On-line camera manual library
This is the full text and images from the manual. This may take 3 full minutes for the PDF file to download.

If you find this manual useful, how about a donation of $3 to: M. Butkus, 29 Lake Ave., High Bridge, NJ 08829-1701 and send your e-mail address so I can thank you. Most other places would charge you $7.50 for a electronic copy or $18.00 for a hard to read Xerox copy.

This will allow me to continue to buy new manuals and pay their shipping costs.
It'll make you feel better, won't it?
If you use Pay Pal or wish to use your credit card,
click on the secure site on my main page.

HONEYWELL PENTAX SL

OPERATING MANUAL

PLEASE READ THIS OPERATING MANUAL THOROUGHLY

INDEX

Introduction 1
Major working parts of the HONEYWELL PENTAX SL 2
Specifications 4
Short operating course 6
How to hold your camera 8
Film loading 9
Setting ASA film type reminder 9
Film wind and rewind 10
Microprism 11
Automatic diaphragm 12
Shutter 13
Depth of field 13
Depth-of-field table: Super-Takumar 50mm lens 14
Depth-of-field table: Super-Takumar 55mm lens 14
Flash synchronization 15
Self-timer 15
Infra-red photography 16
How to make deliberate double exposure 16
How to remove the front cover 17
Important notes 18
Interchangeable lenses 19
Fixed focusing setting 19
Resolving power of Takumar lenses 19
Difference of angle of Takumar lenses 20
Descriptions of each Takumar lens 21
Specifications of Takumar lenses 30
Complete System of Honeywell Pentax Accessories for Close-Ups, Macrophotography, Photomicrography, and other Miscellaneous Accessories 31
Memo 38
Warranty policy 40

HONEYWELL PENTAX SL

The Pentax SL camera is a special adaptation of the world famous Spotmatic.

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

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

The new Honeywell Pentax SL shares the same design and features of the Spotmatic except the behind-the-lens exposure meter. The SL camera has the same heavy-duty focal plane shutter, the same brilliant viewing system with central micro prism and instant return mirror in the same durable, light weight body as the Spotmatic.

Since the SL has no meter, it is the ideal camera for the photographer who wants the professional features of the Spotmatic, but prefers to use a separate exposure meter.

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

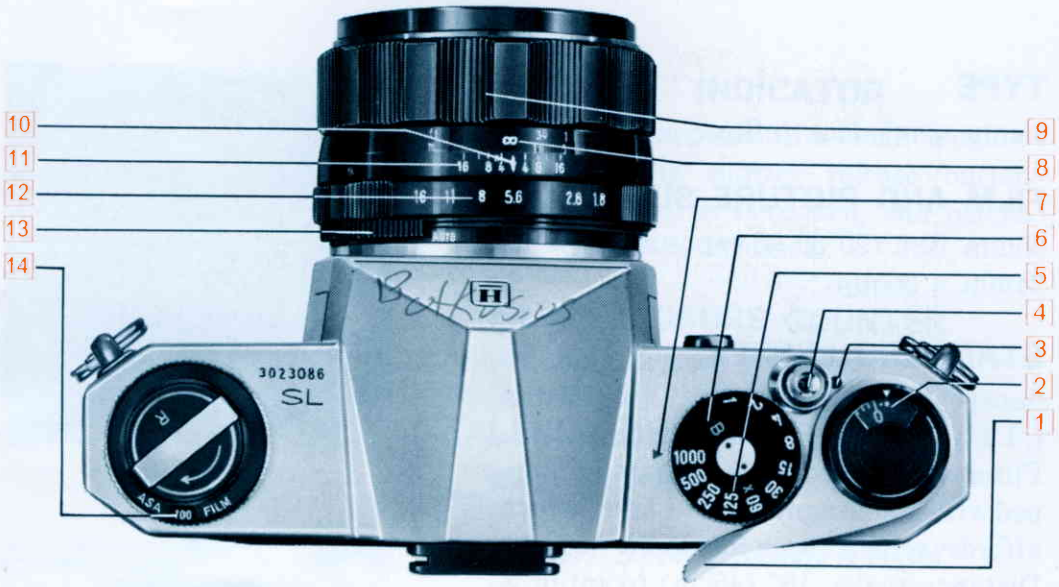
You will find the Honeywell Pentax SL an even more rugged "workhorse" camera than the famous Pentax H3v. Its 55mm f/1.8 or 50mm f/1.4 Super-Takumar lens with completely automatic diaphragm will satisfy the demands of even the most critical professional. Like the H1a and H3v, the Honeywell Pentax SL has a 42mm threaded lens mount that accepts any of the superb Takumar lenses from ultra-wide-angle 17mm Takumar to the super-telephoto 1000mm Takumar.

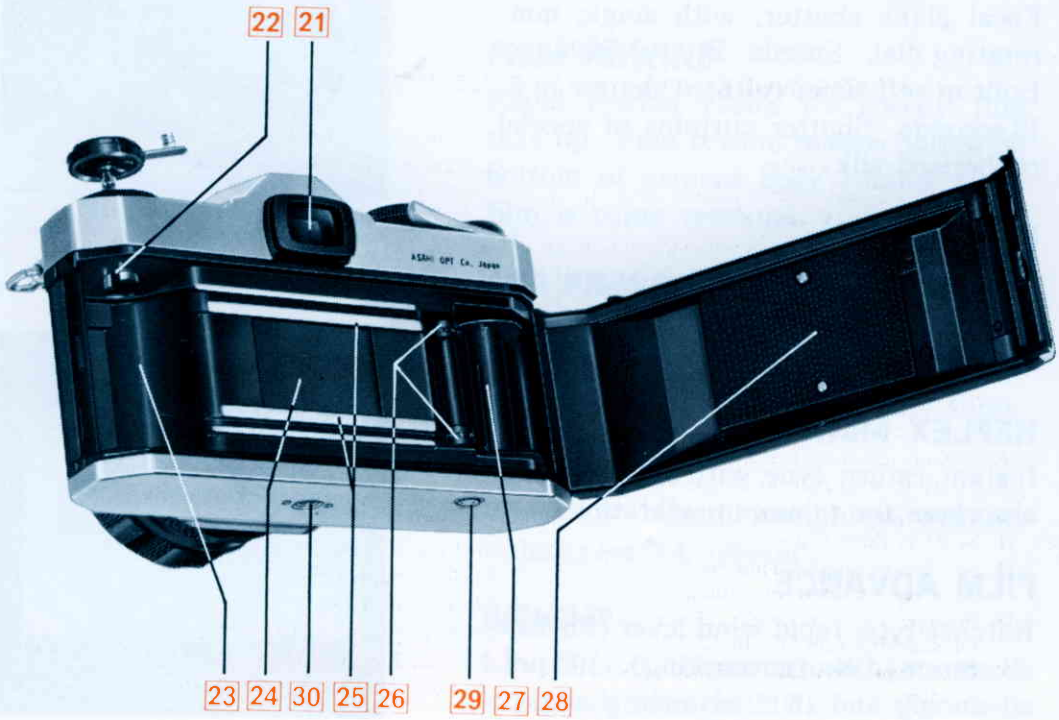
Major working parts of the

MAJOR WORKING PARTS OF HONEYWELL PENTAX SL

1. Ratchet-type Rapid Wind Lever advances film and cocks shutter
2. Exposure Counter automatically resets to -2 when back is opened
3. Cocked Indicator shows red when shutter is cocked
4. Shutter Release Button threaded for use with cable release
5. Shutter Speed Dial Setting for Bulb, Electronic flash, 1 to 1/1000 sec.
6. Groove for coupling SL clip-on exposure meter
7. Shutter Speed Index Mark
8. Distance Scale in feet and meters
9. Focusing Ring / Distance Scale
10. Diaphragm and Distance Index Mark
11. Depth-of-Field Scale
12. Diaphragm Ring with intermediate click stops for selecting aperture settings
13. Preview Lever manually closes diaphragm for checking exact depth of field
14. Film Type Reminder Dial with ASA rating window
15. Film Rewind Crank
16. Film Rewind Knob opens back automatically when pulled up
17. D-ring Lug
18. Self-timer Cocking Lever (Release Button is under the lever)
19. X Flash Terminal for electronic flash synchronization at 1/60 sec.
20. FP Flash Terminal for flash bulb synchronization
21. Viewfinder Frame accepts clip-on meter and eyepiece accessories
22. Film Rewind Shaft
23. Film Cassette Chamber
24. Focal Plane Shutter Curtains of special rubberized silk
25. Film Rail for flat film travel
26. Film Sprockets
27. Takeup Spool
28. Film Pressure Plate
29. Film Rewind Release Button
30. Tripod Mounting Receptacle

HONEYWELL PENTAX SL





Specifications

TYPE

35mm single-lens reflex.

FILM AND PICTURE SIZE

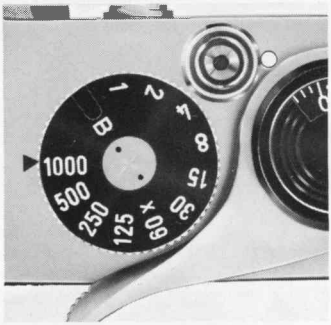
35mm film (20 or 36 exposures).
24mm × 36mm.

STANDARD LENSES

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

SHUTTER

Focal plane shutter, with single non-rotating dial. Speeds: B, 1—1/1000 sec. Built-in self-timer releases shutter in 5-13 seconds. Shutter curtains of special rubberized silk.

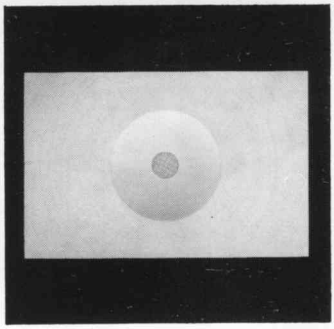


FOCUSING

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

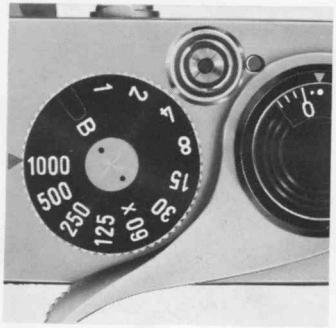
REFLEX MIRROR

Instant-return type with special shock absorbers for minimum vibration.



FILM ADVANCE

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



"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.

LENS MOUNT

42mm threaded lens mount.

FLASH SYNCHRONIZATION

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

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.

ASA FILM SPEED REMINDER RING

Turns to set ASA film speed in window. Red numbers are for colour films; white numbers are for black-and-white films.

DIMENSION

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

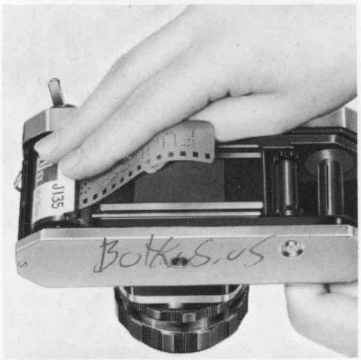
WEIGHT

1 lb. 10 oz. (798 grams) with standard lens. Body alone: 1 lb. 3 oz. (598 grams.)

Short operating course

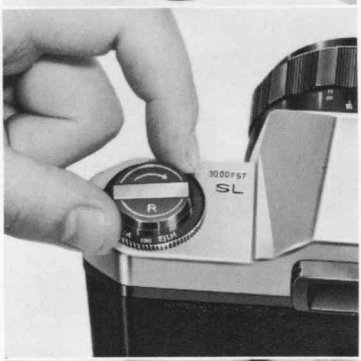
LOAD FILM

Open the camera back and insert a standard 20- or 36-exposure 35mm film cassette into the film chamber.



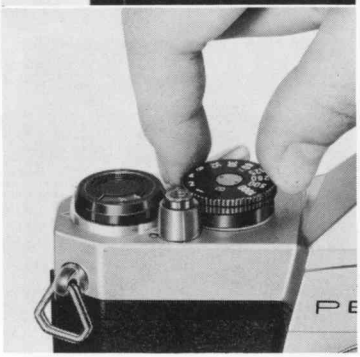
SET FILM SPEED REMINDER

Turn ring to set the ASA number of the film you're using in the ASA FILM window. You can use the red numbers for colour films and the white numbers for black-and-white films.



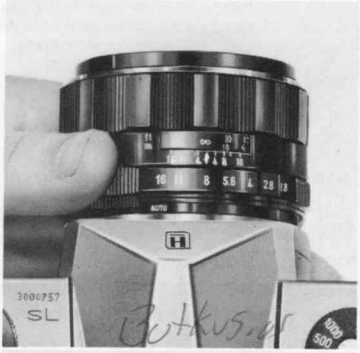
SET SHUTTER SPEED

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.



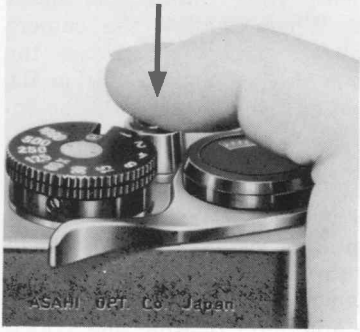
COMPOSE AND FOCUS

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.



ROTATE DIAPHRAGM RING

Determine the exposure and set the f/stop you want by turning the diaphragm ring.



RELEASE SHUTTER

Hold your camera firmly and trip the shutter. When the shutter is released, the diaphragm will reopen to its full aperture and the overall image will look bright again. Cock the rapid wind lever for the next picture.

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 Honeywell 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

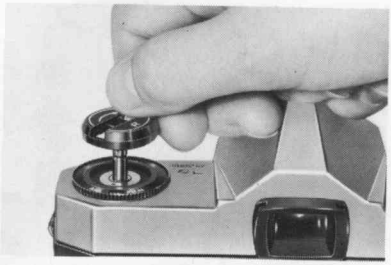
Avoid direct sunlight when loading your film.

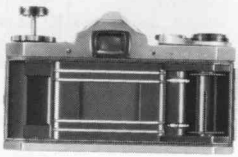
1 Open the back by pulling out the rewind knob until back cover snaps open.

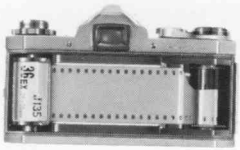
2 Place the film cassette into the cassette chamber, and push back the rewind knob. Draw out the film leader and crease across one or two perforations back from the end of the leader. Insert the creased portion into slot of the take-up spool.

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.

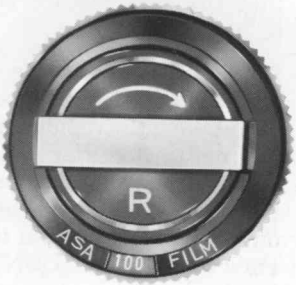
4 If the film is properly loaded, the rewind knob will turn counter-clockwise when you advance the film by turning the rapid wind lever.





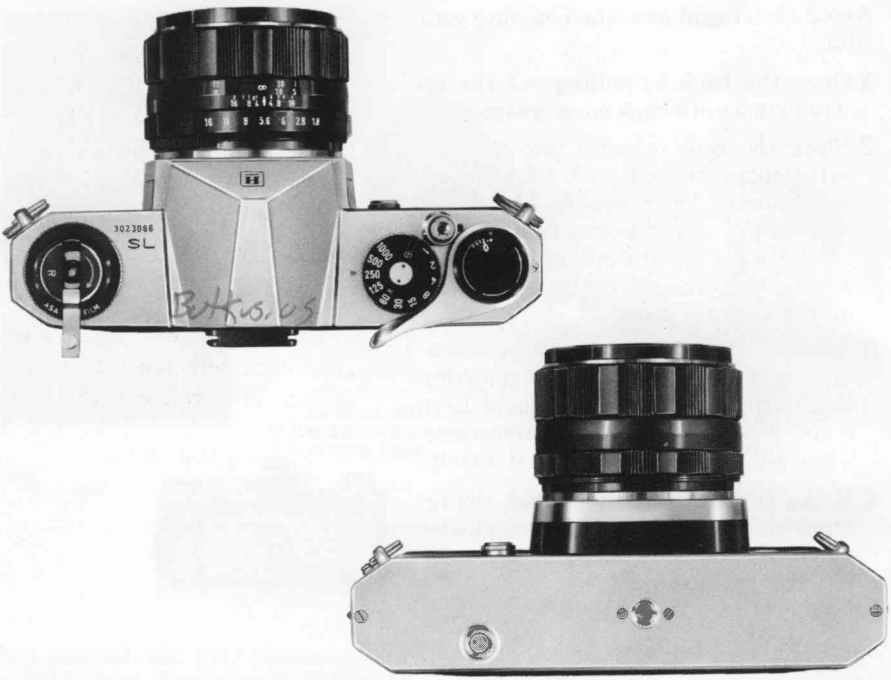


Setting ASA film type reminder



The ASA film speed rating of all 35mm film is listed in the data sheet packaged with each roll of film. Turn the film type reminder ring until the ASA number of your film appears in the window between the words ASA and FILM. Use the red numbers for colour and the white numbers for black-and-white films.

Film wind and rewind



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

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

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

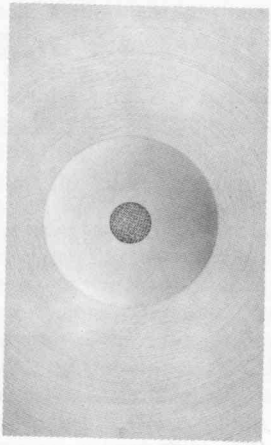
4 Unfold the film rewind crank.

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

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

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

Microprism



Honeywell 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 diaphragm. 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 an engraver's screen. You can focus your subject on any portion of the ground glass.

Automatic diaphragm *

OUT OF FOCUS

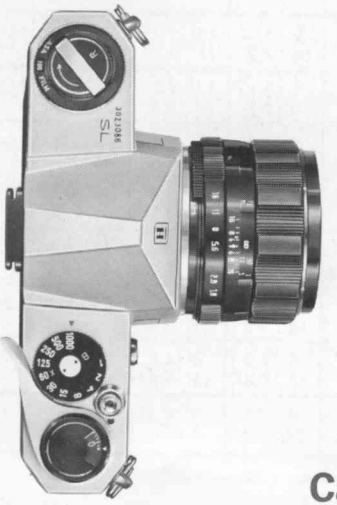
IN FOCUS

When the preview lever is in automatic position (AUTO marked on the lens completely visible), 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 Manual position (MAN marked on the lens completely visible). 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 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 15.

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.

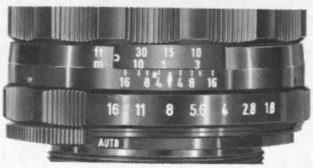
Cautions

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

Depth of field is the range of acceptable sharpness that extends in front of and behind a point that the lens is focused on. The depth of field varies with (1) focal length, (2) subject distance, and (3) aperture setting of the lens. The depth-of-field scale engraved on the lens barrel lets you determine the near and far limits of sharpness in your picture. Look at the engraving on the lens in the above photograph. The lens is focused at 15 feet. You can read the depth-of-field limits at the two lens aperture indicators on each side of the red diamond marked on the lens. If your selected lens aperture is f/8, read the distance opposite the figure 8. In this case, the depth of field or zone of sharp focus is from about 10 to 25 feet. For the depth of field at different apertures and distances, refer to page 14.



Depth-of-field table: Super-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′ ∞

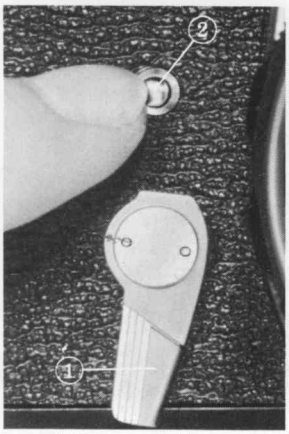
Depth-of-field table: Super-Takumar 55mm lens

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″ ∞

Flash synchronization

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

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



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

55mm
f/1.8

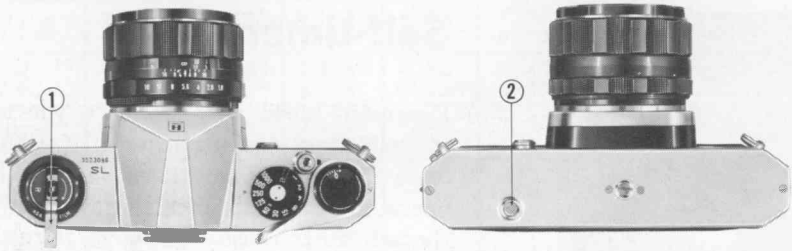
50mm
f/1.4

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. 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.

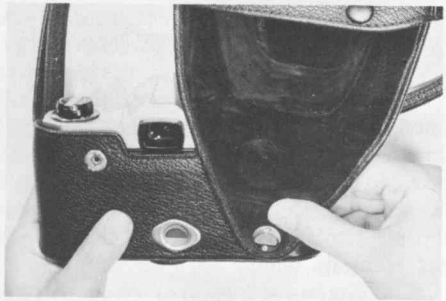
The "R" index marking on the Takumar lenses is based on the lens setting at infinity.

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.

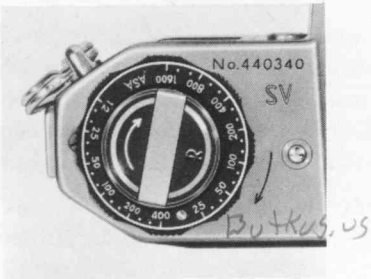
How to remove the front cover



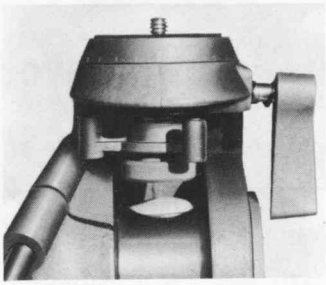
As you see from the above photographs, the rear side of the front cover has a half-moon convex clip and the body side has a half-moon concave clip, which accepts the convex clip. When removing the front cover, turn it 180°. Do not try to remove it with force without turning it 180°.

Important notes

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



The Super-Takumar 50mm f/1.4 lens is made for use with the Spotmatic and the SL. It can be used with only two other cameras: the Honeywell Pentax H3v and H1a, with an orange-coloured "R" marking on the film rewind knob. Use with any other camera will damage the rear element of the lens.



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.

No!

We do not guarantee the quality of photographs when brands other than Takumar lenses and Pentax accessories, such as lens extenders, are used.

INTERCHANGEABLE LENSES

The Honeywell 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 20. 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 Honeywell 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 lenses* shown on page 21~22 have a fixed focus mark. Just align with the index the orange-coloured figures of the diaphagm and distance scales, and the lens will be in fixed focus from foreground to infinity. You'll find this extremely convenient for fast shooting.

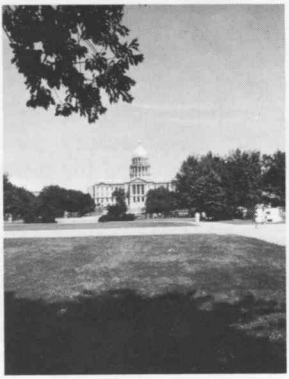
RESOLVING POWER OF TAKUMAR LENSES

Resolving power of all Takumar lenses is factory-tested by skilled optical engineers. There are three types of tests: microscopic aerial test, projection test and photographed film test. Resolving power of a lens shown by lpm (lines per mm) varies depending upon the method of resolution test. Takumar lenses have been tested for resolving power to conform to Asahi Optical Company standards which are higher than those set by JIS (Japan Industrial Standards). All Takumar lenses bear the seal of the Japan Camera Inspection Institute which insures the highest standards of performance.

When testing your lens performance...

Use a slow-speed fine grain film. Generally, high speed films are grainy and are not suitable for resolution test. Support your camera on a good tripod. Use a shutter release cable to prevent camera movement. The definition of the picture on the negative film may decrease if exposure and developing time are not proper. Time your exposure and development correctly.

If you do your own developing and enlarging, see that your enlarger uses a fine quality enlarger lens. If it is not of a fine quality, your pictures can never be sharp no matter what superb lenses are mounted on your camera. Usually, the diaphragm of the enlarger should be closed down to f/8 or f/11.



28mm

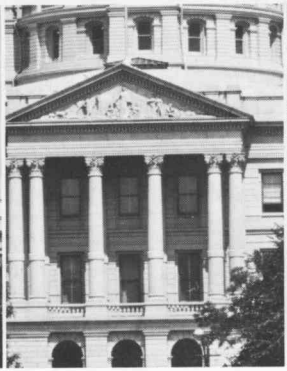
DIFFERENCE OF ANGLE OF TAKUMAR LENSES

50~55mm

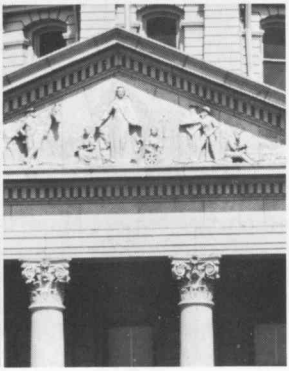
85mm

135mm

200mm

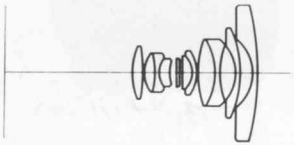


400mm



1000mm

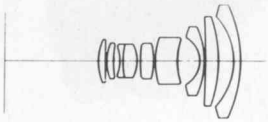
All photographs were taken from the same location and distance from the subject.



Super-Takumar Fish-Eye 17mm f/4*

The world's most efficient fish-eye lens with maximum brightness of f/4. Covers an angle of vision of about 180°. Enables you to view and focus through the viewfinder without keeping the reflex mirror flipped up.

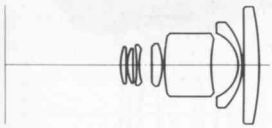
Lens element ..... 11 (including 3 filters)
Minimum aperture f/22
Minimum distance ..... 0.66 ft. (0.2 m)
Angle of view ..... 180° (diagonal)
Weight ..... 7.98 ozs. (288 gr.)



Super-Takumar 24mm f/3.5*

The Super-Takumar 24mm f/3.5 is an ultra-wide-angle lens that increases even further the versatility of your Honeywell Pentax. Compact in size and light in weight, it enables you to view and focus at an 84° angle of vision. A wonderful lens to create pictures with dramatic impact.

Lens element 9
Minimum aperture f/16
Minimum distance ..... 0.8 ft. (0.25m)
Angle of view ..... 84°
Weight ..... 8.7 ozs. (247 gr.)



Super-Takumar 28mm f/3.5*

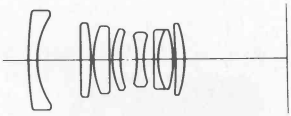
A new super-wide-angle lens of 7 elements, designed and produced to meet the most exacting of the professional requirements, this is *the* lens you professionals and advanced amateurs need to shoot more artistic photographs. Equipped with fully automatic diaphragm; ideal for architecture, fast-action and *artistic* photography.

Lens element 7
Minimum aperture f/16
Minimum distance ..... 1.3 ft. (40 cm)
Angle of view ..... 75°
Weight ..... 7.6 ozs. (218 gr.)

Super-Takumar 35mm f/2*

One of the fastest wide-angle lenses for 35mm single-lens reflex cameras. Edge-to-edge sharp resolution at full aperture; unique lens design without distortion; perfect for pictures of large groups, buildings, sports events, and other large spectacles.

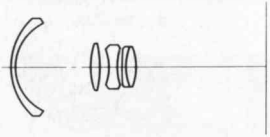
Lens element 8
Minimum aperture f/16
Minimum distance ..... 1.25 ft. (0.4 m)
Angle of view ..... 62°
Weight ..... 8.53 ozs. (242 gr.)



Super-Takumar 35mm f/3.5*

A medium speed lens with extremely high resolving power, this is an excellent general purpose wide-angle optic extremely useful for scenic, industrial, and architectural photography. Compact and light in weight.

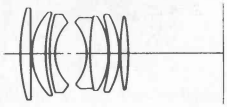
Lens element 5
Minimum aperture f/16
Minimum distance ..... 1.5 ft. (45 cm)
Angle of view ..... 63°
Weight ..... 5.4 ozs. (152 gr.)



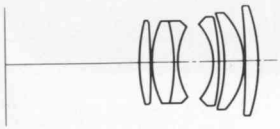
Super-Takumar 50mm f/1.4

Newest high-speed 7-element lens, utilizing latest optical glass advances. High resolving power combines with outstanding brightness for easiest focusing. An ideal all-around lens. Equipped with fully automatic diaphragm.

Lens element 7
Minimum aperture f/16
Minimum distance ..... 1.5 ft. (45 cm)
Angle of view ..... 46°
Weight ..... 8.1 ozs. (230 gr.)



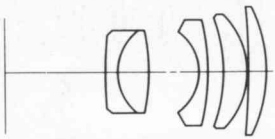
Super-Takumar 55mm f/1.8 & f/2



Razor-sharp, fully corrected, high-speed standard lenses, using rare-earth glass, designed by top lens designers. Bright f/1.8 or f/2 aperture makes viewing and focusing extremely easy. Their extremely fine resolving power is widely acclaimed by professionals and discriminating amateurs alike. Equipped with fully automatic diaphragm.

Lens element 6
Minimum aperture f/16
Minimum distance ..... 1.5 ft. (45 cm)
Angle of view ..... 43°
Weight ..... 7.5 ozs. (215 gr.)

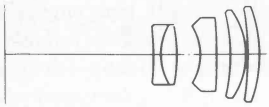
Super-Takumar 85mm f/1.9



A new, ultra-fast 5-element lens which produces an image slightly larger than the standard lens. Perfect for available light portraiture, nature studies, and sport coverage. Used as a standard, general purpose lens by many photographers. Equipped with fully automatic diaphragm; supplied with special lenshood.

Lens element 5
Minimum aperture f/16
Minimum distance ..... 2.75 ft. (85 cm)
Angle of view ..... 28°
Weight ..... 12.3 ozs. (350 gr.)

Super-Takumar 105mm f/2.8

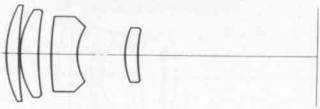


A quality medium telephoto lens of 5 elements, with well corrected aberrations. Light-weight design for portability and easy handling. Recommended for scenery, portrait, news photos, other moderate telephoto effects. Equipped with fully automatic diaphragm; supplied with special lenshood.

Lens element 5
Minimum aperture f/22
Minimum distance ..... 4 ft. (1.2 m)
Angle of view ..... 23°
Weight ..... 10.2 ozs. (290 gr.)

Super-Takumar 135mm f/3.5

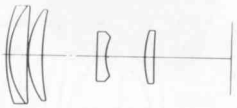
Produces a brilliant image in all corners of the picture even with the diaphragm fully open. Indispensable for distant subject matter and for portrait. Ideal for close-ups of animals or plants even at a distance. Recommended as the ideal long telephoto lens for handheld camera operation. Equipped with fully automatic diaphragm; supplied with special lens-hood.



Lens element 4
Minimum aperture f/22
Minimum distance ..... 5 ft. (1.5 m)
Angle of view ..... 18°
Weight ..... 12.1 ozs. (343 gr.)

Super-Takumar 135mm f/2.5

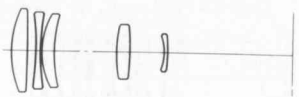
A faster f/2.5 lens has joined the superb Takumar 135mm lens family. Well balanced, its total length is rather short so it is light in weight. Most suitable for shooting night scenes, stage, indoors, sports and snap portraits. An excellent lens also for colour photography.



Lens element 5
Minimum aperture f/22
Minimum distance ..... 5 ft. (1.5 m)
Angle of view ..... 18°
Weight ..... 15.5 ozs. (444 gr.)

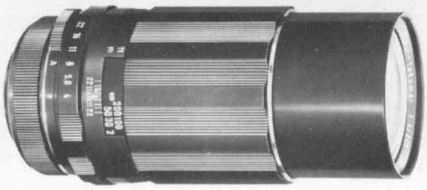
Super-Takumar 150mm f/4

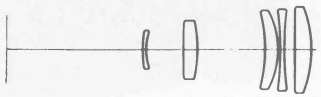
This new fully automatic 150mm Super-Takumar with a focal length three times as long as the standard lens has been designed and produced to suit the purpose of photographing subjects requiring an intermediate angle between the 135mm and 200mm lenses. So compact, so light-weight, it looks like a 135mm lens, yet it is only 7mm longer. New-type, all-purpose telephoto lens ... for telephoto snaps, sceneries, sports, news events, stage photographs, nature life, etc.



Lens element 5
Minimum aperture f/22
Minimum distance ..... 6 ft. (1.8 m)
Angle of view ..... 16.5°
Weight ..... 11.3 ozs. (324 gr.)

Super-Takumar 200mm f/4

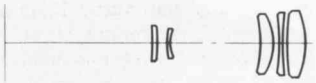




A new member to the superb Takumar telephoto lens family. Equipped with a fully automatic diaphragm. Compact, light, and elegantly designed for fast handleability.

Lens element	5
Minimum aperture	f/22
Minimum distance	8.2 ft. (2.5 m)
Angle of view	12.5°
Weight	19.3 ozs. (550 gr.)

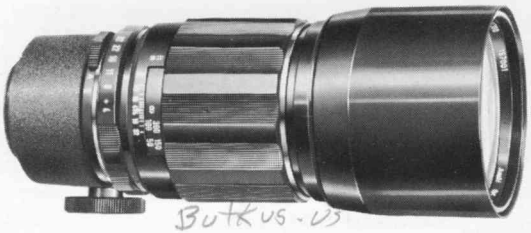
Tele-Takumar 200mm f/5.6



Small, compact and light-weight . . . that's the new Tele-Takumar 200mm f/5.6 lens. It weighs only slightly more than Super-Takumar 135mm. Still it produces professional quality resolution in hand-held telephotography. Equipped with pre-set diaphragm; supplied with special lenshood.

Lens element	5
Minimum aperture	f/22
Minimum distance	9 ft. (2.5 m)
Angle of view	12°
Weight	13.1 ozs. (370 gr.)

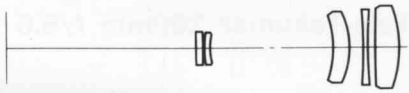
Super-Takumar 300mm f/4



Light enough for hand-held picture taking, this lens is the most ideal for spectacular telephotographic effects. Even with the diaphragm fully open, the aberrations are corrected to the greatest extent possible. Gives needle-sharp resolution to every corner of the picture. Equipped with fully automatic diaphragm; supplied with special lenshood.

Lens element	5
Minimum aperture	f/22
Minimum distance	18 ft. (5.5m)
Angle of view	8°
Weight	33.1 ozs. (946 gr.)

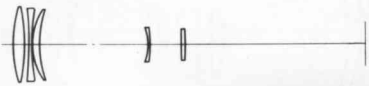
Tele-Takumar 300mm f/6.3

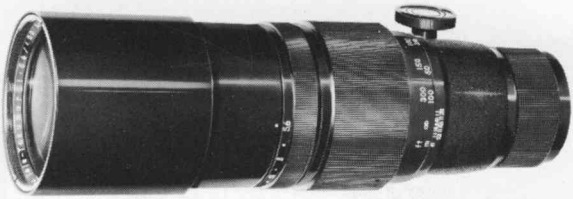


More compact and much lighter than the f/4, this lens is extremely suitable for hand-held outdoor telephotography. Features smooth helicoidal focusing and built-on lenshood. Also represents an exceptional value in long-focus lenses and is the choice of many professionals and advanced amateurs who require an extremely versatile telephoto lens. Equipped with pre-set diaphragm.

Lens element	5
Minimum aperture	f/22
Minimum distance	18 ft. (5.5 m)
Angle of view	8°
Weight	25.7 ozs. (729 gr.)

Tele-Takumar 400mm f/5.6





Especially designed for those professionals who specialize in outdoor sports, news and nature-life photography. Because of its f/5.6 aperture, this tele-lens is extremely compact and light for its focal length of 400mm. Also because of its portability, it can be easily hand-held for fast and successive shooting, depending upon the shutter speed to be used. Equipped with click-stop manual diaphragm; supplied with special lenshood.

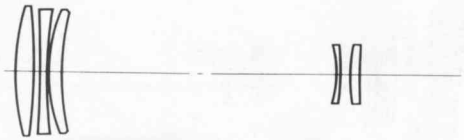
Lens element	5
Minimum aperture	f/45
Minimum distance	27 ft. (8 m)
Angle of view	6°
Weight	45 ozs. (1300 gr.)

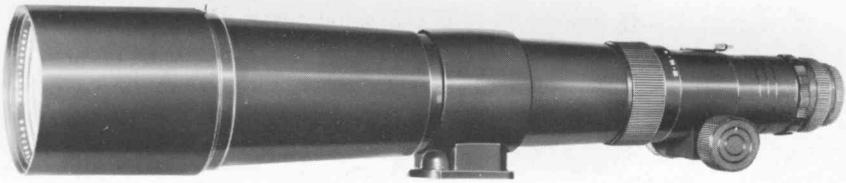
Takumar 500mm f/4.5

Comparatively light and small for its performance, this powerful long-focus lens brings the inaccessible within reach. Its bright f/4.5 image simplifies composition and focusing, and it produces edge-to-edge coverage of high resolution. Equipped with manual diaphragm; supplied with special lenshood.

Lens element	4
Minimum aperture	f/45
Minimum distance	32.8 ft. (10 m)
Angle of view	5°
Weight	122.5 ozs. (3500 gr.)

Tele-Takumar 1000mm f/8

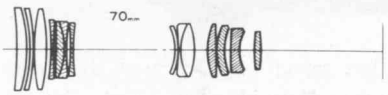


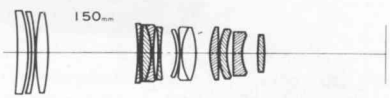


Photographs subjects which are too far away to be seen by the naked eye. The ultimate in fine optics for the photographer who specializes in news, sports, scientific or wildlife photography. Fast, accurate focusing with manual diaphragm. Furnished with built-on lenshood, rigid wooden tripod and in wooden cases.

Lens element 5
Minimum aperture f/45
Minimum distance ..... 98 ft. (30 m)
Angle of view ..... 2.5°
Weight of lens ..... 192.5 ozs. (5.5 kg.)
Weight of tripod ..... 26 lbs. (11.8 kg.)

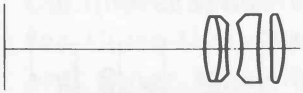
Super-Takumar-Zoom 70mm — 150mm f/4.5





Proven by an impartial and authoritative test to be the best zoom lens for 35mm single-lens reflex. Extremely versatile zooming range from 70mm to 150mm for fast action shooting.

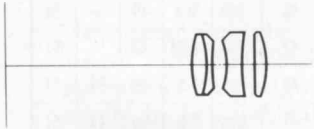
Lens element 14
Minimum aperture f/22
Minimum distance ..... 11.5 ft. (3.5 m)
Angle of view ..... 35° — 16.5°
Weight ..... 42.6 ozs. (1209 gr.)



Macro-Takumar 50mm f/4

For photography from life size to infinity without any close-up accessory, especially designed for close-up and macrophotography.

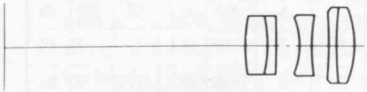
Lens element	4
Minimum aperture	f/22
Angle of view	46°
Weight	9.3 ozs. (265 gr.)



Super-Macro-Takumar 50mm f/4

The new Super-Macro-Takumar 50mm f/4 lens is equipped with a fully automatic diaphragm to further increase its high performance. The magnification range is from 1/2 to infinity, but by applying the Auto Extension Tubes, you can shoot from life size to infinity. The automatic diaphagm enables you to shoot such difficult subjects as moving insects, while holding your camera and looking through the viewfinder.

Lens element	4
Minimum aperture	f/22
Minimum distance	0.77 ft. (0.234 m)
Angle of view	47°
Weight	8.74 ozs. (248 gr.)



Bellows-Takumar 100mm f/4

Used with the standard Bellows Unit, this short-barrel lens enables you to photograph from life size to infinity. Extremely convenient for close-ups from a distance.

Lens element	5
Minimum aperture	f/22
Angle of view	24°
Weight	4.9 ozs. (139 gr.)

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
Super-Takumar Fish-Eye	17mm f/4	22	11	FA	0.2	0.66	180①	228	7.98	BI	—	60
Super-Takumar	24mm f/3.5	16	9	FA	0.25	0.8	84	247	8.71	58	60*‡	60
Super-Takumar	28mm f/3.5	16	7	FA	0.4	1.3	75	218	7.6	49	51*‡	51
Super-Takumar	35mm f/2	16	8	FA	0.4	1.25	62	242	8.53	49	49*	51
Super-Takumar	35mm f/3.5	16	5	FA	0.45	1.5	63	152	5.4	49	49	51
Super-Takumar	50mm f/1.4②	16	7	FA	0.45	1.5	46	230	8.1	49	49	51
Macro-Takumar	50mm f/4	22	4	PS	0.208	0.68	46	265	9.3	49	—	51
Super-Macro-Takumar	50mm f/4	22	4	FA	0.234	0.77	47	248	8.74	49	—	51
Super-Takumar	55mm f/2③	16	6	FA	0.45	1.5	43	215	7.5	49	49	51
Super-Takumar	55mm f/1.8②	16	6	FA	0.45	1.5	43	215	7.5	49	49	51
Super-Takumar-Zoom	70~150mm f/4.5	22	14	FA	3.5	11.5	16~35	1209	42.6	67	67*	70
Super-Takumar	85mm f/1.9	16	5	FA	0.85	2.75	28	350	12.3	58	58*	60
Bellows-Takumar	100mm f/4	22	5	PS	—	—	24	139	4.9	49	49*	51
Super-Takumar	105mm f/2.8	22	5	FA	1.2	4	23	290	10.2	49	49*	51
Super-Takumar	135mm f/3.5	22	4	FA	1.5	5	18	343	12.1	49	49*	51
Super-Takumar	135mm f/2.5	22	5	FA	1.5	5	18	444	15.5	58	58*	60
Super-Takumar	150mm f/4	22	5	FA	1.8	6	16.5	324	11.3	49	49*	51
Super-Takumar	200mm f/4	22	5	FA	2.5	8.2	12.5	550	19.3	58	58*	60
Tele-Takumar	200mm f/5.6	22	5	PS	2.5	8.2	12	370	13.1	49	49*	51
Tele-Takumar	300mm f/6.3	22	5	PS	5.5	18	8	729	25.7	58	58*	60
Super-Takumar	300mm f/4	22	5	FA	5.5	18	8	946	33.1	77	*	85
Tele-Takumar	400mm f/5.6	45	5	M	8	27	6	1300	45	77	*	85
Takumar	500mm f/4.5	45	4	M	10	32.8	5	3500	122.5	49	*	127
Tele-Takumar	1000mm f/8④	45	5	M	30	98	2.5	5500	192.5	49	*	143

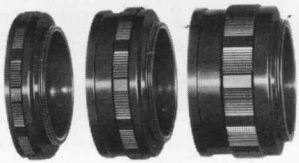
BI=3 filters built-in. M=Manual. FA=Fully Automatic. PS=Preset. ①=Diagonal coverage. ②=Standard lens for Spotmatic. ③=Standard lens for model S1a. ④=Supplied with wooden tripod and carrying cases. All lenses, including standard lenses purchased separately, are supplied with leather case, straps, front and rear caps. All filters and lenshoods are screw-in type unless otherwise indicated.

*(*Lenshood supplied with lens. ‡Clip-on type)*

Complete System of Honeywell 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, 19mm 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.



● AUTO-EXTENSION TUBE SET

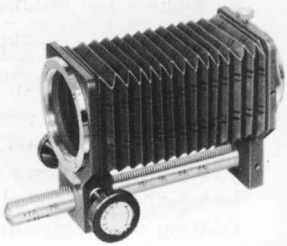
New extension tube set of 3 rings, 9.5mm (#1), 19mm (#2) and 28.5mm (#3), with coupled automatic diaphragm release pins. Mounted singly or in combination between an Honeywell Pentax and a 55mm automatic diaphragm lens, this set of Auto-Extension Tubes permits focusing at magnification from 1.17× to 0.17 and operation of the automatic diaphragm.

● HELICOID EXTENSION TUBE

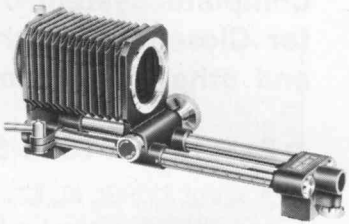
Like the lens helicoid, the new Honeywell Pentax Helicoid Extension Tube extends from 16.8mm to 30.6mm. It serves the purposes of the Honeywell Pentax Extension Tubes #2 and #3. Mounted between an Honeywell Pentax and a 55mm lens, it permits photography at magnification from 0.30× to 0.7×. It is extremely versatile variable extension ring.

● 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.

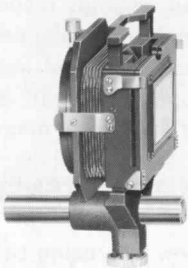


● BELLOWS UNIT II



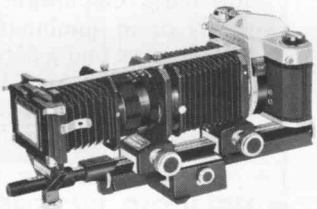
This dual-track unit provides maximum stability, outstanding design and rugged reliability. With precise, firm control, it may be locked in any position. Has an oversized focusing knob for increased sensitivity and ease of focusing. 3.2× magnification at maximum extension with the standard 55mm Super-Takumar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

● SLIDE COPIER

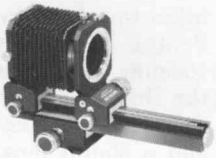


Here is real copying ease for duplicating slides. Slide stage raises or lowers for precise positioning, and a separate set of bellows shuts out all light between the slide and the lens, preventing lens flare from the light source. Used with Bellows Unit II.

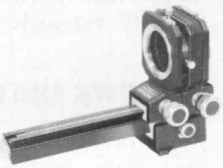
● AUTO-BELLOWS & SLIDE COPIER



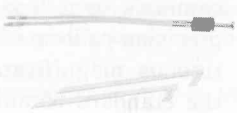
The Honeywell Pentax Auto-Bellows is a highly flexible close-up and macro-photographic instrument. The bellows extension is longer than the extension of the standard Bellows Unit. The Auto-Bellows is more versatile. With the double cable release supplied with the Auto-Bellows, you release the shutter and activate the automatic diaphragm simultaneously if you use a fully-automatic diaphragm lens. With its lens reverse system, you can use a lens in reversed position for higher macro resolution.



The geared rail of the Auto-Bellows is meticulously engineered with high precision. The freely movable tripod seat underneath the rail rod maintains the whole equipment on tripod in complete balance. Micro-action extension knobs are equipped on the camera body and lens sides for precise bellows extension.



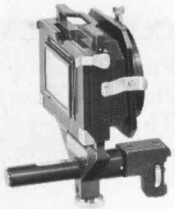
The Slide Copier attaches to the front end of the Auto-Bellows for easy duplication of color films.



With the Bellows-Takumar 100mm f/4 lens, you can photograph from 1.32× magnification to infinity (∞). You easily obtain high magnification with a 28mm to 35mm lens. By adding

the standard Bellows Unit or Extension Tubes to the front or back of the Auto-Bellows, you can reach 10× to 20× magnification.

The Honeywell Pentax Auto-Bellows is a precisely designed close-up and macro equipment for professional photographers, research workers, scientists and specialists in close-up and macro works.



● REVERSE ADAPTER

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

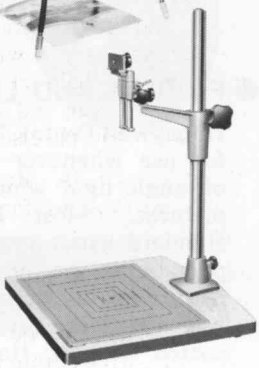
● MICROSCOPE ADAPTER

Fitting between the Honeywell 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, and light sealing tube.

● COPIPOD

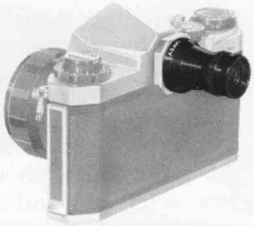
Light-weight, but extremely rigid and sturdy. This portable copying stand fits all models of the Honeywell Pentax and can be used anywhere for copying documents, artwork, stamps, etc. Consists of a lens board complete with adapter rings for 46mm and 49mm lenses, and four calibrated telescoping legs. Sets up easily in seconds and is quickly disassembled. Supplied in 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 Honeywell 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 Honeywell 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, Super-Takumar 200mm f/4 and Tele-Takumar 300mm f/6.3 lenses only.

● FILTERS AND LENSHOODS

Honeywell Pentax lenshoods are recommended for use whenever possible to guard against off-angle light which will cause flare in your pictures. (Most Takumar lenses including standard lenses purchased separately, are supplied with special lenshood.) Improve your picture quality by using the Honeywell Pentax filters that are precision-ground, polished and coated for your Honeywell Pentax.

● HONEYWELL REPRONAR

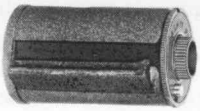
An extremely versatile accessory for the Honeywell Pentax owner who specializes in color transparencies, the Repronar incorporates a specially modified Honeywell Pentax camera with a precision 50mm f/4 Takumar lens and a Strobonar electronic flash light source. It enables the user to duplicate original transparencies, correct for exposure errors and color balance, crop and enlarge portions of original transparencies, create special effects, and perform many other processes in color or black and white. Focusing and composition are quick and easy, and a built-in exposure scale takes the guesswork out of camera settings. Complete with filters, slide holders, lens cap and dust cover.

● 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.

● FILM MAGAZINE

For bulk film loading.



● 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.

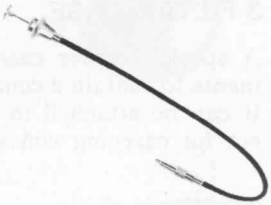
—For use with H3v and H1a only—

● SOFT CASE JUMBO FRONT

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

● LEATHER CASE FOR STANDARD LENSES

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



● CABLE RELEASE

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

● MISCELLANEOUS CAPS

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

Spotmeter III

Selective exposure photography ... the most advanced concept in reflected light meters. The Spotmeter III 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. For dark area reading, a scale illuminator glows when the button is depressed. Exposure is calculated easily by turning movable scales on the side of the meter. The Spotmeter III is also equipped with an IRE (Institute of Radio Engineers) scale, which is especially useful for television filming and other special readings.