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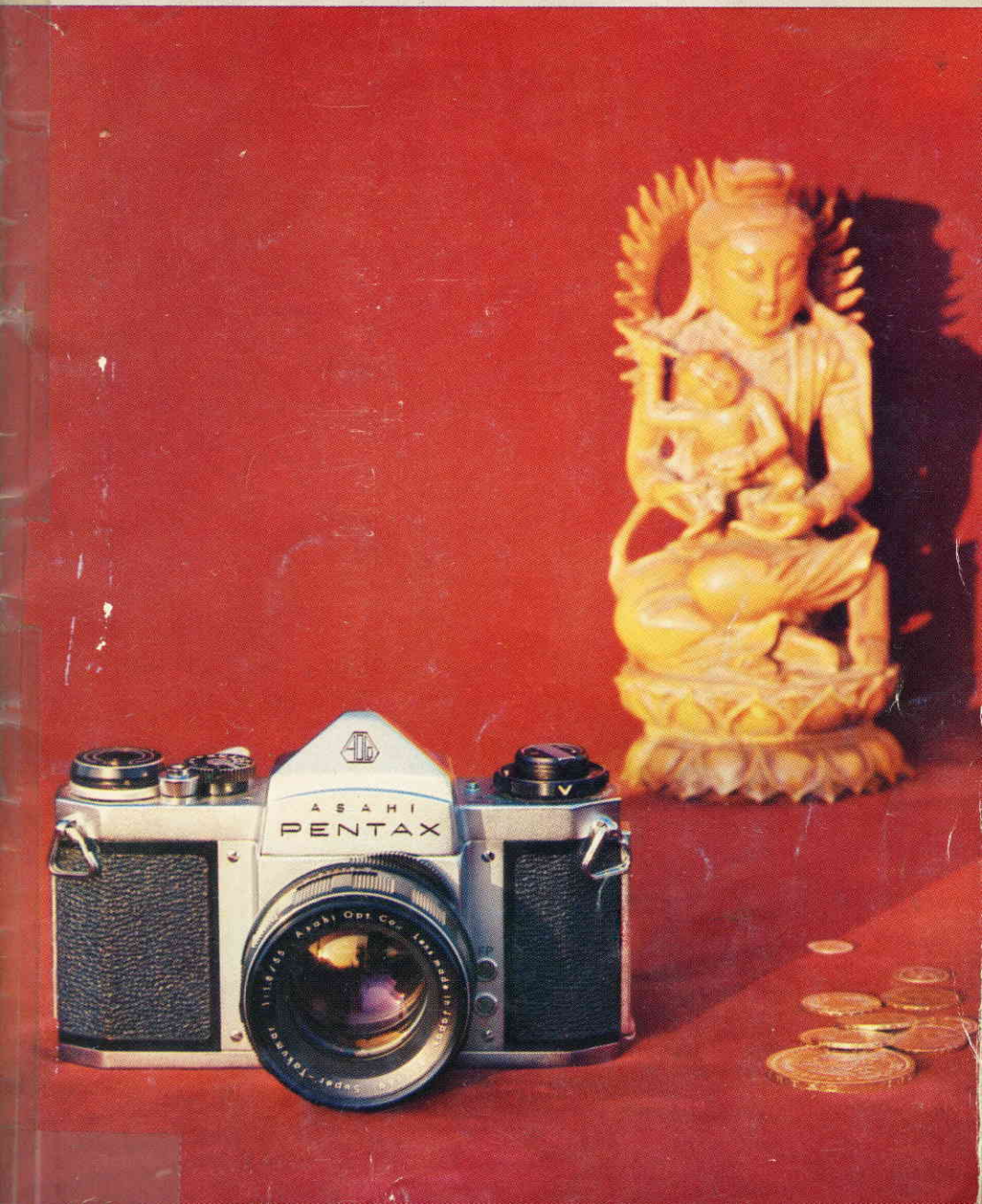
ASAHI PENTAX

MODELS SV & S1a

OPERATING MANUAL



PLEASE READ THIS OPERATING MANUAL THOROUGHLY

Major working parts of the

ASAHI PENTAX
Models SV & S1a

a — Shutter speed dial
b — Rapid wind lever
c — Automatic re-setting film exposure counter
d — Shutter release
e — 'Cocked' indicator
f — Diaphragm ring
g — Diaphragm and distance index
h — Depth-of-field guide
i — Distance scale
j — Distance scale ring
k — X flash terminal
l — FP flash terminal
m — Back lock
n — Preview lever
o — D-ring for neck strap
p — Film type reminder dial
q — Rewind knob
r — Rewind crank
s — Self-timer cocking wheel
t — Self-timer release button

The standard lens of the S1a is a Super-Takumar 55mm f/2, and its top shutter speed is 1/500 second. Unlike the SV, the S1a has no self-timer. Otherwise, the operating parts of the SV are same as those of the S1a.


b
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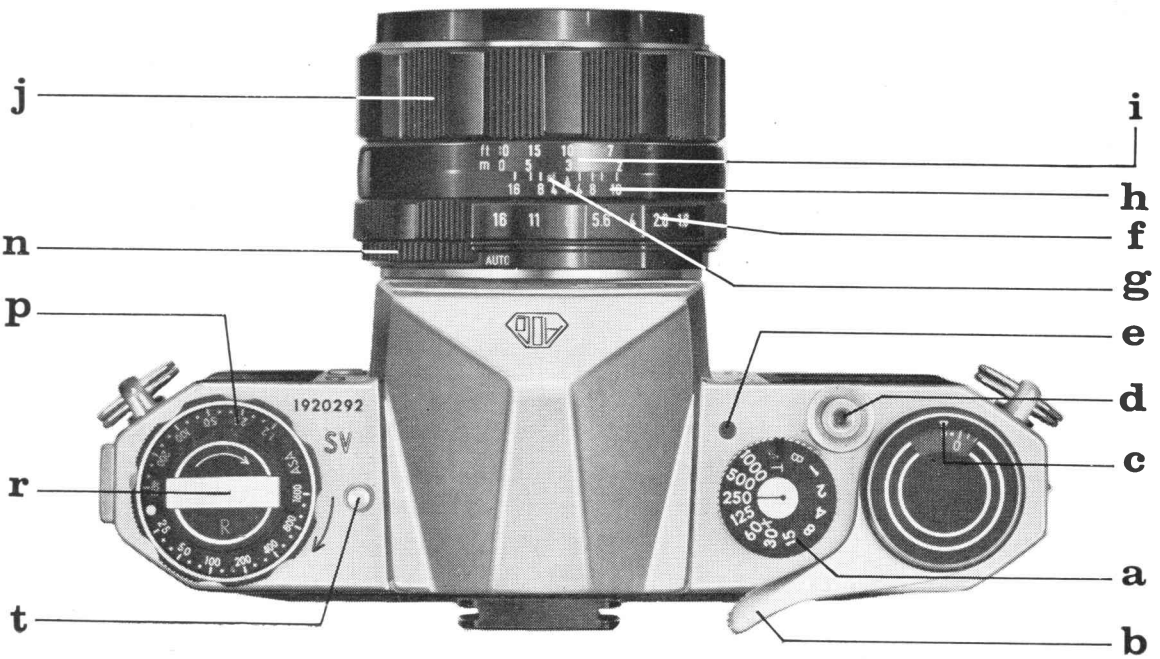
ASAHI
PENTAX
Super-Takumar 1:1.8/55 2135952
Asahi Opt. Co. Lens made in Japan
FP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SV
AUTO

MAJOR FEATURES

Here's why the Asahi Pentax cameras are the outstanding values in their field:

Type	Single-lens reflex
Film & picture size	35mm film (20 or 36 exposures); 24mm x 36mm
Standard lenses	SV - Super-Takumar 55mm f/1.8 with fully automatic diaphragm S1a - Super-Takumar 55mm f/2 with fully automatic diaphragm
Shutter	Focal plane shutter; single, non-rotating shutter speed dial. Speeds: SV - T (Time), B (Bulb), 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500 & 1/1000 sec. S1a - Same as above up to 1/500 sec.
Finder and focusing	Pentaprism finder with microprism Fresnel lens brightened ground glass. Life size image viewing and focusing with standard 55mm lens.
Reflex mirror	Instant return type.
Rapid film advance	Single-stroke rapid wind lever transports film and cocks shutter.
'Cocked' Indicator	When the shutter is cocked, a red disc appears in a small window alongside the shutter speed dial.
Film rewind	Rapid rewind crank speeds film take-up.
Double Exposure	Coupled film wind and shutter cocking prevents double exposure.
Lens mount	Threaded lens mount for interchangeable lenses. Adapter rings are available for use with Leica-type and Asahiflex lenses.
Flash synchronization	FP and X flash terminals.
Film type dial	Colour coded film type reminder dial with ASA ratings for colour and black-and-white films.
Accessory clip	Grooves located on both sides of the viewfinder window frame accept Asahi Pentax Clip-on Exposure Meter, accessory clip, 90° finder, magnifier, and other accessories.
Exposure counter	Automatic re-setting film exposure counter automatically counts the number of exposures made.
Self-timer	Tiny self-timer is built into the SV body.

MAINTENANCE OF YOUR CAMERA

1 Protect your camera from humidity, salty air and dust. In extremely hot weather, try to keep your camera cool. Never put it in the glove compartment or on the rear window sill of your car. When extremely cold, try to keep the camera warm.

2 To remove grit or dirt from the camera body, use a soft brush or a dry soft piece of cloth. For the lens, use only a spray of air, soft lens tissue, or a camel hair brush. For the reflex mirror, use a spray of air or a soft camel hair brush only. Never wipe the mirror or lens surface with cloth.

3 Never use oil in your camera and do not touch the shutter curtains.

4 When advancing the film, be sure to stroke the rapid wind lever all the way until it stops.

5 Do not use the Auto-Takumar 55mm f/1.8 lens with a lens number smaller than 462500 with the SV and S1a camera bodies, for its automatic diaphragm will not work correctly due to modification and improvement of the Instant Return Mirror and automatic diaphragm mechanisms of these new models.

6 If your camera should need repair, do not try to fix it yourself. Take it to the dealer from whom you purchased it. Please refer to the Warranty Policy described on the last page of this operating manual.

7 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. Forcing longer screws into the tripod socket of the camera will damage the mechanism.

HOW TO HOLD YOUR CAMERA

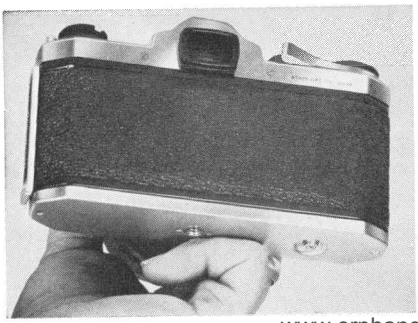
In horizontal position A. Hold the camera firmly with your left hand, and draw your arm close to your body.

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 can see your subject image through the taking lens, and this enables you to compose, focus and shoot with a minimum of time and effort.

BEFORE TAKING PICTURES

1 Set the preview lever ⓝ in 'AUTO' (automatic) position for bright full-aperture viewing.

2 Cock the rapid wind lever ⓑ all the way until it stops.

3 Select the f stop you want by setting the diaphragm ring ⓕ.

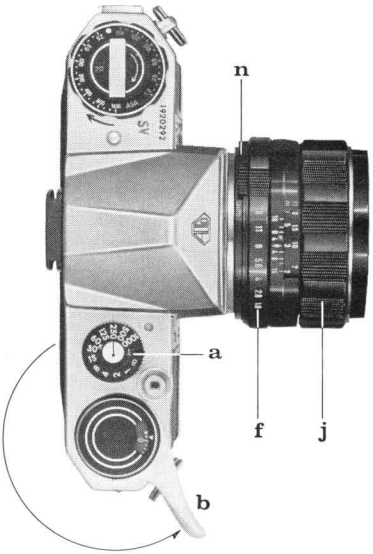
4 Set the proper shutter speed by turning the shutter speed dial ⓐ either way.

5 Compose your picture through the viewfinder.

6 Get the clearest image of your subject by turning the distance scale ring ⓙ.

7 Then trip the shutter.

8 To view exact depth of field at different apertures, move the preview lever ⓝ to 'MAN' (manual) position, and view your focused subject by turning the diaphragm ring ⓕ.



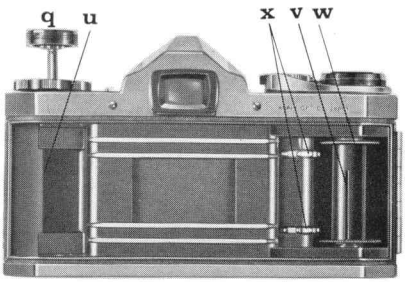
FILM LOADING

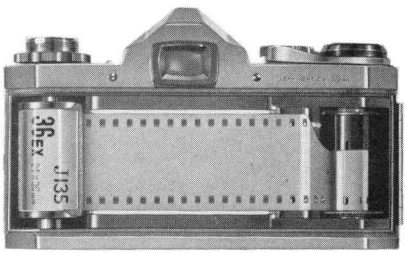
Avoid direct sunlight when loading your film.

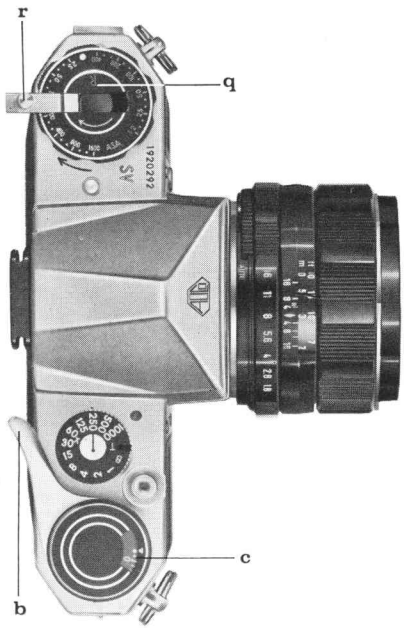
1 Open the back by pulling out the lock ⓜ. (See page 2.)

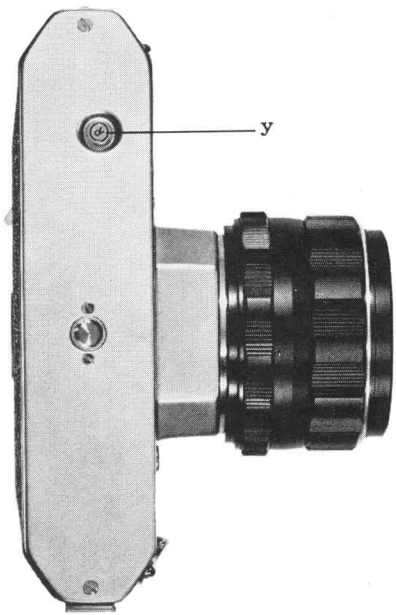
2 Pull out the film rewind knob ⓠ completely, place the film cassette into the cassette chamber ⓤ, and push back the rewind knob. Draw out the film leader and insert it into the slit ⓥ of the take-up spool ⓦ. If the slit is not in a proper position to insert the film leader, turn the take-up spool with your finger.

3 Turn the rapid wind lever ⓑ and make sure that both sprockets ⓧ have properly engaged the film perforations. Close the back and fasten the lock ⓜ.









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.

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2 The first portions of the film can not 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 and trip the shutter again. Your camera is now ready for the first picture. When cocking 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. ALWAYS COCK THE RAPID WIND LEVER COMPLETELY WITH A FULL STROKE.

---

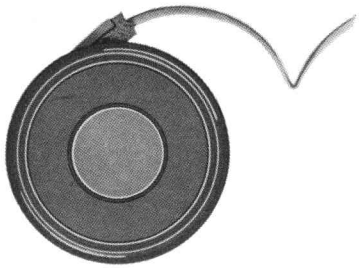
3 After the final picture on the roll (20 or 36 exposures) has been taken, the rapid wind lever will not turn all the way as you stroke it. This indicates that the final picture has been taken on your film, and that the film must be rewound. DON'T open the back of the camera, or *all* exposed frames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

---

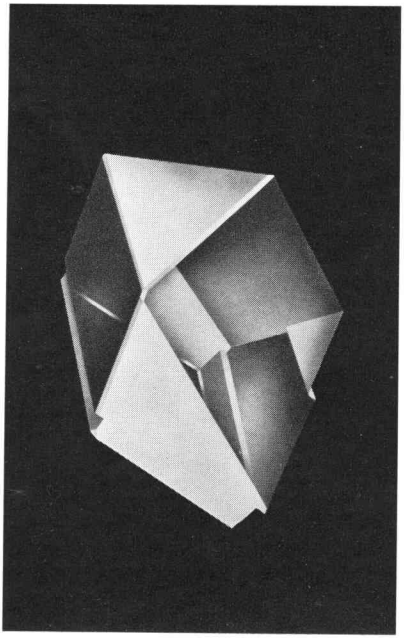
4 Unfold the film rewind crank ⓡ.

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 Open the back, pull out the film rewind knob ⓠ, and remove the film cassette. Bend the leader end of the film to indicate that the film is exposed and ready for development.



Little Jewel

This gem-like object is a pentaprism—nearly two solid ounces of finest optical glass. Ground and polished to extremely fine tolerances, it contains 25 distinct surfaces and is a thing of beauty, yet it dwells out of sight within the innards of Asahi Pentax cameras.

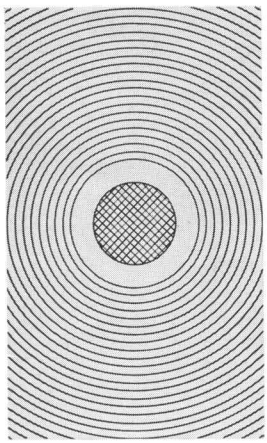
BRIGHT FIELD FOCUSING

1 You can start viewing and focusing before and after cocking the rapid wind lever. When the preview lever ⓝ is in 'AUTO' (automatic) position, 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 the 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 'MAN' appears beside the lever ⓝ, the lens is in manual position; when 'AUTO' appears, it's in automatic position.

MICROPRISM



Asahi Pentax cameras have a Fresnel lens with a microprism center 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 center 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 SV's microprism will break the image up into many small dots, much like an engraver's screen, while a number of parallel diagonal lines will appear in the microprism of the S1a also breaking up your subject's image. You can focus on your subject at any portion of the ground glass.

AUTOMATIC DIAPHRAGM

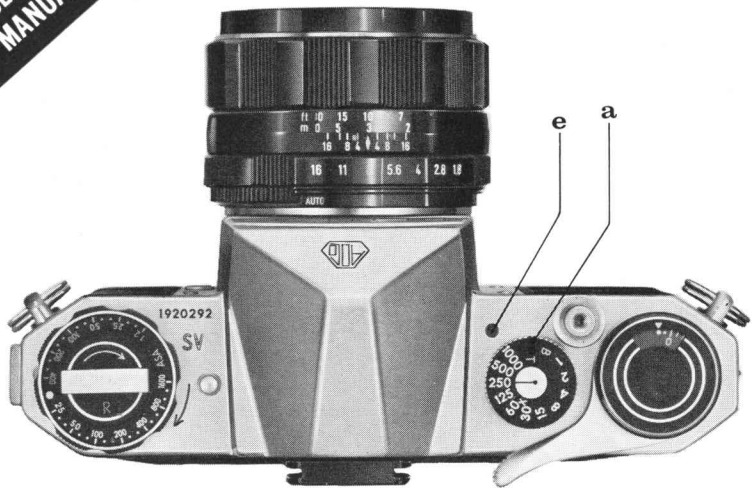
When the preview lever ⓝ is in "AUTO" (automatic) position, the fully automatic diaphragm is at its largest aperture at all times, except for the instant of exposure no matter what aperture is set on the diaphragm ring. When you release the shutter, the diaphragm automatically stops down to the predetermined 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 picture. If you wish to visually check exact depth of field before making the exposure, move the preview lever to "MAN" (manual) position. This stops the diaphragm to the aperture selected and shows you exactly how much depth in field will appear in your picture. The preview lever may be moved back to "AUTO" (automatic) position before or after making your exposure, or, if you are taking pictures in bright sunlight, it may be left in manual position, which permits a constant check of depth of field.

OUT OF FOCUS

IN FOCUS

PLEASE READ THIS OPERATING MANUAL THOROUGHLY.

SHUTTER



Turn the shutter speed dial ⓐ clockwise or counter-clockwise to the desired shutter speed. 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 ⓔ becomes 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 14.

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.

With the shutter speed dial set on T (time), the shutter stays open after the shutter button is released. To close the shutter, turn the shutter speed dial in either direction. Unless you turn the shutter speed dial, the shutter will not close.

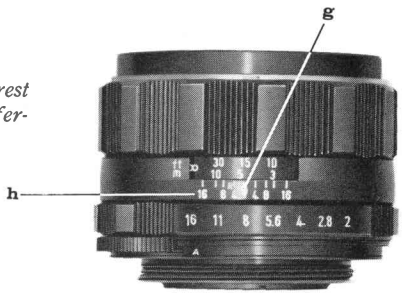
CAUTIONS

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

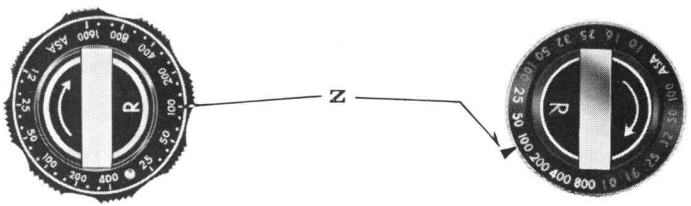
Depth of field is the range between the nearest and farthest distances which are in focus at different lens apertures.



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 that lens opening. You will note from the depth-of-field guide in the above 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 13.

FILM TYPE REMINDER DIAL

SV **S1a**



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 the ASA 200 film.

Use the film type dial to show what type of film is in your camera. Simply move the nipple ⓩ and set the ASA number of your film opposite the red pointer. Use white figures for black-and-white film and green figures for colour and other special films. To check whether the camera is loaded, turn the film rewind knob clockwise. If it turns freely, the camera is not loaded.

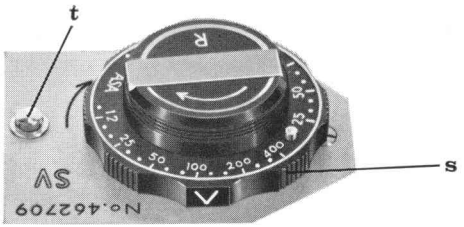
For ASA-DIN film speed conversion, refer to page 29.

DEPTH-OF-FIELD TABLE
SUPER-TAKUMAR 55mm LENS

Distance Scale / f Setting	1′6″	2′	3′	5′	10′	15′	30′	∞
f/1.8	1′ 5.9″ 1′ 6.1″	1′11.8″ 2′ 0.2″	2′11.5″ 3′ 0.6″	4′10.4″ 5′ 1.7″	9′ 5.6″ 10′ 7.2″	13′ 9.7″ 16′ 5″	25′ 6.4″ 36′ 4.7″	168′ 2.4″ ∞
f/2	1′ 5.9″ 1′ 6.1″	1′11.8″ 2′ 0.2″	2′11.4″ 3′ 0.6″	4′10.3″ 5′ 1.8″	9′ 4.9″ 10′ 8″	13′ 8.3″ 16′ 7.1″	25′ 1.3″ 37′ 3.2″	151′ 4.8″ ∞
f/2.8	1′ 5.9″ 1′ 6.1″	1′11.6″ 2′ 0.4″	2′11.2″ 3′ 0.8″	4′ 9.6″ 5′ 2.6″	9′ 2.3″ 10′11.5″	13′ 2.8″ 17′ 4″	23′ 7″ 41′ 3.4″	108′ 2.3″ ∞
f/4	1′ 5.8″ 1′ 6.2″	1′11.5″ 2′ 0.5″	2′10.8″ 3′ 1.2″	4′ 8.6″ 5′ 3.8″	8′10.7″ 11′ 5.3″	12′ 7.1″ 18′ 6.7″	21′ 7.2″ 49′ 2.8″	75′ 9.5″ ∞
f/5.6	1′ 5.6″ 1′ 6.4″	1′11.4″ 2′ 0.7″	2′10.4″ 3′ 1.8″	4′ 7.4″ 5′ 5.4″	8′ 6.1″ 12′ 1.7″	11′10.1″ 20′ 6.2″	19′ 5.2″ 66′ 3.4″	54′ 2.3″ ∞
f/8	1′ 5.5″ 1′ 6.5″	1′11″ 2′ 1″	2′ 9.8″ 3′ 2.5″	4′ 5.6″ 5′ 8.2″	8′ 13′ 4.4″	10′10.3″ 24′ 4.6″	16′10.7″ 138′ 2.8″	37′11.9″ ∞
f/11	1′ 5.4″ 1′ 6.7″	1′10.8″ 2′ 1.3″	2′ 9″ 3′ 3.6″	4′ 3.6″ 5′11.8″	7′ 5.4″ 15′ 3.7″	9′10.1″ 31′10.8″	14′ 6.2″ ∞	27′ 8.2″ ∞
f/16	1′ 5.2″ 1′ 7″	1′10.3″ 2′ 2″	2′ 7.8″ 3′ 5.5″	4′ 0.6″ 6′ 6.8″	6′ 8.2″ 20′ 3″	8′ 6.2″ 66′ 9.2″	11′ 9.4″ ∞	19′ 1″ ∞

Distance Scale / f Setting	0.45 m.	0.6 m.	0.8 m.	1 m.	1.5 m.	2 m.	5 m.	10 m.	∞
f/1.8	0.45 0.45	0.59 0.61	0.79 0.81	0.98 1.02	1.46 1.54	1.93 2.07	4.57 5.52	8.39 12.38	51.27 ∞
f/2	0.45 0.45	0.59 0.61	0.79 0.81	0.98 1.02	1.46 1.54	1.92 2.08	4.53 5.59	8.24 12.72	46.15 ∞
f/2.8	0.45 0.45	0.59 0.61	0.78 0.82	0.98 1.03	1.44 1.56	1.89 2.12	4.36 5.86	7.70 14.27	32.98 ∞
f/4	0.44 0.46	0.59 0.61	0.78 0.82	0.97 1.04	1.42 1.59	1.85 2.17	4.13 6.33	7.01 17.48	23.10 ∞
f/5.6	0.44 0.46	0.58 0.62	0.77 0.83	0.95 1.05	1.39 1.63	1.80 2.25	3.87 7.09	6.27 24.97	16.52 ∞
f/8	0.44 0.46	0.58 0.62	0.76 0.85	0.93 1.08	1.34 1.70	1.73 2.38	3.53 8.65	5.41 70.27	11.58 ∞
f/11	0.44 0.47	0.57 0.63	0.74 0.87	0.91 1.11	1.29 1.79	1.64 2.57	3.18 11.93	4.62 ∞	8.44 ∞
f/16	0.43 0.47	0.56 0.65	0.72 0.90	0.87 1.17	1.22 1.96	1.52 2.95	2.73 32.75	3.71 ∞	5.82 ∞

SELF-TIMER



After completely cocking the rapid wind lever, turn the self-timer cocking wheel Ⓢ clockwise as indicated by the arrow mark until it stops. When you depress the self-timer release Ⓣ, the shutter will release in about 10 seconds. If you depress the release button after turning the wheel Ⓢ about 50 degrees, the shutter will release in about 5 seconds. Remember that the shutter will release when the "V" mark on the side of the wheel Ⓢ comes to the front. So, you always know when the shutter releases when taking your own self portraits. *The self-timer is built in the SV model only. Turn the self-timer cocking wheel only after cocking the rapid wind lever.*

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 between 60 and 30 on the shutter speed dial. The speed of this X setting is 1/50 of a second, and this indicates the highest shutter speed at which electronic flash units may be used.

Shutter Speed / Flash Terminal	1/1000 SV only	1/500	1/250	1/125	1/60	X	1/30	1/15	1/8	1/4	1/2	1	B
FP		FP Class (screw base)											
		FP Class (bayonet base)											
X								FP Class • F Class					
								M Class					
						Electronic flash							

INFRA-RED PHOTOGRAPHY

55mm f/1.8

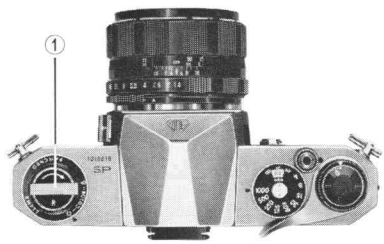
50mm f/1.4

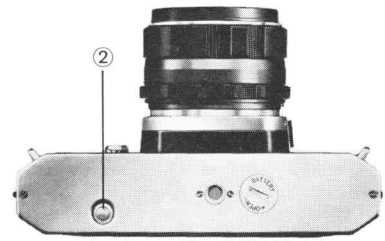
If you intend to take infra-red photographs, remember to use the small "R" index marked on the depth-of-field guide. Some of the Takumar lenses, however, like the above picture of Super-Takumar 50mm f/1.4, do not have the "R" mark, but the index is just a short orange line.

First, focus your lens on your subject. Look at the distance scale, and turn the distance scale ring to move the distance calibration matching the distance index to the "R" index. For instance, if your subject is in focus at infinity, turn the distance ring and move the infinity (∞) mark to the "R" index.

The "R" index marking on the Takumar lenses is based on the lens setting at infinity, and on the infra-red wavelength band of 750mμ of Japanese infra-red films. When using American infra-red films which cover the 850mμ wavelength band, the existing "R" index should be moved roughly one-scale distance farther to the left. This, however, is just a rough guide; but, due to the film latitude and the depth of field at closed diaphragm setting, you will be getting proper exposures.

HOW TO MAKE DELIBERATE DOUBLE EXPOSURE



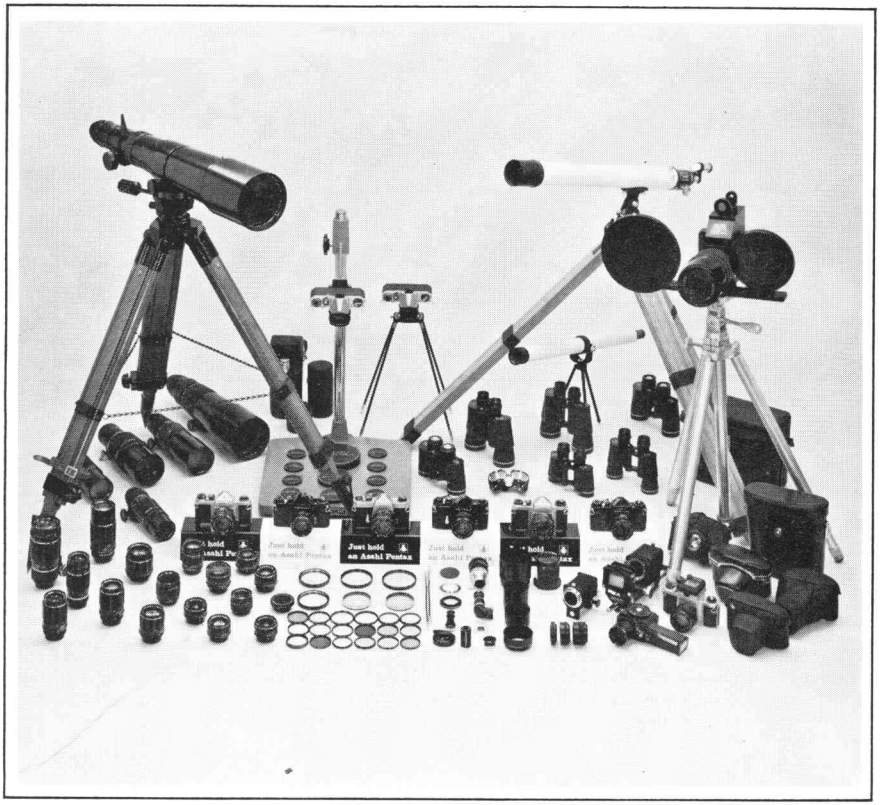


For deliberate double exposures, make the first exposure in the normal way. Then tighten the film by turning the rewind knob ①, and keep hold of the rewind knob. Depress the film rewind release button ② and cock the rapid wind lever. This tensions the shutter without advancing the film. Finally, release the shutter to make the second exposure. Then make one blank exposure, before taking the next picture, to avoid overlapping.

SPECIFICATIONS OF TAKUMAR LENSES

	NAME OF LENSES	FOCAL LENGTH & MAXIMUM APERTURE	MINIMUM APERTURE	LENS ELEMENT	DIAPHRAGM	MINIMUM FOCUSING DISTANCE		ANGLE OF VIEW	WEIGHT		FILTER SIZE	LENSHOOD SIZE	LENS CAP SIZE
						m.	ft.	degrees	gr.	ozs.	mm	mm	mm
1	Takumar·Fish·Eye	18mm f/11	32	4	M	—	—	180①	97	3.4	NA	NA	57
2	Super·Takumar	28mm f/3.5	16	7	FA	0.4	1.3	75	260	9.2	58	60②	60
3	Super·Takumar	35mm f/3.5	16	5	FA	0.45	1.5	63	152	5.4	49	49	51
4	Super·Takumar	35mm f/2	16	8	FA	0.45	1.5	63	398	14	70②	70②	70
5	Super·Takumar	50mm f/1.4③	16	7	FA	0.45	1.5	46	230	8.1	49	49	51
6	Macro·Takumar	50mm f/4	22	4	PS	—	—	46	265	9.3	49	49	51
7	Super·Takumar	55mm f/2④	16	6	FA	0.45	1.5	43	215	7.6	49	49	51
8	Super·Takumar	55mm f/1.8⑤	16	6	FA	0.45	1.5	43	215	7.6	49	49	51
9	Quartz·Takumar	85mm f/3.5	22	4	PS	—	—	28	126	4.4	49⑥	NA	51
10	Super·Takumar	85mm f/1.9	16	5	FA	0.85	2.75	28	350	12.3	58	58*	60
11	Bellows·Takumar	100mm f/4	22	5	PS	—	—	24	139	4.9	49	49	51
12	Takumar	105mm f/2.8	22	5	PS	1.2	4	23	250	8.8	49	49*	51
13	Super·Takumar	105mm f/2.8	22	5	FA	1.2	4	23	290	10.2	49	49*	51
14	Super·Takumar	135mm f/3.5	22	5	FA	1.5	5	18	343	12.1	49	49*	51
15	Super·Takumar	150mm f/4	22	5	FA	1.8	6	16.5	324	11.3	49	49*	51
16	Super·Takumar	200mm f/4	22	5	FA	2.5	8.2	12.5	550	19.3	58	58*	60
17	Tele·Takumar	200mm f/5.6	22	5	PS	2.5	8.2	12	370	13.1	49	49*	51
18	Takumar	200mm f/3.5	22	4	PS	2.5	8.2	12	900	26.5	67	67*	70
19	Tele·Takumar	300mm f/6.3	22	5	PS	5.5	18	8	729	25.7	58	58*	60
20	Takumar	300mm f/4	32	4	M	5.5	18	8	1575	55.6	82	82*	85
21	Tele·Takumar	400mm f/5.6	45	5	M	8.0	27	6	1300	45	77	*	85
22	Takumar	500mm f/4.5	45	4	M	10.0	32.8	5	3500	122.5	49	*	127
23	Tele·Takumar	1000mm f/8⑦	45	5	M	30.0	98	2.5	5500	192.5	49	*	143
24	Super·Takumar·Zoom	70~150mm f/4.5	22	14	FA	3.5	11.5	16~35	1209	42.6	67	67*	70

NA=Not Available. M=Manual. FA=Fully Automatic. PS=Preset. ①=Diagonal coverage. ②=Clip-on type. ③=Standard lens for Spotmatic. ④=Standard lens for model S1a. ⑤=Standard lens for models SV & Spotmatic. ⑥=Special filters are supplied with lens. ⑦=Supplied with wooden tripod and carrying cases. All lenses, including standard lenses purchased separately, are supplied with leather case, straps, front and rear caps. All filters and lenshoods are screw-in type unless otherwise indicated. (*Special lenshood supplied with these lenses.)



THE COMPLETE RANGE OF SUPERB ASAHI PENTAX PHOTOGRAPHIC AND OPTICAL EQUIPMENT

More than 341 lenses will fit the Asahi Pentax. *Only* the Takumar lenses are made for it.

One reason why so many lens manufacturers have produced optics which fit the Asahi Pentax is its commanding position among the fine cameras of the world.

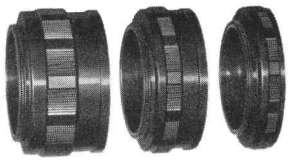
As an Asahi Pentax owner, making a choice from this staggering number of lenses is not easy. And that is why we offer this suggestion:

Only the Takumar lenses from the Asahi Pentax System of Photography are the lenses designed specifically for Asahi Pentax cameras. Certainly, other lenses will fit, but there is more to it than that — camera and lens must be optically compatible. Genuine Takumar lenses are computed for the optical characteristics of the Asahi Pentax viewing system. Their mounts are designed for precise lens-to-camera alignment. Quality control at every step of their manufacturing process is maintained at the same fantastically high level as for the Asahi Pentax cameras. The result of this attention to compatibility is that an Asahi Pentax/Takumar combination will give you results unattainable with other combination. Your Asahi Pentax Dealer will show you the full system of Takumar lenses, from 18mm super wide-angle (fish-eye) to 1000mm super telephoto. Many of these lenses have fully automatic diaphragms, and highlights of the system include a superb 70mm to 150mm zoom lens, a versatile Macro-Takumar 50mm, and a special 100mm Bellows-Takumar. The table on the following page gives the specifications of the Takumar lenses, sizes of the filters, lenshoods, and lens caps which fit the Takumar lenses.

For further information for the Takumar lenses, obtain your copy of the literature #63008 entitled "Complete System of Photography — Asahi Pentax lenses and accessories" if it was not supplied with your Asahi Pentax.

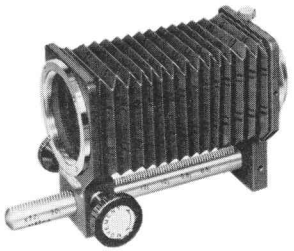
Complete System of Asahi Pentax Accessories for Close-Ups, Macrophotography, Photomicrography, and other Miscellaneous Accessories

● EXTENSION TUBE SET



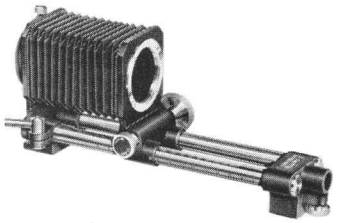
A set of 3 rings, #1, #2 and #3 of 9.5mm, 19.0mm and 28.5mm respectively. They may be used singly or in combination as desired. When all three are used simultaneously with the 55mm Super-Takumar lens, the subject is enlarged on film to a magnification of 1.17 life size.

● BELLOWS UNIT I



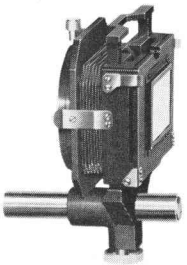
Extremely flexible for ultra-close-up photography, the Bellows Unit I permits use of the camera's own lens. Provided with a special precision-calibrated gear shaft for reading continuous magnification from 0.62 to 2.45 with the standard 55mm Super-Takumar lens.

● BELLOWS UNIT II



This dual-track unit provides maximum stability, outstanding design and rugged reliability. With precise, firm control, it may be locked in any position. Has an oversized focusing knob for increased sensitivity and ease of focusing. 3.2× magnification at maximum extension with the standard 55mm Super-Takumar lens.

● SLIDE COPIER



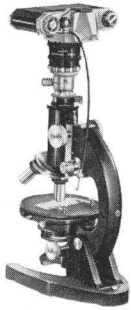
Here is real copying ease for duplicating slides. Slide stage raises or lowers for precise positioning, and a separate set of bellows shuts out all light between the slide and the lens, preventing lens flare from the light source. Used with Bellows Unit II.

● REVERSE ADAPTER

This allows 50mm or 55mm Takumar lenses to be used on bellows or extension tubes in reverse position for better macrophotographic results.

● MICROSCOPE ADAPTER

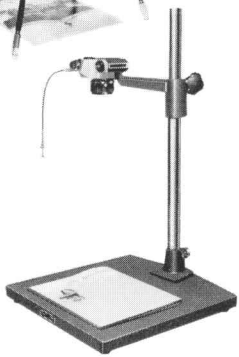
Fitting between the Asahi Pentax camera body and the microscope tube, this adapter permits utilization of the microscope's optics in place of the camera's lens. It may be used with any microscope which has a tube of 25mm diameter. Complete set consists of an adapter tube, fastening knob, light sealing tube, and stopper.



● COPIPOD

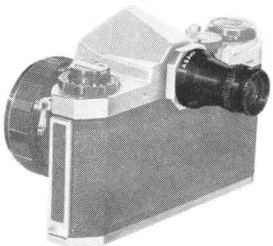
Light-weight, but extremely rigid and sturdy. This portable copying stand fits all models of the Asahi Pentax and can be used anywhere for copying documents, artwork, stamps, etc. Consists of a lens board complete with adapter rings for 46mm and 49mm lenses, and four calibrated telescoping legs. Sets up easily in seconds and is quickly disassembled. Supplied in a small black pouch for storage or carrying convenience.

● COPY STAND ——————→



● CLIP-ON MAGNIFIER

For added convenience in critical focusing for close-ups, copying, macro-photography, etc. This can be easily attached to the slotted frame of the viewfinder of your Asahi Pentax and enlarges your viewing image 2×.



● CLOSE-UP LENS

Ground and polished to the superb Takumar lens standards and has screw-in mount for lenses of 49mm thread. Magnification of 0.32 to 0.15 with the 55mm Super-Takumar lens.

● RIGHT ANGLE FINDER

Attaches quickly and easily to the viewfinder of all Asahi Pentax models. Designed for added convenience in low angle and close-up photography, photomicrography, etc.

● MIRROR ADAPTER

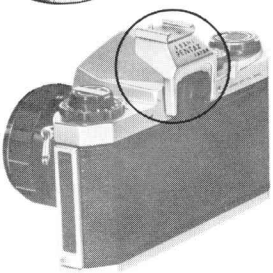
An interesting adapter for detective photographers, this allows you to take photographs by NOT pointing your camera and lens to your subjects. Fits the Takumar 200mm f/3.5 lens only.

● CABLE RELEASE

With floating collar, thread mounting and locking screw for time exposure.

● FILTERS AND LENSHOODS

Asahi Pentax lenshoods are recommended for use whenever possible to guard against off-angle light which will cause flare in your pictures. (All Takumar lenses from 85mm up to 1000mm are supplied with a special lenshoods.) Improve your picture quality by using the Asahi Pentax filters that are precision-ground, polished and coated for your Asahi Pentax.

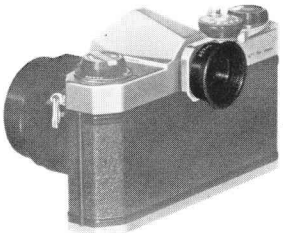


● ACCESSORY CLIP

Slips into grooved slot of Asahi Pentax viewfinder frame for sturdy support of shoe-mounted accessories.

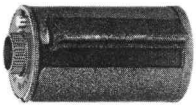
● CORRECTION LENS ADAPTER

A clip-on eyepiece for prescription lens *(eye-piece only)*. Also a convenient eye-cup for everyday photography.



● FILM MAGAZINE

For bulk film loading.



● 3-FILTER CASE

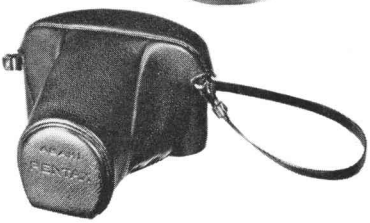
A special leather case with plastic compartments to contain a combination of three filters. It can be attached to the strap of your camera for carrying convenience.

● SHORT SOFT CASE

Especially designed soft case without a nose for the lens. This allows you to take pictures with the camera in the case for quieter operation.

● SOFT CASE JUMBO FRONT

Jumbo-size front for the soft camera case to contain an Asahi Pentax with a 135mm, 105mm or 85mm telephoto lens.



● LEATHER CASE FOR STANDARD LENSES

When the standard Takumar lens is removed from your Asahi Pentax camera bady, protect it in this leather case, available as a separate accessory.

● ASAHI MOUNT ADAPTER

For use of Asahiflex-mount Takumar lenses with your Asahi Pentax camera body.

● MISCELLANEOUS CAPS

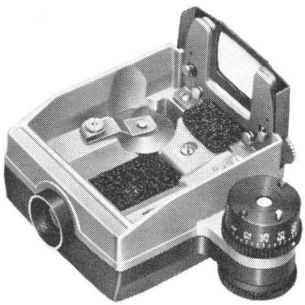
Front and rear lens caps, and Asahi Pentax body mount cap are also available.

ASAHI PENTAX SPOT EXPOSURE METER

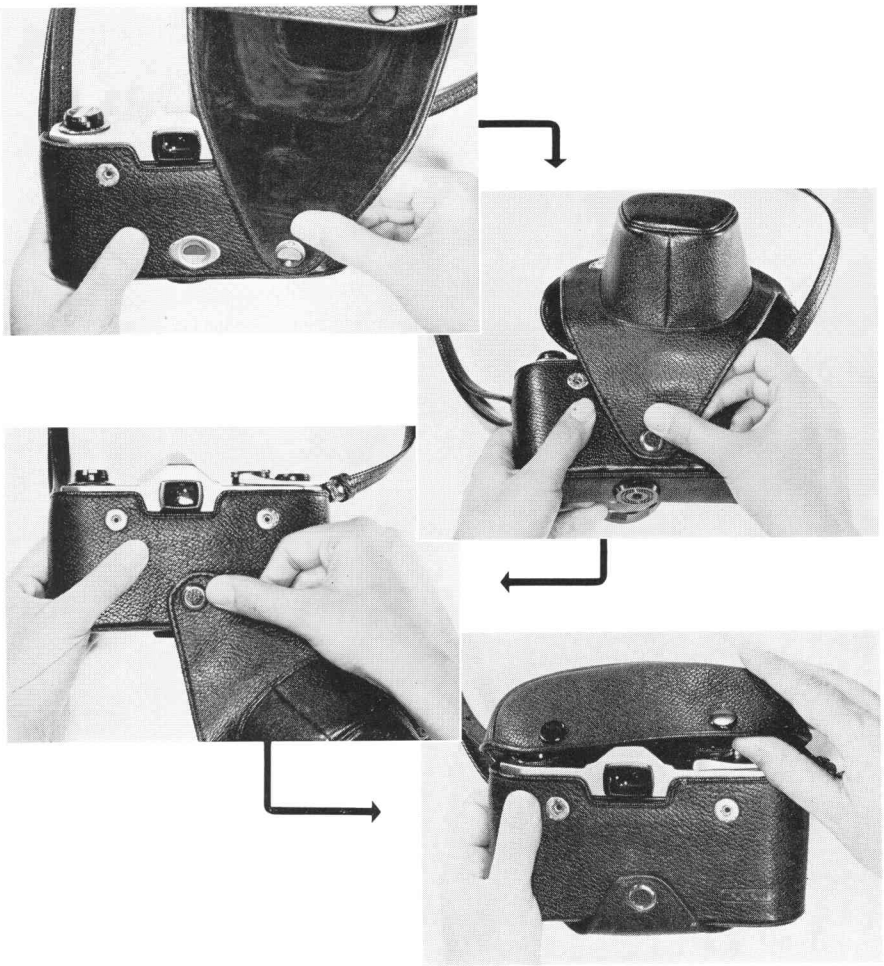
Selective exposure photography ... the most advanced concept in reflected light meters. The Asahi Pentax SPOT Meter utilizes an optical reflect system which gives a 21° angle of view on the ground glass screen. In the centre of this viewing screen is a 1° circle which represents the angle covered by the meter's CdS sensing element. For this reason, it is extremely selective, permitting precise exposure reading at longer distances, and gives greater control over exposure problems. Light intensity is read directly from engraved scales on the viewing lens, and exposure is calculated easily by turning movable scales on the side of the meter. Reads light in high range when lens cap is removed and low light by depressing a button; weight 18 oz. (510 gr.); single-lens reflex viewing utilizing the same pentaprism as Asahi Pentax cameras for upright, laterally correct images; adjustable eyepiece; light level range 3-18; ASA range from 6-6400 (DIN 9-39); shutter speed range from 4 minutes — 1/4000 sec.; battery check, and full-year operation on one 1.3v Mallory RM640 or Eveready E640 and one 9v Mallory or Eveready 216 dry cell. Lens barrel threaded to accept standard 46mm lenshood and filters. Complete with batteries and zippered leather carrying case.

ASAHI PENTAX CLIP-ON EXPOSURE METER

Attached in seconds to the pentaprism housing of the Asahi Pentax SV and S1a cameras, this highly sensitive meter with an ASA range of 6 to 1600 couples directly to the slotted shutter speed dial and is extremely easy to use. Its Cadmium Sulfide sensor measures an angle of 30° for accurate exposure control. Operates one full year on one 1.35v Mallory PX13B or PB13 battery and has convenient battery check. Complete with battery and leather carrying case.



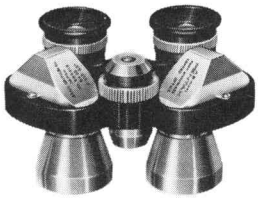
HOW TO REMOVE THE FRONT COVER



As you see from the above photographs, the rear side of the front cover has a half-moon convex clip and the body side has a half-moon concave clip, which accepts the convex clip. When removing the front cover, turn it 180°. Do not try to remove it with force without turning it 180°.

ASAHI PENTAX PRISM BINOCULARS

The unique coated interference filter of the Asahi Pentax prism binoculars, another achievement of the Asahi Pentax engineering, eliminates ultraviolet and infrared rays which may be harmful to the eyes.



	Magnification	Diameter of Objective Lens	Diameter of Exit Pupil	Angle of View	Relative Brightness	Field of View at 1000 yds	Weight	Height and Width
6×, 15	6×	15mm	2.5mm	7.5°	6	120m	6.0 oz. (170 g)	2 3/32″ × 3 1/16″ (6.4 cm × 9.1 cm)
6×, 25 (Wide Angle)	6×	25mm	4.2mm	11.0°	17	176m	16.2 oz. (459 g)	2 3/8″ × 4 1/16″ (6.7 cm × 11.1 cm)
6×, 30	6×	30mm	5.0mm	7.5°	25	120m	18.3 oz. (519 g)	4 3/8″ × 6 3/8″ (11.8 cm × 16.9 cm)
8×, 30	8×	30mm	3.7mm	7.5°	14	120m	18.3 oz. (519 g)	4 3/8″ × 6 3/8″ (11.1 cm × 16.9 cm)
8×, 40 (Wide Angle)	8×	40mm	5.0mm	9.5°	25	150m	28.3 oz. (802 g)	5 3/4″ × 7 1/5″ (14.4 cm × 18.2 cm)
7×, 35	7×	35mm	5.0mm	7.0°(B.L.) 6.5°	25	112m	24.3 oz. (689 g)	5 1/10″ × 6 3/4″ (13.0 cm × 17.1 cm)
7×, 35 (Wide Angle)	7×	35mm	5.0mm	11.0°	25	176m	28.3 oz. (802 g)	4 9/10″ × 7 1/5″ (12.4 cm × 18.2 cm)
7×, 50	7×	50mm	7.1mm	7.1°	51	113m	38.8 oz. (1100 g)	7″ × 8″ (17.8 cm × 22.0 cm)
10×, 50	10×	50mm	5.0mm	5.5°	25	88m	35.8 oz. (1015 g)	6 4/5″ × 8″ (17.3 cm × 22.0 cm)
12×, 50	12×	50mm	4.2mm	5.5°	17	88m	35.8 oz. (1015 g)	6 4/5″ × 8″ (17.3 cm × 22.0 cm)
16×, 50	16×	50mm	3.1mm	4.0°	10	64m	35.8 oz. (1015 g)	6 4/5″ × 8″ (17.3 cm × 22.0 cm)

B.L. . . . Bausch & Lomb Type

ASAHI PENTAX TELESCOPES

The superb Asahi Pentax telescopes, also designed and produced by the Asahi Pentax engineering group, are available in the following sizes:

30×, 40mm telescope, in white or black finish, with tripod. 50×, 50mm telescope, in grey finish, with sun glass and tripod. 60mm astronomical telescope with micro-moving attachment, 4× finder, 4 eyepieces (6mm, 9mm, 12.5mm and 20mm), erecting and diagonal prisms, sun glass, wooden tripod and carrying case.

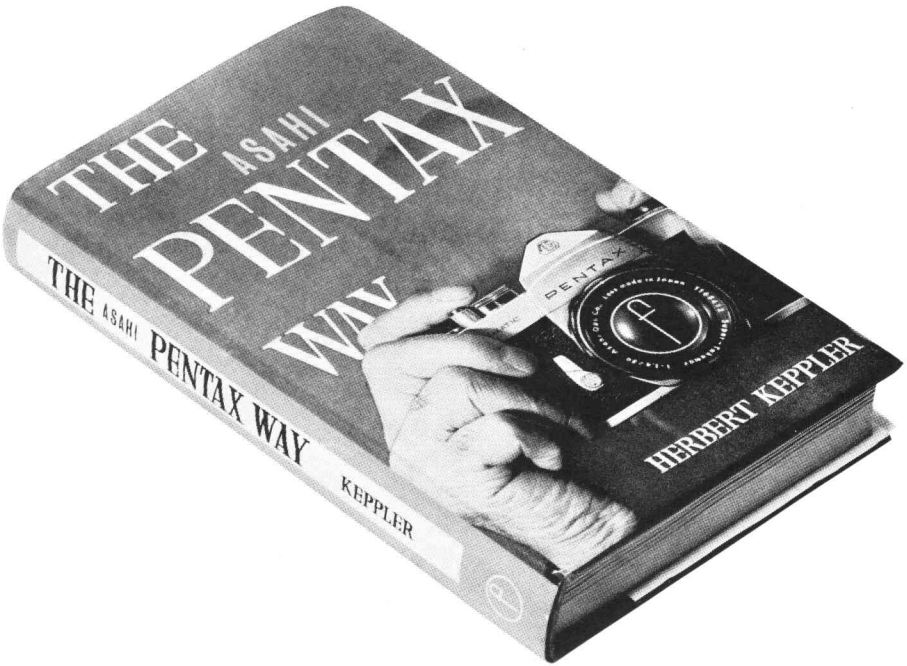
GUIDE BOOKS FOR ASAHI PENTAX SYSTEM OF PHOTOGRAPHY

The operating manual for the Asahi Pentax cameras is merely an instruction book for the proper care and operation of the Asahi Pentax cameras. It does not, and can not, deal fully with every possible application of the Asahi Pentax System of Photography because those applications are almost limitless.

The following books, published by Focal Press Ltd., London, are therefore recommended to those advanced amateurs who are eager to learn more about the Asahi Pentax System of Photography and photographic technique in general. These books will be available through your photographic dealers.

THE ASAHI PENTAX WAY by Herbert Keppler

Herbert Keppler has been associated with the U.S. photographic magazine *Modern Photography* for over 15 years as its editor and publisher. His column devoted exclusively to single-lens reflex cameras and photography is very famous through-



out the world. He is well known for his objective outlook on all things photographic and for his healthy mistrust of any theory that he has not tried out in practice. He has no interest in pushing the products of any particular manufacturer and brings to the Asahi Pentax Way a knowledgeable, independent and unprejudiced outlook.

This comprehensive book of 352 pages, containing 8 full-colour and 48 black-and-white picture pages, deals mainly with the following subjects:

OPERATION AND TECHNIQUE: action, aperture, artificial light, camera care, carrying, choosing films, close-ups, copying, depth of field, developers, exposure, exposure meter, films, film speed, filters, flash, focal length, focusing, holding, lighting, loading, long-range work, monocular, multiple flash, perspective, printing, shooting, slide projection, Spotmatic operation, storing negatives, telescope, tripod, unloading, viewing.

ACCESSORIES: accessory clip, bellows unit, body cover, cable release, cassettes, close-up lenses, copying unit, exposure meters, extension tubes, focusing magnifier, Leica adapter, lens cap, lenses, microscope adapter, prescription eyepiece, right-angle finder, slide copier, SPOT exposure meter.

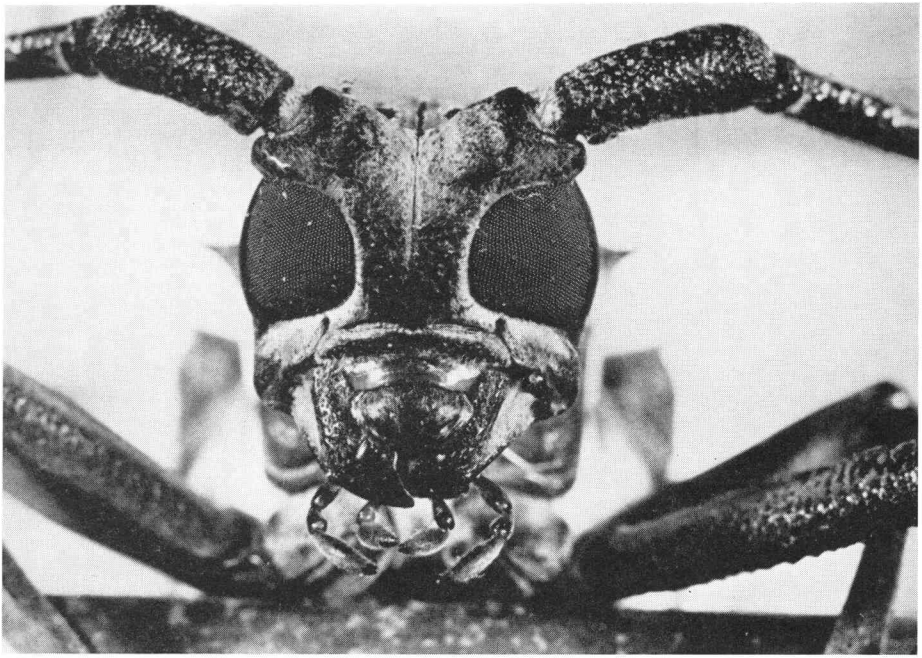
ASAHI PENTAX SUBJECTS: animals, architecture, birds, candid, cinema, fireworks, flowers, groups, lights, low light, nature, night, portraits, scenics, sport, television, theatre, travel, under water, wild life.

FINDING DATA: close-up exposure, colour temperature, depth of field, extension bellows, extension tubes, feet-metre conversion, films, film speed conversion, filters, filter equivalents, filters for colour film, flash.

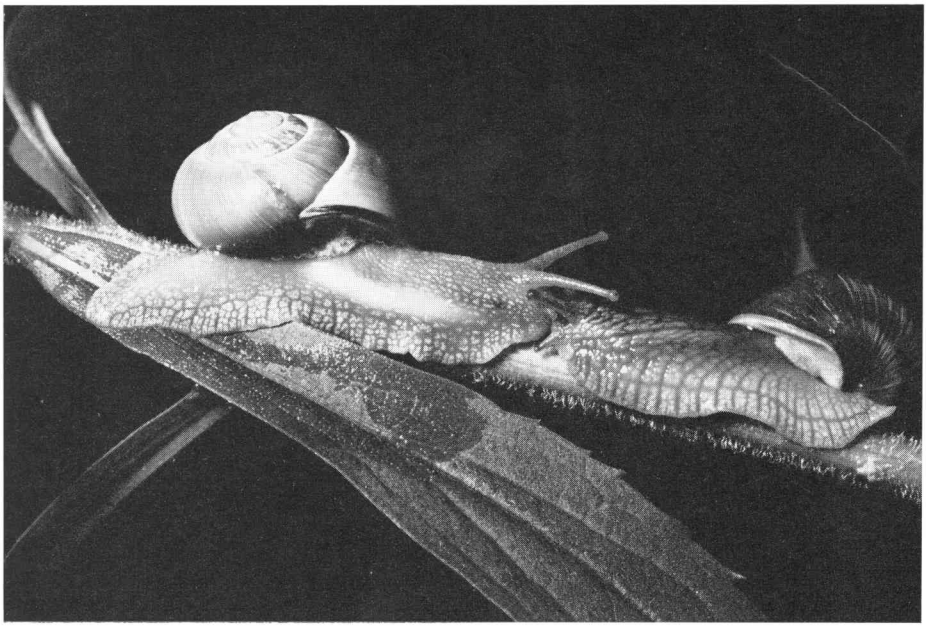
ASAHI PENTAX GUIDE by W.D. Emanuel

This guide book of 72 pages has been in publication since its first edition of March 1960. It deals with the following subjects:

The Asahi Pentax system and its evolution; handling the camera; loading and unloading; films and filters; exposure; flash with the Asahi Pentax; using alternative lenses; facts and figures (feet/inch conversion into metric units; quick focusing zones; exposure table for black-and-white film in daylight; shutter speeds to arrest movement; apertures with flash bulbs; close-ups and depth of field; close-ups with bellows and extension tubes; filter factors; 35mm black-and-white and colour films; conversion of different speed systems); the Asahi Pentax model by model (from original Asahi Pentax model to the present-day model); lenses and accessories; exposure meter; etc.



Close-up with Bellows-Takumar 100mm f/4.



Close-up with Macro-Takumar 50mm f/4.

PLEASE READ THIS OPERATING MANUAL THOROUGHLY.

ASA-DIN FILM SPEED CONVERSION TABLE

ASA	DIN	Relative Exposure Needed
800	30°	1
640	29°	1.3
500	28°	1.6
400	27°	2
320	26°	2.5
250	25°	3.2
200	24°	4
160	23°	5
125	22°	6.3
100	21°	8
80	20°	10
64	19°	13
50	18°	16
40	17°	20
32	16°	25
25	15°	32
20	14°	40
16	13°	50
12	12°	63
10	11°	80
8	10°	100
6	9°	125
5	8°	160
4	7°	200
3	6°	250
2.5	5°	320
2	4°	400

ASA = American Standards Association
DIN = Deutsche Industrie Normen

FEET-METER CONVERSION TABLE

Feet/inches to metric units		Metric units to feet/inches	
1/8 in.	0.32 cm.	0.5 cm.	3/16 in.
1/4 in.	0.64 cm.	1 cm.	3/8 in.
1/2 in.	1.27 cm.	2 cm.	13/16 in.
1 in.	2.54 cm.	3 cm.	1 3/16 in.
2 in.	5.08 cm.	4 cm.	1 5/8 in.
3 in.	7.62 cm.	5 cm.	1 15/16 in.
4 in.	10.2 cm.	6 cm.	2 3/8 in.
5 in.	12.7 cm.	7 cm.	2 3/4 in.
6 in.	15.2 cm.	8 cm.	3 1/8 in.
7 in.	17.8 cm.	9 cm.	3 1/2 in.
8 in.	20.3 cm.	10 cm.	3 13/16 in.
9 in.	22.9 cm.	12 cm.	4 3/4 in.
10 in.	25.4 cm.	15 cm.	5 7/8 in.
11 in.	27.9 cm.	20 cm.	7 7/8 in.
1 ft.	30.5 cm.	25 cm.	9 13/16 in.
2 ft.	61.0 cm.	30 cm.	11 3/4 in.
3 ft.	91.4 cm.	40 cm.	15 3/4 in.
4 ft.	1.22 m.	50 cm.	19 3/4 in.
5 ft.	1.52 m.	60 cm.	23 5/8 in.
6 ft.	1.83 m.	80 cm.	31 1/2 in.
7 ft.	2.13 m.	100 cm.	39 1/2 in.
8 ft.	2.44 .n.	1.5 m.	4 ft. 11 in.
9 ft.	2.74 m.	2 m.	6 ft. 7 in.
10 ft.	3.05 m.	2.5 m.	8 ft. 3 in.
15 ft.	4.57 m.	3 m.	9 ft. 10 in.
20 ft.	6.10 m.	4 m.	13 ft. 2 in.
30 ft.	9.14 m.	5 m.	16 ft. 5 in.
40 ft.	12.20 m.	10 m.	33 ft. 0 in.
50 ft.	15.24 m.	15 m.	49 ft. 2 in.
100 ft.	30.48 m.	20 m.	66 ft. 0 in.