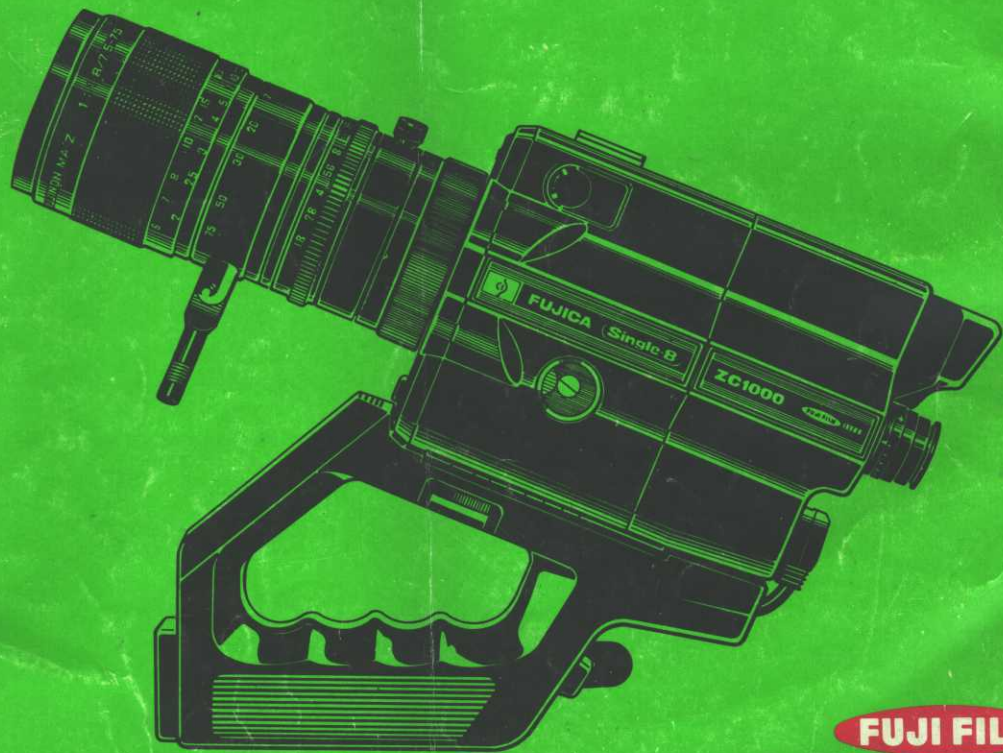


FUJICA
Single-8

New **ZC1000**

OWNER'S MANUAL



FUJI FILM

Thank you for choosing the FUJICA Single-8 ZC1000. We are sure you will like it.

This camera has many features which are not provided in other 8mm movie cameras. Please read this manual carefully so that you can take full advantage of its capabilities and enjoy all the pleasures of 8mm movie-making.

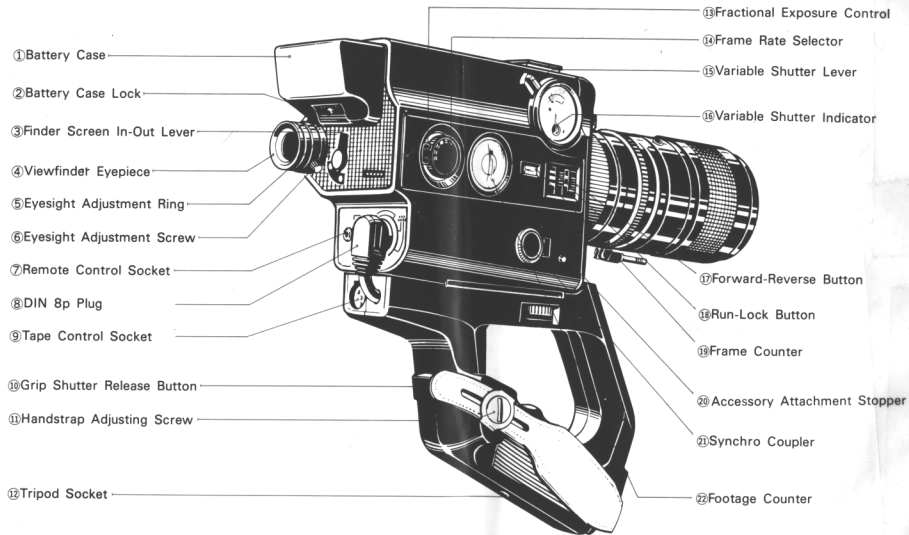
SPECIAL FEATURES

Your FUJICA Single-8 ZC1000 is an interchangeable lens camera. It comes with a 10 \times magnification macro-zoom lens, and this alone will let you shoot in most situations, but it will also take wideangle and telephoto lenses to let you shoot wide scenes from short distances as well as close-ups of distant subjects.

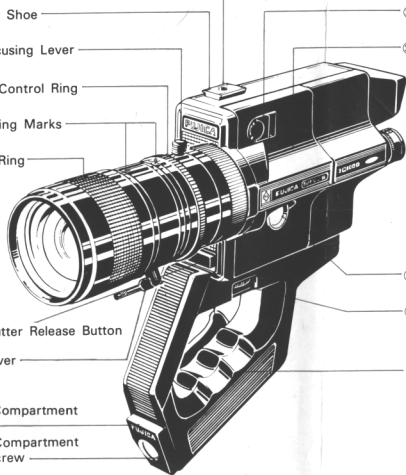
This camera can also be mounted on microscopes, endoscopes and other optical instruments for taking pictures of objects too small to see with the naked eye, for taking pictures of the insides of the human body, etc.

Its other features include 72 fps high speed shooting for taking slow-motion movies, single-frame exposure for taking trick shots, easy-to-see return mirror viewfinder for an extra-clear view of the subject, simultaneous recording of lip-synchronized sound and picture, and digital frame counter for simplified shooting of lap-dissolves, superimposed pictures and time-lapse shots.

NAMES OF PARTS

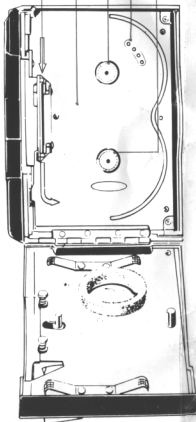


- 23 Accessory Socket
- 24 Accessory Shoe
- 25 Macro-focusing Lever
- 26 Aperture Control Ring
- 27 Lens Setting Marks
- 28 Focusing Ring
- 29 Body Shutter Release Button
- 30 Zoom Lever
- 31 Battery Compartment Cover
- 32 Battery Compartment Cover Screw



- 33 Film Chamber Lock
- 34 Film Chamber Door
- 35 Film Chamber Window
- 36 Grip Securing Screw
- 37 Grip (holds batteries for high speed photography)

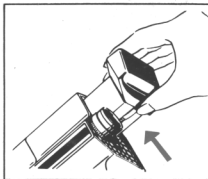
- 38 Take-up Spindle
- 39 Film Speed Setting Pin
- 40 Feed Spindle
- 41 Film Chamber
- 42 Film Gate



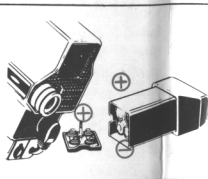
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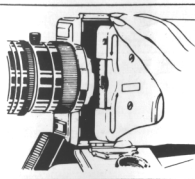
MAIN OPERATION POINTS



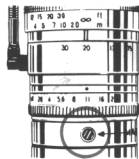
1 Press up the Battery Case Lock (2) and pull out the Battery Case (1).



2 Place 4 penlight batteries in the Battery Case (1) and insert the case in the camera battery case compartment. Also load 4 penlight batteries in the Grip (7). The grip batteries are used for high speed shooting.

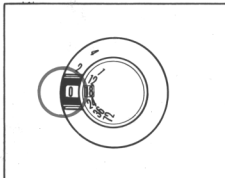


3 Drop the film cartridge in the Film Chamber (4).

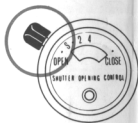


4 Make sure the Macro-focusing Lever (25) is set on the top side of the lens barrel in line with the Lens Setting Marks (27)

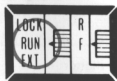
← Set the controls (the inscriptions in green are your guide). →



5 (1) Set the Fractional Exposure Control (13) at 0 and the Frame Rate Control (14) at 18.



(2) Set the Variable shutter Lever (15) at OPEN.



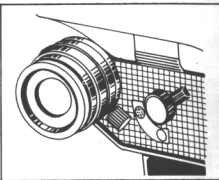
(3) Set the Run-Lock Button (16) at RUN.



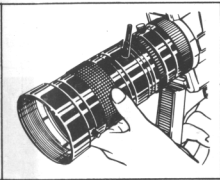
(4) Set the Forward-Reverse Button (17) at F.



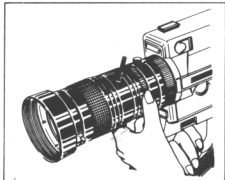
6 Press down the Body Shutter Release Button ⑩. If the cartridge spindle turns, the batteries are properly loaded.



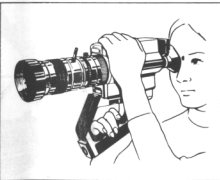
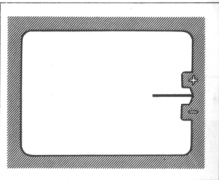
7 Set the Finder Screen In-Out Lever ③ at ④, adjust the lens to your eyesight by turning the Eyesight Adjustment Ring ⑤ and lock it there.



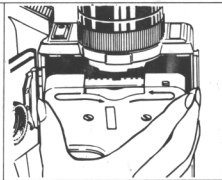
8 Set the Lens focal length at 75mm, set the aperture at wide open, and focus the lens. (Be sure to focus with the Finder matte Screen.)



9 Press the Shutter Release Button ⑩ or ⑲ about halfway down and turn the Aperture Control Ring ⑳ to bring the needle in the viewfinder in the center of the bracket (between the (+) and (-) signs.)



10 Grip the camera, compose your picture, and shoot by pressing the Shutter Release Button all the way down.



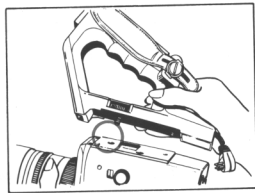
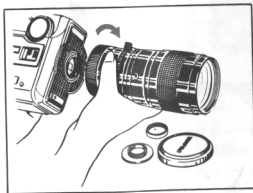
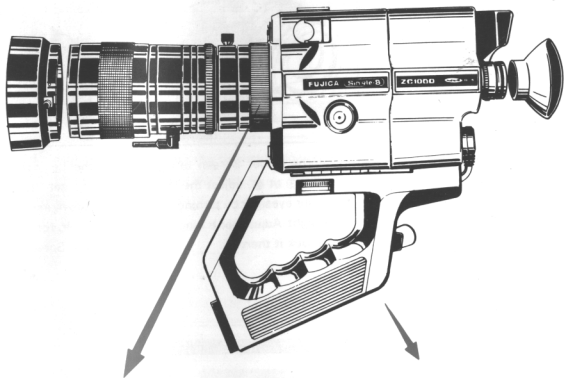
11 After exposing the entire roll of film, drop out the cartridge and send it out for processing as soon as you can.

PART I BASICS

This manual is divided into two parts: Basics and Advanced Techniques. A thorough mastery of the basics is recommended before proceeding to the more advanced techniques.

● Before shooting

1-MOUNT THE LENS AND ACCESSORIES



2-LOAD THE BATTERIES

<Lens>

- (1) Remove the lens rear cap.
- (2) Remove the lens mount cap.
- (3) Screw the lens firmly into the lens mount.

<Grip>

- (1) Screw the Grip Securing Screw ⑩ into the Tripod Socket ⑫.
- (2) Plug the DIN 8P Plug ⑧ into the socket in the camera rear.

Note: Unless this plug is connected the Grip Shutter Release Button ⑨ will not operate, and you cannot shoot at high speeds.

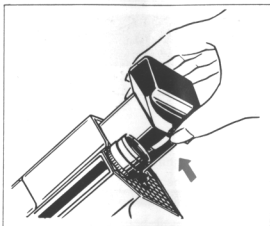
<Eyecup>

Fit it on the Viewfinder Eyepiece ④ and move it into a position that feels most comfortable to you.

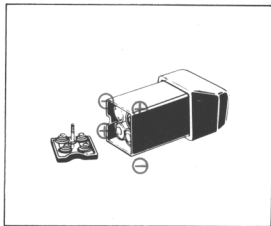
<Lens Hood>

Loosen the screw, fit the hood on the lens front end and tighten the screw.

<Camera batteries> Use alkaline batteries



- (1) Press up the Battery Case Lock ② and pull out the Battery Case ①.



- (2) Remove the Battery Case Cover. (Use a coin).
- (3) Place 4 penlight batteries in the case, plus and minus ends correctly as shown on the inside of the case, replace the cover, and insert the case in the battery case compartment in the camera rear.

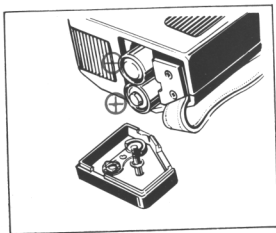
Battery Notes

- If you are not using the camera for a long interval, be sure to remove the batteries. (If the batteries are left in the camera, they can leak and cause internal corrosion that will damage your camera beyond repair.)
- Do not use nickel-cadmium batteries.
- After you are through shooting a scene,

set the Run-Lock Button to Lock before putting the camera away in its case because film and battery power will be wasted if the Shutter Release is depressed by mistake.

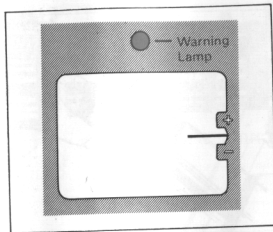
- Always change the batteries all at once and make sure the new batteries you are using are of the same type and brand.

(Grip batteries)



- (1) Release the Battery Compartment Cover Screw ⑫ and remove the Battery Compartment Cover ⑪.
- (2) Insert 4 penlight batteries as shown on the inside of the battery compartment.
- (3) Replace the Battery Compartment Cover.
- (4) If you are not shooting pictures for any length of time, remove the batteries from the Grip.

(Check the batteries)



Look through the viewfinder and press the Shutter Release Button all the way down to start the motor.

- (1) If the warning lamp turns on and does not instantly turn off again, the batteries are worn out and need replacing. Next, check the grip batteries in the same way but first set the Frame Rate Selector ⑭ at either 36 or 72.
- (2) The warning lamp may turn on for an instant as soon as you start, and just before you stop, shooting, but this is a normal reaction and can be ignored.

Besides turning on when the batteries are nearly exhausted, the warning lamp will also turn on.....



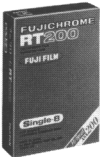

- ① if the Forward-Reverse Button ⑰ is set at R,
- ② if the Variable Shutter Lever ⑱ is located anywhere between CLOSE and the white dot between S and 2,
- ③ if the Fractional Exposure Control ⑲ is not set at 0,
- ④ if the Footage Counter ⑳ is pointing near 15m (50 ft.).

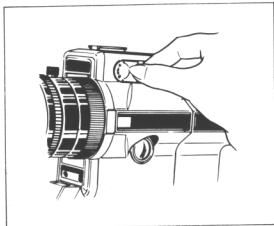
Notes

- ① Be sure to use alkaline batteries. At a speed of 18 fps (forward advance), they will let you shoot 7 continuous rolls of film.
- ② Your FUJICA Single-8 ZC1000 is also provided with a battery pack (optional) which allows many more hours of shooting than the camera batteries alone.

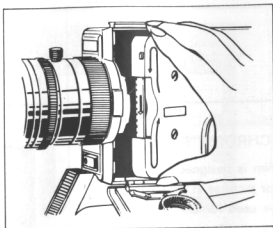
3-LOAD THE FILM

(Types of single-8 films to choose from)

	Single-8 Films	Single-8 Post Recording Film	
Daylight Type ASA25	 <p>FUJICHROME R25 FUJI FILM Single-8</p>	<p>FUJICHROME R25 Post Recording Film</p> <p>This film is designed for shooting outdoor pictures in daylight. It can also be used for shooting twilight scenes, neonlit scenes, and fire-works.</p>	 <p>FUJICHROME R25 Post Recording Film FUJI FILM Single-8</p> <p>This film has the same emulsion as Fujichrome R25 but it also has a magnetic stripe for post recording.</p>
Tungsten Type ASA200	 <p>FUJICHROME RT200 FUJI FILM Single-8</p>	<p>FUJICHROME RT200</p> <p>This is a high speed film for shooting indoor pictures in tungsten light and street scenes at night without supplementary lighting. It can also be used for shooting in fluorescent light although the pictures will turn out somewhat bluish.</p>	 <p>FUJICHROME RT200 Post Recording Film FUJI FILM Single-8</p> <p>This film has the same emulsion as Fujichrome RT200 but it also has a magnetic stripe for post recording.</p>



- (1) Open the film chamber door
Open the Film Chamber Door ③ by erecting the Film Chamber Lock ③ and turning it toward O (Open) as far as it will go.



- (2) Drop in the cartridge
Face the printed side of the cartridge up and drop it into the Film Chamber ④. Make sure the film leader slips into the Film Gate ④.

- (3) Close the Film Chamber Door
Close the Film Chamber Door and lock it by turning the Film Chamber Lock all the way to C (Close) and folding it back against the door.

The camera has now automatically set itself for the speed of the film loaded in it. Next, check to make sure the Footage Counter ② is pointing to S (Start).

Note: The film will not advance unless the film leader is in the Film Gate.

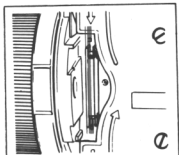


(Check to make sure the film is loaded correctly)

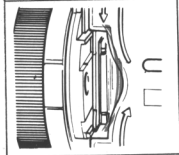
Look through the Film Chamber Window ⑤ and press down the Shutter Release Button for about a second. If the white dot on the cartridge spindle spins in the direction of the arrow, the cartridge is properly loaded.

At a standard speed of 18 fps, one roll of film will provide 3 minutes and 20 seconds of shooting time.

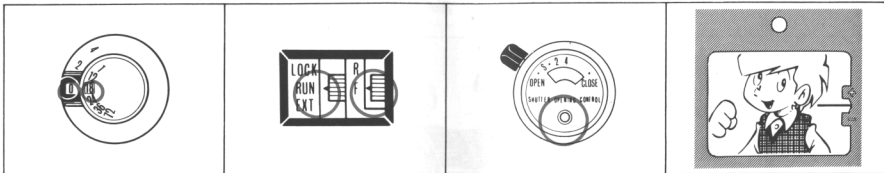
Correct



Wrong



4-CAMERA SETTINGS



(1)Set the Frame Rate Selector ⑭ at 18.

(2)Set the Fractional Exposure Control ⑮ at 0.

(3)Set the Run-Lock Button ⑯ at RUN. (Return it to LOCK after you are through shooting. It is switched to EXT only when the camera is connected to an external power source. (See page 38)

(4)Set the Forward-Reverse Button ⑰ at F.

(5)Pull up the Variable Shutter Lever ⑱, push it toward OPEN as far as it will go (the Variable Shutter Indicator ⑲ will now show as a green spot), and lock it there by pushing it in.

(6)Look through the viewfinder and press down the Shutter Release Button about halfway down to make sure the exposure meter needle moves and the warning light does not turn on. Next, press the Shutter Release Button all the way down. If the warning light turns on and does not instantly turn off again, the batteries are going dead and need replacing.

Note:

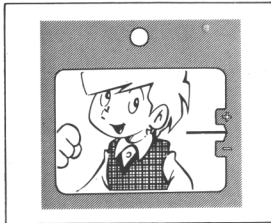
The warning light will turn on and keep twinkling throughout in the following situations:

- ①Film running in reverse. (Forward-Reverse Button set at R.)
- ②Variable Shutter Lever located between CLOSE and the white dot between S and 2.
- ③Fractional Exposure Control not set at 0.
- ④Footage Counter pointing close to 15m (50 ft.).

● Shooting

1-LOOK THROUGH THE VIEWFINDER

(Field of view)



Look through the viewfinder. You will see 98% of the area that will register on the film. There is no parallax to correct because your ZC1000 is a single-lens reflex camera. (Viewfinder signals)

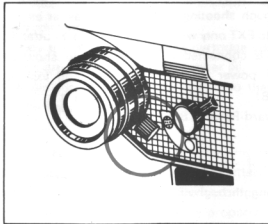
Exposure meter needle and bracket and LED warning light. (See page 15 (6) and Note.)

2-FOCUS THE LENS

(Adjust the lens to your eyesight)

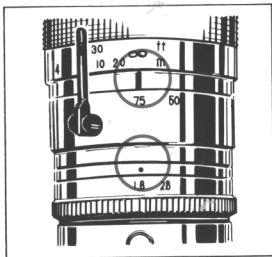


- (1) Set the Finder Screen In-Out Lever ③ at ● as shown.



- (2) Turn the Eyesight Adjustment Ring ⑤ to make the matte screen appear sharp.
- (3) Lock the ring there by tightening the Eyesight Adjustment Screw ⑥.
- (4) Eyesight Adjustment Scale
Use this scale as a guide.

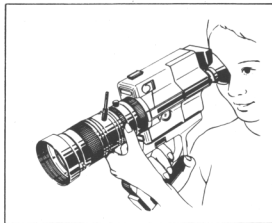
(Focusing)




- (1) Set the lens focal length at 75mm.
- (2) Focus your subject sharply on the screen with the Focusing Ring ②.
- (3) Reset the lens to the correct focal length for the picture you are shooting.

Note: Always use the matte screen for focusing. You cannot focus the lens precisely without the screen.

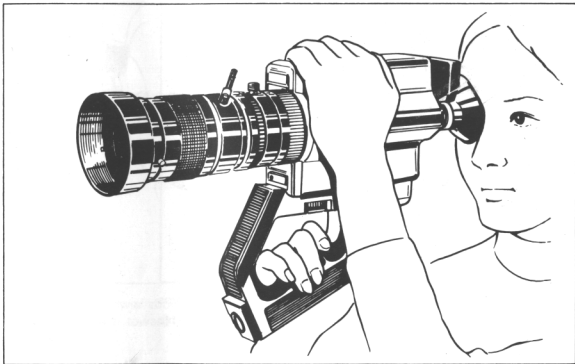
3-SET THE APERTURE



Move the meter needle in the center of the bracket (between the (+) and (-) signs) by turning the Aperture Control Ring  while pressing the Shutter Release Button about halfway down.

The needle may move somewhat off center while you are taking your picture but you can ignore it and keep on shooting as long as the deviation is slight.

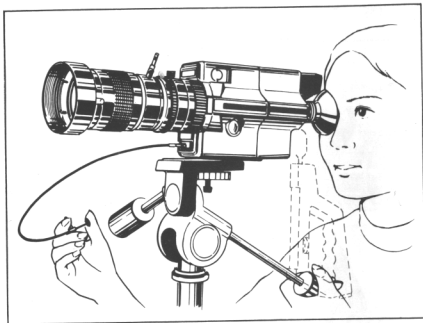
4-GUARD AGAINST CAMERA SHAKE



Hold the camera steady as shown. The controls are manipulated with the left hand.

The camera must be held extra steady when shooting telephoto shots. For best results, use a tripod and cable release.

5-WHEN TO USE A TRIPOD



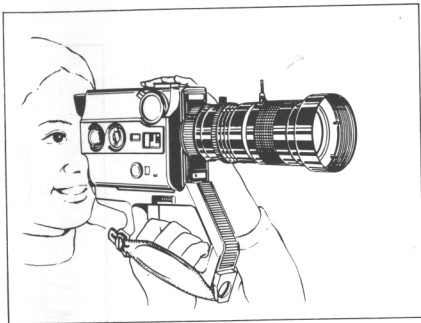
To prevent camera shake, shoot your telephoto shots, pans, zooms and fades with the camera mounted on a tripod, and use a cable release to trip the shutter.

(How to mount the camera on a tripod)

- (1) The tripod can be screwed into the camera grip, but for best results, remove the grip and screw it into the bottom of the camera body. The cable release is screwed into the socket provided on the Body Shutter Release Button ③.
- (2) If you are using an ultra-telephoto lens, screw the tripod into the socket provided on the underside of the lens barrel.
- (3) If you are shooting at 36 or 72 fps, attach the grip to the camera body by means of the DIN 8P Plug (8) alone as shown

(See red drawing).

6-SQUEEZE THE SHUTTER RELEASE BUTTON GENTLY DOWN

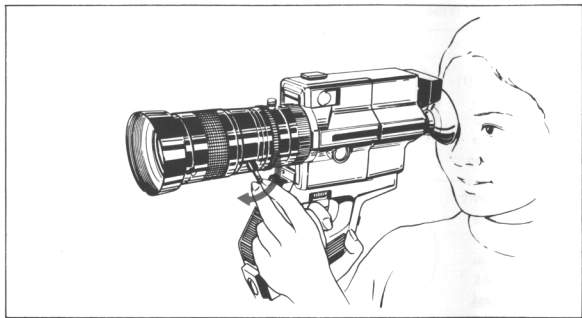


Look through the viewfinder, focus the lens, compose your picture, set the aperture, hold the camera steady and squeeze the Shutter Release Button gently down.

Note: ① The flicker in the viewfinder is caused by the action of the quick return mirror. It tells you the camera motor is running smoothly.

② If you are not shooting with your eye pressed against the Viewfinder Eyepiece, be sure to put the Eyepiece Cover (included) on it because strong light entering through the Eyepiece can adversely effect your picture.

7-ZOOMING IN TO 10× MAGNIFICATION



Your ZC1000's 7.5-75mm, 10× macro-zoom lens enables high power zooming with the Zoom Lever 98. If you are not using the Zoom Lever, fold it down toward the front.

Notes

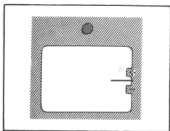
- ① Always zoom slowly in and out.
- ② Avoid using too many zoom scenes in your movies. Too many zoom scenes can become tiresome to watch.
- ③ If you are zooming in all the way, mount the camera on a tripod.

8-WATCH THE FOOTAGE COUNTER



Check the Footage Counter 22 every so often. It will tell you how much film is left in the camera.

9-END OF THE FILM



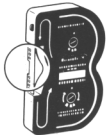
- (1) As the film nears the end, the warning light in the viewfinder will turn on and start twinkling.



- (2) The footage counter will be pointing near 15m (50 ft.).



- (3) Look through the Film Chamber Window ⑤ to make sure the cartridge spindle has stopped turning, then open the Film Chamber Door ④ and drop out the cartridge.



- (4) Make sure you see the end mark (a notch) on the film trailing end before sending the cartridge to your photo-finisher.

10-CHANGING FILMS IN THE MIDDLE OF A ROLL

You can freely change films in the middle of a roll from daylight to tungsten film and vice versa.

- (1) Before changing films, check the Footage Counter and make a note of how much film is left.
- (2) When using the same cartridge again, deduct the exposed length from 15 meters to find the length of unexposed film remaining, then shoot. While shooting, keep a close eye on the Footage Counter because the warning light will not turn on in this case even if the film nears the end.

PART II

ADVANCED TECHNIQUES

Part II explains how professional, theater movie techniques can be added to your films by employing the advanced features of your ZC1000.

● Advanced techniques

1-FRAME RATE

Your ZC1000 can shoot at 12, 18, 24, 36 and 72 fps. It will also let you expose one frame at a time.



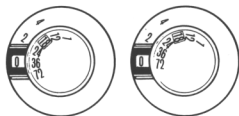
(1) Under normal conditions, use a shooting speed of 18 fps.



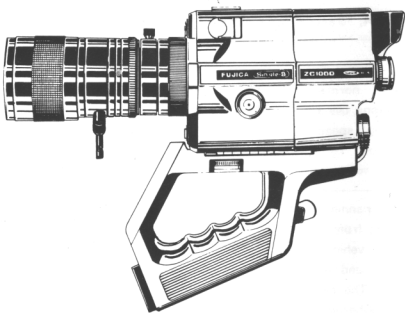
(2) When panning, shooting from a moving vehicle, use a speed of 24 fps. The results will be better.



(3) In dim light, use a speed of 12 fps. However, moving subjects taken at this speed will appear slightly faster than normal on the screen.



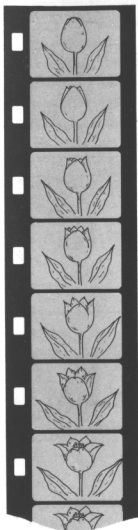
(4) Use 36 or 72 fps for shooting fast-moving subjects, as well as for slowing down motion on the screen.



Notes

- ① You cannot shoot slow-motion movies unless the grip is loaded with batteries.
- ② To insure sharp pictures on every frame, set the Variable Shutter Lever 15 at 2, and the Fractional Exposure Control 13 at 2, for shooting at 36 or 72 fps.

● Single-frame exposure



To shoot time-lapse shots and animated pictures (a flower bud bursting into full bloom in a few seconds, a butterfly coming out of its cocoon, a doll dancing on a table, etc.), expose the frames one at a time.

The Strobe Synchronizer (optional) will let you shoot single-frame pictures with strobo light.

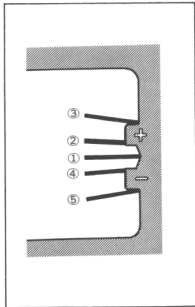
Be sure to depress the Shutter Release at intervals of 0.5 second or longer because the shutter may not operate if the interval is too short.

Note:

Always use a tripod and a cable release for making single-frame exposures. The Fujica Interval Timer (optional) will let you shoot time-lapse pictures automatically.

2-EXPOSURE COMPENSATION

Backlighted pictures will look best when they are taken with the aperture opened up an additional $\frac{1}{2}$ stop or 1 full stop. There are two ways of making exposure compensation.

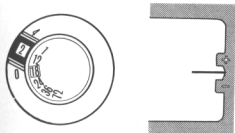


(Exposure compensation with the exposure meter needle)
(See accompanying drawing)

- ① Normal exposure
- ② $1/3$ rd stop over
- ③ 1 stop over
- ④ $1/3$ stop under
- ⑤ 1 stop under

The needle is moved into these positions by turning the Aperture Control Ring ⑫.

(Exposure compensation with the Fractional Exposure Control)



To increase exposure by 1 full stop, set the Fractional Exposure Control ⑬ at 2 as shown in the drawing, and move the needle in the viewfinder into the center of the bracket by turning the Aperture Control Ring ⑫.

To increase exposure by 2 full stops, set the Fractional Exposure Control at 4.

Notes

- ① After setting the Fractional Exposure Control, be sure to set the needle in the center of the bracket.
- ② Don't forget to return the Fractional Exposure Control to 0 after you are through with the cut.

Backlighted subject



Spotlighted subject

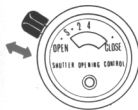


3-HOW TO TAKE ADVANTAGE OF THE VARIABLE SHUTTER

The open part of the shutter blade is called shutter opening. The wider it is, the more light it will let through.

(Changing the angle of the shutter opening)

- (1) The angle of the shutter opening can be varied continuously by using the Variable Shutter Lever.
 - (2) The lever is used for exposure compensation, for shooting fastmoving subjects with a fast shutter speed, and for making fades and lap-dissolves.
 - (3) The chart on the left shows the angle of the shutter opening when the Variable Shutter Lever is set at different points on the scale.
- (3) The Variable Shutter Lever is unlocked by pulling it up. It can be locked at OPEN, S, 2 and 4 by pressing it in.



Frame rate	Shutter opening				
	● OPEN (160°)	● (120°)	2 (80°)	4 (40°)	● (0°)
12 fps.	1/27 sec.	1/40 sec.	1/54 sec.	1/108 sec.	—
18 fps.	1/40 sec.	1/60 sec.	1/80 sec.	1/160 sec.	—
24 fps.	1/54 sec.	1/80 sec.	1/108 sec.	1/216 sec.	—
36 fps.	1/80 sec.	1/120 sec.	1/160 sec.	1/320 sec.	—
72 fps.	1/160 sec.	1/240 sec.	1/320 sec.	1/640 sec.	—

Variable Shutter Lever					

4-VARIABLE SHUTTER LEVER AND FRAME COUNTER

The Variable Shutter Lever **15** is interlocked with the Frame Counter **19**.

The digital Frame Counter tells you at a glance precisely how many frames have been exposed. It greatly simplifies making lap-dissolves and shooting animated pictures.



- When the Variable Shutter Lever is set at OPEN, the Frame Counter automatically returns to zero and will not count even if the film is advancing.



- At S (with click), the shutter will remain fully open but the Frame Counter will begin counting the number of frames exposed.



- The shutter opening becomes gradually smaller as the Variable Shutter Lever is moved toward CLOSE, but the Frame Counter will keep on counting.

5-FADING

The Variable Shutter Lever greatly simplifies fading out from one scene and fading in into another.

(Fade-out)

Pull up the Variable Shutter Lever and shoot your picture. As you near the end of the cut, move the lever slowly from OPEN to CLOSE. Use about 4 seconds to complete the cycle. Stop shooting when the lever reaches CLOSE.



(Fade-in)

Set the Variable Shutter Lever at CLOSE. Squeeze the Shutter Release Button to take your picture, and simultaneously move the Variable Shutter Lever slowly toward OPEN. After the lever reaches OPEN, keep on shooting until you finish the cut.

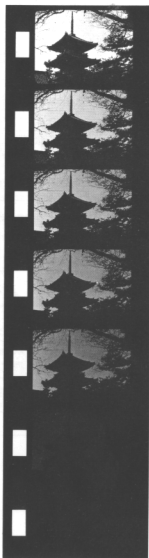
Note :

If you are counting the number of frames, stop the Variable Shutter Lever at S (with click). If it is turned farther toward OPEN, the Footage Counter will return to zero.

Fade-in



Fade-out



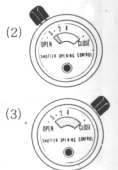
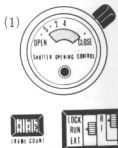
6-HOW TO REWIND THE FILM

To wind back the film for making lap-dissolves and superimposed pictures, set the Forward-Reverse Button (17) at R, the Variable Shutter Lever (15) at CLOSE, and press down the Shutter Release Button. The Frame Counter (19) will count the number of frames wound back.

Note: If the film is wound back to the very start (up to the leader), the cartridge spindle will stop turning and you will have to advance the film forward a bit.

(Single-frame exposure in reverse (animation))

- (1) Set the Variable Shutter Lever at CLOSE and advance the number of frames you are using without exposing them.
- (2) Set the Forward-Reverse Button at R, the Frame Rate Selector at 1, and the Variable Shutter Lever at S. (Make sure you don't push the lever beyond S toward OPEN.) You can now expose one at a time in reverse all the frames you first advanced.
- (3) Next, set the Variable Shutter Lever at CLOSE and advance the film forward up to the point you started exposing in reverse to complete your reverse single-frame exposure.



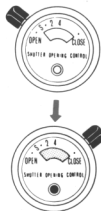
7-LAP-DISSOLVES

A lap-dissolve shows one scene gradually fading away as it is replaced by another scene. The transition can be made short or long to suit yourself.

The procedure for making lap-dissolves is as follows:

(Fade-out)

Set the Variable Shutter Lever at OPEN and shoot. Just before finishing the cut, move the lever slowly from OPEN to CLOSE to fade out the end. Use about 4 seconds to complete the cycle. The Frame Counter will count the number of frames you used for fading out.



(Wind the film back)

Set the Variable Shutter Lever at CLOSE, the Forward-Reverse Button at R, and press down the Shutter Release Button until the Frame Counter shows 0 (zero). If you want to make the transition long, wind back about 10 extra frames. After winding back the film, reset the Forward-Reverse Button at F.

(Fade-in)

Press down the Shutter Release Button and simultaneously move the Variable Shutter Lever from CLOSE to OPEN. Use about 4 seconds to move the lever around from CLOSE to OPEN. After the lever reaches OPEN, keep on shooting until you finish the cut.



8-SUPERIMPOSED TITLES

When two separate exposures are made on the same strip of film, it is called superimposition. Movie titles are good examples.

To make a superimposed title, follow the procedure described below.

- (1) Set the Variable Shutter Lever at S and shoot the background picture. The Frame Counter will count the number of frames you exposed, but be sure to make a note of that number.
- (2) Set the Forward-Reverse Button at R, the Variable Shutter Lever at CLOSE, and press down the Shutter Release Button to wind back the film. Release the button as soon as the Frame Counter counts back to 0 (zero). After winding back the film, set the Forward-Reverse Button at F.
- (3) Set the Variable Shutter Lever midway between 2 and 4, point the camera at the title (preferably written with white ink on a sheet of black paper), and move the needle in the viewfinder into the center of the bracket by turning the Aperture Control Ring. Finally, press down the Shutter Release Button to expose the same number of frames you exposed on the first run.

① Shoot a fade-out



② Wind back the film

④ Rewind the film

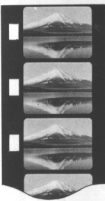
③ Shoot a fade-in



⑤ Continue shooting after fading in



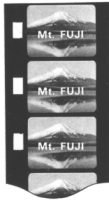
Shoot a scene



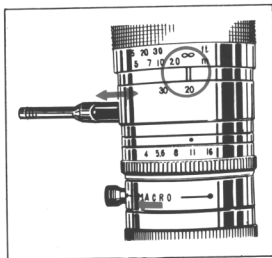
Shoot the title



Super imposed title




9-MACROPHOTOGRAPHY



Your ZC1000's macro-focus lens makes macrophotography—shooting larger-than-life pictures of small objects—almost as easy as shooting ordinary snapshots.

Besides being useful in science, medicine, and many other fields, macropictures of small, familiar objects can be of tremendous interest to your home movie audience.

The procedure for taking macrophotographs is explained in the following.

- (1) Pull up the Macro-focusing Lever ② and push it all the way to the left. Set the lens in the vicinity of 20mm with the Zoom Lever ⑩. This focal length will let you bring the camera up as close to the subject as the lens will permit. An area of 26 × 35mm will register on the film.
- (2) Set the Finder Screen In-Out Lever ③ at . (Precise focusing is difficult unless you use the screen.)
- (3) Set the Focusing Ring ⑪ at ∞, focus the lens with either the Zoom Lever or the Macro-focusing Lever and press down the Shutter Release Button.

Note: It doesn't make much difference where the Focusing Ring ⑪ is set, but to be on the safe side, set it at ∞.

10-HOW TO USE THE DEPTH OF FIELD TABLE

If you want your picture to turn out sharp all the way from front to back, or if you want to blur out the back, consult the depth of field table.

When a lens is focused on a subject, there is a zone of acceptable sharpness both behind and in front of the point of sharpest focus. This zone is referred to as the depth of field, and it can become wide or narrow depending on the lens focal length, the size of the aperture and the shooting distance. The depth of field table will tell you all about it.

(How to use the depth of field table)

Example: Lens focal length: 12mm

Shooting distance: 5m

Aperture: f/8

In this case, everything from 1.02m to infinity will be in sharp focus. (See the sector overprinted with red ink in the depth of field table.)



● $f = 7.5\text{mm}$

①Aperture ②Distance

② \ ①	1.8	2.8	4	5.6	8	11	16	22
1.5	0.90 ~ 4.57	0.73 ~ ∞	0.60 ~ ∞	0.49 ~ ∞	0.38 ~ ∞	0.29 ~ ∞	0.22 ~ ∞	0.16 ~ ∞
2.5	1.18 ~ ∞	0.91 ~ ∞	0.72 ~ ∞	0.56 ~ ∞	0.42 ~ ∞	0.32 ~ ∞	0.23 ~ ∞	0.17 ~ ∞
5.0	1.54 ~ ∞	1.12 ~ ∞	0.84 ~ ∞	0.63 ~ ∞	0.46 ~ ∞	0.34 ~ ∞	0.24 ~ ∞	0.18 ~ ∞
10.0	1.83 ~ ∞	1.26 ~ ∞	0.91 ~ ∞	0.67 ~ ∞	0.48 ~ ∞	0.35 ~ ∞	0.24 ~ ∞	0.18 ~ ∞
20.0	2.01 ~ ∞	1.34 ~ ∞	0.96 ~ ∞	0.69 ~ ∞	0.49 ~ ∞	0.36 ~ ∞	0.25 ~ ∞	0.18 ~ ∞
∞	2.23 ~ ∞	1.44 ~ ∞	1.00 ~ ∞	0.72 ~ ∞	0.50 ~ ∞	0.37 ~ ∞	0.25 ~ ∞	0.18 ~ ∞

● $f = 12\text{mm}$

1.5	1.19 ~ 2.03	1.07 ~ 2.54	0.95 ~ 3.60	0.83 ~ 8.18	0.69 ~ ∞	0.58 ~ ∞	0.45 ~ ∞	0.36 ~ ∞
2.5	1.73 ~ 4.44	1.49 ~ 7.83	1.27 ~ 90.0	1.06 ~ ∞	0.85 ~ ∞	0.68 ~ ∞	0.45 ~ ∞	0.39 ~ ∞
5.0	2.68 ~ 40.0	2.12 ~ ∞	1.70 ~ ∞	1.34 ~ ∞	1.02 ~ ∞	0.79 ~ ∞	0.57 ~ ∞	0.43 ~ ∞
10.0	3.64 ~ ∞	2.69 ~ ∞	2.05 ~ ∞	1.55 ~ ∞	1.14 ~ ∞	0.86 ~ ∞	0.60 ~ ∞	0.45 ~ ∞
20.0	4.44 ~ ∞	3.10 ~ ∞	2.28 ~ ∞	1.68 ~ ∞	1.21 ~ ∞	0.89 ~ ∞	0.62 ~ ∞	0.46 ~ ∞
∞	5.71 ~ ∞	3.67 ~ ∞	2.57 ~ ∞	1.84 ~ ∞	1.29 ~ ∞	0.94 ~ ∞	0.64 ~ ∞	0.47 ~ ∞

● $f = 30\text{mm}$

1.5	1.44 ~ 1.57	1.41 ~ 1.60	1.37 ~ 1.65	1.33 ~ 1.73	1.26 ~ 1.84	1.19 ~ 2.02	1.09 ~ 2.39	0.99 ~ 3.08
2.5	2.34 ~ 2.69	2.25 ~ 2.81	2.16 ~ 2.96	2.05 ~ 3.20	1.91 ~ 3.63	1.75 ~ 4.37	1.54 ~ 6.62	1.35 ~ 17.3
5.0	4.39 ~ 5.81	4.11 ~ 6.39	3.81 ~ 7.26	3.48 ~ 8.86	3.08 ~ 13.2	2.69 ~ 34.6	2.23 ~ 20.5	1.84 ~ ∞
10.0	7.81 ~ 13.9	6.97 ~ 17.7	6.16 ~ 26.5	5.34 ~ 77.6	4.46 ~ 40.9	3.69 ~ 14.1	2.87 ~ ∞	2.26 ~ ∞
20.0	12.8 ~ 45.5	10.7 ~ 155	8.91 ~ 81.8	7.29 ~ ∞	5.73 ~ ∞	4.52 ~ ∞	3.35 ~ ∞	2.55 ~ ∞
∞	34.5 ~ ∞	22.4 ~ ∞	15.8 ~ ∞	11.3 ~ ∞	7.97 ~ ∞	5.81 ~ ∞	4.00 ~ ∞	2.91 ~ ∞

● $f = 50\text{mm}$

② \ ①	1.8	2.8	4	5.6	8	11	16	22
1.5	1.48 ~ 1.52	1.47 ~ 1.54	1.45 ~ 1.55	1.43 ~ 1.57	1.41 ~ 1.61	1.37 ~ 1.65	1.32 ~ 1.73	1.27 ~ 1.84
2.5	2.44 ~ 2.57	2.41 ~ 2.60	2.37 ~ 2.65	2.32 ~ 2.71	2.25 ~ 2.82	2.17 ~ 2.96	2.04 ~ 3.22	1.91 ~ 3.61
5.0	4.76 ~ 5.27	4.64 ~ 5.43	4.50 ~ 5.63	4.32 ~ 5.93	4.09 ~ 6.44	3.82 ~ 7.23	3.45 ~ 9.06	3.09 ~ 13.0
10.0	9.08 ~ 11.1	8.65 ~ 11.9	8.17 ~ 12.9	7.61 ~ 14.6	6.91 ~ 16.1	6.19 ~ 26.0	5.27 ~ 96.2	4.48 ~ ∞
20.0	16.6 ~ 25.1	15.2 ~ 29.1	13.8 ~ 36.2	12.3 ~ 53.6	10.5 ~ 192	8.96 ~ ∞	7.16 ~ ∞	5.77 ~ ∞
∞	99.2 ~ ∞	63.8 ~ ∞	44.6 ~ ∞	31.9 ~ ∞	22.3 ~ ∞	16.2 ~ ∞	11.2 ~ ∞	8.12 ~ ∞

● $f = 75\text{mm}$

1.5	1.49 ~ 1.51	1.48 ~ 1.52	1.48 ~ 1.52	1.47 ~ 1.53	1.46 ~ 1.55	1.44 ~ 1.56	1.42 ~ 1.60	1.39 ~ 1.63
2.5	2.47 ~ 2.53	2.46 ~ 2.54	2.44 ~ 2.56	2.42 ~ 2.59	2.38 ~ 2.63	2.34 ~ 2.68	2.27 ~ 2.78	2.20 ~ 2.89
5.0	4.89 ~ 5.12	4.83 ~ 5.18	4.76 ~ 5.26	4.67 ~ 5.38	4.55 ~ 5.56	4.40 ~ 5.79	4.17 ~ 5.24	3.93 ~ 6.89
10.0	9.57 ~ 10.5	9.35 ~ 10.7	9.10 ~ 11.1	8.78 ~ 11.6	8.34 ~ 12.5	7.85 ~ 13.8	7.15 ~ 16.6	6.46 ~ 22.1
20.0	18.4 ~ 22.0	17.6 ~ 23.2	16.7 ~ 25.0	16.6 ~ 27.7	14.3 ~ 33.2	12.9 ~ 44.2	11.1 ~ 98.3	9.55 ~ ∞
∞	223 ~ ∞	143 ~ ∞	100 ~ ∞	71.7 ~ ∞	50.2 ~ ∞	36.5 ~ ∞	25.1 ~ ∞	18.3 ~ ∞

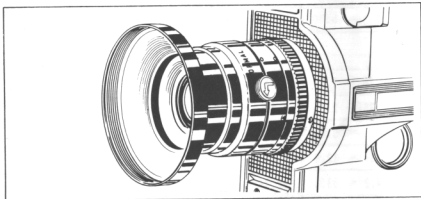
● Taking special situation pictures with extra accessories

(Detailed instructions are packed with the accessories)

1-LENS INTERCHANGEABILITY

Your FUJICA ZC1000 will take all lenses with C-mount—the standard mount of 16mm movie cameras. It will also take 35mm SLR still camera lenses. All you need is an adapter. In other words, it will let you take every variety of picture from ultra-wideangle to ultra-telephoto shots.

⟨ZC1000's EBC FUJINON · SW 1.8/5.5 Lens⟩



This lens is specially designed for single-8 cameras. As far as 8mm movie camera lenses go, it can be classified an ultra-wideangle lens. (It can be used for taking macropictures from a distance of 10mm and is designed for taking 62mm Screw-in filters.)

The filter size is 40.5 mm ϕ (screw-in type) and the hood filter size is 62 mm ϕ (screw-in type).

Note: This lens and the 10 \times zoom lens cannot be used on 16 mm movie cameras.

⟨C-mount lenses of other brands⟩

All C-mount lenses for 16mm movie cameras can be mounted directly on your ZC1000. However, it will not take certain types of C-mount ITV lenses having extra-short lens backs.

⟨Arriflex mount lenses⟩

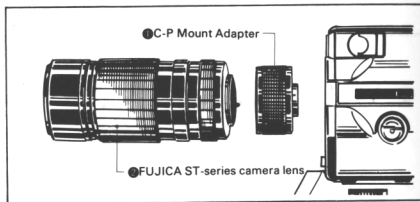
These are mounted on your ZC1000 with a C-Ar Mount Adapter.

● C-Ar Mount Adapter for mounting



● Arriflex mount lenses

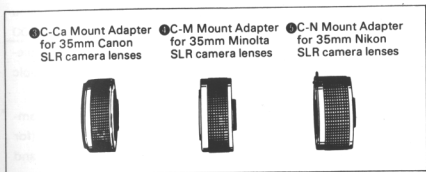
(35mm SLR still camera lenses)



The interchangeable lenses of the FUJICA ST901, ST801, ST701, ST605, ST605N, ST705W and AZ-1 and other Praktica screw mount lenses are mounted on your ZC1000 with a C-P Mount Adapter. Adapters are also available for mounting Nikon, Canon and Minolta lenses.

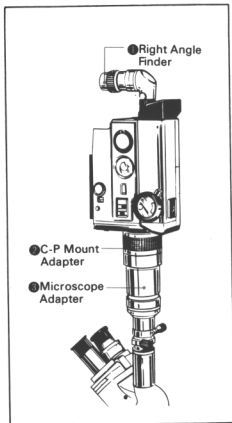
The magnifying power of full-size 35mm camera lenses will become 6.5 times greater on the ZC1000 than on still cameras.

Example: A 100mm lens on the ZC1000 is equivalent in magnifying power to a 650mm lens on a still camera.



2-PHOTOMICROGRAPHY

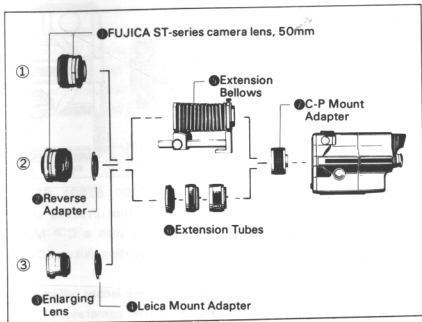
peeking into the microscopic world



These accessories are all you need to mount the ZC1000 on a microscope to take pictures of the microscopic world. (See drawing).

The Fujica ST-series cameras' right angle finder (for Fujica ST701, ST801 and ST901) is a useful accessory for taking photomicrographs.

3-ULTRA-MACROPHOTOGRAPHY

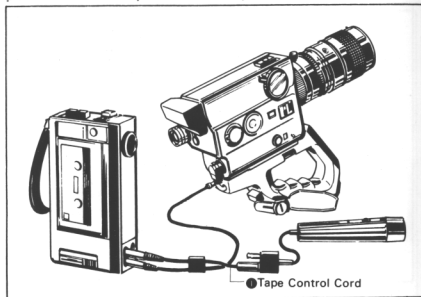


There are three ways of mounting the lens for taking ultra-macro photographs. (See drawing)

- (1) 50mm lens — extension bellows (or a combination of extension tubes) — C-P Mount Adapter — ZC1000.
- (2) 50mm lens (rear end facing front) — reverse adapter — extension bellows (or a combination of extension tubes) — C-P Mount Adapter — ZC1000.
- (3) Fujinon Enlarging lens — Leica Mount Adapter — extension bellows (or a combination of extension tubes) — C-P Mount Adapter — ZC1000.

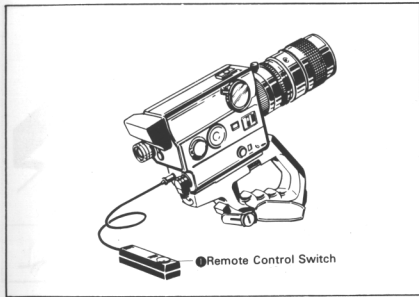
4-SIMULTANEOUS RECORDING OF SOUND AND PICTURE

(Simultaneous recording of sound and pictures with the tape control cord)



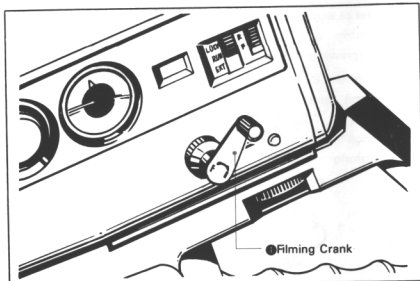
The Tape Control Cord's 4-prong plugs are plugged into a cassette tape recorder (with mini-phone juck and mini-mini phone juck) and your ZC1000's Tape Control Socket ⑨. The camera's Shutter Release Button is then depressed to start film and tape together to record sound and picture simultaneously.

5-REMOTE CONTROL PHOTOGRAPHY



Plug the Remote Control Switch into your ZC1000's Remote Control Socket ⑦ and turn the switch on. The camera will keep shooting as long as the switch is on. No blank frames will be advanced between cuts. The Remote Control Switch can also be used in place of a cable release to make single-frame exposures.

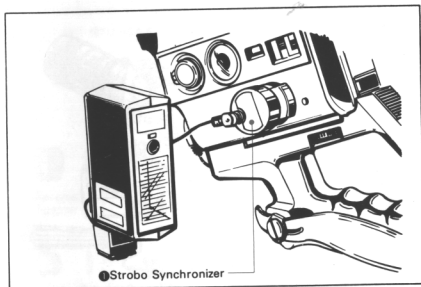
6-MANUAL FILM ADVANCE



Set the Run-Lock Button ⑮ at LOCK, attach the Filming Crank to the Synchro Coupler ⑳ and turn it to advance the film. This is a handy method for shooting at very low speeds as well as for shooting pictures which require long exposure.

The crank must be detached each time before the Shutter Release Button is depressed.

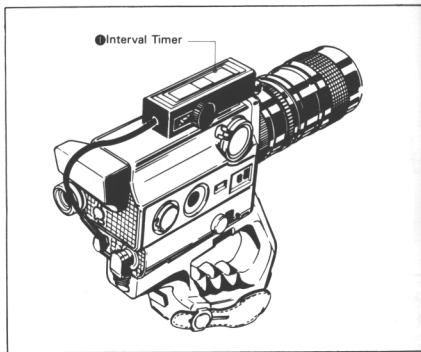
7-SINGLE-FRAME EXPOSURE WITH STROBO LIGHT



To take flash pictures one frame at a time, simply plug the Strobo Synchronizer into the Synchro Coupler ⑳.

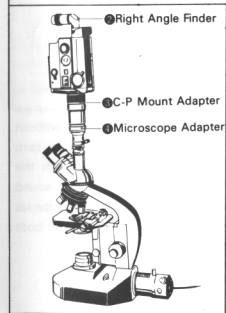
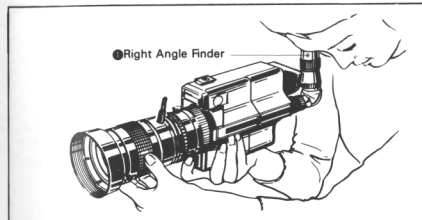
8-TIME-LAPSE PICTURES

(memomotion)



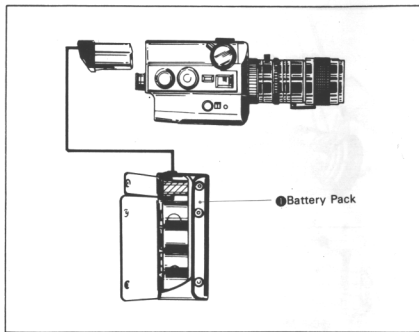
The Interval Timer will let you shoot trick pictures such as a flower bursting into full bloom before your eyes, a butterfly crawling out of its cocoon and flying away within a few seconds, etc. The timing is continuously variable from 0.5 to 60 seconds.

9-HOW TO USE THE RIGHT ANGLE FINDER



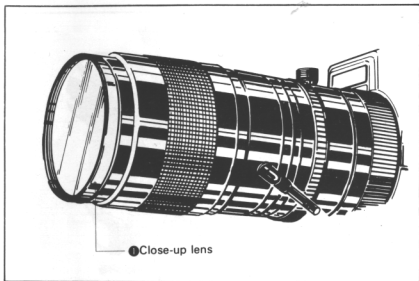
The FUJICA ST-series cameras' right angle finder (for Fujica ST701, ST801 and ST901) will let you shoot comfortably with the ZC1000 from a very low position as well as through a microscope, etc.


10-HOW TO USE THE BATTERY PACK



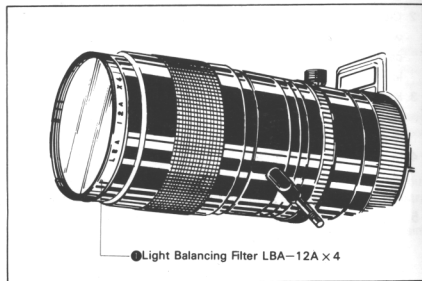
The Battery Pack will let you shoot roll after roll of film without changing batteries. Besides being useful for shooting in sub-zero weather, it can also be used as the power source for both the ZC1000 and Puls-sync Corder at the same time for shooting sound and picture simultaneously. It is loaded with 4 D-type batteries when used on the camera alone, and 5 when it is connected to both the camera and Puls-sync Corder.

11-HOW TO USE THE CLOSE-UP LENS



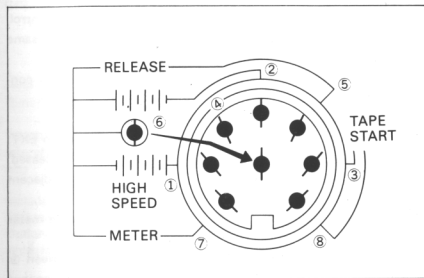
Close-up objects brought into focus with the Macro-focusing Lever  will go out of focus when the lens is zoomed. If you want to focus the lens on a close-up object and keep it in focus while the lens is zooming, use the Close-up Lens. It can be used on both the ZC1000 and the Z800. The nearest point of sharp focus with this lens on is 35.5cm from the lens front end.

12-LIGHT BALANCING FILTER LBA-12A × 4



This filter enables you to shoot outdoor pictures in daylight with FUJICHROME RT200 film. It will come in handy because if you have some film left in the camera after shooting indoors, you can take the camera outside to shoot. It can be used on both the ZC1000 and Z800.

13-FUNCTIONS OF THE DIN 8P PLUG



● CAMERA CARE

1. An external power source (6 V) for normal shooting is connected to ②⁻ and ⑥⁺

It provides power for 1 - 24 fps film transport, exposure control, shutter release, and LED indication in finder. (It fulfils the same functions as the batteries loaded in the camera body.)

2. An external power source (6 V) for high speed shooting is connected to ①⁺ and ⑥⁻

(It fulfils the same functions as the grip batteries.)

Note: In the case of (1) and (2), set the Run/Lock Button to EXT.

3. If contact is established between ⑤ and ⑥, the shutter is released. The terminals ⑤ and ⑥ work in the same manner as the adjacent remote control terminal.

4. If contact is established between ⑥ and ⑦, the exposure meter works.

5. As soon as the shutter is released, contact is made between ③ and ⑧ to enable you to start the tape recorder for simultaneous recording of sound and image.

The terminal ④ is idle.

1. Periodically, dust off your camera and wipe it clean with lintless cloth. Above all, keep the film gate clean.
2. Clean the lens and eyepiece glass with an air blower. Do not wipe with cloth, and don't touch the glass with your fingers. In case it is inadvertently soiled with fingermarks, wipe off with lens cleaning paper moistened in Fuji Film lens cleaning fluid.
3. Keep the camera where it is dry, cool and free of dust, and remove the batteries from both the body and grip before putting it away.
4. In hot weather, do not leave your camera in the car or any other place where heat can accumulate. In winter, in the mountains and at ski resorts, guard against freezing.
5. Always remove the batteries if you are not using the camera for any length of time.

SPECIFICATIONS

Type	Single-8 cartridge loading interchangeable lens C-mount camera.	Simultaneous sound-picture recording System	Provision for film-tape start synchronized recording of sound and picture.
Lens		Grip Type	Detachable. Provided with compartment for holding extra batteries for high speed shooting, and socket for film-tape-drive synchronized recording of sound and picture.
Mount	C-mount (interchangeable lens type).	Filter	62mm ϕ screw in type.
Normal lens	EBC FUJINON MA-Z 1: 1.8 7.5-75mm 10 \times ZOOM, provided with macro-focusing.	Dimensions	62mm ϕ screw in type. (Body with lens mounted) 80mm(W) \times 316 mm(D) \times 120mm(H).
Filter	62mm ϕ screw-in type.	Weight	1,980g.
Viewfinder		Interchangeable lens	EBC FUJINON - SW 1: 1.8 5.5mm (Filter size 40.5mm ϕ ; hood filter size: 62mm ϕ screw-in type).
Type	Return mirror single-lens reflex with provision for eyesight adjustment from -4 +2 diop.	Included accessories	Grip, Lens Hood, Eye Cup, Soft Case.
Focusing	Matte focusing screen (can be moved in and out).	Optional accessories	Exclusive accessories
Signals	LED light signals film advance (forward and reverse), shutter opening angle, overexposure, end-of-film, worn out batteries.		Battery Pack, Filming Crank, Adapters (for mounting praktica screw mount Lenses and Ariflex, Nikon, Canon, Minolta, Olympus and Asahi K-mount lenses), Interval Timer.
Film drive			Accessories compatible with ZC1000 and Z800
Power drive	Motor powered by 4 penlight batteries. Four extra penlight batteries in grip provide extra power for high speed shooting.		Close-up lens, Light Balancing Filter LBA-12A \times 4, Strobe Synchronizer, Tape Control Cord, Remote Control Switch.
Frame rate	12, 18, 24, 36 and 72 fps. Provision for single frame exposure.		Accessories compatible with ZC1000 and FUJICA ST-series cameras
Film rewind	Power rewind.		Extension Bellows, Extension Tubes, Right Angle Finder (for Fujica ST901, ST801 and ST701), Microscope Adapter.
Footage counter	0-15m (50ft.), automatic reset.		
Frame counter	Digital readout, interlocked with Variable shutter.		
Shutter			
Shutter release	Electromagnetic relay system. Provision for single-frame exposure by remote control and time-lapse photography.		
Variable shutter	Continuously variable from 160-0°. Lockable at 160° (0), 80° (2) and 40° (4).		
Exposure System	TTL stopped-down metering with provision for 2 \times and 4 \times fractional exposure control.		
Film speed setting	Automatic for ASA 25, 50, 100, 200 and 400 film.		



FUJICA ZC100 AND ACCESSORIES

1 FUJICA Single-8 ZC1000

2 Lens Hood

Prevents unwanted light from entering the lens.

3 Eye Cup

Provides a clearer view through the viewfinder.

4 Soft Case

Convenient type. Lets you hang the camera from your shoulder.

5 C-P Mount Adapter

For mounting FUJICA ST801, ST901 and other Praktica screw mount lenses on the ZC1000.

6 C-N Mount Adapter

For mounting Nikon SLR camera lenses on the ZC1000.

7 C-Ar Mount Adapter

For mounting Arriflex lenses on the ZC1000.

8 C-M Mount Adapter

For mounting Minolta SLR camera lenses on the ZC1000.

9 C-Ca Mount Adapter

For mounting Canon SLR camera lenses on the ZC1000.

10 Microscope Adapter (compatible with FUJICA ST-series cameras)

Used in combination with the C-P Mount Adapter for mounting the ZC1000 on microscopes.

11 Extension Tubes (for Praktica mount)

For taking ultra-macrophotographs with the ZC1000.

12 Extension Bellows (for Praktica mount)

For taking ultra-macrophotographs with the ZC1000.

13 EBC FUJINON-SW 1:1.8f=5.5mm ultra-wideangle lens.

14 Reverse Adapter (for Praktica mount)

For mounting FUJICA ST-series camera lenses on the ZC1000 for taking ultra-macrophotographs.

15 Leica Mount Adapter (for Praktica mount)
For mounting Leica mount lenses on the ZC1000.

16 Close-up Lens (compatible with FUJICA Single-8 Z800)

For taking extreme close-ups with the ZC1000.

17 Light Balancing Filter LBA-12A×4 (compatible with FUJICA Single-8 Z800)

Lets you shoot outdoor, daylight pictures with tungsten type film.

18 Filming Crank

Used on the ZC1000 for advancing the film manually.

19 Interval Timer

For taking time-lapse pictures with the ZC1000.

20 Remote Control Switch (compatible with FUJICA Single-8 Z800)

For releasing the ZC1000's shutter while standing at a distance from the camera.

21 Strobe Synchronizer (compatible with FUJICA Single-8 Z800)

For taking flash pictures with the ZC1000. Right Angle Finder (compatible with

22 Right Angle Finder (for Fujica ST901, ST801 and ST701 cameras)

For viewing subjects while facing at right angles to it.

23 Tape Control Cord (compatible with FUJICA Single-8 Z800)

For simultaneous recording of sound and picture with commercially available cassette tape recorders.

24 Battery Pack

Lets you shoot roll after roll of film without changing batteries.

Useful for shooting in freezing temperatures and convenient for shooting sound movies.

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