

Minolta

Hi-matic 7s

OWNER'S MANUAL



MINOLTA HI-MATIC 7s

Since its introduction, the Minolta Hi-matic 7s has been hailed as the most versatile automatic camera.

With its wide range of automatic features, your new Minolta Hi-matic 7s can make picture taking easier, more foolproof than ever before possible. For example, the accurate electric eye in the Minolta Hi-matic 7s is based on the patented "CLC" (Contrast Light Compensator) system to provide unsurpassed exposure accuracy, even in high contrast situations.

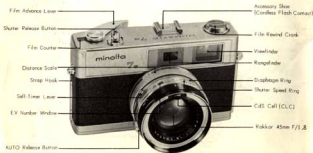
In addition, your new Minolta Hi-matic 7s has many other outstanding features not found on any other 35mm camera... ready to make photography truly "as easy as pressing a button". These include Minolta's "SLS" (Safety Loading System) for rapid, fumble-free loading.

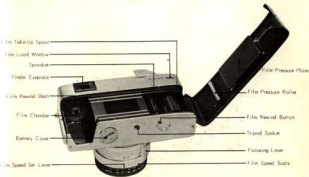
For special photographic techniques, such as deliberate under or over exposure, your new Minolta Hi-matic 7s may also be used semi-automatically or manually. No other camera offers this versatility.

Please read this manual carefully before taking pictures so that you may fully utilize the potential of your Minolta Hi-matic 7s.

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Specifications of Minolta Hi-matic 7s

Automatic 35mm rangefinder camera with CdS electric eye

Lens :

Rokkor PF 45mm F/1.8

Construction : 6 elements in 5 groups

Angle of View : 52°

Diaphragm : Click stops at each engraved aperture
scale : f/1.8, f/2.8, f/4, f/5.6, f/8, f/11, f/16, f/22
(on manual operation)

Filter Mount : 55mm, screw-in

Lens Shade Mount : 57mm, slip-on

Shutter : SEIKO-LA fully automatic programmed shutter with manual control.

Automatic Operation : EV 5.7 (f/1.8 at 1/16 sec.) to EV 17 (f/22 at 1/250 sec.)

Manual Operation : 8, 1/4, 1/8, 1/16, 1/30, 1/60, 1/125, 1/250 and 1/500 sec.
in engraved click stops.

Synchro Contact : X contact (M class bulb synchronizes at 1/30 sec., electronic
flash at all speeds)

Self-Timer : About 10 seconds delay on manual control.

Film Winding :

Lever type, quick wind automatically cocks, advances film and film counter and prevents
double exposure.

Winding Method : Single full stroke or multiple short strokes.

Winding Distance : 220°

Film Counter : Automatic resetting counter shows number of frames exposed.

Film Rewinding : Rapid rewind crank

Frame Size : 36x24mm

Film : Standard 35mm film, 20 or 36 exposure magazine

Finder :

Tinted bright frame viewfinder with automatic parallax correction.

Meter Needle : Needle in the viewfinder shows the proper EV number, over/under exposure warning.

Focusing :

Direct helicoid focusing coupled to super-imposed rangefinder.

Minimum Focusing Distance : 3 ft. (0.9m)

Exposure Meter :

Built in CLC (Contrast Light Compensator) exposure meter in the lens barrel coupled to programmed shutter, automatically compensates for filters or lens attachments.

Film Speed Range : ASA 25-800, DIN 15-30

Working Range : EV 5.7 (f/1.8 at 1/15 sec.) to
EV 17 (f/22 at 1/250 sec.) with any film.

Battery : 1.35V, button-shape mercury battery for photographic applications.

Other Features :

SLS (Safety Loading Signal) shows proper film load and transport.

Easy loading with specially designed multiple-slot take-up spool.

Condens and cond flash contact.

Size :

Height: 3-1/4" (82mm), Width: 5-1/2" (140mm), Front to back including lens: 3-7/8" (47mm)

Weight : 25.4 oz. (720g) 14.74g

How to Insert the Mercury Battery

The automatic electric eye system in the Minolta Hi-matic 7 is powered by a long-life mercury battery which must be properly seated in the battery chamber before the camera will operate.



- 1) Remove the battery chamber cover with a coin by turning it counter-clockwise.
- 2) When the cover is removed, place the battery in the chamber with its plus (+) side up, as indicated by arrow on the inside of the cover. Then replace the cover.



- 1) Be sure that the plus (+) and minus (-) sides of the battery are not reversed.
- 2) If the camera is not to be used for over half a month, remove the battery and store it in a dry place.
- 3) Be sure not to touch the battery terminals with moist or unclean hands. If stained, the battery contacts can deteriorate, making the battery inoperative.

- 4) When the camera is not in use, be sure to turn the power source of the battery "off". This is done by moving the film speed lever to the "OFF" position.
- 5) The Minolta Hi-matic 7s uses a 1.35V, button-shape mercury battery for photographic applications. (For example, Mallory PX-13, PX-625, RM-625R or equivalent.)

Sub: US\$ 6.25 ALKALINE
2.625 ZINC
5.625 Silver





- 1** Insert the film magazine into the film chamber, close the camera back and work the film advance lever until the number "1" appears in the film counter window.



- 2** Set the film speed on the ASA/DIN scale. Then set the "A" marks of both the shutter speed and diaphragm rings to the "arrow" mark on the outer lens barrel.



- 3** Look through the viewfinder and focus on your subject. Check the EV scale and indicator needle while looking through the viewfinder. If the needle is clear of the upper or lower red warning zones, the automatic system can be regarded as functioning properly to give you the optimum exposure.



- 4** Release the shutter.

Using the "SLS" Film Load System

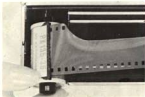
SLS System of Easy Loading

The Minolta Hi-matic 7s loads in seconds with its unique SLS system.

Since the take-up spool has 4 film slots, there is no need to turn it to thread the film. In addition, the red signal in the exclusive Film Load Window provides a constant check on film alignment and advancement.



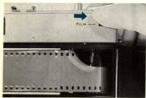
- 1** Pull the back cover lock up about 1/8 inch and the cover will automatically "pop" open.



- 2** Place the film magazine into the film chamber. If the magazine axis does not set properly on the rewind shaft, turn the film rewind crank clockwise or counter-clockwise, until the magazine falls into the proper position.



- 3** Insert the film leader about 1/2 inch into one of the slots in the take-up spool. Be sure that a film perforation is engaged with the tooth in the slot.



- 4** Engage the sprocket gear teeth with the film perforations. Advance the film advance lever slowly (one full stroke), while pressing the film gently against the sprocket. Then, close the back cover.



- 5** When the back cover is closed, a large red dot appears in the film counter window. Now, advance the film advance lever until it stops and press the shutter release button. Repeat this action until the number "1" appears.



- 6** At the same time the number "1" appears in the film counter window, a red mark will appear in the Film Load Window at the back of the camera. This signals that the film has been loaded and advanced properly. (The red mark appears in the right half of the window)



A Few Words of Caution

- 1) When inserting the film leader into one of the slots of the take-up spool, be sure to engage the third or fourth film perforation with the tooth in the slot.
- 2) When placing the film magazine into the film chamber be sure to engage the film perforations with the teeth of the sprocket gear on both sides.
- 3) Be sure to load or unload the film in the shade to prevent it from being damaged from exposure to direct sunlight.

The Minolta Hi-matic 7s is equipped with a programmed shutter and an advanced electric eye system to combine maximum accuracy with the greatest possible operating ease. Once the Minolta Hi-matic 7s is set for automatic operation, you need only focus and press the shutter release button. Not only will the camera automatically set proper aperture and shutter speed, but it will automatically provide the optimum combination of these two settings for any given light situation. With the Minolta Hi-matic 7s, even beginners and children can take perfectly exposed pictures as no photographic skill or experience is necessary.

- 1** Set the film speed rating by moving the lever of the ASA/DIN* scales at the bottom of the lens barrel to the corresponding number of the film's speed. (This simultaneously turns the meter "on".) Both ASA and DIN scales are engraved.
- | | | | | | | |
|-----|-----|-----|-----|-----|----|----|
| ASA | 800 | 400 | 200 | 100 | 50 | 25 |
| DIN | 30 | 27 | 24 | 21 | 18 | 15 |

NOTE: The dots (.) denote ASA 650, 500, 320, 250, 160, 125, 80, 64, 40 and 32. The interval between two numbers is split into three segments, each with a click stop.

*ASA and DIN indicate units of film sensitive to light.





- 2** Set the camera on automatic by aligning the "A" marks of both the shutter speed and diaphragm rings with the "arrow" mark on the outer lens barrel.

CAUTION... When setting the camera for automatic operation :

For fully automatic exposure, be sure to align both "A" marks with the "arrow". If either the diaphragm or shutter speed rings are not aligned precisely with the "arrow" the automatic mechanism of the Minolta Hi-matic 7 will not function.

Using the Viewfinder Warning Signals

When looking through the viewfinder, an EV scale and indicator needle can be clearly seen on the right side.

If the needle is clear of the upper or lower red warning zones, the automatic exposure system will function to give you proper exposure.

If the needle remains in the top warning zone, you do not have enough light for proper automatic exposure. At such times, use a flash unit to provide additional light or disengage the automatic system to keep shutter open longer than 1/15th second.

If the needle remains in the lower warning zone, you have too much light for proper automatic exposure. At such times, use a filter to reduce light or disengage the automatic system to operate shutter at speeds higher than 1/250th sec.

CAUTION . . . When viewing warning marks :

- 1) If the needle points to 5.7, the shutter speed is set at 1/15th sec. and there is a possibility of picture blur.
- 2) The automatic system operates over a range from EV 5.7 (f/1.8 at 1/15th sec.) to EV 17 (f/22 at 1/250th sec.)



Unproper exposure



proper exposure





Turn the shutter speed ring, first.



Turn the diaphragm ring.

How to Use the Minolta Hi-matic 7s Manually

For unusual conditions or for special effects and techniques, you may want to operate the camera manually selecting the shutter speed and aperture yourself.

- 1) Move the "A" marks away from the "arrow" by pressing the AUTO release button (on the right side of the lens) and turning the shutter speed ring. Then, turn the diaphragm ring.
- 2) You are now in complete command of the camera (just as with any fine 35mm camera) and can set any shutter speed or aperture opening combination you wish.

How to Use the Minolta Hi-matic 7s Semi-Automatically (Using the Exposure Meter)



Even after disengaging the automatic system you can, if you wish, use it as an independent exposure meter. When using the Minolta Hi-matic 7s this way, aim at your subject, and watch the point to which the indicator needle moves on the EV scale. Set this EV number in the EV window on the lens barrel.

CAUTION . . . When using the exposure meter :

- 1) When being used semi-automatically, the exposure meter operates over a range from EV 5.7 to 1
- 2) When using the self-timer utilize this exposure method.
- 3) If you set the aperture opening first, you cannot set the shutter speed ring to an intermediate speed between click-stop positions.



- 1) Press the AUTO release button and set any shutter speed you wish.
- 2) Read the EV figure indicated by the needle in the viewfinder. Then set the figure in the EV window, by turning the diaphragm ring.
- 3) You may also set the aperture opening first and then move the shutter speed ring to obtain the correct EV number.

A good picture depends on many factors . . . one of which is the proper holding of the camera. If your grip is unsteady, the movement of the camera can ruin your photograph. It is a good idea to practice holding the camera (either horizontally or vertically).

Holding the Camera Horizontally

This position assures you of a better grip with less chance of moving the camera as you can hold it firmly with both hands. Press your elbows tight to your body and release the shutter gently in order to avoid movement of the camera.

It is best to focus with the right eye for sequence shooting in order to prevent the film advance lever from coming into contact with your face.





Holding the Camera Vertically

In this position the shutter release button may be pressed with either the thumb or index finger. Use whichever is more convenient for you.

How to Look through the Viewfinder

When viewing your subject through the camera's viewfinder, you can see a "bright frame" surrounding the visual field. The area within this frame is what will appear on the film.



As you focus, you will actually see the bright frame lines moving. This provides automatic compensation for parallax and gives you a corrected field of vision. The bright frame lines prevent you from inadvertently "cutting off" the head or legs of your subject.

When focusing at long distance



When focusing at short distance



How to Focus

Look through the viewfinder with your eye at the center of the eyepiece. Then, turn the focusing lever until the double image seen, in the "diamond" at center of the viewfinder, overlaps into one sharp image.



Out-of-Focus

When the subject is seen as a double image in the "diamond", the camera is not properly focused.



Proper Focus

If your subject dissolves into a single image in the "diamond" as shown in the photo, the subject is in sharp focus. The distance from the camera to the subject is indicated on the distance scale of the focusing ring.

Depth-of-Field

When the lens is accurately focused, there is a certain depth considered to be in focus both in the foreground and the background. This is called "depth-of-field".

Depth-of-field becomes deeper as the aperture opening is made smaller (closing the diaphragm) and shallower as the aperture opening is made larger (opening the diaphragm).

Consequently, it is sometimes necessary to select a proper aperture opening depending on your subject. In this case, disengage the automatic system, operate the camera manually utilizing the depth-of-field chart that follows.



At full aperture opening



At smallest aperture opening

How to Read the Depth-of-Field Chart

Look at the photo below. According to the chart (next page), when the distance from the camera to the subject is approximately 10 feet (3m) and the lens aperture is set at $f/8$, everything from approximately 7 feet (2.2m) to 16 feet (4.8m), both in front and behind the subject, will be in sharp focus.



Depth-of-Field Chart (40mm F/1.8 Lens)

F No. Dist. (ft.)	1.0	1.5	2	3.0	4	5	10	20
∞	∞	∞	∞	∞	∞	∞	∞	∞
10'	100'	120'	140'	170'	190'	210'	240'	270'
20'	40'	47'	54'	65'	73'	80'	92'	104'
30'	26'	31'	36'	43'	49'	54'	63'	71'
40'	19'	23'	27'	32'	37'	41'	48'	55'
50'	15'	18'	21'	25'	29'	32'	38'	44'
60'	13'	15'	18'	21'	24'	27'	32'	37'
70'	11'	13'	15'	18'	21'	23'	28'	33'
80'	10'	12'	14'	17'	19'	21'	26'	31'
90'	9'	11'	13'	16'	18'	20'	24'	29'
100'	8'	10'	12'	15'	17'	19'	23'	28'
150'	5'	7'	8'	10'	12'	13'	16'	19'
200'	4'	5'	6'	8'	9'	10'	12'	15'
300'	3'	4'	5'	6'	7'	8'	10'	12'
400'	2'	3'	4'	5'	6'	7'	9'	11'
500'	2'	3'	4'	5'	6'	7'	8'	10'
600'	2'	3'	4'	5'	6'	7'	8'	9'
700'	2'	3'	4'	5'	6'	7'	8'	9'
800'	2'	3'	4'	5'	6'	7'	8'	9'
900'	2'	3'	4'	5'	6'	7'	8'	9'
1000'	2'	3'	4'	5'	6'	7'	8'	9'

F No. Dist. (m)	1.0	1.5	2	3.0	4	5	10	20
∞	∞	∞	∞	∞	∞	∞	∞	∞
10'	30.5	36.6	42.7	51.8	57.9	64.0	76.2	85.3
20'	12.2	14.6	17.1	20.7	23.2	25.6	30.5	34.4
30'	8.1	9.8	11.6	14.1	15.8	17.4	21.2	24.3
40'	6.1	7.3	8.5	10.4	11.6	12.8	15.5	17.7
50'	4.9	5.9	6.9	8.4	9.5	10.5	12.8	14.6
60'	4.1	4.9	5.7	6.9	7.9	8.7	10.7	12.2
70'	3.6	4.3	5.0	6.1	7.0	7.7	9.5	10.9
80'	3.2	3.9	4.5	5.5	6.3	6.9	8.5	9.7
90'	2.9	3.5	4.1	5.0	5.7	6.3	7.8	9.0
100'	2.7	3.3	3.8	4.7	5.3	5.8	7.2	8.3
150'	1.8	2.2	2.6	3.1	3.5	3.8	4.7	5.5
200'	1.4	1.7	2.0	2.4	2.7	2.9	3.6	4.2
300'	1.0	1.2	1.4	1.7	1.9	2.1	2.6	3.0
400'	.8	1.0	1.2	1.4	1.6	1.7	2.1	2.5
500'	.7	.9	1.1	1.3	1.4	1.5	1.9	2.2
600'	.6	.8	1.0	1.2	1.3	1.4	1.7	2.0
700'	.6	.8	1.0	1.2	1.3	1.4	1.6	1.9
800'	.6	.8	1.0	1.2	1.3	1.4	1.6	1.8
900'	.6	.8	1.0	1.2	1.3	1.4	1.6	1.8
1000'	.6	.8	1.0	1.2	1.3	1.4	1.6	1.8

The self-timer delays shutter release for about 10 seconds after you press the button, thus allowing time for you to get into the picture yourself.

- 1) Disengage the automatic system and determine proper settings.
- 2) Advance the winding lever.
- 3) Move the self-timer lever to the "V" mark.
- 4) Press the shutter release button. The self-timer operates for about 10 sec. At this time the shutter will automatically be released.

NOTE: To disengage the automatic exposure system see page 18.

The self-timer will not operate if the camera is set for automatic exposure.



How to Take Flash Photography

Flash bulbs and electronic flash units are used for indoor and night photography or for shooting in shaded areas.

1. Attach the flash unit.

The Minolta Hi-matic 7s is equipped with a cordless (and cord) flash contact. When using Minolta Duo-Fit Flashgun or Minolta Flashcube Gun, all you must do is to slide the unit into the accessory shoe. If you use a flash unit which has a cord contact, be sure to attach the terminal of the cord to the synchro terminal on the lens barrel of the camera.

NOTE: Be sure not to insert a bulb into the flashgun unit until it has been properly attached to the camera.

2. Determine the correct exposure.

To determine the correct exposure for flash photography, refer to the guide number of the flash unit you are using, and see the next page.

When using a M-class flash bulb, set the shutter speed to **1/30th second**.

When using a electronic flash unit, you may set any shutter speed.



3. You are now ready to shoot your picture.

How to determine the correct exposure.

With the guide number known, the correct aperture can be determined by using the following formula :

$$\text{Aperture (F-stop)} = \frac{\text{Guide Number}}{\text{Distance to Subject}}$$

CAUTION

- 1) When using the Minolta Duo-Fit Flashgun or Minolta Flashcube Gun, select a guide number from the table shown on its back.
- 2) When using other flashguns, check their guide number table or instructions.
- 3) The guide number shown on the box of flash bulbs is based on its use with a highly polished reflector. If these guide numbers are used with dull reflectors, pictures will tend to be under-exposed.







- 1** To unload the film, depress the rewind button on the bottom of the camera. The button will remain depressed if you remove your finger. If, however, it returns to its regular position, rewind the film for approximately 2 revolutions while depressing the button. Then turn the film advance lever completely without depressing the button. And depress it again. This should lock it into the depressed position.



- 2** Lift the rewind crank and turn it clockwise. This will rewind the film into the magazine. When all but the film leader is completely rewound and off the camera's spool, the red signal in the Film Load Window will disappear. After one or two more turns, you will feel a slight resistance. This means that the film, including leader, has left the spool and is completely rewound.



- 3** Once the film has been rewound, open the back cover and remove the film magazine.



CAUTION . . . When rewinding film :

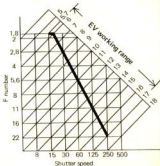
When the red signal in the Film Load Window disappears, turn the rewind crank for one or two more revolutions before opening the camera.

Programmed Shutter

The programmed shutter in the Minolta Hi-matic 7s is designed to select the optimum shutter speed/aperture combination automatically...depending on the brightness of the subject.

All you do is to aim, focus and shoot.

The programmed shutter works over a range from EV 5.7 to 17. The right diagram indicates the relations between shutter speeds and aperture openings.



Filters

UV: This filter absorbs excessive ultraviolet light when shooting mountain, snow, sea and other distance scenes.

Y-48 (Yellow): For black & white photography. This filter renders red and yellow objects lighter than the eye sees them. It can also be used to darken skies; emphasize clouds.

R-59 (Red): Used for panchromatic as well as infrared films. Darkens blue subjects and lightens red and green objects. Yields unusual nighttime effect in daylight photography.

G-O (Green): For black & white films. Ideal outdoor filter where more pleasing fresh tones are desired in portraits against the sky. Also renders beautiful black & white photos of landscapes, blossoms, and natural sky appearance.

O-54 (Orange): For black & white films. Absorbs ultra-violet and blue light, thereby making blue tones appear darker. Excellent for marine scenes and aerial photography.





Minolta Lens Shade

The lens shade prevents extraneous harmful light from entering the lens, and is recommended for all outdoor photography.



Minolta De Luxe Flash Gun

The powerful Minolta De Luxe III Gun enables you to take photographs at any time and in any place.



Minolta Duo-Fit Flashgun

This compact flashgun has a unique design for extremely efficient operation. When used with the Minolta Hi-matic 7s, it operates without cord. It is also equipped with a self-stored cord for use with cord terminal cameras.



Minolta Mini 35 II Projector

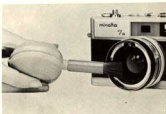
Small, light and compact, the Minolta Mini 35 II projector comes with carrying case. This handy little projector provides amazing projection power. Automatic slide changer, blower and conversion lens are available as optional accessories.

Be sure not to touch the camera lens. If this is accidentally done, wipe it gently with a clean soft cloth.

If the chrome parts of the camera are stained, use a soft cloth and benzine to clean them.

If the camera is not to be used for over a month, be sure to remove the mercury battery.

When storing the camera, keep it where temperature and humidity are relatively low. Also, do not store the camera near chemicals which contain salt. It is advisable to keep the camera in an air-tight container together with silica-gel (drying agent).



MEMO



Minolta means better pictures

Minolta

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