Model **01F**

TAMRON·SP

FLAT-FIELD
2X TELE-CONVERTER

OWNER'S MANUAL

ADAPTALL-2 MOUNT SYSTEM

Thank you for selecting the new Tamron SP Flat Field 2X Tele-converter as the latest edition to your photographic equipment.
This compact, six element optical wonder will double the focal length and magnification ratios of your Tamron Adaptall lens.
The converter has been designed to mount between your lens and the Tamron Adaptall mount, to maintain the full AE or TTL capabilities of your camera. Install the converter in the same manner as you would your Adaptall custom mount.
The Tamron SP Flat Field 2X Tele-converter is a result of creative use of state of the art optical and mechanical design techniques to provide superior optical performance with all telephoto and zoom Tamron Adaptall lenses.
Superior performance has been achieved with this lens by using designs which permit reproduction of flat field images from corner to corner, uniform high contrast and excellent resolving power. Special emphasis was placed on compensation for image distortion. When used with a telephoto or zoom lens, the SP tele-converter transforms your lens into a super tele-lens. This 2X converter has been designed to match the quality of the Tamron Adaptall lens itself without reducing sharpness or introducing any distortion. At the same time, it maintains all functions of the lens while doubling the magnification.

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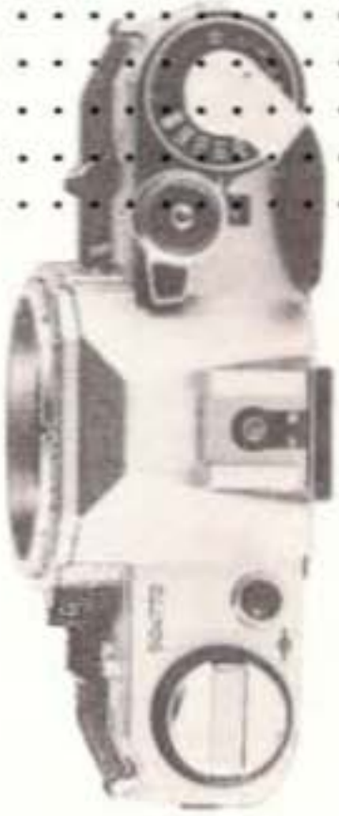
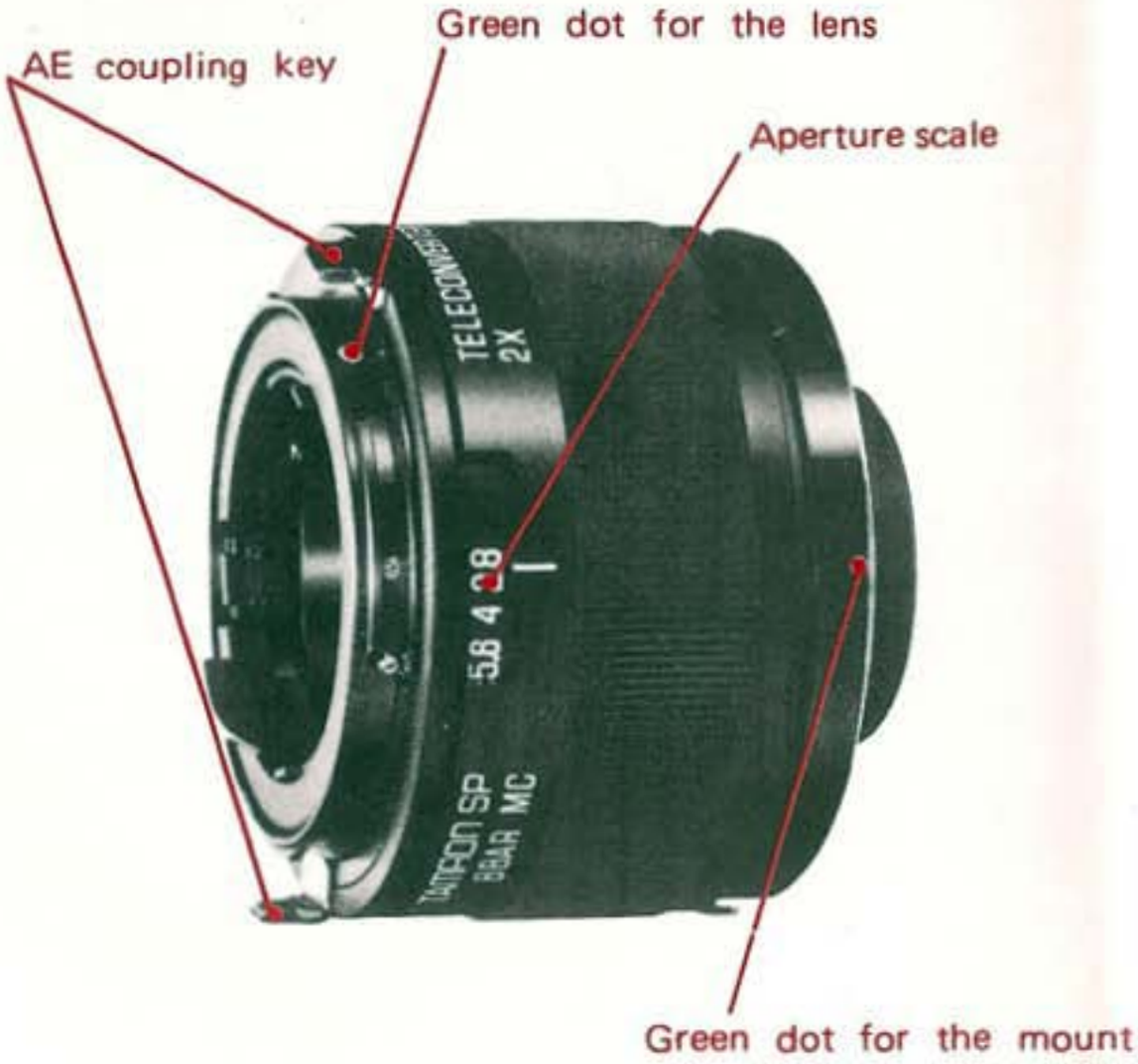


NOMENCLATURE



SPECIFICATIONS

Lens Construction:	6 elements in 5 groups
Lens Coating:	BBAR multi-layer coating
Diaphragm Control System:	TTL open-aperture diaphragm controls including AE
Mount System:	Bayonet System (by means of Adaptall or Adaptall 2)
Overall Length and Diameter:	42.5mm x 64.5mm
Weight:	250g or 8.9 oz.

• WHEN COMBINED WITH A MASTER LENS

Focal Length:	2X the focal length of master lens
Diaphragm Cross-Coupling Range:	2X aperture of master lens (f/2.8 - f/64 diaphragm of master lens = f/1.4 - f/32)

Note: When the converter is used, the f/value of the master lens is lowered by two stops. (For example, f/2.8 on the master lens becomes f/5.6).

Magnification Ratio:	2X the magnification ratio of master lens
Focus Distance Range:	Same as that of master lens
Angle of View:	1/2X that of master lens

The Tamron SP flat field 2X Tele-converter is designed to work with the following lenses:

LENS		SPECIFICATIONS WITH CONVERTER			
		Focal length	Aperture	Minimum focus from film plane (from front element)	Maximum magnification
ADAPTALL lens	105mm f/2.5	210mm	f/5	1.3m/51 in.	1:2.5
	135mm f/2.8	270mm	f/5.6	1.5m/57 in.	1:2.3
	200mm f/3.5	400mm	f/7	2.5m/98 in	1:2.5
	300mm f/5.6	600mm	f/11	2.5m/98 in.	1:1.8
	35-80mm f/2.8-3.5	70-160mm	f/5.6-7	1.3m/52 in. (59mm/2.3")	1:1
	70-150mm f/3.5	140-300mm	f/7	1.5m/59 in. (118mm/4.6")	1:1.2
	85-210mm f/4.5	170-420mm	f/9	2.0m/78 in. (200mm/7.9")	1:1.5
	80-250mm f/3.8-4.5	160-500mm	f/7.6-9	1.5m/59 in. (138mm/5.4")	1:1.2
	70-350mm f/4.5	140-700mm	f/9	2.5m/98 in.	1:1.5
	200-500mm f/6.9	400-1000mm	f/13.8	3.0m/116 in.	1:1.4
SP/ADAPTALL 2 lens	70-210mm f/3.5-4	140-420mm	f/7-8	0.75m/30 in.	1:1
	90mm f/2.5	180mm	f/5	0.39m/15.4 in.	1:1
	300mm f/5.6	600mm	f/11	1.4m/55.1 in.	1:1.6
	500mmf/8 (mirror type)	1000mm	f/16	1.7m/66.9 in.	1:1.5

NOTE:
The SP Flat Field 2X Tele-converter is not compatible with TAMRON wide angle lenses or ADAPTALL CANON FD, KONICA AR and TOPCON RE mounts.

INTRODUCTION

When coupled with the Tamron SP 500mm f/8 lens, the Tele-converter makes a very compact 1,000mm telephoto lens. Since a reflex lens has a lower rate of color aberration than a refracture telephoto lens, the increased doubling of the magnification by the tele-converter does now lower the photographic efficiency. Further, despite working distances as great as 1.56 meters of 5.12 feet (from the front element of the lens) super close-ups (magnification ratios of 1:1.5) almost life size are permitted. Reproductions greater than life size are permitted.

When the Tele-converter is used with the Tamron SP 70-210mm (f/3.5/4 or the 90mm f/2.5, **super close-ups with a magnification ratio of 1:1 are permitted.**

Macro magnification at 1:2

Macro magnification at 1:1

When coupled with the Tamron SP 70-210mm f/3.5/4, the 2X flat field Tele-converter will extend **the focal length of the lens from 70-210 to 140mm-420mm making it possible to cover a 6 times zooming ratio.**

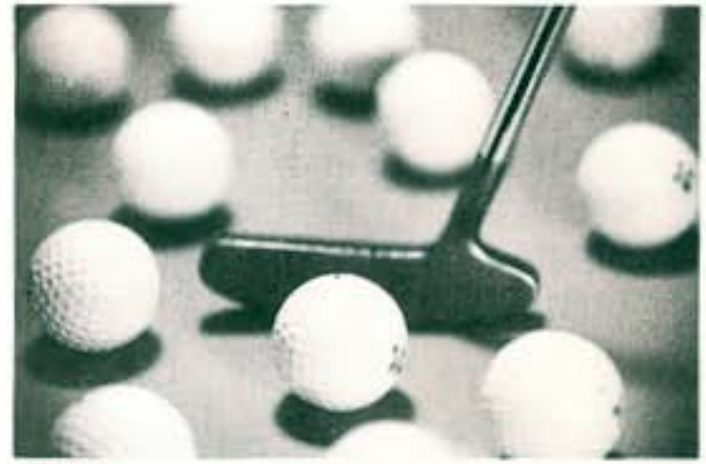
f = 210mm

f = 420mm

In addition, the converter with its tele-macro performance, permits super close-ups with a magnification ratio of 1:1 with a focal distance of 0.75 meter or 2.5 feet from film plane. With a working distance of 51cm or 20.1 inches, it is now possible to use automatic electronic flash manually held for macro shots with flash speeds of up to 1/50,000th of a second.

Increased Depth-of-Field

When coupled with the Tamron SP lenses, 135mm f/2.5, 200mm f/3.5, 300mm f/5.6, 90mm f/2.5 and 70-210mm f/3.5/4, the 2X converter makes it possible to obtain a greater depth-of-field equivalent to f/64 as the diapharagm is stopped down to this extreme, the response to the high sensitivity of the ASA 400 color films and these lenses can be used even under extremely bright illumination conditions.



f32

f64

1. MOUNTING MASTER LENS AND TELE-CONVERTER

a. Align the green dot on the bayonet of master lens with the green dot on the Tele-converter. (P-1)

b. Turn the Tele-converter clockwise approximately 3/4 inch until you hear it click. (P-2)

c. Drop the two keys (⊐) of the Tele-converter into the two slots (⊏) of the master lens. (P-3)

d. Now the master lens and the Tele-converter are coupled.

1


2

3

2. ATTACHING TELE-CONVERTER AND THE MOUNT

a. Align the green dot on the Tele-converter with the green dot of the mount (P-4)

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b. Then turn the adapter clockwise approximately 3/4 inch until you hear it click positively into place. (P-5)

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c. Drop the mount key (⌐¬) into the slot on the Tele-converter. (This is the case with mounts for fully automatic TTL open-aperture metering or AE diaphragm control). (P-6)

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3. MOUNTING THE LENS/CONVERTER ON THE CAMERA

Mount the lens/converter in the same manner as you do your original lens.

CANON FD
Note: Be sure lens is not in AE position when mounting the lens/converter to CANON FTb and AT-1 camera.

The converter can be used with all Tamron Adaptall and Adaptall 2 mounts except ADAPTALL CANON FD, KONICA AR and TOPCON RE mounts since their rear diameters are too small.

4. DETACHING THE TELE-CONVERTER

a. First, set the diaphragm control ring on the master lens to its maximum aperture.

Note: For CANON FD and KONICA AR mount. Be sure to first depress AE lock button mount rotate ring to maximum aperture position. (P-7)

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b. Press the L-shaped mounting/dismounting lever which is located on the side opposite the Tele-converter's aperture indicator window.

c. While pressing the lever, turn the mount counterclockwise and remove the Tele-converter. (P-8)


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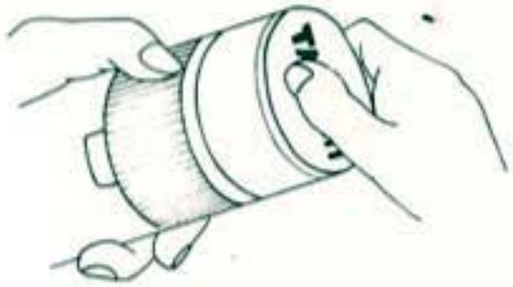
CARING FOR YOUR NEW LENS

1. Avoid touching the surface of your lens. When not using your lens, be sure to put the lens cap on for protection.



2. Cleaning your lens:
   a. Use a photographic lens brush to remove dust or dirt from the surface.
   b. Moisten a lens cleaning tissue with one drop of cleaning solution and clean the surface gently.
   c. Remove excess moisture from the lens surface with a dry tissue.

3. When carrying a zoom lens mounted on your camera, hang it from your shoulder with the lens towards your body to protect it from objects that it might hit.

4. Fine photographic equipment can be delicate. Protect it from any avoidable impact.

5. Always store your lens in a cool, dry place. During humid or wet weather it is an especially good idea to store it with the silica gel packet that was supplied with your lens.

TAMRON International Service
Should any TAMRON product require service, TAMRON's International service is available in over 48 nations worldwide.

TAMRON CO.,LTD.

Manufacturers of lenses for photographic, industrial, laboratory, video, and scientific applications.

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