



## Notes

### General Converter Usage

Tele Converters are a good and relatively inexpensive way of extending the focal length, and hence the range, of an existing lens. However, their usage comes at a price in performance terms. Typically, AF speed may be reduced, and any tendency of the lens to "hunt" may increase. Image quality (resolution and contrast) is likely to be degraded somewhat. Lastly, an inevitable result of using any converter is a lessening of light transmission, and hence a darker viewfinder:

- + a 1.4x converter will lose 1 stop of light; an f/2.8 lens becomes an f/4 lens
- + a 1.7x converter will lose 1.5 stops of light; an f/2.8 lens becomes an f/4.7 lens
- + a 2x converter will lose 2 stops of light; an f/2.8 lens becomes an f/5.6 lens
- + a 3x converter will lose 3 stops of light; an f/2.8 lens becomes an f/8 lens.

Converters are generally designed to be used on longer focal length lenses. Prime lenses under about 100mm, and zooms shorter than about 70-200mm, tend to give poorer results with converters.

The Nikon MF converters have limitations as to which focal lengths they can be used on. The TC-14A, TC-200 and TC-201 are intended for lenses of 200mm and less; the TC-14B, TC-300 and TC-301 are intended for lenses of 300mm and more.

Not all lenses will physically fit all converters. If the converter has a protruding front element, and/or the lens has a non-recessed rear element, fitting the converter could damage both it and the lens. The Nikon TC-300 and TC-301 are good examples. *Nikonians cannot be held responsible for any damage caused by mounting any converter on any lens.*

Converters transmit various signals between the lens and camera using electrical contacts. 10 contacts are currently required for full operation, including autofocus and VR functions where the lens has them, with Nikon AF cameras. Autofocus is transmitted using the electrical contacts for AF-S, AF-I and Sigma HSM lenses, or through a mechanical clutch known colloquially as "screwdriver" for all other AF lenses. Nikon's TC-xxE and TC-xxE II converters do not have the "screwdriver" clutch; some older 3<sup>rd</sup> Party converters such as the Kenko Teleplus MC4 and MC7 lack the contacts for AF-S/HSM lenses. Aperture control is transmitted through the contacts for "G-type" lenses, or through a mechanical linkage for other lenses.

If a VR lens will autofocus with a particular converter and camera combination, then VR will also work. If a lens will meter with a particular camera, then in general metering will also work with a converter attached.

Nikon's TC-xxE and TC-xxE II converters have a tab on the front mounting ring that prevents them being mounted on anything but the longer Nikkor AF-S and AF-I lenses. It is possible to remove the tab with a grinding tool, but *Nikonians cannot be held responsible for any damage caused by doing so.*

The Tamron SP Pro converters are functionally the same as the Kenko Pro 300 converters; any differences are cosmetic only. Likewise, the Nikkor TC-xxE and TC-xxE II converters have only cosmetic differences.

## Notes on the Compatibility Table

### Focusing

- MF: Only manual focusing is possible with this combination.
- AF (1): Autofocus is possible with lenses having a maximum aperture of f/4 or greater.  
Autofocus may be possible in some conditions with lenses having a maximum aperture of f/5.6.
- AF (2): Autofocus is possible with lenses having a maximum aperture of f/2.8 or greater.  
Autofocus may be possible in some conditions with lenses having a maximum aperture of f/4.
- AF (3): Autofocus is possible with lenses having a maximum aperture of f/2 or greater.  
Autofocus may be possible in some conditions with lenses having a maximum aperture of f/2.8.

### Viewfinder Display and EXIF Data

- D (a): The camera display and EXIF show the adjusted aperture and focal length,  
e.g. with a 1.4x converter on a 200mm lens set to f/4, the camera will show 280mm and f/5.6.
- D (b): The camera display and EXIF show the aperture and focal length of the lens itself,  
e.g. with a 1.4x converter on a 200mm lens set to f/4, the camera will show 200mm and f/4.  
Note: the actual exposure will still be correct.
- D (c): The camera display and EXIF show the aperture and focal length of the lens itself;  
e.g. with a 1.4x converter on a 200mm lens set to f/4, the camera will show 200mm and f/4.  
Aperture information is only available with certain Nikon cameras, currently the D2H, D2Hs, and D2X.

### Other Reported Compatibility Issues

Sigma HSM lenses appear to be the most difficult to predict converter compatibility. Members have consistently reported that the older Kenko and Tamron converters will not autofocus with Sigma HSM lenses. Some members have reported that the Kenko Pro 300 and Tamron SP converters will not autofocus with some Sigma HSM lenses. Sigma's own EX 1.4x converters disable autofocus with lenses slower than f/4, so will not AF with, for example, the Sigma EX 500mm f/4.5 HSM, whereas the Kenko Pro 300 1.4x converter *does* provide autofocus with this lens.

Some members have reported problems using the Kenko Pro 300 1.4x converter with the Nikkor AF-S 300mm f/4 lens on a D70 body; for other members the combination works correctly.

Some members have reported that the Sigma EX converters will not autofocus with Tokina ATX lenses.

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