

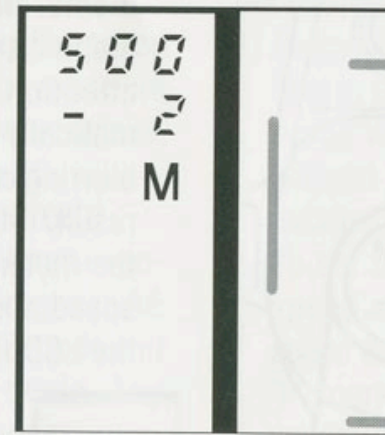
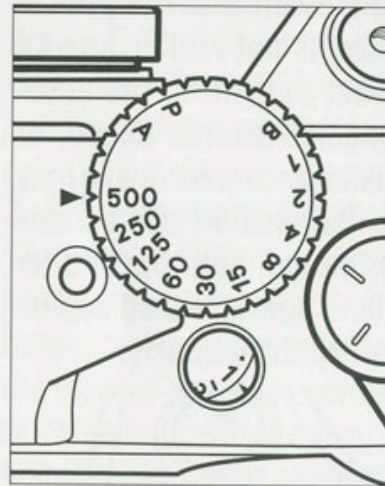
3. Shooting

3-4 Exposures

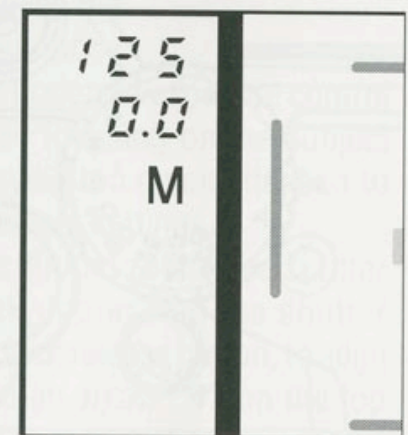
3-4 Exposure Control Mode 3-4 Manual Exposure Control

may result in camera shake is shown, precautionary measures should be taken such as mounting the camera on a tripod or placing the camera on a stable deck or against a wall, to avoid picking up such vibration and consequent blurring.

To compensate for an automatically determined exposure, please refer to the articles 3-4-4 Exposure compensation and 3-4-5 AE lock. If proper shutter speed cannot be selected for the manually set f-number due to subject brightness that is out of metering range, the shutter speed display on the LCD flashes.



Manual exposure (2EV under)



Correct exposure

3) Manual exposure control

This exposure control mode is particularly important to those serious photographers who intentionally determine specific shutter speeds and lens apertures in order to produce creative images. The Bronica RF 645 with its extremely precise electronic shutter speed and lens aperture control systems makes an ideal manual exposure control camera.

To set the manual exposure control mode (from "P" or "A" modes), rotate the shutter speed dial while pressing the shutter speed dial lock release, and align the desired setting from the numerals 1 to 500 (1 to 1/500 sec.) with the arrow "▼" mark on the top of

the camera body. Lightly press the shutter release button and an "M" mark with the set shutter speed and a numeral that indicates the deviation of the manually set exposure level from the metered exposure will appear on the LCD panel in the viewfinder. Note: The exposure deviation indication is a numerical expression of the difference between the manually set exposure level determined by the combination of the set shutter speed and the f-number and the exposure level determined by the camera's metering and correct exposure calculation system. The exposure deviation is indicated in 1/2 stop increments up to ± 3 stops. When "0" is displayed there is no difference

This camera manual library is for reference and historical purposes, all rights reserved.

This page is copyright by mike@butkus.org M. Butkus, N.J.

**This page may not be sold or distributed without the expressed
permission of the producer**

I have no connection with any camera company

If you find this manual useful, how about a donation of \$3 to: M. Butkus, 29 Lake Ave., High Bridge, NJ 08829-1701 and send your E-mail address too so I can thank you. Most other places would charge you \$7.50 for a electronic copy or \$18.00 for a hard to read Xerox copy. These donations allow me to continue to buy new manuals and maintain these pages. It'll make you feel better, won't it?

If you use Pay Pal, use the link below. Use the above address for a check, M.O. or cash. Use the E-mail of butkusmi@ptd.net for PayPal.



[back to my "Orphancameras" manuals /flash and light meter site](#)

Only one "donation" needed per manual, not per multiple section of a manual !

The large manuals are split only for easy download size.

3. Shooting

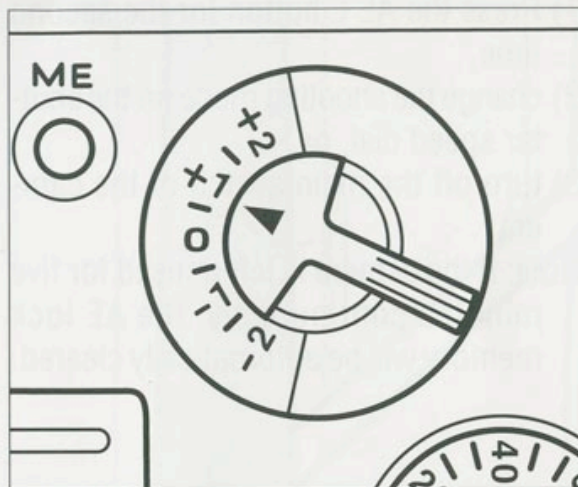
3-4 Exposures

3-4-4 Exposure Compensation

between the manually set exposure and the metered level. When "-1" is indicated, the manually set exposure can be adjusted to the correct or metered exposure level by setting the shutter speed one stop slower or opening of the lens aperture by one stop. A half stop deviation indicated by "-2.5" or "1.5" may be corrected by the intermediate lens aperture setting.

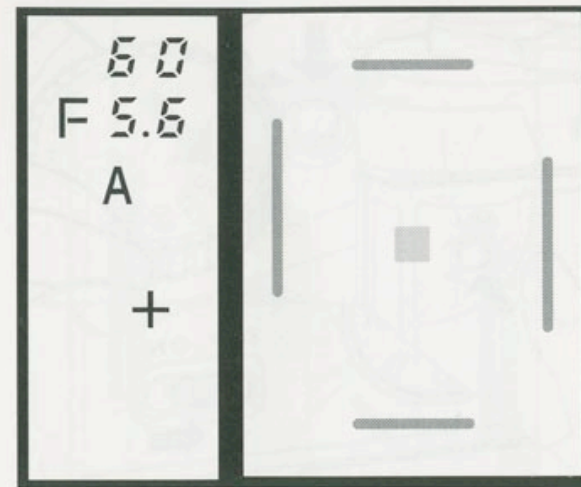
When there is an over ± 3 stop deviation, either the 3 or -3 numeral will flash to alert the user. Naturally, excellent shots can be taken in spite of an indicated exposure deviation.

Many serious photographers take high key, low key and other type of intentionally exposure-deviated images for their artistic expressions.



3-4-4 Exposure compensation.

The purpose of the exposure compensation dial is to adjust the automatically determined exposure level by manually setting the value in the Aperture-priority AE mode or the Program AE mode. Turn the exposure compensation dial on the camera rear cover to any desired amount within the ± 2 stop compensation range, graduated in 1/2 stop increments. All exposures will be adjusted by that amount until the exposure compensation dial is turned back to "0" point. There is a strong click stop at "0" position and light click stops are present at all other graduated positions. When an exposure compensation is applied, a "+" or "-" warning

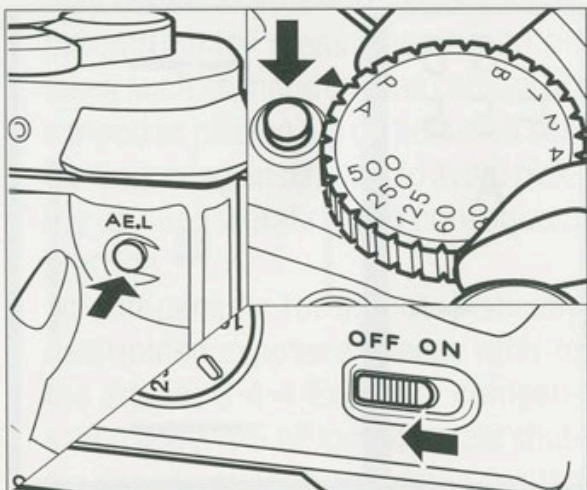


ing symbol is illuminated in the viewfinder LCD panel. It is important to remember there is no numerical indication for exposure compensation.

Note: Once the exposure compensation is completed in a photo session, do not forget to return the exposure compensation dial to the original "0" position.

3. Shooting

3-4 Exposures 3-5 Focusing

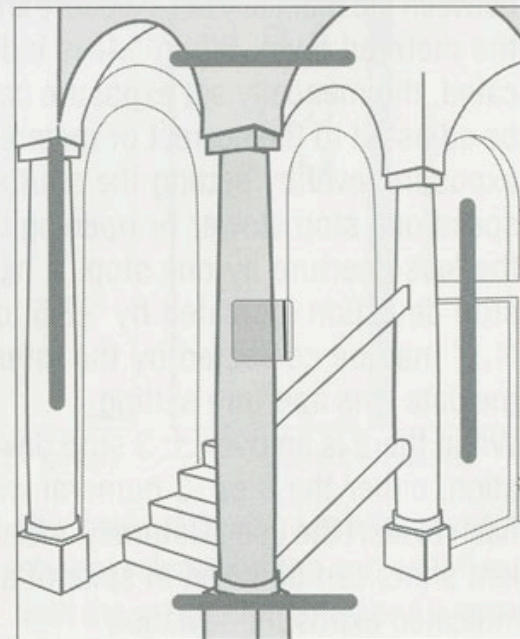


3-4-5 AE lock

The AE lock system is a useful tool to obtain the correct exposure on a limited portion of the subject area. Close in on the subject and point the camera toward the area where the exposure must be correctly metered, then press the AE L button. The metering system of the camera stores the brightness level of that particular portion of the subject and displays an "AL" symbol on the LCD panel. The AE L button does not need to be pressed continually to maintain the metered exposure. The camera stores this metered brightness level for five minutes. To cancel the meter reading in memory, choose one of the actions described below.

- 1) Press the AE L button for the second time,
- 2) change the shooting mode on the shutter speed dial, or
- 3) turn off the main switch of the camera.

Note: If the camera is left unused for five minutes continuously, the AE lock memory will be automatically cleared.



3-5 Focusing

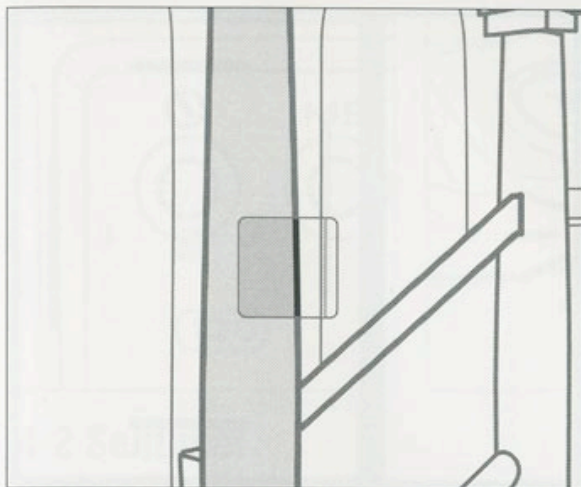
The Bronica RF 645 is a coupled-meter rangefinder camera in which focus is achieved by superimposing two viewfinder images obtained by two independent rangefinder windows.

- 1) Point the camera toward the subject so that the focusing portion of the subject fits into the focusing frame of the viewfinder. When the subject is not in sharp focus, two poorly contrasted, partially overlapped images will be seen in the focusing frame.

3. Shooting

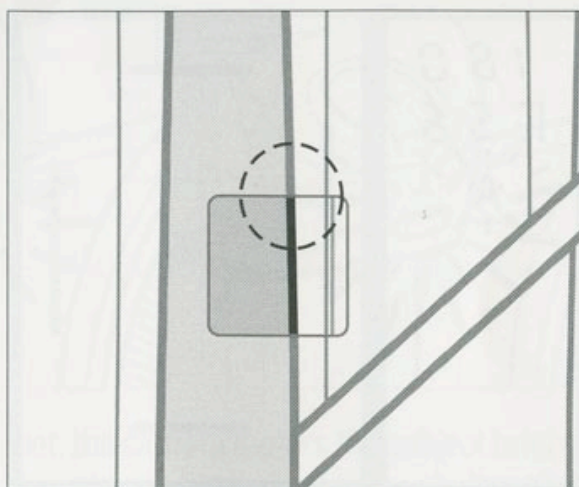
3-4 Exposures

3-6 Automatic Parallax Compensation



2) Focus by superimposing the two images. As the focusing ring is rotated with the camera held normally (i.e. vertically oriented), one of the images in the focusing frame slides sideways in response to the lens movement. Rotate the focusing ring further until both images in the focusing frame of the viewfinder align perfectly. The image contrast will become noticeably sharp when the two images superimpose precisely. That is the point where the lens critically focuses on the subject.

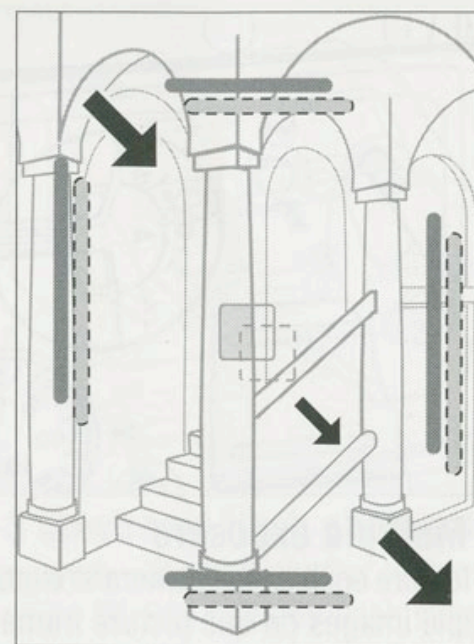
3) Split image focus:
Split-image is an image divided into upper and lower halves. Human vision



naturally perceives the most critical image matching when comparing the alignment of edges in a split image. The optical system of the Bronica RF 645 is so constructed that the sliding side image in the focusing frame is decisively sectioned at the upper and/or lower edge of the focusing frame. By aligning the edge of the moving image with the connecting edge (or lower part) of the stationary image, the lens can be very precisely focused on the subject.

3-6 Automatic parallax compensation

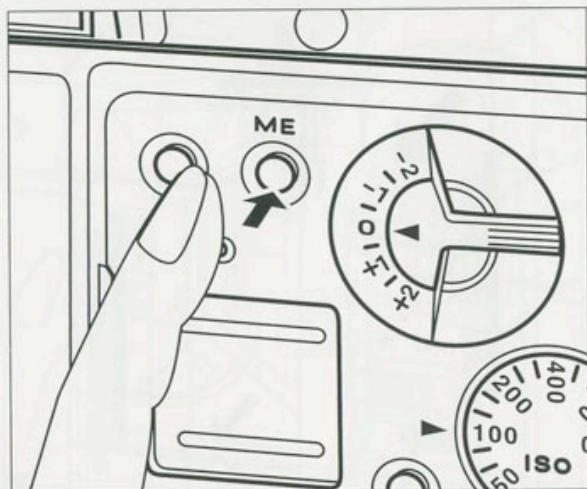
The viewframe of the Bronica RF 645 finder automatically compensates for the par-



allax between the shooting lens and the viewfinder angle by compensating its position and viewing frame relative to the focusing distance. When mounting a 65mm or 100mm lens, focus on a moderately distant object. The angle of view of the bright frame in the viewfinder will shift toward the lower right hand corner of the viewfinder frame. The area enclosed by the bright frame, when focus is achieved, represents the area to be photographed.

4 Other features

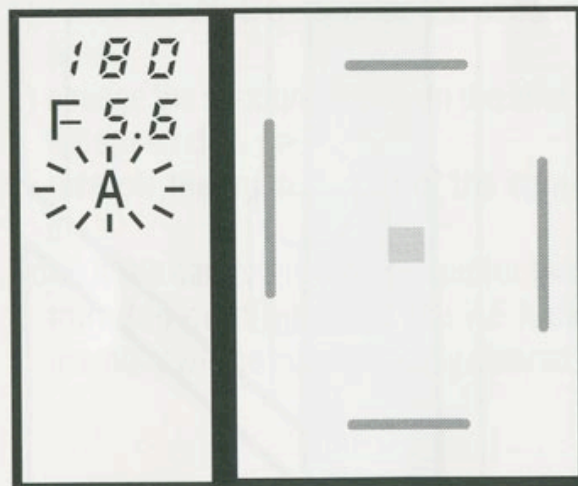
4-1 Multiple Exposure



4-1 Multiple exposure

This feature enables the camera to expose multiple images on one picture frame.

- (1) Firstly, take an image that forms the base of multiple exposures.
- (2) Looking through the viewfinder, make sure the LCD panel is activated. Then press the ME button on the back of the camera. Note: The ME button does not work if pressed while the LCD panel is not active. Press the shutter release button lightly and operate the ME button while the LCD is active.
- (3) The second image is exposed on the same picture frame as the shutter button is clicked. Repeat (2) and (3) consecutively to take as many exposures



Multiple exposure Indication

as desired on one picture frame. Note 1: The ME button electronically cancels out the shutter release button lock system. Five second after pressing the ME button, the canceling effect of the ME button will be cleared, the shutter button will be locked, and the LCD will switch off once again.

Note 2: There is no exposure compensation feature in the Bronica RF645 for multiple exposure mode.

Multiple exposure therefore results in overexposure. Exposure must be calculated by the photographer in accordance with image composition. Note 3: Do not press the ME button during



ME button does not work

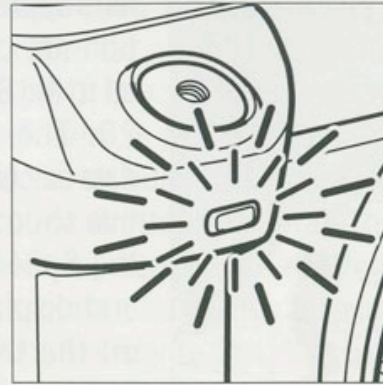
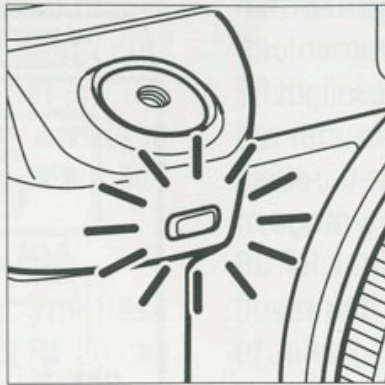
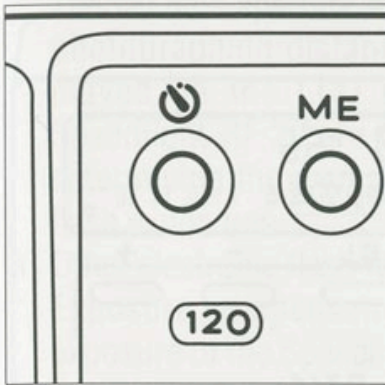
film advancing. This will cause incorrect film winding and cause a partially overlapped picture.

Note 4: The ME button may be activated when the camera is operated without loading a roll of film. One depression on the ME button enables the camera to operate its shutter just one time.


4 Other features

4-2 Selftimer

4-3 Electronic Flash Photography

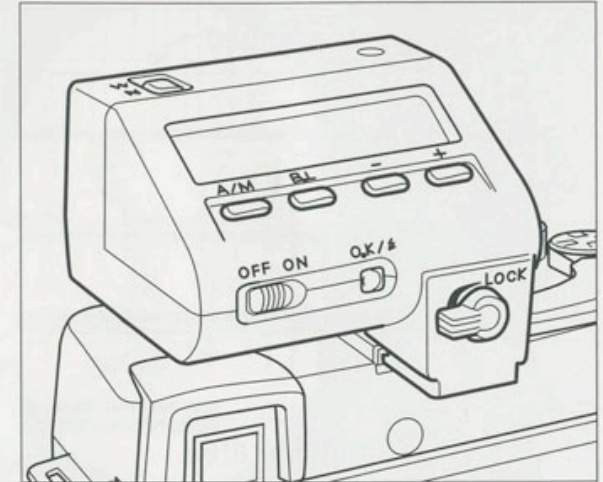


4-2 Selftimer

The selftimer button on the camera back designated by the "  " symbol activates a delayed shutter release, bypassing the shutter release button. The shutter speed indicated in the LCD panel will switch to the selftimer display where the counter begins counting down a ten second delay time. At the same time, an LED located at the front of the camera grip begins to flash. The LED flashing accelerates two second prior to the shutter release, indicating the shutter release timing. To cancel the activated selftimer operation, press the selftimer button for a second time or turn off the main switch to achieve the same effect.

Note 1: If either program AE mode ("P") or the aperture-priority AE mode (A") is

set, the camera meters the subject brightness immediately before the shutter click and the exposure is controlled correctly. Note 2: The selftimer cannot be activated when the shutter dial is set to "B", the main switch is turn off, the battery is depleted, or the exposure counter is set between "S" and "1".



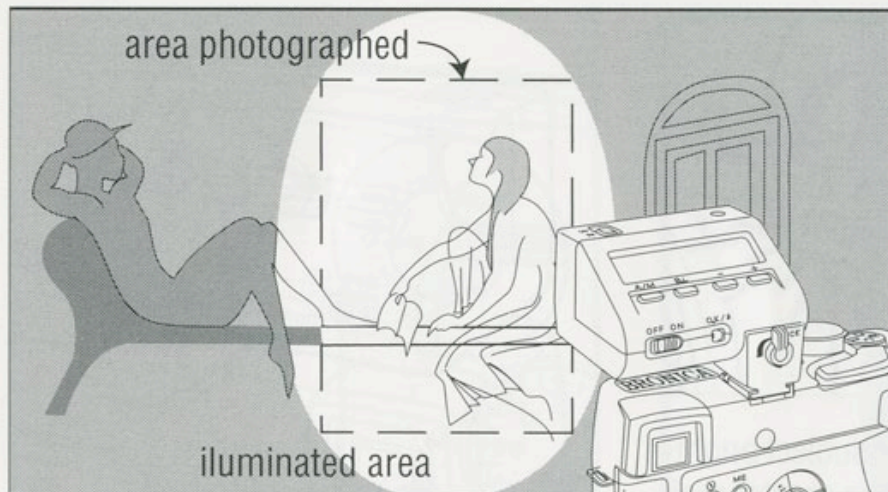
4-3 Electronic flash photography

Equipped with a lens shutter system, the Bronica RF 645 features flash synchronization at all shutter speeds. Connect an electronic Speedlight unit to either the hotshoe or the sync terminal located at the front of the camera. When the dedicated Bronica Speedlight RF 20 is mounted on the hotshoe, vital data such as film speed, set lens aperture setting and exposure compensation factor will be transmitted between the flash unit, the camera body and the lens to control the flash exposure correctly.

- 1) Automatic shutter speed adjustment
Provided that the shutter speed dial is set to "P" (Program AE mode), the

4 Other features

4-3 Electronic Flash Photography



shutter speed is automatically set at 1/60 second for the 45mm and 65mm lenses and at 1/90 second or faster in accordance with the program line for the 100 mm lens as the Speedlight RF 20 completes its cycle.

Note: The shutter speed is not automatically adjusted if the camera is in the Aperture-priority AE mode or the manual exposure control mode. Care should be exercised to avoid picking up camera shake if the unit is set to a slow shutter speed.

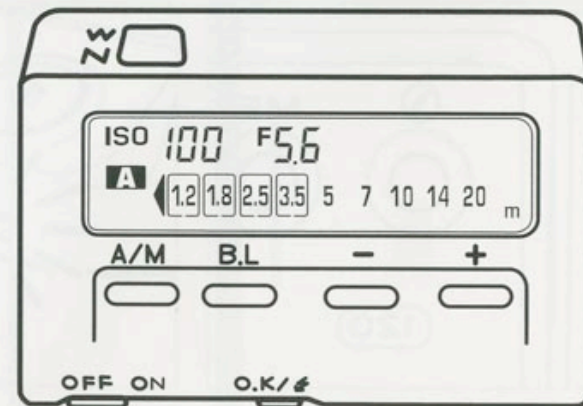
2) Automatic lens aperture and film speed settings

Through dedicated electronic contacts on the hotshoe, the film speed and the

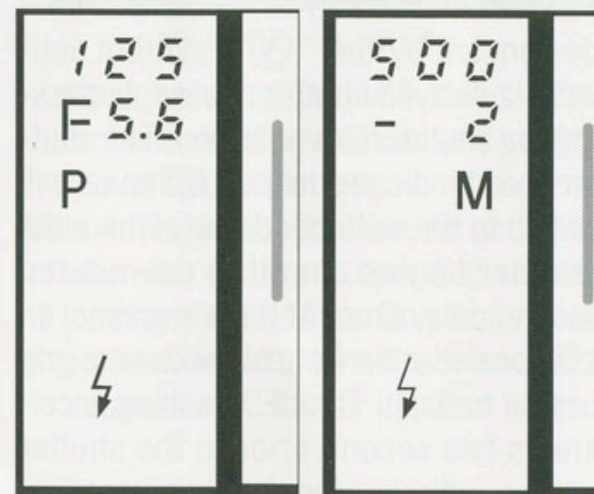
lens aperture information are communicated to the Speedlight RF 20. The transferred data calculate the effective shooting range of the Speedlight RF 20 and display the result on the LCD panel to prevent exposure control mistakes that are common in flash photography. Unlike most external flash metering systems, the Bronica RF 645 / Speedlight RF 20 combination does not place any limitations on lens aperture selection in flash photography. This unlimited utilization of the lens aperture is extremely effective in the adjustment of the distance range and depth of field control in flash photography.

3) Manual flash exposure control

The Bronica Speedlight RF 20 controls the flash light intensity manually in six steps from 1/1 to 1/32 in one-stop increments. Apply this manual flash exposure control for accent flash illumination, e.g.: to highlight a model's



LCD display (Speed light RF 20)



View finder display
left: P mode, right: M mode

eyes, to illuminate the subject with constant flash power regardless of the ambient illumination or to illuminate a subject located at a specific distance.

4 Other features

The set lens aperture and the proper photographing distance range displayed on the LCD panel of the Speedlight RF 20 are very useful in determining the manually controlled flash exposures.

4) Other electronic flash features

- * Exposure compensation: The flash exposure of the Speedlight RF 20 can be compensated from -3 to +2 stop in 1/2-stop increments according to the subject's reflectivity.
- * Backlit LCD: For insufficient lighting, the LCD panel of the Speedlight RF 20 can be illuminated from the back for better legibility.
- * Illumination angle adjustment:: Two illumination angles for the 65 mm lens, the normal illumination angle, and the 45mm lens, the wide illumination angle, are provided with the Speedlight RF 20.

Note: The illumination range of the Speedlight RF 20 is a vertically-oriented rectangular area.

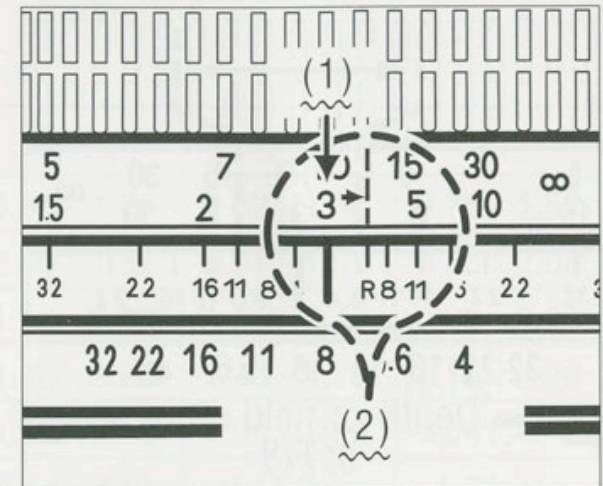
4-4 Long exposure photography 4-5 Infrared Photography

4-4 Long exposure photography

The longest nominal shutter speed of the Bronica RF 645 is eight full seconds. If a longer exposure is required, set the shutter speed dial on bulb ("B"). The electronically control shutter system of the Bronica RF 645 stops consuming battery power at one second after the shutter click in bulb operation in order to conserve battery. Still, it is strongly recommended to carry backup battery cells if repeated long exposures are anticipated.

Note 1: The viewfinder LCD displays "BUL" as the shutter dial is set on "B".

Note 2: Never try to remove the lens from the camera during a long exposure.



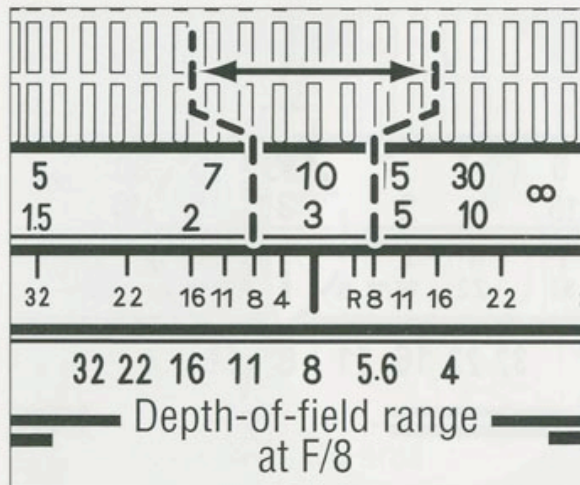
4-5 Infrared Photography

To photograph with a monochrome infrared film, follow the procedures described below.

- (1) Focus normally. Note the location on the distance scale corresponding to the distance scale index line.
- (2) Rotate the focusing ring slightly to shift the focus point to the marked point with the "R" symbol adjacent to the distance index line.
- (3) Attach an infrared filter on the lens and shoot. Note: For more details, refer to the infrared film instructions.

4 Other features

4-6 Depth of Field



4-6 Depth of Field

Since the Bronica RF 645 is a coupled rangefinder camera comprising separate shooting and viewfinder optical systems, the sharp focus range is not directly displayed in the viewfinder. The depth of field must therefore be read from the depth of field scale on the lens, or calculated from the depth of field table on page 32.

(1) To read the depth of field on the lens, focus on a subject, then read two distances on the distance scale between the pair of depth-of-field lines corresponding to the f-number set on the aperture ring. In the illustration above, the 65mm lens is focused on a subject at 3 meters with its aperture set at

f/8. The depth of field range of approximately 2.5 to 4 meters is found between the pair of f/8 lines on the depth of field scale. The subjects within these two distances will be photographed in sharp focus. On the depth of field table of the 65mm lens on page 32, the box located where the horizontal line for 3 meters and the vertical column for f/8 intersect includes the distance range corresponding to the depth of field of 2.52 to 3.71 meters.

Note: The depth of field tables other than the 65mm lens are printed on the instruction manual of each lens.

4 Other features

4-6 Depth of Field

RF 65mm F4 Depth of Field Table

65mm	Distance (m)	F4	F5.6	F8	F11	F16	F22	F32
	1.0	0.96 - 1.04	0.95 - 1.06	0.92 - 1.09	0.90 - 1.13	0.86 - 1.20	0.82 - 1.30	0.75 - 1.52
	1.2	1.14 - 1.27	1.12 - 1.29	1.09 - 1.34	1.05 - 1.40	1.00 - 1.52	0.94 - 1.69	0.85 - 2.08
	1.5	1.41 - 1.61	1.37 - 1.66	1.32 - 1.73	1.27 - 1.84	1.19 - 2.06	1.10 - 2.40	0.98 - 3.33
	2	1.83 - 2.21	1.77 - 2.30	1.69 - 2.46	1.60 - 2.69	1.46 - 3.20	1.33 - 4.15	1.16 - 8.28
	3	2.62 - 3.50	2.50 - 3.76	2.33 - 4.22	2.16 - 4.98	1.91 - 7.16	1.69 - 15.2	1.41 - ∞
	5	4.01 - 6.63	3.73 - 7.63	3.36 - 9.88	3.00 - 15.7	2.54 - 772	2.15 - ∞	1.71 - ∞
	10	6.67 - 20.1	5.89 - 33.7	5.01 - ∞	4.23 - ∞	3.36 - ∞	2.70 - ∞	2.04 - ∞
	∞	19.0 - ∞	13.7 - ∞	9.69 - ∞	7.10 - ∞	4.92 - ∞	3.60 - ∞	2.50 - ∞
	Distance (ft)	F4	F5.6	F8	F11	F16	F22	F32
	3.5	3.35 - 3.67	3.29 - 3.74	3.21 - 3.85	3.12 - 4.00	2.97 - 4.28	2.81 - 4.68	2.59 - 5.54
	4	3.80 - 4.22	3.73 - 4.32	3.62 - 4.48	3.50 - 4.69	3.31 - 5.09	3.11 - 5.67	2.83 - 7.04
	5	4.68 - 5.37	4.57 - 5.53	4.40 - 5.80	4.21 - 6.17	3.94 - 6.91	3.65 - 8.09	3.26 - 11.4
	7	6.37 - 7.78	6.15 - 8.14	5.85 - 8.75	5.51 - 9.66	5.03 - 11.7	4.55 - 15.8	3.94 - 37.7
	10	8.73 - 11.7	8.31 - 12.6	7.75 - 14.2	7.15 - 16.8	6.34 - 24.4	5.59 - 54.4	4.67 - ∞
	15	12.3 - 19.3	11.4 - 21.9	10.4 - 27.3	9.32 - 39.5	7.96 - 158	6.79 - ∞	5.46 - ∞
	30	20.6 - 55.3	18.3 - 83.8	15.7 - 369	13.4 - ∞	10.7 - ∞	8.65 - ∞	6.57 - ∞
	∞	63.4 - ∞	45.6 - ∞	32.1 - ∞	23.4 - ∞	16.2 - ∞	11.9 - ∞	8.22 - ∞

5 Troubleshooting

Troubleshooting

Before taking your camera in for repairs, check your camera referring to the following table.

When photographing

What's happening	Viewfinder LCD	Cause of trouble	Means to solve	How to operate
Shutter release button depressed lightly but LCD does not light.	No LCD indication	Battery drained,	Load new batteries,	
		Improperly loaded batteries,	Properly replace batteries,	
		Main switch turned OFF	Turn ON main switch	
Flashing LCD warning	Shutter speed LCD flashing	Beyond exposure control range	Change f-number setting	When dark: Open aperture to smaller f-number, When bright: Close aperture down to larger f-number
	Aperture & shutter speed flashing	Beyond metering range,		
		Subject too dark,	Too dark: Use photo lamp, flash unit,	
		Subject too bright	Too bright: Use ND filter	Adjust exposure by ND filter factor
	Battery mark flashing	Battery drained	Load new batteries	
Warning indications	"P, A, or M" mark flashing	Camera set on multiple exposure (ME) mode	Cancel ME mode	Press on ME button
	AL mark indication	Camera in AL lock mode	Cancel AE lock mode after shooting in this mode.	Press AE L button for second time, Turn OFF main switch, Change exposure control mode.
		Camera temporarily inoperable,		
		Film not wound to next frame,	Wind film,	Wind rapid wind lever to end,
		No film loaded, Lens not mount properly	Load film, Replace lens correctly	Use ME button for camera check without film, Check if lens lock release button in original position after lens mounting.
Shutter does not click.	No LCD indication	Battery exhausted,	Load new batteries,	
		Main switch turned OFF	Turn main switch ON.	
	"X" mark flashing	Camera temporarily inoperable,		
		Film not wound to next frame,	Wind film,	Wind rapid wind lever to end,
		No film loaded,	Load film,	Use ME button for camera check without film,
ME button does not work.	No LCD indication	Lens not mount properly		Check if lens lock release button in original position after lens mounting.
		Cause of trouble	Replace lens correctly	
Selftimer does not work	No LCD indication	In-finder LCD not activated.	Press shutter release button again to activate LCD panel.	In-finder LCD turns itself off 6 sec. after shutter release button depression for saving energy.
		Shutter dial set on "B"	Change shutter dial position.	

5 Troubleshooting

Exposed film is....

What's happening	Cause of trouble	Means to solve	How to operate
Under exposed,	Shot in AE lock mode	Cancel AE lock mode after shooting in this mode.	Press AE L button for second time, Turn OFF main switch, Change exposure control mode.
Over exposed	Shot in AE lock mode	Cancel AE lock mode after shooting in this mode.	Press AE L button for second time, Turn OFF main switch, Change exposure control mode.
Not exposed at all	Shot with lens cap on	Take lens cap off to photograph.	
Images very blurred	Camera shakes	Mount camera on a sturdy tripod.	

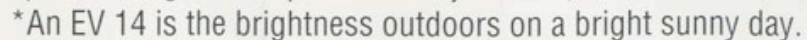
Flash picture appears to be...

What's happening	Cause of trouble	Means to solve	How to operate
Under exposed	Beyond exposure control range,	Cancel AE lock mode after shooting in this mode.	Check flash range on flash unit LCD.
	Exposed on white subject	Set Speedlight exposure compensation on plus (+) side.	
Over exposed	Beyond exposure control range,	Close lens aperture down or step back from subject,	Press AE L button for second time, Turn OFF main switch, Check flash range on flash unit LCD.
	Exposed on black subject	Set Speedlight exposure compensation on minus (-) side.	
Background streaked	Shutter speed too slow in aperture-priority AE mode	Select faster speed in manual (M) mode or change to programmed AE (P) mode.	

Others

What's happening	Cause of trouble	Means to solve	How to operate
Battery dries up too fast.	Used AE lock mode too long,	Load new batteries	Cancel AE lock after shooting in this mode,
	Used camera under low temperature atmosphere	Load new batteries	Take backup batteries for photographing at cold place.

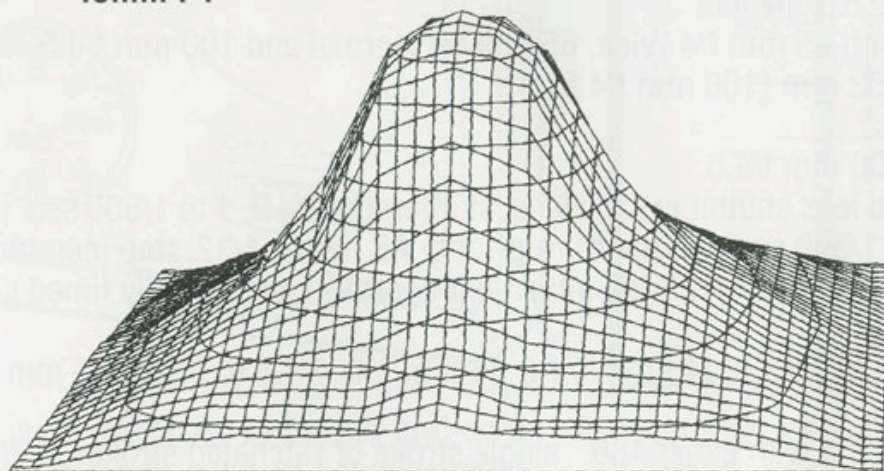
Relationship Between Shutter Speed, Aperture and Exposure



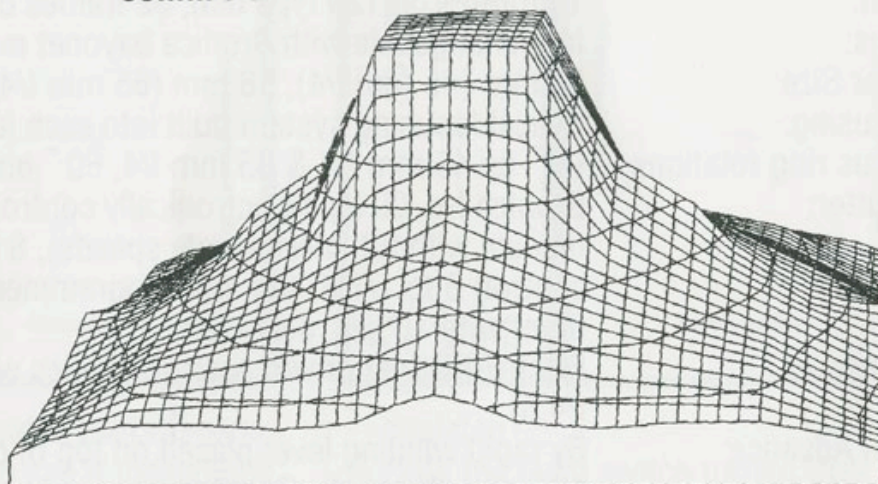
6 References

Exposure Measurement Sensivity Patterns

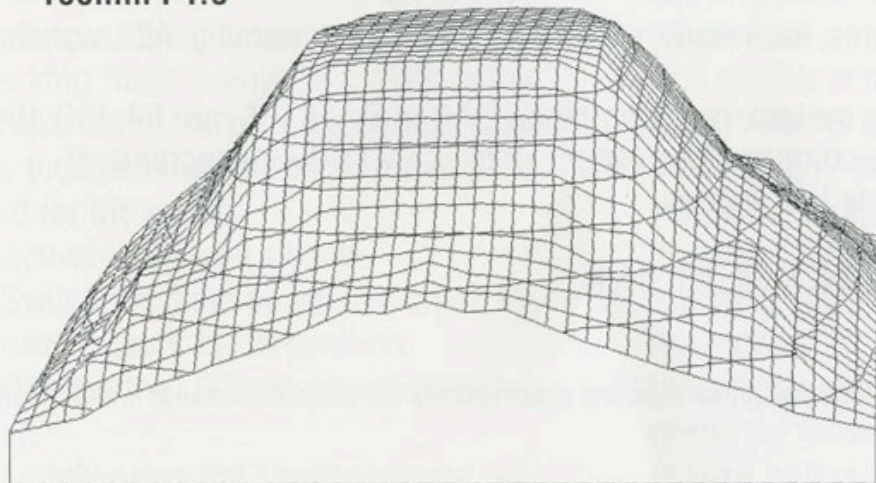
ZENZANON-RF
45mm F4



ZENZANON-RF
65mm F4



ZENZANON-RF
100mm F4.5

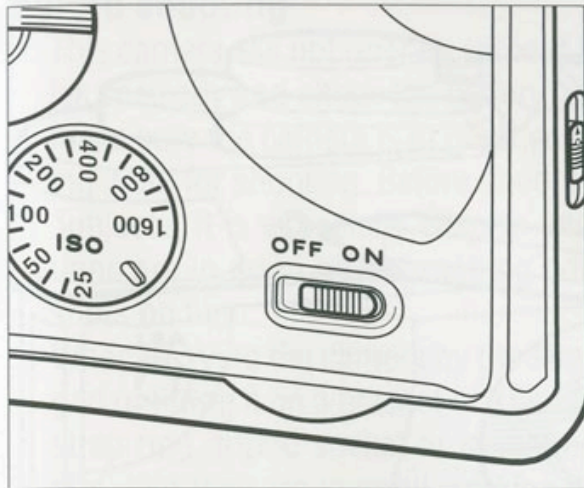


7 Specifications

Camera Type:	Coupled-meter rangefinder, lens shutter 6 X 4.5 format camera
Picture Format:	41.5 mm X 56 mm
Film:	16 frames on 120 type film, 32 frames on 220 type film
Lens:	Interchangeable with Bronica bayonet mount, 45 mm f/4 Wide, 65 mm f/4 Normal and 100 mm f/4.5 Tele.
Filter Size:	58 mm (45 mm f/4), 58 mm (65 mm f/4), 62 mm (100 mm f/4.5)
Focusing:	Helical focusing system built into each lens;
Focus ring rotations:	90° on 45 mm f/4 & 65 mm f/4, 60° on 100 mm f/4.5.
Shutter:	Bronica No. 00 type electronically controlled lens shutter in each lens, shutterspeeds; B, 1 to 1/500 sec. (on manual without intermediate speeds), 8 to 1/500 sec. (on aperture-priority AE mode, 1/12-stop increment control) 8 to 1/750 sec. (on programmed AE mode, 1/12-stop increment control) Electronically timed self timer with 10 sec. delay time
Aperture:	Electro-magnet driven aperture blades with f/4 to f/32 (45 mm f/4 & 65 mm f/4), f/4.5 to f/32 (100 mm f/4.5)
Film Advance:	By rapid winding lever placed on top of camera with either 186° single stroke or ratcheted strokes, with 12° standby angle. Coupled
Rangefinder:	Dual-image superimposing real image optical system, with 53.5 mm base line (effective base line: 33 mm)
Viewfinder:	Inverse Galilean optical system with coupled rangefinder bright frames automatically switched between 65 mm and 100 mm lens and automatically corrects parallax, finder magnification; 0.6X, viewing field 81% at 3 m.
In-Finder Display:	Shutter speeds, lens aperture, correct exposures, flash ready, exposure compensation warning, AE L warning, multiple exposure (ME) warning
Exposure Metering:	Center-weighted area-comparative metering system, metering range EV 3 to EV 18 (65 mm f/4, ISO 100), film speed range; ISO 25 to 1600, exposure compensation range; +2 to -2 EV (1/2-stop increment)
Exposure Control Modes:	Manual, Aperture-priority AE and Programmed AE modes
Battery:	2 cells of CR2, 3V Lithium type battery
Dimensions:	Camera body 145.6 mm wide X 107.3 mm high X 64 mm thick.
Weight:	Camera body 810g

External appearance and specifications are subject to change without notice.

8 Preliminary Checklist (Before loading film)



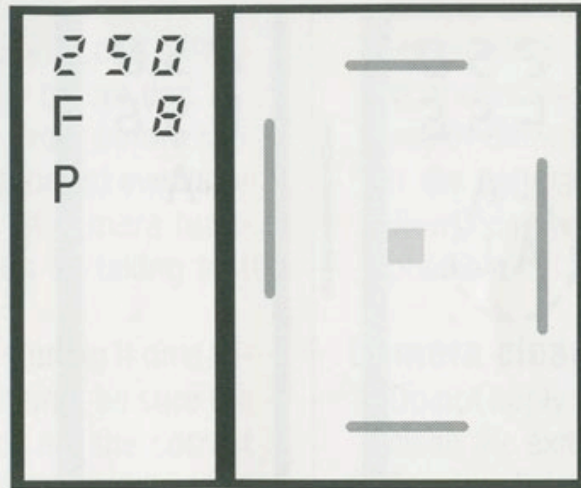
A basic checklist of points and basic procedures to confirm before embarking on a shoot are listed below. When you plan an important photographing session, it is essential to test your camera to ensure the unit and other equipment are in good working order. This includes not only checking these points described below but also taking test pictures with the camera, together with the accessories to be used for the shoot.

1) Activate the main switch:

Switch the main power switch on the camera back to ON position.

2) Observe the LCD panel in the viewfinder:

Lightly press the shutter release but-



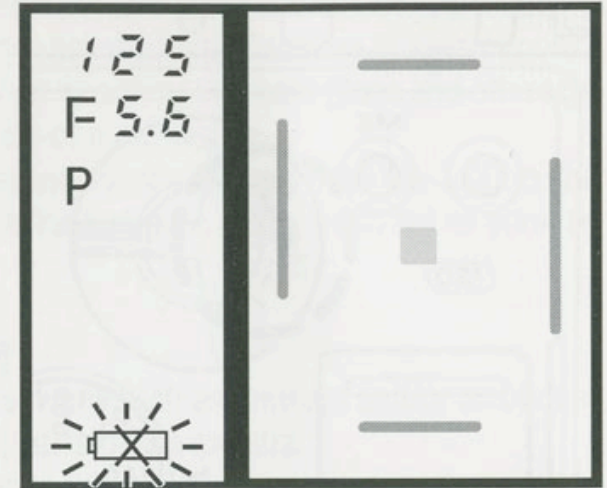
ton, and carefully watch the LCD panel in the viewfinder to see if indications respond properly to the aperture ring or shutter speed dial adjustments, or respond spontaneously to the various brightness of the scene pointed by the camera.

3) Test shutter action:

To activate the shutter without loading a roll of film, activate the LCD in the viewfinder by lightly pressing the shutter button, then press on the multiple exposure (ME) button on the camera rear cover.

4) In case the shutter does not operate, check the following:

(1) Are batteries loaded? Are they



depleted?

(2) Is the main switch turned ON?

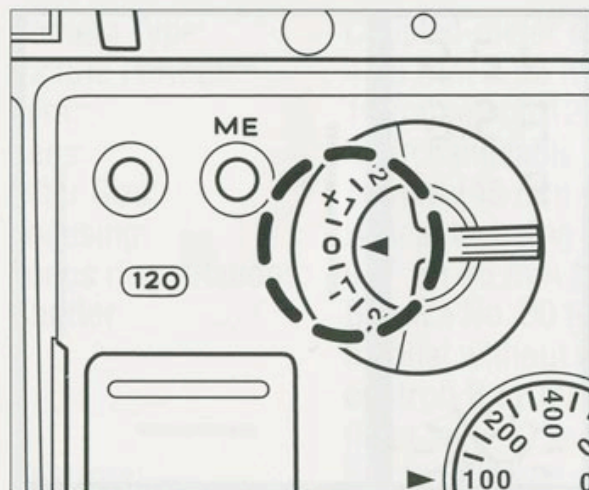
(3) Is the lens correctly mounted on the camera?

If the lens is not securely locked on the camera body, the light shielding curtain will remain activated and the shutter will be locked. Remount the lens correctly and lock it in position.

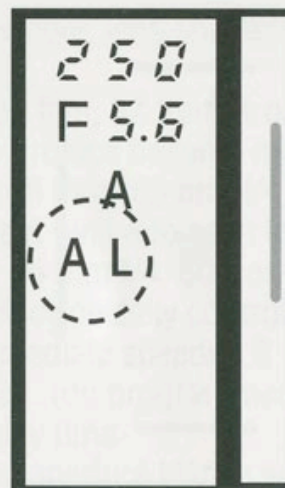
5) Other points to check:

(1) Is the exposure compensation dial set to the "0" position? If not, set the dial back to "0", or incorrect exposures may result. Do not forget to turn the exposure compensation dial back to the original "0" position after exposure compensated shooting.

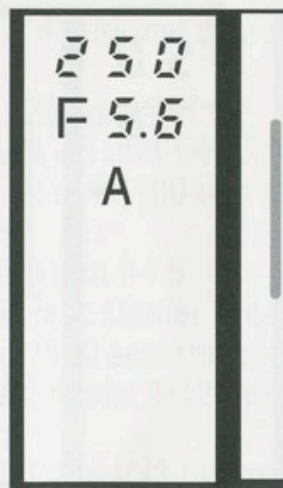
8 Preliminary Checklist (Before loading film)



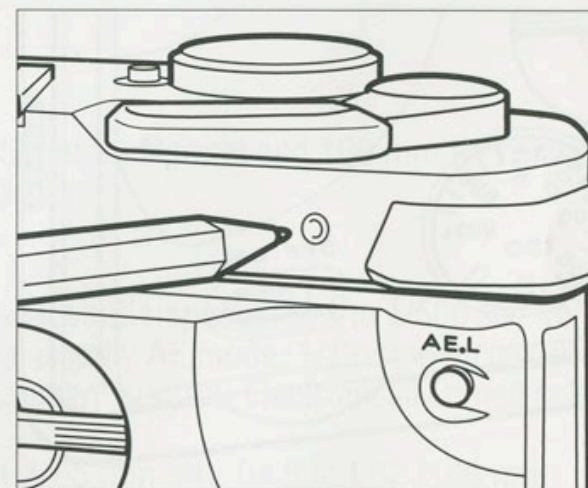
(2) Is the AE L mode canceled? If it is activated, an AE L mark appears on the LCD in the viewfinder. Once you press the AE L button located below the rapid wind lever, it maintains the metered brightness level for five continuous minutes. Be aware that the AE-locked exposure level may not be related to the subject you photograph at any given moment. To clear the AE L mode, press the AE L button for the second time or turn off the main switch momentarily. The camera now is in normal photographing mode.



AE LOCK ON



AE LOCK OFF



Film wind lock release

If battery power drops below the camera's operational level, or the main switch is mistakenly turned off during a long exposure shot (B or longer than 1 second exposure), the film wind lock mechanism will interrupt the camera operation and prevent the film from being advanced any further. To release the film advance lock, press the lock release with a pointed object such as a ballpoint pen. The film wind lock will be released and the film can then be advanced.

Note 1: When the battery power becomes depleted, replace with fresh ones as soon as possible.

Note 2: Do not press the film advance lock release for any reason other than outlined above.

9 Ensuring years of enjoyment through proper care and handling

Before shooting

- * This camera will not operate without batteries. Load batteries correctly and check the battery capacity before use.
- * Make sure the camera is in good working order before taking it out for shooting. Before shooting important events or subjects, it is especially wise to ensure all camera functions are in good photographing condition by taking test shots on film.
- * When carrying the camera by the strap, fastening it on a tripod or fitting it on a bracket of a large flash unit, be sure the strap ring, tripod socket or mounting lock are the correct size, that they are in good working condition, and that the camera is securely fastened to these devices.

About batteries

- * Batteries left in a camera for prolonged periods may leak, resulting in malfunctioning of the circuitry or corrosion of internal mechanisms. When the camera is not used for an extended period, remove the batteries prior to stowing.
- * In the event that a battery leak or corrosion is discovered? no matter how seemingly minor? have a detailed examination performed at a camera service center without delay.
- * Stains, dirt or fingerprints on the battery contact may cause malfunctioning or corrosion of the circuitry. Wipe both contacts of the battery chamber and the ends of batteries clean with soft cloth or paper before loading the batteries to make sure contacts are all clean.
- * Do not forget to carry backup batteries when setting out for a long photography trip or shooting in a cold place.

- * Battery power lessens proportionally with the low surrounding temperature. Carry a set of backup batteries in a warm pocket or container when shooting in a cold place and alternate use of different sets of batteries.
- * If the battery warning symbol appears on the LCD in the viewfinder, replace the batteries with a fresh set as soon as possible.

Camera cleaning

- * Do not apply any solvent such as thinners and/or alcohol to clean the external parts of the camera.
- * To wipe dirt or finger prints from the camera surface, apply a soft cloth or silicone-treated cloth after blowing dust off the camera.
- * Do not apply silicone-treated cloth to glass portions such as viewfinder windows or eyepiece lenses. Such chemically treated cloth may damage the optical coatings of the glass. Blow the dust off the glass surfaces and wipe dirt off the glass with lens cleaning tissues or well washed microfiber cloth, using a lens cleaning liquid available at camera stores.

LCD (Liquid Crystal Display)

- * The LCD may occasionally flicker or flare under bright ambient light. Such phenomena are not malfunctions, but typical attribute to LCD devices.
- * The LCD may darken in an extremely high atmospheric temperature over 60 ° C or 140 ° F. The LCD appearance will return to normal when cooled to room temperature.
- * The display speed of LCD may slow down in a low atmos-

9 Ensuring years of enjoyment through proper care and handling

pheric temperature. This is not a malfunction, but rather an inherent characteristic of LCD technology.

Operational Conditions of Camera

- * Temperature range: -5deg. C to +40deg. C or 23deg. F to 104deg. F. Relative humidity range: Less than 80%. If left in the direct sunlight or on the dashboard of a car, the camera may far exceed operational temperature range, causing damage to the camera. Do not leave your camera in conditions of heat or direct sunlight. If accidentally overheated, place your camera in a cool place until it returns to a normal room temperature before further use.

Storage and Maintenance

- * Your camera is a precision instrument. It is strongly recommended that you visit a service center or a repair station for routine checks every one to two years and for overhauls every three to five years. The best services will be provided at a Bronica/Tamron service centers.
- * Store the camera in a dry, dust free, cool place. Put caps on the camera and lens openings, cavities, accessory mounting devices or electric terminals before storing your camera and lenses.
- * Do not store your photographic equipment in cabinets or drawers containing insecticides, disinfectant, adhesives or other chemical substances. Chemical fumes are extremely harmful to precision mechanisms, electronic devices, optical elements of cameras and photographic films.

BRONICA

Exported by:

TAMRON CO.,LTD.

17-11,7-chome,Takinogawa, Kita-ku, Tokyo 114-0023, Japan

Phone:(03)3916-0131 Fax:(03)3916-1860

0110U ④

