WILSONWERKS ARCHIVES

CONTENTS

CONGRATULATIONS! YOU NOW OWN ONE OF THE FINEST 8mm MOVIE CAMERAS MADE . . . THE MINOLTA ZOOM 8.

You'll find the Minolta Zoom 8 truly versatile in every respect.

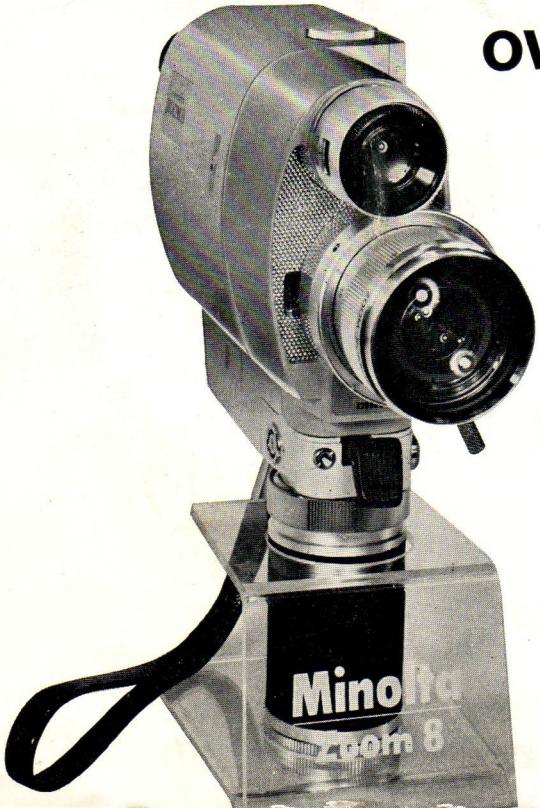
A highly sensitive CdS light meter automatically calculates correct exposure for you. Pan from bright light to dark shadows .... Zoom 8 instantly adjusts to any situation.

Focus down to five feet. Zoom from 10 to 30mm ... wide angle to telephoto effects when you need them. Sight through the single lens reflex system ... see precisely what appears on the film. Perfect balance, electric micromotor drive and remote control help create the professional results you can put on film.

Please read this manual carefully so you may effectively utilize the full potential of your new Minolta Zoom 8.

Minolta Zoom 8

owner's manual

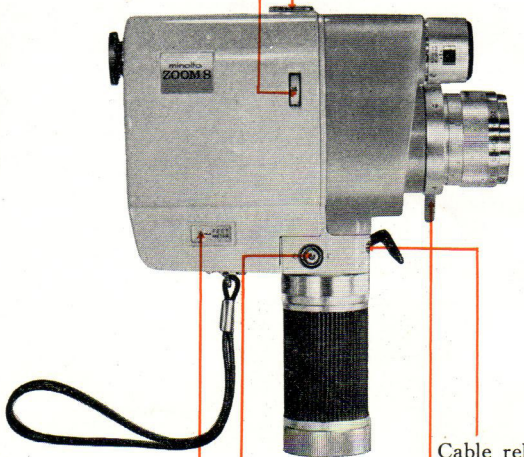


ZOOM 8 CAMERA PARTS

Exposure meter window

Tripod socket

Zoom Rokkor F 1.8, 10-30mm



Filming speed control

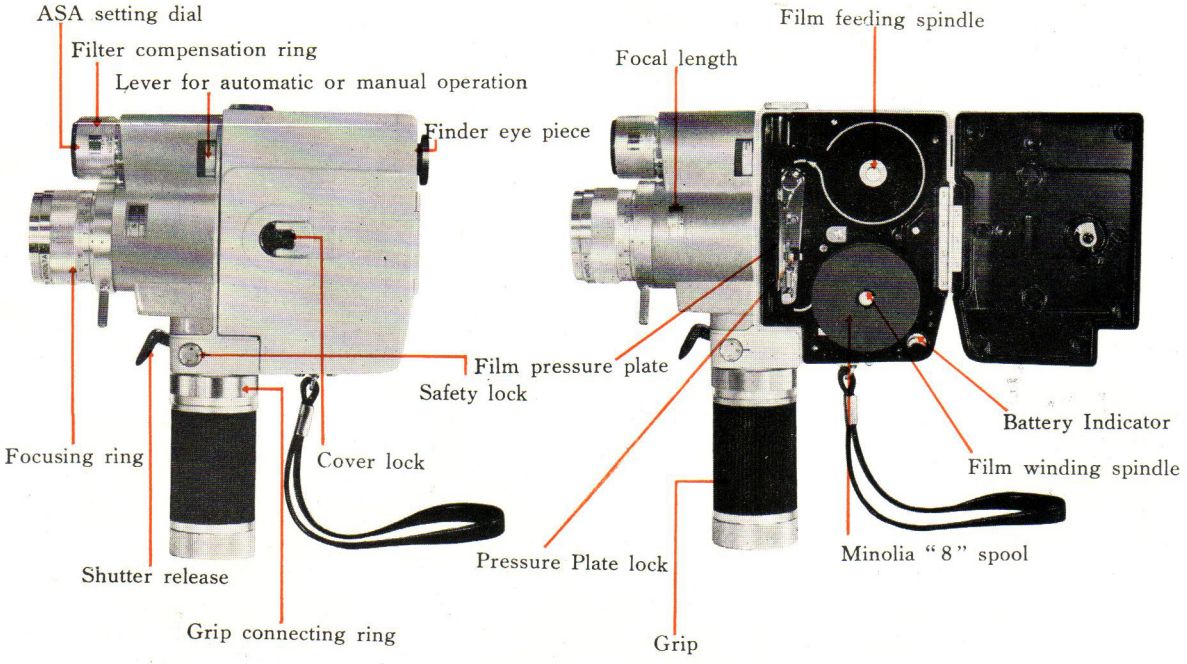
Mercury battery cover

Cable release socket

Zooming lever

Remote control socket

Footage counter

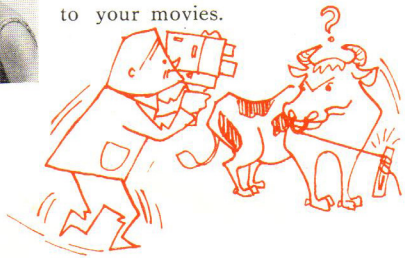

ASA setting dial
Filter compensation ring
Lever for automatic or manual operation
Finder eye piece
Film pressure plate
Safety lock
Focusing ring
Cover lock
Shutter release
Grip connecting ring
Film feeding spindle
Focal length
Battery Indicator
Film winding spindle
Pressure Plate lock
Minolia "8" spool
Grip

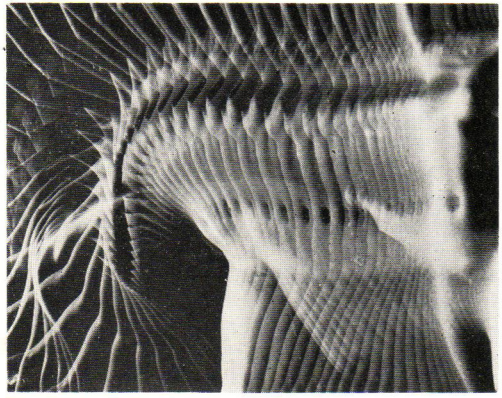
PUTTING ZOOM IN YOUR MOVIES

Used intelligently the zoom feature can give you very dramatic effects in your home movies. Your camera zooms from 10 to 30mm. Varying the focal length or zooming across the entire range adds interest to your subject. The zoom feature also helps you frame the subject just the way you want it by stopping the zoom lever at any point. Also, you'll find it easier to critically focus by moving the zoom lever to 30mm, focus, then return the lever to whatever position you desire.

ZOOM

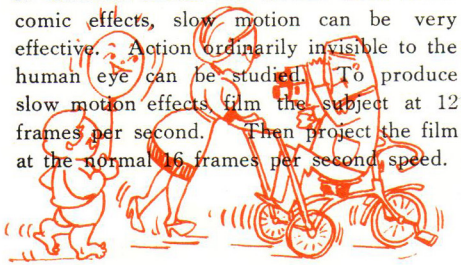
Your camera zooms from 10mm to 30mm. A combination of these add interest to your movies.



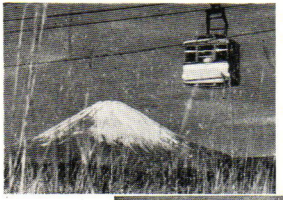


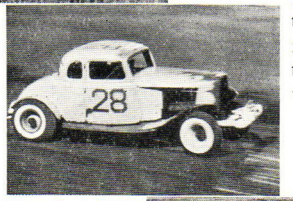
SLOW MOTION

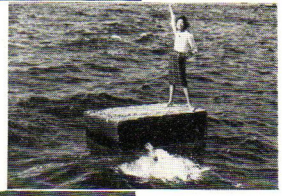
In technical studies and similar fields or for comic effects, slow motion can be very effective. Action ordinarily invisible to the human eye can be studied. To produce slow motion effects film the subject at 12 frames per second. Then project the film at the normal 16 frames per second speed.

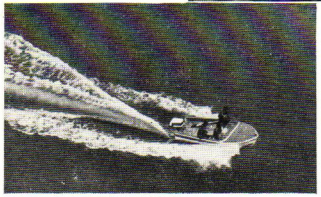


GENERAL PHOTOGRAPHY









For general photography, zooming should be used sparingly so that you can heighten the interest when it is necessary. Ideally, you should zoom to the subject first returning, if you wish, to the wide angle view.

8mm MOVIE FILM

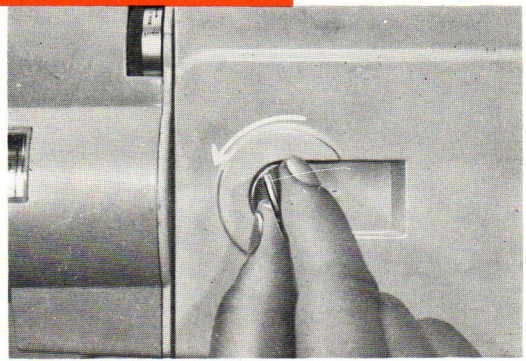
- Regular spool loaded 8mm movie film (standard 16mm width, 25 foot rolls) should be used with your Minolta Zoom 8. Exposure is made on both sides of the film. (The widths of the 16mm and 8mm movie films are the same, but the perforations are different, and cannot be used interchangeably).

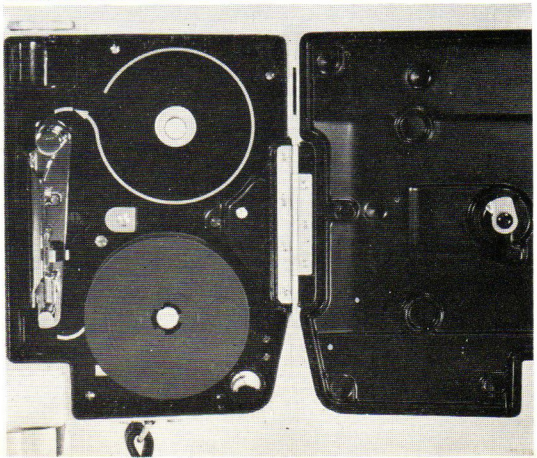
- After exposure, the film should be returned for processing. After processing it is returned to you, cut into two lengths making it 50 feet long, ready for projection on your 8mm home movie projector.

- Both ends of the film are partly exposed to light when loading and removing it from the camera. For this reason, the film has a one foot leader at either end. Film should be inserted into the camera under subdued light.

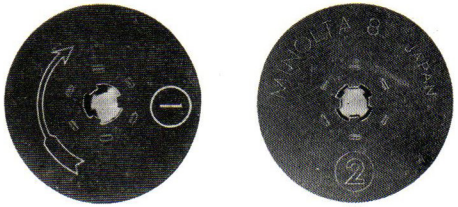
- Total projection time of one 50-Foot roll is about four minutes. This is twice as long as the standard 16mm movie reel of the same length, and four times less expensive.

FILM LOADING





SPOOL



Inside the camera there is a Minolta "8" spool with number (1) on one side and number (2) on the other side. The side bearing number (1) has three teeth in the center hole and the other side (2) has four teeth.

Film feeds onto the Minolta "8" spool with side (1) facing up on the winding spool. When the first half of the film is completely exposed, reverse the spools remembering to flip over the Minolta "8" spool to avoid double exposure.

The second half of the film then winds back onto the original film spool. In the end the Minolta "8" spool is empty, ready for the next film .

1 Hold your camera so that the chamber door faces toward you. Open it, by turning the cover lock counter-clockwise.

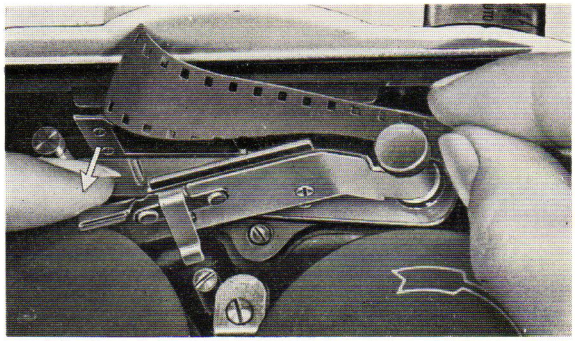
2 Take the Minolta "8" reel out of the camera, and open the film pressure plate, as illustrated in the picture.

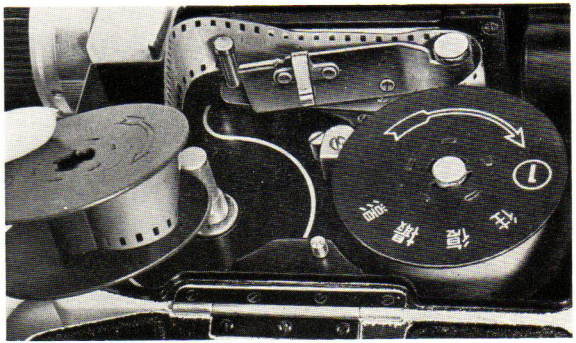
3 Break the seal on the new film, and place it on the feeding spool, (as illustrated) with side (1) facing up Be careful not to insert the reel of new film with the side (2) facing up.

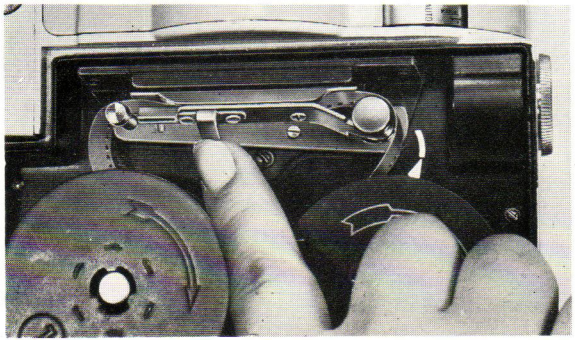
4 Insert the film into the channel of the camera, with the emulsion glossy side of the film toward the lens. Hold the reel fast so that the film does not become loose. (The film should follow the course of the white line on the camera body.)

5 Make sure the film is inserted in the right channel. Close the film pressure plate. Pressure plate will be locked firmly when the camera door is closed.

6 Insert the end of the film into the slot of the Minolta "8" reel, holding it so side number (1) is towards you. Wind the film around a few times to make sure it is tightly engaged.





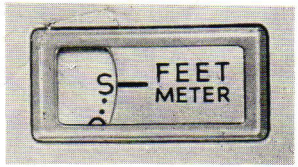


When inserting the end of the film into the Minolta "8" reel, **you must be sure that it is engaged in the slot,** otherwise it may fall out while taking pictures.

7 When the film is loaded correctly, run the film for about 2 seconds to make sure it is winding properly. The film is now properly seated, ready for the first half exposure.

For the second half exposure, flip over the Minolta "8" spool containing the film (with side (2) up) and place it on the film feeding spindle. Proceed with loading for the second half as instructed before.

Close the camera and the footage counter is set automatically at "S" for starting.

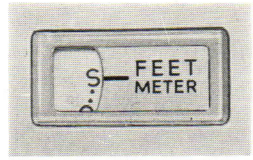


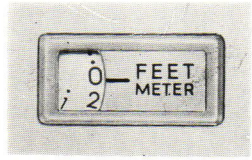
AUTOMATIC FOOTAGE COUNTER

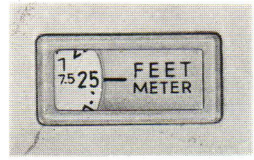
When you press the shutter button, the footage counter runs simultaneously showing the length of film exposed. The footage counter returns to "S" automatically when the camera cover is opened after exposure.

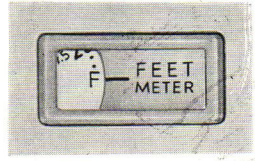
As mentioned before, each end of the film is partially exposed to light when loading. This extra portion (approximately 3 feet) should be run off with the lens cap on before actually taking pictures.

The counter dial indicates film footage used at 2 foot intervals up to 25 feet. It also indicates meters at 0.5 meter intervals. Do not open the camera until the footage dial passes 25 feet and reaches "F" (finished).









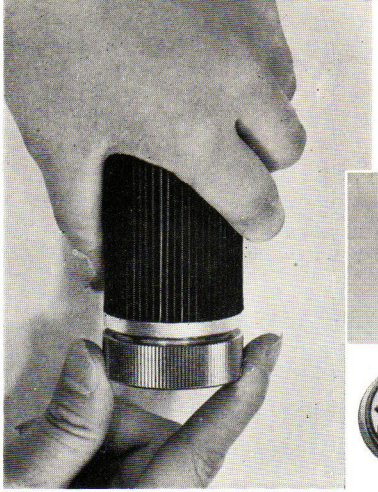
BATTERY AND BATTERY CHAMBER

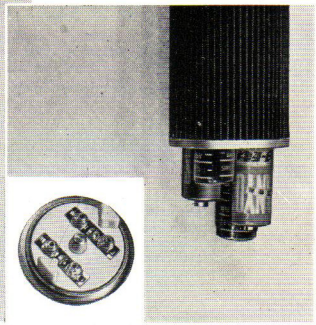
The battery used in Minolta Zoom 8 (the UM-3, 1.5V, commonly called a pen light battery) is a standard size, and is available at electric stores or camera shops everywhere.

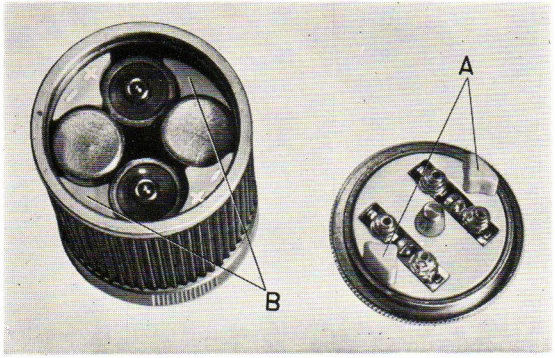
- Insert the batteries in the chamber + to +, − to −, as illustrated. (If the battery is inserted upside down, the camera will not operate. Be sure the batteries are inserted correctly) After inserting the batteries, close the cover of the battery chamber.

- When the camera is not in use, remove the batteries from the camera.

- New batteries can transport 10 films of 25 feet double length, at 16 fps. This is an average figure. For safety's sake, check your battery indicator each time you load a new spool.



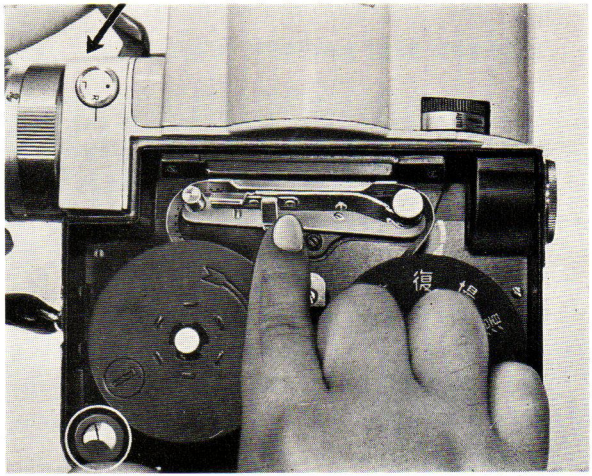


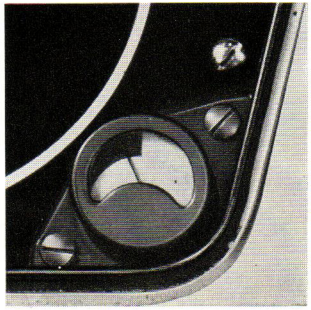


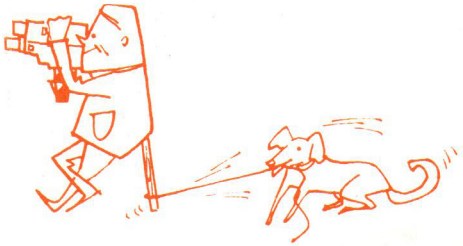
BATTERY INDICATOR

Batteries lose their power in time, and therefore it is advisable to check the battery indicator each time film is loaded.

As you load the film, press the shutter button, and the indicator needle with move. If the needle is in the white area, there is enough power available. If the needle stays in the red border, the batteries should be changed.







FILM SPEEDS

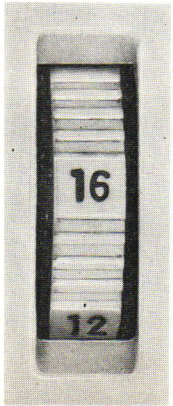
The film speed indicator is on the side of the camera. There are three speeds — 12, 16 and 24 fps. The figures indicate the number of frames exposed per second.

For general photography, use 16 fps. To speed up the action, use 12 fps. At this speed fewer frames are used for each movement making the action take less time. When the film is projected at normal speed the action appears quicker. This is effective, for example, when filming oncoming cars. The 12 fps speed can also be used when light is inadequate even for full aperture shooting.

If you wish to slow down fast moving objects, use 24 fps. This speed can also be used when shooting from moving vehicles, panning or making magnetic recordings for sound movies.

Frames per second	Shutter speed
12	Approx. 1/26
16	1/36
24	1/54

The Minolta Zoom 8 Electric Eye light meter is coupled to the frame speeds and always gives true exposure automatically. The above table is for manual setting when the automatic mechanism is disengaged.



SHUTTER BUTTON AND SAFETY LOCK

Shutter Button

Hold the camera securely so that it does not vibrate, (generally holding the hand grip in the right hand, hooking the fore finger onto the shutter button, and supporting the camera with the left hand,) and shoot by pressing the shutter button.

The film transport setting should be on **R,** for running. The **L** position is for lock.

Safety Lock

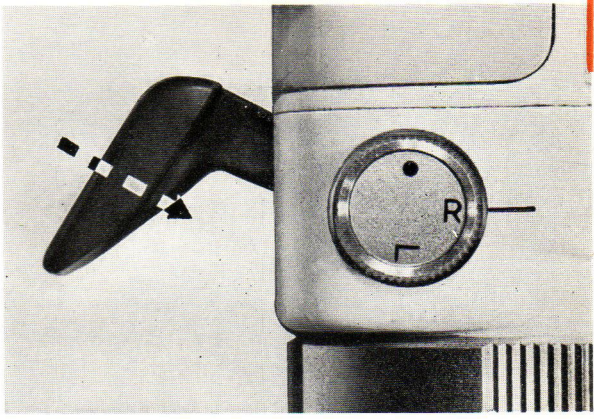
When the film transport dial is set at **L,** the shutter button is locked and accidental shooting is impossible.

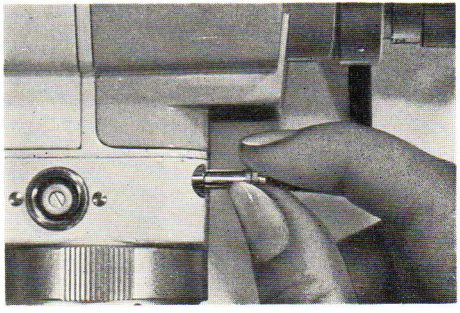
In addition to R and L, there is also a dot on the dial. This is for continuous run. To set the dial on the dot, first press the shutter button. Then turn the dial to the dot by continuing to press the shutter button.

To stop the camera, return the dial to R. (Please refer to "Remote Control" for the use of the dot)

Cable Release Socket

There is a cable release socket beside the shutter button for connecting a cable release or self timer. The film transport dial should be set at R when a cable release is used.





ELECTRIC EYE MECHANISM

The Minolta Zoom 8 is equipped with Electric Eye Mechanism, operated by a powerful CdS light meter. The extremely small light-receiving angle measures the true light of the subject only. Extraneous light cannot upset correct exposure. You get proper exposure just by looking through the finder and pressing the button.

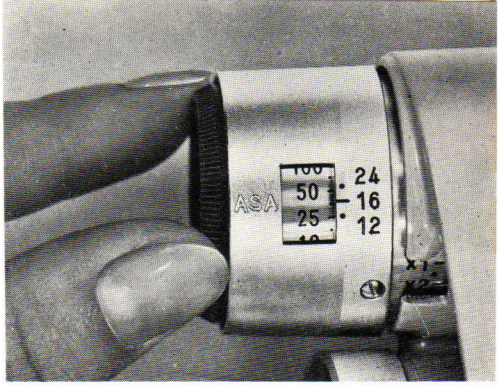
Setting the ASA speed of the film.

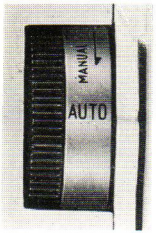
Set the film speed dial to correspond to the film you are using, (generally ASA 10 or 25 with color,). Also set the frame speed (12, 16 and 24 fps.)

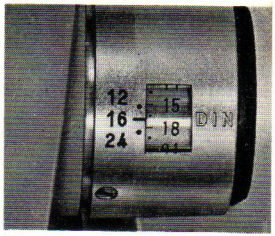
A DIN index is visible on the opposite side of the ASA speed dial. The Minolta zoom 8 accepts any film ASA 10 to 400.

10	25	50	100	200	400
(12.5) (16) (20)	(32) (40)	(64) (80)	(125) (160)	(250) (320)	

The upper part of the table shows the film speed indexes marked on the ASA dial. Intermediate film speeds are in the lower part of the table. There are corresponding dots on the film speed dial between the marked indexes.







Using the Electric Eye.

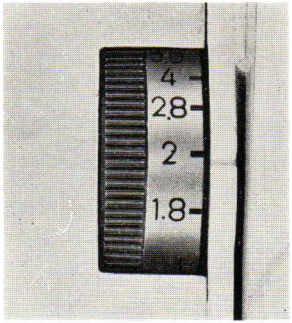
To use the camera automatically, merely set the Exposure Dial to "**A**" for auto. The meter will do the work for you, setting the proper aperture for the prevailing conditions.

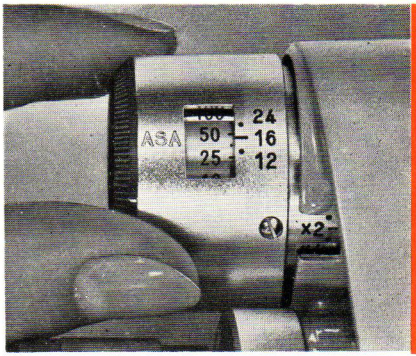
You just press the button for perfect pictures.

FILTER COMPENSATION RING

When you use the camera with a UV filter or without any filter, set the filter compensation ring at X-1.

Since most filters reduce the amount of light reaching the film, a larger aperture must generally be used to compensate for the filter factor. Turn the filter compensating ring to the required filter factor mark, such as x1, x2 or x4.





Manual Operation

Turn the Exposure Dial to "M" for manual, then adjust the diaphragm to the desired F stop, from F1.8 to F16. (By means of manual control, you can do fade-outs and fade-ins).

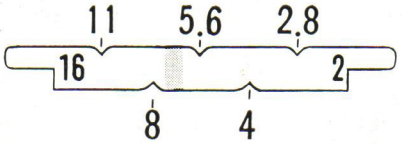
WARNING SIGNAL

As you look through the view finder, with the camera set for automatic operation, you will see various f/stop markings, from f/1.8 to f/16. Under normal light the needle will stop at the proper aperture within the range of marked f/stops.

- As long as the needle is visible in the finder, and does not disappear at either end your camera is set at the correct exposure.

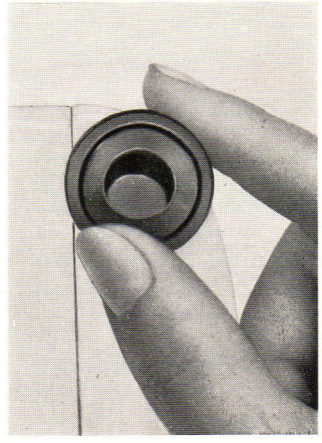
- If you cannot see the needle, and it is at the right side of the f/stop scale, you cannot take pictures because the light is too dim even for the widest lens opening (you may compensate for this slightly by changing the frame speed from 16 fps to 12 fps.) If this does not bring the needle into the proper range you must stop shooting or add extra lights.

- If the needle is at the left end of the scale, beyond f/16, your subject is too bright for the film. This happens occasionally when you are taking pictures of very bright beach or snow scenes. In these cases, reduce the light by means of a neutral density filter.



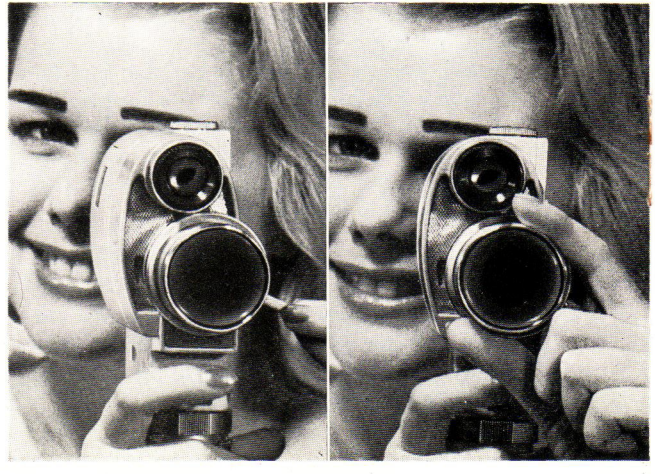
THE VIEW FINDER

In the viewfinder system of the Minolta Zoom 8, the diaphragm is placed behind a semi-reflecting prism. Therefore you always see a very bright image even at the smallest lens opening.
There is no parallax between the viewed image and the filmed image so parallax compensation is not required no matter how close the subject.

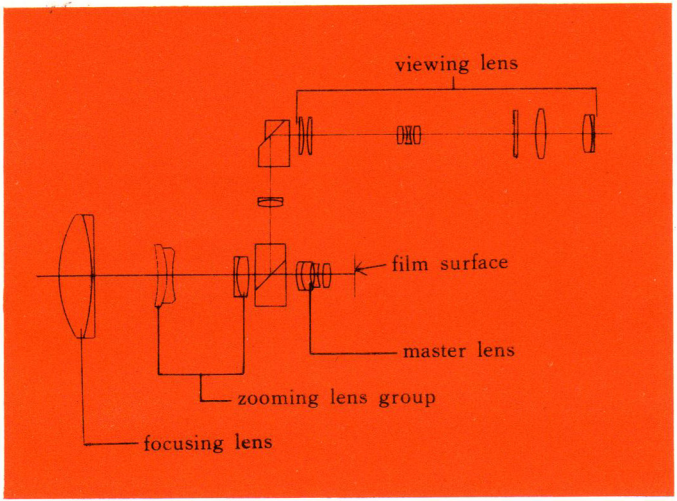


Focusing

Generally speaking, the distance scale on the lens barrel will give you more than adequate focusing results. Simply estimate the distance and set it on the scale. The reason for this is the very great depth-of-field in the Minolta lens. In other words, the range within which everything is in focus is very long. Therefore, it is not necessary to critically focus when you use the wide angle (10mm) setting. However, when you use the telephoto setting (30mm), you should be sure the lens is critically focused because the depth-of-field is considerably shortened at this setting. See the instructions on the following page.



Optical system



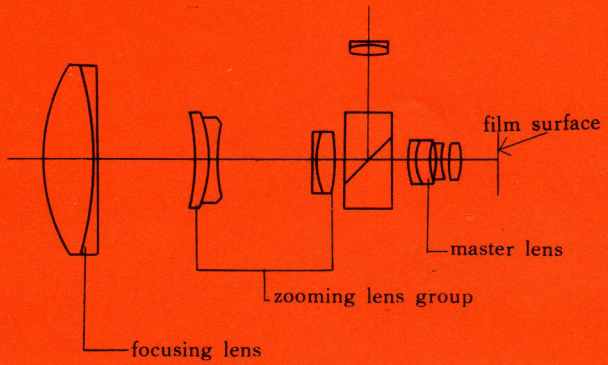
CRITICAL FOCUSING

Before focusing, look through the viewfinder and at the same time turn the eye piece until the viewfinder system is focused for your own eyesight. Once this adjustment is made, it is permanent as far as your personal use is concerned.

To critically focus on any object, set the lens at telephoto (30mm). Now look through the viewfinder and you will see a small screened circle. Look through this circle and turn the focusing ring of the lens barrel until your object is at its sharpest point. Now the lens is critically focused for telephoto shooting. After focusing, you may return the zoom lever to any setting you wish. The lens will always be in focus.


minolta

ZOOM ROKKOR


film surface
master lens
zooming lens group
focusing lens

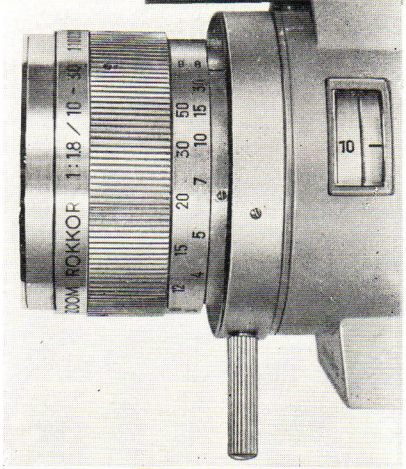
The Minolta Zoom 8 is equipped with newly designed Zoom Rokkor lens, having many advanced features.

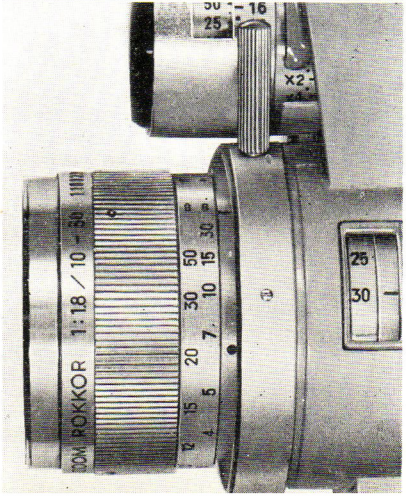
The 8mm frame size is very small (4.8×3.5mm). Yet it is projected on the screen some 100 times as large. For very large groups the magnification may be many times more. You can imagine, therefore, the critical sharpness that is required of the Zoom Rokkor lens.

The Rokkor lens has 10 elements in 7 groups. It is fast (F/1.8) and its focal length varies from 10mm (wide angle) to 30mm (telephoto).

As you look through the viewfinder, and turn the zoom lever, you will see the image change in size. That's why this one lens functions as many lenses. The focal length of any zoom position can be found inside the oblong window on the left side of the lens barrel. Focusing distance is also shown on the lens barrel in both feet and meters. The nearest focusing distance is 5 feet (1.5 meters).

The lens barrel has two sockets for the zoom lever. Use whichever is most convenient for you.





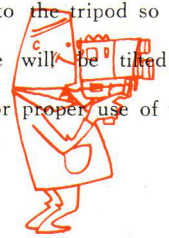
HOLDING THE CAMERA

Hold the camera with the camera grip in your right hand. Press the camera to your forehead and place your left hand over the top. A little practice will enable you to hold the camera quite steady.

Generally, the left hand is used to move the zoom lever. Move the lever slowly for the best zoom effects.

When using the lens at any focal length greater than 20mm, a tripod or other steady support is recommended. Try this and you'll see how much steadier the image will be on the screen.

Attach the camera to the tripod so that it is exactly vertical. Otherwise the image will be tilted on the screen. See "Remote Control" for proper use of the tripod.



REMOTE CONTROL

(1) When you use the remote control device, first remove the hand grip (battery chamber) from the camera by unscrewing the connecting ring. Then you will find a tripod socket at the botton of the camera.

(2) Connect the terminal of the remote control cord to the battery socket on the top of the hand grip.

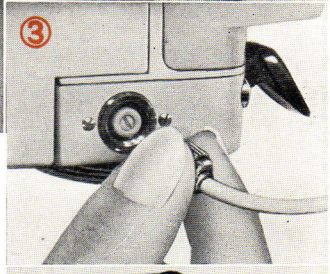
(3) The other end of the cord is attached to the remote control socket of the camera.

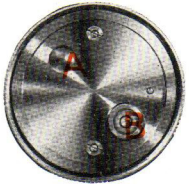
(4) Press the shutter button of the camera, and turn the transport dial from R to the dot for continuous running position. You can now operate the camera, by pressing the shutter button on the handgrip.

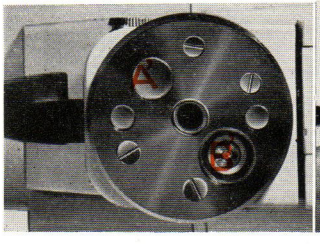
How to attach the hand grip

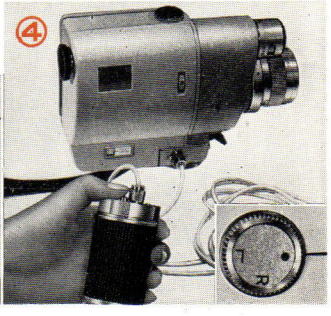
When you attach the hand grip to the camera, join A and B of the camera (indicated in the picture) with A' and B' of the hand grip and then screw the connecting ring.

- Shooting situations where the remote control device is valuable include candid photography, nature photographs, scientific research, as well as many others. This device can also be used to let you get in the picture.









REMOTE CONTROL

Two or three remote control cords can be connected with one another to make a longer cord. In this case, the resistance of the cord is increased and, therefore, the battery has to be new or it has to be checked thoroughly by the battery indicator.

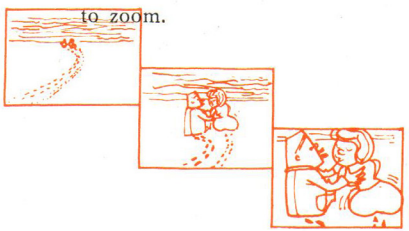
GENERAL INFORMATION

Length of scenes and frames per second:·····For general shooting, set the camera at 16 fps. About 5 seconds is the right length for each scene. (In 5 seconds, approximately one foot of film is used.) For moving objects 8 second scenes are better.

Zooming

Zooming is effective when you want to emphasize the principal subject by bringing it nearer to the audience or moving it away. But, do not use it too often, or you will lessen its effect on your audience

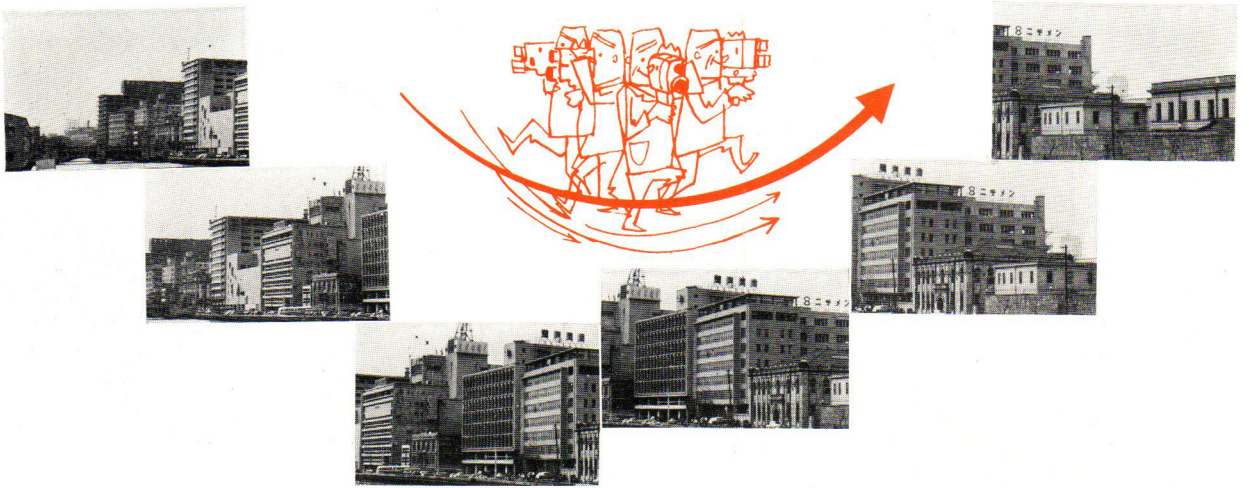
- The speed of zooming depends on the scene. Determine the effective speed by practice.
- During zooming, if the focal length goes beyond 20mm, a slight camera movement may spoil the scene. It is, advisable to use a tripod if you want to zoom.



PANNING

In movie cameras, you can pan during exposure to include more of the scene than your lens can cover from any single position.

- Pan slowly
- Pan smoothly without wavering
- 24 f/s is better than 16 f/s in panning
- Lead the scene into the subject, not out of the subject, when panning.
- Use a tripod when panning for better shots.



TITLES

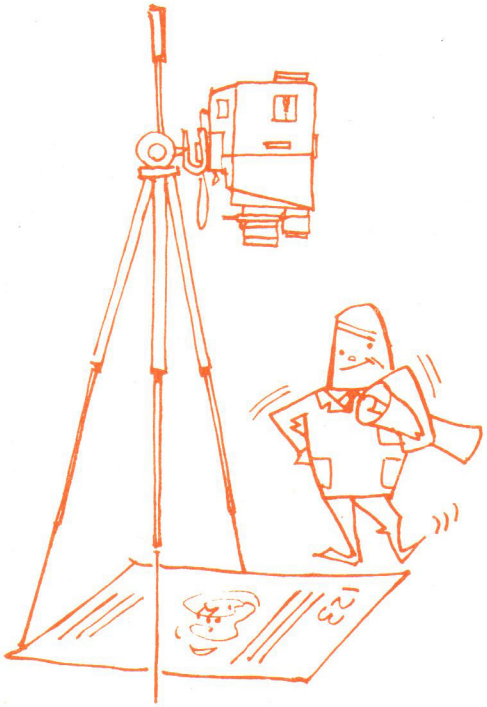
Even with sound movies, titles are important. In silent films titles are imperative since they tie the picture together.

The Minolta Zoom 8 is a single lens reflex camera that shows you exactly the area you are photographing. Therefore titles are very easy to make because there is no parallax correction problem. In addition, you can use zoom effects when making titles as well as when filming.

The nearest focusing distance of Minolta Zoom 8 is about 5 feet. But, with the zoom lever set at 30mm, you can frame as small an area as 5.7×7.5 inches without the need for attachment lenses.

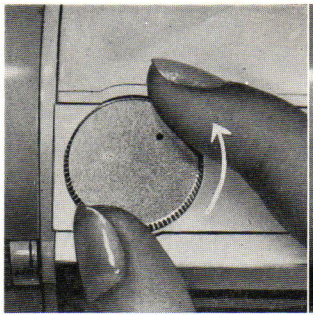
To get even closer to the title card, use a titler, or the close up attachment which will let you get to 15.7 inches from the subject.

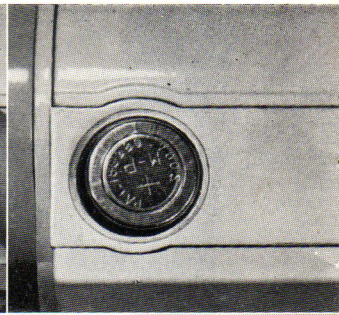
(When the camera is brought to ∾, with the aid of the close-up attachment lens, the area covered by the lens is only 1.8×1.3 inches at the 30mm focal length.)

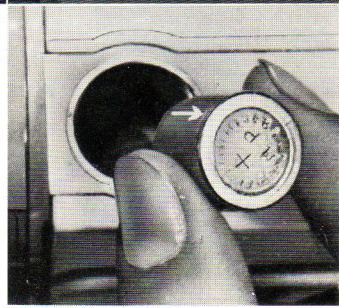


REPLACING THE BATTERY

- Unlike ordinary batteries, the mercury cell used for the CdS light meter loses its power suddenly when it is worn out, although its life is much longer than that of an ordinary battery, which loses its power gradually. This is one of the advantages of mercury cells over the dry batteries.
- When the mercury cell loses its power, the CdS light meter no longer works and you must replace the cell. Mercury batteries have about two years of working life.
- When the camera is to be stored, turn the auto lever to Manual to prevent draining of battery power.
- When you replace the mercury battery, remove the cover of the battery chamber on the top of the camera. Turn it counter-clockwise. Then replace the mercury battery with a new MALLORY RM-1 or National M-P Eveready. Insert the mercury battery with the + side facing up. The needle of the meter will not operate if the battery is incorrectly installed.







- When storing the camera for extended periods of time, keep it in a dry and cool place.

- Clean lens, finder window, light meter cell with soft clean cloth only, or brush gently with lens brush.

- The film gate should always be clean. When inserting a new reel of film, dust it with a soft brush.

- When taking pictures with your eye away from the finder, such as in titling, care should be taken not to expose the eye piece to strong light. Such light may go through the finder prism and reach the film.

- Even the versatile Electric Eye mechanism of the Minolta Zoom 8 camera can make a mistake when shooting back lighted or very contrasty subjects. In these cases, release the Electric Eye mechanism and take pictures by manual operation.
  If the subject has more bright areas than dark ones, open the diaphragm to one stop larger than the light meter measures. When the subject has a greater percentage of dark areas than light ones, but the light ones are important to you (a girl in a blue dress), close down one f/stop.

ACCESSORIES

FILTERS:

UV·····To reduce effect of ultraviolet light on color and B & W films.

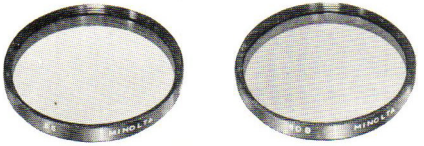
Y48·····To provide natural color rendering in B & W film

ND×4..To decrease light intensity, both for color and B & W.

COLOR FILTERS :

80B·····To use daylight type film in tungsten light.

85 ·····To use tungsten type film in daylight.



CLOSE-UP LENS

Close-up lens is conveniently used in taking title or short distance shots. It can take objects from 15.7 to 19.7 inches distance.

Zooming is also possible with this lens.

CLOSE-UP LENS

◦ The table below shows the relationship between the distance scale of the lens and the actual distance from the subject when the lens is used with the close-up attachment lens.

			The size of the object	
Close-up lens	range scale of the camera	distance of the object	The focal length of the lens used	
			f = 10	f = 30
50 cm	∞	50 cm	cm 17.4×13.2	cm 5.8×4.4
	1.5 m	41 cm	cm 13.7×10.3	cm 4.6×3.4

◦ Frames per second vs. shutter speed.

fps.	12	16	24
speed	1/27	1/36	1/54

DEPTH OF FIELD CHART (f = 10mm)

Lens Opening / Footage Setting		1.8	2.8	4	5.6	8	11	16
50 ft / 15 mt	Near	5′9″	4′1″	3′0″	2′2″	1′6″	11″	10″
	Far							
30 / 10	Near							
7	Far	∞	∞	∞	∞	∞	∞	∞
20	Near	5′4″	4	2′9″	2′1″	1′6″	11″	10″
5	Far	∞	∞	∞	∞	∞	∞	∞
15	Near	4′4″	3′6″	2′8″	2′	1′5″	1′1″	10″
4	Far		∞	∞				
12	Near		3′1″	2′4″				
	Far							
10	Near							
3	Far	∞						
2.5 7	Near	3′7″						
	Far	115′	∞	∞				
2 6	Near	3′3″	2 7	2 2				
	Far	31″			∞			
5	Near	0′3″			1 8			
1.5	Far	1 8″	∞	∞	∞	∞	∞	∞

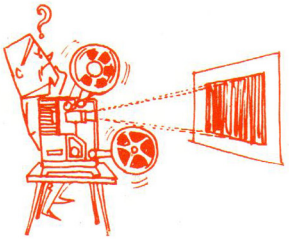
DEPTH OF FIELD CHART (f =20mm)

Lens Opening / Footage Setting		1.8	2.8	4	5.6	8	11	16
50 ft	Near	20′	16′4″	13′	10′5″	8′	6′5″	4′11″
	Far	∞	∞	∞	∞	∞	∞	∞
30	Near	16′	100′	11′	8′7″	6′10″	5′	3′8″
	Far	48′	13′1″	∞	∞	∞	∞	∞
20	Near	13′1″	11′	9′3″	7′7″	6′	4′9″	3′6″
	Far	42′	107′	∞	∞	∞	∞	∞
15	Near	10′7″	9′	7′10″	6′5″	5′3″	4′3″	3′3″
	Far	25′7″	34′	188′	∞	∞	∞	∞
12	Near	8′ 7″	8″	7′	6′	5′1″	4′	3′3″
	Far	18′ 6″	24′10″	107′	∞	∞	∞	∞
10	Near	7′11″	7′	6′ 4″	5′6″	4′7″	3′10″	3′
	Far	13′ 6″	16′10″	23′10″	∞	∞	∞	∞
7	Near	5′11″	5′ 5″	5′	4′6″	3′11″	3′ 4″	2′8″
	Far	8′ 7″	9′10″	11′10″	16′4″	37′ 5″	∞	∞
6	Near	5′ 2″	4′10″	4′ 6″	4′	3′ 6″	3′ 1″	2′6″
	Far	7′ 1″	7′ 9″	9′ 2″	11′ 7″	19′10″	143′6″	∞
5	Near	4′ 5″	4′ 2″	3′10″	3′ 7″	3′ 2″	2′ 9″	2′4″
	Far	5′ 9″	6′ 3″	7′ 1″	8′ 5″	11′11″	24′10″	∞

DEPTH OF FIELD CHART (f =30mm)

Lens Opening / Footage Setting		1.8	2.8	4	5.6	8	11	16
50 ft	Near	28′	27′	18′	15′	11′	8′	7′
	Far	190′	237′	∞	∞	∞	∞	∞
30	Near	19′	17′	14′	13′	9′ 8″	7′10″	6′
	Far	40′	56′	119′	∞	∞	∞	∞
20	Near	16′ 2″	14′ 8″	13′ 2″	11′ 7″	9′10″	8′ 3″	5′ 8″
	Far	26′	31′ 4″	41′ 4″	72′2″	∞	∞	∞
15	Near	12′10″	11′11″	10′10″	9′ 8″	8′ 6″	7′ 4″	5′11″
	Far	18′	20′ 6″	24′ 6″	32′10″	66′ 5″	∞	∞
12	Near	10′	9′ 6″	9′	8′	6′ 9″	6′	4′ 9″
	Far	15″	16′	20′	26′	52′	∞	∞
10	Near	9′	8′ 6″	8′	7′ 4″	6′ 7″	5′10″	4′11″
	Far	11′ 4″	12′ 2″	13′ 6″	15′ 8″	20′ 8″	34′ 4″	∞
7	Near	6′ 6″	6′ 2″	6′	5′ 7″	5′ 2″	4′ 8″	4′ 1″
	Far	7′ 7″	8′	8′ 6″	9′ 4″	11′	14′	25′
6	Near	5′ 8″	5′ 5″	5′ 2″	5′	4′ 7″	4′ 2″	3′ 9″
	Far	6′ 5″	6′ 9″	7′ 1″	7′ 8″	8′ 9″	10′ 5″	15′ 9″
5	Near	4′ 9″	4′ 7″	4′ 5″	4′ 3″	4′	3′ 8″	3′ 4″
	Far	5′ 3″	5′ 6″	5′ 9″	6′ 1″	6′ 9″	7′ 9″	10′ 4″

End



SPECIFICATIONS

Lens	:	Zoom Rokkor, F 1.8, 10-30mm
View finder:	:	Single lens reflex, ultra bright image, with adjustable eye piece for those who wear glasses.
Exposure system:		Electric Eye mechanism, connected with 12, 16 and 24 FPS, with films ASA 10-400. Manual operation is also possible.
Motor drive	:	Powered with electric micromotor, to be used with 4 readily available pen light batteries.
Dimensions	:	56×202×180mm, 1,200 grams.
Also	:	Battery tester and remote control feature.

PLEASE MAKE USE OF THIS TITLE IN YOUR HOME MOVIES.

Minolta masters photography

Minolta

MINOLTA CAMERA CO., LTD.

ED-8011

Printed in Japan