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TAMRON CO.,LTD.

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

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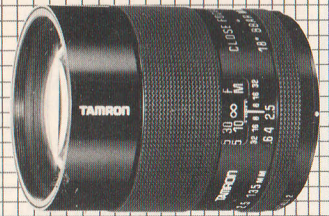
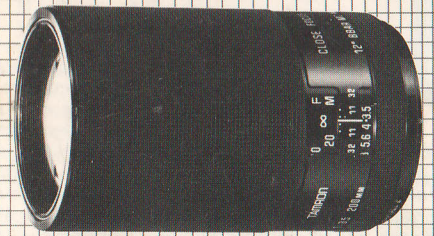


Model 03B



Model 04B

TAMRON

ADAPTALL-2

135mm F/2.5

CLOSE FOCUSING TELEPHOTO

200mm F/3.5

CLOSE FOCUSING TELEPHOTO

OWNER'S MANUAL

ADAPTALL-2 MOUNT SYSTEM

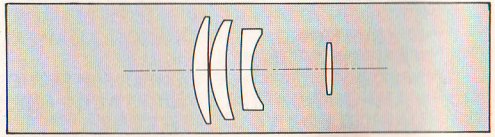
Thank you for selecting the new Tamron Adaptall-2 telephoto lens as the latest addition to your photographic equipment. Before using your new lens, please read the contents of this Owner's Manual thoroughly to become fully acquainted with the proper techniques that will give you the best results possible. Every Tamron lens is made of carefully selected materials and is designed and manufactured for maximum durability to allow rugged use and long lasting performance. With proper handling and care, your Tamron Adaptall-2 lens will give you many years of beautiful and exciting pictures.

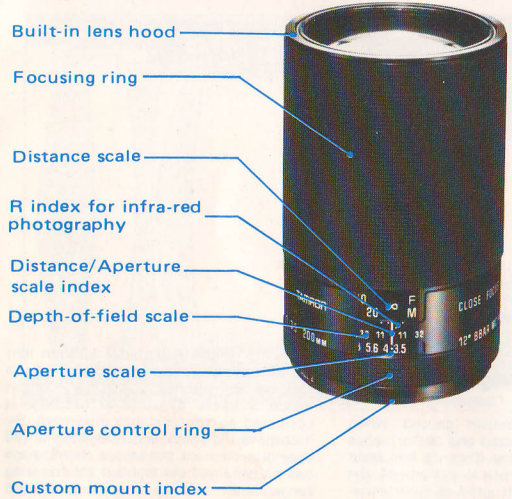
CONTENTS

1. DESCRIPTION OF PARTS AND SPECIFICATION

135mm f/2.5 Model 03B

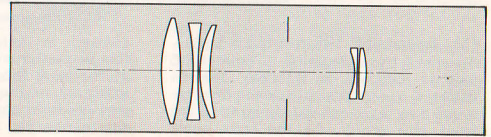
Focal Length	135mm
Max. Aperture	f/2.5
Construction (Groups/Elements)	4/4
Coating	BBAR Multiple layer coating
Angle of View	18°
Min. Focus from Film Plane	1.2m (47.2 in.)
Focusing System	Straight helicoid-extension system
Aperture Control Range	2.5–32, AE (w/half stops)
Lens Accessory Size	58mm
Length (at inf.)	79.5mm (3.1 in.)
Diameter	64.5mm (2.5 in.)
Weight	410 g (14.5 oz.)
Lens Hood	Built-in, retractable

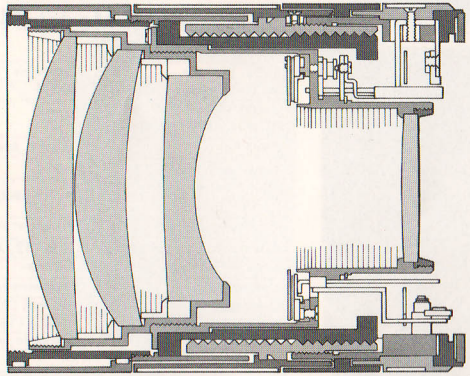




200mm f/3.5 Model 04B

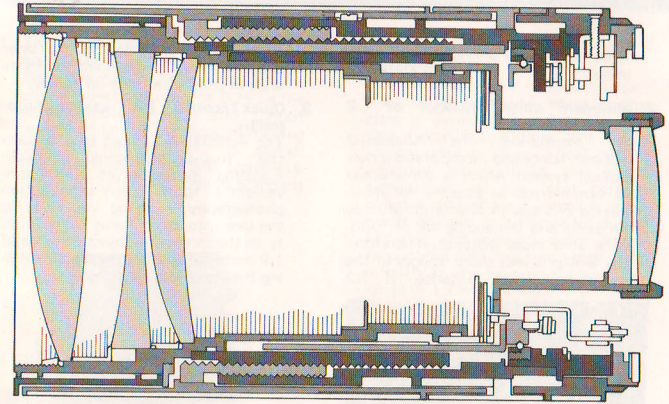
Focal Length	200mm
Max. Aperture	f/3.5
Construction (Groups/Elements)	5/5
Coating	BBAR Multiple layer coating
Angle of View	12°
Min. Focus from Film Plane	1.7m (66.9 in.)
Focusing System	Straight helicoid-extention system
Aperture Control Range	3.5–32, AE (w/half stops)
Lens Accessory Size	52mm
Length (at inf.)	108mm (4.3 in.)
Diameter	68mm (2.7 in.)
Weight	540 g (19 oz.)
Lens Hood	Built-in, retractable





(1) Adaptall-2 135mm f/2.5 Lens

To make the Adaptall-2 135mm f/2.5 lens as compact as possible, Tamron designed a new optical system incorporating two thick convex elements for its front lens group. At the same time, changes in astigmatism caused when focusing are minimized and performance at the close focusing distance has been improved as the optical system of the lens has been constructed as symmetrically as possible. Since the front convex elements of the Adaptall-2 135mm lens use an optical glass material which has a high refractive index, comatic aberration which is likely to occur at the edge is corrected to the absolute minimum. By incorporating these improvements in the optical system of the lens, a sharp image can be obtained throughout the focusing range from infinity to the minimum object distance of 1.2 meters (47.2 in.).



(2) Adaptall-2 200mm f/3.5 Lens

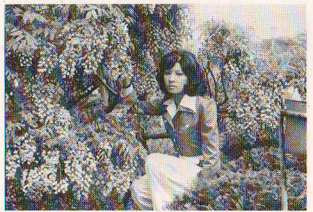
An attempt to reduce the overall length of a lens to make it compact makes the Petzval sum (the index of curvature of image field) small, effecting the image quality of the lens. In designing the Adaptall-2 200mm lens, Tamron employed a new optical system which, while reducing the distance between the front and rear groups, uses optical glass material with a low refractive index and low dispersion factor in order to maintain the necessary value of the Petzval sum. By incorporating these improvements, Tamron has achieved a compact telephoto lens which exhibits excellent image characteristics.

The minimum object distance of conventional telephoto lenses in this class is usually around 2.5 meters (98.4 in.). With the Adaptall-2 200mm lens incorporating the new optical system, in which the power of the front convex, concave and convex elements is arranged in the optimum way, changes in astigmatism due to focusing are minimized and optimum performance can be obtained over all the focusing range from infinity to the minimum object distance of 1.7 meters (66.9 in.). The Adaptall-2 200mm is a compact telephoto which enables you to obtain sharp images throughout its focusing range and offer powerful telephoto close-ups at the same time.

4. FEATURES

(1) Adaptall-2 135mm f/2.5 Lens

1. **Lightweight and compact design boasting a fast maximum aperture of f/2.5**
   The Adaptall-2 135mm telephoto features a fast maximum aperture of f/2.5 which is 25% faster compared with an f/2.8 lens. In spite of this aperture the lens is very compact, measuring 79.5mm (3.1 in.) in overall length and 64.5mm (2.5 in.) in diameter, and taking 58mm standard filters. The lens will prove to be extremely valuable for indoor portraiture when used with available light since it provides a bright viewfinder image.



f=50mm, F8 1/125sec

2. **Minimum object distance of 1.2 meters (47.2 in.)**
   As mentioned, the Adaptall-2 135mm telephoto incorporates a new optical system which is constructed as symmetrical as possible for minimizing changes in aberration due to focusing and enhancing its performance at a close distance. Therefore, the lens provides sharp images at the minimum object distance of 1.2 meters (47.2 in.), and at the same time it exhibits excellent performance in telephoto close-up as well.

f=135mm, F8 1/125sec

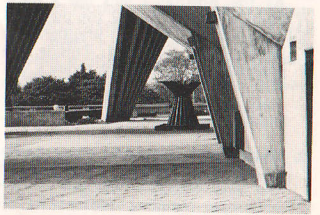
3. **Quick-focusing for action photography**
   The Adaptall-2 135mm lens featuers the human-engineered "Quick-Focusing" system which is very convenient in sport or any other action photography, enabling you to bring the lens into sharp focus from infinity to the minimum object distance of 1.2 meters (47.2 in.) by simply rotating the ring a mere 70 degrees.

(2) Adaptall-2 200mm f/3.5 Lens

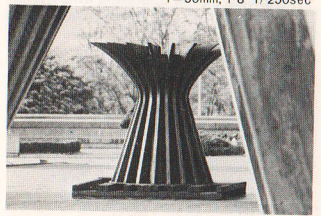
1. **The world's most compact and lightest telephoto in its class**
   The Adaptall-2 200mm f/3.5 lens, with a telephoto ratio of 0.78, is the world's most compact and lightest telephoto lens in its class, measuring only 108mm (4.3 in.) in overall length and weighing 540 grams (19 oz.). The lens takes 58mm standard filters.

2. **Minimum object distance of 1.7 meters (66.9 in.)**
   Conventionally, the minimum object distance of telephoto lenses in this class is usually 2.5 meters (98 in.). The Adaptall-2 200mm lens which incorporates a new optical system designed to optimize the power arrangement of the front convex, concave and convex elements minimizes changes in astigmatism due to focusing and provides sharp images throughout the focusing range from infinity to the minimum object distance of 1.7 meters (66.9 in.).

3. **Vastly improved OTF (Optical Transfer Function) for high contrast**
   The Adaptall-2 200mm lens has been designed with a new optical system offering significantly improved OTF particularly in the low frequency response range which is especially important in photography. Therefore, the Adaptall-2 200mm lens reproduces details of both highlight areas as well as shadow parts with high accuracy also reproducting the dimensional feeling of the subject.



f=50mm, F8 1/250sec



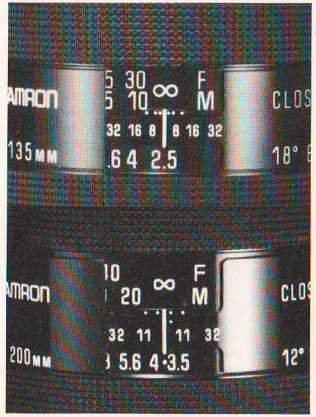
f=200mm, F8 1/250sec

FEATURES

(3) Other Features of Adaptall-2 Series Lenses

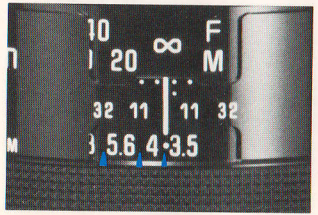
1. Minimum aperture of f/32
As the Adaptall-2 lens has a minimum aperture of f/32 for increased depth-of-field, your photographic horizons are expanded. This is also particularly useful with today's fast 400 ASA color films which can be used even under extremely bright illumination conditions.

2. Unique and convenient outer design
In designing the outer appearance of the lens, emphasis was put on the maximum handling convenience by showing all the operating information where it can be most conveniently read.



3. Exclusive Adaptall/Adaptall-2 mounts
Tamron Adaptall mounts are precision manufactured for most popular 35mm SLR cameras. They provide full meter and aperture coupling and faithfully reproduce all the functions of the lens. Only one mount is necessary for each camera regardless of lens design.

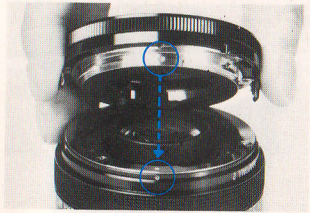
4. Half stops
Both the models 03B 135mm f/2.5 and 04B 200mm f/3.5 lenses have half f-stops to f/16 on the aperture control ring, enabling you to make small exposure differences for creative photography.



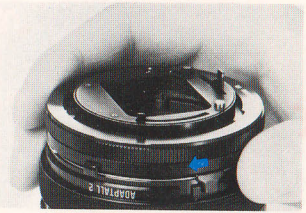
5. FITTING AND REMOVING THE ADAPTALL CUSTOM MOUNT

(1) Align the green dot on the bayonet of the custom mount with the matching green dot on the lens barrel and turn the mount clockwise for approximately 2cm until the mount is locked into the proper position.

(2) The custom mounts for cameras featuring TTL light-metering, AE and automatic diaphragm control are provided with a meter coupling lever which activates the control ring. After fitting the custom mount. move the meter coupling lever so that it engages in the slot provided on the lens, and the exposure control mechanism of the lens will erosscouple to the camera's system.

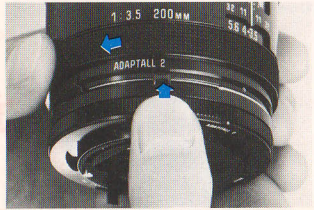


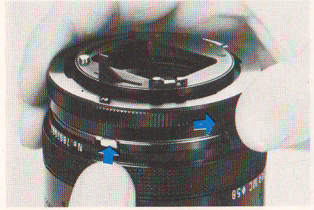
Note: The method of fitting custom mounts for Canon FD, Minolta MD and Nikon AI is the same as described in Steps (1) and (2) above. However, the custom mounts for Canon FD, Minolta MD and Nikon AI each have two coupling levers Therefore, when the mount is fitted, engage the two coupling levers in the corresponding slots on both sides of the lens.



(3) Your Tamron lens with the Adaptall custom mount can be fitted to your camera in the same manner as the camera manufacturer's lenses.
When fitting the lens and adapter onto a Canon FTb or AT-1 camera, be sure to move the aperture ring to a position other than AE.

(4) Removing the custom mount:
Before removing the custom mount, be sure to move the aperture ring to the maximum opening. (However, with the Canon or Konica mount aperture ring is set at the AE position. Depress the AE lock button to release the AE setting, and then move the aperture ring to the maximum opening.)
An L-shaped mount release lever is provided directly opposite the aperture indicator window which, when depressed, releases the mount. Therefore, while keeping the L-shaped mount release lever depressed, turn the custom mount counterclockwise all the way until it stops and then lift the mount off the lens.

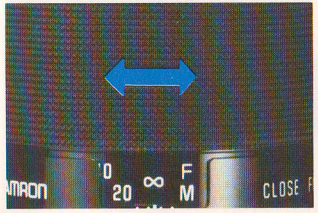




6. OPERATING INSTRUCTIONS

(1) Focusing

Focus by turning the focusing ring while looking through the viewfinder until the image is sharp.

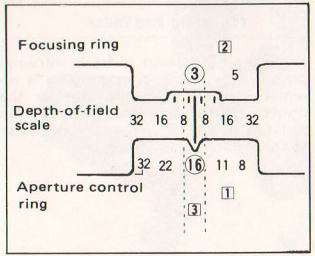


(2) Depth-of-Field

The depth-of-field is marked on the lens barrel between the distance scale index and aperture indicator window of the lens, and you can read the depth-of-field in the following manner:

1. Set the aperture control ring to the desired position.
2. Set the lens to the desired distance.
3. Read the value from the depth-of-field indices.

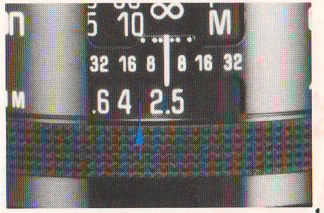
In this case, the depth-of-field of the 135mm lens at f/16 and at the object distance of 3 meters (9.8 ft.) is from 2.7 meters (8.8 ft.) to 3.2 meters (10.5 ft.).



Models 03B 135mm and 04B 200mm lenses do not have an Auto/Manual lever for previewing depth-of-field. When you wish to check the depth-of-field, use the lever or button on the camera body. (In the case of Olympus, the mount has a built-in depth-of-field lever.)

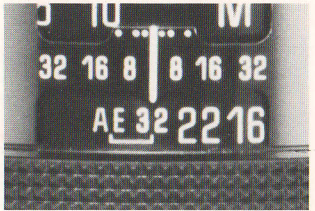
(3) Aperture Control

Turn the aperture control ring and set the required f-stop in the aperture indicator window. Both the 03B 135mm and 04B 200mm lenses feature half stops for precise exposure adjustment between the aperture range of f/2.5 to f/16 (f/3.5 to f/16 in case of 200mm lens).



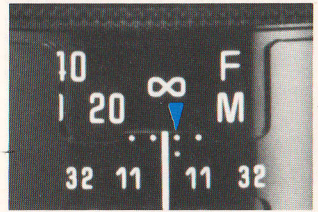
(4) AE Setting

When using your lens on cameras which incorporate a shutter priority automatic mode, turn the aperture control ring on your lens to the AE position which also serves as f/32 when the model 03B 135mm lens is used on the cameras. (The model 04B 200mm lens has the AE mark at the same position as f/22.)



(5) Infra-Red Index

Since the focal point shifts in infra-red photography, focus compensation is essential. First, focus the lens in the normal manner and then set the given distance to the red point provided next to the distance scale index.



(6) Lens Hood

Both 135mm and 200mm lenses have a built-in retractable lens hood. The lens hood is always advantageous since it prevents unwanted light from striking the lens causing image degrading flare giving poor print quality.

(7) How To Hold Your Telephoto Lens

When taking photographs with a telephoto lens, using a tripod is always advantageous since the angle of view of telephoto lenses is narrow and your photos may suffer from camera-shake. This can be a particular problem with telephoto lenses of 200mm or longer. Hold the focusing ring firmly with your left hand, draw the camera near and hold it firmly against your face with your left hand. If you wear glasses, fix the viewfinder frame securely against the glass. The slowest shutter speed for hand-held shots is normally considered to be 1/focal length of the lens. Accordingly, with your 135mm lens, it is recommended that you use shutter speeds faster than 1/135 second and with the 200mm lens 1/200 second. However, depending upon the photographer's skill slower shutter speeds to a 1/60 second and to 1/125 second with the 200mm telephoto lens can be used.

(8) Depth-of-Field Tables

To ascertain the depth-of-field for example when you shoot at a distance of 5 meters (16.4 ft.) with the 03B 135mm lens whose aperture is set to f/5.6, read where the figures shown on the f/5.6 horizontal row intersect with the 5 meters (16.4 ft.) value shown on the vertical distance column. (In this case, the depth-of-field is from 4.761 meters to 5.265 meters.)

Depth-of-Field Table 135mm f/2.5 Model 03B

Aperture / Distance	2.5	4	5.6	8	11	16	22	32
1.2m	1.195~1.205	1.192~1.208	1.189~1.211	1.184~1.216	1.178~1.223	1.169~1.223	1.157~1.246	1.139~1.268
1.5m	1.492~1.509	1.487~1.514	1.481~1.519	1.473~1.528	1.464~1.538	1.448~1.556	1.429~1.579	1.399~1.617
2.0m	1.984~2.016	1.975~2.026	1.965~2.037	1.950~2.053	1.932~2.074	1.902~2.109	1.868~2.153	1.813~2.231
3.0m	2.962~3.039	2.939~3.063	2.916~3.089	2.881~3.129	2.839~3.180	2.772~3.270	2.695~3.384	2.577~3.594
5.0m	4.890~5.115	4.827~5.186	4.761~5.265	4.665~5.387	4.551~5.549	4.373~5.840	4.176~6.234	3.886~7.024
10.0m	9.55~10.48	9.30~10.80	9.05~11.16	8.70~11.74	8.30~12.56	7.71~14.22	7.10~16.91	6.28~24.70
30.0m	26.27~34.96	24.44~38.82	22.76~44.00	20.63~55.02	18.46~80.10	15.72~334.08	13.34~∞	10.66~∞
∞	209.03~∞	130.61~∞	93.27~∞	65.26~∞	47.44~∞	32.59~∞	23.68~∞	16.25~∞

Depth-of-Field Table 200mm f/3.5 Model 04B

Aperture / Distance	3.5	4	5.6	8	11	16	22	32
1.7m	1.694~1.706	1.693~1.707	1.691~1.709	1.687~1.713	1.682~1.718	1.674~1.727	1.665~1.737	1.649~1.754
2.0m	1.991~2.009	1.990~2.010	1.986~2.014	1.981~2.020	1.973~2.027	1.961~2.040	1.947~2.056	1.924~2.082
2.5m	2.485~2.515	2.483~2.517	2.477~2.524	2.467~2.534	2.455~2.547	2.435~2.569	2.412~2.595	2.373~2.641
3.0m	2.978~3.022	2.975~3.026	2.965~3.036	2.950~3.051	2.932~3.071	2.902~3.105	2.867~3.146	2.811~3.217
4.0m	3.959~4.042	3.953~4.048	3.934~4.068	3.907~4.098	3.873~4.136	3.818~4.200	3.754~4.281	3.652~4.422
5.0m	4.934~5.068	4.924~5.078	4.894~5.110	4.851~5.159	4.797~5.221	4.710~5.329	4.610~5.463	4.452~5.704
7.0m	6.866~7.140	6.847~7.160	6.788~7.226	6.700~7.328	6.595~7.459	6.426~7.668	6.234~7.982	5.939~8.527
10.0m	9.72~10.29	9.683~10.33	9.56~10.48	9.385~10.70	9.17~10.99	8.84~11.51	8.47~12.20	7.92~13.56
20.0m	18.88~21.25	18.736~21.44	18.27~22.08	17.62~23.12	16.87~24.56	15.75~27.40	14.58~31.82	12.99~43.53
70.0m	57.80~88.71	56.406~92.23	52.34~105.66	47.23~135.19	42.10~207.80	35.64~∞	30.11~∞	23.92~∞
∞	329.00~∞	287.84~∞	205.52~∞	143.78~∞	104.50~∞	71.76~∞	52.11~∞	35.74~∞

7. TAMRON ADAPTALL-2 SERIES LENSES

ADAPTALL-2 24mm F/2.5
(Model 01B)

ADAPTALL-2 28mm F/2.5
(Model 02B)

ADAPTALL-2 135mm F/2.5
(Model 03B)

ADAPTALL-2 200mm F/3.5
(Model 04B)

8. SPECIFICATIONS OF TAMRON ADAPTALL-2 SERIES LENSES

Specification \ Model No.	01B	02B	03B	04B
Focal Length/Aperture	**24mm f/2.5**	**28mm f/2.5**	**135mm f/2.5**	**200mm f/3.5**
Construction (Groups/Elements)	9/10	7/7	4/4	5/5
Coating	BBAR Multiple Layer Coating			
Angle of View	84°	75°	18°	12°
Minimum Focus from Film Plane	0.25m (9.8 in.)	0.25m (9.8 in.)	1.2m (47.2 in.)	1.7m (66.9 in.)
Focusing Method	Straight helicoid-extension system			
Max. Magnification	—	1:5.8	1:7.0	1:5.9
Aperture Range	2.5–22, AE	2.5–32, AE	2.5–32, AE	3.5–32, AE
Lens Accessory Size	55mm	49mm	58mm	58mm
Length	38mm (1.5 in.)	33mm (1.3 in.)	79.5mm (3.1 in.)	108mm (4.3 in.)
Diameter	64.5mm (2.5 in.)	64.5mm (2.5 in.)	64.5mm (2.5 in.)	68mm (2.7 in.)
Weight	230 g (8.1 oz.)	180 g (6.3 oz.)	410 g (14.5 oz.)	540 g (19.0 oz.)
Lens Hood	Screw-in, optional	Screw-in, optional	Built-in, retractable	Built-in, retractable

9. TAMRON SP SERIES LENSES

52A
70 – 210mm F/3.5-4

55B
500mm F/8

54B
300mm F/5.6

52B
90mm F/2.5

01F
2X TELE CONVERTER

10. SPECIFICATIONS OF TAMRON SP SERIES LENSES

Model No. / Specifications	52A	55B	52B	54B	01F
Focal Length·Aperture	**70~210 mm F/3.5-4**	**500 m F/8**	**90 mm F/2.5**	**300 mm F/5.6**	**2X the focal length of master lens**
Angle of View	34°–11°	5°	27°	8°	–
Construction	16 elements in 15 groups	7 elements in 4 groups	8 elements in 6 groups	6 elements in 5 groups	6 elements in 5 groups
Coating	BBAR and Green multiple layer coating	BBAR multiple layer coating			
Minimum Focus from Film Plane	0.75 m (30 inches)	1.7 m (66.9 inches)	0.39 m (15.4 inches)	1.4 m (55.1 inches)	Sames as that of master lens
Macro Magnification	1:2 – 1:10	1:3 – 1:10	1:2 – 1:10	1:3.3 – 1:10	2X the magnification ratio of master lens
Focusing Ring Rotation	∞ – 2m 40°, 2m – 0.75m 122° (162°)	∞ – 4m 126° 4m – 1.7m 201° (327°)	∞ – 1.5m 29°, 1.5m – 0.39m 195° (225°)	∞ – 2.5m 75°, 2.5m – 1.4m 86° (162°)	–
Lens Accessory Size	58 mm	30.5 mm (82 mm front)	49 mm	58 mm	–
Length (at infinity)	165 mm (6.5 inches)	87 mm (3.4 inches)	66 mm (2.6 inches)	163.5 mm (6.4 inches)	42.5 mm (1.7 inches)
Diameter	64.5 mm (2.5 inches)	84 mm (3.3 inches)	64.5 mm (2.5 inches)	64.5 mm (2.5 inches)	64.5 mm (2.5 inches)
Weight	750 g (26.5 ounces)	575 g (20.2 ounces)	420 g (14.8 ounces)	610 g (21.5 ounces)	250 g (8.8 ounces)
Lens Hood	Built-in, retractable	Screw-in type, detachable	Screw-in type, available as optional	Built-in, retractable	–
Accessory	Tripod mount ring, available as optional	w/Tripod mount ring & 5-piece filter set		Tripod mount ring, available as optional	

11. TAMRON ADAPTALL/ADAPTALL-2 MOUNT SYSTEM

Adaptall Mounts	Adaptall Lenses	SP/Adaptall-2 Lenses
Pentax K	Yes	Yes
Pentax ES	Yes	Yes
Pentax Universal	Yes	Yes
Nikon A1	Yes	Yes
Fujica ST	Yes	Yes
Mamiya SX	Yes	Yes
Topcon RE◇	Yes	Yes ◇
Rollei/Voigtlander	Yes	Yes
Canon FL	Yes	Yes
Minolta ★	Yes	Yes ★
Olympus OM	Yes	(●)
Contax/Yashica *	Yes	Yes *
Canon FD (6 mounts)▼ f/2.5, f/2.8, f/3.5, f/3.8, f/4.5, f/5.6	Yes	—
Konica AR (6 mounts)▼ f/2.5, f/2.8, f/3.5, f/3.8, f/4.5, f/5.6	Yes	—
Minolta MD (4 mounts) f/2.5/4.5, f/2.8/5.6, f/3.5, f/3.8	Yes	—
SP/Adaptall-2 Mounts	**Adaptall Lenses**	**SP/Adaptall 2 Lenses**
Olympus OM	Yes	Yes
Canon FD	—	Yes
Minolta MD	—	Yes
Konica AR *	—	Yes *
Contax/Yashica	—	Yes
"C" mount for CCTV/VTR cameras and 16mm movie cameras	Yes	Yes
"MS" mount for CCTV/VTR cameras	Yes	Yes

◇ Due to small rear aperture, this mount will not accept the SP 70–210mm f/3.5–4, SP 90mm f/2.5, SP Flat Field 2X Converter, and Adaptall–2 80–210mm f/3.8–4.

★ Early SRT and SRT Super/X Adaptall adaptors cannot be used with SP 70-210mm f/3.5-4 lens, SP 90mm f/2.5 lens, SP Flat Field 2X teleconverter and Adaptall-2 80-210mm f/3.8-4 lens. However later types identified simply by the label "FOR MINOLTA' are fully compatible.

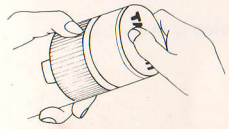
* Mount requires initial maximum aperture adjustment.

(●) Does not have aperture stop down control on adapter. SP lenses do not have A/M selector switch.

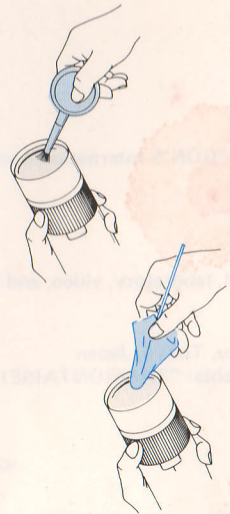
▼ Will not accept the Flat Field 2X Converter, due to its small inside diameter.

Note: The Tamron Flat Field SP Tele-Converter is compatible with most Tamron Interchangeable Lenses, except wide angle lenses. However, be sure to use the appropriate mount.

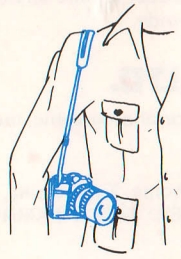
1. Avoid touching the surface of your lens. When not using your lens, be sure to put the lens cap on for protection.



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.