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MAMIYA SEKOR GUIDE

MAMIYA SEKOR 2000DTL
MAMIYA SEKOR 1000DTL
MAMIYA SEKOR 500DTL
MAMIYA SEKOR 1000TL
MAMIYA SEKOR 500TL
MAMIYA SEKOR 528TL
MAMIYA M5X 500
MAMIYA DSX 1000
MAMIYA SEKOR AUTO XTL

MAMIYA SEKOR GUIDE

How to Use the
Mamiya Sekor 2000*DTL*, 1000*DTL*, 500*DTL*,
1000*TL*, 500*TL*, 528*TL and Auto XTL*,
and the Mamiya MSX500 and DSX1000 Cameras

CONTENTS

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THE MAMIYA SEKOR CAMERA

The Mamiya Sekor 35 mm. single lens reflex cameras are of high precision, extremely versatile, incorporating a range of automatic features with a viewing system designed for accurate focusing and precise viewing.

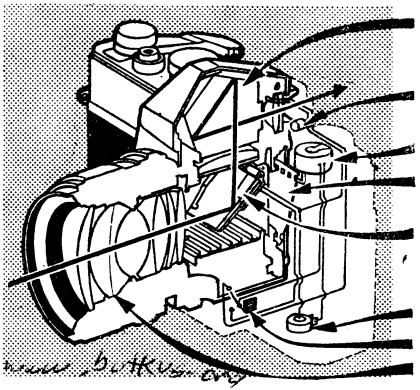
The Mamiya Sekor accepts a wide range of interchangeable lenses from 28 mm. to 400 mm. specifically made for this camera and as its lens mount is the Praktica-Pentax thread mount, lenses not specifically designed for Mamiya Sekor cameras may be used. A range of accessories and attachments permit the Mamiya Sekor camera to be used efficiently on almost any photographic assignment.

Body Construction

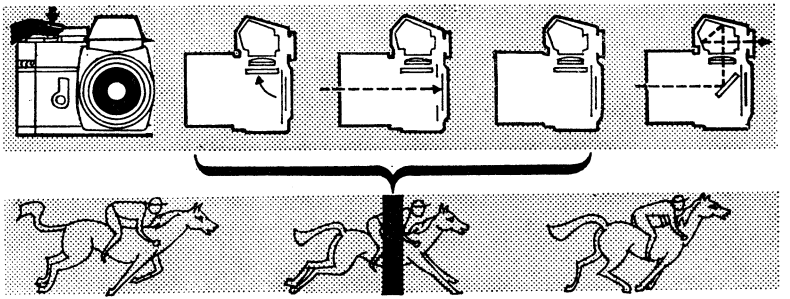
The die-cast body is covered with black resilient material with exposed metal parts black enamel or satin chrome finish. The back is hinged on. The camera yields up to 36 images, $1 \times 1\frac{1}{2}$ in. (24×36 mm.) on perforated 35 mm. film. It has a permanently fitted eye-level reflex finder with built-in pentaprism giving a right-way-round view. The centre of the reflex finder area contains a circular microprism permitting ultra fine focusing. The remainder of the finder field is a Fresnel lens. The exposure indicator is visible in the viewfinder. The image is brilliant and evenly illuminated. The screen field covers 95 per cent of the actual picture field with a standard 55 mm. focal length lens. The taking lens itself is used to form the finder image. In consequence the finder shows exactly the same image as will be obtained on the film, without any parallex even when wearing eye-glasses. The reflex image remains correct at any distance with any lens, including close-up supplementary lenses, extension bellows, extension tubes and other attachments.

The reflex mirror automatically returns to the precise focusing—viewing position the instant the exposure is made. Vibration from the mirror's action is practically eliminated.

MAMIYA SEKOR REFLEX VIEWING SYSTEM



The image formed by the lens is reflected by the mirror on to the ground glass screen, whence it is again reflected to the eyepiece by the pentaprism. The image seen by the eye is right way up and right way round.



Below: When the shutter release is pressed, the iris diaphragm closes to the aperture pre-set, the mirror swings up and the shutter opens. When the shutter closes again, the mirror swings down and the iris diaphragm re-opens fully. While the mirror is in the upward position, the image cannot be seen, but this period is confined to that of the actual exposure, as signified by the black strip in the bottom diagram.

Exposure Measurement

The Mamiya Sekor has a built-in CdS exposure meter which measures the light passing through the lens (TTL) and is cross coupled to the shutter and lens aperture. The exposure meter needle is visible in the viewfinder.

The rectangular frame in the lower part of the finder indicates the area from which the CdS photocell receives its light (=spot reading), so that the main area to be exposed correctly can be decided by the photographer. He can also avoid incorrect exposure of against the light, side-lit or contrasting subjects and ensure well balanced exposure reading. In addition the DTL model has an average reading system (see also green pages).

The circuit is switched on, with the film transport lever, only while the light is measured, thus prolonging battery life.

Lenses

The standard screw thread lenses (as used on Praktica, Asahi Pentax and similar cameras) are interchangeable and a wide range of telephoto and wide angle lenses is available, together with specialized lenses for macro and architectural photography.

All Mamiya lenses from 28 to 200 mm. have an automatic pre-set diaphragm. An internal link between the shutter release and the lens mount couples in such a way that the aperture is stopped down only during the actual exposure. At other times it is fully open to permit viewing of the reflex screen with maximum brilliance and minimum depth of field for greatest accuracy. On Mamiya lenses even intermediate openings between two marked apertures can be set without disturbing the operation of the automatic diaphragm. A depth of field preview control is possible simply by turning the lens to manual aperture for pre-viewing and returning it to automatic for normal working.

The lens mount carries the focusing scale both in metres and feet, as well as a depth of field indicator and an infra red mark. Focusing is effected by a helical movement which is part of the lens mount.

The Mamiya Sekor 528TL has a fixed lens and wide angle and telephoto converter lens fronts are available.

Shutter

The Mamiya Sekor is equipped with a self-capping focal plane shutter travelling horizontally. Focal plane means that the shutter is located just in front of the film. Self-capping means that it remains closed while being tensioned, ensuring full light protection. With this type of shutter, lenses can be changed while the camera is loaded. The shutter blinds are made from rubberized cloth and fitted with a special brake mechanism to reduce mirror shock and shutter sound. The model 528TL has a lens shutter.

The shutter of the model 2000 has 12, and the model 1000 has 11 automatic speeds on a single ring; the model 500 has 10 speeds; the 528, 6 speeds, which can be set before or after the shutter is wound; in addition B setting for time exposures is provided.

The speeds have click stops and the speed ring can be rotated in either direction.

The automatic shutter speed settings are 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500 on the model 500, plus 1/1000 sec. on the model 1000 and also 1/2000 on the model 2000. The model 528 has the speeds of 1/15–1/500 sec. The shutter is flash synchronized for flash bulbs and electronic flash with conventional 3 mm. co-axial contacts.

The speed of the film is set in the shutter speed knob both in ASA and DIN rating. A delayed action is built into the shutter and will release the shutter with a maximum delay of 10 sec. (not on Model 500DTL and 528).

The shutter release button is conveniently placed beside the film transport lever and has a cable release screw-in thread in its centre.

A full single stroke of the film transport lever advances the film, tensions the shutter and actuates the exposure counter. Double or blank exposures are automatically prevented and the flash does not fire before the shutter is wound.

Other Features

The exposure counter is self-setting and returns to S (=start) when a film is loaded.

The camera back swings open on its hinge and the film take-up spool is permanently fixed. A tripod socket is located in the camera base, centred for balance. A fold-up rewind crank permits fast rewinding of the film. There are eyelets to accept a shoulder strap on either side of the camera. The focal plane (film) position is engraved for accurate short distance measurement. The dimensions are 5.8 in. wide, 3.7 in. high and 2 in. deep. The body weighs 27½ oz.

The Mamiya Sekor Models

Mamiya Sekor 2000DTL, 1000DTL and 500DTL are as described above. They differ only in the fastest speed available which is 1/2000 sec. on the model 2000, 1/1000 sec. on the model 1000 and 1/500 sec. on the model 500. All have two through-the-lens measuring systems. One is the averaging meter, with two CdS cells for measuring different parts of the subject and averaging the exposure for the total picture area. The other is a spot reading, measuring only 6 per cent of the total picture area, and mainly used in strong side or back lighting.

Mamiya Sekor 1000TL and 500TL are as described above. The 1000TL has 1/1000 sec. as fastest shutter speed and built-in delayed action, the 500TL has 1/500 sec. as fastest speed and *no delayed action*. Their through-the-lens CdS meter give spot readings of 10 per cent of the total picture area, allowing both spot and average reading.

Mamiya Sekor 528TL. This is a simplified version of the TL models. It has a fixed lens and a tele and wide angle converter attachment is available to screw on to the front of the fixed lens. A lens shutter (in place of the focal plane shutter) is built in for speeds of 1/15 to 1/500 sec. It has automatic TTL metering with manual override. It has one flash contact on the camera front and another for cordless flash guns on the accessory shoe. Its dimensions are 5.5 in. wide, 3.5 in. high and 3 in. deep. It weighs 24 oz.

The 2000 DTL has a top shutter speed of 1/2000 sec. and two systems of TTL measurement. The camera is an all-black model.

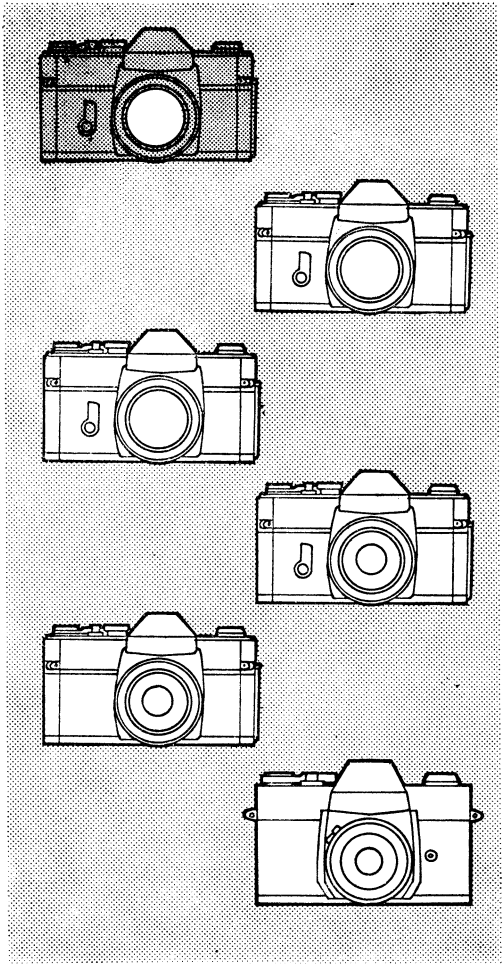
The 1000 DTL has a top shutter speed of 1/1000 sec. and the same metering system as the 2000 DTL.

The 500 DTL is similar to the 1000 DTL but with a top shutter speed of 1/500 sec.

The 1000 TL is similar to the 1000 DTL but the exposure meter gives a single spot reading.

The 500 TL differs from the 1000 TL in its top shutter speed and has no self-timer.

The 528 TL is a simplified version of the TL models with a fixed lens and no self-timer.



HANDLING THE MAMIYA SEKOR CAMERA

Holding

It is obvious that the camera should be held as steady as possible; the slightest shake, even if not seen in the negative, is immediately obvious on an enlargement.

FOR HORIZONTAL PHOTOGRAPHS hold the camera in the palm of both hands, the fingers gripping the front of the body, the thumbs against the back. Use thumb and middle finger of the left hand to move the lens focusing mount, and the index finger of the right hand to operate the release button. Keep the elbows pressed against the body. Either the right or the left eye may be used on the finder.

Always stand with your legs apart.

FOR VERTICAL PHOTOGRAPHS turn the camera through 90° so that the left hand presses the camera against your forehead from above. Use the thumb and the index finger to move the focusing mount. The right hand holds the camera from below with the index finger on the release button. It is of no consequence if the position of the hands is reversed; you can suit your own convenience.

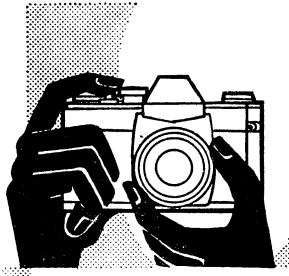
To release the shutter, press the release button with the ball of the finger. Use finger pressure only, and keep the hand and its grip on the camera steady. The actual pressing down should be slow and smooth. The slower the exposure time, the smoother must be the release. A sharp jab at the release encourages camera shake.

For slow exposures in the hand, it is advisable to rest the elbows or at least to lean the body against some support. In this way, even 1/8 sec. can be used without excessive camera movement.

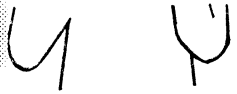
Such a support is also desirable for faster exposures, as quite a lot of movement takes place inside the camera after pressing the release button. A slightly unsteady hold may thus easily lead to blurred pictures.

The use of a tripod is necessary when taking time expo-

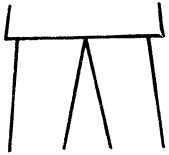
For horizontal shots (*right*) hold the camera in the palms of both hands, the fingers gripping the front of the body, and the thumbs against the back. Focus the lens with the middle finger of the left hand.



Press the elbows close to the body,

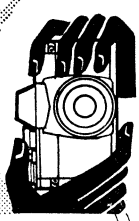


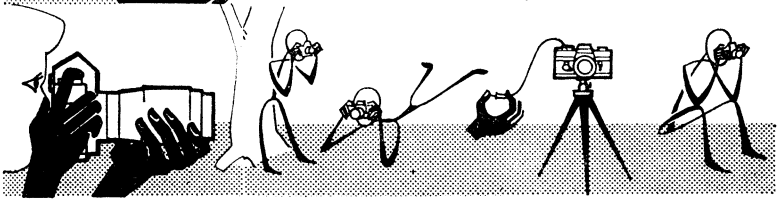
always stand with your legs well apart,



and hold quite still while you release.

For upright shots (*left*) turn the camera through 90° so that the left hand supports it from underneath. Alternatively, turn it round in the other direction, so that the left hand presses the camera against the forehead from above. In this case the thumb of the right hand presses on the release button, while the palm of the right hand supports the weight of the camera.





Above: With the Mamiya it is specially important to keep the camera really steady during the exposure and for a fraction of a second after pressing the release button. Whenever possible support your body against something solid, such as a tree or wall or prop up your hands against your knees or a table, particularly with slow speeds. Use a cable release for time exposures from a tripod.

sures and it is also recommended for speeds slower than 1/30 sec. For upright photographs from the tripod use a ball-and-socket head to allow changing from horizontal to vertical position.

Carrying

To be ready for quick action, it is best to carry the camera on a short strap round the neck so that it lies on your chest. Lifting it up to the eye is then a matter of a split second.

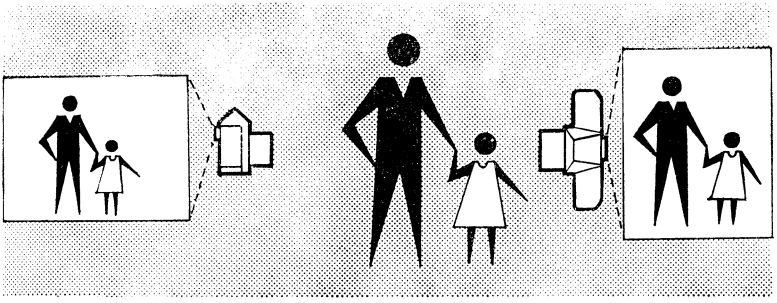
For convenience and protection, the Mamiya Sekor camera should always be carried in its ever-ready case. This case is designed to hold the camera ready for use. The flap of the case is removable when the camera is in continuous use to enable quicker working.

Viewing and Focusing

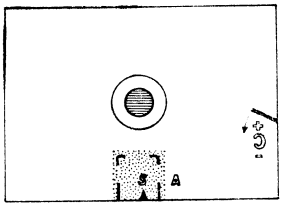
If you look through the eyepiece of the viewfinder of the Mamiya Sekor camera, you see on the screen the image produced by the lens and reflected via the mirror. The image is always visible except during the actual exposure. A fraction of a second before the shutter is released, the automatic pre-set iris of the lens closes down to the aperture chosen; as soon as the shutter closes, the iris opens up to full aperture. The image seen is precisely the same as will be shown on the film. It is free from any parallax. The screen is a Fresnel lined finder field and has in its centre a circular microprism section.

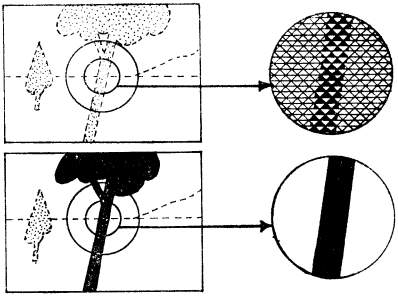
The distance is measured by observing the subject through the microprism centre and turning the lens focusing mount until the image appears sharply focused, that is, the line pattern of the microprism practically disappears and the centre becomes crisp and clear.

The use of the microprism centre is quite straightforward, but some experience is required to obtain the best definition quickly when using the fine ground glass ring. The best way to arrive at critical definition is to turn the focusing mount on the lens slowly to and fro, keeping the subject within the ring. As you turn the mount, the image becomes sharper up



The viewfinder of the Mamiya Sekor shows the image upright and the right way round, whether the camera is held for horizontal (*left*) or vertical (*right*) shooting. With the standard lens the image also appears in approximately natural viewing size.





The Mamiya Sekor viewing screen (*left*) consists of a circular microprism spot. The remaining area is covered by a Fresnel lens. The central area is the microprism zone which acts as a kind of multiple rangefinder. When the image is sharply focused, the pattern of dots virtually disappears (*right*). When the image is out of focus it appears blurred; the pattern is then strongly visible. It remains visible even as the image approaches sharpness, breaking up the picture rather like the lines of a television screen or an engraver's screen. The disappearance of the pattern at the point of maximum focus is quite abrupt, and thus provides a really accurate means of checking the exact image sharpness.

to a certain point beyond which it again loses definition. At this "beyond" stage, turn the mount back, narrowing down the degree of movement until you arrive at the point of best definition.

Focusing Moving Subjects

The orthodox way of focusing with either microprism or ground glass ring may be adopted for taking photographs of subjects which are reasonably stationary. When taking subjects in motion, a different method of focusing is required. Set the distance at which you expect the subject to be at a given moment, or focus on some spot which it actually has to pass. Press the release when the subject reaches the pre-focused point. With subjects liable to react self-consciously (e.g. children) set the lens to a suitable distance, approach the subject quickly, and expose as soon as the microprism centre becomes "clear" or the ground glass ring image appears sharp.

Alternatively, focus on some object, which is at the same distance from the camera to the subject but in a different direction. When the range is found, swing round to press the release button as soon as the victim slips into the field of view of the finder. (See also quick shooting with zone focusing, page 44).

Depth of Field Preview

The precise depth of field (see page 41) can be previewed by pushing the manual aperture lever on the lens flange to M. On doing this the automatic diaphragm lenses close down to the pre-selected opening. The image in the viewfinder becomes darker but you can see the extent of sharpness to the foreground and the background from the subject you have focused on.

Setting the lever back to A opens up the aperture again for automatic working.

The preview control is independent of the shutter release and there is no danger of accidental exposure of a film frame.

Infra Red Indicator

When working with infra red film, the distance setting required is slightly displaced from that of normal films. For this reason a red line is shown to one side of the distance marking on the lens barrel. Having focused the lens in the normal way, rotate the lens a little further until the distance shown against the normal focusing mark comes opposite to the red line.

Film Plane Indicator

The position of the film plane is represented by a circle crossed by a line (⊖) engraved on the top plate camera body. The precise distance between film plane and subject can be measured from this position.

Delayed Action Release

A self-timer, or delayed action release, is built into the front of the camera body to the left of the lens. This timer permits self-portraits and is also useful for hand-held exposures with slow shutter speeds. The transport lever can be wound before or after the self-timer has been cocked.

To use the delayed action release, swing the lever downwards as far as it will go in a clockwise direction. To bring the timer into action, press the small button by the lever which becomes visible after the lever has been cocked, and the shutter will automatically be released after about 9 sec.

By turning the lever only part of the way, but a minimum of 90°, to horizontal position, the delay time is reduced. This method can be used to enable the hands to be shifted to take a particularly steady grip of the camera.

Sequence of Handling Operations

To start with we take it for granted that we have our camera together with the cassette of film in front of us. Our first task is to load the camera with film.

Loading

The film should be loaded into the camera in subdued daylight or, at least, in the shadow of your body. The procedure is as follows:

1. **Open camera back.** Pull up the latch on top of the side wall of the camera body and the hinged-on back will spring open.
2. **Insert film.** Place cassette with film into the film chamber (below the rewind knob, which has to be pulled out) with the hollow part towards the rewind key. The mouth of the cassette with film end protruding has to point towards the fixed take-up spool of the camera. Push back rewind knob.
3. **Fix film to take-up spool.** Push the end of the leader of the film into one of the slots on the take-up spool. Gently turn the film transport lever, to see that the film winds itself under the spool with the emulsion side down and the film perforations engage the teeth of the transport sprocket.
4. **Close camera,** by simply pushing the hinged-on back towards the body, when it will audibly click shut.
5. **Take up film slack.** Turn the rewind crank gently in a clockwise direction until resistance is felt, this takes up the slack of film, particularly when the cassette is loaded with less than 36 exposures.
6. **Make two blind exposures** by alternatively transporting the film wind and releasing and then wind the shutter until No. 1 appears opposite the index in the exposure counter window. This moves on the film leader. While doing this it is advisable to check that at the same time the film rewind knob turns in an anticlockwise (against the arrow) direction. This proves that the film winds properly out of the cassette on to the take-up spool, and for this reason one has to take up the slack as instructed under No. 5.
7. **Set meter film speed.** Set the speed of the film by lifting up the outer milled ring of the shutter speed knob and turn-

THE MAMIYA SEKOR REFLEX MODELS

These green pages deal with the individual Mamiya Sekor Reflex models in detail.

Self-contained sections for each model cover points of loading, unloading, shooting and specific controls.

For a fuller explanation of aspects common to all Mamiya Sekor Reflex cameras, compare these sections with the same headings in the main text.

MAMIYA SEKOR DTL, TL

The Mamiya Sekor DTL cameras are as described on pages 4–8. Their specific feature is the unique exposure control by two separate metering systems:

1. *The Spot method* where the clearly indicated "S" section in the finder, which covers 6 per cent of the whole area only, is used for measuring the exposure by a CdS cell behind the mirror. This is useful for back-lit or side-lit subjects or other unusual lighting conditions where the spot section should be pointed to the part of the picture requiring exact exposure.

2. *The Average method*, where one CdS cell on either side of the viewfinder eyepiece in the pentaprism housing measures the light of the whole subject and gives the result averaged out for the whole scene. This method should be adopted for all evenly illuminated subjects, where no relevant matter is in a different (e.g. deep shadow) light. See also pages 38–41.

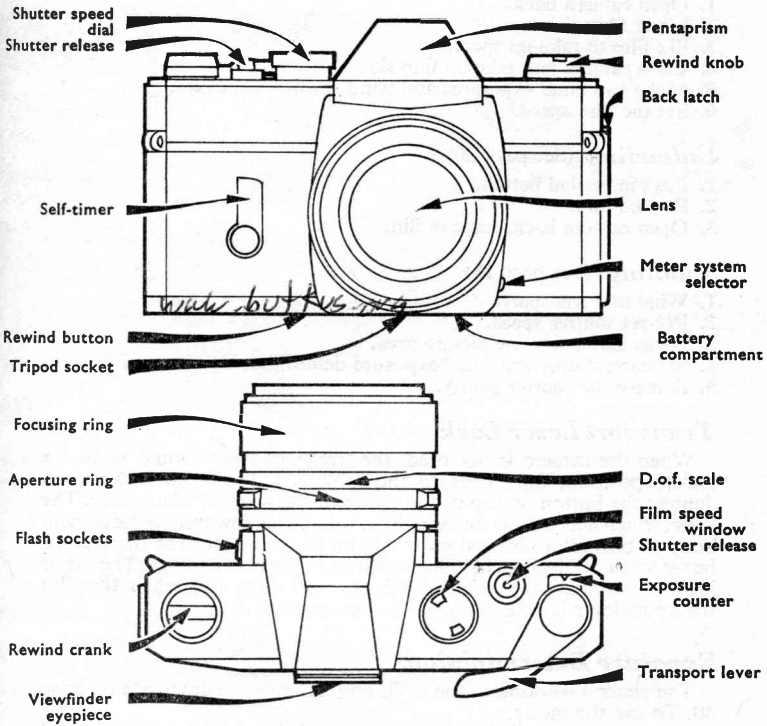
There are three DTL models with different fastest shutter speed:
The Mamiya Sekor DTL 2000 has a speed range from 1/2000 sec. to 1 sec. and B.
The Mamiya Sekor DTL 1000 has the speed range from 1/1000 sec. to 1 sec. and B.
The Mamiya Sekor DTL 500 has the speed range from 1/500 sec. to 1 sec. and B.

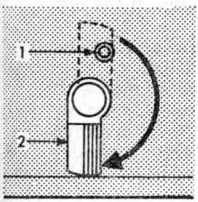
The Mamiya Sekor TL cameras are as described on pages 4–8 and are the same as the DTL but without the average reading exposure control. Its spot light sensor is enlarged to 10 per cent of the area to permit both spot and average reading (see pages 38–41). The models are as follows:
Mamiya Sekor TL 1000 has the speed range from 1/1000 sec. to 1 sec. and B.
Mamiya Sekor TL 500 has a speed range from 1/500 sec. to 1 sec. and B. It is without a built-in delayed action release.

THE LENS FITTED as standard on the DTL 2000 and 1000 is the 55-mm. *f* 1.4 or *f* 1.8; on the DTL 500, the 55-mm. *f* 1.8 or 50-mm. *f* 2; on the TL 1000, the 55-mm. *f* 1.4 or *f* 1.8; and on the TL 500, the 50-mm. *f* 2 or *f* 2.8. Full data on these lens are on page 53.

FOR CLOSE-UP PHOTOGRAPHY below the minimum focusing range of 18 in., close-up lenses, extension tubes, bellows focusing attachment, reversing adaptor and focusing slide are available.

OTHER ACCESSORIES include: accessory shoe, right-angle finder, filters, lens hood, microscope attachment, copy stand, copying device, slide copier and an extensive range of wide-angle and tele lenses.





The DTL and TL models differ only in their method of exposure measurement. Both measure the light transmitted by the lens but the DTL models have two systems, one giving an average reading of two separate areas and the other a single reading of 6 per cent of the image area. The TL models give a reading from 10 per cent of the total image area. The 500TL has no self-timer. The figures 2000, 1000, 500 indicate the fastest shutter speed available.

Left: The self-timer release button (1) is revealed when the lever (2) is pulled down. The self-timer operates when the button is pressed.

Loading (See page 16)

1. **Open camera back.**
2. **Insert film.**
3. **Fix film to take-up spool.**
4. **Close camera** and take up film slack.
5. **Make two blind exposures** and wind for first exposure.
6. **Set the film speed.**

Unloading (See page 20)

1. **Push in rewind button.**
2. **Rewind film.**
3. **Open camera back,** remove film.

Shooting (See page 18)

1. **Wind film transport.**
2. **Pre-set shutter speed.**
3. **Focus and determine picture area.**
4. **Set correct aperture** (see "exposure determination" below).
5. **Release the shutter gently.**

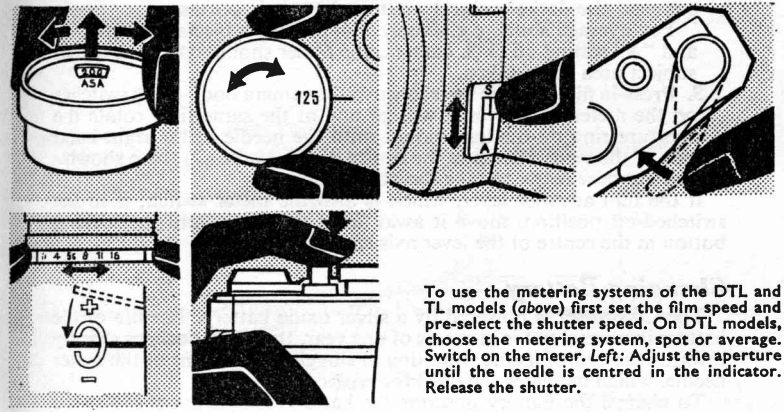
Transport Lever Lock

When the camera is not used, the transport lever should be in the locked position, fully back to the camera body. To lock the lever, depress the button on top of the centre of the transport lever axis. The lever, which acts also as meter switch, will retract inwards to the camera body to prevent accidental switching on of the meter. The meter *must* be switched off during changing of lenses to prevent damage. The meter lock is automatically released (the button pops up) when the film transport lever is actuated from its rest position.

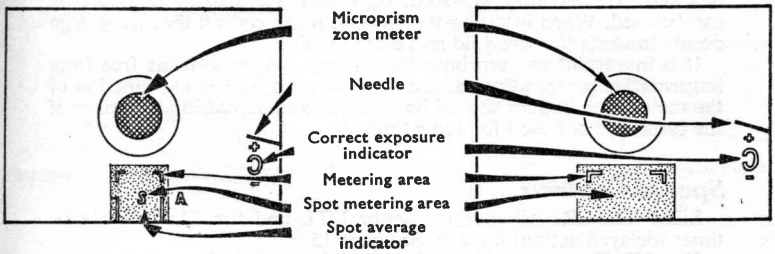
Exposure Determination

The general working of the DTL and TL meter is described on page 40. To use the meter:

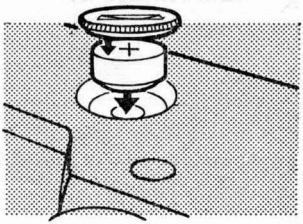
1. **Set film speed** by lifting up the outer milled ring of the shutter speed dial and turning it until the speed of the film used in ASA or DIN is shown in the cut-out marked ASA or DIN respectively, in the top of the shutter speed dial.
2. **Pre-select shutter speed** by turning the shutter speed dial until the speed required clicks into position opposite the index line.
3. **Pre-select metering system** on model DTL only, in accordance with explanation on page 40, by moving the meter system selector (below the flash contacts) to "S" for spot reading or "A" for average exposure measurement. An indicator in the base of the viewfinder points to either the "S" field or to "A", as visual reminder of the setting chosen.



To use the metering systems of the DTL and TL models (*above*) first set the film speed and pre-select the shutter speed. On DTL models, choose the metering system, spot or average. Switch on the meter. *Left:* Adjust the aperture until the needle is centred in the indicator. Release the shutter.



Above: The DTL reflex finder image (*left*) and the TL reflex finder image (*right*) showing the metering areas and exposure indicator.



Right: To change the exposure meter battery, unscrew the compartment cover with a coin and tip the old battery out. Insert the new battery with + side showing and replace the cover.

4. **Point camera to subject** with the meter field indicated in viewfinder in case of TL camera, and spot measuring with the DTL, to encompass the darker subject matter which is important.

   For average shots, e.g. evenly illuminated subjects with the TL and "A" setting on DTL camera, the finder should cover the actual subject area to be taken.

5. **Press-in film advance lever** towards the camera body—this switches on the meter—as far as it will go and at the same time rotate the aperture ring on the lens mount until the needle in the right-hand side of the viewfinder is in the centre of the cradle (Ↄ) there shown. You are now ready to take the photograph.

If the film advance lever, which is also the meter switch, is in the switched-off position, move it away from the body until the locking button in the centre of the lever axis springs up.

Changing Battery

The CdS meter is powered by a silver oxide battery. The life of the battery in normal use is in excess of one year. Its power declines sharply towards the end of its life, resulting in sluggish movement of the meter needle, which indicates the need for replacement.

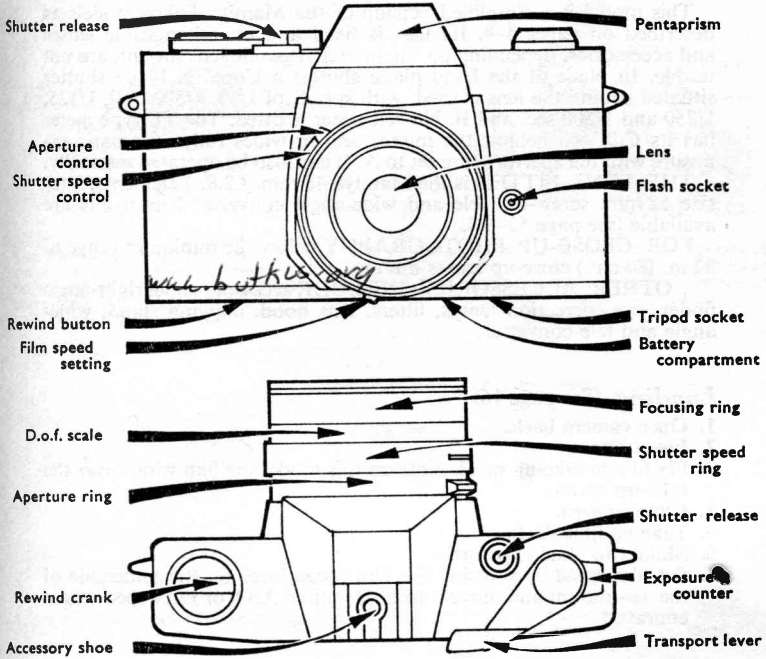
To change the battery unscrew the battery compartment lid in the base of the camera with thumb pressure or insert a coin in the slot of the lid, turning anti-clockwise, remove the old battery and replace by a new one. The Mallory MS-76 or equivalent silver oxide battery only can be used. When inserting the battery, make certain that its + sign points towards the screw lid and close the lid.

It is important to keep both the battery and its contacts free from fingermarks, perspiration, dirt, etc., which can impair the function of the meter. The battery should be removed and stored in a dry place if the camera is not used for some time.

Special Controls

SELF-TIMER. All Mamiya Sekor DTL and the TL have a self-timer (delayed action) built in. See page 15.

FLASH. The camera is synchronized for flash bulbs and electronic flash. See page 45.



The Mamiya Sekor 528TL is a much simplified version of the TL models. Its lens is fixed but tele and wide-angle attachments are available. The shutter is a between-lens type with speeds from 1/15 to 1/500 sec. The meter reads through the lens and has a manual override. The flash contact is in the accessory shoe on the pentaprism.

MAMIYA SEKOR 528 TL

This model is a simplified version of the Mamiya Sekor models as described on pages 4–8. Its lens is fixed and interchangeable lenses and accessories, depending on the interchangeable lens mount, are not usable. In place of the focal plane shutter a Copal X blade shutter situated behind the lens is used, with speeds of 1/15, 1/30, 1/60, 1/125, 1/250 and 1/500 sec. and B. No self-timer is fitted. The TL type meter has its CdS cell behind the mirror and provides fully automatic exposure with the aperture ring set to A. It can also be operated manually.

THE LENS FITTED is the Mamiya 48 mm. *f* 2.8, 3 elements, filter size 52 mm. screw-in. Tele and wide-angle converter lens fronts are available (see page 53–54).

FOR CLOSE-UP PHOTOGRAPHY below the minimum range of 32 in. (80 cm.) close-up lenses are available.

OTHER ACCESSORIES INCLUDE accessory shoe, right-angle finder, eye correction lenses, filters, lens hood, copying stand, wide-angle and tele converter.

Loading (See page 16)

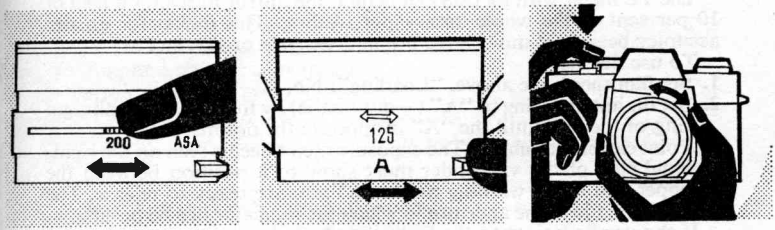
1. **Open camera back.**
2. **Insert film.**
3. **Fix film to take-up spool.** Note on this model the film winds *over* the take-up spool.
4. **Close camera.**
5. **Take up film slack.**
6. **Make two blind exposures.**
7. **Set film speed** by pressing the film speed lever on the underside of the lens mount and move it to the required ASA or DIN speed there engraved.

Shooting (See page 18)

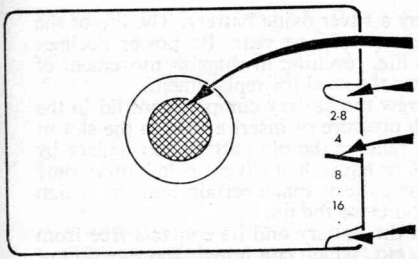
1. **Wind film transport.**
2. **Preset shutter speed.**
3. **Focus and determine picture area.**
4. **Set the aperture** either automatically (see below, "Exposure Determination") or manually by setting the aperture individually.
5. **Release the shutter gently.**

Unloading (See page 20)

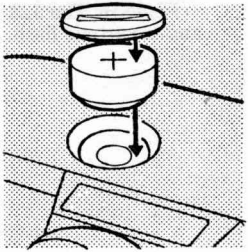
1. **Push in rewind button.**
2. **Rewind film.**
3. **Open camera back** and remove film.



The Mamiya Sekor 528 TL exposure system is fully automatic with manual override. To operate the automatic system (*above*) first set the speed of the film in use. Move the aperture ring to A and set the required shutter speed. Focus the subject and shoot. The exposure meter automatically selects the correct aperture.



The aperture selected by the exposure meter is indicated by the needle position in the viewfinder. When the needle appears in the under-exposed zone, there is insufficient light for the speed of the film. When it appears in the over-exposed zone, the light is too strong for the film.



To change the exposure meter battery, unscrew the compartment cover with a coin and tip the old battery out. Insert the new battery with + side showing and replace the cover.

Exposure Determination

The TL meter with its CdS cell behind the mirror measures a field of 10 per cent of the whole area=spot reading. This makes for greater accuracy because it omits large bright areas, sun or sky, etc.

To use the meter:

1. **Set film speed,** see above, "Loading", No. 7.
2. **Set the aperture ring to "A"** (=automatic) by turning the diaphragm ring of the lens until the "A" is opposite the dot marker.
3. **Point camera to subject.** The exposure meter needle seen on the right-hand side of the viewfinder must show to a position between the upper and lower warning marks and you are ready to release. The shot is made at the aperture to which the indicator needle points.

If the needle points to the upper mark (indicating under-exposure) use a slower shutter speed, or flash; if it points to the lower mark (indicating over-exposure) use a faster shutter speed.

Changing Battery

The CdS meter is powered by a silver oxide battery. The life of the battery in normal use is in excess of one year. Its power declines sharply towards the end of its life, resulting in sluggish movement of the meter needle, which indicates the need for replacement.

To change the battery, unscrew the battery compartment lid in the base of the camera with thumb pressure or insert a coin in the slot of the lid, turning anti-clockwise, remove the old battery and replace by a new one. The Mallory MS-76 or equivalent silver oxide battery only can be used. When inserting the battery, make certain that its + sign points towards the screw lid and close the lid.

It is important to keep both the battery and its contacts free from fingermarks, perspiration, dirt, etc., which can impair the function of the meter. The battery should be removed and stored in a dry place if the camera is not used for some time.

Special Controls

FLASH. The 528 TL camera is synchronised for use of flash bulbs and electronic flash. See page 45.

MAMIYA MSX 500 and DSX 1000

The model MSX 500 has open aperture spot metering only. The model DSX 1000 has dual open-aperture metering, one for averaged readings and one for spot readings.

THE STANDARD LENS of the MSX 500 is the Auto Mamiya/Sekor 50 mm. *f* 2 and that of the DSX 1000 55 mm. *f* 1.8 or *f* 1.4. The lens mount is the Mamiya Sekor 42 mm. universal screw mount with locking pin.

THE FOCAL PLANE SHUTTER has speeds from 1 sec. to 1/500 sec. and B on the MSX 500 and 1 sec. to 1/1000 sec. and B on the DSX 1000, which also has a built-in self-timer.

THE VIEWFINDER is of the pentaprism type with micro diaprism centre, surrounded by a ground-glass area on fresnel field, showing the exposure meter needle, the measuring area and, in the DSX 1000, the spot/average indicator.

EXPOSURE METERING is through-the-lens, with film speed setting from ASA 25 to 3200. It uses a silver oxide battery S-76E.

The flash synchronisation has FP and X outlets and the DSX 1000 has also an X-synchronised "hot shoe". X-synchronisation is at 1/60 sec., focal plane (FP) bulbs to 1/1000 sec.

For film loading the camera back swings open and a multislot take-up spool accepts the film end. The film transport is by single or multi-stroke thumb-operated lever, which also acts as a meter switch when it is pulled away from the body by 1/2 inch. The film counter is progressive with automatic reset. A depth of field preview device is built in.

The right hand front corner of the body has a serrated rubber pad to facilitate non slip easy grip of the camera.

FOR CLOSE-UP PHOTOGRAPHY below the minimum focusing range of 18 in. (0.45 m.) close-up lenses, extension tubes, bellows focusing attachments, reversing adaptor, microscope adaptor, slide copier are available.

Other accessories include: Accessory shoe (for MSX 500), rubber eye cup with adaptor, correction lenses for wearers of glasses, filters, lens hood, angle finder, magnifier, copying stand, and an extensive range of wide angle and tele lenses.

Loading (See page 16)

1. **Open camera back by pulling up rewind knob.**
2. **Insert film.**
3. **Fix film to take-up spool.**
4. **Close camera** and take up film slack.
5. **Make two blind exposures** and wind for first exposure.
6. **Set the film speed.**