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# TELE-CONVERTER S 2X

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**INSTRUCTIONS**  
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The Tele-Converter S has been specifically designed and developed as an integral accessory for the Zenzanon-S Series lenses and, when used between the Zenza Bronica SQ and the Zenzanon-S Series lens, doubles the focal length of the prime (master) lens, without changing the minimum focusing distance and with only a decrease of two stops in the effective aperture value.

There is no loss of automatic diaphragm action, as well as no change in the TTL exposure metering system with those finders having a built-in metering system, because the coupling mechanisms are built into the accessory. This means that all Zenzanon-S lenses, as well as all accessory finders, can be used without any changes in operations, even when the Tele-Converter S is used.

To get best results from the Tele-Converter S, please read the instruction manual carefully before even touching the accessory, as this will help increase your pleasure in using it with the Zenza Bronica SQ and Zenzanon-S lenses.

Two attachment/detachment methods are possible with the Tele-Converter S. In Method 1, the accessory and lens are attached separately and also detached separately. In Method 2, the lens and accessory are, first, attached together and then attached to the body, with detachment in the reverse order.

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Specifications

Magnification:	2x
Lens construction:	6 elements in 5 groups (multi-coated)
Lens diaphragm action:	Coupled to fully automatic lens diaphragm action
Metering system:	Coupled to TTL full aperture exposure measuring system
Exposure factor:	4x (2 F/stops)
Overall length:	57mm
Maximum diameter:	84mm
Weight:	500 grams

Nomenclature

Rear Surface (facing camera body)    Front Surface (Lens side)

In Combination with Prime Lens

Focal length: Double that of prime lens

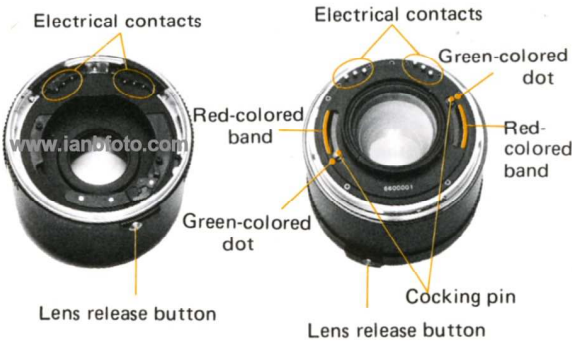
Aperture coupling range: Fully automatic lens diaphragm action from F2.8 to F45 (with effective F/values of F5.6 to F90)

Photographic magnification: Double that of prime lens

Depth of field: One-half that of prime lens

Minimum focusing distance: Same as prime lens

Recommended prime lenses: Zenzanon-S 80mm, 105mm, 150mm, 200mm, 250 mm and 500mm lenses (excluding Zenzanon-S 40mm, 50mm and Zenzanon-S Variogon Zoom lenses)



## 1 Attachment/Detachment of the Accessory (Method 1)



In Method 1, the Tele-Converter S and prime lens are attached separately.

### Attachment

A. First, check whether the cocking pins on the rear surface of the accessory are positioned between the green dot and red band. If not, move the cocking pins to the green dots manually.

\* Attachment is not possible when the cocking pins are not positioned between the green dots and red bands.

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### Detachment

A. Rotate the film winding crank and cock the lens shutter, in order to detach the lens.  
B. Then, slide the lens release button, in the arrow-indicated direction. At the same time, rotate the lens in the clockwise direction until it makes a full stop, at which point it will be possible to detach it.

C. In order to detach the accessory from the body, press the lens release button (on the left side of the body) down and, at the same time, rotate the accessory in the clockwise direction until it makes a full stop and can be detached.

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B. The accessory is attached to the body in the same manner that the lens is attached to the body. (See page 15 of the Instructions for the SQ.)

First, rotate the film winding crank and cock the lens shutter. Next, align the orange dot on the body with the red dot on the accessory and insert the latter. Then, rotate in the counter-clockwise direction until it stops with an audible click.

C. In the same manner, when attaching the lens to the accessory, first, check whether the cocking pins are positioned between the green dots and red bands. Then align the orange dot on the accessory with the red dot on the lens and insert the latter in fully. Then, rotate in the counter-clockwise direction until it stops with an audible click, indicating that it is securely attached.

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## 2 Attachment/Detachment of the Accessory (Method 2)



In Method 2, the Tele-Converter S and prime lens are attached together and then attached to the body.

### Attachment

A. First, check whether the cocking pins on the rear surfaces of the accessory and lens are positioned between the green dots and red bands. If not, they must be moved to the green dots with your finger.

\* Attachment will not be possible when the cocking pins are not located properly between green dots and red bands.

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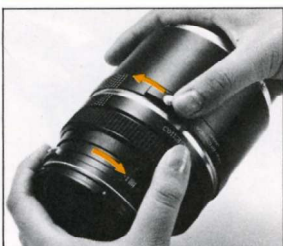


B. To attach the accessory to the lens, align the orange dot on the accessory with the red dot on the lens and insert the latter. Then, rotate in the counter-clockwise direction until there is an audible click, which will indicate attachment.



C. The accessory, with lens attached to it, is attached to the body in the same manner that the lens is attached. First, rotate the film winding crank and cock the lens shutter. Next, align the orange dot on the body with the red dot on the accessory and insert the latter. Finally, rotate counter-clockwise fully, until there is an audible click which will indicate attachment.

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C. Next, slide the lens release button of the accessory in the arrow-indicated direction and, at the same time, rotate the lens in the clockwise direction until it stops, at which point, it will be possible to separate the lens and accessory.



\* It will not be possible to slide the lens release button of the accessory, when the cocking pins are not located between the green dots and red bands, and, therefore, it will not be possible to take off the lens.

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#### Detachment

A. First, rotate the film winding crank and cock the shutter. Then, push the lens release button on the left side of the body down and, at the same time, rotate the accessory in the clockwise direction until it makes a full stop, at which point it will be possible to detach the accessory and lens.



B. Since the cocking pins of the accessory will return slightly in the releasing direction, upon detachment from the body, move the cocking pins to the green dots with your finger.

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### 3 Focusing



Focus with the focusing ring of the prime lens, when the Tele-Converter S is used. Focusing with the split-image spot or microprism ring may be found rather difficult, in this case, because the effective F/value will be two stops less than the marked F/number or rather dark. Therefore, focus with the matte screen area, in such cases. Or, use focusing screens with a central matte area, such as Matte

Screen S or Grid-Line Screen S, in such cases. However, the distance scale can be used without any adjustments.

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#### 4 Exposure Compensation

- A. Since the actual F/value is two stops slower than the F/number marked on the lens, the exposure must be increased by an exposure factor of 4x, when using the Tele-Converter S. However, such exposure compensations are automatically taken care of, when an accessory finder with a built-in metering system is also used, and, therefore, there will be no changes in operation.
- \* When shooting in low-light situations, the ambient light through the eyepiece will influence exposure measurements greatly. Therefore, place your eye against the eyepiece or otherwise cut off the extraneous light with your hand.
- B. When using finders without built-in meters, adjust the exposure setting for an exposure factor of 4x.
- \* When adjusting the aperture, open up by two stops. Or, if adjusting the shutter speed, use a setting which is two speeds slower.
- C. When using auto-flash electronic units, open up the lens opening two stops more than indicated, in order to compensate the exposure.
- D. When using electronic flash units on "manual," the correct exposure will be two stops faster than the one found by calculation from the guide number. Or, the guide number can be used at one-half its true value.

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#### 5 Pointers on Using the Tele-Converter S

- A. Using the Tele-Converter S with the Zenzanon-S 500mm lens gives the photographer a 1000mm focal length lens. In the same manner, the 250mm lens becomes the 500mm and the 200mm a 400mm lens.
- B. Although the focal length of the prime lens is doubled, there is no change in the minimum focusing distance. This means an increase in close-focusing capability.
- C. Because of the 4x exposure factor, conditions will be equal to using ASA 100 film when ASA 400 film is loaded in the camera. In other words, simply dividing the ASA film speed by four will give the user an adjusted ASA film speed setting, for setting exposure manually.
- D. Optional accessory focusing screens Matte Screen S and Grid-Line Screen S are recommended with the Tele-Converter S because the two stop light loss will make focusing with the split-image spot and microprism ring of the standard focusing screen rather difficult.
- E. The accessory is recommended for use with Zenzanon-S lenses from 80mm to 500mm but not with the shorter lenses. The 40mm and 50mm can, of course, be attached but a certain amount of optical degrading will take place. And, in the case of the 500mm, it should be noted that there will be some optical degrading in the edges of the frame area. Therefore, the picture

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#### 6 Care of the Accessory

- should be composed so that the final picture will not have to include the corner areas of the negative.
- F. When the Tele-Converter S is used, there will be no quality loss in prime lens performance, except for those already noted, because the accessory has been designed specifically for use with the Zenzanon S lenses. However, it is always recommended that the lens be stopped down about two stops from the maximum effective lens opening, whenever optimum performance is required.
  - A. The electrical contacts on the front and rear surfaces of the Tele-Converter S must be constantly cleaned, as dirty contacts can lead to malfunctioning of the lens shutter, flash synchronization and coupling with the finder with a built-in metering system.
  - B. Always cover the front and rear surfaces of the accessory, when storing or carrying it, to protect the pins and/or to prevent dust entry.
  - C. The Tele-Converter S and Automatic Extension Tube S (or Automatic Bellows Attachment S) should not be used connected. Furthermore, the Tele-Converter S must not be used with another Tele-Converter S, too.

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