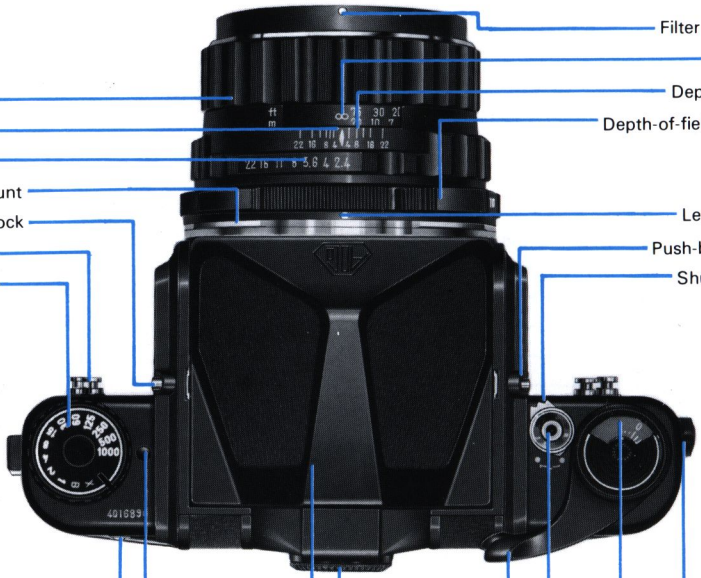
PENTAX

6X7

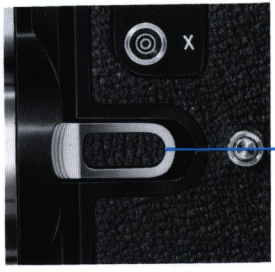

ASAHI
PENTAX
6x7
Super-Multi-Coated TAKUMAR/6X7 1:2.4/105
ASAHI OPT. CO., JAPAN
6932569

Index

Names of parts

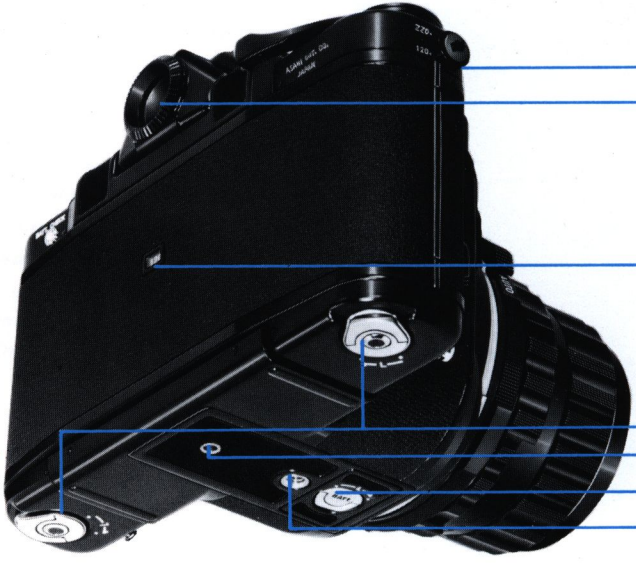


Exposure counter dial
Safety device release button
Pentaprism
Push-button side lock
Flash terminals
Accessory alignment button
Back cover locking lever
Bayonet lock
Mirror lock-up lever
Lens



Bayonet lock

Names of parts



Type	6 × 7 ideal-format Single-lens reflex.
Film	120 roll-film (10 exposures) 220 roll-film (20 exposures)
Picture Size	55mm × 70mm (2-1/4″ × 2-3/4″)
Standard Lens	SMC Takumar/6 × 7 105mm f/2.4, SMC Pentax/6 ×7 90mm f/2.8; fully-automatic diaphragm; 67mm filter size
Minimum Focusing Distance	1 meter (3.3 ft.)
Shutter	Electronically-timed, double-curtain focal plane shutter; X, B, 1-1/1000 sec.
Power Source	6V alkaline or silver oxide battery (Eveready #544 or Mallory PX28)
Battery Check	Push button with indicator lamp
Viewfinder	Detachable pentaprism finder, microprism focusing screen; produces life-size image with standard lens
Reflex Mirror	Swing-up-and-back instant return mirror with lock-up provision
Film Transport	Rapid-wind lever (180° angle); self-cocking shutter
Exposure Counter	Automatic reset exposure counter
Lens Mount	Dual bayonet mounts: inner bayonet for 35mm—300mm lenses; outer bayonet for 400mm—1000mm lenses
Flash Synchronization	FP and X terminals/electronic flash at 1/30—1 sec., B
Exposure Meter	Accessory pentaprism with through-the-lens meter (TTL Pentaprism Finder) couples with shutter speed and aperture
Dimensions	With 105mm f/2.8 lens: 177mm (width) × 150mm (height) × 151mm (depth), (6.97″ × 5.9″ × 5.94″)
Weight	Body 1,290 grams (45.5 ozs.) Standard lens SMC Pentax/6×7 90mm f/2.8 485 grams (17.1 ozs.) SMC Takumar/6×7 105mm f/2.4 628 grams (22.1 ozs.) Pentaprism housing 460 grams (16.2 ozs.)

How to insert the battery

- As the shutter is electronic, it will not operate without a battery.
- If the shutter is operated without a battery the safety device will activate and the mirror will stop partway up.

Inserting the battery

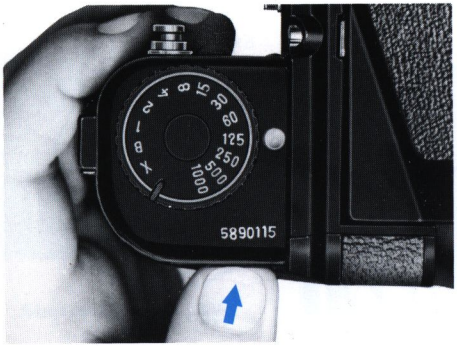
1) Lift up the crank at the bottom of the camera case and turn it in a counterclockwise direction.
2) Take out the battery case and replace the battery.
3) Re-insert the battery case making sure that the (+) (red) and (−) (blue) marks correspond. If this is done incorrectly, the safety mechanism will activate when the shutter is released.

To secure the battery case, press down and turn the crank in the direction of the arrow until it aligns with the red dot.

The alkaline battery should last about 6 months, while the silver-oxide about one year with average use at normal temperatures. When the TTL Pentaprism is used, the battery will last less as it also must activate the meter.

The battery supplied with your camera may be slightly below full capacity as it is considered to have discharged spontaneously.

Also, be sure to remove the battery when the camera is not in use for an extended period of time, as the battery may deteriorate and cause damage to the contact points.

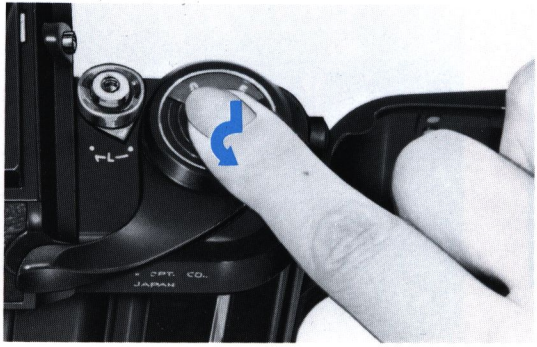


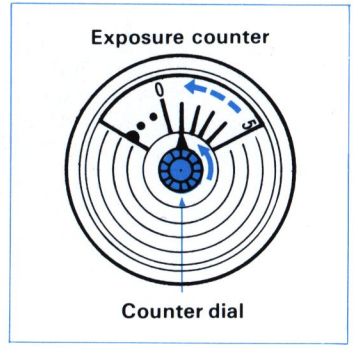
Battery Check

1) Press the battery check button at the back of the camera.
2) If the red shutter speed indication lamp does not light up, there is no battery in the case, the battery is drained, or the battery contact is loose.
3) When inserting film or before taking a picture, check the battery. When the battery power becomes insufficient the mirror will stop partway up, blocking the viewfinder. This safety device has been incorporated to prevent inaccurate shutter speed.

- To reset the mirror, press the safety device release button with a sharp object, and press the shutter button for one blank exposure. The mirror will then return to the original position.
- Insert the battery when the mirror is back in the normal position, not when it is partway up, as it consumes the battery.

Operating the Shutter without Film in the Camera



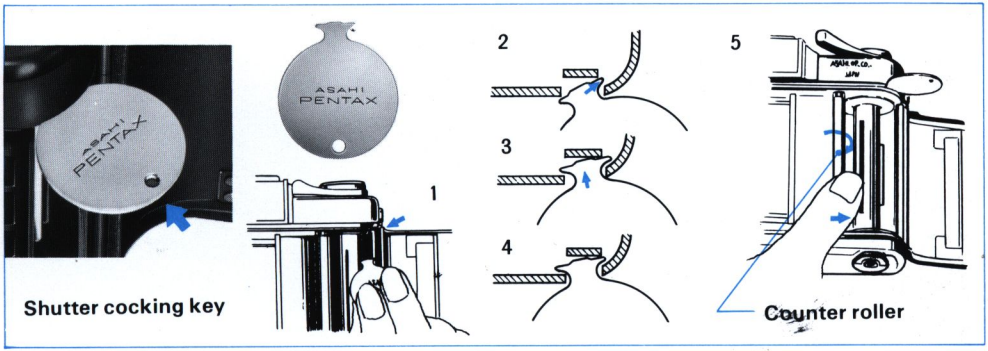


The shutter mechanism of this camera is designed so that without film in the camera it is normally disengaged. Should you need to release the shutter before loading film, follow either one of the following two methods.

A. Releasing the shutter without film in the camera.

1. Open the camera back (see page 12)
2. Place your finger on the dial of the exposure counter and push while turning it counterclockwise until it indicates "1" or more.
3. Keep your finger in place while closing the camera back.
4. Turn the rapid-wind lever and the shutter will be cocked.

Note: The camera back can later be opened and closed without affecting the shutter mechanism or exposure counter provided the shutter is not released when the back is opened.

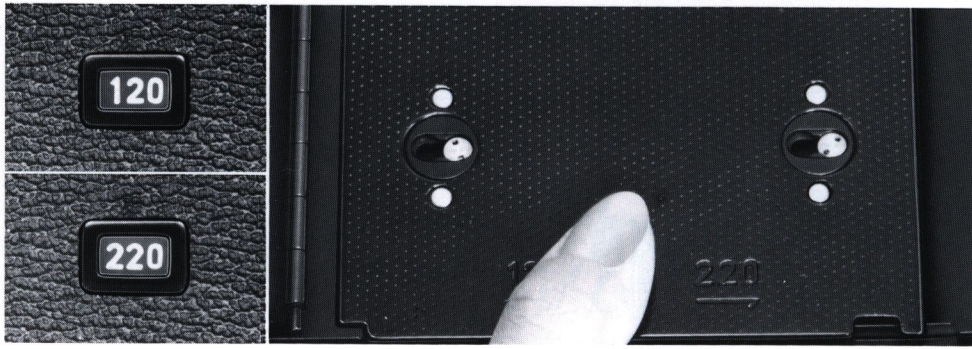


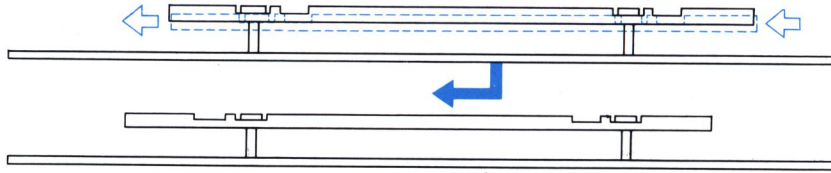
B. Releasing the shutter with the back open.

1. Insert the shutter cocking key into its slot, located below the rapid-wind lever. (see illustration)
   First, insert the right-hand tip of the key and then the left while pressing in on the tab inside the slot. Once the key is inserted adjust it so that it is centered firmly in the slot.
2. Turn the exposure counter roller bar to the right. Stop when the counter indicates "1" and you hear a slight click. There is no need to turn it any farther.
3. Turn the rapid-wind lever to engage the shutter. The shutter can now be released as many times as you wish.

Caution: To prevent damage to the shutter mechanism never turn the exposure counter roller bar to the left.

120/220 Film Type Settings





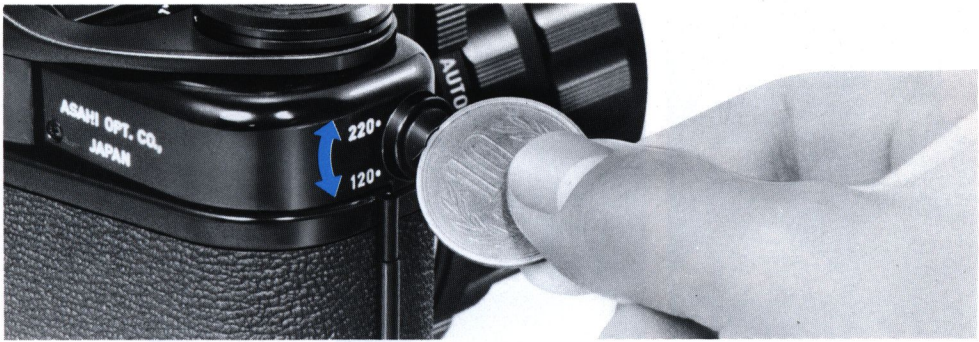
Pressure Plate

This camera accomodates two types of film: 120 (10 exposures) and 220 (20 exposures)
When changing film types, however, the following two adjustments must be made.

To avoid possible film drag and imprecise focusing, the pressure plate must be properly positioned. Press the plate to move it from side to side.

- For 120 film; shift the plate to the left.
- For 220 film; shift the plate to the right.

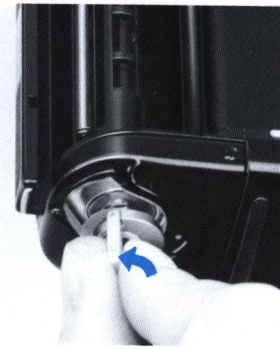
The plate's position can be viewed through the camera's rear window.



Exposure Counter Control Dial

The exposure counter control dial is located on the right-hand side of the camera. With a coin, set the dial to correspond with the type of film you are using. The shutter will be automatically disengaged after the number of exposures for that type of film are completed, permitting continuous wind-up of the film's remaining leader. Should you have the dial set in the wrong position it can be changed to the proper position as long as you have not gone past the 9th frame of the film.

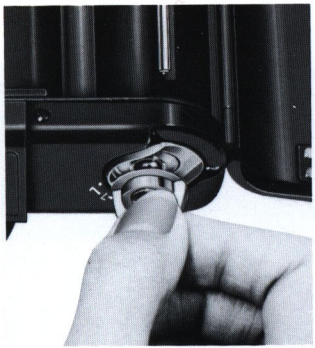
Loading the Camera

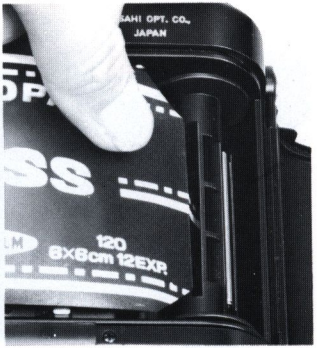


To open the camera, pull down on the release tab at the lower left corner of the camera back.

Two retainer knobs on both ends of the camera bottom secure the film spools in place. Unfold the crank, turn the knob counterclockwise and pull when inserting or releasing a spool.

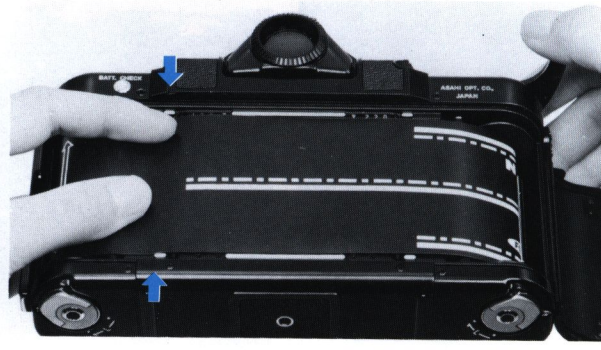
To close the camera, press firmly on its back, as shown in the center illustration, until a "click sound" is heard.





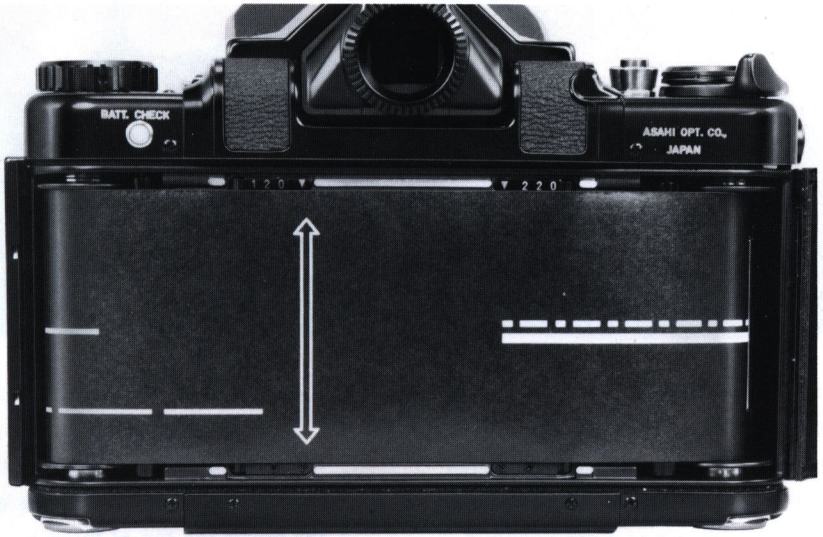
Avoid direct sunlight when loading or removing film

1. Insert an empty take-up spool into the right-hand side of the camera. Push in on the retainer knob and turn it clockwise to lock it into place.
2. After removing the tape from the roll, insert the roll into the left side of the camera and secure the retainer knob. (Avoid getting loose bits of paper in the camera)
3. Pull out about 15cm (6 in.) of the film's leader and thread it into the slot on the take-up spool. (Turn the rapid-wind lever until the slot faces upward. Never turn the spool in the opposite direction.)
4. Hold the leader in place while turning the rapid-wind lever until the spool has revolved once. Make sure the leader is rolling evenly onto the spool. If there is an excessive amount of loose leader rewind it and start again.



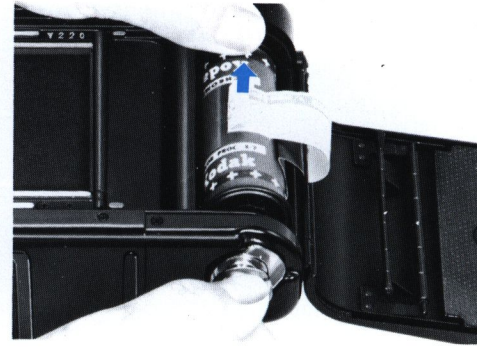
5. As shown in the illustration, press firmly on the film leader while turning the rapid-wind lever so that the leader is wound tightly onto the spool. Be sure to press only the area indicated by the two rectangular marks. Pressing on the shutter curtain will cause damage.

When the above method proves inconvenient, such as when the camera is mounted on a tripod, you can also use both hands to tightly pre-wind the leader onto the take-up spool before insertion into the camera.



6. Pressing gently with your fingers, slowly turn the rapid-wind lever to check if the leader is winding smoothly. Keep turning the lever until the arrow of the film-start-mark aligns with that indicated on the camera for the type of film you are using. (120 marked in green, 220 in yellow.) Going beyond the mark can result in the loss of one frame.
7. Close the camera back. Without pressing the shutter button, keep turning the rapid-wind lever until the counter indicates "1". The camera is now ready for the first exposure.

Taking Out the Exposed Film



Exposure Counter

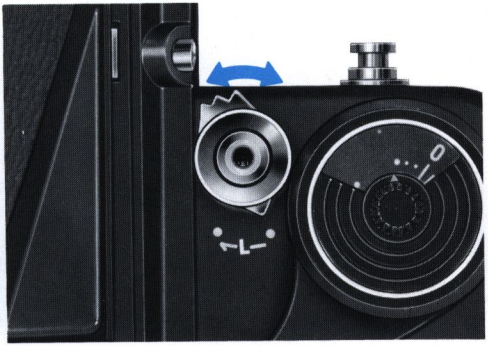
- After you have exposed the proper number of frames for the type of film you are using the shutter will be disengaged, allowing you to continue turning the rapid-wind lever until you feel the film go slack.

After taking 10 exposures of 120 film, or 20 exposures of 220 film, the shutter cannot be released even though the rapid-wind lever is cocked. Keep turning the rapid-wind lever until there is little resistance. The film is now completely wound.

Removing the Exposed Film

- Open the camera back. Press down on the rim at the top of the spool while pulling out the retainer knob. The film can then be easily removed.

Caution: Do not force the wind lever when it becomes taut. This may damage the camera.

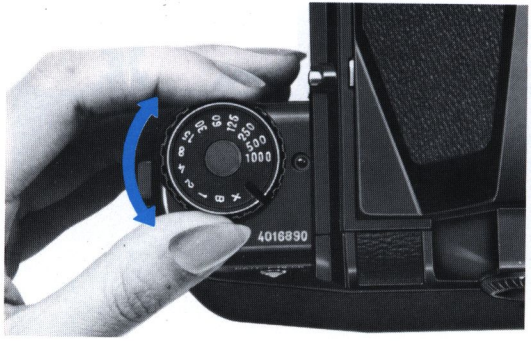


Shutter Button and Lock

The shutter button socket accepts all standard cable releases. It is equipped with a locking device that prevents accidental exposures when turned in the direction indicated by the arrow.

The shutter button should be released as smoothly and slowly as possible to avoid blurred photographs. A little practice is advised in this procedure.

Setting Shutter Speed



In order to achieve a high degree of precision the shutter-speed dial is a rotary switch which determines the shutter speed electronically. However, for this reason intermediate speeds can not be set. To set the shutter speed rotate the dial in either direction until the desired speed indicated on the dial matches the dot to the right.

Speeds of from 1 to 1/1000 of a second can be obtained in addition to X and B settings. At the "B" setting the shutter remains open as long as the shutter button is depressed.

Although there is no setting for long time exposures, if you set the dial anywhere between the dial's indicated settings, such as 500 and 1000, the shutter will remain open. To complete the exposure, move the dial to one of the indicated settings. With such time exposures and at the "B" setting, keep in mind that the battery is being exhausted.

For example, with a continuous time exposure, five hours is enough to exhaust a new battery.

F-stop Number

The aperture ring is turned until the desired F-stop number is aligned with the index on the lens body. The aperture can be set for intermediate F-stops as well. Their values are as follows:

2 • 2.8 • 4 • 5.6 • 8 • 11 • 16 • 22 • 32 • 45
2.4 3.4 4.8 6.7 9.5 13.5 19 26 38

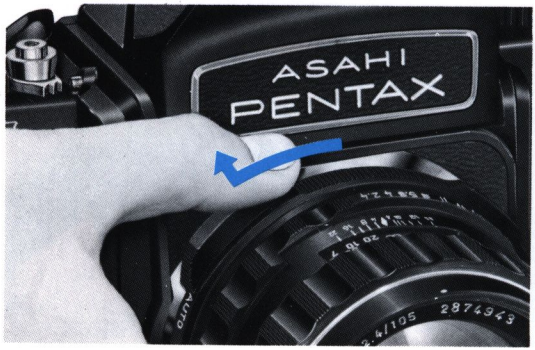
With the 105mm f/2.4 lens, f/3.4 comes after f/2.4.
For the 90mm f/2.8 and 150mm f/2.8 the sequence is: f/2.8, f/4, 4.8.

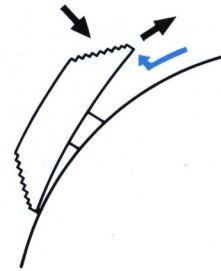
On the 35mm f/4.5, f/5.6 comes after f/4.5. The second available F-stop with the 75mm f/4.5 is f/6.7.

Depth of Field

By stopping down the lens, you can see the actual zone of sharpness at your selected aperture. In addition, the lens has a scale with two lines for each aperture setting. Once you have focused, the distance between these two lines (indicated on the focusing ring) gives you your depth of field.

Depth-of-field preview lever





Automatic Diaphragm

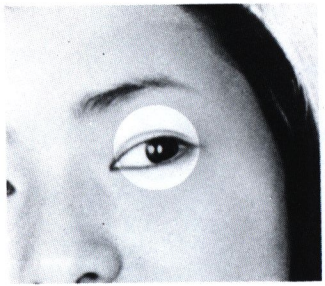
The diaphragm on nearly all lenses for the Pentax 6×7 is automatic, staying fully open until the moment the shutter is released.

Depth-of-field Preview Lever

When you wish to stop down the lens to view the zone of sharpness, however, the diaphragm can be switched to manual. Slide the lever down as shown in the illustration.

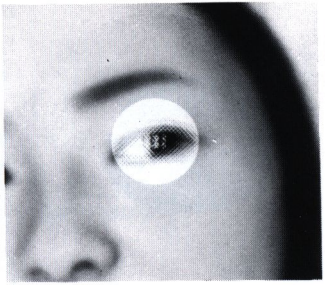
The lever can be locked in place by lifting up the upper end. Push in to release it. It is well known that depth of field can be determined by the aperture but in the case of back light when there is the fear of flare or ghost images the finder should be operated manually and the picture taken while checking the ghost image. The flare and the ghost will appear differently according to the F-stop number.

In focus



Microprism type

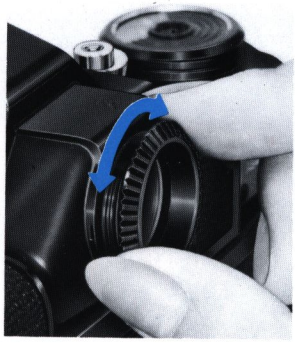
Out of focus



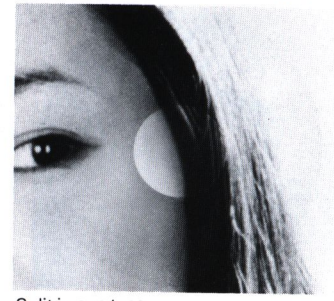
Microprism type

To focus turn the focusing ring 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 you are using does not provide sufficient illumination.
Simply turn the focusing ring until the image appears to be in focus.

Focusing Screens



In focus



Split image type

Inserting the corrective eyepiece

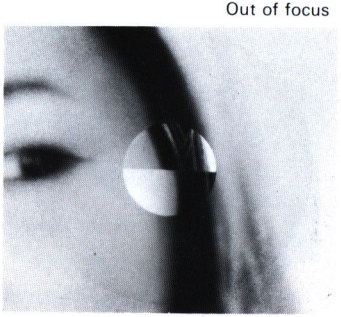
- Turn the eyepiece frame in a counterclockwise direction and remove it. Then, replace the present plain glass with the corrective eyepiece. −1D should be sufficient for nearsighted people while the +1D should be sufficient for farsighted people.

In addition to the standard microprism screen, four other focusing screens are available:

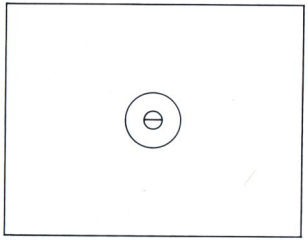
Horizontal Split-image
Matte with central open spot
Grid with microprism
Grid with matte field

Split image type

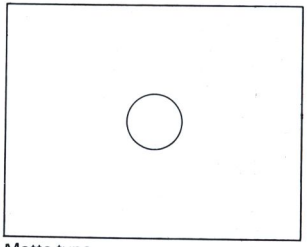
- The image is in focus when the images above and below the split line up. If the image is not in focus, the top and bottom halves of the image will not line up.



Split image type



Split image type



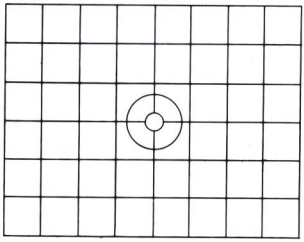
Matte type

Matte type

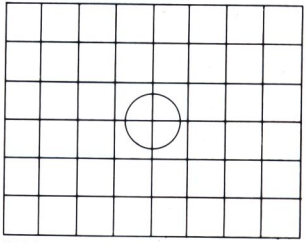
- Recommended for lenses darker than f/5.6

Grid + microprism type
Grid + matte type

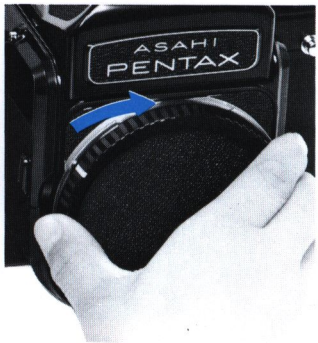
- The grid is necessary for the shift 75mm f/4.5 lens. It is used to check that horizontal or vertical lines are parallel. The horizontal and and vertical lines are spaced at 9mm so the size of the subject can be approximated.



Grid + microprism type



Grid + matte type



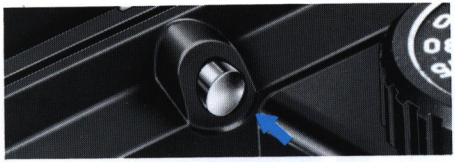
Changing Lenses

- To remove the lens, depress the bayonet lock (see illustration) and turn it counterclockwise approximately 60 degrees.
- The lens is mounted by aligning the red index on the lens with that on the camera and turning it clockwise. Check to see that it is firmly in place.

The inner bayonet is used for all lenses below 300mm and for the 500mm f/5.6.

Attaching Body Cap

When the lens is disconnected, attach the body cap to prevent dirt from damaging the inner mechanism.



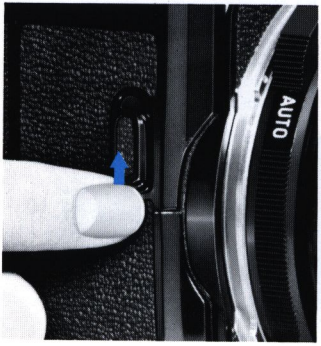
- Depress the release buttons on both sides of the viewfinder and lift.
- When replacing the viewfinder, make sure that both sides have fastened securely.

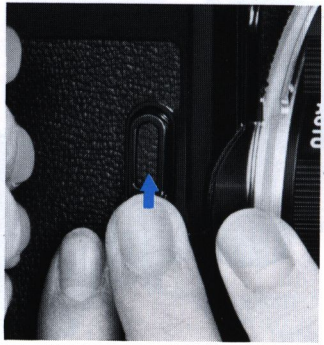
Note: In a bright environment, film may be accidentally exposed if the viewfinder is detached while the shutter is open for an extended period. Therefore, one of the two viewfinders should be mounted on the camera whenever the shutter is released for an extended period. There is also a danger of accidental exposure when very strong light, such as direct sunlight, hits the eyepiece of the viewfinder while the shutter is open for a long time. So be sure to protect the viewfinder eyepiece against light leakage while taking long exposures in bright light.

With the viewfinder attached, approximately 90% of the total picture area is visible.

By removing the viewfinder, the image on the focusing screen can be viewed directly. As a result 100% of the image becomes visible, but it will be reversed; left to right.

Mirror Lock-up Lever





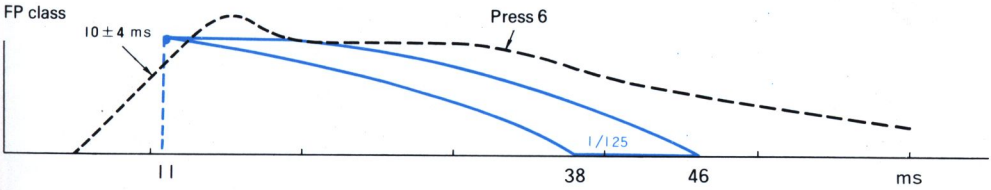
Mirror Lock

For shutter speeds slower than 1/60th second, blurring may occur even when a tripod is used (although this is extremely unlikely). Blurring is also likely to occur when using automatic bellows, a close-up connecting ring, or a large lens of over 300mm. To be sure no blurring occurs, lock up the mirror before releasing the shutter.

- The mirror lock and the lens shutter attached SMC Takumar/6×7 90mm f/2.8 lens cannot be used in combination. Please refer to the instruction manual provided with the lens.

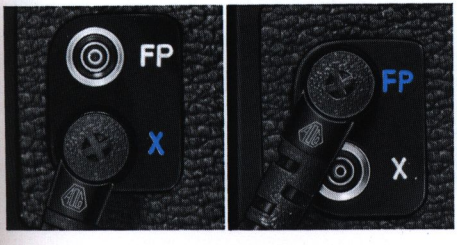
A lever is provided which allows you to lock up the mirror before releasing the shutter when working in situations requiring minimal vibration or noise. After composing and focusing the picture, slide the lever up (see illustration) to lock the mirror in its upward position. The mirror will return automatically after you release the shutter.

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 class						
	FP			FP class									



Electronic Flash

- When using the electronic flash, connection is made with the **X terminal** of the camera.
- Set the shutter speed dial at **X** (1/30 sec.) or any other slower speed.

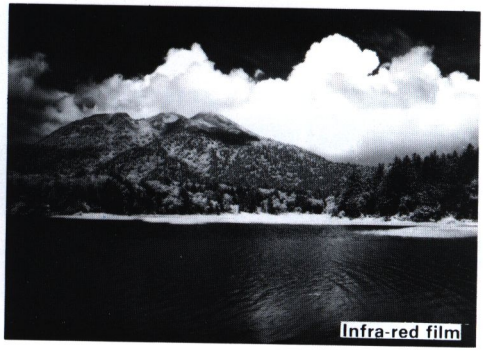


Flashbulbs

- Either the X or FP terminal can be used. (see synchronization table)
- When using the X terminal, select speeds slower than 1/15 sec.

For large cameras with a long shutter curtain travelling time such as the 6 × 7, a long duration flash is required. The FP flash units presently on the market do not synchronize with the Pentax 6 × 7 camera. However, the Press 6 can be used between 1/250 and 1/125 second.

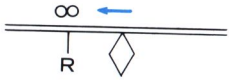
Infra-red Photography

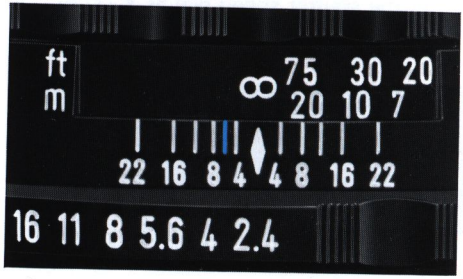


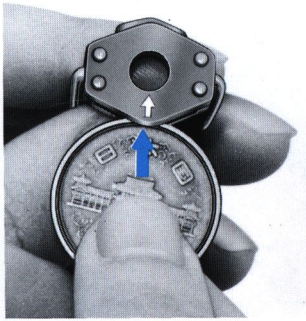
When using infra-red film, a change in focusing is required. For this purpose an infra-red index line is engraved on the lens.

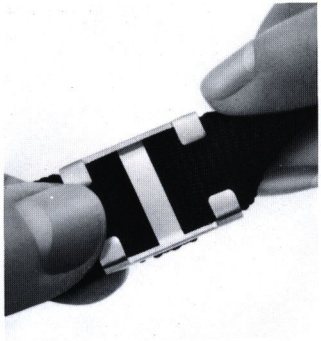
To use the index:

- Bring your subject into normal focus.
- Observe the distance of the subject indicated on the focusing ring.
- Turn the focusing ring until this distance is opposite the red infra-index on the depth of field scale.









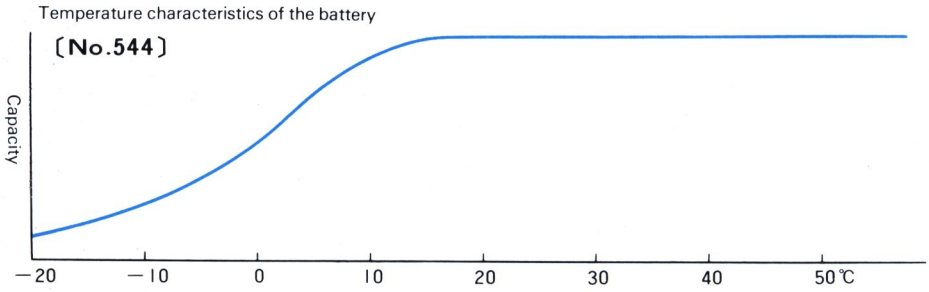
Attaching shoulder strap

The shoulder strap can be attached to any pair of the four hooks provided on the camera body.

- Open the clasp by inserting a coin and pushing in the direction of the arrow.
- Put the clasp onto the hook and press the lock.

To adjust the length of the strap, remove the strap from the metal fastener. The strap can be removed easily by twisting the strap as shown in the above photo and pushing inward.

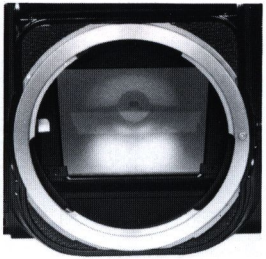
Resistance to Extreme Temperatures



Your camera will function properly within the temperature range of about +50°C to −10°C. Resistance to cold, however, diminishes as the lubricants within the camera become dirty. The effect of this will be a slow-down in shutter speed, particularly in the upper range. It is therefore advisable to use the slowest shutter speed possible in extremely cold situations.

At temperatures below 0°C, most batteries begin to lose power. One way to avoid this is by using the accessory battery cord and keeping the battery warm under your clothing.

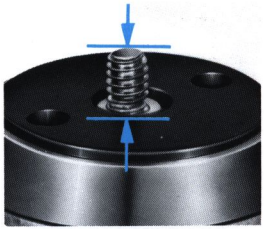
Camera Maintenance



- Always keep the camera's lenses, filters and the eyepiece as clean as possible. Use a blower and soft brush to remove loose dust and dirt. To remove smudges such as fingerprints use lens-cleaning fluid and tissue and wipe gently.
- Never touch the mirror or shutter curtain with your hands, as the natural acids on your skin may be damaging. Minor dirt or spots on the mirror will not affect the clarity of your pictures.
- Take care not to drop the camera or bump it against solid objects. Accidents or rough handling can easily damage the internal mechanism.
- Store your camera in a cool, dry, well-ventilated place.
- Your camera is not waterproof. There are several places where water can get inside and do significant damage. Take care to protect both body and lens from rain or moisture. If your camera should get wet, dry it off immediately with a clean, soft cloth.

If the camera mechanisms become wet this will probably make the camera irreparable. In such a case, consult a Pentax service center as soon as possible.

- The tripod socket has a depth of 5.5mm. Make sure the screw on the tripod you use is no longer than that, to prevent damage to the camera bottom.
- To ensure the high performance of your camera at all times, we recommend that you have it inspected regularly, every one or two years, by a professional repairman. If your camera is used infrequently, take it out every month or so and release the shutter at each of its speeds. Operate all the camera controls to keep them operating properly.
- Disassembly and lubrication should always be left to a specialist.
- Keep a record of your camera's serial number to report in case of loss or theft.



Fisheye 35mm f/4.5

55mm f/4

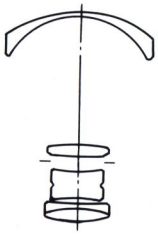
To obtain the focal length with approximate angle of view equivalence in the 35mm format, divide the 6 × 7 focal length by 2.

(Examples)

6×7 format	35mm format
55mm	= 28mm
105mm	= 52mm
300mm	=150mm

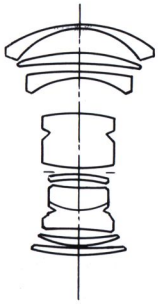
45mm f/4

1/3 X actual size

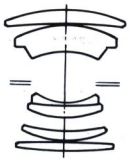


Shift 75mm f/4.5

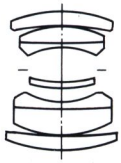
Lens shutter attached
90mm f/2.8



75mm f/4.5

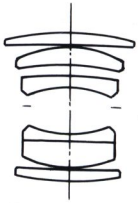


1/3 X actual size

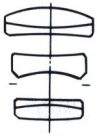


90mm f/2.8

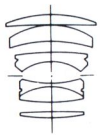
Macro 135mm f/4



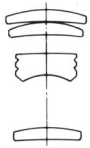
105mm f/2.4



1/3 X actual size



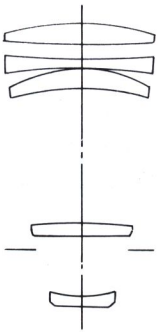
165mm f/2.8



200mm f/4

1/5X actual size

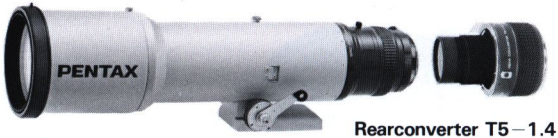
300mm f/4



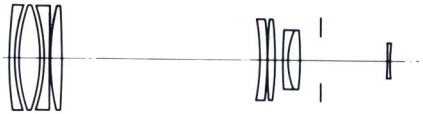
400mm f/4

1/10X actual size

800mm f/6.7

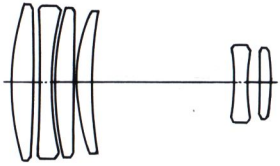


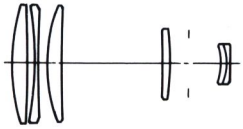
Rearconverter T5—1.4×



500mm f/5.6

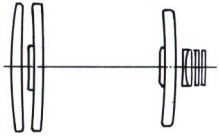
800mm f/4





600mm f/4

Reflex 1000mm f/8



Specifications of Interchangeable Lenses

67 INTERCHANGEABLE LENSES		Lens Construction	Diaphragm	Angle of View	Minimum Focusing Distance (m)	Minimum Aperture	Minimum Diameter (mm)	Length (mm)	Weight (g)	(Filter Size) (mm)
SMC Fish-Eye-Takumar	35mm f/4.5	7-11	FA	180°	0.45	22	102	73	920	●
SMC Pentax	45mm f/4	8-9	FA	89°	0.37	22	91.5	57.5	485	82
SMC Pentax	55mm f/4	8-9	FA	78°	0.40	22	91.5	75.5	615	77
SMC Takumar	75mm f/4.5	4-5	FA	61°	0.70	22	91.5	81	600	82
SMC Pentax Shift	75mm f/4.5	8-9	M	61°	0.70	32	97	106.5	950	82
○SMC Takumar	90mm f/2.8	5-6	FA	53°	0.85	22	91.5	63	610	67
SMC Pentax	90mm f/2.8	5-7	FA	53°	0.65	22	91.5	49	485	67
SMC Takumar	105mm f/2.4	5-6	FA	46°	1.00	22	91.5	60	615	67
SMC Macro-Takumar	135mm f/4	3-5	FA	36.5°	0.75	32	91.5	95	645	67
SMC Pentax	165mm f/2.8	5-6	FA	30°	1.6	22	91.5	98.5	835	67
SMC Takumar	200mm f/4	4-4	FA	25°	2.50	22	91.5	120	900	67
SMC Takumar	300mm f/4	5-5	FA	17°	5.00	45	93	186	1,430	82
SMC Takumar	400mm f/4	5-5	M	12.5°	8.00	45	115	287	2,570	77
SMC Pentax	500mm f/5.6	4-4	FA	10.2°	8.00	45	106.5	398	3,200	95
SMC Takumar	600mm f/4	5-6	M	8.5°	12.00	45	170	370	6,000	77
＊SMC Pentax M★ED (IF)	800mm f/6.7	8-9	FA	6.4°	8.00	45	150	565	6,500	67
SMC Takumar	800mm f/4	6-6	M	6.4°	20.00	45	236	611	17,700	77
SMC Reflex-Takumar	1000mm f/8	4-6	●	5.1°	35.00	—	180	352	6,660	77

SMC=Super-Multi-Coated FA=Fully Automatic M=Manual ●UV,Y2,02 & R2 built-in ● ND filter built-in ●Y2,R2 & ND filters built-in
ED=Extra-low Dispersion IF=Inner Focus ＊When 800mm f/6.7 lens is combined wifh a Rear Converter T5-1.4x it functions as a 1120mm f/9.5 super telephoto lens. ○With a built-in leaf shutter

TTL Pentaprism

A pentaprism with a built-in through-the-lens meter that is coupled to the shutter-speed dial and aperture ring. Full aperture readings can be taken with automatic lenses and the meter switch is provided with a 25 second timer.

Pentaprism

An eyelevel viewfinder providing magnification of 1 × with a 105mm lens.

Collapsible Focusing Finder

A waist-level finder that gives a 100% field of view. It is easily collapsed and weighs only 134 grams. After focusing, the eyepiece can be moved out of the way to permit viewing from a distance. With a 105mm lens, 1.6 times magnification is provided.

Focusing Finder

Equipped with a built-in eyecup and angle of view adjustment. The finder also blocks out unwanted light. Magnification is 1.3 times with a 105mm lens.

Spotmeter V

Built for use by professionals in still photography as well as those in the motion picture and television industries, the spotmeter permits the taking of light readings from the camera's position, often considered the most ideal. The angle of light reaching the meter is only 1°.

Highly responsive silicon photo diodes provide measurement from EV 1 to 19 at ISO 100. Finder magnification is 15X. An internal light facilitates reading of the meter in subdued light.

Digital Spotmeter

Designed to be compact, portable, and easy to use this rugged spotmeter employs LED's for effortless light readings even in the darkest of situations. Angle of reception: 1°; Range is EV 1 to 20 at 100 ISO.

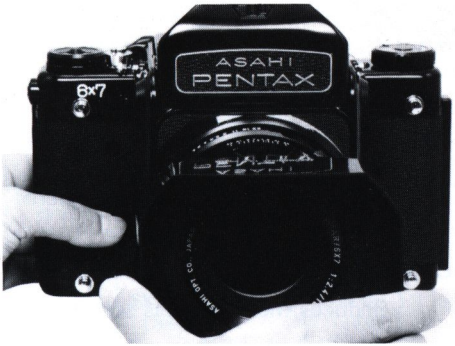
Lens Hoods

A lens hood is useful in preventing flare by blocking out unwanted light and reflection from sources outside of the picture area.

In addition, it can be left on the lens to help protect against the elements when working outdoors, as well as provide a buffer in case of accident.

Lens hoods are as follows:

Lens	Type	Note
105mm 90mm	Screw-in	Can be used with 67mm filters; both standard and special
135mm 150mm	Screw-in	Can be used only with special 67mm filters
45mm f/4	82mm Clip-on	



Lens	Type	Note
55mm f/4	77mm Clip-on	Easily clips on to all 77mm filters
75mm f/4.5	Two prong bayonet	• Align the white dots and turn clockwise to mount. • Also attaches to special 82mm filters
165, 200, 300, 400, 500, 600, 800mm plus 1000mm reflex	Built-on	

- A lens hood cannot be used with the Shift 75mm f/4.5 lens.
- The top and bottom of rectangular lens hoods should be kept parallel with the top and bottom of the camera.

As all Pentax lenses are multi-coated to minimize light reflection, in most instances flare will not occur even without a lens hood.

Filters for 6 x 7 Camera

For use with black and white film there are five types: UV, Y2, 02, R2 and YG.

With color reversal film, three types are available: Skylight, Cloudy, and Morning/Evening (For color negative film, filters are not commonly used, as correction is accomplished with the print.)

Purpose

UV Absorbs the ultraviolet radiation that often shows up as a haze in the background with distance shots.

Y2 Corrects color imbalance outdoors by absorbing blues, thus darkening the sky and adding contrast.

O2 The O2 orange, along with the R2 red, carry even further the effect of the above filter in adding contrast by absorbing blues. Both are used with infra-red film.

YG The yellow-green filter enhances flesh-tones and textures.

Skylight

This slightly pink tinted filter reduces the bluishness encountered in open shade outdoors.

Cloudy

Reduces the bluishness sometimes prevalent on rainy or overcast days. Has a slight yellowish-brown tint.

Morning/Evening

Reduces the warmth of early morning and late-day sunlight.

Avoid doubling-up with filters as there is no benefit to be gained, except in the case of a polarizing filter.

Specifications of Filters

Type / Diameter	U V	Y 2	O 2	R 2	Y G	Lens used	Method of attaching: 2 prong bayonet	Method of attaching: Screw-in
67mm	⊙ ⊙ ●	⊙ ⊙ ●	⊙ ●	⊙ ●	●	90mm、105mm、150mm 200mm、Macro135mm	○	○
77mm	⊙ ⊙ ●	⊙ ⊙ ●	⊙ ●	⊙ ●	●	55mm・F4、400mm、600mm 800mm、Ref 1000mm	○	○
82mm	⊙ ⊙ ●	⊙ ⊙ ●	⊙ ●	⊙ ●	●	45mm、75mm Shift 75mm、300mm	○	
95mm	⊙ ⊙	⊙ ⊙	⊙	⊙		500mm		○
Diameter / Type	SKY LIGHT	CLOUDY	MOR & EVE			Lens used		

⊙ SMC for B&W ⊙ SMC for color ● Single coating ● Single coating for color

SMC Filters

In addition to standard single coating filters, SMC filters (Super Multi-Coated) are available for every type except the YG. Along with SMC lenses , SMC filters ensure a great reduction in unwanted reflections.

Attaching Bayonet-mount filters:

- Of the two white index marks on the filter, align the inner one with the white index on the lens front.
- Turn the filter clockwise about 60° until it is snug.

Window glass reflection

Reflection eliminated with polarization filter.

Polarizing Filter

A polarizing filter allows you to tone down glare and eliminate reflections from non-metallic surfaces. It can deepen the blue of the sky and enrich the color of many surfaces, such as the subject's skin; effects often desired in color photography.

Available in 67mm only.

Gelatine Filter Holders

Holders designed to accept conventional 75mm square gelatine filters are available for three lenses: 67mm, 82mm, and 100mm.

Magnifier

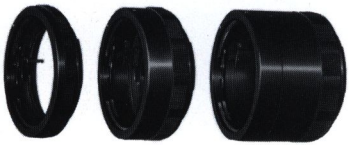
For precise focusing in delicate situations this compact magnifier provides two times enlargement of the central area of the frame. After focusing it can be swung up out of the way for normal viewing. Includes a built-in focal adjustment.

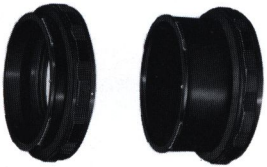
Right-angle finder

Attaches to the eyepiece of either the Pentaprism or TTL Pentaprism. Can be used vertically and horizontally, providing a view identical to that normally seen in the viewfinder. Focal adjustment provided.

Eyepiece Correction Lenses

For those who have trouble focusing without glasses, eyepiece correction lenses are available in seven powers; from −5 to +2 diopters.





Extension Tube Set

By inserting an extension tube between the lens and the camera, close-up can be obtained.

For lenses below 300mm, three automatic extension tubes are available, preserving the function of automatic diaphragm.

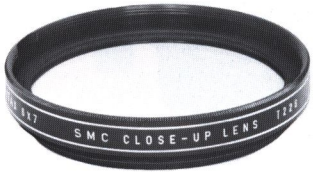
Two extension tubes are available for use with lenses above 400mm (The use of extension tubes with the 500mm f/5.6 lens is not recommended as a serious loss of brightness occurs.)

Helicoid Extension Tubes

Also fitting between the camera and lens, the helicoid extension tube provides a magnification from 0.30 × to 0.63 × with a 105mm f/2.4 lens. This is almost equivalent to the result obtained by combining the two larger of the normal extension tubes. Numerous uses are possible, such as combination with the 35mm format 50mm f/4 lens and reversal ring, or with the slide holder for making copies.

SMC 6×7 Close-Up Lenses

These lenses screw into the front of a 90, 105, 150, 165 or 200mm lens, providing magnification of up to one quarter life-size.



67mm Reverse Adaptor

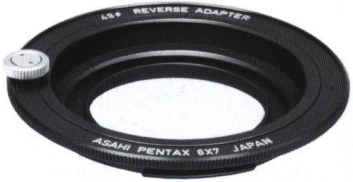
Enables you to reverse any lens accepting a 67mm filter, a quick and simple way to make close-ups and copies. In combination with extension tubes or bellows, magnifications of life-size or more can be obtained.

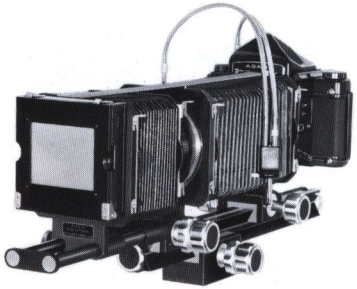
Can be used with: 90mm f/2.8, 105mm f/2.4, Macro 135mm f/4

49mm Reverse Adaptor

For use in the reverse mounting of a 35mm format Pentax lens onto the 6×7 body. With a Macro 50mm f/4 lens, 2.1 × to 2.5 × magnification is obtainable.

Also can be used with: 28mm f/2.8, 28mm f/3.5, 35mm f/2.8, 35mm f/3.5, 50mm f/1.4, 50mm f/1.7, 50mm f/2.





Slide Holder K

Used in making copies of 35mm slides (mounted film) with the Pentax 6 × 7 or 35mm Pentax. When making a negative of a 35mm color slide (for making a color print), the 6 × 7 retains resolution better than the 35mm.

If the body is a Pentax 6 × 7, a 6 × 7 helicoid close-up ring and a 49mm reverse adapter should be used together. (If the lens filter size is 52mm, a 52mm — 49mm adapter ring must also be used.)

These accessories can also be used to make color duplicates or a B&W negative from a color slide; or a B&W positive film from a B&W negative.

Auto Bellows and Slide Copier

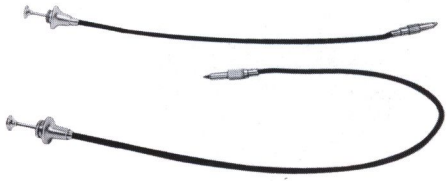
The 6×7 bellows close-up attachment has a large range of extension, from 54 to 300mm, guided by a precision X rail. By using the accessory double cable release, the lens diaphragm functions automatically. Provision is made for reversing the lens, handy for focusing when making enlargements. The slide copier attaches to the front of the bellows, enabling you to make copies of 6×7 and 35mm films.

Copying Stand

Provides sturdy support and precise control of the camera when making copies. Can also be used with bellows or extension tubes.

Cable Release

With time exposures, simply loosen the auto-lock ring and then trip the shutter. Finish the exposure by tightening the ring. With the lock ring kept tightened, it functions like conventional releases.
Type II, 30cm, and a longer 50cm one are available.



Rear Converter T6 – 2X

Takumar 300mm f/4 +
Rear Converter T6 – 2X

Takumar 200mm f/4 +
Rear Converter T6 – 2X

Eyecup

Rear Converter

For use with lenses of over 135mm the rear converter doubles the focal length as well as F-stop value of your lens.

For example, with the converter attached between a 200mm f/4 lens and the 6×7 body, the lens would in effect be a 400mm f/8. With automatic diaphragm lenses, automatic full aperture viewing remains possible.

When used with the longer telephotos, however, considerable loss of brightness can be expected. Particularly with the 500mm f/5.6 and 1000mm f/8 its use is not recommended.

Eyecup

Screwed in under the eyepiece frame, it blocks distracting light. Not recommended for eyeglass wearers.

Grip

The grip provides rigid single-handed support of the 6×7 camera. Includes accessory shoe.

Quick Focusing Ring

Greatly facilitates use of the focusing ring when holding the camera by the accessory grip. 105mm to 200mm lenses require type A; type B for 35mm to 90mm lenses.

Caps

Additional caps are available and should be used on the lens and camera body.

1. **Front Lens Cap**
2. **Rear Lens Cap**
3. **Body mount cap**

Shoulder Strap

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

Battery Cord

Permits you to operate the camera in cold weather while keeping the battery warm with your body heat.

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Soft Lens Case

The soft buckskin case accommodates a variety of lenses. (35mm f/4.5 to 200mm f/4.)

Carrying Case

A small case designed to provide easy access to the camera, along with accessories and film.

Professional Case

Designed especially for the 6×7, the case is partitioned into nine sections accommodating the camera, three to four lenses, accessories and film. **45.5cm width × 28cm height × 26cm depth, weighs 6.8 kilograms.**

Second Body

Pentax 6×7 Body

- Having two bodies will be convenient when shooting with two types of film at the same time; or when using two lenses when there is no time for changing lenses; or when using two kinds of finders, etc.

Warranty Policy

All Pentax cameras purchased through authorized bona fide photographic distribution channels are guaranteed against defects of material or workmanship for a period of twelve months from date of purchase. Service will be rendered and defective parts will be replaced without cost to you within that period, provided the equipment has not been abused, altered, or operated contrary to instructions. Because the tolerances, quality, and design compatibility of lenses other than Pentax-Takumar lenses are beyond our control, damage caused by use of such lenses will not be covered by this warranty policy. The manufacturer or its authorized representatives shall not be liable for any repair or alternations except those made with its written consent and shall not be liable for damages from delay or loss of use or from other indirect or consequential damages of any kind, whether caused by defective material or workmanship or otherwise; and it is expressly agreed that the liability of the manufacturer or its representatives under all guarantees or warranties, whether expressed or implied, is strictly limited to the replacement of parts as hereinbefore provided.

Procedure during 12-month warranty period
Any Pentax which proves defective during the 12-month warranty period should be returned to the dealer from whom you purchased the equipment or to the manufacturer. If there is no representative of the manufacturer in your country, send the equipment to the manufacturer, with postage prepaid. In this case, it will take a considerable length of time before the equipment can be returned to you owing to the complicated customs procedures required in Japan in importing and re-exporting photographic equipment. If the equipment is covered by warranty, repairs will be made and parts replaced free of charge, and the equipment will be returned to you upon completion of servicing. If the equipment is not covered by warranty, regular charges of the manufacturer or of its representatives will apply. Shipping charges are to be borne by the owner. If your Pentax was purchased outside of the country where you wish to have it serviced during the warranty period, regular handling and servicing fees may be charged by the manufacturer's representatives in that country. Notwithstanding this, your Pentax returned to the manufacturer will be serviced free of charge according to this procedure and warranty policy. In any case, however, shipping charges and custom clearance fees are to be borne by the sender. To prove the date of your purchase when required, please keep the receipts or bills covering the purchase of your equipment for at least a year. Before sending your equipment for servicing, please make sure that you are sending it to the manufacturer's authorized representatives or their accredited repair shops, unless you are sending it directly to the manufacturer. Always obtain a quotation of the service charge, and only after you accept the quoted service charge, instruct the service station to proceed with the servicing required.

This warranty policy does not apply to Pentax cameras purchased in the U.S.A. and U.K. For these cameras, please refer to the separate Warranty Policy Card enclosed here.

Asahi Optical Co., Ltd. C.P.O. 895, Tokyo 100-91, JAPAN
Asahi Optical Europe N.V. Weiveldlaan 3-5, 1930 Zaventem Zuid-7, BELGIUM
Pentax Handelsgesellschaft mbH Postfach 54 0169, 2000 Hamburg 54, WEST GERMANY
Pentax U.K. Limited Pentax House, South Hill Avenue, South Harrow, Middlesex HA2 OLT, U.K.
Pentax France S.A., Z.I. Argenteuil, 12, Rue Ambroise-Croizat, 95100 Argenteuil, FRANCE
Pentax (Schweiz) AG Industiestrasse 2, 8305 Dietlikon ZH, SWITZERLAND
Pentax Svenska AB Box 650, S-751 27 Uppsala, SWEDEN
Pentax Nederland Spinveld 25, 4815 HR Breda, THE NETHERLANDS
Pentax Corporations 35 Inverness Drive East, Englewood, Colorado 80112, U.S.A.
Pentax Canada Inc. 1760 West 3rd Avenue, Vancouver, B.C. V6J 1K5, CANADA
Asahi Optical Brasileira Ind. e Com. Ltda. Rue Capitão Antonio Rosa 376, Sala 121 Ed. PBK, São Paulo, BRASIL

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