

# MIRANDA



## MS-3

35mm  
SLR CAMERA  
with 28-70mm Lens

**INSTRUCTIONS**

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Congratulations on your selecting the MIRANDA MS-3 SLR camera. With this camera, you can carry out all necessary steps while seeing your subject through viewfinder, because all necessary information on photographing conditions are displayed within the viewfinder. Also both automatic and manual exposure setting are possible. MIRANDA MS-3 is an electronic SLR camera highly recommended for pros and advanced amateurs alike.

Read this Instruction Booklet carefully and use this camera for your best enjoyment of photography.

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## SPECIFICATIONS

**Type:** Electronic controlled 35mm SLR camera with 16 dot LED display and AF connector, TTL monitoring system employed.

**Film format:** 24mm x 36mm (in J135 film cartridge)

**Mount type:** Bayonet "K" mount with AF connector.

**Shutter release:** Electronic metal focal plane shutter with vertical operation

When using electronic shutter in AUTO; 1/1000 to 8 second, push button setting

When using electronic shutter in MANUAL; 1/1000 to 2 seconds, and "B"

Also electromagnetic release is used

**Display in viewfinder:** LED display lights or blinks using 16 dot array, lighting LED indicates the mode selected by AUTO, M, 125X, B

Lighting LED warns for OVER (overexposure)

Lighting LED points one of 12 steps of shutter speed to be used, from 1/1000 to LT.

Blinking LED displays recommended shutter speed 1/1000 to LT

**Flash synchronization:** Hot-shoe, X contact

**Self-timer:** Electronic controlled, LED display provided (specially approx. 2 seconds before releasing shutter, x: blinking accelerates), activation requires one touch action, **cancelling** is allowed by pressing the shutter partly, working

time is approx. 10 seconds

**Viewfinder:** Pentaprism type, three focusing method available; matching the divided image through horizontally split image spot, focusing through microprism collar, and focusing through entire matte surface screen, image magnification ratio on the finder is 0.86 x, field of view 93% horizontally and vertically of the actual picture area, (with standard 50mm focal length lens set to infinity  $\infty$ )

**Synchronization with Autofocusing lens:** with MIRANDA AF lens attached autofocus operation controlled by operating shutter release button.

**Exposure control:** TTL center-weighted metering, photosensor SPD is used. In AUTO setting aperture priority exposure automatically controlling shutter speed, in M setting manually set the exposure by matching lighting and blinking LED's

**Metering range:** EV-1 (F2, 8 seconds) to EV-18 (F16, 1/1000 seconds) with ISO 100/21° films and the lens of 50mm focal length and F2.

**Filmspeed setting:** ISO 25/15° – 1600/33°, by 1/3 steps

**Film advance:** One frame advance by single lever action with 135° throw and 30° stand-off

**Film rewinding:** by operating the film rewind knob

and film rewind crank, the button returns automatically to the original position at the completion of film winding

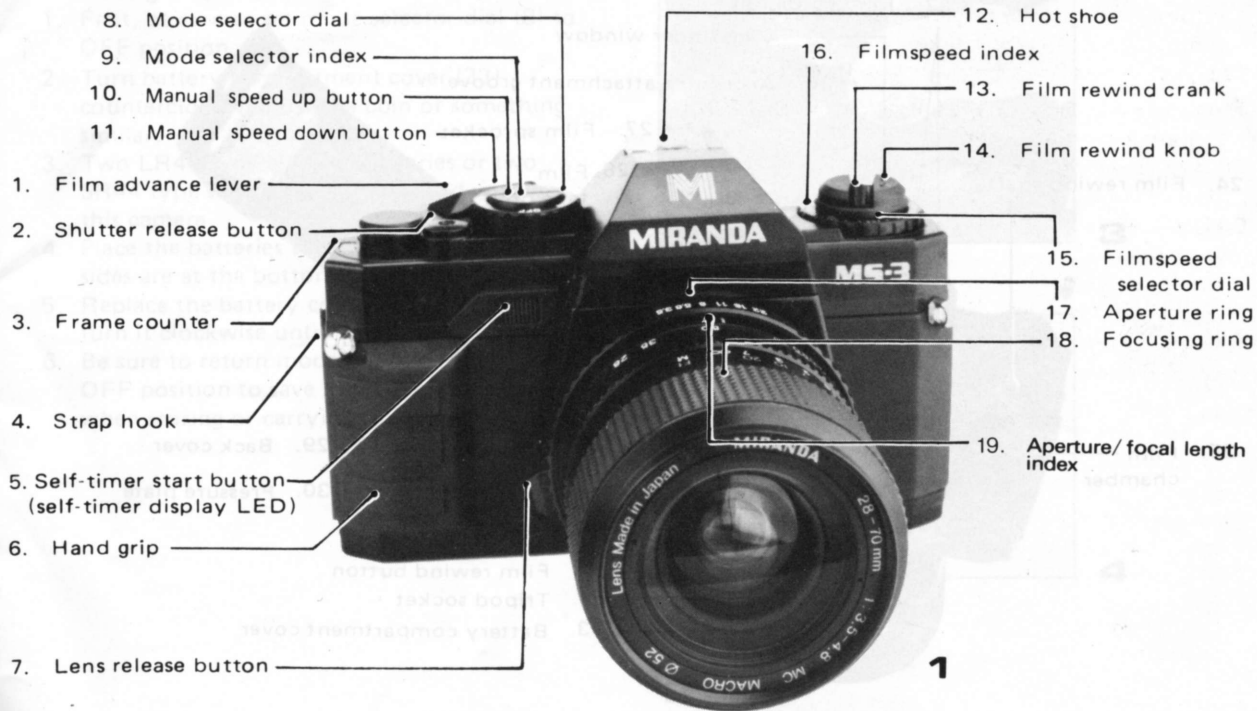
**Frame counter:** Progressive type with auto reset

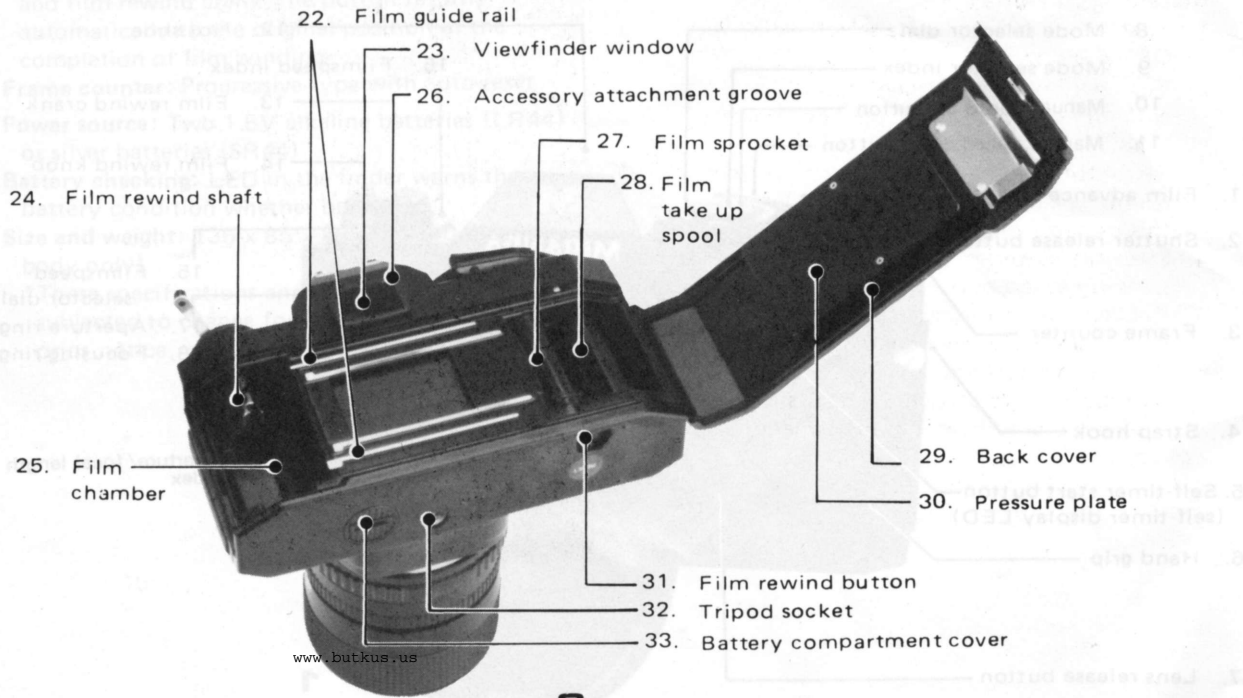
**Power source:** Two 1.5V alkaline batteries (LR44) or silver batteries (SR44)

**Battery checking:** LED in the finder warns the battery condition whether being lit.

**Size and weight:** 136 x 85 x 50 mm, 410g (camera body only)

\*These specifications and external appearance are subjected to change for improvement without prior notice.





22. Film guide rail

23. Viewfinder window

26. Accessory attachment groove

27. Film sprocket

28. Film take up spool

24. Film rewind shaft

25. Film chamber

29. Back cover

30. Pressure plate

31. Film rewind button

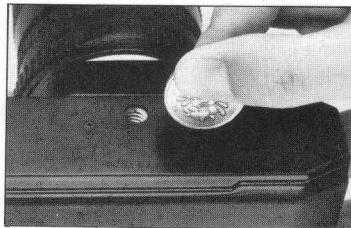
32. Tripod socket

33. Battery compartment cover

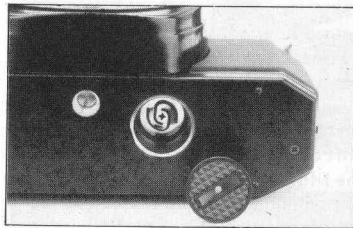
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## Installing Batteries

1. First, be sure to set mode selector dial (8) to OFF position.
2. Turn battery compartment cover (33) counterclockwise using a coin or something similar.
3. Two LR44 type alkaline batteries or two SR44 type silver batteries are used with this camera.
4. Place the batteries so that both positive (+) sides are at the bottom of the compartment.
5. Replace the battery compartment cover and turn it clockwise until it locks firmly.
6. Be sure to return mode selectro dial (8) to OFF position to save the batteries from use when storing or carrying this camera.



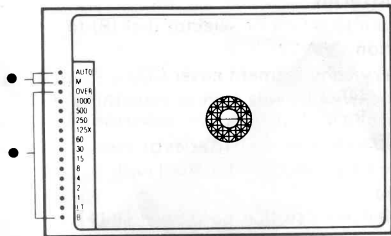
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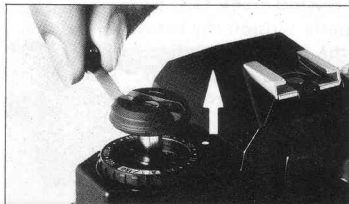
## Battery Check

1. Advance the film by winding film advance lever (1).
2. Set mode selector dial (8) to your desired mode, AUTO or MANUAL position.
3. Press the shutter release button (2) partly while looking through viewfinder (23).
4. If two or three red LED dots light and can be seen in the viewfinder, battery condition is satisfactory. If no red dot appears, the batteries need replacing or have been loaded incorrectly.
5. If the batteries are fully consumed, replace both with new ones.
6. If the film does not advance or shutter cannot be released, even though the batteries are new or loaded correctly, set selector dial (8) to OFF position and lift off the label "RESET" adjacent to the film rewind button (31). Then, use a ball point pen or something with sharp end and insert it into the hole where the label used to be.

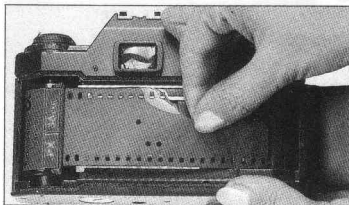


## Loading Film

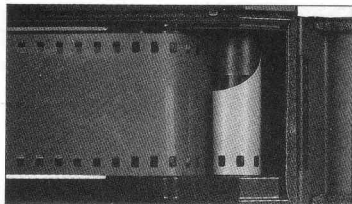
1. To open back cover (29), fold out the film rewind crank then pull it out. When the back cover opens, frame counter (3) automatically resets to "S".
2. Insert the film cassette into film chamber so that the projecting end of the film cassette is downward.
3. Lift film rewind crank (13), and turn the crank carefully while pushing it lightly downward until film cassette locks onto the film rewind shaft (24). Return the film rewind knob to its original position by pushing it down.
4. Insert the film leader in the groove of take-up spool (28) and place it so that the one of the lower row of film perforations engages with the take-up spool's hook.
5. Now hook the film perforation holes on the sprocket teeth. Operate film advance lever (1) carefully to advance the film so that the film is wound properly. At this time, be sure to align the film with film guide rail (22), if necessary, using your fingers and being careful.



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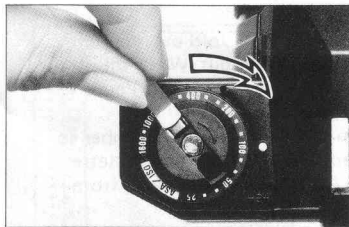


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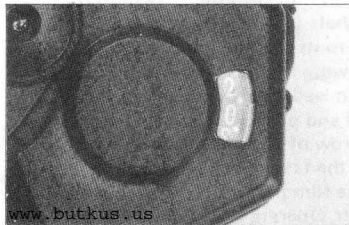


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6. Turn the film rewind crank (13) clockwise gently to properly tension the loaded film. Stop turning the crank once it becomes stiff, and close the back cover by pushing it until it clicks. Now, return the crank to its original position.
7. Set mode selector dial (8) to "MANUAL" position.
8. Advance the film a couple of frames each time releasing the shutter release button until the frame counter reaches the intermediate position between "0" and "2". Check that film rewind knob (14) turns while advancing the film as it means the film advances properly.



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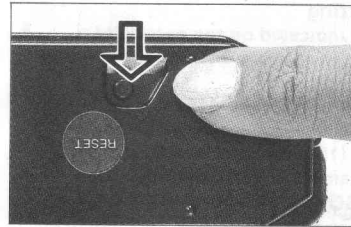


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## Rewinding Film

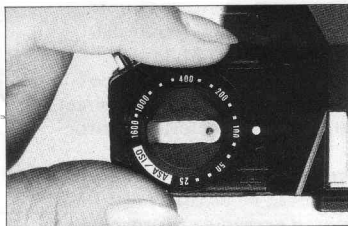
1. When film advancing lever action feels taut, check frame counter (3). If all available frames are exposed change the film with a new one in a place away from direct sunlight according to the following instructions:
2. Press film rewind button (31) and the button is interlocked when pressed. If the film was advanced exceeding the specified frames, film advance lever may stop half way of advancing the film. In such a case, never make attempt to force it farther, leave the film advance lever at halfway and press the film rewind button.
3. Raise film rewind crank (13) and turn it clockwise. Once crank turning operation becomes lighter, it means the film is fully rewind.
4. Raise film rewind knob (14) and pull it upward to open back cover (29). The film cassette can now be removed. Be sure not to open the backcover before fully rewinding all the film.



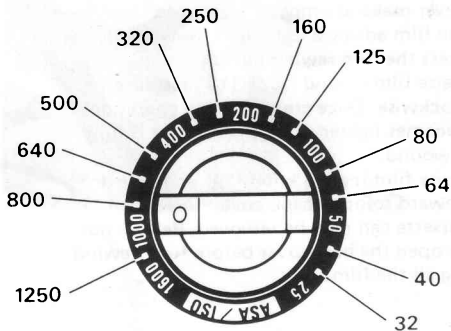
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## Filmspeed Setting

1. Filmspeed is indicated on the outside of film package, in the film instructions or on the film cartridge.
2. Set filmspeed selector dial (15) so that filmspeed index (16) indicates the value on selector dial (15) corresponding to the film used. For example, if filmspeed shown on the film is ISO 100/21°, set the filmspeed selector dial so that 100 on the dial matches with the index.
3. Click points are provided at each step of filmspeed on the film speed selector dial. When setting the film speed, make sure that it clicks.



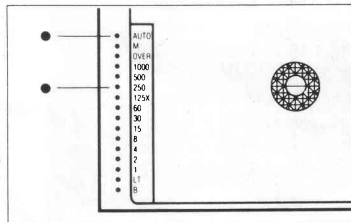
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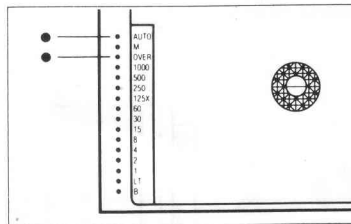
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## Use of AE (Automatic Exposure) system

1. Advance the film and set mode selector dial (8) so that "AUTO" on the dial matches with mode selector index (9).
2. Press the shutter release button (2) partly, while looking through the viewfinder (23) and two LED's will light; the uppermost LED "AUTO" means that the mode is now set in AUTO exposure mode, and the other indicates the shutter speed to be used when fully releasing the shutter. For instance, if the LED "AUTO" and LED pointing "250" are lighting, then fully release the shutter and 1/250 second shutter speed will be used in auto exposure control mode.
3. If the LED pointing "OVER" is lighting, it means overexposure resulting in unsuccessful photography. Turn aperture ring (17) to set a greater F-stop value.
4. When the LED pointing to "LT" is lighting, extreme slow shutter speed approx. 2 to 8 seconds is used.
5. Even when setting the lens aperture to full aperture, if the value of the LED lighting indication is smaller than the value corresponding to the focal length of lens,



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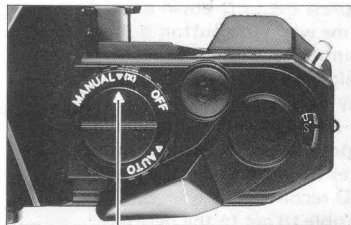
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shutter releasing cannot be expected without camera movement. For example, in photography using 135mm focal length lens with full aperture, if slower shutter speed than 1/125 is set and it is indicated by LED lighting, camera movement may occur when releasing the shutter. Use of tripod and/or remote shutter release control cable is recommended.



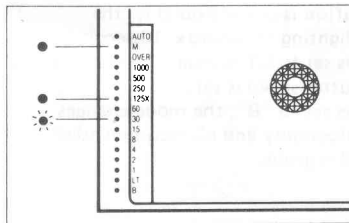
## Manual Exposure Photography

1. Advance the film and set the mode selector index (9) of mode selector dial (8) to MANUAL. Then 1/125 shutter speed setting is obtained.
2. Looking through the viewfinder (23), two LED's light and one LED blinks; one of lighting LED's is that for "M", meaning manual exposure mode, and the other is 125x, meaning that 1/125 shutter speed is used. And another blinking LED indicates the shutter speed recommended by automatic exposure system. Therefore, the value of blinking LED may change according to the change of the subject's luminance, or by turning aperture ring (17).
3. Press the LED-up button (10) and the value indicated by LED will change upward; 125x, 250, 500 and 1000. After 1000, then returns to the lower end, "B", then upward again, LT, 1, 2, 4. Stop pressing LED-up button when the LED of desired shutter speed lights, the desired shutter speed is set for manual exposure photography.



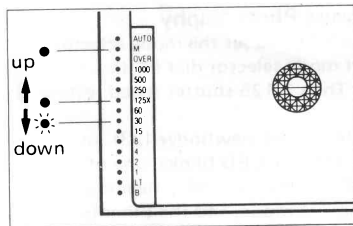
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Mode selector index  
Betriebsartenindex  
Repère du sélecteur de mode

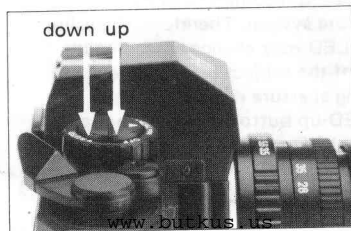


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4. Meanwhile, press the LED-down button (11), each time when the button is pressed, the value pointed by LED will change downward; slower shutter speed is set.
5. The best way to find the appropriate exposure by manual operation is matching the shutter speed value which the lighting shutter LED indicates with the value which the blinking LED recommends.
6. It is also possible to get to the desired shutter speed quickly by pressing the LED-up/LED-down button continuously. However, after getting near to the desired shutter speed value, it is recommended to press the button quickly and repeatedly to get to the desired setting.
7. After the button is pressed quickly, the LED keeps lighting for approx. 10 seconds.
8. If the LED is set to LT manually, 2 seconds very slow shutter speed is set.
9. If the LED is set to "B", the mode changes to Bulb photography and no recommended shutter speed is given.



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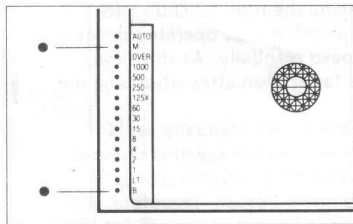


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10. Before advancing the film, LED-up and LED-down buttons can be operated to set the shutter speed manually. At this time, LED changes faster than after advancing the film.
11. The shutter speed once manually set is effective until the shutter speed is changed by operating the mode selector dial or LED-up/LED-down button. Therefore, after once set the correct shutter speed to the subject, you can repeat photographing with the same exposure without setting the shutter speed each time.

## Bulb Photography in "B" Setting

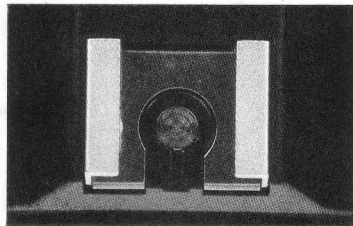
1. Setting the mode into "B" (bulb), the frame is exposed as long as the shutter release button (12) is pressed. When extreme slow shutter speed is necessary, for example in night scene photography, use of "B" setting is useful.
2. To set the mode to "B" (bulb), advance the film and match the MANUAL on selector dial (8) with mode selector index (9).
3. While looking through the viewfinder (23), press the LED-up or LED-down button until the LED pointing "B" at lower-left in viewfinder lights.
4. At this time, 2 LED's, "M" and "B" will light.
5. For photography in this "B" mode setting, use of a tripod and/or a remote shutter release control cable is necessary.
6. Once the mode is set to "B", photography in any other mode is impossible until mode selector dial or LED-up/LED-down button is operated to change the mode.
7. In "B" mode setting, self-timer cannot be used.



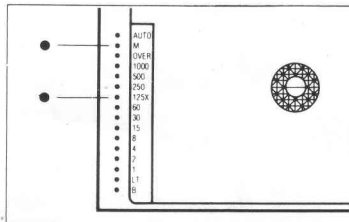
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## Flash Photography

1. Advance the film and set mode selector index (8) to MANUAL of mode selector dial (9).
2. Look into the viewfinder (23) while pressing the shutter release button partly and confirm that two LED's light; one of lighting LED's is LED for M, meaning manual exposure mode, and the other is 125x, meaning that 1/125 shutter speed is used. At this time, another LED will be blinking to indicate the shutter speed recommended by automatic exposure system. However, the value of blinking LED does not affect flash photography.
3. Now you can repeat the synchronized flash photography 1/125 shutter speed as long as the LED-up/LED-down button is not pressed.
4. When using the automatic flash unit, set the aperture to the f-stop specified in the instruction manual of the flash unit.
5. When using the usual flash unit, use the f-stop value obtained by the formula shown overleaf:



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F-stop value (Fn) =

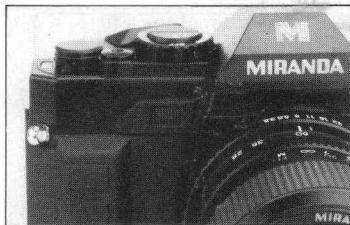
$$\frac{\text{guide number (ISO 100 m)}}{\text{distance to the subject (m)}} \times \sqrt{\frac{\text{ISO}}{100}}$$

For further details, follow the instruction manual of the flash unit.

6. In special use of the flash unit, flash photography at slower shutter speed than 125X including "LT" and "B" is allowed.

## Use of Self-timer

1. The self-timer is very useful when you wish to include yourself in a picture. Or, you may use the self-timer instead of remote release cable to prevent camera movement in shutter releasing.
2. To use the self-timer, advance the film and make sure that all settings, such as composition, focusing, AE/MANUAL mode selection, shutter speed, etc., are correct, then press self-timer button (5).
3. Self-timer button has a self-timer display LED in it. The self-timer LED starts blinking when the self-timer button is pressed, then after ten seconds the shutter will release.
4. Approx. two seconds before releasing the shutter the self-timer display LED accelerates blinking to tell that the shutter will be released soon.
5. Even after the self-timer display LED starts blinking, you may cancel use of the self-timer by pressing partly shutter release button (2).

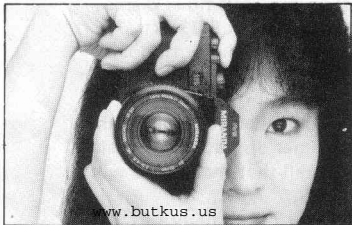


## Holding Camera

1. Hold the camera in the palm of the left hand so you can turn focusing ring (18) easily with the fingers.  
Gently place your forefinger on the shutter release button and thumb finger on film advance lever (1), and use the other three fingers to hold the camera by grip (6).
2. Press your both elbows against your body when holding the camera horizontally and press left elbow against your body when holding the camera vertically. To see the viewfinder, use right eye while both eyes are open.
3. When releasing the shutter, stop breathing for a moment to prevent camera movement.



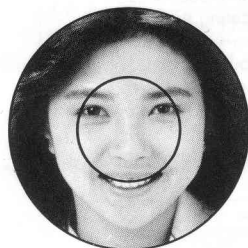
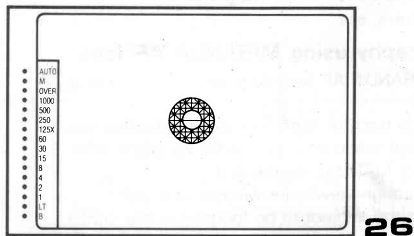
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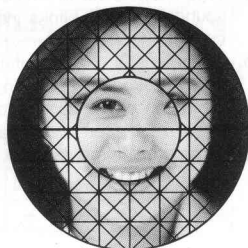
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## Focusing

1. Focusing is by turning focusing ring (18) while looking at the image in the viewfinder.
2. In the center of the viewfinder window a circled area is seen. The circle area includes a split-image spot and microprism collar. Outside the circle area is the matted surface screen.
3. In focusing operation using the split-image spot, when the image divided horizontally is brought into alignment by turning the focus ring, the image focuses correctly.
4. In focusing using the microprism collar, when the image is seen clear and sharp, precise focusing is secured. If the image is out of focus, it appears broken and shimmering.
5. In focusing using the matte surface area, once the sharpest image is seen, focus is correct.
6. Choose the most effective way for focusing according to the shooting situation, such as the lens used, the subject, etc.
7. The accessory attachment groove (26) is arranged on the view finder eyepiece. This is very useful when using optionally available accessories, such as a rubber



In focus **27**



Not in focus **28**

eyecup, diopter lenses, angle finders, magnifiers, etc.

### Photography using MIRANDA AF lens

1. Set MIRANDA AF lens to single or continuous AF mode.
2. Advance the film, then turn mode selection dial (8) so that mode selection index (9) aligns with AUTO or MANUAL on the dial.
3. Look through viewfinder window (23) and position the subject to be focused in the center of the viewfinder window.
4. Press part way shutter release button (2) and the lens autofocusing mechanism is activated.
5. When lens is set to single AF mode, buzzer sounds and LED blinks indicating the lens is correctly focused.
6. When lens is set to continuous AF mode, no buzzer sounds even when correctly focused. So, simply check for correct focus through viewfinder window (23) then press the shutter release button.

**Note** :when selftimer is used, autofocusing is unavailable.

## Depth-of-Field Focus Table

f=28mm

F		METER							
		$\infty$	7	3	2	1.5	1.2	1.0	0.8
3.5	From	6.93	3.53	2.13	1.58	1.26	1.05	0.89	0.73
	To	$\infty$	$\infty$	5.13	2.73	1.86	1.41	1.14	0.88
5.6	From	4.49	2.78	1.84	1.42	1.16	0.98	0.84	0.70
	To	$\infty$	$\infty$	8.56	3.44	2.16	1.57	1.23	0.93
8.0	From	3.20	2.24	1.59	1.27	1.06	0.91	0.80	0.67
	To	$\infty$	$\infty$	40.29	4.96	2.65	1.80	1.37	1.01
11	From	2.28	1.76	1.34	1.11	0.95	0.83	0.73	0.63
	To	$\infty$	$\infty$	$\infty$	13.62	3.93	2.30	1.63	1.13
16	From	1.64	1.36	1.10	0.95	0.83	0.74	0.66	0.58
	To	$\infty$	$\infty$	$\infty$	$\infty$	13.35	3.82	2.23	1.38
22	From	1.18	1.03	0.89	0.79	0.71	0.64	0.59	0.52
	To	$\infty$	$\infty$	$\infty$	$\infty$	$\infty$	122.14	4.91	2.02

f=35mm

F		METER							
		$\infty$	7	3	2	1.5	1.2	1.0	0.8
3.9	From	9.62	4.10	2.32	1.68	1.32	1.08	0.92	0.75
	To	$\infty$	24.97	4.27	2.48	1.74	1.35	1.10	0.86
5.6	From	6.57	3.44	2.10	1.57	1.25	1.04	0.89	0.73
	To	$\infty$	$\infty$	5.34	2.79	1.89	1.43	1.15	0.89
8.0	From	4.67	2.85	1.87	1.44	1.17	0.98	0.85	0.71
	To	$\infty$	$\infty$	7.96	3.35	2.12	1.55	1.22	0.93
11	From	3.32	2.29	1.62	1.29	1.07	0.92	0.80	0.67
	To	$\infty$	$\infty$	26.62	4.68	2.57	1.77	1.35	1.00
16	From	2.37	1.81	1.37	1.13	0.96	0.84	0.74	0.63
	To	$\infty$	$\infty$	$\infty$	10.95	3.69	2.22	1.59	1.11
22	From	1.70	1.40	1.13	0.96	0.84	0.75	0.67	0.58
	To	$\infty$	$\infty$	$\infty$	$\infty$	9.98	3.50	2.12	1.34

f=50mm

F		M E T E R							
		$\infty$	7	3	2	1.5	1.2	1.0	0.8
4.4	From	17.08	5.01	2.58	1.81	1.39	1.13	0.95	0.77
	To	$\infty$	11.70	3.59	2.24	1.63	1.28	1.05	0.83
5.6	From	13.33	4.64	2.48	1.76	1.37	1.12	0.94	0.76
	To	$\infty$	14.45	3.81	2.32	1.66	1.30	1.07	0.84
8.0	From	9.45	4.07	2.31	1.68	1.32	1.08	0.92	0.75
	To	$\infty$	26.03	4.29	2.48	1.74	1.35	1.10	0.86
11	From	6.71	3.48	2.12	1.58	1.26	1.04	0.89	0.73
	To	$\infty$	$\infty$	5.24	2.76	1.87	1.42	1.14	0.88
16	From	4.76	2.88	1.89	1.45	1.18	0.99	0.85	0.71
	To	$\infty$	$\infty$	7.63	3.28	2.09	1.53	1.21	0.92
22	From	3.39	2.33	1.64	1.31	1.08	0.92	0.81	0.68
	To	$\infty$	$\infty$	22.08	4.50	2.51	1.74	1.33	0.98

f=70mm

F		M E T E R							
		$\infty$	7	3	2	1.5	1.2	1.0	0.8
4.8	From	27.32	5.61	2.72	1.88	1.43	1.16	0.97	0.78
	To	$\infty$	9.32	3.34	2.14	1.57	1.24	1.03	0.82
5.6	From	24.11	5.47	2.69	1.86	1.42	1.15	0.97	0.78
	To	$\infty$	9.76	3.39	2.16	1.58	1.25	1.03	0.82
8.0	From	17.07	5.01	2.58	1.81	1.40	1.14	0.96	0.77
	To	$\infty$	11.67	3.59	2.23	1.62	1.27	1.05	0.83
11	From	12.10	4.49	2.44	1.74	1.36	1.11	0.94	0.76
	To	$\infty$	16.17	3.91	2.35	1.68	1.31	1.07	0.84
16	From	8.58	3.91	2.27	1.66	1.31	1.08	0.92	0.75
	To	$\infty$	35.75	4.47	2.53	1.77	1.36	1.10	0.86
22	From	6.09	3.32	2.06	1.55	1.24	1.03	0.89	0.73
	To	$\infty$	$\infty$	5.63	2.85	1.91	1.44	1.15	0.89

## Mounting and Removing the Lens

1. The type of lens mount for this camera is the "K" mount, meaning that all other lenses with a "K" mount can be mounted on this camera.
2. To mount the lens:
  - a) Align the red mark on the camera body with the red mark on the lens.
  - b) Insert the lens into the camera body fully then turn the lens clockwise until it clicks, now the lens is interlocked with the camera body.
3. To remove the lens from the camera body:  
While pressing down lens release button (7) in the arrow direction, turn the lens counterclockwise and the lens can be removed.



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