

YASHICA

PENTAMATIC

INSTRUCTION



Description of the YASHICA PENTAMATIC-S

This is your YASHICA PENTAMATIC -S

A precision instrument capable of bringing you the finest photographs you have ever taken.

IMPORTANT : Care of Camera and Lens

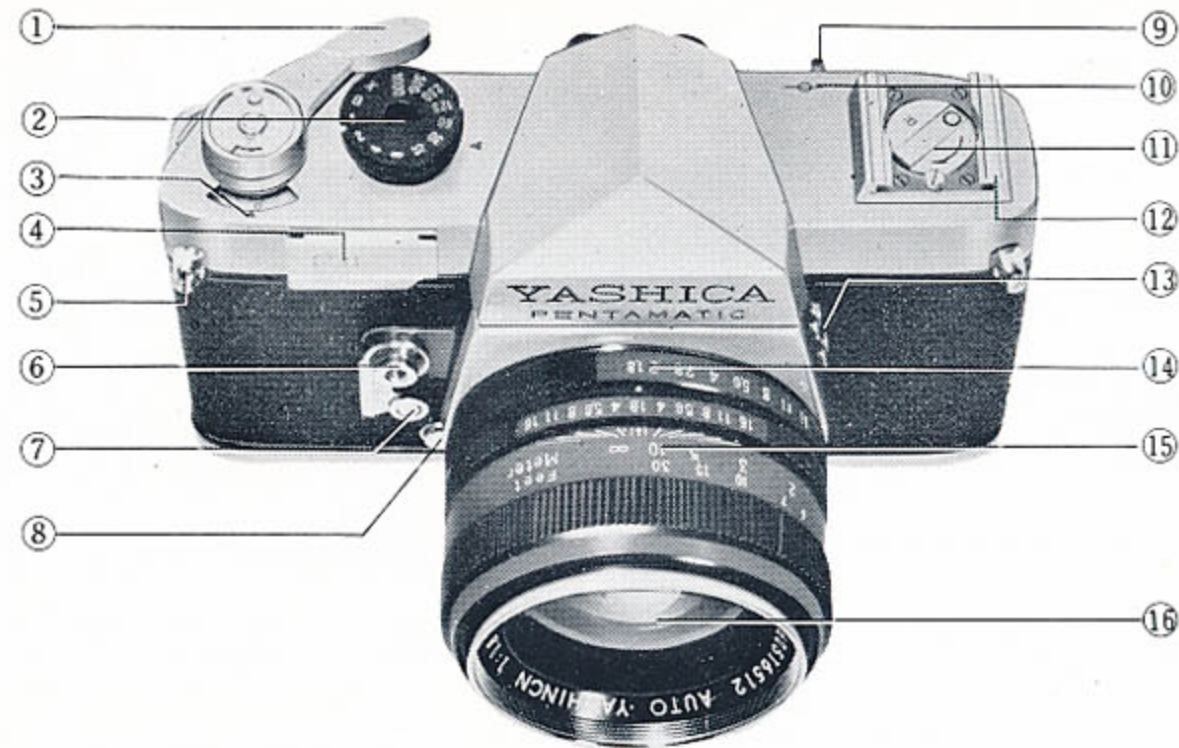
The outer parts of the camera body should be cleaned with soft linen. The inside of the camera body should be cleaned with a soft brush or hand blower with care, never use a frayed cloth. It is most essential to keep the film pressure plate clean.

When cleaning the lens, alcohol may be used but great care must be exercised to prevent excessive amounts of alcohol from attacking the balsam adhesives between the lens elements.

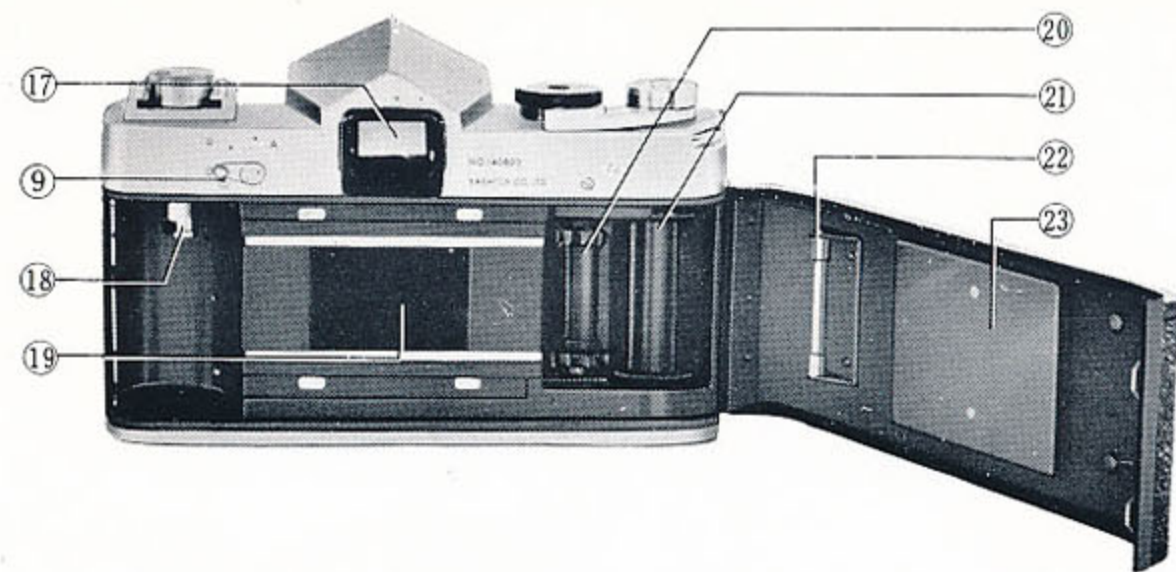
Special care should be exercised when cleaning the mirror surface not to apply undue pressure.

During production special oils are used to permanently lubricate the moving parts of the camera. These special oils do not mix well with ordinary oils and, therefore, it is not necessary nor advisable to oil the camera.

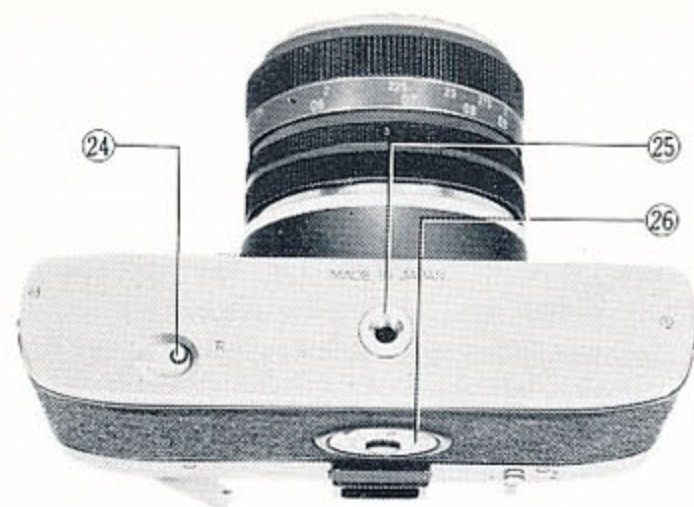
Do not dismantle the camera or the lenses; leave this precision work to expert camera repairmen.



YASHICA Pentamatic-S Single lens Reflex



- | | |
|---------------------------------------|--|
| ① Film Advance Lever/Loading Rewinder | ⑨ Film Rewind Lever and Back Cover Release Lever |
| ② Shutter Speed Dial | ⑩ Film Position Mark |
| ③ Film Exposure Counter | ⑪ Film Rewind Knob and Back Cover Release |
| ④ Clip-on Exposure Meter Shoe | ⑫ Accessory Shoe |
| ⑤ Strap Holder | ⑬ Flash Terminal |
| ⑥ Shutter Release Button | ⑭ Aperture Control Ring |
| ⑦ Built-in Selftimer | ⑮ Distance Scale |
| ⑧ Lens Release Button | |



- | |
|---|
| ⑬ AUTO YASHINON Lens f/1.8 |
| ⑬ Eye-level Pentaprism View/rangefinder Eye-piece |
| ⑬ Cassette Supporting Shaft |
| ⑬ Shutter Screen |
| ⑬ Sprocket |
| ⑬ Take-up Spool |
| ⑬ Film Pressure Roller |
| ⑬ Film Pressure Plate |

- | |
|--------------------------------|
| ⑭ Release Button for Rewinding |
| ⑭ Tripod Socket |
| ⑭ Film Speed Reminder |
| ⑭ Top-dead-center Indicator |
| ⑭ Instant Return Mirror |
| ⑭ Diaphragm Control Lever |
| ⑭ Lens Locking Pin |

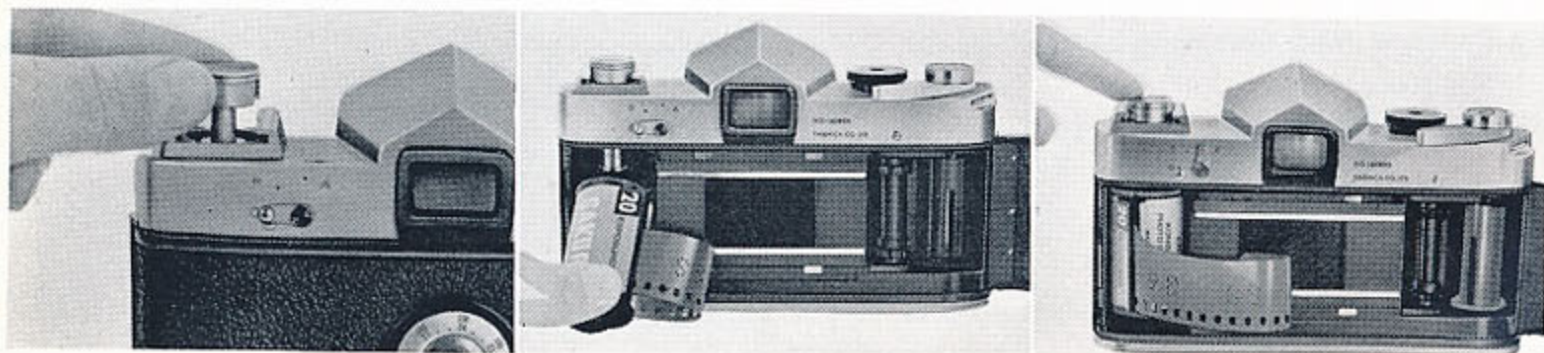


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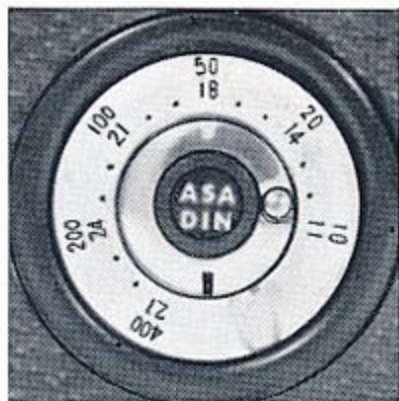
LOADING FILM

35mm roll film
20 or 36 exposures per
roll
24×36mm size negative
Black & White or Color

- 1) Move the Back Release Lever to the 'O' position. The Film Rewind Knob will pop up at the 'R' position but should not be pulled out further until the Back Cover Release Lever is moved to 'O'; the Film Rewind Knob can now be pulled out further to open the back of the camera.
- 2) Place the film cartridge or loaded film cassette in the left chamber so that the cassette projection fits into the slot of the rewind shaft. Put the Back Cover Release Lever at 'R' and push the Film Rewind Knob in; the cassette is now securely in position.
- 3) Rotate the Take-up Spool until the groove in the spool is positioned so as to allow the film leader to fit into the groove.
- 4) Draw out about 6 inches (15 cm) of film, place the end well into the Take-up Spool and fit the sprocket hole over the protruding pin. Position the film perforations over the teeth of the Take-up Spool Sprocket and pull the film taut by slowly moving the Film Advance Lever.



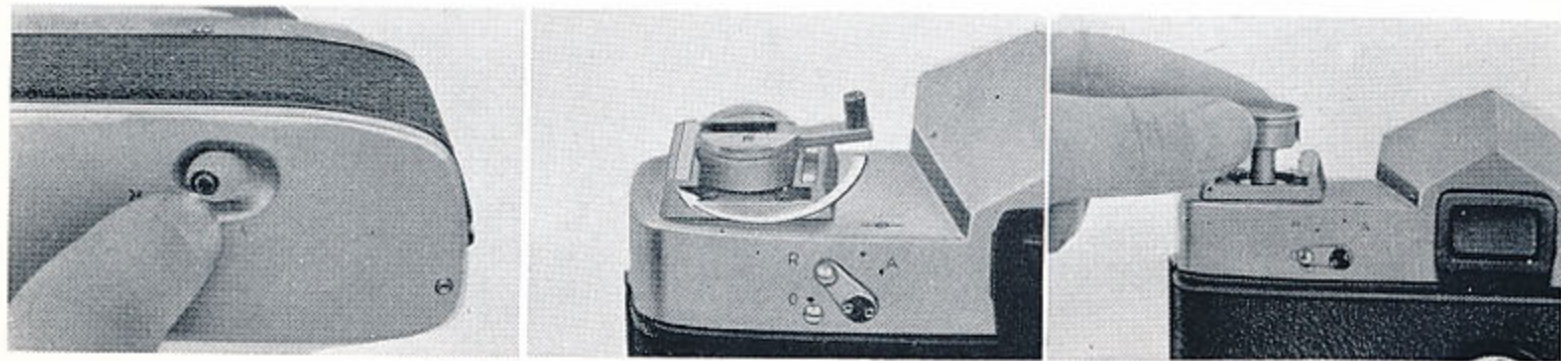
- 4) Put Film Rewind Lever (Back Cover Release Lever) in position 'A' and push the Film Rewind Knob all the way in; a slight rotating movement is sometimes required. Close the camera back, and it will automatically lock in position, and advance the film two times. Set the Film Exposure Counter to 'zero' by moving the Manual Reset Wheel.
- 5) The camera is now ready to make first picture. On the next film advance, the shutter will be cocked and the film counter advanced by one.
- 6) The Loading Reminder should be set at the appropriate number to remind you of the number of exposures which have been loaded into the camera; standard cassettes of 20 and 36 exposures or bulk loaded cartridges, up to 40 exposures, can be used. A handy Film Speed Reminder permits you to set the type of film, black and white or color, and the film speed on one easy-to-read dial. The red line on the inner dial should be set in the upper position for color film and the film speed aligned by turning the outer ring. The black line on the inner dial should be set in the upper position for black and white film and the film speed aligned by turning the outer ring.



UNLOADING FILM

After taking a full roll of film, it is necessary to rewind the film into the cassette or cartridge before removing the exposed film from the camera.

- 1) Release the film for rewinding by pressing the Release Button.
- 2) Move the Film Rewind Lever to position 'R', raise the rewind crank and rewind the film by turning the crank clockwise. The film is completely rewound when the resistance is no longer felt. It is not necessary to hold the Release Button down while rewinding.
- 3) Move the Film Rewind Lever to position 'O' and pull the Film Rewind Knob out to its fullest extent ; this action releases the back cover and the film can be removed from the camera.



Note :

Toward the end of the film you will feel a slight resistance. But continue turning the rewind crank until the film pulls away from the slot on the Take-up Spool.

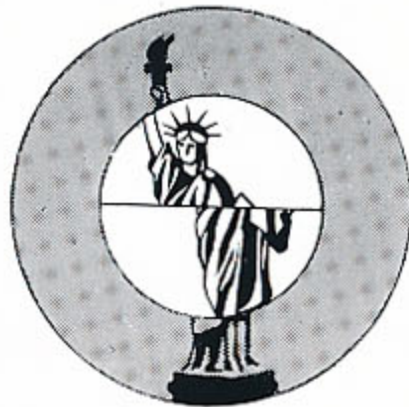
VIEWING AND FOCUSING

Viewing and focusing are both done through a single window.

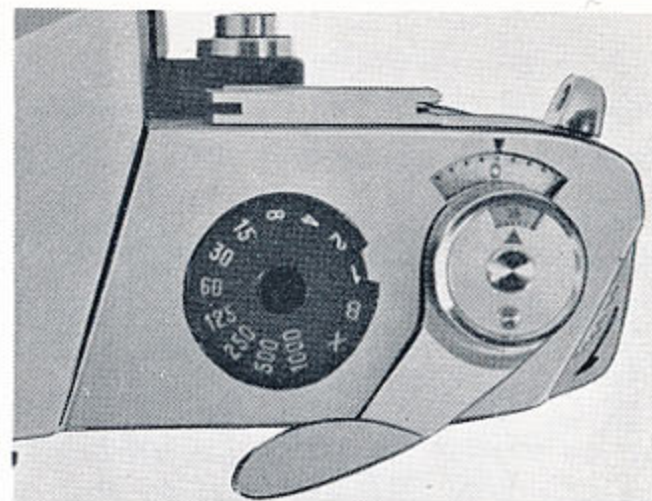
There is never any question about parallax correction as you always see the picture exactly as you see it.

When looking through the view rangefinder eyepiece you will see three concentric circles, the inner-most circle will have a horizontal diameter line through the circle. If the camera is not in focus, the image of the subject in the upper and lower semi-circles of this inner-most circle will not coincide. By turning the Focusing Ring clockwise or counter clockwise it is possible to bring the upper portion and lower portion of the image seen in the inner-most circle into perfect alignment. When the image in the inner-most circle is no longer 'HALVED'. The camera is properly focused. Proper focusing should be done after the shutter has been cocked.

You will also notice that the overall viewing area ; the fresnel focusing glass of the viewfinder, is not clear when the camera is out of focus. If the 'HALVED IMAGE' is properly aligned, the fresnel focusing glass will also give a properly focused image of the subject.



SHUTTER SPEED



The shutter speed controls the duration of the exposure. Shutter speeds on your YASHICA PENTAMATIC-S with its extremely accurate focal screen shutter are, 1 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/500, 1/1000, of a second, Bulb and 'X' (electronic flash). The Bulb, or 'B', setting is for taking pictures with an exposure longer than one second. (See page 14 for using self-timer).

A tripod or other brace should always be used to support the camera when using 'B'. When the Shutter Release Button is depressed and the Shutter Speed Dial is set at 'B' the shutter will remain open until the button is released.

Camera may be Hand held		Use a Tripod or Brace	
Average Pictures	Action Pictures	Time Exposure	Slow Speed
'X' 1/60, 1/125	1/250, 1/500, 1/1000	'B'	1 sec., 1/2, 1/4, 1/8, 1/15, 1/30

PICTURE TAKING

- 1) Determine the correct exposure combination to be used for the particular scene to be taken.
- 2) Turn the inner ring of the lens barrel, Aperture Control Ring, to the desired stop.
- 3) Set the shutter speed by rotating the Shutter Speed Dial in either direction until the desired shutter speed is lined up with the small black triangle on the camera top.

Note : The green numbers on the Shutter Speed Dial indicate that hand-held operation is possible, the white numbers indicate that hand-held operation is not recommended and that a tripod or other steady brase should be used. The red 'X' is used for electronic flash, the shutter speed is approximately 1/60 of a second but the duration of the electronic flash actually determines the exposure time.

- 4) Advance the Film Advance Lever until it stops thereby bringing the next unexposed section of film into place and cocking the shutter. The Film Advance lever can be moved either by a single full movement or by small short successive movements.

IMPORTANT : Be certain the lever travels through its full movement or otherwise the shutter will not cock.

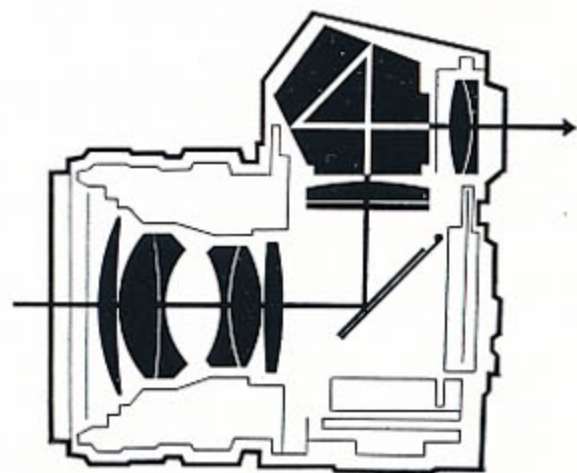


- 5) Regardless of the pre-set aperture setting, the aperture is now fully open and the subject is clearly visible through the pentaprism viewer. Bring the subject into clear focus by rotating the Focusing Ring.

Note : If you have set an aperture opening of $f:16$ and have not cocked the shutter, your view through the finder will seem dark and when focused on to a subject the depth of field will be discernible. Other object in front and behind the subject will be of acceptable sharpness within the range, thus enabling you to determine the aperture opening best suited for your picture. In order to open the aperture for clear viewing and focusing it is essential that the shutter be cocked. When the picture is taken the aperture automatically stops down to the pre-set aperture setting.

- 6) Press the Shutter Release Button

Note : The shutter speed setting can be changed either before or after the film has been advanced and the shutter cocked.

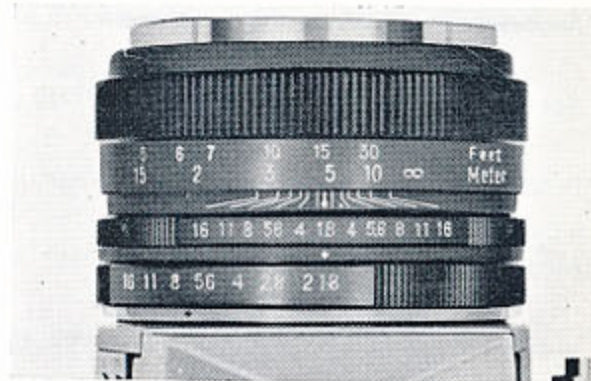


DEPTH OF FIELD

When you focus the camera on a subject there is a certain distance in front and back of the subject within which other objects will also appear sharp. This is known as the "Depth-of-Field", and it varies with the lens aperture, the smaller the aperture the greater the Depth-of-Field; it is much larger at $f:16$ than at $f:1.8$.

The Depth-of-Field Scale will be found on the lens mount in the front part of the camera. You will notice that on either side of the $f:1.8$ figure is a similar set of numbers which represent the lens apertures. When the camera is focused on your subject, look for the aperture you are using on either side of the scale to determine the Depth-of-Field. Thus, if the camera is focused at 10 feet and the lens aperture is $f:16$, the Depth-of-Field (area in which all objects are sharp) is from about 7 ft. to 20 ft.

You can also use the Depth-of-Field to use your Yashica PENTAMATIC-S as a fixed-focus camera. In this case set the distance scale to 20 ft., and the lens aperture to $f:8$. You will notice on the Depth-of-Field that anything from about 11 feet to infinity will be in focus.



INFRARED PHOTOGRAPHY

Associated with the Depth-of-field Scale you will find a small red dot to the right of the Lens Aperture setting indicator. This mark is used for focusing the camera when infrared film is being used.

Most lenses are calibrated for normal white light and the different wave length of infrared light must be taken into consideration when using this medium ; a corrective adjustment of the focusing ring permits accurate setting for infrared wave length.

The camera is readied for use in the normal manner. After the subject distance has been determined, the camera to subject distance must be further aligned with this red dot.

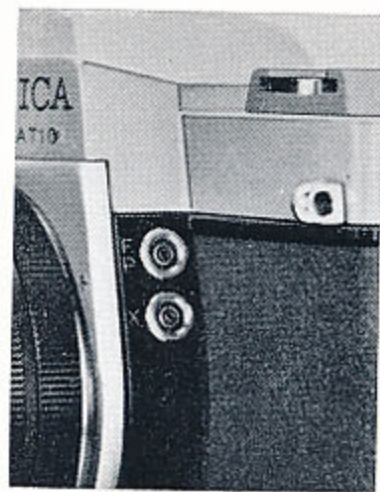


INDEX For
INFRARED PHOTOGRAPHY
DEPTH-OF-FIELD SCALE INDEX

FLASH SYNCHRONIZATION

Two separate terminals are provided for flash synchronization. The upper terminal should be used flash bulb operation. The synchronization is fully automatic for all shutter speeds ; no adjustments are required.

The lower terminal should be used for electronic flash synchronization. When using a stroboscopic or other electronic flash unit, you should always put the Shutter Speed Dial at the red 'X', this assures you of proper synchronization. The shutter speed will be approximately 1/60 of a second but the actual exposure time will depend on the duration of the strobo flash.

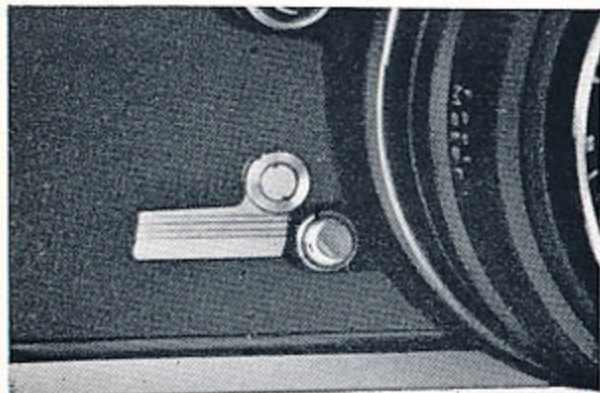


SELFTIMER

To use selftimer first set shutter to desired speed and cock shutter. Then turn the selftimer lever in counterclockwise direction until it stops. When shutter release button is pressed, timer runs about 10 seconds before shutter snaps. Make certain selftimer lever turns completely until it stops; otherwise selftimer and shutter will not operate properly.

CABLE RELEASE

Any standard tapered plunger-type cable release can be used with the YASHICA PENTAMATIC-S by simply attaching the release to the Shutter Release Button.



CHANGING LENSES

To interchange the line of Yashica lenses available for the PENTAMATIC-S you need only press in on the Lens Release Button and rotate the lens counterclockwise about one third of a turn and the lens slips off the camera. Other lenses are installed by matching the longer flange of the lens with the longer slot of the lens mount and then rotating 1/3 of a turn, clockwise.

Lenses of other manufacture can be installed by use of adapter rings. Select the adapter ring which accepts the mount of the desired lens and put it on the camera as you would a standard Yashica lens. Any accessory lens with a mount which matches this adapter can now be installed in accordance with the manufacturer's instructions for the lens.



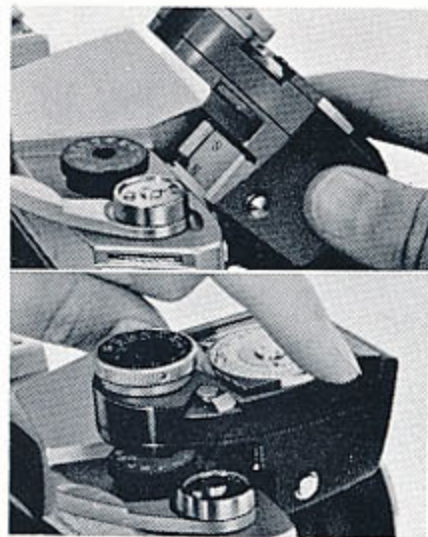


COUPLED, CLIP-ON EXPOSURE METER

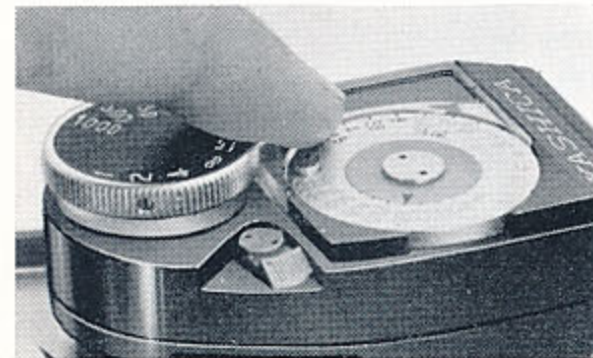
The Yashica Clip-on exposure meter is specifically designed for your Pentamatic—so that you may obtain the correct exposure readings automatically. You are assured of accurate exposure readings for all of your picture taking both in color and black and white.

1. Set the camera shutter speed dial to '1' (The figure '1' on the meter should be aligned with the white triangle—you will feel a slight clickstop when the meter is properly adjusted.)
2. Insert the exposure meter into the exposure meter shoe located on the front of the camera. Be certain to insert the meter fully into the meter shoe until the push button securely holds the meter in place, a slight back-and-forth rotation of the meter shutter speed dial may be necessary to assure that the meter is properly seated.
3. Check the proper seating of the meter by turning the meter shutter speed dial and make sure the shutter speed dial on the camera also rotates.

YOU CANNOT REMOVE THE METER FROM THE CAMERA WITHOUT PRESSING THE RELEASE PUSH BUTTON!



HOW TO USE THE EXPOSURE METER



1. Determine the exposure index of your film from the instruction sheet packed with the film. Set the exposure index on the meter exposure index dial (yellow figures) opposite the black triangular mark on the inner dial of the meter.

*** There are now two methods of determining the proper exposure setting.**

A. To take advantage of lens opening or f-stop values for depth-of-field considerations :

- (1) Set the desired f-stop on the lens aperture control ring.
- (2) Aim the camera at the subject.
- (3) Align the f-stop reading of the meter dial with the indicated meter needle reading. The camera is now properly adjusted for correct exposure.

Note: There are two sets of f-stop setting on the meter ASA dial; one is red and one is black.

The red figures should be used under dim light conditions and the black figures under bright light.

The small lever on the top, beside the shutter speed dial of the meter will tell you whether you should use the red or the black figures.

If the lever is pointing to the red dot, use the red aperture figures ; if it points to the white dot, use the black figures.

The meter lever controls the meter under bright or dim light. For pictures in bright light, the lever should be turned to the white dot ; for pictures in dim light, the lever should be turned to the red dot.

B. To take advantage of the shutter speed values for rapidly moving objects or to eliminate extreme depth-of-field features :

- 1) Set the shutter speed dial to the desired speed by turning the shutter speed dial of the exposure meter.
- 2) Aim the camera at the subject.
- 3) The exposure meter indicating needle will show the f-stop which must be set on the aperture control ring of the camera.



REMARKS :

Always align the shutter speed dial precisely on the white triangular indicator you will feel a slight click-stop when the dial is properly aligned.

Never leave the meter in hot or humid places when not in use for long periods of time. To remove the meter, press in firmly on the meter release push button located on the side of the meter and pull the meter upwards with a steady even pull.

When you can get close to your subject, it is recommended that an average exposure reading be utilized ; this average should be made by taking readings from both the well lighted areas as well as the dark shadowy areas.

When you cannot get close to your subject, take the reading from your shooting position making certain that the light reaching the meter accurately reflects the lighting of the subject. Or, make a substitute reading of any surface which reasonably duplicates the lighting of the out-of-reach subject.

For subjects with strong back lighting :

When you wish the subject to be bright, make your exposure reading very close to the subject. When you wish silhouette effect, make the exposure reading of the bright area of the picture.

When you wish medium tones, take the average of the two readings as determined above.

ACCESSORIES FOR YASHICA PENTAMATIC-S

A full range of accessories are available for your YASHICA PENTAMATIC-S including extra lenses, filters, lens shades and professional equipment such as copying unit and oscilloscope adapters.

Lenses Available for the PENTAMATIC-S



AUTO YASHINON

f: 1.8/55mm, fully automatic, color corrected, hard coated, bayonet mount.



YASHINON WIDE ANGLE

f: 2.8/35 mm, pre-set, color corrected, hard coated bayonet mount.



YASHINON TÉLEPHOTO

f: 2.8/100mm, pre-set, color corrected, hard coated, bayonet mount.

FILTERS

Monochrome Filters:
screw-in mount, designed to fit all Yashica PENTAMATIC lenses, diameter 52mm.



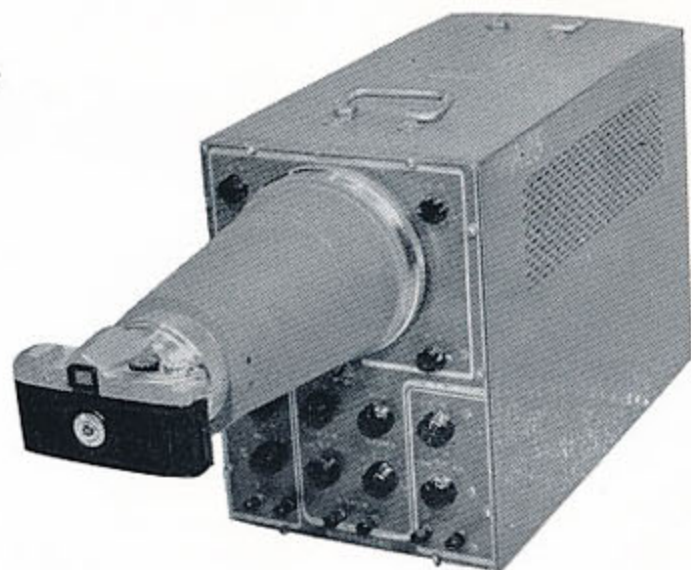
* Yellow (Y2) * Red (R1) * Blue (B)
* Green (G1) * Orange (O2) * Ultra-Violet (U-V). Color Conversion Filters:
Screw-in mount, designed to fit all Yashica PENTAMATIC lenses.

1A, Skylight	to reduce excessive blue light
80 B	for use of daylight film with photofloods
81 B	for cloudy or hazy days
82 B	for early morning and late afternoon
85 C	for tungsten film in daylight

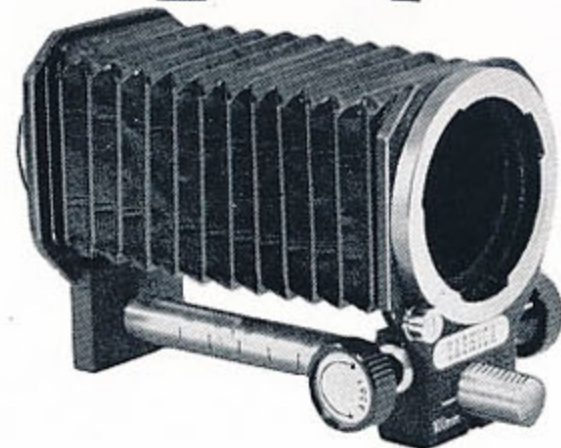
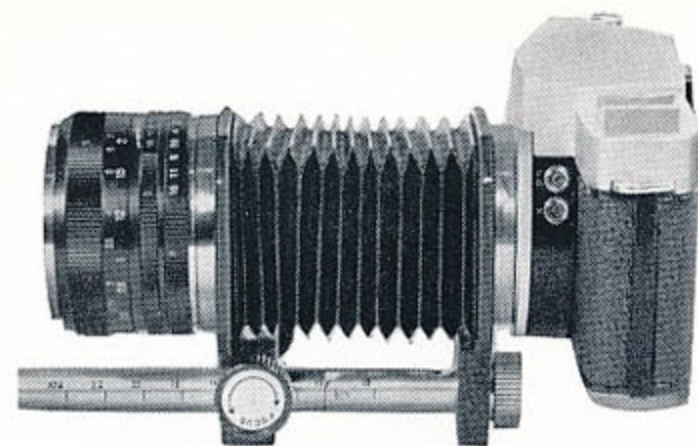
PROFESSIONAL EQUIPMENTS



Copying Unit



Oscilloscope Adapter



Extension Bellows



Microscope Adapter

ADAPTER RINGS



Ring No. 1.

Used to attach lenses utilizing the 'PRACTIKA' or 'ASAHI-PENTAX' type mounts.

Ring No. 2.

Used to attach lenses utilizing the 'EXACTA' type mounts.



LENS HOOD

In order to prevent flare as well as harmful reflection of light within the lens barrel which will spoil the pictures, use of lens hood is recommendable.

The lens hood can be attached to the lens by slipping it on and tightening the set-screw so that it can be fitted over the lens.



EXTENSION TUBES FOR YASHICA PENTAMATIC-S

There are 4 types of the Rings available for the YASHICA PENTAMATIC-S, and close-up data to be acquired by appropriate selection and fitting together of the tubes on the Auto Yashinon standard lens at the closest focus distance are as follows:

Extension Tubes	Length	Repro Ratio	Area Photographed
Adapter Rings only	7.5 mm	0.07	343 × 514
Adapter Ring + No. 1	13 mm	0.12	200 × 300
" + No. 2	18.5 mm	0.18	133 × 200
" + No. 1 + No. 2	24 mm	0.23	104 × 157
" + No. 3	29.5 mm	0.28	86 × 129
" + No. 1 + No. 3	35 mm	0.34	71 × 106
" + No. 2 + No. 3	40.5 mm	0.39	62 × 92
" + No. 1 + No. 2 + No. 3	46 mm	0.44	55 × 82
" + No. 1 × 2 + No. 2 + No. 3	51.5 mm	0.50	48 × 72



DEPTH OF FIELD SCALE IN FEET

Ft. \ F	1.8	2.0	2.8	4.0	5.6	8.0	11	16	22
2	1' 11" 2' 0"	1' 11" 2' 0"	1' 11" 2' 0"	1' 11" 2' 1"	1' 11" 2' 1"	1' 11" 2' 2"	1' 11" 2' 2"	1' 10" 2' 3"	1' 9" 2' 4"
3	2' 11" 3' 1"	2' 11" 3' 1"	2' 11" 3' 1"	2' 11" 3' 1"	2' 10" 3' 2"	2' 10" 3' 3"	2' 9" 3' 4"	2' 7" 3' 6"	2' 6" 3' 9"
5	4' 10" 5' 2"	4' 10" 5' 2"	4' 10" 5' 3"	4' 8" 5' 4"	4' 7" 5' 6"	4' 5" 5' 9"	4' 3" 6' 1"	3' 11" 6' 8"	3' 8" 7' 8"
7	6' 8" 7' 4"	6' 8" 7' 4"	6' 7" 7' 6"	6' 5" 7' 8"	6' 2" 8' 0"	5' 11" 8' 7"	5' 7" 9' 4"	5' 1" 11' 0"	4' 8" 14' 0"
10	9' 5" 10' 7"	9' 5" 10' 8"	9' 2" 11' 0"	8' 10" 11' 6"	8' 5" 12' 2"	7' 11" 13' 6"	7' 4" 15' 7"	6' 7" 20' 11"	5' 10" 108' 0"
15	13' 9" 16' 6"	13' 8" 16' 7"	13' 2" 17' 5"	12' 6" 18' 8"	11' 10" 20' 8"	10' 10" 24' 10"	9' 9" 32' 9"	8' 5" 70' 11"	7' 2" ∞
30	25' 6" 36' 6"	25' 0" 37' 5"	23' 6" 41' 6"	21' 6" 49' 8"	19' 4" 67' 6"	16' 8" 145' 0"	14' 4" ∞	11' 7" ∞	9' 5" ∞
inf.	167' ∞	150' ∞	107' ∞	75' 2" ∞	53' 8" ∞	37' 7" ∞	27' 4" ∞	18' 9" ∞	13' 8" ∞

DEPTH OF FIELD SCALE IN METER

m \ F	1.8	2.0	2.8	4.0	5.6	8.0	11	16	22
0.5	0.50 0.50	0.50 0.50	0.49 0.51	0.49 0.51	0.49 0.51	0.48 0.52	0.47 0.53	0.46 0.54	0.45 0.56
1.0	0.98 1.02	0.98 1.02	0.97 1.03	0.96 1.04	0.95 1.06	0.92 1.09	0.90 1.13	0.86 1.20	0.82 1.29
1.5	1.46 1.54	1.45 1.55	1.44 1.57	1.41 1.60	1.38 1.65	1.33 1.72	1.23 1.81	1.20 2.01	1.11 2.30
3.0	2.84 3.18	2.82 3.21	2.75 3.30	2.66 3.44	2.54 3.66	2.39 4.04	2.22 4.64	1.98 6.17	1.76 10.20
5.0	4.56 5.54	4.51 5.60	4.34 5.89	4.11 6.38	3.84 7.16	3.49 8.80	3.14 12.30	2.68 36.50	2.29 ∞
10.0	8.37 12.40	8.22 12.80	7.67 14.40	6.97 17.70	6.22 25.50	5.35 75.70	4.56 ∞	3.66 ∞	2.95 ∞
inf.	50.90 ∞	45.80 ∞	32.70 ∞	22.90 ∞	16.40 ∞	11.50 ∞	8.32 ∞	5.73 ∞	4.17 ∞

Notice !

Be sure to replace the lens Cap when your camera is not in use. Keep your camera away from dust and moisture. For cleaning the lens surface to remove dust or dirt, always wipe very lightly by using clean gauze or lens cleaning cloth. Do not wipe the lens with a dirty handkerchief. When you are not using your camera for a long period do not leave the shutter set.

REVIEW :

- a Select your exposure combination
- b Set the lens opening (aperture)
- c Set the shutter speed
- d Cock the shutter
- e Compose your picture through the viewfinder
- f Take the picture

CAMERA IDENTIFICATION

As soon as possible after you purchase your Yashica Pentamatic, fill in the information required below. Keep this booklet in a safe place. In case of loss or theft this information may prove valuable in recovering the cameras.

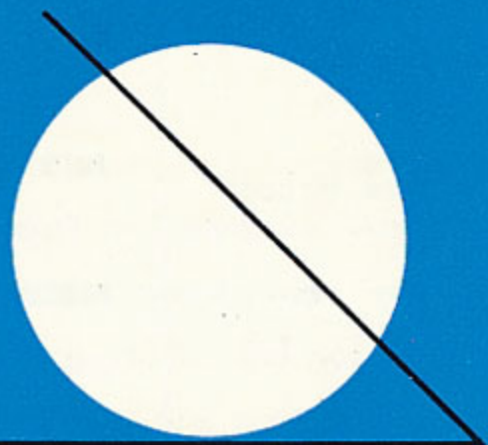
YASHICA Serial Number _____

AUTO YASHINON f : 1.8/55 mm Lens Number _____

PURCHASED at _____
(Name of Firm)

(Address)

DATE of PURCHASE _____



YASHICA CO., LTD.