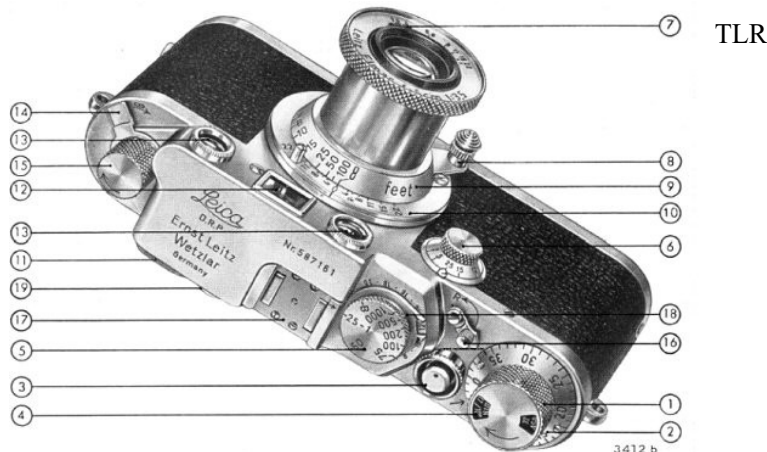
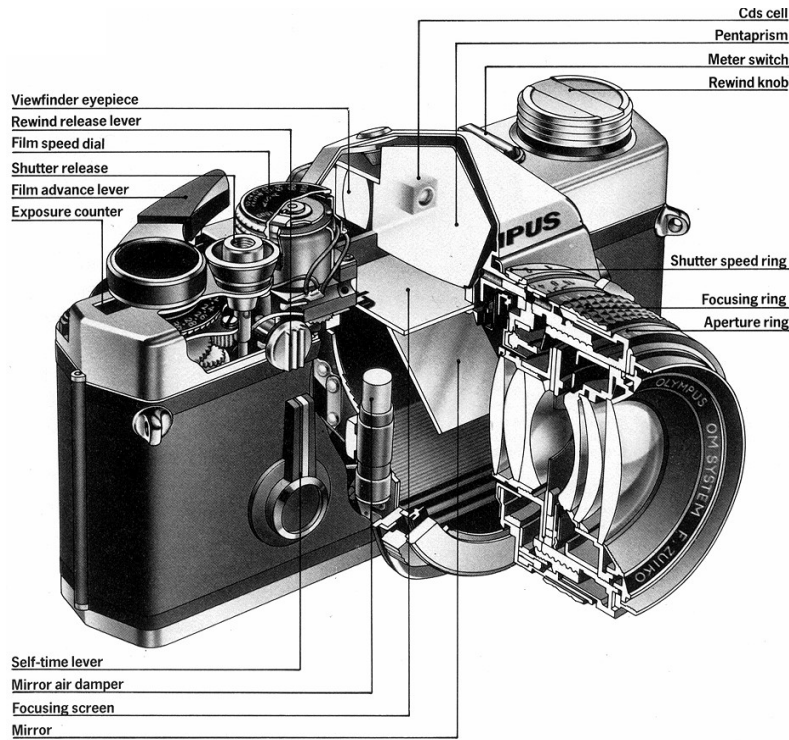


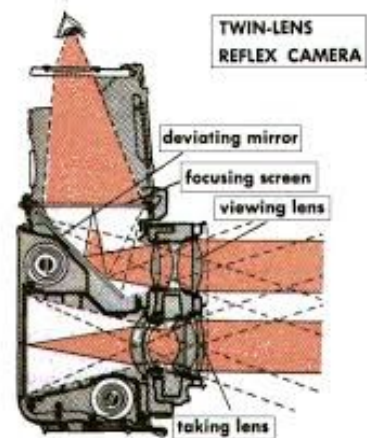
Taking Pictures

The camera

SLR



TLR



- | | |
|--|---|
| <ul style="list-style-type: none"> 1 WINDING KNOB
advances the film and winds shutter in one operation 2 AUTOMATIC EXPOSURE COUNTER 3 SHUTTER RELEASE 4 FILM TYPE INDICATOR 5 FAST SHUTTER-SPEED DIAL
for speeds from 1/25 sec. to 1/1000 sec. and "Bulb" 6 SLOW SHUTTER-SPEED DIAL
for speeds from 1/25 sec. to 1 sec. and "Time" 7 IRIS DIAPHRAGM ADJUSTMENT 8 FOCUSING LEVER WITH INFINITY CATCH 9 DISTANCE SCALE 10 DEPTH OF FIELD SCALE | <ul style="list-style-type: none"> 11 TWIN EYEPIECE of viewfinder and rangefinder 12 VIEWFINDER WINDOW 13 RANGEFINDER WINDOWS (two) 14 RANGEFINDER EYEPIECE ADJUSTMENT 15 REWINDING KNOB 16 REVERSING LEVER
A = Film ADVANCE position
R = Film REVERSE position 17 ACCESSORY SHOE for special viewfinders etc. 18 ADJUSTABLE FLASH CONTACT SCALE
with red contact numbers 19 FLASH PLUG SOCKET
to connect flash attachment cable |
|--|---|

The film

Film is the essential 'software' which captures the image produced by the camera lens. To give a very simplistic outline of what actually is an extremely complex material, film consists of a flexible substrate coated with an emulsion made up of silver salts in gelatine. The action of light causes changes in the silver salt, a change which can be made visible by the action of a chemical developer.

Films are classified according to their sensitivity to light, quantified by means of an industry system called ISO rating. *ISO 400* is a fast film while *ISO 100* is seen as 'normal'. *ISO 40* is slow while *ISO 1600* is very fast. Films with **high ISO numbers require less light** to make an image on film while those with **lower ISO numbers require more light**. Using a fast (high ISO) film tends to mean that the quality of image is less sharp and more grainy than the image obtained with a lower ISO film. This, then, can reduce the level of enlargement you can make.

As a broad general rule, one would use the lowest ISO film which will comfortably equate with a given lighting situation. But the grain in a film can be used for creative purposes in creating a print, so the film you use depends on what you want to produce.

Film Formats

Film is made in a number of formats where a format is combination of the image area plus the method of controlling the movement of the film. The three main formats are 35mm, 120 and 4x5.

35mm has an image area of 24mmx35mm. It is pulled through the camera by a set of sprockets or wheels. The film has holes down its length to engage the sprockets.

120 film has an image area of either 6cmx6cm or 6cmx4.5cm. The film is physically pulled through the camera on a take-up spool.

4x5 film is the main format within the sheet film group and the image size is 4inchx5inch. As the group name implies, the image is taken on a single sheet of film. Special film holders (such as *double dark slides*) are used to manipulate the film.

Film formats will obviously determine the structure of the camera.

Camera formats

Cameras that take 35mm film have been produced in two main formats: Viewfinder and Single Lens Reflex.

Cameras for 120 film include Twin Lens Reflex, Single Lens Reflex and Viewfinder.

Cameras for sheet film are mainly Large Format bellows cameras.

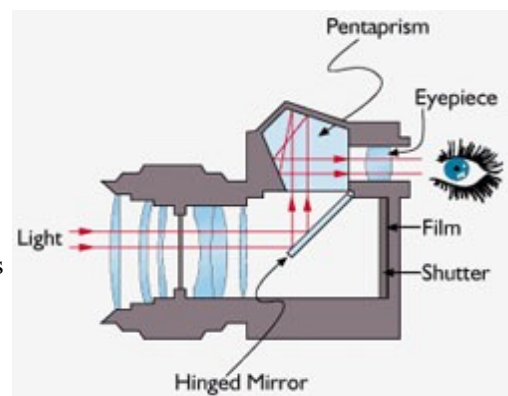
The film taking process

An image in a camera is formed as light is transmitted through the lens onto the film which is a light sensitive medium. A camera is designed to let you compose an image and to then activate the shutter. The shutter allows light to fall on the film surface for a pre-set period of time. This allows the image to be captured on the film.

To obtain the best image, you have to establish how much light is being reflected off the objects in the image you want. Then the following things interact based upon the speed (ISO rating), or sensitivity, of the film you are using:

Shutter speed – the time taken for the shutter to complete an open-close cycle determining the time the film is exposed to the image.

Aperture (or *f* stop) - the proportion of the possible light that will be allowed to hit the film



This interaction is called the *Exposure Value* (EV) and Exposure Index and Light Value

To determine the speed/aperture combination you need some form of light meter. This is a device that measures the amount of light and then scales this as speed/aperture combinations. Most SLRs have a built-in light meter but it is good practice to have a stand-alone meter.

Focusing the image

The quality of the image is normally dependant upon the image being in focus. When the image is sharply defined in the viewing screen it is said to be 'in focus'.

Focus also relates to *Depth of Field*.

Tripod versus hand held

When you press the shutter and record the image, your camera could be in your hands or it could be on a tripod. Whether or not you use a tripod depends on what your intentions are in taking the image. Eg:

- A hand held camera gives you more flexibility if you are interested in candid or street shots.
- A tripod gives a stable support when using slow shutter speeds.
- Images will be sharper if you use a tripod
- A tripod helps if you are using a long lens.

Film Issues

Expiry Dates. All films are marked with a date beyond which they will not necessarily perform at their best. However, as film deterioration is slowed at reduced temperatures, it is possible to markedly extend the life of films that are kept under refrigeration. The original packaging of such films must be intact and they should be allowed to come to room temperature before being opened for use.

Processing. All films may be user processed. However, some processes are quite long and involved, particularly those involving transparency films. Further to this, the necessary chemicals are often packaged in such quantities and have such a short life, that it is uneconomical to home process with fewer than a dozen films at a time.

Tips etc




If you are uncertain about what the shot will produce, you might bracket the shot. That is, you might take two or three frames with different speed/aperture settings.

You will become more confident with your outcomes if you standardise on a particular film. Such a film should cover the type of subject you like to shoot as well as the prints you like to produce.

This is also true of the developer. A standard film/developer combination helps produce more predictable results.

Camera Care And Maintenance

Modern cameras and lenses, though mechanically very complex, are extremely reliable and will give many years of faithful service as long as they receive a modicum of care and attention. The following is a list of hints and tips which should help keep your equipment in first class working order.

-  On acquiring a lens, immediately fit it with a filter, either an ultra violet (UV) or a skylight (1A).
-  When camera and lens are separated, fit each with a cap to prevent dust and dirt entering the mechanism. Metal camera body caps and rear lens caps are available for all popular camera brands.
-  The front of the lens should also be capped when not in use.

- Photographic equipment should be kept clean.

CAUTION: The reflex viewing mirror in your camera is front surfaced and must never be touched. Dust and fluff can be removed from the mirror with a blast from a can of pressurised cleaning air; the can should be held so that the nozzle does not touch the mirror surface.

The camera's film chamber may be cleaned with a small soft brush, lint free cloth, or clean air blast. NEVER TOUCH THE SHUTTER CURTAIN. If it is cloth it will wrinkle, if metal it will rust

- Keep your photographic equipment cool.

Excess heat will cause adverse effects on film, especially where colour is concerned. Heat can damage shutter and diaphragm mechanisms; it causes a thinning of the lubricants used, with the consequence that they find their way onto the thin metal diaphragm or shutter blades causing them to stick together. Repairs of such problems can be difficult and expensive.

- All equipment should be kept dry.

Any moisture from condensation or rain must be wiped off as soon as possible. If you can foresee the possibility of your equipment getting wet, then put it in a plastic bag with the lens only just protruding. This trick can also be used to advantage in very dusty conditions.

SPECIAL NOTE: A CAMERA DROPPED INTO WATER CAN NEVER BE SATISFACTORILY REPAIRED. Corrosion of the alloy parts is inevitable, and will always recur sooner or later, even with thorough cleaning.

- When cleaning lenses, most problem areas will respond to fogging with warm breath, followed by wiping with a special, lint-free, lens cleaning tissue. Micro-fibre glasses cleaning cloths are quite safe. Stubborn or greasy marks may require the use of lens cleaning fluid.

- Change the camera's battery every twelve months, even if it appears to be performing perfectly. Corrosion and leakage occur very quickly from old batteries even when they still work correctly.

- Exercise the camera mechanism regularly.

When changing film, cock and fire the shutter at various speeds, especially the slower speeds that are not normally selected. Do the same for the inbuilt self timer mechanism if fitted.