

Your new Vivitar Macro Focusing Teleconverter is a precision optical component designed to expand your photographic capabilities in two ways: As a premium quality 2X teleconverter, it effectively doubles the focal length of the lens it's used with and maintains the resolution and contrast of any fine optic at a higher level than most standard teleconverters. In addition, the Vivitar Macro Focusing Teleconverter's unique focusing mechanism enables you to do macro work without modifying or adding other equipment to your lens/teleconverter combination. With the Macro Focusing Teleconverter your standard 50mm lens becomes a 100mm macro lens with a reproduction ratio of up to 1:1 (life size image of your subject on the film plane).

The Vivitar Macro Focusing Teleconverter is designed to work with a variety of high quality lenses: 50mm and other fixed focal length lenses from 28mm to 400mm, plus zoom lenses — including wide to tele and telephoto zooms. The 2X (doubling) function is the same with any compatible lens; the macro function varies depending upon the particular lens. For example, standard 50mm lenses have similar optical design and mechanical construction, so when used with the Macro Focusing Teleconverter the results will be almost identical, even for 50mm lenses from different manufacturers. Other lenses, however, particularly zoom lenses, have great variety in both optical design and mechanical construction; results for lenses of identical focal length from different manufacturers may vary. For instance, lenses with close or macro focusing will yield different maximum magnifications when used with the Macro Focusing Teleconverter than lenses of identical focal length without a close/macro focusing mechanism.

The chart as shown illustrates results when using the Vivitar Macro Focusing Teleconverter with several specific lenses; your equipment may or may not provide very similar results. Experiment... exploring combinations available with your own equipment will give you working familiarity with your new Macro Focusing Teleconverter and some terrific shots as well.

INSTRUCTIONS FOR USE

Mounting

To insure proper meter coupling with your camera, first mount your Vivitar Macro Focusing Teleconverter to your camera as you would any of your lenses. Seat it securely; do not overtighten. Attach your lens to the Teleconverter in the same manner as you would attach it to your camera. Properly mounted, the Macro Focusing Teleconverter coupling system fully maintains automatic meter and diaphragm operation. Note to Nikon users: The Vivitar Macro Focusing Teleconverter is compatible with AI series Nikon cameras. This includes the F3, FE, FM and EM. It is not intended for use with the old F series cameras (F2, Nikkormat EL, ELW, FT2, FTN).

Operation

The Vivitar Macro Focusing Teleconverter doubles the focal length of your lens while reducing the amount of light striking the film by 2 stops. Cameras with auto exposure control will adjust to compensate for this light difference; shutter priority cameras will open the diaphragm 2 stops while aperture priority cameras will slow the shutter speed to 1/4 of the value with the lens alone, i.e. 1/500 sec. *without* the Macro Focusing Teleconverter becomes 1/125 sec. *with* the Macro Focusing Teleconverter.

Most SLR cameras have through-the-lens metering; the camera meter reads the exact amount of light being transmitted. However, non-coupled or external (hand-held) meters will require exposure compensation for the 2 stop light loss. Either the aperture, the shutter speed or a combination of both can be adjusted; just wider apertures result in reduced depth of field, your adjustment method should consider your depth of field requirements.

The Vivitar Macro Focusing Teleconverter has two engraved focusing scales. **Both of these scales are intended for reference when the MFTC is used with a standard, 50mm lens.** The numbers on both scales indicate magnifications (not distances). The **blue** scale is used when the prime lens is set to its **closest focus position**. On many 50mm lenses this is at a distance of 0.45 m; however, if your 50mm lens closest focus distance is slightly different, say 0.6 m, the reference figures are still valid. The white scale shows magnifications when your prime lens is set at ∞ . You may use either scale for reference; if you wish to shoot a subject at a specific magnification, i.e. 1:4 or 1:5 etc., the white scale (prime lens set at ∞) may be more convenient.

By turning the focus ring of the MFTC from the $\frac{0.45M/50mm}{\infty/50mm}$ position toward the $\frac{1:1}{1:1.5}$ position, you are increasing the

magnification of your subject. To see the widest possible range of magnifications available, begin with your lens at ∞ and the MFTC at the $\frac{0.45M/50mm}{\infty/50mm}$ position. Focus with your prime lens to its

closest focus position; finally, turn the focusing ring of the MFTC toward its closest focus position. A 50mm lens/MFTC combination will have a magnification range of from approximately 1:20 to 1:1.

With the MFTC set at the $\frac{0.45M/50mm}{\infty/50mm}$ position, the focusing

range of your lens will remain virtually unchanged. However, you will see that as you turn the focusing ring of the MFTC and your subject's image size increases, the focusing range (subject to lens front distance) decreases. Therefore, you will need to adjust your camera position toward (or away from) your subject as you change magnifications.

Note: Although the blue and white scales apply specifically to standard 50mm lenses, the Vivitar MFTC operates in the same fashion with other compatible lenses, i.e. turning the MFTC focus ring from the $\frac{0.45M/50mm}{\infty/50mm}$ position toward the $\frac{1:1}{1:1.5}$ will always increase the magnification and reduce the focusing range.

As with any teleconverter, the addition of the MFTC will reduce depth of field. At higher magnifications depth of field becomes progressively more limited and accurate focusing more critical; this is typical of working at very large magnifications and is not a flaw in your MFTC. For best photographic results, *use a tripod* and shoot using slower shutter speed/smaller aperture combinations. Shooting "wide open" or at larger apertures is likely to result in a softening of corners and edges.

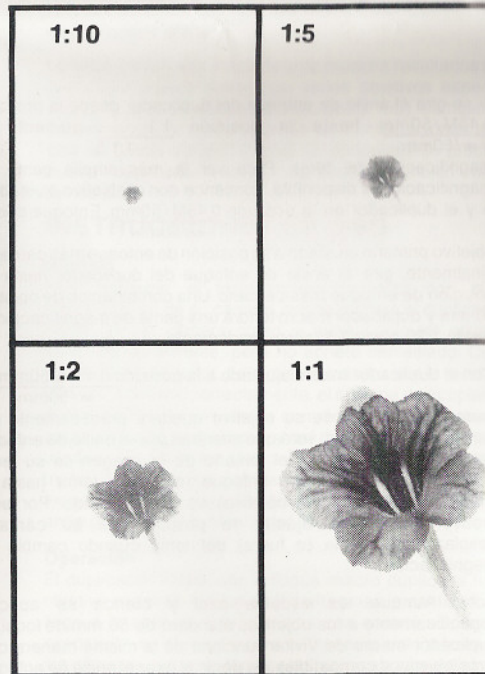
	Lens Alone	Lens at Close Focus/Vivitar MFTC at Furthest Focus*	Lens at Close Focus/Vivitar MFTC at Closest Focus**
Canon 50mm f/1.8 Max. Mag.	1:9.5	1:4.7	1:1.1
Distance to Front Element	509 mm	497 mm	133 mm
Vivitar 35mm f/2.8 Macro Lens Max. Mag.	1:1	2:1	2.6:1
Distance to Front Rim	46 mm	46 mm	32 mm
Vivitar 28-90 1/2.8-3.5 Zoom Lens Max. Mag.	1:3.2	1:1.6	1.8:1
28mm	1:3.2	1:1.6	1:1.7
90mm	1:9.2	1:5.0	1:1.7
Distance to Front Element	63 mm	63 mm	6 mm
28mm	63 mm	63 mm	6 mm
90mm	842 mm	856 mm	279 mm
Vivitar 135mm 1/2.8 Telephoto Lens Max. Mag.	1:9	1:4.7	1:2.1
Distance to Front Element	1388 mm	1386 mm	691 mm
Vivitar (new) 70-210 1/3.5 Series 1 Zoom Max. Mag.	1:12	1:6.1	1:1.6
70mm	1:12	1:6.1	1:1.5
210mm	1:4	1:2.2	1:1.5
Distance to Front Element	1002 mm	996 mm	249 mm
70mm	994 mm	992 mm	756 mm
210mm	994 mm	992 mm	756 mm

* Furthest Focus position is at $\frac{0.45M/50mm}{\infty/50mm}$ (Blue Scale)

$\infty/50mm$ (White Scale)

** Closest Focus position is at $\frac{1:1}{1:1.5}$ (Blue Scale)

1:1.5 (White Scale)



Specifications

Optical Construction: 7 elements, 5 groups
Coating: Multi-coated for increased light transmission
Diaphragm Coupling: Fully automatic
Weight: 282 g (10 oz.)
Length: 44.2 mm (1.74")
Max. Barrel Diameter: 66.1 mm (2.6")