

Specifications of Minolta Hi-matic 7s

Lens: Takumar FF AF55mm F1.8
Construction: 8 elements in 5 groups
Angle of View: 52°
Diaphragm: Click stops at each engraved aperture value: f/1.8, f/2.8, f/4, f/5.6, f/8, f/11, f/16, f/22 (or manual operation)
Filter Mount: Lens Shade Mount
Shutter: Self-CO-LIA fully automatic programmed shutter with manual control
Automatic Operation: EV 5.7 (1/8 sec.) to EV 17.0 (22 at 1/2500 sec.)
Manual Operation: 8, 1/16, 1/8, 1/25, 1/30, 1/60, 1/125, 1/250 and 1/500 sec. engraved click stop
Synchro Contact: Built-in at 1/60 sec.
Self-Timer: About 15 seconds delay on manual control
Film Winding: Lever, wind, quick wind automatically locks, advances film and film counter and prevents double exposure
Winding Method: ZP
Wind-Release: ZP
Film Counter: Automatic resetting counter shows number of frames exposed
Film Rewinding: Rapid rewind crank
Frame Size: Standard 35mm film, 20 or 36 exposure magazine
Film: Standard 35mm film, 20 or 36 exposure magazine

Finder: Titled bright frame viewfinder with automatic parallax correction
Viewfinder: Titled in the viewfinder shows the proper EV number, over/under exposure warning
Focusing: Click-actuated housing coupled to zoom-imposed rangefinder
Minimum Focusing Distance: 3 ft. 10 in.
Exposure Meter: Built-in CLC Compensator Light Compensator exposure meter in the lens barrel coupled to programmed shutter, automatically compensates for films or lens attachments
ASA-DIN Scale: ASA 200, 400, 800, 1600
Film Speed Range: EV 5.7 (1/8 sec.) to EV 17.0 (22 at 1/2500 sec.)
Warning Range: EV 17.0 (22 at 1/2500 sec.) with any film
Battery: 1.35V button-type mercury battery for photographic applications
Other Features: SLS (Self-Loading System) shows proper film load and transport. Easy loading with specially designed multipurpose take-up spool. Complete cord lock contact.
Size: Height: 3.1" (80mm), Width: 5.17" (132mm), Front to back including lens: 2.7" (69mm)
Weight: 254 cc (720g), w. 11g

How to Insert the Mercury Battery

The automatic electric eye system in the Minolta Hi-matic 7s is powered by a long-life mercury battery which must be properly inserted 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, insert the battery in the chamber with its plus (+) side up, as indicated by arrow on the inside of the cover. Then replace the cover.
3. If the camera is not in use, be sure to turn the cover screws of the battery "off" to prevent the film speed from the "OFF" position.
4. The Minolta Hi-matic 7s uses a 1.35V button-type mercury battery for photographic applications. (Equivalent battery: PX13, PX625, RM-625 or equivalent.)
 Zuiyo KOGAKU Co., Ltd.
 6-6-2, Zuiyo Bldg.
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A Quick Guide to Using Your Minolta Hi-matic 7s Automatically

1. Insert the film magazine into the film chamber, close the camera and wind the film advance lever until the number "1" appears in the film counter window.
2. Set the film speed on the ASA/DIN scale. Turn the "A" mark of both the shutter speed and diaphragm ring 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 which is visible through the viewfinder. The needle is clear of the upper or lower red warning zone, 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 its records 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 fit into one of the film slots, slide the magazine axis down and set it properly in the second slot. On the resulting click or counter click stop, until the magazine film ends the proper position.
3. Insert the film leader about 1/2 inch into one of the slots on the take-up spool. Be sure that the film perforation is engaged with the tooth in the slot.
4. From the sprocket gear teeth with the film perforation, advance the film advance lever slowly from full manual, while press 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. It indicates the film advance lever stop. It also indicates 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 signal that the film has been loaded and advanced properly. The red mark appears in the right-hand of the window.

A Few Words of Caution

1. When handling the film leader into one of the slots of the take-up spool, be sure to engage the tooth of the film perforation with the tooth in the slot.
2. After placing the film magazine into the film chamber be sure to engage the film perforation with the tooth of the sprocket gear on film slot.
3. Be sure to load or contact the film in the shade to prevent it from being damaged from exposure to direct sunlight.

How to Take Pictures Automatically

The Minolta Hi-matic 7s is equipped with a programmed shutter and an advanced electric eye system to combine maximum accuracy with the greatest camera 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 an photographic skill or experience is necessary.

1. Set the film speed rating by moving the base of the ASA/DIN indicator at the bottom of the lens barrel to the corresponding number of the film's speed. (The ASA and DIN scales are engraved ASA: 100, 200, 400, 800, 1600, 3200, 6400, 12800, 25600; DIN: 30, 27, 24, 21, 18, 15, 12, 9, 8, 7, 6, 5, 4, 3, 2, 1.)
NOTE: The work of 1 minute ASA 800, 320, 200, 100, 125, 80, 40 and 32. The automatic system functions up to ISO speed 12800. The minimum ISO speed is 1/1250 sec.
 If the needle remains in the top warning zone, you do not have enough light for proper automatic exposure. In such case, use a flash unit to provide additional light. (See page 13 for details.)
 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 change the automatic system to operate shutter at speeds higher than 1/2500 sec.

Using the Viewfinder Warning Signals

When looking through the viewfinder, an EV scale and indicator needle can be seen on the right-hand side of the viewfinder. If the needle is clear of the upper or lower red warning zone, 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. In such case, use a flash unit to provide additional light. (See page 13 for details.)
 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 change the automatic system to operate shutter at speeds higher than 1/2500 sec.

CAUTION - When viewing warning marks:

- 1) If the needle points to EV 17, the shutter speed is set at 1/2500 sec. and there is a possibility of picture blur.
- 2) The automatic system operates over a range from EV 5.7 (1/8 sec.) at 1/1250 sec. to EV 17.0 (22 at 1/2500 sec.)

How to Insert the Mercury Battery

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3. If the camera is not in use, be sure to turn the cover screws of the battery "off" to prevent the film speed from the "OFF" position.
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2. Set the film speed on the ASA/DIN scale. Turn the "A" mark of both the shutter speed and diaphragm ring 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 which is visible through the viewfinder. The needle is clear of the upper or lower red warning zone, the automatic exposure system can be regarded as functioning properly to give you the optimum exposure.
4. Release the shutter.

Disengaging the Automatic System **How to Use the Minolta Hi-matic 7x Semi-Automatically (Using the Exposure Meter)**



Turn the shutter speed ring, first.
How to Use the Minolta Hi-matic 7x 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 "T" mark away from the "green".
 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 speed ring. Then, turn the diaphragm ring.



Then after disengaging the automatic system you can, if you wish, use it as an independent exposure meter. When using the Minolta Hi-matic 7x this way, aim at your subject, and watch the spot to which the indicator needle points on the EV scale. Set this EV number in the EV window on the lens-barrel.
CAUTION: When using the exposure meter:
 1) When using used semi-automatically, the exposure meter operates over a range from EV 5.7 to 1.
 2) When using the auto-focus, the exposure meter is not used.
 3) If you set the aperture opening first, you cannot set the shutter speed ring to an intermediate speed between full-stop positions.

How to Hold the Minolta Hi-matic 7x

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).

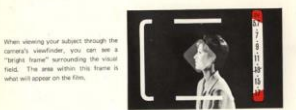


Holding the Camera Horizontally
 This position leaves you of a better grip with less chance of moving the camera as you are held in firmly with both hands. Press your elbows tight to your body and release the shutter gently in order to avoid movement of the camera.
 It is best to focus with the right eye for accurate focusing 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, like whatever is more convenient for you.

How to Look through the Viewfinder



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



How to Focus **Depth-of-Field**

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



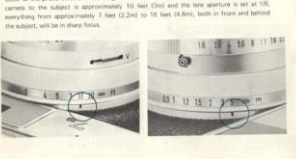
Out of Focus
 When the subject is seen as a double image in the "diamond", the camera is not properly focused.

Proper Focus
 If your subject overlaps 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.

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 smaller as the aperture opening is made larger (opening the diaphragm) and shallower as the aperture opening is made larger (opening the diaphragm).
 Conversely, it is sometimes necessary to select a smaller aperture opening depending on your subject. In this case, disengage the automatic system, operate the camera manually rotating the depth-of-field scale that follows.



How to Read the Depth-of-Field Chart **Depth-of-Field Chart (Taken F1.8 Subject)**



Look at the photo below. According to the chart (next page), when the distance from the camera to the subject is approximately 10 feet (3.0m) 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.

Distance from Camera (ft)	Distance from Camera (m)	f/1.8	f/2.0	f/2.2	f/2.5	f/2.8	f/3.2	f/3.6	f/4.0	f/4.5	f/5.0	f/5.6	f/6.3	f/7.1	f/8.0	f/9.0	f/10.0	f/11.3	f/12.5	f/14.3	f/16.0	f/18.0	f/20.0	f/22.5	f/25.0	f/28.0	f/32.0	f/36.0	f/40.0	f/45.0	f/50.0	f/56.0	f/63.0	f/71.0	f/80.0	f/90.0	f/100.0	
10	3.0	10	9.5	9.0	8.5	8.0	7.5	7.0	6.5	6.0	5.5	5.0	4.5	4.0	3.5	3.0	2.8	2.6	2.4	2.2	2.0	1.8	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1

How to Use the Self-Timer **How to Take Flash Photography**

The self-timer delays shutter release for 10 seconds after you press the bulb. Find following time for you to get into the picture yourself.
 1) Disengage the automatic system and determine proper settings.
 2) Advance the winding front.
 3) Move the self-timer lever to the "M" 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 15.
 The self-timer will not operate if the camera lens is not for automatic exposure.

Flash bulbs and electronic flash units are used for indoor and night photography or for shooting in outdoor areas.
Attach the Flash Unit
 The Minolta Hi-matic 7x is equipped with a Minolta Duo-Fin Flashgun or Minolta Flash-Gun. All you need do is to slide the unit into the accessory shoe. If you use a flash unit which has a cord connector, be sure to attach the terminal of the cord to the bracket provided on the lens barrel of the camera.
NOTE: Be sure not to insert a bulb into the four-pin unit until it has been properly attached to the camera.
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 use the next page. (When using a 35mm flash bulb, set the shutter speed to 1/250 sec.)
 When using a electronic flash unit, you may set any shutter speed.

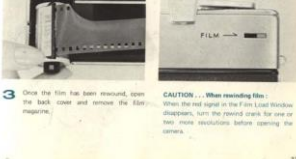
How to Unload the Film

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:
 Aperture (f-stop) = Guide Number / Distance to Subject
CAUTION:
 1) When using the Minolta Duo-Fin Flashgun or Minolta Flash-Gun, select a guide number from the table above on its back.
 2) When using other flashguns, check their guide number table (or instruction).
 3) The guide number shown on the back 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.



How to Unload the Film

1 To unload the film, depress the metal button on the bottom of the camera. The button will recessed if you remove your finger. It, however, it returns to its regular position, rewind the film for approximately 2 revolutions while depressing the button. To be sure the film is completely rewound depress the button. And depress it again. This should lock it into the depressed position.
2 Lift the rewound crank and turn it clockwise. This will wind the film into the magazine. When all film for film leader is completely removed, lift off the camera's spring that red signal. If the Film Load Window will disappear. If not more turns, you will feel a slight resistance. This means that the film, including leader, has left the barrel and is completely rewound.



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 aim, focus and shoot. The programmed shutter works over a range from EV 6.7 to 17. The right diagram indicates the relations between shutter speed and aperture opening.

Accessories

Film

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

V-48 (Yellow) - For black & white photography. This clear, neutral red and yellow absorbs lighter than the eye sees them. It can also be used to remove blue haze from the sky.

R-55 (Red) - Used for panchromatic as well as infrared film. Darkens blue subjects and lightens red and green objects. Yields unusual nighttime effect in daylight photography.

GO (Green) - For black & white films that contain film where more pleasing red tones are desired in portraits against the sky. Also renders beautiful black & white photos of landscapes, blossoms, and natural sky appearances.

O-54 (Orange) - For black & white films. Absorbs ultraviolet and blue light. Deepens 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 II Gun enables you to take photographs at any time and in any place.

Minolta Duo Pin Flashgun

This compact design has a unique design for extremely efficient operation. When used with the Minolta Hi-matic 7s, it operates with-out cords. It is also equipped with a soft-second cord for use with cord terminal camera.

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 change, fitter and conversion lens are available as optional accessories.

Maintenance and Care of Camera

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 soiled, use a soft cloth and bristles 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 reasonably 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 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 fun-filled than ever before possible. For example, the accurate electric eye in the Minolta Hi-matic 7s is based on the patented "CLC" (Correct Light Compensation) 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 breathing a burst!"

These include Minolta's "SLF" (Safety Loading System) for rapid, trouble-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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Minolta Hi-matic 7s

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