Instructions

for use of the

Ciné-Kodak

Model E

f.3.5 Kodak Anastigmat Lens

EASTMAN KODAK COMPANY
ROCHESTER, N. Y.

IMPORTANT

Always hold the camera absolutely steady while taking a scene.

Follow the instructions on the exposure guide on the front of the camera.

When using NORMAL speed, keep the camera in operation for not less than eight or ten seconds on any subject.

Keep the lens clean. This is especially important at the seashore or on ocean voyages. See pages 34 and 35.

Do not move the camera while it is running unless it is absolutely necessary.

When making a scenic panorama where there is no moving object to be followed, the camera should be moved *very slowly and evenly.*

When panoraming for a moving subject, such as a running horse or a speeding motor boat, keep the subject in the center of the finder, and it must not be close to the camera.

The most effective pictures are those in which not more than one-third of the picture area consists of sky, sea or very light foreground.

When making a distant view the best effects are obtained by having some nearby object in the foreground.

HOLD THE CINÉ-KODAK STEADY

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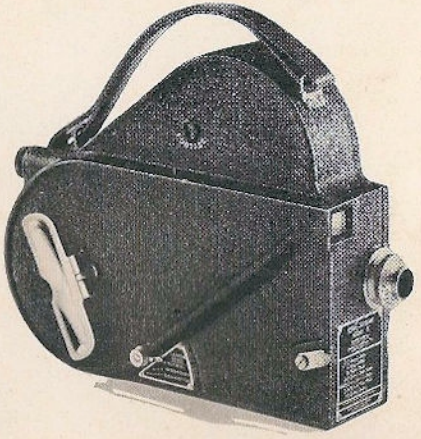

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Instructions for using the Ciné-Kodak Model E

OUR experience has shown that nearly all of the troubles met with by users of Ciné-Kodaks would never have occurred if the manuals furnished with them had been thoroughly read and studied before any exposures were made.

The user of the Ciné-Kodak, Model E, can make good pictures at the very outset if he will read and follow the instructions in this manual. The percentage of properly exposed film that you can make will be in direct proportion to the care with which you follow these directions.

Loading the Camera

The Ciné-Kodak may be loaded or unloaded in daylight. These operations should be done in a subdued light, never in direct sunlight; if necessary, in the shade of the body.

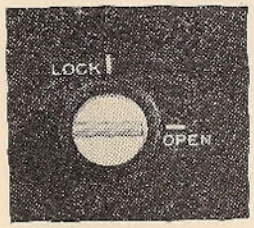


Fig. 1

Remove the cover of the Ciné-Kodak, first unlocking it by turning the button in the center of the cover *clockwise* until the embossed ridge on the button is at the line marked OPEN, as shown in Fig. 1; then lift off the cover.

Table of Parts

PART	EXPLANATION
1 Supply Spool	Holds the unexposed film.
2 Take-up Spool	Takes up the exposed film as it comes from the sprocket.
3 Supply Spool Spindle	Furnishes a bearing for supply spool.
4 Take-up Spindle	Rotates the take-up spool and winds up the exposed film.
5 Tension Spring	Keeps tension on film on supply spool; also operates scale of film meter.
6 Upper Sprocket Clamp 7 Lower Sprocket Clamp	Keep the film perforations meshed with the sprocket teeth.
8 Leader	Protects unexposed film before loading, Fig. 4, page 7.
9 Sprocket	Draws film off the supply spool and feeds it to take-up spool.
10 Upper Loop 11 Lower Loop	Indicate size and shape of upper and lower loops when threading leader, Fig. 8, page 11.
12 Gate	Keeps film in position behind lens.
13 Guide	Guides film after leaving sprocket.
15 Winding Key	Used for winding motor, Fig. 11, page 15.
16 Exposure Lever	Starts and stops motor, Fig. 11, page 15.
17 Film Meter	Indicates footage of film remaining in camera, Fig. 10, page 13.
18 Speed Indicator	Adjusts for speed: Normal, Intermediate, and Slow Motion, Fig. 11, page 15.
19 Lens Barrel	Turns to adjust the diaphragm openings.
20 Pull-down Claw	Draws the film intermittently past the gate aperture, Fig. 14, page 35.

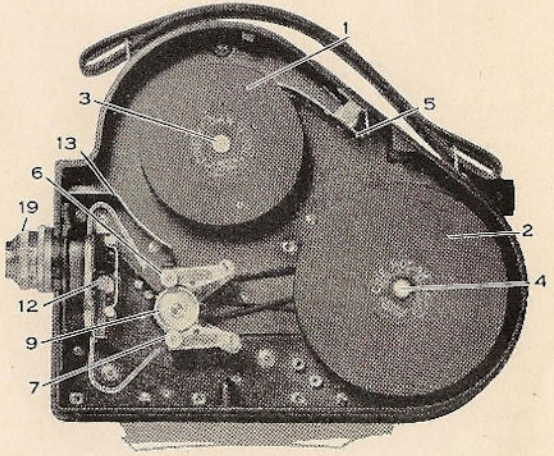


Fig. 2

After the cover has been removed, the inside of the camera will appear as in Fig. 2.

The small spool 1, Fig. 2, contains a short length of film. Practice threading the camera first with this film, but do not make exposures on it. Save the small spool which should be used as the take-up spool when loading the camera with a fifty-foot spool of film.

Push down the lower end of the tension spring 5 which moves the upper end of the spring away from the supply spool 1. Remove the supply spool 1 and take-up spool 2, lifting them off the spindles 3 and 4.

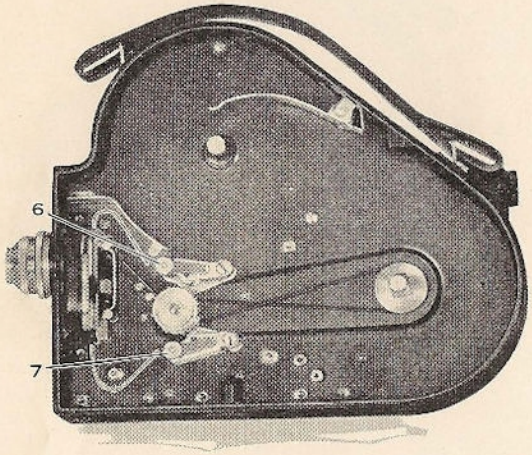


Fig. 3

Open the sprocket clamps, 6 and 7, as in Fig. 3. These are opened by first pulling the knurled headed pins towards you, and then swinging the clamps away from the sprocket.

Remove the spool of film from the container.

When you use a roll of Ciné-Kodak Film save the metal container and the yellow carton in which it comes, for a mailing container in which to send the film for finishing. See page 24.

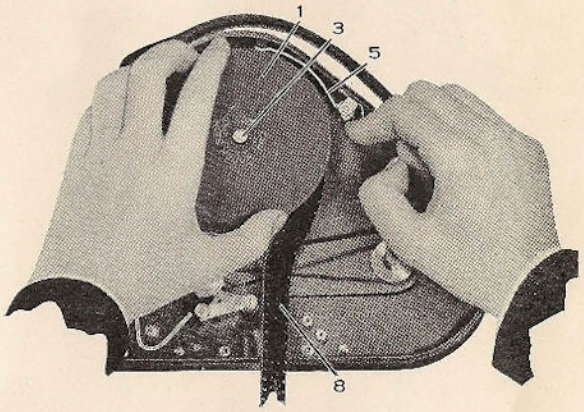


Fig. 4

Remove the paper strip from around the film.

Unwind about 18 inches of the film to be used as a leader 8, as shown in Fig. 4.

With the tension spring 5 pushed back, place the spool of film 1, on the spindle 3, Fig. 4, with the square hole of the spool next to the camera. Be sure that the spool 1 is properly seated; the end of spindle 3 should project, slightly, through the hole in the spool.

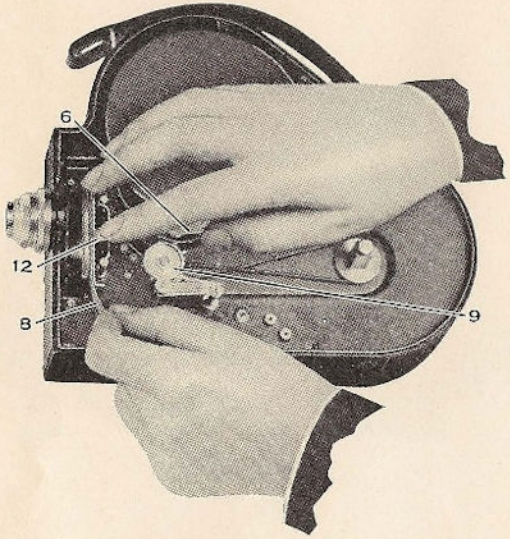


Fig. 5

Thread the leader 8 between the top of sprocket 9 and upper sprocket clamp 6, Fig. 5, but do not close the clamp. Now hold back the rear part of the gate 12 against the two posts and push the film into the gate as far as it will go. Then release the handle of the gate and pull the film down in the track until the pull-down claw snaps into a perforation. The film and rear part of the gate must be properly seated. *Be sure that the light side of the leader is towards the lens.*

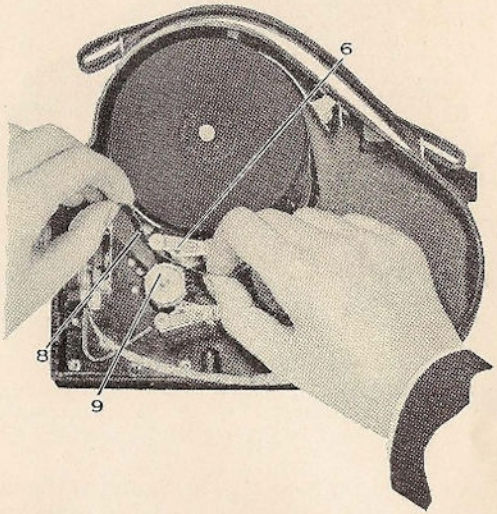


Fig. 6

Form the upper loop 10, Fig. 7, page 10; then engage the teeth on the sprocket 9 in the perforations of the film and close the upper sprocket clamp 6, Fig. 6, pushing it down until it snaps into place. The film should just touch the guide 13, as shown in Fig. 7, page 10; it should follow the path indicated by the white line.

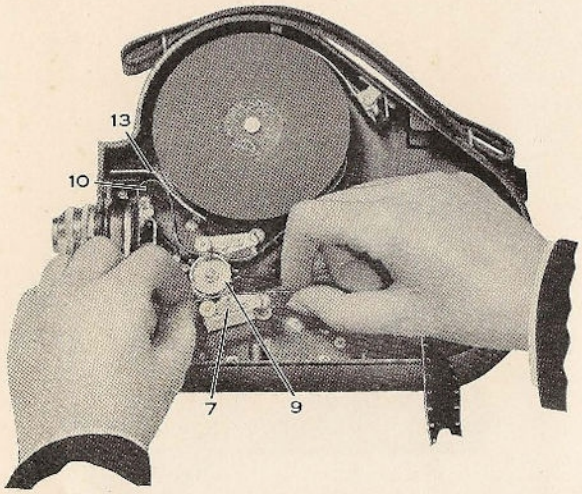


Fig. 7

Form the lower loop 11, Fig. 8, and at the same time thread the leader between the sprocket 9 and the lower sprocket clamp 7, Fig. 7.

Be sure that the teeth on the sprocket engage the perforations in the leader, then close the lower sprocket clamp 7 by pushing it up until it snaps into place.

When forming the lower loop 11, the film should follow the white line, shown in Fig. 8.

It is of great importance that the upper and lower loops follow the path indicated by the white lines. These loops prevent undue strain on the pull-down and tearing of the perforations.

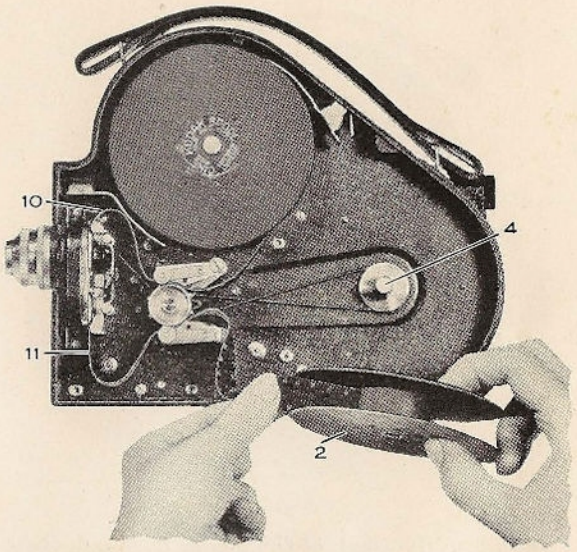


Fig. 8

Holding the leader in the left hand and the empty take-up spool 2 in the right, with the square hole of the spool towards the camera, thread the end of the leader into the slot in the core of the spool, as shown in Fig. 8.

NOTE: A fifty-foot and a hundred-foot film spool are furnished with each Ciné-Kodak. The former should be used as the take-up spool when you load the camera with a fifty-foot roll of unexposed film. The latter should be used when loading with a hundred-foot roll of film.

Always keep on hand an empty fifty-foot spool and an empty one-hundred-foot spool for use as take-up spools.

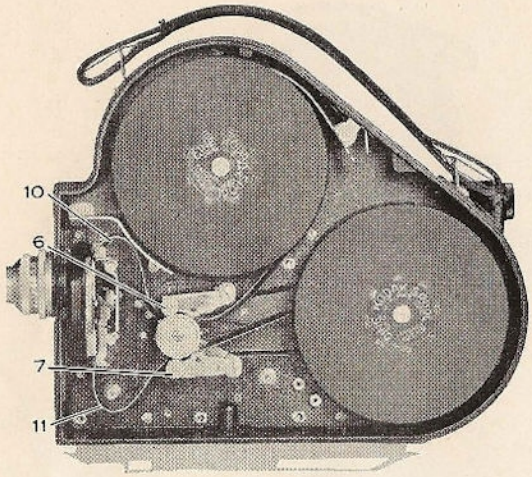


Fig. 9

Wind up the slack of the leader by hand, turning the spool to the right or clockwise, until it is just long enough to slip the spool on the take-up spindle 4, see Fig. 8, page 11.

If the square opening of the spool does not fit readily over the spindle, *lift* the spool and turn it slightly. The spool must be properly seated.

The sprocket clamps 6 and 7 must be closed, and the upper and lower loops 10 and 11 should be the size as shown in Fig. 9.

NOTE: When winding up the leader, note whether or not it has a tendency to bind between the flanges of the spool. If it binds, the spool has become bent, and the flanges should be straightened by bending carefully with the fingers.

Give the winding key 15, Fig. 11, page 15, a few turns, and press down the exposure lever 16 to operate the Ciné-Kodak, see page 15. *Allow the motor to run for only a second or two, and watch the leader, closely.* While winding the spring and operating the camera with the cover removed, be careful to hold the camera so that the take-up spool will not come off the spindle. If the leader is running properly and loops are maintained, stop the motor and immediately replace the cover and fasten it by turning the button in the center of the cover, Fig. 1, page 3, until the embossed ridge on the button is at the line marked LOCK.

If the cover does not close easily, it is because you have not closed the sprocket clamps. The clamps should be closed, as shown in Fig. 9. Do not try to force the cover.

Film Meter

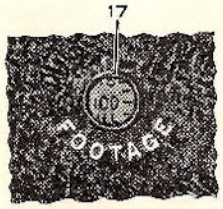


Fig. 10

The film meter 17, Fig. 10, automatically registers the number of feet of unexposed film there is in the camera. Another film meter is located inside of the finder which makes it very convenient to check the number of feet of film being used while making the exposures.

After loading the Ciné-Kodak with a *50-foot* spool of film, run off *three* feet of film (*eight* seconds at normal speed) before taking any pictures. If loading with a *100-foot* spool of film, run off *four*

feet of film (*ten* seconds at normal speed) before taking any pictures. At this point, due to slight variations in the film, the film meter may read slightly above or below the 50 or 100 mark, but there will still be 50 or 100 feet of usable film on the spool.

When the film meter 17, Fig. 11, reads "O" (or when the "O" appears on the scale inside of the finder) no more pictures should be taken, as the remaining film acts as a protection when the exposed film is removed from the camera. Run the motor until the word EMPTY appears, before removing the cover of the Ciné-Kodak to unload it.

No exposures should be made on the protective trailer strip, as it is fogged and will be cut from the finished film in the laboratory. The protective leader strip is also removed when processing.

Operation

The majority of amateur motion pictures are taken at the normal speed of sixteen frames or individual snapshots per second. When the finished film is drawn through the projector at the same rate, these individual snapshots follow one another so rapidly that the illusion, in the case of moving objects, of continuous motion results.

The motor of the Ciné-Kodak, Model E, can be operated at three different speeds: NORMAL, INTERMEDIATE and SLOW MOTION. For subjects where normal motion is desired, the speed indicator 18, Fig. 11, should be at NORMAL. To change the camera speed, move the indicator to the speed required. With the indicator at INTERMEDIATE the motion of

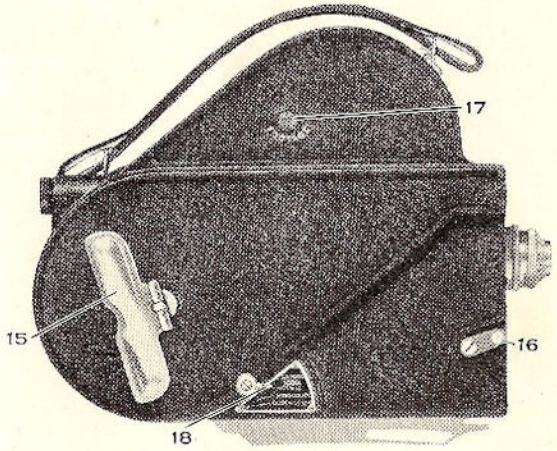


Fig. 11

the subjects will be slower than normal, and for real slow-motion effects the indicator should be moved to SLOW MOTION, see pages 16 and 17.

To wind the motor of the Ciné-Kodak, Model E, raise and turn the winding key 15, Fig. 11, on the side of the camera. Wind up the spring by turning the key to the right or clockwise. Give it about 27 half-turns or until the spring is wound tight. Before winding the spring, be sure that the exposure lever 16 is *up*, as shown in Fig. 11.

To start the motor after the spring is wound, press the exposure lever 16, Fig. 11, about half way. To stop the motor, release the pressure.

While the spring will run the motor for about fifteen to twenty feet of film, when fully wound, it is advisable to wind up the spring after each

scene, or after each five to ten feet of film have been exposed. If the motor sounds as if it were slowing down, stop it and rewind the spring.

Experience has shown that usually ten seconds at NORMAL speed are sufficient for most scenes in which the action is continuous but not changing in character: For example, a waterfall; a street with the usual traffic; "close-ups" of people who are not acting, etc. Some beginners make the mistake of using too much film in taking one scene with the result that, when the film is projected, the picture becomes tiresome before the scene changes.

If the operator wishes to be included in the picture, place the camera on a tripod (it has a socket for this purpose) or some level, steady, firm support. Press the exposure lever 16, Fig. 11, page 15, *as far as it will go*, when it will lock in position, and step into the picture area. To stop the motor, step out of the picture area, return to the camera and push up the lever.

When the Ciné-Kodak is empty and may not be used for a day or so, avoid unnecessary tension on the spring by letting the motor run down.

Camera Speeds
Intermediate and Slow Motion

When it is desired to have the motion of the subjects somewhat slower than normal, set the speed indicator 18, Fig. 11, page 15, at INTERMEDIATE. When operating the camera at this speed it will be necessary to use the *next larger* diaphragm opening than the one given on the exposure scale on the camera or the exposure table on page 20 for the specified light condition.

For instance, if the subject is in direct sunlight, use *f*.8 instead of *f*.11 with Ciné-Kodak Panchromatic Film.

For real slow-motion effects, set the speed indicator 18, Fig. 11, page 15, at SLOW MOTION. With the speed indicator at SLOW MOTION and the exposure lever pressed down, the motor runs at about *four times* the normal speed, exposing about sixty-four frames or individual snapshots per second, instead of sixteen.

When the pictures made at SLOW MOTION are projected at the normal speed, the subjects appear to move very slowly. Many amusing effects can be secured by using this speed. Slow-motion effects can also be used to advantage by coaches of athletic games to analyze various plays, and for many other purposes.

For SLOW MOTION pictures it will be necessary to use the *second larger* diaphragm opening than the one given on the exposure scale on the camera or the exposure table on page 20 for the specified light condition. For example, if the subject is in direct sunlight, use *f*.5.6 instead of *f*.11 with Ciné-Kodak Panchromatic Film.

Before taking pictures at either INTERMEDIATE or SLOW MOTION it is essential that the motor be fully wound.

Important: When through using camera speed INTERMEDIATE or SLOW MOTION, it is advisable to reset the speed indicator 18, Fig. 11, page 15 to NORMAL; this will leave the camera adjusted for making pictures at normal speed. *The Ciné-Kodak should not be operated at SLOW MOTION unless exposing film.*

Position for Operating

Steady pictures on the screen can be secured only by keeping the camera steady during the exposure. The Ciné-Kodak, Model E, may be held in the hands when operating it. It is essential, however, to keep the camera *steady*. Although this camera is designed for hand-held operation, projection results are improved if exposures are made with the camera held against a solid support or placed on a tripod.

Fig. 12

If the camera is held in the hands, hold it firmly against the cheek with arms braced against the body, then locate the subject by looking through the finder.

When making "close-ups" with the subject five feet or less from the lens, allow an ample margin above the top of the subject as it appears in the finder. After the subject is properly located in the finder, raise the camera slightly.

The Ciné-Kodak, Model E, has a fixed focus. The nearest distances at which subjects can be photographed are given below:

Diaphragm opening	*f*.3.5 or *f*.4	*f*.5.6	*f*.8	*f*.11	*f*.16
Nearest distance of subject.....	6 ft.	5 ft.	4 ft.	3¼ ft.	2½ ft.

A good position for holding the camera while making exposures is shown in Fig. 12. The exposure lever is pressed down with the first finger of the left hand, as shown in the illustration. Be careful not to allow the finger to come in front of the lens. The camera must be held *very rigidly*.

The Ciné-Kodak, Model E, is provided with a tripod socket in the bottom of the camera; this makes it possible to use the camera with any standard tripod. It also permits the operator to be included in the picture, see page 16.

Use of the Diaphragm

Successful motion pictures are probably more dependent on correct exposure than on any other factor.

With the Ciné-Kodak, Model E, exposures are governed by the diaphragm and by the camera speed indicator 18, Fig. 11, page 15. The diaphragm, located between the front and rear components of the lens, is a device which controls the amount of light passing through the lens. When we speak of "diaphragm value or opening" we mean the size of the aperture in the diaphragm through which light may pass and reach the film.

The term *f*.3.5 signifies the largest diaphragm opening, *f*.4 is smaller than *f*.3.5, *f*.5.6 smaller than *f*.4, and so on to *f*.16 which is the smallest diaphragm opening. *The higher the number the smaller the opening.* The size of the opening to use depends upon the quantity of light on the subject—the more light the smaller the opening;

Exposure Table for Ciné-Kodak, Model E, with Ciné-Kodak Panchromatic Film

With Ciné-Kodak *Super Sensitive* Panchromatic Film use the next smaller opening (higher number), or use the Ciné-Kodak Color Filter (CK-3) with *no change* in the diaphragm opening.

With Ciné-Kodak Kodachrome Film use the exposure table included with it.

			Diaphragm Opening
Dark Days or in Shade on Bright Days	**Very Dull**	Cloudy days with poor light. **Shade**—Average shaded scenes.	*f*.3.5 or *f*.4
	Dull	Sky completely overcast, but good light. **Open Shade**—Subject lighted by a large area of sky.	*f*.5.6
Bright Days	**Slightly Cloudy**	Sun just obscured, soft, faint shadows cast. Also for clear days when only part of subject is in sunlight.	*f*.8
	Direct Sunlight	Full sunlight, distinct shadows cast.	*f*.11
	Intensely Bright	Unusually brilliant sunlight without large shaded areas.	*f*.16

This table is for the hours from two hours after sunrise until two hours before sunset; earlier or later, use a *larger* diaphragm opening. The exposures given are for the camera operated at NORMAL SPEED; at INTERMEDIATE use the next larger opening; and at SLOW MOTION use the second larger opening.

The "Intensely Bright" classification should be used only for very brilliantly lighted subjects; for example, sea and beach views, distant landscapes, and tropical scenes in brilliant sunlight. In winter the light is not so brilliant as in summer, and the number of scenes in the *Intensely Bright* group will be limited.

Fig. 13

the less light the larger the opening. To change the size of the diaphragm opening, turn the front portion 19, Fig. 13, of the lens barrel until the figure indicating the diaphragm opening required is at the index line. For greater convenience, there are two diaphragm scales on the lens barrel.

The exposure guide under the lens on the front of the camera, Fig. 13, and the exposure table on page 20 are given as guides to correct exposures under various lighting conditions.

The object of changing the diaphragm of the

lens is to produce a film, which, when projected, shows no appreciable variation in the brightness of the picture on the screen. This is the kind you should learn to make and it is easy if you will use the exposure guide properly. Since you can change the diaphragm at will, it is possible to take a number of scenes under various light conditions on one length of film.

Panoramic Pictures

It is sometimes necessary to panoram; that is, to move the camera horizontally, when following races and outdoor games, or to make a landscape continuous, such as a range of mountains and seashore views; or to photograph long or wide buildings and similar subjects in their entirety.

When panoraming, *never* swing or turn the camera quickly from one side to the other. Be sure that the camera is *level*, do not tilt it. Always remember to *hold the camera steady*.

Important Rules

The important rules for operating the Ciné-Kodak, Model E, condensed, are as follows:

1. Hold the camera *steady*.
2. Use special care in determining the correct diaphragm opening with the aid of the exposure guide.
3. Check the camera speed.
4. Ten seconds exposure are sufficient for unchanging scenes.
5. As long as the subject can be seen in the finder, *do not move the camera*. Stop the motor *before* you move it, except when panoraming.

6. When making a scenic panorama where there is no moving object to be followed, the camera should be moved *very slowly and evenly*.
7. When panoraming for a moving subject, such as a running horse or a speeding motor boat, keep the subject in the center of the finder, and it must not be close to the camera.
8. Wind up the spring of the motor after each scene or after each five to eight feet of film have been exposed.

Unloading the Camera

When the film meter 17 (Fig. 10, page 13) reads "O" no more pictures should be taken, as the remaining film acts as a protection when the exposed film is removed from the camera. *No exposures should be made on the protective trailer strip, as it is fogged and will be cut from the finished film in the laboratory. The protective leader strip is also removed when processing.*

Caution: Before removing the cover to unload the camera, after exposing the length of film, run the motor until the film meter 17 (Fig. 10, page 13) reads "EMPTY," following the 0 on the scale. This is necessary so that the exposed film on the take-up spool will be covered by the protecting end. This end is similar to the leader at the other end of the film and enables the camera to be unloaded in daylight. The word EXPOSED is perforated on this end of the film. Do not run the motor after all of the film and protecting end are on the take-up spool.

When the entire length of film has been wound on the take-up spool, and the film meter 17 (Fig. 10, page 13) reads "EMPTY," open the camera and remove the spool of film. Quickly replace it in its metal container and place it in the yellow carton. To prevent edge fog, unload only in subdued light or in the shade of the body.

The film is now ready for development. Print your name and address plainly in the space provided on the back of the yellow carton. Then return the exposed roll of film to your dealer, who will send it to our nearest laboratory for finishing, for which we make no additional charge. If you mail the film direct, tie a string around the carton; do not seal it in any way. A list of laboratories for processing Ciné-Kodak Film is given in the back of this manual, and a list is packed with each spool of film.

When returning the exposed film for development, *be sure to replace it in the metal spool container* before placing it in the yellow carton. If this is not done the film is liable to unwind and it will then be fogged and ruined.

We cannot emphasize too strongly the importance of placing your name and address on the yellow carton. This is the only way by which we can tell to whom the film belongs.

The open sided spool or reel on which the finished picture is returned from the processing laboratory, must not be used as a take-up spool in the Ciné-Kodak.

Ciné-Kodak Panchromatic Film

This film is sensitive to all colors. It gives a truer black-and-white representation of the subject's coloring than does orthochromatic film. Clouds, foliage and flesh tones show an improvement, while almost every scene photographs better because of this film's ability to reproduce colors more nearly in their correct tone relationship.

Ciné-Kodak Super Sensitive Panchromatic Film

The Ciné-Kodak Super Sensitive Panchromatic Film is much faster than regular Panchromatic Film, which makes it possible to photograph scenes that do not have sufficient illumination for regular Panchromatic Film.

With Ciné-Kodak Super Sensitive Panchromatic Film, it is easy to photograph subjects indoors by the light of Mazda Photoflood Lamps; it is not necessary to use expensive lighting equipment. This film makes it possible to make pictures much earlier and later in the day by daylight than could be taken with other films; it is essential for slow motion pictures on dark days.

In daylight, Super Sensitive Panchromatic Film has about twice the speed of the regular Panchromatic Film. Therefore, use the *next size smaller diaphragm opening* than that given in the exposure table on page 20 and on the exposure guide on the front of the camera. For example, if the exposure guide calls for *f*.8, use *f*.11. If the Ciné-Kodak Color Filter (CK-3) is used, make no change in the exposure, see page 27.

Ciné-Kodak Color Filter (CK-3)

The Ciné-Kodak Color Filter (CK-3) is designed for use in front of the regular lens on the Ciné-Kodak when photographing colored objects, and for clearing haze when photographing distant landscapes and similar subjects.

The action of the color filter tends to equalize the effect which the different colors have on the film, during the period of exposure in the camera. It retards the blue-green, blue and violet rays, thus allowing the greens, yellows, oranges and reds, time to record on the film.

When using the color filter with Ciné-Kodak Panchromatic Film or Ciné-Kodak Super Sensitive Panchromatic Film, it reproduces all the colors of the subject in monochrome on the film—more nearly in their accurate tone relationship one to the other. The result is a black-and-white picture of surpassing quality.

In outdoor photography (marine or landscape) where there is a brilliant cloud effect, and when photographing all objects that include colors which act weakly on the sensitive film, the use of the color filter will be advantageous.

The Ciné-Kodak Color Filter **Z-CK-3** fits the 20 mm. *f*.3.5 Kodak Anastigmat Lens used on the Ciné-Kodak, Model E. It is attached by slipping the flange over the front end of the lens barrel. Before placing the filter in position remove one of the sections from its flange; this can be easily done by bending it forward and backward a few times. Then attach the filter with this opening over the most convenient diaphragm index line.

Making the Exposure

When the Ciné-Kodak Color Filter is in position, make the exposures according to the factors given in the following table:

Exposure Factors for Ciné-Kodak Color Filter (CK-3) in Daylight

	Factor
Ciné-Kodak Panchromatic Film	4
Ciné-Kodak Super Sensitive Panchromatic Film	2

A factor of 2 means using the *next larger* diaphragm opening.

A factor of 4 means using the *second larger* diaphragm opening.

Note: The basic exposure for Super Sensitive Panchromatic Film without a filter is the *next smaller* opening than is indicated by the exposure table on page 20 or by the exposure guide on the front of the Ciné-Kodak; therefore, when using the CK-3 filter, follow the exposure guide on the front of the Ciné-Kodak.

When *extreme* contrast is desired, for instance, to obtain an effect of light objects outlined against darkened blue sky or water, use the next smaller opening than given for correct exposures.

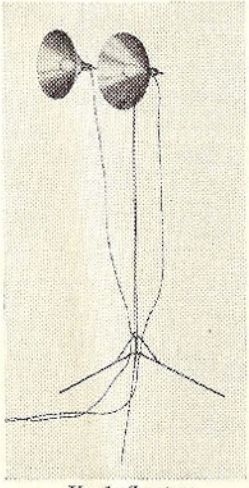
Other than increasing the exposure in the manner described, no change is necessary in the operation of the Ciné-Kodak.

Interior Exposures at Night Using Photoflood Lamps in Kodaflectors

The inexpensive Photoflood Lamp for use on 105-120 volt lines is not intended for ordinary home lighting, but is unusually effective for making motion pictures. It is similar in appearance to the usual 60-watt service lamp and is used in the same sockets. It gives an intensely brilliant light, the result of overloading the filament. Although the life of the lamp is shortened by this overloading, its life of approximately two hours (No. 1 Lamp) or six hours (No. 2 Lamp) at about 115 volts is sufficient for such a large number of exposures as to make the cost per scene negligible. The No. 1 Photoflood Lamp costs 25 cents; the No. 2 Lamp, 50 cents.

These Photoflood Lamps may be obtained from, or ordered through, Ciné-Kodak dealers. When purchasing them, buy several spares. One or two of them may burn out during an evening's picture making. They are not, of course, a permanent light source, but while they last they are thoroughly efficient.

The Kodaflector is designed to give the best illumination that



Kodaflector
(Twin-reflector unit.)

can be obtained with Photoflood Lamps. The height of the lamp, when used in the Kodaflector, can be set anywhere from 2 feet 10 inches to 6 feet 4 inches. The stand has a swivel head, which makes it possible to throw the beams of light in any direction.

The Kodaflector includes a folding, adjustable stand with combination clamp and swivel top, two special reflectors with sockets and angled rods, and two connecting cords.

Complete instructions are included with each Kodaflector.

Other reflectors may be used, provided they are equal in efficiency to the Kodaflector; a less efficient type will produce under-exposed pictures if using the tables on page 30.

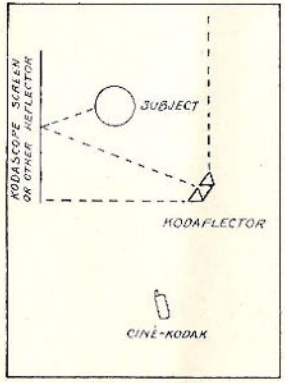


DIAGRAM 1
ONE KODAFLECTOR
(One twin unit.)

Arrangement of Lights

Pleasing results can be obtained by using the lamps indicated in the tables on page 30, with the lamps on one side of and somewhat higher than the subject, and pointed downward. When the lights are close to the camera axis (an imaginary line between the lens and subject) a "flat" picture results; moving the lights far-

Exposure Table for Ciné-Kodak *Super Sensitive* Panchromatic Film Using Kodaflectors with No. 1 Photoflood Lamps†

Diaphragm Opening	*f*.3.5	*f*.5.6	*f*.8
Number of Lamps and Distance between Lamps and Subject	1 at 5½ feet	*1 at 3½ feet	*1 at 2 feet
	2 at 8 feet	2 at 5 feet	*2 at 3½ feet
	3 at 10 feet	3 at 6½ feet	3 at 4½ feet
	4 at 12 feet	4 at 8 feet	4 at 5 feet

Exposure Table for Ciné-Kodak *Panchromatic* Film Using Kodaflectors with No. 1 Photoflood Lamps†

Diaphragm Opening	*f*.3.5	*f*.5.6
Number of Lamps and Distance between Lamps and Subject	*1 at 3½ feet	
	2 at 4½ feet	*2 at 3 feet
	3 at 6 feet	3 at 4 feet
	4 at 7 feet	4 at 4½ feet

*Use only for "close-ups." Camera should be placed so that reflectors will not be included in the picture.

†No. 2 Photoflood Lamps should not be used unless Kodaflector Adapters for No. 2 Photoflood Lamps are obtained; then use half as many lamps as shown in the tables.

The light from all Kodaflectors must be superimposed on the subject, thus restricting the area that can be illuminated successfully by a few Photoflood Lamps.

NOTE: Do not use more than five No. 1 Photoflood Lamps on a single fused circuit; if six lamps or more are required, be sure to use different circuits. Do not use more than three No. 2 Photoflood Lamps on a single fused circuit.

ther to one side of the axis increases the contrast but leaves heavy shadows on the other side of the subject. To illuminate these shadows, a white reflector or a Kodascope Screen must be used, see diagram 1, page 29. Instead of a reflector, an auxiliary lamp can be used. This lamp should be placed near the camera axis and at camera height. By moving it toward and away from the subject, the most pleasing amount of shadow illumination can be easily observed. This lamp is in addition to the lamps given in the tables on page 30. Many scenes can be made without using additional reflectors, as light walls, when near the subject, reflect sufficient light.

With two Kodaflectors (two twin units) it will be found easier to control the balance of illumination, see diagram 2. Bring one Kodaflector closer to the subject than the other.

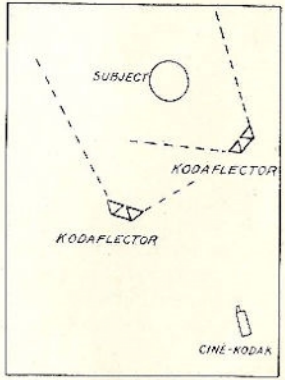


DIAGRAM 2
TWO KODAFLECTORS
(Two twin units.)

Considerable life and sparkle can be put into the pictures by backlighting the subject. This will give a pleasing result with a "flat" lighted subject, with the main lights near the camera axis. Since the light used for backlighting must be intense, one Photoflood Lamp in a

Kodaflector close to the subject is suitable. It should be placed above and slightly behind the subject. To prevent light from striking the camera lens, place some object between the backlighting lamp and camera. Do not include the lamp used for backlighting with the lamps specified in the tables on page 30.

When arranging the Kodaflectors and camera, see that no reflections of the lights in windows, glass in picture frames or glass doors, are within range of the lens of camera. Draw the window shades to avoid reflections from that source.

The distance between camera and subject does not affect the exposure. It is the distance from the light to subject that is important. Do not crowd your subjects, stand well back with the camera to include as much of the subject as desired, but of course the Kodaflectors must not show in the finder.

A medium-colored or light background will give the best results, and it is advisable that it be not more than two feet from the subject.

The exposures recommended in the tables on page 30 are generally satisfactory for flesh tones and light-colored clothing. For dark objects and dark clothing, use at least the next larger diaphragm opening for the given distances from lamps to subject.

Where two or more lamps are given in the tables on page 30, it is understood that the reflectors should be aimed so that the light from all of the reflectors is directed on the same area.

The Photoflood Lamps should be lighted *only while the camera is running*, to prolong their usefulness.

Caution: These lamps will become quite hot, therefore, they should not be allowed to come in contact with the fabric of any lamp shade.

Ciné-Kodak Kodachrome Film

Ciné-Kodak Kodachrome Film reproduces all colors, being based on the three-color principle. The color is in the film itself. This film can be used in the Ciné-Kodak, Model E, and with any 16 mm. projector. It requires no filters or special attachments.

For further details refer to the booklet: "How to Make Home Movies in Full Color with Ciné-Kodak Kodachrome Safety Color Film."

General Information

If the film jams in the camera, it is probably due to one of the following causes:

1. Improper threading of the leader. The teeth on the sprocket were not meshed with the perforations when it was threaded. The leader was not pushed all the way into the gate, see page 8. Be sure that the upper and lower loops of the leader are the same size as shown in Fig. 9, page 12.
2. Failure of the film to wind up. This is caused either by one of the spool flanges being bent; or failure on the part of the operator to insert the end of the leader in the slot in the core of the take-up spool.

If the film breaks or jams you have not wasted the entire length of film. In a subdued light, *not* in direct sunlight, open the camera and take out the film on the take-up spool and that which is tangled up in the camera. Re-thread the camera and run the motor for a few seconds to see that the film is threaded properly. Close the camera and run the motor for about ten seconds. You can now use the rest of the film on the supply spool, because it was not light-struck, since the film that you have just run through acted as a protection for it.

Care of the Lens

Be careful, when taking pictures near waterfalls, in the rain or where waves are splashing, not to get a drop of water on the lens. Water on the lens will cause a blurred picture.

The lens of the Ciné-Kodak should be cleaned whenever necessary. A dirty lens causes cloudy pictures which lack brilliancy on the screen. If there is any dust or dirt on the front of the lens it should be cleaned before any more film is used. It is especially important to clean the lens immediately upon landing, after making an ocean voyage; also when using the Ciné-Kodak at the seashore.

To clean the lens, take a wooden tooth-pick or match around the end of which you have wound a small piece of soft linen or cotton cloth, free from lint. Rub the front of the lens gently, taking care that you do not scratch it by too much pressure. If necessary to use moisture, breathe on the lens or use Kodak Lens Cleaner. The rear element of the lens requires less frequent cleaning as the shutter remains closed when it is not in use, thus preventing dust and dirt getting on the lens. To reach the rear element of the lens, unscrew the lens barrel by turning the rear knurled ring to the left or counter-clockwise, and remove the lens. When replacing the lens, turn the lens barrel to the right, firmly, to fasten it securely to the camera.

Care of the Gate

The track of the gate which guides the film as it passes the lens must be occasionally cleaned and polished. Special attention should be given to keep the gate clean when using Kodachrome Film. If the motor ceases to operate before it has run down, there are probably small pieces of emulsion or some dirt sticking to the track of the gate. The gate should be cleaned as follows:

To remove the gate, first press the exposure lever 16, Fig. 11, page 15, *all the way down* and let the motor run down. Then make sure that the pull-down claw 20, Fig. 14, is withdrawn from the slot in the gate; if it is not withdrawn when the motor stops, turn the sprocket a trifle with the fingers. Take hold of the handle of the gate 12, Fig. 14, and lift up to re-

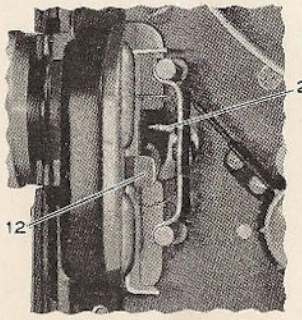


Fig. 14

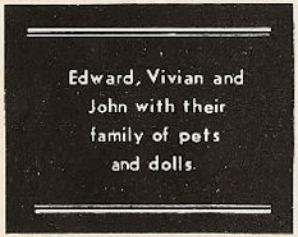
move it. Take care that the two springs which hold the rear part of the gate against the film are not put out of adjustment. Carefully clean and polish the track with a slightly moistened cloth. Do not scrape the track of the gate with a metallic object. The gate must be *clean*. Even particles of emulsion adhering to the track may interfere with the operation of the camera.

When replacing the gate make sure that the projection on the bottom fits into the slot near the pull-down claw so that the gate will snap into position. Before replacing the gate, it must be *dry*.

Caution: When removing or replacing the gate be careful not to bend it.

Titles

You will probably want titles describing the different scenes in your films when you project them. We can make the titles for you. Simply write out the titles you wish to insert in your film and send the list to us. We will send you film with the titles printed on it, which you can then splice into your film in the proper places. (See splicing directions accompanying the Splicer.)



If titles are to be used with black-and-white films, specify in your order if the films are *originals* or *duplicates*.

When ordering titles for use with Kodachrome Film, be sure to mention it in your order, as titles are supplied with a base of standard tint that will harmonize with the average Kodachrome scene, at no additional charge.

Ciné-Kodak Titles (card or scroll) are obtainable in the United States and Canada, at Rochester, Chicago, San Francisco, and Toronto, only.

Card Titles: Card Titles are limited to approximately 35 words. These titles are made at the rate of three cents a word with a minimum of twenty-five cents per title. The minimum charge for an order is $1.00.

A parallel border (see illustration on page 36) is placed above and below the title.

Card and Scroll Titles may be made with or without borders; and they may be made with plain black or mottled backgrounds, for the same prices.

Scroll Titles: The Scroll Title is ideally suited for those longer explanatory titles so often needed at the beginning of a reel. The wording moves slowly and evenly upward on the screen. At the start a slight pause is allowed for the first line—one second for each word—for your spectators to read the start of the title. It then moves slowly upward, until the end of the title is reached.

A Scroll Title may have as many words as you wish. Scroll Titles with more than 33 words are made at the rate of three cents a word. The minimum charge for a Scroll Title is $1.00.

Making Titles with the Ciné-Kodak

If you wish to make your own titles for your Ciné-Kodak pictures, the use of the Ciné-Kodak Titler is recommended. The Titler is a very simple and efficient device. It permits the use of small title cards, close to the Ciné-Kodak. Ordinary typewriter type makes splendid movie titles. Illustrations cut from magazines can be used for backgrounds; your subjects may autograph their own title cards.

Duplicates

While in photography "an original is always better than a duplicate," Ciné-Kodak duplicates are indistinguishable in quality from originals. You may have as many duplicates made of your film as you wish.

If you want duplicates of any film which you make, send it to us as promptly as possible, and before the original has had a chance to become damaged from any cause. The best way to order duplicates is to send the original film to us together with your order for them immediately after you have projected it the first time. Kodachrome Film cannot be duplicated in color, although satisfactory black-and-white duplicates of it can be supplied.

Prices for duplicates: 77 to 100 feet, $5.00; 100 feet or more, $.05 per foot. Orders for less than 77 feet, $.06½ per foot; minimum charge, $3.25.

Duplicates are obtainable in the United States and Canada, at Rochester, Chicago, San Francisco and Toronto, only.

Copies of "Still" Pictures

We can make copies of any pictures, drawings, maps and similar subjects, provided they are not copyrighted, on amateur standard (16 mm.) film. Length of film required for each picture is four feet, enough to run ten seconds; an additional charge will be made for greater lengths. Any picture from Vest Pocket Kodak size (1⅝ x 2½ inches) to and including 11 x 14 inches can be copied. The price of a black-and-white copy is 50 cents, minimum order $1.00.

Copies are obtainable in the United States at Rochester only.

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Kodak Cinegraphs make excellent additions to the home movie programs.

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