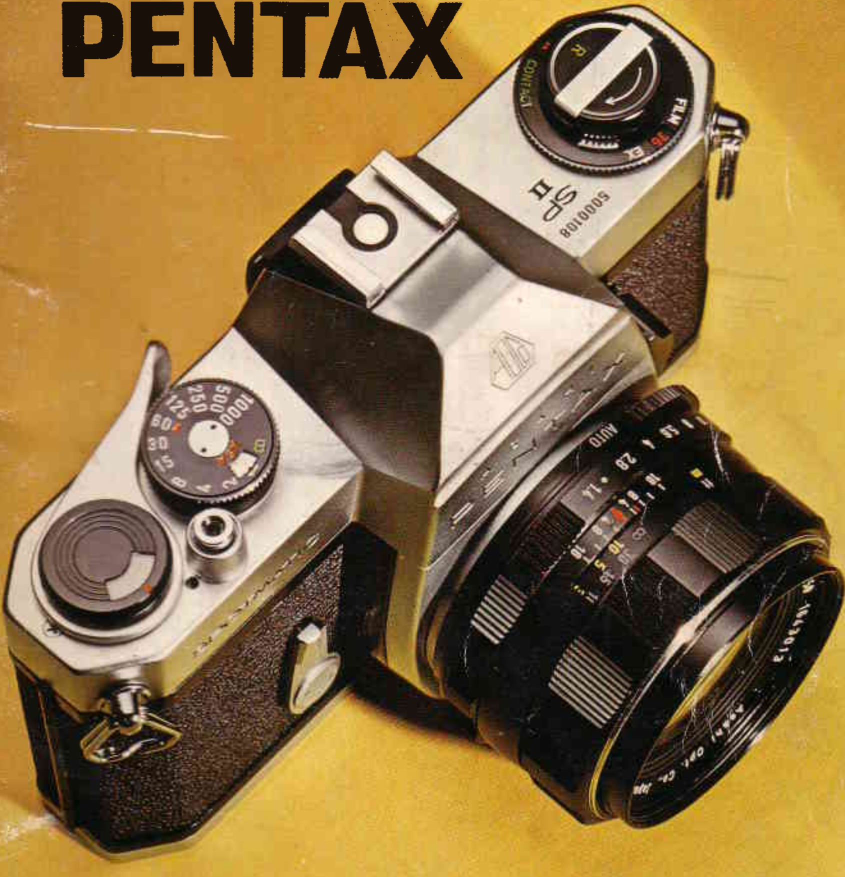
ASAHI PENTAX



SPOTMATIC II

Operating Manual

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ASAHI PENTAX SPOTMATIC II

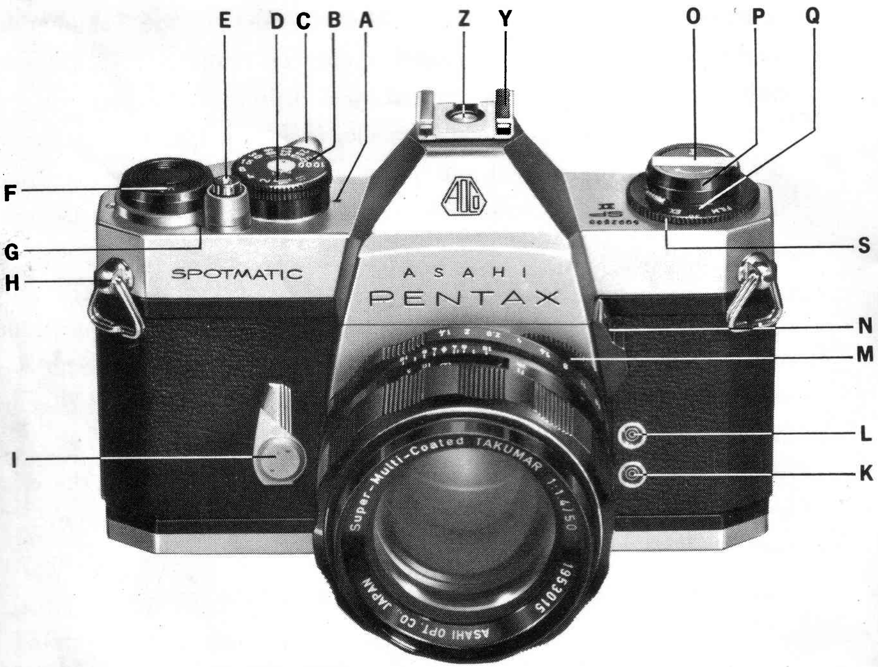
Your Asahi Pentax Spotmatic II is the finest photographic instrument on the market. The "Super-Multi-Coating" on the Takumar lens, developed by Pentax and available only on Spotmatic II Takumars, reduces flare and boosts contrast to a degree far beyond what was previously possible in optical technology. It is a tougher coating than is available on any competitive lenses and results in pictures with more detail and richer colours than is possible with any other system at any price.

The Spotmatic II itself is an outgrowth and refinement of the original Spotmatic which introduced through-the-lens metering to the world of photography. Its stopped-down metering system is the most accurate method for perfect exposure determination. It also automatically gives you a depth-of-field preview. It is an averaging system for the easiest and most dependable exposures in typical picture-taking situations. This metering system has been refined and improved each year in the Spotmatic to a degree of accuracy unmatched in the industry.

The original Spotmatic was the most compact 35mm SLR made. The Spotmatic II retains that same traditional compactness and classic feel. It also is designed for use with the accessories from the Pentax system, including all of the superb Takumar lens ranging from the ultra-wide-angle 17mm Takumar up to the super-telephoto 1000mm Takumar. The Pentax system can grow with you as your interests develop in any direction.

We are very proud of the Pentax Spotmatic II. We are sure you will be, too.

Major working parts of the ASAHI



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

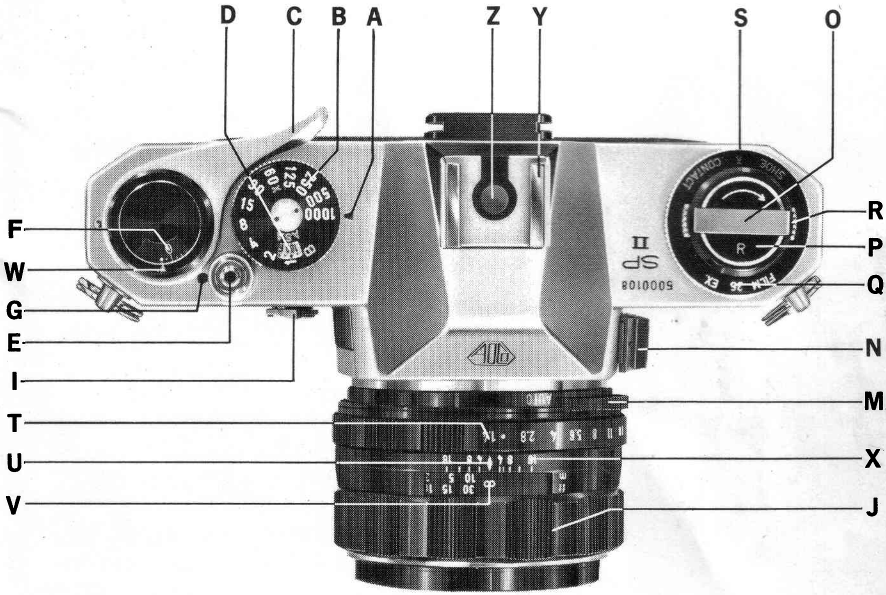
I – Self-timer cocking lever

J – Focusing ring

K – X flash terminal

L – FP flash terminal

PENTAX SPOTMATIC II



M – Preview lever

N – Exposure meter switch

O – Film rewind crank

P – Film rewind knob

Q – Film type reminder dial

R – Reminder dial selector

S – FP/X switch rim

T – Diaphragm ring

U – Diaphragm and distance index

V – Distance scale

W – Exposure counter index

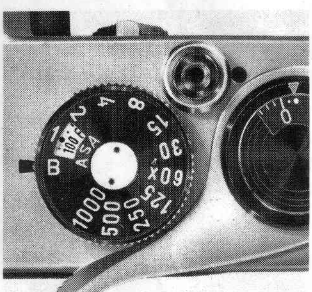
X – Depth-of-field guide

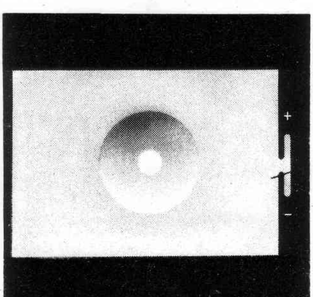
Y – Hot shoe

Z – Hot shoe flash contact

PLEASE READ THIS OPERATING MANUAL THOROUGHLY.

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-Multi-Coated Takumar 50mm f/1.4 or 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.

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 16.

Finder
Pentaprism finder with microprism Fresnel lens for instant focusing; 0.88x magnification with 50mm lens and approximately life-size with 55mm lens.

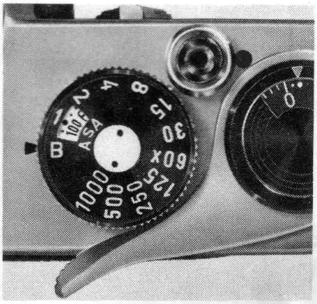
Focusing
Turn the distance scale ring until the subject image on the ground glass comes into focus.

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

Lens Mount
42mm threaded lens mount.

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

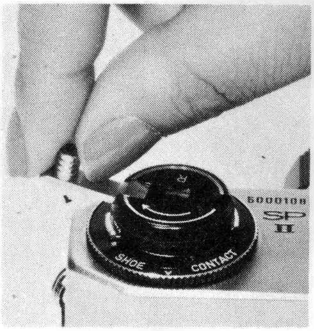
"Cocked" Indicator
A red disk appears in a small window alongside the shutter release button when the shutter is cocked, and blacks out when it is released.



Film Exposure Counter
Automatic re-set type.

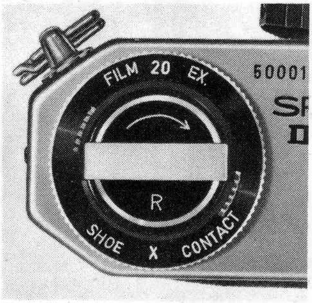
Flash Synchronization
FP + X contacts for conventional flash cord connection. Separate FP/X contact on hot shoe for convenient flash cordless connection.

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 3200 (LV1-18 for ASA-100 film with standard lens.) Meter is powered with a mercury battery.



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.

Loaded Film Indicator
Loaded film reminder dial underneath film rewind knob is marked EMP. (empty), 20 and 36 (exposures) in green (for colour; tungsten type), in white (black and white) and in orange (for colour; daylight type).

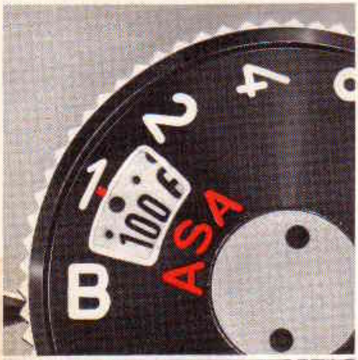


Dimension
Width 143mm (5.6″) × height 93mm (3.66″) × thickness 88mm (3.4″).

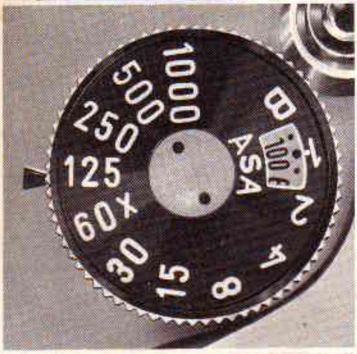
Weight
853 grams (1 lb. 11 oz.) with 50mm f/1.4 lens. Body alone: 622 grams (1 lb. 4 oz.)

Short operating course

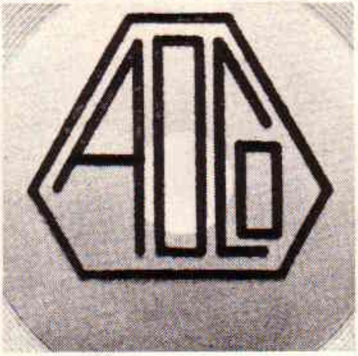
A mercury battery for the light meter is packed separately. Be sure to insert it into the battery housing when operating the camera. For battery insertion, refer to page 17.



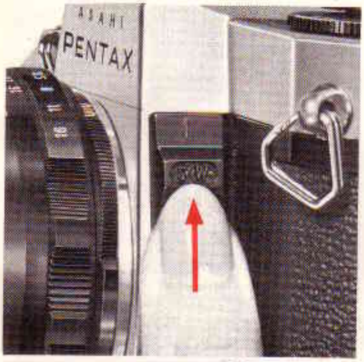
1. SET FILM SPEED
Lift the outer ring of the shutter speed dial, turn it around and set the same number as the ASA number of the loaded film to the small red index which appears alongside the figure 1. Then cock the rapid wind lever.



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 5 on the next page.)



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. 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

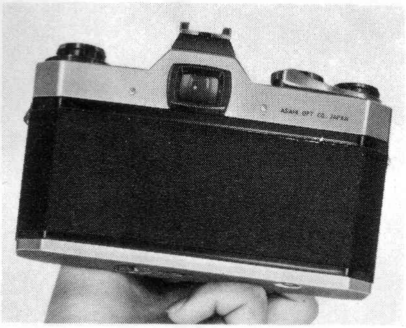
Hold your camera firmly and trip the shutter. When the shutter is released, the meter switch will automatically turn off, and the needle will remain fixed off and underneath the centre. The diaphragm will reopen to its full aperture and the overall image will look brighter. Cock the rapid wind lever 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.)

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.

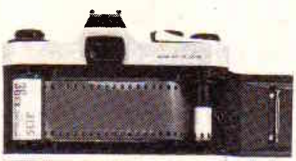
In vertical position B. Hold your camera tightly to your forehead with your left hand, and draw your right arm close to your body.

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. Cradle the camera with 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 until back cover snaps open.
2. Place the film cassette into the cassette chamber, and push back the rewind knob. Draw out the film leader and insert it into slot of the take-up spool.
3. Advance the film by alternately turning the rapid wind lever and releasing the shutter until both sprockets have properly engaged the film perforations. Close the back by pressing it firmly.
4. If the film is properly loaded, the rewind knob will turn counter-clockwise when you advance the film by turning the rapid wind lever.

Film type reminder dial

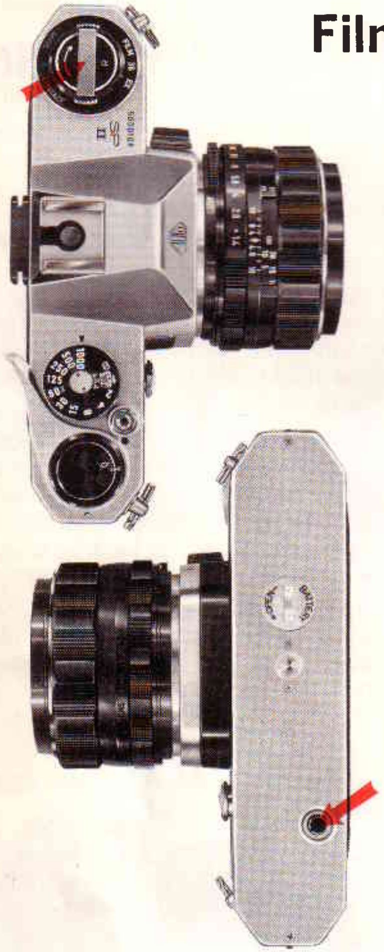
Use the film type dial to show what type of film is in your camera. When you have pulled out the rewind knob to open the back when loading the film, turn the dial selector so that the type of film appears in the window. To check whether the camera is loaded, turn the film rewind knob clockwise. If it turns freely, the camera is not loaded.

Setting ASA film speed

The ASA film speed rating of all 35mm films is given in the data sheet packed with each roll of film. The higher the ASA number, the more sensitive the film. Lift the outer ring of the shutter speed dial and rotate it until the ASA number of your film is opposite the red index mark.

Be sure to set your film speed on the shutter speed dial because the dial is connected to the exposure meter system.

Film wind and rewind



1 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.

2 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.

3 Unfold the film rewind crank.

4 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.)

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

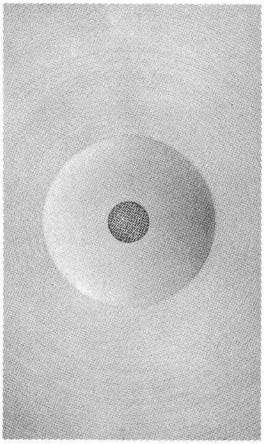
Bright field focusing

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

Microprism

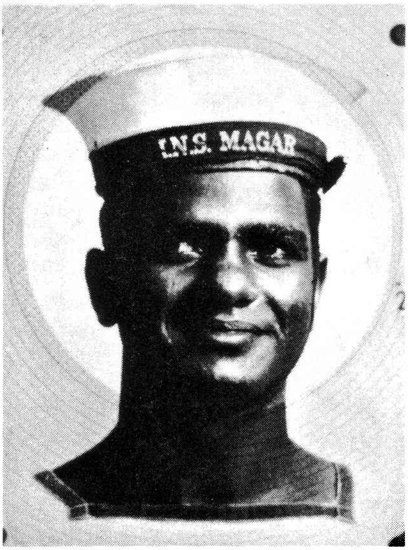


Asahi Pentax cameras have a Fresnel lens with a microprism centre underneath the ground glass. As you look through the finder, you will see that the Fresnel lens consists of many concentric rings which provide the brightest possible image on the ground glass.

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



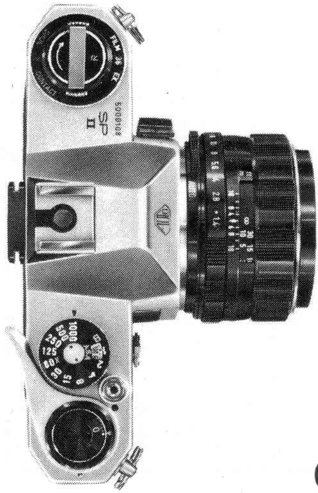
IN FOCUS

When the preview lever is in "AUTO" (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 "MAN" (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 "AUTO" (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 "AUTO" (automatic) position. When the shutter is released, the lens diaphragm will automatically return to its automatic position if the lever is set on "AUTO".*

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.



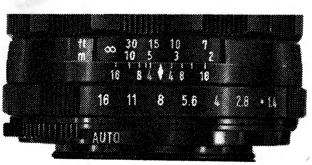
The indicator window blacks out as you trip the shutter button. For use of the X setting on the shutter speed dial, refer to page 18.

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 5 meters ... the lens is focused on a subject 5 meters 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 14~15.

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

Depth-of-field table:
Super-Multi-Coated Takumar 50mm lens

Distance Scale / f Setting	0.45 m.	0.6 m.	1 m.	1.5 m.	2 m.	5 m.	10 m.	∞
f/1.4	0.45 0.453	0.59 0.61	0.98 1.02	1.46 1.54	1.93 2.07	4.57 5.52	8.40 12.36	51.75 ~∞
f/2	0.45 0.454	0.59 0.61	0.98 1.02	1.45 1.56	1.90 2.11	4.41 5.78	7.86 13.75	36.24 ~∞
f/2.8	0.44 0.46	0.59 0.61	0.97 1.03	1.43 1.58	1.87 2.16	4.21 6.16	7.24 16.19	25.90 ~∞
f/4	0.44 0.46	0.59 0.62	0.95 1.05	1.40 1.62	1.81 2.23	3.94 6.84	6.48 22.05	18.14 ~∞
f/5.6	0.44 0.46	0.58 0.62	0.94 1.07	1.36 1.68	1.75 2.34	3.64 8.03	5.68 42.68	12.97 ~∞
f/8	0.44 0.47	0.57 0.63	0.91 1.11	1.30 1.77	1.66 2.52	3.26 10.87	4.80 ~∞	9.10 ~∞
f/11	0.43 0.47	0.56 0.65	0.88 1.15	1.24 1.89	1.56 2.80	2.88 19.53	4.02 ~∞	6.63 ~∞
f/16	0.42 0.48	0.54 0.67	0.84 1.24	1.16 2.16	1.42 3.42	2.42 ~∞	3.16 ~∞	4.57 ~∞

Depth-of-field table:
Super-Multi-Coated Takumar 55mm lens

Distance Scale / f Setting	0.45 m.	0.6 m.	1 m.	1.5 m.	2 m.	5 m.	10 m.	∞
f/1.8	0.45 0.45	0.59 0.61	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	0.98 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	0.98 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	0.97 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	0.95 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	0.93 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	0.91 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	0.87 1.17	1.22 1.96	1.52 2.95	2.73 32.75	3.71 ∞	5.82 ∞

Depth-of-field table: Super-Multi-Coated Takumar 50mm lens

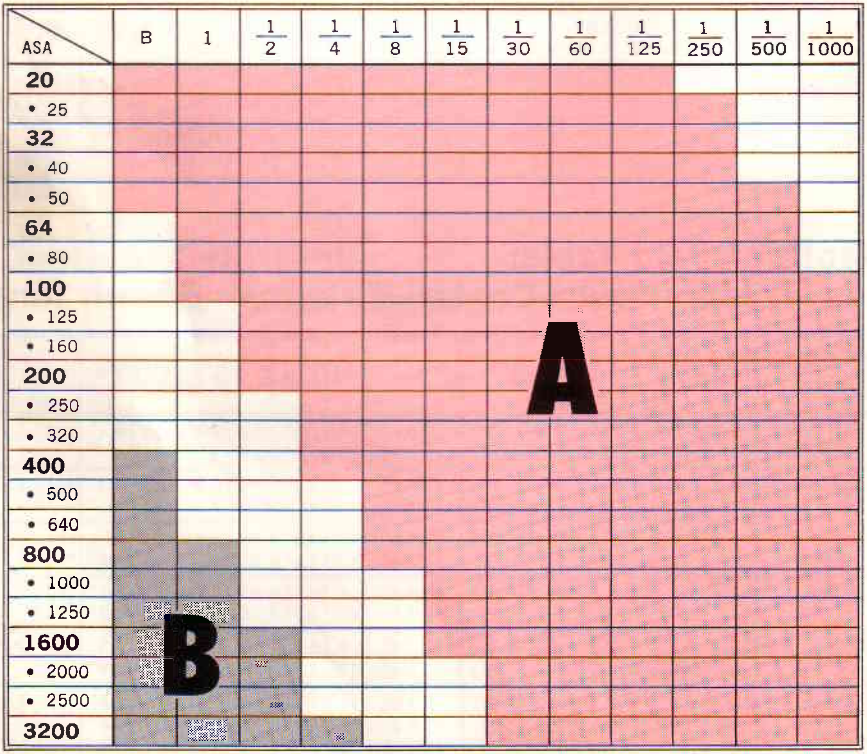
Distance Scale / f Setting	1′6″	2′	3′	5′	10′	15′	30′	∞
f/1.4	1′ 6.12″ 1′ 6.13″	1′11.8″ 2′ 0.2″	2′11.5″ 3′ 0.6″	4′10.4″ 5′ 1.7″	9′ 5.6″ 10′ 7.2″	13′ 9.7″ 16′ 4.9″	25′ 6.6″ 36′ 4.2″	169′ 9.2″ ∞
f/2	1′ 5.9″ 1′ 6.1″	1′11.6″ 2′ 0.4″	2′11.3″ 3′ 0.8″	4′ 9.8″ 5′ 2.4″	9′ 3.1″ 10′10.6″	13′ 4.3″ 17′ 1.2″	24′ 0.2″ 39′11.8″	118′ 3.5″ ∞
f/2.8	1′ 5.8″ 1′ 6.2″	1′11.5″ 2′ 0.5″	2′10.9″ 3′ 1.1″	4′ 9″ 5′ 3.4″	8′11.9″ 11′ 3.2″	12′ 9.6″ 18′ 1.4″	22′ 3″ 46′ 1.4″	84′11.6″ ∞
f/4	1′ 5.6″ 1′ 6.4″	1′11.4″ 2′ 0.6″	2′10.6″ 3′ 1.7″	4′ 7.7″ 5′ 5″	8′ 7.4″ 11′11.2″	12′ 0.6″ 19′11″	20′ 0.4″ 59′11.6″	59′ 6.4″ ∞
f/5.6	1′ 5.5″ 1′ 6.5″	1′11.2″ 2′ 1″	2′10″ 3′ 2.3″	4′ 6.2″ 5′ 7.2″	8′ 1.9″ 12′11.2″	11′ 2″ 22′10.7″	17′ 8.3″ 100′ 1.3″	42′ 6.8″ ∞
f/8	1′ 5.4″ 1′ 6.6″	1′10.8″ 2′ 1.3″	2′ 9.1″ 3′ 3.4″	4′ 4.1″ 5′10.9″	7′ 6.8″ 14′ 9.5″	10′ 1″ 29′ 7.2″	15′ 0.7″ ∞	29′10.2″ ∞
f/11	1′ 5.2″ 1′ 7″	1′10.4″ 2′ 1.9″	2′ 8.2″ 3′ 4.8″	4′ 1.6″ 6′ 4.2″	6′11.3″ 18′ 0.6″	8′11.8″ 46′ 9.7″	12′ 8.4″ ∞	21′ 9″ ∞
f/16	1′ 4.8″ 1′ 7.3″	1′ 9.7″ 2′ 2.9″	2′ 6.7″ 3′ 7.6″	3′10″ 7′ 3″	6′ 1.2″ 28′ 7.6″	7′ 7.2″ ∞	10′ 1″ ∞	15′ ∞

Depth-of-field table: Super-Multi-Coated 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″ ∞

Range of light measurement

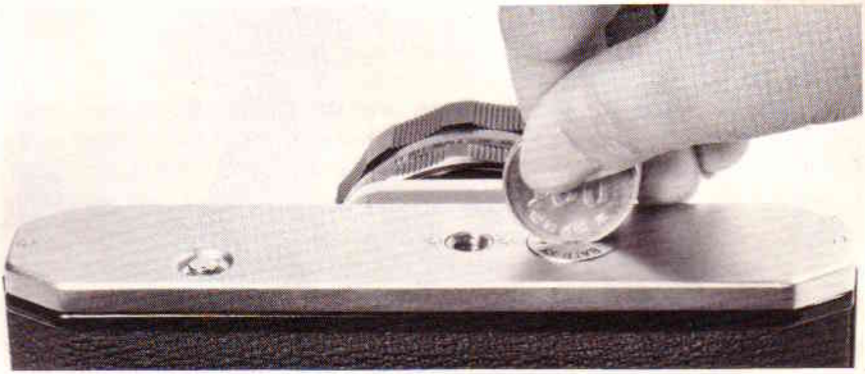
The exposure meter of the Spotmatic measures the brightness of the ground glass. Therefore, the meter should be turned on *after* you have focused your subject on the ground glass. The following table shows the range of the meter's light measurement, and should not be interpreted as the camera's total 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.

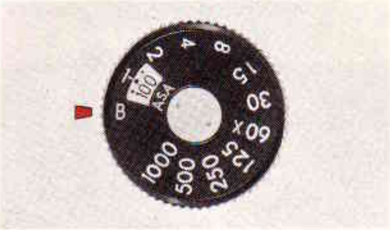


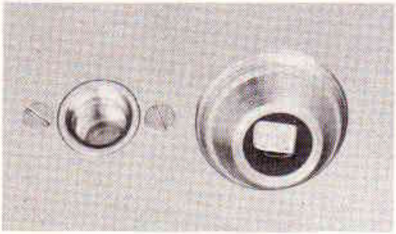
The area A indicates the reading range of the meter. The area B indicates that although the shutter speed index is black and the meter needle moves, the meter is NOT operating properly.

When the meter needle is centered with the shutter speed dial set at B using ASA 20~50 films, this indicates that the exact shutter speed required is 2 seconds. Please expose your picture for 2 seconds.

Mercury battery







How to check it

1. Set the shutter speed dial to B (bulb) position.
2. Turn the ASA dial to ASA 100.
3. Push the meter switch to "on" position.

Look at the meter's needle through the viewfinder. If the needle rapidly drops, the meter battery has sufficient capacity; if it does not, replace the mercury battery.

How to replace it

Open the battery housing cover on the bottom cover plate with a coin. Remove old battery and insert new battery with (+) side toward the top of the camera. For replacement, use Mallory PX-400 or RM-400-R or equivalent.

CAUTION: The mercury battery is like a phonograph record. It can be damaged by skin acids. Handle by the edges with a dry cloth only. Be sure the battery is cleaned with the cloth before insertion into the camera. The battery is not rechargeable.

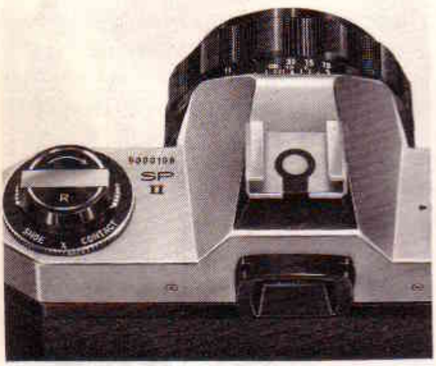
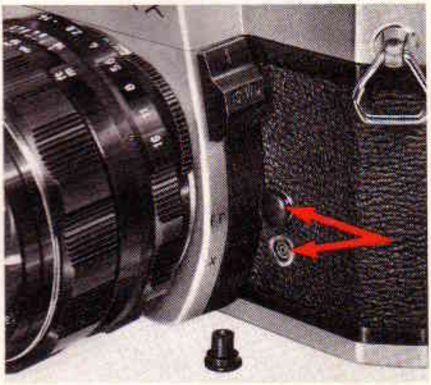
DANGER! A serious accident has been reported of a small child who has put a mercury battery into his mouth and has been hospitalized for serious gripes and stomach inflammation. Please always keep a mercury battery from the reach of small children.

PLEASE READ THIS OPERATING MANUAL THOROUGHLY.

Flash synchronization

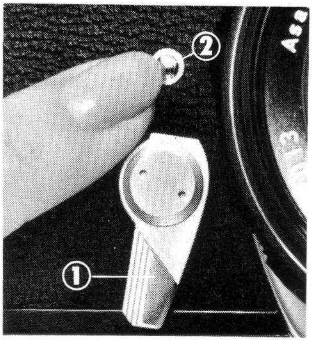
The Spotmatic II has FP and X terminals at the front of the camera body, and a separate FP/X contact on the built-in hot shoe. The table below shows which flash contact, which shutter speed and which flash bulb may be combined for maximum lamp efficiency. Unless these combinations are rigidly followed, 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.

Use the hot shoe flash contact only when using the Super-Lite II or any other electronic flash or flash gun that has a flash contact on the shoe bracket. To select FP or X, just turn the FP/X switch rim so that eiether one of the marks appears in the window.

When not using these terminals, keep the plugs inserted in the terminals.

<table>
<tr><th>SHUTTER SPEED / FLASH TERMINAL</th><th>$\frac{1}{1000}$</th><th>$\frac{1}{500}$</th><th>$\frac{1}{250}$</th><th>$\frac{1}{125}$</th><th>$\frac{1}{60}$ X</th><th>$\frac{1}{30}$</th><th>$\frac{1}{15}$</th><th>$\frac{1}{8}$</th><th>$\frac{1}{4}$</th><th>$\frac{1}{2}$</th><th>1</th></tr>
<tr><td rowspan="2">FP</td><td colspan="5">FP Class (Screw Base)</td><td colspan="6"></td></tr>
<tr><td colspan="4">FP Class (Bayonet Base)</td><td colspan="7"></td></tr>
<tr><td rowspan="3">X</td><td colspan="6"></td><td colspan="5">F Class</td></tr>
<tr><td colspan="7"></td><td colspan="4">M Class & MF Class</td></tr>
<tr><td colspan="4"></td><td colspan="7">Electronic Flash</td></tr>
</table>



Self-timer

Depending upon how far down you turn the self-timer cocking lever ①, it will release the shutter in 5-13 seconds. When operating the self-timer, always depress the self-timer release button ② to release the shutter. Do not depress the shutter button ... it will immediately release the shutter without delayed action. The self-timer cocking lever should be turned down at least 90° or the release button will not operate.

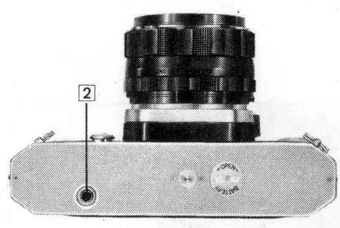
Infra-red photography

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. The index is just a short orange line.

First, focus your lens on your subject. Determine the lens to subject distance from the distance scale. Then match your lens to subject distance to the "R" mark by turning the distance scale accordingly. For instance, if your subject is in focus at infinity, turn the distance ring and move the infinity (∞) mark to the "R" index.

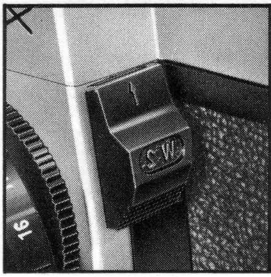
The "R" index marking on the Takumar lenses is based on the lens setting at infinity.

How to make deliberate double exposure



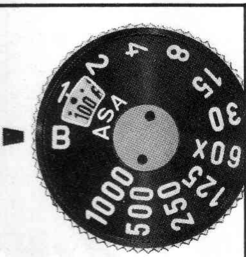
For deliberate double exposures, make the first exposure in the normal way. Then tighten the film by turning the rewind knob ①, and keep hold of the rewind knob. Depress the film rewind release button ② and cock the rapid wind lever. This tensions the shutter without advancing the film. Finally, release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

Important notes



Always keep the meter switched off when not actually taking readings. Leaving the meter switched on will rapidly exhaust the battery. It is also necessary to keep the meter switched off when mounting a Super-Takumar or SMC Takumar lens on the Spotmatic II camera body. If it is switched on, the tip of the automatic diaphragm release pin of the lens will hit the pin release plate inside the camera body and it may get damaged.

1



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 16.

2

When the meter is the switched on, the lens (any Super-Takumar or SMC Takumar lens) is in its manual position even when the diaphragm preview lever is in "AUTO" (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 "AUTO" position.

3

4

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

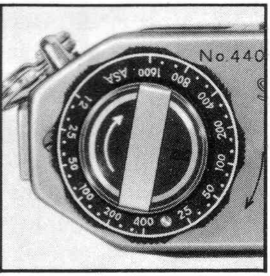
No!

Exposure factor

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

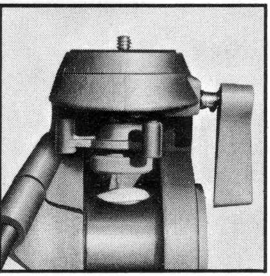
5

Primarily made for use with the Spotmatic II, the **Super-Multi-Coated Takumar 50mm f/1.4** can also be used with the original Spotmatic, the models SL and SP 500. Further, it can be used with only two other cameras: Asahi Pentax SV and S1a with an orange-coloured R marking on the film rewind knob. Use with any other camera will damage the rear element lens.



6

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 take care of your camera

1. STORAGE

a) The instrument, when not in use, should be protected from dampness and dust. Preferably, it should be kept in its case and, as an additional precaution, inserted into a polyethylene bag.

b) Care should be taken to see that the camera is not kept in abnormally high or low temperatures — normal room temperature is best.

c) Take the precaution of removing any batteries since, no matter how well made these may be, there is always a risk of deterioration and corrosion.

2. EXERCISE

All mechanical instruments need to be exercised regularly to keep them in good condition. Cameras are no exception to this rule. If you put your car in storage for the winter, the first thing a prudent owner does in the spring is to have it serviced before putting it back on the road. There is not quite the same parallel between a motor car and a camera, nevertheless, you should store your camera where you can get at it easily and put it through its normal operations at least once per month. i.e.

a) Set the shutter release and fire.

b) Turn to a slow shutter speed and again set the shutter release and fire. Also operate delayed action device (self-timer).

c) Examine the exposure meter for correct operation.

d) Check film transport.

e) Check the range finder or pentaprism viewfinder.

These actions will keep the mechanism in good order, retaining the natural qualities of the lubricant — thus ensuring the camera is ready for instant use when required.

3. RUNNING TEST BEFORE USE

Before embarking on a holiday where your camera will be your constant companion or, in fact, any other reason for the camera being required on an important assignment, make a few trial exposures. It is advisable to test the camera at least four weeks prior to your departure to give time for a test film to be exposed and processed. Many spoiled holiday records would have been avoided if this precaution had been taken.

4. DUSTY CONDITIONS

When your camera is used on the beach, or other conditions where dust or sand can easily infiltrate the mechanism, take the precaution of putting the instrument with its case into a polyethylene bag or other container so that flying dust or sand are prevented from entering the camera. This applies particularly, of course, if it is laid down on a sandy beach. Furthermore, avoid leaving the camera in such a position that direct sunlight is allowed to fall upon it for a long length of time.

5. LOOSE PIECES OF FILM

This nuisance is often the cause of trouble with a camera. Small chips of film can easily damage the mechanism. Therefore, check your camera every time it is loaded. Always make sure it is free from small pieces of film.

6. TREATING YOUR CAMERA TENDERLY

Your camera is a fine, precision instrument. It has been produced with great care and attention to detail. Do not allow it to be swung by its shoulder strap, thrown into the back of a car, or in any other way treated as if it were as robust as a battleship. If you protect the camera against possible damage due to a knock, you will be amply repaid by years of excellent and trouble-free service.

Interchangeable Lenses

The Asahi Pentax offers many interchangeable lenses in a wide variety of focal lengths, all of which are highly respected by both professional and amateur photographers for their fine resolution. The photographic coverage of the various Takumar lenses is illustrated on page 25. With focal length 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 need for an 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 remove.

Fixed Focusing Setting

Because of the considerable depth of field of wide-angle lenses, you can use them as fixed focus lens if the diaphragm and distance scales are set properly. For your convenience, the Super-Takumar and SMC Takumar lenses shown on pages 26 and 27 (marked with *) have a fixed focus mark. Just align with the index the orange-coloured figures of the diaphragm and distance scales, and the lens will be in fixed focus from foreground to infinity. You'll find this extremely convenient for fast shooting.

Super-Multi-Coated (SMC) Takumars

Pentax SMC Takumar lenses are the world's first 7-layer multi-coated lenses. A truly remarkable optical achievement. Conventional lenses have only 1-3 layer coatings. The additional coating of SMC Takumar lenses let in more lighting resulting in truer colours. Reflection is reduced to 0.2% allowing the remaining 99.8% of light to pass through. This means higher light transmission, and the brightest lens possible. Colours pass through with equal intensity so colour balance is strikingly improved. Brighter blues. Vibrant reds. Truer yellows. SMC Takumar lenses make it possible. And, no ghosts or flares even when shooting against the sun. Ultra violet light is reflected off the glass surface. So, only true colours are absorbed. Undesired rays are kept out. SMC Takumar lenses are for people interested in the ultimate in photographic lenses.