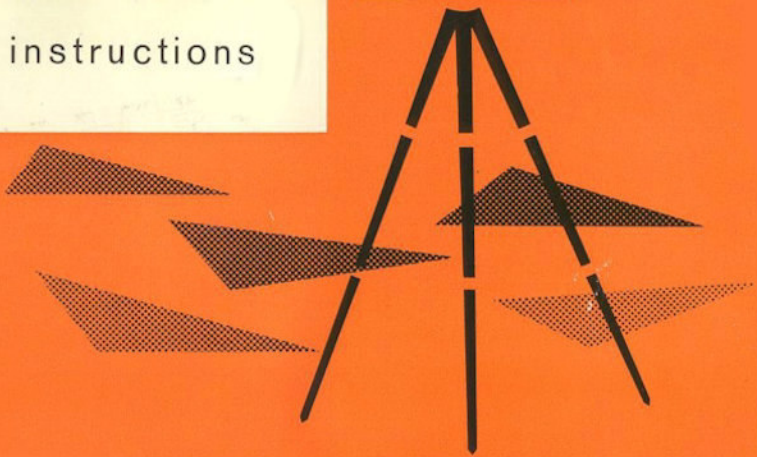
BOLEX

H8 REX®

instructions



Bolex paillard

Filming speeds	Shutter open lever up		Shutter ¼ closed Lever on ¼		Shutter ½ closed Lever on 1	
	EXPOSURE TIMES (1/sec.)					
	Real	Adapted	Real	Adapted	Real	Adapted
12 f. p. s. ▶	1/33	1/40	1/45	1/55	1/75	1/94 ◀
16 f. p. s. ▶	1/45	1/55	1/60	1/75	1/100	1/125 ◀
18 f. p. s. ▶	1/50	1/60	1/70	1/87	1/110	1/137 ◀
24 f. p. s. ▶	1/65	1/80	1/90	1/112	1/150	1/188 ◀
32 f. p. s. ▶	1/90	1/110	1/120	1/150	1/200	1/225 ◀
48 f. p. s. ▶	1/130	1/160	1/180	1/225	1/300	1/375 ◀
64 f. p. s. ▶	1/180	1/220	1/240	1/300	1/400	1/500 ◀

Single frame exposure. Speed control knob on 12 f. p. s. 16 - 64 f. p. s. ▶	1/30	1/40

When setting your exposure meter, use the figures listed under "adapted exposure times" in order to take into account the light directed by the reflex prism into the viewfinder.

We would recommend you to shoot a roll of film and check the results before filming a vacation trip or other important occasion. This will allow you to become familiar with your camera and will show you if you are correctly following the indications in this instruction manual. When in doubt, see your retailer for advice or help.

H8REX

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8 mm FILMS

Your camera is designed to take "double" 8 mm film on 25 ft. or 100 ft. spools. This means that the film you load is 16 mm wide and will be run through the camera twice, one half of the film being exposed each run. The processing laboratory will cut it lengthwise into two parts and return it as one 50 ft. or 200 ft. strip of 8 mm film, running for just over 4 and 16 minutes on the screen. Film is always returned on a spool ready for projection.

Films are provided with leaders of about 4 ft. at each end which permit loading and unloading of the camera without exposing the usable portions to light. The leader is, as a rule, removed by the laboratory at the time of developing.

Black and white or color films of different sensitivities are available. The sensitivity, expressed in ASA, is indicated on the exposure guide which accompanies the film.

The expiration date of the film is mentioned on the carton.

GET TO KNOW YOUR CAMERA

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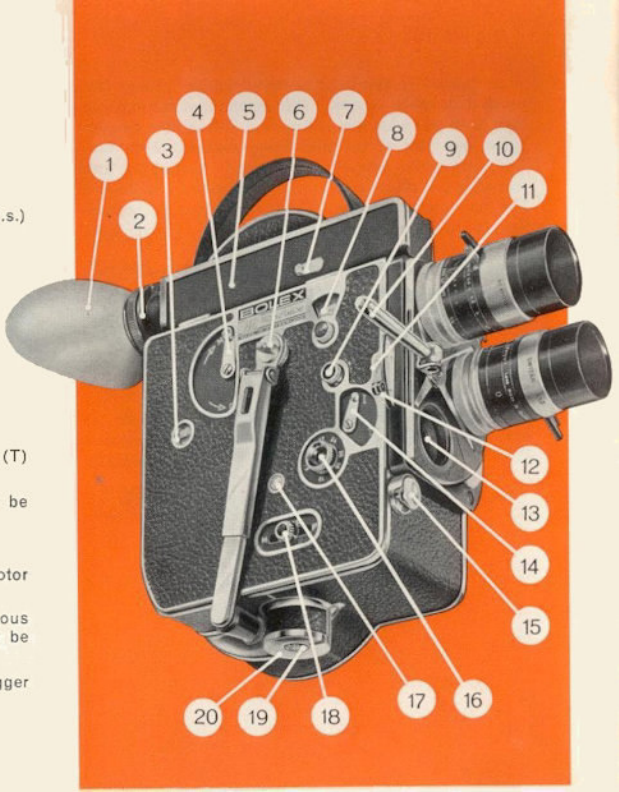

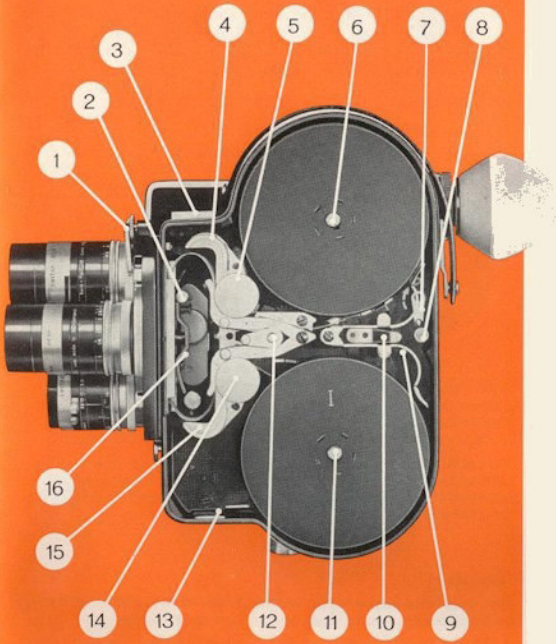

GET TO KNOW YOUR CAMERA

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BEFORE LOADING THE CAMERA, LEARN TO USE ITS MAIN CONTROLS

Winding the motor

First put the motor disengaging lever to position MOT and the side release to STOP.

Then raise the winding handle and turn it until it engages itself on its axle.

Next, wind the motor fully, counter-clockwise, without forcing it. Afterwards lower the handle and secure it on its catch (A) to prevent it from rotating during filming.

The length of the handle can be shortened by pushing it towards the center. This shortening of the motor winding handle will be found necessary with certain turret positions.

The fully wound motor will drive about 10 ft. of film which corresponds to about 45 seconds of filming at 18 f.p.s.

However it is an advisable practice to wind the motor after each scene, regardless of the power reserve.

Filming speeds

The speed control dial has seven settings 12, 16, 18, 24, 32, 48 and 64 frames per second.

The usual filming speed nowadays is 18 frames per second. It replaces 16 f.p.s. as the international standard for filming as well as for screening. Movements are thereby reproduced smoother, and if a magnetic sound track is to be added to the film, the sound will be purer and clearer.

When the film is projected at normal speed, films shot at a slower speed (12 f.p.s.) produce an illusion of accelerated motion on the screen, while films shot at higher speeds (24/64 f.p.s.) will produce a slow motion effect.

To set filming speed, turn speed control dial to corresponding setting in front of the red point. The dial can also be set in between the engraved number for intermediate speeds (20 f.p.s. for example).

Important !

Never let the camera run without film at more than 32 f.p.s., as this could cause damage to the mechanism.

Turn the speed control dial to 18 f.p.s. now.

Operating controls

The H-8 Rex camera can be used for regular scenes, for selfilming and for single frame shots. These different operations are controlled by the **side release.**

NORMAL SHOTS

For ordinary filming. The camera runs as long as the operator presses on the front release or pushes the side release towards M. The latter operation is usually done with a cable release.

SINGLE FRAME SHOTS

Push the side release forward on P.
Instantaneous: lever in position I.
Time: lever in position T (for use in poor lighting conditions, indoors for example).

When making time exposures, open the variable shutter so that none of its blades can cut off a part of the subject.

Single frame exposures are used for titles, cartoons, scientific films and various trick effects, such as ultra-accelerated motion (clouds, sunsets, humorous effects, etc.). To avoid any movement of the camera, use a cable release.

SELFILMING

Push the side release all the way back to M.

The camera will run for as long as the motor is wound. Selfilming permits the operator to get into the scene.

The camera stops running when the release is put in the STOP position.

CAMERA OPERATION BY CABLE RELEASE

In single frame filming, it is better to use a cable release in order to avoid any "jump" that may occur when hand releasing the camera (see p. 31).

Hand cranking

The mechanism of the H-8 Rex camera can operate in either forward or reverse by means of a small auxiliary rewind crank that fits over the cranking shaft.
Film can be fully rewound by the hand crank, to enable the operator to remove a partly exposed film from the camera. The film rewind is also used for special effects such as lap dissolves, double exposures, etc.

Learn to use the hand crank

To do so:

1. Disengage the motor by turning the clutch lever to position O.

If you feel a slight resistance near position O, do not force, but press the front release while pushing the lever.

2. Set the side release on position M (selfilming).

3. To prevent fogging of the film close the variable shutter by lowering the lever and pushing it inward.

4. Insert hand crank over the rewind shaft and turn it in the direction of the engraved arrow (for reverse) without attempting to go faster than the governor allows.

To return to normal operation with the spring motor:

- Withdraw the hand crank.
- Push the side release to position STOP and the clutch lever to position MOT.
- **Do not forget to open the variable shutter.**

IMPORTANT! Reverse cranking is for rewinding purpose only and is not suitable for filming in reverse.

The footage counter

The footage counter shows the length of film that has been exposed.

The frame counter

This shows the exact number of frames exposed and permits highest accuracy for scientific motion picture studies, as well as in rewinding film for trick effects such as fades, lap dissolves, etc. It is also very useful for single frame exposures.

To read the frame counter, add the figures shown on each dial:

The upper dial adds the frames in forward run and subtracts them in reverse run, from 0 to 100 frames.

The lower dial totalizes the frames in forward run and subtracts them in reverse run, up to 2000 frames.

Beyond this figure, the cycle starts again and the totals shown by both dials must be added to the 2000 frames already shot. On the illustration the counter shows 296 frames. But the total number of frames exposed could be 2000 + 296 = 2296 frames.

It is easy to check at any moment on the footage counter if the figures on the frame counter refer to the first or second cycle: 2000 frames of 8 mm film correspond to 25 ft.

TO ZERO THE FRAME COUNTER:

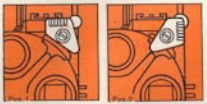
1. Zero the frame-by-frame dial by means of the knob around the axle of the rewind shaft.

2. Zero the lower dial by means of the knob immediately under the frame counter window.

A clicking sound marks the passage of each 8″ of film, or every 3 seconds at the speed of 18 f.p.s. Thus, the operator can easily estimate the length of a scene while filming. To reduce the sound of the audible signal or eliminate it altogether, push to zero the small lever located inside the camera next to the counter pin.

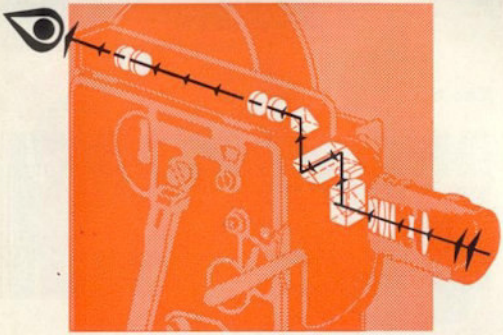
The turret

The turret offers the possibility of switching rapidly from one focal length lens to another by simply moving a lever. Use this turret lever and not the lenses when turning the turret, in order to avoid any accidental altering of the distance or diaphragm setting. Three click stops ensure that the lenses are correctly positioned in front of the picture aperture.



When using heavy lenses, such as zoom lenses or extreme tele lenses, the turret can be locked by means of a special clamp and of a locking plug.

THE REFLEX VIEWFINDER



The advanced optical equipment of your H-8 Rex camera enables you to view through the taking lens while filming as well as when the camera is not running.

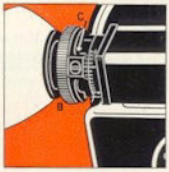
The reflex viewfinder ensures accurate framing and focusing. In addition it enables you to estimate the depth of field, to choose the focal length of the lens, to check the color of the filter used, and to estimate light conditions. It shows a natural size image at standard focal length (12.5 mm).

Do not use the reflex viewfinder without its rubber eyepiece. Its purpose is to ensure correct and comfortable viewing without the intrusion of extraneous light.

PRELIMINARY ADJUSTMENT OF THE VIEWFINDER EYEPIECE TO THE OPERATOR'S EYE

This adjustment is made to adapt the viewfinder to the operator's eyesight, whether wearing glasses or not and remains the same for any lens used on the camera.

It is advisable to check this adjustment from time to time.



1. Remove the taking lens.

2. View a well lighted subject.

3. Loosen the milled ring (B) and turn knob (C) until the grain of the ground glass is perfectly sharp. Tighten the ring (B) which serves as a locking nut.

If your eyesight is normal, the line on the lever (C) will be opposite the longest line engraved on the fixed ring. If not, it will face one of the shorter lines on this ring.

DISTANCE SETTING

The reflex viewfinder of the H-8 Rex camera shows the scene as it will be projected on the screen, i.e. it shows what will be sharp and what will be out of focus.

It is therefore easy to set the lens for a specific distance and to check at the same time the depth-of-field.

The depth-of-field, i.e. the zone in which the picture is sharp, varies according to the focal length of the lens, the diaphragm opening and the filming distance.

The depth-of-field is **shallow** when using a long focal length lens, an open diaphragm or a short filming distance.

The depth-of-field is **great** when using a short focal length lens, a closed diaphragm or a long filming distance.

Almost all lenses for the H-8 Rex have a depth-of-field indication on their mount. In addition lenses are supplied with a chart showing the depth-of-field at the various settings.

The distances are calculated from the film plane (see p. 4) indicated by means of the sign ϕ situated near to the control of the variable shutter.

DIAPHRAGM SETTING AND REFLEX VIEWFINDING

The diaphragm serves to vary the amount of light which is to reach the film through the lens.

The reflex prism directs into the viewfinder about 20 % of the light entering the lens.
Although this loss of light can be considered as insignificant, it has nevertheless been taken into account in the exposure table printed on the back of cover which you should use in setting your exposure meter.

CLOSING THE VIEWFINDER

If the reflex viewfinder is not used during filming, it is advisable to close it by pushing **the safety lever up.** If this is not done, there is a danger of fogging the film by light entering the camera through the viewfinder eyepiece.

The variable shutter

The H-8 Rex camera is fitted with a shutter having a variable opening, thus permitting changes in exposure time without a change in the filming speed.

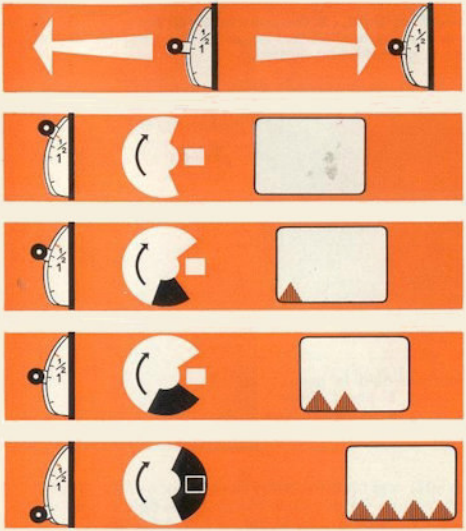
The control lever can be moved while filming, or it can be set in one of the four positions shown on illustration opposite.

The variable shutter can be locked in each of its four positions by pushing the lever in the direction of the arrow.
The ¼ and ½ closed positions of the variable shutter are indicated on the lever scale by the figures ½ and 1 which have the following meaning:

¼ closed position (figure ½): the diaphragm should be opened by ½ stop to compensate for the shorter exposure time due to the partly closed shutter.

½ closed position (figure 1): the diaphragm should be opened by 1 stop.

The variable shutter setting can be checked while filming: 1, 2, 3 or 4 dark orange triangles appear in the field of view according to whether the shutter is ¼, ½, ¾ or entirely closed.



Use of the variable shutter

If the light is particularly strong (snow or beach scenes), the variable shutter can be used to reduce exposure and the use of a neutral density filter becomes unnecessary.

REDUCING THE DEPTH OF FIELD

With the variable shutter closed down, larger f openings can be used on the lens thereby " blurring out " unwanted backgrounds.

Example

Main subject from 3 ½ to 5 feet from the camera. Background between 30 feet and infinity. 12.5 mm lens set at 3 ½ feet. Lightmeter reading f/8.

Shutter open

diaphragm opening f/8
sharp definition from 1 ½ foot to infinity
subject and background sharp

Shutter ½ closed

lever on " 1 "
diaphragm correction = 1
diaphragm opening f/5.6
sharp definition from 2 ft. to 11 ft.
subject sharp, background blurred

SHARPENING OF DEFINITION

By reducing the exposure time for each frame, the variable shutter also makes possible the sharper definition of moving objects.

This improved definition is especially useful for projection on large screens or for 5 frames per second studies on the Bolex 18-5 projector (see 3rd cover page).

If filming speed is not increased, this improvement of definition may result in jerky projection.

To prevent this, it is advisable to use filming speeds of 24 f.p.s. or more when the variable shutter is ½ closed.

Finally, the variable shutter allows the gradual variation of exposure known as **fade-in, fade-out and lap-dissolve** (see p. 24-25).

You are now familiar with the main controls of your H-8 Rex camera and you are fully acquainted with the various ways of using the camera.
You have selected your film (see p. 3) and the time has come to load your camera.

HOW TO LOAD YOUR CAMERA

To prevent fogging of the film edge, the camera should be loaded in a shady and dim place. Before loading it, wind the camera motor (see p. 6).

INSERTING THE FILM


1


2


3

1. Remove the camera lid by turning the locking ring to the left (direction indicated by arrow 0) and put it in a dry, clean place.

2. Make sure that the pressure pad pin is firmly in place and that the pressure pad cannot open.

3. Remove the empty spool by pressing on the spool ejector lever.


4

4. Open the two film retaining arms fully.


5

5. Place the spool with the unexposed film on the upper spool shaft so that the film runs in the direction of the arrow. Make sure the film does not uncoil.

6

6. Raise the small pin and adjust the upper film retaining arm according to the size of the spool.


7

7. Insert the beginning of the film between the blades of the film knife.

If the spool is correctly placed, the light mat side of the film should face the turret and the dark shiny side towards the rear.

Then cut off the end of the film diagonally between two perforations.

Remove the cut-off piece of film

8

8. Close the loop formers by means of their control lever.

9

9. Insert the beginning of the film into the funnel guide and push it until it gently touches the sprocket wheel.

10. Hold it in this position and press the front release with the index finger of the left hand. Stop the camera when 10″ to 12″ of film have passed through the drive mechanism.

11

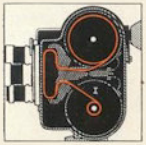
11. Open the loop formers again by pressing on the knob of their control lever. If, by error, you leave the loop formers closed, they will automatically open when you replace the camera lid.

12. Insert the beginning of the film into the slot in the core of the take-up spool, rotate the latter until about two or three turns of film have been taken up and then place it on the lower spool shaft. It is most important that the film is secured tightly on the spool.

12

13. Set the lower film retaining arm in the same position as the upper arm.

14. Run the camera for 1 or 2 seconds to make sure that the film is driven normally.



15

15. Ready to run the inside of your camera should look like this.

16. Replace and lock the camera lid by turning the locking ring to the right (direction indicated by arrow F). If it does not lock correctly at the first try, do not force it! This means that the spools or the pressure pad are not correctly positioned.

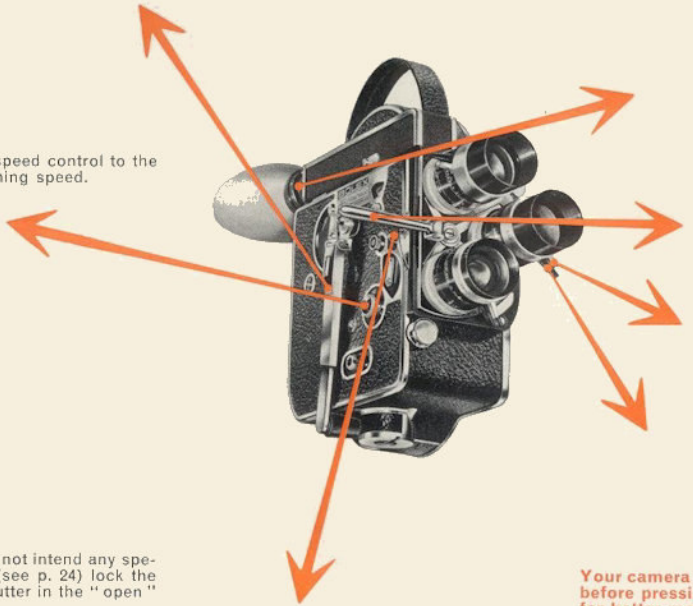
16

17. The footage counter shows the letters **ft.** Run the camera until the figure 0 comes opposite the white line on the red mask of the footage counter. The leader of 3′9″ of film has now been taken up and you can start filming. The counter automatically returns to **ft.** when the camera lid is removed for loading or unloading.

17

When your camera is loaded

1. Wind the motor fully.



2. Set the speed control to the desired filming speed.

3. If you do not intend any special effect (see p. 24) lock the variable shutter in the "open" position.

4. Check the adjustment of the viewfinder eyepiece (see p. 10).

5. Place the desired lens in front of the aperture using the turret lever for turning the turret.

6. Adjust the diaphragm according to your exposure-meter using the twin diaphragm setting lever (see instructions for H-8 Rex lenses).

7. Open the diaphragm completely, by rotating the longer lever towards the stop (see instructions for H-8 Rex lenses); sight on the scene through the reflex viewfinder and turn the focusing ring until the picture appears sharp on the ground glass. Turn the long diaphragm lever against the shorter lever, which sets the diaphragm number again at the preset opening.

Your camera is now ready for filming. But before pressing the release, read the hints for better moviemaking on pages 20 to 22.

Reversing the film

The H-8 Rex camera uses 25 or 100 ft. spools of "double eight" film. After running the film once through the camera, only one half of the film width has been exposed. To expose the other half, the film has to be reversed.

As soon as the footage counter shows 25 or 100 ft. (according to the size spool used), keep on pressing the release for another 10 seconds or so (6 clicks of the audible warning) in order to roll the trailer of the film on the take-up spool.

Before opening the camera, make sure all the film has run through the camera.

For doing so lower the single frame control lever to T, turn the turret so you can see the picture aperture and

If the film has not run completely through the camera, it will show in ivory in the aperture.

Do not open the camera in bright light, in order to avoid fogging the film.

then push the side release to P to open the shutter.

Then load your camera again. Open the lid, press on the spool ejector lever to free the two spools and place the full spool on the upper (film feed) spindle, with the side marked II uppermost.

How to unload camera

After film is fully exposed

When the film has been completely exposed, the original BOLEX spool supplied with the camera is once again empty on the upper spool shaft.
Remove the full spool with the same care as when reversing the film and place it immediately in its metal container.

When the film is only partly exposed

A partly exposed film is removed as follows:

1

1. Note the figure on the footage counter.

3

2. Set the frame counter to zero.

3. Close and lock the variable shutter.


5

4. Disengage the motor and rewind the film until the figure 0 of the footage counter is in front of the white index on the red mask.

5. Give the turret a half turn.


6

6. Swing the reflex prism open.

7. Set the side release in the STOP position.

8. Set the single frame control lever to T (time).

9

9. Engage the motor by setting its control lever to MOT.

10. Push the side release to P and hold it there.


11

11. Open the variable shutter.


12

12. Make an ink mark on the frame seen in the aperture.

13. Note the figure shown on the frame counter.

13 14. Swing back the reflex prism.

15. Put the turret back into place.

16. Disengage the motor.

14 17. Rewind the rest of the film.

18. Open the camera lid and unload the camera.

To put the film back in the camera at the exact point where your last exposure was
15 made, proceed as follows:

19. Load your camera as shown on pages 14 and 15.

20. Run the camera with the front release while checking the footage counter. Stop the camera when the figure 0 of the counter is slightly to the right of the white index
20 line.

21. Free the aperture by turning the turret.

21

22. Run the film frame by frame (lever in the T position) until the ink mark previously made appears in the aperture.

22

23. Adjust the frame counter to the figure noted above under 13.

24. Put the turret back into place.

25. Close and secure the variable shutter.

23

26. Run the camera until the footage counter shows again the figure noted under 1,

27. and the frame counter indicates 0.

26

28. Open the variable shutter.

28

Filming can now begin again.

Camera stability

It is most important that your camera be held firmly and steadily, for the slightest jerk while filming is amplified on the screen and results in unsteady pictures.

Rest the camera against the forehead or cheek, stand with the legs wide apart and the elbows tucked well into the sides. Where possible, lean against a firm support such as a wall or tree trunk.

We recommend to use a grip or handle, or, if possible, a monopod or a tripod. This latter can be considered a must when filming with a telephoto or zoom lens.

Film continuity

With your H-8 Rex camera you are in a position to make films of superior quality. The main purpose of a film is to tell a story. Surely you would not go to the cinema to see a series of photographs thrown together without purpose or reason. Remember that the sequences on the screen are made up of a series of usually short individual shots. These shots have to be put together in a meaningful manner to give the impression of continuity.

The average shot (or scene) lasts from 5 to 10 seconds according to what is being filmed. If the action to be filmed lasts longer, cut it into different shots taken from various angles and distances, i.e. long shots (with full background), medium shots (an entire person), and close-ups (a portrait).

Here are some basic rules which will help you

1. Change the shooting angle often.
2. Film close ups. The results are always better and more interesting.
3. Do not shoot everything from eyelevel.
4. Never film rapidly moving subjects from a right angle, but from a three-quarter angle or head on.
5. When approaching a subject with a series of successive shots, go from the general to the specific but never advance in a straight line but in a zigzag line. Otherwise it would look as if the object had advanced towards you by leaps.
6. If the camera mechanism stops while you are filming, do not continue filming from the same angle. Change your position. The interruption will be less noticeable.
7. Make it a habit to rewind your camera after each sequence, even a short one.
8. Remember that you can edit the developed film and change the sequence of the pictures. Do not hesitate to cut what seems of poor quality or too long.

To avoid monotonous sequences, use various effects. Your H-8 Rex has many special features to allow this. In addition you can use two types of camera techniques : **panning** and **dollying.**

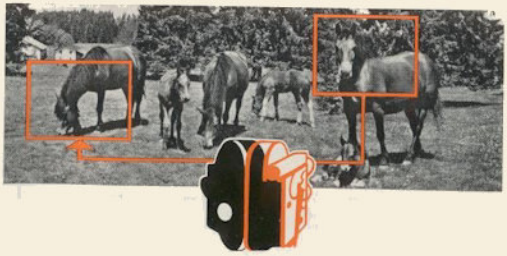
Pan shots

To pan means to make your camera swivel around a fixed point. This is difficult to do by hand, except when following moving subjects. A **monopod** helps a lot. But **a tripod is ideal.**

Of course, like any camera technique, panning must be done for a good reason. It should never be abused. Viewers would become tired of a constant sweeping of the horizon. You are well advised not to pan on a distant landscape.

HOW TO MAKE PAN SHOTS?

— First of all, you need a solid support.
— A rather fast speed (24 or 32 f.p.s.).
— Determine accurately the beginning and the ending point of the pan shot.
— Start filming without moving the camera, then turn the camera slowly and smoothly. The longer the focal length of the lens, the slower the movement should be. At the end of the movement continue filming for a short time without moving the camera and never pan backwards.



Dolly shots

Dollying means to place the camera on a moving support which makes it possible to approach the subject, move away from it or follow it alongside.

This moving support may be your car or a train. However, there is always some difficulty in keeping the camera stable, even when filming at higher speeds (24 or 32 f.p.s.).

Instead of dollying, you can obtain a similar effect with a variable focal length lens (the Pan Cinor from SOM Berthiot or the Kern-Paillard Vario-Switar both of them especially designed for the H-8 Rex). The camera then remains fixed on a tripod and only the focal length changes. In addition, the variable focal length lenses offer you the choice of all fixed focal lengths from wide-angle lens to telephoto lens. There is an infinite variety of lenses combined in one lens.

Lighting

Front or side-lighted subjects give excellent results with color film, back-lighted subjects are difficult but produce striking results. Back-lighted subjects are easier to shoot with black-and-white film.

The best hours for shooting with a color film are given in the instruction sheet packed with the film. The morning and evening hours may give interesting results with black-and-white film.

Indoor sequences

Well lit indoor scenes even in available light can be filmed if a fast lens is used.

Film at 12 f.p.s. if the available light is not strong enough.
If the natural light is not sufficient, you can use flood lamps, but the camera must be loaded with artificial light type films when shooting colour sequences.

Night sequences

With a fast lens you can film fireworks or lighted neon signs with very good results.

Editing and titling films

After shooting several films, you will most probably want to "edit" them, i. e. to cut out unwanted sequences, reduce the length of others and join the remaining scenes in a logical order.

It is also an excellent idea to enhance the value and interest of your films by adding main and subtitles or indicating a location by filming maps, road signs, etc.

Adding sound to films

A magnetic sound track can be added to 8 mm films. A musical background or narration will also greatly increase the audience's pleasure in your films.

Faulty films and their causes

FAULT	POSSIBLE CAUSE
Film all black	Variable shutter was closed.
Under-exposed film, inverted frames, strong orange tint	Film has been wrongly loaded, with the dark side of the film towards the lens.
Frames too dark, without life	Under-exposed (diaphragm closed down too far with regard to the filming speed and the opening of the variable shutter).
Washed out frames	Over-exposed (diaphragm open too wide with regard to the filming speed and the opening of the variable shutter).
Blurred frames	Inaccurate distance setting.
"Jumping" frames	Camera unsteady while filming. Pan shot made too quickly.
Unnatural coloring	Using filters for black-and-white film with color film. Films developed long after exposure. Films badly stored before use.
Dominant red-orange tint	Sequence shot too early in the morning or too late in the evening. Using tungsten lamps with a "daylight" film, or using a lamp not receiving enough current with an "artificial light" film.
Dominant blue tint	Filming distant subjects at high altitudes or on water without the necessary filter.
Partly obscured frames	An object in front of the taking lens, possibly a long tele lens or finger. Turret improperly positioned.
Parallel scratches on the edge of the film	Dust or emulsion particles in the filmgate of the camera.
Fogged film	Direct light entered the camera through the reflex viewfinder.
Film fogged at the edges	Film insufficiently protected during the loading or unloading of the camera — the film was accidentally exposed to direct light.

Reading this booklet carefully should avoid the above mistakes and produce excellent films.

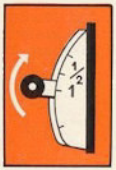
ADVICE TO THE ADVANCED MOVIE MAKER

Until recently, **the fade-in, fade-out,** etc., were special effects accessible only to the professional film maker. With the variable shutter of your H-8 Rex camera you can make them yourself quite easily.

Fade-in

A fade-in is the gradual change from black to a correctly exposed scene. It thus prevents the viewer from being suddenly and unpleasantly blinded, at the beginning of a film.

HOW TO MAKE A FADE-IN?



— Start with the variable shutter closed (shutter lever downwards, but not locked).

— Press the release with the left hand.

— Gradually raise the shutter lever to its top position and lock it (the shutter is then fully open) and continue filming.

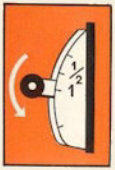
— In general a fade-in should not take more than two seconds and it will be sufficiently accurate if you count aloud "twenty-one—twenty-two". At "two" the shutter lever should reach its top position.

In order to ensure a steady movement rest the middle finger against the edge of the turret and hold the black tip of the lever between thumb and forefinger, pushing it slightly foreward as you move it.

Fade-out

A fade-out means the gradual darkening of the picture until it is black. It is good to end the last scene of a film by a fade-out in order to have a gradual rather than a sudden change.

HOW TO MAKE A FADE-OUT?



Proceed as with the fade-in but in reverse order, counting "Twenty-one-twenty-two-twenty-three" for example. At "three", the lever should have reached its lowest notch. Release starting button at the same time.

Transitional fade

Fade out + fade in = transitional fade

If there are two consecutive scenes of different brightness or if a change of place or action is to look natural, it is advisable to end the first scene with a fade-out and start the second with a fade-in.

Lap dissolves

A lap dissolve is unquestionably one of the most pleasing transitional effects between two scenes and is made by superimposing a fade-in on a fade-out. In the final result, the picture of the first scene gradually disappears as the picture of the following scene appears. Thus, a remarkably soft transition is achieved during which the picture brightness hardly varies.

Proceed as follows:

1. Close the scene with a fade-out without changing the framing. The duration, at a filming speed of 16 f.p.s., should average 2 seconds.
2. Lock the shutter in the closed position.
3. Set the upper frame counter dial to zero.
4. Disengage the motor by lowering the lever (b) to O, then push the side release to M.
5. Rewind the film in reverse run until the frame counter shows the following figures.

Duration of fade in seconds	Camera speeds		
	16 f.p.s.	18 f.p.s.	24 f.p.s.
1 1/2	76	73	64
2	68	64	52
2 1/2	60	55	40
3	52	46	28

6. Push the side release to STOP and the lever (b) to MOT.
7. Disengage the lever of the variable shutter.
8. Frame the second scene, press the release and make a fade-in of the same length as the previous fade-out. Continue filming without stopping.

The filming of fade-out and fade-in can be done automatically with the Rexofader available as accessory. This accessory is highly recommended for lap dissolves.

Double exposures

In order to enhance the artistic effect of a scene, the professional movie maker sometimes uses double exposures, i.e. the superimposing of two different scenes, filmed separately, on the same length of film.

Proceed as follows:

A. TO DOUBLE EXPOSE THE ENTIRE SCENE

1. Set the diaphragm of the lens according to the lightmeter reading.
2. Half close the variable shutter by locking the lever in position "1".
3. Set the frame counter to zero.
4. Film a scene.
5. Note the reading of the frame counter.
6. Close the variable shutter completely and lock its lever in that position.
7. Disengage the motor and rewind the film until the frame counter again reads zero.
8. Re-engage the motor.
9. Free the variable shutter lever and lock it in position "1".
10. Film the second scene until the frame counter reads the figure noted under 5.
11. Open the variable shutter and lock its lever in that position.

B. TO DOUBLE EXPOSE ONLY PART OF THE SCENE

1. Set the lens diaphragm according to the lightmeter reading.
2. Film the beginning of the main scene, then stop when you reach the point where you intend to make the double exposure.
3. Set the frame counter to zero and free the variable shutter lever.
4. Begin filming again. Start with a partial fade-out lasting 1 ½ seconds, by pushing the lever down in position "1" while counting "hundred-and-one". Lock the lever in that position but do not stop filming.
5. Stop filming where you want the double exposure to end and note the frame counter reading.

6. Free the variable shutter lever.

7. Continue the scene with a partial fade-in lasting 1 ½ seconds and end it with the lever locked in the "open" position. Note the frame counter reading.

8. Close the variable shutter and lock its lever in that position.

9. Disengage the motor and rewind the film until the frame counter reads zero again.

10. Engage the motor and free the variable shutter lever.

11. Film the superimposed scene. Begin with a partial fade-in lasting about 1 ½ seconds, made by pushing the lever into position "1" and locking it there, but do not stop filming.

12. Stop filming when the frame counter reaches the number noted under 5.

13. Free the shutter lever and make a half fade-out lasting approximately 1 ½ seconds. Stop the camera when the frame counter shows the number noted under 7.

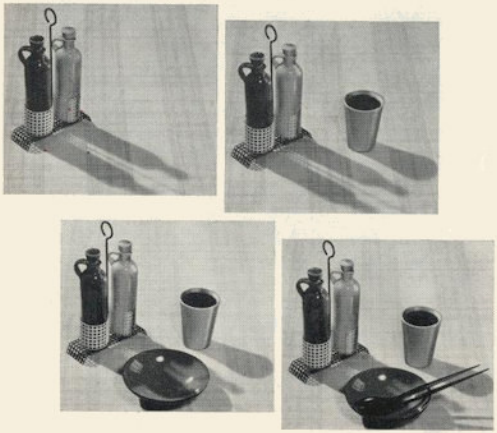
N.B. Use a tripod and, if possible, have an assistant.

The production of the different fades and double exposures described on the preceding pages will be particularly simplified by utilizing the automatic variable shutter control device: the Rexofader (see p. 31).

Frame by frame filming

Frame by frame filming makes it possible to analyse extremely slow processes (the growth of plants, for instance).

With the same technique you can animate objects, drawings or titles.



ANIMATION TECHNIQUE

When you film an object frame by frame, moving it slightly between each shot, you are making an animated film.

For instance, you can show a table that lays itself or two dolls dancing with each other. All it takes is a little patience.

The Bolex takes care of the rest through :

— The reflex viewfinder for focusing and framing of the object ;

— The indispensible frame counter. The number of frames shot for each movement determines the smoothness and final speed. Carefully plan the various movements and their timing. Always keep an eye on the frame counter while filming ;

— The cable release which avoids camera movement between frames.

— The absolutely steady tripod, with its head locked in position.

Shooting is preferably done in artificial light.

The same technique can make your titles move or can show arrows on a map to explain a trip or for instructional purposes.

CARTOONS

If you have a Bolex Super Titler you can also make cartoons with your H-8 Rex. You have to be both movie-maker and cartoonist. Or you can enlist the help of a talented friend.

Without going into detail, the technique consists of breaking the movement of the figures into fractions, each of which is represented by a picture. These are placed consecutively in the Super Titler and filmed frame by frame. The same technique is used for animating technical illustrations.

Macro- and microcinematography

Scientists, industrial cameramen, engineers, as well as many amateur movie makers, are turning more and more to the micro- and macrocinematographic technique for studies and research. The movie camera has proved itself to be a most useful instrument for recording actions or phenomena that cannot be seen with the naked eye.

Macrocinematography is the filming of very small objects. To do so, the distance between lens and film plane has to be lengthened by means of the close-up extension with which some of the lenses for the H-8 Rex are equipped (see instructions for the use of H-8 Rex lenses).

Microcinematography means filming through microscope and is used mainly in the medical and biological field.

The illustration left below shows the solution adopted by Wild S. A. of Heerbrugg (Switzerland).

HOW TO LOOK AFTER YOUR CAMERA

Camera

The interior of the camera, where the film drive mechanism is housed, must be kept spotless.

Gelatine deposits and dust are sometimes found in the gate and on the pressure pad after unexposed film has been run through the camera.

Clean them as follows :

a) Open the pressure pad by raising its pin, then unscrew its shaft.

b) Remove the pressure pad by pulling it towards you.

c) Clean the gate and pressure pad, paying special attention to the aperture, with a clean cloth wrapped around the end of a small wooden stick. If the gelatine deposit is hard to remove, wet the cloth slightly. Make sure that the parts are well dried after cleaning.

d) Replace the pressure pad.

Reflex prism

The reflex prism is situated in front of the aperture and can be reached by turning the turret. As it is mounted on hinges, it is a simple matter to turn it for cleaning the rear and the ground glass surface. Use a soft, dry brush for cleaning these parts. The prism can be cleaned even when the camera is loaded (preferably in the shade).

Important!

The reflex viewfinder must not be taken apart.

CARE OF CAMERA IN TROPICAL OR COLD CLIMATES

Certain precautions must be taken to protect both camera and film against heat and humidity.

Airtight boxes and protective chemicals for your camera are available on the market.

Be extra careful with your equipment when in tropical regions.

If you are going to film at high altitudes or in very cold climates, send your camera to the BOLEX agent for special winterizing.

TO COMPLETE YOUR EQUIPMENT

The specially designed accessories for your H-8 Rex camera add to its style, comfort and performance.

Base, grip, monopod and tripod

give improved stability for the camera. Their use greatly improves the quality of films.

The cable release

(21 or 40 inches) avoids camera movement in normal and frame-by-frame filming. Two different adapters make it possible to mount the cable to the side release or the front release of the camera (the latter is necessary when the Rexofader is used).

The self-timer Bolex

An ideal accessory "for getting yourself into the picture".

Variable focal length lenses

A wide choice of focal lengths in a single lens. They facilitate the framing of scenes and enable you to approach a subject, move away from it or follow it, without moving the camera.

PAN CINOR 40

SOM Berthiot lens; focal lengths from 8 to 40 mm. Especially built for the H-8 Rex.

VARIO-SWITAR 36

Kern-Paillard lens. Gives smooth and gradual transition from 8 mm to 36 mm focal length; especially designed for the H-8 Rex.

Multifocal auxiliary viewfinder

Its field can be adapted immediately and smoothly to that of lenses with the following focal lengths: 6,5, 12,5, 25, 36, 50 and 75 mm.

Electric motor

Runs on batteries or A C. current with Robs Transformer. It is easily attached to the H-8 Rex. Useful for long, uninterrupted takes.

Rexofader

This is a device for automatically and smoothly opening and closing the variable shutter. It is especially useful for perfect lap dissolves, etc.

Super Titler

Worth investigating. This precision instrument offers many possibilities, titles, animated films, cartoons.

The Bolex Matte box

A highly efficient, multi-purpose lens hood and an indispensable tool for the advanced movie-maker.

Spools

Made of finest quality, unwarpable steel, painted grey.

Underwater housing

Designed for underwater filming down to 300 ft.

Carrying cases

Several models available in good quality brown leather. Practical and elegant.

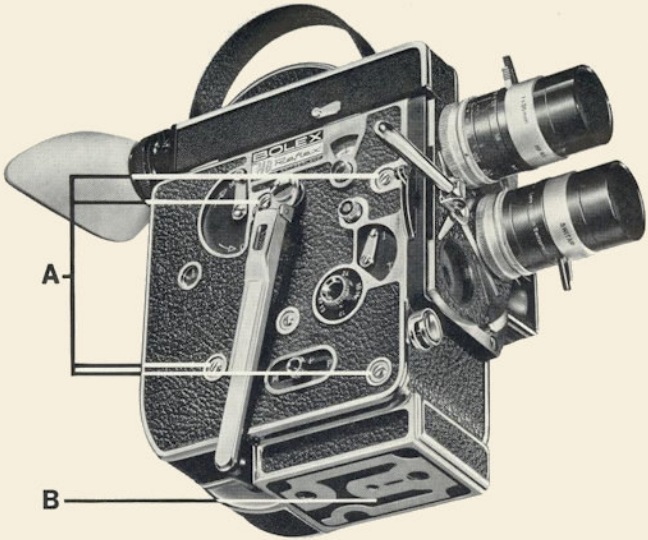
Your BOLEX Franchised Dealer is available with detailed literature on each of these accessories.

ALPHABETICAL INDEX

Two modifications have recently been made to the BOLEX H8 REX :

A Four extra holes have been provided on the right side of the camera for attaching electric motors.

B A flat base gives the camera a steady foundation. This base is bored with three fixation holes, two of which have Congress and the other a Kodak thread. The hole at the front is recommended when using heavy lenses, and particularly when using a lens with a variable focal length.



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Votre caméra est pourvue d'un axe supplémentaire (a), qui n'est pas mentionné dans le présent mode d'emploi. Cet axe tourne à la vitesse de 1 tour par image exposée. Il est d'ores et déjà prévu pour l'adaptation d'un moteur électrique à cadence stabilisée.
Le levier de commande pour instantané ou pose mentionné à la page 4 du présent mode d'emploi (No 10 pour H16 RX et No 14 pour H8 RX) a été remplacé par un bouton moleté (b).

Ihre Bolex ist mit einer zusätzlichen Motorachse (a) ausgestattet, die in der vorliegenden Gebrauchsanweisung nicht erwähnt ist. Diese ist für die Verwendung eines Elektromotors mit stabilisierter Laufgeschwindigkeit vorgesehen. Bei jeder Umdrehung der Motorachse (a) wird ein Filmbild belichtet.
Der auf Seite 4 der Gebrauchsanweisung erwähnte Umschalthebel für Moment- und Zeitaufnahmen (Nr. 10 bei der H16 RX und Nr. 14 bei der H8 RX) wurde durch einen Rändelknopf (b) ersetzt.

The camera is now fitted with an additional shaft (a) which is not mentioned in this instruction manual. The speed of this shaft is equivalent to one revolution per frame and it is intended for use with a constant speed electric motor.
The control lever for instantaneous and time exposures shown on page 4 of this manual (Item 10 for H16 Reflex and Item 14 for H8 Reflex) has been replaced by a milled knob (b).

La vostra cinepresa è munita di un asse supplementare (a) che non è menzionato nella presente istruzione d'uso. Questo asse gira alla velocità di 1 giro per ogni fotogramma esposto. È previsto fin d'ora per l'adattamento di un motore elettrico a velocità stabilizzata.
La leva di comando per istantanee o pose, menzionata a pagina 4 della presente istruzione d'uso (No 10 per H16 RX e No 14 per H8 RX), ha dovuto essere sostituita con un bottone zigrinato (b).

Su cámara va equipada de un eje suplementario (a) que no aparece en el presente modo de empleo. Este eje gira a una velocidad de una vuelta por imagen expuesta. Su utilidad es preveer la adaptación de un motor eléctrico de cadencia estabilizada.
La palanca de mando para instantánea o pose mencionada en la página 4 del presente modo de empleo (no 10 para H16 RX y no 14 para H8 RX) ha tenido que ser substituida con un botón estriado (b).

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Uw camera heeft een extra motoras die in deze gebruiksaanwijzing niet is aangegeven. Deze as is bedoeld voor het gebruik van een electromotor met constante snelheid. Bij elke omwenteling van de motoras a wordt één beeld belicht. De op blz. 4 van de gebruiksaanwijzing besproken omschakelhandel voor moment- en tijdopnamen (nr 10 bij de H16 RX en nr 14 bij de H8 RX) is vervangen door de kartelknop (b) zoals op nevenstaande afbeelding staat aangegeven.

Bolex paillard