

The Essential Guide To Advanced EOS Features

Written by Nina Bailey

Especially for Canon EOS cameras



PREVIEW
EDITION

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Foreword by the author

The Canon EOS cameras have some fantastic technology and features, which allow you to push the boundaries of photography. Over the years, these features have really changed how we approach photography and also expanded the range of subjects that we can tackle.

Many of these features not going to be used in day-to-day photography however when they are needed they can be the difference between getting a good and a poor result. The one thing they'll have in common is the need for the photographer to understand what they are doing and also when to apply them.

There are a few features which will only be found on the higher level models however you may be surprised at how many of the features are found on every single camera within the Canon EOS range. True you sometimes get a few more setting options on the higher level models, but even the most basic EOS cameras can take very good pictures providing you understand and utilise the features that they have appropriately.

I have worked with the EOS range since it first appeared on the market, both selling in the retail environment and also working on the technical side whilst at Canon. The original models that appeared on the market were film based models, and had very few innovative features on them with the possible exception of the evaluative metering and the autofocus.

As time went by, the later film models began to develop some additional options, but it was not until the introduction of the digital models, that we started to see a much wider range of functionality on the cameras.

The digital models introduce the concept of menu driven settings onto the EOS range, and many of the features that I will be looking at in this ebook will be found within the menu system. Once mastered, the menu system is simple and intuitive to use. However for the newcomer to photography and those who have fairly recently switched from film it can be a very steep and difficult learning curve to get to grips with all the cameras features and functions.

So in this book I set out to help explain some of the features that you will really find useful once you have mastered them.

Nina





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PREVIEW
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Introduction



Introduction

The EOS camera range has a vast range of features, and is not possible to go through every single one in this book. What I have tried to concentrate on are the ones that either cause confusion, or are particularly useful to some groups of photographers.

I have also tried to concentrate mostly on features that are on every single model. Although there are a handful that will be found on the more advanced models only. This is especially the case with the focusing settings which vary a lot on the higher level models.

I am not going to cover the modes, or what the photographic settings, apertures, shutter speed or ISO do as they have been amply covered in *The Essential Guide To EOS Photography*. However I will expand on some of the overrides that were covered towards the end of that book and talk about their use in much more depth.

To avoid listing all of the models I have tended to refer to the cameras in the groups that they are normally found in.

Introductory models are ones such as EOS 500D, 550D, 600D, 650D and 700D. The EOS 100, 1100 and 1200 also fall into this range but are missing some of features found as standard on the rest.

Advanced models are ones such as EOS 50D, 60D and 70D. The EOS 7D, 6D, 5D Mark II also for practical purposes fit into this category.

The professional models are the EOS 5D Mark III and the EOS 1DX.



The models launched before the ones listed above will not have a number of the features that we look at in this book. Also some of the ones that they still do feature may work in a slightly different way due to the much earlier processing circuitry within the cameras.

Models that come out after this book was published which was in Autumn 2014 will have most of the features in the ebook.

If you are not sure if your camera has a feature then look in the index in your camera manual. If your camera has that feature, it will be listed there.

The LCD screens that I photograph to illustrate

some of the features will either be from the EOS 700D, 70D or the 5D Mark III. I have chosen these cameras deliberately as between them they all have, the most features, and are three of the latest models within the range.

I have made the assumption that most photographers reading this book will have a workable knowledge of how to navigate around the menu system and the main camera controls.

However I have put a quick guide to navigation of the cameras and the menu system in the next few pages. You will also see the main layout differences between the introductory and more advanced models.

Introductory model navigation



Menu button

Info button/ DISP on some models

Live view button
Cross keys and set button
AE Lock button
Focusing point selection button



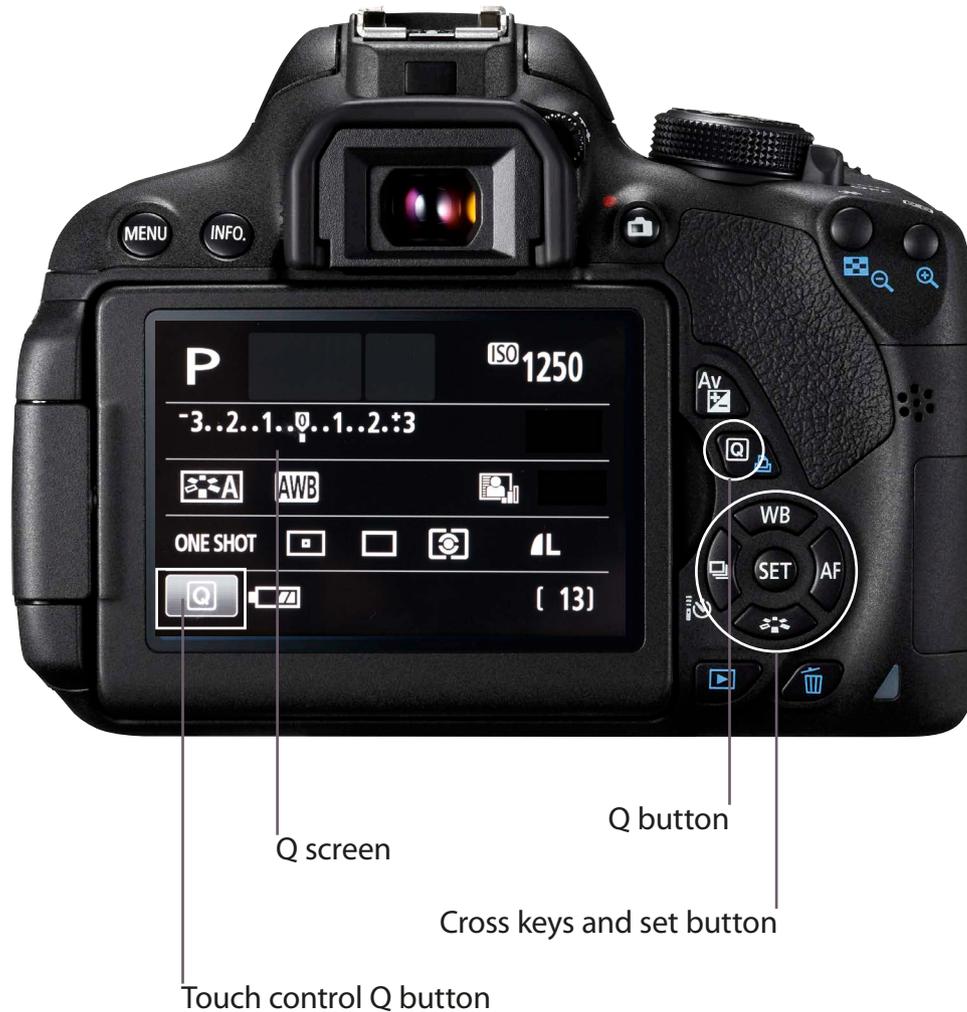
Mode dial

AE Lock button

Main dial

Focusing point selection button

Introductory model navigation



The Q screen only appears like this if the camera is set to one of the creative modes. That's P, TV, AV or M on the introductory model. If you are in one of the basic zone modes, or the PIC or SCN controls then the Q screen overrides we look at in this ebook will work.

When you press the Q button on the rear of the camera a highlighted icon appears on the Q screen. On a touch screen camera you can also just touch the Q on the Quick screen.

To navigate around the screen touch controls can be used or the up, down, left and right cross keys can be used. If your camera supports touch controls and you are used to using touch devices such as a smart phone it is well worth using the touch controls.

Once the item is highlighted then you set the feature using the main dial on the top of the camera. To see what options you have press the set button or tap the icon again if using touch controls. If you go into the tools menu, you simply select the item you want to set either using the main dial or the touch controls.

To get out of the setting screen either wait a few seconds, or touch the shutter button which will return the camera to its normal shooting operation.

On the very latest models 2012 onwards, there are also playback functions available via the Q button. When playing back an image, simply press the Q button on the rear of the camera and the menu options will be listed down the side. Navigation through the menu items is via the cross keys and to change the settings it is the main dial on the top of the camera. These controls also work through the touch controls if your camera has them.

Advanced model navigation



Multi controller - may look like this on some models



Set button

AF-ON

START/STOP

Live view button
 Quick control dial
 AE Lock button
 Focusing point selection button

Info button/ DISP on some models

Menu button



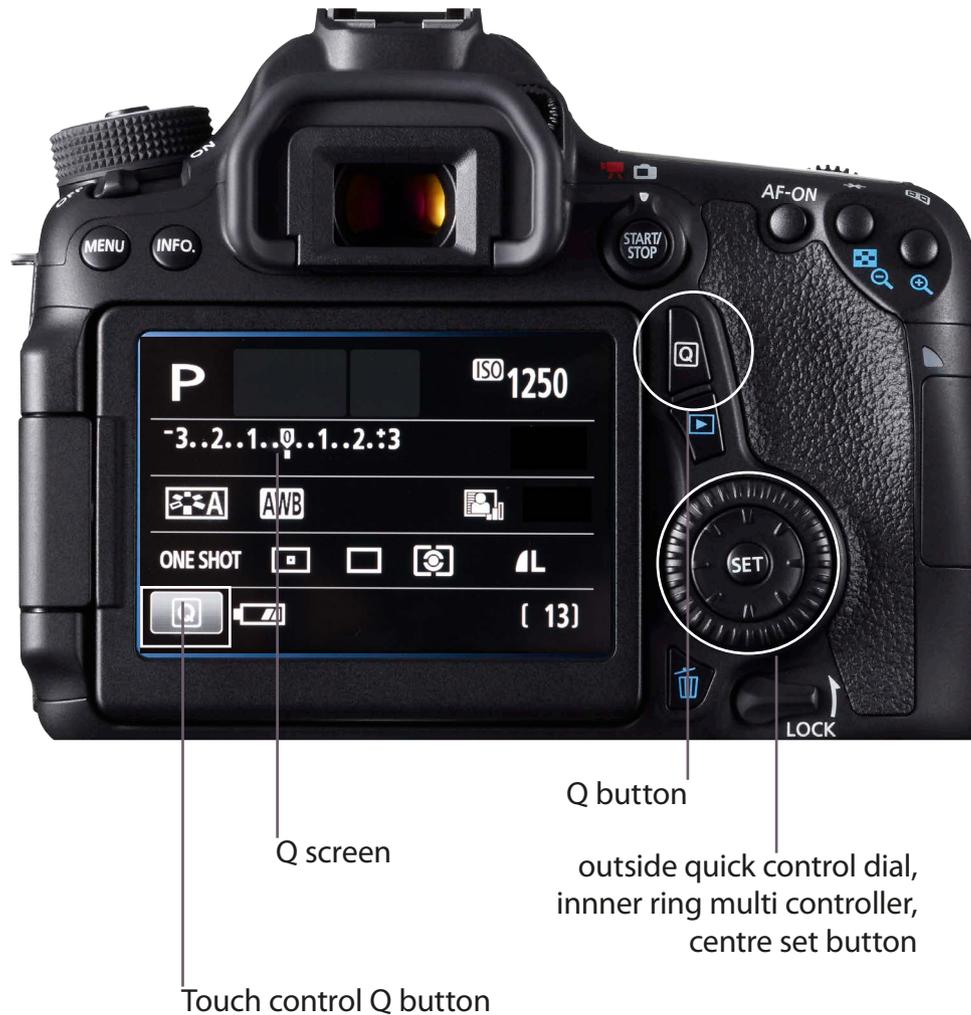
Main dial

Function buttons

Mode dial

AE Lock button
 Focusing point selection button

Advanced model navigation



The Q screen only appears like this if the camera is set to one of the advanced modes. That's P, TV, AV, M, B or C modes on the advanced models. If you are in one of the basic zone modes, or the PIC or SCN controls, then the overrides we look at in this ebook will work.

When you press the Q button on the rear of the camera a highlighted icon appears on the Q screen. On a touch screen camera you can also just touch the Q on the Quick screen.

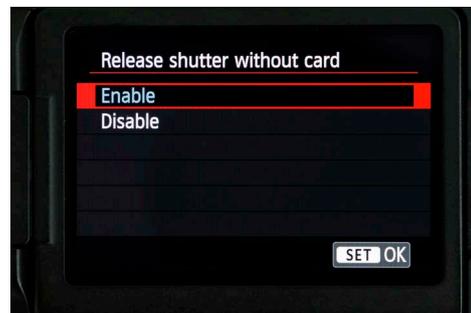
To navigate around the screen touch controls can be used or the multi controller can be used. If your camera supports touch controls and you are used to using touch devices such as a smart phone it is well worth using the touch controls.

Once the item is highlighted then you set the feature using the main dial on the top or for most controls the quick control dial on the rear of the camera also works. To see what options you have press the set button or tap the icon again if using touch controls. If you go into the tools menu, you simply select the item you want to set either using the quick control dial, multi controller or the touch controls. On some features the main dial may also operate some options.

To get out of the setting screen either wait a few seconds, or touch the shutter button which will return the camera to its normal shooting operation.

On the very latest models 2012 onwards, there are also playback functions available via the Q button. When playing back an image, simply press the Q button on the rear of the camera and the menu options will be listed down the side. Navigation through the menu items is via the cross keys and to change the settings it is the main dial on the top of the camera. These controls also work through the touch controls if your camera has them.

Menu navigation - all models



The menu is always entered by pressing the menu button on the rear of the camera. All the functions I'm describing can also be set by touch controls if your camera has them.

Once a menu appears on the rear of the camera you need to navigate to the menu tab that contains the commands that you want to use. On all models this can be done by turning the main dial on the top of the camera.

It can also be done using the left and right cross keys on the introductory models or the multi controller on the advanced models.

Once you're in the menu tab that you want you navigate up and down the menu using the cross keys on the introductory model or the quick control dial or multi-controller on the advanced models.

To enter the menu you simply pressed the set button. If you're using the touch control the act of tapping the menu item will take you into the menu.

Some menus are very simple and simply have a normal, off or enable, disable option. Others are more complex such as the ISO speed setting options on some of the



more advanced models. The main menu item is entered effectively presented with the menu and the navigation controls are the same and when you enter the menu item you want to set it gives you a third menu with the options on it.

Regardless of the menu, once you have selected the item you wish to set, it is important to press set or if you're using the touch controls, touch the menu icon at the bottom of the screen and this will apply the item. If you do not apply the item it will revert to how it was previously set.

Some menus are slightly more involved as the examples I'm showing to the left. If you look at the bottom of the screen the options are displayed and if there are patterns that need to be pressed it will show you these graphically, normally at the bottom of the screen. Just follow the on-screen prompts and you'll be able to set the feature.

To quit out of the menu either keep pressing the menu button or just touch the shutter button and it will revert to the camera's normal shooting operation.

Chapter 01

Image processing overrides



Why start with image processing?

Over the last four or five years, image processing has become one of the most important features that the camera has.

It's an area that has expanded rapidly as the camera's processing circuitry has significantly increased in both capacity and speed.

The reason I'm starting off this book with image processing is that the systems here are the things that are going to affect all the images that you take. The choices you make on the image processing options can affect many of the other features that we are going to be looking at within this ebook.

The image processing options are also important to understand as even if you have never set them, many of the options are already set and working upon the images that you shoot.

All of the features within this section are going to be set within the camera's menu system. However where they are set within the menu system has changed over the last two or three years. The very latest models have many of these options within the camera or shoot menu. This makes them very visible to the photographer and therefore they are now explored more regularly.

However on the earlier models they were mostly found within the camera's custom function menu. This is a menu that is rarely explored by the majority of photographers and as a result the awareness of these features is generally very low.



What does image processing do?

Image processing is all about how the camera handles and processes the images that you take. These options are becoming increasingly important, as they are now more responsible for the stunning quality results that the camera can give.

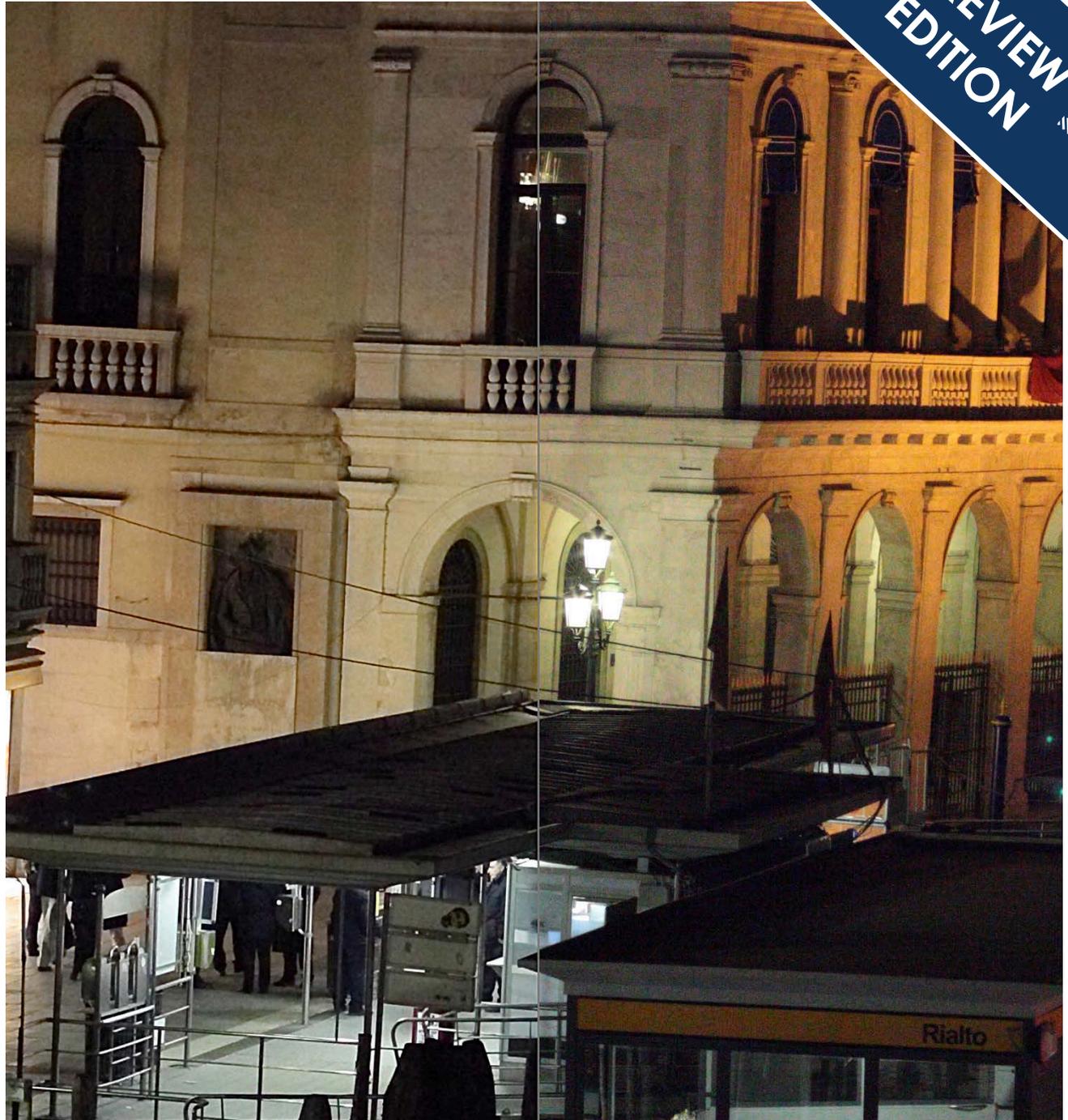
Some of these options will decide for you how “finished” the image is by the camera or how much flexibility you have to do post production work to the images that you take. Others can ensure that you get the very best optical quality on the images you shoot.

There are also options to capture better highlight detail, and optimise the image you shoot for the best tones.

One of the major improvements on the latest cameras is the ability to use ISO settings up to 25600 ISO and even higher on the professional models. The ability to do this relies heavily on the image processing options.

This image has been processed in Canon’s Digital Photo Professional Software to show the result with the image processing for noise reduction on the left hand side and without on the right hand side, to show the difference that it can produce. This image was taken on the EOS 5D Mark II at 6400 ISO.

How important these options are will depend on the workflow you have, how finished you want the images, and whether you shoot JPEG or RAW images.



How the format you shoot affects these options

If shooting JPEG, then what is set on the camera is applied to the image in the camera and therefore will control the look of the final image.

Therefore these settings are important to understand and apply correctly. Once the image is captured as a JPEG they can be used as they are or have adjustments performed in any software without the setting applied in camera being affected.

If shooting RAW images the data about these settings is stored as data with the RAW file. It is then applied by Canon Digital Photo Professional software that is supplied with the camera at the time that you process the RAW file.

Canon's Digital Photo Professional which is supplied free with the camera, is the only RAW conversion software that will 100% support all the functions that we are looking at here.

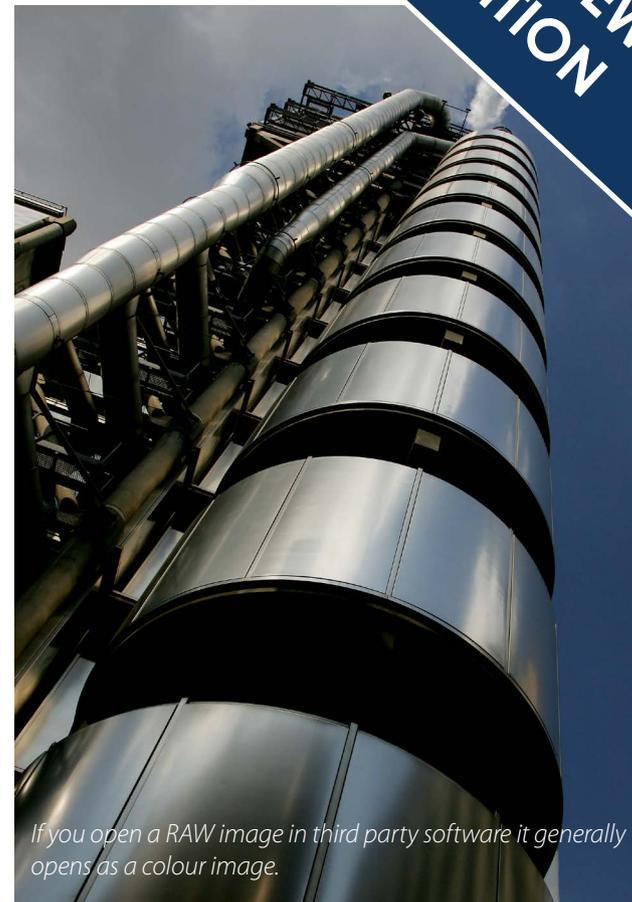
I always recommend that you only use Digital Photo Professional software to handle the Canon RAW files as then you will get all the benefits offered by the camera, or of course shoot JPEGs as I do, rather than RAW.

Using third party software, can produce results that do not have all the image processing that is produced by Canon's software, as some of these corrections are either ignored, or applied differently as the software cannot use the same algorithms as Canon patent them.

A good test to see how much your images are being affected by this is to shoot a large fine



If you open a RAW image taken as monochrome in DPP you get a monochrome image.



If you open a RAW image in third party software it generally opens as a colour image.

JPEG and RAW at the same time and then open both in your non Canon software.

If the JPEG file looks better, or more noise free, then it is the software that is causing the difference. If the software is working correctly they should look identical when opened and viewed at 100% without any adjustments needed.

Through this chapter we will look at how the features work on the camera at the time of

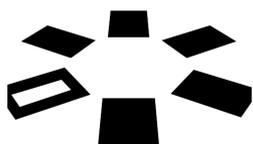
shooting and look at the options that exist within Digital Photo Professional when processing RAW images within the computer.

The disc that came with your camera may not be the latest version of DPP, so you may need to update it, to get all of the features that I am showing. This is easily done by visiting the Canon web site.

Understanding Picture Styles

The first image processing topic I am going to look at are the picture style.

Picture styles control the way that the camera processes the image. The symbol indicating picture style is shown below.



Therefore, they mainly affect photographers that shoot JPEG images with their cameras.

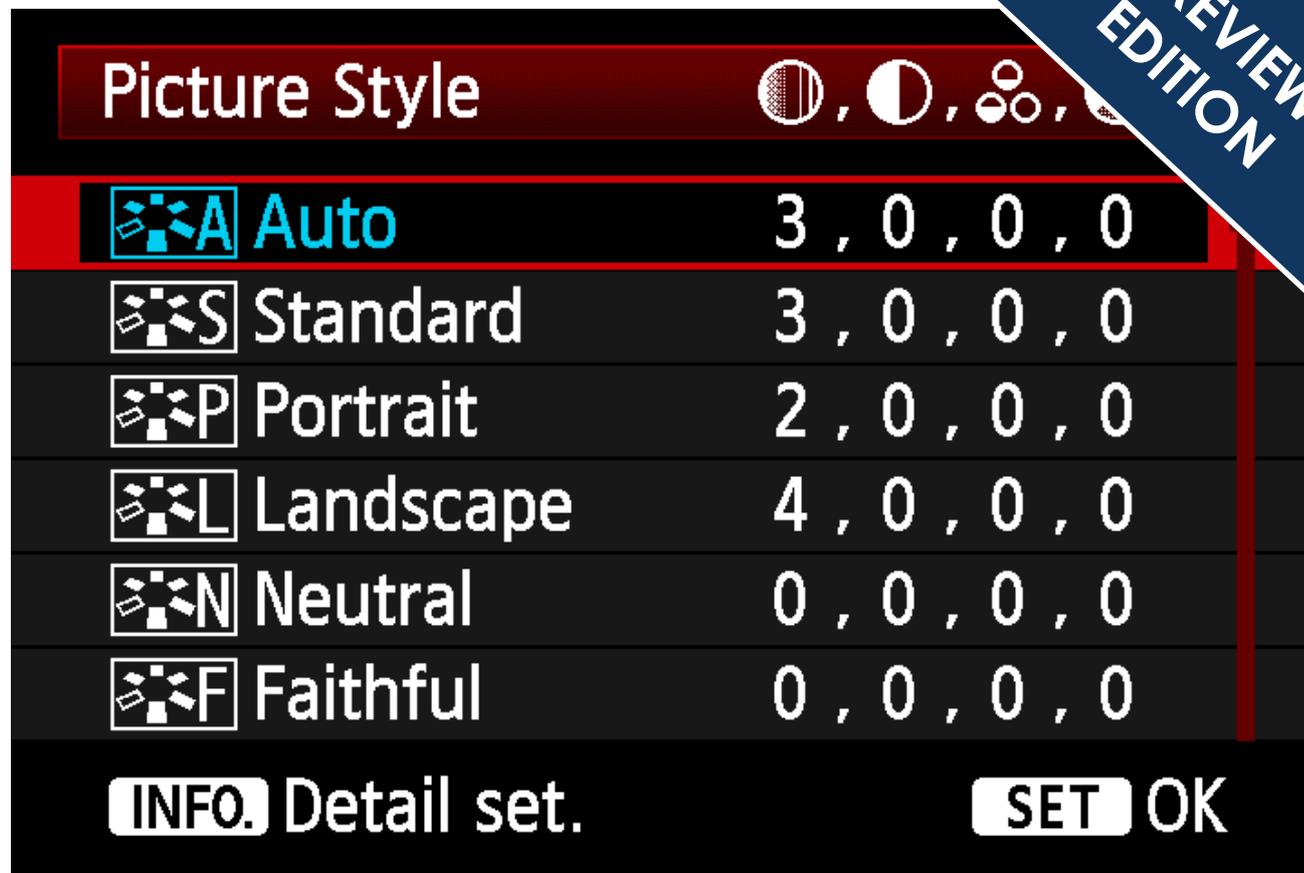
That said, for photographers that shoot RAW who use Canon's Digital Photo Professional it offers them the ability to minimise the work that needs to be done to the image. Often just needing to be batched processed to get them into a more usable file format.

They offer JPEG users the option to produce an image that the camera has processed and adjusted, so that the image can just be printed. Although these images are designed to be finished, they can still have adjustments applied if required.

Alternatively, images can be produced that are much flatter and less impressive to look at but which will give the photographer much more flexibility when they process the images within a post production programme such as Photoshop.

The latest cameras have an additional picture style to the normal group of six settings. This is an auto setting that will detect the scene and decide on the best picture style for the scene.

In the auto setting the colours will look vivid and will have the contrast enhanced. This is designed to



produce a finished image that can just be printed as it is with no further adjustments being necessary.

If this is not giving the images as required there are 6 overrides that can be selected within the creative modes.

On all the creative modes the auto picture style is the default option. The auto setting adapts to the type of image that is being taken based upon data being sensed by the camera, distance, lens type etc and will give what it believes to be the best image processing for the scene being

taken. The auto mode assumes that minimal post production is required by the photographer.

If more control is required, there are six picture style override settings available as shown above. Three of these are designed to produce a finished image that can just be printed. These are the standard, landscape and portrait settings.

There are then two styles that are designed for photographers that wish to do post production to their images. These are neutral and faithful. There is also a monochrome setting.

Setting picture styles

The picture styles can be set within the creative modes from two places on most cameras. They can be set from the LCD panel on the rear of the camera by pressing the Q button and navigating to the picture style setting. The touch controls if you have them on your camera can also be used on the Q screen or within the menu system.

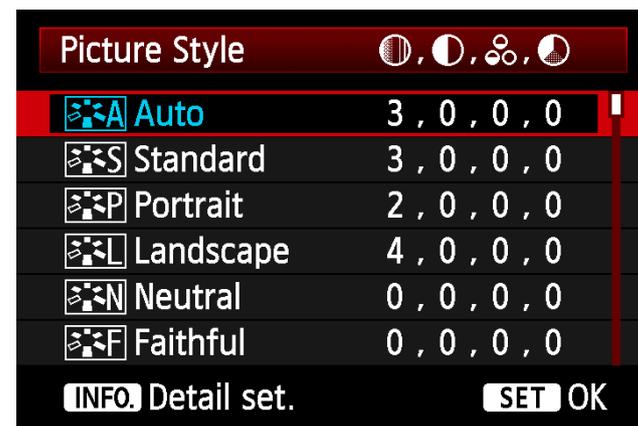
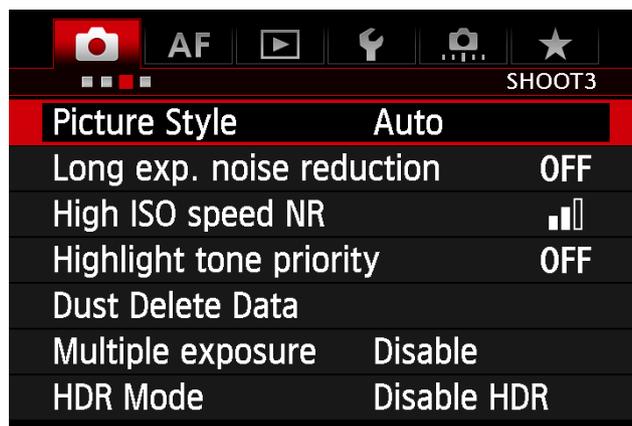
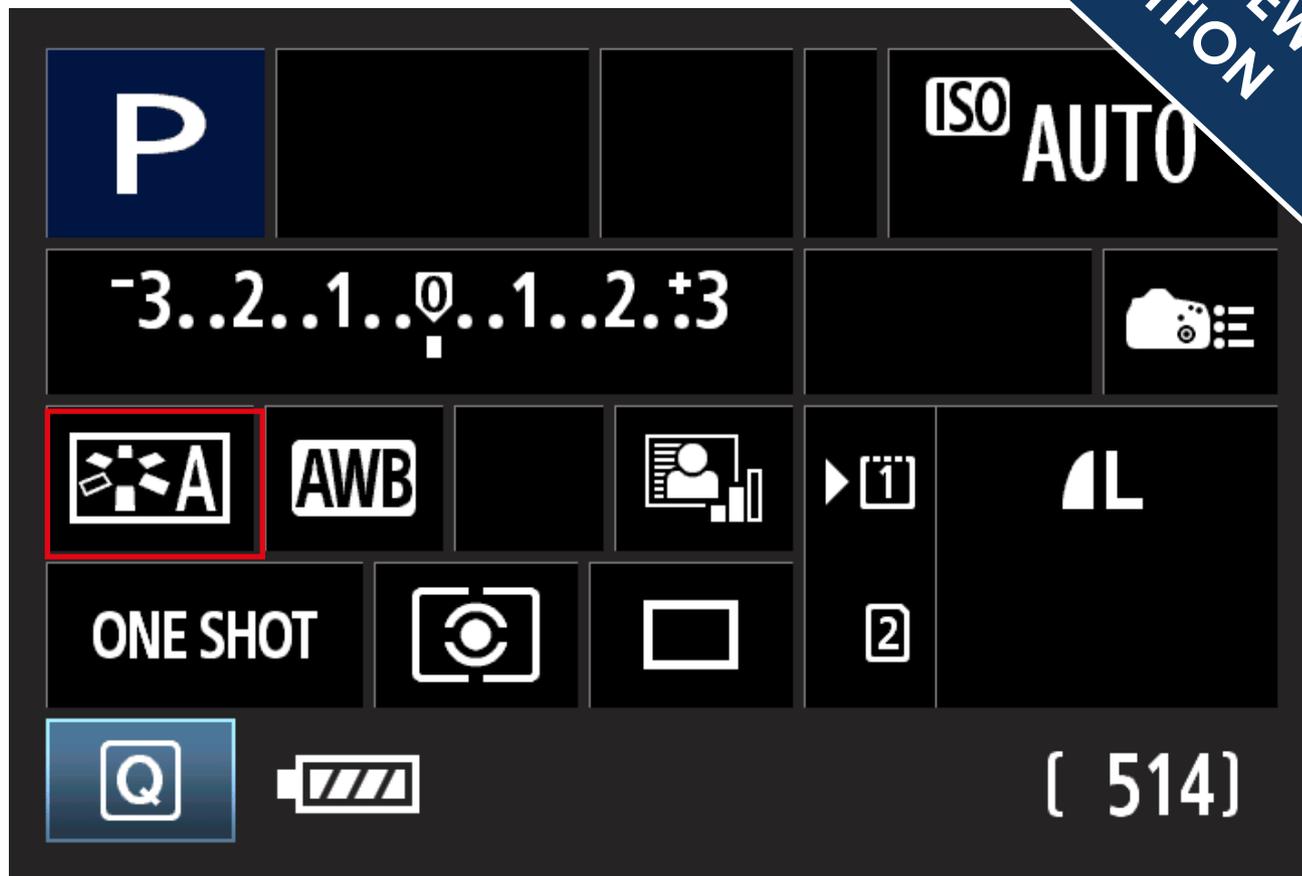
The settings can then be selected by the multi controller or the cross keys depending on the model you own. If you press the set button this then takes you into the picture style menu where there are more options, which are selected in the normal way.

There is also an option in the shooting or camera menu. The first item on this menu is the picture style option. Selecting this takes you into a menu where all the options are listed and where you can view any customisations that are applied.

Pressing the info button in this screen will take you to the customisation options, which I will look at once I have explained how the picture styles vary.

The auto mode works for most images, I am very familiar with these controls and tend to set up the picture style according to what I am shooting and the conditions on the day.

The standard and landscape picture styles are the ones that I generally use. I do sometimes modify the settings on the picture styles which I will explain a little later.



Standard picture style



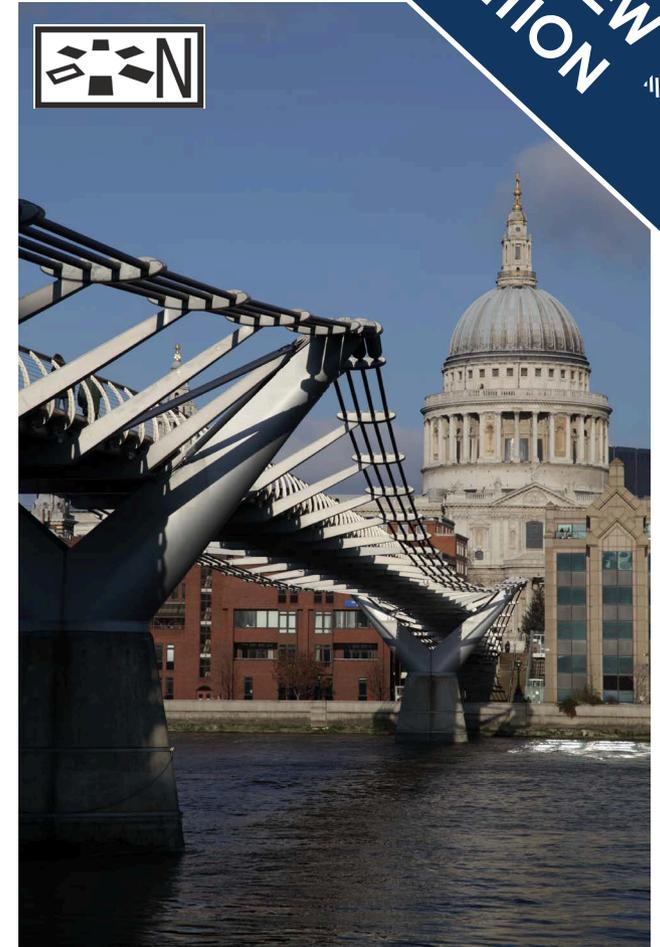
The standard picture style is one of the three key settings that can be picked by the Auto + mode, it is also the default mode on the earlier cameras that do not have the Auto + mode.

It provides an image that is ready to print with good contrast, good saturation and has been sharpened.



The image is designed to look good without doing anything to it and this picture style will work for most images that you are likely to shoot.

The samples above compare the standard picture style on the left with the landscape picture style and the neutral picture style on the right. I tend to prefer the landscape picture style when shooting landscapes and travel scenes,



however it does take the contrast up and this can give problems with shadow details on very bright sunny days.

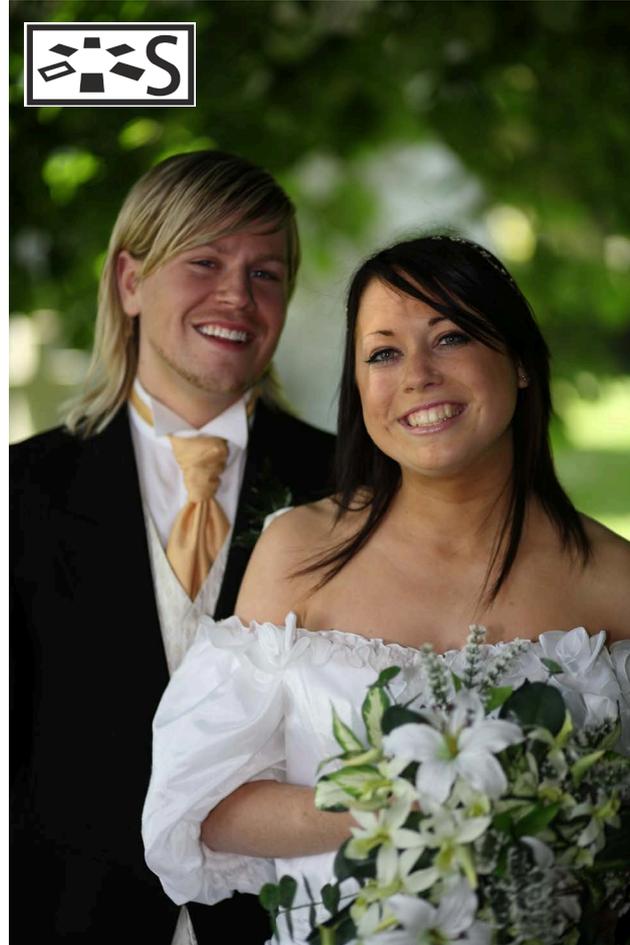
The neutral picture style is much more muted and will need a reasonable amount of adjustment including the image being sharpened before the image looks good.

Portrait picture style



The portrait picture style is designed for when shooting portraits and you want an image that is ready to print.

The image that this produces has less contrast, sharpening, and saturation than an image produced on the standard picture style as we see from the two examples above.



The reds in the image are also enhanced, which can be seen quite significantly in the image above left. This is especially obvious when compared to the neutral setting above right, which is more muted.

Although this can be beneficial for some skin types, it is not going to be beneficial for the paler skin colours, and so for some portraits



the standard picture style may well give better results. If the contrast and saturation proves to be a problem then these can be reduced and I will show how this is done a little later in this chapter.

There are also two downloadable portrait picture styles that can be added onto the camera's user defined options, or used within RAW processing, again I will look at these shortly.

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