



Welcome Everyone

To the 2nd WCC Monday Night Information Session

A close-up, artistic photograph of a camera lens, showing the intricate details of the glass elements and the metallic housing. The lens is positioned diagonally, with the front element on the right side of the frame. The background is a soft, out-of-focus mix of light blue and white, creating a clean and professional aesthetic.

Your Canon Camera

Getting More From It

Tonight's Topics

- Not all Canon DSLR's are created equal
 - Buttons that you wondered what they do
 - Custom shooting modes and custom menus
 - Customising camera buttons
 - What's in your viewfinder
 - Using the diopter adjustment
 - The Histogram as visual reference
 - Using live view to attain sharp focus
- Now you know your body-choosing a lens
 - Telephoto, Normal, Wide Angle
 - Super Telephoto
 - Ultra wide/Fisheye
 - Macro
- Hints & tips + your questions

Not all Canon DSLR's are Created Equal

There are many differences between the range of Canon DSLR's from the range of ISO speeds to features such as the number of focus points. Some cameras will automatically adjust for different lenses characteristics and some will allow you to modify how the autofocus system responds and behaves.

The entry level cameras such as the EOS 1200D lack many features of a camera such as the EOS 1DX and as you would imagine, this is also reflected in their prices.

The next page compares the entry level 1200D against the popular 5D Mk3 and the professional 1DX to give you a look at some of the more obvious differences.

First the 1200D



The 5D Mk3



Then the 1DX 2



• Maximum Shutter Speed	1/4000 th Sec	1/8000 th Sec	1/8000 th Sec
• Min & Max ISO	100 - 6400	50 – 102,400 (Expanded)	50 – 409,600 (Expanded)
• Focus Points	9 AF Points	61 AF Points	61 AF Points
• Continuous Shutter Speeds	3 fps	6 fps	14 fps (16 in Live View)
• LCD Monitor	7.5cm (3") 460,000 dots	8cm (3,2") 1,040,000dots	8cm (3,2") 1,620,000dots
• Viewfinder Coverage	95%	100%	100%

Buttons That You Wondered What They Do?

- The Depth of Field Preview Button



If we were to set our lens at f/22 in a fairly dark scene, the hole in the lens that light can get through is quite small. In a DSLR camera the viewfinder allows us to look through the lens by way of a mirror but if the lens is set at f/22 then we wouldn't be able to see much because of the low light and the small hole. To get around this problem a DSLR camera leaves the iris in the lens wide open right up to the point that we press the shutter where the iris closes to our chosen aperture to take the shot. However, on occasion we may want to preview the depth of field that we can see through the lens and this button allows this. It works by temporarily closing the aperture when the button is depressed.

Buttons That You Wondered What They Do?

- The Exposure Lock Button



Yes, that asterisk button on the back does have a function and its primary use is to lock the camera's exposure. It has many uses but one example is when taking panorama shots, it keeps the camera from changing the exposure which helps when stitching them together. Advanced use allows the photographer to pick a neutral point such as a grey rock in a scene that has a wide range of tones to help attain the correct exposure in the important parts of the image. This button is used by pointing the centre focus point at the exposure target and then holding the button depressed with your thumb, recompose and shoot the image.

Buttons That You Wondered What They Do?

- The AF-ON Button



Right next to the Exposure Lock is the AF-ON button. Often referred to as 'Back Button AF' this button lets you customise the camera so this back button starts the auto focus process instead of using the shutter button. By separating AF activation from shutter release, it's possible in some cases to be more effective with AF, and not have the focus thrown off if something momentarily enters the picture area while you're shooting. Canon was actually the world's first camera maker to incorporate such a feature, launching it back in 1989 with the EOS 630 (35mm film SLR). All current EOS digital SLR models have this feature in the camera's Custom Functions, including the EOS Rebel models, going back to the Rebel XT and XTi.

Some Examples of Back Button AF

- **Easier timing of shots**

One benefit of pulling focus away from the shutter button is that critical timing becomes simpler to manage. For example, if you were shooting a speaker at a podium, he or she might periodically look up or make a gesture that would be an ideal instant to capture. If you've focused with back-button AF, your index finger is free to shoot at the decisive moment. There are no worries about holding your finger half-way down and waiting, waiting, waiting for the autofocus to acquire.

Even with a very animated subject that may be moving around, you can have your camera's focus set to AI Servo AF (to track any movement), and just keep your right thumb on the back button to keep focus active, while your index finger can be ready to shoot with no worries about also preserving focus.

- **Less risk of focus errors with moving subjects**

For sports photographers and others taking action pictures, back-button AF lets you stop focus whenever something might interfere with the moving subject you're tracking — without requiring you to stop shooting. In sports, for instance, it's common for a referee or another player to come between the camera and an athlete being photographed. With back-button AF, it's easy to momentarily pull your thumb off the rear button, and you can still keep shooting by pressing the shutter button fully. The camera instantly stops focusing when your thumb comes off the back button. Once the obstruction is out of your way, you can immediately pick-up your primary subject by pressing your thumb on the back button again.

- **Easier over-riding of AF with full-time manual focus**

More than half of Canon's lenses have a neat feature called full-time manual focus*. Even if the lens's AF/MF switch is in the AF position, these lenses allow the shooter to instantly adjust focus manually by simply turning the focus ring on the lens. There's no need to first move the switch to MF.

With back-button AF, this becomes a nearly foolproof feature. Use the autofocus whenever you like by pressing the rear button with your right thumb. Shoot whenever you like by pressing the shutter button. And if you want to touch-up focus, or totally over-ride what the AF is doing, just pull your thumb off the rear button and turn the ring. No matter how many pictures you shoot, pressing the shutter button will not cause the AF to try to kick-in and re-set the focus you just adjusted manually.

- **Easier macro and close-up focusing**

Many times, you'll find that it's actually easier to get consistently sharp close-up pictures of small objects by pre-focusing, and then moving yourself forward or backward until you see the critical sharp focus appear in your viewfinder. Once again, with back-button AF active, you can use the AF to get within general range (press the rear button with your thumb, then take your thumb off the button), and move a little bit to get things critically sharp. Most important, you can then shoot freely, without AF trying to re-focus each time you touch the shutter button. Finally, touching-up focus with the full-time manual focus feature on certain Canon lenses is simple and quick, and the autofocus never fights you by trying to un-do what you just adjusted.

Custom Shooting Modes & The Custom Menu?

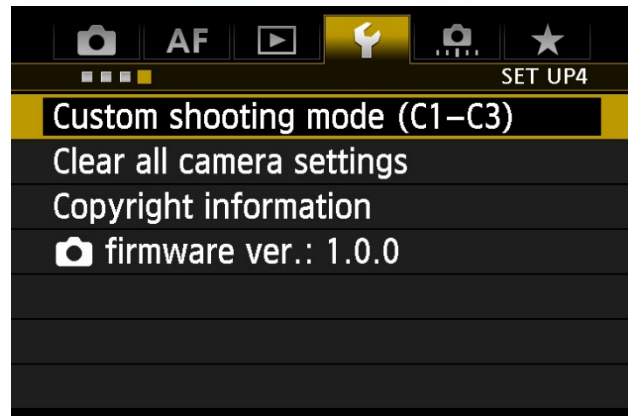
- Custom Shooting Modes



Custom shooting modes are available on a lot of Canon DSLR's yet they are not used by many people. This is likely due to people not reading their manuals and never enquiring as to what those C1, C2 & C3 selections are for on the mode dial. As a general photographer I quite often set my camera for a particular setting for e.g. long exposure seascapes on a tripod. But, what happens if a dolphin suddenly leaps from the water, can you set your camera quick enough to capture a shot? The answer is probably no because Murphy's law states that as soon as you get your camera ready the dolphin will jump no more. So to get around this problem we use custom modes, once setup a simple click of the mode dial to one of the custom settings will set your camera to a preconfigured mode. Some people set HDR modes to custom setup modes to allow them to easily switch between normal operation and exposure bracketing.

Custom Shooting Modes & The Custom Menu?

- Setting the Custom Modes

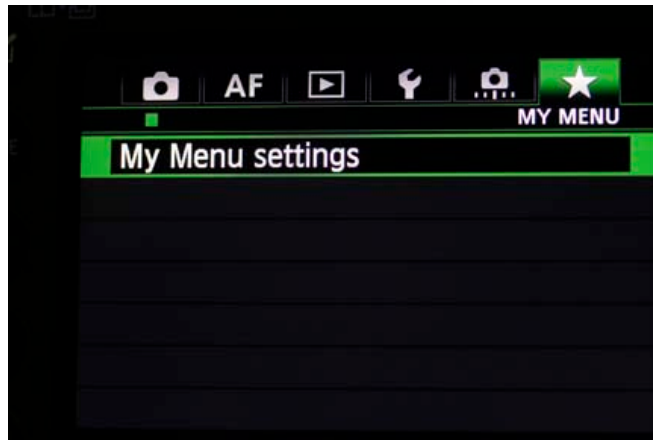


- Setup the cameras controls to your desired configuration
- Open the camera's menu
- Move to the yellow menu
- Select the 'Custom Shooting Mode (C1-C3)' and press the 'set' button
- In the next menu select 'Register Settings'
- In the next menu select either C1, C2 or C3 to register the setup

The camera will now return to these setting at anytime you select the relevant mode on the dial.

Custom Shooting Modes & The Custom Menu?

- The Custom Menu

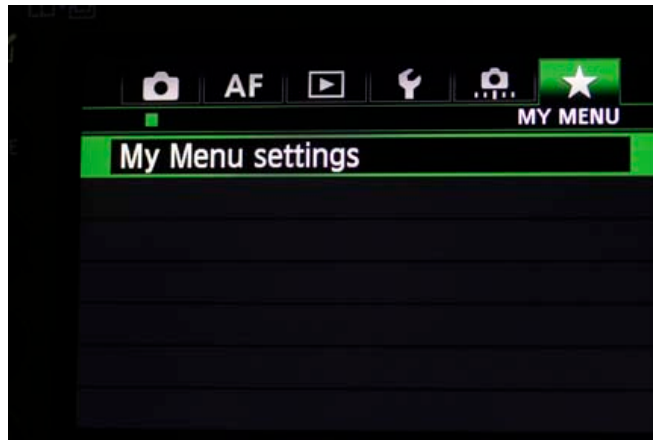


The custom menu is an area within the cameras menu system where the user can set a number of often used features. For e.g. my own menu has the following set:

- Image Review
- Mirror Lockup
- Format Card
- Record func+card/folder sel.
- HDR Mode
- Expo.comp./AEB

Custom Shooting Modes & The Custom Menu?

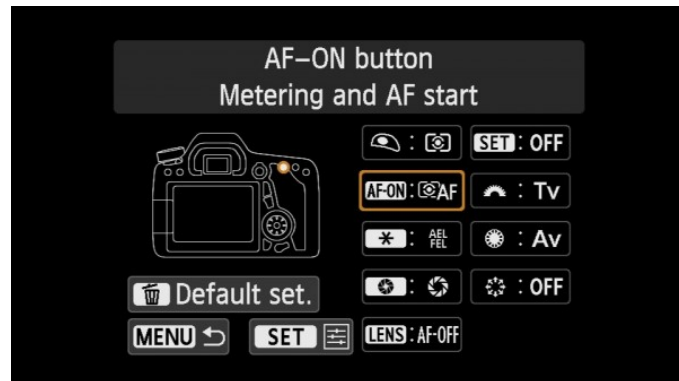
- Setting The Custom Menu



- Open the camera's menu
- Navigate to the far right until you get 'My Menu'
- With the cursor on 'My Menu Settings' press the 'set' button
- Select the 'Register to My Menu' option
- Scroll through the list of selectable options to add what you wish to appear in the list

Customising Camera Buttons?

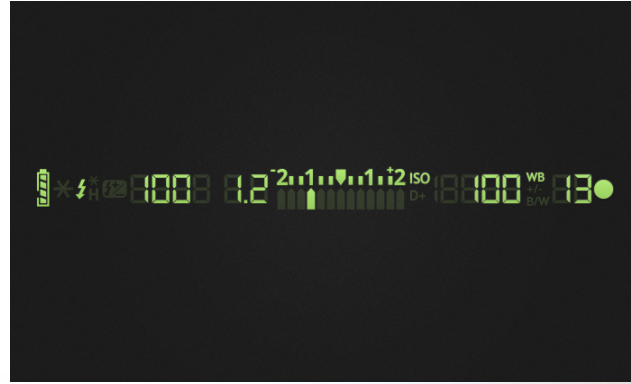
- Customising your camera's buttons



It is possible on many Canon DSLR's to customise many of the camera's buttons to change their function or turn features on and off. These are definitely worth mentioning however, many of these features are for advanced users and would likely take another evening to go through on their own. It is enough to just point out that these options are there.

What's in Your Viewfinder

- Why is this information shown in the viewfinder?



Besides the auto-focus points, there are a few numbers and a scale in my viewfinder and most viewfinders show just about the same information. In this 5D Mk2 image, the numbers etc. that we see appertain to settings that are currently being used by the camera regardless of whether they are set manually or automatically. These settings are what are essential to the way in which the shot will turn out. This what the highlighted symbols represent from left to right:

- Battery level indicator
- Flash Ready (interesting because the 5D does not have a built in flash)
- Next is shutter speed and here it is showing 1/100th second
- Lens aperture next and here it is set to f/1.2
- The scale is the exposure compensation setting and here it is read 1 stop underexposed
- ISO is shown here as 100
- WB means the white balance is set to other than auto.
- 13 is the number of shots left in the buffer for continuous shooting. This is for RAW as the number would be higher for JPEG
- The round dot shows that auto focus has been achieved

The Diopter Adjustment

- What is the diopter?



So now we know what the dioptre is but what does it adjust?

- All of Canon's EOS range of SLR cameras feature a built-in dioptic adjustment system that allows photographers with less than 20:20 vision to get viewfinder clarity despite their eyesight defects. Ideally it should be the first adjustment that you make when setting up a new camera. Dioptic adjustment allows for fine-tuning of the viewfinder focus to suit an individual's eyes. The process is essential to ensure that both the image on the focusing screen and the viewfinder display information are in perfect focus.
- Remove the lens and point the camera at a bright, but diffused light source such as a window. Removing the lens ensures that you concentrate on getting the focus screen in perfect focus. This is the surface where the camera mirror projects the image that you are capturing. If your view of the focus screen is not correctly adjusted, the image may appear un-sharp, even if the camera is focusing it correctly.
- Move the dioptic adjustment dial backwards and forwards until the focus point and other markings on the screen appear sharpest. Check that the viewfinder information displays are also sharp and also in perfect focus. The eye has an impressive compensatory ability for subjects that are not quite in perfect focus so it may be worth repeating the process a couple of times to ensure that results are consistent.

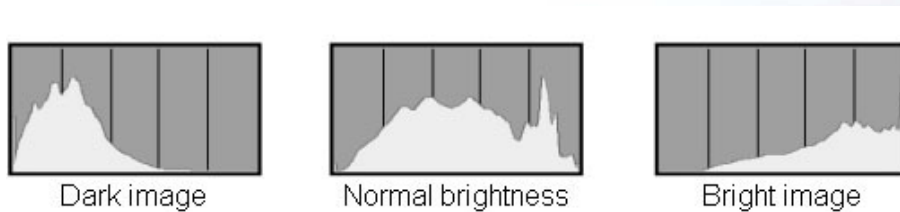
The Histogram

- As a Visual Reference?



A histogram is a graph that shows the frequency distribution of an image's data values, which makes it convenient for checking an image's brightness or darkness or the trends in the colours it uses.

This histogram shows the distribution of brightness in an image as a graph of brightness along the horizontal axis (Left: Dark; Right: Bright) and a stack of the number of pixels at each level of brightness along the vertical axis.



Within the screen, the peaks in the graph will skew more to the left the greater the dark components of the image there are and will skew more to the right of the graph the greater the bright components of the image there are. Components up against the left edge of the horizontal axis are crushed blacks, and components up against the right edge are blown highlights. By looking at an image and its histogram, you can check the exposure level and the overall gradation in the image.

Using Live View to Get Sharp Images

- How can live view help you get sharp images?



The use of live view to get sharper shots makes real sense when you are using a tripod and manual focus mode. Live view's ability to zoom into scene's makes it invaluable for attaining sharp images and here's how to use it:

- With your camera secured on your tripod and pointing at your subject, switch on 'Live View'
- Using the joystick or buttons move the white box to the focus point in the scene
- Now push the blue magnifying glass button once and zoom in then press it again to zoom in fully
- Alter the focus ring until the sharpest image is achieved
- Now using a remote trigger, take the shot

Now you know your body
Now choose the right lens



No wonder it is confusing!

What you will need
to consider:

- Camera body
- Image
- Your location

Telephoto vs Normal vs Wide Angle



Canon EF 100-400mm
f/4.5-5.6L IS II USM



Canon EF 24-70mm
f/2.8L II USM



Canon EF 16-35mm
f/2.8L II USM



Canon EF 300mm
f/2.8L IS II USM



Canon EF 50 mm
f/1.2L USM



Canon EF 24 mm
f/1.4L II USM

What different focal lengths do-

	Telephoto	Normal	Wide Angle
Focal Length (35mm format)	70-400mm,	35-80mm	14-40mm
Angle of View	less than 40°	40° - 60°	greater than 60°
Perspective effect	compresses: size difference between close and remote objects is less.	Little to none: closest to what the eye sees	expands: close objects look much larger remote objects much smaller
Magnification	yes	No	No
Max aperture	f/4 (zoom) f/1.2 (prime)	f/2.8 (zoom) f/1.2 (prime)	f/2.8 (zoom) f/1.4 (prime)
Use	sport, wildlife	Portrait	landscape

*Also have super telephoto, ultra wide/fish eye and Macro

So here's a Canon video to explain a bit more

<https://www.youtube.com/watch?v=cR0z7rulk0s>

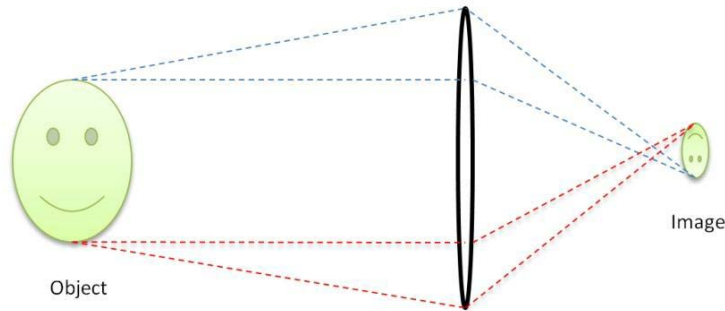


Canon 5200mm F/14 Mirror Lens (sold on ebay in 2010 for \$50000)



Macro Lenses - remember workshop

- Magnification is 1:1
- Max aperture f/2.8



Canon 100mm f/2.8L Macro IS USM



Hints Tips and Questions?

- When you're messing in the menu and a killer shot presents itself, half pressing the shutter will return you to shooting mode
- Learn where all of the buttons are with your eyes closed, you should be able to operate the buttons needed for shooting with one hand and whilst looking through the viewfinder. This is why they are positioned where your right hand can access them
- Keep your firmware up to date, you may well be missing out on new features
- When you've messed it all up and all else fails, as a last resort use the 'Clear all camera settings' in the yellow menu to reset your camera back to factory settings
- Best lens is not how big it is it is how you use it.
- Canon lenses are made for canon bodies they do work best together.
- While your right hand knows your camera body the left must know your lenses switches, focus and zoom rings

[https://www.youtube.com/watch?v=fkB
OsTVfpdA](https://www.youtube.com/watch?v=fkB
OsTVfpdA)



Goodnight everyone,

Thanks For Coming