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INSTRUCTIONS

Congratulations on your choice of the Zenza Bronica SQ-Am single lens reflex camera which has been developed to provide the user with high quality performance, simple handling convenience and extremely useful versatility plus automatic motorized film winding and shutter cocking operations suitable for the professional photographer.

Although the Zenza Bronica SQ-Am has been designed exclusively for motorized operations, it has, also, been developed as a complete modular "system" camera possessing complete interchangeability with the interchangeable lenses and accessories developed for the SQ and SQ-A models, on which the SQ-Am is also based, and, therefore, provides the user with a very high degree of motorization in daily operations, in addition to automatic film winding and shutter cocking actions.

Although instructions following are based on a standard combination consisting of the SQ-Am main body with Zenzanon-S 80mm lens, Film Back SQ 120 and Waist-Level Finder S, the choice of the lens, film back and finder is left to the discretion of the photographer, who should choose those items best suited to the type of assignments contemplated.

To obtain best results from the Zenza Bronica SQ-Am, may we suggest that you read this instruction manual through carefully, before you even touch the camera, as your pleasure in using the camera will be even greater if you thoroughly familiarize yourself with its working parts before loading your first roll of film.

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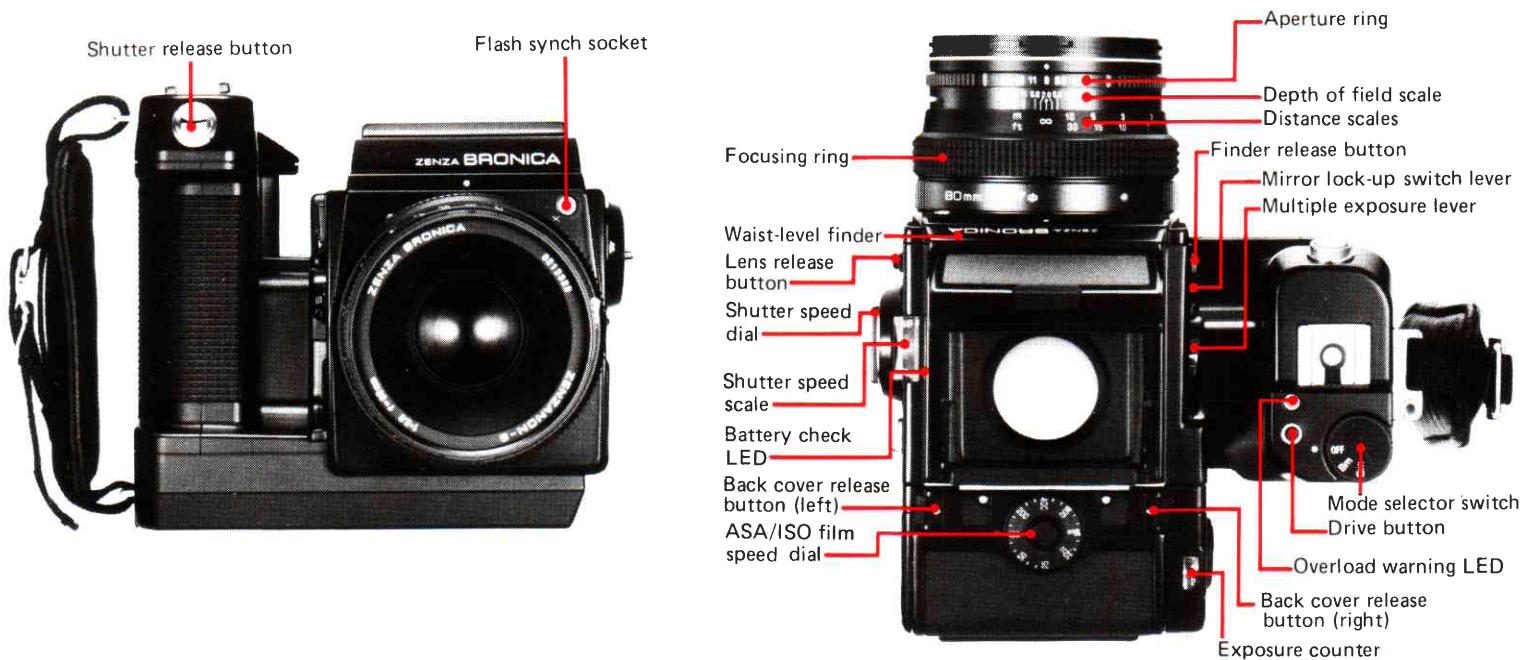
## Specifications of the ZENZA BRONICA SQ-Am

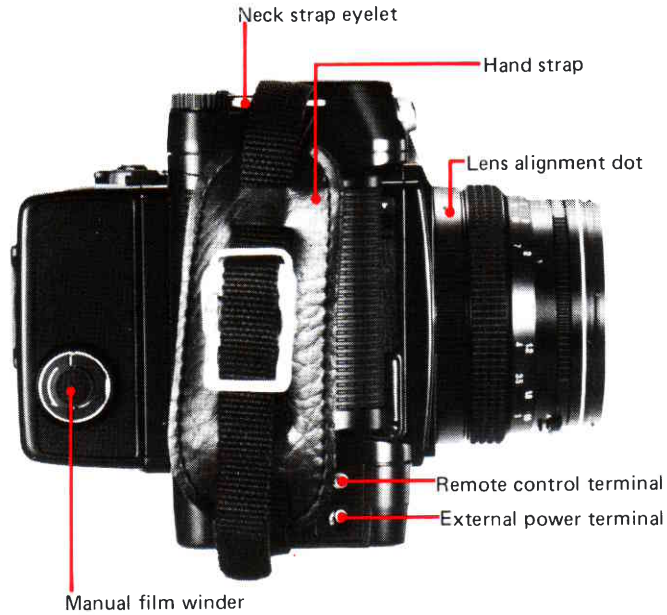
Type	6 x 6cm format auto-winding lens shutter single lens reflex camera, with interchangeable lens, film back, finder and focusing screen systems.
Frame size	55.6 x 55.6mm
Film	120 roll film (12 exposures); 220 roll film (24 exposures); 135 roll film in film cartridges; and Polaroid® Land Pack films. (Exclusive film backs for each film type.)
Standard lens	Zenzanon-S 80mm F2.8; interchangeable type lens; six elements in four groups; multi-layer anti-reflection coated; 51° angle of view; F22 minimum aperture; and minimum 0.8m focusing distance.
Filter size	67mm diameter on 50mm to 250mm lenses; and 95mm diameter on 40mm and 500mm lenses.
Lens mount	Exclusive four-claw Bronica SQ bayonet mount.
Focusing adjustments	Helical focusing system built into each lens.
Lens diaphragm	Fully automatic instant reopening lens diaphragm action; equal-distant aperture scale graduations.
Shutter	Electronic control SEIKO #0 between-lens leaf shutter; shutter speeds 8 sec. to 1/500 sec., without intermediate settings, plus T (time exposure); mechanical control 1/500 second.
Film winding	Motorized automatic film winding action.
Multiple exposure	Multiple exposure possible with multiple exposure lever on camera main body.
Mirror lock-up	Mirror lock-up possible with the mirror lock-up switch lever on the camera main body, with two settings – S – Mirror returns automatically after shutter release action. C – Mirror stays locked up for continuous mode operation.
Mode selection	Mode changes with mode selector switch on the handgrip, with three settings – OFF – All power is switched OFF and the shutter is locked. Sm – Single mode operation (single frame exposed). Cm – Continuous mode operation (consecutive frames exposed).

Film back	Exclusive film backs for 120, 220 and 135 roll films and Polaroid® Pack film. Daylight loading interchangeable type; with ASA/ISO film speed dial coupling to finder with built-in exposure meters.
Finder	Interchangeable finder system.
Focusing screen	Interchangeable type. Standard type, supplied with camera, has split-image rangefinder spot surrounded by microprism ring and full-area matte screen.
Flash synchronization	X-setting (for all speeds up to 1/500 second).
Battery checking	Red-colored LED indicator lights up at the rear end of the shutter speed scale window when the battery check button is depressed (for checking the electronic shutter 6-volt power source).
Batteries	Single 6-volt silver oxide or alkaline-manganese battery for the electronic shutter system; Six AA-size alkaline-manganese or NiCd batteries for the motor drive system.
Firing speed	Continuous shooting or single frame exposures at the rate of 3 frames per 2 seconds (approximately) is possible with the fastest shutter speed.
Shutter speeds usable	All shutter speeds can be used with auto-winding (also possible with finders having built-in exposure meters).
Number of frames	Approximately 500 frames can be exposed when fresh alkaline-manganese batteries are used (at normal ambient temperature)
Others	Drive button, Over-load warning LED, Shutter release warning LED, Remote Control terminal, External power terminal, Hot-Shoe.
Dimensions	144.5(wide) x 109 (high) x 132mm(long) – SQ-Am main body only. 144.5(wide) x 125 (high) x 179mm(long) – SQ-Am main body, with standard lens, Film Back SQ 120 and Waist-level Finder S.
Weight	960 grams (SQ-Am main body, without batteries) 1,925 grams (SQ-Am main body, with standard lens, Film Back SQ 120 and Waist-level Finder S but without batteries.)

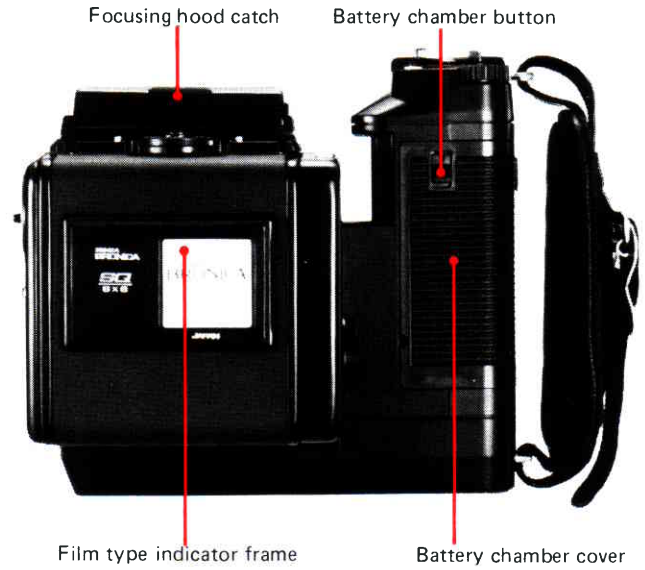
The above specifications are subject to change with or without prior notice.

## Parts of the ZENZA BRONICA SQ-Am









# 1 Loading the Batteries

A single 6 volt silver oxide battery or alkaline-manganese battery is required for the electronic control lens shutter.

The electronically-controlled shutter system will not work without loading the battery. The shutter will be mechanically controlled when the battery is not loaded and will be released at 1/500 sec., regardless of the setting on the shutter speed dial.

Six 1.5 volt AA-size alkaline-manganese or NiCd batteries are required for the motor drive system.

However, the performance noted in the specifications will not be possible when manganese batteries are used because of their electrical characteristics.

\* The batteries noted may be obtained at any photographic equipment or electrical appliance shop.



A. Set the mode selector switch to OFF. Then, slide the battery chamber button in the arrow-indicated direction which will permit the cover to be taken off.

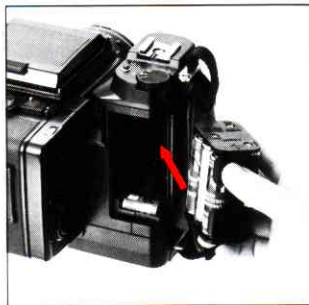
The battery chamber cover is closed by, first, inserting the bottom end and then pushing the top end until it locks.



B. Taking out the upper battery holder will expose a lower battery chamber which is for the 6 volt battery of the electronic shutter. Coincide the plus (+) and minus (-) marks on the battery with similar polarity indications in the battery chamber, when inserting the battery, and then push it in with your finger.

\* The shutter will be mechanically-controlled at 1/500 sec. when the battery is loaded with polarity marks reversed.

## 2 Battery Checking

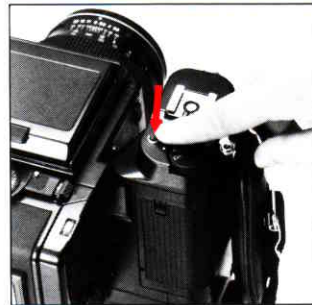


C. The six AA-size batteries for the motor drive system must be loaded in the battery holder taken out, with their polarity marks coincided to the indications on the holder.

The battery holder in which the batteries have been loaded must be inserted into the battery chamber in the arrow-direction indicated on the holder.



A. Set the mode selector switch to Sm or Cm and then depress the battery check button. If a red-colored LED lights up at the rear end of the shutter speed scale window, the battery for the electronic shutter is loaded properly and there is sufficient power for operations.  
\* If the LED does not light up, (1) Mode selector switch is on "OFF" position, (2) the battery is not loaded properly or (3) it is completely drained and should be exchanged.



B. The batteries for the motor drive system are checked by setting the mode selector switch to Sm or Cm and depressing the drive button to check whether there is motor drive operation or not.

### 3 Exchanging Lenses

The Zenza Bronica SQ-Am will not operate properly unless the lens is attached. Furthermore, it will not be possible to attach or remove the lens unless both main body and lens are in the "cocked" condition, with the cocking pin on the lens positioned between the red-colored band and green-colored dot and the cocking pin of the body set to the green dot. When the cocking pins are not located properly for attaching the lens, simply move the cocking pin of the lens to the green dot manually, with your finger, and press the drive button to cock the lens shutter when the cocking pin of the main body is not located at the green-colored dot.



A. To attach the lens to the body, align the orange dot on the camera main body and the red dot on the lens, and then insert the lens fully into its mount. Rotate in the counter-clockwise direction until it stops, with an audible click, which will indicate that it is securely locked.

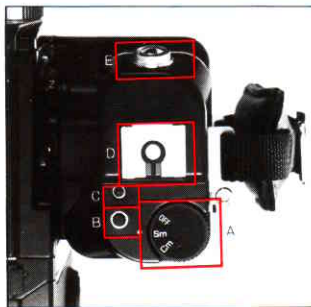


B. To detach the lens, press the lens release button down and, at the same time, rotate the lens in the clockwise direction until it makes a full stop, at which point it will be possible to detach the lens.

## 4 Functions on the Hand-Grip



A. The mode selector switch has three settings, or OFF, Sm and Cm. When set to OFF, all power is switched OFF and auto-winding, lens shutter operation and the built-in exposure meter of attached finders will not function. When set to Sm, there is single exposure operation and when set to Cm, there is continuous exposures while the shutter release button is depressed.



B. The drive button is used to set the loaded film to the first frame to be exposed, after it is aligned to the start-mark, to advance the film for multiple exposures, etc.

C. When there is abnormal overload on the motor during film winding operations, etc., the motor will stop and the red-colored overload warning LED will light up. **Therefore, move the mode selector switch to OFF, check for the cause of the overload and rectify it. Then, set the mode selector switch to Sm or Cm and it will be possible to continue shooting.**

D. The accessory shoe is a hot shoe type which means that electronic flash units with proper terminals can be used without connecting cords.

However, the contact cover on the hot shoe must be removed, first, when attaching electronic flash units.

E. Depress the shutter release button gently, with the ball of the finger.

When the shutter release button is stroked gently and smoothly, it will be possible to confirm the shutter speed setting in the viewfinder area of the AE Prism Finder S, when it is attached.

## 5 Shutter Release Warning LED



In the following cases, the shutter will not be released and a shutter release warning LED will light up, outside the screen area, in the top center of the finder:-

1. Dark slide is inserted.
2. Lens is not attached properly. (Same with automatic extension tubes, too.)
3. Lens release button is depressed.
4. Film is not advanced. (Same when exposure counter is between "S" and "1".)
5. Batteries for motor drive operation does not have sufficient power.

## 6 Attachment and Removal of Film Back

The film back is a film chamber that can be attached or detached freely, thus permitting free exchange of film types even during shooting sessions.

The film back is fully coupled to the camera main body, upon attachment. Therefore, the shutter will not be released, even when the shutter release button is depressed if the film back is attached with the film still not advanced properly, and the shutter release warning LED will light up instead.

The drive button should be used, in this case, to advance the film one frame.

On the other hand, should the drive button be depressed when a film back is attached with film advanced properly and, therefore, in condition for photography, the film will not be advanced.

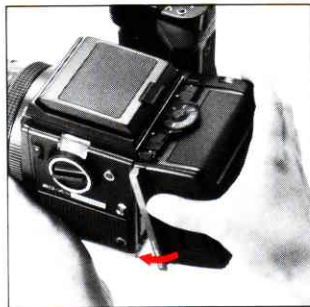
Thus, it is possible to choose the film type most suited to the shot, even midway in the roll. An ASA/ISO film speed dial is available on the film backs and can be used for setting the film speed of the film loaded in the film back, as there is automatic

coupling when finders with built-in exposure meters are attached on the camera body. This will, of course, be very convenient when using films of different sensitivities in the film backs.

\* Make full use of the interchangeable film back.

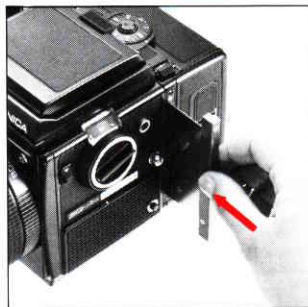
1. Color and black-and-white, in different film speeds, can be shot, as required.
2. Continuous shooting is possible if sufficient preloaded film backs are available.
3. Don't waste unsuitable film used in a previous session but simply load up a new film back with the required film type.
4. A Single SQ-Am can be used by many in the studio or at home, by using additional film backs.

\* Film backs are available optionally. Therefore, the type meeting the requirements of the photographer should be chosen.



A. To attach the film back to the camera main body, simply insert the latches at the upper end of the film back into the attachment openings at the upper end of the camera main body. Then, press the lower end of the film back against the body until it locks securely.

\* The dark slide must be withdrawn from its slit, upon attachment of the film back to the main body, as otherwise the shutter cannot be released. Furthermore, there is danger of the film back accidentally becoming detached from the main body, should the dark slide be ↗



B. To remove the film back from the camera main body, insert the dark slide into the dark slide slit, as illustrated, with the ⊙ mark on the dark slide at the top end. Push it all the way in.

↗ left in its slit while the camera is being carried. Therefore, make it rule to withdraw the dark slide promptly upon attaching the film back to the main body.



C. Depress the film back release button and the lower end of the film back can be removed, as illustrated. Simply shift the film back up slightly and pull it away.

\* The dark slide cannot be withdrawn from the film back when the film back is detached from the camera main body.

## 7 Construction of Film Back



A. The film back consists of a film holder and a film back frame, with exclusive film backs available for 120 and 220 roll films.

The film holder has an insert or frame for loading film, as well as a built-in film winding mechanism.



B. The film back frame has a base with a dark slide slit and a back cover with an ASA/ISO film speed dial and a film type indicator frame. The film back frame completely encloses the film holder and shields it from outside light, as well as connecting it to the camera main body and also coupling with the finders with built-in exposure meter.

## 8 Film Loading

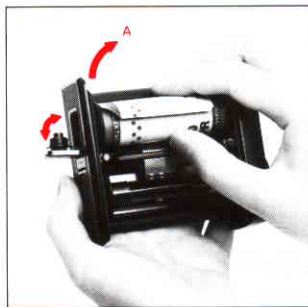


A. To open the back cover, squeeze the left and right back cover release buttons, in the arrow-indicated directions, at the same time and the back cover will open.



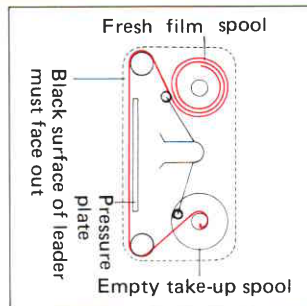


B. The film holder can be taken out for film loading, upon opening the back cover.



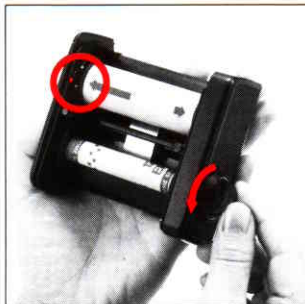
C. There are two spool holders on the film holder. The top one is for the fresh film spool while the bottom one is for the empty take-up spool. The left-side shaft of spool holder can be opened by pushing the end of the spool outward in the arrow-indicated A direction. Therefore, insert the right end of the spool on to the right-side shaft, which is fixed, and then close the left-side holder (shaft) which will engage the spool.

\* The spool holders on the left side will be locked securely, when the back cover is closed.



D. After loading the fresh film spool properly, draw out the leading end of the film and turn it across the film pressure plate (as illustrated). Run it down and turn it over to the take-up spool. Insert the leading end into the slit of the take-up spool and wind slightly until securely engaged.

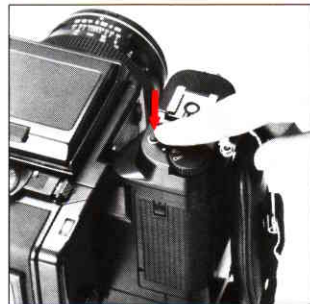
\* The inside black surface of the leader must face out when running across the pressure plate, in this case.



E. Lift up the hinged flap and rotate the manual film winder on the right side of the film holder in the arrow-indicated direction. When the starting point, or arrow mark, on the leader is aligned with the triangular ▼ start-mark on the top left side of the film holder, stop rotation.

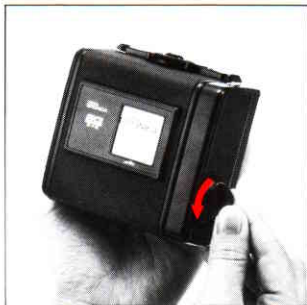


F. Close the back cover, by pressing it firmly against the base of the film back, as illustrated. The back cover will automatically close and lock. The same operation will close the back cover when the film back is detached from the main body.

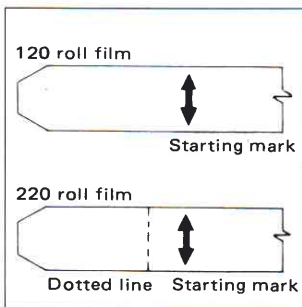


G. Upon loading the film, set the mode selector switch to S<sub>m</sub> or C<sub>m</sub> and depress the drive button, which will place the first frame into position for taking the picture. The exposure counter will also change from "S" to "1" and the shutter will also be cocked.

## 9 ASA/ISO Film Speed Dial



H. When the film back is detached from the camera main body for film loading, the manual film winder is used for advancing the film. The film will stop when it is in place for the first exposure, with the exposure counter also changing to "1". However, it will be possible to rotate the manual film winder and, therefore, it should be rotated 2 or 3 times more, in order to take up any slack in the loaded film.



\* When loading 220 roll film in the Film Back SQ 220, do not mistake the dotted line before the arrow mark for the start-mark.

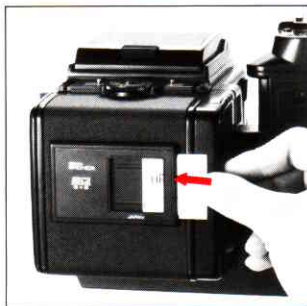
\* See the instructions supplied with Film Back SQ 135 for proper use of the 135 roll film.



To set the film sensitivity of the film loaded in the film back, revolve the ASA/ISO 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. (The dial can be revolved in either direction)

\* The ASA/ISO film speed dial is automatically coupled to the finder with built-in exposure meter, when attached.

## 10 Film Type Indicator Frame

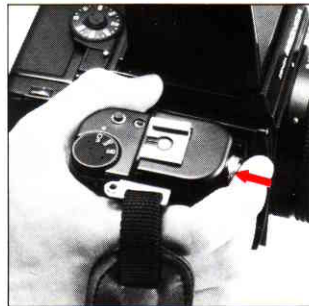


Upon loading the film, tear off the end flap from the empty film package and insert it in the film type indicator frame. This will help you keep track of the film loaded in the film back, even when two or more film backs are used with different films. At the same time, set the film speed with the ASA/ISO film speed dial, as it will come in handy when using the finder with built-in exposure meter.

## 11 Auto-Winding and Shutter Cocking



A. When the mode selector switch is set to Sm, the film will be advanced one frame and the shutter will be cocked, after which motor operation will be suspended, each time the shutter release button is depressed and the picture taken. To take the next picture, therefore, the finger should be lifted from the shutter release button and then used to stroke the shutter release button once more.



B. When the mode selector switch is set to Cm, there will be continuous photography (with continuous auto-winding and shutter cocking action), as long as the shutter release button is depressed.

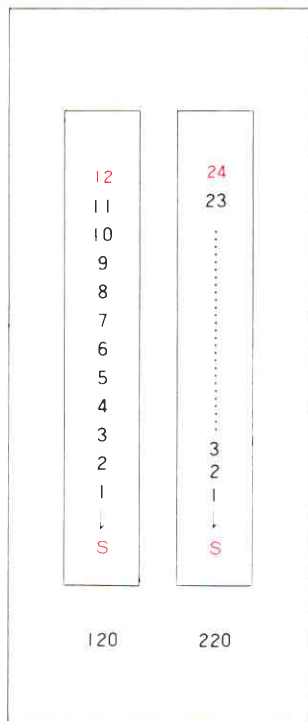
\* The mirror lock-up switch lever should be set to N, except when shooting with the mirror locked up. (See page 29 on Mirror Lock-Up.)

# 12 Exposure Counter



The exposure counter shows the number of frames exposed or, in other words, is an additive type. Starting from "S", the counter on Film Back SQ 120 shows numbers from 1 to 12, while Film Back SQ 220 shows numbers from 1 to 24.

The letters "S", "12" and "24" are orange-colored while all other numbers are white.



## 13 Film Unloading



A. After the 12th exposure of the 120 roll film (24th exposure of the 220 roll film), the film only will be advanced until the remaining film and leader paper is wound up on the take-up spool.

Open the back cover when the motor suspends operations.

B. Remove the film holder and, while preventing the loose film from unwinding, take out the take-up spool. Seal the exposed film and return it to its original box until development.

\* Load and unload film away from direct sunlight and/or strong illumination.

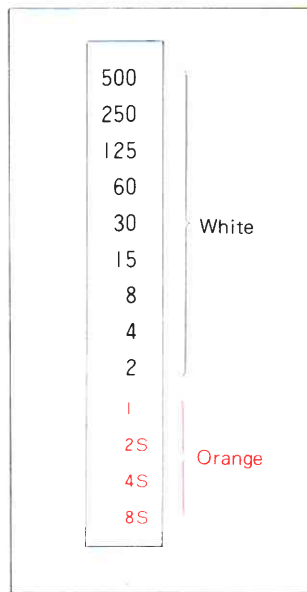
## 14 Setting the Shutter Speed Dial



A. The shutter speed scale is viewed in its window over the shutter speed dial. The numbers on the scale are shutter speed settings, with numbers 1 to 8S full numbers and numbers 2 to 500 fractions of a second. For examples, "8S" is 8 sec., "2S" is 2 sec. and "500" is 1/500 sec., but no intermediate setting between click stops are possible.

\* The shutter is released at 1/500 sec., regardless of the setting when the battery is not loaded or is completely drained.

B. The numbers on the scale are color-coded in orange and white. Orange-colored numbers are full number settings of 1 second and longer while white-colored numbers are setting from 1/2 to 1/500 second. There is no B (bulb) setting. See the page 21 for time (T) exposures.



## 15 Time (T) Exposure

Time exposures are made with the time exposure lever on the lens, regardless of the setting on the shutter speed scale. However, the lever is locked to prevent accidental movement and, therefore, must be unlocked for use.

Except when using the lever for time exposures, always shift it so that the letter "A" is visible on the lens barrel and tightly lock its setscrew to prevent accidental movement.



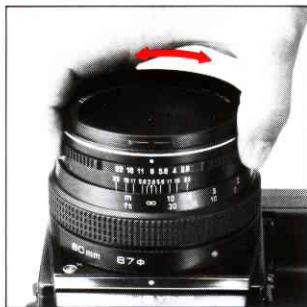
A. Unscrew the setscrew on the time exposure lever until further revolution is not possible, which will permit the lever to be moved freely.



B. Slide the time exposure lever and expose a red-colored "T" on the lens barrel. Depressing the shutter release button, in this condition, will open the shutter. The shutter is closed by shifting the time exposure lever and exposing the letter "A" once more. **However, since the film will not be advanced to the next frame, in this case, depress the drive button to advance the film.**



## 16 Setting the Aperture



A. The aperture ring is rotated, in either direction, to set the required f/number opposite the white index dot. The aperture ring click-stops at the numbered settings. Intermediate settings are also possible.

\* Intermediate settings cannot be used when the finders with built-in exposure meter are used.



B. All interchangeable lenses for the Zenza Bronica SQ-Am have fully automatic lens diaphragms which means that the focusing screen is always viewed at the full aperture, with the brightest possible image. However, depressing the depth of field preview lever will stop the lens diaphragm down to the pre-selected lens opening and permit the photographer to check the depth of field effect on the focusing screen.

\* The aperture ring must not be adjusted while the depth of field preview lever is being depressed.

\* If exposure measurements are taken with the depth of field preview lever depressed, when using finders with built-in exposure meter, the shutter speed setting indicated will cause over-exposure. This is because proper exposures are obtained with exposure measurements made at the full aperture.