

Canon  
REFLEX  
ZOOM 82

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ZOOM 82



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**INSTRUCTION**

Thank you for buying the Canon Reflex Zoom 8.

The new Canon Reflex Zoom 8 is another Canon's first! The first 8 mm cine camera with the fastest speed F1.4 zoom lens. The first 8mm cine camera to combine the highest quality optical system with Professional level body mechanism. The first 8 mm cine camera with an amazing 10 mm-40 mm zooming range . . . you can zoom from wide-angle to telephoto continuously!

Please read the following pages carefully to get utmost enjoyment in taking 8 mm motion pictures with the new Canon Reflex Zoom 8. Thank you.

Sincerely yours

Dr. T. Mitarai  
President

## CANON REFLEX ZOOM 8-2

The Canon Reflex Zoom 8 is extremely simple to operate that even a very beginner can take fine motion pictures. These are the special features;

### (1) CANON-EXCLUSIVE ZOOMING SYSTEM

The Zoom 8 has the fastest speed F1.4 zoom lens with an amazing zooming ratio of 1:4. The powerful 4X magnification enables you to zoom from wideangle to telephoto continuously. Once the subject is focused, the performance to world-famed Canon precision lens and the zooming system assure you of absolute sharpness during the entire zooming operation. It is also deviation free which enables you to take clear-and-sharp pictures at any point between 10 mm and 40mm, making composition a breeze! The clearest and smoothest zooming effect is obtained.

### (2) SINGLE-LENS REFLEX SYSTEM

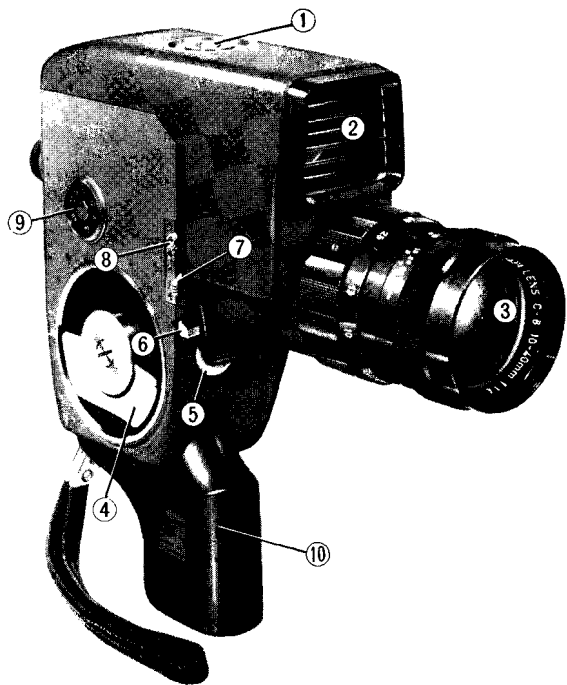
The Zoom 8 is superbly designed for the easiest and most care-free picture taking. The single-lens reflex system of the Zoom 8 assures you of the easiest viewing and the most accurate focusing through the lens. Single lens reflex focusing assures the freedom from parallax error. You will view with full brightness at all time; closing lens aperture does not affect the brightness of the view. The split-image rangefinder gives critical focusing.

### (3) CdS\* EXPOSURE METER COUPLED TO THE LENS DIAPHRAGM

Super sensitive CdS Exposure Meter is incorporated in the Canon Reflex Zoom 8. Setting exposure is so much more easier now. You can now view while you turn the aperture ring to get accurate exposure. An accurate exposure is automatically determined by simply rotating the aperture ring to match the needle to the index mark both of which are visible in the viewfinder window.

The meter can be employed in all filming speeds and aperture readings of the Zoom 8 for all film with sensitivities for ASA 10 to 320 DIN 8 to 26; for ASA 640 DIN 29 film all readings except a speed of 8 and 12 fps.

\*Sulfur-Cadmium



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**Canon**

### (4) FILMING MECHANISM

7 filming speeds from 8 to 64 frames per second are available with this camera. A single frame exposure is also possible.

THE EXPOSURE LEVER is equipped with a SAFETY LOCK as well as a RUNNING LOCK which enables continuous picture taking without having the exposure lever kept depressed by your finger. There is also a FOOTAGE-COUNTER which shows the length of film exposed.

### (5) CLOCKWORK SPRING MOTOR

Like a watch, the Spring Motor with a ratched wheel enables you to wind without reseating your grip on the handle. Uniform speed is maintained throughout. A warning signal sounds approximately 3 sec. (50 frames or 7-1/2 inches in length) before the spring runs down.

### (6) FOOTAGE-COUNTER

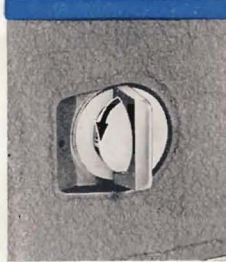
In addition to a FOOTAGE-COUNTER INDICATOR DIAL, a click signals, as every 7-1/2 inches of film is exposed, for accurate counting while the picture taking is in progress. The indicator automatically returns to "S" or starting position as the side cover is opened. If you want to keep the same footage shown on the indicator dial even after the side cover is opened, press the FILM COUNTER CONTROL BUTTON adjacent to the counting indicator when you open the side cover.



## LOADING THE FILM



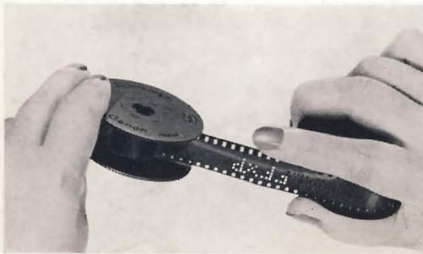
(1) To wind the spring mechanism, lift the ratchet winding key and wind the motor with a back and forth movement.



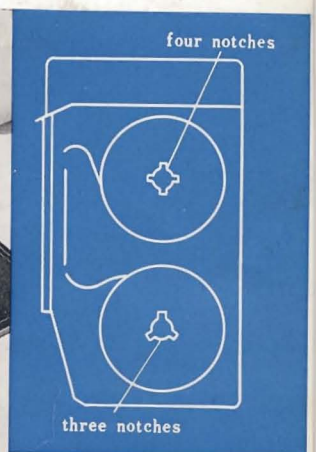
(2) To open, lift the OPENING KEY on the side cover and turn it to the counter-clockwise. As the cover is opened, the film gate will automatically be opened, and the FOOTAGE COUNTER returns to starting position "S".

(3) Take out the TAKE-UP SPOOL from the camera. The center hole of the unwound spool should show the THREE NOTCHES facing up. Reverse side of the spool has FOUR NOTCHES around the center hole (See the drawing on the opposite page).

(4) Take the seal off the new film and unroll about 25cm (10 inches) of the film.



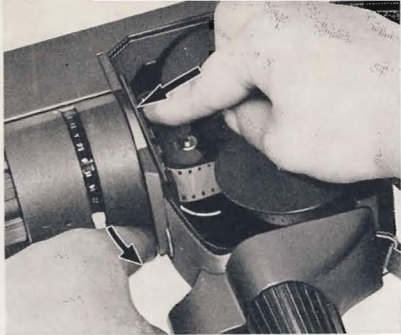
(5) With the dull emulsion side of the film facing the lens, insert the end of the film into the slot on the inside TAKE-UP SPOOL, and wind it four or five turns.



(6) Holding the TAKE-UP SPOOL in the left hand and the FILM SUPPLY SPOOL in the right hand, these will now be a loop of film in between. pass this loop over the FILM GATE and place the TAKE-UP SPOOL on the TAKE-UP SPINDLE at the bottom of the camera, while the new film-spool placed on the FEED SPINDLE at the top.

The TAKE-UP SPOOL will now show three notches up and the FILM SUPPLY SPOOL will show the four-notch hole facing up. Take care that the spools and the loop of film are touching the floor of the film compartment. If the loop is too short, it will be difficult to place both spools on their respective spindles.

Be carefull not to touch the Pressure Plate Spring shown in the picture above.



(7) To test if the film is loaded correctly, press the pressure Pad against the Film Gate and release shutter. (See the illustration.) If the film is loaded properly, it will be advanced smoothly.



(8) When the film is placed correctly, close the side cover tight and turn the LOCKING LEVER to the right to lock. The FILM GATE is now automatically in position for the film to pass through.



(9) Press the EXPOSURE LEVER until the "S" on the FOOTAGE COUNTER indicates "O". The camera is now ready for taking pictures.



(10) Wind the spring motor again until the spring is taut.

## CHANGING THE FILM

When the first 7-1/2 meters (25ft) of film have been exposed, reverse the film.



- (1) Run the film until the letter "F" is shown in FOOTAGE-COUNTER WINDOW.
- (2) Open the side cover and remove both spools. Turn then upside down and exchange their positions. The spool which was at the bottom will now be at the top showing four notches, while the spool which was at the top will now be at the bottom showing three notches.

## TAKING OUT THE FILM

When both strips of the film have been exposed, run the motor until the FOOTAGE COUNTER INDICATOR shows "F". The film can now be removed.

### CAUTION

When changing or reloading film do it in a shade. Avoid strong light or the direct rays of sunlight.



EXPOSURE LEVER, CONTINUOUS RUNNING and SINGLE FRAME EXPOSURE.

For continuous running, set the EXPOSURE LEVER CONTROL to "R". With the control pointed at "R" and the EXPOSURE LEVER pressed down, continuous running shots can be taken. When the control is placed at "1", single frame picture can be taken by pushing up the EXPOSURE LEVER. In both case, shutter can not be operated if the EXPOSURE LEVER SAFETY LOCK is locked.



FILMING DIAL

The SPEED DIAL indicates the number of frames exposed per second. By rotating this dial the speed can be adjusted to 8, 12, 16, 24, 32, 48, or 64 frames per second. Correct speeds are not always proportionally obtained at any in-between speeds settings, precautionary recommended.

FILMING SPEED

16 frames per second is the speed usually used for normal purposes. The speed is increased when taking pictures of moving trains and vehicles or other high speed or fast action subjects. A higher speed would be used, for instance, to take shots of birds in flight or to produce slow-motion effects of sports action.

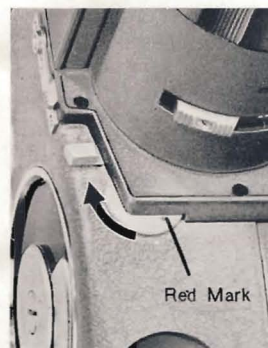
Speeds slower than 16 frames per second can effectively be used if you wish to film cloud or weather condition changes or to speed up the action of slow moving objects for which the usual 16-frame-speed would appear too slow or monotonous on the screen. The single frame exposures be used in recording the life of growing plant.

It can also be used in trick photography or to give comic effects to your motion pictures. When taking single frame exposure the 16 speed should be used.

CHANGES IN SPEED have the following effect on the exposure time.

Film Speed	Exposure
8 frames per sec.	1/18 sec.
12 frames per sec.	1/26 sec.
16 frames per sec.	1/35 sec.
24 frames per sec.	1/50 sec.
32 frames per sec.	1/70 sec.
48 frames per sec.	1/100 sec.
64 frames per sec.	1/140 sec.

EXPOSURE LEVER SAFETY LOCK



When the camera is not in use, rotate the LOCKING RING clockwise until a red mark appears. When this is done, the EXPOSURE LEVER is locked to prevent accidental tripping. To unlock, rotate the LOCKING RING back until the red mark is concealed.

With the EXPOSURE LEVER pressed down the LOCKING RING can be rotated further in the same direction (still concealing the red mark). This will lock the lever in position to enable speed continuous taking.

CAUTION

When the camera is empty, avoid running the spring motor at the high speeds of more than 24 frames per second.

Now that you set the filming speed, your next step is to adjust the aperture reading for proper exposure.

This can be done in the following manners :

1. First, rotate the Exposure Meter Adjustment Dial on the top of camera to match the ASA or DIN readings with the filming speed as shown in the illustration on the right. The illustration shows filming speed of 16 fps using ASA 40 (DIN 17) film.



2. Turn the CdS battery switch-knob of exposure meter on the left to the viewfinder, and align the white dot marks. Be sure to return this off-position (to half-way circle) when not in use to save CdS Battery from waste.

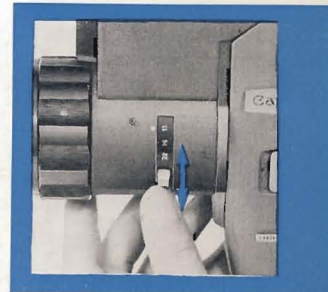
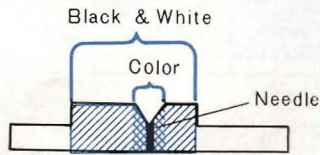
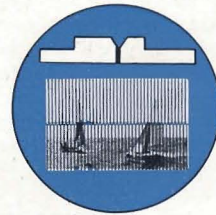


Any mercury battery has life of about one year under normal usage. To replace, unlid the battery case above the viewfinder by turning it counter-clockwise. Take out the old battery and drop in a fresh one. Be sure to have the flat part of the battery facing out.

When replacing the battery, the following mercury batteries are available on the market :

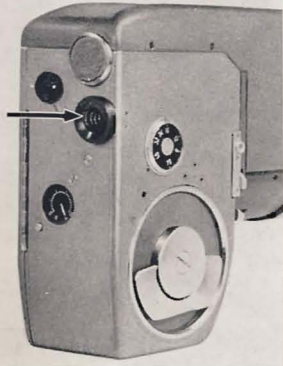
- RM-1 by Mallory (U.S.A.)
- M-P by National (Japan)
- E-1 by Eveready (U.S.A.)
- RG-1 by General (U.S.A.)

3. Then, view through the viewfinder. You will see a needle in vertical position and an index mark above the viewing frame. The needle runs across horizontally to the right and left as you rotate the aperture scale ring. Correct exposure can be obtained automatically by rotating and adjusting the aperture scale ring until the needle seen in the viewfinder aligns with the index mark. (The needle represents the pre-set film and filming speeds.) It is important to match them exactly when shooting in color; however, when using black-and-white film less accurate exposure is allowed. In this case, the adequate exposure is obtained unless the needle swings out of the deeper part (on either end) of the window in which the needle runs. The diaphragm opens up when the needle is swung to the left and closes down when swung to the right.





1. VIEWING ...



View is seen through the viewfinder eyepiece. As the viewing is done through the lens, you are absolutely free from parallax error. What you see through the eyepiece is what you will get on the film. You can view the scene at full brightness at all times. The field-of-view changes as you turn the zooming ring. At the maximum magnification, the focal length of the lens is 40 mm; at the minimum 10 mm. You can compose your picture any way you like in the

zooming range between 10 mm and 40 mm from the same position. The focus will not deviate. Table below is for reference to the magnification changes. The Canon Zoom lens is so designed that at 20 mm it is 1 : 1 actual life size.

Focal Length	10	13	15	20	25	30	35	40
Magnification	0.5	0.7	0.8	1	1.3	1.5	1.8	2

2. ZOOMING ...



With your left hand fingers on the knurled zooming ring, rotate from one extreme to another for zooming. Deviation-free Canon zoom lens will assure you of constant focus throughout the entire zooming operation.

Although the zooming gives your picture powerful effect, do not use it often. Too many zoomings will spoil your picture and make it extremely annoying to watch.



ZOOMING  
EFFECT OF  
CANON REFLEX  
ZOOM 8

### 3. FOCUSING . . .

When you view through the eyepiece, you will see a thin line running across the center of viewfinder...the image is split in halves when out of focus.

This is called the Split-Image Range-Viewfinder. Focusing can be done as you rotate the knurled focusing ring on the lens barrel.

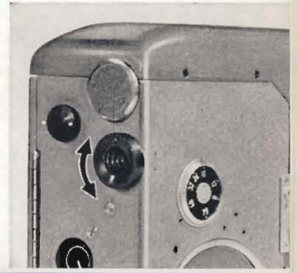
Focus in the following manner :

1. Rotate the zooming ring and bring it to the maximum focal length of 40 mm (extreme close-up).
2. Focus the subject by rotating the focusing ring.
3. When the split-image on the range-viewfinder appears in perfect alignment the lens is critically focused. Once the subject is focused, it will be maintained throughout the entire zooming operation or at any desired point you choose for composition between 10 mm and 40 mm. If you know the exact distance to the subject, focusing can also be done by sitting the respective distance scale to the index mark



### CORRECTED VISION

The viewfinder is adjustable with an eyepiece lens for average eye-sight as well as for those with particular vision. As you rotate the hood on the eyepiece, it is adjusted for your own vision.





## HOLDING THE CAMERA

The Canon Reflex Zoom 8 has been designed primarily for taking picture while holding in right hand with a grip; however, care should be taken to hold the camera as firmly as possible and avoid shaking while shooting.

If the camera is not steady when taking your shots, the resulting pictures will be shaky and difficult to see. Special care should be taken when zooming or taking at the maximum focal length. For the best stability when taking pictures, place the camera on a table, or firm surface, or use a sturdy tripod or monopod.

Two common ways to hold the camera.

- (1) With the left hand over the top of the camera and the right hand holding the trigger grip, keep the camera pressed firmly against the forehead. The forefinger of the right hand manipulate the exposure lever. The right elbow is pulled in against the body.



- (2) Holding the camera in both hands, the camera is supported by the right hand which is on the hand grip. The left hand is under the lens barrel to operate zooming ring, and the forefinger of the right hand manipulates the exposure lever.

## TAKING PICTURES

- (1) Take off the lens cap.
- (2) Wind the spring motor fully.  
Do this after every exposure, no matter how short it is before the spring runs down.
- (3) Choose the most appropriate running speed and adjust the speed dial figure accordingly.
- (4) Set the film speed (ASA or DIN) to the shutter speed on the Exposure Meter Adjustment Dial.
- (5) Face the camera toward the subject. Turn the aperture ring and match the meter needle to the index mark in the viewfinder.
- (6) Focus and have the split-image in perfect alignment at the maximum focal length (40 mm).
- (7) Compose your picture by rotating the zooming ring.
- (8) Holding the camera correctly while looking through the eyepiece, press the exposure lever.
- (9) For photographing a picture title, an accessory Close-Up Lens 450 is available.

### NOTE:

When photographing with your eyes away from the viewfinder eyepiece...in shooting title for your motion picture or in panning when the camera is on a tripod...please take care that no strong rays of light reflect on the eyepiece.

### PHOTOGRAPHING THE PICTURE TITLE

The parallax-free, single-lens reflex system of the Canon Reflex Zoom 8 makes it extremely simple to photograph the title of your picture. The versatile Canon Zoom Lens will serve the purpose without any attachment; however, the Canon 48 mm Close-up Lens 450 can suitably for it.

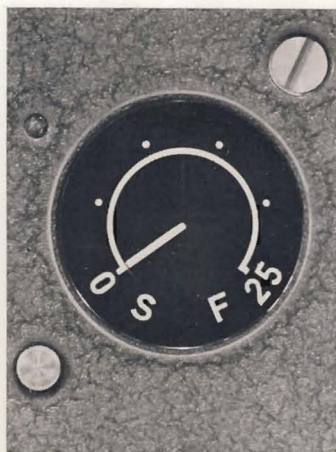
The chart below will be helpful to determine your equipment.

Focal Length	Distance Scale	Distance from Film to Subject	Field-of-View
10 mm	∞ infinity	58cm. 22-7/8"	212×160mm
	1.5 meters	47.5cm. 18-11/16"	152×114mm
40 mm	∞ infinity	58cm. 22-7/8"	53×40mm
	1.5 meters	47.5cm. 18-11/16"	38×28.5mm

- Note:
- When photographing the title, steady the camera on a sturdy tripod or use a Canon Copying Stand. (see p 25.)
  - For the best result, use aperture smaller than F 5.6. If necessary, use a photo flood lamp.

### FOOTAGE COUNTER

While the film is running, the FOOTAGE COUNTER INDICATOR shows the length of film exposed. The 7-1/2 meter or, 25 ft of film is divided into five sections on the indicator scale. While taking shots a click is heard every 50 frames (19 cm) so that one can keep account of the length of film being used.



### FOOTAGE COUNTER CONTROL BUTTON

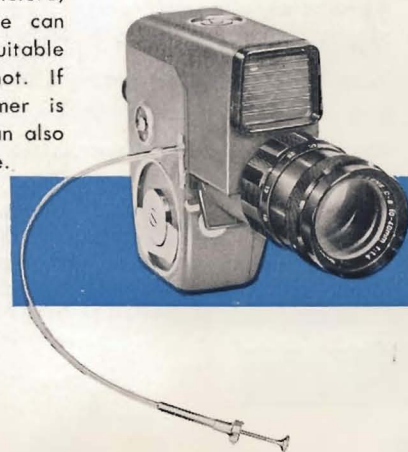
Every time the side cover of the camera is opened, the FOOTAGE COUNTER INDICATOR automatically returns to starting position "S". If, however, the CONTROL BUTTON is kept pressed down when opening the side cover, the FOOTAGE COUNTER reading remains in the same position when the lid is closed. This is useful when for any reason it becomes necessary to open the cover to adjust the film before the full length has been exposed. This should be done in a dark room, otherwise the film will be spoiled. For taking double exposure shots (overlaps) this system can be used. By back winding the required length in a dark room, the same film could be exposed again. In this case you can continue taking shots even after the FOOTAGE COUNTER registers 25, for the same length of film was wound back, at 16 F.P.S.

### ABOUT THE SPRING MOTOR

With one winding of the motor, approximately 600 frames (2.3 m) of film can be exposed. A warning signal sounds approximately 3 seconds or 50 frames (19 cm) before the motor runs down.

### CABLE RELEASE ATTACHMENT HOLE

When taking picture, a cable release can be used very suitable for single from shot. If a Cine Self-Timer is attached, you can also be in the picture.





### LENGTH OF FILM TO BE SHOTS

The length of the film to be shot for the best result depends on the subject being photographed. There is no fixed specified length, but if it is too short it will appear only momentarily on the screen. Approximately 9 seconds or 50 cm (20 inches) of film usually makes a good shot at 16 F.P.S.

### PANNING (Panorama picture taking)

Panning means taking picture from one position to another by moving the camera around to make continuous shot over a wide area in one cut of film. Care must be taken not to move the camera too rapidly in any direction especially vertically. When taking panning pictures, stand steadily with both feet apart. Do not move from the waist down but move the camera by movement of the upper section of your body. The best result can be obtained by using a sturdy tripod.

In panning, 24 or 32 is the optimum speed. Start with the relatively unimportant part of the picture. Continue shooting with the most important section last. Spending a little additional exposure time on the last will give you effective results. With moving objects it is important to keep the subject in the center of the viewfinder.

As it is very difficult for a beginner to produce good panning movies, it is recommended to take a series of separate shots changing the position each time.

## FOR THE BEST RESULTS FROM YOUR CANON REFLEX ZOOM 8

### KEEP THE FINDER EYEPiece CLEAN

To get the best result from your camera, it is important to keep the LENS and EYEPiece clean. Be particularly careful to use a clean cotton cloth to rub lightly with a spectacle lens cleaner. A little alcohol or ether can be used to remove stubborn spots.

### KEEP THE FILM GATE CLEAN

Specks of film and dust on the film gate can cause mechanical damage or may even scratch the film. From time to time it should be cleaned with a soft brush. Anything sticking to the film gate which cannot be removed with a brush can probably be removed with a toothpick. Do not use a metal or hard instrument.

### WHEN TAKING PICTURES, WIND THE SPRING MOTOR FULLY

When taking pictures, even after a short exposure the motor should be immediately wound up tight again. This will avoid the film running out in the middle of a shot. Make it a habit.

### DO NOT LET MOTOR COMPLETELY RUN DOWN

When a long scene is being taken, be careful not to let the motor completely run down. When the motor is unwound, it may stop leaving the shutter open, and the last one frame will be spoiled.

### STORING THE CAMERA

Keep the camera away from dampness, heat, and dust. Take care not to store with naphthalene or camphor. It is not necessary to oil any part of the camera. When storing, the spring motor should be unwound completely. A periodical cleaning and overhauling the camera will lengthen its life.

CANON REFLEX ZOOM 8 ACCESSORIES

**Filters :** 48 mm Screw-In Type with Plastic Case

For Color :

Skylight filter

Color conversion filter A...tungsten type film in direct daylight.

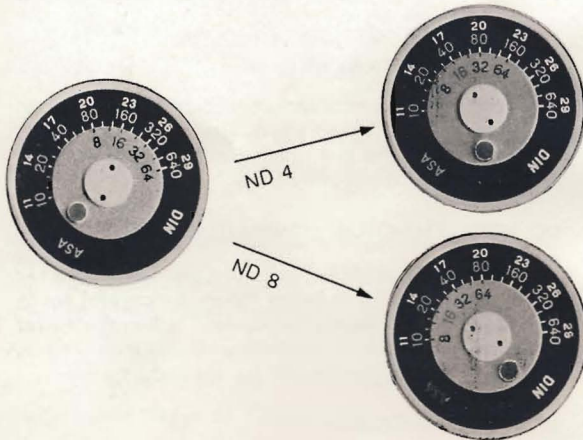
Color Conversion filter B...daylight type film in artificial light.

For Black and White :

- UV Ultra Violet O1 Orange
- Y1 Light Yellow R1 Red
- Y3 Yellow G1 Green



Neutral Density filters ND4 (4x) ND8 (8x)...reduce excessive light irrespective of film's color sensitivity characteristics.



When using ND filter, adjust film speed or shutter speed to get correct exposure.

ND4: Reduce film speed by 1/4 (e.g. ASA 160 to 40), or increase shutter speed by 4 times (e.g. 1/60 to 1/240 f.s.)

ND8: Same procedure for ND4, but use 1/8 or 8.

**Leather Carrying Case      Cable Release**

**Canon 48mm Close-Up Lens 450 :**

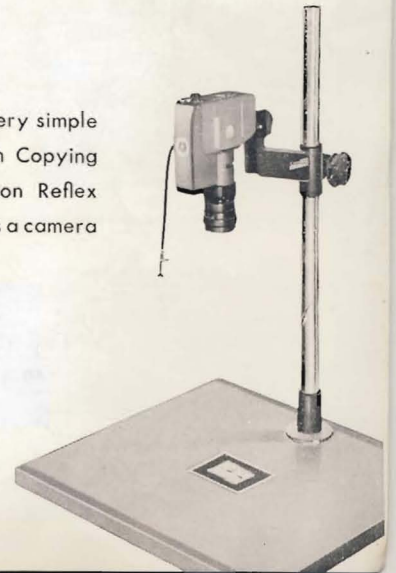
Designed for use with Zoom 8. It is used film titling as well as close-up works. Close-Up Lens 450 is of screw-in type.

See the chart below for specifications . . .

Focal Length at	Distance Scale on Focusing Ring	Distance from Film Plane to Subject		Field View	
		in millimeter		in inch	
		in millimeter	in inch	in millimeter	in inch
10mm	∞	580	22 3/8	212 × 160	8 5/16 × 6 5/16
	1.5	475	18 3/8	152 × 114	6 × 4 3/8
13	∞	580	22 3/8	163 × 123	6 7/16 × 4 3/8
	1.5	475	18 3/8	117 × 88	4 9/16 × 3 3/8
15	∞	580	22 3/8	142 × 106	5 9/16 × 4 3/8
	1.5	475	18 3/8	102 × 76	4 × 3
20	∞	580	22 3/8	106 × 80	4 1/8 × 3 1/8
	1.5	475	18 3/8	76 × 57	3 × 2 1/4
25	∞	580	22 3/8	85 × 64	3 5/16 × 2 1/2
	1.5	475	18 3/8	61 × 46	2 3/8 × 1 3/8
30	∞	580	22 3/8	71 × 53	2 3/4 × 2 1/2
	1.5	475	18 3/8	51 × 38	2 × 1 1/2
35	∞	580	22 3/8	61 × 46	2 7/16 × 1 3/8
	1.5	475	18 3/8	43 × 33	1 3/8 × 1 3/8
40	∞	580	22 3/8	53 × 40	2 1/16 × 1 9/16
	1.5	475	18 3/8	38 × 28.5	1 1/2 × 1 1/8

**TITLING**

Filming a title will be very simple and convenient if Canon Copying Stand is used with Canon Reflex Zoom 8. The stand holds a camera firmly.







**Canon 7**

This is the latest model in the rangefinder type camera group of Canon precision family. Model 7 is made with the highest degree of precision throughout its entire mechanism.

Its rangefinder and related mechanism are made to match the function of the world fastest lens 50 mm F0.95, which is 2.2 times faster than F 1.4.



**Canonflex R2000**

The best in single-lens 35mm reflex cameras with the fastest shutter speed in the world... 1/2000th second. The quick-as-a-wink Super Canomatic System allows you to view and focus at full brightness at all times.



**Canonflex RP**

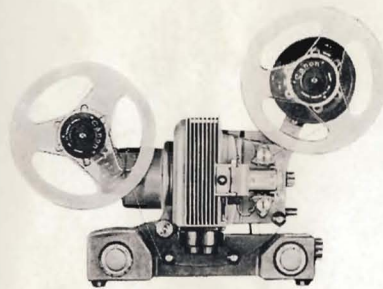
The RP is the popular-priced single-lens 35 mm reflex camera of Canon quality and embodies all the precision features of the R2000 with these exception: shutter of 1 to 1/1000 second...non detachable pentaprism.



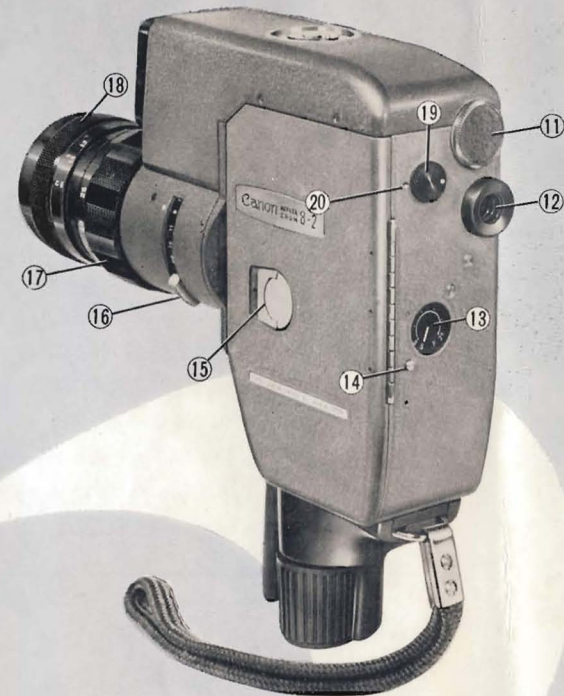
**Canonet**

Canon's new electric-eye 35mm camera. Just about the only thing you have to do is to focus and press the button for perfect pictures every time...any time any place. The Canonet's revolutionary electric-eye mechanism measures the light value for you...sets the exposure automatically.

**CANON PROJECTOR P-8**



This model with all the up-to-date features is exceedingly compact in design. Built to give an excellent performance by reproducing sharp flicker-free image on the screen. The film gate is designed to remain at low temperatures preventing the film from damage. Precision made, it will give life-long, trouble-free performance. The motor is sturdy and will function efficiently even in those areas where there is a marked power fluctuation. Its gear drive is perfectly balanced and runs silently and smoothly. The Canon P-8 has a 19 mm F 1.4 projection lens and a 500W pre-focus projection lamp and operates on 100-110V. It can also be used for individual frame showing. Projection Lamp-Bell & Howell mount, 100~110V, 500W ; 400 ft. reel with case; Projection Cord; P-8 projector for 125, 220, or 240V is also available.



**Canon REFLEX ZOOM 82**

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