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## 17 Interchanging Finders

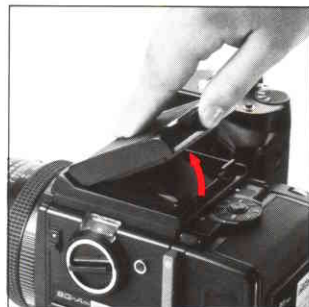


A. The finder can be interchanged, with other optional finders, to match shooting conditions to photographic conditions. To attach the finder, align the front end of the finder with the front end of the finder frame on top of the camera main body, as shown. Then, gently lower the finder and, when well-seated, slide forward until it locks.



B. To detach, simply depress the finder release button, while, at the same time, sliding the finder backwards where it can be taken up.

## 18 Waist-Level Finder and Interchanging Magnifiers



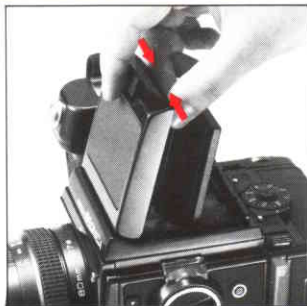
A. The focusing hood of the waist-level finder is opened by pushing up on the focusing hood catch at the rear end of the folded waist-level finder.

\* There is no standard finder for the Bronica SQ-Am, with the user having a choice of several finders. Instructions are based on the waist-level finder because of its popularity.



B. The magnifier is flipped into viewing position, by simply sliding the release lever in the arrow-indicated direction. To store the magnifier, simply push it down until it catches.

\* The magnifier can be exchanged for one matching the eyesight of the user.



C. To close the focusing hood, first, push down the magnifier (if it is in viewing position). Next, press in both side frames, as illustrated, and, at the same time, press the front frame back towards the rear. The focusing hood will automatically be folded down.



D. The standard magnifier supplied with the waist-level finder has a power of  $-1.5$  diopters, which can be exchanged for others with powers of  $-4.5$ ,  $-3.5$ ,  $-2.5$ ,  $-0.5$ ,  $+0.5$  and  $+1.5$  diopters. These optional accessories should be purchased to suit the user's eyesight, if necessary. Simply rotate the magnifier frame in the counter-clockwise direction to unscrew. Attach in the reverse manner.

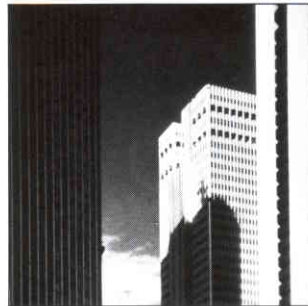
## 19 Focusing Adjustments



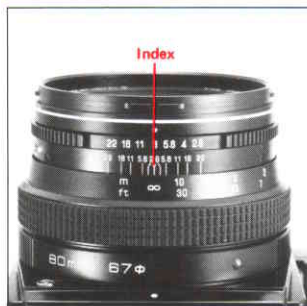
A. The lens is focused on the subject, by rotating the focusing ring in either direction, while checking the effect on the microprism / split-image range-finder spot in the center of the focusing screen (standard type).



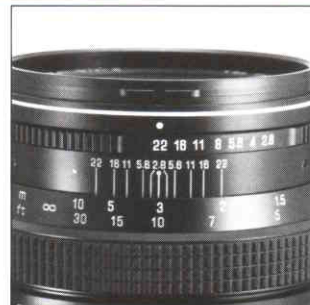
B. The central split-image spot splits the image into two, with the upper and lower halves separated horizontally when the lens is out of focus. When in focus, however, the two halves will coincide with the displacement disappearing. The microprism ring surrounding the central spot can also be used for checking the sharpness of the focused image, since the image will glitter when the lens is not focused. The surrounding full-area matte surface can also be used for checking image sharpness.



## 20 Distance Scale and Depth of Field Scale



A. Distance scales on the Zenzanon-S lenses can be used for focusing at the required distance or finding the distance actually focused. Simply rotate the focusing ring and set the required distance opposite the orange-colored index, which will adjust the lens for the required distance.



B. There is an apparent zone of sharpness, both in front and back of the focused subject, which is known as the depth of field. The depth of field scale shows the zone of apparent sharpness at any lens opening or distance and can be utilized for quickly and simply ascertaining the depth of field. The depth of field scale is next to the distance scales and is made up of identical pairs of apertures on both sides of the orange-colored distance index. These identical pairs of apertures indicate the distance that will be in focus at these lens openings. For example, if

the 80mm lens is focused at a distance of 3m, it can be seen from the depth of field scale that the zone will extend from 2 to 7 meters (6 ft. to 23 ft.), when a lens opening of F22 is used.

\* See the depth of field table for the Zenzanon-S 80mm lens, on page 40.

## 21 Infrared Photography



In infrared photography, some adjustment must be made in the focus in order to retain sharpness on the film, because the invisible infrared rays are longer in wave length than the visible rays used for focusing. For infrared photography—

1. Use a R filter or equivalent with an infrared (black-and-white) film.
2. The red-colored line, next to the orange-colored distance index, is the infrared index.
3. After focusing in the normal manner, re-set the distance indicated by the orange-colored distance index to the infrared index, by shifting the distance ring.

4. Follow instructions enclosed with the infrared film and filter and, to be on the safe side, make several bracketing shots. In general, more exposure rather than less seems to be a safe guide.

## 22 Flash Photography

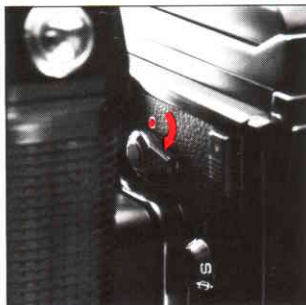


- A. Always use flash cords with a standard PC type plug. When detaching the flash cord, grip the plug firmly and pull it out straight, instead of using a twisting action.

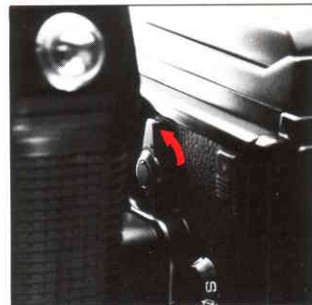
## 23 Multiple Exposures

B. The lens shutter of the Zenanon-S lens has 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.



A. To make multiple exposures, turn the multiple exposure lever in the arrow-indicated direction before exposing the first shot. When the shutter release button is depressed, in this condition, the shutter will be released any number of times without advancing the film.



B. Upon completing the multiple-exposure picture, be sure to return the multiple exposure lever back to its vertical position and **depress the drive button to advance the film one frame**. If the drive button is not depressed, the next frame will also be a multiple-exposed one.

## 24 Mirror Lock-Up



A. The mirror lock-up switch lever has three settings —  
**N**(normal) — For shooting without mirror lock-up.  
**S**(single frame) — For shooting single frame with mirror lock-up.  
**C**(continuous) — For shooting continuously with mirror lock-up.

\* Always use the AE Prism Finder S in the manual mode, when shooting with the mirror locked up.



B. For shooting with the mirror locked up, rotate the mirror lock-up lever in the arrow-indicated direction and coincide S or C to the index. The lens shutter will close completely and the reflex mirror and film safety plate will swing up.



C. The shutter will be released when the shutter release button or electro-magnet release is depressed.



D. When S is set to the index, with the mirror lock-up switch lever, the lever will automatically return to N, with the next film advancing and shutter cocking action. And, following shots will, of course, be normal.



E. When C is set to the index, with the mirror lock-up switch lever, however, the lever will not return to N with the next film advancing and shutter cocking action but will stay locked up any number of times.

\* After completing the 12th exposure or 24th exposure, the film only will be advanced automatically and the motor will suspend its operation.

Should new film be loaded and the drive button depressed, with the mirror lock-up switch lever at C, the film will be placed into position for exposing the first frame with the mirror locked up. ↗

When shooting is suspended, after mirror lock-up, and the mirror lock-up switch lever is rotated from S or C to N, shutter release and motor operation will take place but the film will not be advanced with the result that the next exposure will be double-exposed. Double exposure can be prevented, in the above case, by the following methods.

↗ The mirror lock-up switch lever must always be returned to N, before loading film.

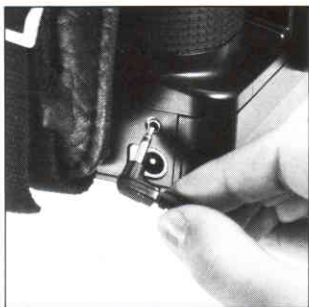


a) Cover the lens and then use the mirror lock-up switch lever to return to N. Then, continue photography in the normal manner.



b) Utilize film back interchangeability and detach the film back before rotating the mirror lock-up switch lever to N. Attach the film back after motor operations take place and is suspended.

## 25 Remote Control Operations



Remote control shutter release operations will be possible by inserting a 2.5mm mini-plug into the remote control terminal on the Zenza Bronica SQ-Am. Equipment which can be used, in this case, are remote control extension cord, wireless remote control equipment, intervalometer, etc., which are available in most photographic equipment stores. However, always check operation of the equipment before actual use. Resistance of the extension cord should not exceed 30 ohm, too.

\* The mini-plug of the remote control equipment must be attached or removed with the mode selector switch at OFF, as otherwise the shutter will be released if the mode selector switch is at Sm or Cm.

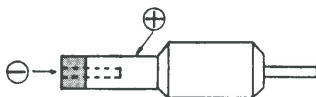
## 26 Use of External Power



Inserting the plug of an external power source into the external power terminal automatically switches power supply to the motor drive system from the internal battery power (six AA size batteries) to the external power. The battery holder must be left inside the battery chamber even when taking power from an external source.

**The NiCd batteries cannot be recharged inside the battery chamber but must be recharged externally and then used.**

Optional accessories, such as external power source plug, NiCd battery recharger, AC adapter, etc., are not supplied but equipment meeting the fol-



lowing specifications and conditions will be acceptable.

1. External power plug: Plugs used for transistor radios and taperecorders are acceptable.
2. External power conditions: Voltage — DC 9 Volt; Current — 5 Ampere.
3. Cable conditions: The cable from the external power to the SQ-Am should be as short and thick as possible, or —  
Less than 2 meter length with cable of 0.3 sq.mm area, or  
Less than 5 meter length with cable of 0.75 sq.mm area.

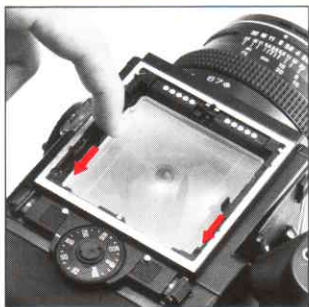
\* Do not mistake the polarity (+ and -) marks, when using the plug.

\* An optional External Battery Pack S (six UM-2 or C-type batteries) is also available as an external power source for continuous shooting sessions.



External Battery Pack S

## 27 Interchanging Focusing Screens



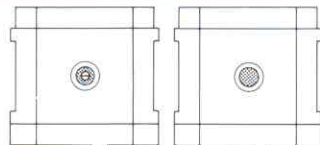
A. The focusing screen can be exchanged, depending on the type of photographic work being undertaken.

First, remove the finder attached to the camera main body. Then, move the screen removal levers on both sides in the arrow-indicated directions, as illustrated. Then, using a pincer or similar tool, lift up the screen with the protrusion at the rear end.



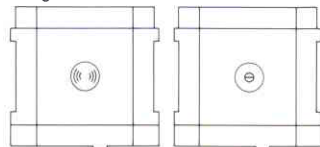
B. To install the focusing screen, nest the protrusion at the rear end of the screen in a corresponding groove on the camera main body. Then, slide both screen removal levers forward to secure the focusing screen.

\* Seven types of focusing screens are available.



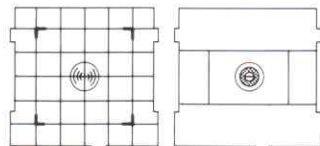
Microprism/split-image

Microprism



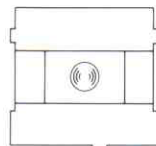
Matte

Split-image



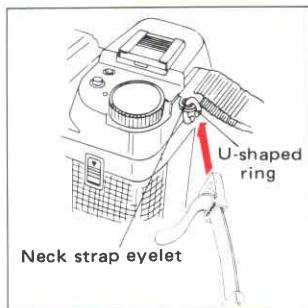
Grid-lines

Microprism/split-image (for 135 film)

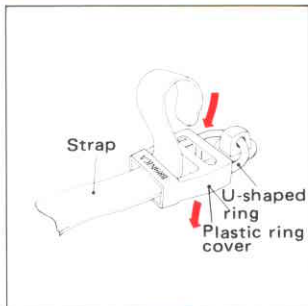


Matte (for 135 film)

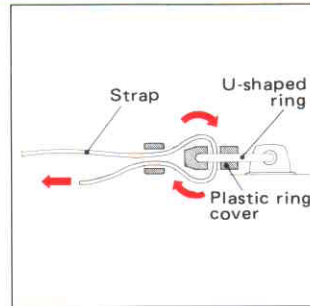
## 28 Attachment of the Neck Strap



A. First, insert the U-shaped ring into the neck strap eyelet, as illustrated.

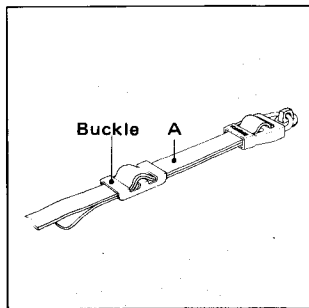


B. Next, place the plastic ring cover over the U-shaped ring, as illustrated.



C. Next, thread the neck strap through the plastic ring cover (and the U-shaped ring) and pull it out, as illustrated.

## 29 Facts about the Battery



D. After adjusting the length of the neck strap, pass the leading end of the strap through the buckle, as illustrated, which will fix it securely.

\* There should be no slack in the strap between the buckle and the plastic ring cover, or in "A" section, which means that both straps must be of the same length at this point.

The batteries supply power for the various electronic control mechanisms and motor drive mechanisms incorporated in the Zenza Bronica SQ-Am. When used incorrectly, there is possibility of the wrong exposure being set to the camera and/or the camera not operating.

Be sure to use and store the battery correctly for obtaining optimum performance from it at all times.

- Take the battery out of the battery chamber, and set mode selector switch to "OFF" position when storing the camera.

- Leaving the battery in the camera for a long time, without using it, can lead to leakage problems and result in poor contact.

Discard a battery with leakage or corrosion and thoroughly clean out the battery chamber, before inserting a new battery.

- Clean the contacts of the battery chamber and battery with a soft cloth. Don't use sandpaper or emery cloth.

- For motor drive system, use fresh batteries with same brand name. When replacing the batteries, replace all six batteries at the same time.

- Don't throw the battery into a fire, or hit it strongly, as there is danger of explosion.

- Either a silver oxide battery (No. 544/PX28) or an alkaline-manganese battery (A544/4LR44) for shutter control as well as "AA" size alkaline-manganese or NiCd batteries for motor drive are used with the Zenza Bronica SQ-Am. Both have very 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 a new battery and/or keep replacement batteries on hand for shooting outdoors in freezing weather. Keep the battery (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 E and External Battery Pack S.

## 30 Pointers on Shooting

- The shutter cannot be cocked when film is not loaded in the film back. The use of the multiple exposure lever will, however, permit you to cock the shutter, in such instances. This feature is, of course, very convenient for familiarizing yourself with the camera and for testing the shutter in flash photography. (See "23 Multiple Exposures".)
- Battery power is not consumed when time exposures are made.
- The voltage will drop when the camera is used for long shooting sessions in freezing weather. Insert new batteries or keep a spare on hand, for such occasions. Furthermore, keep such batteries in an inside pocket.
- The focusing screen is detachable, for exchanging with other types. Do not place trimming masks or tapes on the bottom surface of the screen, as this will lead to inaccurate focusing.
- If the mode selector switch is set to OFF when the AE Prism Finder S is attached to camera main body, battery power will not be consumed even the power source switch of the AE Prism Finder S is set to ON.
- In case the voltage of 6 volt battery for the shutter operation drops and the battery checker LED does not light up, the shutter will be mechanically-controlled at 1/500 sec. and there will be no automatic film winding by the motor. In such case, if the battery is removed, then the shutter will be released at 1/500 sec. and the film will be advanced automatically by the motor.
- It should be remembered, when taking pictures, that the final print will not be a square format, especially in the economy size, but will be cut down on both sides or at the top and bottom.

## 31 Care of the ZENZA BRONICA SQ-Am

- Restrict cleaning of the reflex mirror to blowing or brushing with the blower brush or a soft camel hair brush. Don't touch the surface with your fingers or a cloth.
- Use lens cleaning tissue and liquid to clean the surface of the lens. Do not use silicon-coated cloth for this purpose, as it will prove detrimental to the lens coating.
- Clean the plastic focusing screen in the same manner. Don't touch the surface as you may leave fingerprints.
- Protect your camera from temperature changes which can result in moisture condensation, frost, etc., inside the body, leading to rusting of metallic parts and troubles.
- Protect your camera from impact and vibrations, too.
- Upon attaching the film back, always pull out the dark slide from its slit.
- Always protect the lens with its cover, when carrying the camera.

- Clean the camera and lens very carefully after using it outdoors in wet weather or at the seashore.
- Wipe the camera carefully with a well-wrung damp cloth, using fresh water, if the exterior is effected by salty air. Then, wipe it dry with a soft, dry cloth. If necessary, send it out for a quick inspection at an authorized repair station.
- If the equipment is not being used for a long period, store everything in tin-lined containers, with plenty of desiccant, such as silica gel. Finally, store the equipment in a cool, dry and well-ventilated (but not windy) place.
- Do not thread too strongly, when using a longer-than-standard tripod screw, as you may damage the body.



- Both camera main body and lens must be in the "cocked" condition to attach or remove the lens. In other words, when "cocked" the cocking pin of the lens will be set between the red band and green dot, while the cocking pin of the body mount will be set to the green-colored dot.
- When not set in the above manner, the cocking pin of the detached lens (also Automatic Extension Tube) can be set by moving it manually to the green-colored dot, while the cocking pin of the SQ-Am main body is set by depressing the drive button.

• Always clean all exposed contact points before attachment, as otherwise there will be faulty contact which will lead to improper operations.

• See that exposed contact points are not short-circuited with a metal object.

• When using the flash synch socket on the camera body, always cover the hot shoe with its protective cover.

On the other hand, when using the hot shoe, cover the flash socket with its cover. Otherwise, an electric shock may be received from the uncovered contact.

• Never insert/remove the mini-plug of the remote control equipment with the mode selector switch set at Sm or Cm.

• Do not use the external terminal with external power exceeding 10 volts.

• When a finder with a built-in exposure meter is attached for photography and a film of different sensitivity is loaded in the film back, always remember to readjust the ASA/ISO film speed dial for the new film.

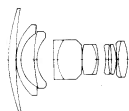
# 32 Depth of Field Tables

## Zonanon-S 80mm F2.8

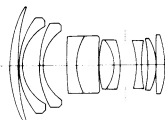
F/ Dis- tance	Meter									
	$\infty$	10	5	3	2	1.5	1.2	1.0	0.9	0.8
2.8	$\infty$	13.3	5.68	3.22	2.09	1.55	1.23	1.02	0.92	0.81
	39.8	8.03	4.46	2.81	1.92	1.45	1.17	0.98	0.89	0.79
4	$\infty$	15.1	5.99	3.32	2.13	1.57	1.24	1.03	0.92	0.82
	28.9	7.47	4.29	2.74	1.89	1.44	1.16	0.97	0.88	0.78
5.6	$\infty$	19.3	6.53	3.47	2.19	1.60	1.26	1.04	0.93	0.82
	20.5	6.77	4.06	2.64	1.84	1.41	1.15	0.96	0.87	0.78
8	$\infty$	31.3	7.48	3.72	2.28	1.64	1.29	1.06	0.94	0.83
	14.5	5.97	3.76	2.52	1.78	1.38	1.13	0.95	0.86	0.77
11	$\infty$	287	9.44	4.13	2.42	1.71	1.33	1.08	0.96	0.85
	10.3	5.13	3.42	2.36	1.71	1.34	1.10	0.93	0.85	0.76
16	$\infty$	$\infty$	15.0	4.90	2.66	1.82	1.39	1.12	0.99	0.87
	7.28	4.27	3.02	2.18	1.61	1.28	1.06	0.91	0.83	0.74
22	$\infty$	$\infty$	97.0	6.67	3.08	2.00	1.48	1.18	1.04	0.90
	5.17	3.46	2.60	1.96	1.49	1.21	1.01	0.87	0.80	0.72

F/ Dis- tance	Feet								
	$\infty$	30	15	10	7	5	4	3.5	3
2.8	$\infty$	38.7	16.8	10.8	7.35	5.17	4.10	3.57	3.05
	131	24.5	13.5	9.34	6.68	4.84	3.90	3.43	2.95
4	$\infty$	43.5	17.7	11.1	7.49	5.23	4.14	3.60	3.07
	94.8	22.9	13.0	9.11	6.57	4.79	3.87	3.40	2.93
5.6	$\infty$	53.4	19.1	11.6	7.72	5.34	4.20	3.65	3.10
	67.1	20.9	12.4	8.79	6.41	4.71	3.82	3.36	2.90
8	$\infty$	79.2	21.5	12.4	8.06	5.49	4.29	3.71	3.15
	47.5	18.6	11.5	8.38	6.19	4.59	3.75	3.31	2.87
11	$\infty$	25.1	26.3	13.8	8.61	5.73	4.43	3.81	3.21
	33.7	16.1	10.6	7.85	5.91	4.44	3.65	3.24	2.82
16	$\infty$	$\infty$	38.3	16.5	9.53	6.10	4.64	3.96	3.31
	23.9	13.5	9.41	7.22	5.55	4.25	3.53	3.14	2.75
22	$\infty$	$\infty$	110	22.7	11.2	6.72	4.97	4.19	3.46
	17.0	11.0	8.16	6.48	5.12	4.01	3.36	3.02	2.65

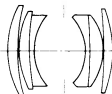
# 33 Specifications of Zenanon-S Lenses



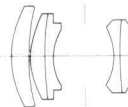
40mm F4



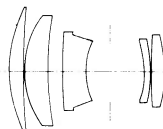
50mm F3.5



80mm F2.8

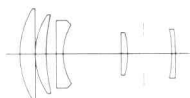


105mm F3.5

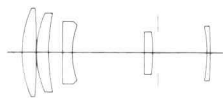


150mm F3.5

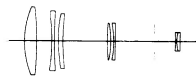
	40mm F4	50mm F3.5	80mm F2.8	105mm F3.5	150mm F3.5
No. of group-element	8 — 11	8 — 10	4 — 6	4 — 6	5 — 5
Angle of View	87°	76°	51°	41°	30°
Apertures	4 — 22	3.5 — 22	2.8 — 22	3.5 — 22	3.5 — 22
Minimum focusing distance (M)	0.4 (1.3ft)	0.5 (1.6ft)	0.8 (2.6ft)	0.85 (2.8ft)	1.5 (4.9ft)
Filter size (mm)	95	67	67	67	67
Overall length (mm)	83	62	52	60	61
Weight (grams)	660	560	470	540	590
Equivalent focal length in 35mm format camera (mm)	21	28	45	58	85



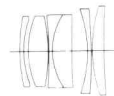
200mm F4.5



250mm F5.6

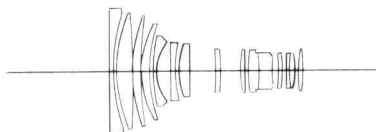


500mm F8



Tele-Converter S 2X

	200mm F4.5	250mm F5.6	500mm F8	Tele-Converter S 2X
No. of group-element	5 - 5	5 - 5	6 - 7	5 - 6
Angle of View	22° 30'	18°	9°	
Apertures	4.5 - 32	5.6 - 32	8 - 45	
Minimum focusing distance (M)	2.5	3	8.5	
	(8.2ft)	(9.8ft)	(28ft)	
Filter size (mm)	67	67	95	
Overall length (mm)	97	129	255	53
Weight (grams)	740	870	1,890	500
Equivalent focal length in 35mm format camera (mm)	105	135	280	



**Zenanon-S Variogon 75-150mm F4.5 Zoom Lens**

Lens construction: 13 groups in 15 elements

Angles of view: 53° 30' ~ 30° 6'

Apertures: 4.5 ~ 32

Diaphragm: Fully automatic

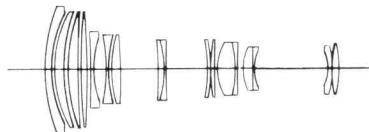
Minimum focus: 1.8m (0.25m in macro mode)

Filter size: Series 9a (diameter 93mm)

Size: 100mm $\phi$  x 152mm

Weight: 1,800 grams (3.96 lbs)

Accessory: Filter retainer, lens hood, lens case,  
front lens cap & rear lens cap.



**Zenanon-S Variogon 140-280mm F5.6 Zoom Lens**

Lens construction: 14 groups in 17 elements

Angles of view: 30° 42' ~ 16° 12'

Apertures: 5.6 ~ 32

Diaphragm: Fully automatic

Minimum focus: 2.5m (0.76m in macro mode)

Filter size: Series 9a (diameter 93mm)

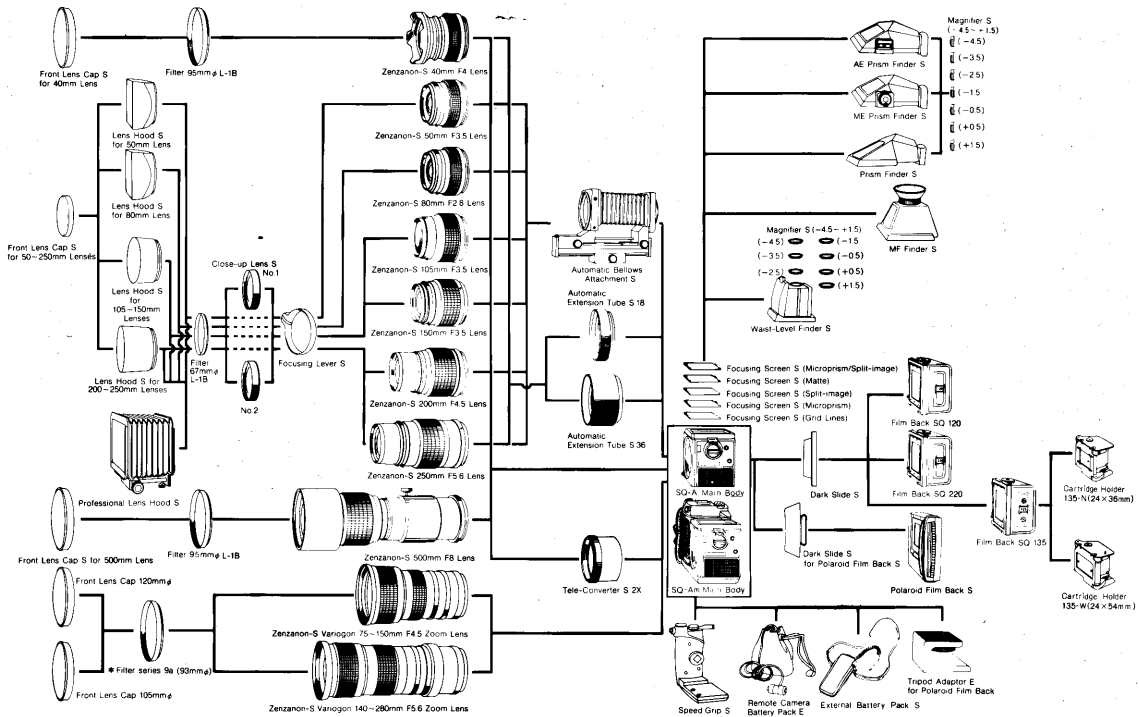
Size: 94mm $\phi$  x 221mm

Weight: 2,000 grams (4.4 lbs)

Accessory: Filter retainer, lens hood, lens case,  
front lens cap & rear lens cap.



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 BRONICA SQ-A/SQ-Am SYSTEM**



Changes in specifications and/or designs may be made without advance notice.  
 The item marked by an asterisk (\*) is available from B+W, West Germany or other manufacturers.