. Be sure to read the **Autofocus (AF) Menus** section of the **Menu Settings** chapter first to make sure your camera is properly set up with the various recommended AF settings.

Autofocus works in part by looking for contrast, so you should try to focus (locate the active AF Point seen in the Viewfinder or rear Screen, as in *Figure 7.2*) on a texture or a detail with a pronounced line or some amount of contrast between light and dark. The camera may not be able to focus on a large area of consistent color - such as an all-white wall or clear blue sky - or on a subject that is too dark. It can be disrupted by regular patterns or confused when looking through close objects to objects farther away, such as looking through a fence, and it sometimes might fail to work well in dim light. The *AF-Assist Beam Firing* of the camera or an optional Speedlite (*AF 3 Menu*) can assist in low light situations.

As a mirrorless camera, the autofocus system of the EOS R8 works the same whether you are shooting through the Viewfinder or using the Live View scene on the rear Screen. If you have shot stills or video using Live View of a dSLR camera, you will likely have experienced the slow autofocusing and hunting for focus, which made Live View autofocusing frustrating and impractical for many situations, and virtually eliminated the usefulness of continuous autofocus for video shooting. And in the past it was common that making use of autofocus while shooting in Live View or video was slower, noisier, and more cumbersome than working through the Viewfinder. This has all dramatically changed with the improved *Dual Pixel CMOS AF* autofocus system of the EOS R models. This system, first introduced in the Canon 70D dSLR, resolves the majority of these issues. In addition to allowing continuous focus tracking when shooting video, the autofocus system of the EOS R8 enables continuous focus tracking for stills shooting as well. With previous cameras, when taking a series of continuous images, the Live View autofocus system would track the subject but then lock focus on the first image as soon as the Shutter Button was pressed, and so subsequent images might be out of focus as

Canon EOS R8 Experience

the subject moved. With *Servo AF Operation* of the EOS R8, you can continue to take a series of continuous images, and the camera will continue to track the moving subject and update the focus for each image.

So with the autofocusing of the EOS R8, you will be able to accurately focus quickly, without the camera hunting for focus, as well as to successfully track moving subjects and maintain smooth and accurate continuous focus.



Figure 7.2 - Making use of the camera's Dual Pixel CMOS AF capabilities to quickly and smoothly change focus from one area of the scene to another. Here the focus is changed from the llama figure's head (left) to the giraffe figure's head (right). This can also be used prior to or during movie recording, by simply tapping on the desired area of the rear Screen.

Canon's *Dual Pixel CMOS AF* is a sensor-based phase-detection autofocus system which allows the camera to quickly determine both how much a subject is out of focus and in which direction it needs to correct. (By sensor-based, it means that no mirror and separate autofocus sensor are required to temporarily or partially divert the light for focusing, as is done with dSLR viewfinder autofocusing.) Previously, dSLR Live View autofocusing relied on either contrast-detection systems, which had to test and hunt to determine which direction to correct, or hybrid systems which used phase-detection to get the subject close to focus and then contrast-detection to fine-tune the final focus. And with previous systems, a limited number of separate, dedicated phase-detection pixels were located about the sensor. However with the EOS R8, dedicated phase-detection pixels are located at every pixel over a large area of the sensor's width and height, so autofocusing can occur at virtually any point of a large area of the frame. The autofocusing area is approximately 88% of the width of the frame, and 100% of the height, as indicated by the outer brackets seen on the displays when tracking a subject using *Servo AF* and *Whole Area AF*. Obviously one can see the benefits of making use of this to either immediately focus exactly where you wish, or to track and retain focus on a moving subject when taking the shot, without the issue of losing it if it strays away from, or between, a limited number of AF Points.

Canon's ingenious solution for accomplishing this is to divide each pixel into two photodiodes that act independently for the phase-detection process during

autofocusing, but work together as a single pixel for image capture. Each pixel has a micro-lens that separates the light between the pixel's two photodiodes, and the camera focuses by making use of the phase-difference as seen by the two halves of each pixel. For an excellent detailed explanation of how phase-detection and the *Dual Pixel CMOS AF* autofocus system work, have a look at this article from Canon:

<https://www.usa.canon.com/internet/portal/us/home/learn/education/topics/article/2018/July/Canon-Autofocus-Series-Dual-Pixel-CMOS-AF-Explained/Canon-Autofocus-Series-Dual-Pixel-CMOS-AF-Explained>

While this AF system will work with all of Canon's current lenses, the use of one of their STM "stepping motor" lenses and "NANO" *USM* lenses will result in even quieter autofocus operation while shooting video. An additional advantage of this system is that because the camera is using the image sensor itself to focus, without a separate AF sensor, the image should never suffer from front-focus or back-focus issues due to mis-calibration. And autofocus will continue to make use of nearly the entire frame even with f/8 and f/11 lenses or lens-extender combinations.

Checking Focus

You can review your images on the rear screen of your Canon EOS R8 (or in the Viewfinder) to try to determine if they are in focus, especially by zooming in as close as possible using the Magnify Button. But be aware that this 3" rear Screen has 1.62 million dots or pixels, while your actual image has over 24.2 million pixels. This means that some images may appear to be in proper focus on your rear Screen, but you might discover that the actual images are not in quite as sharp focus when reviewing them on your computer monitor. The opposite can actually occur as well at certain magnifications, where an image appears slightly out of focus at such a small size and resolution, but is actually in sharp focus when viewed full-size on a monitor. However, zooming-in to 100% view on the rear Screen can help to determine the accuracy of the focusing, but be sure to verify on a larger monitor.

The EOS R8 boasts some significant improvements to the autofocus system, which might change how you use it compared to previous models. They should also make it significantly easier to locate and to track moving subjects. Each of these features are found in the AF 1 Menu as well as the Autofocus Cases of the AF 2 Menu. With previous EOS R models, there was a separate AF Area Mode that was used to detect eyes and faces and to track subjects. However, with the EOS R8, you can now detect eyes and subjects, and track subjects, when using any of the AF Area Modes, such as *1-Point AF*, *Expand AF Area*, or *Flexible Zone AF*. This is a powerful improvement, which gives you much more flexibility for selecting the AF Area that works best for the size and motion of the subject, yet will still enable you to automatically detect and track subjects. These features will be explained in the next chapter, after discussing the AF Operations and AF Area Modes.

7.2 Autofocus - AF Point Selection

As I go over the autofocus AF Operations and AF Areas in the next sections, I will talk about manually positioning the AF Point or AF Area. This is done to tell the camera exactly which AF Point or location to use for locating the subject and autofocus, and is generally recommended so that you have full control over where the camera focuses. Alternately, you can make use of automatic subject selection (by first enabling the *Subject to detect* menu item), as well as use subject tracking and *Eye detection*, but then you will not always have complete control over where the camera focuses. However, these features are useful and powerful, and can be taken advantage of in many shooting situations. And even when using these features, you will still want to first locate the active AF Point, Area, or Zone over your intended subject, so that the camera knows which subject to detect, focus on, and follow.

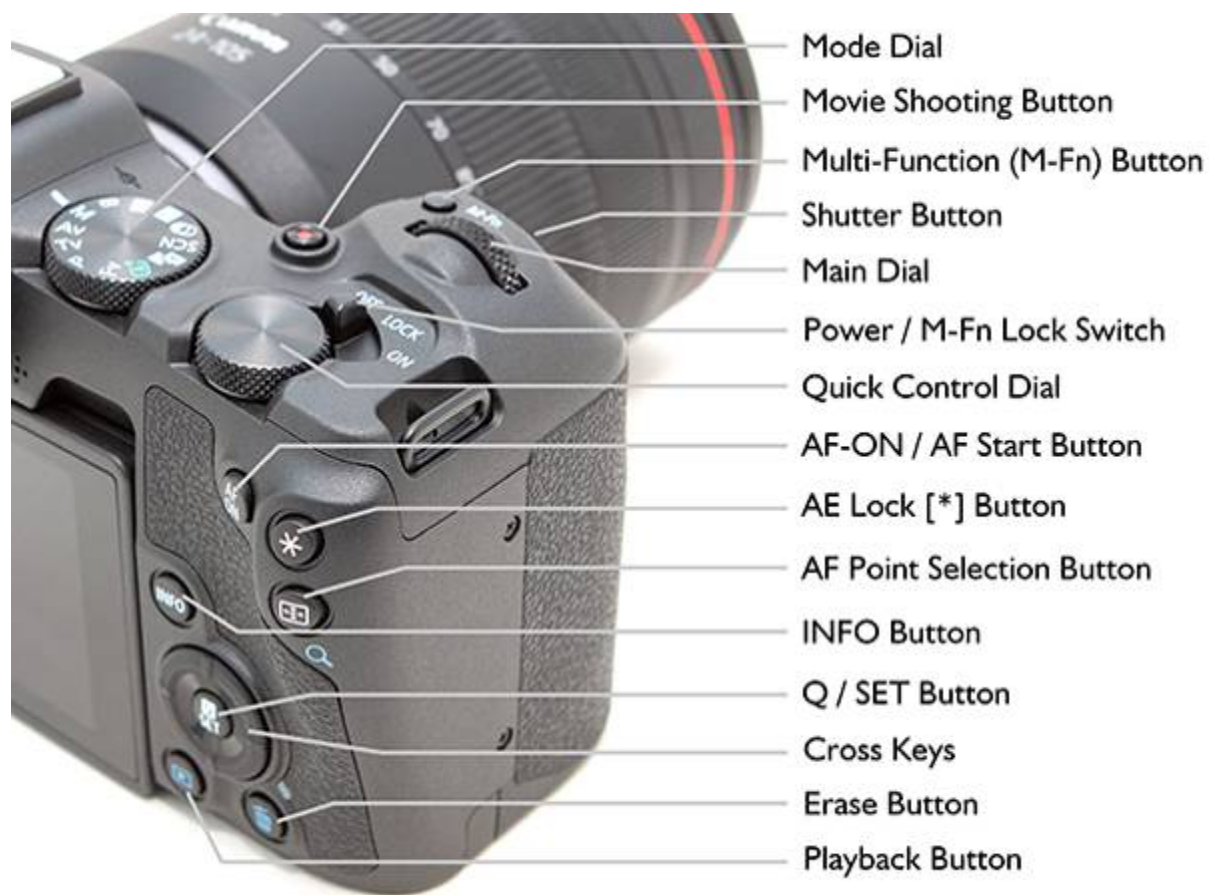


Figure 7.3 - Canon EOS R8 controls, including Autofocus-related controls.

When making use of AF Areas such as *1-Point AF*, *Expand AF Area*, or *Flexible Zone AF*, use the Cross Keys to position the AF Point, Area, or Zone. To quickly choose the center AF Point, you can tap the "return to center" touch screen icon. You can also make use of Touch and Drag AF, where the rear touch screen is used to quickly locate the active AF Point, Area, or Zone, while looking through the Viewfinder. As explained in the **Autofocus (AF) Menus** section of this guide, if you wish to make use of this

feature, access the *Touch & Drag AF Settings* item of the *AF 4 Menu*, enable *Touch & Drag AF*, choose the desired *Positioning Method (Absolute or Relative)*, and then set the *Active Touch Area* option to specify which part of the rear Screen will be used for Touch and Drag AF.

With the default camera settings, you need to first press the AF Point Selection Button before using the directional Cross Keys to move the AF Point, Area, or Zone. I highly recommend using the *Customize Buttons* item of the *Custom Function 3 Menu* to change the function of the Cross Keys to *Direct AF Point Selection*. This way you can use them to directly position the AF Point, Area, or Zone without having to first press the AF Point Selection Button. If you do this, the AF Point Selection Button can then be reassigned to *Start / Stop Whole Area AF Tracking*, a useful function which will be explained in this chapter.

To see how manual autofocus point selection works, set the Shooting Mode to Av or Tv for now, and make sure the switch on your lens is set to *AF*. Set your Autofocus AF Operation to *One-Shot* by using either of the Quick Control Screens (see *Figure 7.4* and *Figure 7.5 - left*), or via the M-Fn Button if you have included AF Operation as one of the functions accessed with this button. Set the AF Area to *1-Point AF*, also using the shooting settings or Live View Quick Control Screen, or the M-Fn Button if you have included AF Area as one of its functions (see *Figure 7.5 - right*).



Figure 7.4 - Left: The Quick Control Screen with the AF Operation icon highlighted. The AF Area icon is just to the left of the AF Operation icon. Change the setting directly on the screen by turning a dial, or press the SET Button and make your selection (right).



Figure 7.5 - Left: Use the Live View Quick Control Screen to access the AF Area (the top-left icon), and select 1-Point AF. The AF Operation icon is just below it. Right: If the AF Operation and AF Area functions are included for the M-Fn Button, you can quickly access them via this button.

- Tap the Shutter Button with a half-press to wake up the camera.
- To position the AF Point, while looking through the Viewfinder, use the Cross Keys to move the focus point to where you wish to focus. Press the AF Point Selection Button first before using the Cross Keys, unless you have assigned the Cross Keys to *Direct AF Point Selection*. Or use the *Touch and Drag* feature of the rear touch screen to position the AF Point.
- Place that point over your intended subject.
- Press and hold the Shutter Button halfway down and see your selected point turn green. The camera will beep if you have that enabled. You have locked the focus. An orange AF Point means that the camera did not achieve focus.
- Keeping the Shutter Button pressed halfway, take the shot by fully pressing the Shutter Button. Make sure that your finger does not slip from the Shutter Button half-press, or else you may need to refocus on the subject again.

If the AF Point does not turn green, and the camera does not take the photo, the camera may not be finding enough contrast to focus on, you may be too close to your subject for the lens to focus, or the lighting may be too dim for the AF system to work properly. Or the camera may be set in *Servo AF Operation* (rather than *One-Shot*), and does not lock focus in this manner because it is tracking a moving subject. In rare situations when autofocus fails, you can also resort to manual focusing by switching your lens to MF and using the lens focusing ring. Or you can autofocus on an object at the same distance from the camera as the subject, and then recompose the image back to the subject. This technique can also be used in other situations such as a sporting event, where you pre-focus at a specific spot or distance and wait for the subject to get to that point - so that the camera is already in proper focus and the moment and subject can be captured.



Figure 7.6 - 1955 Chevrolet Bel Air - Lions Annual Car Show, Waltham, Massachusetts - Simulated view of EOS R8 Viewfinder, using 1-Point AF to position a single AF Point, and locate it on a detail of the car. Shutter speed 1/2500, Aperture f/4.0, ISO 100.

Remember that you can use a smaller focusing frame by selecting *Spot AF*. There are important reasons to use all the focus point locations throughout the frame, and not just the center one all the time as some photographers may be in the habit of doing. One reason for this is that if you lock focus with the center point and recompose, you moved the camera in a slight arc and the focus plane will thus be located slightly behind your subject. This could be more noticeable when working close to the subject and/ or when using wide aperture settings (f/1.4, f/2.8). The potential consequences of recomposing will also be discussed later in the text in relation to exposure and metering. It may sound challenging to reposition the focus point to various locations as you shoot, but it is actually very feasible and will likely become instinctive.

7.3 Touch and Drag AF

The *Touch & Drag AF* feature allows you to use the rear touch screen to position the AF Point, Area, or Zone, while shooting through the Viewfinder. Typically you will use your thumb on the rear Screen to position and move the AF Point around the frame. The *Touch & drag AF settings* are found in the *AF 4 Menu* (see *Figure 7.7 - left*). The options include *Touch & drag AF*, used to enable this function, *Positioning method*, to choose either *Absolute* or *Relative* positioning of the AF Point based on your touch screen motions, *Active touch area*, to dictate the portion of the rear Screen that can be

What Readers are Saying About Doug's previous Camera Guides:

Simplifies without technical jargon! - Douglas Klostermann has the unique ability to explain in very readable, easy-to-follow directions how to operate every facet of the camera. This is definitely worth purchasing as a companion to the camera and the camera's manual.

-Alan

Best reference book for Canon - Well written and easy to understand. This book really helps one to be able to take advantage of all the features of my Canon. A must have.

-N.D.

Excellent ebook - This book is first-class, and this author knows his stuff about Canon cameras. He cuts to the chase, and gets right to the heart of the important matters. I learned a lot and I learned it very quickly indeed. Highly recommended.

-S. Walker

Very clear and precise - It explains all the features and does this in a very clear and precise way giving a detailed run through of the camera functions and controls as well as the operation and options of the menu system - and it does this without assuming you are an expert photographer to begin with. This is an excellent book to help with getting to grips with your camera, whether as a newcomer to the EOS world or upgrading from a previous version.

-Camea

Will Save You A Month On The Learning Curve - This book clearly and practically walks the reader through every step of setting up and using the camera. A wonderfully well-organized book, it explains every feature and setting on the camera with recommendations on optimal setup choices and the reasoning behind each recommendation. This is the lowest cost, highest value accessory I could have purchased.

-Robert

Superb Guide - An excellent guide, clear and concise. A great tool for budding photographer as well as the seasoned pro. A sure way to get the most out of your camera.

-Mark S.

A Pro Right There With You - If you want to get the camera up and running with the feeling of a pro right there with you then I would strongly recommend it. Camera in one hand and reader in the other and dig in. Thanks Doug, just what I was looking for.

-Tim S.

A Must-Have Accessory - What a great addition to my bag. This is a well written, full body of work that explains, in plain English, how to get the most out my new camera. Doug provides the knowledge and experience to bring you to the next level. I look forward to learning more every time I open the book.

-Steven

Purchase Canon EOS R8 Experience at:

<http://www.fullstopbooks.com/canon-eos-r8-experience/>

About the Author



Douglas Klostermann is a travel, culture, and humanitarian photographer as well as the author and publisher of the bestselling *Full Stop* e-book camera guides including *Canon 5D Mark IV Experience* and *Canon EOS R6 Mark II Experience*. He has photographed for numerous organizations in the United States and Latin America, been recognized by the *United Nations Development Programme* for his humanitarian photography, and been published in magazines, books, and websites including *Condé Nast Traveler*, *Sherman's Travel*, *NationalGeographic.org*, *South American Explorer*, and *Viva Travel Guides*. Doug is a member of the North American Nature Photography Association (NANPA).

Learn more about photography techniques and equipment on his blog *Picturing Change* at <http://blog.dojoklo.com/>, view his e-books at <http://www.fullstopbooks.com/>.