

# PENTAX

## 6x7





# ***THE SUPER SLR!***

A stampeding stallion . . . An athlete making a flying tackle  
. . . A hummingbird darting from blossom to blossom . . .  
A glamorous model posing atop a sand dune . . .

Regardless of the subject, photography with the Pentax 6x7 combines unmatched image quality with maximum handling ease. That's why we call it the "Super SLR." For it is a perfect balance of two picture-taking personalities. It's the medium format camera guaranteeing the high-quality results and non-waste enlargements inherent in its 6x7 "ideal" negative format; and from its very inception it was designed to incorporate all of the outstanding features of a 35mm SLR — including well-positioned controls, precise eye-level operation, superb balance, smooth and steady shutter release, an electronic focal plane shutter, well-dampened mirror action and a host of other outstanding features. And, enhancing its versatility even more is a wide array of interchangeable lenses from ultra-wide to ultra-telephoto, fish-eye to macro, and also a full range of close-up accessories. Optical viewfinders permit the camera to be used at waist and ground levels, on vertical copy stands or on low-height tripods. A highly accurate TTL metering pentaprism finder is also available which provides full-aperture readings with automatic diaphragm lenses. In

addition, there's an assortment of focusing screens with varied alignment patterns for a wide variety of studio, architectural and other applications. But, these are not the only reasons we call the Pentax 6x7 the "Super SLR." It would be hard to overlook its rugged body and durable construction. Photographers really appreciate its capacity to take the day-in, day-out battering of studio work and yet render unwavering performance on location.

There's yet one more superlative which can be applied to the "Super SLR" — the quality of its 6x7 lenses, acclaimed the world over for their brilliance and clarity. Like the camera, these also have been designed along 35mm SLR lines, featuring a bayonet mount for quick changes, and automatic diaphragm action on all models up to 500mm telephoto excluding the 400mm. Moreover, as the only medium format lenses treated with Super-Multi Coating, the 6x7 lenses retain their crisp sharpness and dramatic contrast even in the harshest lighting conditions.

It all adds up to "The Super SLR."  
The Super Camera . . . The Super Lenses . . .  
The Super System!







## NOT A FORMAT DESIGNED TO MATCH THE CAMERA, BUT A CAMERA DESIGNED TO MATCH THE FORMAT

With the advent of roll film, box-shaped cameras were designed to accommodate it. But, whether inexpensive plastic box cameras or deluxe twin lens and single lens reflexes, they were too awkward to be held both horizontally and vertically; consequently, the film format was designed as a square. This way, no matter how the camera was held, the result was the same. Later, when attempts were made to extend the format size of roll film to 6x7, the box was enlarged, but not redesigned to permit holding the camera sideways; it was decided to rotate the film instead.

Both of the above examples may be considered as designing the format to match the camera. Or reworded, placing the cart before the horse.

But, the solutions created more problems than they solved. Although the original square format design eliminated the need to hold the camera sideways, it created a large waste, as negatives required cropping to create a rectangular picture. The rotating back design eliminated the problem of negative waste, but added significant bulk and weight, thereby restricting the use of the camera.



## THE PENTAX ANSWER

When the engineers at Asahi Optical Company set out to design the Pentax 6x7, they started from the right, premise: they chose the 6x7 format because it is only slightly larger than the 6x6 square format, but offers a full 50% more usable area. And it enlarges to all standard paper sizes without cropping. That's why it is referred to as the ideal format — "It eliminates the problem of negative waste."

Furthermore, as the 6x7 negative is merely 21% larger than the square format, the engineers were able to make it almost as small as cameras using the smaller negative, but designed it exactly like a 35mm SLR. Thus, it offered superb balance and far excelled the box-shaped cameras in handling ease. And while the box cameras were designed principally for waist-level viewing or use with a tripod and later adapted for eye-level use, the Pentax 6x7 was designed for both hand-holding and eye-level viewing from the very beginning. Its easy handling and rapid response to action facilitates concentration on the image, eliminating the cumbersome operation associated with box-shaped cameras. It can be used anywhere — on the ground, vertically on a copy stand, on low-height tripods, in the air. . . . The Pentax engineers had the answer. From the very beginning they designed the "ideal camera to match the ideal format."



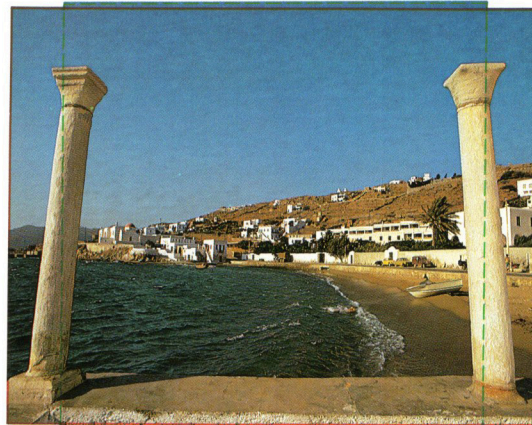
## GIVES YOU 50% MORE USABLE NEGATIVE AREA THAN "SQUARE" FORMATS

The Pentax 6x7 gives a 55mm x 70mm negative — an effective area of 3,850 sq. mm. With the 6x7, you need enlarge the negative only 3.2 times for an 8x10 print. The typical 6x6 has a 56mm x 56mm size negative — with an *effective* area of only 2,508 sq. mm. This means the negative must be enlarged by 4 times to make an 8 x 10 print. There's less grain, sharper pictures, better color with the Asahi Pentax 6x7, the only ideal-format SLR with 35mm eye-level handling ease. A direct comparison of negative sizes can be deceptive, as illustrated on the right. A 6x7 negative has only 21% more area than a 6x6 negative. However, there is fully 50% (two square inches) more *usable* negative with the 6x7 format over the old 6x6 "square."

Actual 6 x 7 size—  
fully usable image

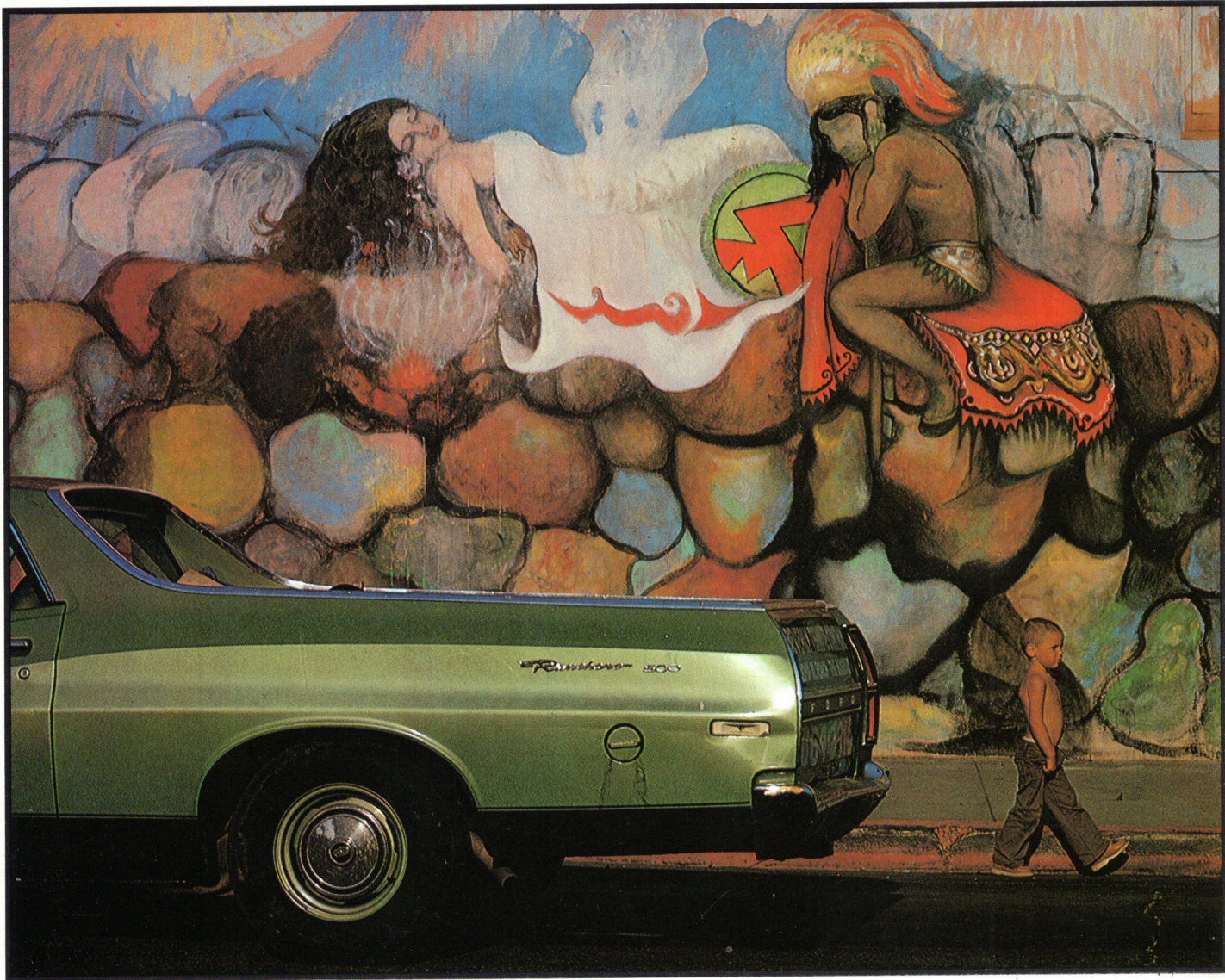
Actual 6 x 6 size—  
 $\frac{1}{2}$  as much usable image

8 x 10 Format



- With the 6x7 and its fully usable image format, you can compose either vertical or horizontal shots using the full edge-to-edge image area without having to "crop" in the viewfinder.



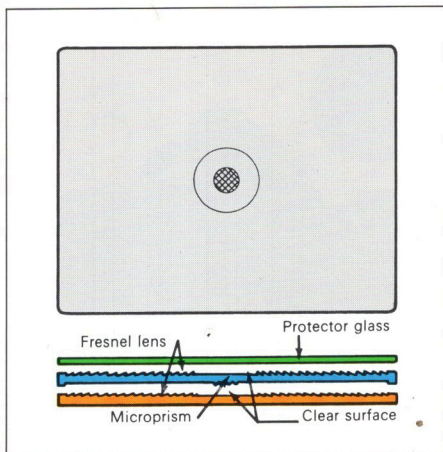




## 35mm SLR HANDLING

### Outstanding Viewfinder

The viewfinder system of the Pentax 6x7 is more than you would expect from a high quality 35mm SLR. The image appears on a large, bright focusing screen which features a centrally located microprism spot for critical focusing. Because the finder produces a life-size image with the standard lens, the camera can be operated with both eyes opened for comfortable and easy viewing. And, in spite of the compact size of the interchangeable pentaprism, 90% of the taking image is visible on the focusing screen to assure accurate framing. Moreover, visibility can be increased to 100% merely by replacing the standard Pentaprism Finder with the Folding Focusing Hood, and the Rigid Magnifying Hood, which offer waist-level viewing. The standard focusing screen can also be replaced with any of four other screens which are available at all Pentax service centers.



### Quick-Change Lenses

All SMC 6x7 lenses are designed to handle and function exactly like the very best 35mm SLR interchangeable lenses. Each SMC 6x7 lens instantly bayonets into place with a mere  $57^\circ$  twist, and each lens from fish-eye to 300mm plus 500mm and M<sup>\*</sup>800mm telephoto is equipped with an automatic diaphragm. They are all easily focused with and cradled in the left hand. A single flick of the right forefinger on the Depth-of-Field Preview Lever of the lens closes the diaphragm to the taking aperture for direct viewing of the depth of field. And one more flick returns the lens to its maximum aperture for bright viewing. Additionally, depth-of-field, distance and aperture scales are clearly engraved for legibility; the focusing and aperture rings are strongly knurled to simplify manipulation.

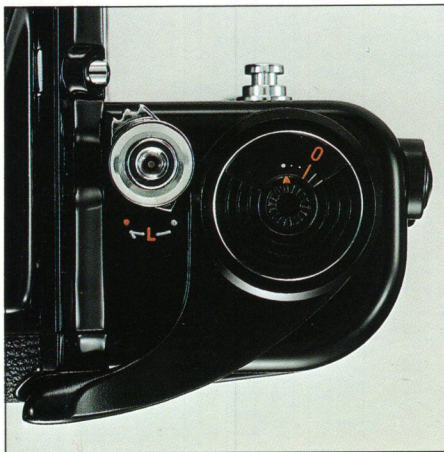




## 35mm SLR HANDLING

### Rapid-Wind Lever & Shutter Release Button

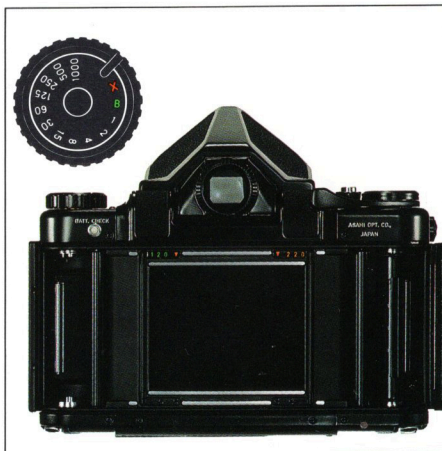
The film advance cranks on most large format cameras require either full 360° rotation or multiple strokes in order to advance the film one frame. However, the Pentax 6x7 enables you to advance the film and cock the shutter with a short 180° stroke of the Rapid-Wind Lever. This makes it possible to keep pace with the quickest action. Each time the film is advanced, the Exposure Counter also advances, indicating a maximum of 10 exposures for 120 film, or 20 exposures for 220 film. The Shutter Release Button is perfectly positioned for smooth operation and is equipped with a lock lever which prevents accidental release of the shutter. The lock lever also permits "time" exposures when used in conjunction with the "B" setting of the Shutter-Speed Dial.



### Accurate Electronic Shutter

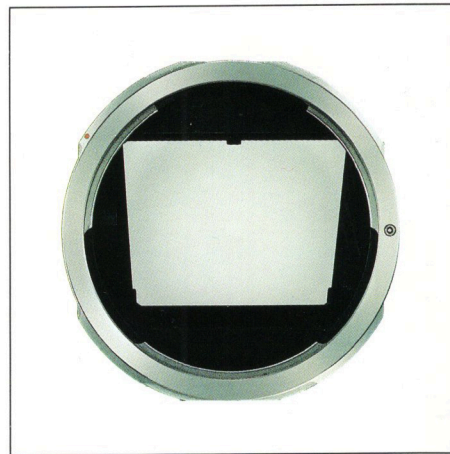
Unlike 35mm SLR's, most medium format cameras have neither an electronic shutter nor a fast shutter speed of 1/1000 of a second. However, the Pentax 6x7 can hardly be considered an ordinary medium format camera. Not only is it equipped with a precision electronic shutter, but each of its shutter speeds from 1/1000 to 1 second is electronically timed for matchless accuracy.

Precision performance is not the only concern of Pentax engineers—equal weight has also been given to human engineering. That's why the shutter speed dial is located within easy reach of the fingers of the left hand, and can be easily manipulated even when holding the camera at eye-level; it also rotates a full 360° for maximum operating convenience.



### Large, Swing-Back Mirror

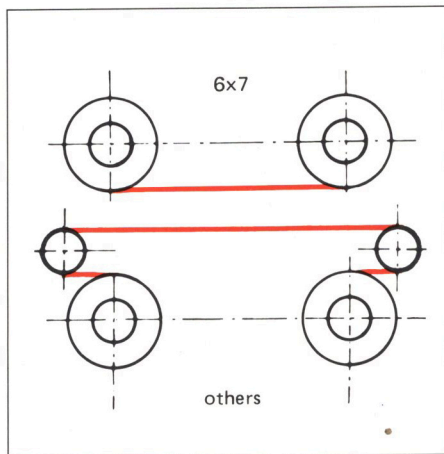
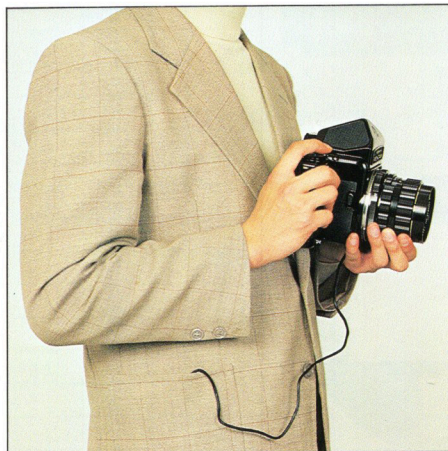
The large, reflex mirror of the 6x7 swings back and up, returning instantly after the exposure for uninterrupted viewing. There's no blackout and minimal vibration. Hidden in the walls of the mirror chamber is a damping device which effectively reduces mirror shock. And, thanks to the large dimensions of the mirror, a 100% of the taking image can be viewed when the Rigid Magnifying Hood and the Folding Focusing Hood are used for waist-level viewing. Moreover, for critical work, such as macro-photography and ultra-telephotography, the mirror can be locked in the up position to eliminate shock entirely.





### Dependable Power Source

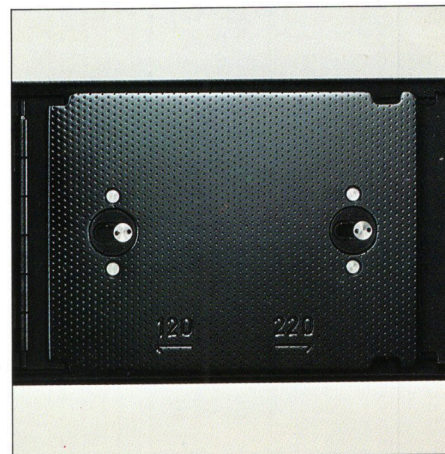
A single 6V silver oxide battery is all that is needed to power both the electronic shutter and the accessory full-aperture metering TTL Pentaprism Finder. Because silver oxide batteries offer higher voltage and greater stability at low temperatures than mercury batteries, they are an extremely dependable power source. You need not stop working at freezing temperatures either, as the accessory Remote Battery Cord makes it possible to operate the camera in frigid zones as well. At temperatures below zero degrees Centigrade (32° F), the battery can be kept warm in your pocket by removing it from the camera and placing it in the battery chamber at the end of the Remote Battery Cord. The opposite end of the cord has an electrical plug which inserts into the camera to power the shutter and TTL Pentaprism Finder.



### Flatness of the Film Plane Assured

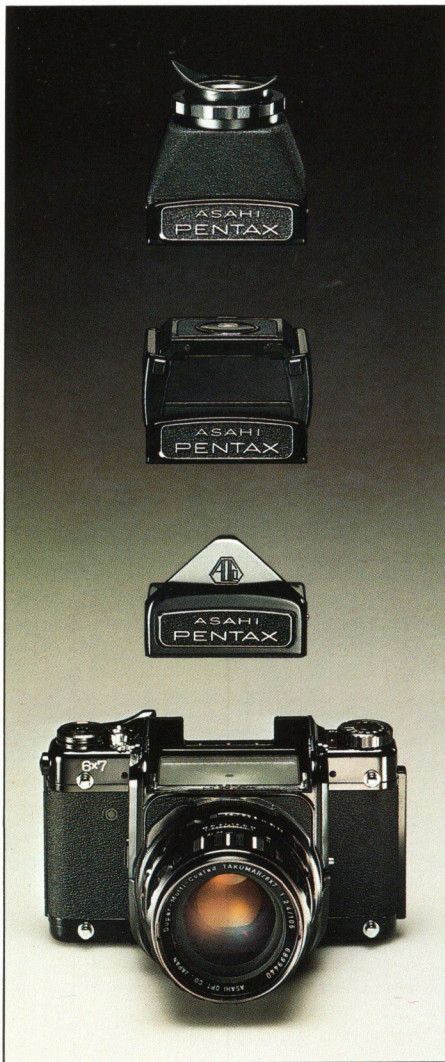
In addition to the camera lens, sharpness of the image on the negative depends heavily both upon the film transport method and adjustment of the film pressure plate. The unique film take-up system of the Pentax 6x7 features direct winding onto the take-up spool in accordance with the film's natural curve. And a slight horizontal movement of the film pressure plate instantly adjusts the plates's height to coincide with the type of film in use (120 or 220). Precisely the right amount of pressure is applied to hold the film gently but firmly against the guide rails for edge-to-edge sharpness. After adjustment is made, the numbers "120" or "220" appear in a window on the back cover for last minute checking.

These two factors (direct film wind and pressure plate adjustment) assure flatness of the film plane for optimum sharpness.





## INTERCHANGEABLE FINDERS



### Rigid Magnifying Hood

This deluxe waist-level type finder completely shields the focusing screen from ambient light for crisp, clear viewing. The 1.3X magnifier can be adjusted to the viewer's eyesight for maximum viewing comfort. The entire focusing screen is visible for a 100% view of the negative area.

### Folding Focusing Hood

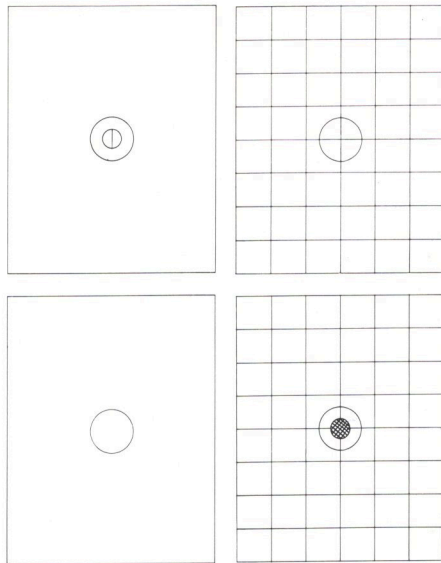
The waist-level viewing offered by this compact folding finder is ideal for macro-photography and ultra-telephotography. It has built-in 1.6X magnifier for critical focusing. The magnifier folds out of the way for full-screen focusing and composition. The Folding Focusing Hood simplifies low-angle shooting and shows 100% of the negative area on the screen.

### Pentaprism Finder

This is the standard eye-level, pentaprism finder unit. Extremely compact, it provides large, bright viewing in spite of its size. It weighs only 460 grams and detaches instantly from the camera body for interchanging with the three other finder units. 90% of the taking image on the focusing screen can be seen through the finder eyepiece.

## FOCUSING SCREENS

The 6x7 focusing screens are varied in design for a wide range of specialized applications requiring accurate alignment of image patterns such as in architectural photography, advertising and copy work. In addition to the standard focusing screen, others are available and can be installed at your nearest Pentax service center. Each of the focusing screens is equipped with a unique double Fresnel lens for exceptionally bright viewing and even illumination across the entire field. The standard screen features a mat field with central microprism spot, while the others are: mat with central split-image spot, all-mat, mat with crosslines, mat with crosslines and central microprism spot.





## TTL PENTAPRISM FINDER



The Through-The-Lens Pentaprism Finder attaches to the camera in the same manner as the other viewing units and automatically couples to the shutter-speed dial and aperture for "zero-method" exposure control. The through-the-lens meter reads an average of the total light entering the camera no matter what lens is used. All readings are made with the lens wide open, as the meter is mechanically cross-coupled to the camera. No battery is necessary in the meter unit itself because it draws power from the battery already inserted in the camera body. Behind this precision, through-the-lens meter are years of experience. It has been perfected in other Pentax cameras, and incorporates the utmost in technological sophistication.

**Through-the-lens meter**—GPD average metering either at full aperture or stopped-down aperture. Meter needle visible through the viewfinder window. Couples to both shutter-speed dial and diaphragm.  
**Measurement range**—EV 2.5 - 19 (with ASA/ISO 100 film and f/2.4 lens.)  
**Film speed and scale**—ASA/ISO 12 - 3200.  
**Working range**—Shutter speeds from 1 to 1/1000 sec. with ASA/ISO 100 film. Diaphragm settings from f/2 to f/22.  
**Power source and consumption**—6V alkaline or silver oxide battery which also powers the shutter mechanism; 4mA.  
**Dimensions**—Width 123mm (4.84") x Height 58mm (2.28") x Depth 89mm (3.5")  
**Weight**—520 g (1 lb. 2 ozs.)



# NOMENCLATURE AND SPECIFICATIONS





- 1 Rapid-wind lever
- 2 Exposure counter
- 3 Shutter release button
- 4 Shutter lock lever
- 5 Push-button side locks
- 6 Depth-of-field scale
- 7 Distance scale
- 8 Aperture scale
- 9 Exposure counter control dial
- 10 Safety device release button
- 11 Depth-of-field preview lever
- 12 Mirror lock-up lever
- 13 Battery check lamp  
(*Shutter speed index*)
- 14 Neck strap lug
- 15 Film spool retainer knobs
- 16 Pentaprism
- 17 Tripod socket
- 18 Battery housing cover
- 19 Shutter-speed dial
- 20 Bayonet lock
- 21 Battery check button
- 22 Eyepiece
- 23 120/220 film indicator
- 24 FP flash terminal
- 25 X flash terminal
- 26 Accessory alignment button
- 27 Back cover locking lever

**Type**

**Film**

**Picture Size**

**Standard Lenses**

**Shutter**

**Power Source**

**Battery Check**

**Viewfinder**

**Reflex Mirror**

**Film Transport**

**Exposure Counter**

**Lens Mount**

**Flash Synchronization**

**Exposure Meter**

**Dimensions**

**Weight**

6 x 7 ideal-format single-lens reflex

120 roll-film (10 exposures) 220 roll-film (20 exposures)

55mm x 70mm (2-1/4" x 2-3/4")

SMC Takumar 6 x 7 105mm f/2.4 and SMC Pentax 6 x 7 90mm f/2.8 lenses.

Electronically-timed, double-curtain focal plane shutter; X, B, 1-1/1000 sec.

6V alkaline or silver oxide battery

Push button with indicator lamp

Detachable pentaprism finder, microprism focusing screen; 0.85 magnification with standard lens; shows 90% of picture area (100% with waste level finders).

Swing-up-and-back instant return mirror with lock-up provision

Rapid-wind lever 180° angle with 10° stand off self-cocking shutter

Automatic reset exposure counter

Dual bayonet mounts: inner bayonet for 35mm–300mm (plus 500 mm and M\* 800mm) lenses; outer bayonet for 400mm–1000mm lenses (excluding 500mm and M\* 800)

FP and X terminals/electronic flash at 1/30–1 sec., B

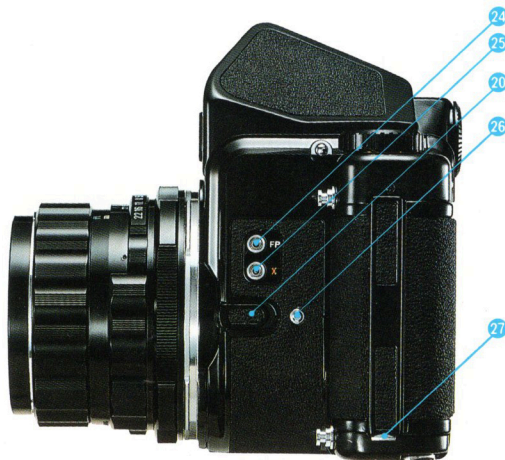
Accessory pentaprism with through-the-lens meter (TTL Pentaprism Finder) couples with shutter speed and aperture

177mm (width) x 150mm (height) x 140mm (depth), with 90mm standard lens and pentaprism (7.0" x 5.9" x 5.5")

Body 1,290 grams (45.5 ozs.)

90mm f/2.8 standard lens 485 grams (17.1 ozs.)

Pentaprism housing 460 grams (16.2 ozs.)

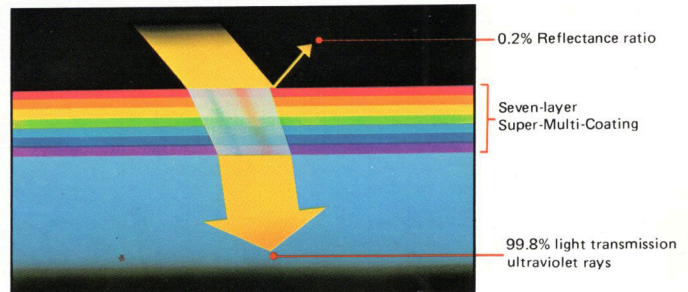




## 17 ADDITIONAL REASONS FOR SELECTING THE PENTAX 6x7

Any photographer knows that a precision SLR camera is only as good as its lenses. The 18 superb SMC Takumar and SMC Pentax 6x7 lenses thus give you 18 more substantial reasons for selecting the Pentax 6x7 camera. While the majority of camera companies are camera manufacturers first and lens makers second, Asahi Optical began as a lens maker, and today is the world's only leading lens maker manufacturing a medium format camera. This fact, combined with the company's advanced lens-making technology, assures owners of the Pentax 6x7 the following additional benefits.

- All eighteen 6x7 lenses are designed exclusively for the Pentax 6x7 camera and feature a precision bayonet mount which matches the camera perfectly. Each lens is as rugged and exact as the camera, providing years of reliable use.
- Asahi Optical's obsession with quality has made PENTAX a household word. All lenses bearing the names SMC Takumar and SMC Pentax are computer-generation optics designed in the Company's own engineering department, manufactured in its own factories, and tested in its own laboratories. Meticulous quality control over each step of the manufacturing process assures maximum optical performance with every lens in the line.
- And, because each 6x7 lens is made by Asahi Optical Company – and not subcontracted to others – you do not have to pay inflated prices. Each dollar you spend on a 6x7 interchangeable lens pays for quality, nothing more.
- Each 6x7 lens also features Super-Multi-Coating, Pentax's own unique 7-layer coating process which greatly reduces flare and squelches ghost images to deliver unexcelled image quality. SMC treated lenses transmit a remarkable 99.8% of the incident light to produce extra-bright images, offer higher resolution, better contrast, and also superb color balance and saturation.









## WIDE-ANGLE PHOTOGRAPHY

### ● SMC FISH-EYE TAKUMAR 6x7 35mm f/4.5

35mm



### ● 6x7 WIDE-ANGLE LENSES

45mm



55mm



75mm



Just like the painter uses a wide array of brushes as tools to create his masterful effects, the photographer relies on a wide assortment of lenses as the tools for expressing his creativity.

One of the most exciting of the tools available to the photographer is the fish-eye lens. Pentax has the longest history of any lens maker in the manufacture of full-frame ("semi") fish-eye lenses and its experience accumulates in the Fish-Eye Takumar 6x7 35mm f/4.5 lens. In addition to its dynamic 180° fish-eye perspective which even makes it possible to curve straight lines, this highly versatile and precision optical instrument also offers incredible depth of field, close focusing down to 45cm and features four built-in filters.

In the ultra-wide angle range, the SMC Pentax 6x7 45mm f/4 is another highly versatile lens. This lightweight and compact model, which corresponds roughly to a 20mm - 24mm ultra-wide angle lens in the 35mm format and incorporates a floating element design, has been well corrected for aberrations and offers focusing down to 37cm.

The SMC Pentax 6x7 55mm f/4 and 75mm f/4.5 wide-angle lenses correspond to the 28mm and 35mm wide-angle focal lengths in the 35mm film format. Considering their retrofocus design, both lenses are relatively compact. Yet, absolutely no sacrifice in optical performance was made in order to reduce their physical dimensions. The extensive depth of field and close focusing capabilities of both aid greatly in the creation of highly dramatic effects. Furthermore, focusing is simplified by their comparatively large maximum apertures.

## LEAF SHUTTER LENS FOR MULTIPLE EXPOSURES, FILL-IN FLASH SYNCHRONIZATION

### ● SMC TAKUMAR 6x7 90mm f/2.8

90mm



Photo by N. Tominaga

The 90mm f/2.8 SMC Takumar 6x7 Leaf Shutter Lens is a multi-functional lens that greatly increases the picture-taking versatility of the 6x7 camera. In addition to permitting use as a normal lens without cocking the built-in leaf shutter, it may be put to a variety of special uses when the leaf shutter is used. Shutter speed settings for the lens shutter run from 1/30 sec. to 1/500 sec. to enable high-speed flash synch—a must for outdoor portraits requiring fill-in flash and other special applications.

Moreover, the leaf shutter lens also permits easy and efficient multiple exposures, simply by locking the camera shutter open and freely tripping the lens shutter as often as desired without advancing the film. Special features include a built-in X flash terminal, cable release socket, shutter cocking lever and mode control lever.

Add new dimensions to your creativity with the 90mm Takumar Leaf Shutter Lens—another reason why we call the Pentax 6x7 “the Super SLR.”



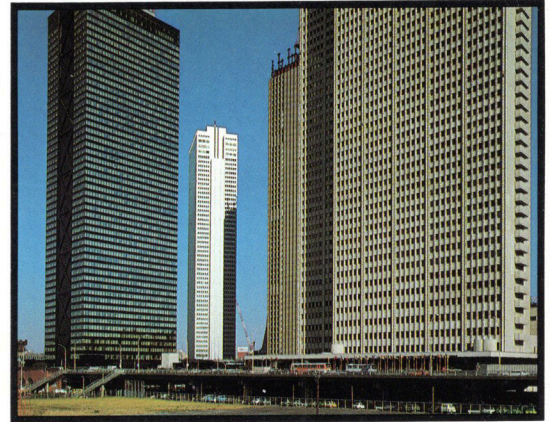
## SHIFT LENS VARIES PERSPECTIVE FOR ARCHITECTURE, CREATIVE EFFECTS, PANORAMAS

### ● SMC PENTAX SHIFT 6x7 75mm f/4.5

75mm



Another highly versatile lens in the 6x7 system is the SMC Pentax 75mm shift lens. A problem constantly plaguing photographers, especially in architectural photography, is that of converging lines. The 75mm shift lens serves as a solution to the problem and a lot more. Equivalent to a 35mm wide-angle lens in the 35mm format, it features a 360° lens-barrel rotation and a maximum shift of 20mm in all directions enabling the photographer not only to correct converging lines, but allowing him the choice of not correcting or overcorrecting to achieve the most attractive and dynamic effect.



## TELEPHOTOGRAPHY

### ● 6x7 TELEPHOTO LENSES

**165mm**



**200mm**

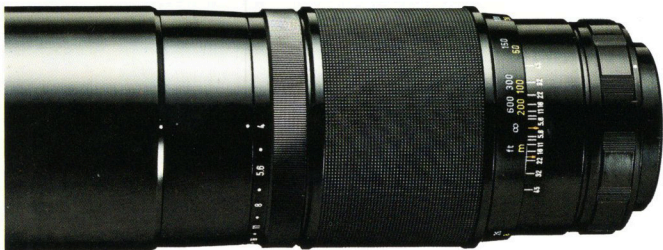
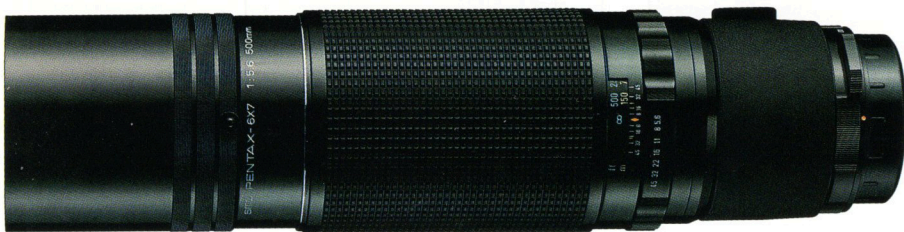


**300mm**



● There are eight 6x7 telephoto lenses available to cover all of your telephoto needs. Each is a tool for scenic, wildlife, sports, news, glamor and portrait photography. The close focusing moderate telephoto SMC Pentax 6x7 165mm lens (approximately equivalent to an 80mm lens in the 35mm format) has a large maximum aperture of f/2.8, making it an ideal portrait lens. Those who prefer a slightly longer portrait lens, which also performs well as a general purpose moderate telephoto, will find the 200mm Takumar suits their needs. And the 3X magnification of the 300mm Takumar combined with Super-Multi-Coating makes it a breeze to take sharp candid pictures of others from a distance in relaxed and natural poses.

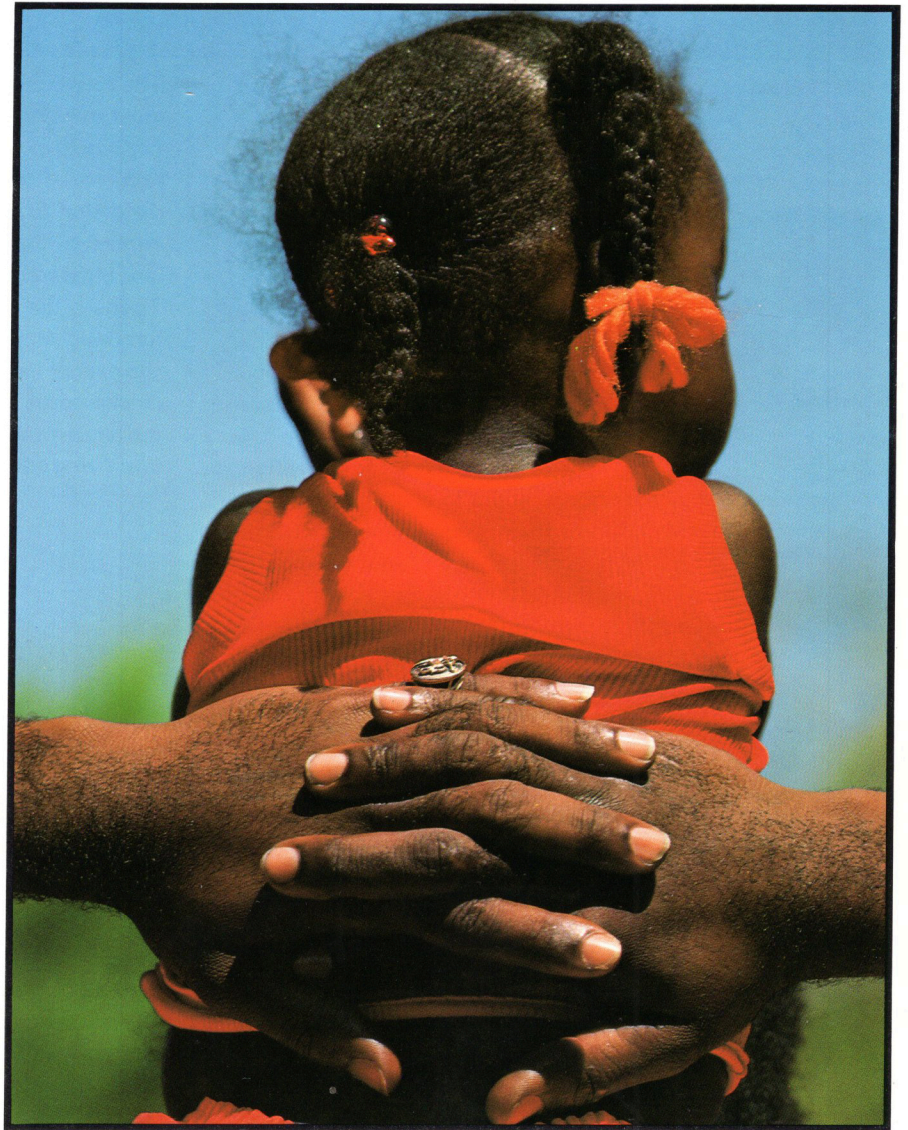


400<sub>mm</sub>500<sub>mm</sub>

• For pictures bursting with impact, any one of the 400mm, 500mm, 600mm, 800mm and 1000mm 6x7 ultra-telephoto lenses is ideal. Lenses of such great focal length lend themselves to dramatizing the results. Isolation of the subject, for example, is pronounced because of the shallow depth of field and large magnifications of these lenses. Moreover, compression of the foreground and background, which is typical of their long focal length, also serves to dramatize their effect. The 1000mm reflex lens is especially acclaimed for its compact size and light weight in relation to its extreme focal length. This lens weighs only 6.6% more than the 600mm telephoto lens, yet offers 66% greater magnification. Moreover, the doughnut-shaped, out-of-focus highlights produced by its mirror-lens design add greatly to the interest of pictures taken with this lens. With the 400mm, 600mm and 800mm ultra-telephotos you can economize on focal length and stretch your "reach" even further by employing the Pentax T6-2X Rear Converter to double their magnifications.

Whether you're shooting a rustic old farm house, a distant missile launching, dignitaries arriving for an international conference, or giant suns on the horizon—one of the 6x7 ultra telephotos is certain to be made to order.





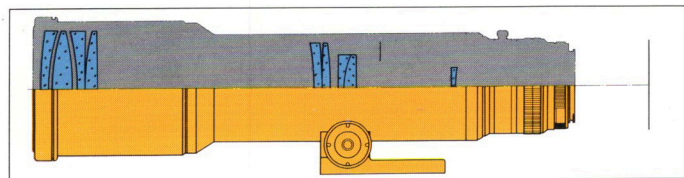


## TELEPHOTOGRAPHY

### ● SMC PENTAX-M<sup>★</sup> 67 800mm f/6.7 ED(IF)



REAR CONVERTER T5-1.4X



The very latest advances in Pentax lens-making technology are incorporated in our new ultra-telephoto lens, the M<sup>★</sup> 67 800mm f/6.7 ED(IF). The optical elements in this lens are made of extra-low-dispersion glass. These materials reduce chromatic distortion to an absolute minimum all the way out to the extreme corners of the 6x7 format. Low chromatic aberration gives this lens outstanding image quality, resolution and contrast. To make the M<sup>★</sup> 800mm compact and easy to operate, Pentax has designed it with an inner focusing system. The balance and the overall length of the lens remain exactly the same as you change focus from infinity to the minimum distance. All the movement takes place within the lens barrel. In addition to improving balance, the inner focus system also allows you to move closer to the subject. With the M<sup>★</sup> 800mm, the minimum

focusing distance is 8 meters. Among the other advantages of this lens are: relatively light weight, provisions for mounting the camera vertically or horizontally, and a focus-lock screw. Pentax also offers a 1.4X rear teleconverter, especially engineered to maintain the superior image quality of the M<sup>★</sup> 800mm. With the rear converter, you have an effective focal length of 1,120mm.

## MACROPHOTOGRAPHY

### ● SMC MACRO TAKUMAR 6x7 135mm f/4

135mm



The perfect companion for the macrophotographer. With a focal length exactly midway between standard and moderate telephoto lenses, this macro lens offers the advantages of both worlds. It allows you to work far enough from the subject to obtain pleasing perspective, and leaves ample space for the placement of auxiliary lighting. Moreover, there is little likelihood of the lens being close enough to cast a shadow on the subject or frighten away live specimens such as insects. In spite of this, you remain close enough to the subject to adjust its position when necessary. In addition, the proximity of the lens to the subject makes it possible to work with small apertures for shadowless illumination when using ringflashes or similar units.

As depth of field is of prime importance in macrophotography, the f/32 minimum aperture of the SMC Macro Takumar 6x7 135mm f/4 lens is a stop smaller than that of the f/22 minimum aperture of the 165mm and 200mm lenses. Moreover, the maximum aperture of this outstanding optic equals that of most macro lenses in the 35mm format, thus offering the same handling ease and relatively bright viewing.

In addition to the above, the 75cm close focusing capabilities of the Macro Takumar are immeasurably extended with the accessory Helicoid Extension Tube, Auto Extension Tube Set, Auto Bellows and Reverse Adaptor. For critical focusing with the macro lens, either the 2X Magnifier (for the Pentaprism Finder) or the 1.6X magnifier of the Folding Focusing Hood is ideal.



## SPECIFICATIONS OF THE 6x7 INTERCHANGEABLE LENSES

| 6 x 7 INTERCHANGEABLE LENSES              |                    | Lens Construction<br>(Groups-Elements) | Diaphragm | Angle of View | Minimum Focusing Distance(m) | Minimum Aperture | Maximum Diameter (mm) | Length (mm) | Weight (g) | Filter Size (mm) |
|---|--------------------|--|-----------|---------------|------------------------------|------------------|-----------------------|-------------|------------|------------------|
| SMC Fish-Eye-Takumar 6x7                  | 35mm f/4.5         | 7-11                                   | FA        | 180°          | 0.45                         | 22               | 102                   | 73          | 920        | ①                |
| SMC Pentax 6x7                            | 45mm f/4           | 8-9                                    | FA        | 88°           | 0.37                         | 22               | 91.5                  | 57.5        | 485        | 82               |
| SMC Pentax 6x7                            | 55mm f/4           | 8-9                                    | FA        | 77°           | 0.40                         | 22               | 91.5                  | 75.5        | 615        | 77               |
| SMC Takumar 6x7                           | 75mm f/4.5         | 4-5                                    | FA        | 61°           | 0.70                         | 22               | 91.5                  | 81          | 700        | 82               |
| SMC Takumar 6x7 <sup>(Leaf Shutter)</sup> | 90mm f/2.8         | 5-6                                    | FA        | 53°           | 0.85                         | 22               | 91.5                  | 63          | 610        | 67               |
| ⊙ SMC Pentax 6x7                          | 90mm f/2.8         | 5-7                                    | FA        | 52°           | 0.65                         | 22               | 91.5                  | 57.5        | 485        | 67               |
| ⊙ SMC Takumar 6x7                         | 105mm f/2.4        | 5-6                                    | FA        | 45°           | 1.00                         | 22               | 91.5                  | 60          | 628        | 67               |
| SMC Macro-Takumar 6x7                     | 135 mm f/4         | 3-5                                    | FA        | 36°           | 0.75                         | 32               | 91.5                  | 95          | 645        | 67               |
| SMC Pentax 6x7                            | 165mm f/2.8        | 5-6                                    | FA        | 30°           | 1.60                         | 22               | 91.5                  | 98.5        | 835        | 67               |
| SMC Takumar 6x7                           | 200mm f/4          | 4-4                                    | FA        | 26°           | 2.50                         | 22               | 91.5                  | 120         | 900        | 67               |
| SMC Takumar 6x7                           | 300mm f/4          | 5-5                                    | FA        | 17°           | 5.00                         | 45               | 93                    | 186         | 1,425      | 82               |
| SMC Takumar 6x7                           | 400mm f/4          | 5-5                                    | M         | 12°           | 8.00                         | 45               | 115                   | 287         | 2,570      | 77               |
| SMC Pentax 6x7                            | 500mm f/5.6        | 4-4                                    | FA        | 10°           | 8.00                         | 45               | 106.5                 | 398         | 3,200      | 95               |
| SMC Takumar 6x7                           | 600mm f/4          | 5-6                                    | M         | 8°            | 12.00                        | 45               | 170                   | 370         | 6,000      | 77               |
| SMC Takumar 6x7                           | 800mm f/4          | 6-6                                    | M         | 6°            | 20.00                        | 45               | 236                   | 611         | 17,700     | 77               |
| SMC Pentax-M* 67                          | 800mm f/6.7 ED(IF) | 8-9                                    | FA        | 6°            | 8.00                         | 45               | 150                   | 570         | 6,000      | 67               |
| SMC Reflex-Takumar 6x7                    | 1000mm f/8         | 4-6                                    | ②         | 5°            | 35.00                        | —                | 180                   | 352         | 6,660      | ③                |
| SMC Pentax Shift 6x7                      | 75mm f/4.5         | 8-9                                    | M         | 61°           | 0.70                         | 32               | 97                    | 106.5       | 950        | 82               |

FA=Fully Automatic M=Manual ① UV, Y2, O2 & R2 filters built-in ② Controlled by ND filters ③ Skylight, Y2, R2 & ND filters built-in  
 ⊙ =Standard lens. "Length" does not include mount portion.

## SUPER-MULTI-COATING (SMC)



The two photographs were shot directly into the light, both at the same time, both with the same camera. The picture on the right was taken with one of the best conventionally coated lenses available, the one on the left with a Super-Multi-Coated 6x7 lens. More light passes through the Super-Multi-Coating, so color transmission is greater, ghosts and flare are virtually eliminated. Pentax engineers have succeeded in perfecting an anti-reflection layer combination that reduces the reflection ratio to as low as 0.2%. This means 99.8% light transmission. With conventional lenses the reflection ratio is 4%-7%.

## ● REAR CONVERTER T6-2X



This is an extremely handy teleconverter unit for use with all 6x7 lenses from 135mm to 800mm (excepting the 500mm and M<sup>★</sup> 800mm lenses). By attaching the teleconverter between the lens and the camera, you double the focal length of the lens in use. If the lens features automatic diaphragm control, this feature is retained with the 2X teleconverter. Adding a rear converter to your 6x7 system is a versatile, sensible and economical way to double the capabilities of your lenses.











## PENTAX 6x7 ACCESSORIES

### ●MACROPHOTO AND COPYING ACCESSORIES

#### Auto Extension Tube Set

A set of three extension tubes can be used singularly or in combination on the inner bayonet mount of the Pentax 6x7 with lenses from 55mm wide-angle to 500mm telephoto (excluding the 400mm lens). Fully automatic diaphragm action is retained and magnifications greater than life-size can be produced.



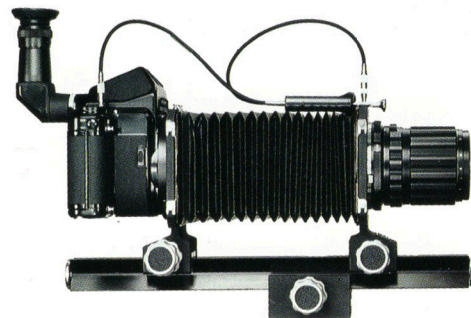
#### Extension Tube Set

A two piece extension tube set used on the outer bayonet mount of the Pentax 6x7 to extend the minimum focusing distance of ultra telephoto lenses (excluding the 500mm and M<sup>★</sup> 800mm lenses). The tubes can be used in combination with each other or with the Pentax Rear Converter.



#### Auto Bellows

Magnification of 0.5X to 3.3X is possible with the combination of Auto Bellows and standard lens. Diaphragm automation is retained with the aid of a double cable release, even when the lens is mounted in reverse. All lenses from 90mm to 300mm can be used with the Auto Bellows.



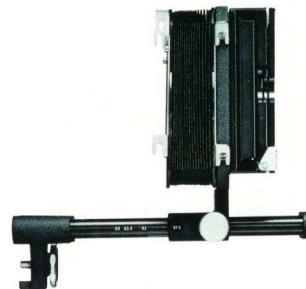
#### Helicoid Extension Tube

This single extension tube, which is used on the inner bayonet mount of the Pentax 6x7, offers continuously variable extension for precise control of the image size. It is equal to the No. 2 Auto Extension Tube at minimum extension, and to the No. 3 Auto Extension Tube at maximum extension. When used in combination with the standard lens, magnification is 0.3X - 0.6X, making it possible to fill the frame with a king-size pack of cigarettes.



#### Slide Copier

The Slide Copier is used in conjunction with the Auto Bellows unit to make copies of mounted or unmounted transparencies, whether of the 35mm or 6x7 format. Life-size or partially cropped duplicates can be made from originals.



### 49mm Reverse Adaptor

This adaptor makes it possible to use 49mm filter size lenses mounted in reverse on the Helicoid Extension Tube for macrophotography. Lenses designed for the Pentax bayonet mount cameras (e.g. SMC Pentax-M 28mm, 35mm standard and macro lenses) and Pentax S Series cameras (SMC Takumar lenses) may be used.



### 67mm Reverse Adaptor

The 67mm Reverse Adaptor makes it possible to use the 90, 105, and 135mm lenses mounted in reverse on the Helicoid Extension Tube, Auto Extension Tubes, or Auto Bellows for superior optical performance when working at greater-than-life-size magnification.



### Copy Stand

This deluxe copy stand has double posts, providing rigid support for the Pentax 6x7. When the camera and lens is combined with extension tubes or bellows, the Copy Stand offers convenience and flexibility for copy work and macrophotography.



### Slide Holder K

An extremely handy slide holder unit for copying 35mm transparencies on the 6x7 format. Offers magnifications up to 2x when used with a macro 50mm lens (35mm format) and Helicoid Extension Tube.



### 6x7 SMC Close-Up Lenses

SMC 6x7 Close-Up Lenses are lightweight, convenient accessories for a wide variety of close-up work. They can be screwed easily into the filter threads of any 6x7 lens and do not interfere with automatic diaphragm action or open-aperture metering.





## PENTAX 6x7 ACCESSORIES

### ● VIEWFINDER ACCESSORIES

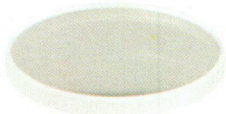
#### Right-Angle Finder

Attaches to the eyepiece of the standard and TTL pentaprism finders for low-angle photography. The image is both laterally correct and unreversed. The entire focusing screen, as well as the exposure meter indicator needle of the TTL Pentaprism Finder, is visible. The adjustable eyepiece accepts the accessory Eyecup.



#### Correction Lenses

They attach to the eyepiece of the pentaprism finder to correct for near and farsightedness. Available in seven strengths: +2, +1, -1, -2, -3, -4, -5.



#### Magnifier

Magnifies the central area of the focusing screen by 2X for critical focusing. The eyepiece of the magnifier has a built-in diopter adjustment for optimum viewing comfort. It is hinged at the top, allowing it to be raised out of the way for a final check of the overall composition.



#### Eyecup

The rubber Eyecup attaches to the eyepiece of the pentaprism and right-angle finders to prevent extraneous light from obstructing the view or adversely affecting the TTL exposure meter.



Photo by N. Tominaga

## ● CAMERA BODY ACCESSORIES

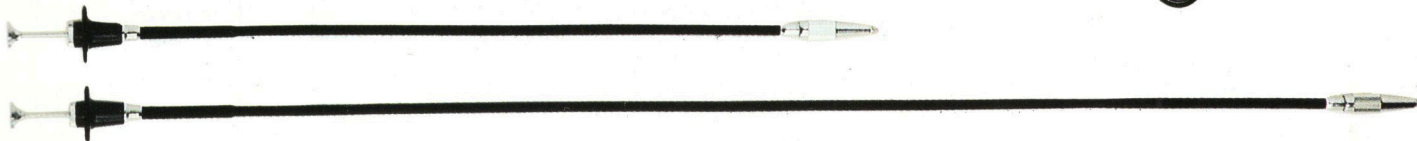
### Grip

The grip can easily be attached or removed with a single hand and has an accessory shoe to accept flash units. Once attached to the camera, this accessory offers a secure grip for the left hand.



### Cable Releases

Two are available: Cable Release 30 (30cm) & Cable Release 50 (50cm). Both are provided with locking collars for "time" exposures.



### Camera Neck Strap

This robust strap is specifically designed to support the Pentax 6x7 without tangling and attaches to the camera body in a moment. The camera has four strap lugs, to permit attaching an extra strap or hanging the camera vertically.



### Body Mount Cap

Used to prevent dirt from entering into the mirror chamber when the camera body is stored without a lens.



### Remote Battery Cord

When batteries are used at below-freezing temperatures, their voltage may drop, causing malfunction of the electronic shutter. The Remote Battery Cord is designed to eliminate the possibility of this problem occurring with the Pentax 6x7. One end of the cord contains the battery chamber and fits in a warm pocket, while the opposite end of the cord is plugged into the camera.





## PENTAX 6x7 ACCESSORIES

### ● LENS ACCESSORIES

#### Front Lens Caps

Front Lens Caps are available to protect the front element of the lens or a filter from dirt, scratches, and smudges. Most of the caps bayonet into place to prevent accidental removal.

#### Rear Lens Caps

Used to prevent dirt from entering the rear of any lens when it is stored separately.



#### Lens Hoods

Whenever possible, the use of lens hoods is recommended as they help to maintain high contrast and increase color saturation by reducing the amount of stray light striking the lens. They are available for the following lenses: 45mm, 55mm, 75mm, 90mm, 105mm, 150mm. For convenience, telephoto lenses have built-on lens hoods.



#### Pentax Filters

Filters are available in five screw-in sizes (67mm, 77mm, 82mm, 95mm, 100mm).

**Skylight, Cloudy** (correct for excessive bluishness of cloudy and rainy days)

**Morning-Evening** (corrects for excessive reddish)

**Black & White Filters: UV, Y1, Y2, R2, YG**

**Polarizing** (cuts out reflections)



#### K & S Mount Adaptors

Adaptors are available for using Takumar 6x7 lenses on 35mm SLR's. K-Mount Adaptor is used with the Pentax bayonet mount cameras and similar cameras; and the S-Mount Adaptor is used with the Pentax ES II, SP and similar models.



#### Gelatin Filter Frames

Available in three sizes (67mm, 82mm, 100mm) all of which accept standard 75mm gelatin filter squares. The filter frames allow the use of two gelatin filters at a time.



### Quick Focusing Rings

With the Quick Focusing Ring in place it is possible to focus the lens with the fingers of the left hand at the same time they grasp the camera Grip. Quick Focusing rings are available in two types: A-type (for use with 105mm, 135mm, 150mm, 200mm lenses) and B-type (for 35mm, 45mm, 55mm, 75mm, 90mm lenses).



### ● CAMERA CASES-

#### Soft Lens Case

Because they occupy less space than hard cases, this soft buckskin case is ideal for protecting lenses when space is limited. The case is available for lenses from 35mm—200mm.



#### Hard Lens Cases

These quality hard leather cases offer optimum protection for 6x7 lenses. They are individually designed for each lens.



#### Professional Trunk Case Pro II

A professional compartment type case designed exclusively for the Pentax 6x7. This strong aluminum case will hold two camera bodies, 3 to 4 lenses and accessories.



#### Carrying Case

A compact case which will hold camera with standard lens and some accessories such as filters, cable releases, and film. Designed to offer adequate protection for the camera, which easily slides in and out of the case.





## PENTAX 6x7 ACCESSORIES

### ● FLASH BRACKET

#### AF400T bracket for 6x7

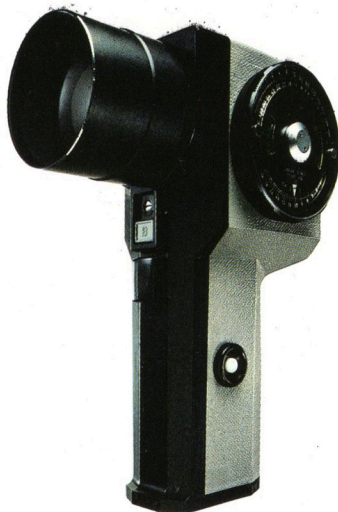
The AF400T is a totally professional auto flash unit with advanced capabilities which will surely appeal to 6x7 users. Pentax provides a special bracket which allows you to attach the AF400T to the 6x7 for greater handling convenience. The AF400T gives you a wide range of power source options, including two belt-mounting packs, a very compact battery grip and an AC adaptor that lets you plug into normal household current. Among the features of the AF400T are three auto flash output levels, four manual levels and a rotating flash head. Rotation is 180° horizontal, 90° vertical and -15° for close-up work.



### ● EXPOSURE METERS

#### Spotmeter V/Spotmeter V-FL

Spotmeter V is a precision instrument for exposure measurement which measures an acute angle of just 1°, enabling highly accurate readings of main subjects and areas of the picture of prime interest. In addition, use of a virtually instantaneous response silicon photo diode ensures utmost precision of exposure readouts. The viewfinder features a scale and pointer with readings given in EV numbers, over an EV range of 1 to 19 with ASA 100 film. Model V-FL is similar to Model V, except that exposure information is given in foot lamberts, making it especially valuable for T.V.



and film metering. Model V-FL also calculates illuminance ratios.

#### Digital Spotmeter

Large, bright red LED's illuminate in the viewfinder of the handy compact and lightweight digital spotmeter model, thereby offering maximum visibility regardless of prevailing lighting conditions. The digital model also measures an acute 1° angle via an SPD. Correct exposure is immediately displayed in EV numbers (rounded off to the nearest 1/3 EV). The entire EV range is 1 to 20 with ASA 100 film; weight (245g).



Digital Spotmeter

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