

How to
use the

— ENSIGN —
SIMPLEX POCKETTE

16 $\frac{3}{4}$ CINE CAMERA

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Foreword.

This is more than an instruction book. It is an attempt to give, as simply as possible, not only details of the working of the Ensign-Simplex Pockette 16 m/m Camera, but also a brief guide to the elements of amateur cinematography.

The object is to help the owner of the Ensign-Simplex Pockette to obtain the best results from his camera with as little waste of time and money as possible.

It is worthy of careful study.

ENSIGN, Limited.

Donner
Hilde

How to use the **ENSIGN-SIMPLEX POCKETTE** 16mm. Ciné Camera

Loading the Ensign-Simplex Pockette Camera.

Wind motor fully by means of the permanently attached ratchet key A. Fig. 1. This may be accomplished either by a half turning action or by holding the key and rocking it backwards and forwards.

Press the door lock release button B. Fig. 1, and open the door in the back of the camera. The compartment is constructed to hold the Ensign-Simplex Pockette light tight metal charger containing 50 feet of Kodak 16 mm. safety film. Chargers are loaded with either Panchromatic or Super-sensitive film, and may be instantly interchanged in the camera.

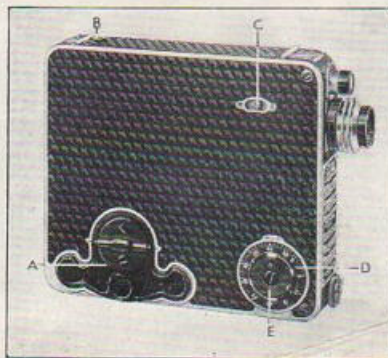


Fig. 1.

Remove the film charger from its carton and metal container, *see that a film perforation fills each of the two square apertures, G. Fig. 2*, gently push the charger into the compartment as far as it will go. This can only be done with the take-up projecting disc on the right-hand side of the charger, H. Fig. 3, where it engages with the camera mechanism. Snap the door closed and push the release trigger C. Fig. 1 several times to "S." This will ensure engagement of the film perforations with the claw.

Film Footage Indicator Setting.

The outer dial D. Fig. 1 should be rotated clockwise and set at 50 when a new charger is inserted. The indicator is of the subtracting type, showing at a glance the amount of unexposed film left in the charger.

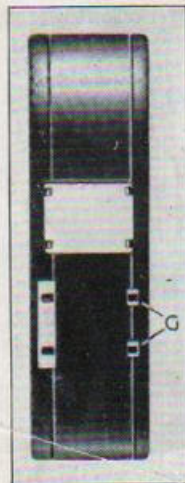


Fig. 2.



Fig. 3.

Delayed Automatic Stopping Device.

To expose a pre-determined footage, set the white line on the inner dial E. Fig. 1 to the required number of feet AHEAD of the figure indicated on the outer dial. For example, should the outer dial register 30 feet and it is desired to make an exposure taking 5 feet of film, set the white line on the inner dial to 25 feet and pull the release trigger right back to "M." When the 5 feet have been exposed the camera will automatically stop. If continuous exposure is desired regardless of footage, the white line on the inner dial should be set at "O."

Note :—The "automatic stop" feature only comes into operation when the release trigger is pulled right back to the continuous running position and is entirely inoperative when releasing in the usual manner.

Release Trigger.

There are three operating positions for the release trigger.

1.—FOR ORDINARY FILMING. Draw the trigger back towards "M" until the mechanism starts and hold while filming. Immediately on release the trigger will return to the centre "stop" position.

2.—FOR CONTINUOUS RUNNING OR AUTOMATIC DELAYED STOP. Draw trigger right back to "M" as far as it will go, remove the finger and the mechanism will continue to run until stopped by returning the trigger to the centre position or if automatically stopped (see above).

3.—SINGLE PICTURE EXPOSURES. When the trigger is moved forward to "S" a single picture only is exposed, for use in animating dolls, toy animals, etc., and making cartoons.



Fig. 4.

Speed Regulator.

A speed regulator is provided F. Fig. 4 to change the camera speed from 16 pictures per second (normal speed) to 12 pictures per second. This slower speed allows an increase in exposure under extremely adverse lighting conditions and should only be used when the maximum aperture of the lens is inadequate. Since the camera speed is reduced 25%, the lens exposure is increased 25% and allows the camera to be used under lighting conditions that would ordinarily give serious under-exposure. When exposing at 12 pictures per second, remember that normal action will be speeded up on projection and wherever possible subjects should be cautioned to move slowly and deliberately to counteract the slower camera speed.

Rewinding the Motor.

Two complete windings are necessary to run through a full 50 foot charger, but it is as well to form the habit of turning the winding key a few turns after each exposure. Should it be necessary to run off the entire 50 feet of film on one continuous shot, the motor may be rewound while the mechanism is running. In this case it is essential that the camera be mounted on a tripod to keep it steady.

Setting the Lens.

It is vitally important to getting clear, brilliant pictures that the lens be set so as to give correct exposure and sharp focus to each scene. Therefore we shall devote sufficient space to the lens to explain its setting clearly. It will be well worth while reading the following paragraphs with special care.

Diaphragm Setting.

The term $F/$ describes the relative area of the lens aperture through which light may pass to record an image upon the film. On examining the lens, you will notice that one ring bears the figures $F/2.9$ or 3.5 , 4 , 5.6 , 8 , 11 and 16 with an index mark engraved upon the mount. Turn the number bearing ring until $F/2.9$ or $F/3.5$ falls opposite the index mark. As this is done, it will be noticed that the metal leaves of an iris diaphragm within the lens open until, when the lens is set at $F/2.9$ or $F/3.5$ they are expanded to the maximum. When the light on the subject to be photographed is weak, this is the stop to use, as the iris opening admits as much light as possible through the lens to the film.

Now turn the ring bearing the stop numbers in the opposite direction, and watch the iris diaphragm close down until, at F/16, only a small opening remains. This is the lens stop to use when the light is exceptionally strong.

As you turn back from F/16 to F/3.5 or F/2.9, remember that each stop gives approximately twice the exposure (admits twice as much light) as the preceding stop. F/11 gives twice the exposure of F/16, F/8 gives twice the exposure of F/11, etc. An exception is that F/3.5 is intermediate between F/2.9 and F/4 and is approximately 50% faster than F/4.

Exposure Guide.

Approximate lens settings for normal light conditions with Panchromatic film may be determined from the exposure guide on front of camera. With Super-sensitive film use next smaller-lens stop, i.e. next higher number on scale. For more detailed and special light conditions consult Exposure Chart contained in this booklet.

The Use of Colour Filters.

As their name implies, the function of colour filters is to filter out the undesirable excess rays of light before they reach the photographic emulsion. Since the blue and violet rays are the offending ones in the usual run of scenes, it is found helpful to interpose between the subject and the emulsion a material which is transparent to all the other colour rays and yet lets pass through only a limited portion of the violet and blue rays.

Since a filter absorbs part of the light that concurs to form an image on the film, the exposure must be increased by opening up the lens diaphragm. Thus if the exposure

table suggests that an exposure of F/11 would be correct for a certain subject, we would have to work at F/8 when using a 2X filter and at F/5.6 when using a 4X filter.

To attach the filter holder screw into front of lens. In the case of the f/2.9 lens remove the lens hood and screw the holder into its place. Then replace the lens hood by screwing it in turn into the filter holder.

Focussing with F/3.5 Model.

The Ensar 1 inch F/3.5 lens is of *universal focus*. The term *universal focus* is synonymous with *fixed focus*, which means that no adjustment is necessary to photograph subjects at varying distances from the camera, but which limits the shortest distance at which sharply focussed pictures may be taken to about 9 feet when the lens is set to work at its largest aperture, F/3.5. The smaller the aperture, the nearer the subject can be to the camera and still be in sharp focus. It will be seen that the aperture at which the lens is set cannot be determined arbitrarily, but that it is dictated by the prevailing light conditions.

In order to get sharply defined "close-ups" (portraits from 2 ft. 6 ins. to 3 ft. 6 ins. from the camera) with the fixed focus Ensar F/3.5 lens, a supplementary lens known as a Portrait Attachment is necessary, and may be screwed into the front cell.

Focussing with F/2.9 Model.

The Dallmeyer F/2.9 one-inch lens, is supplied in a focussing mount, and it is only necessary to measure the distance between the object to be photographed and the camera, then set the ring, bearing footage numbers so that the correct number of feet comes opposite the index mark engraved on the mount.

EXPOSURE GUIDE FOR ENSIGN-SIMPLEX POCKETTE CAMERA

This guide is for Panchromatic film : for Super-sensitive use next smaller stop (higher number).

SUBJECT	TIME	DIAPHRAGM SETTING		
		Bright—No Clouds over Sun	Light Clouds over Sun	Cloudy Dull
A. Sea, Sky, Beach and Snow Scenes, Distant Landscapes, Mountains.	Apr.-Sept.	f/16	f/11	f/8
	Oct.-March	f/11	f/8	f/5.6
B. Close-ups* of Group A, Open Landscapes, Games, etc., with no heavy shade.	Apr.-Sept.	f/11	f/8	f/5.6
	Oct.-March	f/8	f/5.6	f/4
C. Close-ups* of Group B Street Scenes. Groups where houses or trees obstruct part of the light from the sky.	Apr.-Sept.	f/8	f/5.6	f/4
	Oct.-March	f/5.6	f/4	f/2.9 to f/3.5
D. Close-ups* of Group C Scenes on shady side of streets. Boating Scenes out of direct sunlight.	Apr.-Sept.	f/5.6	f/4	f/2.9 to f/3.5
	Oct.-March	f/4	f/2.9 to f/3.5	f/2.9
E. Close-ups* of Group D Scenes on heavily shaded streets. Scenes on heavily shaded porches.	Apr.-Sept.	f/4	f/2.9 to f/3.5	f/2.9
	Oct.-March	f/2.9 to f/3.5	f/2.9	f/2.9 12 speed
F. Brilliant Interior Subject near window. (See note.)	Apr.-Sept.	f/2.9 12 speed	—	—

Above figures are from two hours after sunrise to two hours before sunset. Earlier or later use larger diaphragm opening.

* "Close-up" means picture taken from 3 to 6 ft. from lens.

For using 12 picture speed see "speed regulator."

TROPICAL EXPOSURES—If scenes contain trees and landscape resembling temperate zone, follow guide using April to September exposure. If subjects are deserts or lack predominance of heavy shadows use next smaller diaphragm than one specified in chart. Distant objects in bright tropical sunlight require diaphragm opening f.16. Filters will improve tropical pictures or those taken at the seashore or in the snow.

NOTE: Special directions for taking interiors at night are furnished with Super-sensitive film.



Fig. 5.

Interchanging Lenses.

Two special Dallmeyer Telephoto lenses are available for use with the Ensign-Simplex Pockette Camera and are interchangeable with either the Ensar F/3.5 or Dallmeyer F/2.9 lens. They are a 2-inch focus F/2.9 giving two linear magnifications, and a 3-inch focus F/3.5 giving three linear magnifications. The lenses are attached by means of a screw thread in the body of the camera into which they are easily screwed Fig. 5. It is essential that lenses should be screwed right "home" otherwise "out of focus" pictures will result.

In focussing Telephoto lenses the same procedure applies as that described for the F/2.9 lens on page 9.

How to Hold the Camera.

The most important consideration in holding the camera to take a movie scene is to *hold it steadily*. Whatever holding method yields the greatest camera steadiness is



Fig. 6.

the brilliant reflector waist-high type. When using the Direct Vision view finder, hold the camera as shown Fig. 6, Top. Sight through the finder with the left eye. This will permit holding the camera firmly against the nose or forehead for greater steadiness. Keep the elbows as close as possible to the body, this helps to steady the camera. Your hands can grasp the camera in any way you find most conducive to steadiness, care being taken not to cover the lens with the fingers.

The use of the Direct Vision view finder is recommended for most scenes. It not only provides by far the steadier operating position, but places the camera at eye level, the logical viewpoint for natural pictures.

the one for you to use. The holding methods illustrated are usually preferred. A collapsible wire frame Direct Vision view finder is provided in addition to



When working within a few feet of your subject, allow for the fact that the view finder is slightly to one side of the lens. At greater distances this offsetting can be ignored.

The waist-level view finder should be considered as the secondary view finder, for special rather than general use. It is convenient when you want pictures from a low viewpoint, as would be the case in filming small children, or taller subjects which you wish to portray as looming up large against their surroundings. Rest the camera on the palm of the left hand, with the forearm and the back of the camera against the body, as shown in Fig. 6, Bottom. The right forearm, too, should be steadied against the body, and the fingers not used for the starting trigger can help hold the camera. Avoid deep breathing while the camera is running.

To obtain the correct angle of view when using Telephoto lenses, special masks corresponding to the 2- or 3-inch lenses are provided to slip over the Direct Vision view finder. The waist-level finder is not suitable for use with Telephoto lenses.

Tripod Fixing.

The camera is threaded at the base so that it may be attached to a tripod for Telephoto and special work. As it is flat on the bottom the camera may also be placed on any flat surface which is convenient to the scene to be filmed.

Length of Scenes.

A common tendency, when first starting to use a moving picture camera, is to make the scenes too short—that is, to fail to keep the camera operating long enough on each subject. As a result the scenes, when projected, flash on

and off the screen too quickly for the eyes of the audience to follow. Three feet can be considered an absolute *minimum* footage for such scenes as close-ups of people, scenic, or any action which is continuous but not changing in nature.

If action is changing, more than three feet of film may be required to tell the story. Ordinarily the camera should be started just before the action begins and stopped just after the action ends. The automatic stop as already described on page 5 is invaluable to the beginner in gauging the length of scenes.

In animation work with the single frame exposure device, be sure to make the scenes long enough. Either watch the footage dial or count the frames exposed. There are 40 frames per foot, so a scene of minimum length, three feet, would require 120 exposures.

What to "Shoot."

Plan your shots to take full advantage of the possibilities of motion pictures. Probably your first pictures will be of family and friends. Avoid posed pictures—leave these for the still camera. You will very likely obtain your best scenes when your subjects are not conscious of being filmed, or when you can give them something to do which will induce natural actions and expressions and help them forget the camera.

Plan your shots wherever possible to tell a little story of some kind, whether it be a simple account of a day's events at home or a record of a holiday trip. Scenes need not necessarily be exposed in the order in which you wish them to appear when projected, as they can be cut and spliced, after being developed, into any sequence.

Panorama Pictures.

Panorama views (made by pivoting the camera in a horizontal plane while it is in operation) often provide very pleasing additions to moving picture films. But if panoramas are not properly made they are anything but satisfactory. There are several precautions to be observed if "pans" are to be successful.

Firstly, pivot slowly on every "pan." When you think you are going slowly enough, reduce your pivoting speed by half and you'll be better satisfied with the results.

Secondly, "pan" evenly and steadily. A jerky "pan" is hard on the eyes when projected and, furthermore, causes disappointment at not being able to see the subjects clearly for a sufficient length of time.

Thirdly, do not attempt to panoram when an ordinary "shot" will tell the story or get the desired scene. An abundance of "pans" makes a film tiresome, so save them for the proper occasion.

Often the following method will improve your "pans." Swing slowly past objects of general interest until your view finder frames a picture of especial appeal. Hold the camera steadily on that scene for about 7 seconds (3 feet), then swing slowly on to the next scene of importance and stop again. This handling of the problem will give your audience ample time to enjoy each outstanding point of the scene and still retain that value of the "pan"—the showing of elements in their relation to each other. Where a choice is possible, "pan" from left to right, because movement in this direction is easier for the eye to follow.

Filming Moving Objects.

In panoraming to follow a moving object the problem becomes different. Here the camera should be swung to keep the subject constantly as nearly as possible in the centre, or, better, just behind the centre of the field of view. The background, which may be blurred in the process, is not important.

If you wish to show the subject moving into, across, and out of the field of view, select a viewpoint from which the subject will not move directly across in front of the camera (at a right angle). Have the subject moving toward or away from the camera at an oblique angle. This will help avoid blurring. If the action *must* take place at right angles to the camera, do not attempt a close shot, but get at least thirty feet away from the line of action before starting the camera, or farther in cases of very fast action.

Lighting.

Not only is light essential in photographic work, but it is a tool which permits artistic modelling of the picture. Depending upon how the lighting is handled, the subject may be portrayed in almost stereoscopic depth and relief, or, at the other extreme, in a flat, unnatural manner. Since the subject of light is so important and so rich in its possibilities, it is recommended that the amateur read the chapters on this subject in one or more books on cinematography.

Close-ups (motion picture portraits) are usually better if taken in a subdued light, as they are free from the dark shadows found in similar scenes taken in bright sunlight. A shady spot, open to the sky, is a good location for making close-ups.

Full front lighting (sun directly behind the camera) tends to give a flat picture, lacking in depth. Side lighting or oblique lighting is better.

Pictures taken with the sun directly overhead (at or near noon in summer) usually lack in pictorial quality as compared with those taken when the sun's rays slant down upon the subject, throwing longer shadows.

Cultivate the habit of studying the effect of light upon various subjects. You will find that while a subject may be quite lacking in pictorial possibilities in one light, it may offer a wonderful effect when the sun strikes it from a different angle.

Unloading the Camera.

When all the film has been exposed, the camera will stop, as the film end is attached to the feed spool within charger, also, circular perforations will show in the gate aperture of the charger.

Withdraw the film charger, put it in the metal container and cardboard carton in which it came, and send it to the nearest processing station (for addresses, see the booklet enclosed with the film). Be sure to write your name and address clearly on the carton, as the laboratory has no other means of returning your film to you. Your film will be returned ready to project. There are no processing charges to pay—they are included in the original price of the film.

When removing a partially used film which is to be replaced and finished later, write the footage indicator reading on the exposed film frame so that, when reloading you can set the footage dial correctly.

Cleaning Lens and View Finder.

The lens must always be kept scrupulously clean. A film of dirt, oil, or finger marks on the lens will prevent your getting clear, brilliant, sharp pictures. *Never take the lens apart.* It is sufficient to clean the glass surfaces which are exposed at the front and rear of the lens. Unscrew the lens from the camera, and clean the above-mentioned surfaces, using the Ensign Lens Cleaning Outfit, or Ensign Lens Cleaning Tissue. Use no other materials, as they may damage the highly polished glass surfaces.

After cleaning, be sure that the lens is screwed firmly into the camera, and that none of the lens elements were partially unscrewed in the process of removing the lens.

Colour filters should be kept as clean as lenses. Use the same cleaning materials.

Dirt or finger marks on the view finder objectives impair clear vision, and so should be removed. Use the same cleaning material as for lenses.

Cleaning Aperture Plate.

The aperture plate (accessible through the film chamber) should be inspected after every film has been exposed, and cleaned if any dirt or film emulsion has collected upon it. Its smooth, highly polished surface must be maintained. Never use a hard instrument for removing dirt here. Loose dirt may be removed with the brush supplied with the camera. Foreign matter which sticks to the plate may be removed with the opposite end of the brush or in extreme cases with a swab of lintless cloth or lens cleaning tissue placed on the rubber end of a pencil and moistened slightly with alcohol. Be especially careful to keep the edges of the aperture free from dust

and dirt, otherwise your pictures will have "fuzzy" edges or the film may even become scratched. Camera should be kept in a carrying case to prevent dust accumulating in the lens and mechanism.

Brush out the charger compartment occasionally, to keep it free from dust.

Camera Care.

The Ensign-Simplex Pockette Camera is a precision built instrument. While it is strong and sturdy it requires ordinary care for best results. It is equipped with self-lubricating bearings and, therefore, does not require oiling for a considerable period.