



Rear Converter T6-2X

Rear Converter T6-2X is a tele converter unit which fits between the 6×7 camera body and the lens in use to double the focal length of the lens. It may be used with both inner and outer bayonet mounting SMC Takumar and SMC Pentax 6×7 lenses and features internal linkage to retain the automatic diaphragm action and open-aperture metering capabilities of the master lens (with stop-down metering lenses, diaphragm control is manual). The "T" in the designation T6-2X denotes that this is a telephoto converter, while "6" denotes that it is constructed of 6 elements; "2X" refers to the focal length increase.

In addition to doubling the focal length of the master lens, the converter unit also doubles the f-number reading, or in effect, reduces the maximum aperture of the lens by 2 stops. Thus, when used with the 135mm

f/4 telephoto, for example, the lens becomes a 270mm f/8 telephoto, etc.

Usable Lenses

With the exception of two lenses (SMC Pentax 6×7 500mm f/5.6 and SMC Reflex Takumar 6×7 1000mm f/8), the T6-2X Rear Converter Unit may be used with all SMC Pentax 6×7 and SMC Takumar 6×7 lenses having a focal length of 135mm or greater. It will not mount and/or function properly with lenses having shorter focal lengths than the above.

Also, use is not recommended at minimum or near-minimum focusing distances with the 400, 600 and 800mm lenses when using small apertures, as vignetting will result. In addition, there is also noticeable light fall-off at the edges when using the 800mm lens at minimum aperture, even when focused at infinity.

Mounting

Normally, especially when changing lenses frequently, it is considered more convenient to mount the converter unit to the camera body first, and then mount the lens to the converter. However, the converter and the lens may also be assembled first, and then attached to the camera. Mount the converter to the camera in the same manner you would a lens; and mount the lens to the converter in the same manner you would attach a lens to the camera body, using the converter's inner or outer bayonet mount, whichever is appropriate.

Exposure

When using the TTL Pentaprism finder, the reduction in exposure is automatically compensated for through the lens. However, the following should be kept in mind.

1. Because the actual f-number value in effect when the converter is used is double that to which the lens is set, exposure is only 1/4 of what it was originally, or, in effect, reduced by 2 stops. Thus, as a longer shutter speed will be required, it is advisable to use a tripod or take similar precautions against camera shake, even with the shorter telephoto lenses.
2. Exposure loss may also be offset by use of high speed film in situations where optimum resolution and fine grain are not required. Thus, in situations where your exposure would be f/5.6 at 1/250 sec. using ASA 100 film without the converter, for example, you will obtain the same exposure with ASA 400 film at 1/250 sec. when the converter alters the f-number to f/11.
3. Results of using the converter unit are similar to those obtained with a fixed focal length lens when it is stopped down. For example, the 150mm f/2.8 lens becomes a 300mm f/5.6 lens, or roughly the equivalent of the SMC Takumar 300 mm f/4 lens when it is stopped down to f/5.6. However, when the converter is

used, sharpness is most pronounced in the center of the picture area and drops off somewhat at the edges. For this reason, we recommend placing the subject near the center of the picture to maintain better overall focal balance.

4. Better results are also obtained if you do not use the master lens at maximum aperture, but stop it down a stop or two. Thus, use an f/3.5 lens at f/5.6 or f/8, where possible, which will give an effective f-number of f/11 or f/16 when the converter is used. On the other hand, you should avoid stopping the lens down to minimum apertures, as loss of sharpness will occur in this instance, also.
5. In addition to focal length and f-number value, depth of field and focusing distances are also doubled when the converter is used.

Close-ups, etc.

Although the T6-2× has the power of doubling the magnification of subjects at close focus, it was designed to render maximum sharpness with distant subjects near infinity. We do not normally recommend use of the converter unit for close-ups, because far better results can be obtained with standard close-up accessories. The only exception to this is when it is impossible to get close enough to the subject to take the picture with standard close-up accessories. In this instance, the greater working distance of the converter unit will enable you to get the job done. In normal shooting situations, however, high quality telephoto close-ups can be made using the telephoto close-up attachment lenses or Auto Extension Tubes.

Specifications

Construction: 6 elements in 6 groups

Magnification: 2×

Lens Coating: SMC

Size: 91mm dia. × 71mm
(61mm excluding mount)

Weight: 443 grams (15.6 ozs.)



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