

Specifications

Magnification	2X
Lens Construction	7 elements in 5 groups
Lens Coating	Multi-coat
Diaphragm Coupling	Fully automatic
TTL AE (EE)*	Fully automatic
Exposure Factor	4 times (2 f-stop value)
Exposure Factor in Macro Mode	4 times—8 times (2—3 f-stop value)
Max. Length (∞—Macro setting)**	approx. 44.5—62.0 mm
Max. Diameter**	approx. 67.0 mm
Weight**	approx. 260 g

* excluding Electronic Flash AE system

** differs a little depending on mount types

How To Use

* How To Mount on Camera

Teleplus is placed between the camera body and master lens. For mounting or removing Teleplus from the camera body use exactly the same method as for the master lens. Likewise, the master lens mounts on Teleplus in the same way. Follow the instruction manual of your camera.

NOTE: For CANON cameras, Teleplus should be mounted on the camera body first, then mount the master lens on Teleplus, otherwise connecting sequence will prevent the TTL or AE function operating.

* Lens Adaptability

For Teleplus a variety of mounts to fit almost all leading SLR cameras are available. However, in an exceptional case, it may fail to fit properly, cause vignetting or affect mirror operation due to structural mechanism of the master lens.

* Focusing Adjustment

For normal photography, adjust the helicoid of Teleplus so that the ∞ mark matches to the index line and maintain this position. Focusing adjustment is then done with the focusing ring of the master lens.

* Aperture of Master lens

At aperture settings brighter than f/1.7 of the master lens, Teleplus is ineffective owing to its front element serving as a fixed diaphragm. Remember that even if set to f/1.4, or f/1.2 master lens actually works only as f/1.7, (effective f/value of f/3.4).

NOTE:

- 1) When the Teleplus is used with some TTL cameras, extraneous light entering through the viewfinder may affect light measuring greater than when the master lens is used alone. Follow the instruction manual of your camera and take any necessary steps to overcome such.
- 2) In normal photography, the ∞ mark on the helicoid should be set and left at the index line.
- 3) When used with some master lenses, correct focus of infinity may be obtained before focusing indication reaches the ∞ mark. Always focus while checking the image through the viewfinder.
- 4) For CANON cameras, when the aperture ring is set to the 'A' mark, teleplus's M-A selector should be set to 'A' mark and when the aperture ring is released from the 'A' mark, the M-A selector should be set to the 'M' mark.

* Exposure

For TTL (Through-The-Lens Metering) cameras; (when the lens is darker than f/1.7 or when metering by stop-down.) The exposure factor is automatically compensated so simply follow the camera's exposure indicated.

(When open-aperture of the lens is brighter than f/1.7) Open-aperture TTL metering may cause some differences between measured and correct exposure values, in which case adjust the camera's ASA sensitivity as follows:

Open-Aperture of master lens	When using ASA 100 film	When using ASA 400 film
f/1.4	set to ASA 125	set to ASA 500
f/1.2	set to ASA 160	set to ASA 640

* The above compensation is effective when the aperture is set between f/1.7-the smallest aperture. However, it is impossible to obtain correct exposure if the aperture is set to f/1.2 or 1.4.

* The above compensation is unnecessary for following cameras:

Pentax LX, Olympus OM-2, OM-10, Nikon FG, Minolta XD, XD-s, X700

For non-TTL cameras

Exposure should be compensated according to the exposure factor by adjusting either the aperture or shutter speed.

* Flash Photography

- 1) When F-value is calculated from the Guide Number of the flash unit, open the aperture by two f-stops.
- 2) When using Auto flash, open out the aperture by two f-stops from specified value.
- 3) When using with a camera with AE flash function and its dedicated flash-unit, release the AE flash function and use as an ordinary Auto flash. (See 2)
- 4) When using with a TTL direct-light-measuring type camera and its dedicated flash unit, use as if using the master lens alone. (The automatic light controlling distance becomes shortened.)

For Macro Photography

* Focusing Adjustment

For macro photography, focusing adjustment is done with both the helicoid of Teleplus and the focusing ring of the master lens. Since the effective f/value is made smaller by Teleplus, when focusing with split-image type viewfinders there may be shadows in the split-image. In such cases, focus using the mat surface around the split-image.

* Magnification Ratio With Macro Mode

The magnification ratios for use with a standard (50mm focal length) lens are indicated on the circumference ring of the helicoid of Teleplus. White values on the lower part are magnification ratios when the focusing ring of the standard lens is set to the ∞ mark, and green values on the upper part are ratios of when the ring is set to the minimum focusing distance (0.45 m).

NOTE: The magnification ratio differs depending on the position of the focusing ring of the master lens and the helicoid of Teleplus, and on the focal length of the master lens — the longer the focal length, the smaller the magnification ratio becomes. The magnification ratio, when used with other than the standard lens, can be calculated using the following equation. (When the focusing ring of the master lens is set to the ∞ mark.)

Calculating magnification ratio = 1:X

Indication (white) on Teleplus' helicoid = 1:a,

$$X = a \times \frac{\text{focal length of master lens}}{50}$$

For example, with 135 mm focal length lens, and the helicoid of the Teleplus is set to 1:2,

$$2 \times \frac{135}{50} = 5.4$$

Thus the magnification ratio at this setting is 1:5.4

* Exposure Factor With Macro Mode

The exposure factor differs depending on the magnification ratio. The relation between the magnification ratio and the exposure factor is shown in the table below:

Magnification	1:1—1:1.5	1:2—1:2.5	1:3—1:7	1:10—∞
Exposure factor (f-stop)	8 (3 f-stops)	6.4 ($2\frac{2}{3}$ f-stops)	5 ($2\frac{1}{3}$ f-stops)	4 (2 f-stops)

* Macro Flash Photography

Proper exposure can not be obtained with Auto Flash or AE flash function. Decide the proper f-stop by testing using the compensating Guide Number calculated f-stop according to the exposure factor. However, when Teleplus is used with a TTL directlight measuring type camera and its dedicated flash unit, proper exposure is obtained with the AE flash function.

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