



MINOLTA

MD 2X TELE CONVERTER 300-S and 300-L

The Minolta 300-S and 300-L 2X Tele Converters are sophisticated optical accessories that double the effective focal length of the lens they are used with.

Use of special low-refractive index glass for positive lens elements, and high-refractive glass for negative ones eliminate the astigmatism and spherical aberrations common to other tele converters. These special glasses along with multi-layer lens coatings, and computer designed element groupings produce little or no loss of image quality, contrast, or color balance, even at full aperture.

The Minolta 300-S and 300-L are designed to give optimum performance within a particular range of lenses. So, please read this manual thoroughly with special attention to the section on lenses. In this way you will avoid damaging the converter and your lenses, and obtain the best possible results.

NOTE

- This is a combined manual for both the 300-S and 300-L Tele Converters. Operation of both units is the same, except when specifically noted.

NAME OF PARTS

- Meter-coupling lug
- Mounting-index dot
- Lens release
- MD-coupling lug
- Mounting bead
- "S" mode indicator



ATTACHING

The converter is attached to the camera in the same manner as you would a lens. Align the red mounting indices on the converter and camera body, insert the bayonet into the camera, and turn the converter clockwise until it locks in place.

To remove the converter, push and hold the camera's lens-release button. Then turn the converter counter-clockwise until the red indices are realigned, and remove the converter from the camera.

The attaching to and removal of lenses from the converter is done in the same way, except that the converter's lens release is used instead of the camera's.

NOTE

- A lens shorter than 85mm in focal length and some zoom lenses should never be used with the 300-L Converter as this could damage both lens and converter.
- Refer to the chart below for compatible lenses and converter combinations.

USING THE CONVERTER

Exposure compensation

Use of either converter doubles the effective focal length of the lens in use, but it also decreases the indicated f-number setting of the lens by two (2) stops. If for example, you are using a 200mm lens at f/4, the effective focal length and aperture become 400mm and f/8. With Minolta through-the-lens (TTL) metering cameras there is no need to make any compensating adjustments except when a lens with a maximum aperture larger than f/1.7 is used.

When an f/1.4 lens is used a quarter (1/4) of a stop compensation is needed, and an f/1.2 lens requires two thirds (2/3) of a stop adjustment.

The following table shows the recommended film-speed selector settings to obtain correct compensation for various film speeds. This table and necessary compensation apply only to the 300-S converter since the 300-L should not be used with these lenses (see chart).

Lens	ASA of film			
	ASA 64	ASA 100	ASA 400	ASA 500
f/1.4	set film speed selector at	ASA 80	ASA 125	ASA 500
f/1.2	set film speed selector at	ASA 100	ASA 160	ASA 640

NOTE

- If either the f/1.2 or f/1.4 lenses are used at maximum aperture only, there will be no compensation needed.
- When the f/1.2 or f/1.4 lens is used with the converter and a XD-series camera there is no need to make adjustments if the camera is in the "S" or "A" mode.
- When the converter is used with an MD lens and XD camera in the "S" mode, the LED aperture readout in the viewfinder does not indicate the effective aperture. This will be two (2) stops higher than what the readout shows, but exposure will be correct. Because of the converter's mechanical linkage, aperture display may be one stop off. This doesn't indicate a camera malfunction, and exposure will be correct.
- When an MC lens is used with the converter on an XD camera only the "A" and "M" modes should be used.
- When a flash is used the lens aperture should be opened two (2) stops more than is indicated by the flash's manual or calculator.
- For non-TTL metering cameras a two stop compensation of either the aperture or shutter-speed setting is necessary. Either open up the lens two stops more, or reduce the shutter speed two stops less than is indicated.
- When you want to focus at infinity don't use the "∞" mark, always use the camera's focusing screen.
- Use of the converter will often cause the camera's focusing aids to "blackout". In this situation the matte field of the focusing screen should be used to focus with.
- It is not recommended to "stack" one converter upon another. Automatic aperture coupling is possible only when a single converter is used.

Depth of field

The converter reduces the depth of field of a lens by approximately one half. Therefore more care should be taken when focusing.

The lens depth-of-field scale can still be used, but not as it is normally read for an indicated f-number setting. The scale should be read for the f-number that is half that of the f-number set on the lens. If the lens is set at f/8 for example, read the scale for f/4. This gives you the depth of field for your selected f-number.

The converter does not affect the lens' distance scale. It is still read directly as is normally done.

LENSES

The Minolta 300-S and 300-L Tele Converters are designed to give optimum results with specific lenses.

The 300-S can be used with almost all Minolta lenses, but it gives the best results with 300mm and shorter focal lengths. The 300-S is also meant to be used with those lenses that should not be coupled to the 300-L converter.

The 300-L is designed to be used with lenses longer than 200mm. While it can be used with some shorter focal lengths, THE 300-L SHOULD NEVER BE COUPLED TO LENSES SHORTER THAN 85mm IN FOCAL LENGTH OR SOME ZOOM LENSES. If you should do this, the lens elements in the converter and lens may come in contact with one another and be damaged.

The following chart shows the recommended lens and converter combinations:

Lens type Objektiv	Focal length/ F no. (mm) Brennweite/ Lichtstärke (mm)	300-S	300-L	Lens type Objektiv	Focal length/ F no. (mm) Brennweite/ Lichtstärke (mm)	300-S	300-L
MD/MC	75/4	O	☒	MD	50/1.2	O	☒
MD/MC	16/2.8	O	☒	MD/MC	50/1.4	O	☒
MD/MC	17/4	O	☒	MD/MC	50/1.7	O	☒
MD	20/2.8	O	☒	MD/MC	50/2	O	☒
MC	21/2.8	O	☒	MC	55/1.7	O	☒
MD/MC	24/2.8	O	☒	MC	55/1.9	O	☒
MD/MC	28/2	O	☒	MC	58/1.2	O	☒
MC	28/2.5	O	☒	MC	58/1.4	O	☒
MD/MC	28/2.8	O	☒	MD/MC	85/1.7	O	△
MD/MC	28/3.5	O	☒	MD	85/2	O	△
MD/MC	35/1.8	O	☒	MD/MC	100/2.5	O	△
MD/MC	35/2.8	O	☒	MD/MC	135/2.8	O	△
MD	45/2	O	☒	MD/MC	135/3.5	O	△

- O Compatible combination
- △ Can be used, but with some loss of image quality
- X Severe loss of image quality, especially of image-field edges
- ☒ Should not be used, as damage to lens and converter may result.
- * Vignetting will result

NOTE

- The f-number set on the lens will not be visible in the viewfinder of cameras with this feature, when the converter is used. A green dot will be visible when the lens is set at its minimum aperture.
- When the converter is used with some speciality lenses there will be differences in results. For instance, with the 7.5mm fisheye lens a rectangular image will be formed, the degree of softness at any F-stop will be greater with the 85mm Varisort lens, and working distance with macro lenses will double.
- When using a MD lens, a green dot will appear in the center of the aperture-viewing window when minimum aperture is set. With some MD lens this dot may appear at the right side of the window one stop before minimum aperture is reached.

SPECIFICATIONS

	300-S	300-L
Magnification rate:	2X	2X
Construction:	7 elements in 6 groups	5 elements in 3 groups
Coating:	Minolta Achromatic	Minolta Achromatic
Exposure factor:	4	4
Coupling:	Meter coupled for automatic stop-down metering with MC and MD lenses, coupled for MD mechanism	
Dimensions:	65mm x 41.5mm (2-9/16 x 1-5/8 in.)	65mm x 52.5mm (2-9/16 x 2-1/16 in.)
Weight:	230g (8-1/8 oz.)	230g (8-1/8 oz.)