

# A Brief History of the Camera

Cameras have proven to be great tools for mass media, visual arts, and for that enjoyable past time of being able to capture moments to remember. Whether you're a professional or an amateur photographer, knowing a bit more about the history of the camera can help you appreciate photography and the tools that you use a little more.

The history of the camera has shown how today's cameras are much different from what used to be fairly crude looking instruments. It has been dominated by modern inventions like digital single lens reflex cameras which are the improved versions of its more traditional single lens reflex siblings, digital point and shoot cameras which you can carry conveniently in your pocket, and even smartphone cameras which come as almost standard features of today's many different smartphones.

These digital innovations added to photography history and the fast, ever changing world of technology continues to improve the cameras that people use today. Let's look at a brief history of the camera and see just how much this gadget has evolved. But first things first...

## What is a Camera?

Before moving along to the details of the history of the camera, let's understand what a camera is first. In the simplest terms, a camera is a device used to take photographs and is the main tool used for the art of photography. Photography comes from the Greek words "photos" which means light, and "graphein" which means "to draw". This word in photography history was first used by Sir John F.W. Herschel in 1839.

A camera therefore is a device which captures light and records the images by the action of light or other related forms of radiation on a sensitive material. A camera makes use of lenses, mirrors, its own light source, and the media on which the captured image can be saved. So now we know, in basic terms, what a camera is, let's get into the history of the camera in more detail.

## The Evolution of the Camera

Photography history and the evolution of the camera as we know them today is kind of similar to that in the sense that the very first versions of the camera, although considered ingenious in their time, had been very crude instruments of photography compared to the advanced and even smart cameras that people have today.

The very first "camera" was the camera obscura or the pinhole camera. This device in the timeline of photography history is said to date back to the ancient Greeks and the ancient Chinese. The device makes use of a pinhole to project the image but the resulting projection was upside down. It is said that Alhazen or Ibn Al-Haytham, a great authority in the field of optics, was later on known in photography history as the one who created the pinhole camera in 1000 AD.

In the earliest days of photography history, the camera obscura was used for watching solar eclipses, most notably done by Reiniers Gemma Frisius from the Leuven University in 1544. Giovanni Batista della Porta recommended using this device as an aid for scientific drawings in 1544. It was in 1685 when Johann Zahn envisioned the first small and portable camera which is closer to the smaller gadgets known today. Although crude, the camera obscura which was the first device in the history of the camera that showed the first signs of the makings of a more advanced device which would lead to the development of cameras as we know them today.

# The Very First Photograph

In the history of the camera, the camera obscura had been around for many years, but no one has been able to preserve the images in a photographic form. It was only in 1827 when Joseph Nicéphore Niépce used the camera obscura for coming up with heliographs or sun prints which made it the first tool used in photography history. It can be said that these heliographs were the prototype of today's modern photographs which used light to draw the picture.

The resulting photograph is very different from the photographs we know today though. Niépce made use of an engraving and a bitumen-coated metal plate which was then exposed to the light. The darker, shadowy parts on the engraving were able to block light, but lighter areas allowed just enough light to react with the chemicals on the metal plate. The image had initially been invisible, but after placing the metal plate in a solvent, it helped produce the image of the engraving. There are two major cons to this method though, it required eight hours of exposure to create the image and after it appears, it tends to fade away quickly.

Niépce had the idea of transferring images on another medium for a more permanent solution, although not enough to be counted as successful yet. Louis Daguerre, Niépce's partner worked on his idea after Niépce died in 1833. Four years later, Daguerre succeeded in creating the daguerreotype which is the first practical photographic process. He unveiled the daguerreotype in 1839 where he showed how he used a silver-plated copper sheet that has iodine vapor to help give it a light-sensitive coating which is silver iodide. The resulting image was developed in mercury vapor which was then fixed with a strong sodium chloride solution. Quite a potent mix of chemicals don't you think?

The daguerreotype camera was a box-shaped device made by Maison Susse Frères in 1839. This device has a lens which was created by Charles Chevalier. In 1841, Henry Fox Talbot came up with a more perfected process called the calotype which made use of cameras which were like what Zahn envisioned. The resulting image from this process was transferred on a sheet of paper or sensitised plate. He is said to be the inventor of the first negatives, and the term "calotype" is a Greek term which means "beautiful picture".

## Photography History – Film and the Birth of Modern Photography

In photography history, cameras have long been known to use films which would then come up with a negative of the image. Film has been a major part of the history of the camera and despite being used years ago, it is still actively used today. Over the course of photography history, the techniques for developing photos improved, and being able to produce colored photographs was made possible.

The "olden days" made the relationship of photographic printing and the development of the camera go hand in hand. Throughout the history of the camera, the same rule of developing more advanced devices to come up with beautiful printed photographs transferred was applied. George Eastman was the man responsible for pioneering the use of photographic film. In 1885, he developed paper film before he switched to celluloid use in 1889.



His first camera was called the “Kodak” and this name is still a major name recognized as a major player in the development of the camera and camera film. It was a simple box camera that had a fixed focus lens and just a single shutter speed. Upon purchase of this relatively affordable device, it came loaded with film enough for a hundred exposures which would then have to be sent back to the factory to be processed. As the 19th century closed, Eastman was able to expand his camera lineup to include box as well as folding cameras. These innovations were readily taken by the masses who wished to capture their own special moments and preserve them in print.

The Brownie was another camera made by Eastman and this was what introduced the snapshot. It became very popular and was still on sale around 1960. In photography history, Eastman became famous for low-cost photography but there was no denying how plate cameras still had higher quality prints. This was why these more expensive cameras were still popular and well used around the 20th century.

## The First Compact Cameras

It is true that the Kodak and Brownie were affordable, but they weren’t very compact. Comfortable handling and more portability would definitely be more attractive to more buyers who are interested in creating photographs of their own.

Oskar Barnack decided to experiment with 35-mm cine film while simultaneously trying to make a compact camera. His prototype camera was the 35-mm Ur-Leica which was developed in 1913. Its development was delayed because of the First World War though, but it was test-marketed from 1923 to 1924. It received positive feedback which resulted in commercial production of the “Leica 1” which got its name from the first two letters of “Leitz” where Barnack worked, and “camera”. Today, Leica cameras are sought after by most photographers as the pinnacle of photography equipment, but the price tag that comes with a Leica means that for some, it’s just **something to lust over**.

## TLRs and SLRs

In 1928, the Franke & Heidecke Rolleiflex TLR or twin-lens reflex camera was released and it was known to have been the first practical reflex camera. TLRs and SLRs or single-lens reflex cameras have been available for decades but both have been even bulkier than the box-type Kodak and other more portable cameras. The Rolleiflex was different though, and it was compact enough to gain popularity in the mass market. The TLR design then became popular for high as well as low-end cameras during those years.

In 1933, the same revolution happened with the SLR when the Ihagee Exakta was released. This was a 127 rollfilm compact SLR which was followed three years later by the Kine Exakta, which was also known as the Soviet “Sport” camera. The SLR gained immediate popularity and new models as well as more innovative features were introduced back in those days.

After the First World War, the newest SLR innovation was having the eye-level viewfinder, which was first featured on the Hungarian Duflex released in 1947. A year later, it was refined with the Contax S

which was the first camera to have used a pentaprism. Around the same time, the Hasselblad 1600F was released and this set the standard for **medium format SLRs** for many years.

In 1952, the Asahiflex was introduced and this was made by the Asahi Optical Company who is now well known for their Pentax cameras. In the 1950s, other Japanese camera makers entered the worldwide market. These brands included cameras from Canon, Nikon, and Yashica. It was Nikon F that came with interchangeable components and was called the first Japanese system camera. This helped establish Nikon's reputation as the manufacturer of professional-level cameras. Something they continue to have today.

## Enter Instant Cameras

The relationship between the printing method and development of cameras has been established in the earlier models of cameras, and this relationship has not been forgotten. The Kodak required film to be taken back to the factory, and the same applied for many other cameras when it came to developing the photographs.

Conventional cameras steadily became more sophisticated, but come 1948, a completely new "breed" of the camera was released. The Polaroid Model 95 was the very first instant-picture camera in the world. It had also been known as the Land Camera since it was named after Edwin Land who created it. It made use of a patented chemical process to come up with finished prints of the photos within just a minute! You can imagine just how different and modern this concept was back then and it became a really huge success because of this innovation.

It was expensive, but despite the hefty price tag, the fact that users can have their photos right then and there made all the difference. In the 1960s, there were dozens of models for the Polaroid and they were met with huge success. The Model 20 Swinger released in 1965 was largely successful and it remains to this day as one of the top-selling cameras of all time!

Today, there truly are a lot of cameras but having a Polaroid and those instant printouts prove to be a novel experience for many. Unlike smartphone cameras which can give you photos limited to only the amount of storage you have, a Polaroid snapshot may seem more unique because the resulting printout is one of a kind.

## The Arrival of Digital Cameras



In the history of the camera, instant cameras came after the film cameras and they are closer to the digital cameras which we know today. These cameras are some of the most innovative ones in photography history because these no longer use film for storing images, but make use of memory cards or internal storage for keeping the photos. These photos of course can still be printed, but they can also now be viewed on other gadgets which have display screens. Most, if not all, digital cameras have their own display screens which can show the photos right after they are taken.

Compared to film cameras which require printing the photos somewhere else, unless you have your own dark room or red room, these digital cameras have lower costs. Because of this, film cameras have been limited to some niche markets. There are still advantages when using film, but the expenses and other limitations make the use of film much more laborious than the friendlier digital cameras.

There are a bounty of digital cameras and there are hundreds of models from many different brands. They do however share some common properties which make them the popular gadgets they are today.

These properties include:

- Being powered by rechargeable batteries
- Having more advanced settings for ISO, white balance, focus, shutter speed, and image resolution among others
- Having display screens
- Having internal or removable storage systems

Usually portable, digital cameras are used by a lot of people and can be one of the following:

- DSLR or digital single lens reflex cameras – These are quite bulky and often used by professionals but are still more portable than its early ancestors.
- Point and shoot digital cameras – Pocket-sized and very user friendly, they are also more affordable than DSLRs.
- Compact system cameras – A cross between the DSLRs and point and shoots, they have less bulk but can rival the shooting quality of DSLRs.

Modern digital camera features continue to amaze people especially when they are compared with the cruder camera versions of photographic history. Some of these features include burst shots or having several photos taken at intervals, capture timers for automatic shooting without anyone pressing the capture button, built-in filters and colour selection, mood and shooting options, and several others. Some cameras even have Wi-Fi or Bluetooth connectivity which allows for photo file transfers to other devices for easier sharing.

Truly, cameras have come a long way from being something used to view a solar eclipse to gadgets which are now used to share works of art or even the most random of captured moments. From being used for scientific purposes to being used for minute-by-minute selfies or group pictures, the history of the camera has truly seen many advancements through time and has become a part of how people today preserve memories, in both digital and printed form.

Looking at how technology is advancing, it won't be long before more huge innovations enter the world of photography. Who knows, maybe we'll be taking holographic images in the near future