BRONICA

SQ-Ai

AE PRISM FINDER SQ-i

INSTRUCTIONS

Thank you for purchasing the AE Prism Finder SQ-i which has been designed as an integral accessory for the Zenza Bronica SQ-A System of Photography.
The AE Prism Finder SQ-i is a newly developed finder for use with the Zenza Bronica SQ-Ai, SQ-A and SQ-Am models and when used in combination with the camera main body will provide the user with a TTL (through-the-lens) automatic exposure camera showing an eye-level laterally-correct and upright image.

Please carefully read this instruction manual so that you can fully enjoy the superior functions incorporated in this new AE Prism Finder SQ-i.

Contents of the AE Prism Finder SQ-i

The AE Prism Finder SQ-i consists of the following items which are packaged together.
1) AE Prism Finder SQ-i
2) Finder bottom cover S (supplied with Finder)
3) Interchangeable eyepiece, Standard (S) (supplied with Finder)
4) Rubber eyecup E (small) (supplied with Finder)
5) Rubber eyecup E (large) (supplied in same package)
6) Instruction manual

Precautionary Indications

As ragards indications for safe usage, the following indications ara used in this instruction manual in order that you can use this product safely, while, at the same time, preventing danger and damage to the property of the user, as well as to third parties.

Please read this instruction manual carefully, thoroughly understanding the contents, so that you can use the product properly.

Precautionary Indications Regarding Safety

⚠ Warning This indicates that it is assumed that there are possibilities that the user may die or be injured when handling is mistaken.

⚠ Caution This indicates that it is assumed that there is danger of the user being injured and/or of property damage occurring when handling is mistaken.

Other Indications

⃠ Prohibited Prohibitionary clause is written. Concrete prohibitionary contents should be available near this indication.

⚠ Warning

- Care should be exercised to store the battery where small children will not be able to reach it and use care so that small children cannot swallow the battery accidentally.
  Should the battery be swallowed, however, contact the doctor immediately and ask for advice.
- Store the camera where small children cannot reach it. There is danger of suffocation should the neck strap get wrapped around the neck. And, since the camera is rather heavy, there is danger of injury to the small children, should the camera fall on the children.

Contents

Precautions on Usage

Overall

⚠ Caution

1. The finder cannot be attached on the Zenza Bronica SQ.
2. Store the camera where small children cannot reach it. There is danger of suffocation should the neck strap get wrapped around the neck. And, since the camera is rather heavy, there is danger of injury to the small children, should the camera fall on the children.

Battery

⚠ Warning

3. Do not throw the battery into a fire, as there is danger of explosion.
4. The button type battery should be kept out of reach of the children. Should the battery be swallowed accidentally, get in touch with the doctor immediately.

⚠ Caution

5. The battery is used in the motor drive and remote camera battery pack, in addition to being loaded in the camera main body.
- The batteries loaded should always be exchanged at the same time and should be of the same type. Do not mix new and old batteries.
- The batteries should be loaded properly, with polarity oriented according to indications in the battery chamber.

6. Power for the finder is supplied from the camera main body. The finder will not operate properly should the battery in the camera become exhausted.
Always check the battery before photography and take extra batteries when traveling.
7. Battery exhaustion will be extreme when long time exposures are made under extremely dark conditions, which will shorten the battery-life. AE photography with the lens cap covering the lens will also result in the same thing.
8. The finder's main switch should be switched OFF while moving from one location to another and/or while resting during shooting sessions, or when the camera is stored, in order to conserve battery power.
9. It is recommended that the main switch of the finder be set to OFF, during time exposures, in order to save battery power when the exposure meter is not used.
10. The backlight may go out, when the memory button, clear button and/or shutter release button is depressed while the backlight is illuminat-

ed. This will indicate that the battery is quite exhausted and that it should be exchanged for a new battery.
11. Take out the battery when the equipment is not being used for a long time.
12. Should the battery be left in the battery compartment for a long time, there is danger of poor contact due to leakage. Should leakage be confirmed, wipe the contact point carefully and exchange the battery. If leakage should be serious, it is recommended that you have the problem checked by the service center.

Photography

⚠ Caution

13. Always remember to change the film speed dial on the film back when a film of different film sensitivity is loaded in the film back.
14. When shooting at a slow shutter speed setting in the AE or manual mode, always confirm that the shutter has actually closed before advancing the film.
Should the film be advanced before the shutter has closed, the frame will be underexposed and the picture will be streaked. And, part of the next frame may also be streaked. Furthermore, the shutter speed will also not be controlled properly.
In the case of the SQ-A and SQ-Ai models, an LED signal will light up momentarily in the top section of the finder and signal that the shutter has closed. Thus, when using a slow shutter speed, always confirm the LED signal before advancing the film.
15. Confirm that A is visible on the time exposure lever of the lens, except when actually taking time exposures.
The shutter speed will not be properly controlled when T is visible with the time exposure lever and the frame will be overexposed. Furthermore, if the film is advanced in this condition, the frame will be streaked, with part of the next frame also streaked. And, the shutter speed will not be correctly controlled.
16. Do not release the shutter in the case of AE photography, while depressing the depth of field preview lever. Since the camera has a fully automatic instant reopening lens diaphragm action, the picture will be overexposed when the depth of field preview lever is depressed while shooting, in this case. The same will be the case for AE lock photography and for exposure measurement in the manual mode.
17. For mirror lock-up photography in the AE mode, always utilize the AE lock mode. Set the

mirror lock-up lever of the camera body to S (single frame) when switching to the mirror lock-up mode. AE lock is only effective for the first frame after mirror lock-up. For mirror lock-up shooting in the C (continuous) mode, the second and later frames will be exposed at 1/500 sec.; therefore, mirror lock-up should be cancelled once, after which AE lock should be repeated for mirror lock-up photography.

18. When shooting under dim-light conditions, release the shutter only after, first, checking the exposure setting, as the exposure will not be accurate when outside the coupling range of the exposure meter.

19. Do not release the shutter while depressing the memory button or clear button. The electronic circuit of the finder will operate mistakenly and the exposure will not be accurate.

20. Avoid continuous shooting immediately after moving the main switch from OFF to A. The exposure may not be accurate from the second frame in continuous shooting.

21. AE lock is only possible with the main switch set to A.

22. Always test shoot before important events, such as weddings and trips abroad, and check whether the camera and finder function properly.

Reference

23. The use of a tripod is recommended, in order to prevent camera shake, when a slow shutter speed (slower than 1/30 sec.) will be used.

24. In the case of AE photography, without looking through the eyepiece, such as when using a cable release or self-timer, close the eyepiece shutter in order to prevent entry of ambient light through the eyepiece and thus prevent an error in AE operations.

Maintenance

⚠ Caution

25. The finder and camera are precision instruments.
It is recommended that you periodically inspect the equipment every year or two years, as well as overhaul the equipment every three or five years. Have the service center or store at which the product was purchased take care of periodical inspections and overhaulings.

26. The finder is a precision accessory. It should not be subjected to strong shocks.

27. Before attaching the finder, clean the contact points on the camera body and finder very carefully with a soft, dry cloth.

28. Do not leave the finder inside a closed

automobile or on the beach for a long period of time.
29. The finder and camera are not waterproofed. Do not leave them in humid locations for long periods or use them in locations where they will get wet. When wet, wipe it dry with a dry, clean cloth. And, when exposed to the sea breeze for a long time, wipe carefully with a clean, wet cloth which has been wringed dry.
30. Do not subject the equipment to sudden temperature changes.
31. The temperature range in which the product can be used is −10° to 40° in Centigrade. The humidity range in which the product can be used is less than 80%.

Reference

32. If left outdoors where direct sunlight falls on the product for a long period of time, the inside of the product will become overheated and, therefore, outdoor shooting should be limited to the shade, as much as possible. The use of a single white handkerchief as a covering will make a great difference, in this case.
33. The liquid crystal utilized for the LCD has a superior temperature characteristic.
Because of this characteristic, however, the LCD display may seem transparent and seem to flicker at a very quick cycle in the case of a bright subject.
But, it should be noted that this is a characteristic of the liquid crystal and not a defect.

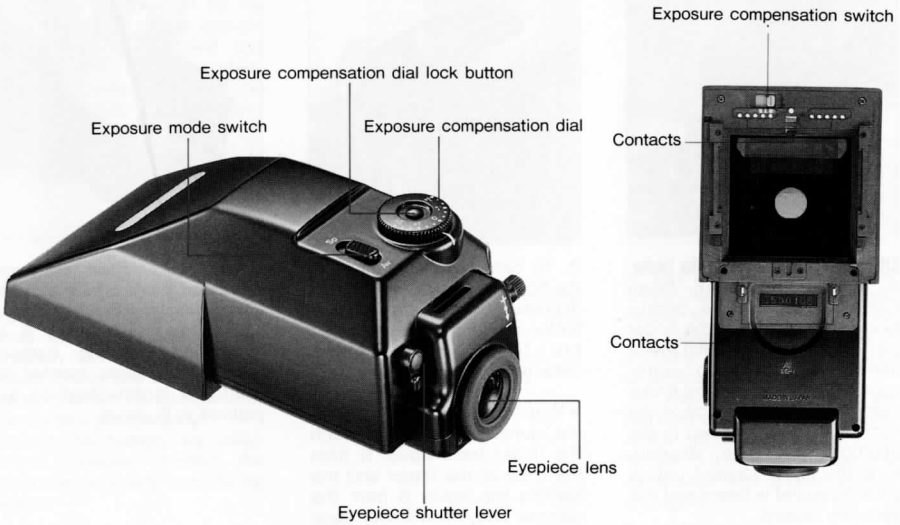
Others

⚠ Caution

34. For determining exposure in photography based on the use of infrared film, and other such special films, always refer to the instructions supplied with the film used.
35. When using the finder attached on the SQ-Am, set the mode selector switch of the motor drive to Sm (single frame shooting). See page 42, regarding operation when the finder is attached to the SQ-Am.

Blank Page

Name of Parts



Attachment/Detachment of the finder

A. To attach the AE Prism Finder SQ-i, coincide protrusions on the base of the finder (at 4 positions "A" shown in the above photograph) to corresponding openings in the finder frame on the top surface of the camera body ("B" shown in the photograph). When aligned, slide the finder forward until a clicking sound is heard and it is securely locked.

B. To detach the finder, slide the finder to the rear end, while depressing the finder release button of the camera body, and the finder will become detached.

* When attaching the finder to the camera body, first, detach the finder base cover S from the base of the finder and the camera top cover S from the camera body. The finder base cover S is lifted up and detached, while pressing in the horizontal direction, as shown. The camera top cover S is detached from the camera body in the same manner as the finder is detached, as explained in B above.

Battery

The finder is powered by the battery loaded in the camera body. Since the camera and finder will only operate propely when the battery is loaded, be sure to check the battery capacity.

⚠ Warning

Care should be exercised to store the battery where small children will not be able to reach it and use care so that small children cannot swallow the battery accidentally.
Should the battery be swallowed, however, contact the doctor immediately and ask for advice.

Checking the Battery

The battery should be checked in the following manner: –

A. Set the main switch of finder ON (set to A or M).

B. Depress the shutter release button halfway; if the LCD indication in the finder lights up, this means that the battery is properly loaded and that there is sufficient battery power.
*If the LCD indication does not light up or should the illumination go out, after lighting up for about 0.5 sec., the battery is exhausted and should be exchanged.

* When shooting with the AE Prism Finder SQ-i attached, always check the battery in the above manner.

* In the case of the SQ-Am, set the mode selector switch to Sm or Cm for battery checking.

Services-life of the Battery

Batteries which can be used in the camera are the alkaline manganese type and silver oxide type (in the case of the SQ-A and SQ-Am only). The following table shows the number of exposures possible with alkaline manganese batteries.

	With AE Finder SQ-i	Without AE Finder SQ-i
SQ-Ai	150 rolls (120 roll film)	750 rolls (120 roll film)
SQ-Am	160 rolls (120 roll film)	750 rolls (120 roll film)
SQ-A	160 rolls (120 roll film)	750 rolls (120 roll film)

* The above figures are based on tests conducted by the company. The number of rolls will decrease when the LCD indication is checked frequently or when many long time exposures taken.

* The batteries are exhausted in the following cases and the batteries should be exchanged.
1) No LCD indication in the finder or LCD indications light up but goes out immediately.
2) Shutter cannot be released (in the case of the SQ-Ai).

* There is a tendency for performance to drop in the cold region, because of the characteristic of the battery. In such cases, therefore, the use of the Remote Camera Battery Pack is recommended.

* Always set the main switch of the finder to "OFF", while moving from shooting site to shooting site, when resting between shots, or when storing the camera, in order to prevent battery drainage.

Film Speed Dial Scale
(The film speed scale is actually marked as in the center row.)

ISO	25	32	40	50	64	80	100	125	160	200	250	320	400	500	640	800	1000	1250	1600	2000	2500	3200	4000	5000	6400		
Scale	25	·	·	50	·	·	100	·	·	200	·	·	400	·	·	800	·	·	1600	·	·	3200	·	·	6400		
DIN	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39		

Setting the Film Speed

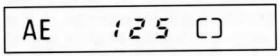
The film speed of the film used must be set to the film speed dial of the film back.
To set film sensitivity of the film loaded in the film back, rotate the film speed dial with a slight lifting action, as illustrated, and set the film speed scale to the index. There are click-stops at 1/3rd increments, in this case.

* In the case of the Film Back SQ-i, care must be exercised because there is a range in which the film speed dial cannot be rotated when the exposure compensation dial is set to a position other than 0.
* This instruction is for the Film Back SQ-i. In the case of the Film Back SQ, read the instructions in the instruction manual for the SQ-A and SQ-Am models.

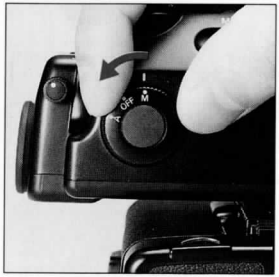
Film Speed	Exposure Compensation Range
ISO 25	−2‥−1‥0
ISO 50	−2‥−1‥0‥+1
ISO 100~1600	−2‥−1‥0‥+1‥+2
ISO 3200	−1‥0‥+1‥+2
ISO 6400	0‥+1‥+2

Use of the Main Switch
Set the main switch of the Finder to A or M and power will be supplied to the Finder.

Aperture-Priority Automatic Exposure
When set to A, aperture-priority automatic exposure control will be possible. The shutter speed will be controlled from 32 sec. to 1/500 sec., with each stop controlled in 1/12th step.



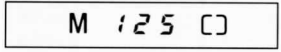
A. Rotate the aperture ring of the attached lens to set the required aperture.
With all SQ lenses, auto-exposure control is possible at click-stop settings only. With "S" lenses, click-stops are available at settings with f/numbers, and with "PS" lenses, at intermediate 1/2 stop settings as well.

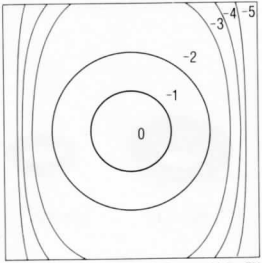


B. In order to display the shutter speed selected by AE Prism Finder SQ-i, depress half-stroke of the shutter release button, indications will be displayed in the bottom area of the finder, outside the screen area.
Upon releasing the shutter, the shutter speed display will stay illuminated while the shutter is open and will go out when the shutter closes.

Manual Exposure
When set to M, manual exposure control is possible.
In the case of manual exposure control, the proper shutter speed for the preset aperture setting will be indicated in the finder; however, the actual shutter speed at which the exposure will take place, in this case, will be the shutter speed set to the shutter speed dial of the camera body.

For full particulars on operations in this case, refer to "3. Advanced Picture-Taking Methods".





Average Metering Sensitivity Pattern Unit : EV

Switching the Exposure Mode

· Average Metering

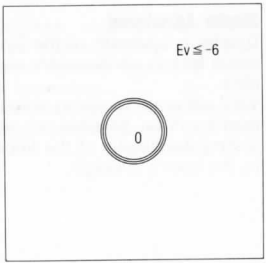
Slide the exposure mode switch to the Av side, which will give you the average metering mode, with the [] mark indicated in the finder. The sensitivity pattern, in this case, is that illustrated.

AE 125 []

· Spot Metering

Slide the exposure mode switch to the Sp side and this will give you spot metering, with the ● mark indicated in the finder. The sensitivity pattern is that illustrated.

AE 125 ●



Spot Metering Sensitivity Pattern Unit : EV

Diopter Adjustment

Diopter adjustment of the eyepiece lens is continuously variable.

Very accurate focusing adjustments will be possible, by adjusting the diopter of the finder to the user's eyesight.

Adjust knob so that details on the screen itself, such as etched lines, or prism/split-image of the focusing screen is seen clearly.

Turn the diopter correction knob clockwise for plus corrections and counter-clockwise for minus corrections.

The knob has an angle of rotation of about 240° while the index (white dot) should only be used as guide.

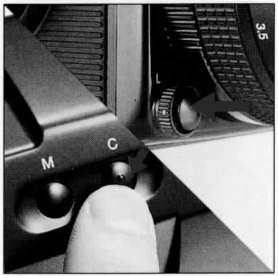
Exchanging the Eyepiece Lens

A total of three adjustable diopter eyepiece lenses are available for the AE Prism Finder SQ-i, i.e. the standard eyepiece lens, the plus (+) eyepiece lens and the minus (−) eyepiece lens.

To exchange the eyepiece lens, remove the rubber eyecup, if attached, then rotate the attached eyepiece lens in a counter-clockwise direction to

remove. Rotate the replacement eyepiece lens in a clockwise direction to attach.
Adjustments are possible from +0.5 to −2.5 dptr. with the standard eyepiece lens and, in combination with the plus eyepiece lens (variable from +3 to 0 dptr.) and minus eyepiece lens (variable from −2 to −5 dptr.), there is a total adjustment range of +3 to −5 diopters.

Rubber Eyecup
The rubber eyecup should be attached over the eyepiece lens. There are two types of rubber eyecup, or small (supplied on the finder) and large (supplied as an accessory).
The rubber eyecup prevents entry of rear light into the finder and has the effect of showing a more clear image. And, for eyeglass users, the rubber eyecup provides protection for the eyeglass lens surface. The small rubber eyecup and large rubber eyecup should be used, as necessary.
*The rubber eyecup can be used interchangeably with that of the AE-III Prism Finder E.



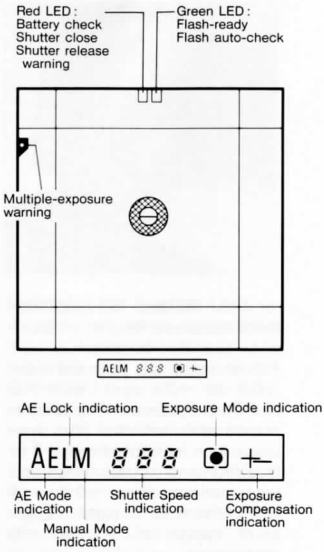
Finder Indications

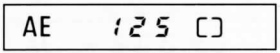
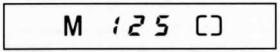
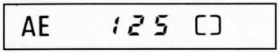
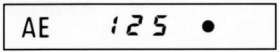
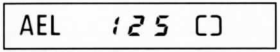
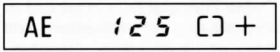
When the AE Prism Finder SQ-i is attached, the LCD indication and other indications can be confirmed.

· LCD indications

With half-stroke of the shutter release button, exposure indications will be displayed in the bottom area of the finder, outside the screen area. The display will be illuminated for 16 sec., even after pressure is released.

The display will also light up when the Clear (C) button is depressed in place of the shutter release button.



	Finder Indications
Finder display in the AE mode	
Finder display in the manual mode	
Finder display for average metering	
Finder display for spot metering	
Finder display for AE lock (See page 25) ...Use Clear (C) button (see page 27) to release AE lock, when not required.	
Finder display with exposure compensation (see page 28) ...Set exposure compensation dial (see page 28) to 0, when not required.	

* When the Electro-Magnet Cable Release is connected to the SQ-Am, no indications will appear with the Electro-Magnet Cable Release action. The indications will only appear when the shutter release button is half-stroked or when the Clear (C) button is depressed.

* The shutter speed indication changes at each 1/2 step. The denominator only is shown as a full number for settings from 1/2 to 1/500 sec. (For example, 125 stands for 1/125 sec.) On the other hand, 0″7 stands for 0.7 sec. and 1″5 for 1.5 sec., while 1″ - 16″ is 1 sec. - 16 sec.
* The shutter speed indication in the finder changes for each 1/2 step but, when used on AE, the actual shutter speed will be controlled in 1/12th step. (A flickering 16″ when used in the AE mode means that the shutter will operate at a shutter speed between 21 to 32 seconds.)
* When a slow shutter speed is being used, prevent camera shake with a tripod.

Finder Warning Indications

When warning indication appears in the finder, carry out the procedure noted following.

In the case of overexposure

In the case of underexposure:

...Change the aperture setting, so that the shutter speed is illuminated steadily.

When outside the meter coupling range:

...Use ND filter and decrease light intensity, as the light is too bright.

...Metering not possible, as light is too dark for the built-in meter.

Error indication:

...Check whether lens or film back is properly attached.

When batteries are exhausted:

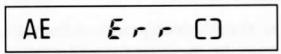
...Check also battery direction.

Multiple exposure warning. (In the case of the SQ-Ai.)

...Set the multiple exposure lever perpendicular.

(See page 30 of the instructions for the SQ-Ai.)

The shutter speed computed will flicker.



No indication or indication goes out after about 0.5 sec.

Warning mark will appear in top left corner of screen area.

Backlighting the Display

The AE Prism Finder SQ-i incorporates a backlight system so that the LCD indication inside the finder can be confirmed even when used in dark places.

1) Backlighting will automatically be switched on when the ambient lighting (or the amount of light entering through the finder display illumination window) becomes dark.
2) The backlight illumination period is 6 sec. when the LCD display is already illuminated. The backlight will go out automatically after 6 sec. If the backlight needs to be illuminated once more, simply depress the shutter release button halfway or depress the Clear (C) button.
3) If the backlight is also illuminated when the LCD display is illuminated with the shutter release button, etc., the backlight will go out 6 sec. after releasing pressure on the button.
4) The backlight will also go out when illumination of the LCD display goes out.
5) If the shutter release button, etc., is continuously depressed halfway, the backlight will also continue to be illuminated, even if the ambient light level becomes brighter.

AE Lock

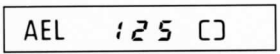
When AE lock is utilized in aperture-priority AE operations, the brightness of a predetermined section of the subject within the finder area is memorized and, therefore, makes it possible to deliberately adjust exposure over or under, as required.

When AE lock is required for accurately determining exposure for a certain limited area, spot metering is recommended. (AE lock can also be used in the average metering mode.)

For mirror lockup operation in the automatic mode, take an AE reading first. Activate AE lock, lock the mirror up and then release the shutter.

*AE lock is only possible in the aperture-priority AE mode.

A. When the memory button (with the "M" indication) of the AE Prism Finder SQ-i is depressed, the LCD display is illuminated and the finder starts exposure measurement. (At this point, in the case of normal AE metering, the exposure measurement value will change continuously.)



B. Release pressure on the memory button when the point to be metered is determined. The exposure will be memorized and locked for a one minute period, after releasing pressure on the memory button. At this time, "L" (for AE lock) will be indicated in the finder. After one minute, AE Lock will be cancelled and the LCD display will go out.

*Should the aperture, ISO film speed and exposure compensation be changed during AE lock, the LCD shutter speed indication and the actual operating shutter speed will change correspondingly.

*During AE Lock, should the shutter release button be depressed halfway and the pressure then released, the AE lock memory will continue while the button is depressed halfway. There will be an extension of the AE lock action for another one minute period from the time that pressure is removed from the shutter release button.

*If the memory button is depressed once more during AE lock, AE lock will be cancelled. When pressure is released on the button, a new exposure measurement will be memorized and another one minute AE lock period will start. Should the shutter release button be depressed halfway at this time, it will not be possible to cancel AE lock.

C. AE lock is cancelled with the following operations:

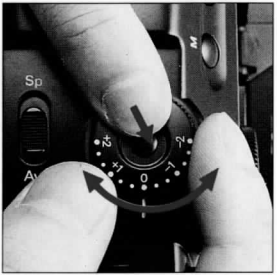
- When the Clear (C) button is pressed.
- When the exposure mode switch is switched.
- When the main switch is changed.
- When the lens is detached and exchanged.
- When the film back is detached and exchanged.
- When the mode dial is set OFF (in the case of the SQ-Am and SQ-Ai plus Motor Drive SQ-i).
- When the shutter is released.

*Do not release the shutter while depressing the Memory (M) button or Clear (C) button. The electronic circuit of the finder will operate mistakenly and the exposure will not be accurate.

D. When the shutter is released, the picture will be taken at the exposure value memorized. The indication will go out, after picture-taking, and AE lock will be cancelled.

Exposure Compensation Dial

Exposure compensation up to two stops on the over (+) side and under (−) side are possible in 1/3rd step increments, with the exposure compensation dial located on top of the finder.



*A "+" or "−" indication will be seen in the finder while exposure compensation is in effect. Normally, the exposure compensation dial should always be set to "0".

*The exposure compensation dial on Film Back SQ-i can be used together with the exposure compensation dial on the AE Prism Finder SQ-i. In this case, the exposure compensation will be the total value of the two dials.

When exposure compensation is undertaken only with the film back, great care is required as the "+" and "−" indications will not be displayed.

A. Rotate the exposure compensation dial while depressing the exposure compensation dial lock button and set the dial to the required exposure compensation. The dial only locks at "0".

Once the lock is released, the dial can be rotated without depressing the lock button.

B. After taking the picture with exposure compensation, always return the exposure compensation dial to the "0" setting.

Eyepiece Shutter
When the user's eye must be taken away from the eyepiece lens during photography, the eyepiece shutter should be closed to prevent the entry of ambient light through the eyepiece lens which could influence the exposure meter reading. Rotate the eyepiece shutter lever in the arrow-indicated direction and the red-colored eyepiece shutter will be closed.

Manual Exposure Control

Use manual exposure control when you want to take the picture at a shutter speed and aperture setting of your own choice, such as when a special exposure effect is required or when an independent exposure meter is used to determine the shutter speed and aperture setting. The main switch should be set to M or OFF, for manual exposure control.

* When the main switch is set to M (for manual exposure control), although the AE Prism Finder SQ-i will indicate the correct shutter speed for the predetermined aperture setting, the actual shutter speed at which the shutter will be released will be the shutter speed set to the shutter speed dial of the main camera body.
* When the main switch is set to OFF, the exposure meter will be switched OFF. No indications will appear in the finder and the shutter will be released at the shutter speed dial setting of the main camera body.

If conditions do not require operation of the exposure meter, operations similar to the manual exposure control can be undertaken, in this case.

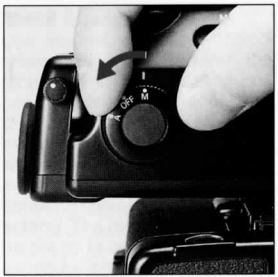
Manual exposure control should be undertaken in the following cases;

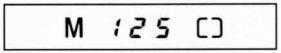
1) When it is required to photograph at a desired shutter speed.
2) For flash photography.
3) For time exposure photography on bulb (B) or time (T).
4) For use as an independent exposure meter.
5) For special effects photography.

*When using the SQ-Am in the continuous mode (with mode selector switch set to Cm) the AE Prism finder SQ-i should be set to M or OFF.
If the main switch of the finder is set to A when using the SQ-Am in the continuous (Cm) mode, the exposure after the second frame will be inaccurate.

*If the exposure meter is not required, when shooting on B (bulb) or T (time), use the AE Prism Finder SQ-i on OFF in order to prevent battery consumption.

When the main switch is set to M, Aperture-Priority Manual Exposure Control or Shutter-Priority Manual Exposure control will be possible, in the following manner, by utilizing the finder indications.





Aperture-Priority Manual Exposure Control

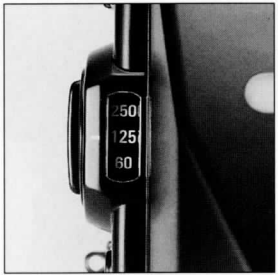
A. Set the main switch of the finder to "M".

B. Rotate the aperture ring of the attached lens and set the required f/number opposite the index.

In the case of the Zenzanon-PS lens, there are click-stops at the f/number positions and intermediate 1/2 stop positions, with the finder metering system working at all such click-stop positions.

*As a reminder, when metering, Zenzanon-S lenses cannot be used between f/number positions with the meter turned on, as there are no click-stop detents at these settings to transfer metering information. After taking a reading at a f/number position, turn off the meter finder and you can set the aperture to any in-between f/number setting you wish for precise exposure control.

C. Confirm the shutter speed with the shutter release button or the Clear (C) button. The shutter speed will be shown in 7-segment LCD display in 1/2 step increments, together with "M", indicating manual exposure control. The indication will be illuminated for 16 seconds after releasing pressure on the button.



* When the Electro-Magnet Cable Release is connected to the SQ-Am, no indications will appear with the Electro-Magnet Cable Release action. The indications will only appear when the shutter release button is half-stroked or when the Clear (C) button is depressed.

D. Set the shutter speed indicated in the finder, or an intentionally compensated shutter speed, to the shutter speed dial of the main camera body.

E. Illumination of the finder's indication will go out when the shutter is released.
* The finder indications will light up while the shutter is open, in the case of the SQ-A and SQ-Am. The indication will go out when the shutter is closed.

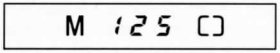
Shutter-Priority Manual Exposure Control

A. Set the main switch of the finder to "M".

B. Set the required shutter speed to the shutter speed dial of the main camera body.

C. The shutter speed can be indicated in the finder with the shutter release button or Clear (C) button. The shutter speed will be indicated in 7-segment LCD display in 1/2 step increments, together with "M" indicating manual exposure control. The indication is illuminated for 16 seconds after releasing the button.

* When the Electro-Magnet Cable Release is attached, in the case of the SQ-Am, there will be no finder indications with the Electro-Magnet Cable Release action. The indication will only appear with half-stroke of the shutter button or when the Clear (C) button is depressed.



D. Rotate the aperture ring of the attached lens so that the same value, or an intentionally compensated value, as the shutter speed set to the main camera body, is indicated in the finder.
The Zenzanon-PS lens has click-stops at the numbered settings, as well as intermediate 1/2 stop positions.

*The exposure meter will not operate at intermediate aperture settings in the case of the Zenzanon-S lens. In order to utilize the finder indications, take readings at click-stop f/number settings.

E. The finder indications will go out when the shutter is released.
*The indication will light up while the shutter is open, in the case of the SQ-A and SQ-Am; and will go out when the shutter is closed.

Flash Photography

The lens shutter of Zenzanon-S and PS series lenses have a X-setting for flash synchronization, which means that electronic flash units will synchronize at all shutter speed settings, up to the fastest 1/500 second.
This means, of course, that flash fill-in for daylight shots can also be made very easily.

*For flash photography with the AE Prism Finder SQ-i attached, care should be exercised on the following points.

1) Electronic flash units will synchronize at all shutter speeds and, therefore, there is no switching of the shutter speed setting, when the flash unit is attached (fully charged) with the AE Prism Finder SQ-i used. Thus, if the ambient illumination is dark during AE photography, a slow shutter speed will be set. Since there is danger of camera-shake in this case, if the picture is being shot with a hand-held camera, switch over to manual exposure control and a shutter speed which will not cause camera-shake. Or, attach the camera on a tripod for photography.
2) The AE mechanism of the AE Prism Finder SQ-i is designed to operate on the basis of the exposure memorized before shutter release. In the case of AE photography, since the automatic exposure operates on the basis of the exposure before flash illumination, there will be a tendency for overexposure, by the amount of flash illumination. When precise exposure is required, trial shooting is recommended.

Mirror Lock-up Photography

In mirror lock-up photography, the mirror raising action and shutter operations, which are undertaken consecutively in the normal shooting mode, are activated with timing differences. This will be very effective in close-up photography and telephoto photography, in which cases slight vibrations caused by the mirror raising action may be objectionable.

Mirror lock-up is possible in the single frame (S) or continuous (C) mode.

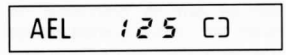
The use of a cable release or other external release device is recommended, in the case of mirror lock-up photography.

* For mirror lock-up photography with the AE Prism Finder SQ-i, use the AE lock mode or manual exposure control. Photography in the AE mode, without AE lock, will result in shutter release at 1/500 sec.

Mirror Lock-up in the AE Mode

A. Set the main switch of the finder to "A".

B. Depress the Memory (M) button of the AE Prism Finder SQ-i and then release pressure. This will input the exposure measurement into memory and activate the AE lock mode.



C. Lock up the mirror with the mirror lock-up lever on the main camera body, within one minute of activating the AE lock mode.

D. Shutter release should take place within one minute after mirror lock-up. The AE lock condition will be maintained for one minute after mirror lock-up and the LCD display will be illuminated during this time.

*The shutter release button should be depressed halfway or the Memory (M) button should be depressed, within one minute, and AE lock will be extended for another minute from that point.

Mirror Lock-up in the Manual Exposure Control Mode

A. Set the main switch of the finder to "M".

B. Determine the exposure, as explained earlier, for Aperture-Priority and Shutter-Priority Manual Exposure Control Modes.

C. Lock the mirror up with the mirror lock-up lever on the main camera body. The LCD indication will go out with mirror lock-up.

D. Release the shutter. The indication 500 will light up in the finder, with half-stroke of the shutter button, but will go out when fully stroked.

*In the case of the SQ-A and SQ-Am, the indication 500 will be illuminated while the shutter is open and will go out when the shutter is closed, upon releasing the shutter (if the shutter speed is set at a slower speed than 1/60 sec.).

* AE lock will be cancelled in the following cases. And, if the shutter should be released, in this case, it will be released at 1/500 sec.
In this case, shooting should be switched to manual exposure control and the picture should be taken at the exposure obtained with an independent exposure meter, or mirror lock-up should be cancelled, based on instructions for the main camera body, and AE lock photography should be undertaken.

- When the Clear (C) button is pressed.
- When the exposure mode switch is switched.
- Elapse of one minute after mirror lock-up, with the LCD indication also going out.
- When film back is detached and exchanged.
- When mode dial is set OFF (in the case of the SQ-Am and SQ-Ai plus Motor Drive SQ-i).

* Mirror lock-up in the AE lock mode should be undertaken on S (single frame). AE lock is only effective for the 1st frame following mirror lock-up. In the case of mirror lock-up on C (continuous), the 2nd and following frames will be exposed at 1/500 sec. Mirror lock-up should be cancelled once, AE lock should be repeated and mirror lock-up should take place.

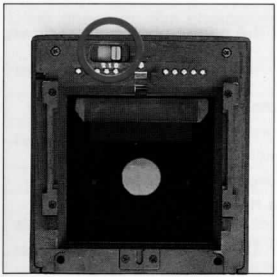
* If the main switch of the finder is moved from "OFF" to "A", after mirror lock-up, and the shutter is then released an error in the camera's operation may occur. For mirror lock-up in the AE mode, always lock the mirror up after setting the AE lock.

* AE lock is not possible after mirror lock-up. If mirror lock-up should take place during AE, cancel mirror lock-up (see page 33 of the SQ-Ai instructions) or set the main switch to OFF; then, take the picture. (The shutter speed and aperture settings should be determined with an independent exposure meter, in this case.)

Interchangeable Focusing Screens
Cameras in the Zenza Bronica SQ Series have interchangeable focusing screens which should be chosen depending on the purpose of the photography. The standard focusing screen is the microprism/split-image type. Exposure compensation is not required when focusing screens are interchanged.

Operations When Attached on the SQ-Am

* All power supply is switched OFF when the mode dial on the main camera body is set to OFF. The finder indication will not light up, in this case, when the main switch is turned ON (set to A or M). Power will be supplied to the finder when the mode dial is set to Cm or Sm.
* AE photography will not be possible when the mode dial is set to Cm (continuous). For shooting in the AE mode, switch the mode dial to Sm (single frame). Shoot in the manual mode for continuous photography.
* For AE photography with the Electro-Magnet Cable Release, illuminate the finder indications by half-stroking the shutter button or press the Clear (C) button. Should the Electro-Magnet Cable Release be depressed, when the finder indication is not illuminated, the exposure will always be taken at 1/500 sec.
* When the shutter button is half-stroked and the shutter release warning LED lights up, outside the screen area, in the top center area, and the shutter cannot be released, check the points noted in page 11 of the SQ-Am instruction manual. Should the AA-size batteries for the motor drive system be exhausted, exchange for fresh batteries.
* When the finder indication does not light up, check whether the main switch or mode dial are not set to OFF. If this is not the case, the 6 volt battery for the electronic lens shutter is exhausted and should be exchanged.



Exposure Compensation Switch

The exposure compensation switch is located on the bottom surface of the finder, at the front end, by the electrical contact points, and is used when a predetermined exposure compensation is constantly required. It can be used, for example, when the film sensitivity should be changed, when it is necessary to change development conditions for black-and-white film, etc.

The amount of exposure compensation is determined by the setting of the exposure compensation switch, with no compensation when set to 0, +0.3EV compensation when on 1 and +0.6EV compensation when set to 2.

For normal photography, always confirm that the exposure compensation switch is set to 0, as there is no warning indication that exposure compensation is in effect.

In the following cases —
Check the camera, based on the following chart, before considering that the camera has broken down.
While shooting...

Symptoms	Causes	Solutions
Indication does not appear.	Battery exhausted.	Exchange battery.
	Battery reversed.	Re-insert battery correctly.
	Main switch OFF.	Switch ON.
Indication flickers.	Outside coupling range.	Change aperture setting.
	Outside metering range.	Use ND filter, if too bright. Shoot in brighter area or use illumination/electronic flash, if too dark.
"Err" indication appears.	Lens attachment is defective.	Check lens attachment.
	Contacts are dirty.	Clean contact points.
	Film back attachment is defective.	Check film back attachment.
Shutter does not release.	Shutter button locked.	Release shutter button safety lock.
	Dark slide not detached.	Pull out dark slide.
	Lens attachment is defective.	Check lens attachment.
	Battery exhausted (SQ-Ai).	Exchange battery.
	Battery exhausted (SQ-Am).	Exchange motor drive system battery.
	Incomplete winding action.	Check film winding action.
LCD indication becomes black.	Temperature increase.	Shoot in cooler place.

Upon checking film photographed...

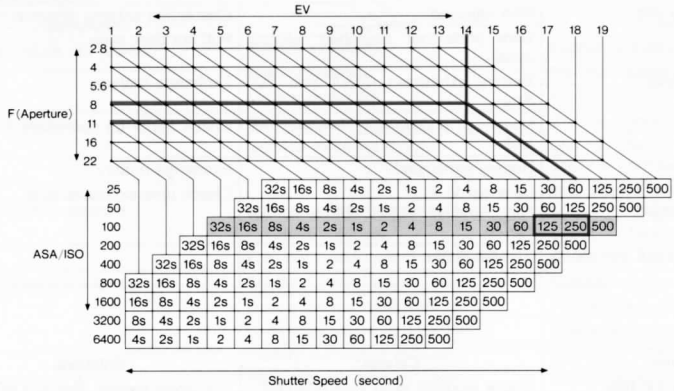
Symptoms	Causes	Solutions
Nothing taken on the film.	Film reversed.	Check film loading direction.
	Dark slide not detached (slightly open)	Pull out dark slide.
Extremely underexposed.	Battery exhausted (SQ-A and SQ-Am).	Exchange battery.
	Mirror-up photography without AE lock.	Check Mirror-up operations.
Extremely overexposed.	Battery exhausted.	Exchange battery.
No boundary between frames and taken as streaked picture.	Lens set to T. Film winding action before shutter closes.	Check time exposure lever.
Exposure satisfactory but overall indistinct image.	Camera shake.	

Other reasons...

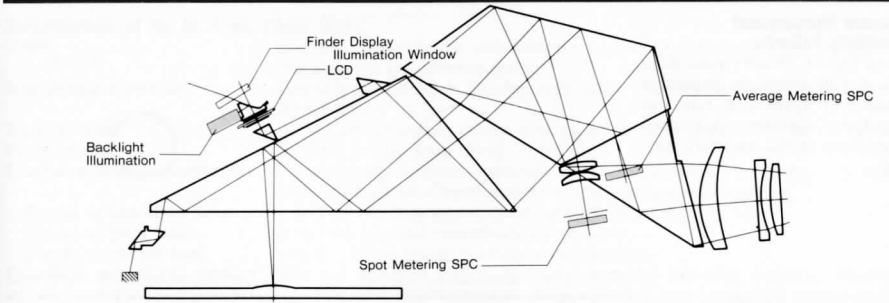
Symptoms	Causes	Solutions
Battery exhaustion is too fast.	Check whether main switch is OFF.	Exchange battery. Set to OFF when not in use.
	Used in low temperature range.	Use remote camera battery pack.

4 Appendix

Relationship Between Shutter Speed, Aperture and Exposure



* The shutter speed indications in the diagram should be read, as follows:-
  1S - 32S: 1 second to 32 seconds
  2 - 500: 1/2 sec. to 1/500 sec.



Relationship Between Shutter Speed, Aperture and Exposure

For example: If EV 14 is the correct exposure with ISO 100 film, the shutter speed setting will be 1/250 sec. when f8 is set to the aperture ring. (See the red-lined section in the table.)

If the aperture is adjusted to f11, in the above case, the shutter speed setting will become 1/125 sec.

* An EV 14 is the brightness outdoors on a bright sunny day.

Exposure Measuring Range and Ev

The exposure measuring range with the AE Prism Finder SQ-i is EV 1 to 18 (with ISO 100 film).

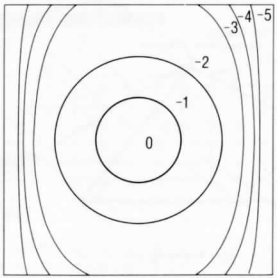
Ev, or exposure value, is a combination of shutter speed and aperture (or f/numbers), as determined by the film speed (or sensitivity) and the intensity of the light.

Exposure Measuring Positions

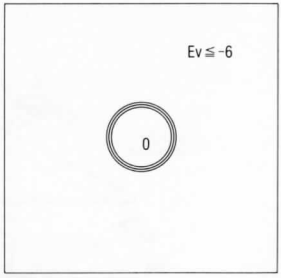
Three silicon photocells (light receptor cells) are located in the positions illustrated, with two SPC's used exclusively for average exposure measurements and one SPC used exclusively for spot exposure measurements. The meter sensitivity patterns are illustrated.

Exposure Measurement Sensitivity Patterns

Since the AE Prism Finder SQ-i has a full aperture exposure measuring system, it has the sensitivity pattern illustrated regardless of the aperture setting.



Average Metering Sensitivity Pattern Unit : EV



Spot Metering Sensitivity Pattern Unit : EV

Specifications of the AE Prism Finder SQ-i

Type	Eye-level prism finder with laterally correct upright image and incorporating automatic exposure meter.
Attachable cameras	Zenza Bronica SQ-A, SQ-Am and SQ-Ai (SQ-Am has some limitations on its function).
Magnification	0.7×, with standard 80mm lens at infinity and at zero diopter correction.
Finder field	52.3mm × 52.3mm (94% × 94%)
Eyepiece diopter correction	Continuously variable; standard eyepiece lens can be further corrected with optional plus eyepiece lens and minus eyepiece lens.
Range w/standard lens	−2.5 to +0.5 diopters, continuously variable.
Range w/plus lens	0 to +3 diopters, continuously variable.
Range w/minus lens	−5 to −2 diopters, continuously variable.
Exposure measuring system	TTL full aperture exposure measurements; full-area average measurements switchable to spot measurements. (Light receptors: silicon photocell; two cells used for average metering and one cell used for spot metering.)
Shutter coupling range	
AUTO	32 sec. to 1/500 sec., controlled in 1/12th steps.
MANUAL - SQ-Ai	16 sec. to 1/500 sec., per one step.
- SQ-A, SQ-Am	8 sec. to 1/500 sec., per one step.
Exposure measuring range	EV1 to EV18 (80mm lens; ISO 100)
Film speed coupling range	ISO 25 to 6400 (with Film Back SQ-i) ISO 25 to 3200 (with Film Back SQ)
Exposure compensation range	±2 EV (1/3rd step increments.) (Usable on finder side and Film Back SQ-i side)

Exposure control modes	Aperture-priority AE (automatic exposure) and manual
Finder indications	Liquid crystal display indications. 7-segment number and letter indications (automatic backlight illumination)
AE	Illuminated display of shutter speed (in 1/2 step increments) and "AE" illumination.
MANUAL	Illuminated display of shutter speed (in 1/2 step increments) and "M" illumination.
Other displays	AE lock; L/Spot metering; ●/Average metering; [ ]/Exposure compensation; + or −/Error; Err/Outside coupling range/outside metering range; flickering at 2Hz.
AE lock	Possible in AE mode only. Locks for 1 min.
Spot metering area	12mm circle in center of finder area. (7.7° angle of acceptance with standard 80mm lens)
Dimensions	71mm (width) × 153.2mm (length) × 57mm (height) (excluding rubber eyecup)
Weight	435 grams
Accessories	Interchangeable eyepiece lens SQ-i (Type S for AE Prism Finder SQ-i). Supplied on finder. Rubber eyecup E (Same as AE-III Prism Finder E) small. Supplied on finder. Rubber eyecup E (same as AE-III Prism Finder E) large. Supplied in same package.

Specifications and contents of the instruction manual are subject to changes, without prior notice.

5 Care and Storage

Care and Storage

* Cleaning of the magnifier and prism should be restricted to blowing with the blower brush, after which lens cleaning tissue and liquid should be used to lightly wipe the surfaces.

Do not use silicon-coated cloth, as it will prove harmful to the coating.

* However, use the silicon-coated cloth, or a soft cloth, to clean the exterior of the accessory and never use solvents, such as lens cleaning liquid, alcohol or thinner, for this purpose.

* Do not leave the accessory for a long time in extremely hot locations, such as summer beach or car parked in the sun, as the accessory may be affected, leading to improper exposure measurements and even to damage.

Should the camera and accessory become overheated, under the above circumstances, let them return to the ambient temperature level before using them.

* Wipe and clean the accessory very carefully after using it in wet weather or at the seashore.

* If the accessory has been exposed to salty air (or water), wipe the exterior carefully with a well-wrung damp cloth (using fresh water). Then, dry with a soft, dry cloth. And, have the accessory inspected at the authorized repair station, if neccessary.

* Store the accessory in a tin-lined container, with plenty of desiccant, such as silica gel, if it is not being used for some time. And, store in a cool, dry and well-ventilated (but not windy) location, free of naphthalene and/or camphor.

LCD (Liquid-crystal display) Display

* The liquid crystal utilized for the LCD has a superior temperature characteristic.

Because of this characteristic, however, the LCD display may seem transparent and seem to flicker at a very quick cycle in the case of a bright subject.

But, it should be noted that this is a characteristic of the liquid crystal and not a defect.

Regarding the Battery

The finder is powered by the battery loaded in the camera body. The camera and finder are placed in operation only when the battery is loaded and, therefore, the battery must always be handled properly and stored properly, too.

* If the battery is kept in the battery chamber for a long time, there is danger of leakage and, consequently, poor contact. If leakage is confirmed, throw the battery away and, before loading a new battery, be sure to clean the contact points very carefully.
* Take the batteries out of the battery chamber when storing the camera.
* The shutter release button of the main camera body should be locked, when the camera is not being used. The shutter release button may be depressed accidentally while the main camera body is being carried in a bag, which could lead to discharge of the battery power.
* Do not throw the batteries into a fire, or hit it strongly, as there is danger of explosion.
* An alkaline manganese battery is used with the Zenza Bronica SQ-Ai. It has good cold weather resistance. However, there is a tendency for performance to drop when the temperature falls below 0°C (32°F). Therefore, make it a rule to use new batteries and/or keep replacement batteries on hand for shooting outdoors in freezing weather. Keep the batteries (and camera) under cover, next to the body, and load just before beginning the session and/or, preferably, use the optional Remote Camera Battery Pack SQ-i.

Note:

Use of Spot Metering

When using the AE prism viewfinder SQ-i with any of the following Zenzanon PS/S lenses, apply exposure compensation as indicated in the following table to result in correct exposure.

Lens requiring exposure	Spot meter (SP) compensation (in Ev)
PS 110 mm	− 1/3
PS 135 mm	− 1/3
PS 150 mm	− 1/3
PS 180 mm	− 1/3
PS 200 mm	− 2/3
PS 250 mm	− 1

*When using average value (AV) metering, no compensation is required.
*Exposure compensation may be made using either the exposure compensation dial on the film back, or the exposure compensation dial on the viewfinder.
*Note however that the 'exposure compensation' warning in the viewfinder does not recognize exposure compensation applied on the film back.
*When you switch to a lens that does not require exposure compensation, be sure to return the exposure compensation dial to its normal place before using average value metering.
*When shooting with a teleconverter, close-up lens, auto extension tube, or auto bellows attachment, the above exposure compensation values may be used without further adjustment.

TAMRON

TAMRON CO.,LTD.
<Overseas Sales Dept>
17-11, 7-chome, Takinogawa, Kita-ku, Tokyo 114-0023, Japan
Tel:(03)3916-0131 Fax:(03)3916-1860

Printed in Japan
9810H0001