ZENZA BRONICA

SQ-Ai

TELE-CONVERTER PS 2X & 1.4X

ZENZA BRONICA
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INSTRUCTIONS

The new Bronica PS Tele-Converters have been specifically designed and developed as integral accessories for the Zenza Bronica SQ, SQ-A, SQ-Am and SQ-Ai series 6 X 6cm format single lens reflex cameras. Extending the focal length 2 times (with the PS 2X) and 1.4 times (with the PS 1.4X), when used between the camera main body and the Zenzanon PS and S Series lenses, PS Tele-Converters convey all automatic camera functions.

Bronica PS Tele-Converters maintain the high quality performance of Zenzanon PS Series lenses, which have been widely accalimed by professional photographers throughout the world. They now make it possible to double your Zenzanon PS lens value.

To get the best results from your PS Tele-Converters, please read this instruction manual carefully before using the accessory. This will help increase your enjoyment when using it and avoid unnecessary difficulties.

Contents

Specifications

PS Tele-Converter 2X

Magnification	: 2X
Lens construction	: 7 elements in 6 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	: 64.4mm
Maximum diameter	: 84mm
Weight	: 600 grams

PS Tele-Converter 1.4X

Magnification	: 1.4X
Lens construction	: 5 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	: 2X (1 F/stop)
Overall length	: 29mm
Maximum diameter	: 84mm
Weight	: 370 grams

Performance in Combination with Prime Lens

PS Tele-Converter 2X

Focal length	: 2 times that of prime lens
Aperture coupling range	: F2.8 to F64 (with effective F/values of F5.6 to F128)
Photographic magnification	: 2 times that of prime lens
Minimum focusing distance	: Same as prime lens

PS Tele-Converter 1.4X

Focal length	: 1.4 times that of prime lens
Aperture coupling range	: F2.8 to F64 (with effective F/values of F4 to F90)
Photographic magnification	: 1.4 times that of prime lens
Depth of field	: 1/1.4 times that of prime lens
Minimum focusing distance	: Same as prime lens

Recommended Prime Lenses:

Zenzanon PS 80mm, 110mm, 135mm, 150mm, 180mm, 200mm, 250mm and 500mm lenses.

Zenzanon S 80mm, 105mm, 150mm, 200mm, 250mm and 500mm lenses.

(While it is mechanically possible, we do not recommend the use of PS Tele-Converters with Zenzanon PS 40mm, 50mm and 65mm lenses, Zenzanon S 40mm and 50mm lenses, and PS Variogon Zoom lenses.)

Nomenclature

Front Surface (lens side)

The above is the PS Tele-Converter 2X.
The PS 1.4X is identical.

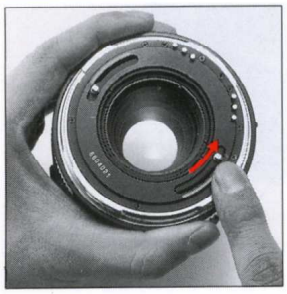
Rear Surface (camera body side)

1 Attaching/Detaching the Tele-Converter (Method 1)

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

(Attachment/detachment of PS Tele-Converter 2X and PS 1.4X are the same, although all photographs only show the PS 2X.)

Attachment



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

* Attachment is not possible when the cocking pin is not positioned between the green dot and red band.

B. The Tele-Converter is attached to the body in the same manner that the lens is attached to the body. (See page 22 of the Instructions for the SQ-Ai.) 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 Tele-Converter and insert the latter. Rotate in a counter-clockwise direction until it stops with an audible click.

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

Detachment

A. Rotate the film winding crank and cock the lens shutter, in order to detach the lens.

B. Slide the lens release button of the Tele-Converter 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 the lens.

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

2 Attaching/Detaching the Tele-Converter (Method 2)

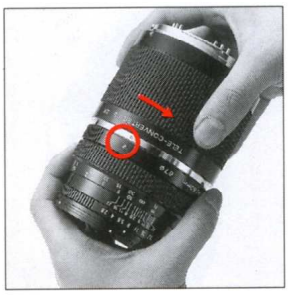
In Method 2, the PS Tele-Converter and prime lens are attached together and then attached to the body.

(Attachment/detachment of PS Tele-Converter 2X and 1.4X are same although all photographs only show the PS 2X.)

Attachment

A. First, check whether the cocking pins on the rear surfaces of the Tele-Converter and prime lens are all positioned between the green dots and red bands. If not, move the cocking pins manually to the green dots.

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



B. To attach the accessory to the lens, align the red dot on the lens to the orange dot on the accessory and insert the lens. Then, rotate in the counter-clockwise direction until it makes a full stop, with a audible click.

C. The Tele-Converter, 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 red dot on the Tele-Converter to the orange dot on the body and insert the Tele-Converter. Rotate fully counter-clockwise until there is an audible click and the Tele-Converter is securely attached.

Detachment

A. First, rotate the film winding crank and cock the lens shutter.
B. Then, push down the lens release button (on the left side of the body) and, at the same time, rotate the Tele-Converter in a clockwise direction until it makes a full stop. At this point, it will be possible to detach the Tele-Converter and prime lens together.

C. Since the cocking pins of the Tele-Converter will return slightly towards the release position (de-cocking slightly) upon detachment from the body, move the cocking pins to the green dots manually.

D. Next, slide the lens release button of the Tele-Converter in the arrow-indicated direction and, at the same time, rotate the lens in a clockwise direction until it stops. At this point, it will now be possible to separate the lens and the Tele-Converter.

* To review, all items must be cocked before attachment/detachment of the Tele-Converter. It is not possible to slide the lens release button of the Tele-Converter if the cocking pins are not located between the green dots and red bands. Therefore, it will not be possible to detach the lens if the above instructions are not followed.

3 Focusing

Focus with the focusing ring of the prime lens, when the PS Tele-Converter is used. Focusing with the split-image or microprism area may be more difficult, in this case, because the effective F/value will be 2 stops (or 1 stop) less than the marked F/number. In some cases, one half of the split image area may appear blacked out. Therefore, focus with the matte screen area, in such cases. If this presents a difficulty, you may consider using screens with a central matte area, such as the Matte or Grid-Lines.
In any case, the distance scale can be used, without making any adjustments.

4 Exposure Compensation for PS Tele-Converter 2X

A. The actual F/value is two stops slower than the F/number marked on the lens, when the PS Tele-Converter 2X is used and, therefore, the exposure must be increased by an exposure factor of 4X. However, when an accessory finder with a built-in metering system is used, such exposure compensations are taken care of automatically and no changes in operation are necessary.
* Ambient light through the eyepiece will influence exposure measurements greatly when shooting in low-light situations. Therefore, place the eye flush against the eyepiece or cut off extraneous light with your hand.
B. When finders without built-in meters are used, adjust the exposure setting for an exposure factor of 4X.
* Open up two stops, when adjusting the aperture, or use a setting which is two speeds slower when adjusting the shutter speed.
C. When an auto-flash electronic unit is used, open up the lens opening two stops more than indicated for exposure compensation.
D. When the electronic flash is used on "manual", the correct exposure will be two stops faster than that found by calculation from the guide number. Or, the guide number can be used at one-half its true value.

5 Exposure Compensation for PS Tele-Converter 1.4X

A. The actual F/value is one stop slower than the F/number marked on the lens, when the PS Tele-Converter 1.4X is used. Therefore, the exposure must be increased by an exposure factor of 2X. However, when an accessory finder with a built-in metering system is used, such exposure compensations are taken care of automatically and no changes in operation are necessary.
* Ambient light through the eyepiece will influence exposure measurements greatly when shooting in low-light situations. Therefore, place the eye flush against the eyepiece or cut off extraneous light with your hand.
B. When finders without built-in meters are used, adjust the exposure setting for an exposure factor of 2X.
* Open up one stop, when adjusting the aperture, or use a setting which is one speed slower when adjusting the shutter speed.
C. When an auto-flash electronic unit is used, open up the lens opening one stop more than indicated for exposure compensation.
D. When the electronic flash is used on "manual", the correct exposure will be one stop faster than that found by calculation from the guide number. Or, the guide number can be used at 1/1.4 (approximately 0.70) its true value.

6 Pointers on Using PS Tele-Converter 2X

A. Using the accessory with the Zenzanon PS 500mm gives the phtographer a 1000mm focal length lens. In the same manner, the 150mm and 200mm become the 300mm and 400mm respectively.
B. Althogh the focal length of the prime lens is doubled, there is no change in the minimum focusing distance. In other words, there is an increase in close-focusing capability.
C. Because of the 4X exposure factor, conditions will be equal to that of using ASA/ISO 100 film when ASA/ISO 400 film is used.
D. Because of the two stop light loss when the Tele-Converter is used, focusing may be difficult with the split-image and microprism focusing areas. The use of optional Matte Screen S or Grid-line S focusing screens is recommended as their matte focusing areas allow for easier focusing.
E. The Tele-Converter can be used with Zenzanon PS, S lenses from 80mm to 500mm. If some minor optical degrading is acceptable, the Zenzanon PS 40mm to 65mm, the S 40mm to 50mm and the PS Variogon Zoom lenses can be used, but it is not recommended.
F. The PS Tele-Converter has been designed so that there is no quality loss of the prime lens (80mm — 500mm). Because almost all lenses are designed to perform better stopped down slightly, you may experience noticeably better

performance if the prime lens is stopped down about 2 stops from the maximum effective lens opening.
G. When the Tele-Converter is used with the Zenzanon PS 500mm lens, there is some minor optical degrading at the very edges of the frame area. Therefore, always compose the image so that the final photograph does not include the corner areas of the negative.

7 Pointers on Using PS Tele-Converter 1.4X

A. Using the Tele-Converter with the Zenzanon PS 500mm gives the photographer a 700mm focal length lens. In the same manner, the 150mm and 200mm become the 210mm and 280mm respectively.
B. Although the focal length of the prime lens is extended 1.4 times, there is no change in the minimum focusing distance. In other words, there is an increase in the close-focusing capability.
C. Because of the 2X exposure factor, conditions will be equal to that of using ASA/ISO 100mm when ASA/ISO 200 film is used.
D. Because of the one stop light loss, when the Tele-Converter is used, focusing may be difficult with the split-image and microprism focusing areas. The use of optional Matte Screen S or Grid-line S focusing screen is recommended because of their matte focusing areas allow for easier focusing.

E. The Tele-Converter can be used with Zenzanon PS, S lenses from 80mm to 500mm. If some minor optical degrading is acceptable, the Zenzanon PS 40mm to 65mm, the S 40mm to 50mm and the PS Variogon Zoom lenses can also be used, but it is not recommended.
F. The PS Tele-Converter has been designed so that there is no quality loss of the prime lens (80mm — 500mm). Because almost all lenses are designed to perform better stopped down slightly, you may experience noticeably better performance if the prime lens is stopped down about 2 stops from the maximum effective lens opening.
G. When the Tele-Converter is used with the Zenzanon PS 500mm lens, there is some minor optical degrading at the very edges of the frame area. Therefore, always compose the image so that the final photograph does not include the corner areas of the negative.

8 Care of PS Tele-Converters

A. The electrical contacts on the front and rear surfaces of the PS Tele-Converters must be kept clean at all times. Dirty contacts can cause electrical failure and malfunctioning of the lens shutter, flash synchronization, and meter coupling with finders having a built-in metering system.
B. Always cover the front and rear surfaces of the Tele-Converter, when storing or carrying it, to protect the contacts and/or to prevent dust entry.
C. PS Tele-Converters and Automatic Extension Tube S (S-18 and S-36) should not be used connected. Furthermore, PS Tele-Converters must not be used with each other.