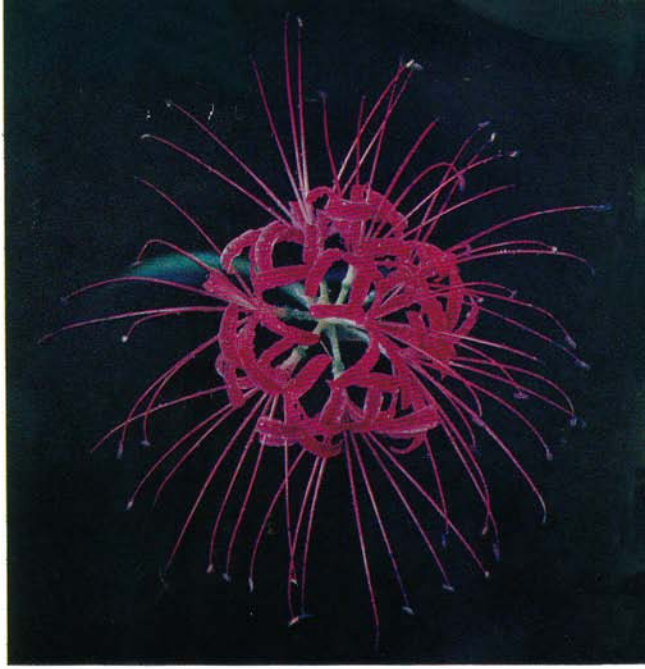
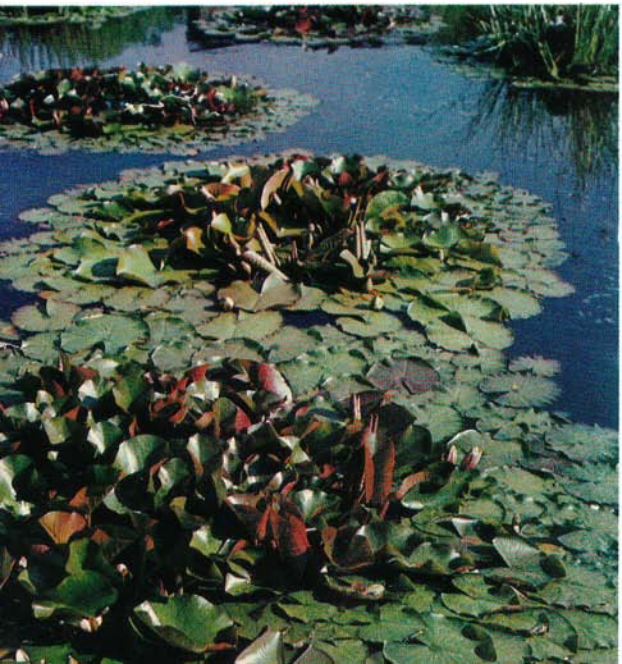


ASAHI PENTAX SPOTMATIC

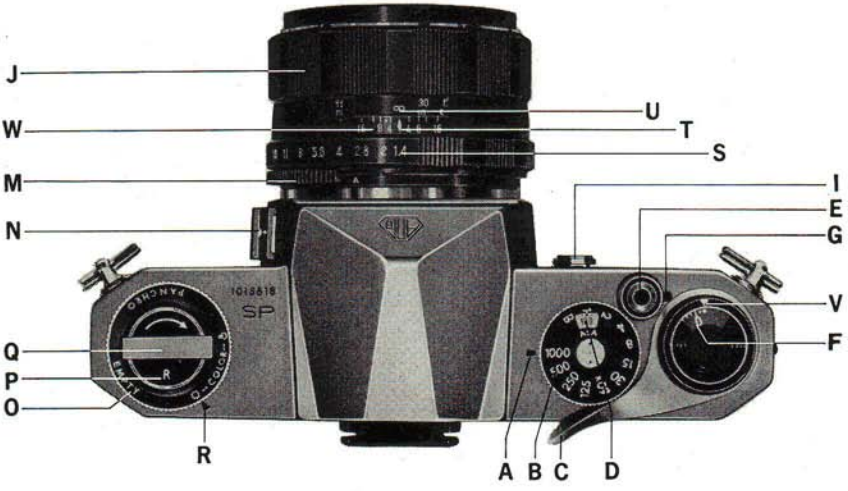
OPERATING MANUAL



Major working parts of the

A — Shutter speed index
B — Shutter speed dial
C — Rapid wind lever
D — ASA film speed setting
E — Shutter release
F — Automatic reset exposure counter
G — 'Cocked' indicator
H — D-ring lug
I — Self-timer cocking lever
J — Focusing ring
K — X flash terminal
L — FP flash terminal
M — Preview lever
N — Exposure meter switch
O — Film type reminder dial
P — Rewind knob
Q — Rewind crank
R — Film type index mark
S — Diaphragm ring
T — Diaphragm and distance index mark
U — Distance scale
V — Exposure counter index mark
W — Depth-of-field guide

ASAHI PENTAX SPOTMATIC



Asahi Pentax Spotmatic

When the Asahi Pentax Spotmatic was introduced to the public at the 1960 Photokina, the photographic world's fair in Cologne, Germany, it attracted immediate and keen attention. Not available for purchase at that time, it was a model of the advanced features and design that would be incorporated into cameras of the future.

Four years of extensive research, exhaustive experiments and intensive testing followed before it became available to serious amateur and professional photographers in late 1964.

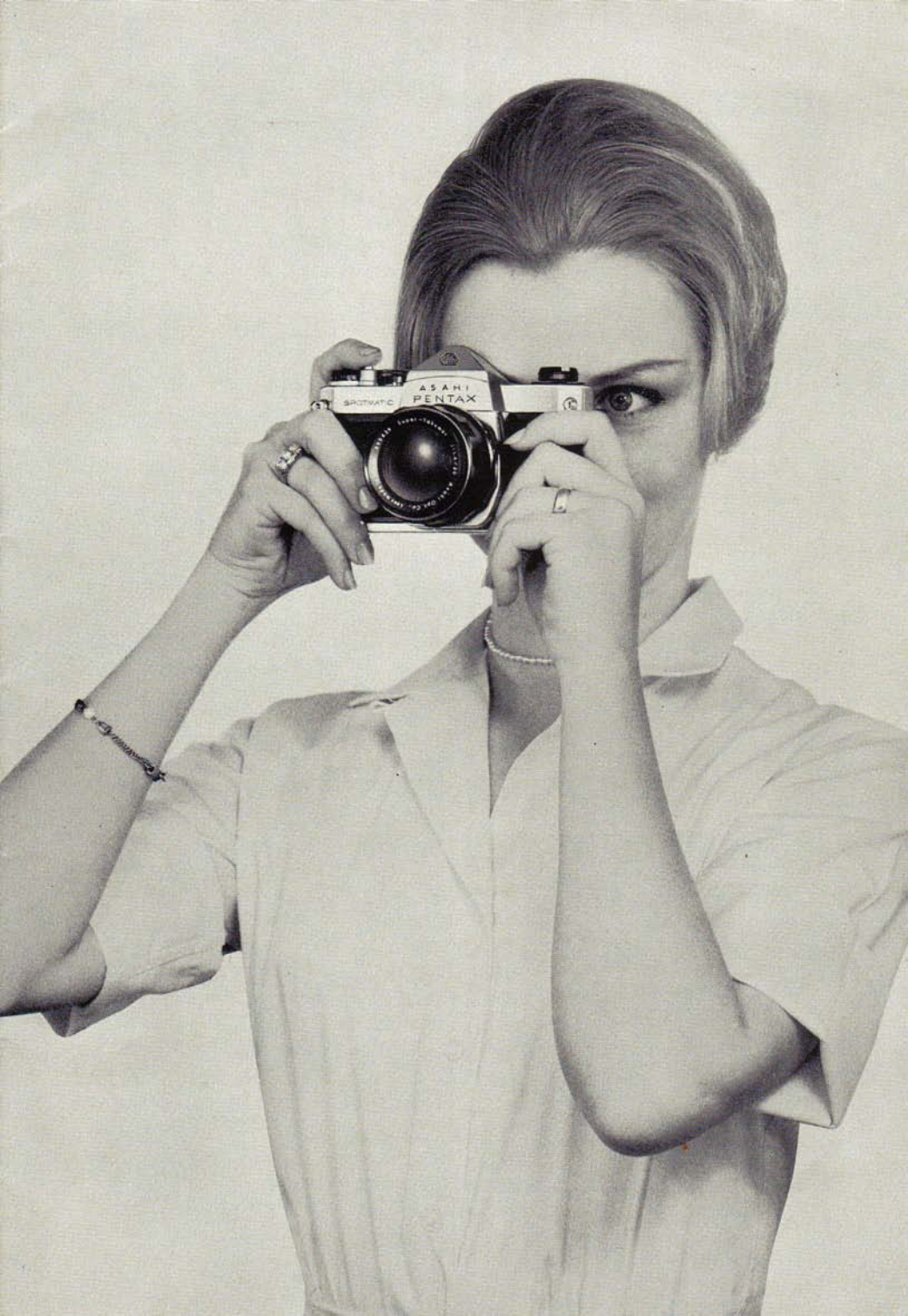
With its unique behind-the-lens exposure meter of entirely new design, the Asahi Pentax Spotmatic is now more than just another camera . . . it is a new concept in photography.

Hidden within the camera body, its through-the-lens meter utilizes two highly sensitive Cadmium Sulfide sensors to accurately measure light seen by the camera's lens as it is reflected from the subject being photographed. Therefore, by measuring the light as it passes through the lens and matching the exposure needle as seen through the viewfinder, you can be assured of properly exposed pictures under all but the most impossible lighting conditions. Macro- or microphotography, pictures with telephoto lenses or with filters . . . the Asahi Pentax Spotmatic will give you correctly exposed photographs without the use of external meters or the need for cumbersome, time-consuming calculations!

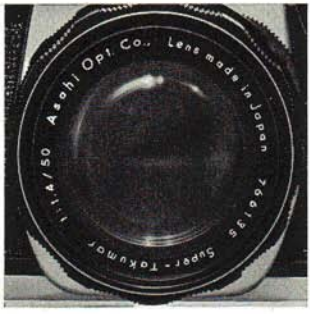
The Spotmatic may also be set manually the same as any other quality 35mm camera if special lighting or selective focus effects are desired. Just leave the exposure meter switch in its OFF position and select the f/stop and speed settings for the required effect.

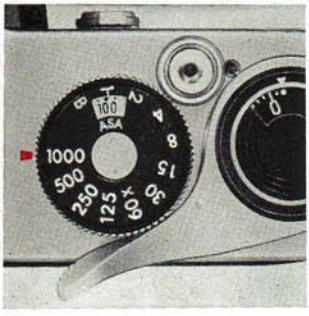
The traditional classic design and simple elegance associated with earlier models of the famous Asahi Pentax have been retained in the Spotmatic despite the incorporation of many highly advanced features. Meticulously constructed by master craftsmen, the Asahi Pentax cameras remain the standard of excellence and precision in the world of 35mm single-lens-reflex cameras.

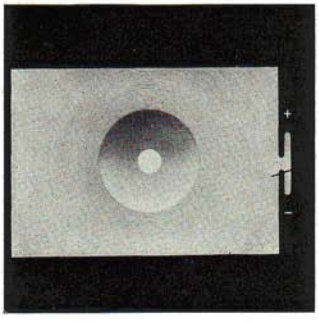
You will find the Asahi Pentax Spotmatic even more versatile than the famous Asahi Pentax SV. Its new 50mm f/1.4 and 55mm f/1.8 Super-Takumar lenses with completely automatic diaphragm will satisfy the demands of even the most critical professional. Like the S1a and SV, the Asahi Pentax Spotmatic has a 42mm threaded lens mount that accepts any of the superb Takumar lenses from the ultra-wide-angle 18mm Takumar to the super-telephoto 1000mm Takumar.


ASAHI
PENTAX
SPOTMATIC

Specifications







Type
35mm single-lens reflex with built-in light meter.

Film and Picture Size
35mm film (20 or 36 exposures). 24mm x 36mm.

Standard Lenses
Super-Takumar 50mm f/1.4 and 55mm f/1.8 with fully automatic diaphragm. Filters and lenshood size: 49mm. Equipped with diaphragm preview lever which affords visual check of depth of field. Distance scale: 45cm (18″) to infinity.

Shutter
Focal plane shutter, with single non-rotating dial. Speeds: B, 1-1/1000 sec. Film speed (ASA) setting dial and window on shutter speed dial. Built-in self-timer releases shutter in 5-13 seconds. Shutter curtains of special rubberized silk and eccentric cam for extremely high accuracy of shutter speeds, even in sub-zero temperatures.

Warning Signal
The index of shutter speeds turns to red when the shutter and film speed settings are off the meter's measurability range. Refer to page 15.

Finder
Pentaprism finder with microprism Fresnel lens for instant focusing; 0.88x magnification with standard lens.

Focusing
Turn the distance scale ring until the subject image on the ground glass comes into focus.

Reflex Mirror
Instant return type with special shock absorbers for minimum vibration.

Film Advance
Ratchet-type rapid wind lever (for film advance and shutter cocking). 10° pre-advancing and 160° advancing angle.

Film Exposure Counter
Automatic re-set type.

Film Rewind
Rapid rewind crank for speedy film take-up. Film rewind release button on bottom of camera body rotates while film is being rewound.

Lens Mount
42mm threaded lens mount.

Flash Synchronization
Equipped with FP and X flash terminals. Electronic synchronization at 1/60 sec.

Exposure Meter
Built-in meter measures the brightness of the ground glass, and couples directly to shutter and film speed settings. Film speed (ASA) setting ranges from 20 to 1600 (LV1-18 for ASA-100 film with standard lens.) Meter is powered with a mercury battery.

Loaded Film Indicator
Loaded film reminder dial underneath film rewind knob is marked "PANCHRO" (black-and-white), "COLOR" and "EMPTY."

"Cocked" Indicator
A red disk appears in a small window alongside the shutter speed dial when the shutter is cocked, and blacks out when it is released.

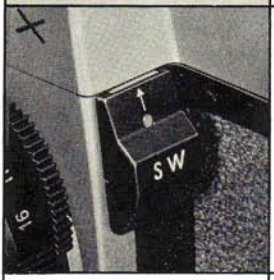
Dimension
Width 5.6″ (143mm) x height 3.6″ (92mm) x thickness 3.4″ (88mm).

Weight
868 grams (1 lb. 14 oz.) with standard lens. Body alone: 621 grams (1 lb. 6 oz.)

Important notes

1

A spare mercury battery for the light meter is in the small pocket on the inside ceiling of the camera case.

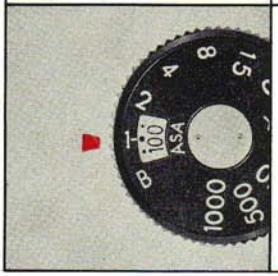


2

Always keep the meter switched off when not actually taking readings. Leaving the meter switched on will rapidly exhaust the battery.

3

When removing the Super-Takumar 50mm f/1.4 lens from the camera body, do not place it on its threaded end without the rear mount cap in place, or you will scratch its rear element lens.



4

When the index of the shutter speeds turns to red, it indicates that the shutter and film speed settings are off the meter's measurability range. Change the shutter speed setting to a faster or slower setting.
Refer to page 15.

5

When the meter is switched on, the lens (any Super-Takumar lens) is in its manual position even when the diaphragm preview lever is in "A" (automatic) position. When the meter is switched off manually, or automatically after shutter release, the lens returns to its automatic position when it is set in "A" position.

6

Exposure increase factors which apply when taking pictures with filters, close-ups, macro- and micro-photos, do not apply to the Spotmatic.

No!

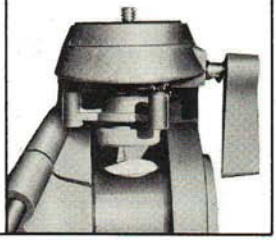
Exposure factor
x1.63
x1.96
x3.20
x4.80
x5.46

7

Do not use the new Super-Takumar 50mm f/1.4 lens with any other camera or any other Asahi Pentax model except with models SV and S1a, having orange-coloured "R" marking on the film rewind knob, or you will damage the rear element of the lens.

8

The length of the tripod's screw should not exceed the normal length of 3/16″ (4.5mm). Do not extend it longer than this length when mounting your camera on tripod.

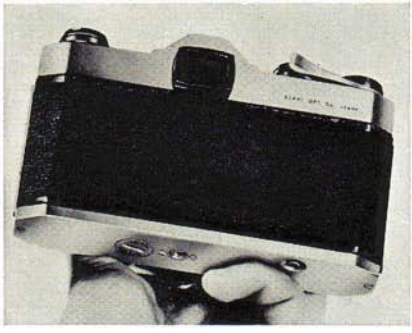


How to hold your camera

In horizontal position A. Hold the camera firmly with your left hand, and draw your arm close to your body.

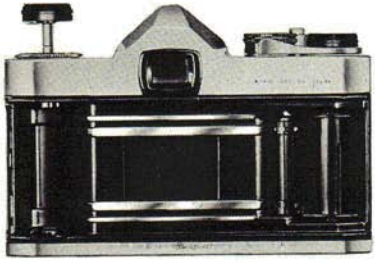
In vertical position B. Hold your camera tightly to your forehead with your left hand, and draw your right arm close to your body.

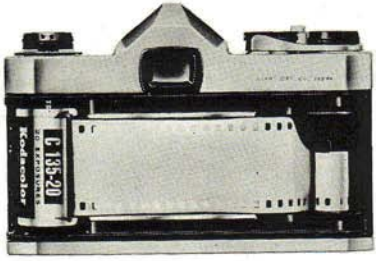
In vertical position C. Hold your camera tightly to your forehead with your left hand, raise your right arm and draw your left arm to your body.



As a general rule, your camera should be held more firmly by the left hand which does not release the shutter. If you hold your camera with the right hand—the hand which releases the shutter—it may cause camera movement. Very often, pictures which are not sharp are due to movement of the camera. When you focus with the camera held horizontally (Position A), hold the lens barrel as illustrated in photograph. Put the camera on your left hand thumb and little finger. Turn the distance scale ring with your thumb and index finger. When holding the camera vertically, some people release the shutter with the thumb (Position B), while others release it with the index finger (Position C). Position C is more desirable for fast focusing and shooting. With the Asahi Pentax, whether held vertically or horizontally, you see your subject image through the taking lens, enabling you to compose, focus and shoot with a minimum of time and effort.

Film loading





Avoid direct sunlight when loading your film.

1 Open the back by pulling out the rewind knob.

2 Place the film cassette into the cassette chamber, and push back the rewind knob. Draw out the film leader and insert it into the slit of the take-up spool. If the slit is not in proper position to insert the film leader, turn the take-up spool with your finger.

3 Turn the rapid wind lever and make sure that both sprockets have properly engaged the film perforations. Close the back. The release button will pop out to its locked position when the cocking lever is advanced.

Film type reminder dial

The ASA film speed rating of all 35mm films is given in the data sheet packed with each roll of film. As the ASA number increases, the sensitivity of the film also increases.

For example, for two films of ASA 50 and ASA 200, the ASA 50 film requires 4 times more exposure than ASA 200 film. Use the film type dial to show what type of film is in your camera. Simply turn the dial so that the type of film in the camera is opposite the ▲ mark.

Then set your film speed on the shutter speed dial by lifting the outer ring of the shutter speed dial and rotating it until the ASA number of your film is opposite the red index mark. To check whether the camera is loaded, turn the film rewind knob clockwise. If it turns freely, the camera is not loaded.

Film wind and rewind

1 Before turning the rapid wind lever, slowly turn the film rewind knob clockwise until a slight resistance is felt. This prevents loosening or warping of the film.

2 The first portions of the film cannot be used for picture taking as they have already been exposed to light. Generally, two blank exposures should be made before taking your first picture. Cock the rapid wind lever until it stops. Watch to see that the film rewind knob automatically turns counter-clockwise, indicating that the film is moving from cassette to take-up spool. Trip the shutter. Cock the rapid wind lever for the first picture; the exposure counter automatically turns to '1', indicating that the first picture is ready to be taken.

3 After the final picture on the roll (20 or 36 exposures) has been taken, the rapid wind lever will not turn all the way as you stroke it. This indicates that the final picture has been taken on your film, and that the film must be rewound. DON'T open the back of the camera, or *all* exposed frames will be ruined.

4 Unfold the film rewind crank.

5 Depress the film rewind release button. Turn the rewind crank to rewind the film into the film cassette. The film rewind crank permits rewinding at a smooth, even rate. (Under some atmospheric conditions, erratic or too rapid rewinding will cause static electricity marks on the film.) You will feel the tension on the rewind crank lessen as the leader end of the film slips off the take-up spool.

Stop rewinding when you feel this happen. AVOID DIRECT SUNLIGHT WHEN UNLOADING YOUR FILM. (The rewind release button will return to normal position as you load your next film and turn the rapid wind lever.)

6 Pull out the film rewind knob (the back will open automatically), and remove the film cassette.

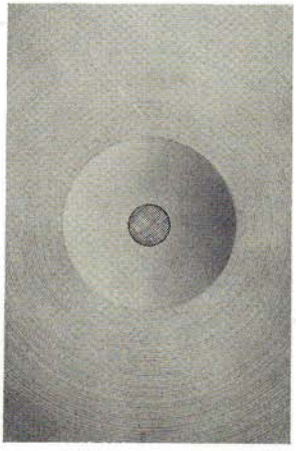
Bright field focusing

1 You can start viewing and focusing before and after cocking the rapid wind lever. When the preview lever is in "A" (automatic) position, and the meter is at "OFF", the diaphragm is fully open except for the moment of exposure.

2 Turn the distance scale ring until your subject image is clearly in focus. It is not always necessary for you to view and focus with the diaphragm fully open. In bright sunlight, you can easily focus with diaphragm closed to f/5.6 or f/8 and still observe the depth of field. It is easier, however, to focus with the diaphragm fully open as your subject image is much brighter.

When the letter "M" appears beside the lever, the lens is in manual position; when "A" appears, it is in automatic position.

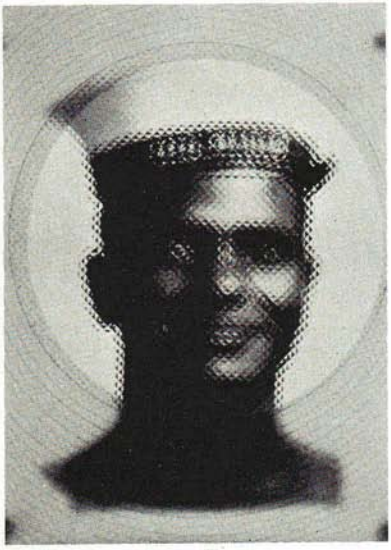
Microprism



Asahi Pentax cameras have a Fresnel lens with a microprism centre underneath the ground glass. As you look through the finder, you will see that the Fresnel lens consists of many concentric rings which provide the brightest possible image on the ground glass.

The microprism is the centre portion of this diagram. When your subject is in focus, the image in the microprism will be sharp and perfectly clear. If your subject is not in focus, the microprism will break the image up into many small dots, much like engraver's screen. You can focus your subject on any portion of the ground glass.

Automatic diaphragm*



OUT OF FOCUS

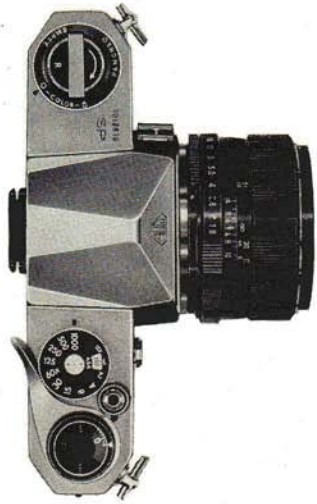
IN FOCUS

When the preview lever is in "A" (automatic) position, and the exposure meter is turned to "OFF", the fully automatic diaphragm is at its largest aperture at all times, except for the instant of exposure, no matter what aperture is set on the diaphragm ring. When you release the shutter, the diaphragm automatically stops down to the predetermined aperture and the shutter curtains start traveling instantly. When the exposure is completed, the diaphragm reopens to maximum aperture completely automatically and you are ready to compose, focus and shoot your next pictures. If you wish to visually check exact depth-of-field before making the exposure, move the preview lever to "M" (Manual) position. This stops the diaphragm to the aperture selected and shows you exactly how much depth-of-field will appear in your picture. The preview lever may be moved back to "A" (automatic) position before or after making your exposure, or, if you are making pictures in bright sunlight, it may be left in manual position, which permits a constant check of depth of field.

**When the exposure meter switch is turned to the "on" position, the lens diaphragm changes from the automatic to manual position even though the preview lever is in the "A" (automatic) position. When the shutter is released, the lens diaphragm will automatically return to its automatic position if the lever is set on "A".*

Shutter

Turn the shutter speed dial clockwise or counter-clockwise to the shutter speed desired. The shutter speed may be set either before or after cocking the rapid wind lever. As you cock the shutter by turning the rapid wind lever, the "cocked" indicator turns to red showing that the shutter is cocked.



The indicator window blacks out as you trip the shutter button. For use of the X setting on the shutter speed dial, refer to page 17.

With the shutter speed dial set on B (bulb), the shutter will stay open as long as you depress the shutter button. As you release your finger from the shutter button, the shutter closes. When a long exposure is desired while using the B setting, attach a shutter release cable with a locking device to the shutter button. This will permit a "Time" exposure.

Cautions

1 At slow speeds — slower than 1/30 — support your camera rigidly or use a tripod to prevent movement of your camera.

2 To protect the shutter mechanism, trip the shutter release before putting the camera out of use for any extended period.

Depth-of-field guide

If you want to know how great the depth of field is at a certain aperture, look at the depth-of-field guide. In the above photograph, the distance scale is set at 15 feet . . . the lens is focused on a subject 15 feet away. The calibrations on each side of the distance index correspond to the diaphragm setting and indicate the range of in-focus distance for different lens apertures. For example, if the lens opening of f/8 is to be used, the range on the distance scale ring covered within the figure 8 on the depth-of-field guide indicates the area in focus at the lens opening. You will note from the depth-of-field guide in the photograph that the range from approximately 10 to 25 feet is in focus. Note that as the lens apertures change, the effective depth of field also changes. For the depth of fields at different apertures and distances, refer to page 14.

Depth of field is the range between the nearest and farthest distances which are in focus at different lens apertures.

Opening camera back

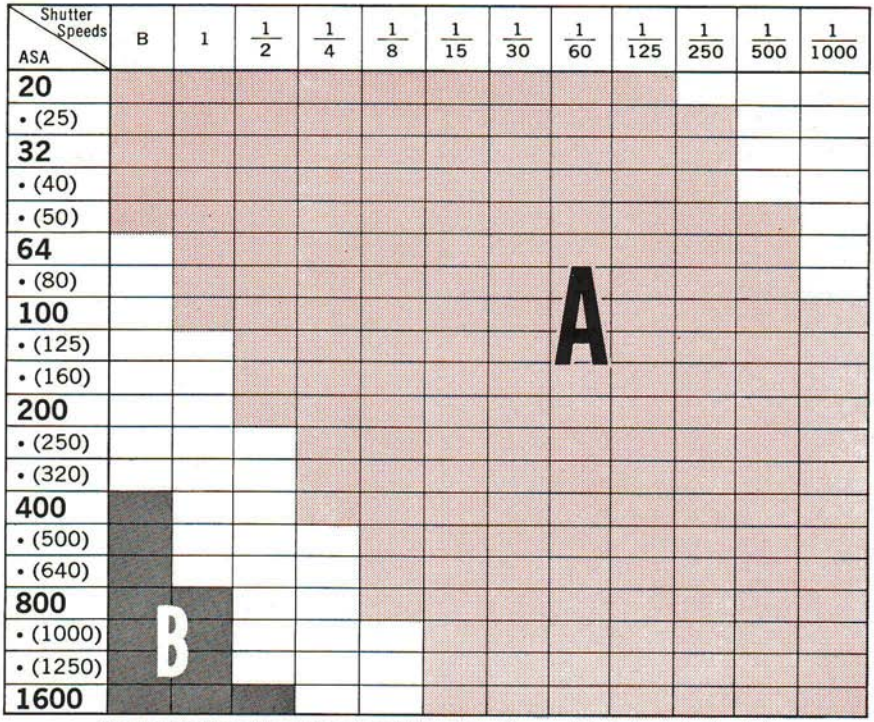
To open the back cover of the camera, pull up the film rewind knob completely until the back cover snaps open. To close it, press the back cover firmly.

Depth-of-field table
Super-Takumar 50mm lens

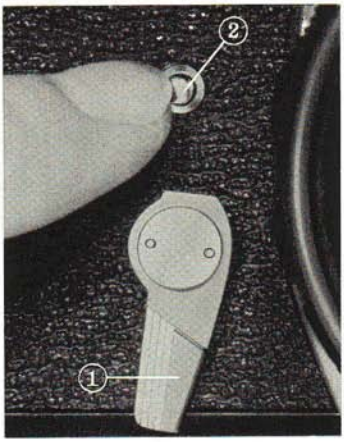
f Setting \ Distance Scale		0.45 m.	0.60 m.	0.80 m.	1.00 m.	1.20 m.	1.50 m.	2.00 m.	3.00 m.	5.00 m.	10.00 m.	∞ m.
		m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.
F/1.4	NEAR	0.45	0.59	0.79	0.98	1.18	1.46	1.93	2.84	4.57	8.40	51.75
	FAR	0.453	0.61	0.81	1.02	1.23	1.54	2.07	3.18	5.52	12.36	∼∞
F/2.0	NEAR	0.45	0.59	0.79	0.98	1.17	1.45	1.90	2.78	4.41	7.86	36.24
	FAR	0.454	0.61	0.81	1.02	1.24	1.56	2.11	3.26	5.78	13.75	∼∞
F/2.8	NEAR	0.44	0.59	0.78	0.97	1.15	1.43	1.87	2.70	4.21	7.24	25.90
	FAR	0.46	0.61	0.82	1.03	1.25	1.58	2.16	3.37	6.16	16.19	∼∞
F/4.0	NEAR	0.44	0.59	0.77	0.95	1.13	1.40	1.81	2.59	3.94	6.48	18.14
	FAR	0.46	0.62	0.83	1.05	1.28	1.62	2.23	3.57	6.84	22.05	∼∞
F/5.6	NEAR	0.44	0.58	0.76	0.94	1.11	1.36	1.75	2.46	3.64	5.68	12.97
	FAR	0.46	0.62	0.84	1.07	1.31	1.68	2.34	3.86	8.03	42.68	∼∞
F/8.0	NEAR	0.44	0.57	0.75	0.91	1.07	1.30	1.66	2.28	3.26	4.80	9.10
	FAR	0.47	0.63	0.86	1.11	1.36	1.77	2.52	4.40	10.87	∼∞	∼∞
F/11.0	NEAR	0.43	0.56	0.73	0.88	1.03	1.24	1.56	2.09	2.88	4.02	6.63
	FAR	0.47	0.65	0.89	1.15	1.43	1.89	2.80	5.34	19.53	∼∞	∼∞
F/16.0	NEAR	0.42	0.54	0.70	0.84	0.97	1.16	1.42	1.84	2.42	3.16	4.57
	FAR	0.48	0.67	0.94	1.24	1.57	2.16	3.42	8.31	∼∞	∼∞	∼∞

Range of light measurement

The exposure meter of the Spotmatic measures the brightness of the ground glass. Therefore, the meter should be turned on *after* you have focused your subject on the ground glass. The following table shows the range of the meter's light measurement, and should not be interpreted as the camera's total range of f/stop-shutter speed combinations. As you will note from the table below, with an ASA100 film, you may use any shutter speed from 1 sec. to 1/1000 sec. in combination with any aperture that will bring the meter needle to the midpoint in the viewfinder. The total range of the aperture settings is, of course, determined by the minimum and maximum apertures of the lens being used. For example, with the 50mm f/1.4 lens and ASA100 film, an aperture from f/1.4 (the maximum aperture of this lens) to f/16 (the minimum aperture) may be used with any shutter speed from 1 sec. to 1/1000 sec. that will bring the meter needle to midpoint.



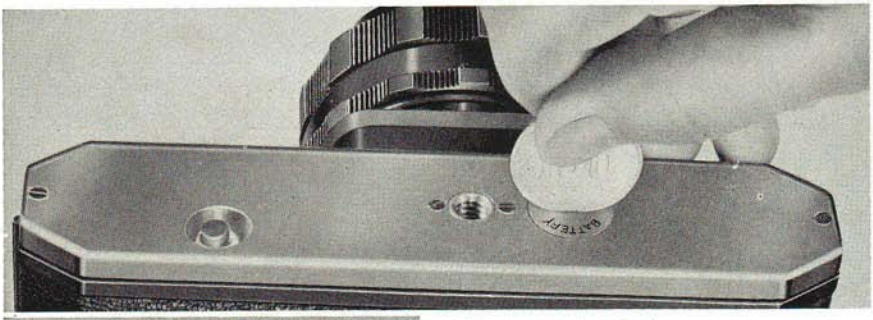
The area A indicates the reading range of the meter. The area B indicates that although the shutter speed index is black and the meter needle moves, the meter is NOT operating properly.

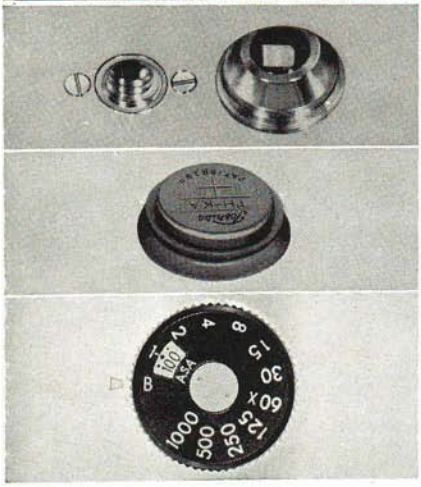


Self-timer

Depending upon how far down you turn the self-timer cocking lever, it will release the shutter in 5-13 seconds. When operating the self-timer, always depress the self-timer release button to release the shutter. Do not depress the shutter button . . . it will immediately release the shutter without delayed action.

Mercury battery





How to check it.

Set the shutter speed dial at B (Bulb) and the film speed indicator at 100. Look at the meter's needle through the viewfinder, and turn on the meter switch. If the needle rapidly drops, the meter battery still has sufficient capacity; if it does not, replace the mercury battery.

To replace the battery, open the battery housing cover marked "BATTERY" located on the bottom cover plate of the camera with a coin. Remove the old battery, and insert your new battery with its (+) side down. For replacement, use Mallory RM 400R or equivalent.

Flash synchronization

The Asahi Pentax has two sets of terminals — FP and X. The table below shows which flash contact, which shutter speed and which flash bulb may be combined for maximum lamp efficiency. Unless these combinations are rigidly followed, there will be a failure in flash synchronization. Note the "X" setting is exactly at the 60 marked on the speed dial. This indicates the highest shutter speed at which electronic flash units may be used.

SHUTTER SPEED / FLASH TERMINAL	1/1000	1/500	1/250	1/125	1/60 X	1/30	1/15	1/8	1/4	1/2	1
FP	FP Class (Screw Base)										
	FP Class (Bayonet Base)										
X					F Class						
						*M Class					
					Electronic Flash						

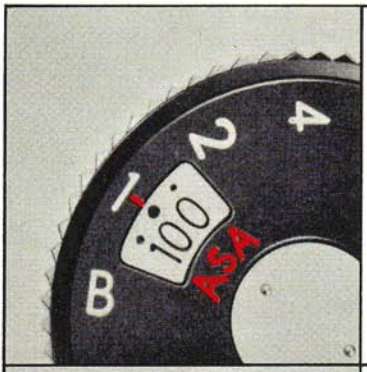
**The use of M class bulbs in the FP terminal at any speed should be attempted only after tests have been made by the individual.*

Interchangeable lenses

The Asahi Pentax offers many interchangeable lenses, all of which are widely respected by professional and amateur photographers for their fine resolution. With focal lengths longer than 55mm, the subject image is seen through the viewfinder larger than its life size. Regardless of the lens selected for your Asahi Pentax, there is never a need for accessory viewfinder, ordinarily required for rangefinder type cameras.

When interchanging lenses, hold the lens by the distance scale ring. When attaching a lens, filter, or lenshood, do not screw it too tightly, as you may find it difficult to unscrew.

Short-course operating manual



1

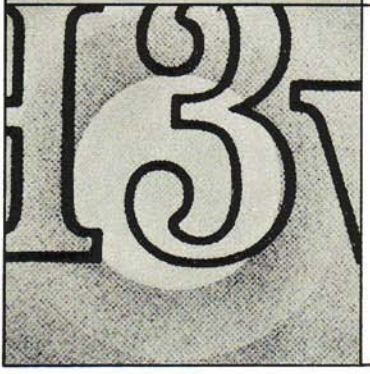
SET FILM SPEED.

Lift the outer ring of the shutter speed dial, turn it around and set the same number as the ASA number of the loaded film to the small red index which appears alongside the figure 1. Then cock the rapid wind lever.

2

SET SHUTTER SPEED.

Turn the shutter speed dial and set the speed you wish to use to the index. When outdoors, set the speed at 1/125 sec. or faster, depending upon the lighting. When indoors, set it at 1/30, or in its neighbourhood. Change the shutter speed later, when necessary. (Refer to item 5, page 19.)



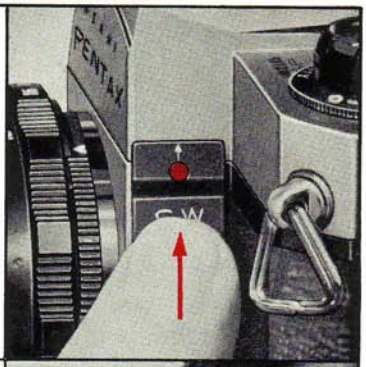
3

COMPOSE AND FOCUS.

While viewing through the viewfinder, turn the distance scale ring with your thumb and index finger until you get the sharpest image of your subject at the microprism centre of the finder.

4

TURN ON LIGHT METER SWITCH.
Push up the switch button with your thumb, and the small window on the switch button will turn to red indicating that the meter is switched on. Through the viewfinder, you will observe the movement of the meter's needle on the right side of the ground glass. Be sure to turn off the meter's switch when not actually taking readings.



5 ROTATE DIAPHRAGM RING.

The needle moves up and down with the turn of the diaphragm ring. When the needle rests at the centre, you will get correct exposure. If the needle does not come to the centre no matter how far you turn the diaphragm ring, change the shutter speed. When the needle is off centre and close to the (+) mark, you will get over-exposure: change the shutter speed to a faster setting. If the needle is closer to the (−) mark, you will get under-exposure: change the shutter speed to a slower setting.

6 RELEASE SHUTTER.

Hold your camera firmly and trip the shutter. When the shutter is released, the meter switch will automatically turn off, and the needle will remain fixed off and underneath the centre. The diaphragm will reopen to its full aperture and the overall image will look brighter. Cock the rapid wind lever for the next picture. (When taking a series of pictures under the same lighting conditions, it is not necessary to repeat instructions 4 and 5.)

WARRANTY POLICY

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

PROCEDURE DURING 12-MONTH WARRANTY PERIOD

Any Asahi Pentax which proves defective during the 12-month warranty period should be returned to the dealer from whom you purchased the equipment or to the manufacturer. If there is no representative of the manufacturer in your country, send the equipment to the manufacturer, with postage prepaid. In this case, it will take a considerable length of time before the equipment can be returned to you owing to the complicated customs procedures required in Japan in importing and re-exporting photographic equipment. If the equipment is covered by warranty, repairs will be made and parts replaced free of charge, and the equipment will be returned to you upon completion of servicing. If the equipment is not covered by warranty, regular charges of the manufacturer or of its representatives will apply. Overseas shipping charges are to be borne by the owner. If your Asahi Pentax was purchased outside of the country where you wish to have it serviced during the warranty period, regular handling and servicing fees may be charged by the manufacturer's representatives in that country. Notwithstanding this, your Asahi Pentax returned to the manufacturer will be serviced free of charge according to this procedure and warranty policy. In any case, however, overseas shipping charges are not included in our free warranty service. To prove the date of your purchase when required, please keep the receipts or bills covering the purchase of your equipment for at least a year.

All models, prices and specifications are subject to change without notice.

CAUTION

Mercury Battery

The mercury battery should be kept dry. Don't touch it with your finger unnecessarily. Before inserting it into its housing, wipe its surface completely with a dry piece of cloth. Don't try to measure the short current or to charge the battery, to prevent rapid deterioration. Don't throw a used battery into fire ... it may explode. Keep the battery out of the camera's battery housing when you do not intend to use it for a lengthy period of time.

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