

BRONICA

ETRSi



Congratulations on your choice of the Zenza Bronica ETRSi single lens reflex camera. The ETRSi has been developed on the basis of the technology and experience gained with the Zenza Bronica ETRS and is between the lens leaf shutter type single lens reflex camera which provides full flash synchronization at all shutter speeds. When used together with the exclusive SCA386 System Adapter (optional) in combination with specified electronic flash units, it also has full auto-flash control based on TTL direct light measurements made at the film plane. Used in combination with the newly-developed AE-III Prism Finder E, there is also switching from full-area average metering to spot metering, as well as AE lock. Although the following instructions are based on the standard ETRSi combination consisting of the ETRSi main camera body with the standard Zenzanon-PE 75mm lens, Film Back Ei 120 and Waist-Level Finder E, the choice of lens, film back and finder is, of course, left completely to the discretion of the user to suit picture taking needs.

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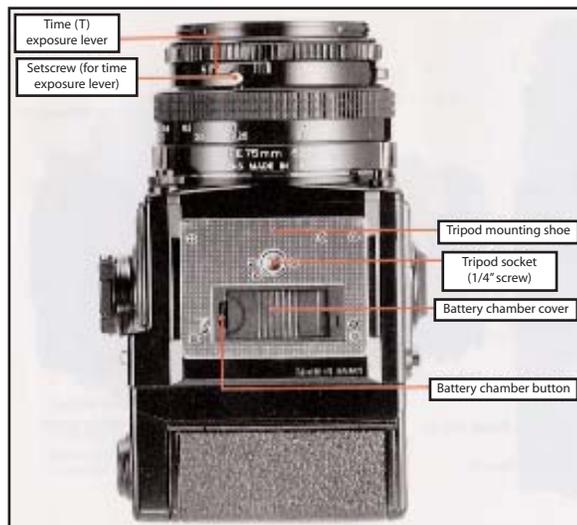
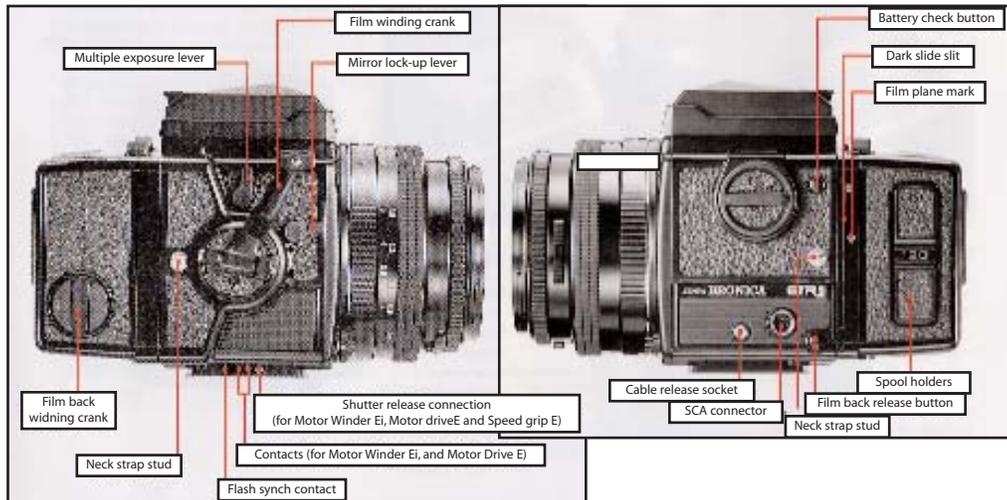
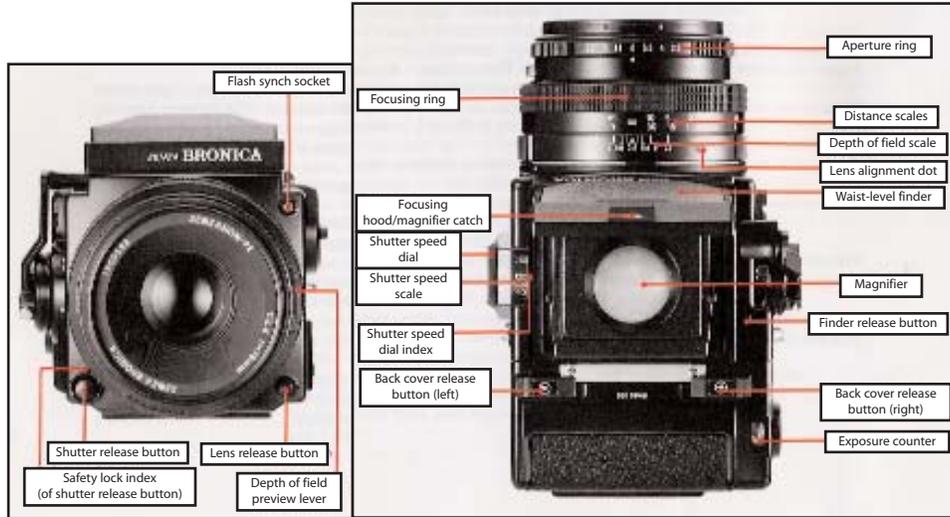
Specifications of the ZENZA BRONICA ETRSi

Type	4.5 x 6cm format lens shutter single lens reflex camera, with interchangeable lens, film back, finder and focusing screen systems
Frame Size	42 x 55.1mm (side/length ratio of 1:1:31 closely matches standard paper and reduction sizes.
Film	120 roll film (15 exposures); 220 roll film (30 exposures); 135 cartridge loaded film; and Polaroid Land pack film.
Standard Lens	Zenzanon-PE 75mm F2.8 lens, interchangeable type; 6 elements in 5 groups; multi-layer anti-reflection coated; 49.7° angle of view; F22 minimum aperture; 60cm minimum focusing distance; and helical focusing.
Filter Size	62mm diameter for 40-250mm lenses and 95mm for 500mm lens.
Lens Mount	Exclusive four claw Bronica ETR bayonet mount.
Lens Diaphragm	Fully automatic instant reopening diaphragm action; equal-distance aperture scale graduations; depth of field previewing.
Shutter	Electronic control SEIKO #0 between-lens leaf shutter: shutter speeds 8 to 1/500 sec. plus B(bulb) and T(time); intermediate settings not possible; mechanical control setting of 1/500 sec.
Film Winding	Film winding crank; one complete forward revolution or ratcheted winding action.
Mirror Lock-Up	Possible with mirror lock-up lever
Multiple Exposure	Possible with multiple exposure lever; red warning sign in finder.

Specifications of the ZENZA BRONICA ETRSi (con't)

Film Back	Daylight loading interchangeable type; exclusive film back for 120, 220 and 135 roll film and Polaroid Land pack film
Finder System	Interchangeable finder system; 94% of actual field of view (remains unchanged with different finders); choice of four optional finders; Waist-Level Finder E, AE-II Finder E, Rotary Viewfinder E and Prism Finder E.
Focusing Screen	Interchangeable type; standard screen has matte spot.
Flash Synchronization	X-setting (up to 1/500 sec) ; auto-flash control based on direct light measurements at the film plane is possible with optional SCA System Adapter.
Battery Checking	Red-colored LED light up within screen area when battery check button is depressed, if there is sufficient power; also doubles as shutter closing signal.
Battery	Single 6-volt silver oxide or alkaline-manganese battery; also powers AE-II Finder E, when attached.
Dimensions	92(wide) x 87 (high) x 69 (long)mm (ETRSi main body only) 92(wide) x 107(high) x 165 (long) mm (with standard lens Film Back Ei 120 and Waist-Level Finder E)
Weight	480 grams (ETRSi main body only; without battery) 1,285 grams (with standard lens, Film Back Ei 120 and Waist-Level Finder E; without battery.)

Parts of the ZENZA BRONICA ETRSi



1. Loading the Battery

The electronically-controlled speeds of the shutter will not work without loading the battery. One alkaline-manganese or one silver-oxide battery of 6 volts should be used. The shutter will be mechanically controlled when the battery is not loaded, exhausted or when it is loaded with its polarity marks reversed. It will then be released at 1/500 sec, regardless of the setting on the shutter speed dial. Time exposure is an additional mechanical speed, accessible by a lever (A/T) on the lens.

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



A. Depress the battery chamber button with your finger and, at the same time, move the battery chamber cover in the arrow-indicated direction. The cover will come off easily.

* When loading the battery, be sure to leave the battery removal ribbon extending out, for convenience in removing the battery the next time.



B. Coincide the plus (+) and minus (-) marks on the battery with similar polarity indications in the battery chamber. Then, push in the negative end of the battery first and follow with the positive end.

C. Insert the BATTERY end of the battery chamber cover which also has a mark coinciding to that on the body. Then move the cover in the other direction (opposite to the arrow indication) until it locks in place.

2. Battery Checking



If a red-colored battery check LED lights up in the left-rear corner (of the screen area) when the battery check button is pressed, the battery is loaded properly and there is sufficient power for electronic operations.

* If the LED does not light up, (1) the battery is not loaded properly or (2) it is completely drained.

3. Attachment and Removal of Film Back

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

The camera main body and film back are fully coupled, upon connection. Therefore, always turn the film winding crank completely one time, upon attaching the film back. If winding is not possible, all preparations for taking the picture have been completed. But, if winding is possible, rotating the film winding crank until it stops will automatically take care of the incomplete action, whether uncocked shutter or film not advanced. Thus, it's always possible to choose the film type most suited for the shot, even midway in the roll.

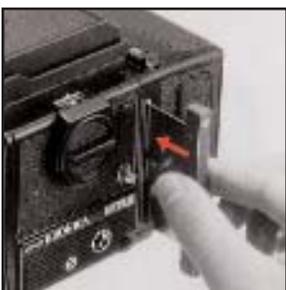
* Make full use of the interchangeable film back.

1. Color and black and white, in different film speeds, can be shot, as required.
2. Continuous shooting is possible if sufficient preloaded film backs are available.
3. Don't waste unsuitable film used in a previous session but simply load up a new film back with the required film type.
4. Using a Polaroid Land Pack Film Back will provide an instant color or black and white picture, used typically for checking the lighting and/or composition before taking the actual photograph.

* Choose film backs to match your photographic requirements, as various types and formats are available optionally.

5. The film chamber that can be attached or detached freely, thus permitting changes in film types even in mid roll. The camera body and film back are fully coupled upon connection. This means that the back and body communicate their state of readiness to each other, and prevent accidental double exposures, or blank frames.

After attaching the film back, wind the crank. If winding is not possible, all preparations for taking the picture have been completed. But, if winding is possible, the wind will automatically take care of any incomplete action, whether uncocked shutter or film not advanced. Thus, any back can simply be attached to the body without need for checking the body, or back for their state of readiness.



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

* The dark slide must be withdrawn from its slit, upon attachment of the film back to the main body, as otherwise the shutter cannot be released.

3. Attachment and Removal of Film Back (con't)



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

* There is danger of the film back accidentally becoming detached from the main body, should the dark slide be left in its slit while the camera is being carried. Therefore, make it a rule to withdraw the dark slide promptly upon attaching the film back to the main body.



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

* The dark slide cannot be withdrawn while the film back is removed from the main body.

4. Construction of Film Back

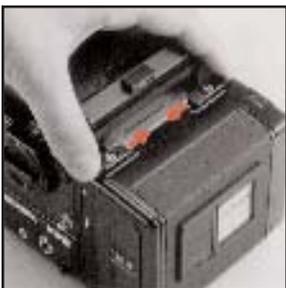


A. The film back consists of a film holder and a film back frame, with exclusive film holders supplied for 120 and 220 roll films. The film holder has an insert or frame for loading film, as well as a built-in film winding mechanism.



B. The film back frame, on the other hand, consists of a base with a dark slide slit and a back cover with a film type indicator frame. The film back frame completely encloses the film holder and shields it from outside light, as well as connecting it to the camera main body.

5. Film Loading



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

* Various film back types and formats are available optionally. Therefore, choose those suitable for your needs. See instructions supplied with the Polaroid Land Pack Film Back and Film Back ETRS 135 for their proper use.

5. Film Loading (con't)



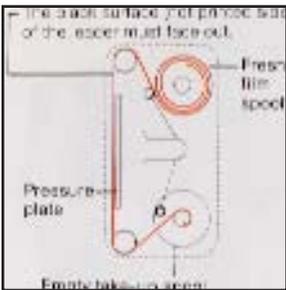
B. Then, the film holder can be detached.



C. There are two spool holders on the film holder, with the top for the fresh film spool and the bottom for the take-up spool.

The left-side shafts of both can be opened outward, by sliding the spool as illustrated. Insert the right end of the spool on to the right-side fixed shaft and, next, close the left-side holder (shaft) which will engage the spool.

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



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

* Be especially careful regarding the running direction of the film. When properly loaded, the inside black surface of the leader must face outward when running across the pressure plate, as illustrated.



E. Rotate the film back winding crank on the right side of the film holder in the direction indicated by the arrow, while checking the advancing film. When the starting point, or arrow mark is aligned with the triangular start-mark on the top left side of the film holder, stop rotation.



F. The starting point, or arrow mark, can also be aligned with the start-mark, with the film holder loaded in the film back. Simply rotate the film winding crank on the camera main body, in this case. This method is preferred since there will be coupling with the camera main body mechanism, from the beginning.

5. Film Loading (con't)

*If the film is not advanced when the film winding crank is rotated, the film holder is not inserted properly and/or the camera main body may be set for multiple exposures. In the latter case, return the multiple exposure lever to an upright or vertical position. (See Section 21: Multiple Exposures)



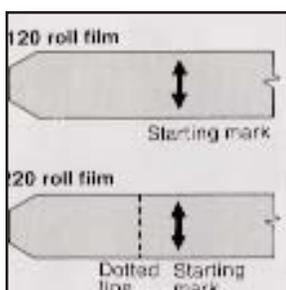
G. Close the back cover, by pressing firmly against the base of the film back, as illustrated. The back cover will automatically close and lock, with the safety lock also locking the back cover release button. The same operation will close the back cover when the film back is detached from the body.



H. Upon loading the film, rotate the film winding crank until it stops to place the first frame into place for taking the picture. The exposure counter will also change from "S" to "1", while the shutter will also be cocked.



I. The film back winding crank is used for advancing the film, when the film back is detached from the main body for film loading. The film back winding crank can continue to rotate, even when the film is set for the first exposure. It should be rotated 2 or 3 times more, in order to take up any slack in the loaded film.



When loading 220 roll film in its exclusive film back, do not mistake the dotted line for the starting point, as it is located before the arrow marks.

6. Film Type Indicator Frame



Upon loading the film, tear off the end flap from the empty film package and insert it in the film type indicator frame. This will help you keep track of the film loaded in the film back and should prove useful when two or more film backs are used, with different types of films.

7. Film Advance and Shutter Cocking



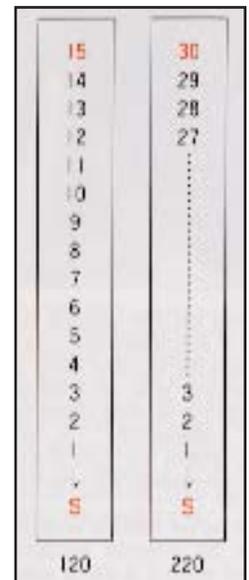
Rotating the film winding crank once, in the forward direction, will advance the film one frame and, at the same time, cock the shutter, with the winding action stopping automatically. Or, short, rapid strokes, up to an accumulated full rotation, will also do the job.

* The mirror lock-up lever must always be oriented horizontally except when it is being used to lock up the reflex mirror. In one 360° clockwise rotation, the winding crank will advance the film one frame, and at the same time, cock shutter. The winding mechanism ratchets freely in the reverse direction, allowing short strokes to accumulate a full wind. In either case, winding action stops automatically when complete.

8. Exposure Counter

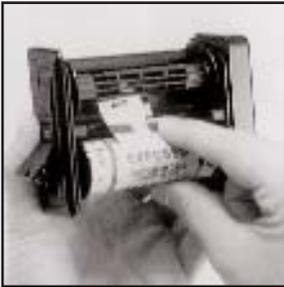


The exposure counter is an additional type and shows the number of frames exposed. Starting from "S", the exposure counter for 120 roll film shows numbers from 1 to 15 while the counter for 220 roll film shows numbers from 1 to 30.



9. Film Unloading

A. After the 15th exposure of the 120 roll film (30th exposure of the 220 roll film), the film winding crank will turn freely with further rotations. Therefore, continue rotating the film winding crank until the remaining film and all the leader paper is wound up on the take-up spool. Open the back cover when winding action becomes very light.



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

*Always load 120 roll film in Film Holder Ei 120 and 220 roll film in Film Holder Ei 220.

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

10. Setting the Shutter Speed Dial



A. The numbers on the shutter speed scale show the shutter speed which is set. For example, "8S" is 8 sec., "2" is 1/2 sec. and "500" is 1/500 sec. The shutter stays open as long as the shutter button or cable release is pressed on "B (bulb)". However, since battery power is drained during "bulb", time exposures should be made when the exposure time is longer than one minute.

* See "Section 12:Time(T) Exposure"



B. The numbers on the shutter speed scale are divided into red and white colors. Red-colored numbers are full number settings of 1 second and longer while white-colored numbers are from 1/2 to 1/500 second.

* The shutter speed setting can be changed before or after the film is advanced.

11. Shutter Release Button



A. Depress the shutter release button with the ball of the finger. Press all the way in with a smooth and gentle action.

* A red-colored LED will flash briefly in the left-rear corner of the focusing screen area, when the shutter is released. This will indicate that the lens shutter has closed and the exposure is complete, and should be noted when using a slow shutter speed.



B. Safety Lock- The safety index on the shutter release button can be rotated to three positions for obtaining different shutter function. The settings are directly left, 45 degrees up from the side position and directly above, which have different safety lock functions.

* The safety lock index should be set 45 degrees diagonally when using Motor Winder Ei.

Safety lock position	Release with		
	Shutter release button	Motor Winder E, Motor Drive E & Speed Grip E release accept	Cable release button
Left side	Releases	Releases	Releases
45° diagonal	Locked	Releases	Releases
Top side	Locked	Locked	Locked

Remarks: Use Motor Drive E with red dot positioned at 40° left.

C. The shutter cannot be released in the following cases:

1. Shutter release button is locked.
2. Dark slide is inserted.
3. Film winding crank has not been rotated fully. (same when the exposure counter is still between "S" and "1".)
4. Shutter is not cocked.
5. Lens is not properly attached.
6. Lens release button is being depressed.
7. All frames (15 on 120 roll film and 30 on 220 roll film) have been exposed already.

*If the film winding crank is rotated before completion of the preset shutter speed, such as when a slow shutter speed is being used, the frame will be underexposed and image streaking in the frame may occur as well. Also, although the shutter will not be released on the next frame, there may be leakage of light onto that frame.

12. Time (T) Exposures

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



A. First, cock the shutter with the film winding crank and then pull up the time exposure lever release.

* Except for time exposures, always shift the time exposure lever so that the letter "A" is visible on the lens barrel and keep the time exposure lever release pushed in all the way.



B. Next, cock the shutter with the film winding crank and then shift the time exposure lever to the left (looking from the body towards the lens) which will expose a red-colored "T" on the barrel. The shutter will stay open when the shutter release button is depressed in this condition. The shutter is closed by shifting the time exposure lever in the opposite direction and exposing the letter "A" once more.

13. Exchanging Lenses

The lens cannot be attached or detached unless the shutter is cocked and the reflex mirror charged. Therefore, first, rotate the film winding crank to cock the lens shutter and charge the reflex mirror action before attempting to remove the lens.



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

* Should the lens release button appear, or feel pre-activated at this time, this will indicate that the lens attachment is not proper.



B. To detach the lens, rotate the lens in the clockwise direction while depressing the lens release button until the lens makes a full stop, at which point it can be detached.

14. 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.

15. Waist-Level Finder and Interchanging Magnifiers



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



B. The magnifier can be flipped up into viewing position, by simply sliding the focusing hood/magnifier catch in the arrow-indicated direction (to the left). To return the magnifier to its storage position, simply push it down until it catches.



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

15. Waist-Level Finder and Interchanging Magnifiers (con't)



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.

16. Setting the Aperture



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

* Intermediate settings can be used with PE series lenses when the finders with built-in exposure meter are used.



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

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

* Furthermore, the depth of field preview lever must not be used for taking an exposure reading, with the AE-III Finder E, in both automatic and manual exposure operations, the indicated shutter speed setting will not be correct. This is because the Bronica ETRSi has been designed for full aperture metering and over-exposure will result, in this case.

17. Focusing Adjustments



The lens is focused on the subject, by rotating the focusing ring in either direction, while checking the effect on the matte surface in the center of the focusing screen.

*Various interchangeable Focusing Screen Ei types are available optionally for the camera. Therefore, a type suitable for the photographic work planned should be chosen. (See Section 23: Interchangeable Focusing Screens)

18. Distance Scale and Depth of Field Scale

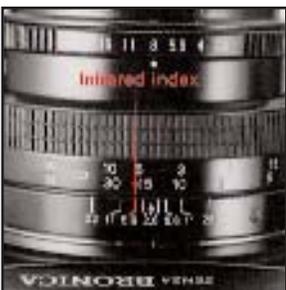


A. Distance scales on the Bronica lenses for the ETRSi can be used for setting the focus on the required distance or finding the distance actually focused. Simply rotate the focusing ring and set the required distance opposite the green-colored index, which will adjust the lens for the required distance.



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 green-colored distance index. These identical pairs of apertures indicate the distance that will be in focus at these lens openings. For example, if the 75mm lens is focused at a distance of 3m it can be seen from the depth of field scale that the zone will extend from about 1.96 to 6.80 meters (6ft to 22ft), when a lens opening of F22 is used. Please refer to the Depth of Field Tables.

19. 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 green-colored distance index, is the infrared index.

19. Infrared Photography (con't)

3. After focusing in the normal manner, re-set the distance indicated by the green-colored distance index to the infrared index, by shifting the distance ring. For example, if 5 meters is coincided to the green-colored distance index, when the subject is focused on the focusing screen, then, shift "5" to the red-colored infrared index which will mean that the infrared film is focused at 5 meters.
4. Always follow instructions enclosed with the infrared film and filter regarding exposure conditions. To be on the safe side, make several bracketing shots. In general, a slight over exposure rather than under seems to be a good rule of thumb.

20. Flash Photography



A. Always use flash cords with a standard PC type plug (i.e., JIS B7102).

* When detaching the flash cord, grip the plug firmly and pull it out straight; never use a twisting action.

B. The lens shutter of the Zenza Bronica ETRSi 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. Thus, it is very convenient for taking shots in daylight which require flash fill-in, too.



C. When a special SCA adapter is used in combination with the Zenza Bronica ETRSi, automatic flash adjustments are based on direct exposure readings made at the film plane. When the electronic flash unit is fully charged, a flash ready indicator will light up on the focusing screen.

* See instructions supplied with the exclusive Bronica SCA System Adapter.

20. Flash Photography (con't)

To perform TTL automatic flash adjustments on the Zenza Bronica ETRSi, use the SCA300 System Grip Type flash unit and the SCA386 Adapter by connecting. To attach the SCA adapter to the Zenza Bronica ETRSi, follow the instruction shown below. Flash units which can be used: SCA300 System Grip Type flash units.



Use the Mounting Bracket in Combinations

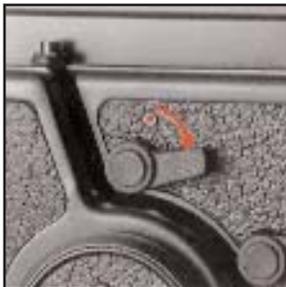
Attach to the Adapter mounting area of the Mounting Bracket.



Use the Motor Winder Ei or Speed Grip E in Combination

Attach to the respective shoe.

21. Multiple Exposures

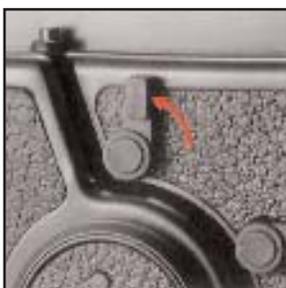


A. To make multiple exposures, first, rotate the film winding crank to advance film, cock shutter and charge mirror action. Then, turn the multiple exposure lever in a clockwise or arrow-indicated direction. The shutter can be released and cocked any number of times, in this condition, without advancing the film.

* The multiple exposure lever must be set before the first exposure, as the film may move slightly if the multiple exposure lever is set after the exposure.



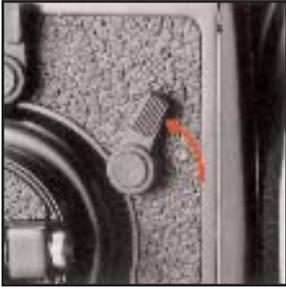
B. When set for multiple exposure, a red warning indicator will appear on the right-central area of the focusing screen.



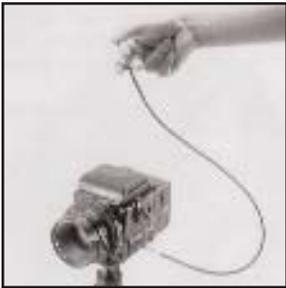
C. Upon completing the multiple-exposed picture, be sure to return the multiple exposure lever counter-clockwise back to its vertical position. Otherwise, there will be an additional multiple exposure on the same frame.

* The red warning mark will continue to appear on the focusing screen unless the multiple exposure lever is returned.

22. Mirror Lock-Up



A. For photography with the mirror locked up, first cock the shutter with the film winding crank and, then, turn the mirror lock-up lever in the arrow-indicated direction. The lens shutter will be closed down and the reflex mirror and film safety plate will swing up.



B. The shutter can be released with the shutter release button or the cable release.

* To suspend photography when the mirror is locked up, first, reverse the mirror lock-up lever then rotate the film winding crank.



* Rotating the film winding crank, after the 15th (120) or 30th (220) exposure when the mirror is locked up, will not advance the film as in the normal case, but will result in releasing the shutter once per 360° wind. Therefore, always return the mirror lock-up lever to the normal position after completing 15 or 30 exposures, before advancing the film to the take up spool.

When it is decided to suspend photography, after mirror lock-up, it should be noted that reversing the mirror lock-up lever will release the shutter. Therefore, in such cases, photography should be continued, in the following manner:

Detach the film back from the main body, utilizing exchangeable function of the film back. After returning the mirror lock-up lever, located on the main body, to "Multiple Exposure" position and set the shutter. Attach the film back and expose the frame with the lever in the multiple exposure position. Then return the multiple exposure lever and wind up the film. Continue normal shooting. (Refer to "Attachment and Removal of Film Backs".)

Photography with the mirror locked-up, when using the AE-II Finder E, is undertaken in the following manner: (Follow the procedures noted while referring to the instructions for the AE-II Finder E.)

A. Manual Exposure Operations

1. Align "M" (AE dial) to index mark.
2. Use AE-II Finder E to find the shutter speed for the chosen aperture.
3. Stroke shutter release button on the main body halfway and shutter speed will flicker in the finder.
4. Transfer the displayed shutter speed dial of the main body.
5. Lock mirror up and press the shutter release button fully.

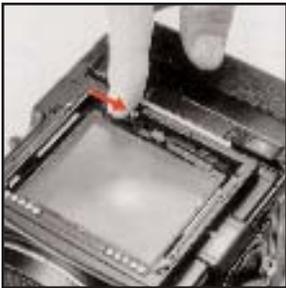
22. Mirror Lock-Up (con't)

B. Automatic Exposure Operations

1. Align "A" (AE dial) to index mark.
2. Stroke shutter release button on the main body halfway and shutter speed will be displayed in the finder.
3. Lock the mirror up and press the shutter release button fully.

* Shutter release should take place as soon as possible after lock-up of the mirror.

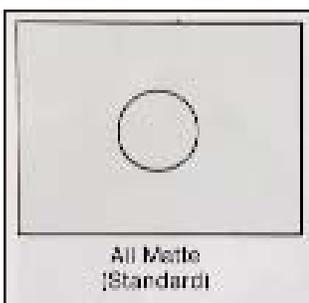
23. Interchanging Focusing Screens



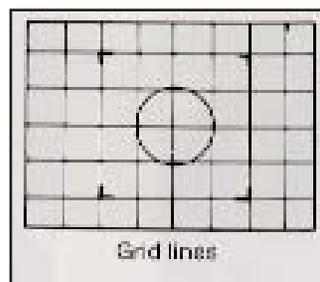
A. The focusing screen can be exchanged, depending on the type of photographic work being undertaken. First, remove the finder attached to the camera main body. Then, move the screen removal lever in the arrow-indicated direction, as illustrated. Finally, lift it up by the lever.



B. To install the focusing screen, insert the protrusions at the forward end of the focusing screen frame into corresponding openings in the focusing screen frame of the main body. Then, drop the rear end of focusing screen and slide the screen removal lever to the right.



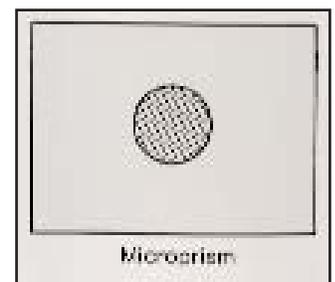
All Matte
(Standard)



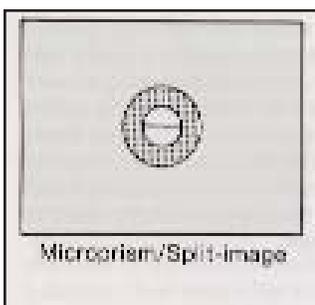
Grid lines



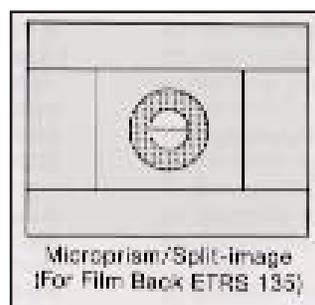
Split-image



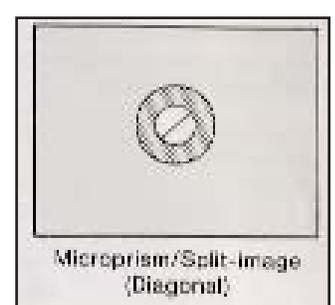
Microprism



Microprism/Split-image

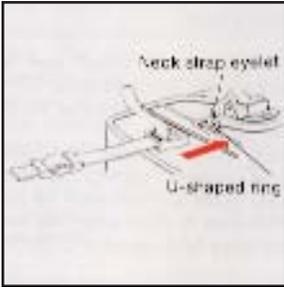


Microprism/Split-image
(For Film Back ETRS 135)

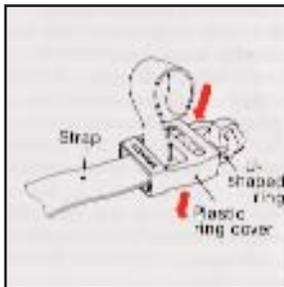


Microprism/Split-image
(Diagonal)

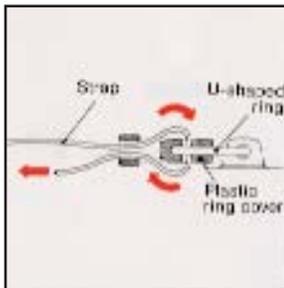
24. Attachment of the Neck Strap



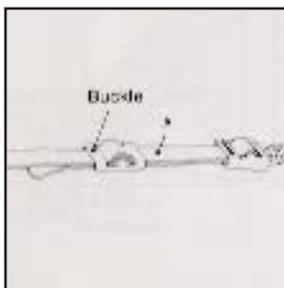
A. First, insert the U-shaped ring into the neck strap eyelet, as illustrated.



B. Next, insert the U-shaped ring into the slot of plastic ring cover.



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



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.

25. Facts About the Battery

The battery supplies power for the various electronic control mechanisms incorporated in the Zenza Bronica ETRSi. When used incorrectly, there is a 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 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 a poor contact. Discard a battery with leakage or corrosion and thoroughly clean out the battery chamber, before inserting the new battery.

25. Facts About the Battery (con't)

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

The batteries which can be used in the Zenza Bronica ETRSi are the alkaline battery or the silver oxide battery. Both batteries 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 such freezing weather. Furthermore, keep the battery (and camera) under cover, next to the body, and load just before beginning the session.

Do not throw the battery into a fire or hit it strongly, as there is danger of it exploding.

26. 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 Section 21: Multiple Exposures)

Battery power is not consumed when time exposures are made or when the ETRSi is used with the mechanically-controlled 1/500 sec. setting.

The voltage will drop when the camera is used for long shooting sessions in freezing weather. Always insert a new battery or keep a spare on hand, for such occasions. Furthermore, keep such batteries in an inside pocket. Or, use the optional Remote Camera Battery Pack E, which has been developed for obtaining optimum battery performance in freezing weather.

The focusing screen is detached, 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.

A red LED will flash in the lower left corner of the focusing screen and signal closing of the shutter, when taking pictures. Wait for this signal, especially at slow shutter speeds, before turning the film winding crank. The LED will light up in the lower right area when the AE-II Finder E, Prism Finder E and Rotary View-finder E are used.

Use cable release and self-timer accessories with the cable release socket of the main body.

Due to the mask used in auto-printing, the finished print will be slightly smaller than the negative frame (in the case of the service-size prints). Therefore, take this into account when framing the picture.

27. Care and Maintenance

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.

27. Care and Maintenance (con't)

Clean the plastic focusing screen in the same manner. Don't touch the surface as you may leave fingerprints.

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

Use the lens cleaning tissue and very little lens cleaning liquid to clean the lens. Do not use a silicon-coated cloth which can scratch the lens coating.

Protect your camera from temperature changes which can result in moisture condensation, frost, etc., inside the body, leading to rusting of metallic parts.

Protect your camera from impact and vibrations too.

Always withdraw the dark slide from its slit upon attaching film back to main body.

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 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 store with chemicals, other than silica gels.

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, cocking the lens shutter sets the cocking pins of both lens and main body to a green-colored dot. The cocking pin of the detached lens can be set to the dot by moving it manually. On the other hand, simply revolve the film winding crank to set the cocking pin of the main body mount.

When shooting with the optional AE-II Finder E, remember to re-adjust the film speed dial of the finder when a film back with a different speed is attached to the main body. Also remember that the aperture ring cannot be set to intermediate settings with the AE-II Finder E.



28. Depth of Field Tables

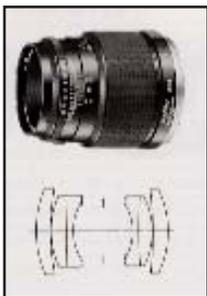
F-numbers	Meters											
	∞	10	5	3	2	1.5	1.2	1.0	0.9	0.8	0.7	0.6
2.8	∞	13.2	5.67	3.22	2.09	1.55	1.23	1.02	0.91	0.81	0.71	0.60
	40.1	8.05	4.47	2.81	1.92	1.46	1.17	0.98	0.89	0.79	0.69	0.60
4	∞	15.3	6.01	3.32	2.13	1.57	1.24	1.03	0.92	0.81	0.71	0.61
	28.4	7.45	4.29	2.74	1.89	1.44	1.16	0.98	0.88	0.79	0.69	0.59
5.6	∞	19.6	6.56	3.48	2.19	1.60	1.26	1.04	0.93	0.82	0.71	0.61
	20.1	6.74	4.05	2.64	1.84	1.41	1.15	0.97	0.87	0.78	0.69	0.59
8	∞	32.8	7.54	3.72	2.28	1.64	1.28	1.05	0.94	0.83	0.72	0.61
	14.3	5.95	3.76	2.52	1.79	1.38	1.13	0.95	0.86	0.77	0.68	0.59
11	∞	766	9.59	4.14	2.42	1.71	1.32	1.08	0.96	0.84	0.73	0.62
	10.1	5.11	3.41	2.37	1.71	1.34	1.10	0.93	0.85	0.76	0.67	0.58
16	∞	∞	15.7	4.93	2.66	1.82	1.38	1.12	0.99	0.86	0.74	0.63
	7.20	4.26	3.02	2.18	1.62	1.28	1.06	0.91	0.83	0.75	0.66	0.57
22	∞	∞	176	6.80	3.09	2.00	1.48	1.17	1.03	0.89	0.77	0.64
	5.14	3.46	2.61	1.96	1.50	1.21	1.02	0.88	0.80	0.73	0.65	0.57

F-numbers	Feet											
	∞	30	15	10	7	5	4	3.5	3	2.5	2.25	2
2.8	∞	38.6	16.8	10.7	7.34	5.16	4.10	3.57	3.05	2.53	2.27	2.02
	131	24.6	13.6	9.36	6.69	4.85	3.91	3.43	2.95	2.47	2.23	1.98
4	∞	43.8	17.7	11.1	7.49	5.23	4.14	3.60	3.07	2.54	2.28	2.02
	93.1	22.9	13.0	9.11	6.57	4.79	3.87	3.41	2.94	2.46	2.22	1.98
5.6	∞	54.2	19.1	11.6	7.72	5.33	4.20	3.64	3.10	2.56	2.30	2.03
	66.0	20.8	12.4	8.79	6.41	4.71	3.82	3.37	2.91	2.44	2.21	1.97
8	∞	81.9	21.6	12.5	8.06	5.49	4.29	3.71	3.14	2.59	2.32	2.05
	46.8	18.5	11.5	8.38	6.20	4.60	3.75	3.32	2.87	2.42	2.19	1.96
11	∞	300	26.6	13.9	8.62	5.72	4.42	3.80	3.20	2.63	2.35	2.07
	33.2	16.0	10.5	7.86	5.92	4.46	3.66	3.25	2.82	2.39	2.16	1.94
16	∞	∞	39.4	16.6	9.55	6.09	4.62	3.94	3.30	2.69	2.39	2.10
	23.6	13.5	9.41	7.23	5.57	4.27	3.54	3.16	2.76	2.34	2.13	1.91
22	∞	∞	129	23.2	11.3	6.71	4.95	4.17	3.45	2.77	2.45	2.14
	16.9	11.0	8.18	6.51	5.15	4.03	3.39	3.04	2.67	2.29	2.09	1.88

29. Interchangeable Lenses

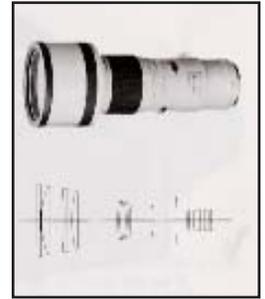
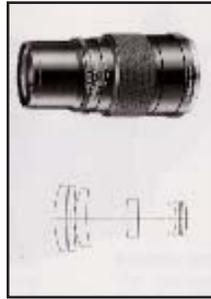
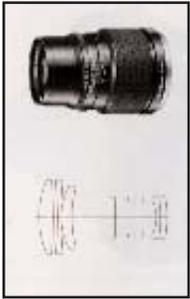


Zenzanon-PE	40mm F4	50mm F2.8	60mm F2.8	75mm F2.8
Lens Construction	8 - 9	7 - 9	7 - 7	5 - 6
Angle of View	82 deg. 1'	69 deg. 7'	60 deg. 7'	49 deg. 7'
F/numbers	4 - 22	2.8 - 22	2.8 - 22	2.8 - 22
Minimum focus (m/ft)	0.35 (1.1 ft)	0.46 (1.5 ft)	0.42 (1.42 ft)	0.6 (2ft)
Filter Size (mm)	62	62	62	62
Length (mm) - Weight (g/lbs)	50.5 - 510 (1.13 lbs)	50.5 - 490 (1.08 lbs)	54 - 520 (1.15 lbs)	49.5 - 440 (0.98 lbs)
Equivalent 35mm focal length (mm)	24	30	36	45



Zenzanon-PE	Macro 100mm F4	135mm F4	150mm F3.5	180mm F4.5
Lens Construction	4 - 6	4 - 6	5 - 6	8 - 9
Angle of View	38 deg. 4'	29 deg. 1'	26 deg. 1'	21 deg. 9'
F/numbers	4 - 32	4 - 32	3.5 - 22	4.5 - 32
Minimum focus (m/ft)	0.61 (2 ft)	1.0 (3.3 ft)	1.5 (4.9 ft)	1.0 (3.3 ft)
Filter Size (mm)	62	62	62	62
Length (mm) - Weight (g/lbs)	86.7 - 650 (1.43 lbs)	91.5 - 750 (1.65 lbs)	71.0 - 635 (1.40 lbs)	107.5 - 840 (1.85 lbs)
Equivalent 35mm focal length (mm)	60	81	90	110

29. Interchangeable Lenses (con't)



Zenzanon-PE	200mm F4.5	250mm F5.6	Elli 500mm F8	PE 500mm F8
Lens Construction	5 - 6	6 - 6	6 - 7	10 - 11
Angle of View	20 deg. 2'	16 deg. 2'	8 deg.	8 deg. 1'
F/numbers	4.5 - 32	5.6 - 45	8 - 45	8 - 64
Minimum focus (m/ft)	2.0 (6.6 ft)	3.0 (9.8 ft)	8.5 (28 ft)	8.0 (26 ft)
Filter Size (mm)	62	62	95	122
Length (mm) - Weight (g/lbs)	109 - 755 (1.71 lbs)	147 - 910 (2.00 lbs)	267 - 1890 (4.17 lbs)	318 - 3760 (8.29 lbs)
Equivalent 35mm focal length (mm)	120	150	300	300

Tele-Converter PE 2X and PE 1.4X available.

30. Accessories for Increasing the Versatility



Motor Winder Ei-

Provides auto-winding action, when finger is lifted from the shutter release button after taking the picture. Has built-in shutter release button and hot shoe for use with cordless electronic flash units. Permits fast operation comparable to 35mm SLR systems.



Speed Grip E-

Allows for rapid manual film advance via speed-lever for winding actions. The speed grip also has a built-in shutter release button which is automatically connected to the main body release system. Also, built-in hot shoe which permits the use of cordless electronic flash units is included, thus making possible fast operations comparable to 35mm SLR systems.

Finder Interchangeability



Various finders can be used interchangeably on the ETRS and will provide the user with different viewpoints. Therefore, the user should choose the type most suited for his work.

Prism Viewfinder E- The accessory shows an eye-level laterally-correct and up-right image which is ideal for following fast action, especially as it shows a very bright image of high magnification and can be used easily in both horizontal and vertical formats.

Rotary Viewfinder E- The accessory makes reflex view-focusing very easy, as the eyepiece rotates 90 deg. to the left or right for view-focusing a very bright and distinct erect image which moves with the lens. For reflex viewing in horizontal/vertical formats, as well as eye-level view-focusing from the side.

Waist-Level Finder E- The accessory also folds flat but shows a laterally-reversed up-right image when erected. Has flip-up magnifier for critical focusing which makes it suited for careful composition work. Opens/closes with single action.

AE-III Prism Finder E- Aperture-priority automatic exposure, switchable to manual exposure control. Focusing at eye-level, laterally correct and up-right image is possible when the accessory is attached to the ETRS. Switching from full-area average metering to spot metering, AE lock and exposure compensation are also available and indicated in finder with LCDs. The AE-III also provides eye-piece diopter corrections from -2.5 to +0.5 diopter. (With standard eyepiece lens), as well as built-in eyepiece shutter.

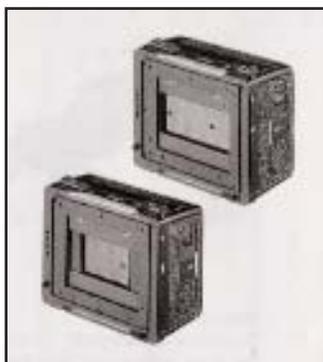
Automatic Close-Up Photography



Zenzanon-PE	40mm F4	50mm F2.8	60mm F2.8	75mm F2.8	100mm F4	
Close-Up Lens E	No. 1	0.08 - 0.25	0.10 - 0.25	0.12 - 0.35	0.15 - 0.32	0.20 - 0.46
	No. 2	0.16 - 0.33	0.20 - 0.35	0.24 - 0.47	0.30 - 0.48	0.40 - 0.68
	No. 1 & 2	0.24 - 0.40	0.30 - 0.44	0.35 - 0.59	0.44 - 0.63	0.59 - 0.88
Automatic Extension Tube E	E-14	0.35 - 0.55	0.28 - 0.44	0.23 - 0.47	0.19 - 0.38	0.14 - 0.40
	E-28	0.70 - 0.90	0.56 - 0.72	0.47 - 0.70	0.37 - 0.56	0.28 - 0.54
	E-42	1.05 - 1.25	0.84 - 1.00	0.70 - 0.94	0.56 - 0.75	0.42 - 0.68
Automatic Bellows Attachment E	1.43 - 4.13	1.14 - 3.31	0.95 - 2.85	0.76 - 2.28	0.57 - 1.83	

Zenzanon-PE	135mm F4	150mm F3.5	180mm F4.5	200mm F4.5	250mm F5.6	
Close-Up Lens E	No. 1	0.26 - 0.48	0.30 - 0.46	0.35 - 0.65	0.39 - 0.57	0.48 - 0.65
	No. 2	0.54 - 0.78	0.60 - 0.80	0.71 - 1.05	0.78 - 1.03	0.98 - 1.21
	No. 1 & 2	0.79 - 1.07	0.89 - 1.12	1.06 - 1.43	1.15 - 1.46	1.45 - 1.74
Automatic Extension Tube E	E-14	0.10 - 0.30	0.90 - 0.22	0.08 - 0.35	0.07 - 0.20	0.06 - 0.16
	E-28	0.21 - 0.40	0.19 - 0.32	0.16 - 0.44	0.14 - 0.28	0.11 - 0.22
	E-42	0.31 - 0.51	0.28 - 0.41	0.24 - 0.53	0.22 - 0.35	0.17 - 0.28
Automatic Bellows Attachment E	0.43 - 1.36	0.38 - 1.18	0.32 - 1.27	0.29 - 0.94	0.23 - 0.74	

Film Back Interchangeability



One of the greatest attractions of the ETRSi is complete film back interchangeability which makes it possible to detach or attach the film back at any time, in daylight and/or in mid-roll, and use different film types interchangeably. Thus, an extra film back or two will let a single ETRSi do the work of several, such as, for example:

1. Take color and black-and-white shots of the same subject.
2. Reload without losing a shot, even when shooting fast action, by using preloaded film backs.
3. Use different film speeds in the same session, by changing film backs.
4. Use a single ETRSi in common, but with personal film backs, in the studio or at home.
5. Use of 35mm films broadens the choice of film widely. In addition to the standard 35mm format, a new panoramic 24 X 54mm wide format is also available.
6. Use Polaroid® pack film back E for instant pictures for previewing lighting and/or exposures.

5 Types of Film Backs:-

Film Back Ei 120 (15 exposures)

Film Back Ei 220 (30 exposures)

Film Back ETRS 135N (Frame Size: 24 X 36mm)

Film Back ERRS 135W (Frame Size: 24 X 54mm)

Polaroid® Pack Film Back E (8 exposures)

Polaroid Land Pack Film

Film	ASA#	For	Print Size (cm)	Exposures
665	80	B & W / Neg.	8.3 X 10.8	8
667	3000	B & W	8.3 X 10.8	8
668	80	Color	8.3 X 10.8	8
669	80	Color	8.3 X 10.8	8
107	3000	B & W	8.3 X 10.8	8
108 P2	80	Color	8.3 X 10.8	8

ZENZA BRONICA ETRSI SYSTEM DIAGRAM

