

A SMALL PRIMER FOR CINE FANS



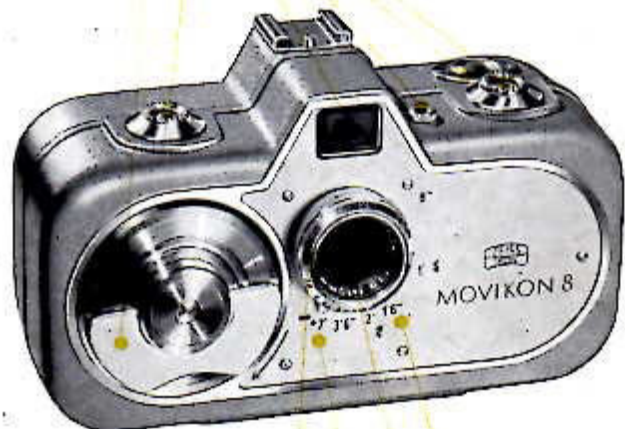
MOVIKON 8

ZEISS IKON A.G. STUTTGART

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- 1 WINDING KEY FOR
SPRING-DRIVEN MOTOR
- 2 RELEASE KNOB
- 3 VIEWFINDER
- 4 SOCKET FOR CABLE RELEASE
- 5 FOOTAGE INDICATOR
- 6 CHANGE-OVER KNOB FOR
SINGLE-FRAME SHOTS



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The MOVIKON 8

presented by ZEISS IKON AG, STUTTGART is an 8-mm-cine-camera of an entirely new design. Backed by 50 years of experience in the design and construction of cine apparatus, the movikon 8 is the first cine-camera of this shape, which has until now been reserved for miniature still-cameras only. Its manipulation is easy to master and the new shape guarantees a perfectly firm and steady hold. The compact design and the convenient arrangement of the operating knobs makes its manipulation so simple that one can concentrate on the filming itself and on the object to be taken. For the beginner as well as for the advanced and discriminating film-amateur the movikon 8 is the cine-camera which meets all demands.

With a single turn of the hand

OPERATING COMPONENTS:

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Consistently successful results

which you will enjoy from the first yard of film to the last will please you if you keep to these instructions. The ingenious simplicity of operations as well as the convenient and streamlined shape of your MOVIKON 8 will make the little camera your cherished friend and constant companion.



SPECIAL FEATURES OF THE MOVIKON 8

The most conspicuous feature of the new movikon 8 is its new shape. This new construction, which is the determining factor for the holding and operation of the camera, could be achieved only by arranging the spool hobbins in parallel with the optical axis of the lens.

You will doubtless enjoy also the other special features of the movikon 8.

BODY OF LIGHT ALLOY

The camera body of light alloy consists of two parts which fit tightly together and thus protect safely the mechanism and the film. The front part accommodates the lens, the spring motor, the operating elements and the driving mechanism. The back panel which encloses the spool chamber carries the footage indicator, a part of the viewfinder and the lock for closing the camera back (see page 11).

LENS

The movitar $f/1.9-10$ mm, a lens of four components, yields a needle-sharp definition which permits of a sharp and bright projection of the film taken. The lens is colour corrected and all its surfaces are T-coated.

Filters are screwed into the lens mount. The lens is deeply sunk into the camera body so that a special lens hood is not required.

The lens has click-stops to prevent any accidental displacement. The diaphragm settings are marked out twice in order to facilitate a convenient reading off of the different stops in any position of the camera.

The lens permits of distance settings from "infinity" to 8 ins (20 cm) without the use of any supplementary lenses (see page 13).

When set to the red dot the depth of field at full aperture covers the distance from 5' 9 1/4" (1,77 m) to ∞ . The camera is therefore always ready for use, because no time will be lost with focusing (see page 15).

The extremely convenient position of the optical eye level viewfinder allows for an easy view of the whole image field even for wearers of glasses. Positioned vertically above the lens, the finder excludes horizontal parallax. At distances from ∞ to 3' 3" (1 m) vertical parallax is also prevented. Special reference marks in the viewfinder field indicate the necessary parallax corrections at distances under 3' 3" (see page 18).

DIAPHRAGM

DISTANCE

RED-DOT SETTING

VIEWFINDER

THE SPRING-DRIVEN MOTOR

The spring-driven motor works almost noiselessly and runs at least 5 ft. of film on one full winding (see page 11).

RELEASE KNOB

The motor is released by shifting the release knob to the right. The knob can be locked in both final positions by turning it through 90°, in order to prevent an unintentional release or to allow the operator to get into the picture (see page 19).



FOOTAGE INDICATOR

The footage indicator shows always the length of film which remains to be exposed. When the camera back is detached the indicator returns automatically to its initial position (see page 13).

FILM SPOOLS

After removal of the camera back the film spools are completely free and easily accessible (see page 12).



FILM GATE

The film gate, when opened, uncovers the film track, thus facilitating the insertion of the film into the track. The pressure plate and the picture gate can easily be cleaned (see page 12).

FOCUSING FRAME

The focusing frame in the film gate serves for exact framing of the picture in the focal plane when accessories are used.

The rotating shutter differs from that of cameras previously made by having a very large open sector (201°). This allows the speed of the lens to be fully utilized and ensures a more fluent recording of fast movement or when taking "panoramas".

ROTATING SHUTTER



The change-over from the usual motion pictures to single pictures is effected by turning the change-over knob.

CHANGE-OVER

The frame frequency is rigidly controlled at 16 frames per second at an exposure time of $1/50$ sec. When single shots are made the exposure time is $1/16$ sec.

FRAME FREQUENCY

A cable release can be screwed into the socket. According to the setting of the change-over knob it can be used for single pictures or motion pictures. A self-timer (see page 19) can also be connected to the socket.

CABLE RELEASE



A tripod bush is countersunk into the base of the camera. Two holes left and right of the bush serve for attaching the movicon to the tilting apparatus MOVITRIX and the universal lighting equipment MOVILUM (see page 21).

TRIPOD BUSH



PREPARATIONS FOR SHOOTING

WINDING OF THE SPRING MOTOR

The spring-driven motor is wound by turning the winding key (1) in a clock-wise direction as far as possible. The motor will run at least 5 ft. of film, which corresponds to a running time of about half a minute. The spring motor of the movikon 8 is not definitely stopped when run down. During filming, when the motor is running down, a peculiar noise reminds the user that he has to wind the motor, without being obliged by an automatic stop to interrupt the scenes he has already begun to film.

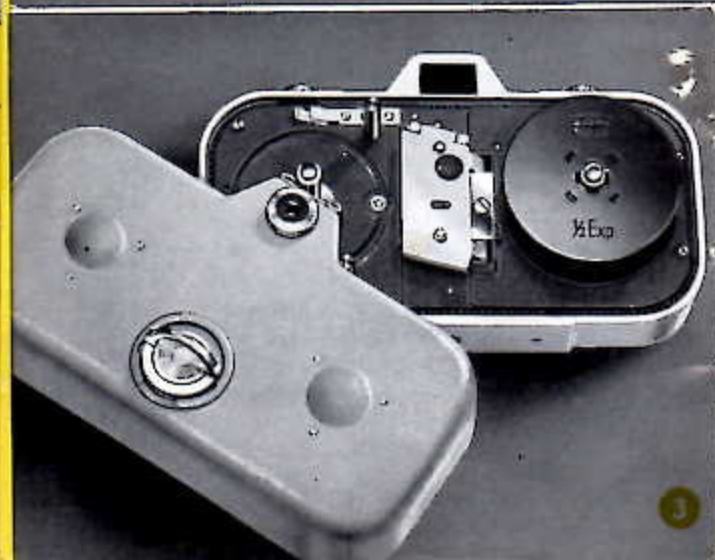
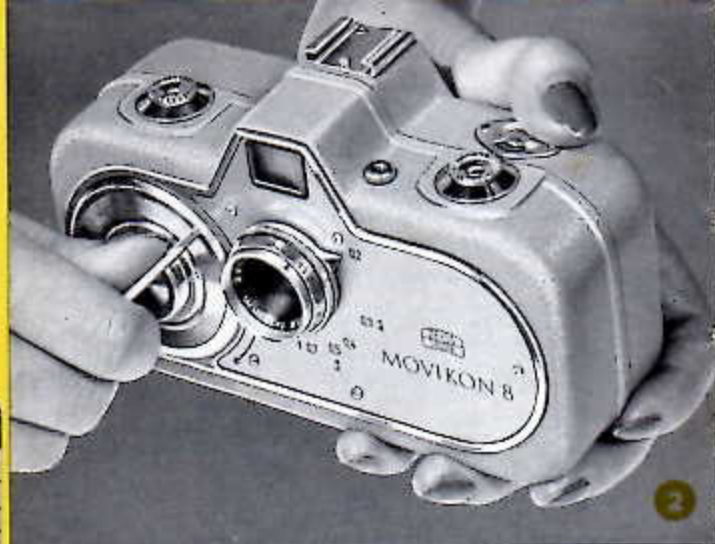
After each shooting, the motor should again be fully wound, so as to be always well prepared for the next shooting.

For cleaning the lens and for focusing when using the tilting equipment MOVITAX, the shutter can be opened by turning the pin for the take-up spool (16) after the motor has completely run down.

DETACHING OF THE CAMERA BACK

The camera back can be detached after turning the locking device (19), leaving the film gate and the spool chamber entirely free.

When the camera is loaded with film the back may be removed only after the leader at the end of the film has passed the film gate. The film should be loaded and changed over in subdued light only.





LOADING THE CAMERA

The movikon 8 takes all current daylight 25 ft x 8 mm double-reel spools giving a screening time of 8 minutes.

Open the back of the camera and also the film gate. Remove the empty brass ikon spool and thread the beginning of the new spool into the fixing slot of the empty spool. Secure it by slipping the spring (which fits the hobbin) over the film and the hobbin of the spool.

Insert the film into the film channel in such a way that the new spool is directed towards the viewfinder, while the empty spool points towards the base of the camera (Fig. 4). Now close the film gate and make sure that the focusing frame (14) is also closed (Fig. 5). Check the correct position of the film in the film channel by slightly pulling the film towards the empty spool. Now slip the fresh spool over the left spindle (Fig. 6) in the camera (feed reel hobbin) and the empty spool over the right spindle take-up reel hobbin (Fig. 7). Check the correct running of the film by operating the release knob for a moment (2). This will also automatically lay the loops which are essential for the smooth running of the film. The back of the camera is then returned to its initial position in such a way that the viewfinder side is

put on first. Make sure that the film loops are not squeezed in. The same procedure has to be followed when the film is changed over after the first half of its complete length has been exposed.

LEADERS AT START AND END OF FILM

Before starting exposure the leader of the unused film, which serves to shield the film from light, must be run through the camera. The leaders at the start and end of the film are marked on the footage indicator by parallel lines. The footage indicator shows always the length of film that remains to be exposed. Position "0" of the footage dial indicates that the whole film has been exposed. For changing over the film, the camera must, however, not be opened before the leader at the end of the film has completely passed the film gate.



End of leader
at start of film



End of leader
at end of film



FOCUSING

SETTING OF DISTANCE

The lens is focused by turning the milled ring in the lens-mount until the pointer indicates the desired distance (10). The markings on the camera refer to the distances between the subject and the focal plane. As the position of the focal plane corresponds to that of the joint between the front part and the back of the camera, the exact distance for close-ups is measured from this joint to the subject. When the pointer is set on the red mark (8) (red-dot-setting) and full aperture is used, all objects from 5' 9 1/4" (1.77 m) to ∞ will be recorded sharply. Exact data regarding depth of focus at the various apertures can be found in the table on page 31.

SETTING OF DIAPHRAGM

For setting the diaphragm, turn the diaphragm setting ring until its mark faces the required lens aperture marking. The iris diaphragm of the lens slides in at the following stops: 1.9; 2.8; 4; 5.6; 8; 11 and 16. Owing to its constant exposure time of 1/25 sec. the shutter is not variable and therefore the lens has to be stopped down in accordance with the prevailing lighting conditions and the film speed used. The correct aperture can be ascertained exactly by means of the photo-electric Z188 ISKON exposure meter IKON-PILOT. In cases of extremely bright objects, as for

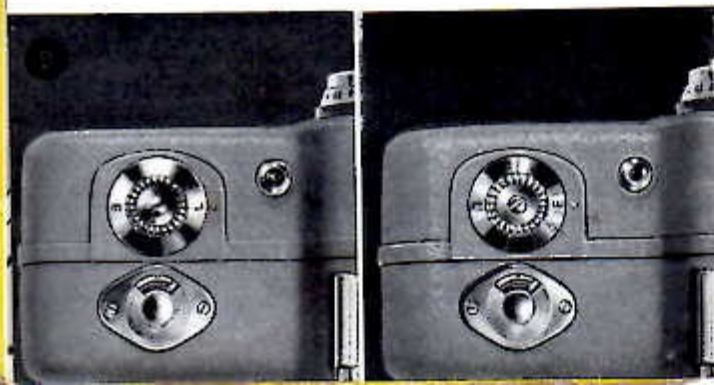
instance by the sea or in high mountains, when the exposure meter indicates apertures smaller than 16, neutral grey filters or colour filters should be applied. When the ZISSLIKON neutral grey filter (4x) for MOVITAR f/1.9, 10 mm, is used the lens aperture must be increased by two steps as compared to the value ascertained with the exposure meter. When using colour filters the filter factor has to be taken into consideration.

MOTION PICTURE ACTION (Fig. 9)

For motion pictures the change-over knob (6) should be set on L. The film speed is 16 frames per second, which means an exposure time of $1/16$ sec.

SINGLE PICTURE ACTION (Fig. 10)

The exposure of single frames is often required for trick photographs or time-lapse pictures. The change-over knob (6) must be set on E. The exposure time in this case is $1/20$ sec.

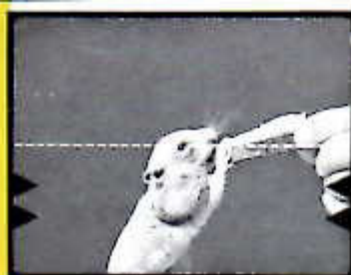


SHOOTING

DETERMINATION OF THE IMAGE AREA

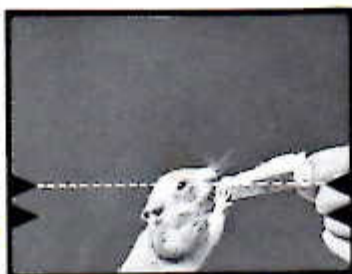
The viewfinder shows distinctly and clearly the correct picture area. It is free of parallax at distances from ∞ to 3' 3". If the distance is shorter the vertical parallax has to be taken into account. For this purpose two parallax marks (teeth) are visible in the finder-image. The "teeth" to be used for distances of 1' 8" (between 2' and 1' 6") and 1' are shown by the symbols on the distance scale (10). When the distance is 1' the picture area is determined first without taking into account the parallax, but it is important that the centre of the image should be noted. The MOVIKON 8 is then swung upwards until the two lower "teeth" are connected by an imaginary line which goes straight through the centre of the image. Then the exposure can be made.

For a distance of 1' 8" the imaginary line between the two upper "teeth" is used while for a distance of only 8" the lower edge of the finder-image is correct. (See illustrations on page 18). A table giving the height and width of the image area at the different distances can be found on page 29.



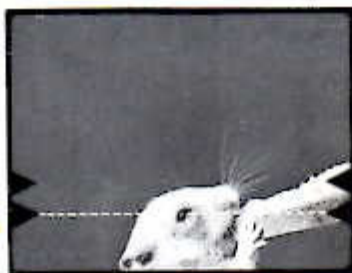
Displaced framing during the exposure. (Centre line of picture is between upper marks.)

Distance setting 1
Intended framing of the picture.



Displaced framing during the exposure. (Centre line of picture is between lower marks.)

Distance setting 2
Intended framing of the picture.



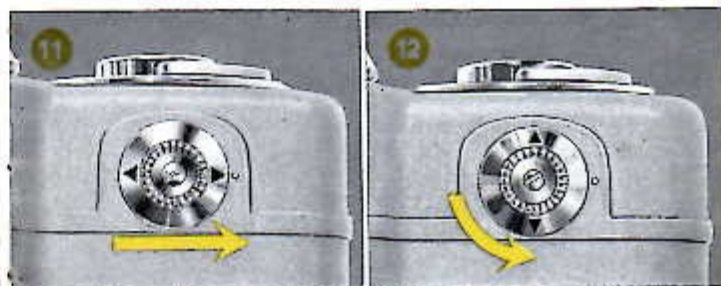
Displaced framing during the exposure. (Centre line of picture is at lower edge of viewfinder field.)

Distance setting 3
Intended framing of the picture.



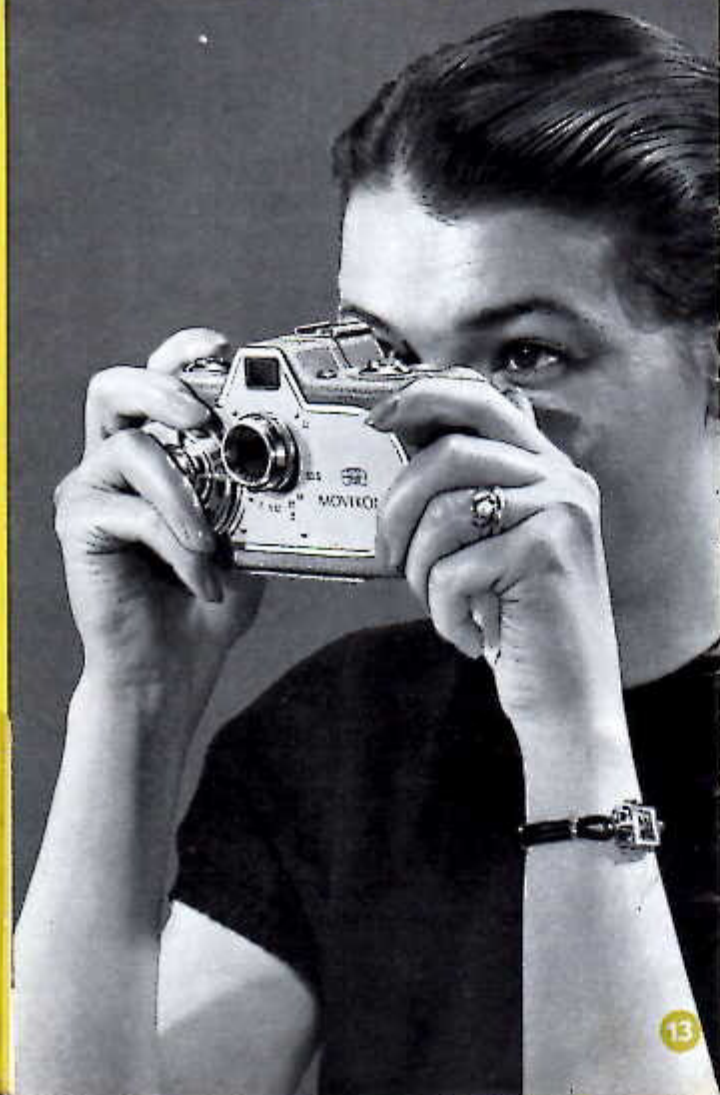
THE EXPOSURE

Shifting the release knob (2) to the right starts the spring-driven motor running in accordance with the position of the change-over knob. A quarter turn of the release knob in the rest position prevents unintentional release of the motor. In the release position, with the change-over knob (6) on "L", the release knob can also be locked, thus enabling the



operator to get into the picture. The locked positions of the knob can be recognised by the fact that the triangular marks have been turned through 90° from the release position (fig. 12).

A cable release can be screwed into the threaded socket (4) beside the change-over knob, to simplify the operation of the camera when trick films have to be made or a self-timer is used.



◀ HOW TO HOLD THE CAMERA

FILMING WITH THE HAND-HELD CAMERA

Most general shots can be done without using a tripod, as the convenient shape of the camera body allows the camera to be held firmly and rigidly in both hands. During the exposure the vertical lines of the subject should run parallel with the lateral edges of the viewfinder.

When "panning", that is, taking panoramas, which, by the way, should not be done before the photographer has acquired some experience, the camera should be moved slowly and evenly and if possible from a tripod to prevent jerky sequences.

EXPOSURES FROM A TRIPOD

A tripod can be used for taking trick-, time-lapse- and single pictures. For this purpose the camera is provided with a tripod bush (18) in the base.

ATTACHMENT OF ACCESSORIES

Besides the tripod bush there are two holes (17) in the base of the camera which are used to attach certain accessories to the camera (see page 23).

ACCESSORIES



LENS ATTACHMENTS MOVIFLAR AND MOVIGONAR

The lens attachments specially computed for the MOVIKON 8. The MOVIFLAR (2x) is a tele-attachment, which extends the focal length of the MOVIFAR $f/1.9-10$ mm to 20 mm, whereas the MOVIGONAR (0.5x), a wide-angle attachment, reduces it to 5 mm. The high speed of $f/1.9$ remains unchanged in both cases. Each lens attachment is supplied with a special finder and a special lens hood in a sturdy case.

EVER-READY CASES

There are supplied two cases for protecting the MOVIKON 8 from dust and damage. The ever-ready bag of soft leather



with zip fastener, neck sling and carrying strap is particularly elegant, while the attractive ever-ready case of solid leather is supplied for such cases in which the camera has to be protected against especially trying conditions. The case accommodates furthermore two filters.

ZEISS IKON PRECISION FILTERS

Colour filters, for the correction of the tonal values of black and white films, can be screwed into the lens ($\varnothing 22.5$ mm; for lens attachments $\varnothing 35.5$ mm). The following colour filters are available: yellow, yellow-green, orange, red, ultra-violet, and neutral grey (see page 16). When using filters the stop ascertained by means of the exposure meter must be increased according to the film factor.

EXPOSURE METER

The photo-electric exposure meter *IKONOR* is provided with a setting mark indicating the exposure time of the MOVIKON 8, which allows the user to ascertain at once the correct lens aperture, no matter how the lighting conditions may be or whether daylight or artificial light is used.



MOVITRIX

The tilting equipment MOVITRIX serves the production of titles and trick-films. This general purpose equipment allows not only for the production of all kinds of titles – like those seen in the cinema – but also for the taking of trick-films of the most different pattern.



EFFECTS BOX

The tilting outfit and the lighting equipment can be completed by a light-hood into an "effects box" (compendium), (see figure below).

MOVILUM

Makes filming with artificial light independent of the tripod and of any other lamps. The attachment is equipped with 2, 4 or even 6 reflectors and can be screwed firmly to the MOVIKOS 8 so that moving objects can easily be followed by the camera without any fear of insufficient lighting. The use of one or two Photo-floods in reflection when filming close-ups in bright sunlight lightens the shadows surprisingly well and adds quite a "Hollywood" touch to the film.

The tilting outfit and the lighting equipment can be combined and used together.

Further uses are described in the literature dealing with narrow-film cinematography and in the instructions supplied with each accessory.



The actual shooting

HINTS FOR BEGINNERS

PLANNING

The screen is ideal for the free use of the imagination. The beginner will usually start filming anything which happens to come across his camera. You will, however, derive more pleasure from your film when you "plan" it before the camera begins to whirl. It is a good plan to make a note of your ideas when they occur to you.

If you wish to produce entertaining short films you must make sure of continuity, that is, each sequence must be linked to the preceding one. This can be achieved only when you take the film according to a detailed script. A script enables you to arrange your ideas in a pleasing sequence of scenes and to bridge any continuity gaps by shooting a few more adequate close-ups. The script serves for recording the contents of the various scenes, the scale of reproduction of the object, the length of the scenes, the lighting and the "trills" that separate the individual shots.

PRIOR TO SHOOTING

Wind up the spring-driven motor until it stops, just like a watch. This will prevent undesirable interruptions during filming.

COLLECT FILM IDEAS



WRITE A SCRIPT



THE SPRING- DRIVEN MOTOR

- DISTANCE SETTING** Setting the correct distance when close-ups under 3.6 ft. are being filmed needs extra care. Otherwise adopt the red-dot technique.
- APERTURE** Determine the correct stop. It depends upon the filmspeed, the subject brightness and, if filters are used, on the filter factors. The best way is to use the electric exposure meter IKOPHOT.
- LIGHTING** The beginner should avoid any harsh lighting. Shadows must sometimes be lighted by the reflections of white paper or a table cloth. Opposite light produces sentiment pictures. For artificial light the Universal Lighting Equipment MOVILUM should be used.

WHILE SHOOTING

- hold the camera firmly otherwise the picture will jerk and flicker in the projection. Do not tilt the camera.
- PANNING** Beginners should avoid panning. The camera is not a garden-hose. After some experience panning may be done by slowly and evenly moving the camera from one side to the other. Avoid pendulous movements.
- FINDER IMAGE** Frame the correct outline of your object in the viewfinder, a later correction of the exposed picture is impossible. A film-picture is not a photograph which can be cut at will. When taking close-ups make sure to use the marks for vertical parallax.

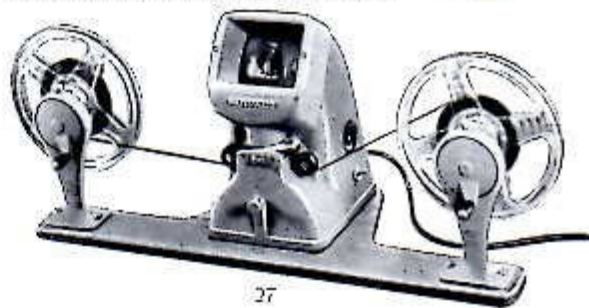
The device for single frame shots should be used for trick and time-lapse shots. The use of a cable release is to be recommended. The camera must be placed on a tripod or any other support free from vibration.

SINGLE
FRAME SHOTS

PRIOR TO THE PRODUCTION

Self-criticism is the prerequisite of a good film. Telling a story properly is the most important element in film making. A film is a knitting together of a series of pictures to make a rhythmic whole. Bad pictures - due to incorrect stop or wrong distance setting - must be cut out. The ZUSS KAM film editor MOVISCOP serves this purpose extremely well. It projects a clear image of the film in motion and enables the amateur to mark any desired passage with a built-in marking knife. Once you have become interested in acquiring this scant information and you enjoy the presentation of your own films on the screen you will find additional and detailed advice in the text-books concerning sub-standard film cinematography.

EDITING



HINTS AND TABLES

HOW TO TAKE CARE OF YOUR CAMERA

The camera should be thoroughly cleaned from time to time. Special attention should be given to the film track, which can easily be cleaned with a soft brush when the film gate is opened. Take special care that no dust soils the picture gate. If a hard deposit of the emulsion of the film should have settled on the edges it should be removed with a small piece of wood (match stick), but never use any metallic object.

THE 8 mm-DOUBLE RUN SPOOLS

The film to be used for the movikon 8 is the 25 ft x 8 mm double run spool of black-and-white - or colour - film. Both are reversal films. These films are processed in such a way that the original negative is reversed into a positive without an intermediate negative. This double run film is also slit into its two halves. This work is done by special laboratories or by the film manufacturers, who return the film ready for projection. The price for processing is included in the original film price. The exposure latitude is rather limited. Underexposure will inevitably produce a darker film and overexposure a lighter. The amateur must expose his films as accurately as possible and should use an electric exposure meter for the correct setting of the diaphragm.

DEPTH OF FIELD TABLE for MOVIKON 8 (1:9, f = 10 mm)

Distance settings and apertures together result in the following ranges of depth of field

Lens setting	DIAPHRAGM						
	1:9	2:8	4	5.6	8	11	16
8"	7 1/2" - 8 1/2"	7 1/2" - 8 1/2"	7 1/2" - 8 1/2"	7 1/2" - 9 1/4"	6 1/2" - 9 1/2"	6 1/2" - 10 1/4"	5 1/2" - 11"
1'	1 1/4" - 1 3/4"	1 1/4" - 1 1/2"	1 1/4" - 1 1/2"	1 1/4" - 1 3/4"	1 1/4" - 1 3/4"	1 1/4" - 1 3/4"	7 1/2" - 2 3/4"
10"	1 1/4" - 1 3/4"	1 3/4" - 1 3/4"	1 2 1/2" - 1 1 1/2"	1 1 1/2" - 2 1/4"	1 1/2" - 2 1/4"	1 1" - 2 1/4"	9 1/2" - 2 1/4"
2'	1 1/2" - 2 1/4"	1 1/2" - 2 1/4"	1 1/2" - 2 1/4"	1 1/2" - 2 1/4"	1 1/2" - 2 1/4"	1 1" - 2 1/4"	10 1/2" - 2"
30"	2 3/4" - 1 1/4"	2 1/2" - 2 1/4"	2 3/4" - 2 1/4"	1 1 1/2" - 1 7/8"	1 7/8" - 2"	1 1/2" - 2"	1 1" - 2"
7'	4 1/2" - 15 1/2"	3 1/2" - 15 1/2"	3 3/4" - 2"	2 3/4" - 2"	2 1/4" - 2"	1 3/4" - 2"	1 3/4" - 2"
Recharge	5 1/2" - 2"	4 1/2" - 2"	3 3/4" - 2"	3"	2 3/4" - 2"	1 3/4" - 2"	1 3/4" - 2"
∞	11 1/2" - 2"	7 1/2" - 2"	5 1/2" - 2"	3 1/2" - 2"	2 1/2" - 2"	2 1/4" - 2"	1 5/8" - 2"

The distance settings indicated refer to the distance between the focal plane (the separating line of the two camera parts) and the object. (Circle of confusion 0.015 mm)

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B75813
↑

LENS NO 2944694
1.9
6 SEPT 1957

SERIAL NUMBER

In the base of every MOVIKON 8 a serial number is engraved of which a note should be taken to prove your ownership in case of loss or exchange of the camera.

Small changes on the camera as compared to the description may have been necessary due to technical progress.

OBJECT SIZES

for MOVIKON 8 with MOVITAR $f/1.9$, $f = 10$ mm

Lens setting	Size of picture field	
	Height	Width
8"	2 1/2" x	3 11/32"
1'	3 1/4" x	5"
1' 6"	5 11/32" x	7 7/32"
2'	7 7/32" x	10 1/16"
3' 6"	1' 1 1/4" x 1'	5 1/4"
7'	2' 2 1/2" x 2'	11 1/4"
Red-dot	3' 3 3/4" x 4'	10 1/4"

- 11 FOOTAGE INDICATOR CONTROL
- 12 FIELD REEL ROBBIN
- 13 FILM GATE
- 14 FOCUSING FRAME
- 15 LATCH FOR FOCUSING FRAME
- 16 TAKE-UP REEL ROBBIN



- 17 HOLES FOR THE ATTACHMENT OF ACCESSORIES
- 18 TRIPOD BUSH
- 19 LOCK OF CAMERA BACK
- 20 BACK PANEL
- 3 EYEPiece OF VIEWFINDER

C. J. BENT.

Garantieschein

CERTIFICATE OF WARRANTY

CAMERA MOVIKON. 8. NO. B. 75813.
WITH LENS MOVITAR. 1/9. NO. 2944691.

IS A GENUINE PRODUCT OF ZEISS IKON AG. STUTTGART

The above instrument has been fully tested, inspected and adjusted and it is guaranteed against mechanical and manufacturing defects in conformity with our terms of sale.

ZEISS IKON AG. STUTTGART

Heuff Warrmann.

We, the authorised distributors for ZEISS IKON AG. STUTTGART, certify that we have properly imported this camera and lens and have paid Customs Duty upon it.

DATE. 18. 9. 57.

Signature of the Agent

L. Lohse

In the event of service being required please consult your photographic dealer.

