

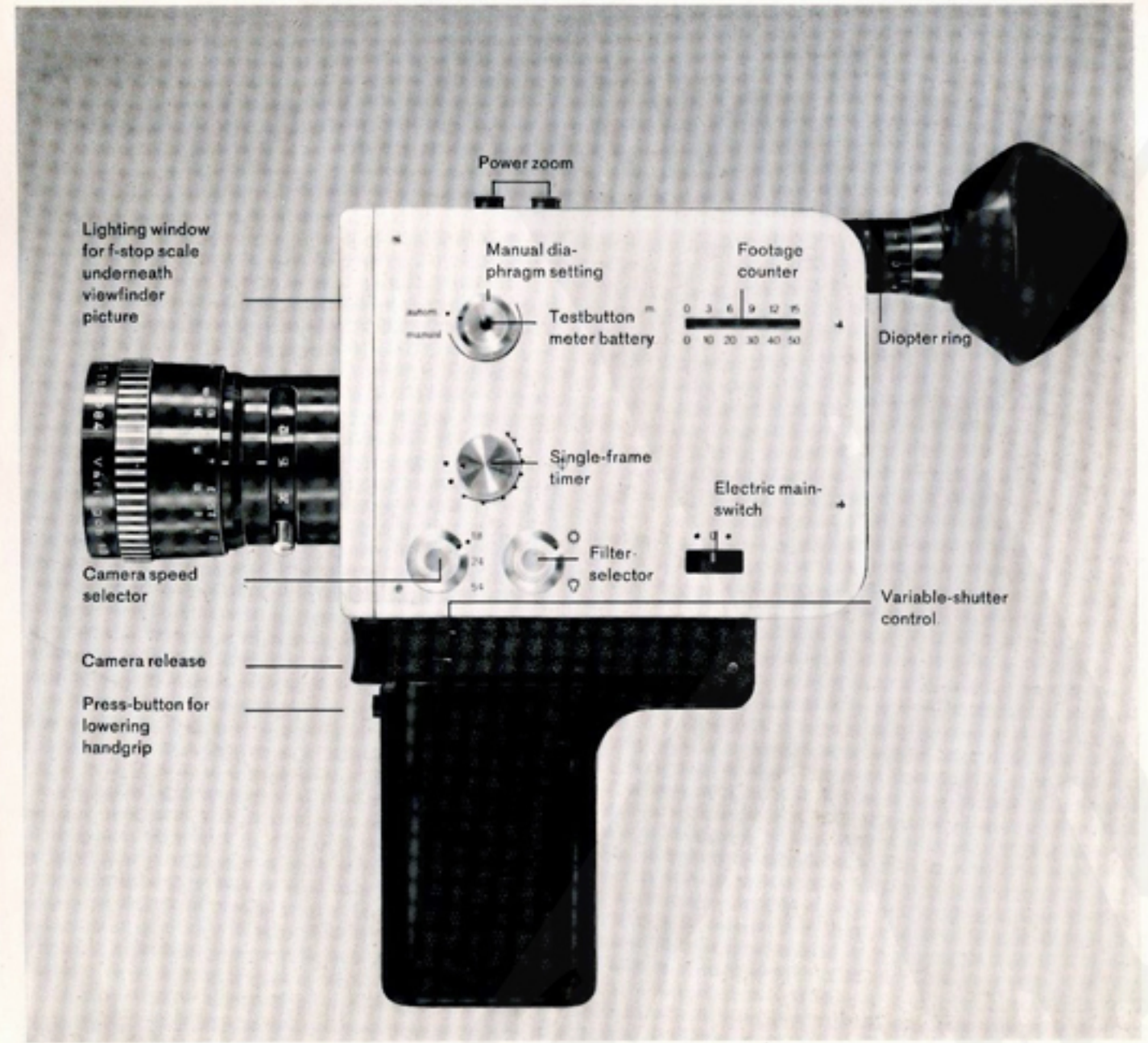
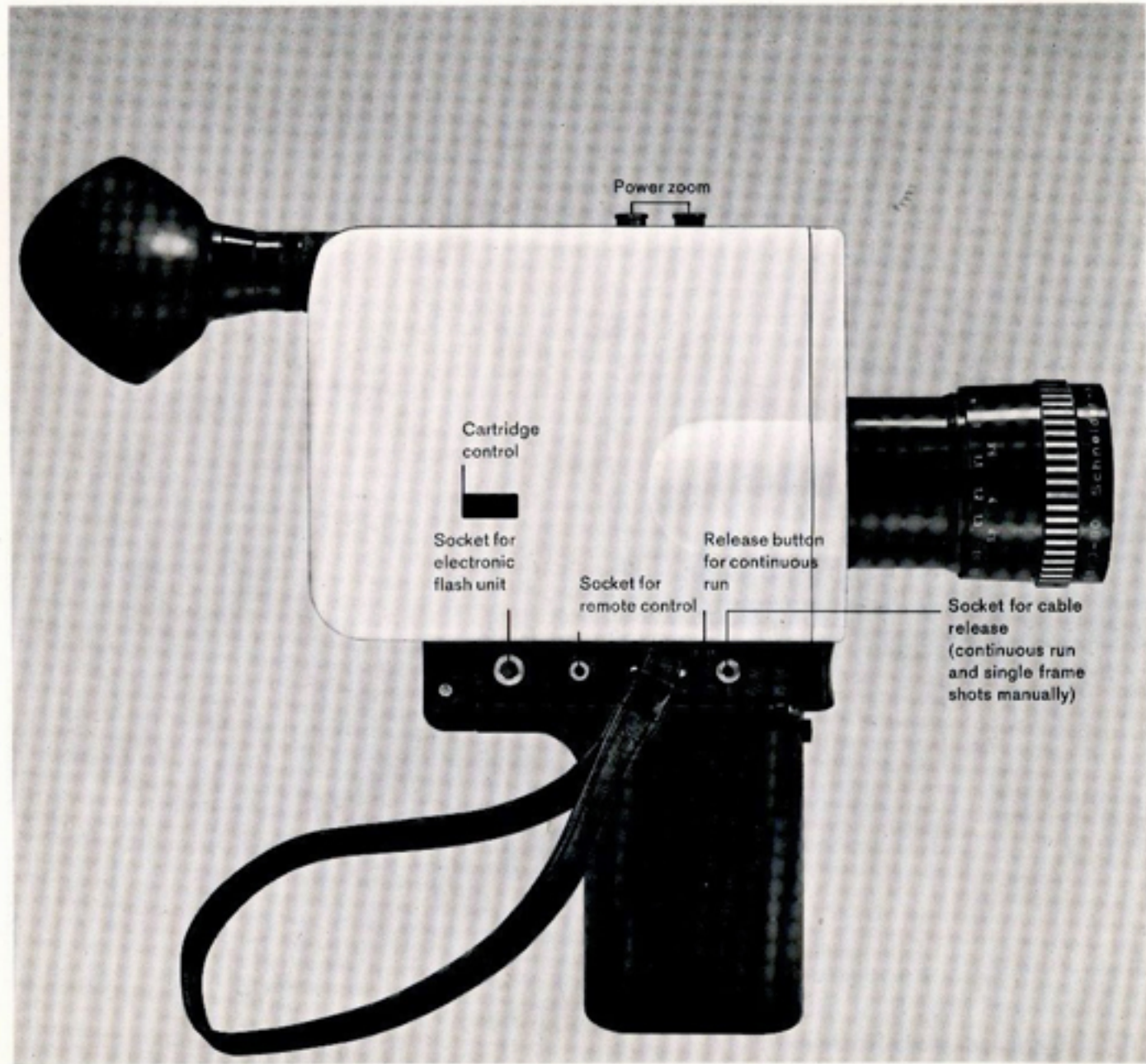
Nizo

How to use
your Nizo S 56
or Nizo S 80

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These instructions apply to both
Nizo S 56 and Nizo S 80, since
only the lenses are different.



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Instructions at a glance

For easiest shooting without even focusing, set all controls to the red marks:

1. Lower pistol grip and snap it into position.
2. Insert cartridge.
3. Turn aperture control to «automatic» (red dot).
4. Set speed to 18 f. p. s. (red dot).
5. Turn automatic timer to red dot.
6. Outdoors: Move the red triangle on the filter selector to the sun symbol, indoors to the lamp symbol.
7. Move main switch to «on».
8. Adjust viewfinder to suit your eyes. (Use diopter ring on eye piece)

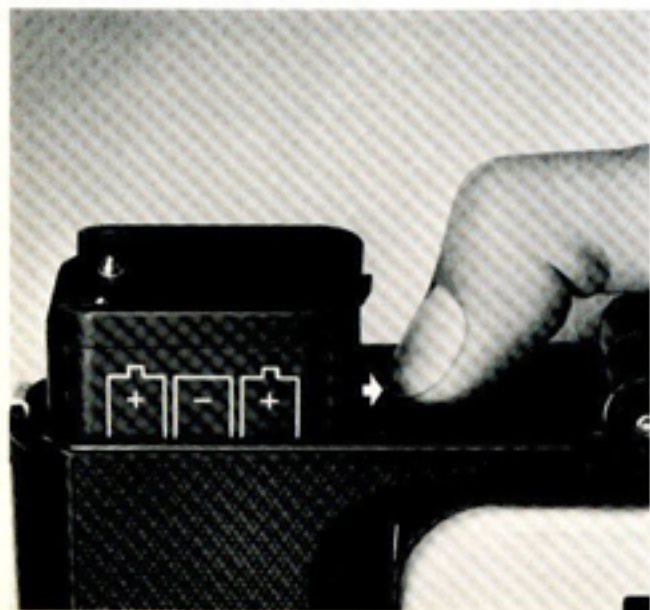
9. Focus camera through rangefinder with lens preferably set at the 80 mm Telephoto position. No focusing necessary when the combination of 15 ft. distance and 15 mm focal length is used. Both figures are marked in red on the respective control rings. Even at f:4 this combination gives a depth of field from 6 ft. to infinity.
10. Select focal length — and shoot.
11. When you are finished, turn main switch to «0».

Motor-drive battery

The film transport and the power zoom are driven by six 1.5 volt batteries located in the grip of the camera.

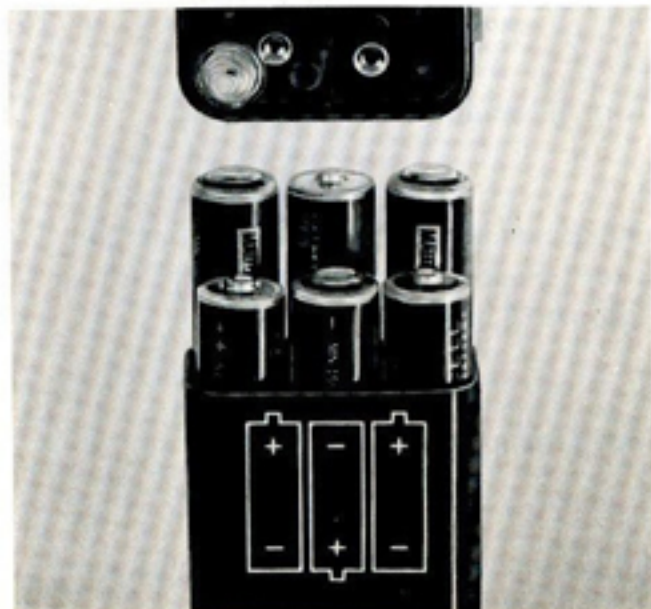
Press the button below the trigger and lower the pistol grip. Pull the latch in the upper part of the pistol grip and the battery box will slide forward. Tilt the camera and the box will drop into your hand.

Loosen screws on the bottom of the box until the lid comes off. Insert six 1.5 volt batteries as marked. Replace the lid and tighten screws. Registration pins of



different lengths insure the proper position of the lid. Insert box into battery chamber and press lightly until the latch snaps over the edge of the box. Return pistol grip.

Camera will not run unless batteries are properly inserted. Do not tinker unnecessarily with the slow motion speeds or the single frame timer, it is just a waste of current.



Testing the motor-drive battery

To check the operating voltage, move the main switch to the black dot and hold it in that position.

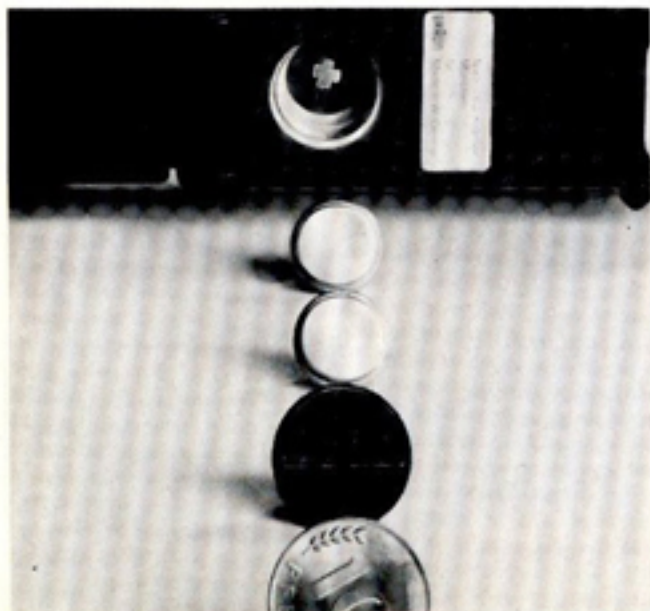
The aperture pointer in the viewfinder should move to the red 8 and beyond. If it does not, exchange the complete set of batteries. In the 0-position, the main switch disconnects the drive and meter batteries and prevents any accidental start of the camera. Folding back the hand grip, only disconnects the circuits of the drive batteries.

Meter battery

The automatic exposure control works on two wafer batteries. For normal temperatures the battery type Mallory PX 13 is recommended. It can be stored for two years.

With temperatures below 32° F the type Mallory PX 625 should be preferred. Storeable one year.

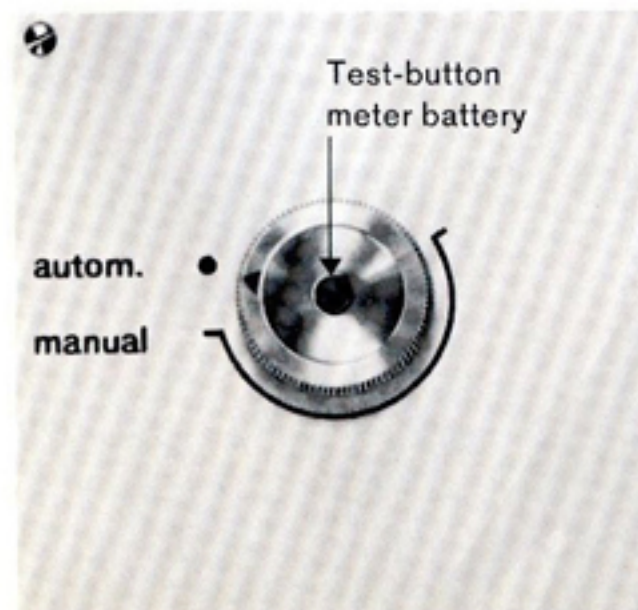
The battery chamber is in the bottom of the camera and readily accessible when the pistol grip is dropped. The cover can be unscrewed with any small coin.



The + mark of the first battery put into the chamber must face towards the bottom of the camera, the second one is placed on top of the first battery, also with the + mark facing the camera. Otherwise the automatic exposure control will not operate.

Testing the meter battery

Turn main switch to red dot. Press the button in the center of the exposure control. The aperture pointer in the viewfinder window should turn to the red 8. If it does not, be sure to exchange the meter batteries (Please note: Use only the above mentioned Mallory battery types).



Inserting the film cartridge

Open the cover in the back of the camera and insert the cartridge with the film opening toward the lens. Make sure the label on the cartridge points to the right, otherwise the cover will not close. Do not use force!

Inserting the film cartridge automatically adjusts the electric eye to the film speed.

The footage counter always returns to zero when the camera is opened, and operates even without a cartridge in the camera.



Filter Selector

The label on the film cartridge is visible through a window on the right (smooth) side of the camera, showing that the camera is loaded and which type of film is being used.

When the film transport works freely a soft light must appear from time to time above the viewfinder image. A bright red light warns that the end of the film is reached.

Keep the film gate in the cartridge chamber clean by using a long handled brush occasionally to remove dust.

At this time the only Super 8 Color film available is of the indoor type A responding to the low color temperature of movie lights. Therefore, a conversion filter is needed to adjust this film for outdoor uses. Turn the red triangle of the filter selector to the «sun» symbol when shooting outdoors, and to the «lamp» symbol when using movie lights indoors.

Split image rangefinder

To obtain really sharp pictures it is essential to adjust the viewfinder ocular to your eyes.

Turn the eye piece until the horizontal divider line in the rangefinder is in sharp focus. Point camera against plain background (wall, sky) so that the eye may concentrate on the divider line. People who wear glasses can get closer to the eye-piece and see better if they invert the rubber eye cup on the ocular. When focusing, observe first the vertical lines of the subject. If they are broken up at the divider line turn the focusing ring of the

lens until they are aligned. Do not worry if one-half of the image is a little darker. This has no bearing on the finished picture.

Once the camera is focused the picture will remain sharp regardless of the focal length used, as long as the object distance does not change. Actually, critical focusing is only vital when the light is bad, when you use long focal lengths (starting at about 30 mm) and when the distance between camera and subject is less than 10 ft.

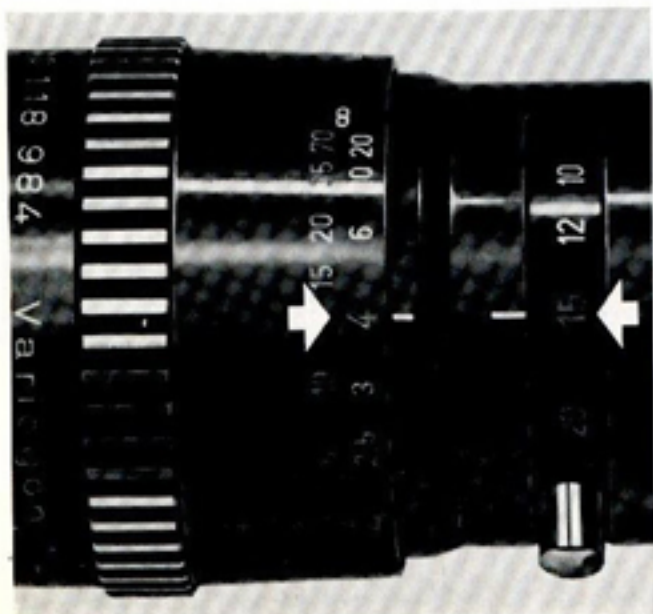
If there is no time for focusing you can take advantage of the greater depth of



Power Zoom

field at short or medium focal lengths. You will notice that the 15 ft. mark on the focusing ring and the 15 mm mark on the focal length ring are red. Using this combination will give you a depth of field from 6 ft. to infinity even under relatively poor light conditions at an aperture of f:4. The closer the focal length approaches the wide angle position the greater will be the depth of field.

If distances are checked with a tape, work from the small mark (black circle with the vertical line) near the timer switch for single exposures.



The controls for the power zoom are on top of the Nizo S 56 and the Nizo S 80 camera. The black button (closer to the lens) moves the lens towards the wide angle, the green button (nearer the viewfinder) towards the telephoto position. There are two zoom speeds available: if you press the control button lightly the zoom will be slow, if you push it down firmly the zoom will be fast. The zoom effect can be further slowed down by the use of one of the two slow motion speeds. Of course, any focal length can be set manually, if you want to change quickly just before starting the camera.

Motor speeds

The Nizo S 56 and the Nizo S 80 has 3 speeds, 18, 24 and 54 frames per second (f. p. s.). Movies taken at 18 f. p. s. will show normal timing and movements, when projected at standard speed (18 f. p. s.).

24 f. p. s. should be used when panning or shooting from moving vehicles. When projected at the standard speed of 18 f. p. s. all motions will appear to be one-third slower.

54 f. p. s. produces true slow motion. When projecting at the standard speed of 18 f. p. s. everything will appear to be three times slower than normal. Any action too fast for the eye to follow can now be closely observed.

Even while filming it is possible to switch from 18 or 24 f. p. s. Press the thumb on to the speed switch and turn it clockwise.

At 18 f. p. s. each frame is exposed 1/43rd second, and at 54 f. p. s., 1/129th second. The electric eye automatically adjusts for these changes. Avoid playing unnecessarily with the slow motion speed because it uses a lot of battery current.

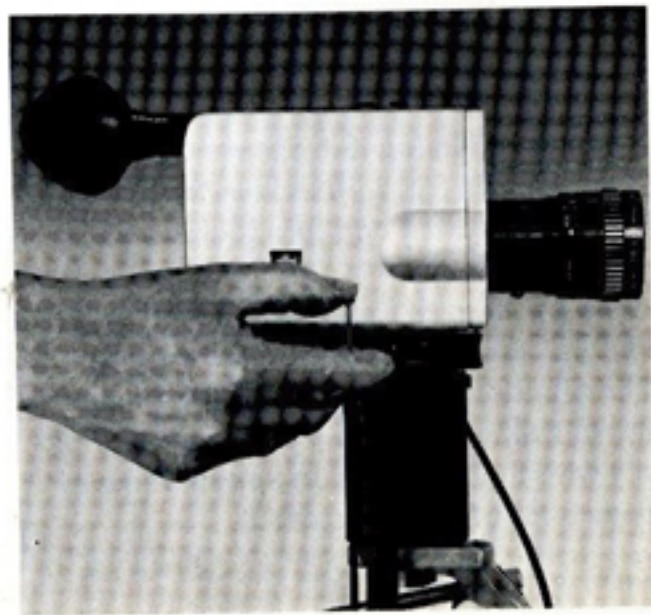
How to hold camera and how to start it

Nizo cameras may be used with the left or the right hand. Reach through leather strap and hold camera firmly by the pistol grip. Your index finger will easily reach the trigger. Hold viewfinder to your eye. The eye cup keeps it in the right viewing distance. Position yourself firmly on a fairly even spot with legs slightly apart.

If the film transport works right, a soft light will flash regularly above the viewfinder image. The closer you get to the end of the film the slower the flashing rhythm. If these signals stop at all during shooting the film transport is out of order.



The camera may also be started by a cable release (right socket on camera base), electrical remote control (middle socket), or through the time lapse release (automatic single frame exposure). More details on these features in the respective sections of the manual.

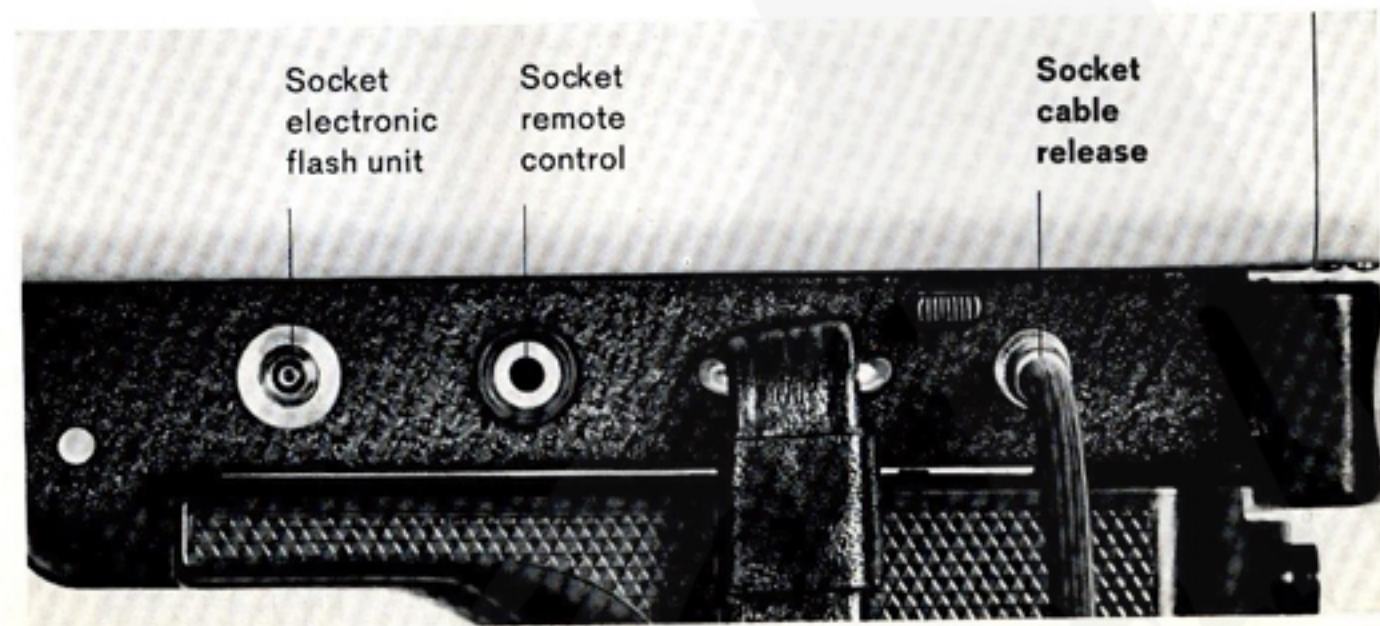


Using a tripod

For the sake of steadier pictures on the screen it always pays to use a tripod. This is particularly true when you want to use pan or zoom. A tripod becomes indispensable for single frame exposures when making trick films with the automatic time lapse, or when using focal lengths above 30 mm.

The camera is attached to the tripod with the pistol grip in position, using the thread at the bottom of the grip. The adapter in the socket may have to be removed depending on the screw in the tripod head. If you want to use a cable release while

the camera is on the tripod — or at any other time for that matter — insert it in the first socket from the right on the camera base.

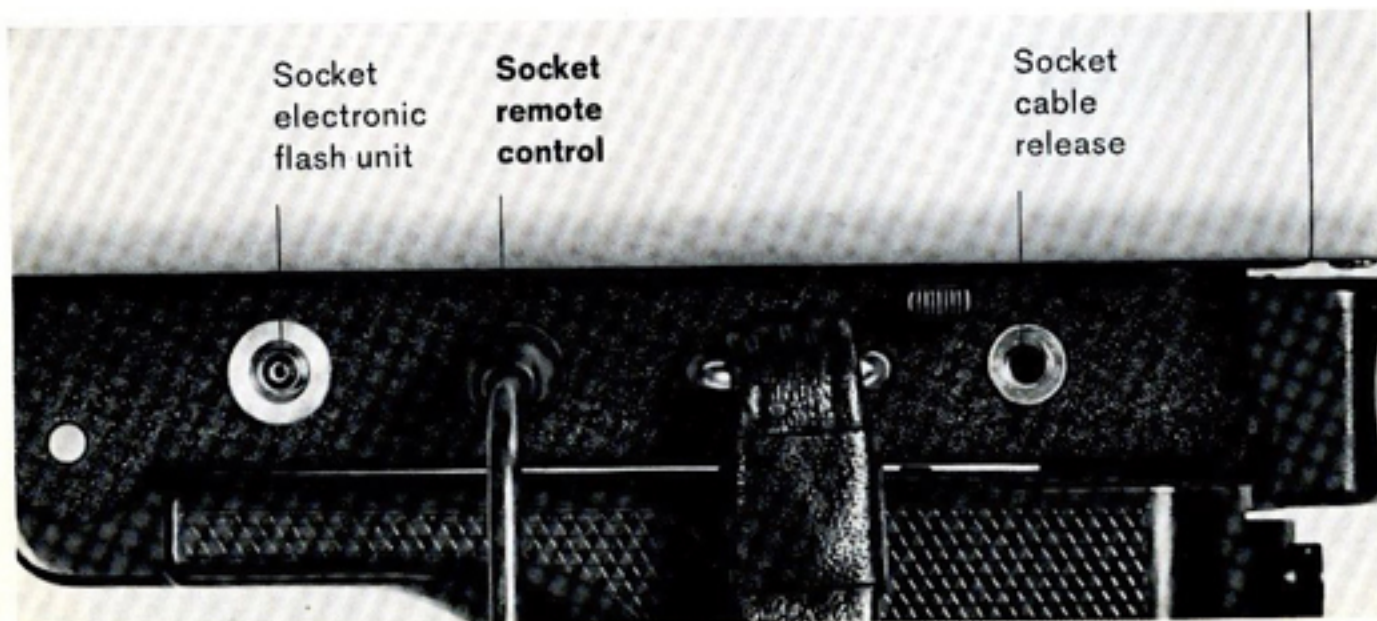


Electrical remote control

The Nizo S 56 and the Nizo S 80 can also be operated by remote control through a built-in magnet. Cables of 30 ft. length with push button switch are available as accessories.

Several cables can be connected. The receptacle for the cable extensions is next to the push button switch.

Remote control allows movies with the camera hidden some distance away (wild-life pictures etc.). It can also be used when the cameraman himself wants to appear in the scene.



Place your Nizo S 56 and Nizo S 80 in position — preferably mounted on a tripod — focus and keep the exposure control at the «automatic» setting. Insert cable end into the middle socket.

Be careful not to move the camera from its position, or, worse, pull down the tripod while you are busy laying out the remote control cable.

Exposure control

The exposure control of the Nizo S 56 and the Nizo S 80 automatically selects the right opening.

The f-stops are visible and may be checked in the viewfinder. However, the readings will only be accurate if the camera is loaded since the cartridge itself adjusts the system to the film speed. When there is not enough or too much light to take pictures the pointer in the viewfinder stops in the red segments on either end of the scale. (Beyond f:2.5 when there is not enough light, beyond f:22 then there is too much light).

If there is not enough light you will have to stop taking pictures unless you are indoors and can use movie lights.

But if there is too much light the new adjustable diaphragm of the Nizo S 56 and the Nizo S 80 can cut down exposure times and this makes it possible to continue shooting. (See section: Adjustable Diaphragm).

The automatic exposure control can be shut off and any f-stop set manually. Turn the knob from «automatic» to «manual» and continue turning until the aperture

pointer in the viewfinder is at the desired f-stop.

This manual control — or override — is used to correct automatic readings, if the electric eye of the exposure meter is too strongly affected by a background which is much brighter or darker than the main subject. In this case point the camera, set on «automatic», towards the subject from a short distance or point it towards a similarly lighted, more accessible subject. Read the correct f-stop and set it manually. Or — zoom in on the important subject, note the f-stop reading, set it manually, change to the desired focal length and shoot.

Here is an example: In beach or snow scenes the automatic exposure control will be affected by the reflection of sand or snow, and a person in this kind of surrounding would be under-exposed. Obviously the automatic reading needs correction through manual override.

Close-up lenses

You have a choice of 3 lenses for extreme close-ups. Combining with these the long focal lengths of the Variogon makes it possible to cover very small areas and reproduce subjects more nearly life-size. This opens up the fascinating world of Macro photography. There is no need to go into further optical details here. Much depends on the choice of the focal length in each case and other factors which can only be shown in tables. However, each Nizo close-up lens is furnished with such tables giving exact information on field of view, taking distances, depth of field, etc.



Using Nizo close-up lenses usually requires no f-stop corrections, but exact focusing and a tripod are mandatory.

Close up lenses for the Nizo S 56:

Nizo NL 1 40" to 19"

Nizo NL 2 20" to 13"

Nizo NL 3 13" to 10"

Close up lenses for the Nizo S 80:

Nizo NL 801 60" to 29"

Nizo NL 802 32" to 20"

Nizo NL 803 20" to 15"

Single frames

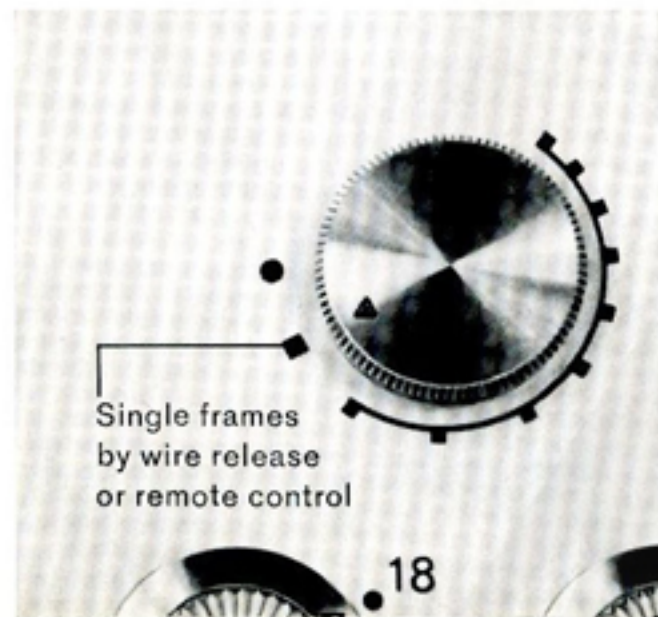
A movie camera with single frame exposure can be used for

1. Time lapse filming
2. Animation (Trick films)

This is an example of time lapse photography: The movement of clouds seemingly standing still can be made visible through a sequence of pictures taken seconds apart. Because of its automatic timer the Nizo S 56 and the Nizo S 80 is ideal for this purpose. This is an example of a trick film: Dolls wave their arms and legs when they are moved slightly between

shots. In most instances the camera is triggered with a cable release when making trick films. This is the easiest way to control the intervals between the exposures which depends on the preparation of the subject for the next picture.

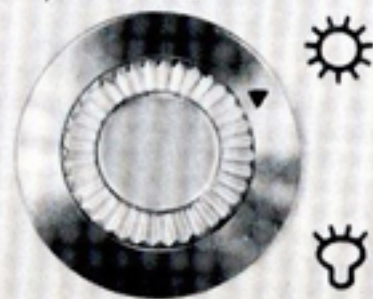
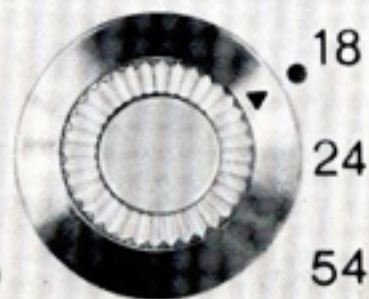
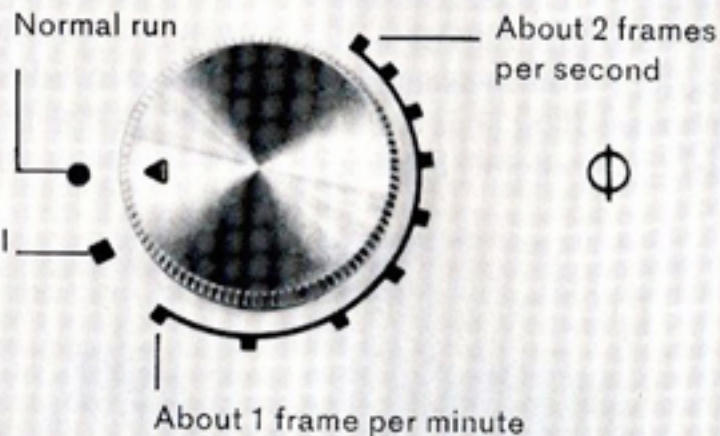
The cable release should be inserted into the first socket from the right on the camera base. Turn the timer switch to the first square marking next to the zero position. Instead of the cable release electric remote control can be used for single exposures or — although rarely — the camera trigger.



manual



Single frames by wire release or remote control



Single frames with automatic timing

When the timer switch is turned counter clockwise to the second or any of the following markings each exposure is made automatically at set intervals. These get shorter as you continue turning the switch. The time sequence may be set either before or during the shooting. The timer has a range from about two pictures per second to about one picture per minute and more.

Place camera on a tripod or an otherwise firm support, select 18 f. p. s. as speed and turn the automatic timer to a random position.

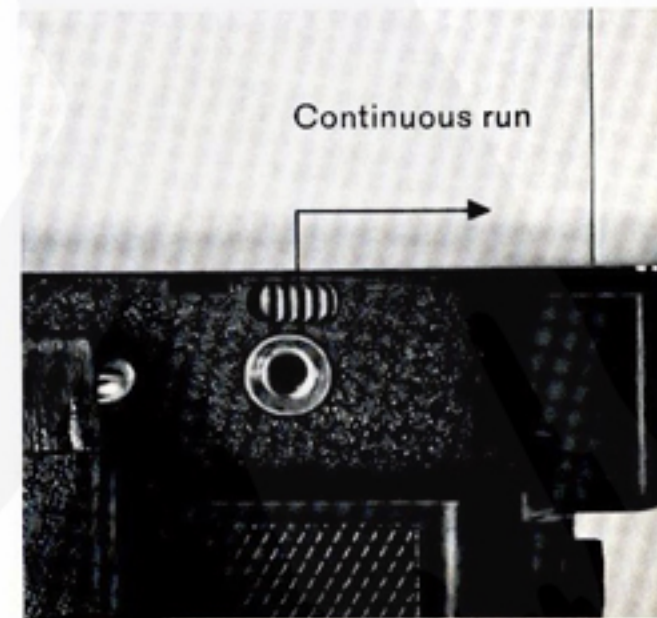
Unlock the release button for continuous run (at the right of the camera base) by lifting it, and push it forward.

The automatic timer will now take over. (Patience please! You may have set it for one minute, and those 60 seconds are a long time). Determine the correct intervals and set the timer accordingly.

Of course, instead of having the camera running continuously, which is recommended for extended filming, any other type of release can be used (trigger button, remote control, cable release).

Needless to say, the camera must not be moved under any circumstances during a picture series. If it should happen accidentally, stop and start all over again after adjusting the focal length or the camera position.

Single frames are always correctly exposed at a speed of 18 f. p. s. Time lapse photography can «speed up» very slow, or even barely noticeable movements for study and observation. On the other hand it creates dramatic or even grotesque effects when applied to quite ordinary events.



Projection Time at 18 f. p. s.																				
Slow Motion			Standard			Time Lapse														
Pictures per second						Taking Time			Time Interval between single frames in seconds											
54		24		18					0,5	1	2	4	8	15	30	60	120			
Min	Sec	Min	Sec	Min	Sec	Hour	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec		
3		1,33		1				1												
6		2,66		2				2												
12		5,33		4				4	0,44											
24		10,66		8				8	0,89	0,44										
45		20		15				15	1,66	0,83	0,42									
1	30	40		30				30	3,33	1,66	0,83	0,42								
3		1	20	1				1	6,66	3,33	1,66	0,83	0,42							
		2	40	2				2	13,33	6,66	3,33	1,66	0,83	0,44						
								4	26,66	13,33	6,66	3,33	1,66	0,89	0,44					
								8	53,33	26,66	13,33	6,66	3,33	1,78	0,89	0,45				
								15	1	40	50	25	12,5	6,25	3,33	1,66	0,83	0,42		
								30	3	20	1	40	50	25	12,5	6,66	3,33	1,66	0,83	
							1			3	20	1	40	50	25	13,33	6,66	3,33	1,66	
							2				3	20	1	40	50	26,66	13,33	6,66	3,33	
							4					3	20	1	40	53,33	26,66	13,33	6,66	
							8						3	20	1	47	53,33	26,66	13,33	
							16									1	47	53,33	26,66	
							24									2	40	1	20	40

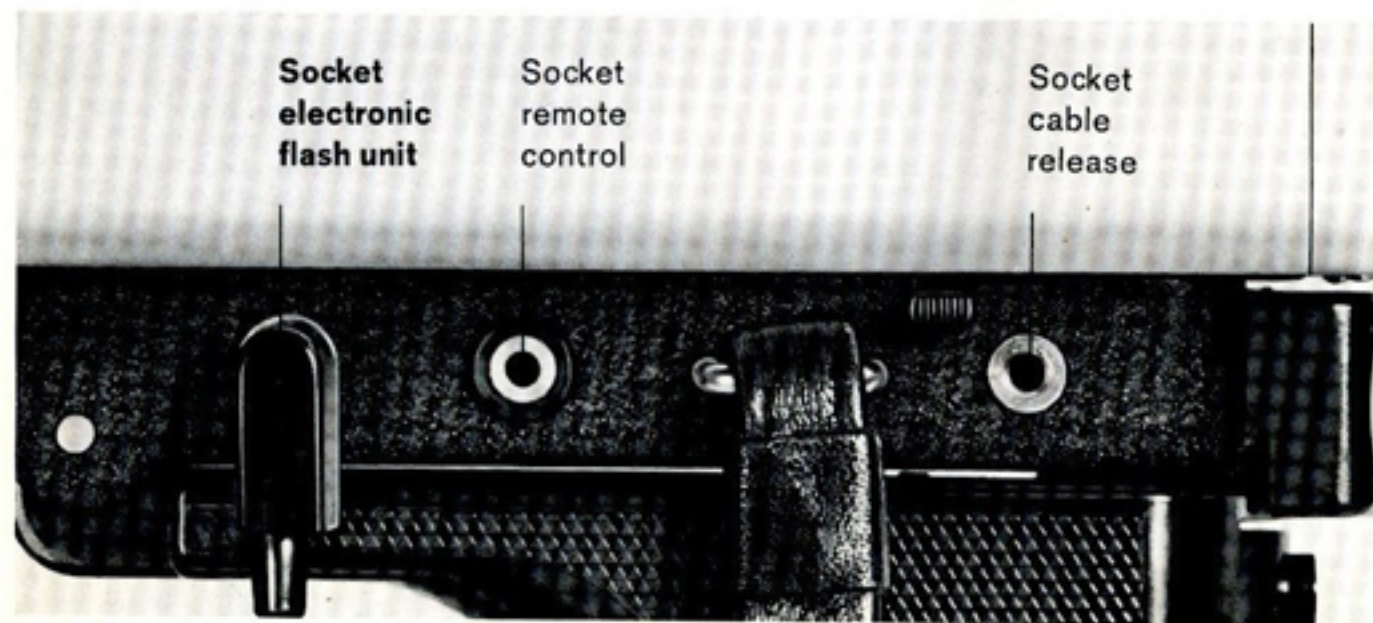
Single frames with flash synchronization

A good example of what can be done with a combination of time lapse and flash is a motion picture record of a rare phenomenon: The opening of a *Victoria regia* blossom in the course of a night. Using an automatically triggered Nizo S 56 and the Nizo S 80 such a movie practically makes itself. When projected, the film will show every detail of the process, including normally unnoticeable movements of the plant.

Since flood lights can not be used in this or similar cases electronic flash offers the only solution. Make sure that the interval between the pictures is longer than the



recycling time of the flash unit. The f-stop must be set manually. F-stops used on still cameras under similar conditions should be increased by one opening (for instance, from f:8 to f:5.6). As with any other camera, the electronic flash can be attached with a bracket. The plug should be inserted into the left socket on the camera base.



Adjustable diaphragm

For the perfect fade-in and fade-out, in any light, use the adjustable diaphragm. To do this with the Nizo S 56 and the Nizo S 80 not even a tripod is necessary.

Fade-out:

Hold the camera as usual. Move the lever in the camera base (on the left side, underneath all the other controls) as far back as it will go. Do it slowly and evenly while the camera is running.

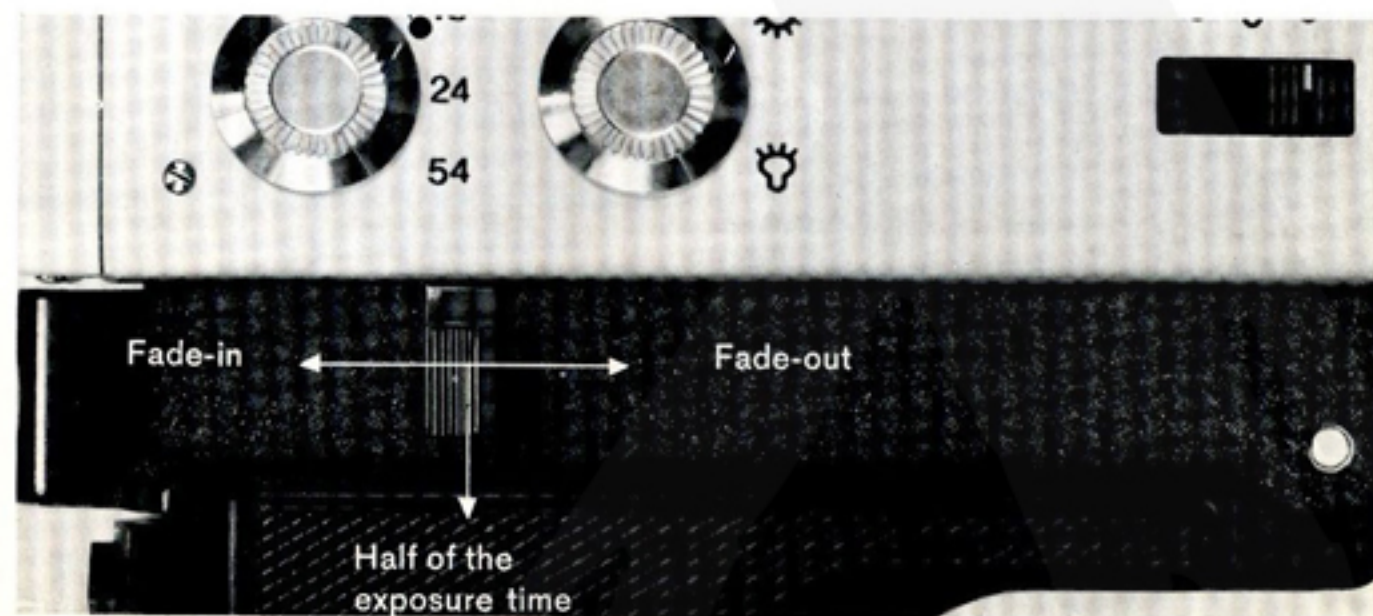
Stop the camera (let go of the trigger button) and then, not before, slide the lever back to its starting point.

Fade-in:

Before starting the camera, move lever to the rear stop. Now start the camera and return the lever to its forward stop. Do it slowly and evenly.

Halfway between the front and the rear stop there is a catch. To lock the lever in this position press down on it lightly and then release it. Now the exposure time at 18 f. p. s. is 1/86th second instead of 1/43, in other words it is cut in half.

The automatic exposure control makes up for this by opening up the lens diaphragm



Adjustable diaphragm

by one stop. On this basis it continues to supply the correct amount of light.

This special feature of the Nizo S 80 offers these advantages:

1. The camera can be operated even in excessively bright light where the aperture pointer in the viewfinder would normally move into the danger area. (Neutral density filters are therefore unnecessary).
2. Opening the lens diaphragm by one stop decreases depth of field. This means that by keeping the background out of

Time of exposure with variable shutter half closed		
Camera speed	Variable shutter	
	open	half closed
One single frame	1/43	1/86
18/Sec	1/43	1/86
24/Sec	1/57	1/115
54/Sec	1/129	1/258*

focus the main object will stand out more and properly become the center of attraction.

3. The greater shutter speed decreases the danger of blurring and thus gives better definition when filming fast moving objects.

* Not recommended. The diaphragm will not be set automatically.

Titling

The Nizo S 56 and the Nizo S 80, with its many special features, makes Titlers superfluous. The main function of Titlers is to eliminate parallax. Because of parallax the picture seen by the viewfinder is different from that seen by the lens. The Nizo S 56 and the Nizo S 80 as a reflex camera has no parallax. What is more important, it has a zoom lens with many focal lengths. Therefore, the distance between the camera and the copy board need not be changed, yet the titles can be reproduced in any size. Place the camera on a tripod, or if there is no tripod handy, on a table or any other steady support. Zoom in on the copy until it fills the frame. Be sure that the copy board is well and evenly illuminated and that the title sequence is long enough so that there is time enough for the viewer to read the titles on the screen. To avoid mistakes read the title aloud yourself while the camera is running.

Nizo

How to use
your Nizo S 56
or Nizo S 80