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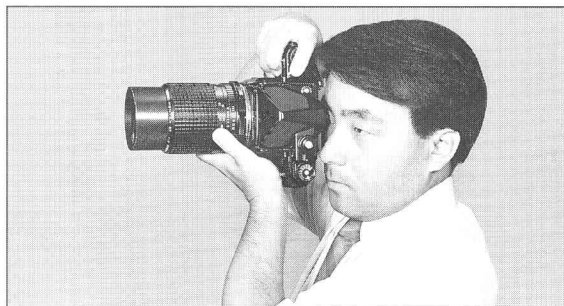
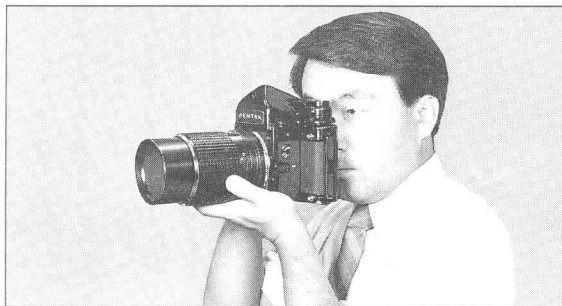
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## HOLDING CAMERA



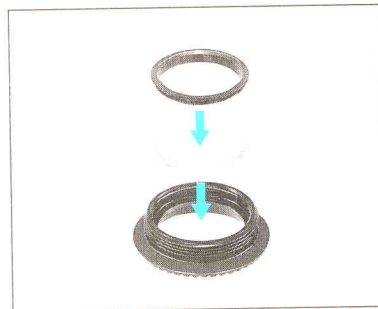
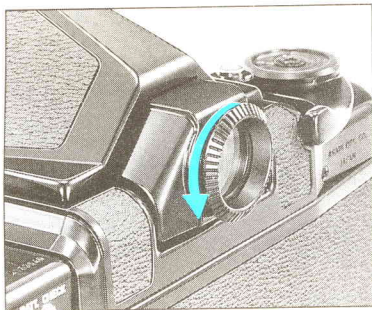
When shooting, hold the camera securely with both hands. Keep the camera as still as possible, and gently press the shutter button.

(If pressed forcefully, the camera is likely to shake, and the picture will be blurred.)

Try to brace your elbow against your body, or support yourself and the camera against a stable stationary object such as a wall.

- When utilizing a slower shutter speed or a telephoto lens, mount the camera onto a sturdy tripod and use a cable release to prevent camera shake.

## DIOPTER ADJUSTMENT AND FOCUSING



### 1. Diopter Adjustment

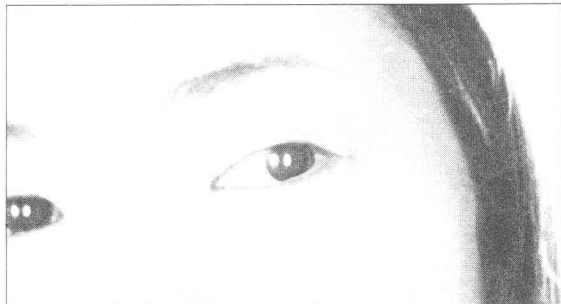
For accurate focusing, please check if the focusing screen can be seen clearly. Should you need a diopter adjustment, please use a correction lens (option).

### Attaching the Correction Lens

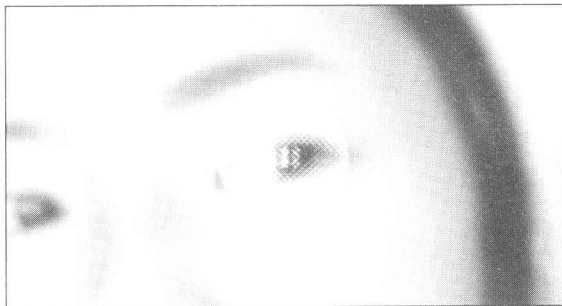
Turn the eyepiece frame counterclockwise and remove it. Turn the inside ring and replace the plain glass with a correction lens.

- The diopter of the TTL Pentaprism and Pentaprism is  $-1D$ . If you are not able to read the letters of a news paper 1 m away, you would better put a correction lens in the viewfinder eyepiece.  $-1D$  should normally be sufficient for near sighted people, while the  $+1D$  should be sufficient for farsighted people.

In focus



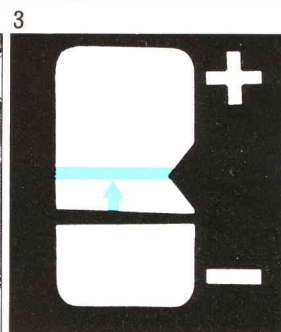
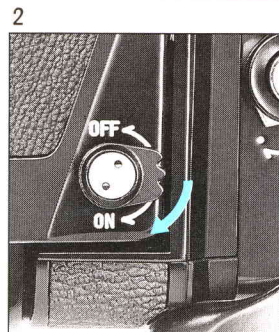
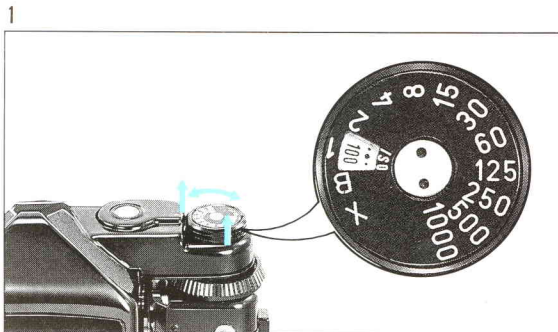
Out of focus



Turn the focusing ring of the lens until the image seen through the central microprism pattern appears sharp. The matte area surrounding the circular microprism can also be used when focusing on objects not in the center or when the lens has a maximum aperture smaller than  $f/5.6$ . To focus on the matte area, simply turn the focusing ring until the image appears to be in focus.

- As for Interchangeable Focusing Screen, please refer to page 36.

## EXPOSURE



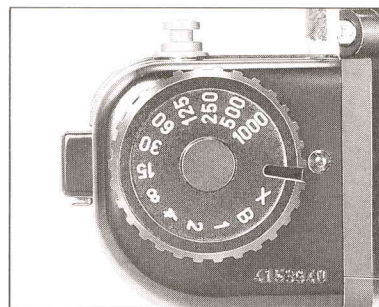
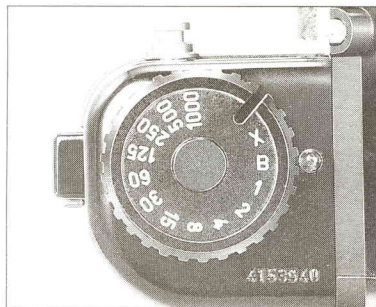
Since the 67 camera has no exposure meter, a hand held exposure meter or the TTL Pentaprism should be used to measure the light. The way to use the TTL Pentaprism is as follows;

1. Set the ISO rating of the film loaded by lifting and rotating the finder's outer ring of the shutter dial.
2. Turn the switch to the ON position.
3. Adjust the lens aperture ring or shutter dial until the needle in the meter window matches the center index. The TTL Pentaprism metering system is an overall averaging metering type.

- For the details of the TTL Pentaprism, please refer to the operating manual, 67 TTL PENTAPRISM FINDER.

# **APPLICATIONS**

## B (BULB) AND TIME PHOTOGRAPHY



### 1. B (Bulb)

At the B setting on the shutter dial, the shutter remains open as long as the shutter release button is held down. This is especially useful for shooting such subjects as fireworks and night scenes. Mount the camera on a sturdy tripod and use a cable release to prevent camera shake.

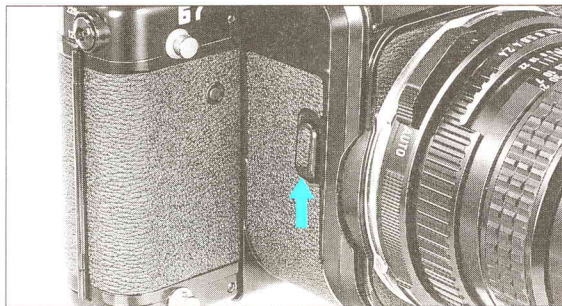
### 2. Time

Although there is no setting for long time exposure, time exposure is possible when the shutter dial is set anywhere between the clicks.

The shutter remains open until the shutter dial is set to one of the indicated setting.

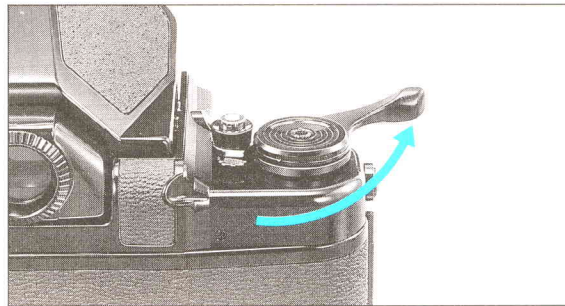
- The battery is being exhausted as long as the shutter is open. A new 4SR44 Silver-Oxide battery lasts about 5 hours when the shutter is kept open constantly under our testing conditions.

## MIRROR LOCK UP LEVER



At shutter speeds slower than 1/60 sec., blurring may occur even when a tripod is used. Blurring is also likely to occur when using the Auto Bellows, Extension tube or large lenses over 300mm.

- The lens shutter of the 165 f/4.0 LS cannot be used when the mirror lock up lever is operated.

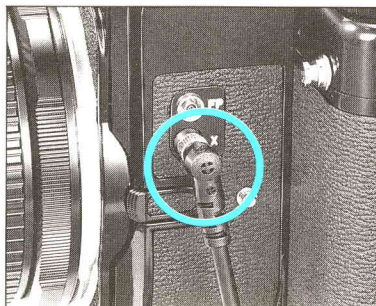
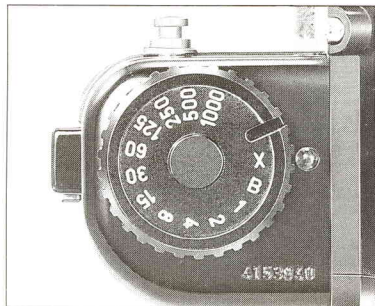


After composing and focusing, slide the mirror lock up lever to lock the mirror in its upward position. The mirror will return automatically after you release the shutter.

- The battery is being exhausted as long as the mirror is held up. A new 4SR44 Silver-Oxide battery lasts about 5 hours when the mirror is kept constantly held up under our testing conditions.



## FLASH PHOTOGRAPHY



### Electronic Flash

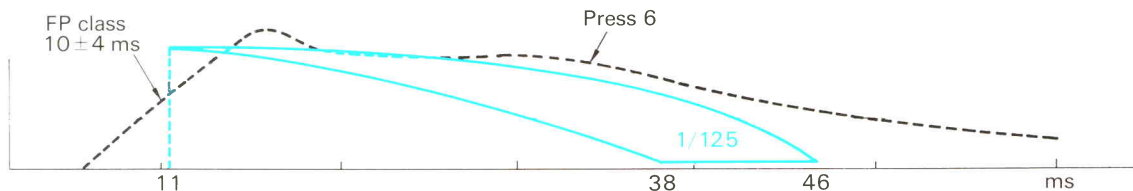
To connect an electronic flash to the 67 camera, a synchro cord with the JIS (PC) type plug should be inserted to the X terminal. Set the shutter dial at X (1/30sec) or any speed slower than 1/60 sec.

To attach the Pentax AF400T flash unit, set up the 67 body with the AF400T 67 bracket and connect them using the 4P synchro cord C. Other clip-on type electronic flash unit can be attached to the 67 by either of the following ways;

- Hot shoe grip + AF400T 67 bracket + 4P synchro cord C
- 67 grip + 645 hot shoe adapter LS

- Both shutter speed and lens aperture must be set manually when using any electronic flashes.

Shutter speed		1/1000	1/500	1/250	1/125	1/60	1/30	1/15	1/8	1/4	1/2	1	x
Terminal	X						Electronic flash						
							M class, MF class						
	FP			FP class							FP class		



## Flashbulb

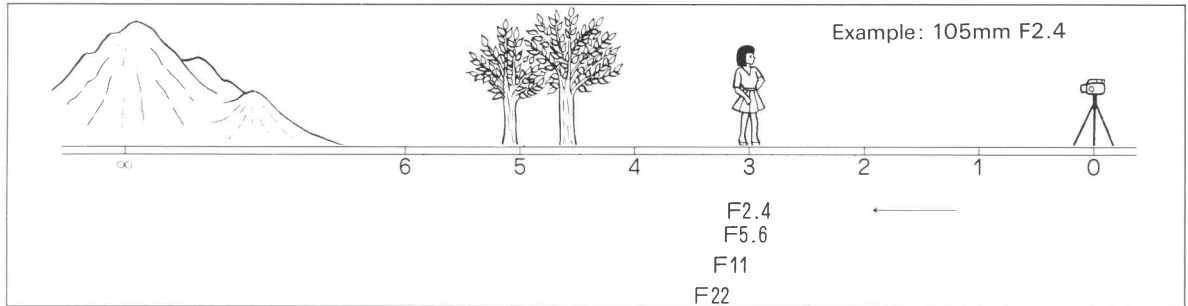
With X terminal:

M class and MF class flashbulb can be used at shutter speeds 1/15 sec. or slower. FP class can be used at 1/8 sec. or slower.

With FP terminal:

The FP class flash units presently on the market do not synchronize with the 67. However the Press 6 flash bulb can be used at the shutter speeds of 1/250 sec. and 1/125 sec. if the black and white film is used.

## DEPTH OF FIELD



Depth of field refers the range around the optimum focusing point of the subject in which the elements at different distances are in focus. The in-focus range can be confirmed by the depth of field scale on the lens. When using an automatic diaphragm lens, in-focus zone can be actually seen by setting the depth of field preview lever to manual (MAN.).

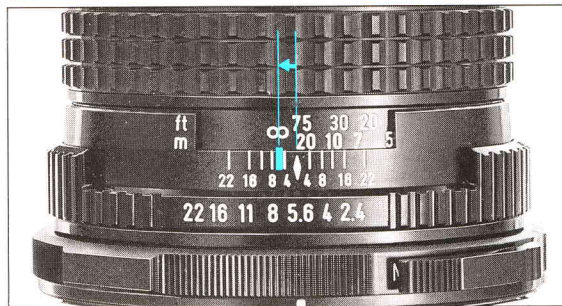
1. With the same focal length of lens and the same camera to subject distance, the depth of field increases as the aperture becomes smaller.
2. With the same focal length of lens and the same F-stop, the depth of field increases as the camera to subject distance becomes greater.
3. With the same camera to subject distance and the same F-stop, the depth of field increases as the focal length becomes shorter.

## INFRARED INDEX

(1)



(2)



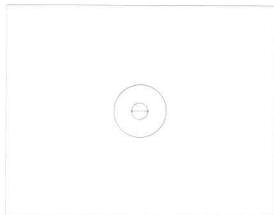
When taking infrared photographs using infrared film and either the R2 or O2 filter, it will be necessary to compensate for the difference between the visible light and infrared light focus.

As referenced in the photos above, (1) read the camera to subject distance on the focusing ring after focusing through the viewfinder. Then (2) turn the focusing ring until the distance setting aligns with the red infrared index. The picture shows an example where the camera to subject distance is infinity ( $\infty$ ).

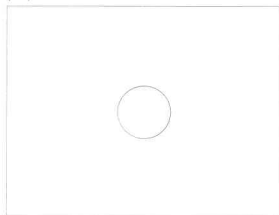
- For exposure control, refer to the film's instructions.

## ACCESSORIES

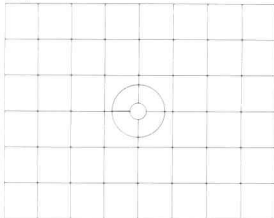
(1)



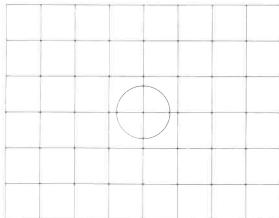
(2)



(3)



(4)



Besides the standard microprism screen, there are four types of focusing screens as follows;

- (1) Split Image,
- (2) Matte with Central Open Spot,
- (3) Grid with Microprism,
- (4) Grid with Matte

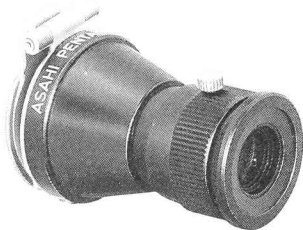
The replacement should be performed at the nearest Pentax service facility.

Focusing with split image:

The image is in focus when the images above and below the split line up.

Focusing screens with grid:

The grid is useful to check the horizontal or vertical lines in an image are parallel. The horizontal and vertical lines are spaced at 9mm.



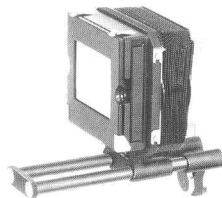
For precise focusing, this compact magnifier provides two times enlargement of the central area. Includes a built-in diopter adjuster.



To adjust the diopter of the TTL Pentaprism or Pentaprism. 7 types (from  $-5D$  to  $+2D$ ) of correction lenses are available. Please refer to Page 26.

Attached to the eyepiece of either the TTL Pentaprism or Pentaprism, the finder can be used vertically and horizontally. Includes a built-in diopter adjuster.

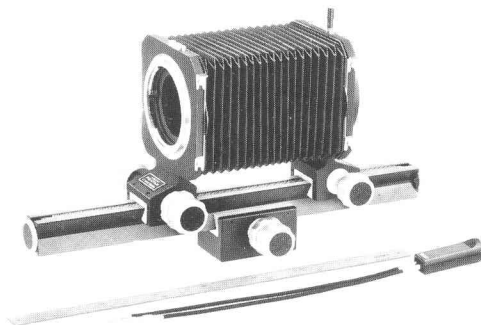
Put the eyepiece ring of either the TTL Pentaprism or Pentaprism into the groove of the Eyecup, then screw it into the eyepiece frame. It blocks distracting light and improves the visibility. Not recommended for eyeglass wearers.

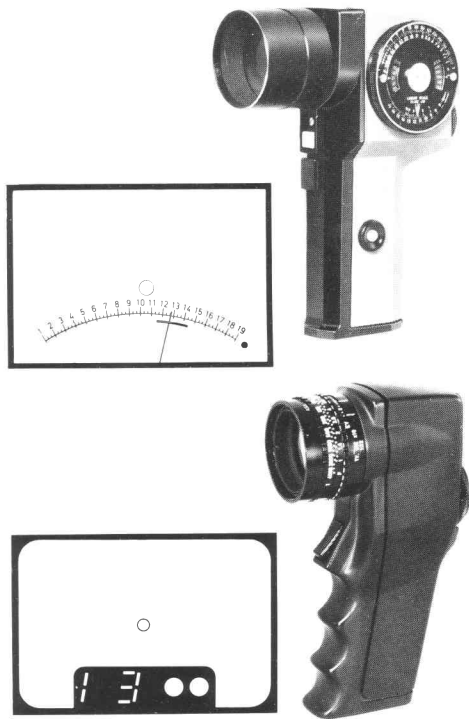


- 67 SMC Close-up Lenses
- 67 Auto Extension Tube
- 67 Hellicoid Extension Tube
- 67 Auto Bellows
- 67 Slide Copier
- 67 Reverse Adapter

### Large Copying Stand II

From easy close-up photography with the Close-up lenses to macro photography with the versatile Auto Bellows, there are a wide range of accessories. There are also accessories for duplicating slide or copying pictures.



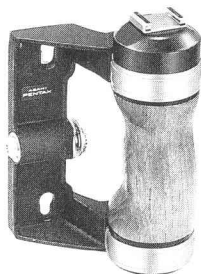


### Spotmeter V

#### Digital Spotmeter

Designed for use by professionals in still photography as well as those in the motion picture and television industries. The angle of light reaching the meter is only 1°.





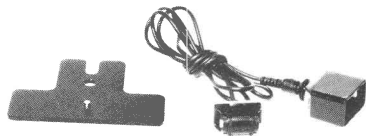
The grip provides rigid support of the 67 camera. With the accessory shoe, a clip-on type electronic flash unit can be mounted. Please refer to page 32.



This bracket enables you to attach the AF400T electronic flash unit to the 67. It attaches to the camera in the same manner as the 67 grip.



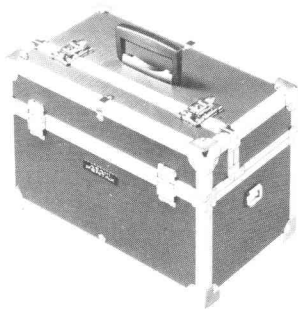
30cm and 50cm type are available. An auto-lock ring is provided for time exposures.



Permits you to operate the camera in cold weather while keeping the battery in a warm pocket.



Additional support for the camera will be obtained by attaching a second strap.



67 Carrying Case  
67 Professional Trunk Case II

## OPERATIONAL PRECAUTIONS

- Dropping or banging the camera against stationary objects can damage the camera in many ways.
- Dirt, mud, sand, water, noxious gas and salty sea breeze / spray can cause serious damage to the mechanisms inside the camera. Remove them from the camera surface with lens-cleaning fluid, lens cleaning tissues, etc. and have it checked by a Pentax service facility or an authorized repair shop immediately.
- Your camera is not water-proof. It must be protected from salty sea breeze / spray at the beach, splashing liquid of anykind, and rain.  
If your camera gets wet, wipe it dry immediately and have it examined at a Pentax service facility.
- The temperatures at which this camera should function properly are approx. 50° ~ -10°C (122°-14°F).
- Never attempt to touch the mirror, focusing screen, shutter curtain, etc.
- Humidity and temperature extremes should be avoided. Keep out of direct sunlight, car trunks, glove compartment, etc.
- Sudden changes in temperature often cause condensation of moisture inside or on the outside your camera. This might cause extremely damaging rusting of the mechanism. Keep the camera in its case or a bag to minimize the effect of a sudden temperature change.
- When mounting your camera on a tripod, make sure the tripod screw is no longer than 5.5mm (0.22 in.) which is the depth of your camera's tripod socket, or the camera may be damaged.
- Vibration from traveling in a car, aircraft or ship can cause screws to loosen. To minimize this problem, line the bottom of your camera bag with inch-thick (2.54cm) foam rubber padding.

## MAINTENANCE

- Make sure to remove the battery when the camera is not in use for an extended period of time, because the battery deteriorates and may cause damage to the contact points of the battery chamber.
- To prevent mildew on the camera, storage should be located in a cool, well-ventilated area.
- Gases from insecticides such as naphthalene may also harm the camera.
- Never wipe with solvents such as thinner or alcohol.
- Periodical performance checks at least once a year are recommended to maintain your camera in good working condition. If you have not used your camera over a long period of time, or when important pictures are planned on an assignment, a pre-check and/or trial shooting is suggested.
- To remove dust on the lens and viewfinder eyepiece, use a blower, followed by the application of a lens cleaning brush. Smudges such as finger prints should be carefully wiped with a clean soft cloth with a few drops of a lens cleaning fluid available on the market. Wipe the lens surface gently from the center towards the edges in a spiral.

## TROUBLE SHOOTING

Problems	Remedies
The mirror is stopped partway up.	When the battery power becomes insufficient, the mirror will stop partway up. Reset the mirror by pressing the safety device release button, then replace the battery. Please refer to Page 4.
TTL Pentaprism's exposure meter does not function. (Needle does not move.)	Is the power switch on? The TTL Pentaprism's power switch turns off automatically approximately 30 seconds after it is turned on. There are some other causes. Please refer to the operating manual for the TTL Pentaprism.
The shutter cannot be released without loading film.	The shutter mechanism of the 67 is designed to be disengaged when a film is not loaded. Please refer to Page 10.
Focus is not precise in the picture.	Did you set the pressure plate according to the film type? Film drag or imprecise focusing will occur, if the pressure plate is set contrary to the film type you are using.
Film is not wound smoothly.	Did you set the pressure plate correctly? Since the thickness differs between the 120 type and 220 type, film drag will occur when the pressure plate is set to 220 while using the 120 type film.

Problems	Remedies
The first frame (or the last frame) was cut off on the film.	Did you set the film mark properly? Otherwise, the first (or the last) frame is cut off.
There are some light fog on the film edges.	If the film is wound loosely, accidental exposure may happen when loading or unloading the film. Please refer to Page 20.
The shutter opens up and does not close for a long time.	Did you set the shutter dial at a click properly? The shutter will not close when the shutter dial is set anywhere between the clicks. Please refer to Page 23.
In flash photography, some part of a frame was not exposed.	Did you set the shutter speed at X (1/30 sec.) or slower? Please make sure to connect the synchro cord to the X-terminal. Please refer to Page 32.

# INTERCHANGEABLE LENSES

● Lens		● Lens construction (Groups-Elements)		● Diaphragm	● Angle of view	● Minimum focusing distance (m.)	● (ft.)	● Minimum aperture	● Maximum aperture (f/)	● Length (mm)	● Weight (g.)	● (oz.)	● Filter size (mm)	● Remarks
SMC Pentax Fish-Eye	35mm f/4.5	7-11	FA	180°	0.45	1.5	22	102	73	900	31.7	#		
SMC Pentax	45mm f/4	8-9	FA	89	0.37	1.2	22	91.5	57.5	485	17.1	82		
SMC Pentax	55mm f/4	7-8	FA	78	0.35	1.2	22	92.5	78.5	725	25.5	77		
SMC Pentax	75mm f/4.5	4-5	FA	61	0.70	2.3	22	91.5	81	560	19.7	82		
SMC Pentax Shift	75mm f/4.5	8-9	M	61	0.70	2.3	32	97	106.5	950	33.5	82		
SMC Pentax	90mm f/2.8	5-7	FA	53	0.65	2.1	22	91.5	49	480	17.1	67		
SMC Pentax	105mm f/2.4	5-6	FA	46	1.00	3.3	22	91.5	60	590	20.8	67		
SMC Pentax Soft	120mm f/3.5	3-4	M	40.5	0.75	2.5	22	89	63.5	520	18.3	77		
SMC Pentax Macro	135mm f/4	3-5	FA	36.5	0.75	2.5	32	91.5	95	620	21.8	67		
SMC Pentax	165mm f/2.8	5-6	FA	30	1.6	5.3	22	91.5	98.5	830	29.2	67	+	

Soft...Soft focus

LS...Leaf shutter built in

FA...Fully automatic

M...Manual

ND...Controlled by ND filters

#...UV, Y2, O2 &amp; R2 filters built in

# #...Skylight, Y2 &amp; R2 filters built in

ED...Extra-low Dispersion

IF...Inner Focus

+...Hood built in

● Lens		● Lens construction (Groups-Elements) ● Diaphragm ● Angle of view ● Minimum focusing distance (m.) ● (ft.) ● Minimum aperture ● Maximum diameter (ømm) ● Length (mm) ● Weight (g.) ● (oz.) ● Filter size (mm) ● Remarks											
SMC Pentax LS	165mm f/4	4-5	FA	30	1.6	5.3	32	92.5	77	780	27.5	77	
SMC Pentax	200mm f/4	4-5	FA	25	1.5	4.9	32	92.5	135	795	28.0	77	
SMC Pentax	300mm f/4	5-5	FA	17	5.0	16.4	45	93	186	1,430	50.0	82	+
SMC Pentax M*ED (IF) 400mm f/4		9-9	FA	12.5	2.8	9.2	45	133	305	3,700	130.3	67	+
SMC Pentax	500mm f/5.6	4-4	FA	10.2	8.0	26.2	45	107	398	3,200	112.7	95	+
SMC Takumar	600mm f/4	5-6	M	8.5	12.0	39.3	45	170	370	6,000	211.3	77	+
SMC Pentax M*ED (IF) 800mm f/6.7		8-9	FA	6.4	8.0	26.2	45	150	565	6,500	228.9	67	+
SMC Takumar	800mm f/4	6-6	M	6.4	20.0	65.6	45	236	611	17,700	623.2	77	+
SMC Reflex Takumar	1000mm f/8	6-9	ND	5.1	35.0	114.8	-	180	352	6,600	232.4	##77	+