This camera manual library is for reference and historical purposes, all rights reserved.

This page is copyright by mike@butkus.org M. Butkus, N.J.
This page may not be sold or distributed without the expressed permission of the producer
I have no connection with any camera company

If you find this manual useful, how about a donation of $3 to: M. Butkus, 29 Lake Ave., High Bridge, NJ 08829-1701 and send your E-mail address too so I can thank you. Most other places would charge you $7.50 for a electronic copy or $18.00 for a hard to read Xerox copy. These donations allow me to continue to buy new manuals and maintain these pages. It'll make you feel better, won't it?

If you use Pay Pal, use the link below. Use the above address for a check, M.O. or cash. Use the E-mail of butkusmi@ptd.net for PayPal.

back to my “Orphancameras” manuals /flash and light meter site

Only one “donation” needed per manual, not per multiple section of a manual !
The large manuals are split only for easy download size.

www.orphancameras.com

mamiya AUTO X 1000

owners
operating manual

www.orphancameras.com

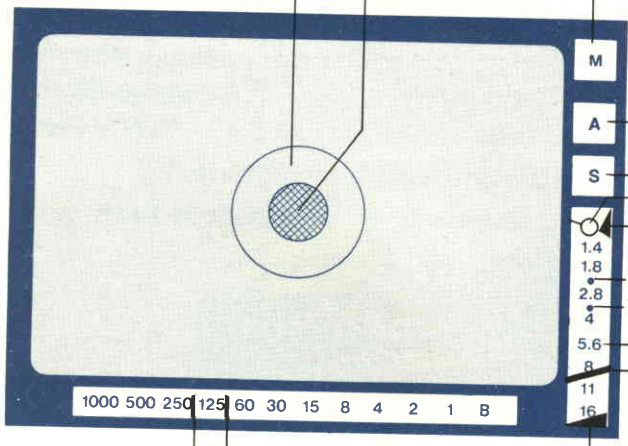
Congratulations

We know that when you purchase an exciting new product like your mamiya Auto X1000 Camera, you want to use it immediately. For this reason, an AUTO X1000 SHORT COURSE appears on page 5, showing how to take a few pictures before you read detailed instructions on all the great features at your command. Have fun!

CONTENTS

www.orphancameras.com

AUTO X1000 CONTROL CENTER



Shutter speed indicator
The shutter speed you select is shown by the indicator.

Overexposure warning mark

f/stop indicator (Exposure meter needle)

Manual indicator
When the lens aperture ring is turned counterclockwise, the green dot (or AUTO) on the ring is separated from alignment with the index, and the letter M appears to indicate that the aperture has been set manually. In this case, the camera will stop the lens down to the f/stop you have manually selected at the moment of exposure.
The letter M (for manual) also appears when a preset lens is attached to the camera, or when an accessory such as the auto bellows is installed between the lens and the camera. Under this condition, the aperture should be set manually so that the f/stop indicator aligns with the stopped-down aperture index.

Spot/average indicator

Stopped-down aperture index
The round mark is the stopped-down aperture operation index.

Underexposure warning mark
This red mark warns of insufficient exposure.
Depending on the "F" number of the lens being used, this red mark automatically travels vertically. When fitted with an f/1.4 lens, the red mark is positioned above the 1.4 mark; and when fitted with an f/1.8 lens, the red mark descends to a position immediately above the 1.8 mark.
When the shutter speed is set to a slow speed, the warning mark occasionally appears below the "F" number position of the lens being used. In this case, change the shutter speed to a faster one, whereby the warning mark will be raised up to the "F" number position of the lens.

f/stop numbers
The f/stop indicator travels vertically over this portion to show what lens opening will be chosen by the camera.

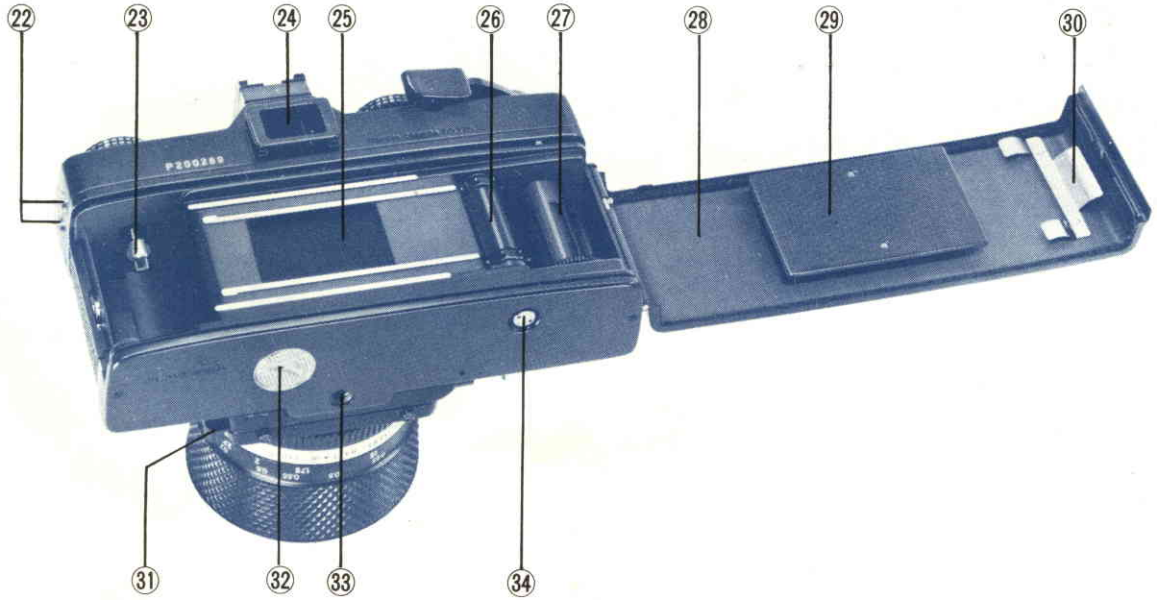
www.orphancameras.com

DESCRIPTION OF PARTS

1. Self-timer
2. Neck strap eye-let
3. Automatic reset exposure counter
4. Meter OFF locking button
5. Shutter release button with threaded cable release receptacle and soft release button
6. Single stroke rapid film advance lever
7. Shutter speed dial and ASA/DIN window
8. Exposure hold control switch
9. Accessory shoe with built-in flash contact
10. Penta-prism housing
11. Film plane reference point
12. Battery test light
13. Rewind knob with rewind crank
14. Battery check button
15. Spot/average meter system selector swhich
16. Depth-of-field preview button
17. Raised red dots for lens mounting and removal
18. Built-in lens hood
19. Lens focus ring
20. Depth-of-field scale

www.orphancameras.com

21. Aperture ring
22. FP and X terminals
23. Film chamber
24. Viewfinder eye-piece
25. Focal plane shutter
26. Film advance sprockets
27. Rapid loading take-up spool
28. Removable hinged compartment door
29. Film pressure plate
30. Film cartridge pressure plate
31. Lens release knob
32. Battery compartment cover
33. Tripod socket
34. Rewind release button



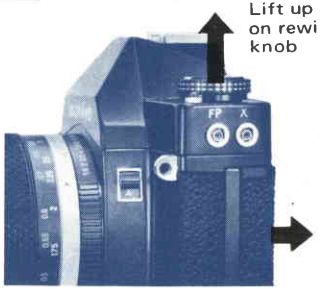
www.orphancameras.com

SHORT COURSE OF INSTRUCTIONS

1 INSERT THE BATTERY AND TEST IT FOR POWER

Push battery test button

2 OPEN CAMERA BACK

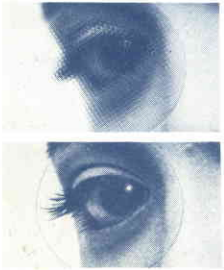


Lift up on rewind knob

3 LOAD THE FILM

Draw out the film leader, and insert the end of the film into one of the slots on the take-up spool. If no slot is in the correct position for insertion of the film, the take-up spool may be rotated by hand until the slot is accessible.

8 FOCUS AND VIEW



Blurred

Sharp

9 USE THE AUTO X1000 VISUAL CONTROL CENTER

When "M" appears, your aperture has been set manually

This tells you that you are using the average meter

This tells you that you are using the spot meter

Red warning flag for under exposure

This needle tells you what lens opening will be chosen by the camera

This is the area measured by spot

This is your shutter speed

www.orphancameras.com

4 SET ASA OF FILM INTO CAMERA'S METERING SYSTEM

Pull up on outer dial and turn until ASA of film being used appears in window.

Set shutter speed — Turn entire dial until 1/60 or 1/125 is opposite index mark.

5 COCK THE SHUTTER

The figure "1" should appear here after three strokes.

Push to right as far as it will go.

6 SET LENS TO GREEN DOT OR AUTO

7 SET SPOT/AVERAGE SWITCH TO "A"

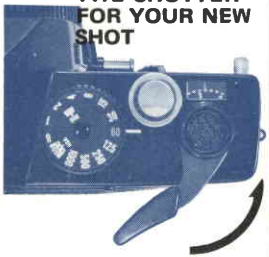
10 HOLD CAMERA CORRECTLY

Take a breath and hold it before you snap the shutter. This helps to steady the camera.

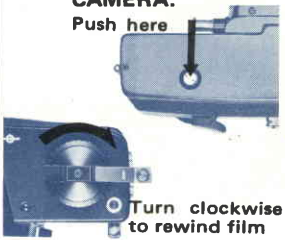
11 TAKE THE PICTURE

Push with slow steady pressure to avoid camera shake.

12 ADVANCE THE FILM AND COCK THE SHUTTER FOR YOUR NEW SHOT



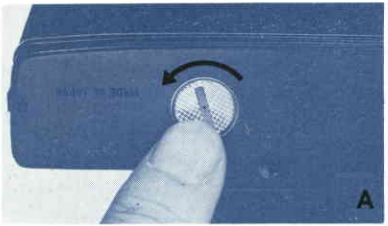
13 REWIND THE FILM WHEN YOU ARE FINISHED AND REMOVE FILM FROM CAMERA.

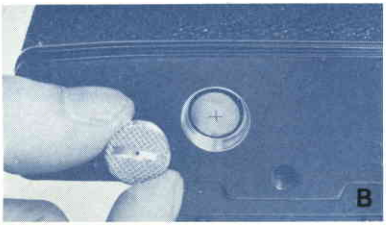


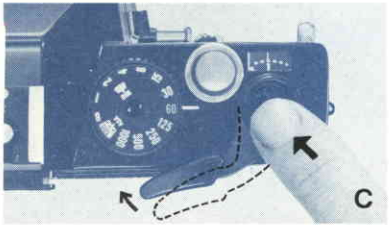
Turn clockwise to rewind film

www.orphancameras.com

1 INSERTING THE BATTERY







Your Auto X1000 Camera is supplied with a silver oxide battery (S-76) especially designed for its unique metering system. It will last approximately one year depending upon use and must only be replaced with an Eveready S-76 battery or equivalent. No other substitute can be used.

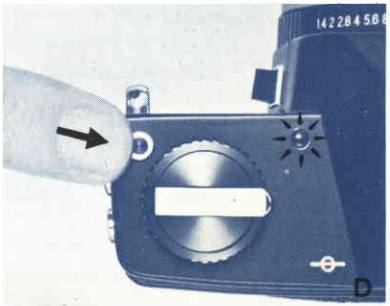
Open the battery compartment on the base of the camera by turning the cover counter-clockwise with your thumb and forefinger, and remove (A). You may use a coin to loosen the cover if it is too tight, but continue to remove it with your thumb or forefinger.

Clean the battery contacts with a clean dry cloth to assure they are free of oil or dust which can interfere with making positive contact. With the (+) sign facing you (B) insert the battery and replace the cover, tightening with thumb and forefinger, turning it clockwise **until it's tight.**

When the camera is not in use, or when changing lenses, always LOCK the meter in the OFF position. To do this, press the button on top of the film advance lever (C).

www.orphancameras.com

2 CHECKING POWER SUPPLY

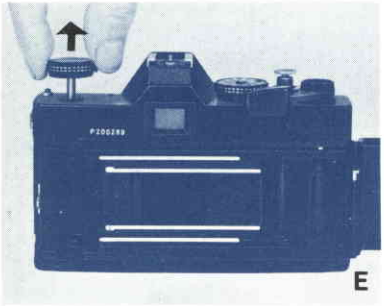


Press the red Battery Check Button located near the Rewind Knob. A green light will show in the small circular window to the right of the Rewind Knob indicating the battery has sufficient power (D).

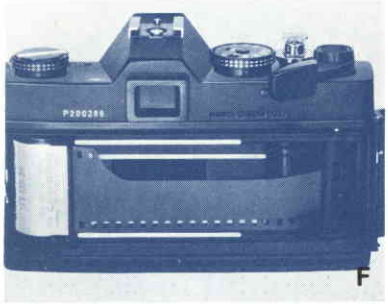
Check periodically in this manner to make sure that the battery is up to operating power.

www.orphancameras.com

3 LOADING THE FILM



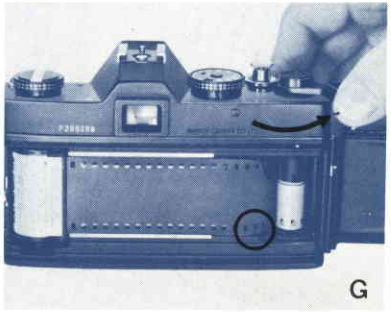
Pull up on the Rewind Knob until lock disengages and film door swings open (E). When you do this the Exposure Counter will automatically return to zero. Drop the film cartridge into the chamber, push down and rotate the Rewind Knob until it drops into its fully seated position.



Rotate the take-up spool with your finger until one of the slots is facing you. (The arrow on the take-up spool indicates the direction in which it rotates). Unwind enough film (about 2 inches) so that the leading edge may be inserted in the slot (F).

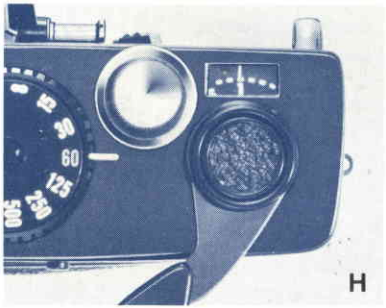
www.orphancameras.com

With slow steady pressure advance the film with the Advance Lever and check to see that the film sprocket holes are engaged in the teeth of the film transport sprocket (G). Close the door firmly until you hear a click. The letter "S" will automatically appear in the Exposure Counter Window every time fresh film is loaded in the camera. Gently turn the Rewind Knob **clockwise** to take up the slack of the film.


G

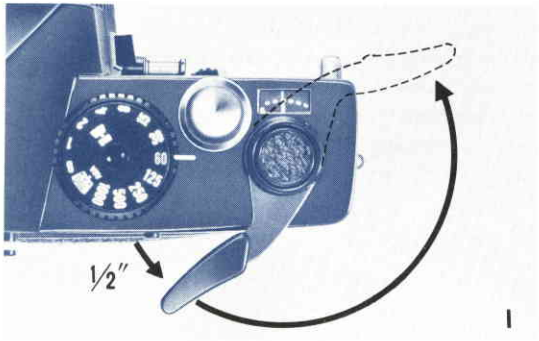
Press the Shutter Button and advance the film by rotating the Film Advance Lever to the right with your thumb until it stops. Release the lever and repeat several times until the figure "1" appears in the Exposure Counter Window (H). As film is advanced, the Rewind Knob will rotate in a counter-clockwise direction indicating that the film is advancing properly.

Your camera is now ready for action.



H

www.orphancameras.com



FILM ADVANCE LEVER

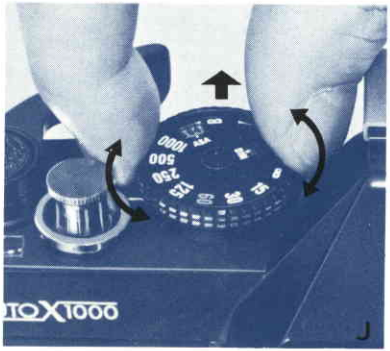
The Film Advance Lever on the camera accomplishes the following operations:

1. Activates the light metering systems.
2. Advances the film forward one full frame.
3. Advances the film (frame) counter.
4. Cocks the shutter.

As the lever is slowly pulled away from the body of the camera (approximately 1/2 inch), it clicks into a position that turns on the light metering systems. By continuing the stroke to the right until the lever stops, it advances the film and cocks the shutter. Release the lever and it returns to the "meter on" position. You may turn off the metering system and snap the lever to its fully seated position by pushing down on the leatherette button on top of the Film Advance Lever (I).

www.orphancameras.com

4 SETTING THE FILM SPEED



Lift the outer ring of the Shutter Speed Dial and rotate it in either direction until the ASA number of the film you are using appears in the window (J). The speed of the film you are using can be found in the data sheet which is packed with the film or printed on the film cassette itself.

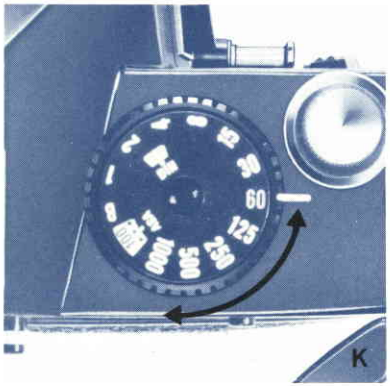
For films using the DIN rating, turn the ring until the corresponding number appears in the window next to the DIN marking.

The table below indicates the ASA and DIN numbers available. The numbers represented by the dots are shown in parentheses next to the respective dot.

ASA	25	32	40	50	64	80	100	125	160	200	• (250)	• (320)	400	• (500)	• (650)	800	• (1000)	• (1250)	1600	• (2000)	• (2500)	3200
DIN	15	• (16)	• (17)	18	• (19)	• (20)	21	• (22)	• (23)	24	• (25)	• (26)	27	• (28)	• (29)	30	• (31)	• (32)	33	• (34)	• (35)	36

www.orphancameras.com

5 SELECTING THE SHUTTER SPEED



The length of time that light is allowed to strike the film is controlled by the focal plane shutter. The shutter consists of two opaque "curtains" which travel across the opening and allow light to reach the film. The speed at which these blinds travel and the gap between the two blinds determines in fractions of a second the exposure time for your picture. For example, 1000 on the dial indicates 1/1000 of a second and 60 indicates 1/60 of a second. The figure 1 indicates one full second. The B setting is used for longer time exposures. At this setting, the shutter will remain open as long as the shutter button is held down. For exposures less than 1/60 of a second, it is advisable to use a cable release, tripod or other steadying devices to avoid camera movement which can result in blurred or fuzzy pictures.

To set the shutter speed rotate the Shutter Speed Dial in either direction until the desired number clicks into place next to the indicator (K). The speed you select is also indicated on the bottom of the viewfinder control center so that you can set the speed without removing the camera from your eye.

IMPORTANT: When selecting a shutter speed, do not pull up on the Shutter Speed Dial or you may inadvertently change the ASA speed setting.

www.orphancameras.com

6 SETTING THE LENS

Now that you have determined the **time** the light will be allowed to strike the **film,** you may set the precise **amount** of light. This amount of light is represented by "f" numbers or f/stops engraved on the lens aperture ring which clicks into place as you rotate it. The f/stop designations indicate the opening formed by the diaphragm of your lens. When operating manually, you may use the "click stops" provided or set your lens at any setting between click stops (L).

www.orphancameras.com

7 FOCUSING AND VIEWING

The **mamiya** Auto X 1000 is a single lens reflex camera. This means that you view the subject through the taking lens. Since the same image is transmitted to the eye as to the film, parallax is eliminated. You see the picture in the viewfinder exactly how it will appear later on your developed prints or slides.

Focusing the Auto X1000 is made easier by the micro diaprism focusing grid in the viewfinder. This small round area in the center of the finder exaggerates the difference between the "in focus" and "out of focus" image (M). By rotating the focusing ring on the lens barrel until the micro diaprism disappears, the image is in focus for both the eye and the film (N). For subjects with irregular outlines, like wooded hillsides, the entire ground glass area of the viewfinder may be used for focusing. In any case (except with infra-red materials) when the image appears to be sharp in the finder, it will be sharp on the film.

INFRA-RED PHOTOGRAPHY

When using infra-red film, first focus the image as above. Then note the distance as represented by the number which appears opposite the footage index mark on the lens barrel. Rotate the focusing ring until this number is opposite the **small** red mark, and the lens will be correctly focused for infra-red photography at that distance. This is necessary because infra-red film is sensitive only to infra-red light rays, which focus on a plane slightly behind that of ordinary light rays.

www.orphancameras.com

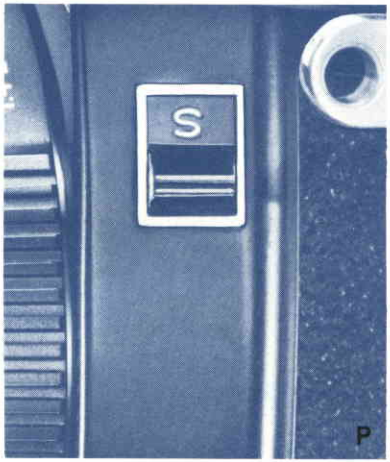
8 USING AUTOMATIC PHOTOGRAPHY

Your **mamiya** Auto X 1000 has a precision dual metering system which frees you from the necessary manual operations of conventional cameras. Now **you can enjoy** complete freedom **and** expression without having to figure out exposure settings. With accurate electronic precision, the Auto X 1000 makes the necessary adjustments for correctly exposed pictures. Just follow these simple steps for automatic operation :

1. Load the camera with film and set the correct ASA speed for the film used.
2. To turn on the metering system pull the Advance Lever away from the camera body approximately 1/2 inch.
3. Select your shutter speed (1/125 for usual outdoor situations).
4. For automatic operation set lens aperture ring so "green dot" (or "AUTO") is next to red index dot (O).
5. Check viewfinder to verify exposure needle is not in red area.
6. Compose and focus your subject in viewfinder and take picture.

www.orphancameras.com

9 SELECTING METER SYSTEM



There are two ways of determining correct exposure with your camera. Whether you use the Spot or the Average system will depend upon the type of picture you are taking.

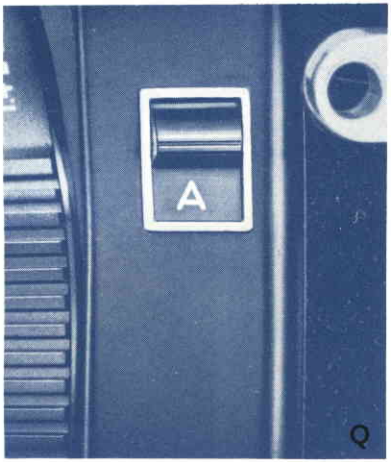
" SPOT " Reading :

The " Spot " method of exposure calculation is especially valuable when the most important area of the picture is either much lighter or much darker than the general picture area, or in landscapes, where sky light would register a much higher reading than trees or buildings at ground level. Such a situation would cause under exposure if the subject were to be measured with a conventional, averaging meter from the camera position. " Spot " reading is also useful for subjects under insufficient lighting such as indoor shots or night scenes.

To obtain a spot reading, move the Spot/Average selector switch down until the letter " S " appears (P).

Looking through the viewfinder you will notice that the letter " S " in a yellow square appears in the right vertical section of the Control Center. This indicates that the metering system is reading about 6% of the total picture you are viewing. Focus the lens so that the subject is critically sharp. Then aim the camera so that the micro diaprism focusing spot in the center of the viewfinder falls upon the most important part of the

www.orphancameras.com



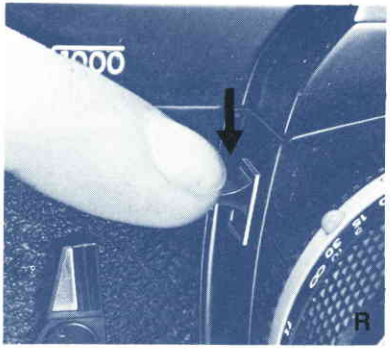
picture you are about to take. Make sure that this spot does not include any part of the picture that is either lighter or darker than the section you are reading.
Now, snap the shutter for perfectly exposed picture.

" AVERAGE " Reading :

When the scene to be photographed is made up of areas of equal importance, an overall, average reading is preferable. Push the Spot/Average selector switch up until the letter " A " appears (Q). The letter " A " in a yellow square will also appear in the right vertical section of the Control Center, indicating that the whole picture is being measured by the meter. Focus on the subject and snap the shutter.

www.orphancameras.com

10 SETTING EXPOSURE HOLD CONTROL



You will encounter some picture taking situations in which you may want to depart from routine metering in the automatic position such as :

1. Your subject is backlighted or sidelit and will not be positioned in the center of the picture ;
2. The most important light falling on your subject is so critical that you have to move in closer to take a reading and then return to your original position.

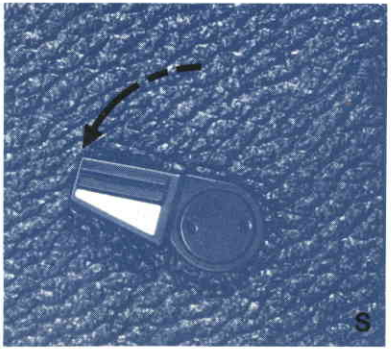
Many creative photographers feel that the best composed photographs do not always have the center of interest in the center of the picture. If this is your preference and if your subject is positioned to either side of the picture as you see it in the viewfinder, you will find the Exposure Hold Control (R) a helpful feature.

Take a close-up reading of the important portion of the picture, press the Exposure Hold Switch and then compose as desired. The Auto X 1000 metering system will " memorize " the exposure until you fire the shutter. If you are taking a portrait in an extremely backlighted situation, you can move up close to your subject and take a spot reading on a portion of your subject's face ; press the exposure hold switch, and then move back to your original position. After you have taken the picture the exposure hold switch will automatically return to its original position so that subsequent photographs will not be affected by the previous " memorized " meter reading.

You can release the exposure hold switch any time by pushing up on it with your fingertip. With a small amount of pressure the exposure hold switch will return to its original position. (In situations where special readings will be repeated, we recommend that you reset the aperture ring on the lens to the f/stop which corresponds with that particular exposure setting. This procedure will ensure that all of your subsequent photographs are made at the special exposure you have selected).

www.orphancameras.com

11 USING SELF TIMER

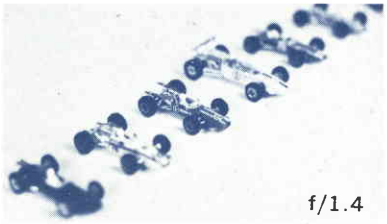


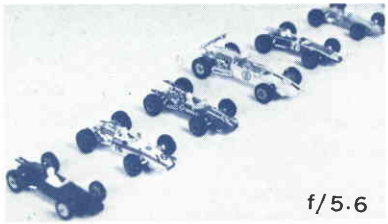
The self timer provides a method of taking delayed action pictures, allowing a photographer to get in to his own pictures!
When the self timer lever is rotated counter-clockwise, it travels approximately 70 degrees, and a delay of eight seconds is provided before the shutter fires. Shorter intervals may be accomplished by rotating the lever for shorter distances anywhere between 30 and 70 degrees (S). The timer is activated by pushing the shutter release button.

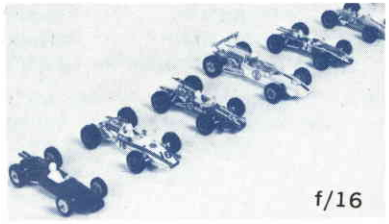
NOTE: If the self timer lever is not rotated at least 30 degrees, the timer will not function properly.

www.orphancameras.com

12 SELECTING DEPTH-OF-FIELD


f/1.4


f/5.6


f/16

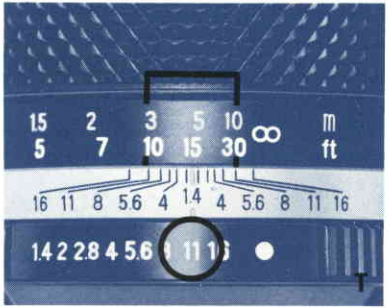
When a camera lens is focused to give a sharp image of a particular subject, some objects slightly behind, as well as some objects slightly ahead of the subject will appear to be sharp. The distance between the nearest and farthest objects, which are in focus, is called Depth-of-field.

Depth-of-field changes each time the f/stop changes, becoming greater as the lens is stopped down toward f/16, while decreasing as the f/stop is opened toward f/1.8 or f/1.4. Other factors influencing depth-of-field are the focal length of the lens and the focusing distance at which the picture is taken. The shorter the focal length and/or the smaller the lens diaphragm opening, the greater the depth-of-field for any given focusing distance, and vice versa.

Proper use of depth-of-field can enable the photographer to utilize the principles of "selective focus" which often means the difference between ordinary snapshots and pictures of quality. For example, the proper selection of a "sharp" zone of focus can eliminate an unwanted object in the background. The same could be true of foreground objects. (See photos to left).

When you wish to view the depth-of-field before taking a picture with the Auto X 1000, focus with the micro diaprism spot as explained before and press the depth-of-field preview button. This causes the lens diaphragm to close (i. e. "stop down"). If you

www.orphancameras.com



have already taken the meter reading, the lens is now at the diaphragm opening at which the picture will be taken.

The depth-of-field will appear in the finder exactly as it will be in the finished picture. By changing the focus while the lens diaphragm is stopped down, you can select the area of sharpness in your picture. When using non-automatic or preset lenses, the diaphragm must be closed manually, but the same results can be achieved.

You may also determine depth-of-field by checking the scale on the lens barrel. Numbers representing lens apertures appear at the near and far limits of depth for any given focus distance and lens opening (T).

For Example, if the standard lens is focused at 15 ft., one of the lines representing f/11 appears at the 10 ft. mark. The other line (again representing f/11) is at the 30 ft. mark. This means that a picture taken with the lens focused at 15 ft., and the diaphragm set at f/11, all objects in the picture between 10 ft. and 30 ft. will be in focus. This method is extremely valuable when the lens diaphragm is stopped down too far to allow enough light for the picture to be viewed through the viewfinder.

www.orphancameras.com

13 CHANGING LENSES

A variety of interchangeable lenses are available to increase your enjoyment of your new **mamiya** Auto X1000 Camera. With the wide angle and telephoto lenses you can take pictures expressing different points of view. Telephoto lenses change the perspective normally associated with shorter focal length lenses. For example, a telephoto lens allows you to move up closer to your subject without physically changing your position. Wide angle lenses allow greater coverage than is possible with your normal lens. Interiors and exteriors of buildings or pictures of large groups of people are possible.

To change your lens, hold the camera securely with one hand and press upward on the lens release knob. With the other hand, firmly grasp the lens and rotate it counter-clockwise until the two large red dots are opposite one another. Pull the lens straight out from the camera body (U).

To mount the lens, match the red dots of the lens barrel and the camera body and rotate the lens clockwise until it locks into position with an audible click.

IMPORTANT: Protect your camera body and lens from damage or dust by using a body cap for the camera body and front and rear lens caps.

www.orphancameras.com

14 USING FLASH

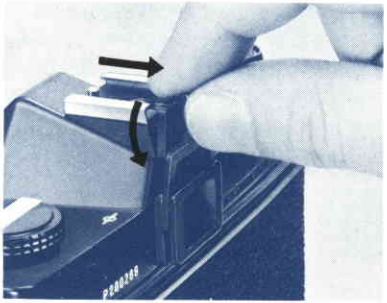
The flash terminals, marked FP and X allows a choice of flash synchronizations (V). The selection of a terminal depends upon the type of flash used, as well as shutter speed. The following table shows the correct combinations to be used in various flash situations. These combinations must be rigidly followed to ensure correct synchronization.

Shaded areas indicate the shutter speeds at which listed bulbs are to be used, with the cord attached to the indicated terminal.

Flash Synchronization Chart

FLASH TERMINAL	SHUTTER SPEEDS										
	1/1000	1/500	1/250	1/125	1/60	1/30	1/15	1/8	1/4	1/2	1
FP	FP Class										
						M Class					
X					Electronic Flash						
							M Class				
						FP Class · F Class					

www.orphancameras.com



To use the X ("hot shoe") contact on the camera with cordless flash units, pull the cover off the shoe and fold it down out of the way.

NOTE: When using flash units with synchronization cords, an electrical charge is present in the "hot shoe". Keep the cover in place to prevent the possibility of a light electrical shock while the unit is connected.

EXPOSURE FOR FLASH PHOTOGRAPHY

In flash photography, exposure is determined by the guide number of the flash bulb or electronic flash unit. The guide number represents a relationship between the power of the flash and the speed of the film. Flashbulb guide numbers can be found on the package they came in. Guide numbers for electronic flash units are found in the manufacturers specifications.

Once you've found the correct shutter speed for your type of flash, (see Flash Synchronization Chart), you can compute the correct lens opening by this formula:

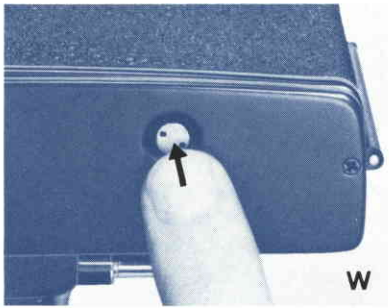
GUIDE NUMBER ÷ LENS-TO-SUBJECT DISTANCE = APERTURE

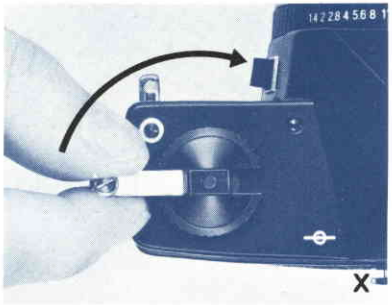
If the flash you are using has a guide number of 56, for example, and if, after focusing, you determine from the lens barrel Distance Scale that the subject is 7 feet away, divide 56 by 7. The answer is 8; therefore the correct aperture is f/8.

Not only is flash the most effective light source for indoor snapshots and shooting in dark places, but it's also an effective tool for back-lighting portraits and filling in shadows. Remember that when flash is used as a supplemental light source, exposure must be based on the light from the main light source (such as the sun).

www.orphancameras.com

15 REWINDING THE FILM





When you have finished taking all your pictures, (either 20 or 36 exposures), you must rewind the film back into its cartridge.

To do this, push in the rewind release button located on the bottom of the camera (W).

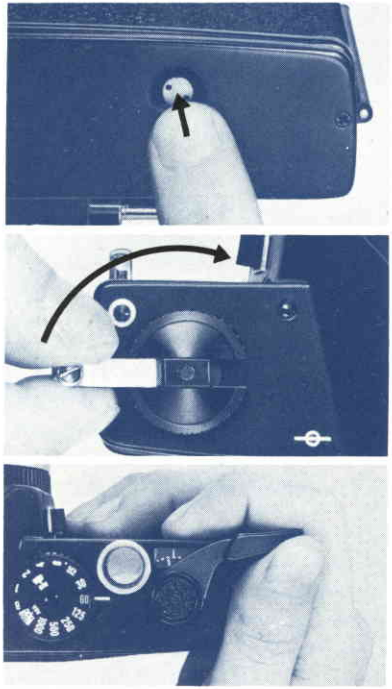
Turn the crank in the direction of the arrow until you feel the tension in the film lessen. This indicates that the film has left the take-up spool (X).

When rewinding film, a click can be heard each time one frame is rewound. When the clicks can no longer be heard, the film has been completely rewound. If for any reason you are not sure that the film has been totally rewound into the cartridge, continue to maintain tension on the rewind crank and at the same time advance the film advance lever a full stroke. Trip the shutter and advance again. Repeat this at least 3 times. If you do not feel a tension or pulling on the rewind crank when working the film advance lever, the film has been completely rewound. Open the back of the camera and remove the cartridge.

AVOID DIRECT LIGHT WHEN UNLOADING THE CAMERA.

www.orphancameras.com

16 OBTAINING MULTIPLE OR DOUBLE EXPOSURES



Your new **mamiya** Auto X1000 Camera is protected from accidental double exposure under normal picture taking situations since you cannot take a picture until you advance the film and recock the shutter. However, to make double exposures for special effects :

1. Take your first picture in the usual manner.
2. Press the film rewind button on the base of the camera and slowly turn the film rewind knob clockwise until you hear a click. Stop. The click means that you have **rewound** the film one full frame. Next, advance the film twice. This cocks the shutter and repositions the original frame for the second shot or double exposure.

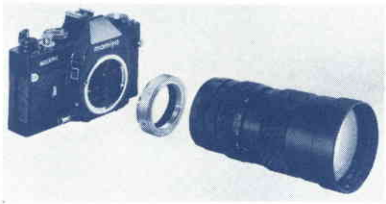
www.orphancameras.com

Manual or Stopped-down Aperture Operation with Lenses and Accessories

You can use lenses other than Auto **mamiya/sekor** ES lenses with accessory **mamiya/sekor** "P" and "T" adapters such as:

1. All **mamiya/sekor** or Praktica universal screw mount automatic or preset lenses.
2. All preset "T" mount lenses.

Here's how the above lenses are used:



1. mamiya/sekor or Praktica mount automatic lenses.

(a) Attach **mamiya/sekor** "P" adapter to your Auto X1000 camera by matching the red dots and turning clockwise until it clicks into position.
(b) Mount lens by screwing it into the adapter.
(c) Turn meter on and focus.
(d) Depress Depth-of-field preview button and rotate aperture ring until meter needle in viewfinder moves into index mark O (see viewfinder control center diagram) immediately above the f/1.4 index.
(e) Release the Depth-of-field preview button and shoot. The lens will now automatically stop down to the proper exposure setting.

2. Preset "T" Lenses

(a) Attach **mamiya/sekor** "T" adapter to any preset "T" lens by screwing on to the lens until it is fully seated.
(b) Mount lens and adapter combination to camera by matching the red dots and turning clockwise until the lens clicks into place.
(c) Focus on the subject.
(d) Rotate aperture ring until meter needle in viewfinder moves into index mark O immediately above f/1.4 index mark.
(e) Shoot.

www.orphancameras.com

LENS COMPARISON CHART

Description	Construction Groups	Elements	Angle View	F : stop Scale	Operat. Modes	Closest Focus Distance	Lens Acces. Size	Lens Hood
Auto mamiya/sekor ES 21mm f/4	8	9	91°	4–16	Auto	1.5 ft. or 0.45m	58 mm	None Required
Auto mamiya/sekor ES 28mm f/2.8	7	7	75°	2.8–16	Auto	1.5 ft. or 0.45m	58mm	Slip-on
Auto mamiya/sekor ES 35mm f/2.8	4	7	63°	2.8–16	Auto	1.5 ft. or 0.45m	52mm	Slip-on
Auto mamiya/sekor ES 55mm f/1.4	5	7	43°	1.4–16	Auto	1.5 ft. or 0.45m	52mm	Built-in
Auto mamiya/sekor ES 55mm f/1.8	5	6	43°	1.8–16	Auto	1.5 ft. or 0.45m	52mm	Built-in
Auto mamiya/sekor ES 105mm f/2.8	4	4	23°	2.8–16	Auto	5 ft. or 1.5m	52mm	Built-in
Auto mamiya/sekor ES 135mm f/2.8	4	4	18°	2.8–16	Auto	5 ft. or 1.5m	58mm	Built-in
Auto mamiya/sekor ES 200mm f/3.5	4	4	12°	3.5–16	Auto	7.5 ft. or 2.3m	67mm	Built-in
mamiya/sekor ES 400mm f/6.3	3	3	6°	6.3–32	Preset	30 ft. or 9m	72mm	Screw-in
mamiya/sekor ES 600mm f/8	3	3	4°	8–32	Preset	33 ft. or 10m	41.27mm Drop-in Ser. VI	Screw-in
mamiya/sekor ES 800mm f/8	4	4	3°	8–32	Preset	60 ft. or 18m	41.27mm Drop-in Ser. VI	Screw-in
Auto mamiya/sekor Zoom ES 90-230mm f/4.5	6	11	27°–10°	4.5–16	Auto	8 ft. or 2.5m	58mm	Built-in
Auto mamiya/sekor Macro ES 60mm f/2.8	4	5	39°	2.8–16	Auto	9¼ ins.or 0.235m	52mm	None Required

www.orphancameras.com

Filters:

Five different types of filters—SY48 (Y2), SO56 (O2), SL39 (UV), YG, and SL (skylight)—are available, except for series VI filters. The sizes for each lens are shown in the lens comparison chart.

Lens Hood:

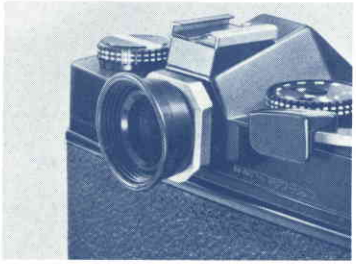
Always use a lens hood to take clear, crisp photos.
The built-in lens hood can be used by simply pulling it out, and it can be pushed back to its retractable position when storing the lens.

Diopter Correction Lenses:

Many near and far-sighted persons have difficulty looking through a camera viewfinder while wearing glasses, but they could not focus accurately without them. This common problem can be corrected by using a diopter correction lens that mounts easily over the viewfinder eyepiece. Diopter correction lenses are available in strengths +3, +2, +1, −1, −2, and −3.
The diopter correction lens is attached using the rubber eye-cup with adapter.

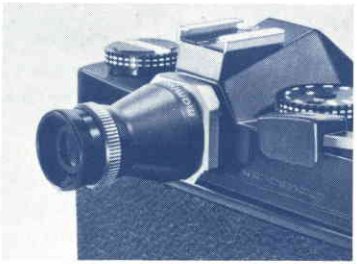
www.orphancameras.com

ACCESSORIES



Rubber Eye-cup with Adapter:

The rubber eye-cup helps eliminate unwanted light from entering the viewfinder from the back and sides while viewing.



The Magnifier:

The magnifier is a useful aid for critical focusing required in copy work, close-up photography, etc. Only the center portion of the finder image is visible through the magnifier, and the size of the image is doubled. The magnifier provides for a diopter adjustment of +5 to −5.

Angle Finder:

The angle finder, useful for waist level or right angle viewing, can be rotated in any direction for more convenient viewing, particularly in close-up and microphotography. The angle finder provides the same magnification as the viewfinder and allows for a diopter adjustment of from +2 to −2. A rubber eye-cup is provided to eliminate unwanted light from entering the viewfinder.

www.orphancameras.com

Auto Bellows:

The auto bellows makes it possible to continuously change the magnification in a wide range for close-up photography. The lens automatic diaphragm is operated by a dual cable release with the bellows attached, and the entire unit can be focused without loss of magnification when the focusing rail accessory is used.

Mounted with the 55mm lens the bellows unit is able to achieve 3.3 × magnification. The lens can also be turned around and mounted in the reverse position for optimum corner-to-corner resolution at close distances.

Slide Copier:

Used with the bellows unit, the slide copying attachment is mounted in front of the lens to allow the photographer to copy slides and film strips. It has a slide stage that moves in any direction to make it easy to crop slides for better composition and a removeable film tray to facilitate copying long rolls of 35 mm film.

Bellows Stand:

The bellows stand is actually a stage for photographing small objects. The platform rotates to allow for the best positioning of the subject with small clips to hold it in place. The surface of the stage itself has a reflectance of approximately 18%, ideal for exposure measurements. A clear glass stage is provided to allow for backlighting and incident light measurement.

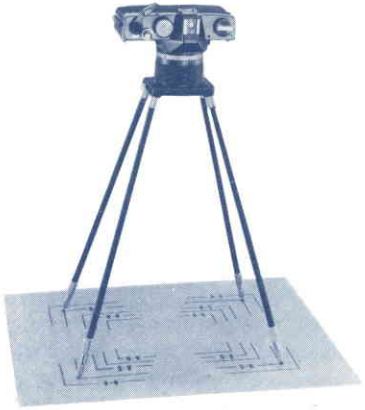
www.orphancameras.com

ACCESSORIES

Portable Copy Stand:

The unit is a light, portable, four legged copy stand used to insure that the cameras film plane is held parallel with the copy material for maximum sharpness. Using a 55 mm lens, flat objects sized from 8-1/4 ×11-3/4 inches (21.0 ×29.7 cm) to 4-1/8 ×5-7/8 inches (10.5 ×14.8 cm) can easily be copied. The stand comes complete with a handy carrying case.

There are two types of the portable copy stands — one for the 55mm f/1.4 lens and one for the 55mm f/1.8 lens. The difference between them is an included attachment lens corresponding with the respective lens.



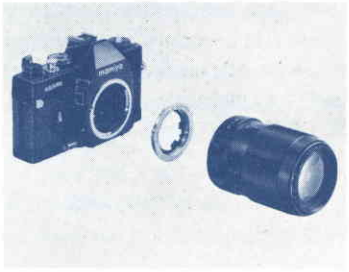
Microscope Adapter:

The microscope adapter permits the Auto X 1000 camera to be mounted to the eyepieces of a microscope. The cameras built-in exposure metering system provides an accurate light measuring guide for photomicrography.

Chest Pod:

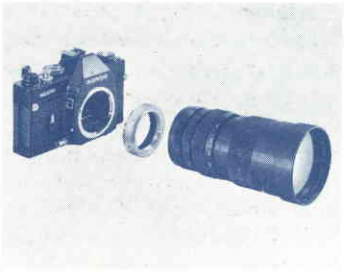
This one-legged portable support helps prevent movement when hand-holding your camera or when a larger tripod would be impractical. It proves quite effective in high angle and sports photography where stability and mobility are important.

www.orphancameras.com



"P" Adapter:

The "P" adapter permits the use of automatic or preset lenses employing a universal screw mount. As for lenses having an automatic diaphragm pin, the "P" adapter will allow you to use these lenses in a semiautomatic manner.



T-mount Adapter:

The T-mount adapter allows you to use Preset T-mount lenses on your mamiya Auto X1000 camera.

www.orphancameras.com

TROUBLE SHOOTING

Problem : FILM COMPLETELY BLANK WHEN PROCESSED, INDICATING NO EXPOSURE HAS BEEN MADE.

Possible cause : Improper loading. Review the section on film loading and be sure you are loading the camera correctly, with the film being securely attached to the take-up spool and winding in the CORRECT DIRECTION, that is, UNDER the take-up spool. Film may not have gone through camera at all.

Problem : SELF TIMER DOES NOT OPERATE SHUTTER.

Possible cause : Timer not rotated full 30 degrees. Timer must be rotated to some point between 30 and 70 degrees.

Problem : FLASH PICTURES EITHER BLANK OR ONLY PARTIALLY EXPOSED.

Possible cause : Improper shutter speed for the type of bulb used.
Or improper cord receptacle used for the type of bulb or shutter speed. Check Flash Synchronization tables carefully.

Problem : SHUTTER WILL NOT RELEASE.

Possible cause : Film Advance lever not advanced far enough. A full stroke is necessary for cocking the shutter. However, a ratchet incorporated within the advance mechanism will allow you to accomplish a full wind in a series of short strokes.

If any problem listed above cannot be solved in the manner suggested, do not attempt to repair your camera. Take it, or send it, instead, to your nearest service station. A minor problem could possibly be aggravated by tampering.

www.orphancameras.com

HELPFUL HINTS

STORAGE:

If the camera will not be used for an extended length of time, store it with the shutter uncocked. This relieves tension on the spring. Lock the exposure meter "Off" and remove the battery.

Never store in areas where temperatures exceed 100 degrees F, or go below freezing (32 degrees F).

Protect against excess moisture by using desiccant.

Never expose the camera to direct sunlight for extended periods of time. Avoid areas where exposure to salt water or salt air occurs.

CARE AND CLEANING:

Use a blower or camel hair brush to clean film chamber and area around take-up spool before loading film into camera. Never use your own breath to blow out dust from a camera. Your breath is full of moisture which will cause corrosion of the precise operating parts of your camera. Clean lens with lens tissue and a good quality lens cleaning liquid only. Do not clean lens at all unless you notice that it needs it. Avoid rubbing the surface of the lens if there is any loose grit or dirt present. **Don't use a handkerchief.** Never touch the lens with your bare fingers. Never rub the surface of the reflex mirror. If there are foreign particles of any kind that cannot be removed by blower or camel hair brush, leave them alone until a factory approved serviceman is available. Dirt on the mirror can have no effect on the picture.

www.orphancameras.com

SPECIFICATIONS

CAMERA TYPE :

35 mm Single Lens Reflex with automatic exposure control, manual exposure control and two built-in behind-the-lens exposure systems, one for spot readings and one for average readings.

FILM SIZE AND CAPACITY :

35 mm perforated film in 20 or 36 exposure cartridges.

FILM FORMAT :

24×36 mm

STANDARD LENSES :

55 mm f/1.4, **mamiya/sekor** ES
7 elements 5 groups
Fully automatic aperture control
Angle of view : 43°
Lens accessory size : 52 mm

55 mm f/1.8, **mamiya/sekor** ES
6 elements 5 groups
Fully automatic aperture control
Angle of view : 43°
Lens accessory size : 52 mm

LENS MOUNT :

mamiya bayonet

SHUTTER :

Focal plane type with speeds from 1 to 1/1000 sec. and "B" for time exposures.

SELF-TIMER :

Built-in variable delay timer to 8 sec.

EXPOSURE METER :

Sensitive CdS exposure meter provides average or spot 6% center reading. Light is measured at film plane.

EXPOSURE CONTROL :

Automatic control. Set lens to "green dot" (or AUTO) ; camera will automatically select correct exposure or lens may be manually set to aperture indicated in the viewfinder. Metering system will also operate with **mamiya/sekor** Praktica type lens mounts, preset lenses and other accessories by using lens "stop-down" method.

EXPOSURE RANGE : (ASA 100)

f/1.4 lens : EV 3—18
f/1.8 lens : EV 3.7—18

EXPOSURE METER POWER SUPPLY :

1.5 V silver oxide Eveready S-76 battery.
Battery ON/OFF switch and tester provided.

www.orphancameras.com

FILM SPEED RANGE :
ASA 25 to 3200
DIN 15 to 36

VIEWFINDER :
Penta-prism with Micro diaprism center surrounded by ground glass area on Fresnel field for rapid focusing.

VIEWFINDER MAGNIFICATION : At infinity.
With 55 mm lens : 0.95X

VIEWFINDER CONTROL CENTER :
Lower portion of viewfinder indicates shutter speed selection. Right side of viewfinder indicates Auto/Manual setting ; spot/average meter system ; under and over exposure warning, and f/stop.

REFLEX MIRROR :
Instant return type

FLASH SYNCHRONIZATION :
With focal plane bulbs : 1 to 1/1000 sec.
With Class "M" bulbs : 1 to 1/30 sec.
With Class "F" bulbs : 1 to 1/30 sec.
With Electronic Flash "X" : 1 to 1/60 sec.

FLASH CONTACTS :
Two flash contacts provided—"FP" and "X"
Flash contact "X" built into accessory shoe on penta-prism.

FILM ADVANCE :
Ratchet type film advance.

FILM ADVANCE LEVER :
May be advanced in one stroke or several short strokes for a total of 150° rotation. Advance lever also contains meter ON/OFF control and double exposure prevention system.

EXPOSURE COUNTER :
Progressive type from "S" (start) to 36. Counter automatically resets to "Start" when film compartment door is opened.

DIMENSIONS :
Width : 5 7/8" (149.5 mm)
Height : 3 3/4" (95 mm)
Thickness (without lens) : 2 1/8" (54 mm)

WEIGHT :
1 lb. 9 oz. (710 grams)