

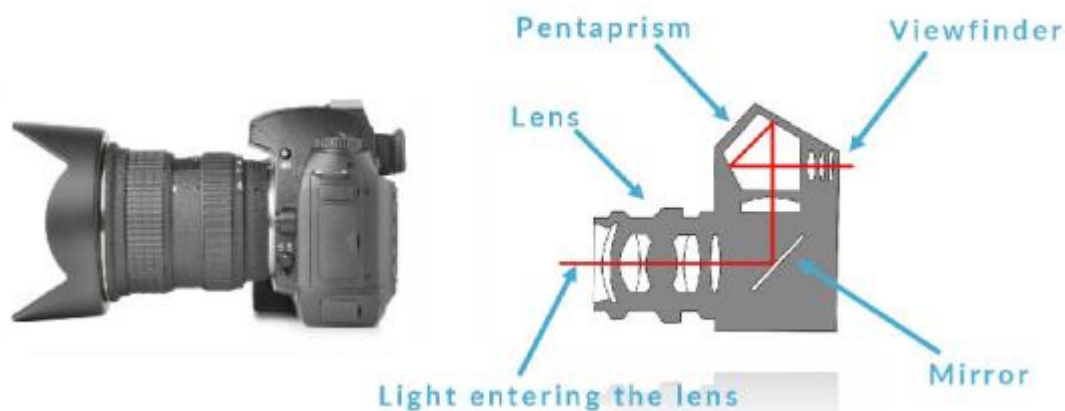
# Merthyr Tydfil Camera Club

## Basic Camera Operation & Functions

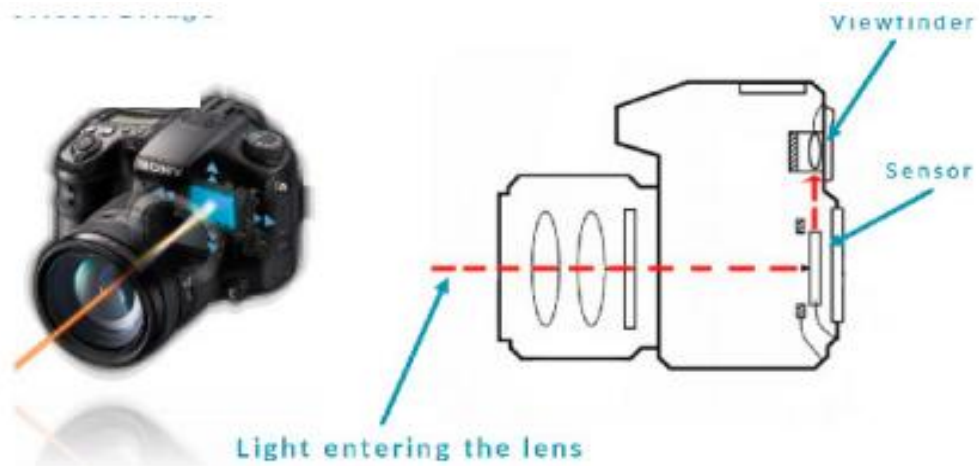
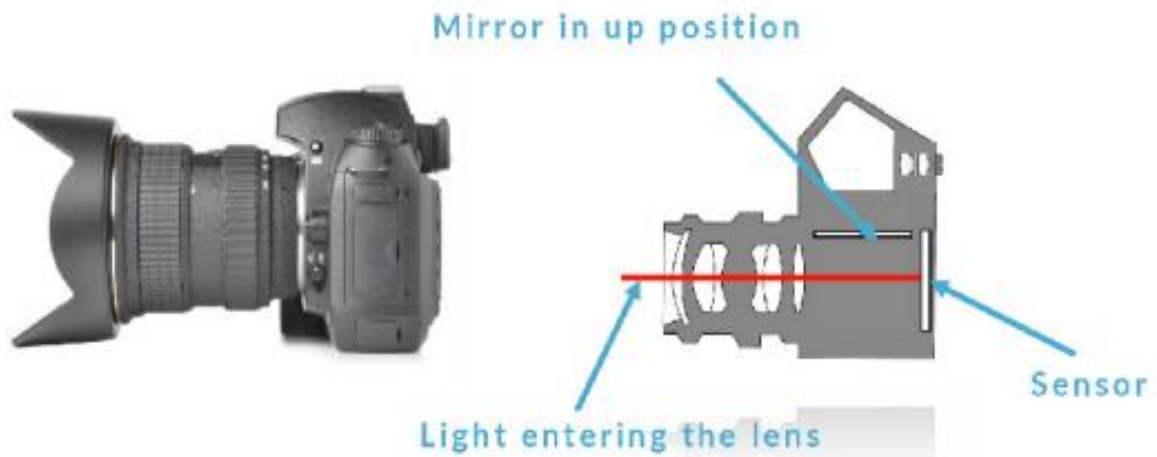
This tutorial will look at the most common functions that appear on most cameras and hopefully familiarise the reader with their use. Understanding these functions will expand the creative control and open new possibilities for the user's images.

### 1. How a camera works?

All cameras use the same basic design: light enters an enclosed box through a converging/convex lens and an image is recorded on a light-sensitive medium. The sensor. In a camera with a mirror this is how the camera basically operates.



With the mirror in the down position, the user can look through the viewfinder and with the combination of the pentaprism and mirror sees what the lens sees allowed the user to made a composition of what is seen.



Once the user is happy with the composition of the image, the user presses the shutter release button, and this causes the mirror to be moved to the up position allowing the light into the lens and on to the sensor.

## 2. Camera Components



### Viewfinder.

A viewfinder is what you look through to compose and focus the picture. Viewfinders are used in many cameras of different types from film to digital.

### Menu Button.

A camera has many settings that can only be accessed by selecting a detailed menu view. Some feature the ability to make a series of differently-exposed images.

### Joystick.

These controls on each camera will vary depending on the model and type.

### Adjustment Wheel.

Cameras come with dioptres that allow you to calibrate the viewfinder to match their eyesight. Stare through the camera while turning the dial to sharpen.

### Liquid Crystal Display.

A display, often a liquid crystal display (LCD), permits the user to view the scene to be recorded and settings such as ISO speed, exposure, and shutter speed



## Lens.

A lens might be permanently fixed to a camera, or it might be interchangeable with lenses of different focal lengths, apertures, and other properties.

## Shutter Release.

The shutter release is the button enables the ability to capture the image. The length of time the shutter is left open is determined by the shutter speed.

## LCD Screen.

The LCD is mainly for viewing photos after shooting. You may also find LCD screens that offer more information.

## Hot Shoe.

A metal bracket on top of your camera with electrical contacts where an external device can be connected.

## Mode Selection.

Most digital cameras support the ability to choose among several configurations, or modes, for use in various situations, including Manual Mode.

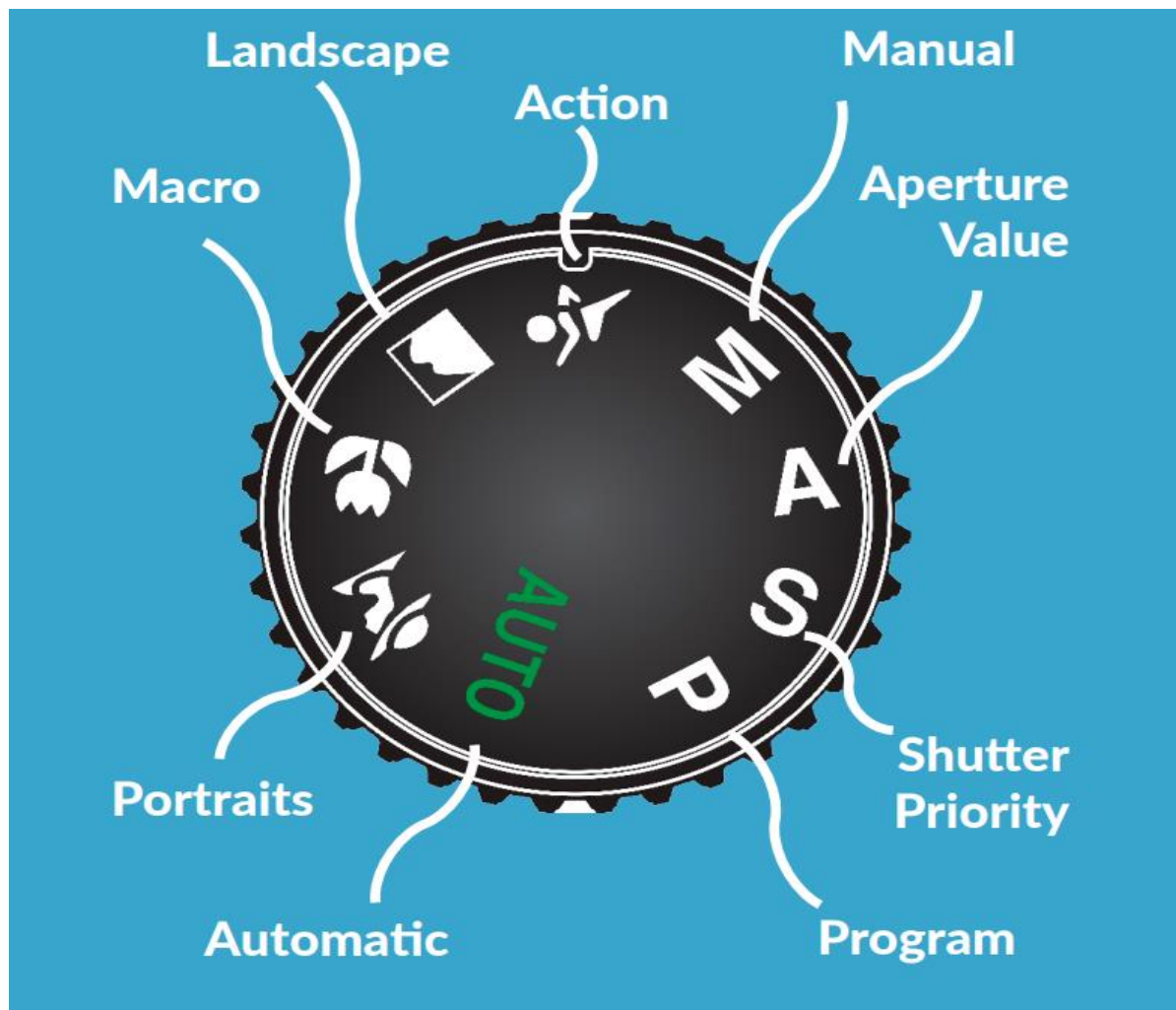
### 3. Camera Modes

Why are camera functions so important and what option should I use? The mode dial is a crucial component for all photographers, especially those that wish to educate themselves on how to take their best pictures.

The mode dial sets the camera to your desired shooting mode. The standard modes are Program, Shutter Priority, Aperture Priority, and Manual and are usually represented by the P, S, A, and M positions on the dial.

On point-and-shoot cameras which support modes a range of scene types is offered. On DSLR cameras and SLR-like cameras, mode dials usually offer access to manual settings.

Most cameras, especially entry-level models, will also have a green box for automatic mode. Automatic mode is the easiest way to take photos but not always the best. Automatic mode handles all the options for user and will even raise the pop-up flash automatically when needed. A no-flash automatic mode keeps all settings in automatic but will disable the pop-up flash when you don't want to use it.



On most DSLRs and Bridge cameras, the mode dial is located at the top of the camera. On point-and-shoot cameras, however, the mode dial's location is less standard. On many models, it is found on top like DSLRs. On Compacts the dial is found on the back of the camera, often coupled with a menu navigation button. Some thin cameras use a slide switch rather than a dial.

## Automatic – Auto

In automatic modes the camera determines all aspects including exposure, aperture, focusing, light metering, white balance, and equivalent sensitivity.

## Program Mode - P

Program mode offers the photographer partial control over shutter speed and aperture.

## Aperture Value Mode – A or AV

Aperture value allows the photographer to control the aperture, while the shutter speed and ISO sensitivity are calculated by the camera.

## Shutter Priority Mode – S or Time Value TV

Shutter priority allows the photographer to control the shutter speed, while the aperture and ISO sensitivity are calculated by the camera.

## Manual Mode – M

Manual mode allows the photographer to control shutter speed, aperture and ISO independently.

Some cameras have tens of modes, showing the majority only in the menu rather than on the dial. Many cameras do not document exactly what their many modes do; for full mastery of the camera, one must experiment with them

## Sport or Action Mode

Action or sport mode increases ISO and uses a fast shutter speed to capture action and moving subjects

## Landscape Mode

Landscape mode uses a small aperture to gain depth of field. This captures scenes where everything is in focus from the foreground to the background.

## Macro Mode

This mode the camera allows you to get physically very close to the subject to fill the frame and emphasize its detail.

## Portrait Mode

Portrait mode widens the aperture to throw the background out of focus. The camera may recognize and focus on a human face.

## Other Modes

Other scene modes found on many cameras include Fireworks, Snow, Natural light/Night snapshot, Night mode, Night Portrait mode and Movie mode