Canon

CINEZOOM 512

INSTRUCTION

English Edition

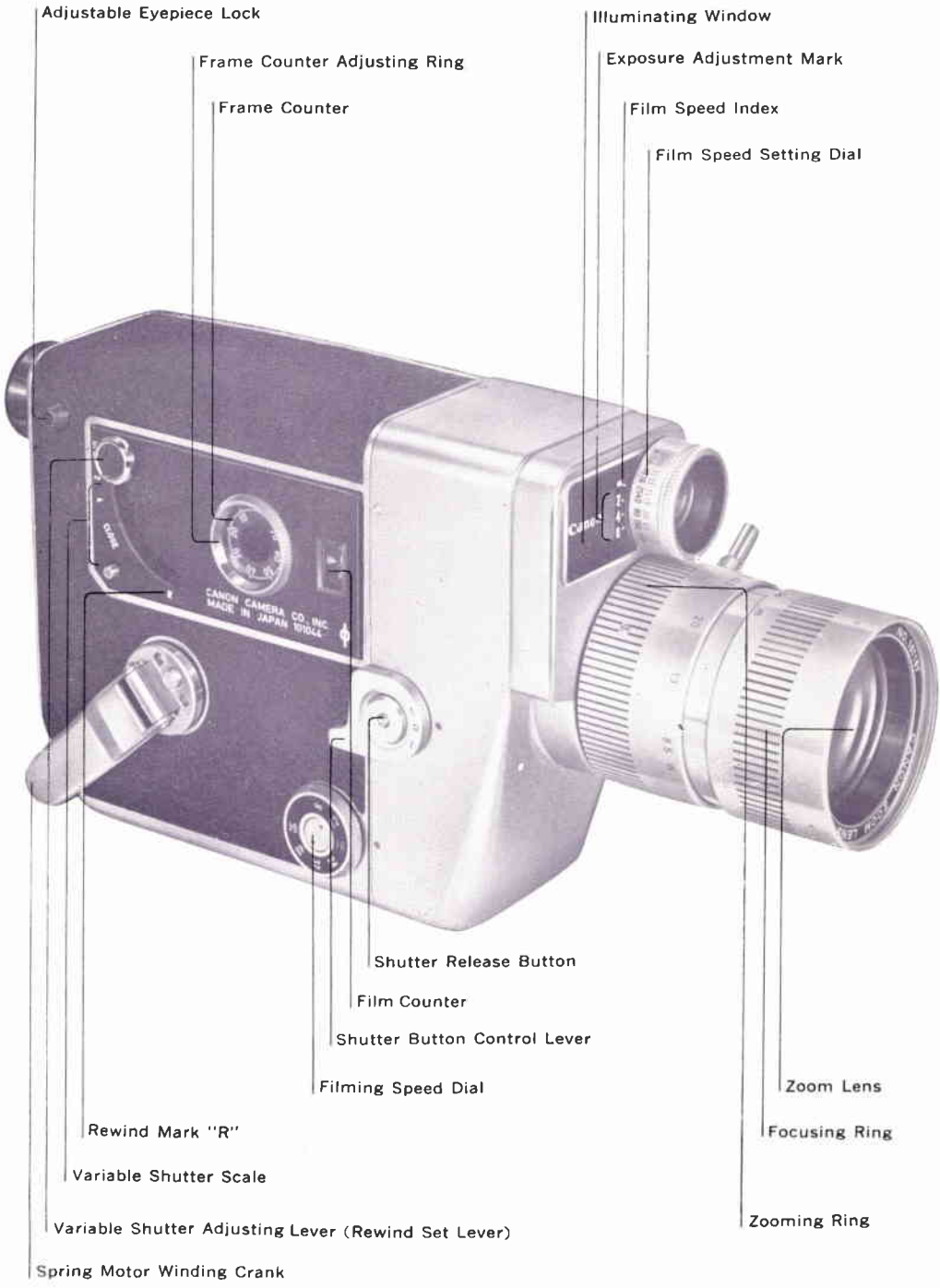
CANON CINE ZOOM

512

You have selected a fine camera, and we are proud we can offer it to you. The Canon Cine Zoom 512 is another addition to the family of Canon cameras which have contributed greatly to Japan's spectacular advance in the field of photography. At the same time, Canon is always striving to add to your "joy of living".

Canon products, reflecting the latest designs and exacting demands of the modern public, are the outcome of a unique and original manufacturing process which has been developed over many years of experience.

We have no doubt that the superior quality of the Canon products—not to mention their reasonable prices—will give users the fullest satisfaction. It is our sincere hope that your Canon will make family and friendly get-togethers, recreational outings, etc., much more meaningful and memorable.


Adjustable Eyepiece Lock
Frame Counter Adjusting Ring
Frame Counter
Illuminating Window
Exposure Adjustment Mark
Film Speed Index
Film Speed Setting Dial
CANON CAMERA CO., INC.
MADE IN JAPAN
Shutter Release Button
Film Counter
Shutter Button Control Lever
Filming Speed Dial
Rewind Mark "R"
Variable Shutter Scale
Variable Shutter Adjusting Lever (Rewind Set Lever)
Spring Motor Winding Crank
Zoom Lens
Focusing Ring
Zooming Ring

CANON CINE ZOOM 512 SPECIFICATIONS

Lens: Canon zoom lens 8.5 to 42.5mm, F1.2. 17-element in 12 components (including 6 new type glass). Magnification ratio of 5. Spectra Coating of amber and magenta. Inner diameter of 48mm, outer diameter of 50mm.

Exposure meter: Built-in matching needle type super high sensitive CdS meter. Operate aperture inside the finder. Matching the needle to the exposure meter needle will produce the proper exposure. Warning mark also included.

Range of exposure meter: Can be coupled to any range for all films between ASA 10~320, and within the range of F1.2, 8 frames/sec. to F 22, 64 frames/sec.

Exposure meter battery: Use one 1.3V mercury battery (National M-P, Toshiba TH-MP, Mallory RM-1, etc.)

Filming speed: 8, 12, 16, 24, 32, 48, 64 frames per second and single frame.

Spring motor: Cranking to full charge will enable film to run for 4m (13 ft.). Only two full windings of the powerful spring motor will enable one side of the film of 7.5m to be completely exposed.

Variable shutter control: Variable shutter control has been built in, which enables the camera to obtain consecutively an angle from 165° to 0°. There is a scale of four stages, from OPEN, 2, 4 and CLOSE, with an angle of 165°, 82.5°, 41.25°, and 0°, respectively. By adjusting the exposure time, it is possible to obtain fade-ins, fade-outs and overlaps.

Automatic rewinding mechanism: An automatic rewinding mechanism worked by spring motor. Includes safety lock.

Film counter: When the film is loaded, the counter is automatically reset. Coupled to the film advance.

Frame counter: Frame counter is capable of making zero adjustment. One revolution: 80 frames (1 ft.). Coupled to film counter and able to register single frames.

Viewfinder: Single lens reflex type showing unreversed correct images. Built-in split image rangefinder and meter window. Viewing is always bright. Capable of adjusting visibility.

Safety devices: Equipped with shutter button safety lock, automatic film advance safety device and safety device for mercury battery switch.

Tele Converter: Converter with a telescopic zoom lens of 14~70mm for the Canon Cine Zoom 512.

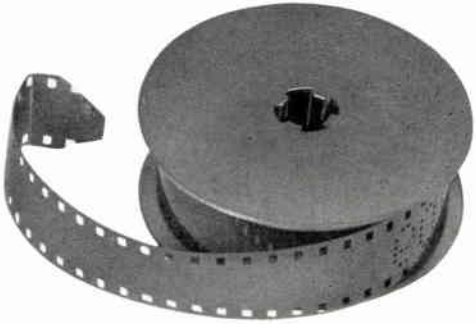
Power grip: Operates electric motor zooming and shutter release with trigger.

Size, Weight: 210 X 114 X 53mm. 1,700gr.

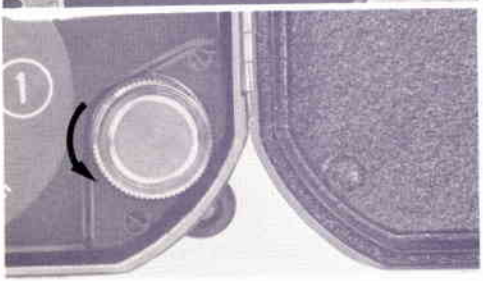
CANON CINE ZOOM 512

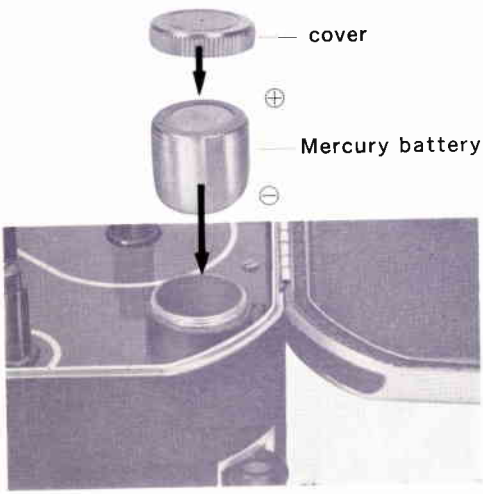
SHOOTING 8MM MOVIES AND FILMS

* The film inside the 8mm cine camera is actually 16mm, or double the width, with the length being 7.5 meters.
  One half of the entire length is exposed during each run. After both sides are exposed and developed, split into two strips and sliced into 8mm width, the film is ready for showing.
* The developing, splitting and splicing of the film are all handled by the Film Company.
  When the exposed film is sent to the film manufacturer, it will be processed and returned to you on a roll which can be inserted into the projector immediately.
* A reversal development converts the 8mm roll, whether black and white or color, into a positive picture film.
  Accordingly, because of its narrow latitude compared with the ordinary film, it is essential that special attention should be paid to exposure.
* One 8mm roll of film, 15 meters in length, has a running time of four minutes. In terms of volume, it is equivalent to a 16mm film which is 30 meters in length.



CANON CINE ZOOM 512





HOW TO LOAD THE MERCURY BATTERY

Before using the camera, take the mercury battery out of the envelope and load it into the camera. If you forget to do this, the meter will not function.
For CdS, mercury batteries M-P made by National and TH-MP made by Toshiba are used, which are equivalent to the Mallory RM-1. Ordinarily the battery lasts for about two years.

* The mercury battery chamber is inside the film compartment.

1

Open the side cover by turning the side cover lock of the camera to the left.

2

To unscrew the mercury battery chamber cover, turn it to the left.

3

Place the center point of contact of the battery face downwards and insert.

- Before insertion, thoroughly wipe the mercury battery.

4

Exert a little pressure on the cover when screwing it in by turning it clockwise.

- The meter will not function properly if the battery is incorrectly inserted.

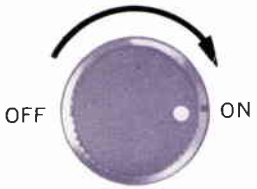
5

Close the side cover.

6

The switch is ON when the white dot of the circuit switch is turned to the opposite side of the orange mark, and the needle inside the finder starts to fluctuate.

REPLACEMENT OF MERCURY BATTERY



When the circuit switch has not been turned to the orange mark position, the circuit is disconnected and the meter is not functioning. When the switch is turned on, the electric current will activate the meter needle. When the camera is in this condition, turn it towards the bright sky. If the needle inside the finder fails to move, it is necessary to replace the mercury battery.

Do not soil with perspiration or fingerprints

Before loading the mercury battery, wipe it thoroughly with a dry cloth. Perspiration and fingerprints can cause corrosion. If an unclean battery is inserted, there is a danger that the connecting part of the camera may be damaged. Exercise the greatest care.

If you do not plan to use the camera for a long time, remove the mercury battery and store it in a dry place.

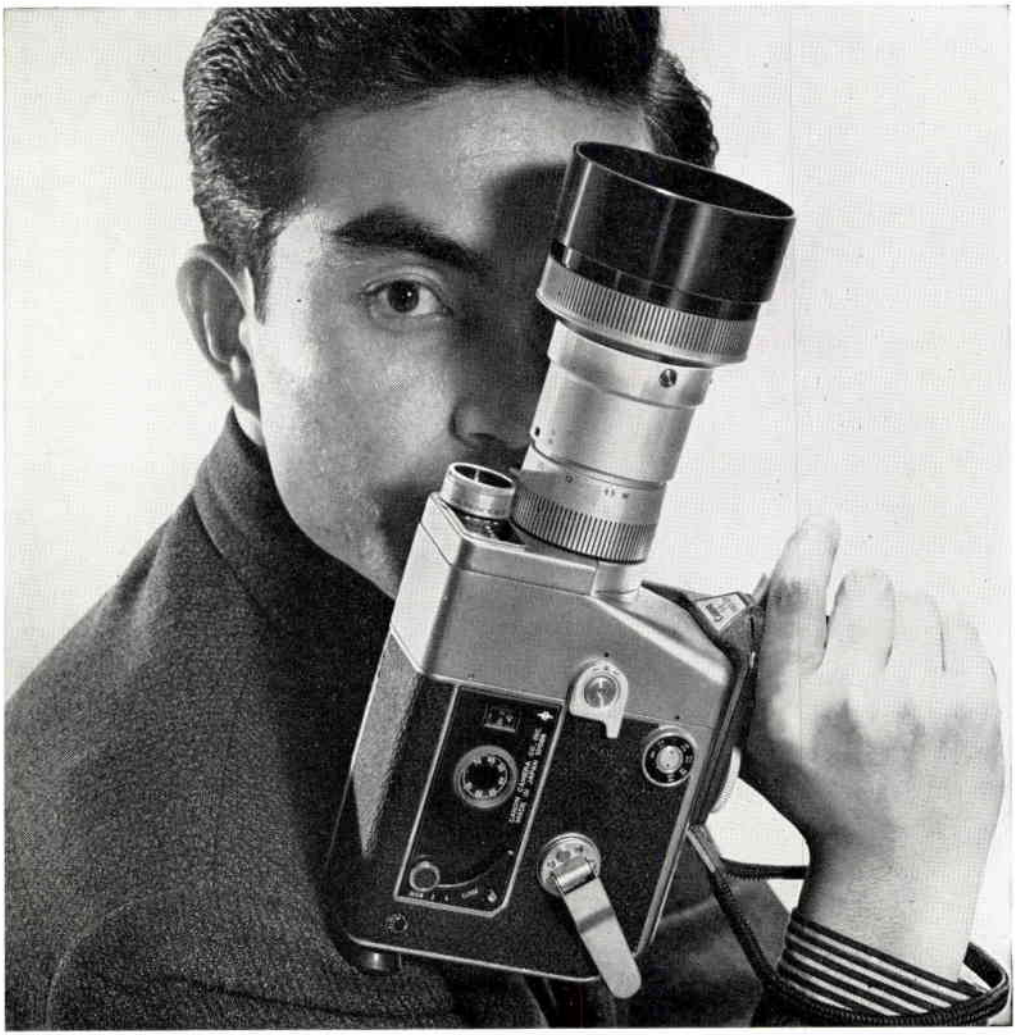
CANON CINE ZOOM

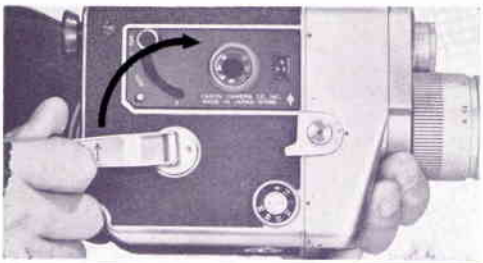
512

HELPFUL FACTS

This camera is classed among the finest 8mm cameras, capable of the highest performance. Equipped with the variable shutter control and rewinding system, it is able to display the highest cinematographic standards attainable with the 16mm cameras.
Thus, the key to achieving these superb results is the knowledge of how to get the most out of each functional part of the camera. Above all, it is necessary to be fully acquainted with your camera.
Before actually taking the pictures, it is important that you should know how to handle the camera and how the various parts of the camera function. Make your own tests. By doing this, you will not only be able to avoid careless failures and mishaps, but achieve the finest results.

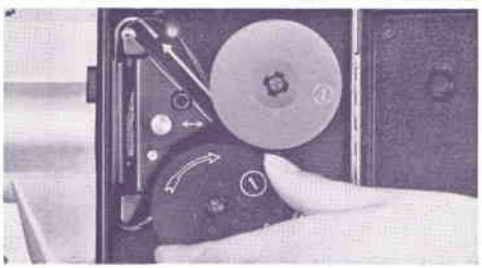
Please read Instruction Manual carefully.





1

Wind the crank. Page 11



2

Load the film. 33

3

Set the film speed. 22

4

Set the filming speed at 16. 12

5

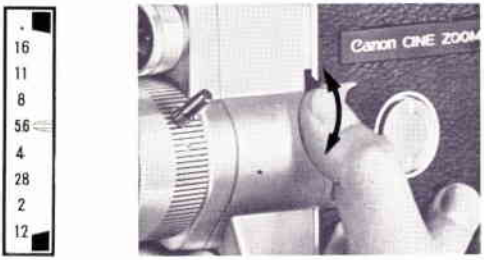
Set the variable shutter adjusting lever to OPEN. 16

6

Look into the finder. **Page 25**

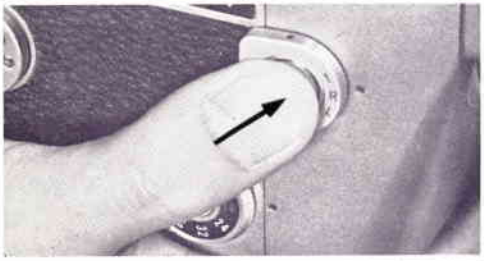
7

Focus correctly, and decide on composition. **27**



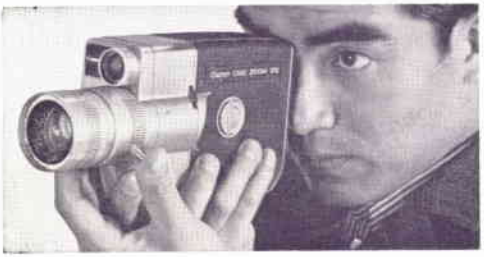
8

Determine the lens aperture. **23**



9

Press the shutter button. **24**



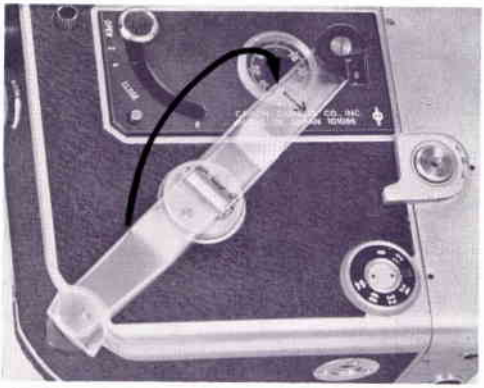
10

Whenever necessary, operate the zoom. **26**

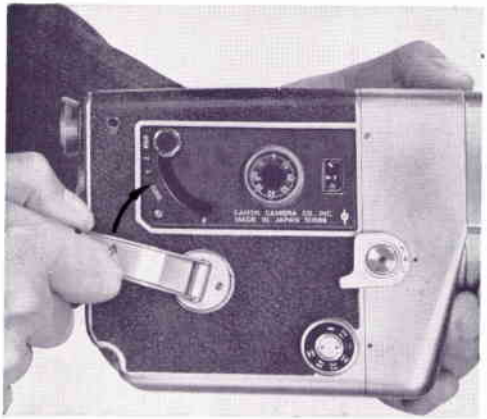
CANON CINE ZOOM

512

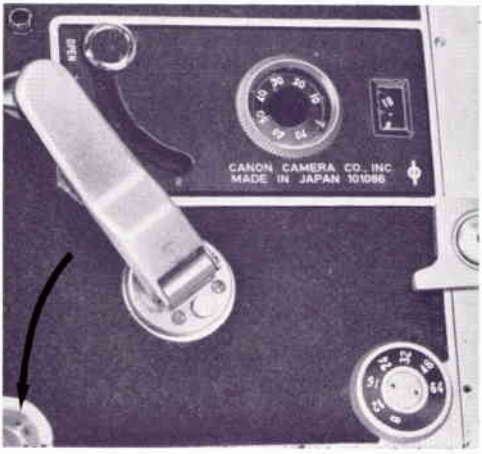
WINDING



Winding crank charges the spring which powers the advance of the film. After pulling out the crank to its winding position, keep winding in the direction of the arrow until it stops.

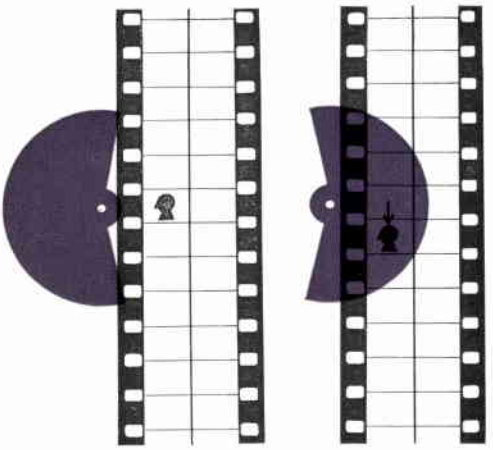


- By one full winding of the powerful spring, it is possible to run the film 4 meters (13 feet). Thus, to entirely expose one side of the film, 7.5 meters long, only two full windings are required.



AFTER USING THE CRANK

When the crank is folded, it can be freely turned either to the left or right. Return to its original position when not in use.



The film stops for exposure.

An advance of the exposed frame takes places.

FILMING SPEED AND SHUTTER

The 8mm shutter is closely connected with the film advance.

The exposure is made from the rotation of the semicircular leaf which has a given angle. When the leaf is rotating, exposure of one frame and film advance are coupled, moving synchronously. In other words, when the open section of the leaf is at the aperture section, the film stops for exposure. The principle of this process is that when the aperture section is blocked by the rotating leaf, an advance of the exposed frame takes place.

The term 16 frames denote that in one second, 16 frames are exposed and advanced, while 32 frames would mean that the speed will be doubled. Hence, the exposure time is determined by the open angle of this leaf and the rotating speed and is regulated by the filming speed.

Frame speed	8	12	16	24	32	48	64
Exposure (sec.)	1/18	1/26	1/35	1/50	1/70	1/100	1/140

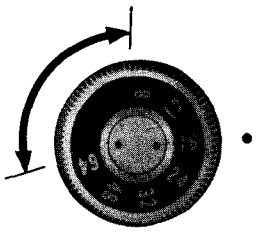
ADJUSTING THE 8mm CAMERA FILM SPEED

Putting aside the 8mm at this point, let us consider the film speed adjustment of the ordinary camera. For a fast moving object, a fast shutter speed is selected. In a dark room, the slow shutter is properly adjusted and set in open position. For an ordinary camera, shutter and diaphragm are freely adjusted together.

However, in the case of the 8mm camera the filming speed cannot be changed at will. The reason is that the standard speed is fixed at 16 frames. Because under normal conditions, the shooting of the film is done on the basis of 16 frames and projected at the speed of 16 frames, change of speed should be made only when you intend to take special types of movies such as trick shots. In other words, the exposure adjustment is not done by changing shutter speed, but is done by adjusting the diaphragm.

EXPOSURE ADJUSTMENT WITH THE VARIABLE SHUTTER CONTROL

Instead of relying only on the diaphragm, the variable shutter control enables the change of exposure to be made with the shutter. As explained earlier, the exposure time is determined by the open angle of the shutter. By changing the degree of this angle, the exposure time is reduced. Although the ordinary 8mm camera has the shutter opening angle fixed at around 160°, in the case of the Canon Cine Zoom 512 the angle may be changed to any of the four stages between 165° to 0°. It is possible, therefore, to freely make exposure adjustments. In addition, fade-in and fade-out may be easily carried out.



ADJUSTING FILMING SPEED

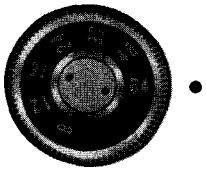
The filming speed dial adjusts the number of film frames advanced during a period of one second, and in the case of the 8mm movies, the standard speed is 16 frames. Turn the dial, and set the red dot to the required filming speed.

- Intermediate speeds on the dial may be used. The change in speed in such a case may be regarded as consecutive.
- The dial cannot be turned between 64 and 8.
- Avoid slipping resulting from high filming speed; in particular, the 64 filming speed.

FILMING SPEED AND PICTURE EFFECTS

The 8mm movie is taken and projected at a standard filming speed of 16 frames. Hence, if speeds other than 16 are used, the effects of the picture will vary when the film is projected.

HIGH FILMING SPEED



When the film is taken at a high filming speed of between 24 to 64, slow motion effects will result during the projection. For example, as 64 frames represent a fourfold increase in the standard speed of frames, this means that the projection will take four times longer. By decreasing the speed of motion, it reduces the blur of rapid movement and is especially helpful in showing any motion analytically. The time of exposure being rapid, it also prevents blurring when panning and can be conveniently utilized to control exposure when taking pictures of the clear sky.

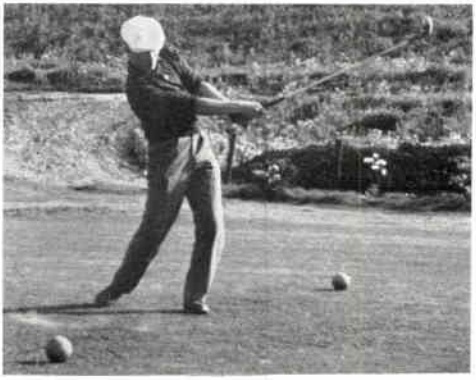
LOW FILMING SPEED

Under 12 frames, the effects are proportionately opposite to high filming speed. By reducing the number of frames, the sense of speed is heightened. Serving to accentuate the motion of the object, it can make movements humorous and far away objects appear to be nearer. In addition, in case it is too dark when the filming speed is 16—and the aperture is fully open—it may be used to compensate the inadequacy of light and under-exposure.

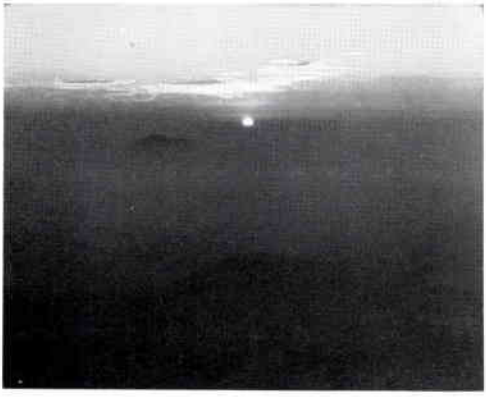
- When it is used to control exposure, refrain from shooting objects that have normal movements.

High filming speed for moving reflections on water.

High filming speed for detailed analysis of a golf shot.



Low filming speed for the setting sun.



Low filming speed to exaggerate the speed of a vehicle at a given moment.

Low filming speed for exposure control.

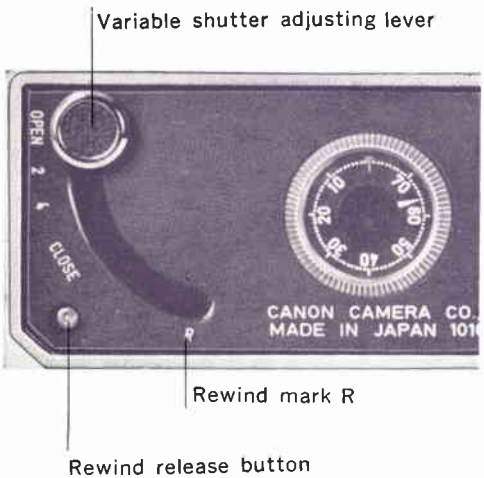
High filming speed for a dynamic shot.

Low filming speed to accelerate the speed of a distant object.

CANON CINE ZOOM

512

ADJUSTMENT OF VARIABLE SHUTTER CONTROL



By sliding the variable shutter adjusting lever, it is possible to change the open angle of the shutter leaves at four stages from OPEN to CLOSE.
By doing so, besides being able to adjust the exposure, operation of the fade-out and fade-in may be executed very effectively.

- Sliding of the lever may be carried out smoothly to adjust the full opening and full closure.
- Each stage of the scale is at a position which halves the open angle, thus the open angle degree of each shutter scale is as follows:

OPEN	2	4	CLOSE
165°	82.5°, 41.25°		0
(Completely opened)			(Completely closed)

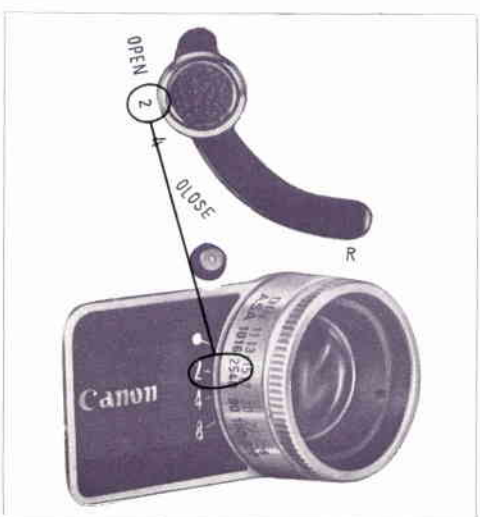
- Although each point of the scale has a click stop, the intermediate points of the scale also changes consecutively.
- By sliding the lever beyond CLOSE, it will stop opposite the rewind release button. The shutter will not function. (see section on fade).

VARIABLE SHUTTER CONTROL AND FILMING SPEED

Changing the variable shutter adjusting lever will relatively affect the filming speed and exposure time as follows:

	8	12	16	24	32	48	64
165°	0 1/18	1/26	1/35	1/50	1/70	1/100	1/140
82.5°	2 1/36	1/52	1/70	1/100	1/140	1/200	1/280
41.25°	4 1/72	1/104	1/140	1/200	1/280	1/400	1/560

Re-adjust to the same dial



ADJUSTMENT OF THE VARIABLE SHUTTER ADJUSTING LEVER AND FILM SENSITIVITY

Setting of the lever will change the exposure according to the dial. As a result, it is necessary to change the setting of the film sensitivity to compensate the exposure factor. To do this, adjust the film sensitivity to the exposure factor mark which is the same as the open angle index being used. By doing this, the meter will function properly. For example, when the shutter opening angle is set at 2, and the speed of the film being used is ASA 25, set the scale of 25 at the 2x index mark.

Prevents a moving object from appearing blurred.

EFFECTIVENESS OF THE VARIABLE SHUTTER CONTROL

Since a fast exposure time may be attained even at the same filming speed, this greatly contributes to the effectiveness of the picture.

1

Since a shutter speed of 1/140 sec. can be attained even with a 16 filming setting, not only can the exposure be adjusted, but it helps to prevent a moving object from appearing blurred as well as blur caused by moving the camera.

2

High filming speed may be used to film a moving object at slow speed, and get a sharp picture.

3

It can be used to great advantage when panning a scene in which the change from light to dark is very pronounced.

During properly exposed panning, by moving the lever, it is possible to take exposed scenes of dark to bright places continuously.

4

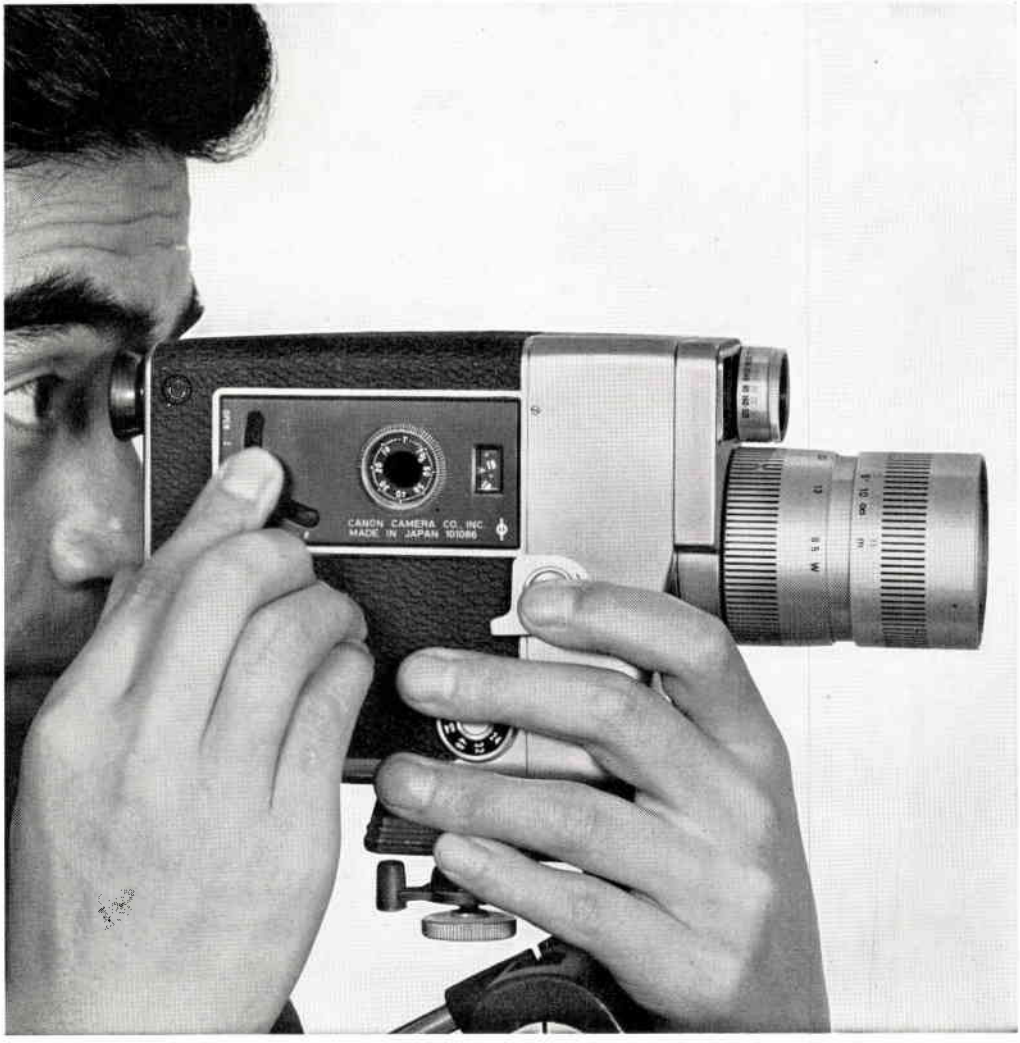
Use of fading technique is possible (refer to page 19).

CANON CINE ZOOM

512

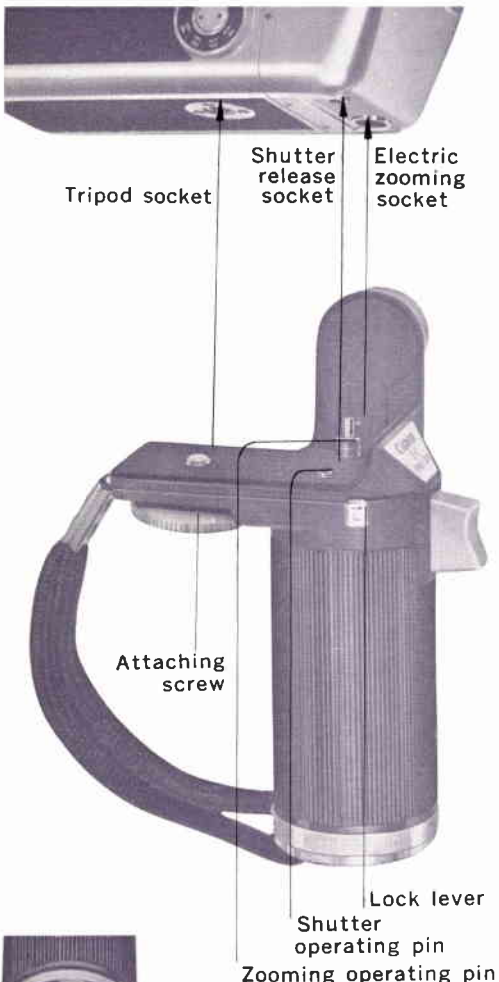
ADJUSTMENT OF VARIABLE SHUTTER CONTROL

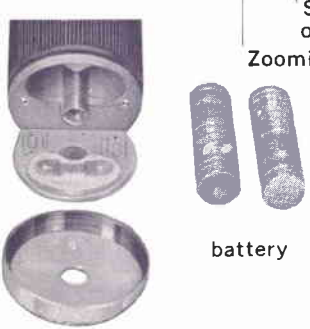
Since the variable shutter adjusting lever can make continuous adjustments from fully open to totally closed, fade-out and fade-in operations can be easily undertaken during the shooting. Moreover, by utilizing the re-winding mechanism it is possible to get the overlap.



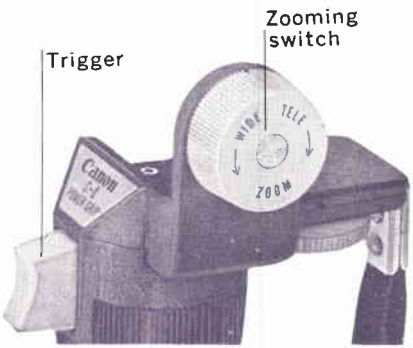
ZOOMING

HOW TO USE THE TRIGGER GRIP





While holding the grip, operate the shutter release and electric zooming. For electric zooming, load two batteries.



ATTACHING ONTO THE CAMERA BODY

1. Turn the lock lever in the direction of the arrow.
2. Fit the 3 contact sections, and tighten with the tripod screw.

HOW TO LOAD THE BATTERY

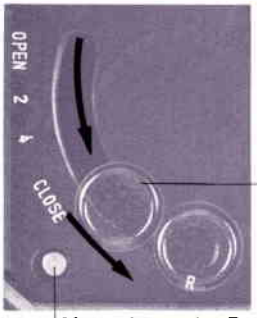
Unscrew the cover at the bottom of the grip, and insert the battery, being careful not to mistake the + and −.

STORAGE AND USE

Hold the grip with the right hand. When the trigger is pulled, the shutter is released and when the zooming switch is turned on, zooming is performed electrically.

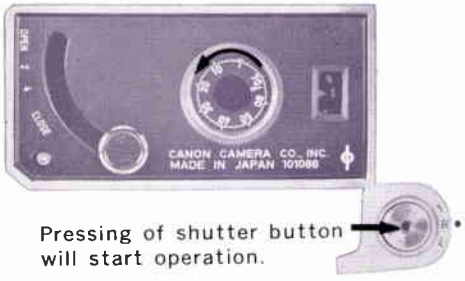
- With a new battery.
- When the camera is not used for about six months, always remove the battery.
- When using the grip, check the electric voltage.
- Operation is possible even when the Tele Converter is attached.
- Zooming time from wide angle to telescopic is about five seconds.
- Since the lock lever is a safety device for shutter and zooming, when the camera is not in use, always turn it in the direction of the arrow.

CANON CINE ZOOM 512

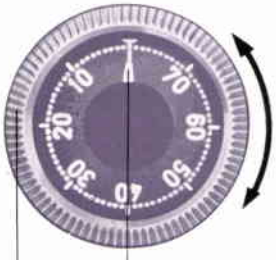


Lever stop position

Move lever to R position while the rewind release button is pressed.



Pressing of shutter button will start operation.



Movable dial

Frame counter adjustinig ring

By turning the movable dial, it can be set to the start position

FILM REWIND MECHANISM AND COUNTER

By operating the spring motor, it is possible to rewind the film and use it for double exposure. The exact amount of rewinding can be ascertained from the coupled film counter and frame counter.

1

When the variable shutter adjusting lever is moved from CLOSE to the red dot mark, the shutter will cease to function.

2

While pushing the rewind release button, set the variable shutter adjusting lever accurately, so it will be at R position.

3

When the shutter button is pressed, the film starts winding in reverse and the film counter and frame counter also rotate in reverse.

CONFIRMING WITH FRAME COUNTER

One rotation of the film counter equals 80 frames (one foot), enabling calculation of even a single frame.

The indication is given by the rotating mark inside the dial. For regular rotation it is reverse calculation, for reverse rotation, it is regular calculation.

Thus, before shooting, set it to zero and fade-out. Read the frame number, and rewind to 0 position.

By fading-in, the overlap can be made precisely and completely.

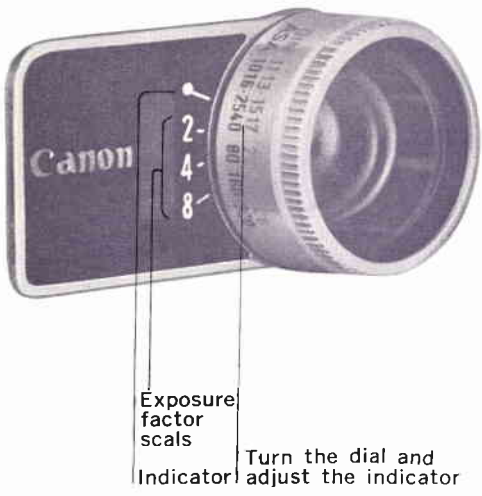
Generally in fade technique, rarely does it go over 80 frames.

CANON CINE ZOOM 512

ADJUSTMENT OF COUPLED METER AND LENS APERTURE

The Canon Cine Zoom 512 meter is completely coupled to the filming speed dial. The adjustment of the aperture is made by adjusting the matching needle to the meter needle inside the finder. By making following preparations, the coupling operation of the meter is carried out.

1. Set the film sensitivity.
2. Set the filming speed dial.
3. Turn the switch to ON.



ADJUSTMENT OF THE FILM SENSITIVITY

After loading the film, always turn the adjusting dial of the meter, and set the speed of the film being used. If this is not done, the meter will not give the correct exposure.

- For example when an ASA 25 film is used, adjust the scale of 25 to the index.
- For black and white as well as color films, the method of adjustment is the same.
- The speeds of the film that can be used are :

ASA	10	16	(20)	25	40	80	160	(200, 250)		320
DIN	11	13	(14)	15	17	20	23		(24, 25)	26

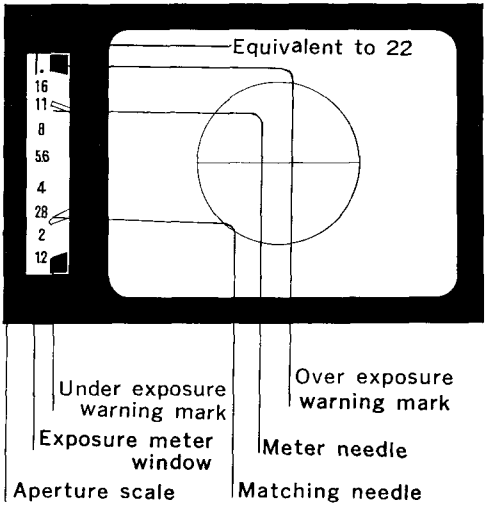
EXPOSURE FACTOR MARK AND FILM SPEED SETTING DIAL

The numbers 2, 4, 8 under the film speed scale is a scale for compensating the exposure factor. By adjusting the film speed to these marks, as shown on the scale, the exposure will be twofold, fourfold, eightfold.

METHOD OF USE

When a filter is attached to the lens, or the shutter angle is changed, multiply the exposure by two in order to get the proper aperture. For example, when a fourfold ND filter is used, or when the shutter angle is 4, turn the speed dial and adjust the speed to be used to the scale of 4.

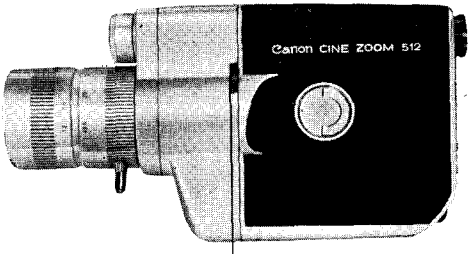
ADJUSTING THE APERTURE

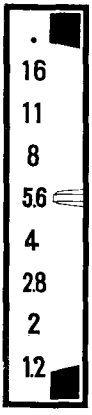


Inside the finder, there is a meter window, as well as a meter needle, matching needle, aperture scale and warning mark.

1. While looking at the object through the finder, rotate the aperture adjusting ring.
2. Overlap the matching needle onto the needle inside the exposure meter window. By doing this, you are assured of the correct exposure.

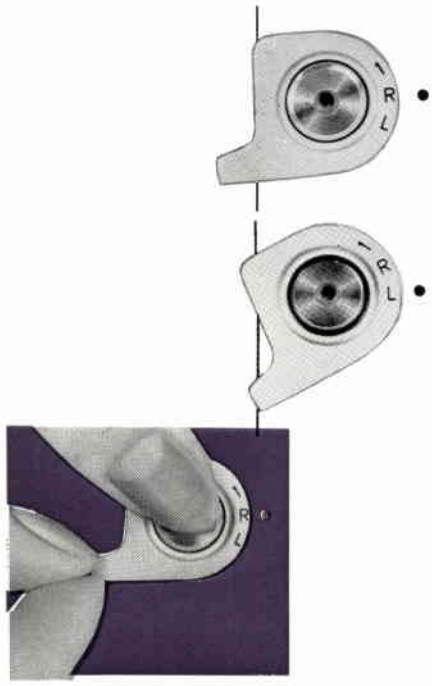
- When the needle is at the bottom of the window, correct exposure is not attainable.
- When the needle is at the top, either adjust the variable shutter adjusting lever or use the ND filter.
- The aperture may be freely set and used without regard to meter.





Aperture setting ring

SHUTTER RELEASE BUTTON



Turn the lever to "L" while pressing the shutter button.

Pressing the shutter button will advance the film as the pictures are being taken. At this time, the lever should be at the R position. Depending on the position of the shutter button control lever, it will work in the following three ways:

1. Safety lock

If the lever is at the L position, the shutter button is locked, preventing any unintentional release of film. Convenient when traveling.

2. Running lock

Place the lever at R position and press the shutter button. Then turn the lever to L position. The shutter is now in a depressed state, enabling pictures to be taken even after the finger is removed.

3. Single frame photography

Turn the lever to 1 position. Then by pressing the shutter button, it is possible to take a single frame picture. Single frame photography is particularly suitable for illustrating plant growth, for trick photography, animated cartoons, etc.

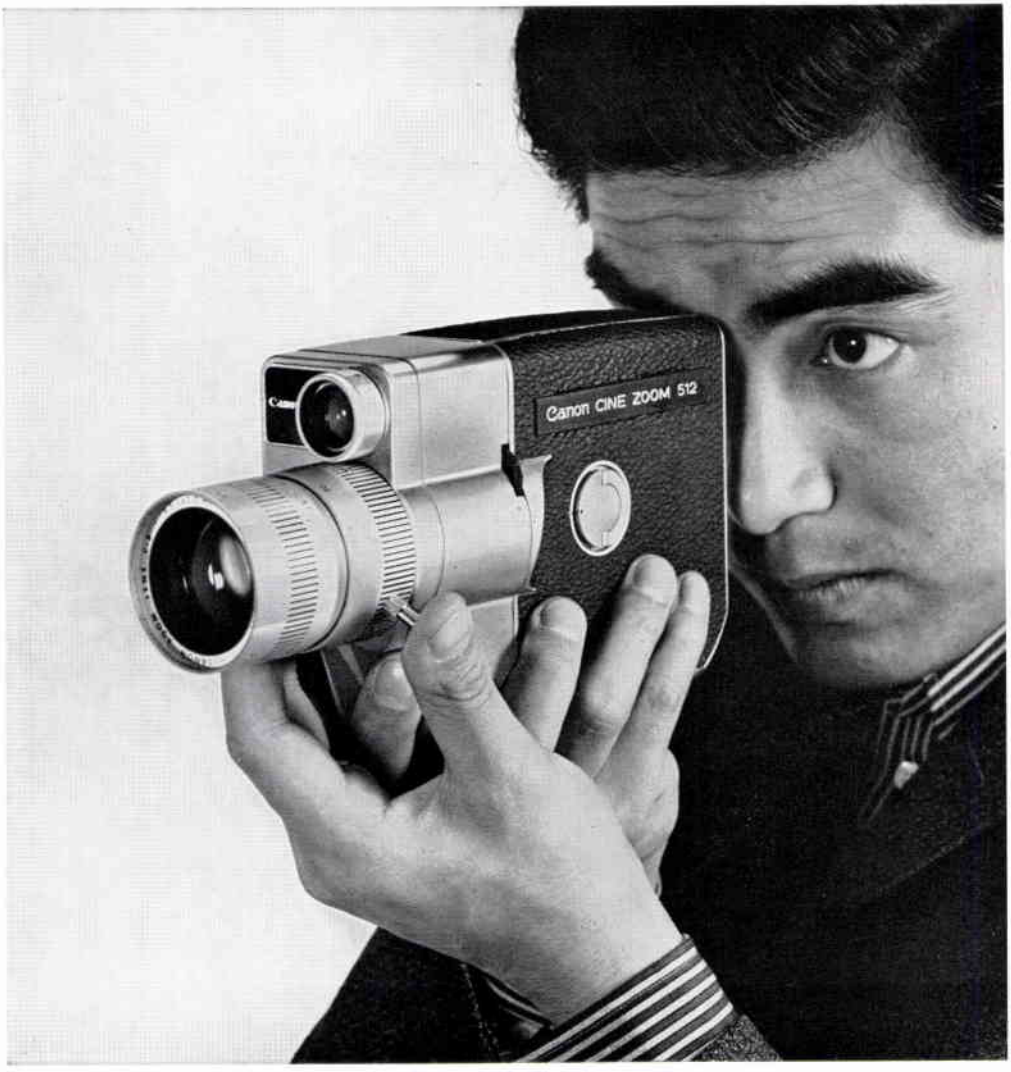
- In the case of single frame photography, use the 12 filming speed, with exposure time around 1/25 sec. Aperture coupled to the exposure meter.

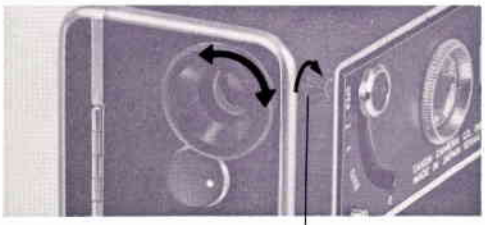
RELEASE SOCKET

The release may be attached to the shutter button. Recommended for single frame photography and when using the tripod.

FOCUSING AND ZOOMING

Both focusing and zooming are done while looking through the viewfinder.





Adjustable eyepiece Lock

ADJUSTING THE VISIBILITY

Look through the finder, face the camera towards the bright light, then while rotating the eyepiece, make line, needle and number appear clear within the field-of-view.
After adjusting the visibility, tighten the adjustable eyepiece lock clockwise.

ZOOMING

The picture seen through the viewfinder eyepiece will not only change in magnification but the scope of vision will also change when the zooming ring is rotated. What is seen in the viewfinder is the same as that which will appear on the film. At the maximun magnification, the focal length of the lens is 42.5mm, at the minimum, 8.5mm. Zooming will give your pictures varying effects.

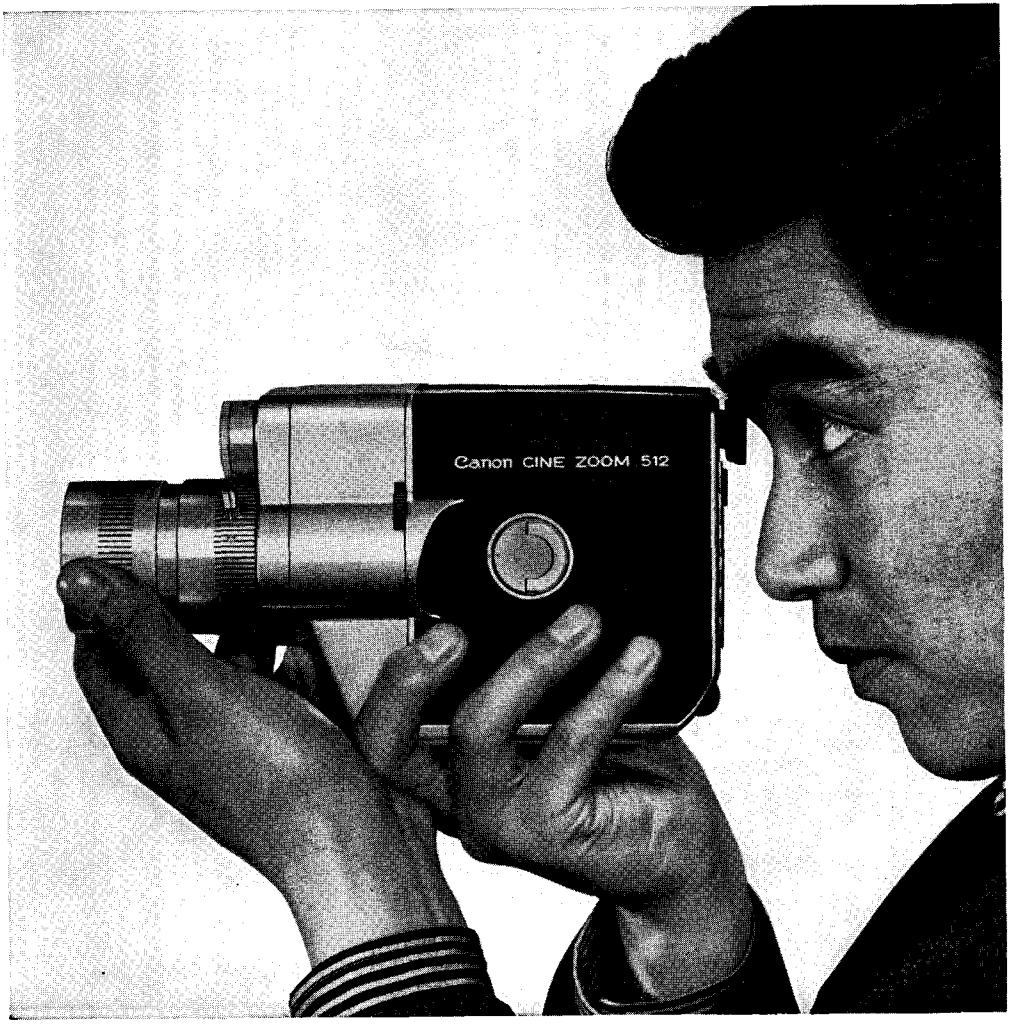
Zooming ring
Zooming lever
Focal Length scale
Index
Distance scale
Focusing ring

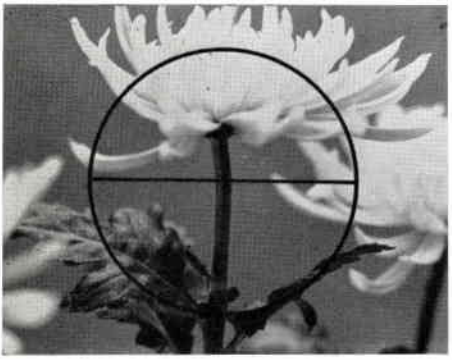
Magnification of Viewfinder

Focal Length	Magnification
8.5mm	0.5
13mm	0.75
20mm	1.15
42.5mm	2.5

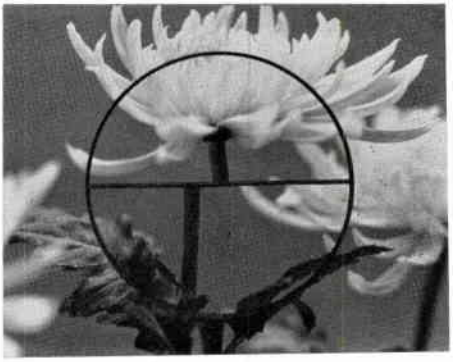
FOCUSING

Focusing can be attained when the distance is correctly measured. By turning the focusing ring, the image in the center of the viewfinder will separate into left and right. When the top and bottom are perfectly aligned, then the camera is in focus.
The longer the focal length of the lens, the more accurately the aligned image can be distinguished. As focusing does not change by zooming, even when using small magnification, focus with the maximum magnification and then return to minimum magnification. To adjust the focus with the eye, obtain the distance and then adjust this distance mark to the distance scale of the focusing ring.

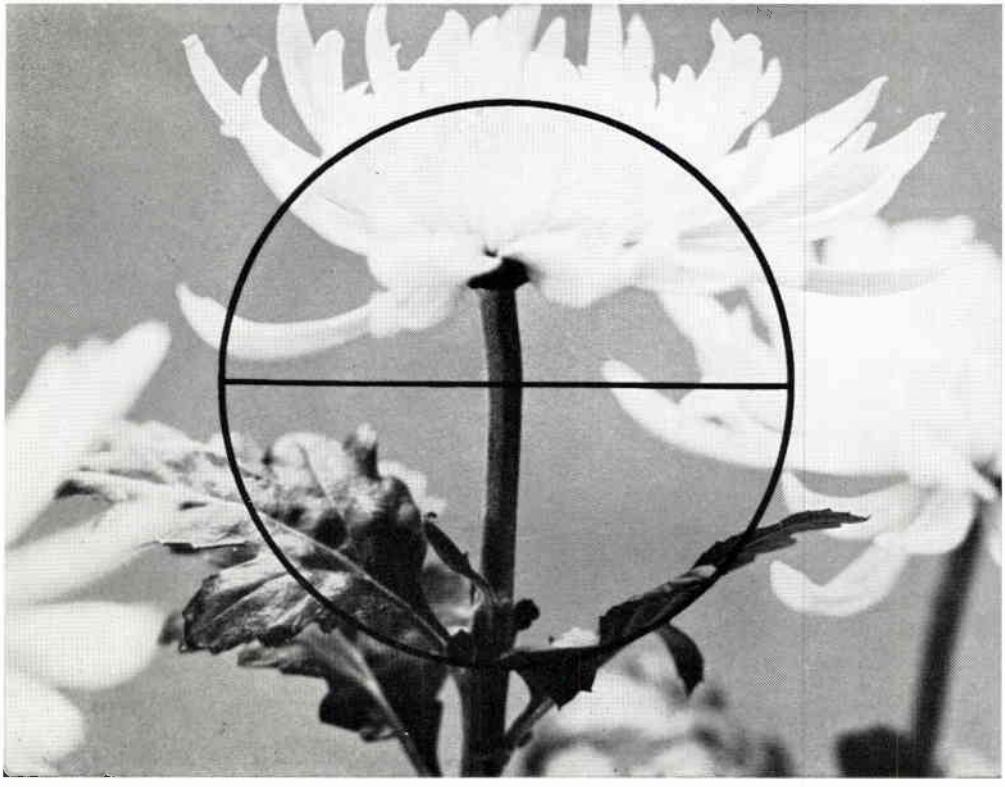




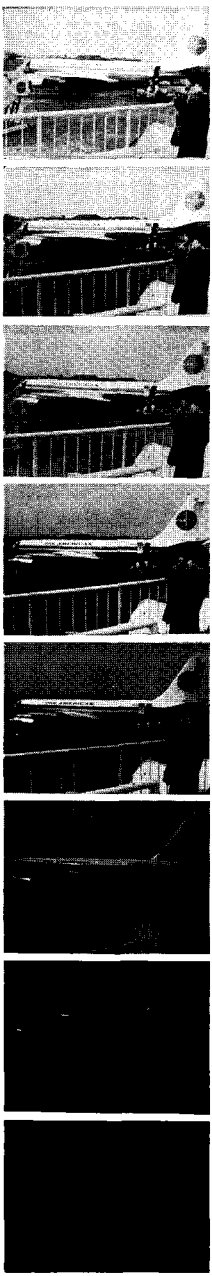
In focus



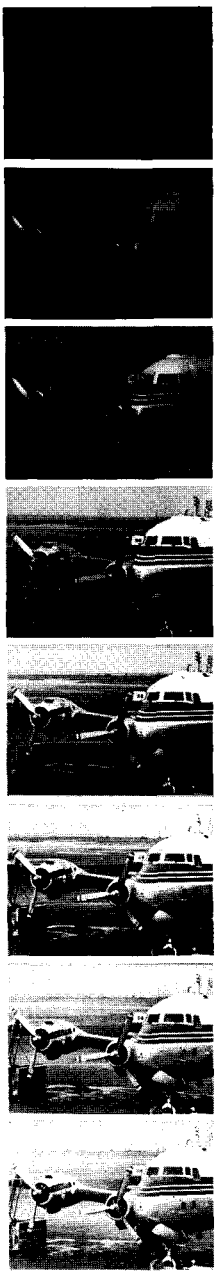
Out of focus



FADE-OUT AND FADE-IN



Fade-out

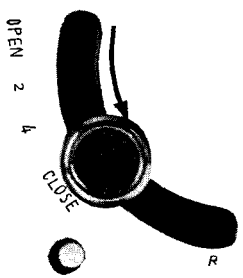


Fade-in

FADE-OUT (F. O.)

By gently pushing the variable shutter adjusting lever continuously, the shutter can be closed at the CLOSE position. When this is done, the bright picture gradually darkens and finally fades out. This is known as "fade-out"

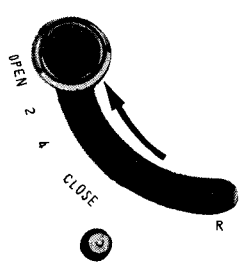
- If the lever is turned beyond CLOSE, it is possible (up to the red dot) to run the film with a totally closed aperture.



FADE-IN (F. I.)

By shooting the film while progressively returning the totally closed lever, the dark picture gradually becomes brighter. This is known as "fade-in."

- The fading technique is used in movies when there is a change of scene. Generally speaking, the fade-in operation is used at the beginning of a movie and the fade-out at the end. The technique of fading may also be used to show the elapse of time or a sudden change in scene. However, it should not be used indiscriminately.
- For a quickly changing scene, with the filming speed at 16, a fade of 1~1.5 sec. would be adequate, or about 2~3 sec. in the case of a slow moving scene.



Overalp

OVERLAP (O. L.)

The technique of overlapping a scene by combining the fade-out and fade-in to have a smooth transition of scene is known as the "overlap" For 8mm movies, this technique is regarded as difficult to master.

1

First, operate the fade-out.

2

Next, rewind only the film footage which has been faded out. (see section on re-winding)

3

Then, fade-in in the next scene over this section, in other words, double expose. This procedure will first make the scene darker and then progressively brighten the scene which follows.

- Be sure to accurately calculate the time of fade-in and fade-out and the number of frames affected. Good effects cannot be obtained if the timing is wrong.
- It is essential that the lever be moved evenly and smoothly.
- As for the time of the overlap, a period of under five seconds is considered as appropriate.

CANON CINE ZOOM

512

HOW TO HOLD THE CAMERA

If the camera is not stable during the shooting, the picture that is projected will be dancing and full of defects. This is especially true when taking long distance shots and when zooming. To get the best results, the use of the tripod is recommended.

BASIC HOLDS

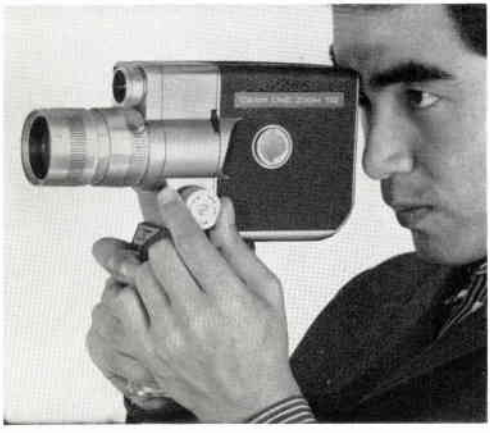
1

Hold the bottom of the body with the right hand, and with the thumb press the shutter release button.
With the left hand, adjust the zooming lever and aperture.

2

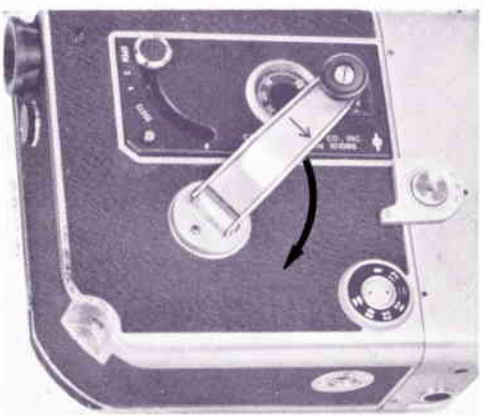
Hold the grip with the right hand, and pull the trigger with the forefinger.
With the left hand adjust the aperture, focus and manipulate the zoom lever.

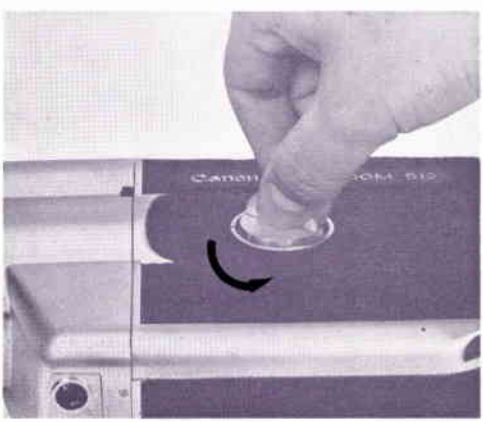
- It is advisable to use a lens hood when taking pictures against the light.



LOADING THE FILM

For the 8mm camera, the double width, or 16mm film, is used. This is exposed one side at a time. Unlike the ordinary camera which exposes a strip of film once, two separate exposures are required, one half of the strip at a time. When one half of the strip is exposed, the film is turned over so that the other half of the strip may be exposed. Since the loading is easy to learn, there is a tendency to be careless, which often results in slipping and entry of light. Such cases are not rare. Therefore, it is important to become fully acquainted with the correct method of loading.





AVOID DIRECT SUNLIGHT

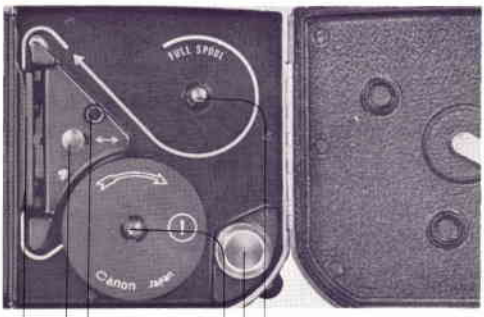
The film is wound around a spool. In order to avoid stray light, a leader section of 3 feet at both ends of the reel has been provided. Against any direct strong light, there is always the danger of light infiltrating. It is, therefore, desirable that the loading and reloading be carried out quickly in the shade, if need be, in the shade of your own body. Follow the procedures outlined below:

1

Raise the winding crank, and wind the spring.

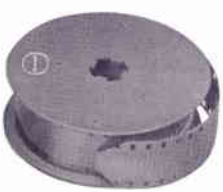
2

Turn the side cover lock and open the cover.



Open the film gate

Counter towards S



3

Remove the empty spool. The white line illustrates the path of advance of the film.

4

Pull the pressure plate out in preparation to insert the film.

- At this time, the film counter will return to the S start mark.

5

Have the spool and film ready. Face (1) surface up.

6

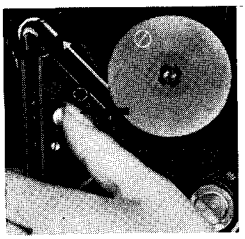
Pull out the film about 25cm, being careful that the film does not slacken.

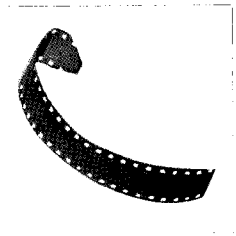
7

Insert the film spool into the supply spool spindle and place the film into the film gate.

8

After the film has been sufficiently inserted, return the pressure plate to its original position to keep the film secure.

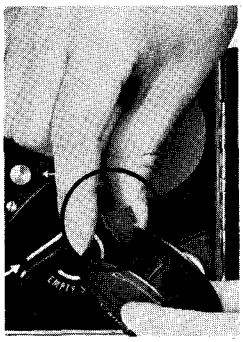


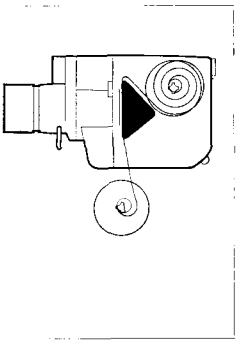


9

Bend the end of the film and insert it into the slit of the take-up spool.

- If the film is not long enough, press the shutter button and extract. Do not pull out the film.





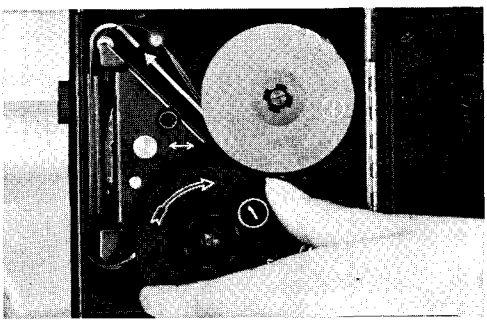
10

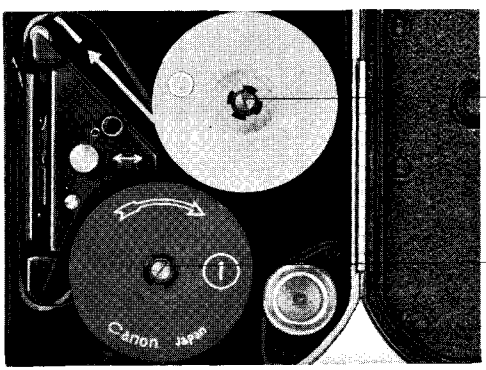
Face the emulsion side of the film on the inside, and tightly wind it four or five times.

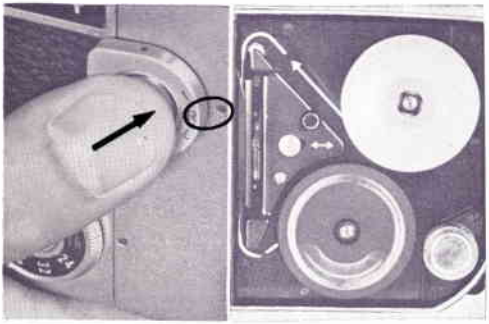
11

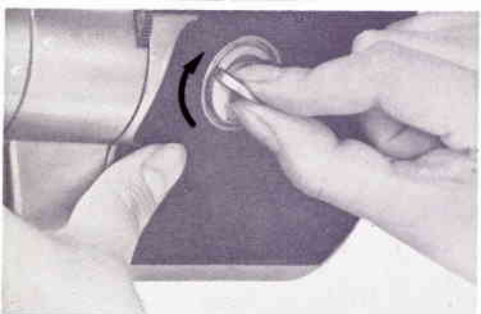
Insert the take-up spool into the take-up spindle.

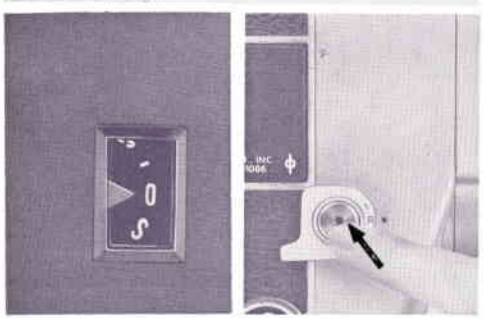
- It is best if the inserted film has a little extra length at the film gate opening.
- After the film has been loaded, there will be four notches on the supply spool and three notches on the take-up spool.
- The spool and film must be fully inserted.

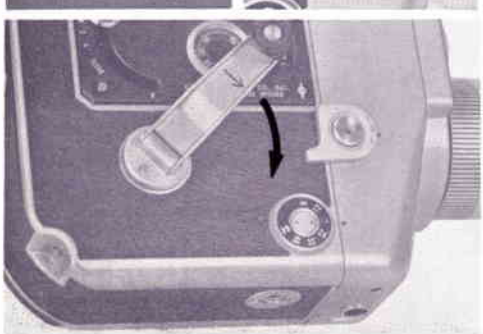












12

Press the shutter button a moment and check the film advance. An advance of about 3~4cm is sufficient.

- The shutter button cannot be pressed unless the safety lock is at R position.

13

After checking the film advance, close the cover, and press the knob while turning.

- Unless the pressure plate has been completely returned, the side cover cannot be closed.

14

Press the shutter button, and run the film until the film counter advances from S to 0.

- Shooting is to begin from 0 position.

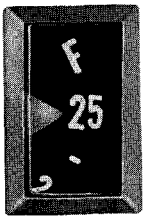
15

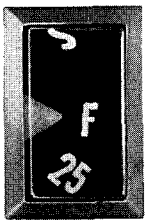
Fully charge the winding crank.

FILM COUNTER

As the pictures are being taken, the film counter dial as well as the frame counter revolve to show the amount of exposed film. The entire length of film to be exposed is divided into ten sections with 25 as the maximum. (A mark or numeral denotes 2.5 feet.) The distance between S to 0 at the beginning and 25 to F at the end represents the leader section. The filming speed dial is used for fading technique and single-frame photography. No attention need be paid to it during ordinary photography.

FILM RELOADING OPERATION





When one side of the 7.5 strip of film has been completely exposed, reverse the film and use the remaining half.

1. After the film counter indicates 25 for the first half of the film, stop taking pictures.
2. Then press the shutter button and advance the film leader until the film counter moves from 25 to F.
3. Open the side cover and remove both spools. Reverse the spools so that the figure ② will appear on top.
4. The same procedure applies as that followed when the spool was first inserted. The spools are interchanged, the supply spool being inserted into the shaft of the take-up spool and vice versa.

- When making the reloading, be especially careful of any sagging of the film.

FILM UNLOADING

When the counter has advanced to 25 after reloading, advance the film until it reaches F, and then unload.
The film has now been exposed on both sides. Prevent the film from loosening and place it in the empty container which originally contained the film and then send it to the film company for developing.

- Loading and unloading of the film must be done in the shade.

CLEANING THE APERTURE SECTION

It is very important to keep the camera clean when loading the film. The aperture section where the film passes, that is, the section held by the pressure plate, easily gathers film fragments and dust. If this is not cleaned out, scratches and blots will appear on the film. The camera can be kept free of dirty elements by using the blower on the open pressure plate each time the film is loaded. Anything solid should be gently removed with a toothpick or the like. Do not use any metallic or other hard objects.

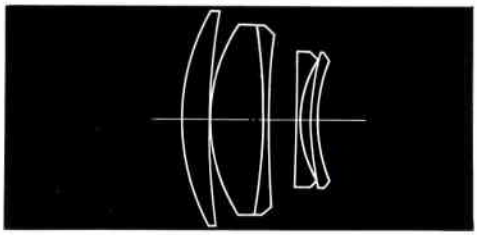
CANON CINE ZOOM 512

HOW TO USE THE CONVERTER

The tele-converter for the Canon Cine Zoom 512 is an attachment for the zoom shooting lens. In this case, the magnification conversion, or range focal length is from 14mm to 70mm, making possible photography in a wide range, from standard to telephotography.

Photographic range

Lens speed	Zooming ratio	Magnification conversion	Zooming range
F 1.2	5	Continuous	14~70mm



LENS COMPOSITION

This converter is of the afocal system, composed of three components, five elements, and is optically designed for the exclusive use of the Cine Zoom.

Distance scale

ft.	∞	50	30	20	15	12	10
m.		20	10	7	5	4	3

Size	Overall length 80mm Maximum diameter 80mmϕ
Weight	420 grams
Coating	Spectra Coating of purple
Filter size	72mm
Cap size	80mm
Hood	Built-in type

METHOD OF ATTACHING

1

Remove the back cover of the Converter and place it over the camera lens.

2

Rotate the lens barrel and screw the Converter into the front panel of the lens.

3

Loosen the tightening screw of the Converter's distance ring.

4

Turn the distance ring of the Converter so that the infinity mark of the lens appears in the ∞ window.

5

Fasten with the tightening screw.

6

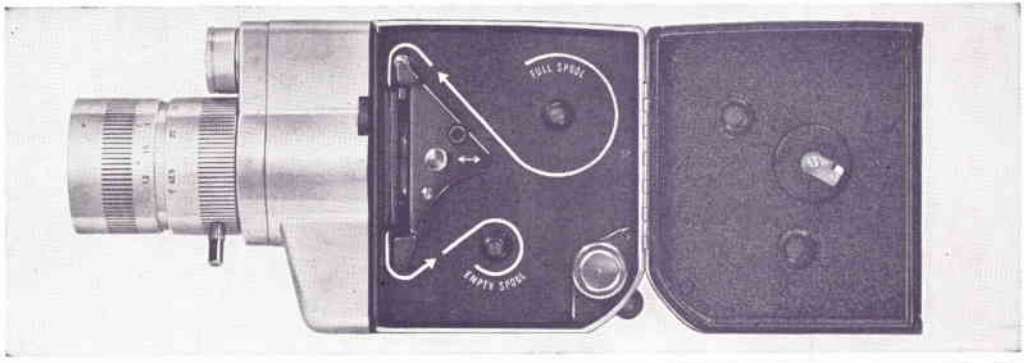
Pull out the built-in hood.

7

Zooming and focusing are carried out in the ordinary manner.

- **CONVERTER STANDARD REFLECTING PAINT**

  The grey paint on the slanting section of the Converter produces the same result as the standard reflecting plate of the meter. Although the CdS light window can be blocked with the use of the lens, the appropriate amount of light can be imparted.



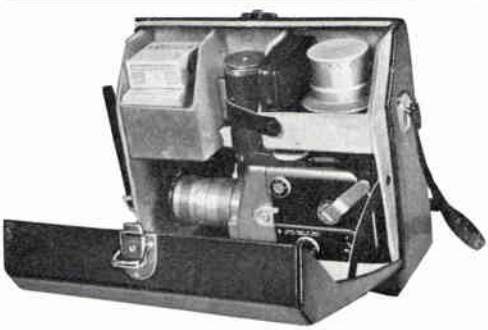
CANON CINE ZOOM 512

IMPORTANT POINTS TO REMEMBER

When the eye is off the viewfinder during the filming, for titling or single-frame photography, as well as panning photography with the use of the tripod, always remember to bar the entry of any strong light into the eyepiece when the shutter is pressed.
When a very strong light hits the eyepiece, there are cases of the viewfinder's light reflecting section being pierced and a "ghost" reflection will appear on the film.

CLEANING THE FILM GATE

When taking pictures, fully charge the spring motor.
Avoid failures during the take. Make it a habit to always keep the motor in full charge condition. During long takes, the spring motor may become fully exhausted. In such a case, it will stop while the shutter is open and the last frame may be wastefully exposed.



STORING THE CAMERA

Keep the camera away from dampness, heat, and dust. When storing, do not place the camera near naphthalene or camphor. While it is not necessary to oil any part of the camera, a periodic overhaul and cleaning will prolong its life.

SAFETY LOCK

When storing the camera in the case, turn the safety lock of the shutter to L. If there is a grip, also lock the safety lock lever of the grip.

CANON CINE ZOOM 512

ACCESSORIES

48mm CLOSE-UP LENS 450

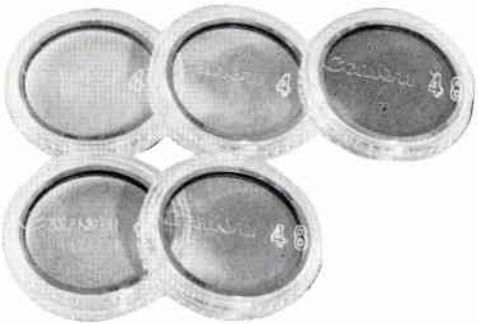
The close-up lens are designed for titling, reproduction of documents, photographing of plants and insects, etc.

※ 450 : Attach the close-up lens, and when the distance scale is adjusted to ∞, the distance from the tip of the lens to the subject is 450 mm.

FIELD-OF-VIEW OF 48mm CLOSE-UP LENS 450

	48mm Close-up lens 450			
Focal length	8.5mm		42.5mm	
Distance scale	∞	1.2m	∞	1.2m
Distance from film plane to subject	560 mm	440 mm	560 mm	440 mm
Field-of-view	243× 182 mm	177× 133 mm	50× 38mm	36× 27mm

Leather Case
C-8 Power Grip
C-8 Tele-Converter with Case
C-8 Spool
Lens Hood T-50-2
Canon Release



FILTER

The 48mm filter for the camera itself and the 72mm filter for the Converter are available. When using the filter, pay regard to the exposure factors.

HOW TO MAKE ADJUSTMENTS

When the filter factor is 2, 4, 8, adjust the film speed setting dial to the exposure factor mark of 2, 4, 8, respectively. Generally, the film speed is divided by the filter factor, and the value becomes the speed for the filter. The film speed setting dial is set accordingly.

CANON FILTER EXPOSURE FACTOR

Type	SL 39.3C	SY 44.2C	SY 50.2C	SO 56.2C	MG 55C	SR 60.2C	Color Conversion A	Color Conversion B	Skylight	ND × 4	ND × 8
	UV	Y1	Y3	O1	G1	R1	CCA	CCB	SKYLIGHT	ND4	ND8
Exposure Factor	1	1.5	2	3	3	6	2	3	1	4	8

48mm Filter

Y_1, Y_3, O_1, G_1, R_1
UV, ND4, ND8, CCA, CCB

72mm Filter (for Converter)

Y_3, R_1
UV, CCA, CCB

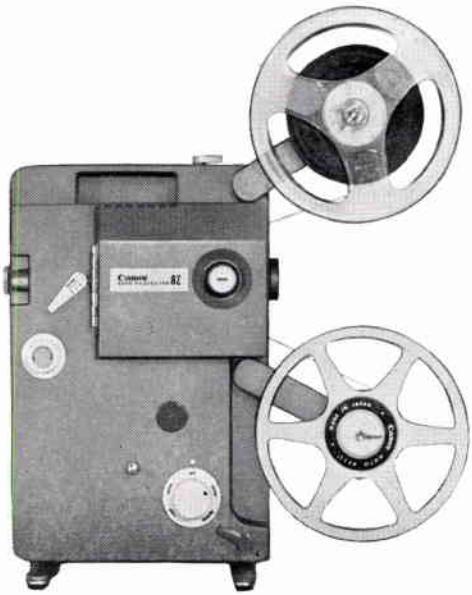
TITLING SET

Especially suitable for titling, close-ups, reproduction and single-frame photography.
Construction: Shaft, arm, metal attachments, case.

MICROSCOPE ATTACHMENT A

Attachment designed for microscopic photography which may be jointly used without any difficulty with the titling set.

CANON AUTO PROJECTOR 8 Z



Canon Auto Projector 8 Z appeared on the stage of the world market as a good companion of reputed Canon 8mm cine cameras. Canon Auto Projector 8 Z with the incredible outstanding features has changed the entire concept of an 8mm projector into new one!

Namely, the three main features are its perfect auto-loading device, its amazingly sharp zoom lens of F1.5 with focal length of 15mm to 25mm, and its surprising compactness of the unique vertical structure.

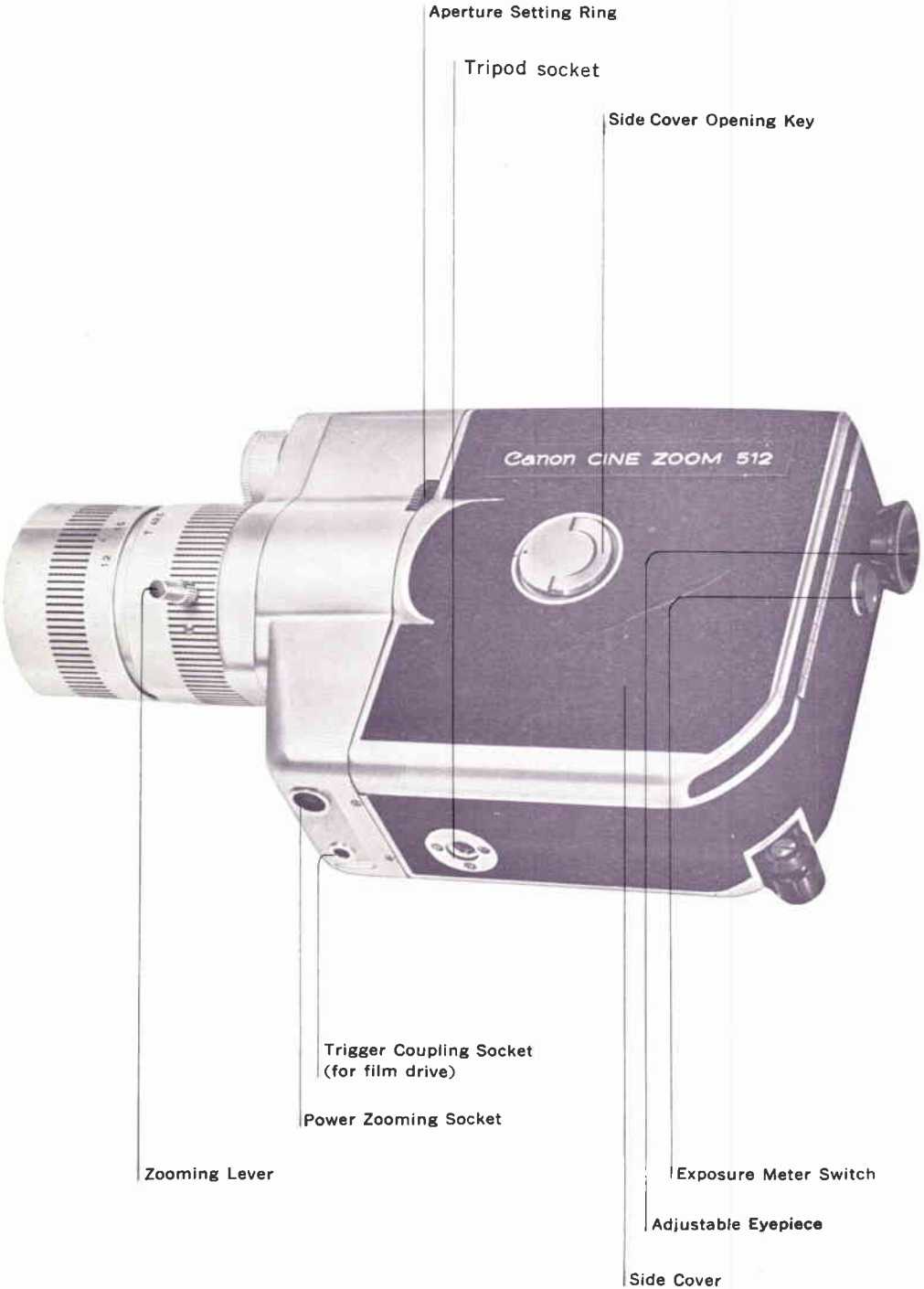
■

Auto Projector 8 Z (100V~240V) with Lens 15~25mm F 1.5, Lamp (21.5V, 150W), Reel & Cord in Carrying Case

■

Reverse projection, single frame projection, high-speed rewinding, and tape recorder type talkie projection possible.


CANON CAMERA CO. INC.
MADE IN JAPAN 101020


Aperture Setting Ring
Tripod socket
Side Cover Opening Key
Canon CINE ZOOM 512
Trigger Coupling Socket
(for film drive)
Power Zooming Socket
Zooming Lever
Exposure Meter Switch
Adjustable Eyepiece
Side Cover