Learn How To Confidently Take Photos In Manual Mode With Any Camera

GOODBYE AUTOMATIC

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About the Author

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Hey! I'm an outdoor lifestyle and travel photographer from Vancouver, Canada, and the guy behind Brendan Williams Creative. An online educational resource for photographers and photo editors looking to take their work to the next level.

When I first began creating online photography tutorials and workshops in late 2017, my mission was to help decode the mysteries of photography and photo editing to those just starting. The vast majority of people I know love taking photos, but rarely (if ever) venture out from the safety of automatic mode. In this e-book, readers will gain the understanding of essential camera settings, and learn how they work together to create an image. Once you discover how to shoot in manual mode, your creative control is limitless!

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Introduction

When I first started photography, I never left the comforts of automatic mode. I still remember looking at the dreaded **M** on my cameras mode dial and thinking, "that's only for the pros". I occasionally would gain the confidence to try shooting in manual mode, just to get shut down with photos that appeared too bright, too dark, a little blurry and everything in between.

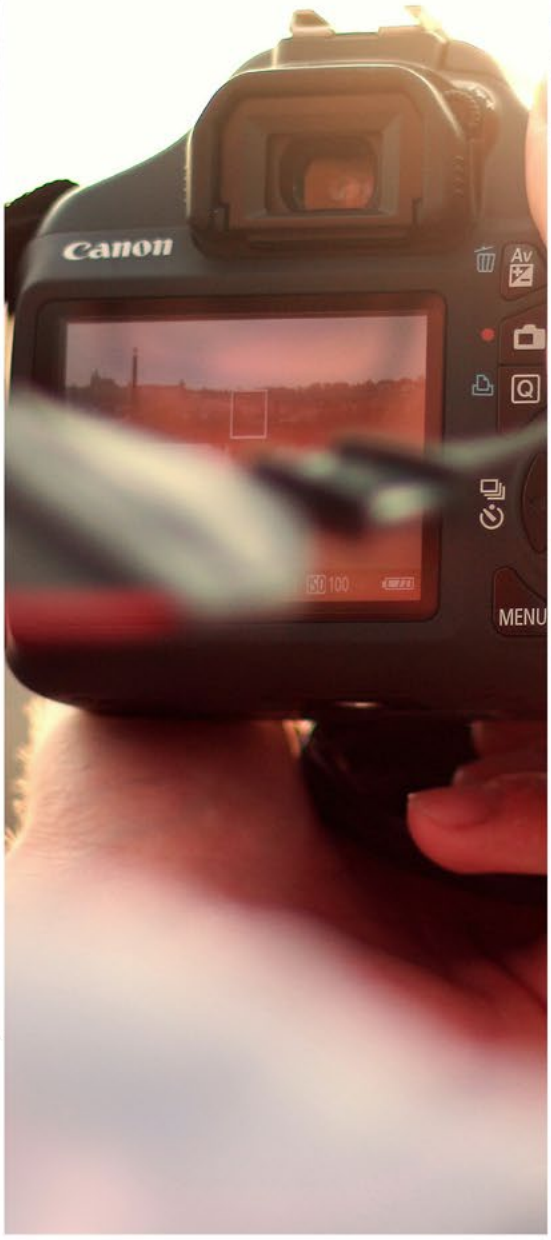
Back to the comforts of automatic I went.

In this book, you'll discover the essential aspects and tools for shooting in manual mode and building a better understanding of your camera. Shooting in manual mode opens up a world of creative opportunities that you can't find in any other method. You are in complete control of your images and all the artistic flair that can go along with it.

Shooting in manual mode can feel intimidating because most people don't understand how each setting operates on its own. In this book, I break down your essential camera settings into individual and digestible chunks that are simple to understand. As you discover how one setting works, it's much clearer to understand how they all relate together to create your photo.

This book will cover everything from the basics of how a camera works, the notable settings that affect your photos, and how to implement your new knowledge in the field.

After implementing the skills learned here, you'll feel confident to shoot in manual mode and begin to notice a substantial positive change in your photography. You'll have the all the know-how and self-assurance to capture photos exactly like you envision them!

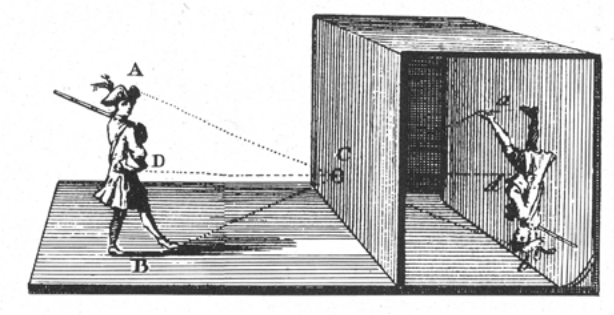


Chapter 1

How Cameras Work

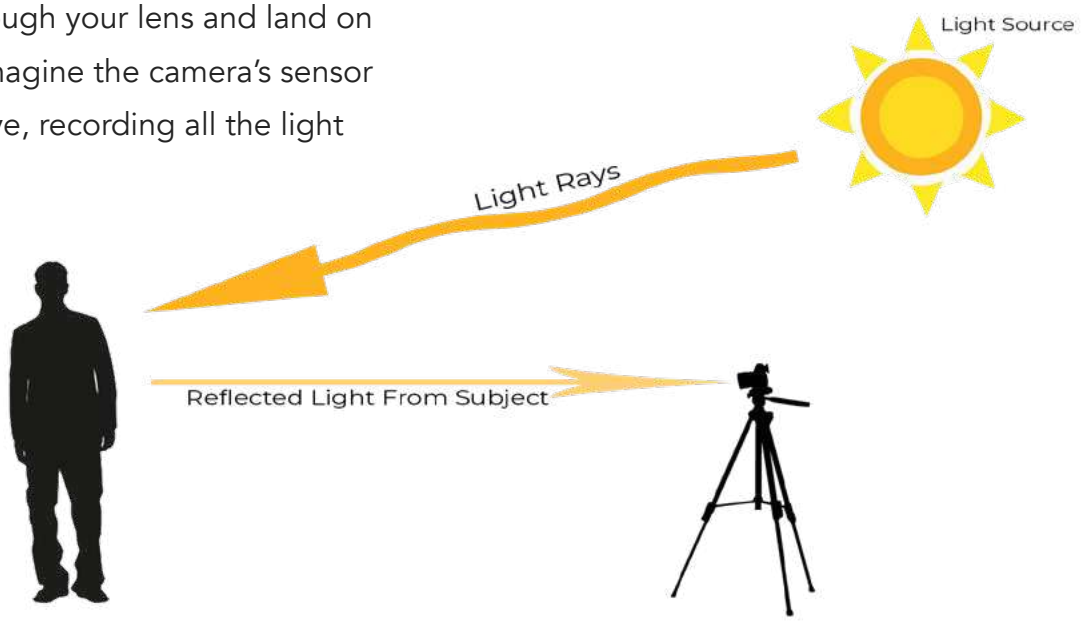
What Is A Camera Anyways?

There has never been a better time to become a photographer. In the age of digital, it's easy to pick up a camera, snap a few photos and begin sharing them as you please. Cameras have come a long way since the early 1800s, but one principle remains the same—cameras record light.



At every moment, our eyes are bombarded by light reflecting off of everything we see around us. The light that you and I are familiar with is called **white light.** White light consists of all visible colours like red, orange, yellow, green, blue, indigo, and violet. As you likely learned in high school Science class, waves of light travel in beams; these beams reflect off objects and enter our eyes, allowing us to see.

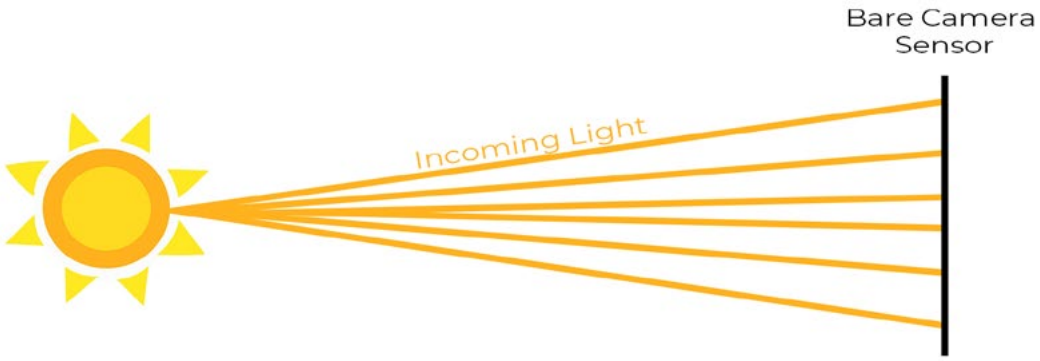
Cameras work the same way. Beams of light reflect off an object, travel through your lens and land on your camera's sensor. Imagine the camera's sensor like the retina of your eye, recording all the light that hits it.



Sensors, Lenses, And Refracting Light

You're probably thinking, "if the sensor does all the work, why am I paying big money for lenses?". Although a valid point after reading the previous section, if you only had a sensor and some light, you would get a blurry white image. ***Why is that?***

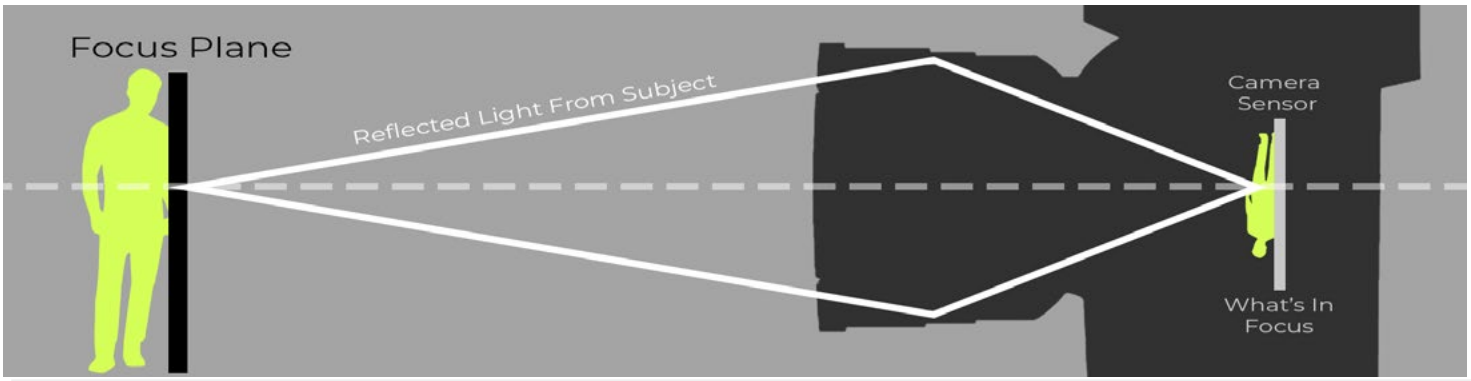
Yes, a sensor records the light and turns it into a photo, but the only purpose of a sensor is to **record light**. A sensor cannot manipulate or help bring those incoming light rays into focus. Below is an example of what light rays would look like hitting a bare sensor. Notice how none of the light rays converge; they are all going off in their own directions from the source. This would cause anything in the photo to appear blurred since the beams of light do not converge into a point.



The incoming light does not converge to a single point on the sensor. This means that everything will be out of focus in this example. Light must converge to a point to create a focus plane. That's what lenses help to do!

To make these light beams converge into a single point, lenses use convex-shaped glass elements to refract incoming light and focus it to a single **focal point.** A focal point is the area of your photo that will be in focus. Now let's dive into this a little further.

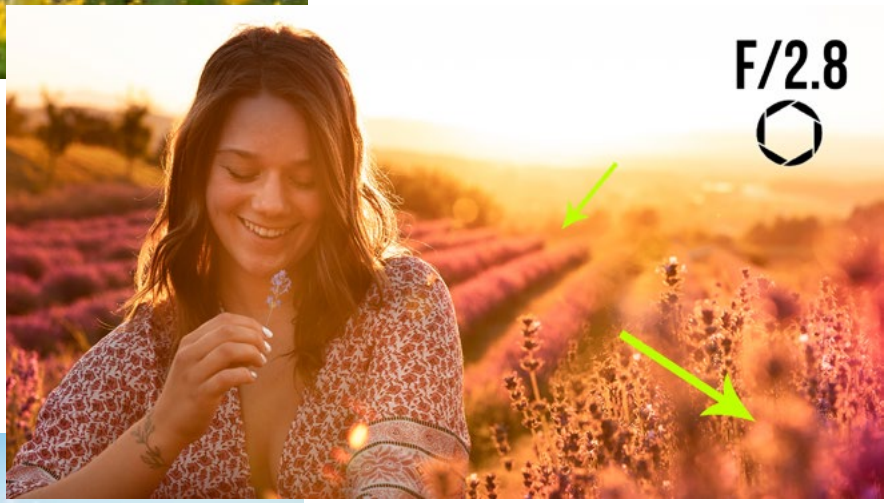
As you likely already know, lenses are made up of a series of glass elements. This glass is perfectly shaped to refract (otherwise known as a bend) light into a single point. The light that is refracted to a single point, creates an in-focus image on your sensor. As you adjust the focus on your lens, you are slightly moving the glass elements inside to perfectly refine the lights focal point.



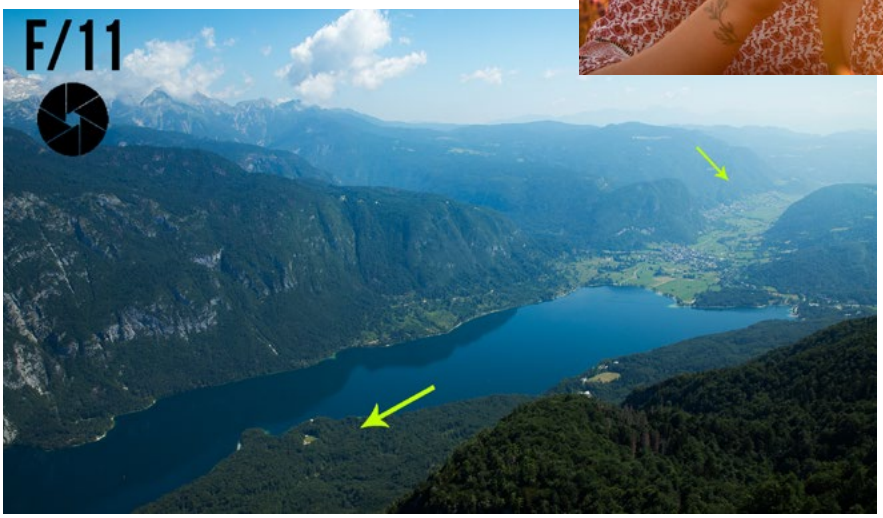
Aperture

Although the primary purpose of a lens is to refract light, the lens is also home to a little ring called the **aperture.** The aperture is the 'light beam security guard' to your sensor, dictating exactly how much light is allowed to pass through your lens at a time. The aperture is ring-shaped and opens or closes depending on your aperture setting, otherwise known as **F-stops.** We'll be getting into this later on, but in a nutshell, the aperture helps to alter overall image brightness and the depth of field (how much is in focus at once). Below are some examples of aperture and its effect in photos.

At F/5.6 notice how the foreground is blurry while the background is in focus. There is a shallow depth of field.



At F/2.8 only the subject is in focus while the foreground and background look heavily blurred.



At F/11 nearly everything looks to be in focus. There is a large depth of field.

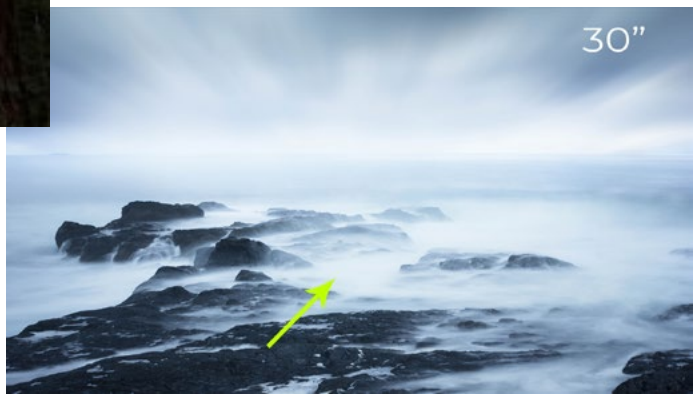
Shutter Speed

The last gatekeeper to your sensor is found within the camera body itself. This piece is called the shutter. The shutter opens and closes when you hit the capture button and is the reason for that unmistakable 'click' sound you hear when you take a photo.

The shutter speed can be set to stay open for a variety of lengths, from something as fast as 1/4000 of a second to as slow as 30 seconds. In simple terms, your shutter speed will dictate how long light is able to reach your sensor. The longer your sensor is exposed to light, the brighter your image will become. That's why if you tried to take a picture with a shutter speed of 30 seconds on a sunny day, your image would be completely white. This happens when your sensor gets overwhelmed with too much light. If you were to do the same 30 second shutter speed at night, suddenly your camera can clearly see objects that appear dark to the human eye. Again, we will cover this more extensively later on in this book.

At 1/250 I can darken my image enough on a sunny day and still shoot handheld without any problems.

At 1/800 extremely fast moving subjects like this mountain biker are perfectly frozen. Faster moving parts like bike tires still may appear blurred.



At 30 seconds, anything that is moving will become blurred. The crashing waves and moving clouds become completely blurred and smooth looking. A tripod is required for these kinds of shots called "long exposures".