

PANAGOR[®]

AUTOMATIC LENSES

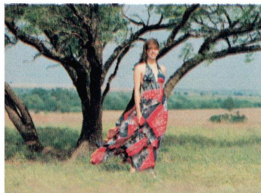
FOR 35mm SLR CAMERAS



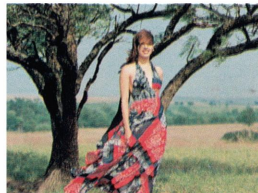
PANAGOR[®] AUTOMATIC Lenses

High Speed
High Resolution
Multi Coated

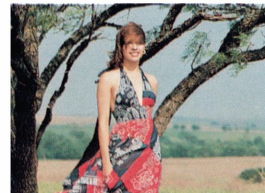
*FIVE(5) YEARS
GUARANTEE*



80mm



100mm



135mm

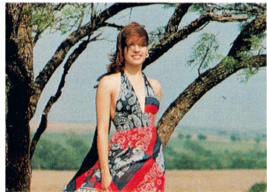


28mm

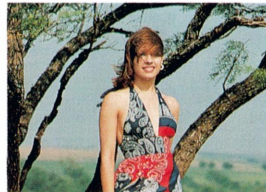


35mm

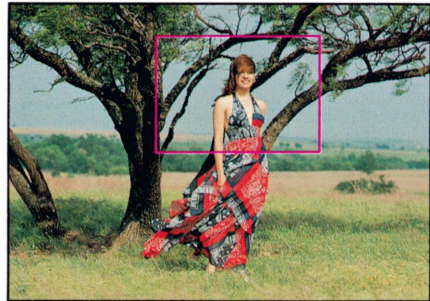
for 35mm SLR Cameras



150mm



200mm



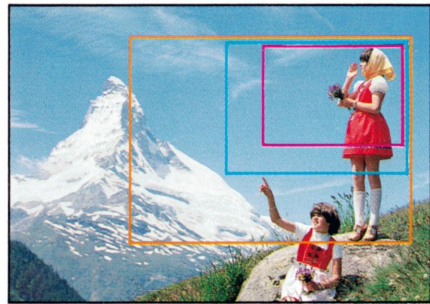
200mm

80mm

80 to 200mm ZOOM LENS



50mm (STANDARD)



100mm

70mm

50mm

35mm

35mm to 100mm ZOOM LENS

PANAGOR[®] AUTO ZOOM 80mm -

AUTO LENS OPERATION

The Panagor Automatic Zoom is designed to operate with the same simplicity and ease as the normal lens of your camera. Just mount the lens to your camera and operate as you would your normal lens. The diaphragm will automatically close to the pre-selected f stop at the moment of exposure, and re-open automatically as soon as the exposure time has ended. No pistol grips, cable releases, or external mechanisms are necessary with the Panagor Automatic Zoom.

FOCUSING AND ZOOMING

The lens can be focused before or after zooming, however since the 200mm focal length has the greatest magnification and narrowest depth of field, it is best to focus at 200mm and then zoom to the desired focal length. The unique, built-in, cam-operated focusing system will maintain focus regardless of zoom setting. The zoom ring can be set anywhere between 80mm and 200mm, and produce perfect results. The engravings showing the various focal lengths serve only as a guide.

OPTICAL VERSATILITY

By zooming from 80mm to 200mm, you can do the following:

A) Make the subject appear closer eliminating unwanted background.

B) Change the depth of field: Zooming to 200mm also narrows the depth of sharp focus at a pre-selected distance, thereby making unwanted background appear out of focus. By taking full advantage of the above features, you can be sure of professional looking results.

C) Change perspective: Zooming to 200mm causes a foreshortening effect and gives the appearance of compressing the planes in a picture to look flat and almost two dimensional.

200mm F3.8 MACRO



Photo taken at 80mm setting



Photo taken at 200mm setting



Photo taken at 200mm at 1M (MF)

PANAGOR®

MOUNTING YOUR LENS

AUTO 28mm F2.8, PMC

PANAGOR Fixed Mount lens has been specifically designed and built for your individual camera brand, it will mount on your camera with same ease as your normal lens.

The PANAGOR Wideangle lenses 28mm F2.8 is the latest addition to the PANAGOR line of lenses for SLR cameras. The inclusion of the AUTO DIAPHRAGM feature now makes your lens truly the equal of the finest and fastest automatic lenses available for your camera.

SETTING THE F STOP

Rotate the diaphragm ring to the desired f stop as determined by an exposure meter. Click stops are provided at the full f stops; however, the diaphragm can be set between stops as well.

FOCUSING

Due to the depth of field, it is difficult to see the image "snap" into focus as it does with your normal, or even more so, with your telephoto lens. This depth of field makes the lenses desirable for quick, prefocussed shooting. For example, 28mm lens at F16, the depth of field extends from less than 1 meter (3 feet) to infinity.

AUTO 135mm F2.8, PMC 200mm F3.5, PMC 400mm F5.6, PMC

The PANAGOR Auto telephoto lenses 135mm F2.8, 200mm F3.5 and 400mm F5.6 are the high speed, fully automatic telephoto lenses which are the ideal choice for sports, nature, and general telephoto work.

FOCUSING AND COMPOSING WITH LONG TELEPHOTO LENSES

On many SLR cameras, the rangefinders on microgrid prisms built into the groundglass do not work as well with longer focal length lenses as with the normal lens and may black out. Under these conditions, focusing is best done on the groundglass portion of the finder. Some cameras also, produce apparent cutoff, primarily in the upper corners or along the entire upper edge of the viewfinder. Actually, such cutoff is caused by the size of the camera's mirror which is sometimes inadequate for longer focal length lenses. This cutoff, however, occurs only in the viewfinder system and will not affect the slide or the negative.

AUTO MACRO 1:1 55mm F2.8, PMC 90mm F2.8, PMC

The PANAGOR Auto macro lenses are ideally suited for photographing flat subjects such as documents, photographs, or postage stamps as well as for normal photography.

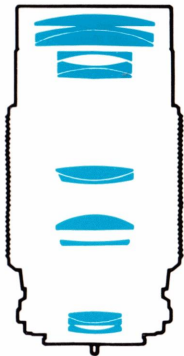
PANAGOR®

This PANAGOR zoom lens allows you to focus continuously from infinity to close-up range without lever, special fitting, or loss of zoom capability.

AUTO ZOOM 80mm–200mm F3.8, PMC SINGLE ACTION (O/T) MF

SPECIFICATIONS

Focal Length:	80mm to 200mm
Zoom Ratio:	2.5X
Lens Construction:	13 elements, 9 groups
Aperture:	F3.8 to F22 with half stops
Angle of View:	29° at 80mm, 12° at 200mm
Minimum Distance:	1.0 meter (3.5 feet) from film plane
Filter Size:	58mm, screw-in
Length:	137mm (approx., depending on mount)
Net Weight:	750 grams 26.45oz (approx., depending on mount)

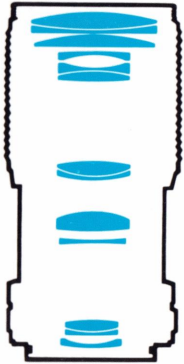


Maximum reproduction
ratio at 80mm, 1:8
200mm, 1:3.4



Built in Retractable Lens Hood

PANAGOR®



AUTO ZOOM 80–200mm F4.5, PMC SINGLE ACTION (O/T) MACRO

SPECIFICATIONS

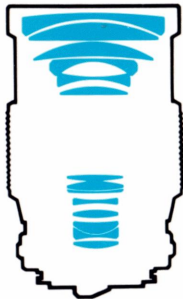
Focal Length:	80mm to 200mm
Zoom Ratio:	2.5X
Lens Construction:	13 elements, 9 groups
Aperture:	F4.5 to F32 with half stops
Angle of View:	30° at 80mm, 12° at 200mm
Minimum Distance:	Normal, 2.0 meter (7 feet) * Macro, 42cm (16.54 inches) at 80mm (from front lens) 115cm (3.77 feet) at 200mm (from front lens)
Filter Size:	55mm screw-in
Length:	130mm (approx., depending on mount)
Net Weight:	570 grams 20.1oz (approx., depending on mount)

* Using the MACRO-Focusing mechanism built into your PANAGOR zoom, focusing down to 42cm (16.54") is possible with the normal focusing ring set at 2.0 meter (7 feet). To use in MACRO-focus mode, simply press the "MACRO" button while turning the ring until it stops.



Built-in Retractable Lens Hood

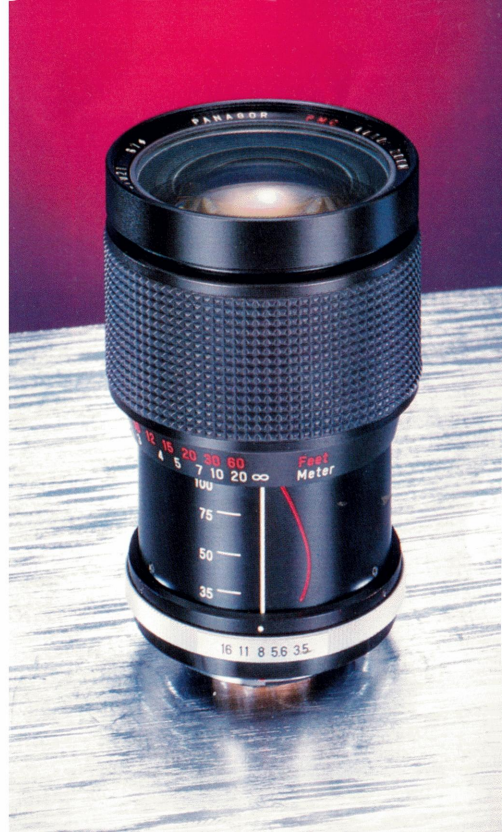
PANAGOR[®]



AUTO ZOOM 35—100mm F3.5, PMC SINGLE ACTION (O/T)

SPECIFICATIONS

Focal Length:	35mm to 100mm
Zoom Ratio:	2.86X
Lens Construction:	14 elements, 12 groups
Aperture:	F3.5 to F16 with half stops
Angle of View:	63° at 35mm 24° at 100mm
Minimum Distance:	1.8 meter (6 feet)
Filter Size:	67mm screw-in
Length:	107.5mm (approx., depending on mount)
Net Weight:	660 grams 23.28oz (approx., depending on mount)



PANAGOR®



AUTO WIDEANGLE 28mm F2.8 , PMC

SPECIFICATIONS

Focal Length:	28mm
Lens construction:	7 elements 6 groups
Aperture:	F2.8 to F16 with half stops
Angle of View:	75°
Minimum Distance:	0.3 meter (12 inches)
Filter Size:	49mm Screw-in
Length:	41.5mm (approx., depending on mount)
Net Weight:	250 grams 8.82oz (approx., depending on mount)



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AUTO TELEPHOTO 135mm F2.8, PMC

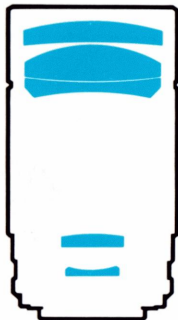
SPECIFICATIONS

Focal Length:	135mm
Lens construction:	4 elements 4 groups
Aperture:	F2.8 to F22 with half stops
Angle of View:	18°
Minimum Distance:	1.5 meter (5 feet)
Filter Size:	55mm Screw-in
Length:	81.5mm (approx., depending on mount)
Net Weight:	360 grams 12.69oz (approx., depending on mount)



Built-in Retractable Lens Hood

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AUTO TELEPHOTO 200mm F3.5, PMC

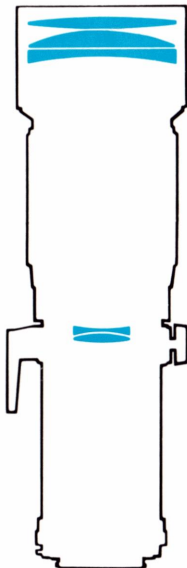
SPECIFICATIONS

Focal Length:	200mm
Lens construction:	5 elements 4 groups
Aperture:	F3.5 to F22 with half stops
Angle of View:	12°
Minimum Distance:	1.8 meter (6 feet)
Filter Size:	62mm Screw-in
Length:	124 mm (approx., depending on mount)
Net Weight:	630 grams 22.22oz (approx., depending on mount)



Built-in Retractable Lens Hood

PANAGOR®



AUTO TELEPHOTO 400mm F5.6, PMC

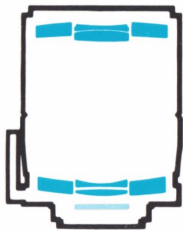
SPECIFICATIONS

Focal Length:	400mm
Lens construction:	5 elements 3 groups
Aperture:	F5.6 to F32 with half stops
Angle of View:	6°
Minimum Distance:	6 meter (20 feet)
Filter Size:	72mm Screw-in
Length:	250mm (approx., depending on mount)
Net Weight:	1,150 grams 40.56oz (approx., depending on mount)



*Built-in Retractable Lens Hood
and Tripod Clamp*

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500mm F8.0 REFLEX

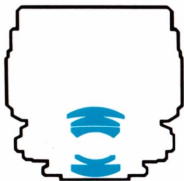
SPECIFICATIONS

Focal Length:	500mm
Lens Construction:	6 elements, 5 groups
Aperture:	F8.0
Angle of View:	5°
Minimum Distance:	4m (15 feet)
Filter:	Exclusive slide filters
Length:	120.5mm
Net Weight:	750 grams 26.45oz
Mount:	Fixed, but interchangeable



*Built-in Retractable Lens Hood
and Tripod Clamp*

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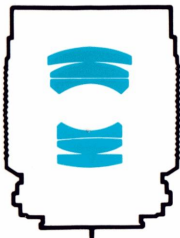
AUTO MACRO 55mm F2.8, PMC for 1:1 w/o using extra tube

SPECIFICATIONS

Focal Length:	55mm
Lens construction:	5 elements 4 groups
Aperture:	F2.8 to F16 with half stops
Angle of View:	42°
Minimum Distance:	0.215 meter (8.5 inches)
Filter Size:	62mm Screw-in
Length:	63.5mm (approx., depending on mount)
Net Weight:	400 grams 14.1oz (approx., depending on mount)



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AUTO MACRO 90mm F2.8, PMC

for 1:1 w/o using extra tube

SPECIFICATIONS

Focal Length:	90mm
Lens Construction:	6 elements 4 groups
Aperture:	F2.8 to F22 with half stops
Angle of View:	27°
Minimum Distance:	0.35 meter (1'2")
Filter Size:	62mm Screw-in
Length:	85.5mm (approx., depending on mount)
Net Weight:	520 grams 18.34oz (approx., depending on mount)



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AUTO MACRO CONVERTER

SPECIFICATIONS

Lens construction: 4 groups 4 elements

MAGNIFICATION RATIO:

For Pentax, Praktica thread (42mm)	(1:10 to 1:1)
Pentax-K	(1:10 to 1:1)
Nikon AI/Nikkormat FT3	(1:10 to 1:1)
Olympus OM	(1:10 to 1:1)
Contax/Yashica	(1:10 to 1:1)
Canon FD	(1:5 to 1:1)
Minolta SRT/XD	(1:7 to 1:1)
Konica T-3/TC	(1:4 to 1:1)

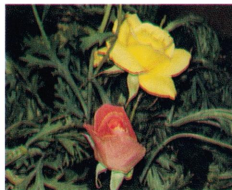
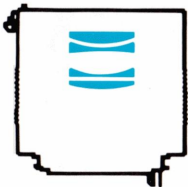
Net Weight: 270 grams 9.52oz
(approx., depending on mount)

U.S. Patent: 4,030,113

Canada 1,063,399

W. Germany 2 545 950

Patent Pending in Japan



STANDARD



1:1



1:4



1:10

PANAGOR[®] AUTO TELE CONVERTERS 2X

The PANAGOR Automatic Tele Converter doubles the effective focal length of any SLR normal or telephoto lens, while maintaining the automatic diaphragm operation of automatic lenses. With non-automatic lenses, the PANAGOR Automatic Tele Converter works equally well on a non-automatic basis. The Converter fits directly into the camera body and accepts any lens made for such camera body. The normal 50mm lens becomes a 100mm, the 100mm a 200mm and so on. The "converted" lens will focus over the same range as the "unconverted" lens.

The converter changes your f stop scale by two openings: F5.6 becomes F2.8, F8 becomes F4 and so on. If you prefer, you can set your exposure meter at 1/4th the usual ASA speed and read directly (set at ASA 100 for Tri X, for example).

However, do not use wide openings, but stop down at least two stops beyond the maximum aperture of your lens for critical sharpness. If your lens's maximum aperture is F1.8, stop down to at least F4 (which will be the equivalent of F8) and so on.

Larger openings can be used, but there will be some loss of sharpness.

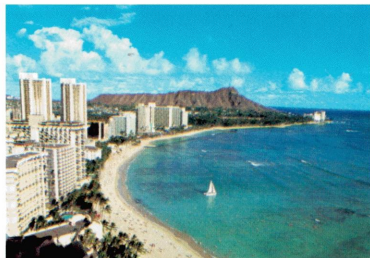
The converter can be used with zoom lenses, for close-up work, and even with mirror lenses.

However, only lenses of good quality should be "Converted", since the Converter also brings out and enlarges faults of the lens with which it is used.

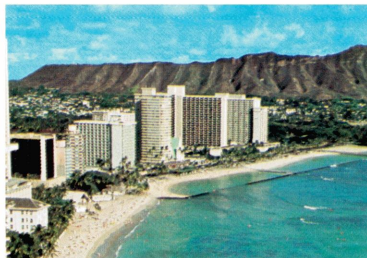
Properly understood and used, the PANAGOR Automatic Converter will greatly add to the versatility of your lenses and the effectiveness of your picture-taking.



ML 1.4 2 2.8 4 5.6 8 11 16 22
W/ATC 2.8 4 5.6 8 11 16 22 32 45



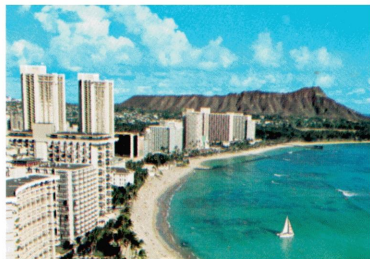
STANDARD 55mm



200mm



400mm



STANDARD 55mm + ATC 2X



200mm + ATC 2X



400mm + ATC 2X



PANAGOR[®]

JACA CORP., TOKYO.

SOLE AGENT:

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