

# Vivitar®

## 2X

Tele Converter

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Owner's Manual



**2X Tele Converter**

## **Double the focal length— double your lens set**

Your new Vivitar 2X Tele Converter lets you quickly and easily *double* the effective focal length of any of your compatible lenses, giving you telephoto power plus close-up capability in the bargain!

*This fine optical component may give you the equivalent now of twice as many lenses in your equipment set.*

Mount your Vivitar 2X Tele Converter and your 50mm lens is equivalent to a 100mm telephoto. With a 90mm lens, you would have the power of a 180mm telephoto. If you have, for example, a Vivitar 75-205mm Automatic Zoom Lens, you now have an addi-

tional focal length range available of 150-410mm! The Vivitar 2X Tele Converter gives you telephoto capabilities at a fraction of the cost and weight of telephoto lenses.

Your Vivitar Tele Converter also gives you an additional close-up capability, since the minimum distance-to-subject of your prime lens is not changed, but your image is doubled in size. Another bonus from your new Vivitar 2X Tele Converter!

Vivitar Tele Converters are Vivitar VMC multicoated and engineered to operate with either manual or automatic diaphragm systems on most 35mm SLR cameras. Mounted on a compatible automatic diaphragm

camera, automatic coupling is maintained between prime lens and camera body.

## Mounting

To mount your new Vivitar Tele Converter, follow these steps:

- Remove the prime lens from the body of your camera.
- Mount your Tele Converter onto your camera as you would any of your lenses. Seat it securely, but do not overtighten.
- Next, mount your prime lens onto your Vivitar Tele Converter in the same manner as you would mount it directly on your camera.
- To remove the Vivitar Tele Con-

verter, simply reverse the above procedure.

**NOTE FOR NIKON USERS:** Vivitar Tele Converters for use with Nikon cameras are engineered to work with both the F Series and the AI Series lenses and bodies. For the Nikon F Series, be sure to engage the *external* pin coupling of the Tele Converter, and for the AI Series to engage only the *internal* pin coupling. To engage the external pin type, press the button on the side of the coupling, releasing the pin which will spring forward and seat in the slot of the component in front. To disengage, lift the tip of the pin with your finger, swing it up and back, and push it down until it locks

in place. To engage the internal pin type, rotate the Tele Converter coupling ring all the way to the left and release. Whichever coupling system (F or AI) is used between the camera body and the Tele Converter, the same must also be used between Tele Converter and prime lens. Mixing F and AI Series components and couplings will produce incorrect exposure. Also, the AI Direct Reading system is not operative when using a Tele Converter.

For Konica Autoreflex cameras, after mounting your Vivitar Tele Converter as stated above, check that *both* Tele Converter control ring and prime lens aperture ring are set on their EE posi-

tions to ensure proper meter coupling in EE operation. For manual operation, set the Tele Converter control ring on M and the prime lens aperture ring on the desired f-stop.

## **Operation**

### **Manual / Automatic**

Vivitar Tele Converters work with both manual and automatic lenses. With automatic lenses on compatible cameras, the Tele Converter coupling system maintains full automatic diaphragm operation between prime lens and camera body.

### **Focusing Range**

The Vivitar 2X Tele Converter maintains the same focusing range of your

prime lens while doubling the focal length and thereby doubling the image size in the film frame. For example, the Vivitar 135mm f2.8 Close Focusing lens has a focusing range of 0.6 meter (2 feet) to infinity. Mounted on a 2X Tele Converter, the 135mm lens becomes a 270mm lens, but it can still focus down to 0.6 meter (2 feet). This capability to double the image size and still stay the same close distance to the subject makes your Vivitar 2X Tele Converter an extremely valuable tool for close-up work.

### **Compensation**

Doubling the focal length of your lens has two optical effects:

- Depth of field is reduced;
- The amount of light striking the film is reduced.

Depending on the photographic situation and requirements, compensation for one or both of these optical effects may be needed.

*On cameras with through-the-lens metering systems and automatic exposure control, this compensation will be performed automatically in one of two ways: With a preset ASA/DIN film speed, cameras which adjust the diaphragm aperture to correlate with a preset shutter speed (shutter-preferred system) will automatically open the diaphragm 2 additional f-stops when the 2X Tele Converter is*

mounted. Likewise given a preset ASA/DIN film speed, cameras which adjust the shutter speed to correlate with a preselected f-stop (aperture-preferred system) will slow the shutter speed to 1/4 of the normal value (e.g. 1/500 second without 2X Tele Converter becomes 1/125 second with 2X Tele Converter).

*On cameras without automatic exposure control systems, or when using automatic cameras in the manual mode for depth-of-field or stop-action control, compensation for the optical effects of the 2X Tele Converter can be made as follows:*

**1** — *Depth-of-field most important?*  
Adjust shutter speed to 2 speeds

slower than that indicated by external hand-held or non-coupled exposure meter (e.g. 1/500 indicated, set at 1/125).

**2** — *Shutter speed most important?*  
Adjust aperture by *opening* the diaphragm 2 f-stops wider than the value indicated by meters (e.g. f8 indicated, set at f4).

**3** — *Both equally important?* Slow down one shutter speed (e.g. 1/500 to 1/250) *and* open up one f-stop (e.g. f8 to f5.6).

As with any telephoto lens, for best results use a Vivitar tripod or other firm support to minimize camera movement.

Taken with 135mm lens



Taken with 135mm lens  
+ Vivitar 2X Tele Converter





Silver Taler of Emperor Leopold I of Austria  
taken with Vivitar 75mm-205mm f3.8 Close  
Focusing Zoom lens



75 mm



205 mm



Same coin taken with the  
same lens + Vivitar 2X  
Tele Converter

**75 mm**



**105 mm**



**150 mm**



**180 mm**



**205 mm**

## Special Note

When using electronic flash, set your lens two stops wider than the recommended flash exposure setting. For example, if the recommended flash exposure setting is f5,6, set your lens two stops wider to f2,8.

Some flash units automatically couple to your camera for proper flash exposures, however, such flash units aren't able to automatically compensate when the lens is used with a teleconverter. It's best to use such flash units following the above procedure. (Refer to flash instructions.)

## Specifications and features

*Optics:* 4 elements in 4 groups

*Coating:* Multi-coated for maximum light transmission

*Diaphragm coupling:* Fully automatic

*Meter coupling:* Fully automatic

*Weight:* 138 g (4.9 oz) (most models)

*Length:* Approximately 25 mm (1 inch) mounted on camera

- Doubles effective focal length of prime lens
- Does not change focusing range of prime lens

Specifications are subject to change without notice.

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