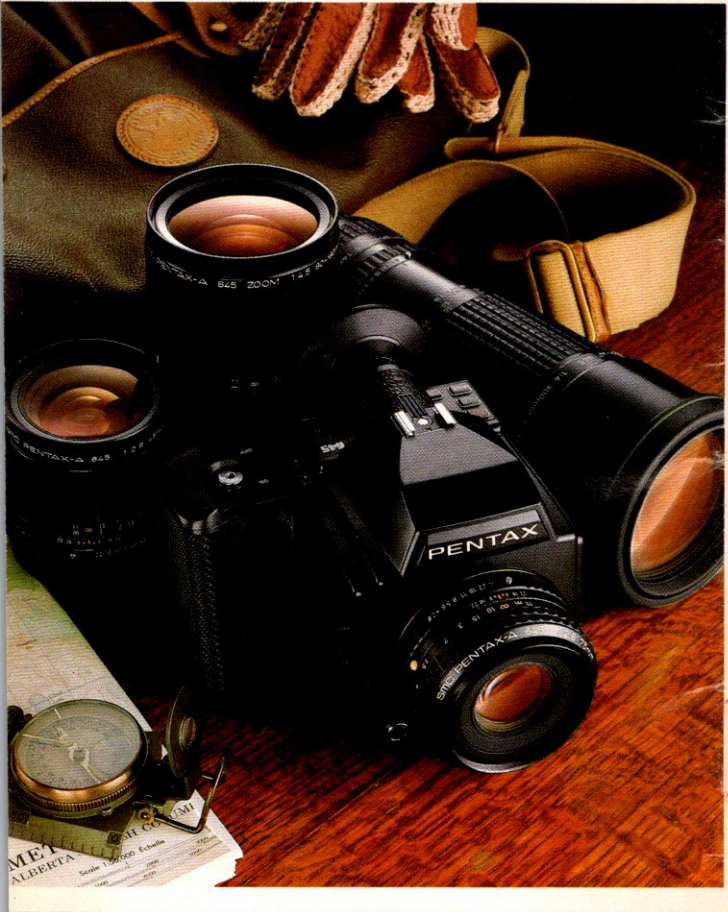
PENTAX
645

Multi-Mode Medium-Format SLR Camera with Built-In Motor Drive

THE PENTAX 645: The first multi-mode medium-format camera for professional photography in the field



The serious field photographer demands two things from a camera: flawless, professional picture quality and total responsiveness to the fleeting photographic moment. The Pentax 645 satisfies these demands like no other camera.

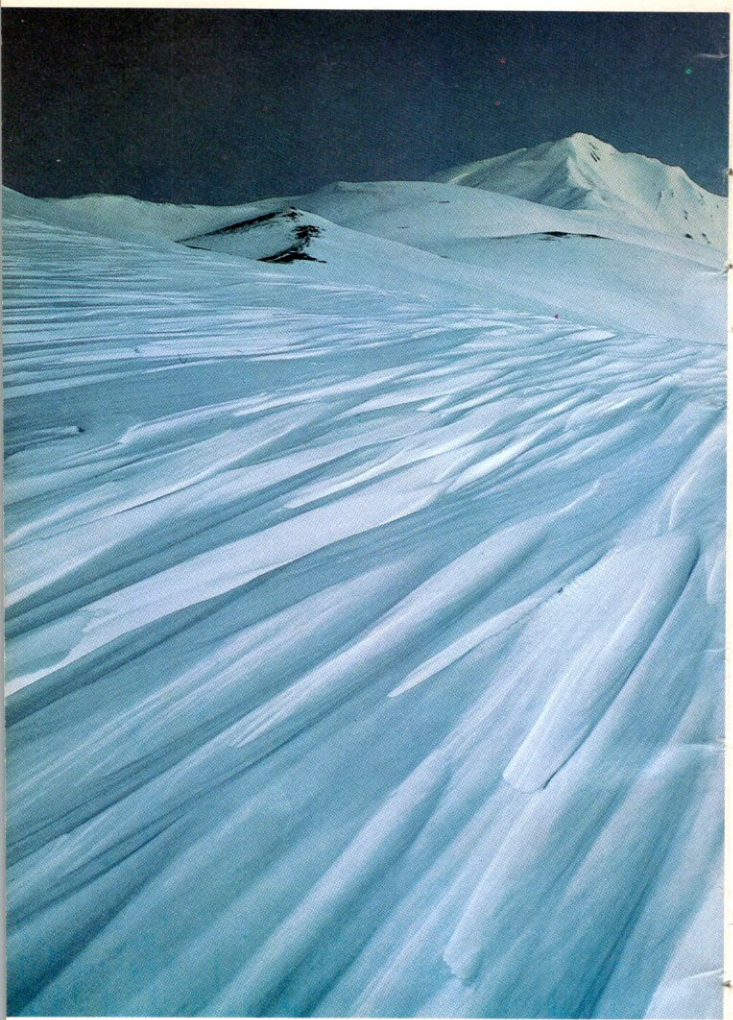
The Pentax 645 puts the very latest SLR technology at the photographer's command — for the first time in a medium format camera. Seven electronic exposure modes, built-in motor drive, fast-access electronic controls, and TTL auto flash allow the photographer to react swiftly and surely to an incredible variety of photographic situations.

And to make the Pentax 645 even more competent and versatile in the field, it has been designed specifically for hand-held eye-level photography — another first for the 6 × 4.5 format. Any photographer familiar with the outstanding handling of the popular 35mm format will appreciate the performance of this lightweight, compact camera.

But though the Pentax 645 handles like a 35mm camera, it produces a dimension of photographic excellence known only to the medium- and large-format user. The 6 × 4.5 format provides over two and a half times the negative area of 35mm film, for accurate, high-resolution enlargements that would be impossible with a 35mm negative.

For the experienced photographer who demands in a single camera the versatility made possible by technological sophistication *and* the quality of medium format, there's an answer at last: The Pentax 645.

Beyond 35mm: Professional Quality



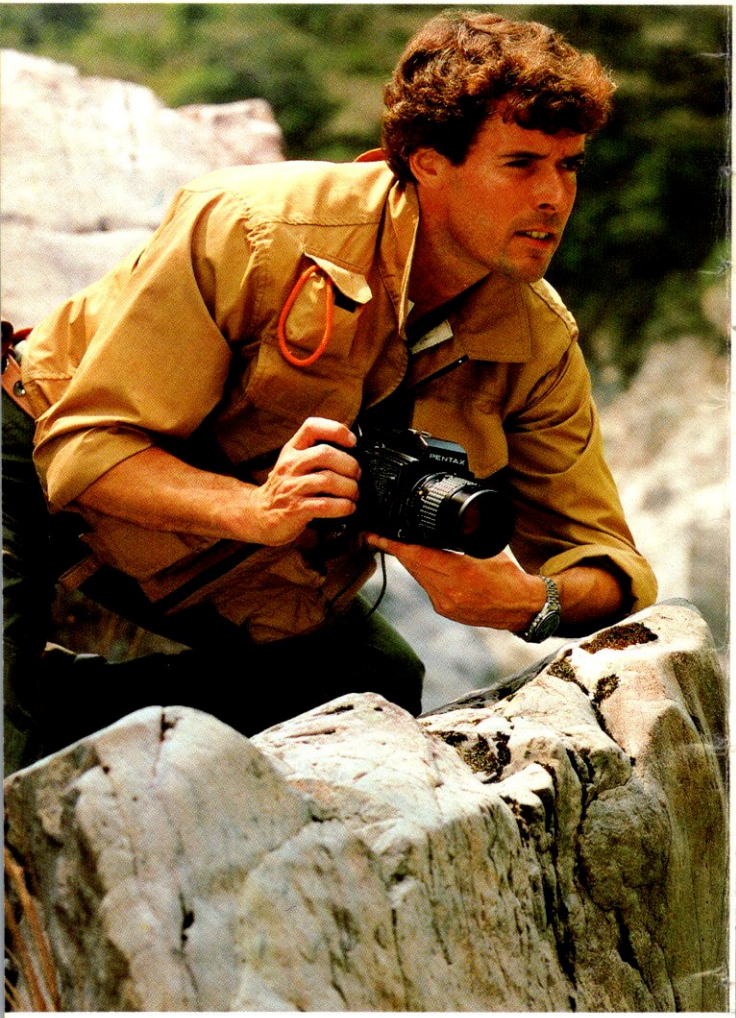
As versatile as the popular 35mm format is, the serious photographer often needs more. Only a larger format can produce sharp, professional-quality enlargements for display or transparencies for reproduction.

The Pentax 645 offers the superior photographic quality of the 6×4.5 format without sacrificing versatility and handling ease. The 6×4.5 negative provides 2,324 sq. mm of usable area — over two and a half times the area of a 35mm negative. That means finer resolution and

and Handling Ease in the 6×4.5 Format

better color fidelity in enlargements and easier viewing of stock photos. Using 120, 220, or 70mm film, the 6 × 4.5 rectangular negative format is also highly efficient, with none of the wasted space of 6 × 6 square negatives, which must usually be cropped into rectangular shape. And there's one more advantage to the 6 × 4.5 medium format: it gives the photographer access to a full range of professional-quality medium-format lenses — not only our new 645 lenses, but also, with an adapter, most Pentax 67-system lenses.

The Pentax 645 Brings Medium Format



Most medium-format cameras are designed to handle like a studio camera, and that's fine if you have a tripod and plenty of time and a static subject. But for field work, where lightning-fast reactions are essential, these cameras are usually far too clumsy and slow.

Now, for the first time, there's a medium-format camera that is as competent and responsive in the field as a 35mm SLR. The Pentax 645 is tough, lightweight, easy-to-handle and designed especially for eye-level shooting. An impressive range of electronic features allows it to respond

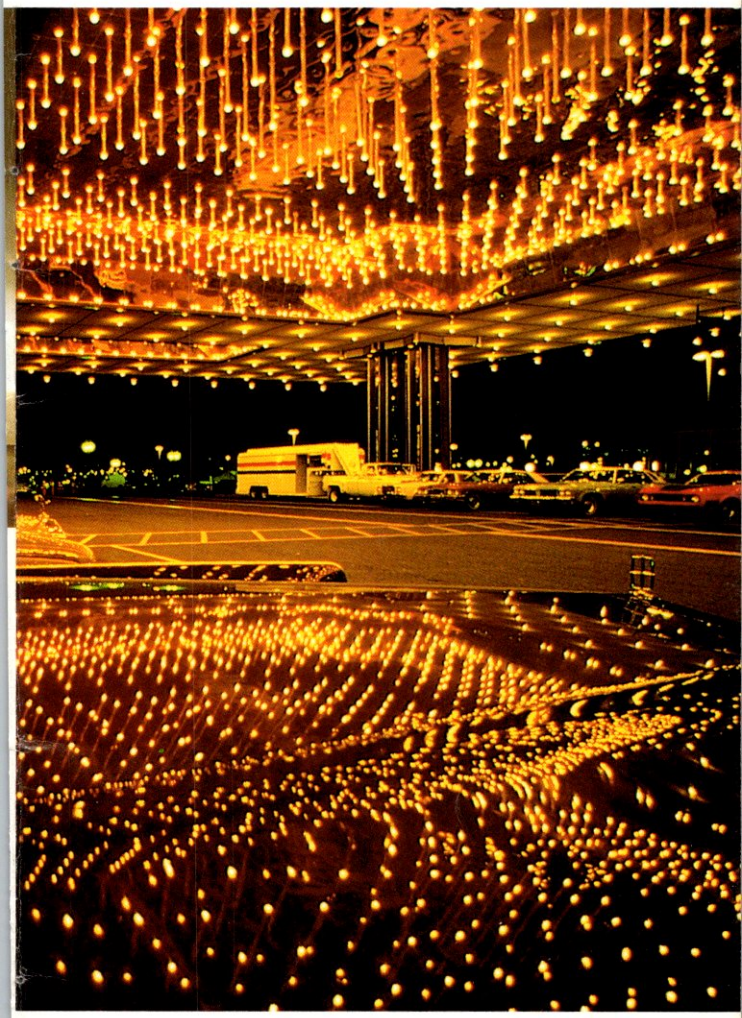
Out of the Studio

instantly when any photographic opportunity arises. New designs, like the low-profile fixed pentaprism, extra-smooth mirror and auto-wind mechanisms, and accessible light-touch controls have replaced the cranks and dials and oversized viewfinders that make other medium-format cameras so difficult to use. With the handgrip placed flush with the rear of the body, the camera can be held steady, for excellent results even at slow shutter speeds. Only the Pentax 645 combines such handling ease with the superior photographic quality of the 6 × 4.5 format.

For the First Time, Total Electronic Co

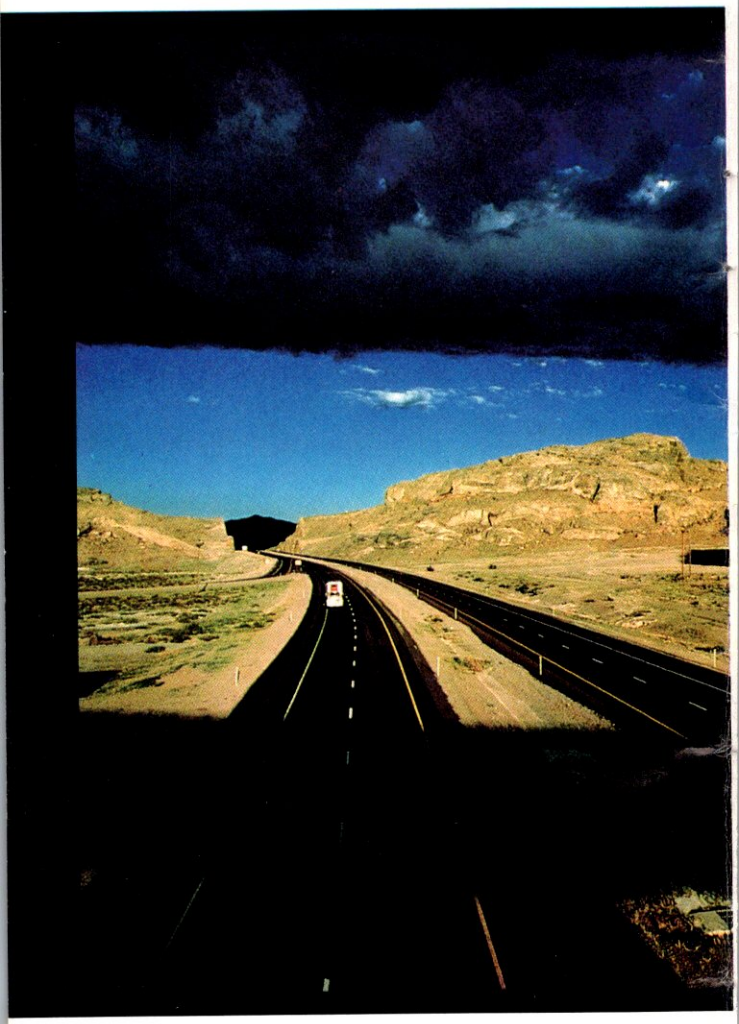
All too often, the professional photographer must wait years for some new innovation to make its way from mass-market 35mm SLRs to medium-format cameras. The Pentax 645 is a welcome exception. It is a fully programmed multi-mode camera with more sophisticated electronics than any other medium-format SLR now on the market. The Pentax 645's seven exposure-control modes put the photographer in charge, whether the situation demands the instant response of programmed automation, the full creative freedom of metered manual, or anything in between,

ntrol in a Medium Format



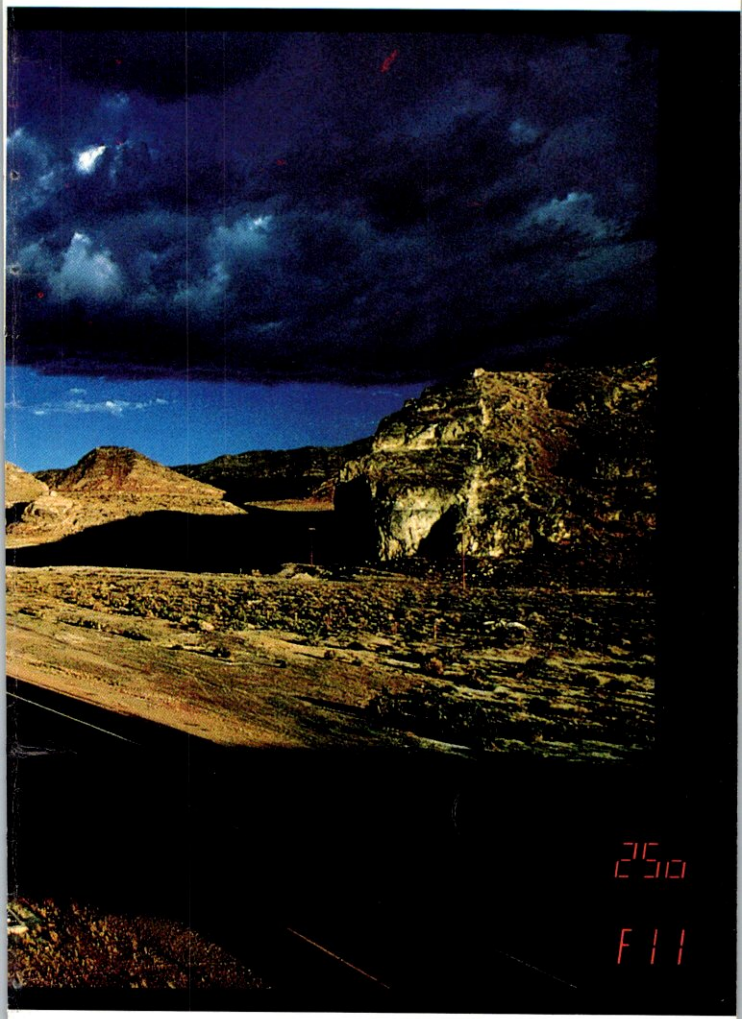
including aperture or shutter priority automation and automatic TTL flash synchronization. The Pentax combination of total control through electronics and superb picture quality with the 6×4.5 format opens up exciting new possibilities for professional-quality photography.

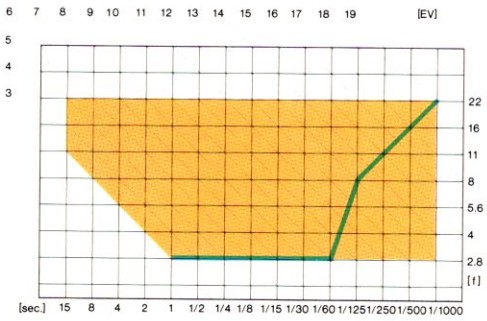
Preserve the Spontaneity of the Mom



Programmed AE Mode
The 645's program mode is a critically important feature in the field, where moving subjects and constantly changing light conditions can frustrate even the most experienced professional. With a sophisticated exposure program controlling both aperture and shutter speed settings, you are free to react spontaneously to any photographic situation. And for best results in hand-held photography, the 645 is programmed for high shutter speed bias. Just frame, focus and shoot to capture even the most rare and fleeting images.

ent





Shutter/Aperture Coupling Range
(At ISO 100 with 75mm f/2.8 lens)

Creative Freedom Through Electronics

Aperture-Priority AE Mode

For special situations where you need full control over depth of field, the Pentax 645 has two aperture priority modes. In Aperture-Priority AE 1, set the lens on "A" (automatic) and choose the desired aperture with the selecting buttons. In Aperture-Priority AE 2, set the aperture manually by turning the aperture ring on the lens. In either case, the correct shutter speed is set automatically. When using Aperture-Priority AE 1, available with 645 lenses, both aperture and shutter speed information appears in the view-finder and LCD window. Aperture-Priority AE 2 can be used with Pentax 67-system lenses, with shutter speed information appearing in the view-finder. A preview lever allows the photographer to predetermine depth of field when using Aperture-Priority AE 2.

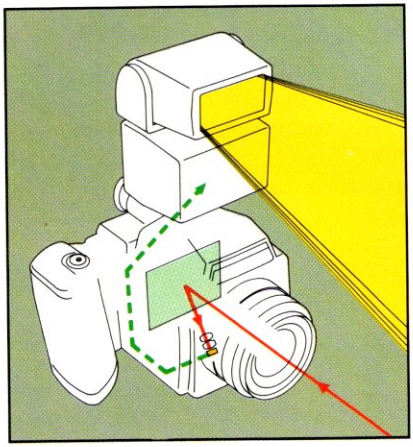
Shutter-Priority AE Mode
The Shutter-Priority AE Mode is perfect for when you wish to create special effects with motion, either freezing an instant in time or stretching the movement out across the picture. Set the lens on the "A" position and select the desired shutter speed, from 1/1000th second to 15 seconds, with the selecting buttons. The camera automatically selects the proper aperture for the precise moment the shutter is activated.

Metered Manual Mode
For total creative control over all exposure factors, use the Metered Manual Mode. Select f-stop with the aperture ring on the lens, and the shutter speed with the selecting buttons. The shutter speed will appear in the viewfinder along with "OK" for a correct exposure or numbers showing how many stops over- or under-exposed your aperture setting is.

Sophisticated Flash Photography

TTL Auto Flash

In the TTL Auto Flash Mode, a sensor in the camera body measures flash output and ambient light as it travels through the lens to the film plane. The flash is automatically terminated when the proper amount of light has reached the film. Since the measuring is done off the film plane as the exposure is actually taking place, TTL flash exposure is virtually error-free. When you use TTL Auto Flash in the Aperture-Priority AE 2 or Metered Manual modes, you can shoot flash photos at most f-stops, for precise control over depth of field. Shutter sync speed is automatically fixed at 1/60 second. When



the lens is set at the "A" position (Programmed AE or Aperture-Priority AE 1 modes), the aperture is automatically set according to the automatic exposure program.

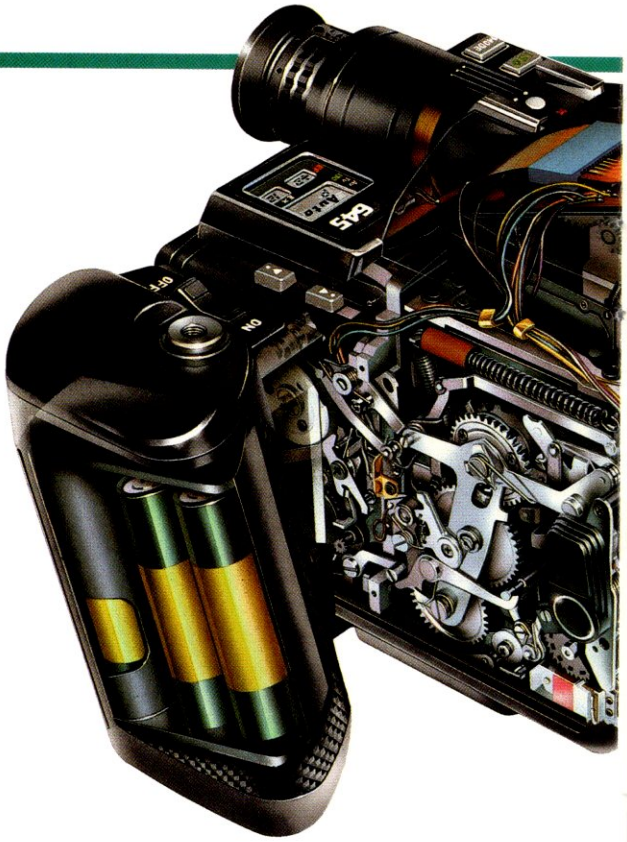
Programmed Auto Flash

Programmed Auto Flash lets you do with flash what the Programmed AE Mode does with available light: shoot on the spur of the moment with accuracy, speed and confidence. Set the lens aperture on "A" and the flash unit on Automatic. There's no need to set either shutter speed or lens aperture. When the flash is fully charged, the shutter speed will automatically be set at 1/60 second and the aperture will be adjusted to the automatically-selected f-stop. If special flash effects are needed, the flash and lens can be used in the Manual Mode.

Leaf-Shutter Lens (LS) Mode

When the camera is used with the SMC Pentax 645 75mm leaf-shutter lens, flash synchronizations up to 1/500 second are possible. This feature is particularly useful for studio work and daylight flash synchronization. When the leaf-shutter lens is attached to the camera, the viewfinder and LCD window show "LS" and the focal-plane shutter is set automatically at 1/8 second. Exposure control and metering are both manual.

Superior Electronic and Mechanical



The Pentax 645 is by far the most electronically advanced medium format camera on the market: all major functions, from exposure control to display panels, are microprocessor controlled. These sophisticated LSIs are designed by Pentax engineers exclusively for this camera. That means circuit patterns are efficient, extremely reliable and perfectly suited to the task they are designed to perform.

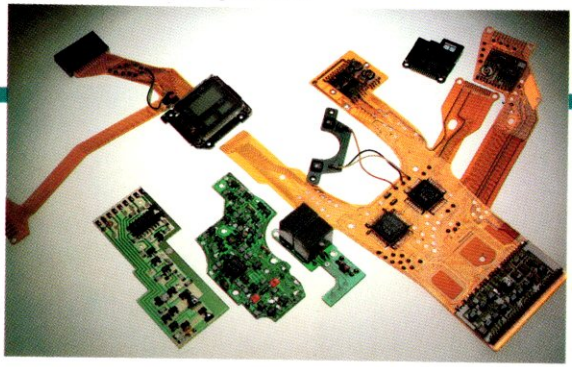
This camera's technological superiority does not stop with electronics. We've made sure every mechanical function of the 645 incorporates the newest technologies and materials engineered to the most exacting tolerances. To meet the demands of constant daily use, the 645 is subjected to far more stringent testing and inspection than standard 35mm cameras.

Engineering

Smooth, quiet film winder
Most auto-wind cameras use a system of noisy speed-reduction gears to transmit motion from the motor to the film spools. For the Pentax 645, we've created a quiet belt-drive system that is both reliable and durable. "Teeth" on the belt help prevent slippage during high-speed winding.

Compact, high-performance motor
A major reason why the Pentax 645 is more compact than other medium-format cameras is the compact, custom-made motor it uses to advance the film, cock the shutter and load the mirror mechanism. Though only 18mm in diameter, this advanced 7-pole coreless motor uses expensive samarium-cobalt magnets for excellent start-up torque.

Circuit Board Configuration



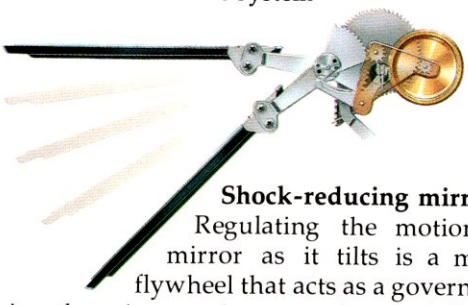
Highly accurate film advance

The cam that regulates film advance turns a full 120° per frame (versus about 18° for most medium format cameras). Thus, spacing between frames is more accurate than any other medium-format camera. A special mechanism adjusts spacing according to the film holder in use.

Durable ball bearing action

Ball bearings are used at 10 different points in the Pentax 645, including mirror up/down, aperture setting and operation, and shutter movement and control. Besides providing smoother operation and outstanding durability (especially important in a rugged field camera like the 645), ball bearings reduce friction so that battery life is extended. A special surface treatment for all gears also ensures smoother operation and longer life.

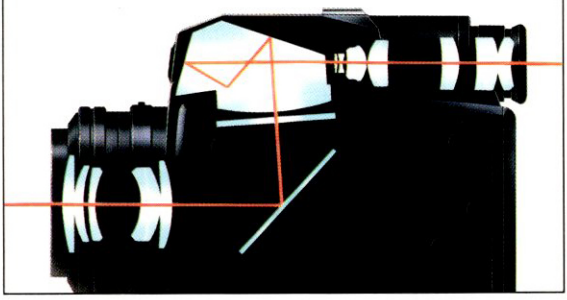
Pentax Mirror Brake System



Shock-reducing mirror brake

Regulating the motion of the mirror as it tilts is a motorized flywheel that acts as a governor, braking the mirror as it approaches its full-up position. Mirror shock is thus minimal, an important consideration at slow shutter speeds. Most other cameras use a jerky spring-action mirror mechanism.

Light Path with Compact Pentaprism



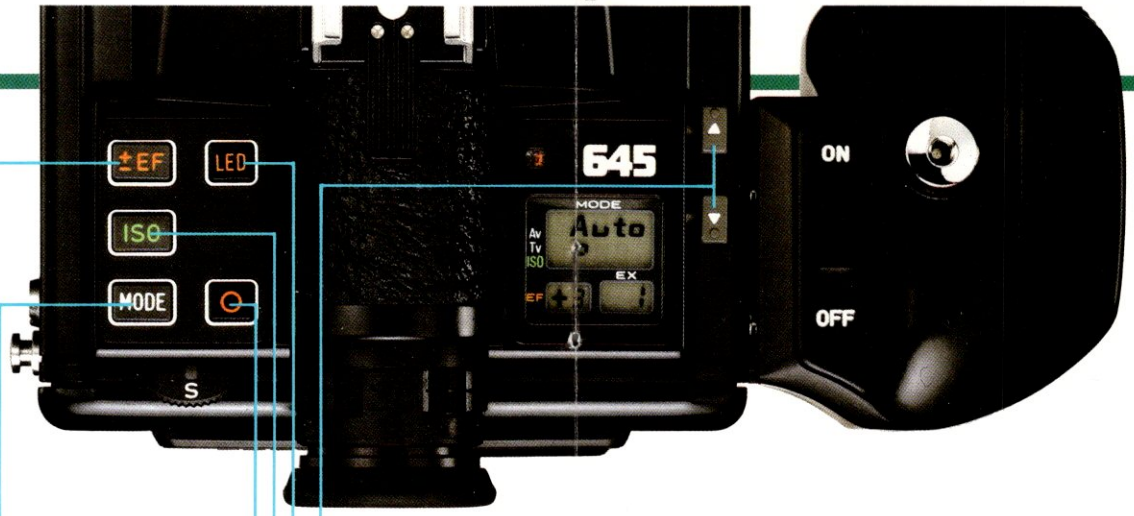
Compact prism
A highly compact pentaprism of a type never before used in a medium-format camera contributes significantly to the light weight and low-profile design of the camera. Thanks to this new prism, the 645 stands just a little taller than popular 35mm SLRs.

Bright viewfinder consists of 9 lens elements
The viewfinder eyepiece of the 645 is made up of a total of 9 lens elements — five relay elements and four eyepiece (diopter) lenses. Like the newly-designed prism, the compactness of this eyepiece helps keep the weight and dimensions of the 645 low. The 645 finder is less likely than conventional finders to cause image disappearance when the eye moves away from the optical axis. All lenses are coated to ensure bright images and true-to-life colors.

Newly-designed pressure plate
To keep the film ideally flat in the focal plane, the 645 makes use of newly designed pressure plate and rollers, a more sophisticated system than that used in any other medium-format single-lens reflex camera. The result is sharper focus over the entire film plane.

Rugged lens mount
The lightweight Pentax 645 bayonet lens mount is extra thick for added durability and more precise lens positioning.

The Pentax 645 Control Panel: A Concept That's Years Ahead of Its Time



Mode setting.
Depress MODE button and move to desired mode setting using selecting buttons. Programmed AE, Aperture-Priority AE 1 and Shutter-Priority AE available with lens set on "A". Aperture-Priority AE 2, Metered Manual, Flash Sync and Bulb available with lens aperture on manual settings.

Exposure compensation.
Adjusts for intentional over- or underexposure from −3 to +3 stops While depressing the EF button, use selecting buttons to move to the desired setting.

Selecting buttons.
Use together with other control buttons to adjust exposure mode, shutter speed, lens aperture, ISO setting and exposure compensation.

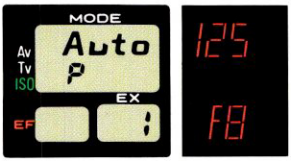
LED on/off switch.
Press LED button to switch LED viewfinder display on or off. A timer automatically switches display off after 30 seconds.

ISO setting.
Depress ISO button and move to desired ISO film speed setting using selecting buttons.

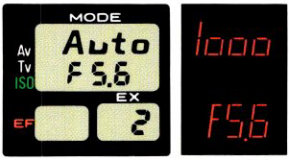
Display Light.
Press "O" button and LCD window illuminates for 10 seconds.

Pentax has created a totally new concept in electronic controls for the new 645. Instead of a slow, noisy hand crank, there's a built-in automatic film winder. Instead of mechanical dials and switches, there's a functional, easy-to-use panel of electronic buttons. An easy-to-read LCD window monitors all important functions. The 645 control panel is years ahead of its time.

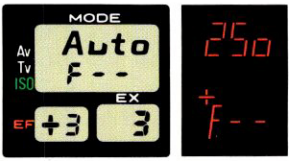
Functional control panel layout
All electronic controls on the Pentax 645 are functionally arranged on the top panel of the body for easy access while shooting. The lefthand panel contains buttons for MODE, ISO setting and exposure compensation (±EF). These controls are activated by selecting buttons located between the righthand panel and the shutter release button. All control settings can be made in seconds without moving the hands from the shooting position. The lefthand panel also contains on/off switches for display panel illumination and viewfinder LED display. On the righthand panel, in addition to the selecting buttons, are large LCD readouts for all vital information concerning mode, aperture, shutter speed, flash status, ISO setting, exposure compensation and exposure count. Located between the selecting buttons and the shutter release is the main power switch. Switching off power to the camera does not erase previous control settings.



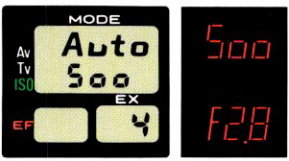
Programmed AE Mode
Set lens aperture ring to "A". Then, while pressing MODE, press selecting buttons until "AUTO" plus "P" appear. Viewfinder LED display shows automatically-selected f-number and shutter speed.



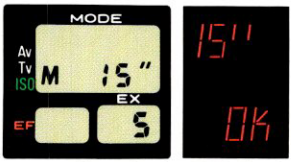
Aperture-Priority AE Mode 1
Set lens aperture ring to "A". While pressing MODE, press selecting buttons until "AUTO" plus an f-number appear. Now choose f-stop with selecting buttons. Viewfinder LED display shows f-number plus automatically-selected shutter speed.



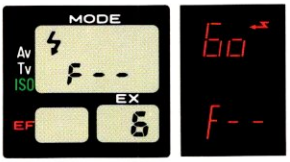
Aperture-Priority AE Mode 2
Set lens aperture ring to desired f-stop. While pressing MODE, press selecting buttons until "Auto" plus "F --" appear. Viewfinder LED display shows only automatically-selected shutter speed. Exposure compensation from "−3" to "+3" is displayed in the LCD window; "+" or "−" only is displayed in the viewfinder.



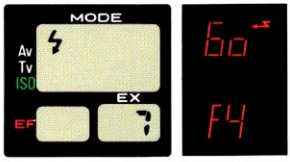
Shutter-Priority AE Mode
Set lens aperture ring to "A". While pressing MODE, press selecting buttons until "AUTO" plus a shutter speed appear. Choose shutter speed with selecting buttons. Viewfinder LED display shows shutter speed plus automatically-selected f-number.



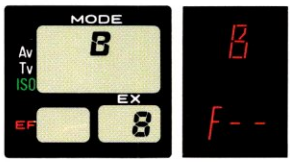
Metered Manual Mode
Set lens aperture ring to desired f-stop. While pressing MODE, press selecting buttons until "M" plus a shutter speed appear. Viewfinder LED display shows shutter speed plus over/under exposure from −3 stops to +3 stops. Adjust f-stop or shutter speed until "OK" appears.



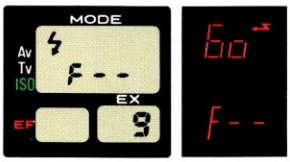
TTL Auto Flash Mode
Set lens aperture ring to appropriate f-stop. When the dedicated flash unit is completely recycled, the shutter speed is automatically set to 1/60 second. Viewfinder LED display shows shutter speed of 1/60 second plus "F --," and " ϟ " when flash is recycled.



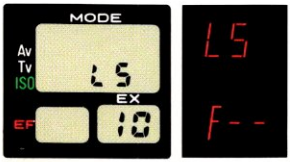
Programmed Auto Flash Mode
Set lens aperture ring to "A". When the dedicated flash unit is completely recycled, the shutter speed is automatically set to 1/60 second. The viewfinder will show "60," " ϟ " and automatically-selected f-number. The LCD window will show " ϟ ".



Bulb
Set lens aperture ring to appropriate f-stop. Then, while pressing MODE, press selecting buttons until "B" appears. Viewfinder LED display also shows "B" plus "F--".

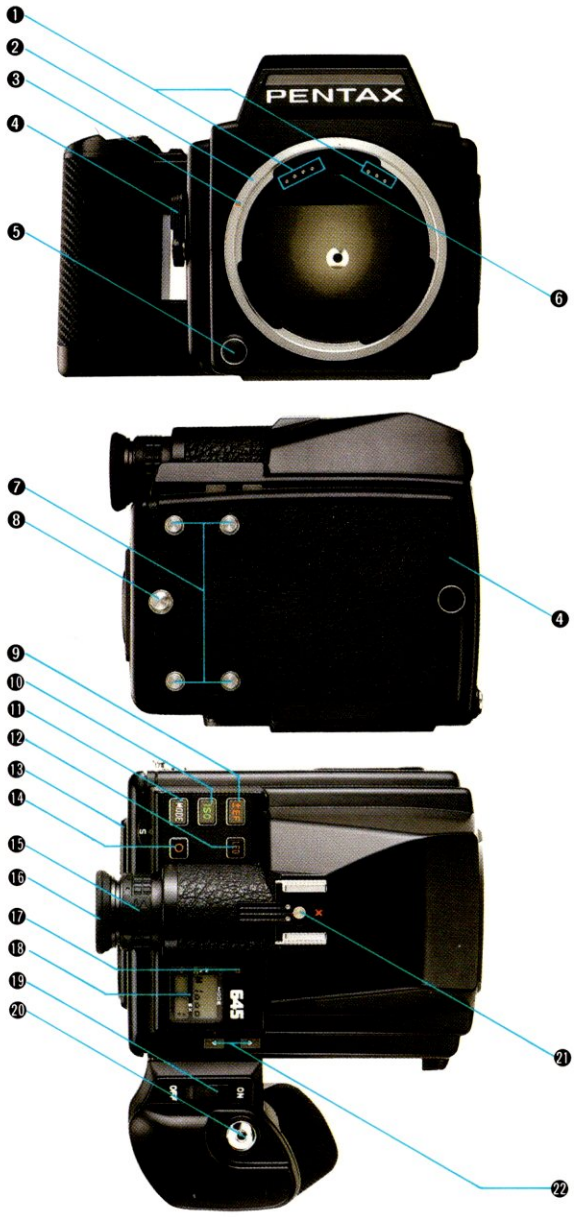


Manual Flash
Set the camera on Metered Manual and adjust aperture manually according to the exposure scale on your non-dedicated flash unit. Shutter speed is set manually at 1/60.

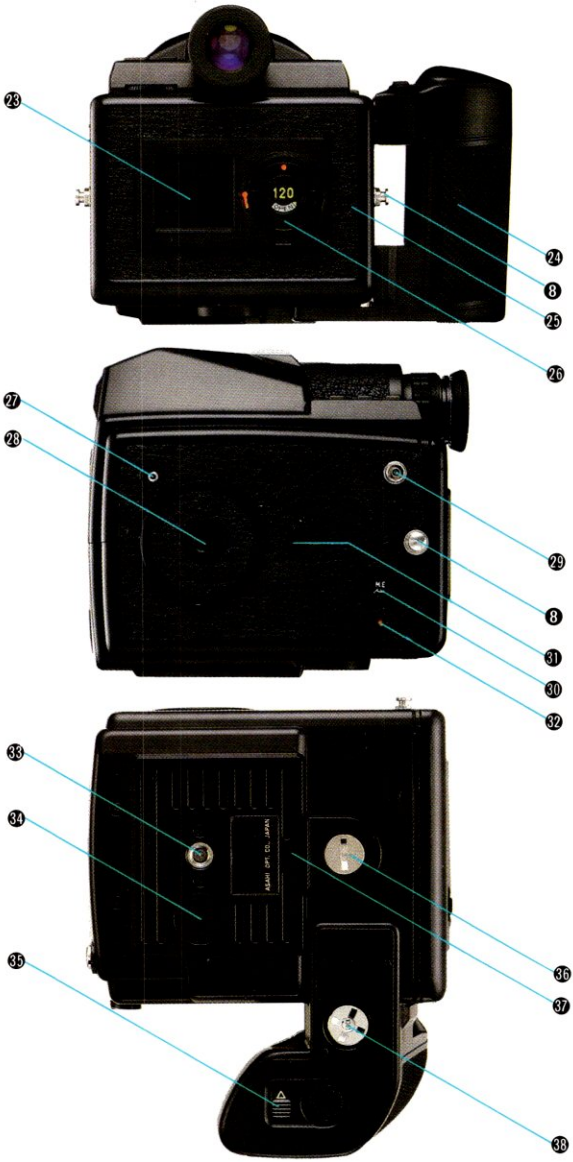


LS Mode
When a leaf shutter lens is mounted on the camera body, the LCD window automatically shows "LS" and the focal-plane shutter is set automatically at 1/8 second. Operation of the leaf shutter lens is manual and unmetered.

Nomenclature

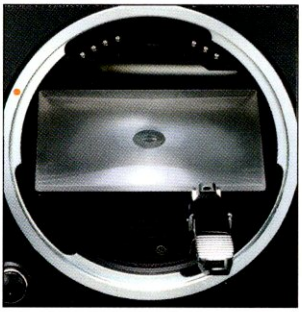


❶ Lens information contacts
❷ 645 lens mount
❸ Lens alignment index
❹ Preview lever
❺ Lens release button
❻ Focusing screen release lever
❼ Grip lugs
❽ Strap lug
❾ Exposure compensation button
❿ Film speed button
⓫ Mode button
⓬ LED button
⓭ C/S switch
⓮ Illumination button
⓯ Diopter adjusting ring
⓰ Eyepiece
⓱ Film advance indicator
⓲ LCD window
⓳ Main switch

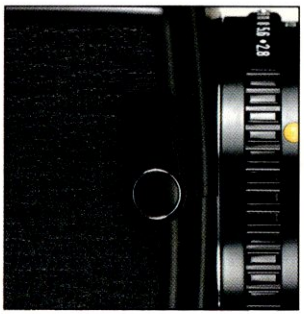


⑳ Shutter release button
㉑ Hotshoe
㉒ Selecting buttons
㉓ Memo holder
㉔ Battery holder
㉕ Film holder 645
㉖ Film holder key
㉗ Film wind knob socket
㉘ Vertical tripod socket
㉙ X-sync socket
㉚ Multi-exposure ring
㉛ Accessory guide hole
㉜ Shutter cocked indicator
㉝ Vertical tripod socket
㉞ Lithium battery chamber
㉟ Battery holder release
㊱ Film wind knob chamber
㊲ Accessory guide hole
㊳ Grip lock screw

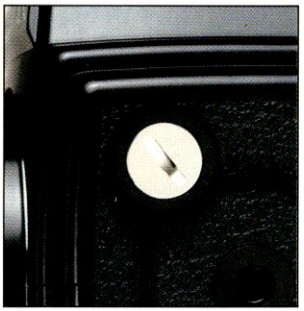
Other Features



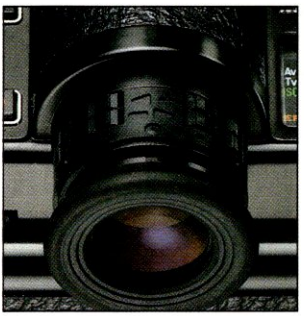
Interchangeable focusing screens
A total of 5 interchangeable focusing screens are available for the 645. In addition to the standard split-image/microprism screen, microprism, split-image, matte and crosslined matte are available. Focusing screens are easily interchanged through the body mount.



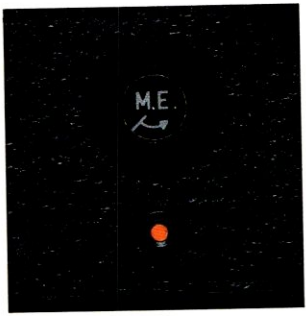
Preview lever
It is easy to preview depth of field when the lens aperture is set manually for use in the Aperture-Priority AE 2 and Metered Manual modes. Just push the preview lever and the lens automatically stops down to the aperture setting you have selected, showing you exactly the range of focus.



Emergency film wind
The automatic film wind motor in the 645 becomes inoperable when batteries are exhausted. Should battery failure occur, the film may still be wound using the manual film wind knob stored in the base of the camera. In this operating mode, the camera may be operated only at 1/50 second shutter speed.

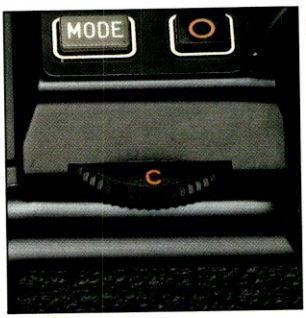


Diopter adjusting ring
To adjust for near- and farsightedness, a diopter adjusting ring with values from −5 to +2 diopters is built into the eyepiece.

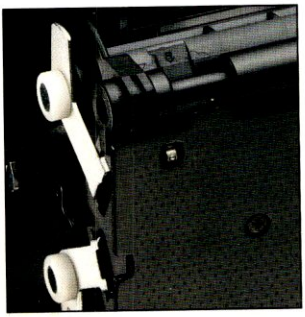


Multiple exposure ring and shutter cocked indicator
To capture two or more images in a single frame, turn the multiple exposure ring on the side of the camera before pressing the shutter release. This prevents the film from advancing. The shutter cocked indicator, located below the multiple exposure ring, shows red when the camera is ready for the next exposure.

Lens information contacts
Information from SMC Pentax 645 series lenses is relayed to the camera body through electronic contacts inside the lens mount, making possible automatic aperture control modes.



C/S switch
The C/S auto-drive switch permits you to choose single frame shooting or consecutive shooting (1.5 frames per second with 120 and 220 film, and 1 frame per second with 70mm film).

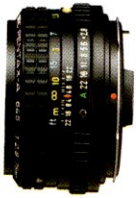


Film end detector
A pair of electrical contacts on the film pressure plate locate the end of the film when the last frame is advanced and stop winding automatically.

Superior Optics in Pentax 645 Lenses

SMC PENTAX-A 645
45mm f/2.8

SMC PENTAX-A 645
55mm f/2.8

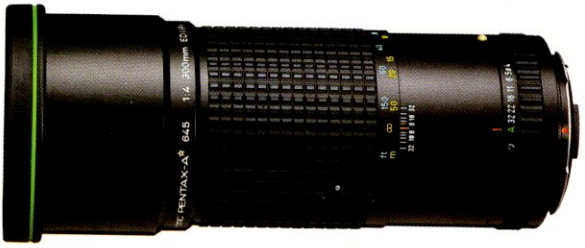


SMC PENTAX-A 645
75mm f/2.8

SMC PENTAX 645 LS
75mm f/2.8

SMC PENTAX-A 645
150mm f/3.5

REAR CONVERTER 645-A 1.4X
for 300mm f/4 ED[IF] Lens



SMC PENTAX-A* 645 300mm f/4 ED[IF]

SMC PENTAX-A 645 Zoom 80mm—160mm f/4.5

All Pentax 645 lenses live up to the outstanding optical and mechanical capabilities of the 645 body and to Pentax's unexcelled reputation as a lens maker.

The Pentax 645 lenses, like all Pentax lenses, are of superior optical quality. Our engineers start with the finest materials — specially selected high-grade optical glasses. Lenses are then manufactured in accordance with advanced computer-generated optical designs and rigid production and inspection procedures.

Optical performance is improved further by Pentax's exclusive Super-Multi-Coating (SMC), a seven-layer process that reduces reflection ratio to an exceptionally low 0.2% per lens surface. SMC lenses produce images that are brighter, superior in resolution, color balance and image contrast, and remarkably free of ghost images and flare.

All Pentax 645 lenses are designed especially for the 645 camera, which means they are durable and built to exacting professional standards. All feature precision bayonet mounts, and all except the leaf shutter lens have special electrical contacts for automatic aperture control.

The lenses now available with the 645 offer a full range of focal lengths, and many more lenses will be added to the range in the next few years. In addition, 13 of Pentax's highly acclaimed 67-system professional lenses may be used on the 645 body with an adapter.

Two lenses are available in the wide-angle range: a 45mm and a 55mm (roughly equivalent to the 28mm and 35mm lengths in the 35mm format). In the standard 75mm focal length (equivalent to 45mm in the 35mm format), we offer two lenses: an automatic-aperture lens for use in the 645 auto modes and a leaf shutter model that makes possible flash synchronization up to 1/500 second and may be used in the manual mode. In the telephoto range, there is a 150mm lens (equivalent to 90mm in the 35mm format), an 80-160mm zoom lens, and a 300mm ED telephoto that features inner focusing and extra-low-dispersion optical elements.

Together, the 645 lenses provide a wide range of creative tools for a variety of photographic situations.

Pentax 645 Lenses

Name of Lens	Minimum Aperture	Angle of View (Degrees)	Lens Construction (Groups-Elements)	Diaphragm	Minimum Focusing Distance (m)	(ft.)	Maximum Diameter & Length (∅mm × mm)	Weight (g)	(oz.)	Filter Size (mm)
SMC Pentax-A 645 45mm f/2.8	22	76	8-9	FA	0.45	1.5	74 × 66.5	400	14.0	67
SMC Pentax-A 645 55mm f/2.8	22	65	7-8	FA	0.45	1.5	74 × 60.5	410	14.4	58
SMC Pentax-A 645 75mm f/2.8	22	50	5-6	FA	0.6	2.0	74 × 37.5	240	8.4	58
SMC Pentax 645 LS 75mm f/2.8	22	50	5-6	FA	0.75	2.5	76 × 49.5	365	12.8	58
SMC Pentax-A 645 150mm f/3.5	32	26	4-4	FA	1.4	4.6	74 × 71.5	440	15.4	58
SMC Pentax-A* 645 300mm f/4 ED[IF]	32	13.5	8-8	FA	3	9.8	93 × 208	1,360	47.6	77
SMC Pentax-A 645 Zoom 80mm—160mm f/4.5	32	47-24.5	11-11	FA	1	3.3	82.5 × 131	1,020	35.7	77

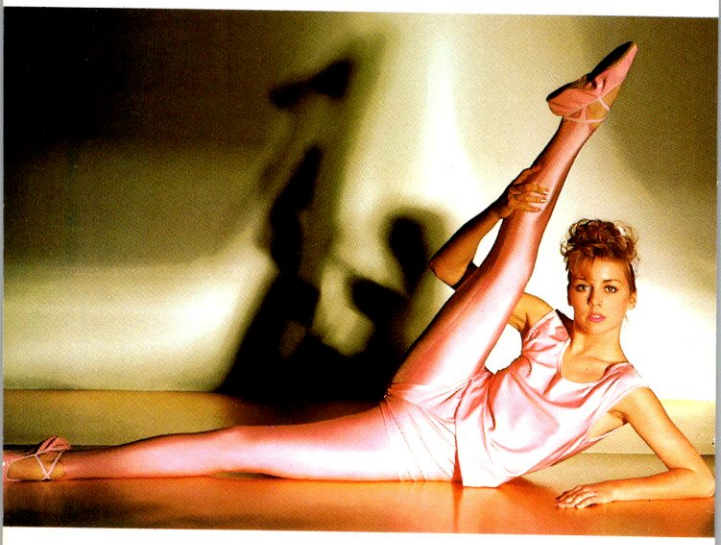
FA=Fully Automatic Note: **Length** does not include mount portion.

Pentax 645-Compatible 67 Lenses

Name of Lens	Minimum Aperture	Angle of View (Degrees)	Lens Construction (Groups-Elements)	Diaphragm	Minimum Focusing Distance (m)	(ft.)	Maximum Diameter & Length (Ø mm × mm)	Weight (g)	(oz.)	Filter Size (mm)
SMC Fish-Eye-Takumar 67 35mm f/4.5	22	180	7-11	FA	0.45	1.5	102 × 73	920	32.2	*
SMC Pentax 67 45mm f/4	22	88	8-9	FA	0.37	1.2	91.5 × 57.5	485	17.0	82
SMC Pentax 67 55mm f/4	22	77	8-9	FA	0.40	1.3	91.5 × 75.5	615	21.5	77
SMC Takumar 67 75mm f/4.5	22	61	4-5	FA	0.70	2.3	91.5 × 81	700	24.5	82
SMC Pentax 67 90mm f/2.8	22	52	5-7	FA	0.65	2.1	91.5 × 57.5	485	17.0	67
SMC Takumar 67 105mm f/2.4	22	45	5-6	FA	1.00	3.3	91.5 × 60	628	22.0	67
SMC Macro-Takumar 67 135mm f/4	32	36	3-5	FA	0.75	2.5	91.5 × 95	645	22.6	67
SMC Pentax 67 165mm f/2.8	22	30	5-6	FA	1.60	5.2	91.5 × 98.5	835	24.2	67
SMC Takumar 67 200mm f/4	22	26	4-4	FA	2.50	8.2	91.5 × 120	900	31.5	67
SMC Takumar 67 300mm f/4	45	17	5-5	FA	5.00	16.4	93 × 186	1,425	49.9	82
SMC Takumar 67 400mm f/4	45	12	5-5	M	8.00	26.2	115 × 287	2,570	90.0	77
SMC Takumar 67 600mm f/4	45	8	5-6	M	12.00	39.4	170 × 370	6,000	210.0	77
SMC Pentax-M*67 800mm f/6.7 ED[IF]	45	6	8-9	FA	8.00	26.2	150 × 570	6,000	210.0	67

FA=Fully Automatic M=Manual *UV, Y2, O2 & R2 filters built-in Note: **Length** does not include mount portion.

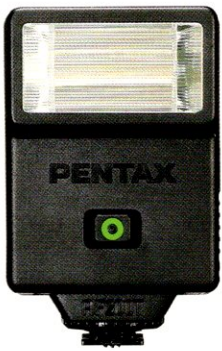
Dedicated TTL Flash Units



AF400T
This is a professional unit for those who require added power and power source options. It offers TTL, three power settings with Auto Flash, and four power settings with manual operation. Its rotating flash head can be adjusted 270° horizontal, 90° vertical and features a −15° setting for close-ups. The AF400T offers a choice of four power supply sources.

Through-the-lens flash photography presents the photographer with a world of creative new possibilities. Bounce flash, hand-held flash, multiple flash and close-up flash photography can all be accomplished with no bothersome calculations or guesswork. Instead, flash illumination is measured by a precise metering cell as it comes through the lens and reflects off the film plane. When enough light has reached the film, including both flash and ambient light, the flash is automatically terminated. Thus correct exposure is assured at any aperture. Exposure accuracy is virtually guaranteed. A variety of dedicated TTL flash units are available with the Pentax 645, from the most compact to the most powerful professional units.

AF280T
This handy and versatile unit features a rotating flash head with 270° horizontal and 90° vertical settings plus a −15° setting for close-up work. Like the AF200T, it has TTL and Auto Flash settings and two aperture settings. The rotating head is especially useful for bounce or angle flash in the TTL mode.



AF200T
This is a compact and lightweight unit designed for use in TTL and Auto Flash modes. Correct flash exposure confirmation is indicated by both viewfinder indicator and audible signal. It gives a choice of two aperture settings.

Convenient Infrared Remote Control

• Transmitter

Transmitter
The compact, powerful infrared transmitter has settings for single or consecutive shooting, three channel settings, a transmit switch and a hotshoe mount.

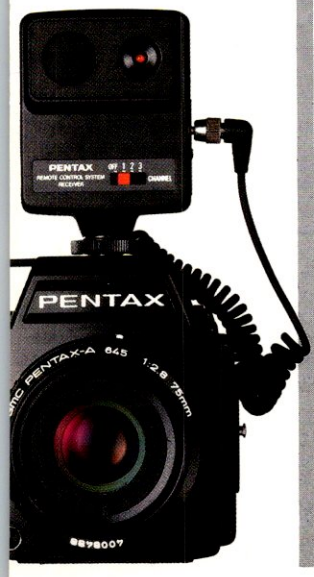
Receiver
Each receiver unit attaches to the camera or flash unit for wireless operation. It receives any of three channels at a maximum distance of about 60 meters.

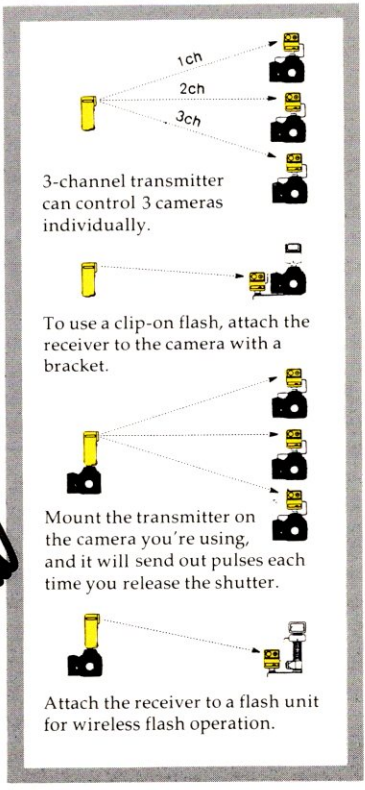
System

With the Pentax infrared remote control system, you can operate the camera from up to 60 meters away using a compact remote control transmitter. You can control either shutter release or remote flash. With a transmitter and any number of receiver units, you can accomplish tasks impossible with conventional equipment.

For instance, you can trigger the camera's shutter release at a distance when photographing animals, candid shots or in other situations where the photographer cannot be physically present at the scene. Or the remote control can be used to activate several remote flashes, for multiple-flash studio work. You can even mount the transmitter on the camera you are using and trigger up to three remote cameras or flash units, for photographing or illuminating a subject from a number of different angles. In addition, the transmitter unit has three channels for individual control of up to three cameras or flash systems.

• Receiver





Pentax 645 Accessories

120 Film Holder 645: Film holder/camera back for 120 film. Spacing between frames is automatically adjusted for 120 film. Holds film for 15 exposures.
220 Film Holder 645: Film holder/camera back for 220 film. Spacing between frames is automatically adjusted for 220 film. Holds film for 30 exposures.
70mm Film Holder 645: Film holder/camera back for 70mm film. Spacing between frames is automatically adjusted for 70mm film. Holds film for approximately 90 exposures. (Available soon.)
SMC Pentax Close-Up Lenses S33 and S56 (58mm): Close-up lenses screw onto the front of the main lens for simple close-up photography at two magnifications.
Large Copy Stand II: Provides rigid support for copy work and macro photography. (Available soon.)
Auto Bellows 645: Fits between lens and camera body for extreme close-up photography. Can be used in Aperture-Priority AE mode. (Available soon.)
Macrophoto Stand 645: Holds camera, lens and close-up attachments firmly in place for close-up and macro photography. Reversible gray/black stage plate is included. (Available soon.)
Slide Copier 645: Slide Copier 645 is used to duplicate 6 × 4.5-format transparencies onto other 645 film. (Available soon.)
Slide Copier 645 for K-Mount SLR: Used to copy 6 × 4.5-format transparencies onto 35mm film with K-mount SLR camera. (Available soon.)
Auto Extension Tube-A 645 (No. 1, No. 2 & No. 3): Set of three tubes can be used singly or in any combination for close-up photography in all modes except Programmed Auto Flash. Magnification is from 0.35X to 1.22X with standard 75mm lens.

Helicoid Extension Tube 645: Magnification can be adjusted from 0.57X to 1.06X (with standard 75mm lens) by means of an internal helicoid. Automatic aperture control is not available.
58mm Reverse Adapter 645: Allows lenses to be mounted in reverse on bellows, extension tubes, etc., for macro photography.
Reverse Attachment 645: Permits manual adjustment of aperture opening with lens mounted in reverse. Also protects bayonet mount and electronic contacts.
Adapter 645 for 67-System Lenses: Allows Pentax 67-system lenses to be used on the Pentax 645 body. Aperture-Priority AE 2, Metered Manual and TTL Auto Flash modes can be used.
Adapter K for 645 Lenses: Allows Pentax 645 lenses to be used on Pentax 35mm bayonet-mount bodies.
AF400T Bracket for 645: Attaches AF400T flash unit to camera via tripod socket in base of camera. Flash unit can be easily detached and replaced without removing bracket. Tripod can be attached to base of bracket.
Quick Shoe 645/67: Top section screws into camera's tripod socket; bottom section is attached to tripod. Camera can be attached to and removed from tripod in seconds.
Hot Shoe Adapter LS: Adjusts flash synchronization of Pentax dedicated flash units for use with 75mm LS lens. (Available soon.)
Interchangeable Focusing Screens 645: Easy-to-remove focusing screens available with the Pentax 645 include: split image with surrounding microprism collar on matte field; central microprism grid on matte field; split image on matte field; matte field; and crosslined matte.
Refconverter 645: This 90° eyepiece attaches to the viewfinder for easier low-angle photography. Image is both laterally correct and unreversed.
Finder Eyepiece 645 for 70mm Film Holder: Extended viewfinder eyepiece allows easy viewing with 70mm film holder. (Available soon.)
Magnifier 645: Attaches to viewfinder for critical focusing. Magnification is 2X. (Available soon.)
Rubber Lens Hoods: Rubber lens hoods to reduce glare are available in 58mm, 70mm and 77mm sizes.
Remote Battery Pack 645: Attaches to the hand grip via extension cord for better battery performance in cold weather and extended operating time.
Power Cord 645: Connects detached hand grip to camera body for remote shutter release or warm storage of batteries.

Specifications

Type:
6 × 4.5 format SLR with multi-mode automatic exposure controls and built-in motor drive.

Exposure Modes:
Programmed AE, Aperture-Priority AE, Shutter-Priority AE, Metered Manual, TTL Auto Flash, Programmed Auto Flash, and Leaf-Shutter Lens modes.

Exposure Control Mode Selection:
Via mode setting buttons and aperture ring of 645 lens.

Film:
120 film (15 exposures), 220 film (30 exposures) and 70mm film (approx. 90 exposures).

Picture Size:
56mm × 41.5mm

Lens Mount:
Pentax 645 bayonet mount (with electronic contacts).

Shutter:
Electronically-controlled vertical-run cloth focal-plane shutter, from 15 to 1/1000 sec., 1/60 sec. and B. Electro-magnetic shutter release.

Exposure Information in Viewfinder:
LED indication for lens aperture, shutter speeds and exposure factor warning, out-of-meter coupling and shutter/aperture coupling range warning, flash-ready signal, flash exposure confirmation signal, Flash sync at 1/60 sec. [60], Bulb [B], and Leaf-Shutter Lens [LS, F--].

External Indication:
Liquid crystal displays (LCD) indicate Programmed AE [Auto, P], Aperture-Priority AE [Auto, f-number], Shutter-Priority AE [Auto, shutter speed], Aperture-Priority AE (lens aperture set manually) [Auto, F--], Metered Manual [M, shutter speed], Flash sync at 1/60 sec. [60], Bulb [B], Leaf-Shutter Lens [LS, F--], exposure factor, ISO film speed, exposure count, and flash-ready signal.

Flash Synchronization:
Via hotshoe (X-sync contact, dedicated flash contacts) and X-sync socket. X-sync speed at 1/60 sec. Slow shutter speed synchronization possible in Metered Manual mode.

Viewfinder:
Keplerian telescopic viewfinder with split-image/microprism Clear-Bright-Matte screen. (Interchangeable focusing screens available.); Viewing area 92% vertical and 93% horizontal, 0.75X magnification with 75mm lens at infinity and -1 diopter. Diopter adjustment possible from −5 to +2 diopters.

Mirror:
Instant return mirror.

Film Loading:

120 and 220 films semi-automatically loaded with start mark; 70mm film automatically loaded.

Film Winding:

Automatic film winding by motor drive with single/consecutive shooting modes. (Single: 1 fps. Consecutive: approx. 1.5 fps.) Film winding automatically stops at end of film trailer.

Exposure Counter:

LED indication. Additive type. Automatic resetting by LCD. Automatically sets shutter speed at 1/1000 sec. up to first frame. Exposure count not advanced in multiple-exposure mode.

Multiple Exposure:

Via multi-exposure ring.
Cancellation possible.

Exposure Metering:

Open-aperture, center-weighted TTL metering by GPD cells. Off-the-film metering for dedicated TTL automatic electronic flashes.

Exposure Range:

From EV 3 (f/2.8 at 1 sec.) to EV 19 (f/22 at 1/1000 sec.) with 75mm f/2.8 lens with ISO 100 film.

Exposure Compensation:

Via exposure factor button. Settings at +3, +2, +1, 0, −1, −2, and −3.

Depth-of-Field Preview:

Via preview lever when aperture set manually.

Power Source and Battery Life:

Six 1.5V "AA" batteries (Manganese, Alkaline or Ni-Cd) for exposure control/display circuits and motor drive. Power automatically turned off 30 seconds after the return of shutter release button.

	Power Source		
	Manganese Battery:	Alkaline Battery:	Ni-Cd Battery:
120 Film	Approx. 100 rolls	Approx. 250 rolls	Approx. 100 rolls
220 Film	Approx. 70 rolls	Approx. 170 rolls	Approx. 70 rolls
70mm Film	Approx. 20 rolls	Approx. 50 rolls	Approx. 20 rolls

Memory Power Source:

One built-in lithium battery for exposure data memory circuits. Minimum battery life 5 years. (Replaced at Pentax service center.)

Size:

147mm (W) × 109mm (H) × 117mm (D)
(5.7" × 4.3" × 4.6") with Film Holder and Grip 645.

Weight:

1,320g (46.2 oz.) with lithium battery, Film Holder and Grip 645.

PENTAX®

Asahi Optical Co., Ltd. C.P.O. 895, Tokyo 100-91, JAPAN
Asahi Optical Europe N.V. Weiveldlaan 3-5, 1930 Zaventem, 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 Nederland Spinveld 25, 4815 HR Breda, THE NETHERLANDS
Pentax (Schweiz) AG Industriestrasse 2, CH-8305 Dietlikon, SWITZERLAND
Pentax Svenska AB Box 650, S-751 27 Uppsala, SWEDEN
Pentax Corporation 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 R. Capitão Antonio Rosa 376, Sala 121 Ed. PBK, São Paulo, BRAZIL

LCZ 6161•Printed in USA