**SP AF24-135mm F/3.5-5.6 Di Aspherical [IF] Macro**
(Model 190D)

**AF28-200mm F/3.8-5.6 XR Di Aspherical [IF] Macro**
(Model A031)

**AF28-300mm F/3.5-6.3 XR Di LD Aspherical [IF] Macro**
(Model A061)

**AF70-300mm F/4-5.6 Di LD Macro 1:2**
(Model A17)

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**The EEC Conformity Report applies to the**
ENGLISH

Thank you for purchasing the Tamron lens as the latest addition to your photographic equipment. Before using your new lens, please read the contents of this Owner’s Manual thoroughly to familiarize yourself with your lens and the proper techniques for creating the highest quality images possible. With proper handling and care, your Tamron lens will give you many years of photographing beautiful and exciting pictures.

- Explains precautions that help to prevent problems.
- Explains things you should know in addition to basic operations.

NOMENCLATURE (Refer to Fig. 1, if not specified)

- Lens hood
- Hood attaching alignment mark
- Hood attaching indicator
- Filter ring
- Hood attaching bayonet ring
- Distance index
- Distance scale
- Focusing ring
- Zooming ring
- Focal length scale
- Zoom lock switch (190D, A031, A061: Figs. 3 & 4)
- Lens mount (Nikon, Canon, Sony)
- AF-MF switch (Canon: Fig. 5: & 6)
- Lens attachment mark
- AE (minimum aperture) lock
- Aperture scale
- Aperture Index
- F-number index for long focal lengths (Nikon, Pentax)
- F-number scale for finder display (Nikon)
- Aperture ring
- Macro selector switch

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>Focal Length</th>
<th>F Stop (f)</th>
<th>Focal Distance</th>
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- Minimum Focusing Distance: 0.4 m

FOCUSING (Autofocus) (Ref. Figs. 1 & 2)

Models A031, A061 and 190D are equipped with a zoom lock switch mechanism which prevent lens barrels from extending toward long focal length by their own weight while hanged from shoulders. Activated the switches at 29mm setting (24-mm position for Model 190D) to stop the lens barrels from rotating and extending.

- When the zoom lock switch cannot be activated unless the lens is set to the 28-mm position (24-mm position for Model 190D). Do not force the lock switch or try to rotate the lens barrel while locked.
- The lens can be used at 28-mm setting (24-mm position for Model 190D) for picture taking even when locked by the switch.
- The zoom lock mechanism is made to prevent the lens barrel from extending while carried around on shoulder. When not locked the zoom lens may change its focal length during a long exposure if used in a low or high angle position.

LENS APERTURE AND AE MODE (Ref. Figs. 1, 7 & 8) (190D, A031, A061, A17)

- Setting lens f-numbers with Canon & Sony cameras
- Setting lens f-numbers with Nikon & Pentax cameras

Photographing in a programmed-AE or a shutter-speed-priority-AE mode. The aperture is set for a range of values automatically. The maximum magnification ratio in the macro photography mode is 1:2 (f=300 mm, 0.95 m).

MACRO SWITCHOVER MECHANISM (Ref. Figs. 11, 13 & 21) (A17)

- The macro selector switch cannot be operated unless the zooming ring is set to a distance between 1.5 m and infinity (-∞). Always make sure to set the focus ring within 1.5 m or farther before operating the macro selector switch.
- The focus ring can only be turned between infinity (-∞) and 1.5 m when the macro selector switch is set to the Normal position (when macro photography canceled). It cannot be turned to a distance closer than 1.5 m.

MACRO SWITCCHOVER MECHANISM

SWITCHING TO MACRO PHOTOGRAPHY

First, turn the zoom ring to align the zoom between 180 and 300 mm. Next, slide the macro selector switch from the Normal to the Macro position. The lens is now switched to the macro photography mode.

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- Always make sure to set the focus ring within 1.5 m or farther before operating the macro selector switch.
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- The Tamron lenses described here employ an internal focusing (IF) system. Because of the characteristics of this optical design, the angles of view at distances other than infinity are wider than that of the lenses applying an ordinary focusing system.
- When the built-in flash on the camera is used, adverse photographic phenomena such as corner illumination fall-off or vignetting at the bottom part of the image may be observed, especially in wide angle ranges. This is due to the inherent limitation of the coverage of the built-in flash, and/or the relative position of the flash to the edge of the lens barrel which causes shadows on the image. It is strongly recommended to use a suitable separate flash. In cases of use for the camera manufacturer for all flash photography.
- For further details, please read the “built-in flash” article in the instruction manual of your camera.
- When using a special filter as a PC filter on the 190D use low profile filters. The thick rim of a normal filter may cause vignetting.

- When on Auto mode, interfering with focusing ring may cause serious damage to the lens mechanism.
- Certain camera models may indicate the maximum and minimum aperture values of the lens inapproximate numbers. This is inherent to the design of the camera and not an indication of an error.
- Please be aware that there is no infrared index line on any models listed on this owner’s manual, and therefore, practically, no black-and- white infrared film can be used with these lenses.

PRECAUTIONS IN SHOOTING

- The optical design for Di takes into consideration the various features of digital single reflex cameras. However, due to the configuration of the digital single reflex cameras, even when the autofocus accuracy is within specific values, the focal point may be a little forward or behind the optimum point when shooting with auto focus under some conditions.
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TO ENSURE LONG-TERM SATISFACTION

- Avoid touching the glass element surface. Use a photographic lens cloth or blower to remove dust from the lens element surface. When not using the lens, always place a lens cap on the objective lens.
- Use a lens cleaning tissue or lint cloth with a drop of cleaning solution to remove fingerprints and dust. Use a silicon cloth to clean your lens barrel only. Avoid touching the glass element surface. Use a photographic lens cloth or blower to remove dust from the lens barrel while locked.
- Improper attachment of a hood for wide-angle zoom lens may cause large shadowed areas in your pictures.
- Corner illumination fall-off or vignetting at the bottom part of the image may be observed, especially in wide angle ranges. This is due to the inherent limitation of the coverage of the built-in flash, and/or the relative position of the flash to the edge of the lens barrel which causes shadows on the image. It is strongly recommended to use a suitable separate flash. In cases of use for the camera manufacturer for all flash photography.
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