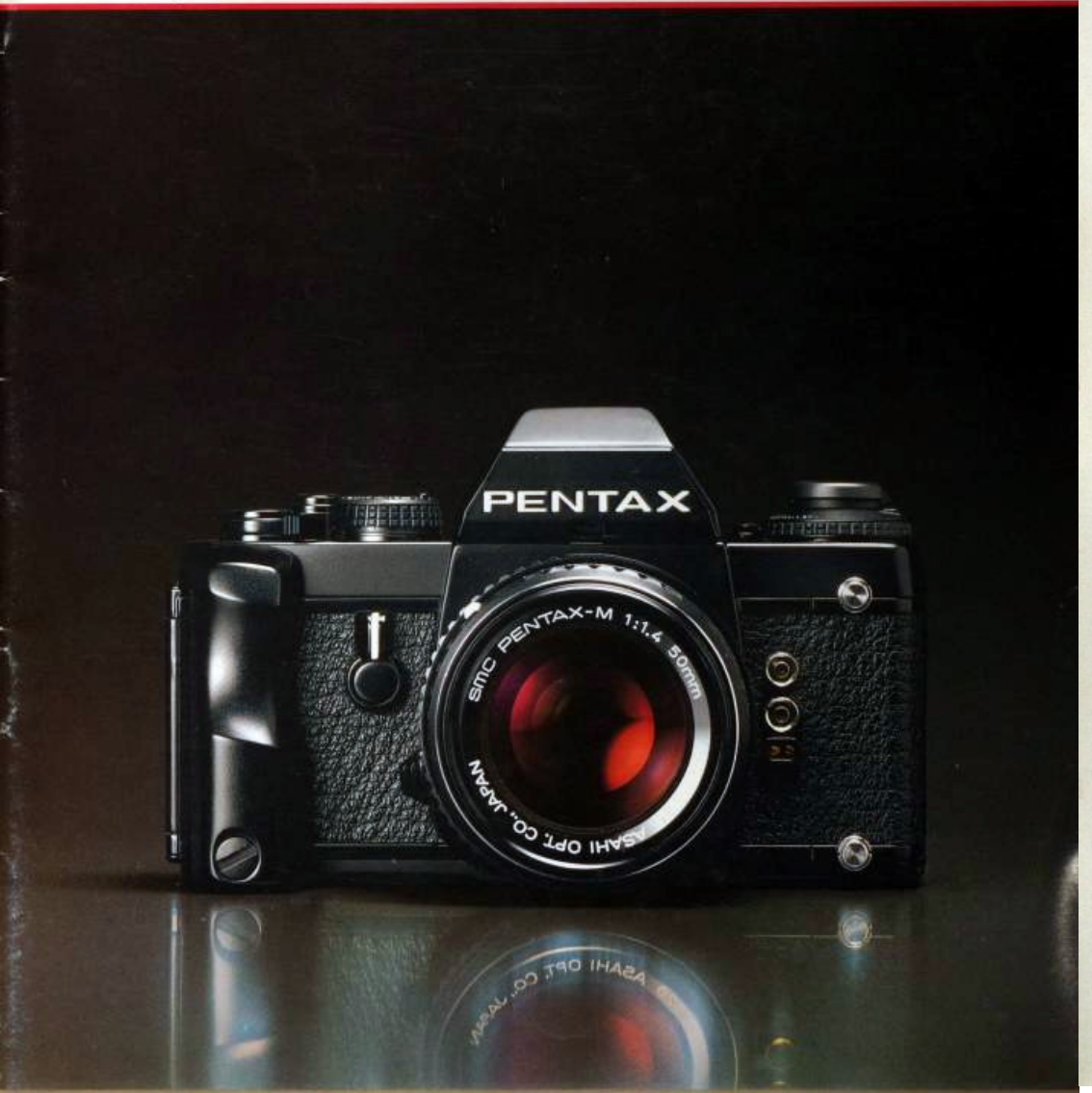
PENTAX LX

The Totally Professional 35mm SLR Camera



PENTAX LX SPECIFICATIONS

Type: 35mm full-frame single lens reflex camera, with IDM off-the-film plane Aperture-Priority automatic or full manual exposure metering, TTL integrated flash control with Pentax "T"- and "C"-type flash units.

Lens Mount: Pentax bayonet mount with fully automatic diaphragm coupling.

Shutter: Electro-mechanical horizontally-run titanium focal plane shutter; manual speeds mechanically controlled from 1/2000 second to "X" (1/75 second) and electronically controlled from 1/60 second to 4 seconds; mechanical speeds and "B" operational without batteries; automatic exposures electronically controlled in stepless range from 1/2000 second down to 125 seconds; shutter lock provided; shutter dial locks at "AUTOMATIC" with push-button release; built-in curtain blind for use with Watch Data LX.

Flash Control: TTL measurement of ambient and electronic flash lighting directly off film plane with "T"- and "C"-type Pentax flash models providing auto flash sync at "X" and visible flash-ready and exposure check in viewfinder when flash reaches full charge; automatic flash sync and visible viewfinder flash-ready light with other Pentax dedicated flash models.

Flash Synchronization: "FP" terminal and "X" terminal, plus contacts for TTL integrated automatic flash control at camera front; FA-1 Standard Finder features built-in "X"-sync hotshoe with TTL contacts.

Self-Timer/Preview: Multi-function lever provides a manually activated self-timer with 4 to 12 second delay, depth-of-field preview and mirror-lock capability.

Exposure Measurement: Open-aperture, center-weighted, through-the-lens light metering for both automatic and manual modes. Integrated Direct Metering (IDM) system measures light at the film plane via Silicon Photo Diode (SPD): high-speed measurements for automatic operation are made off fixed pattern on front shutter curtain, slow speed measurements off curtain and film, automatic electronic flash/ambient light measurement with TTL "T"- and "C"-type flash models. Manual exposure range from EV 1 to EV 19 (at ISO 100 with f/1.4 lens); stepless automatic exposure range extends to EV -6.5 to EV 20 (125 seconds at f/1.2 to 1/2000 second at f/22, at ISO 100 at normal temperature and humidity). Meter activated by light pressure on shutter release with automatic shut-off after 25 seconds. ISO film speed range: ISO 6 to 3200.

Exposure Compensation: Up to ± 2 EV automatic exposure compensation in automatic mode by dial control; dial indexed at 1/4X, 1/2X, 1X, 2X and 4X, with click stops at 1/3 EV positions; red flag appears in viewfinder to indicate dial is off "1X" normal exposure position; dial lock provided at "1X" with push-button release.

Viewfinder: Standard FA-1 Interchangeable Eye-Level Pentaprism Finder features silver-coating and shows 98% vertical, 95% horizontal of picture area plus full data viewfinder display; built-in diopter correction by adjustment screw. Finder removable by release lever.

Viewfinder Display: Tri-color display for TTL-measured shutter speeds with green LEDs indicating hand-holdable speeds from 1/2000 second to 1/30 second, yellow LEDs as slow speed warning from 1/15 second to 4 second, and red LEDs indicating overexposure or long exposure and "X"-sync flash-ready light with TTL and dedicated flash units; blue flag indicates automatic at "A" and manually selected shutter speeds; aperture visible in standard FA-1, FA-1W, FC-1 and FD-1 finders.

Focusing Screen: SC-21 standard focusing screen with center split-image spot surrounded by microprism collar on matte field; fully interchangeable with 11 other focusing screen models through the lens mount.

Film Transport: Pentax Magic Needle Loading System. Single-stroke, rapid wind lever with 120° throw and 25° standoff angle; built-in shutter cocked indicator. Accepts Winder LX and Motor Drive LX for automatic film advance and automatic rewind capability.

Exposure Counter: Additive two-way exposure counter moves from loading indicator to "38" with color-coded indexes at "0", "20", "24" and "36"; operates in reverse to indicate precise film location for rewind or tracking of multiple exposures.

Film Rewind: Crank type: Film Rewind Button doubles as multiple exposure button to disengage film advance mechanism. Automatic rewind with Winder LX and Motor Drive LX.

Power Source: Two 1.5V alkaline or silver-oxide batteries power all electronic systems in both automatic and manual modes; LED flickers in viewfinder to indicate low battery condition; mirror locks when batteries fail.

Mirror: Large swing-back type, instant-return mirror to virtually eliminate image cutoff with most lenses; mirror-up lock provided.

Back Cover: Standard camera back with spring catch, built-in film memo holder. Back is fully interchangeable with Dial Data LX, Watch Data LX and Bulk Film Magazine LX.

Body Size: 144.5mm × 90.5mm × 50.0mm (5.7" × 3.6" × 1.9") with Standard FA-1 Finder attached.

Body Weight: 565g (19.9 oz.) with Standard FA-1 Finder.

Other Features: Optional handgrip, special gaskets to minimize intrusion of dust and moisture, rubber fittings at base for stability on flat surfaces, interchangeable strap fasteners, Tripod Spacer Ring for use with compact or large-diameter lenses, neck strap with shoulder pad.

PENTAX®

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Pentax LX
The Professional's SLR

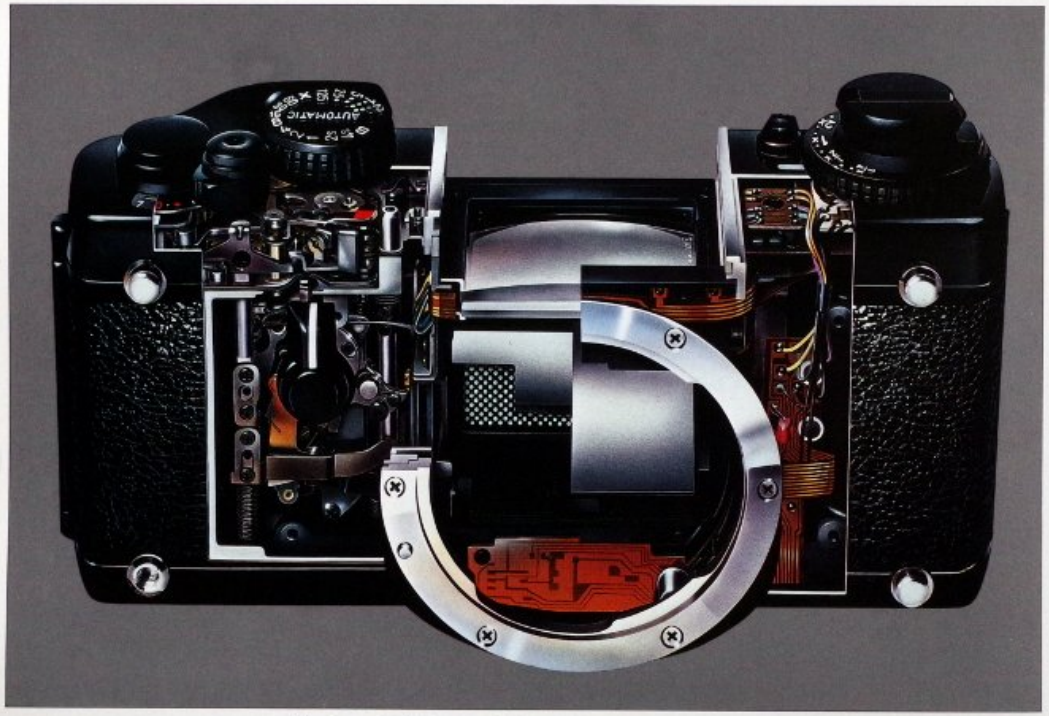
Compact, Rugged Body with the World's First Seal Construction Body——The LX's revolutionary seal construction prevents sand, dust and rain from working its way inside. Its rugged, aluminum-alloy body stands up to every-day professional use. Its compact, easy-to-hold design is a triumph of human engineering.

IDM Light Measuring System for Perfect Automatic Exposure——The Pentax original IDM (Integrated Direct Metering) system offers the professional extremely accurate, instantaneous automatic exposure, both in available light and in the TTL Auto Flash mode.

High-Performance Mechanisms for the Most Demanding Professional Use——The LX employs special high-performance mechanisms for professional use, including a mechanical shutter that can withstand temperatures down to -30°C, and a multiple exposure mechanism that allows the photographer to wind back to any frame.

Complete Lineup of Options for Every Situation——The LX system includes over 50 SMC Pentax lenses, 8 interchangeable viewfinders and 12 interchangeable focusing screens. With other options such as high-speed motor drive unit, infrared remote control system, dedicated TTL Auto Flash units, and macro and close-up accessories, the LX gives the professional photographer unlimited creative freedom.

A revolutionary approach to camera toughness



The Pentax LX is designed like no other 35mm SLR to withstand constant handling, extremes of temperature and humidity and other rigors of daily professional use. The body is constructed of a durable aluminum alloy produced exclusively for the LX. Tough seals protect all major operating parts from dust and moisture. Reliable solid state electronics are used throughout the camera. Ball bearings keep the winder action smooth and friction-free. The result of all these design innovations is a camera that keeps on working far longer than other SLRs.

The professional photographer will also appreciate the careful human engineering of the Pentax LX body. The compact, rounded shape of the body was designed only after extensive handholding tests. And all controls and mechanisms have been newly designed for better accessibility and ease of use.

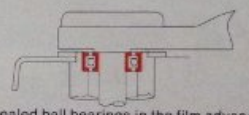
Exclusive Aluminum Alloy Body
The entire LX body — including the top and bottom panels — are diecast with an aluminum alloy produced especially for the LX. Far lighter than zinc and far stronger than plastic, this alloy provides excellent protection against shock without adding excess weight. A black alumite coating protects the aluminum body from corrosion, even when the outside coating is damaged.

Designed for Comfortable Handling
Every detail of the LX body has been designed and thoroughly tested in the field for ease of handling. The overall shape of the body fits the hands perfectly. The winding lever has been redesigned and positioned for optimum speed and accessibility. Even the strap lugs have been moved to the front of the body where they won't get in the way.

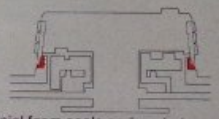
A Compact, Lightweight System
Like all Pentax SLRs, the LX is exceptionally lightweight and compact, even though it is built for heavy-duty professional use. Not only the body, but also all camera accessories, including motor drives, winders and lenses, are designed to reduce bulk and weight.

Sealed Body Construction
Dust, sand or moisture can cause serious damage to a camera's interior mechanisms and circuits and leave scratches on film. The LX's sealed body construction locks out virtually every trace of foreign matter, for longer camera life and better photographic results. Please note that while the LX is designed for use even in extreme environmental conditions, it is not an underwater camera and should not be immersed.

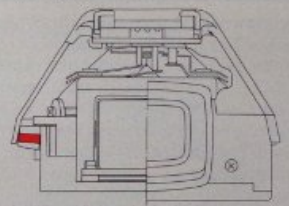
Artificial Rainfall Test
Pentax subjects randomly chosen LX cameras, with lenses attached, to a tough artificial-rainfall test to check the strength and effectiveness of body seals.



•Sealed ball bearings in the film advance mechanism insure smooth, reliable operation.

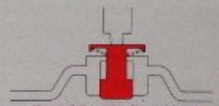


•Special foam seals and gaskets are used under the Shutter Dial cluster.

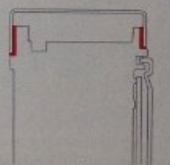


•Additional linings in the finder mount provide a tight seal when the finder is mounted.

•The rewind shaft protects against moisture with special foam seals and gaskets.



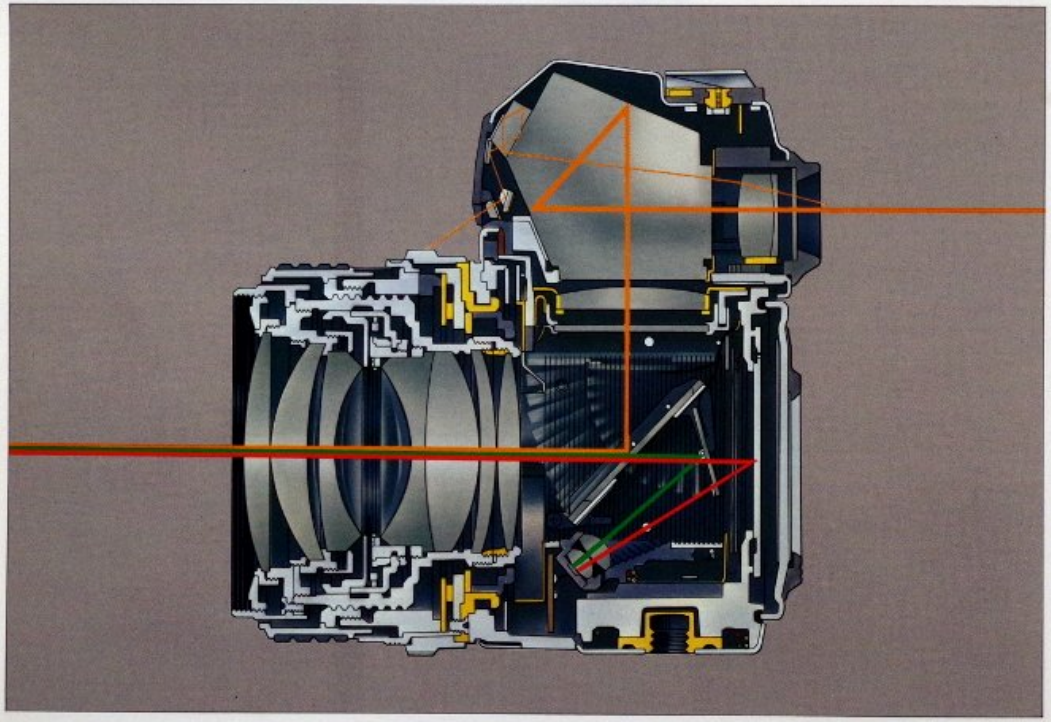
•Separation of the shaft and bottom of the rewind button eliminates the gap.



•The main body and the upper and lower panels are sealed together with a special high-strength bonding agent.

•A foam seal between the camera body and back provides further protection against moisture and dust.

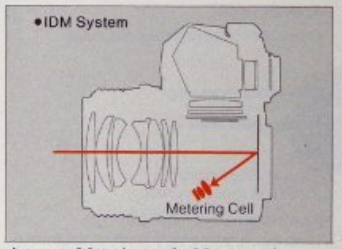
Accurate Automatic Exposure System with IDM (Integrated Direct Metering)



Pentax's exclusive IDM (Integrated Direct Metering) system makes the LX's automatic exposure system the most accurate available on a 35mm SLR camera.

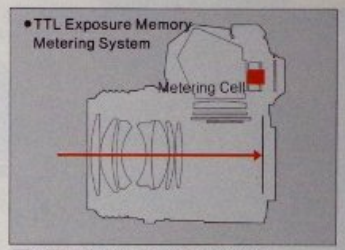
The IDM system measures the actual amount of light reaching the film plane during exposure, regardless of aperture setting or which focusing screen or viewfinder is being used. Even if light conditions change during the brief moment of exposure, shutter speed is adjusted instantaneously to compensate.

Flash output is also directly measured as it reaches the film plane. Bounce flash, diffused flash, and filtered flash photography are all possible without exposure compensation (with Pentax dedicated TTL Auto Flash units).



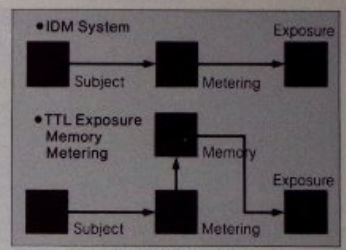
Accurate Metering at the Moment of Exposure

When the camera is operated in the automatic exposure mode, the IDM system switches on the instant the mirror flips up and the front shutter curtain begins to move. It calculates the amount of light hitting the film plane and instantaneously controls rear shutter curtain motion for correct exposure. Light values, metered through the actual aperture, are monitored for the duration of the exposure — not the instant before the shutter is released. Thus, shutter speed is correct, even in changing light.



The IDM System is Different from Conventional TTL Systems

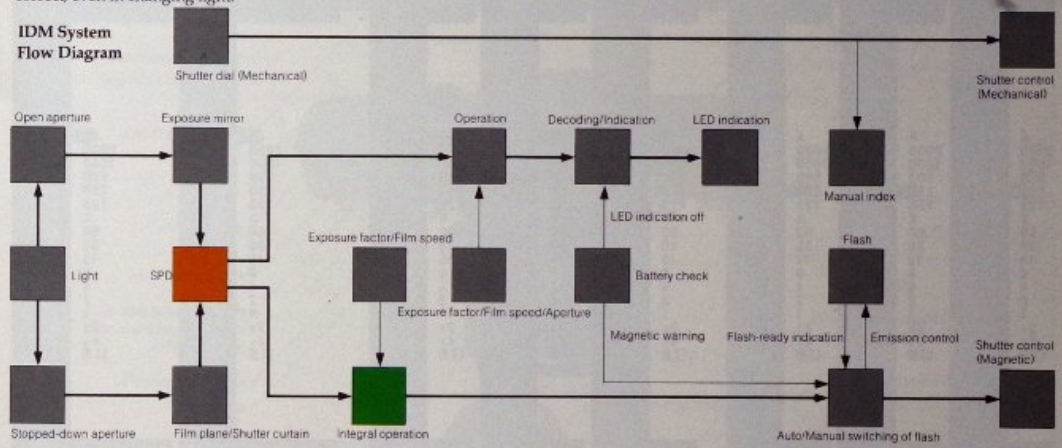
Unlike conventional through-the-lens metering systems, the Pentax IDM system measures incoming light at the moment of exposure — after mirror flips up. This makes it unnecessary to add a special circuit to store exposure data. IDM circuitry is thus simpler and more reliable. Also, all IDM metering circuitry, including the metering cell, is located inside the body, not in the pentaprism, so that finder changes do not affect the performance of the metering system.

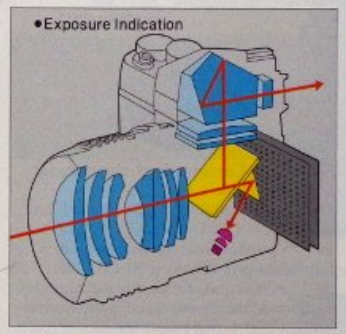


15-Layer Multicoating Half-Mirror

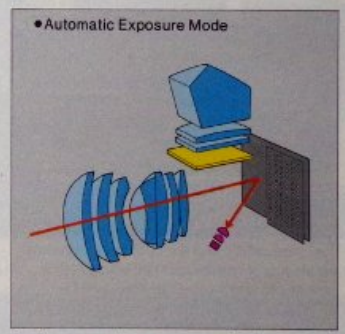
The special all-surface half-mirror has a reflectance ratio of approximately 85% over the entire surface of the mirror. There are no shadows or ghost images even in close-up shooting or stopped-down metering. In addition, 15 layers of the exclusive Pentax Super-Multi-Coating are applied for better reflectance ratio, clearer and brighter viewfinder image, and more accurate viewfinder color.

IDM System Flow Diagram

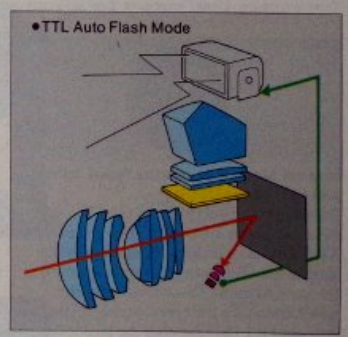




In TTL open-aperture metering, an SPD cell measures light transmitted through the quick-return half-mirror and reflecting off the metering mirror. The IDM system then indicates the photometric measurement in the viewfinder.

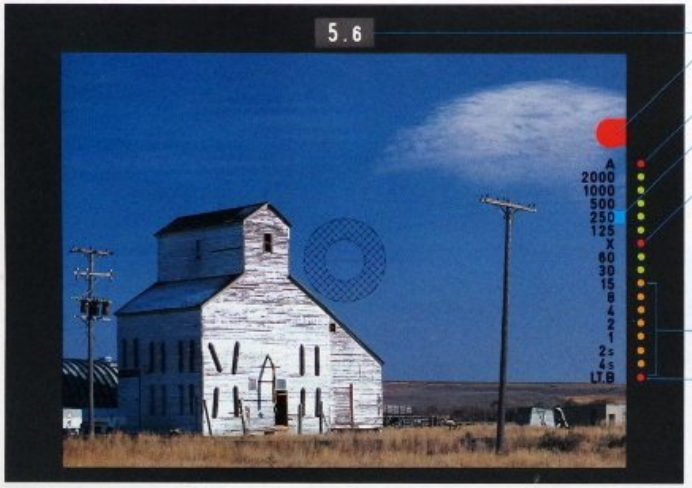


In the automatic exposure mode, the moment the front shutter curtain starts moving, the IDM system is switched on. As the shutter curtain moves, the IDM system makes an integral calculation of incoming light and controls movement of the rear shutter curtain for correct exposure.



For automatic exposure in the TTL Auto Flash mode, the IDM system measures only light reflecting off the film plane since the flash goes off after the shutter is fully open. The rear shutter curtain closes after the IDM system determines that enough light has reached the film and terminates the flash.

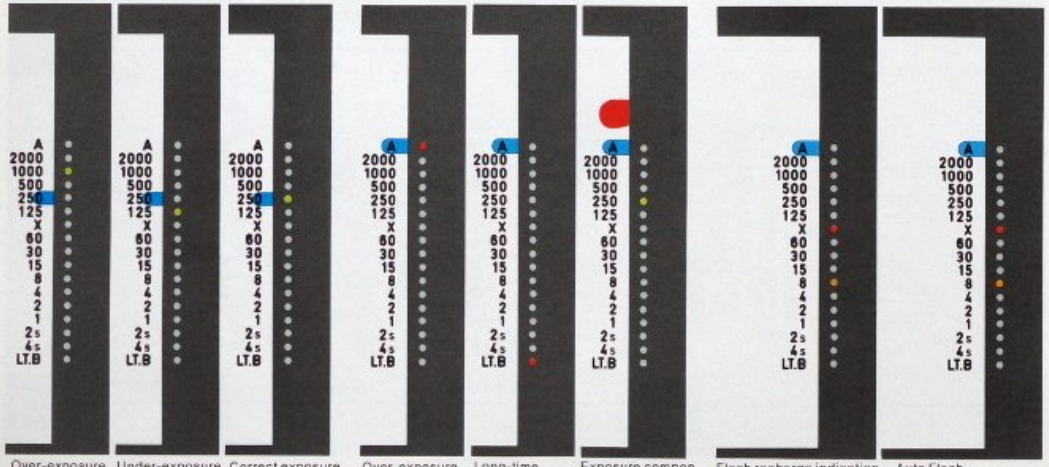
Total Information Viewfinder



With Finder FA-1

- Aperture window
- Exposure compensation warning index
- Over-exposure warning
- Shutter speed index
- Flash recharge indication
  Auto Flash exposure check
- Slow shutter speed warning
- Long exposure warning & bulb indication

All viewfinder indications are printed on the condenser lens by means of a chrome evaporation process.



Manual Mode with Shutter Speed Index and LED Meter Display

Photometric readings from the TTL exposure meter are indicated by 16 LEDs in 3 colors arranged along a scale of possible shutter speeds. To set the correct aperture in the manual mode, first choose a shutter speed, then turn the aperture ring on the lens until the LED matches the blue index tab indicating selected shutter speed. A red LED at either the "A" or "LT-B" position indicates that the selected aperture/shutter speed combination is either over- or under-exposed. A red index tab appears above the shutter-speed scale to remind the user that exposure factor is other than 1X.

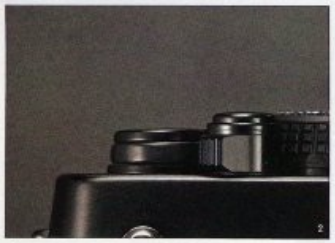
Aperture-Priority Automatic Exposure Mode with 3-Color LED Display

When the shutter speed dial is set at "AUTOMATIC", the blue index tab remains at "A", indicating that the automatic exposure mode has been selected. For any aperture setting, an appropriate shutter speed is automatically selected and indicated by an LED light. A red LED at "A" means over-exposure beyond the exposure coupling range. "LT-B" means a long exposure time. A yellow warning LED appears at shutter speeds between 1/15 second and 4 seconds, indicating that hand-held shooting will be difficult.

Recharge & Confirmation Indications for Dedicated Flash

With Pentax dedicated TTL Auto Flash unit AF400T, 280T, 200T or 080C, a red LED at the "X" position indicates that the flash is fully recharged. When the AF400T, 280T, 200T or 080C units are used in the automatic flash mode, the shutter speed is automatically set at 1/50 second even if the shutter dial is set at "AUTOMATIC." When the flash is successfully discharged, a red LED at "X" blinks for confirmation. In the manual flash mode, shutter speed should be set slower than 1/75 second ("X").

Professional features for greater versatility and handling ease

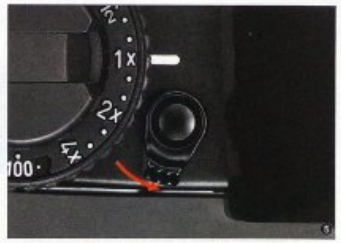


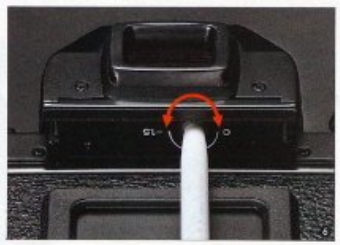
❶ 120° film wind angle with partial wind capability
The LX film wind lever has been thoroughly redesigned for functional operation and durability. It has a winding angle of 120° plus a 25° standoff angle, and any amount of partial winding is possible. The winding mechanism moves on eight ball bearings, giving it an extra smooth action. The LX wind lever is also extra tough — capable of withstanding pressures up to 30kg.

❷ Comfortable shutter release button
The shutter release button is placed for fast and comfortable access with the right index finger when holding the camera. With its sure touch, short stroke and smooth, ball-bearing assisted shutter mechanism, this mechanical shutter release button meets the strictest professional demands — even when using a motor drive or winder. At the bulb ("B") position, the shutter release button can be locked in the down position with the shutter release lock lever for long exposures.

❸ Exposure counter for film winding and rewinding
The exposure counter is an additive type from exposure 1 to 38. It keeps track of exposures even while rewinding, so it is easy to check when motorized rewinding has finished. The LX counter is so accurate that the photographer can wind back to any frame for precise multiple exposures.

❹ Two-way multiple exposure mechanism
The LX offers two ways to shoot multiple exposures. The first is to advance the film wind lever while pressing the film rewind button to release the film take-up spool and sprocket gear. This keeps the film in position for additional exposures. The second is simply to rewind to several frames before the frame to be exposed a second time and shoot blank shots up to that frame. The LX's accurate exposure counter makes this procedure simple and exact.

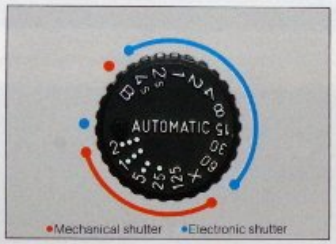


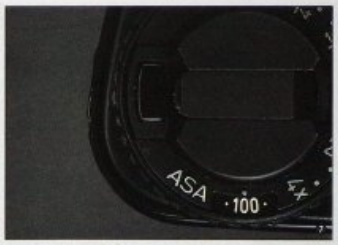


❺ Interchangeable finders
LX finders can be easily removed and replaced by releasing the finder lock on the top panel. The finder fits onto the body snugly and firmly. The contact surfaces are tightly sealed against dust and moisture and the finder remains perfectly steady even with flash attached.

❻ Viewfinders with adjustable diopters
Finders FA-1, FA-1W and FA-2 include a diopter lens that can be adjusted with a special tool (supplied) to correct the photographer's vision. Such accessories as Adapter M for SMC diopter correction lenses, Eyecup M, Magnifier M, and Refconverter A can be attached to any of these three viewfinders.

Professional quality mechanical shutter
For shutter speeds faster than "X" (1/75 sec.) and bulb shooting, the LX employs a reliable, high-performance mechanical shutter. Combined with the LX's rugged body construction, this shutter operates accurately without batteries, even under extreme conditions of humidity and shock and temperatures down to -30°C (compared to a minimum of -20° for an electronic shutter).



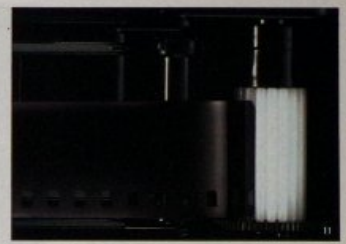


❼ Film speed setting for ISO 6—3200
The film speed setting dial is located at the base of the film rewind crank. It features a reliable locking mechanism (the locking lever is located beside the dial) that prevents accidental movement of the dial. Virtually any 35mm film on the market is covered by the film speed range of ISO 6 to 3200.

❽ Exposure compensation dial in 1/3 steps
The LX is equipped with a precise exposure compensation mechanism that moves in 1/3 EV steps between 1/4X and 4X, allowing the photographer to make minute adjustments in exposure. The exposure compensation dial locks at 1X to prevent accidental movement. A red warning tab in the viewfinder appears when the dial has been moved away from 1X.

❾ Precise, durable Pentax K-mount
Like all current Pentax cameras, the LX uses the renowned Pentax K bayonet mount for one-touch lens change. This precise, durable mount mechanism holds any lens firm, even after years of extensive use.

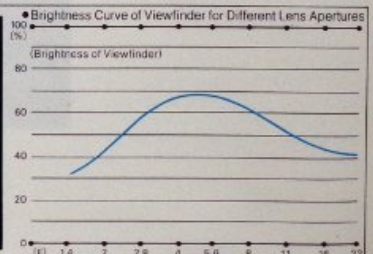
❿ Self-timer/preview/mirror-up lever
Self-timer, aperture preview and mirror-up functions are all controlled by a single, efficiently-designed lever placed accessibly on the LX's front panel. To activate the self-timer, press the center button and rotate the lever counterclockwise. The self-timer is activated by the shutter release button. Delay time can be adjusted from 4 to 12 seconds by changing the angle of rotation. Turning the lever clockwise allows the photographer to preview depth of field at stopped-down apertures. Turning the lever clockwise while pressing the center button locks the mirror at the up position for reduced mirror shock during shooting.



⓫ Fast-loading magic needles on film spool
Loading film into the LX is fast and foolproof with Pentax's magic needles on the take-up spool. Simply insert the film leader between any two of the flexible plastic rods. They grip the film securely for quick film loading.

⓬ Functional dual-position strap lugs
The LX has 3 strap lugs, two near the top of the front panel and one near the bottom. This allows the photographer the option of carrying the camera horizontally or vertically. With an accessory grip attached, the LX provides an extremely firm grip, with the right hand on the grip and left hand wrapped around the strap placed at the vertical position.

Easy-to-see Clear-Bright-Matte focusing screen
All LX focusing screens feature Pentax's original Clear-Bright-Matte process. The improved grain on this new matte surface makes the viewfinder image almost 30% brighter at f/1.4 and an unbelievable 70% brighter at f/2.8 to f/8 compared to our conventional focusing screens. With a Clear-Bright-Matte screen, the finder is bright and clear even in stopped-down shooting.



A Complete Line of Professional Accessories

A professional's SLR must offer the user a totally professional photographic system. The Pentax LX system offers a full range of SMC Pentax lenses plus a complete line of professional-quality accessories, including interchangeable finders, interchangeable focusing screens, interchangeable camera backs, TTL Auto Flash units, motor drive and winder, and even a wireless infrared remote control system. Other optional accessories for the LX include a handgrip that can be molded to fit each individual photographer's grip. The LX is more than a camera — it is a complete professional photographic system.

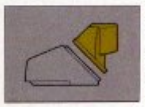
VIEWFINDERS Interchangeable Finders for Every Professional Need

FA-1 Eye-Level Finder (Standard)
Ideal for a standard LX viewfinder, the FA-1 combines bright, eye-level pentaprism viewing with built-in diopter correction, a full data viewfinder display and a TTL-coupled "X"-sync hotshoe. Adjustable diopter covers the −1.5 to 0 range.

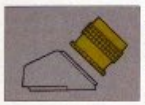
FA-1W Eye-Level Finder
Offers the same features as the FA-1 Finder with an extended diopter correction range from −3 to +1.

FA-2 Eye-Level Finder*
More compact and lightweight than the FA-1 Finder, this finder offers the same features but without the built-in hotshoe for electronic flash.

FB-1 System Finder
This Pentax exclusive viewing system accepts any of three optional viewing eyepieces for the ultimate in viewfinder versatility. Each eyepiece attaches easily to the viewfinder with a bayonet mount. Exposure information is clearly displayed in the viewfinder.



FC-1 Action Eyepiece
Offers a high eye-point at 60mm and a full 180° rotation for total flexibility in viewing angle from waist level to eye level.



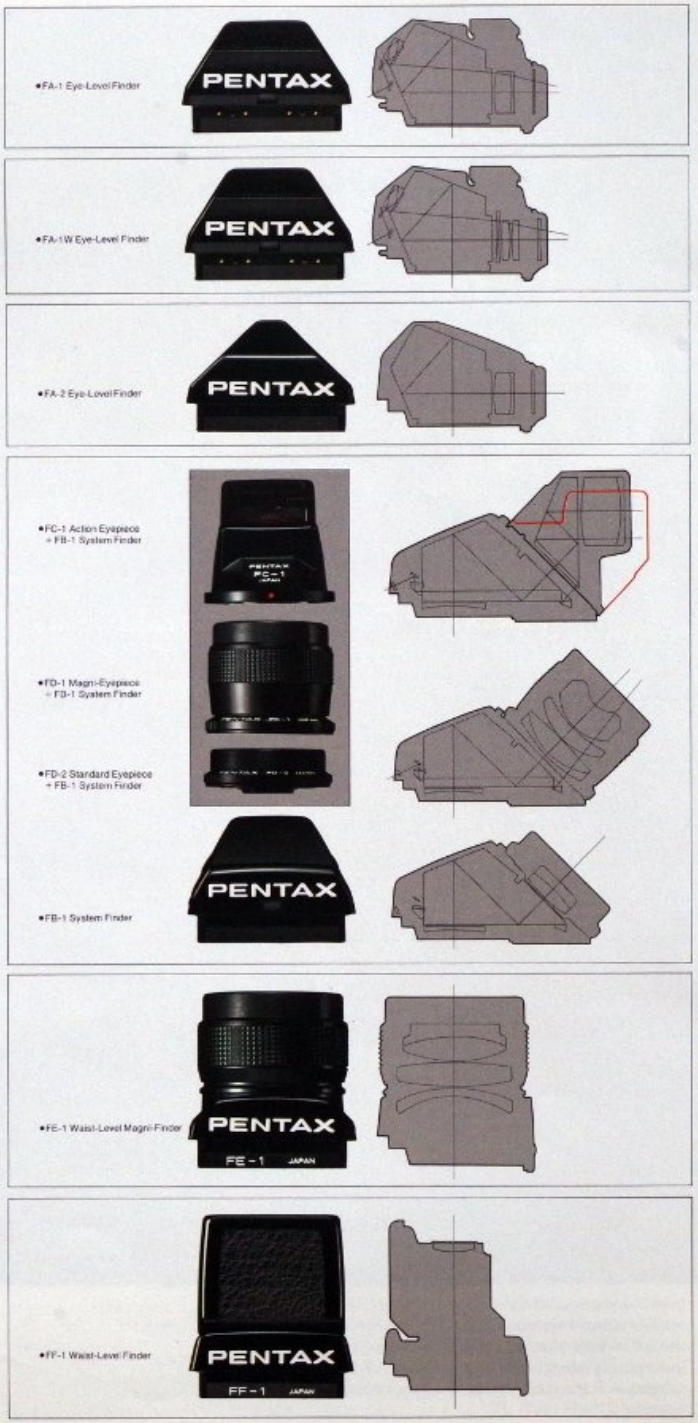
FD-1 Magni-Eyepiece
A magnifier eyepiece with built-in diopter correction from −4.5 to +3.5 plus a convenient 45° viewing angle.

FD-2 Standard Eyepiece*
Provides a convenient 45° viewing angle ideal for microscope use, copy work or general photography.

FE-1 Waist-Level Magni-Finder*
The FE-1 combines the benefits of waist-level viewing with high image magnification, making it ideal for close-up photography or any situation where critical focusing is important. Adjustable diopter correction from −5 to +4 is built in. All data except aperture setting is visible in the viewfinder.

FF-1 Waist-Level Finder*
This space-saving finder folds almost flat yet pops up in an instant to provide bright, clear waist-level viewing. All viewfinder data except aperture setting is visible in the reversed position.

* f/stop is not visible in the finder.



Eight Different Finders—One for Every Shooting Situation
The LX system provides the professional photographer with viewfinders for nearly any conceivable shooting situation. There are finders for eye-level, waist-level, and 45°-angle viewing. There is a special magnifying finder for close-up shooting and a high-eye-point finder for action shooting. And all finders show a full image area of 98% horizontal and 95% vertical.

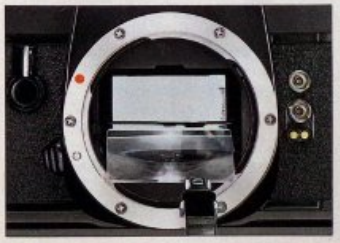
Automatic exposure is possible with any LX finder — or no finder at all — since the LX's IDM System is contained entirely inside the body. The IDM System also prevents incorrect metering due to light entering through the eyepiece. No eyepiece shutter is necessary and metering is accurate even when the eye is removed from the eyepiece.

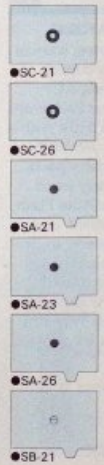
Adjustable Diopters
All LX eye-level finders are equipped with a built-in diopter adjusting mechanism. An easy adjusting mechanism lets you adjust the diopter while looking through the viewfinder image by turning a screw at the bottom of the finder until the image is clear.

Finder Specifications

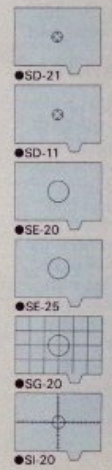
•Name	•Magnification	•Diopter	•Eye-Point	•Shutter Speed Indicartion	•Aperture Indication	•Application
Eye-Level Finder [FA-1]	0.9X	−1.5 — 0 Dpt.	15.8mm	•	•	General
Eye-Level Finder [FA-1W]	0.84X	−3 — +1 Dpt.	15mm	•	•	General
Eye-Level Finder [FA-2]	0.9X	−1.5 — 0 Dpt.	15.8mm	•	–	General
System Action Finder [FB-1 + FC-1]	0.55X	−0.95 Dpt. (fixed)	60mm	•	•	Sports, Aerial, Microscope, etc.
System Finder 45 [FB-1 + FD-1]	0.95X	−4.5 — +3.5 Dpt.	15mm	•	•	Microscope, etc.
System Finder 45S [FB-1 + FD-2]	0.84X	−1 Dpt. (fixed)	15mm	•	–	Microscope, etc.
Waist-Level Magni-Finder [FE-1]	1.35X	−5 — +4 Dpt.	20mm	• (reversed)	–	Macro, Copy, etc.
Waist-Level Finder [FF-1]	1.05X	−1.1 Dpt. (fixed)	15mm	• (reversed)	–	General (for low-angle photos)

12 Interchangeable Focusing Screens
For everyday use and a wide variety of special applications, the LX system has available 12 interchangable focusing screens, from plain matte to split-image microprism. All matte surfaces are coated with Pentax's exclusive Clear-Bright-Matte surface for superior imaging in all light conditions. Focusing screens are easily replaced through the LX body mount, and thanks to the IDM system, no exposure compensation is necessary when a non-standard screen is used. For added versatility, the nine focusing screens of the Pentax MX system can be used in the LX.





SC-21 Split-Microprism
A standard screen featuring a central split-image spot with a microprism collar on a matte field.
SC-26 Split-Microprism
A split-image/microprism screen on a matte field for use with telephotos 300mm and over. A 4-degree prism angle permits use up to f/8.
SA-21 Microprism/Matte
A highly versatile yet simple screen with a central microprism grid on a matte field.
SA-23 Microprism/Matte
Similar to the SA-21, but with sharper prism angles to aid focusing with high-speed (f/1.2 — f/2.8) lenses.
SA-26 Microprism/Matte
A microprism screen with a matte field suited for telephotos longer than 300mm. A 4-degree prism angle permits use up to f/8.
SB-21 Split/Matte
Standard split-image focusing at center spot on a matte field.

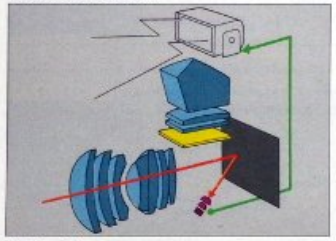


SD-21 Matte with Central Cross Hairs
An all-matte focusing screen with central cross hairs for use in microphotography, astrophotography and macrophotography.
SD-11 Clear Surface with Central Cross Hairs
Similar to the SD-21 but without matte surface for clearer vision.
SE-20 All-Surface Matte
Especially suited for focusing small-aperture telephoto or macro.
SE-25 All-Surface Matte
An all-matte screen suitable for telephoto lenses 300mm and over.
SG-20 Matte with Crosslines
Similar to the SE-20 but with etched crosslines in 6mm squares. Excellent for architectural subjects and multiple-exposure composition.
SI-20 Matte with Vertical and Horizontal Scales
Similar to the SE-20 but with engraved scales for determining subject size with bellows and microscope photography.

FLASH UNITS

Versatile, Dedicated TTL Auto Flash Units

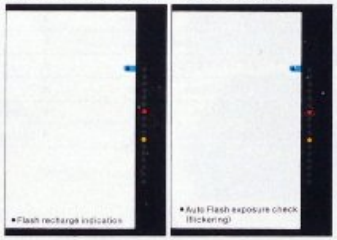
Accurate TTL Auto Flash Controlled by IDM
Combine the LX's IDM System with Pentax dedicated flash units AF400T, AF280T, AF200T or AF080C Ring Light Set, and discover the sophisticated convenience of fully automatic TTL flash photography. With this system, flash output is controlled not by the flash unit, but by the camera's own metering system. Incoming light — both flash and ambient light — is measured as it reaches the film plane, and the flash is automatically terminated the instant sufficient light has reached the film. TTL Auto Flash allows flash photography at any aperture, and makes complicated flash setups simple. The LX system guarantees the accuracy and versatility a professional requires.



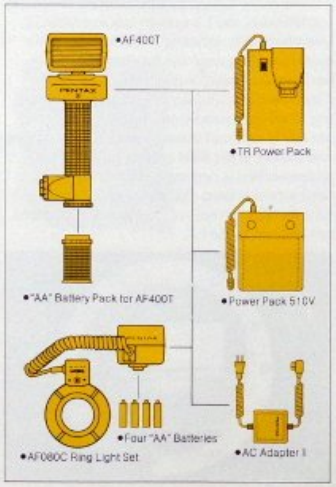
"Failsafe" Dedicated Flash Features
Since the TTL Auto Flash system measures the light actually reaching the film plane, the photographer can select any aperture, allowing precise control over depth of field. And the flash output is controlled accurately regardless of where the flash is placed, what other light sources are being used, or what filters or close-up accessories are being used.

Automatic Switching between Auto Flash and Auto Exposure
With the AF400T, AF280T, AF200T or AF080C attached and the shutter dial set at "AUTOMATIC", the LX automatically sets the shutter speed at 1/50 second when the flash is recharged if the exposure measurement requires a shutter speed slower than 1/30 second. For shutter speeds faster than 1/60 second, the LX automatically switches to the IDM-controlled automatic exposure mode. The LX's automatic flash system automatically chooses between the Auto Flash and automatic exposure modes, depending on light conditions and the degree of flash recharge.

The Fully Professional AF400T
The AF400T offers full system flash capabilities for the most exacting professional flash applications. This high-performance grip-type flash unit has a guide number of 40 (at ISO 100/m). Used with the LX, the AF400T permits the versatile TTL Auto Flash as well as three settings for Auto Flash, four settings for Dedicated Manual Flash and four settings for Manual Flash — a total of 12 different flash settings. The flash head can be adjusted 270° horizontally, 90° vertically and -15° vertically for bounce and close-up photography. The flash covers an angle of view equal to that of a 35mm lens. With a wide-angle adapter AFW2, which covers the angle of view for a 24mm lens, or a telephoto adapter AFT2 (both optional), the AF400T can be used in wide variety of flash applications. The AF400T connects to the LX via a 4P Sync Socket with a 4P Sync Cord A, or via the hotshoe of finders like the FA-1 with a 4P Sync Cord B. The AF400T System Kit includes a 4P Sync Cord B, a bracket, a clamp, and a battery pack for "AA" batteries. (670g for AF400T main unit.)



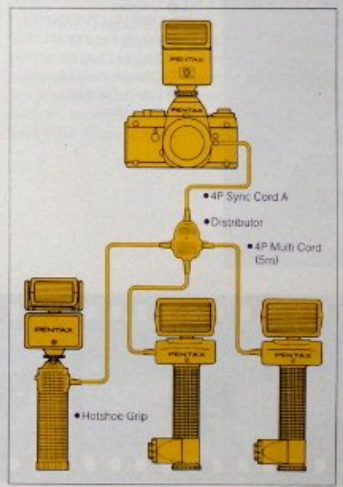
Power Sources for AF400T and AF080C
The AF400T has four different power sources for maximum versatility: a handy battery pack with six "AA" Ni-Cd batteries, AC Adapter II for AC outlet, TR Power Pack with six "C" batteries, or a Power Pack 510V with a high-power battery for extended use. With AC Adapter II and the smaller battery packs, flash recharge time is approximately seven seconds at full flash output. In the Auto Flash mode, even faster recharge is possible. The Power Pack 510V is a powerful power source for heavy-duty professional use and has a very short recharge time of approximately two seconds even at full output. AC Adapter II, TR Power Pack and Power Pack 510V can also be used as a power source for the AF080C Ring Light Set.



•AF280T

•AF200T

AF080C Ring Light Set
The Pentax AF080C Ring Light Set consists of a Ring Light that screws onto the front of the camera lens and a Control Pack which clips onto the camera's hotshoe. Used with the LX system in the TTL Auto Flash mode, it provides direct, shadowless lighting to within centimeters of the subject, an impossible task with regular flash units. With a guide number of 8 (at ISO 100/m), the unit is powered by 4 "AA" batteries housed inside the control unit. For added versatility, three optional power sources are available including the transistorized TR Power Pack to boost operation with 6 "C" batteries, the high-voltage Power Pack 510V for fast recycles, and the AC Adapter II for operation on AC current. The Ring Light also offers two-way manual override with dedicated flash features for convenient close-up work.



The Versatile AF280T
The handy and easy-to-use AF280T clips directly onto the LX's hotshoe and offers full TTL Auto Flash control plus other benefits, including two-way manual override, horizontal and vertical bounce flash, accessory telephoto and wide-angle lens adapters, and dedicated flash operation in all operating modes. The AF280T features a top guide number of 28 (at ISO 100/m) and power-saving thyristorized circuitry for maximum performance from its 4 "AA" batteries. Alkaline and rechargeable Ni-Cd batteries may be used.

The Compact AF200T with Confirmation Beep Tone
This compact and versatile flash unit, powered by 4 "AA" batteries, has a guide number of 20 (at ISO 100/m) and clips directly onto the hotshoe of any LX finder. It has settings for both TTL and Auto Flash, and gives you a choice of flash levels. In addition to fully automatic operation, it offers a flash-ready indication in the viewfinder and an audible signal to confirm proper flash exposure.
• Both AF280T and AF200T cover an angle of view equal to a 28mm lens. However, with the wide-angle adapter AFW1 (optional), they can cover the angle of a 24mm lens. Telephoto adapter AFT1 (optional) extends flash range.

- Film Speed Scale
- Aperture Scale
- Distance Scale
- Power Switch (Auto Check Switch)
- Manual Light Intensity Selector
- Flash Mode Selector
- Test Button/Flash-Ready Lamp

Multiple Flash Photography with TTL
Complex multiple flash situations are simple with the LX TTL Auto Flash system. For example, attach three AF400T flash units to the LX 4P sync terminal via a distributor, and clip a AF280T or AF200T unit to the camera's hotshoe. To the IDM System, this four-way flash setup is as easy as a single flash. Light from all four flashes is measured by the SPD cell in the LX body and output from all units controlled accordingly. Even the most difficult professional lighting problems are solved simply and accurately in the LX's TTL Auto Flash mode.

•AFW2 Wide-Angle/AFT2 Telephoto Adapters for AF400T

MOTOR DRIVE SYSTEM

High-Performance Motor Drive System for Fast Action

Fast Five Frames per Second with Winding Speed Control

A motor drive is a vital necessity for a professional photographer who must react swiftly to a changing situation. Motor Drive LX is fast enough to capture any action, with a maximum winding speed of five frames per second. It operates at all shutter speeds except "B" and has a stepless winding-speed control between five frames per second to 0.5 frame per second. Motor Drive LX automatically stops winding at the end of a roll to protect the film, and rewinds a 36-exposure roll in about eight seconds. The shutter can be released with the camera's release button or with the trigger button of Ni-Cd Battery Pack LX or Battery Grip M. Compact, lightweight and perfectly balanced, Motor Drive LX is ideal for sports and all action photography.

❶ Rewind Shaft
❷ Remote Control Socket
❸ Rewind Lever
❹ Attachment Screw
❺ C/S Switching Dial
❻ Winding Shaft
❼ Lock Button (at OFF position)
❽ Wind Speed Control Dial

Three Power Sources

Motor Drive LX can be powered by three different power sources: Ni-Cd Battery Pack LX, which winds up approximately 20 rolls of 36-exposure film when fully recharged by the Charge Pack M at 14.4V; Battery Grip M, which winds approximately 30 rolls of 36-exposure film with 12 alkaline manganese "AA"-size batteries at 18V; and the Power Pack M, which is used to power Motor Drive LX by AC current. All three power sources can be attached to the bottom of the Motor Drive LX, or connected by a power cord to keep batteries warm in cold weather.

❶ Motor Drive LX
❷ Ni-Cd Battery Pack LX
❸ Ni-Cd Battery Pack M
❹ Bulk Film Magazine LX
❺ Battery Grip M
❻ Film Cartridge
❼ Coupler
❽ Cartridge Loader
❾ Power Pack M
❿ Trigger Cord M
⓫ Charge Pack M
⓬ Power Cord M (3m/10m)

Extensive Line of Accessories

Bulk Film Magazine, which holds film enough for 250 exposures, is a convenient accessory for high-speed successive shooting and for interval shooting using a timer built into Power Pack M. Included are two film cartridges and a coupler. Also available is a Cartridge Loader for loading regular 100-foot bulk film into the Bulk Film Magazine's cartridge. Other accessories for Motor Drive LX include Power Cord M (3m and 10m), which connect power sources to the motor drive; Remote Cord for Motor Drive LX, which connects two power sources to the motor drive; and Trigger Cord M for remote shutter release.

•Remote Cord for Motor Drive LX

REMOTE CONTROL SYSTEMS

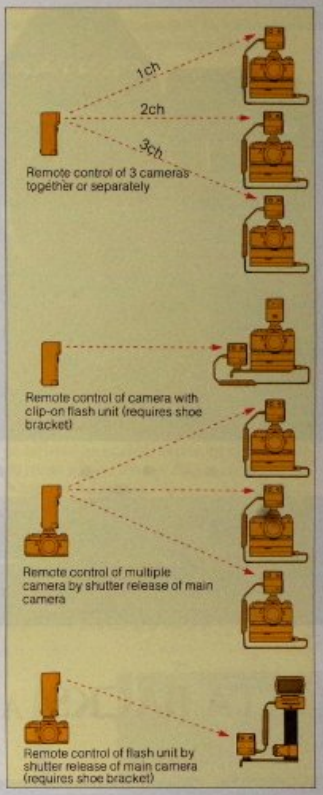
Control Camera or Flash from a Distance

Infrared Remote Control System

The Pentax Wireless Remote Control System allows one photographer to do the work of several. It consists of a transmitter, which shoots out a short infrared beam, and any number of receivers, which can be used to activate remote cameras, flash units or even motor drives. Maximum control distance is 60 meters in daylight (farther at night) and the system can transmit and receive on three different channels, for individual control of several receivers from a single transmitter. The transmitter can be mounted on an LX hotshoe, so that the camera's shutter release activates the signal, or it can be controlled separately. The receiver is powered by a 6V silver battery, although when used with the Motor Drive LX, it can be powered by the motor drive's power source. The transmitter runs on two "AA" batteries.

Creative Remote Control Possibilities

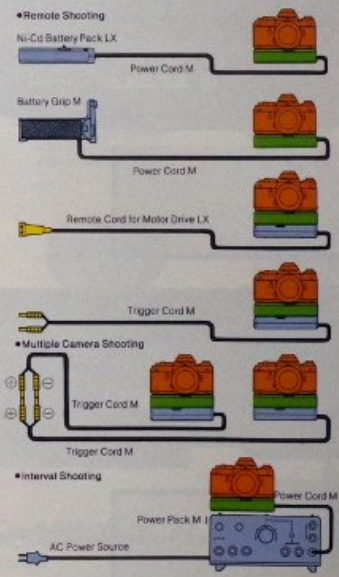
The Infrared Remote Control System offers an exciting variety of creative possibilities. Operate shutter or flash for three remote cameras, either simultaneously or seperately by changing channels on the transmitter. Intricate multiple flash setups are possible with no cords or wires. A single event can be photographed simultaneously from several different angles with continuous motor drive. And of course the remote control system is perfect for subjects either too dangerous or too sensitive for the photographer to be physically present at the scene.



❶ Sensor Window
❷ Signal Confirmation Lamp
❸ Channel Selector
❹ Signal Emitter
❺ Pilot Lamp
❻ Channel Selector
❼ C/S Mode Selector
❽ Hotshoe Lock Button

Wired Remote Control Systems

The LX system includes a complete selection of connection cords for wired remote control of shutter or motor drive. A number of convenient operations are possible with wired remote control systems. For example, two motor-driven cameras can be operated simultaneously by connecting both to a single power source via Trigger Cord M. And automatic long-term remote time exposures are possible using the interval timer of Power Pack M, Motor Drive LX, Power Cord M and Bulk Film Magazine LX.



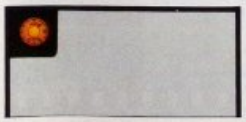
WINDER SYSTEM Automatic Convenience

❶ Rewind Shaft
❷ Remote Control Terminal
❸ Rewind Lever
❹ Attachment Screw
❺ LED Film End Indicator
❻ C/S Mode Selector
❼ Wind Shaft

Portable Auto Wind/Rewind Convenience
Lighter and more compact than Motor Drive LX, Winder LX provides the convenience of continuous automatic film wind at 2 frames per second. In the single-frame mode, the film advances as soon as the shutter closes, even before the shutter button is released, for extra quick shooting. Winder LX also features a fast auto rewind that returns a 36-exposure roll of film to its cartridge in just 15 seconds. At the last exposure, the winder automatically stops winding and an LED film-end indicator flashes. With four "AA" alkaline batteries, Winder LX can wind and rewind approximately 25 rolls of 36-exposure film. With optional Remote Battery Pack and Remote Cord, remote control shooting is possible.

• Remote Control Pack
• Remote Cord for Winder LX

DATA BACKS A Permanent Data Record



Dial Data LX for General Information
Dial Data LX imprints valuable information, such as date or exposure data, permanently on the finished photograph. The photographer simply sets the three alpha-numeric wheels on the Dial Data LX panel to record such information as year/month/date, lens aperture, shutter speed, letters from "A" to "O", or numbers between 0 and 36. Data is recorded on the film in an instant, so imprinted information is always sharp, even when using a high-speed motor drive. Dial Data LX interchanges easily with the standard LX back, leaving the camera's sync terminal open for a flash. It is usable with any ISO film speed from 25 to 400 for both color and black and white film.

Watch Data LX for Specialized Information
The Watch Data LX imprints a clock face directly on the corner of the photograph to display the month, hour, minute and second the picture is taken. Additional information can be written in by hand on the central ground glass portion of the face. If more space for handwritten data is needed, a clock face with larger center blank space is available. Like the Dial Data LX, Watch Data LX requires no sync cord, and information is sharply imprinted even during high-speed shooting. Watch Data LX is ideal for specialized scientific and professional work.

CLOSE-UP & OTHER ACCESSORIES
Wide Selection of Accessories for Every Situation

Accessories for All Pentax SLR Cameras
Almost all accessories are compatible with all Pentax SLR cameras. From microscopic photography to astronomic photography, the extensive line of accessories for the LX makes this one of the most versatile camera systems available.

• Auto Extension Tubes K 50mm/K 100mm
These fixed-length extension tubes provide automatic diaphragm operation and open-aperture metering. Magnifications are up to life size for the K 50mm tube and up to 1.5X for the K 100mm tube, with the 100mm f/4 macro lens.

• Helicoid Extension Tube K
This is a manual extension tube with an internal helicoid that permits continuous magnification from 0.57X to 1.05X with a 50mm lens.

• Auto Extension Tube Set K/Extension Tube Set K
Auto Extension Tube Set K consists of three rings (12mm, 19mm and 26mm in length) that fit between the camera body and the master lens and can be used with automatic diaphragm. Extension Tube Set K consists of 9.5mm, 19mm and 28.5mm tubes, and is used with manual diaphragm operation.

• Reverse Adapter K 49mm/52mm
Available in 49mm and 52mm sizes, this adapter is used to mount lenses in reverse on bellows or extension tubes, for easier focusing at greater-than-life-size magnifications

• Slide Holder 1X/K
Used with Auto or Extension Tube K, Slide Holder 1X/K allows 1X duplication of slides with a standard 50mm or macro 50mm lens.

• Auto Bellows A Set/Slide copier A
Auto Bellows A is used for high-magnification photography and slide copying. Features include a lens-reversing system and a moveable tripod receptacle. With slide copier A, slides can be duplicated up to 1.5X size.

• SMC Pentax Bellows 100mm f/4
This compact lens is designed for automatic operation and magnifications to greater than life size when used with Auto Bellows A.

• Battery Cord LX
To ensure proper battery performance in cold weather, this cord allows the photographer to store LX batteries in a warm pocket.

• 67-System Lens Mount Adapter K
This adapter permits Pentax 67-system lenses to be used in manual exposure modes with bayonet mount Pentax 35mm cameras.

• Mount Adapter K
This adapter allows screw-mount Takumar lenses to be used on bayonet-mount Pentax cameras in manual exposure modes.

• 52—49mm/49—52mm/58—77mm Adapter Rings
A variety of adapter rings are available to fit filters to different size lenses.

• Extension Tube Set K

• Helicoid Extension Tube K

• SMC Close-Up Lenses

• Reverse Adapter K 49mm/52mm

• Slide Holder 1X/K

• Auto Extension Tube Set K

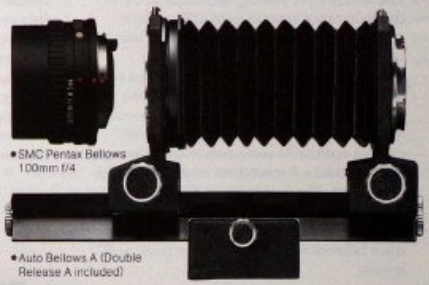
• Auto Extension Tube K 50mm

• Auto Extension Tube K 100mm

• 49—52mm Adapter Ring
• 52—49mm Adapter Ring
• 58—77mm Adapter Ring

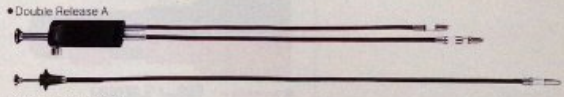
• Mount Adapter K

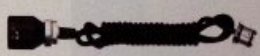
• Slide Copier A


• SMC Pentax Bellows 100mm f/4
• Auto Bellows A (Double Release A included)

• Microscope Lens Adapter K

• 6x7 Lens Mount Adapter K


• Double Release A
• Cable Release 50/30


• Battery Cord LX

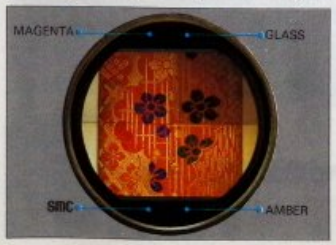
• Telescope Adapter

LENSES

Professional Image Quality with SMC Pentax Lenses

Compact, High-Performance SMC Pentax Lenses

SMC Pentax lenses offer every photographer the quality and creative versatility that have made the LX system the choice of professionals worldwide. Mechanical and optical elements of SMC Pentax lenses are the product of Pentax's decades-long experience in lens production and today's most advanced computer-aided design technology. Pentax lenses are optically superior, durable, intelligently designed, and exceptionally lightweight and compact. And for maximum system versatility, SMC Pentax lenses are available in an exceedingly broad range of focal lengths and special-application designs.

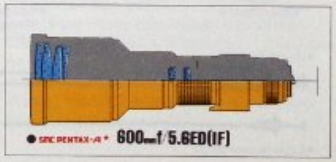


Exclusive Super-Multi-Coating

Pentax was the world's first producer of multi-coated lenses — a true breakthrough in optics technology. Today, our Super-Multi-Coating process continues to offer unsurpassed color balance and overall optical performance in all SMC Pentax lenses. The seven-layer coating technique reduces the reflectance ratio to just 0.2% per lens surface — or about one-tenth that of lenses with conventional magenta or amber coatings. At the same time, SMC lenses reduce transmission of undesireable ultraviolet rays. In today's multi-element lenses — zoom and telephoto lenses in particular — this can mean a noticeable reduction in ghost images and flair and a tremendous improvement in lens speed. The Super-Multi-Coating process is fine-tuned to each individual lens design and each different optical material so that color balance remains consistent in all SMC lenses.

Wide Selection of Lenses

The professional photographer can now match the LX body with over 50 different SMC Pentax lenses ranging in focal length from a 15mm ultra wide-angle to a 2000mm super telephoto. In between there are dozens of standard, wide-angle, telephoto and special-purpose lenses, including a 17mm fish-eye, a convenient line of zoom lenses, and ED[IF] telephoto lenses with extra low dispersion glass and internal focusing. In addition to the compact M-series lenses, Pentax now offers new A-series lenses. There's a quality SMC Pentax lens to meet the creative and technical needs of the most demanding professional.



SMC Pentax Interchangeable Lenses

●Type	●Name of Lens	●Minimum Aperture	●Angle of View (Degrees)	●Lens Construction (Groups-Elements)	●Diaphragm	●Minimum Focusing Distance m	●Minimum Focusing Distance ft	●Maximum Diameter & Length (Ø mm × mm)	●Weight g	●Weight oz.	●Filter Size (mm)	
FISH-EYE	SMC Pentax Fish-Eye 17mm f/4	22	180	7-11	FA	0.2	0.7	64.5 × 34	235	8.2	BI	●⊗
ULTRA WIDE-ANGLE	SMC Pentax-A 15mm f/3.5	22	111	12-13	FA	0.3	1	80 × 81.5	600	21	BI	–
	SMC Pentax 18mm f/3.5	22	100	11-12	FA	0.25	0.8	63 × 61.5	295	10.3	BI	●⊗
	SMC Pentax-M 20mm f/4	22	95	8-8	FA	0.25	0.8	63 × 29.5	150	5.3	49	●⊗
	SMC Pentax-A 24mm f/2.8	22	84	8-9	FA	0.25	0.8	63 × 41.5	205	7.2	52	●⊗
WIDE-ANGLE	SMC Pentax-A 28mm f/2	22	75	7-8	FA	0.3	1	63 × 41.5	215	7.5	49	●⊗
	SMC Pentax-A 28mm f/2.8	22	75	7-7	FA	0.3	1	63 × 36.5	170	6	49	●⊗
	SMC Pentax-A 35mm f/2	22	63	7-7	FA	0.3	1	63 × 41.5	205	7.2	49	●⊗
	SMC Pentax-M 35mm f/2	22	63	7-7	FA	0.3	1	63 × 42	205	7.2	49	●⊗
	SMC Pentax-A 35mm f/2.8	22	63	6-6	FA	0.3	1	63 × 36.5	170	6	49	●⊗
	SMC Pentax-M 35mm f/2.8	22	63	6-6	FA	0.3	1	63 × 35.5	170	6	49	●⊗
STANDARD	SMC Pentax-A 50mm f/1.2	22	47	6-7	FA	0.45	1.5	64.5 × 47.5	345	12.1	52	●⊗
	SMC Pentax 50mm f/1.2	22	47	6-7	FA	0.45	1.5	65 × 48.5	385	13.5	52	●⊗
	SMC Pentax-A 50mm f/1.4	22	47	6-7	FA	0.45	1.5	63 × 37	235	8.2	49	●⊗
	SMC Pentax-A 50mm f/1.7	22	47	5-6	FA	0.45	1.5	63 × 31	165	5.8	49	●⊗
	SMC Pentax-M 50mm f/2	22	47	5-5	FA	0.45	1.5	63 × 31	160	5.6	49	●⊗
TELEPHOTO	SMC Pentax-A★ 85mm f/1.4	22	28.5	6-7	FA	0.85	2.8	74 × 66	560	19.6	67	●⊗
	SMC Pentax-A 100mm f/2.8	22	24.5	5-5	FA	1	3.3	63 × 56	260	9.1	49	●⊗
	SMC Pentax-M 100mm f/2.8	22	24.5	5-5	FA	1	3.3	62.5 × 55.7	225	7.9	49	●⊗
	SMC Pentax-A★ 135mm f/1.8	22	18	6-7	FA	1.2	3.9	80 × 97.5	865	30.3	77	●⊗
	SMC Pentax 135mm f/2.5	32	18	6-6	FA	1.5	4.9	67.5 × 85.9	480	16.8	58	●⊗
	SMC Pentax-A 135mm f/2.8	32	18	4-4	FA	1.2	3.9	65 × 76.5	340	11.9	52	●⊗
	SMC Pentax-M 135mm f/3.5	32	18	5-5	FA	1.5	4.9	62.5 × 65.7	270	9.5	49	●⊗
	SMC Pentax-M 150mm f/3.5	32	16.5	5-5	FA	1.8	5.9	62.5 × 75	290	10.2	49	●⊗
	SMC Pentax 200mm f/2.5	32	12.5	6-6	FA	2	6.6	89 × 145	950	33.3	77	●⊗
	SMC Pentax-A★ 200mm f/2.8 ED	32	12.5	6-6	FA	1.8	5.9	91 × 137.5	850	29.8	77	●⊗
	SMC Pentax-A 200mm f/4	32	12.5	6-6	FA	1.9	6.2	63.5 × 111	410	14.4	52	●⊗
	SMC Pentax-M 200mm f/4	32	12.5	5-6	FA	2	6.6	63.5 × 111	400	14	52	●⊗
SUPER TELEPHOTO	SMC Pentax-A★ 300mm f/2.8 ED[IF]	32	8.3	8-8	FA	3	10	133 × 236	2,970	104	49	●⊗■◆
	SMC Pentax-A★ 300mm f/4	32	8.3	7-8	FA	4	13.1	84.5 × 132	850	29.8	77	●⊗
	SMC Pentax-A 400mm f/5.6	45	6.2	6-7	FA	2.8	9.2	85 × 277	1,280	44.8	77	⊗■◆
	SMC Pentax 500mm f/4.5	45	5	4-4	M	10	32.8	126.5 × 440	3,370	118	52	⊗■◆
	SMC Pentax-A★ 600mm f/5.6 ED[IF]	45	4.1	6-8	FA	5.5	18	133 × 386	3,280	114.8	49	⊗■◆
	SMC Pentax 1000mm f/8	45	2.5	5-5	M	30	98.4	143 × 738	5,290	185.2	52	⊗■◆
	SMC Pentax Reflex 1000mm f/11	–	2.5	4-6	ND	8	26.2	119 × 248	2,300	80.5	BI/52	⊗
	SMC Pentax-M Reflex 2000mm f/13.5	–	1.2	4-6	ND	20	65.6	180 × 530	8,000	280	BI/52	⊗
ZOOM	SMC Pentax-A Zoom 24mm – 50mm f/4	22	84-47	10-11	FA	0.4	1.3	64 × 67.5	375	13.1	58	●⊗
	SMC Pentax-M Zoom 28mm f/3.5 – 50mm f/4.5	22	75-47	10-10	FA	0.6	2	65 × 52	310	10.9	52	●⊗
	SMC Pentax-A Zoom 28mm – 135mm f/4	22	75-18	15-17	FA	1.7	5.6	80 × 112	820	28.7	77	●⊗
	*SMC Pentax AF Zoom 35mm – 70mm f/2.8	22	63-34.5	7-7	FA	1.2	3.9	73 × 76.5	580	20.3	58	●⊗
	SMC Pentax-A Zoom 35mm – 70mm f/4	22	63-34.5	7-7	FA	0.25	0.8	65 × 62	330	11.6	58	●⊗
	SMC Pentax-A Zoom 35mm – 105mm f/3.5	22	63-23.5	13-15	FA	1.5	4.9	70 × 97.5	615	21.5	67	●⊗
	SMC Pentax-M Zoom 40mm f/2.8 – 80mm f/4	22	57-30.5	7-7	FA	1.2	3.9	65.5 × 76	395	13.8	49	●⊗
	SMC Pentax Zoom 45mm – 125mm f/4	22	51-19.5	11-14	FA	1.5	4.9	69 × 127	615	21.5	67	●⊗
	SMC Pentax-A Zoom 70mm – 210mm f/4	32	34-12	10-13	FA	1.2	3.9	72 × 149	680	23.8	58	●⊗
	SMC Pentax-M Zoom 75mm – 150mm f/4	32	32-16.5	9-12	FA	1.2	3.9	63.5 × 111	465	16.3	49	●⊗
	SMC Pentax Zoom 135mm – 600mm f/6.7	45	18-4.1	12-15	M	6	19.7	105 × 582	4,070	142.5	52	⊗◆
	SMC Pentax Reflex Zoom 400mm f/8 – 600mm	–	6.2-4.1	7-12	ND	3	9.8	82 × 108	730	25.6	▲	●⊗
MACRO	SMC Pentax-A Macro 50mm f/2.8	22	47	4-6	FA	0.24	0.8	63 × 50	220	7.7	49	●⊗
	SMC Pentax-A Macro 100mm f/4	32	24.5	3-5	FA	0.45	1.5	64.6 × 78	340	11.9	49	●⊗
	SMC Pentax-M Macro 100mm f/4	32	24.5	3-5	FA	0.45	1.5	64.6 × 77.5	360	12.6	49	●⊗
	SMC Pentax Bellows 100mm f/4	32	24.5	3-5	FA/M	–	–	60 × 40	185	6.5	52	–
SHIFT	SMC Pentax Shift 28mm f/3.5	32	75	11-12	M	0.3	1	80 × 92.5	610	21.4	BI	●⊗

BI .... Filters built in FA .... Fully automatic M .... Manual ND .... Controlled by ND filters * .... AF stands for Auto Focus; auto focus possible only with ME-F.
▲ .... 67mm filters can be screwed onto the lens front; 40.5mm special filters to the lens rear.
Note: Lens length does not include mount portion.

● for Rear Converter-A 1.4X-S
⊗ for Rear Converter-A 2X-S
■ for Rear Converter-A 1.4X-L
◆ for Rear Converter-A 2X-L