

Zenza Bronica S2A Instructions

2 1/4" x 2 1/4" (6cm x 6cm) Single-lens Reflex Camera

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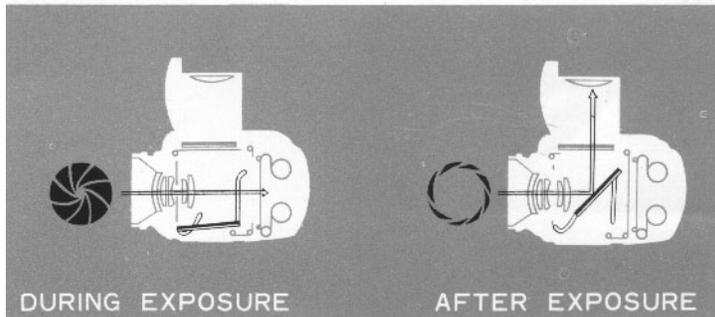
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Special Features of the Zenza Bronica Model S2A

The Zenza Bronica S2A is the ultimate single lens 6x6 reflex camera, designed to add improvements to the earlier models. This new camera accepts both standard 120 size film and the 220 film.

Nikkor and Zenzanon lenses are equipped with instant return automatic diaphragms. A full line of accessories is available for this camera. The Zenza Bronica S2A is a superior camera both in name and reality.

photo shows mirror position during and after exposure



Instant Return Automatic Mirror

The reflex mirror of Bronica model S2A is an exclusive and original mechanism. It is very different from that of other single lens reflex cameras. Usually mirrors move upward, but the Bronica instant return automatic mirror moves forward and down. After the exposure, it instantly and automatically returns to viewing position.

Thus, it is possible to use wide-angle and other deep seating lenses, and a bright image remains on the ground glass except while the shutter is in motion.

Interchangeable Filmback Magazine

This convenient feature offers many advantages. It is possible to change film in the middle of a roll (black and white to color, color to black and white, indoor to daylight, etc.) without the loss of a single exposure. It permits you to preload several backs and shoot continuously without stopping for reloads.

The back is fully automatic and foolproof. It is equipped with a metal dark slide to prevent the film from being exposed while the back is off the camera. The back can not be removed until the dark slide is inserted and while the back is off the camera, the dark slide cannot be withdrawn.

When the back is attached to the camera, no attention need be paid as to whether the film or the shutter has been previously wound.

The film/shutter crank, which normally winds the shutter and the film simultaneously, automatically performs only the required function. For example, if the shutter is wound and if the film in position has been exposed, turning the crank will only advance the film to a fresh unexposed section. Also, when the back is on the camera, the dark slide must be completely withdrawn before an exposure can be made.

Exclusive Lenses and Automatic Diaphragm

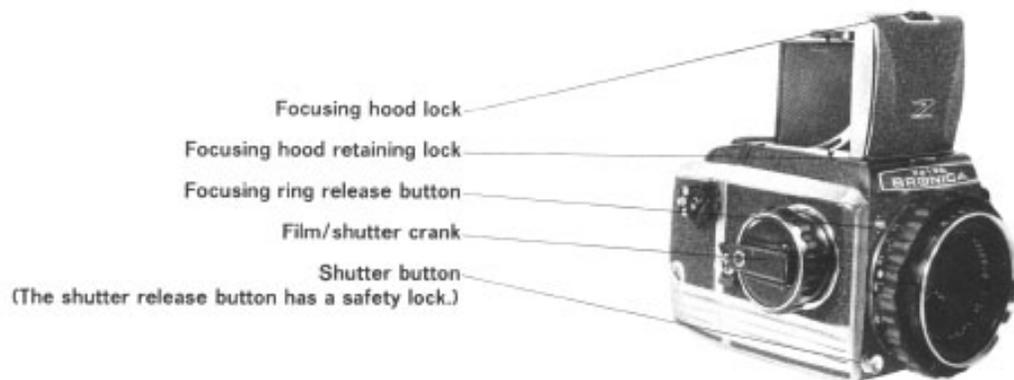
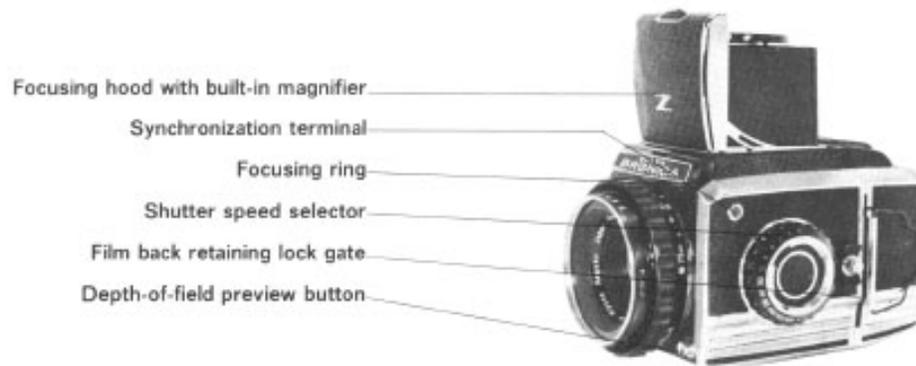
Nikkor and Zenzanon lenses are especially designed for Bronica cameras and can be used with not only the S2A but also other earlier models (S type, S2 type and C type). You can speedily adjust the focus of the bright image. These lenses (Nikkor 40mm, Nikkor 50mm, Nikkor 75mm, Nikkor 105mm, Nikkor 200mm, Zenzanon 100mm, Zenzanon 150mm and Zenzanon 300mm) have instant reopening automatic diaphragms.

Depth-of-Field Preview Button

By pressing this depth-of-field preview button, you can check the depth-of-field before exposing.

Selector for 12 or 24 Exposures

Ordinary 120 film gives 12 exposures, 24 exposures are possible on the 220 size film. The Bronica S2A has an entirely new system permitting either film to be used.



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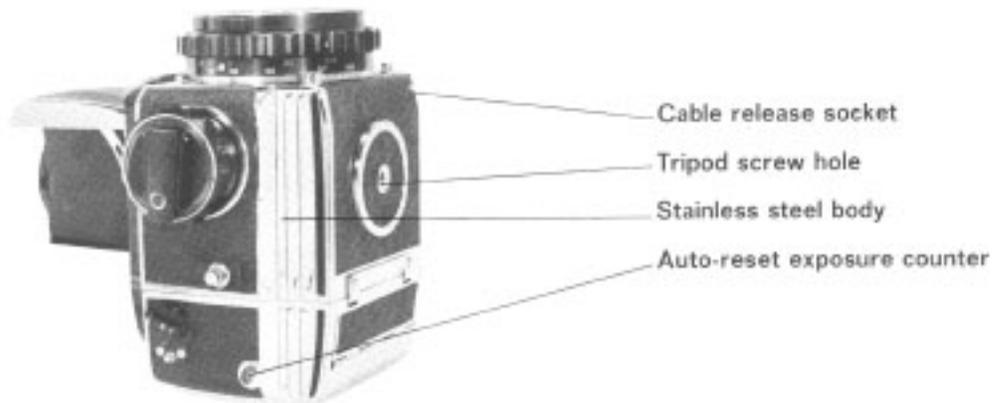
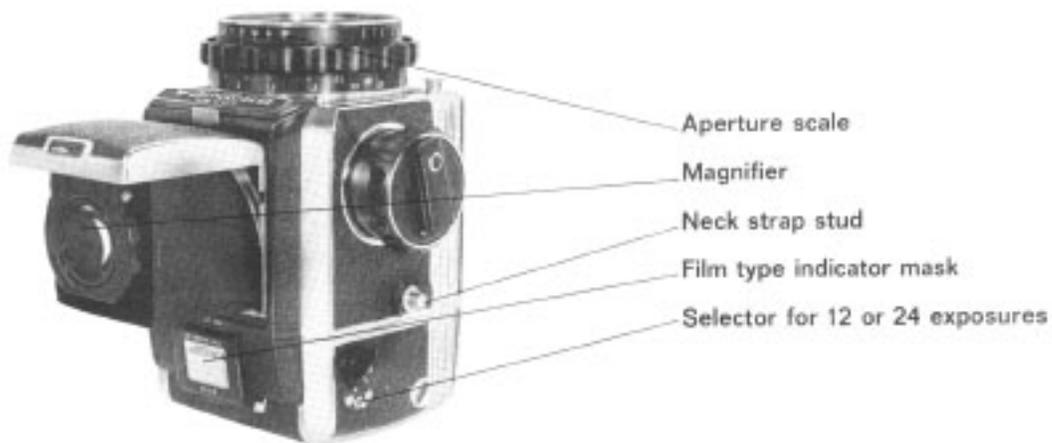
Top Photo:

- * focusing hood with built-in magnifier
- * Synchronization terminal
- * Focusing ring
- * Shutter speed selector
- * Film back retaining lock gate
- * Depth-of-field preview button

Bottom Photo:

- * Focusing hood lock
- * Focusing hood retaining lock
- * Focusing ring release button
- * Film/shutter crank
- * Shutter button (The shutter release button has a safety lock)

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Top Photo:

- * Aperture scale
- * Magnifier
- * Neck strap stud
- * Film type indicator mask
- * Selector for 12 or 24 exposure

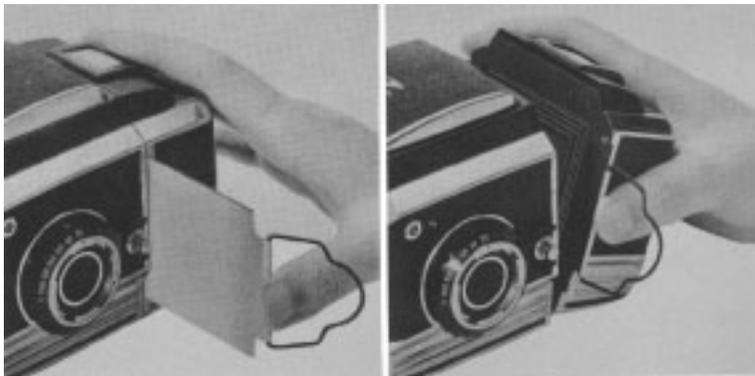
Bottom Photo:

- * Cable release socket
- * Tripod screw hole
- * Stainless steel body
- * Auto-reset exposure counter



**INTERCHANGEABLE
FILMBACK MAGAZINE**

Interchangeable Filmback Magazine



The standard Bronica S2A film back magazine is specially designed to accept either the 12 exposure 120 or the 24 exposure 220 roll film. With the Model-E film back magazine, you can get 16 (6x4.5) exposures on the 120 film and 32 (6x4.5) exposures on the 220 film.

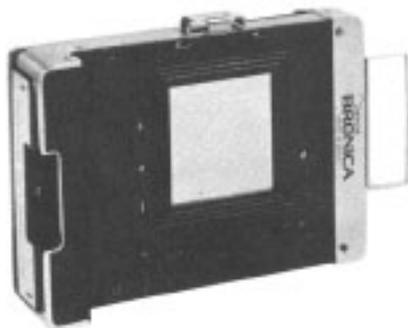
Removing the Filmback Magazine

Insert the dark slide into the back. Hold the camera in the left hand. With the right hand, hold the back with thumb on the protruding edge of the dark slide. Press the dark slide inward with the thumb. This will release the back from the camera. Remove the back by tilting and lifting it off the open hinge at the bottom.

Note: The dark slide is only necessary for removing the back from the camera and should be withdrawn after the back is attached to the camera.



Color film ↔ Monochrome film
 Low speed film ↔ High speed film
 Daylight film ↔ Tungsten film
 Positive color ↔ Negative color
 (Transparency)

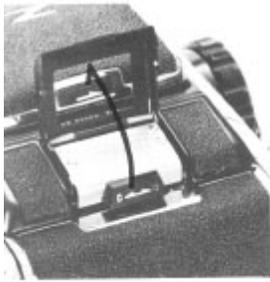


Polaroid Pack Film Back

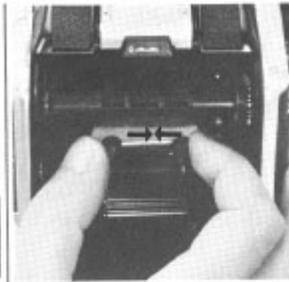
Two kinds of polaroid pack film are presently available for use with the Bronica camera. For color pictures, 108 type film is used, while for black-and-white, 107 type.

Film Loading

The Zenza Bronica S2A uses 120 and 220 films.



1)
Lift film indicator frame and press hood lock to right. Back will spring open.



2)
Press two knobs together and lift film holder out.



3)
Insert empty take-up spool in top and fresh film spool on bottom. Spools are inserted by pressing out against spring pressure plates on left side.

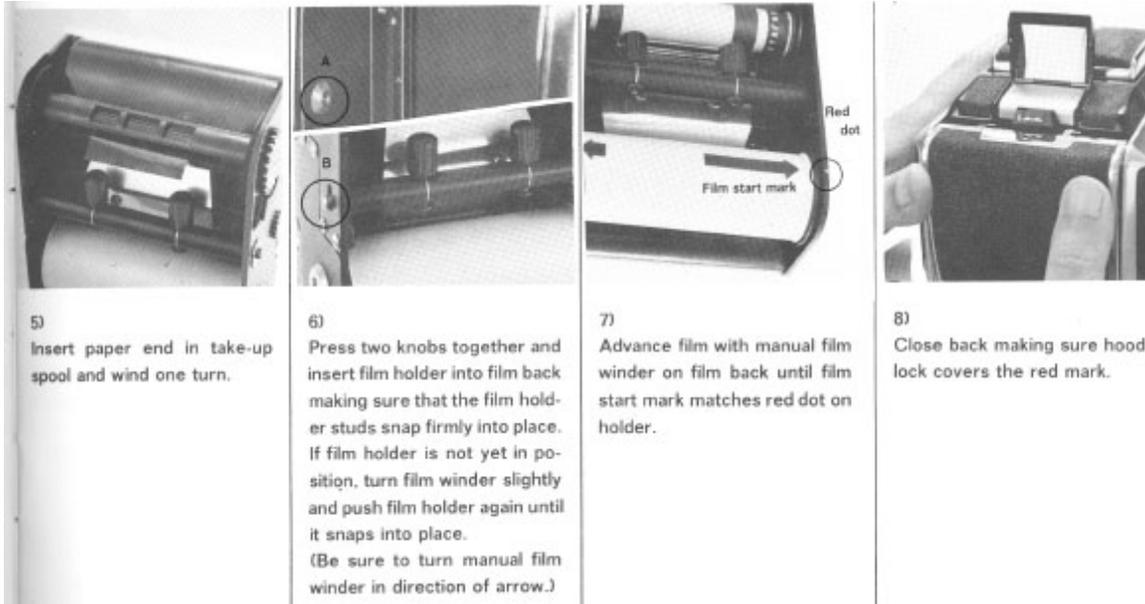


4)
Draw leader paper down and across film pressure plate making sure that the leader paper is black side out.

Avoid direct light on film while loading

Film Loading:

1. Lift film indicator frame and press hood lock to right. Back will spring open.
2. Press two knobs together and lift film holder out
3. Insert empty take-up spool in top and fresh film spool on bottom. Spools are inserted by pressing out against spring pressure plates on left side.
4. Draw leader paper down and across film pressure plate making sure that the leader paper is black side out.



- 5) Insert paper end in take-up spool and wind one turn.
- 6) Press two knobs together and insert film holder into film back making sure that the film holder studs snap firmly into place. If film holder is not yet in position, turn film winder slightly and push film holder again until it snaps into place. (Be sure to turn manual film winder in direction of arrow.)
- 7) Advance film with manual film winder on film back until film start mark matches red dot on holder.
- 8) Close back making sure hood lock covers the red mark.



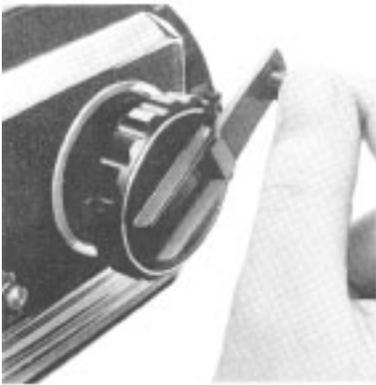
9) The film indicator frame is designed to accept the end flap of the empty film box to indicate the type of film loaded in the film back.



10) Only even numbers will show in the exposure counter window after the number "8" appears. Odd numbers are indicated by a line. (On the Model-E, only even numbers appear after the number "4". Odd numbers are indicated by a dot.)

9. The film indicator frame is designed to accept the end flap of the empty film box to indicate the type of film loaded in the film back.

10. Only even numbers will show in the exposure counter window after the number "8" appears. Odd numbers are indicated by a line. (On the Model E [16 exposure 6x4.5 back], only even numbers appear after the number "4". Odd numbers are indicated by a dot.)



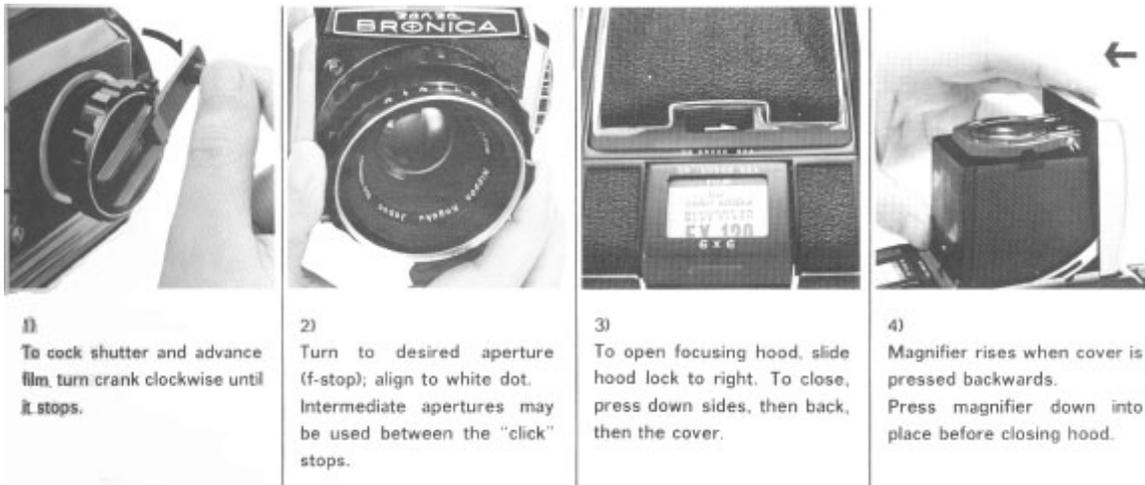
1)
After taking last (12th or 24th) exposure, wind forward until indicator in auto-reset exposure counter window does not move.
(On the Model-E after the last (16th) exposure on the 120 film is shot set pointer to "F" by pushing the free lever to right. Film winder will become free and the film can be quickly wound up on take-up spool.)



2)
Open back cover and take out film holder gently by pressing two knobs together.

Removing Exposed Film

1. After taking last (12 th or 24 th) exposure, wind forward until indicator in film counter window does not move. (On the Model-E [*16/32 exposure back*] after the last (16 th) exposure on the 120 film is shot set pointer to "F" by pushing the free lever to right. Film winder will become free and the film can be quickly wound up on take-up spool). (*see photo of film advance knob being wound*)
2. Open back cover and take out film holder gently by pressing two knobs together.



Taking Photography

1. To cock shutter and advance film, turn crank clockwise until it stops.

When winding the shutter, please be sure to keep turning the crank until it stops, even if you hear a sound half way. The sound means the shutter is wound, but the film is not advanced yet. Pressing the shutter button at this time will result in a double exposure.

2. Turn to desired aperture (f-stop); align to white dot. Intermediate apertures may be used between the "click" stops.
3. To open focusing hood, slide hood lock to right. To close, press down sides, then back, then the cover.
4. Magnifier rises when cover is pressed backwards. Press magnifier down into place before closing hood.



5) Focus by rotating focusing ring while observing image on ground glass.



6) Distance scale provided on helicoid focusing ring shows the distance between the film plane and the object to be photographed with auto Nikkor 75mm F2.8. Footage is shown in red and meterage in white. See focusing distance table for 40mm, 50mm, 100mm, 150mm and 200mm lenses at page 22 or refer to the distance comparison table accompanying each lens.



7) All Bronica interchangeable lenses have automatic diaphragm, and critical focusing and viewing can be done with full aperture. Check the depth-of-field or adjust the background vignetting by depressing the preview button.



8) When the preview button is depressed, the diaphragm is closed down to the preselected aperture. The depth-of-field can be visually checked. (Critical focusing and viewing are done with full aperture.)

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5. Focus by rotating focusing ring while observing image on ground glass.
6. Distance scale provided on helicoid focusing ring shows the distance between the film plane and the object to be photographed with auto Nikkor 75mm F2.8. Footage is shown in red and meterage in white. See focusing distance table for 40mm, 50mm, 100mm, 150mm and 200mm lenses at page 27 or refer to the distance comparison table accompanying each lens.
7. All Bronica interchangeable lenses have automatic diaphragm, and critical focusing and viewing can be done with full aperture. Check the depth-of-field or adjust the background vignetting by depressing the preview button
8. When the preview button is depressed, the diaphragm is closed down to the preselected aperture. The depth-of-field can be visually checked. (Critical focusing and viewing are done with full aperture).

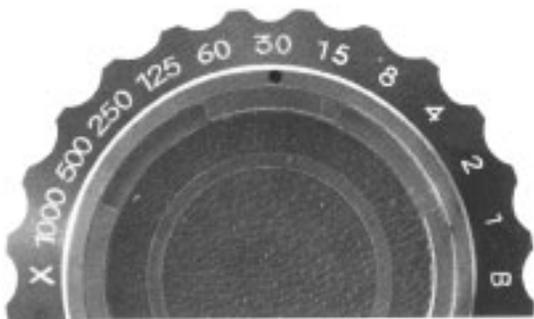


Shutter dial photo

Shutter

The vertical focal plane shutter has rubber-coated curtains. Speeds are set on a single non-rotating selector. Through a special stabilizing device, there is uniformly balanced exposure across the large film area even at high shutter speeds.

High quality miniature ball bearings are used. The shutter curtain travels across the 55mm film gate in 15-16 milliseconds. The X setting for electronic flash (strobe) represents 1/40 second. Intermediate shutter speeds can be selected between the following speeds: 1-1/4 1/8 -1/30 1/60-1/1000



1 - Shutter Speed Selector

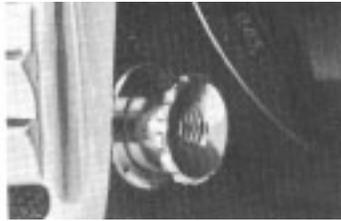
"B" stands for "Bulb"; press to open, release to close shutter. "1" is one second; "2" is 1 / 2 second; "1000" is 1 /1000 second, etc.

"X" represents 1/40 second and is the fastest shutter speed with which electronic flash can be used. Any faster settings will result in partial non-exposure. (see "Flash", page 19).

2 - Selecting the Shutter Speed

The shutter speed selector turns either right or left.

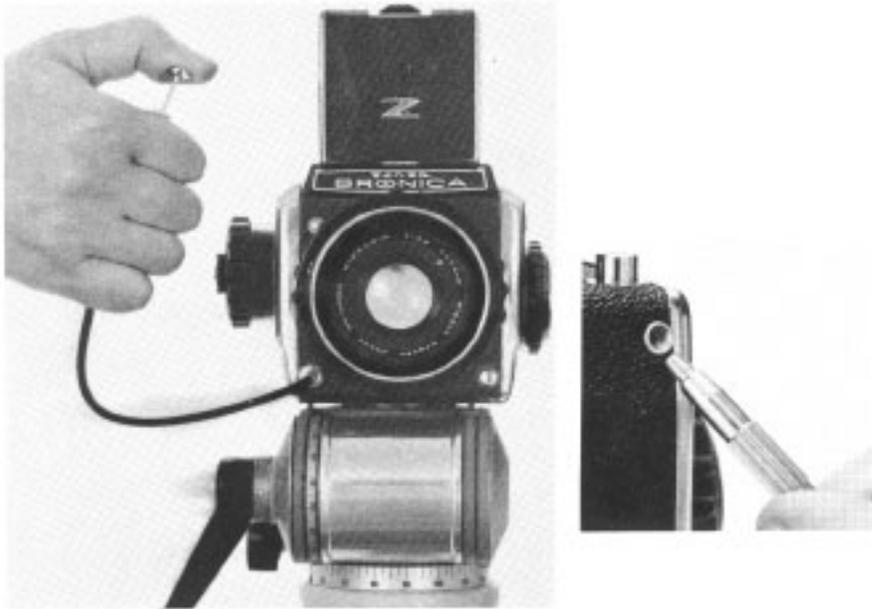
The selector may be set for intermediate shutter speeds as indicated on page 16. Settings may be selected either before or after the shutter is wound.



3 - Color Codes of Shutter Speed Selector

The red, white, green and yellow colors of shutter dial numbers are color codes for flash synchro photography. (see "Flash", page 19)

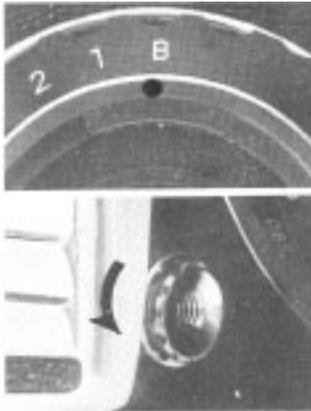
When the dark slide is in the camera, the shutter will not work even if the shutter button is pressed. In this case, withdraw the dark slide. If the shutter does not now work, wind up the shutter once more and an exposure can be made without any loss of film.



Cable Release

Having selected the shutter speed and diaphragm aperture, advance the film by turning the film/shutter crank clockwise to a firm stop. Focus the lens and you are now ready to make an exposure.

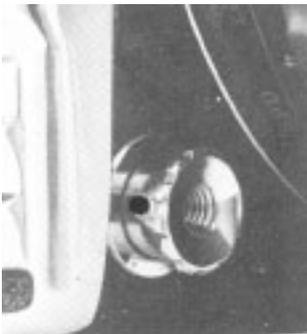
To avoid camera movement, it is desirable to use a cable release when a slow shutter speed is used. Cable release sockets are provided both on the body release button and below the depth-of-field preview button.



Time Exposure Device

When "T" (Time) exposure is desired, set the shutter speed selector at "B", depress the body releases button and turn the tip of the button counterclockwise to lock it in place. This will hold the shutter open.

To close the shutter, turn the tip of the button clockwise.



Safety Lock

The body release button has a safety lock. When the camera is carried with the shutter cocked, it is best to set the safety lock.

To set the safety lock, rotate the tip of the release button clockwise. When the red dot is in outside position, shutter is locked.

Flash Bulb	Shutter Speed											
	B.	1	2	4	8	15	30	60	125	250	500	1000
F Bulb	[Shaded bar from B. to 15]											
M Bulb	[Shaded bar from B. to 125]											
X (Strobe)	[Shaded bar from B. to 15]											(1/40)
FP Bulb	[Shaded bar from B. to 1000]											
Shutter speed selector	[Color-coded segments: red (B.-15), green (1-15), white (15-1000), yellow (1000-X)]											
Color indication	[Color-coded segments: red (B.-15), green (1-15), white (15-1000), yellow (1000-X)]											

Flash

The Bronica flash terminal accepts a standard connecting cord (German Type P.C.)

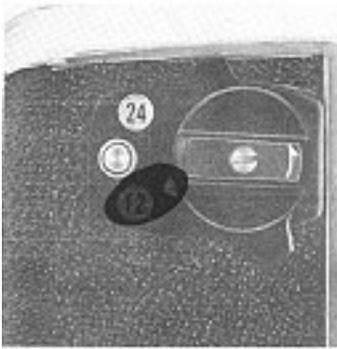
Exposure Setting Device

The 120 film allows twelve 6x6 (2 1/4" x 2 1/4") exposures. Twenty-four exposures can be obtained on 220 film.

The upper right picture shows lever position when using the 120 film. Keep pressing switch lever lock button and move lever until indicator arrow points to "12" mark. After the 12th exposure the film/shutter crank will wind remaining film continuously onto take-up spool with no resistance. The lower right picture shows lever position when using the 220 film.

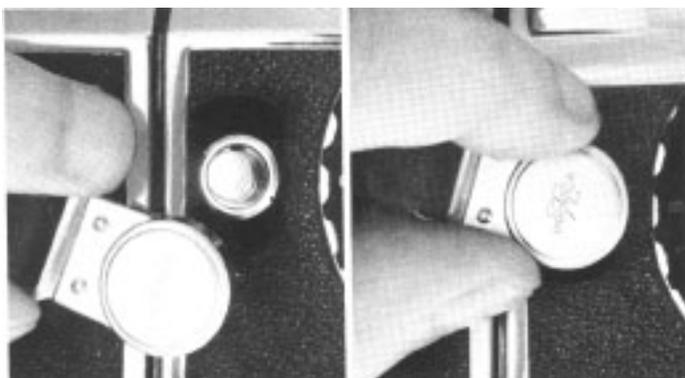
Switch lever lock button should be also pressed to move lever until arrow points to "24" mark. In this way the film/shutter crank will stop at every number in exposure counter until 24 before becoming "free", allowing the remaining film to be wound up on roll.

(When Model-E is used on your Bronica S2A, set the film setting device on "S". The film/shutter crank will stop at every number in the exposure counter until "32". When the pointer is set on "F" the film/shutter crank becomes free, allowing the remaining film to be wound continuously onto the take-up spool.)



S2A: Switch lever may be moved to the 24 exposure position at any time if you have forgotten to do so before loading.

E: If at any time during a roll the pointer has accidentally been set on "F", push the free wind release button up and the pointer will return to "S".



Using neck strap

The neck strap has coupling connectors at each end. Place these coupling connectors over the camera strap studs on each side of the camera, and press in, then adjust strap length.

To remove, lift or raise the metal wings on camera strap stud and simultaneously lift off the coupling connector.

[Making Double or Multiple Exposures]

Bronica S2A has a built-in protection against inadvertent double exposures. However there are times when deliberate double exposures may be desired.

- A. After making one exposure, insert the dark slide and remove the back.
- B. Turn the film/shutter crank until the shutter is wound. Replace the back on the camera body and withdraw the dark slide.

You can now make the second exposure.

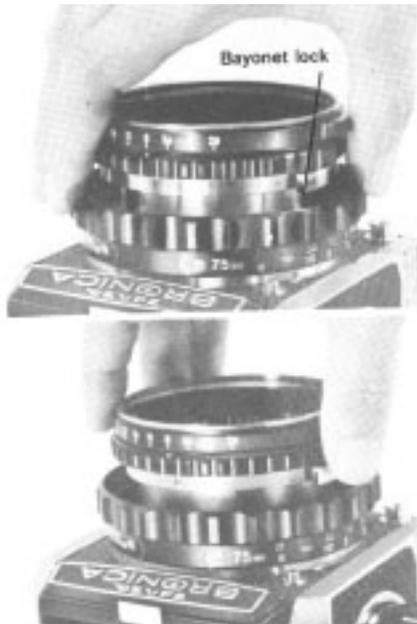


Interchangeable Lenses

Interchangeable Lenses

To Remove Lens:

1. Extend lens by turning focusing ring to closest focus position.
2. Press bayonet lock with thumb, and twist to left. (counter clockwise) Remove lens by pulling straight out.



To Mount Lens:

1. Line up red dots on lens and mount. Insert gently to full stop. Twist to right (clockwise) until bayonet lock snaps closed.

The interchangeable lens system of the Zenza Bronica Model S2A can be used with earlier model bayonet type Bronica cameras.

The screw thread (diameter 57mm, pitch 1 mm) shown at lower left is new* with Model S2A and permits extension tube sets and certain very long telephoto lenses to be mounted.

[*Editor's Note: same text is in Model S2/C manual so feature predates S2A.]

Interchangeable Lenses Exclusive For Bronica





Nikkor 40 mm F:4

Lens construction: 10 elements in 8 groups

Angle of view: 90 degrees

Minimum aperture: f/22

Minimum focus: 27 cm (0.87 ft)

Filter Size: 90mm screw type

Weight: 430 gm

Nikkor 50mm F2.8

Lens construction: 8 elements in 7 groups

Angle of view: 77 degrees

Minimum aperture: f/22

Minimum focus: 33 cm (1.08 ft)

Filter Size: 77mm screw type

Weight: 450 gm

Nikkor 75mm F2.8

Lens construction: 5 elements in 4 groups

Angle of view: 55 degrees

Minimum aperture: f/22

Minimum focus: 60 cm (1.9 ft)

Filter Size: 67mm screw type

Weight: 230 gm

Zenanon 100mm F2.8

Lens construction: 6 elements in 4 groups

Angle of view: 43 degrees

Minimum aperture: f/22

Minimum focus: 98 cm (3.2 ft)

Filter size: 67mm screw type

Weight: 360 gm



Nikkor 105mm F3.5

Lens construction: 4 elements in 3 groups
Angle of view: 41 degrees
Seiko No.0 model SL shutter: T, 1-1/500 sec.
Minimum aperture: f/32
Minimum focus: 1.3m (4.26 ft)
Filter size: 67 mm screw type
Weight: 700 gm

Zenanon 150mm F3.5

Lens construction: 5 elements in 4 groups
Angle of view: 28 degrees 30 minutes
Minimum aperture: f/22
Minimum focus: 2 m (6.5 ft)
Filter size: 67 mm screw type
Weight: 550 gm

Nikkor 200mm f/4

Lens construction: 5 elements in 5 groups
Angle of view: 21 degrees
Minimum aperture: f/22
Minimum focus: 3.3m (10.8 ft)
(Focusing range when used in concert with
close-up lens: 1.85m to 3.7m)
Filter Size: 67 screw type
Weight: 750 gm



Zenzanon 300m F4.5

Lens construction: 6 elements in 5 groups

Angle of view: 14 degrees 50 minutes

Minimum aperture: f/32

Minimum focus: 4m (13.12 ft)

Filter size: 82 mm screw type

Weight: 1.8 kg



Nikkor 400mm F4.5

Lens construction: 4 elements in 4 groups

Angle of view: 11 degrees

Minimum aperture: f/22

Closest distance: 5 m (16.4 ft)

Filter Size: 122mm screw type

Weight: 3.3 kg

Nikkor 600mm f5.6

Lens construction: 5 elements in 4 groups

Angle of view: 7 degrees 30 minutes

Minimum aperture: f/22

Closest distance: 11 m (36 ft)

Filter Size: 122mm screw type

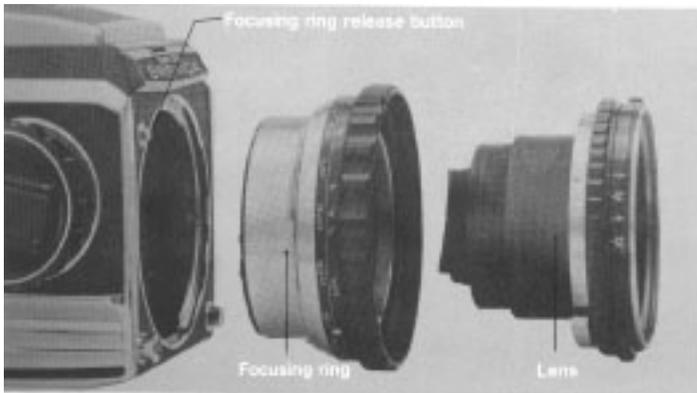
Weight: 3.8 kg

Focusing Distance Table for Bronica Interchangeable Lenses:

Distance scale for 75 mm lens is given on camera's focusing ring. The following table shows the focusing distances for 40mm, 50mm, 100mm, 150mm and 200mm lenses.

NIKKOR 75 mm F2.8	feet	∞ 30 15 10 8 6 5 4 3.5 3 2.5 2.25 2
	meter	∞ 10 5 3 2 1.5 1.2 1.0 0.9 0.8 0.7 0.65 0.6
NIKKOR 40 mm F4	feet	∞ 10 4 3 2.5 2 1.75 1.5 1.25 1
	meter	∞ 3 1.5 1.0 0.7 0.5 0.4 0.35 0.3
NIKKOR 50 mm F3.5	feet	∞ 10 9 4 3 2.5 2 1.75 1.5 1.25
	meter	∞ 4 2 1.3 1.0 0.8 0.7 0.6 0.5 0.45 0.4 0.35
ZENANON 100 mm F2.8	feet	∞ 30 20 15 12 10 8 7 6 5 4.5 4 3.5
	meter	∞ 20 10 7 5 4 3 2.5 2 1.7 1.5 1.3 1.2 1.1 1.0
NIKKOR 135 mm F3.5	feet	∞ 100 50 30 20 15 12 10 8 7 6 5.5
	meter	∞ 30 20 10 7 5 4 3 2.5 2 1.7
ZENANON 150 mm F3.5	feet	∞ 100 50 30 20 15 12 10 8 7
	meter	∞ 40 20 10 7 5 4 3 2.5 2
NIKKOR 200 mm F4	feet	∞ 200 100 50 30 20 15 12
	meter	∞ 50 30 20 15 10 8 7 6 5 4.5 4 3.5

Focusing Ring



When using Bellows Attachment or long focal length interchangeable lenses (105mm, 300mm and over 300mm) equipped with their own focusing systems, remove the camera's focusing ring.

- 1 - Press the focusing ring release button and twist the focusing ring to the left (counter-clockwise), then remove the focusing ring.
- 2 - To return the focusing ring, insert into body mount, lining up the red dots on the focusing ring and body mount. Twist the focusing ring to right (clockwise) until the focusing ring release button snaps closed.



Using focusing hood

The focusing hood of the Zenza Bronica Model S2A can easily be removed or inserted. It is possible to use the prism finder for eye-level focusing or the outdoors magnifying hood which is adjustable for individual eyes.

1 - Press upward the focusing hood retaining lock on the front of the camera body name plate and remove.

2 - When inserting the focusing hood, match the two tips on the back side of the focusing hood frame and the two holes on the back side of the focusing hood.

Press down and lock the front side of the focusing hood.



Prism view finder Model "A"



Magnifying hood



Closeup Photography

With the Zenza Bronica S2A 75mm standard lens, you are able to approach up to 60 cm (1.9 ft) from the subject to the surface of the film with full extension of the focusing ring. The 40 mm wide angle lens goes to 27 cm (0.87 ft), the 50 mm lens to 33cm (1.08 ft), the 100 mm lens to 98 cm (3.2 ft), the 105 mm lens to 1.3 m (4.26 ft), the 150 mm lens to 2 m (6.5 ft), the 200 mm lens to 3.3 m (10.8 ft) and the 300 mm lens to 4 m (13.12 ft) (with the close-up lens on the 200 mm, you can take photographs as close as 1.85m (6.06 ft).

If you wish to photograph the subject even closer, use the special Bronica Extension Tube Set or Bellows Attachment.

Special Extension Tube Set

Insert the desired extension ring between the focusing ring and the lens.

CA RING

The CA close-up ring has an aperture preview lever. Press this lever to open the aperture; when this lever is released, the aperture will close down. In the case of changing the value of lens aperture, please move the aperture adjusting ring to the desired position of value, while keeping the diaphragm lever pressed open.

CB RING

For closer pictures, use an additional CB ring on top of the CA ring.

CC and CD RINGS

The CD ring is twice as deep as the CC ring. See chart below for various combinations.

Lenses No. of Tube	Stroke inch (mm)	NIKKOR 40mm F4		NIKKOR 50mm F3.5		NIKKOR 75mm F2.8		ZENANON 100mm F2.8		NIKKOR 135mm F3.5		ZENANON 150mm F3.5		NIKKOR 200mm F4	
		Magnification Rate	Exposure Multiple Rate	Magnification Rate	Exposure Multiple Rate	Magnification Rate	Exposure Multiple Rate	Magnification Rate	Exposure Multiple Rate	Magnification Rate	Exposure Multiple Rate	Magnification Rate	Exposure Multiple Rate	Magnification Rate	Exposure Multiple Rate
CA	0.54~1.10 (14~28)	0.7	2.9	0.56	2.4	0.36	1.9	0.27	1.6	0.21	1.5	0.19	1.4	0.14	1.3
CA + CB	1.10~1.7 (28~42)	1.04	4.2	0.84	3.4	0.54	2.4	0.41	2.0	0.31	1.7	0.28	1.6	0.21	1.5
CA + CB + CC	1.7~2.2 (42~56)	1.39	5.7	1.12	4.5	0.72	3.0	0.54	2.4	0.41	2.0	0.37	1.9	0.28	1.6
CA + CB + CD	2.2~2.8 (56~70)	1.74	7.5	1.40	5.8	0.90	3.6	0.68	2.8	0.52	2.3	0.47	2.2	0.35	1.8
CA + CB + CC + CD	2.8~3.3 (70~84)	2.08	9.5	1.68	7.2	1.08	4.3	0.82	3.3	0.62	2.6	0.56	2.4	0.42	2.0

● Magnification Rate and Exposure Multiple Rate mentioned above are meant for the lenses closest position.

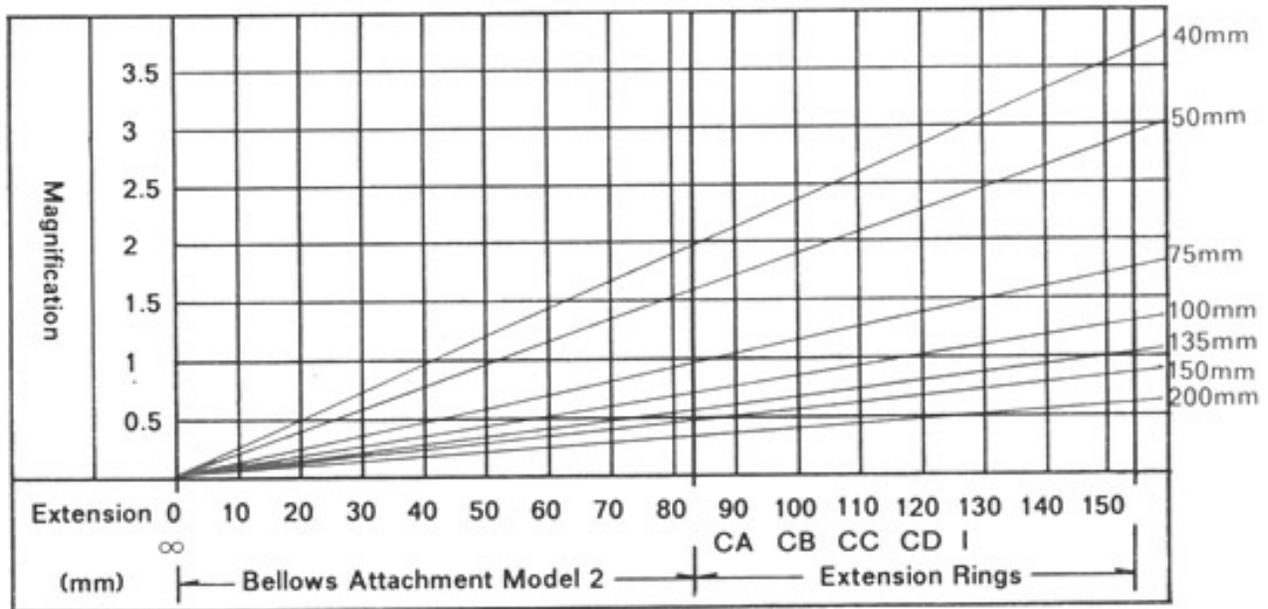
Bellows Attachment Model 2

If you wish to take a wide range of closeup photographs, rather than using the Extension Tube Set, this attachment is most convenient. Bronica Bellows Attachment Model 2 in conjunction with the Bronica S2A permits taking photographs up to 1x magnification (life-size) with the 75mm lens.

Its device for raising, lowering, shifting and swinging the lens makes the equipment indispensable for scientific and commercial photography.

Range of Magnification

The Bellows can be used with the lenses up to 200mm focal length for taking pictures from infinity to close-up distances. Additional use of the extension rings permits photographing at closer distances and therefore at higher magnifications. The range of magnification obtained with various interchangeable lenses is given below.



Filters

Bronica filters are high grade filters having a special finish with superior surfaces.

The 40 mm wide-angle lens requires 90 mm screw type filters; while the 50mm and the 300 mm, 82 mm screw type filters.

The other lenses (75mm to 200mm lenses) can be used with 67mm screw-type filters.

The long focal length interchangeable lenses (400mm and over) require 122 mm screw type filters.

FOR MONOCHROME	Color Number	Color	Exposure Magnification				Effect of Filter
			* B type panchromatic film		* C type panchromatic film		
			Daylight	Art. Light	Daylight	Art. Light	
SL-39	UV	Transparent	1	1	1	1	Absorbs ultra-violet rays.
SY-44	Y1	Light Yellow	1.5	1.3	1.5	1.2	Gives a clear image of sky and background in natural contrast.
SY-48	Y2	Yellow	2.0	1.5	2.0	1.5	Shades down reds and yellows. good contrast. For general use.
SO-56	YA3	Amber	4.0	3.0	4.0	2.0	Brings out cloud effect. Strong contrast.
SR-60	R1	Red	8.0	4.0	6.0	3.0	Gives greater contrast. For perfect infra-red photography with infra-red film.
G-55	P00	Yellowish Green	2.5	2.0	4.0	3.0	Gives natural contrast with panchromatic film.

* B type panchromatic films: Konipan S.S.S. Neopan S.S.S. Plus X. Double X and Veri-Chrome. * C type panchromatic films: SSS class films and Tri-X.

FOR COLOR	Color	Conversion ratio for color temperature * Dekamired value	Exposure Magnification	Classification of color film	Effect of Filter
L-1A	Light Violet	0	1	Daylight type or Tungsten	Absorbs ultra-violet rays to prevent bluish appearance on background. Adjusts natural color balance. Used for lens protection.
O-85A	Orange	+12	2	Tungsten type	Conversion filter for tungsten type color film in daylight.
O-80A	Dark Blue	-12	2.5	Daylight type	Conversion filter for daylight type color film under artificial light.
B-82C	Blue	-4.0	1.5	Daylight type	Absorbs reddish color when photographs are taken before 9 A.M. or after 3 P.M. in daylight.
O-81B	Amber	+4.0	1.5	Daylight type	Absorbs bluish color when photographs are taken in cloudy or shadowy conditions.

* (+) Reduction of color temperature. (-) Increase of color temperature.

S2A Specifications

Type - 2 1/4 x 2 1/4 (6cm x 6cm) Single lens reflex camera

Film - 120 roll film, 12 exposures and 220 roll film, 24 exposures

Interchanging Films - interchangeable film back coupled with camera body, dark slide with safety lock system.

Standard lens - Nikkor 75mm F2.8 fully automatic preset diaphragm, 4 group 5 element

Lens mount - Bayonet type (Bronica mount), also equipped with screw mount (57mm x 1 mm pitch). Large bayonet mount for long telephoto lenses

Finder - Fresnel lens and large magnifier

Viewfinder hood - interchangeable with prism finder or magnifying hood

Focusing - Helicoid type, stroke 14mm, rotating angle of focusing ring 250 degrees

Distance Scale - for 75mm lens.

Mirror - flip down, instant return, automatic mirror system

Diaphragm - Fully automatic diaphragm - 75mm, 40mm, 50mm, 100mm, 105mm, 150mm, 200mm, 300mm, 400mm and 600mm lenses

Depth-of-Field - Depth-of-field can be checked by pressing preview button

Shutter - Vertically operating focal plane shutter, non-rotating single shutter dial, B, 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, 1/1000 and 'X' (1/40). "T" (Time) Shutter release lock device. Intermediate shutter speeds.

Synchro - Automatic switch-over synchronization system

Film loading - Separate film holder, automatic film winding system by matching with film start mark

Film winding - winding crank or knob.

Film counter - Automatically returns to "0"

Camera body - made of 18-8 stainless steel, bright polished finish

Dimensions - 100mm x 100mm x 140mm

Weight - 1.780 kg

Accessories

□ ACCESSORIES



□ Prism viewfinder "A"



□ Prism viewfinder "C"



□ Magnifying hood



□ Sports finder

- * Prism view finder Model A
- * Prism view finder Model C
- * Magnifying Hood
- * Sports Finder



□ TTL exposure meter

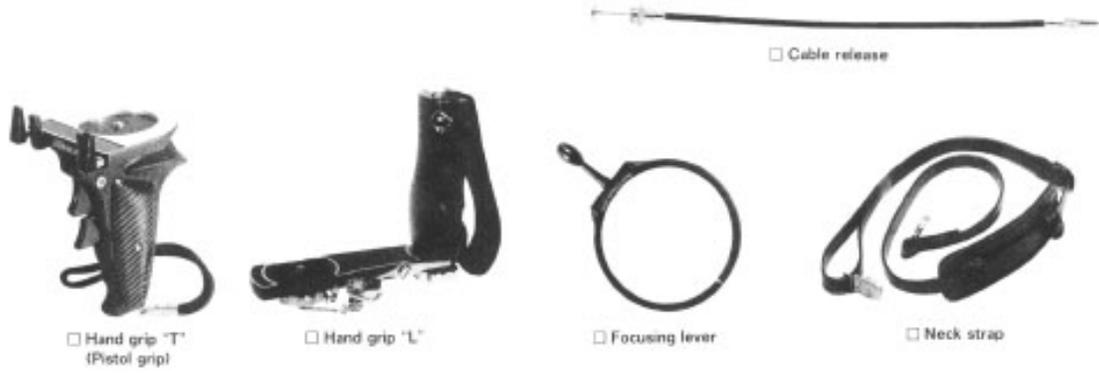


□ Leather case
for 50mm lens
for 135mm/150mm lens
for 200mm lens

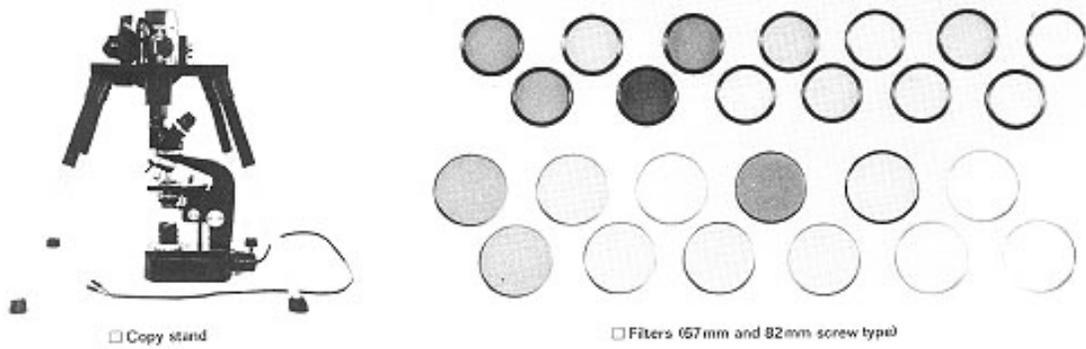


□ Lens hood
for 50mm lens
for 75mm/100mm lens
for 135mm/150mm lens

- * TTL exposure meter
- * Leather Case
for 50mm lens,
for 135mm/150mm lens,
for 200mm lens
- * Lens Hood
for 50mm lens
for 75mm/100mm lens
for 135mm/150mm lens



- * Cable release
- * Hand grip "T" (pistol grip)
- * Hand Grip 'L'
- * Focusing Lever
- * Neck strap

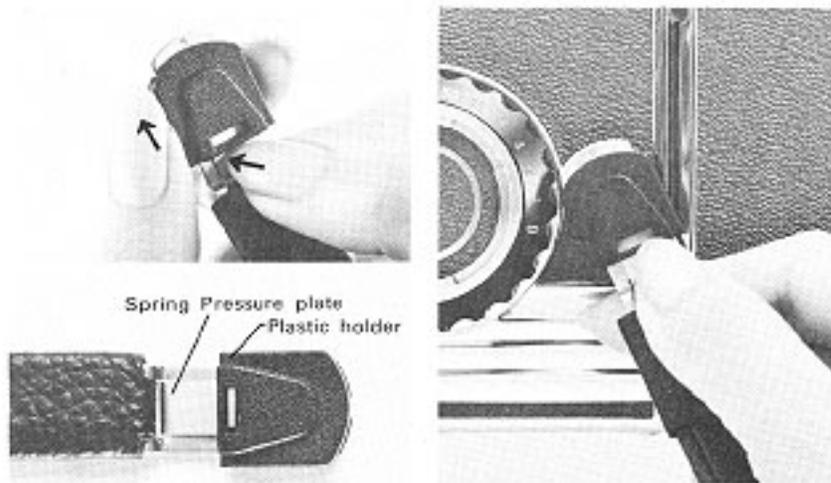


- * Copy stand
- * Filters (67mm ad 82mm screw type)

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[Editor's Note: The following is an insert in Mike Bond's Manual:]



The neck strap of your S2A camera is an improved type.
Please read the instructions before removing or attaching

a) To attach the strap to the camera, press and hold down the spring plate on the strap metal, as shown in the photograph, and slide the plastic holder toward the strap using the metal protrusion atop the plastic holder. The hole on the reverse side of the plastic holder opens. Insert the neck strap stud on the camera body into this hole, and pull the strap toward you, locking the strap onto the neck strap stud.

b) To remove the neck strap, grasp the strap, as shown in the photograph, and with the finger-tip, press down the spring pressure plate, and push the strap metal into the plastic holder, unlocking the strap from the strap stud.

Special Thanks to Michael D. Bond
for making this S2A Manual Available Online!
<http://people.smu.edu/rmonagha/brons2a/index.html#page8>

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