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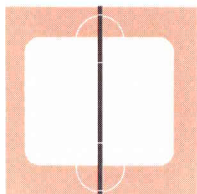
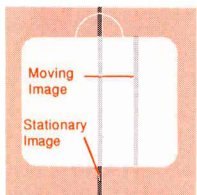
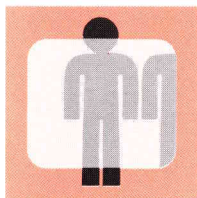
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Focusing the Lens



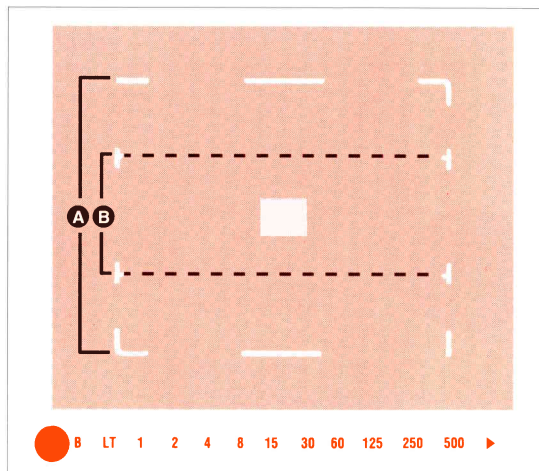
When the lens has been focused, the double image superimposing rangefinder produces two superimposed images with in the square □ of the viewfinder.

How To:

1. Position the subject within the central square □ of the viewfinder. As on the top left the subject will appear as a double images.
2. Rotate the focusing ring until the two images converge and are superimposed as on the figure on the left. The lens is now focused.

The two images can also be superimposed by using the lateral boundary line between the viewfinder and the center rectangle zone or split image. Adjust the images until the boundary lines converge.

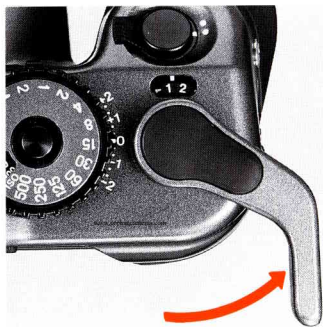
[Photographic area covered]



Within the viewfinder the subject area covered is indicated by the visible bright frame. Parallax is automatically compensated for according to the subject-to-lens distance.

The composition will be within in the lines of the bright frame **A** for 6 x 7 format and **B** for 135 panoramic format. 83% of the field of view is visible at ∞ , and 100% is visible at the minimum focusing distance. The appropriate bright frame area is automatically indexed upon lens interchange.

Taking Photographs



1. Press the shutter release button when you have focused and determined composition.
2. Advance the film by winding the film advance lever until it stops. (The shutter is then cocked.)
3. After completing the last exposure, wind the advance lever several times, until the film with its backing paper is completely wound onto the take-up spool. The advance lever will become easier to actuate when the film has been completely wound on the spool.

★ When the shutter release button is pressed and the film is exposed, a red LED will light on the lower left side of the viewfinder.

[Unloading the film]



When unloading film, avoid direct sunlight.

1. Open the back cover.

See page 12.

When the back cover is opened, the exposure counter will automatically return to "S" (Start).

2. Push the spool stud releases lever to the right in order to disengage the spool from the stud.

3. Simply push the upper rim of the spool with your index finger as shown to lift up the other end of the spool.

4. Then the roll of film can be easily removed from the take-up chamber.

5. Be careful not to let the roll of exposed film unwind. Be sure to seal it immediately.

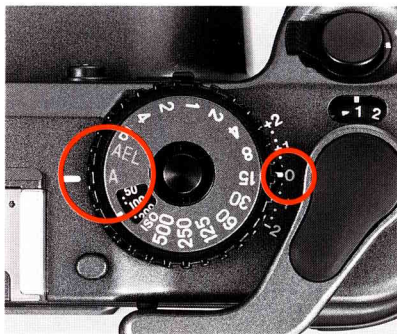
- Do not advance the film too quickly, as this might adversely affect film flatness, or frame spacing.

★ To prepare for another roll, remove the empty spool from the film chamber, and place it in the take-up chamber.

★ Wind the advance lever until it stops. (Otherwise, a red warning Lamp in the viewfinder will signal that it is impossible to press the shutter release button.)

★ To remove the film before exposing the entire roll, cap the lens and press the shutter release button and wind the film onto the take-up spool frame by frame.

AE (Automatic Exposure) Photography



The aperture priority metering device is incorporated into the rangefinder system. The correct shutter speed for the preselected aperture will automatically be determined.

1. Align “A” on the shutter speed dial with the white line index mark on the camera body.
2. Be sure to set the exposure compensation scale to 0. (See page23)
3. Set the aperture to the desired “f” number according to conditions.
4. When the shutter release button is slightly touched, an LED indicating proper exposure will automatically light in the viewfinder.

★ When “▲” LED blinks, it indicates over-exposure. Rotate the aperture ring to stop down to a smaller f/stop until an LED indicates proper exposure.

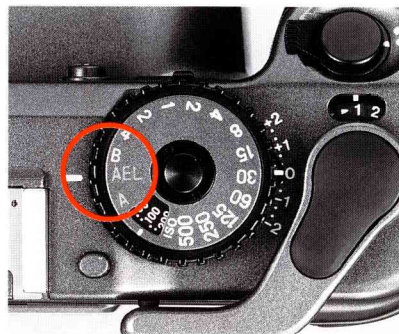
★ Blinking “LT” indicates under-exposure: rotate the aperture ring until the LED stops blinking to increase exposure.

★ Illuminating “LT” indicates that the shutter is set for a relatively long exposure from between 1 to 4 seconds. When taking pictures at such slow speeds you must be able to hold the camera very steady, or increase aperture to obtain higher shutter speeds, or best of all, use a sturdy tripod.

- Under AE (automatic exposure) or AEL (AE lock), the LED display in the viewfinder will continue to operate as long as the shutter release button is touched slightly. When you take your finger off the button, the LEDs will go out.

★ If you cannot get close enough to your subject for another meter reading, make substitute measurements by pointing the camera to light and dark areas and calculate a mean exposure value or try taking a reading off your palm.

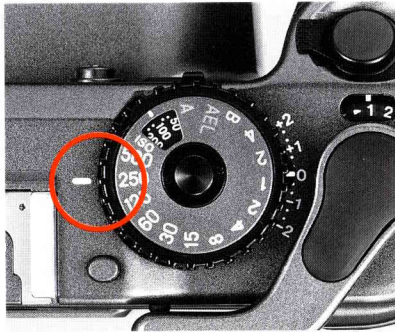
AE Lock(AEL)Photography



The AEL position is very useful when making selective exposure measurements of important subject areas which are not in the center of the finder image when faced with difficult lighting conditions.

1. Rotate the shutter speed dial until “AEL” aligns with the white index mark on the camera body.
2. Position the important part of your subject in the central square of the viewfinder – this will establish the correct exposure. Then touch the shutter release button slightly and an LED will light indicating the correct exposure.
3. In above state, the exposure reading will be memorized. After adjusting for composition as desired, release the shutter.

Manual Photography



You may override the AE mode and select the aperture and shutter speed manually. Simply set the shutter speed against the white line index mark and also set the lens aperture to the desired "f" stop.

1. When the shutter release button is touched gently, the selected shutter speed LED only will be continuously illuminated or another LED may also flash.
2. When the pre-selected shutter speed LED only illuminates, it indicates the shutter speed for correct exposure.
3. When the pre-selected shutter LED illuminates and one other LED blinks, the blinking LED indicates the shutter speed for correct exposure.

4. Turn the shutter speed dial and/or aperture ring to align the two LEDs until merged. The single LED indicates correct shutter speed.

★ When on manual, 10 seconds after activation, the LED indicators will go out, to save battery power. If they do so during metering, press the Shutter Release Button half way again.

Please note:

The LED indicators will disappear 10 seconds after you remove your finger from the shutter release button in the following situations:

- 1) When the film advance lever is not advanced.
- 2) When the light shield curtain is closed.

Self-Timer



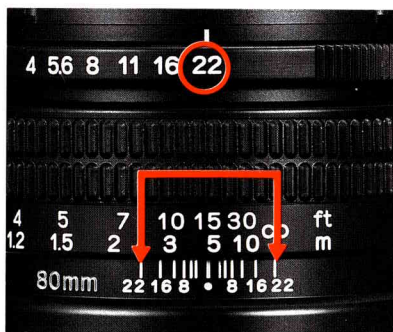
1. The shutter is released about 10 seconds after pressing the self-timer button. The LED on the front of the camera illuminates for about 8 seconds, then blinks for about 2 seconds, and then the shutter is released.
2. The self-timer mode cancels itself automatically.

★ When using the self-timer the camera must rest on a steady support.
 ★ When the shutter is set to "B" (bulb), the self-timer does not operate.
 ★ To override the self-timer, after having pressed the release, press the self-timer button again. Then the self-timer lamp will go out and then the self-timer mode will be canceled.

Depth-of-Field



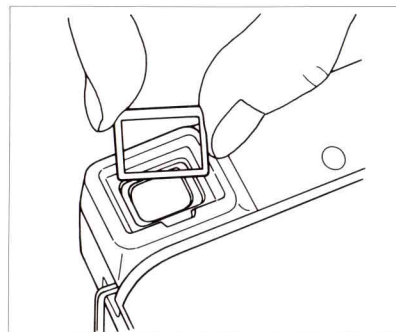
The depth-of-field varies according to the aperture. The smaller the aperture ($f/8$, $f/11$, $f/16$...) the greater the depth-of-field; the larger the aperture ($f/8$, $f/5.6$...) the smaller the depth-of-field. To take pictures which are sharp from foreground to infinity or when taking snap shots, the focusing range is extended or depth increased by using a smaller aperture. When the subject is to stand out, with the background out of focus, a larger aperture is appropriate.



The depth-of-field scale on the lens indicates depth-of-field in terms of the distance between subjects on both sides of the scale. For example, when a 80mm lens is stopped down to $f/8$ and $f/22$, respectively, all objects located within the ranges shown in the illustrations above will be sharp.

★ Refer to the instructions attached to individual lenses for specific depth-of-field tables.

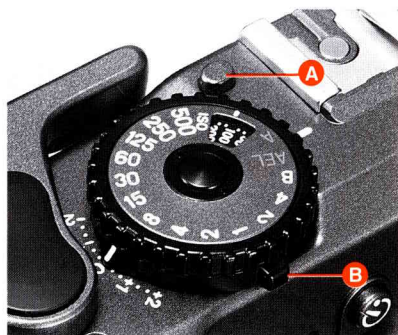
Diopter Correction Lenses



Six types of diopter correcting lenses are available for near/far-sighted people. Mount as indicated above. Powers available are: +3, +2, +1, -1, -2 and -3.

+: Far-Sighted
-: Near-Sighted

Exposure Compensation



The exposure compensator functions in a number of important ways. It can be used to correct exposure values (EVs) or the differences in brightness between a primary subject and its background — especially when over or under-exposures occur. It can also be used when filters are employed or when engaged in available light photography — or under high contrast conditions (i.e. low or high key).

To set, press the compensator lock release button **A**, and move lever **B** to select the desired EV: graduations are 1/3 EV.

[When a filter is used]

Whether using the AE or manual mode simply compensate for the filter exposure factor as indicated in the table below.

★ After using exposure compensation, be sure to reset to “0”.

Filter exposure factor	×1	×1.2	×1.5	×1.7	×2	×2.5	×3	×4
Exposure compensation value (EV)	0	+ $\frac{1}{3}$	+ $\frac{2}{3}$	+ $\frac{2}{3}$	+1	+1 $\frac{1}{3}$	+1 $\frac{2}{3}$	+2

Time Exposures

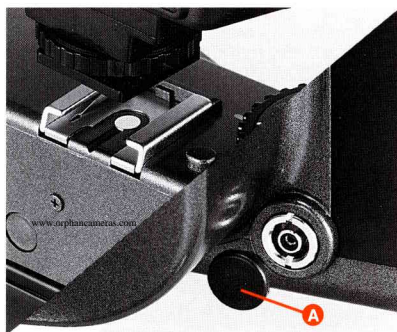


When taking an exposure longer than 4 seconds, set shutter to “B” (bulb). At “B” the shutter will remain open as long as the release is pressed down. In order to prevent camera movement, it is best to use a cable release and tripod.

When set at “B” the self-timer does not work.

The cable release can be screwed in the release socket beside the shutter release button as pictured above.

Flash Photography



The Mamiya 7 features an X synchro flash terminal and its lens shutter system permits flash synchronization at all shutter speeds.

Shoe-mounted flash units can be attached directly to the hot-shoe, while flash brackets can be attached to the tripod socket for larger flash guns.

Remove safety cover **A** to attach sync cord to PC terminal on front left bottom of camera.

[Determining the aperture]

When using automatic flash units, refer to the instructions on the flash unit for correct aperture settings.

When using a manual electronic flash, the guide number divided by subject distance gives the correct aperture.

$$\frac{\text{Guide number (48)}}{\text{Subject distance (6 m)}} = \text{Correct aperture setting (8)}$$

★ Charged electronic flash units sometimes fire when they are attached to the camera. This does not indicate a defective circuit.

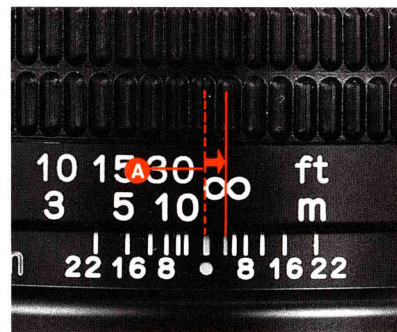
★ When using electronic flash, be sure to read its manual carefully.

★ Be careful, if electronic flash is used at the "A" (Auto exposure) mode, over-exposure may occur.

CAUTION:

When an electronic flash is connected to the hot-shoe, current moves through the X contact. So, be sure to put the safety cover supplied with the camera on the X contact so that you will not receive an electric shock.

Infrared Photography



When using infrared film, it is necessary to make a focusing adjustment in order to achieve accurate focus. This is because the focus position of the image deviates from normal since the infrared ray wavelength is longer. After focusing in the usual manner, check the distance on the distance scale that is aligned with the center reference mark of the lens. Make the focusing adjustment by turning the focusing ring in the direction of the arrow in the accompanying photograph so that the distance just observed is aligned with the infrared mark.

When using infrared film, be sure to read the instructions with the film.

How to Hold the Camera



Because most out of focus pictures are the result of camera movement, make sure not to move when pressing the shutter button. Hold the camera with your elbows close to your body; pressing part of the camera on your forehead will help stabilize it. Then gently release the shutter.

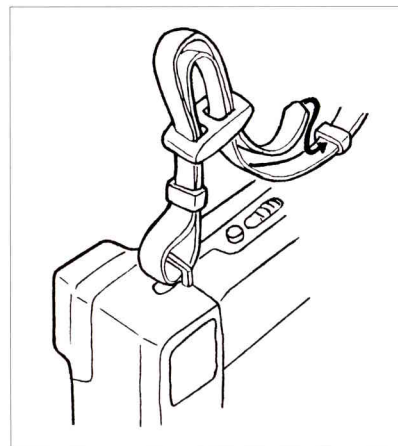
When making exposures longer than 1/30 sec., it is advisable to use a tripod with a cable release.

[Using a tripod]

When using the camera with a large tripod head, the head may interfere with the spool stud, preventing film from being loaded. To prevent this, use the optional tripod adapter N.

- The threaded tripod screw hole is 5.5mm deep and the use of a longer tripod screw might result in damaging the camera. So be careful not to apply unnecessary pressure when mounting the camera.

[Neck strap]



Pass the neck strap through the carrying strap lugs, and fasten it as shown.

TIP:

Be sure to focus the lenses by spanning the lower part of the focusing collar with your fingers, in order not to block the rangefinder window.

Trouble shooting

Uniquely designed to prevent errors, the Mamiya 7 incorporates numerous safety features.

If the shutter will not function, it is very likely due to user error rather than camera malfunction. Should there be problems, be sure to review the following points.

- **When the shutter will not function.**

- ① Is the battery good?
- ② Is the power on/off lever set to the ON position?
- ③ Has the film been completely advanced to the next frame?

Have all the exposures already been made (10 with 120, 20 with 220)?

- ④ Has the film advance lever been moved until it stops?
- ⑤ Is the light shield curtain closed?
(In the case of examples ③ ~ ⑤, the red warning Lamp will flash a warning on the lower left hand corner of the viewfinder.

- **When the lens cannot be removed:**

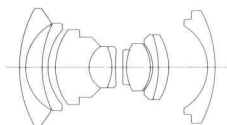
Is the light shield curtain open?

Lenses

N43mm f/4.5L



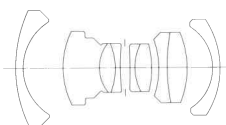
Lens construction: 10 elements in 6 groups
 Angle of view: 92°
 Minimum aperture: 22
 35mm equivalent: 21mm
 Minimum focusing distance: 1m
 Magnification at minimum distance : 0.049
 Area covered: 1145 x 1421mm
 Filter size: 67mm
 Hood: Bayonet type
 Dimensions: 42(L) x 72(D)mm
 Weight: 390g



N65mm f/4L



Lens construction: 9 elements in 5 groups
 Angle of view: 69°
 Minimum aperture: 22
 35mm equivalent: 32mm
 Minimum focusing distance: 1m
 Magnification at minimum distance : 0.078
 Area covered: 719 x 892mm
 Filter size: 58mm
 Hood: Bayonet type
 Dimensions: 65(L) x 67(D)mm
 Weight: 380g



N80mm f/4L



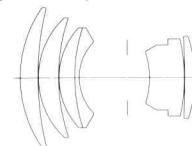
Lens construction: 6 elements in 4 groups
 Angle of view: 58°
 Minimum aperture: 22
 35mm equivalent: 39mm
 Minimum focusing distance: 1m
 Magnification at minimum distance : 0.097
 Area covered: 580 x 719 mm
 Filter size: 58mm
 Hood: Bayonet type
 Dimensions: 56(L) x 67 (D) mm
 Weight: 290g



N150mm f/4.5L



Lens construction: 6 elements in 5 groups
 Angle of view: 34°
 Minimum aperture: 32
 35mm equivalent: 71mm
 Minimum focusing distance: 1.8m
 Magnification at minimum distance : 0.096
 Area covered: 581 x 721 mm
 Filter size: 67mm
 Hood: Bayonet type
 Dimensions: 96(L) x 70(D)mm
 Weight: 520g



Lens hood

For 43mm f/4.5 : Bayonet type
For 65mm f/4 : Bayonet type
For 80mm f/4 : Bayonet type
For 150mm f/4.5: Bayonet type
All are supplied with the lenses.

Diopter correcting Lenses

Focusing accuracy diminishes when the eye diopter is incorrect. So, it is advisable that near and far sighted people use diopter correcting lenses. Fit the proper diopter correcting lens to the eyepiece.
6 types are available: +3, +2, +1, -1, -2, -3.

Tripod adapter N

This is used to mount the camera to tripod head.
Even when the tripod has a large head, the adapter allows film to be loaded, while the camera is attached to the tripod.

Panoramic Adapter Kit AD701

When using the Panoramic Adapter, a wide panoramic photograph can be taken by using 35mm film.

The 135 panoramic Adapter Kit is composed of the following :

- ① 135 Panoramic Mask
- ② Take-up Spool
- ③ Cassette Holder
- ④ Rewind Crank Unit
(Unit Weight : 110g)

- 135 Panoramic Picture Area and the Number of Exposures.

Picture area : 24mm x 65mm

Number of exposures:

135 Film 36EXP	16
135 Film 24EXP	10

The picture area (24 x 65mm) provided by the Mamiya 7 panoramic format is 3.3 x larger the 35mm panoramic format (13 x 36mm).

Note: A panoramic paper slide mount, 24 x 65mm, is also available.

Lens case Type A

The lens case is made of special material which is very soft but tough and fits 65mm, 80mm and 150mm lenses.

Dimension: bottom diameter is 90mm and it is 160mm in length.

External Battery Case PE702

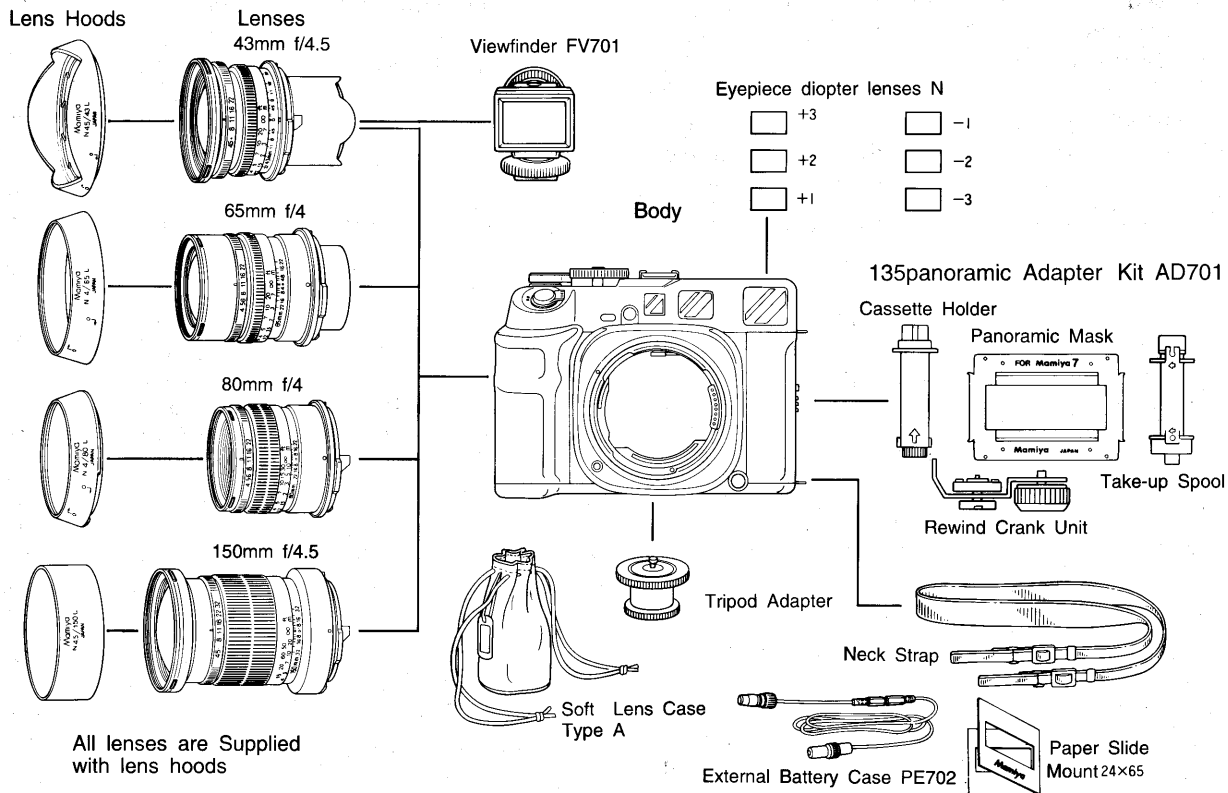
Cold temperatures can affect battery power. Permits camera battery to be worn conveniently inside clothing and connected to battery chamber by wire.

Viewfinder FV701 for 43mm f/4.5 lens

See lens instructions booklet.

System chart

System Chart



Specifications

Type of Camera	: 6 x 7cm format interchangeable lenses, rangefinder camera, double formats (6 x 7 and 35mm panorama)
Film Used	: 120 Roll Film (10 exposures) , 220 Roll Film (20 exposures), 135 Roll Film (16 exposures with 36 exp. film)
Actual Image Size	: 56 x 69.5mm with 120/220 film, 24 x 65mm with 135 film, using Panoramic Adapter Kit
Film winding	: A single 185° stroke
Lens Mount	: Exclusive Bayonet Mount
Lenses	Ultra wide angle : 43mm f/4.5 L with Optical Viewfinder Wide angle : 65mm f/4 L Standard : 80mm f/4 L Telephoto : 150mm f/4.5 L
Shutter	: #00 electronic leaf shutter , B, 4-1/500sec. ,electro-magnetic shutter release, X-contact synchronizing at all shutter speeds with hot-shoe and PC Terminal ; Electronic Self Timer (10 sec. delayed, automatic turn-off)
Exposure Control	: Aperture priority AE , SPD receptor in viewfinder metering range : EV3- EV18 (with 80mm f/4 lens, ISO 100), Exposure compensation : +2 - -2EV (in 1/3EV steps) Film speed range : ISO 25 - 1600
Rangefinder	: Lens declination, double image super imposing system : base length 60mm (effective base length 34.2mm)
Viewfinder	: Coupled with rangefinder : automatic bright line frame indexing (65, 80 and 150mm) : parallax compensation : Magnification ratio : 0.57X : 83% of the field of view visible at infinity : built - in shutter speed and exposure display, safety interlock warning L.E.D.
Internal "Dark Slide" curtain	: To permit changing lenses with loaded camera
Safety Mechanism	: 1. Double exposure prevention 2. Shutter release is locked when internal dark slide curtain is engaged. 3. Shutter release button lock lever
Power Supply	: one 6V (4SR44, 4LR44 or 2CR1/3 lithium) battery
Dimensions	: Camera body : 159(L) x 112(H) x 69(D)mm Body with 80mm lens : 159(L) x 112(H) x 123(D)mm
Weight	: Camera body : 920g Body with 80mm lens : 1,210g

- Specifications and features are subject to change without notice.

Common Sense Camera Care and Practice

The Mamiya 7 is a precision optical/mechanical instrument, built for heavy professional use and a long service life, if properly treated and maintained. Please observe these basic caveats:

- Read instructions before using camera.
- Protect camera against shocks and falls. Use neckstrap supplied with it, whenever possible.
- Check the battery frequently and always carry spares. The sealed battery supplied with the camera may have been subject to storage conditions which have reduced its service life.
- Be sure to wipe battery contacts before installation and watch correct polarity.
- Battery life differs, depending on frequency of use, type, age, storage condition, ambient temperature (use External Battery Case in very cold weather), etc.
- Always remove the battery (and film) when camera is not used for a period of time.
- Always keep covers on lenses and camera body.
- Do not store the camera at temperatures exceeding 40°C (105° F) and -10°C (15°F). Also avoid humid or sea air environment.
- Prolonged disuse shortens camera life. Periodically exercise the shutter (at different speeds, lens diaphragms and focusing mounts).
- Protect camera against rain and moisture.
- Do not touch lens surfaces. Use blower or lens tissue to remove dust particles.

Specific Suggestions:

- Operate the film advance lever with easy strokes. If moved too rapidly it may affect spacing.
- Hold lens focusing mounts on bottom in order not to block range finder window.
- Always test your equipment before going on important assignments.

The Importance of Proper Maintenance

Your camera has mechanisms like film transport, shutter and diaphragm blades, rangefinder couplings, etc. They are controlled by gears, levers, springs, and so on. All require special lubrication from time to time. Ambient conditions can also affect these mechanisms, as well as the electronic components and the optical glass of your lenses. "We therefore suggest that you have your camera and lenses checked, and if necessary serviced, periodically".

Batteries Care

1. The sealed, new battery which is supplied with this camera may have been subject to storage conditions which have reduced its service life. Therefore it is desirable to replace it with a fresh battery as soon as possible.
2. Carefully wipe the battery contacts before inserting into the chamber. Failure to do so may result in poor electrical contact and consequent malfunctioning of the camera.
3. Always remove battery when camera is not used for a while. Always carry spare batteries.
4. Battery life differs, depending on type, age, storage condition, ambient temperature, frequency of use etc.
5. Be sure to match the poles of the battery with those shown in the diagram in the chamber.
6. Always keep batteries out of the reach of children and never throw used batteries into a fire or expose to excessive heat.
7. When going on trips be sure to carry spare batteries to ensure that the camera will function. Also, as batteries tend to temporarily malfunction at temperatures below freezing, when photographing in extremely cold climates, carry the External Battery Case.
8. "When you carry spare batteries, leave them in the original factory packaging. If they are "unpacked", be sure to wrap them carefully in order to prevent them touching each other or any metal objects which can cause them to short circuit and become useless.