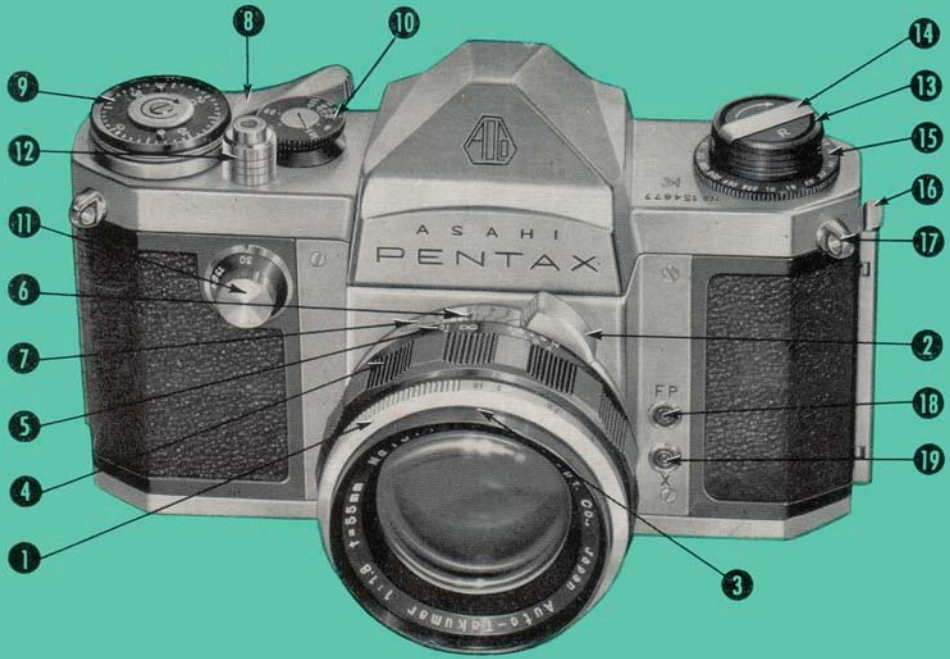
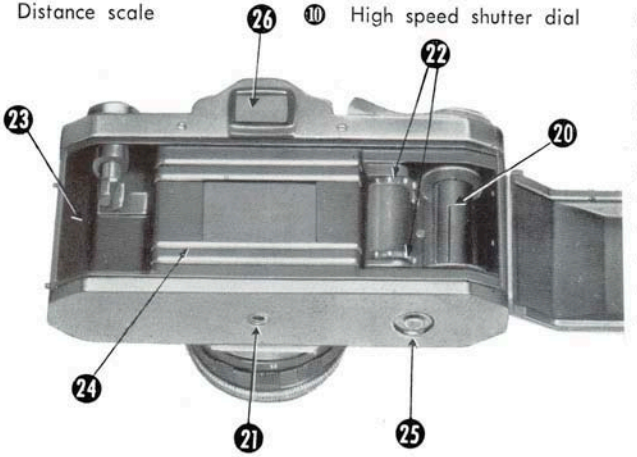
ASAHI PENTAX K

Instruction Guide


ASAHI
PENTAX
FP
X
Auto-Takumar 1:1.8 f=55mm
Japan
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19

MAJOR ASAHI PENTAX "K" WORKING PARTS

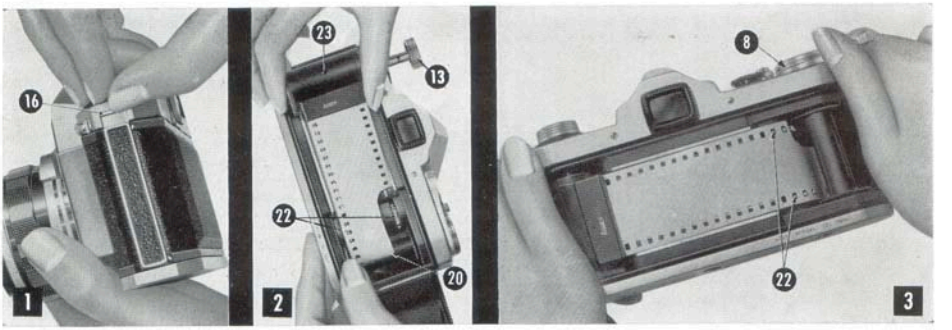
1. Diaphragm adjusting ring
2. Diaphragm charging lever
3. Diaphragm index
4. Distance scale ring
5. Distance scale
6. Distance scale index
7. Depth-of-field guides
8. Film transport lever
9. Exposure counter
10. High speed shutter dial
11. Slow speed shutter dial
12. Shutter button
13. Film rewind knob
14. Film rewind crank
15. Film type guide
16. Hinged back lock
17. Shoulder strap hook
18. Synchro-flash FP socket
19. Synchro-flash X socket
20. Film take-up spool
21. Tripod socket
22. Sprockets
23. Film cassette chamber
24. Film guide rail
25. Film rewind release button
26. Viewfinder



MAIN FEATURES OF ASAHI PENTAX "K"

Type	Penta-prism single lens reflex, with automatic diaphragm.
Film size	35mm film
Picture size	24mm × 36mm
Standard lens	Takumar 55mm f 1.8 with automatic diaphragm, and helicoidal lens barrel.
Focal plane shutter speeds	T, B, 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, 1/1000 sec. Synchronized for regular flashbulbs and electronic flash. Special "X" setting on high speed shutter dial for use with electronic flash.
Viewing and micro-split image focusing	Viewing and focusing are done through the penta-prism viewfinder with its built-in, 4-power magnifier and image-brightening Fresnel lens. Fast, precision focusing is made easy by the use of a micro-split image circle in the center of the penta-prism. Minor errors in focus are greatly magnified in concentric circles to permit rapid, exact correction.
Reflex mirror	Instant Return Mirror capitalizes on .... man eye's image retentiveness to aid in photographic follow-through.
Film transport and rewind	Single-stroke rapid transport lever automatically winds film and cocks shutter. Double exposure prevented. Film rewind crank speeds film take-up.
Film type guide	Color-coded to aid in film identification with ASA range from 10–800, or with DIN range from 11/10—30/10.

Recommended horizontal position for camera.

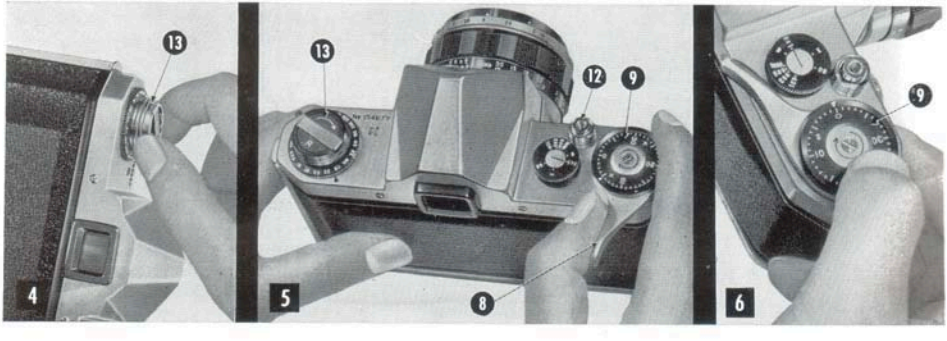


SIMPLIFIED FILM LOADING

1. Open the back by pulling out the lock[16].
2. Pull out the film rewind knob[13] completely, place the film cassette into the cassette chamber[23], and push back the rewind knob. Draw out the film leader and insert it into the slit of the take-up spool[20].
3. Turn the film transport lever[8] and make sure that both sprockets[22] have properly engaged the film perforations. Close the back and fasten the lock[16].

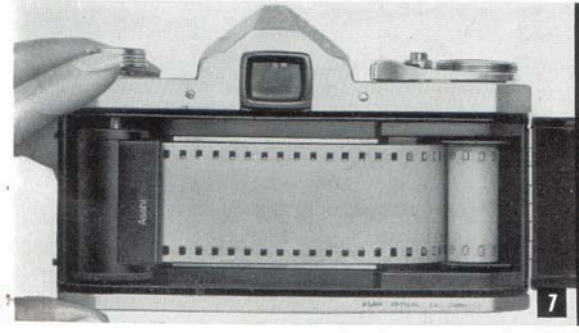
RAPID-ACTION FILM TRANSPORT

1. Before turning the film transport lever[8], slowly turn the film rewind knob[13] clockwise until a slight resistance is felt. This prevents loosening of the film.
2. Cock the film tramsport lever until it stops (180°). Watch to see that the film rewind knob automatically turns counter-clockwise, indicating that the film is moving from cassette to take-up spool.
3. Trip the shutter button[12] and again cock the film transport lever. Set the exposure counter[9] to "0" and trip the shutter button again. The camera is now ready to take the first picture. When cocking the film transport lever for the first picture, the exposure counter automatically moves to "1", indicating that the first picture has been taken.



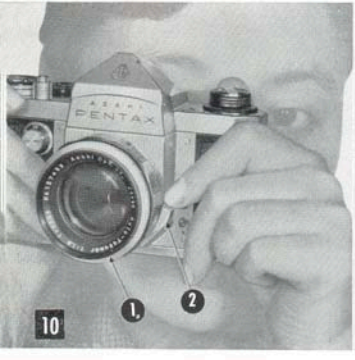
RAPID-TYPE FILM UNLOADING

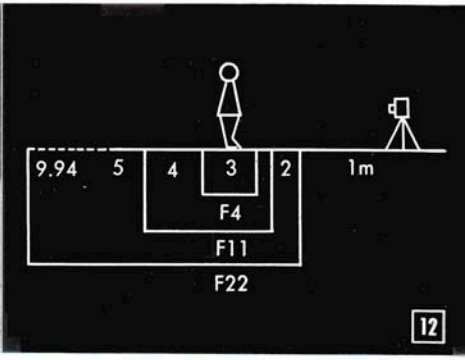
1. After the final picture has been taken, DO NOT open the back, or **all** exposed frames will be ruined.
2. Erect the film rewind crank[14] and turn it while depressing the film rewind release button[25]. When the film has been rewound back into its cassette, the rewind crank will lighten as the leader end of the film slips off the take-up spool.
3. Open the back, pull out the film rewind knob[13] and remove the film cassette. Bend the leader end of the film to indicate that the film is exposed and ready for development.


7

8


9





BRIGHT FIELD FOCUSING WITH MICRO-SPLIT IMAGE FINDER

1. Cock the film transport lever to wind the film and set the shutter. Set the automatic diaphragm to the F stop desired for exposure. Shift down the diaphragm charging lever[2] and open the diaphragm fully for brilliant, easy focusing.
2. Observe the subject through the viewfinder. Turn the distance scale ring[4] until the micro-split image in the center of the viewfinder is free of distortion and clearly in focus. Take the photo by pressing the shutter button which stops the diaphragm down to the pre-set opening and initiates shutter action.
3. The above diagram illustrates depth of field. When the diaphragm is stopped down, depth of field is increased; when it is opened wide, depth of field is shallow. It is sometimes advisable to stop down the diaphragm to determine the effective depth of field.

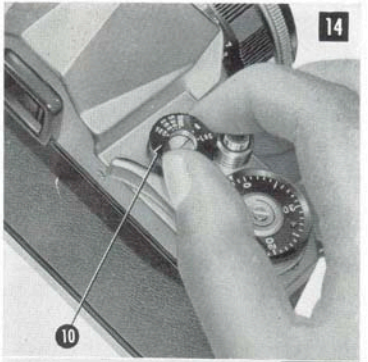
AUTOMATIC DIAPHRAGM

The diaphragm adjusting ring[1] is used to pre-set diaphragm to the desired F stop.
Pressing the diaphragm charging lever all the way down permits wide-aperture focusing.
When shutter release button is pressed, the automatic diaphragm instantly stops down to the pre-set aperture and shutter action takes place.

LENS APERTURE (DIAPHRAGM)

The brightness of the lens increases as the diaphragm f number decreases. The following table shows the relative exposures of f numbers.

Diaphragm setting	1.8	2	2.4	2.8	3.5	4	5.6	8	11	16	22
Ratio of exposure	1/16	1/8		1/4		1/2	1	2	4	8	16
Brightness of lens	As the diaphragm is opened from f22 to f2, lens brightness doubles of each setting. For instance, twice as much light emters at f11 as at f16.										



SHUTTER SPEEDS

The ASAHI PENTAX "K" is equipped with shutter speeds of 1/1000, 1/500, 1/250, 1/125, 1/60, 1/30, 1/15, 1/8, 1/4, 1/2, 1 second, plus Time and Bulb.

ADJUSTMENT OF SHUTTER SPEEDS

From 1/30 to 1/1000 sec. and Bulb:

Set the figure 30 on the **slow speed** shutter dial[11]. Lift the **high speed** shutter dial[10], turn and drop it at the desired shutter speed setting. The shutter speed may be set **before** as well as **after** cocking the film transport lever.

Note that at the setting 1/1000 on the high speed shutter dial, the dial does not fall all the way down as at other high speed shutter settings.

For Bulb exposure :

At the setting B (Bulb), the shutter will be fully open as long as the shutter button is depressed. 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.

From 1 second to 1/15 and Time :

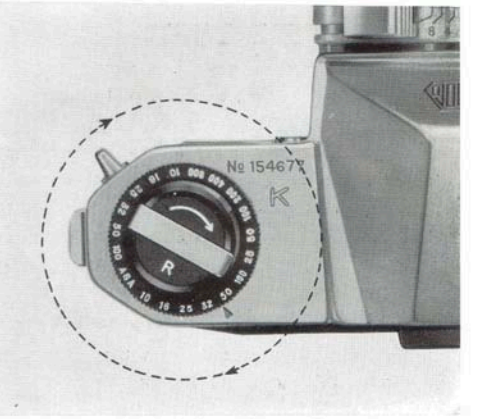
Set the figures 30–1 on the high speed shutter dial[10]. Turn the slow speed shutter dial[11] to the desired slow speed setting.

For Time exposure:

At the setting T (Time), the shutter will be fully open after the shutter is released. To close the shutter, turn the slow speed shutter dial to the left.

MULTIPLE-EXPOSURE

To make a double or multiple-exposure, depress the film rewind release button25 and turn the film transport lever. This permits the cocking of the shutter without moving the film. Multiple-exposures are made by repeating this procedure.



CAUTION

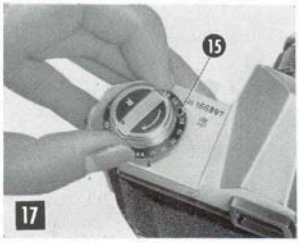
1. At slow speeds, support the camera rigidly or use a tripod to prevent vibration of the camera.
2. The high speed shutter dial10 automatically turns when the shutter is released. DO NOT touch the high speed shutter dial while releasing shutter.
3. Avoid keeping the camera shutter cocked to protect the shutter mechanism.

FILM TYPE GUIDE

Use the film type guide15 to record the speed of the film loaded in the camera. The figures on the film type guide are ASA numbers; or DIN numbers for European countries. Use the white figures for black-and-white film; red figures for color film; and green figures for special film such as positive film, copying film, reversal film, etc. To check whether or not the camera is loaded, turn the film rewind knob clockwise. If it turns freely, the camera is not loaded.

PROPER MAINTENANCE

To remove grit or dirt from the camera body, use a soft brush or a dry, soft piece of cloth. Never use oil and do not touch the shutter curtains. For the lens and the reflex mirror, use only a spray of air or soft lens tissue. Never wipe the mirror or lens surfaces with cloth.

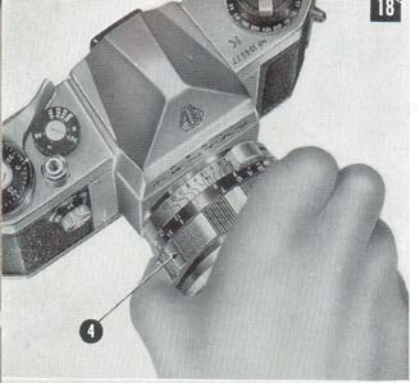


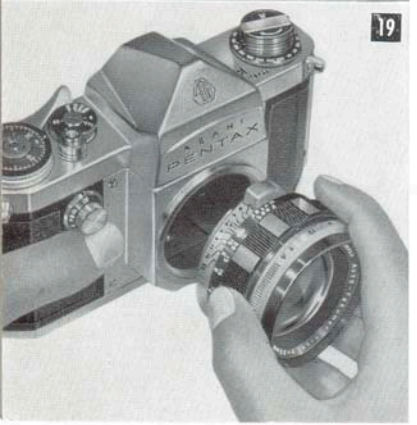
Recommended vertical position for camera.

FLASH SYNCHRONIZATION

The ASAHI PENTAX "K" is equipped with FP and X flash sockets. The table shows which flash socket on the camera, which shutter speeds and which flashbulbs may be combined for maximum lamp efficiency. Unless these combinations are rigidly followed, there will be a failure in flash synchronization. Note "X" on the high speed shutter dial[1], which indicates the highest shutter speed at which an electronic flash may be used. Also note that by using the X socket and any of the slow shutter speeds (1/30, 1/15, 1/8, 1/4, 1/2 and 1 second), it is possible to use Class F and M bulbs according to the following table.

Flash sockets \ Shutter speeds	1/1000	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							F Class						
							M Class						
						Electronic Flash							





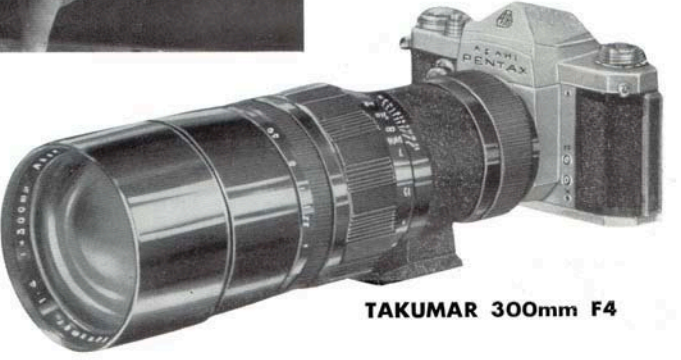
INTERCHANGEABLE LENSES

The ASAHI PENTAX "K" offers a system of seven interchangeable TAKUMAR lenses. TAKUMAR lenses are widely respected by the professional and amateur photographers for their fine resolution. The photographic coverage of the various TAKUMAR lenses are illustrated on pages 16 and 17. With focal length longer than 83mm, the subject image is seen through the viewfinder larger than life size.

Regardless of the lens selected for the ASAHI PENTAX "K" there is never need for an accessory viewfinder, ordinarily required for range-finder type cameras.

When interchanging lenses, hold the lens by the distance scale ring[4] shown in photographs 18 and 19.

Super telephoto lens of newest design ··· most ideal for spectacular telephotographic effects.



TAKUMAR 300mm F4


35mm


55mm


83mm

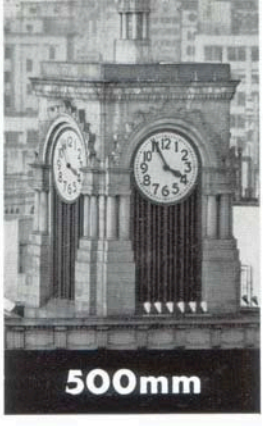

100mm

SUPERB TAKUMAR LENS SYSTEM

Fully color-corrected, coated lenses of highest optical quality offering pre-set diaphragm design and with the standard lens-mount common to some other single lens reflex cameras. All TAKUMAR lenses have been tested for resolving power to conform to ASAHI standards, which are higher than those set by JIS (Japan Industrial Standards). All Asahi-TAKUMAR lenses bear the seal of the Japan Camera Inspection Institute which insures the high performance standards.


135mm


300mm


500mm


1m

FILTERS & LENSHOOD

Filters are available in UV (ultra-violet), O–53 (light orange) and Y–47 (light yellow). All are 46mm screw-in types which are interchangeable for TAKUMAR 35mm f4, 55mm standard, 100mm and 135mm lenses.

Recommendedfor use whenever possible to avoid off-angle rays and when shooting against the light.

EXTENSION TUBE SET

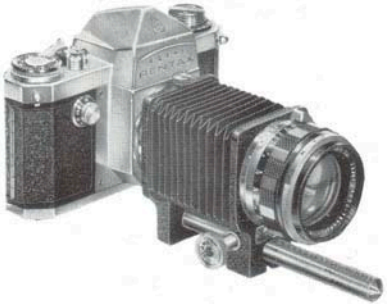
These rings may be used in combination as desired. Ring No. 1 is suited for moderate close-up works as in copying documents. When all extension tubes are used with the standard lens, you will get a magnification of 1.06 of life size.

ASAHI COPY STAND

For exact and accurate copying with the single lens reflex camera. Maintains precise, parallel camera position, while providing close-up performance impossible with a tripod or other camera stand.

BELLOWS UNIT

An extremely flexible accessory for ultra-close-up photography. Permits use of the camera's own lens with special calibrated gear shaft. Pictures may be taken as close as 2 1/2 inches with standard lens. Unit collapses, shaft folds, for compact storage in small case.



MICROSCOPE ADAPTOR

By inserting this microscope adaptor between the camera body of the ASAHI PENTAX and the microscope tube, photomicrography can be easily and simply accomplished with the optic of the microscope.

INSTANT RETURN MIRROR

The ASAHI PENTAX incorporates the unique advantage of an instant return mirror which permits the photographer to find—shoot—and instantly see again the subject on the ground glass. This creates the advantage of the evaluation of the exposure just completed so that the photographer may be ready for the next exposure to come. The accompanying photographs illustrate the differences between the instant return mirror action and the action of the standard single lens reflex mirror.

ASAHI

Focus Expose Instantly See Again

Because of the human eye's image-retentiveness combined with the instant return feature of the ASAHI PENTAX mirror, the image is only partially lost during the moment of exposure.

OTHERS

Focus Expose Image Blackout

BRIGHT GROUND GLASS

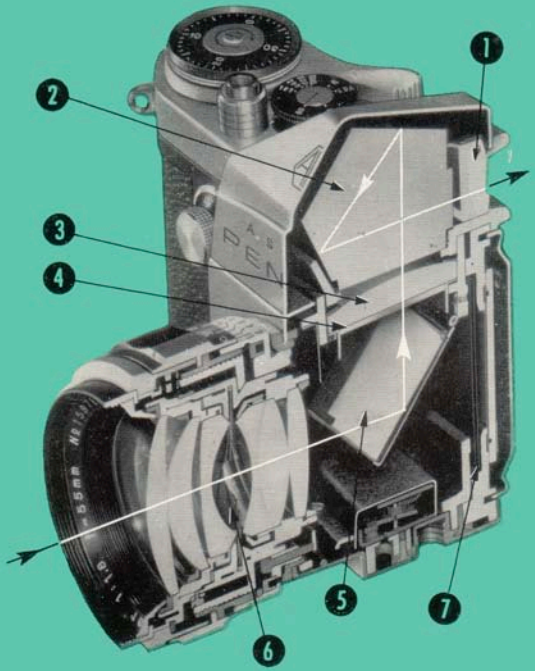
For maximum optical brilliance even in weak light conditions or when the lens has been closed to a small f-stop, the ASAHI PENTAX has been equipped with a Fresnel lens beneath the ground glass. This lens insures brilliant images in the corners of the ground glass with all interchangeable lenses. The illustrations on this page indicate the advantages provided in this superior viewing system design.

PENTA-PRISM OPERATION

For improved single lens reflex operation, the ASAHI PENTAX incorporates a penta-prism which, in addition to correcting the mirror image reversal of waist-level type reflex cameras, adds the advantage of simplified vertical and horizontal camera handling.

PROOF OF PRECISION

① Magnifying lens
② Penta-prism
③ Ground glass
④ Fresnel lens
⑤ Reflex mirror
⑥ Diaphragm
⑦ Shutter curtains



Asahi Optical Co., Ltd.

Ginza 8-chome, Chuo-ku, Tokyo, Japan.

Sept. 1958 Printed in Japan