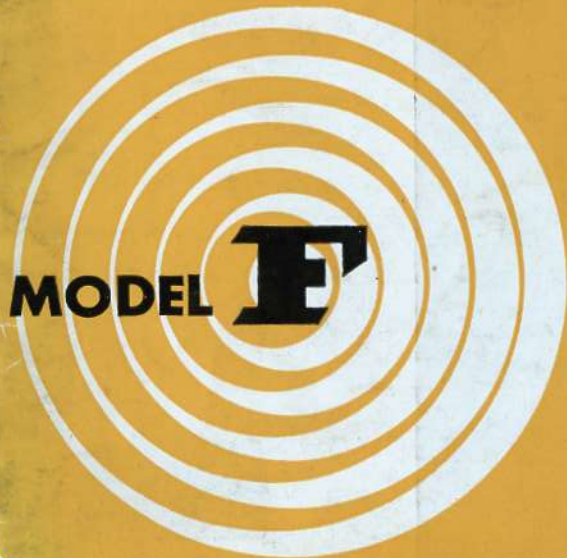


MIRANDA



MIRANDA CAMERA CO., LTD.

Tokyo Japan



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In order that you may derive the maximum enjoyment from this fine instrument, may we earnestly suggest careful reading of this manual before taking your first roll of film.

A FEW WORDS ABOUT YOUR MIRANDA

In cameras with coupled rangefinders, the lens and the rangefinder are operated simultaneously but are optically entirely separate entities, while the viewfinder is another separate entity. The rangefinder is mechanically complex with many moving parts which rarely stay in perfect adjustment in relation to the lens. Accordingly, the photographer who uses such a rangefinder frequently finds his pictures not as sharp as he had hoped. The viewfinder, on the other hand, usually contains no moving parts to get out of adjustment, but it is optically so imperfect that the photographer cannot tell with reasonable assurance what will be included, and what will be excluded, from his picture. In ordinary snapshooting the inconvenience may not be great. Today, however, photographers are becoming increasingly demanding.

More and more photographers are demanding that their cameras give them black and white negatives good enough to make very large prints and color transparencies good enough to project on to a large screen. Interest in fine pictures, artistically composed, is increasing and many photographers are demanding 35mm cameras which will enable them to compose and take pictures which formerly would require the use of large ground-glass-back cameras. Increasing numbers of photographers have discovered that small subjects—a single flower taken closeup—often make beautiful pictures. Technical, medical, and scientific workers are making photographs, frequently under extreme and exacting condition.

These are the basic reasons why the single-lens reflex camera is today enjoying increasing popularity compared to the coupled rangefinder type.

In the first place, the single lens reflex camera, such as the MIRANDA, offers the advantages of ground glass focusing. This is the simplest and surest system, the only one which uses the lens itself, has no moving parts other than the lens, and never gets out of adjustment. It works equally well at all distances from infinity to extreme close up, with all lenses from telephoto to wide angle and even when taking pictures through a microscope. The ground glass by which the focus is adjusted is also the viewfinder. As a viewfinder, it is far superior to the type used on coupled rangefinder cameras since it gives you the exact edges of your picture, works equally well with all lenses at all distances, and when using a microscope. This is not surprising when you consider that the view that you see on your ground glass is the same view which the lens sees. It is merely being reflected up to your eye by a mirror. When you take a picture the mirror flicks out of the way, letting the same light rays go straight on back to the film. The result is a picture corresponding exactly to the scene which you saw in the viewfinder. In most cases the final picture will be even sharper than the scene as viewed. When the exposure is made, the lens automatically closes down to the preselected opening, providing increased depth of field. The camera is focused with the lens wide open, when the depth of field is at its minimum, but the picture is taken with the diaphragm shut down, and increases the depth of field.

WE HOPE THAT YOUR MIRANDA WILL BE A GOOD COMPANION TO YOU FOR A LONG TIME TO COME, THAT YOU WILL ENJOY USING IT, AND THAT THE PICTURES YOU TAKE WITH IT WILL GIVE YOU MUCH PLEASURE AND SATISFACTION.

FEATURES

OF

YOUR

MIRANDA F

1. The Fully Automatic Diaphragm:

The diaphragm of all SOLIGOR-MIRANDA F lenses is fully automatic. This means the diaphragm stays wide open except at the instant a picture is taken. This assures a bright image in the viewfinder and easy focusing. When the shutter release button is pushed to take a picture, the diaphragm closes down instantly to the pre-selected aperture and then automatically reopens to full aperture. A control button is provided, on the camera, however, which enables you to close the diaphragm manually when desired so that you can see the depth of field at "taking" aperture.

2. Single Large Shutter Speed Dial:

Shutter speeds are set on a large, easily read, easily adjusted dial which can be turned without being lifted. It is a shutter speed-control you can set even with gloves on. Speeds can be set either before or after the shutter is cocked, the dial does not rotate when the shutter is released. Shutter speeds range from 1 second to 1/1000 second, plus B. An uncluttered top deck and automatic controls make picture taking much surer and faster.

3. Eye-Level Viewfinder :

The pentaprism viewfinder offers a view-finding image which is brilliant, evenly illuminated, full life size, has no parallax, is precisely defined at the edges, is grainless, can be seen with glasses on, and is not reversed from right to left—as it is in the case of all twin lens reflex cameras and some single lens reflexes. A fresnel lens incorporated into the viewing system is responsible for brightening the image out to the edges. A multi split rangefinder is built into the center of the ground glass giving a choice of focusing methods, either by the ground glass, or with the rangefinder.

4. SOLIGOR-MIRANDA Lenses :

These lenses utilize a new design made possible by recently improved, rare earth glass with remarkable properties. They make pictures of extraordinary sharpness and brilliance. The lenses are quickly removed permitting the use of other lenses with a wide range of focal lengths. Instead of interchanging merely the front element of a lens, the MIRANDA offers the much superior sharpness and quality of true wide angle and telephoto lenses.

5. Lens Mount :

Compared with other 35 mm single lens reflex cameras, the flange to focal plane distance is less and the lens mount opening is larger. This makes it possible with adapters to use lenses made for other cameras. Some of these lenses will focus normally at any distance but others can be used only for close-up pictures. The large lens mount opening makes possible the use of improved high speed lenses without restrictions imposed by the size of the mount. It eliminates vignetting when the lens is extended for taking close-ups, and when a fast lens of long focal length is used.

6. Close-Up Photography :

The standard 50 mm lenses can be focused as close as 17 inches without attachments. Pictures as close as 10 inches can be made by simply inserting an extension adapter between the lens and the camera. Still closer pictures can be made easily by further extending the lens using extension tubes or the Focabell. Close-up pictures made by extending the MIRANDA standard or telephoto lens out from the camera are sharper than pictures taken with add-on lenses. In addition, ultra close-ups can be taken, which is not possible with add-on lenses. Pictures can also be taken through a microscope by using an adapter.

7. Instant-Return Mirror :

One of the advanced features of the MIRANDA F is the instant return mirror. When the shutter release button is pressed, the mirror swings up permitting the light rays from the lens to reach the film as the focal plane shutter opens. Immediately after the film is exposed the mirror returns to the viewing position. When the mirror is up, the view through the viewfinder is momentarily blacked out, but, at speeds of 1/15 second and faster, the mirror returns to the viewing position so quickly that the photographer hardly notices the interruption. This is an important aid in following fast action, and when fleeting expressions are important to the success of the picture.

Unlike many other cameras with instant return mirrors, the MIRANDA's viewfinder image returns as bright as before taking the picture. This is because the diaphragm is fully automatic; it instantly and automatically reopens fully after a picture is taken.

8. Quick Consecutive Picture Taking :

The MIRANDA F has many features which make picture taking quicker and easier. The rapid film winding lever has a short light stroke. It advances the film, cocks the shutter, and registers the exposure on the exposure counter dial. You can tell at a glance whether or not the shutter is cocked by the change of color of the counter indicating arrow.

Exposed film is quickly rewound into the cartridge by the rapid rewind crank. To rewind the film, you press the rewind button once (you do not have to hold it down).

The exposure counter on the MIRANDA F automatically goes to the starting position "S" when the camera back is opened in preparation for loading a new roll. You do not have to set the counter manually every time you load the camera.

9. Release System :

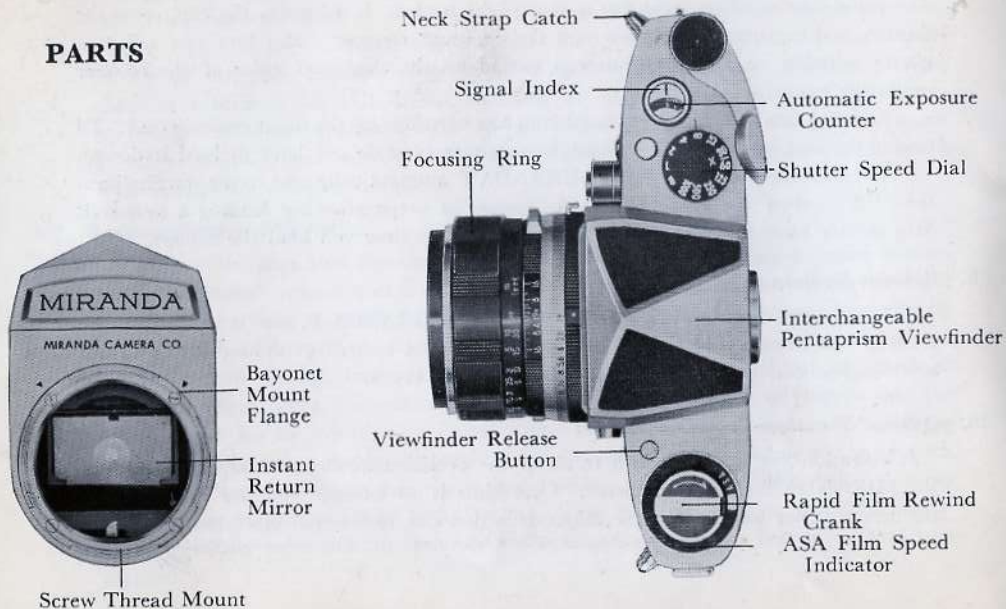
Two release methods are possible with your MIRANDA F, one is located on the front of the camera and the other is a release socket located on the top deck in front of the speed dial both permit release by a feather touch.

10. Quiet, Vibration-Free Operation :

Vibration-free operation is a result of the precision quality and superior design of the MIRANDA shutter and mirror. Operation is so smooth you are assured your pictures will not lose their razor sharp definition due to internal vibration.

PRINCIPAL

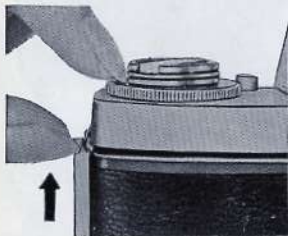
PARTS





It is always advisable to load and unload the film in the shade, rather than in direct sunlight, to prevent fogging the film. Keep the film cartridge in its container until it is ready for use and then return it to the container immediately after removing it from the camera.

FILM LOADING AND UNLOADING



How to Set ASA Speed Reminder:

The reminder scale is executed in two colors. The red figures are used for color film and the black for Black & White. Be sure to set the Reminder scale to the appropriate ASA number which will serve as a constant reminder of the type of film in the camera.



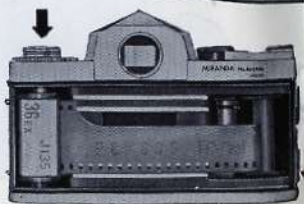
How to Unlock the Back Cover:

Pull up on the sliding lock at the end of the camera and the hinged back cover will open.



How to Put Film in the Camera:

Pull the rewind knob up, place the film cartridge in the film chamber, and push the rewind knob back down to hold the cartridge in place. If the knob does not go all the way down, turn it a little and it will seat.

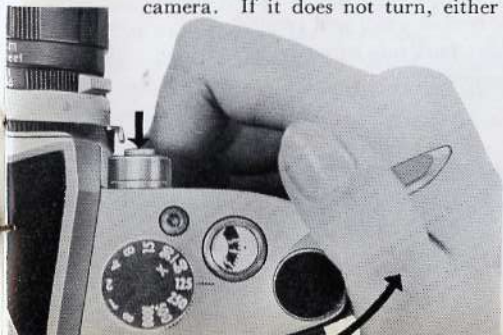


If necessary, turn the take-up spool (the flange is serrated for this purpose) until the slot is on top. It may be turned in either direction for this purpose. Then gently draw the film leader farther out of the cartridge and insert it into the slot. Turn the take-up spool toward the center of the camera, for 1/2 revolution or more.

Hold the lip of the cartridge (where the film comes out) down against the camera and turn the rewind knob on top of the camera in the direction of the arrow. Continue turning until there is resistance and all of the slack in the cartridge has been taken up. You will notice that a 20-exposure cartridge will require several turns to absorb all of the slack while a 36-exposure cartridge will have very little slack. Be sure the perforations in the film have caught in the sprockets of the sprocket wheel. If not, turn the take-up spool until they catch. Close the back cover and push the sliding back lock down.

Release the shutter, and advance the film with a full stroke of the film winding lever, while watching the rewind knob to see that it turns, then release the shutter a second time. If the rewind knob turns, it shows that the film is moving properly through the camera. If it does not turn, either the slack was not fully taken up in the cartridge or the film is not properly attached to the take-up spool.

After one more stroke, release the shutter, and the exposure counter will automatically register "1", and indicate that the camera is now ready for the first shot. The exposure counter will, thereafter, automatically register the number of exposures taken.



After the full roll of film has been exposed, the film winding lever can not be advanced. Do not try to force it, but rewind the film back into the cartridge and remove the film from the camera.



Unloading Film

1. Depress the film rewind button located at the bottom of the camera. (It is unnecessary to press the button continuously while rewinding the film.)
2. Flip up the rewind crank on the rewind knob and wind in the direction of the arrow. At the end of the roll you will feel the resistance increase and then suddenly cease. Turn the rewind crank several more times to make certain the film has been entirely rewound.
3. Open the back cover, pull up the rewind knob and remove the film cartridge. Put the cartridge back into its container. This roll is now ready for development.



SETTING THE SHUTTER SPEED



The shutter speed is very easily set by rotating the shutter speed dial. Just rotate, it is not necessary to lift the dial. The setting can be made either before or after cocking the shutter. The desired speed should be set opposite the shutter speed index. The red "X" on the speed dial is to be used when taking electronic flash pictures.

- Time exposures are taken by setting "B" opposite the index. In this case a cable release should be used and the shutter will remain open for as long as the cable release is pressed. If extremely long exposures are to be made, a locking type cable release is suggested.

SETTING THE DIAPHRAGM

The desired aperture may be set by revolving diaphragm control ring until the appropriate number appears opposite the red dot on top of the lens.



The Same Brightness
← Before & After →
Exposure



Before exposure



At the moment of
exposure



Immediately after
exposure

The diaphragm operation of the Miranda Lens is fully automatic and is internally controlled and activated.

Under all normal circumstances, use of the Automatic diaphragm will make picture taking much easier and faster. The diaphragm will remain wide open to facilitate viewing and focusing until the shutter release button is pressed. The diaphragm will then close down to the previously selected stop and instantly reopen fully after the exposure is completed.

In order to pre-determine depth of field a control button is provided on the side of the camera lens mount. By simply sliding this button down the diaphragm will close down to its preselected opening permitting critical examination of resulting depth of field. This procedure may be taken before or after cocking the shutter.



EXPOSURE

The following table applies to commonly used black & white film (ASA 100 at 1/125 second, from two hours after sunrise to two hours before sunset. When taking black and white pictures under unusual light conditions or when using color film, a photoelectric exposure meter is strongly recommended.

	Clear Sun	Hazy Sun	Cloudy Bright	Cloudy Rain
Light Subject	f / 22	f / 16	f / 11	f / 8
Average Subject	f / 16	f / 11	f / 8	f / 5.6
Dark Subject	f / 11	f / 8	f / 5.6	f / 4



AVOID CAMERA SHAKE

When taking a picture it is very important not to move the camera when you press the shutter release button. You should learn to release the shutter very smoothly in the same way that an expert target shooter very gently squeezes the trigger of his rifle. It is a good idea to practice releasing the shutter, with no film in the camera. It will help to grasp the camera rather firmly with the left hand, and press it firmly against the face, but to hold the camera lightly and press the shutter release button very lightly with the right hand. Many people also find that it helps to hold the camera steady by keeping the arms fairly close to the body at the elbows.



Out of focus

VIEWING AND FOCUSING

In focus



The MIRANDA F offers two methods of focusing: (1) The center of the ground glass is equipped with a multi split range finder. This optical grating distorts the image unless it is in perfect focus. By simply focusing the lens until the center image is completely undistorted, critical focus can be obtained. (2) The camera can also be focused by focusing lens until image is at maximum sharpness on the surrounding ground glass.

The Miranda also offers a wide variety of focusing screens for special purposes (ask your camera dealer about them)

DEPTH OF FIELD:

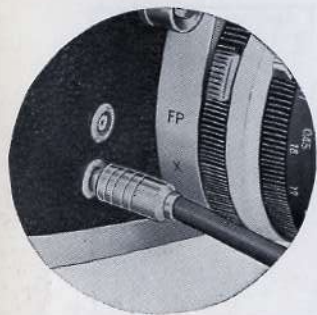
This is the range that is in sharp focus for any particular distance and diaphragm setting. There is relatively very little depth of field where close-up subjects are focused on, and a great deal of depth of field in the case of more distant subject. Closing the diaphragm down increases the depth of field, and opening the diaphragm up reduces the depth of field. The depth of field also varies with the lens used. Wide angle lenses have lots of depth of field while with telephoto lenses the depth of field is much reduced. If your picture is such that you want both nearby and distant objects to be in sharp focus, then the smallest possible diaphragm should be used. However, very frequently the composition of a picture can be improved by having the principal subject in sharp focus while other object in the scene are soft and out of focus. This will de-emphasize distracting background objects, and concentrate the viewer's attention on the principal subject. If you want to preview the depth of field prior to exposure, you can readily do so by depressing the control button on the side of the camera lens mount.

Depth-of-Field Table for the MIRANDA F

with Soligor-Miranda f: 1.9 50 mm

Distance	Aperture f / 1.9	Aperture f / 2.8	Aperture f / 4	Aperture f / 5.6	Aperture f / 8	Aperture f / 11	Aperture f / 16
∞	135'6"	91'9 $\frac{3}{5}$ "	64'0"	45'9 $\frac{3}{5}$ "	32'3 $\frac{3}{5}$ "	23'7 $\frac{1}{5}$ "	16'3 $\frac{3}{5}$ "
	$\sim \infty$	$\infty \sim$	$\sim \infty$	$\sim \infty$	$\sim \infty$	$\sim \infty$	$\sim \infty$
feet							
30	24'9 $\frac{3}{5}$ " $\sim 38'8\frac{2}{5}$ "	22'9 $\frac{3}{5}$ " $\sim 44'8\frac{2}{5}$ "	20'8 $\frac{2}{5}$ " $\sim 56'3\frac{3}{5}$ "	18'3 $\frac{3}{5}$ " $\sim 86'6"$	15'9 $\frac{3}{5}$ " $\sim \infty$	13'4 $\frac{4}{5}$ " $\sim \infty$	10'8 $\frac{2}{5}$ " $\sim \infty$
15	13'7 $\frac{1}{5}$ " $\sim 16'10\frac{1}{5}$ "	13'0" $\sim 17'10\frac{1}{5}$ "	12'3 $\frac{3}{5}$ " $\sim 19'6"$	11'6" $\sim 22'1\frac{1}{5}$ "	10'4 $\frac{4}{5}$ " $\sim 27'9\frac{3}{5}$ "	9'3 $\frac{3}{5}$ " $\sim 40'9\frac{3}{5}$ "	8'0" $\sim 195'7\frac{1}{5}$ "
8	7'7 $\frac{1}{5}$ " $\sim 8'6"$	7'4 $\frac{4}{5}$ " $\sim 8'9\frac{3}{5}$ "	7'2 $\frac{2}{5}$ " $\sim 9'1\frac{1}{5}$ "	6'11 $\frac{1}{3}$ " $\sim 9'7"$	6'6" $\sim 10'6"$	6'1 $\frac{1}{5}$ " $\sim 11'9"$	5'6" $\sim 15'3\frac{3}{5}$ "
5	4'10 $\frac{1}{5}$ " $\sim 4'2\frac{2}{5}$ "	4'9 $\frac{3}{5}$ " $\sim 5'3\frac{3}{5}$ "	4'8 $\frac{2}{5}$ " $\sim 5'4\frac{4}{5}$ "	4'7 $\frac{1}{5}$ " $\sim 5'7\frac{1}{5}$ "	4'4 $\frac{4}{5}$ " $\sim 5'9\frac{3}{5}$ "	4'2 $\frac{2}{5}$ " $\sim 6'2\frac{2}{5}$ "	4'0" $\sim 7'0"$
3	3'0" $\sim 3'1\frac{1}{5}$ "	3'0" $\sim 3'1\frac{1}{5}$ "	2'6" $\sim 3'2\frac{2}{5}$ "	2'4 $\frac{4}{5}$ " $\sim 3'2\frac{2}{5}$ "	2'4 $\frac{4}{5}$ " $\sim 3'3\frac{3}{5}$ "	2'3 $\frac{3}{5}$ " $\sim 3'4\frac{4}{5}$ "	2'3 $\frac{3}{5}$ " $\sim 3'7\frac{1}{5}$ "
inch							
30	2'5 $\frac{3}{5}$ " $\sim 2'6\frac{3}{5}$ "	2'4 $\frac{2}{5}$ " $\sim 2'6\frac{3}{5}$ "	2'5 $\frac{1}{5}$ " $\sim 2'7\frac{1}{5}$ "	2'4 $\frac{4}{5}$ " $\sim 2'7\frac{3}{5}$ "	2'4 $\frac{2}{5}$ " $\sim 2'8\frac{1}{5}$ "	2'3 $\frac{1}{5}$ " $\sim 2'9"$	2'2 $\frac{1}{5}$ " $\sim 2'10\frac{1}{5}$ "
20	1'7 $\frac{4}{5}$ " $\sim 1'8\frac{3}{5}$ "	1'7 $\frac{4}{5}$ " $\sim 1'8\frac{3}{5}$ "	1'7 $\frac{3}{5}$ " $\sim 1'8\frac{3}{5}$ "	1'7 $\frac{3}{5}$ " $\sim 1'8\frac{4}{5}$ "	1'7 $\frac{2}{5}$ " $\sim 1'9\frac{1}{5}$ "	1'7 $\frac{1}{5}$ " $\sim 1'9\frac{2}{5}$ "	1'6 $\frac{4}{5}$ " $\sim 1'9\frac{1}{5}$ "
17	1'4 $\frac{4}{5}$ " $\sim 1'5"$	1'4 $\frac{4}{5}$ " $\sim 1'5"$	1'8 $\frac{4}{5}$ " $\sim 1'5\frac{1}{5}$ "	1'4 $\frac{3}{5}$ " $\sim 1'5\frac{2}{5}$ "	1'4 $\frac{3}{5}$ " $\sim 1'5\frac{2}{5}$ "	1'4 $\frac{2}{5}$ " $\sim 1'5\frac{3}{5}$ "	1'4 $\frac{1}{5}$ " $\sim 1'5\frac{4}{5}$ "

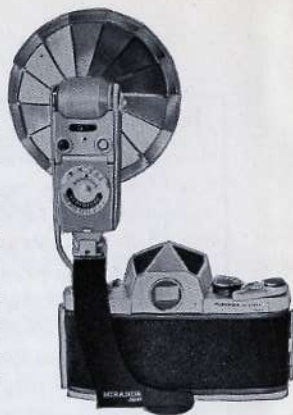
TAKING FLASH PICTURES



The MIRANDA has built-in flash synchronization. Flash bulbs can be inserted into a flash gun either before or after the shutter is cocked without risk of unintentional firing.

The following table shows the type of flash bulbs (including electronic flash) which may be used, and the proper shutter speed dial setting and synchronization socket.

A special bracket is available providing a standard shoe to which any shoe-mounted flash unit can be attached. Exposure should be determined in accordance with the recommendations of the manufacturer of the bulb or flashgun being used.



Type of Flash	Focal Plane Bulbs No. 6 and 6B No. 26 and 26B	No. 5 and 3B* No. 25 and 26B	AG - 1* AG - 1 B	Electronic Flash
Shutter Speed Dial Setting	1/30 to 1/1000	1/125	1/125	X
Synchronization Socket	FP	FP	FP	X

* With these bulbs, the light pattern will be less even than when focal plane bulbs or electronic flash are used.



MIRANDA LENSES

The lens mount of your MIRANDA F will accept all MIRANDA preset or Automatic of all present and superseded models without modification on adapters.

MIRANDA F LENSES :

A very wide range of Automatic and preset lenses are available for your Miranda camera, a complete list can be found on page (34) of this manual.



To attach "F" type lenses to your camera line up the red dot on the lens barrel with Red arrow on camera then depress lens lock lever and turn clockwise until lens locks.

To remove the Lens simply depress lock lever and turn lens counter-clockwise and remove lens.





MIRANDA AUTOMEX LENSES :

The same procedure as used with "F" Lenses should be followed.

The presetting of diaphragm opening can be done in normal fashion by moving the meter coupling arm. Care should be taken that the Automex Lens is set for Automatic operation, as otherwise the diaphragm will not close when camera is released.



MIRANDA AUTOMATIC LENSES FOR MODEL C, D & DR :

The above automatic lenses feature external Automatic system but can be used in normal fashion on the Model "F" Body. For manual operation the control lever on the lens must be used.

In some cases the length of release stroke of this type of lens may not match that of the body if so your camera dealer can easily adjust the lens by turning the screw on the rear of the release plunger.



MIRANDA PRESET LENSES :

These lenses are equipped with a screw thread instead of bayonet mount and can be screwed directly into the camera mount.

OTHER LENSES :

The inner diameter of the MIRANDA is larger than on any other 35 mm camera therefore by using one of the wide range of Miranda adapters lenses of such cameras as Exakta, Praktika, Asahi Pentax, Pentacon etc. can be used on your MIRANDA F from infinity to close up. Leica and Contax type lenses can also be used but for close up work only.



The 50 mm standard lens was used with an extension adapter and 32 mm extension tube to take this picture.

USING ACCESSORIES WITH THE MIRANDA F

Close-up with 50 mm lens mounted on an extension adapter & 8 mm tube.



**The
Chest-Level
Viewfinder**

A chest-level collapsible viewfinder (VF 1) and a critical focuser (VF 3) are also available as accessories and may be substituted for the standard viewfinder when so desired.

The VF 1 viewfinder opens and closes with a touch. A hinged magnifier is quickly raised for accurate focusing.

The critical focuser (VF 3) is of unique design and efficiency. It has two positions, one giving a five-times magnification of the entire field of view, the other giving a fifteen-times magnification of the central portion of the field. The fifteen-times magnification is for ultracritical focusing.

A chest-level viewfinder will be found convenient wherever it is desired to look into the top of the camera, rather than the back, for viewing and focusing. This may frequently be the case when taking pictures of very small subjects, for example in nature photography. With this kind of viewfinder, the image is reversed from right to left.

To remove the viewfinder on the camera, pull the viewfinder release to the left and at the same time gently draw the viewfinder to the rear. To replace with the other viewfinder, insert the finder's rail into the groove of the camera and push it gently forward, it will automatically lock into place.



VF 1 Viewfinder



VF 3 Viewfinder
(magnification $\times 15$)

VF 3 Viewfinder
(magnification $\times 5$)



**Extension
Adapter
and
Extension
Tubes**

The 50 mm standard lens will focus at a distance as close as 17 inches without an accessory. By adding an extension adapter between the camera and the lens, pictures can be taken from 17 inches to 10 inches. To take pictures at still closer distance, extension tubes are added between the extension adapter and the camera. The tubes are supplied in lengths of 8, 16 and 32mm and enable the photographer to take full-frame pictures of subjects the size of postage stamps and even smaller.

In addition to the regular extension tubes, a special helical focusing tube is available. This tube is used between the camera and the lens either alone, or in combination with one or more regular extension tubes. The purpose of the focusing tube is to make focusing in close-up photography more flexible than it is when using only the focusing range which is afforded by the lens. The focusing tube is 16 mm long when fully telescoped and 24 mm long when fully extended.

When extension tubes are used, the automatic diaphragm mechanism of the lenses will not be operative. Accordingly, you will have to set the diaphragm manually.

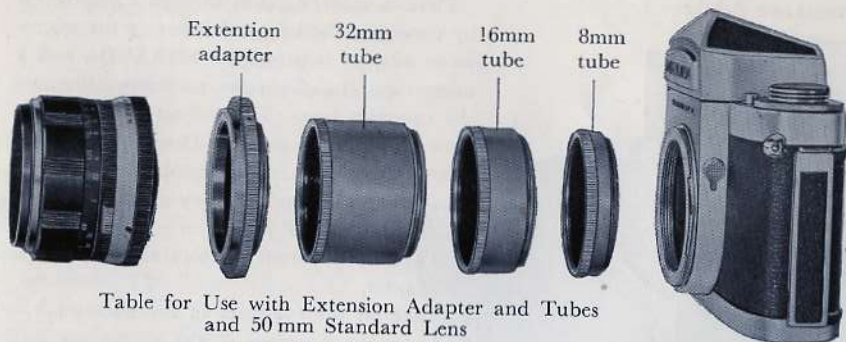
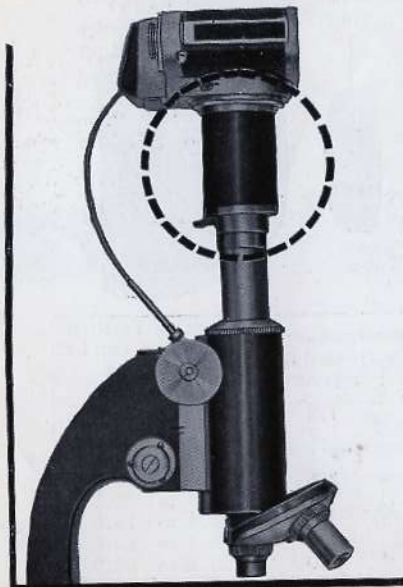


Table for Use with Extension Adapter and Tubes
and 50 mm Standard Lens

Extension Adapt. and Tubes (length of tubes in mm.)	Total length including Adapter (in mm.)	Field of View Covered (in mm.)	Size-Image on Film to Subject	Increase Needed in Exposure	Nearest to Farthest Point which can be Focused on (in mm.)
Adapter only	8	156 by 238	0.15	1.3	185.4 to 358.5
Adapter and 8	16	78 by 117	0.31	1.7	131.3 to 189.5
" 16	24	52 by 78	0.46	2.1	104.0 to 133.1
" 8+16	32	40 by 60	0.62	2.6	87.4 to 105.0
" 32	40	32 by 48	0.77	3.1	76.4 to 88.1
" 8+32	48	26 by 39	0.92	3.7	68.4 to 76.8
" 16+32	56	24 by 36	1.08	4.3	62.5 to 68.8
" 8+16+32	64	20 by 30	1.23	5.0	57.8 to 62.8

Note: 25.4 mm equal 1 inch

The Microscope Adapter



Pictures may be taken through a microscope by removing the lens and inserting the microscope adapter between the MIRANDA and a microscope. In effect, the microscope becomes the camera's lens. The subject to be microphotographed can be viewed and focused using either the camera's regular eye-level viewfinder, or, if preferred, the accessory chest level viewfinder VF 1 or VF 3.

1. Take off the front piece of the microscope adapter.
2. Take off the eye-piece of the microscope.
3. Insert the eye-piece of the microscope into the front piece of this adapter and put these on the microscope, fastening them by means of the screw on the side.
4. Take the lens off the camera and screw the body of the adapter into the camera.
5. Connect the front piece to the body of the adapter.

Pictures may then be taken through the microscope.

The Focabell

The Focabell is a bellows-type focusing device intended primarily for taking close-up pictures. It focuses over an extreme range very quickly and conveniently. There are two provisions for changing the focus, one for rapid shifts and one for critical adjustments. The Focabell is made with fine precision, is very rigid, and will be found to satisfy the most exacting requirements. In addition to MIRANDA lenses, lenses of other makes can be used with adapters. Telephoto lenses in short mounts can be focused from infinity; other lenses only for close-up photography.



List of Other Small Accessories

Focabell-S Single track bellows extension
Double Release
Pistol Grip
MIRANDA Everready Case
Leather Cases for all MIRANDA Lenses
Flash Gun Bracket
Helical Focusing Extension Tube

Rubber Eye Cup for Eye-Level Pentaprism
and Chest-Level VF 3 Viewfinders
Eye Sight Adjuster for Eye-Level Pentaprism
and Chest-Level VF 3 Viewfinders
Lens Hoods (all lenses)
Body Cap
Back Lens Cap

Lens Adapters

X•M adapter (with this adapter any lens made for the Exacta camera can be used from close-up to infinity)
P•M adapter (with this adapter any lens made for the Praktica or Pentacon camera may be used from close-up to infinity)
L•F adapter (with this adapter any lens with standard Leica threads can be used for close-up photography)
CS•F adapter (with this adapter any standard focal length Contax or Nikon lens can be used for close-up photography)
CT•F adapter (with this adapter Contax and Nikon wide angle and telephoto lenses can be used for close-up photography)

MIRANDA ACCESSORIES



List of MIRANDA Lenses

AUTOMEX Lenses

- 28 mm f: 2.8 Ultra Wide-Angle 8-element construction
- 35 mm f: 2.8 Wide-Angle 7-element construction
- 50 mm f: 1.9 Normal 6-element construction
- 105 mm f: 2.8 Medium Telephoto 6-element construction
- 135 mm f: 2.8 High Speed True Telephoto 6-element construction
- 135 mm f: 3.5 True Telephoto 6-element construction

Lenses For All Models

- 28 mm f: 2.8 Wide-Angle Fully Automatic 8-element retrofocus construction
- 35 mm f: 2.8 Wide-Angle Fully Automatic 7-element retrofocus construction
- 35 mm f: 3.5 Wide-Angle Preset 6-element retrofocus
- 50 mm f: 1.9 Normal Automatic 6-element fully corrected
- 50 mm f: 2.8 5-element preset normal
- 105 mm f: 2.8 General Purpose Telephoto 5-element construction
- 135 mm f: 3.5 Short barrel telephoto
- 135 mm f: 3.5 Preset 5-element true telephoto
- 135 mm f: 2.8 Preset 5-element telephoto
- 135 mm f: 3.5 Telephoto Automatic 6-element true telephoto
- 135 mm f: 2.8 Telephoto Automatic 6-element true telephoto
- 250 mm f: 4.5 Telephoto Preset
- 400 mm f: 5.5 Telephoto Preset with orienting tripod socket at center of gravity and filter slot and holder with deluxe leather case

MIRANDA LENSES



CARE OF YOUR CAMERA

Storage

Keep your MIRANDA in a cool, dry, ventilated place.

Do not store in a closed cabinet under humid conditions.

Never store in a humid place, such as a basement, particularly during rainy seasons.

If it is to be stored for some time, remove your MIRANDA from the everready case, and put it in a sealed container along with a drying agent such as silica gel. Do not permit the drying agent to come into direct contact with the camera body.

If an air conditioned room is available, keep it there.

Protection against Dirt, Dust, and Salt Spray

When your MIRANDA is used out-doors it will in time pick up a certain amount of dust which should be regularly removed with a soft brush and air blower. On board ship or at the seaside, your MIRANDA should be protected from contact with salt water spray. If your camera is exposed to salt spray, clean the metal and leather parts with a soft, clean cloth, moistened with alcohol or ether.

If no alcohol or ether is available, water can be used if the cloth is first vigorously wrung out. The glass surface of the lens should never be touched with a finger since the slightest touch will leave finger prints which will in time seriously injure the lens. Dust should be removed from the lens with an air blower (an ear syringe purchasable at drug stores is good). Finger prints and stubborn dirt should be removed with a photographic lens cleaner and lens cleaning paper.

The mirror is front surfaced and the reflective coating is very delicate. It should never be touched. It should be cleaned only with an air blower.

MEMORANDUM OF YOUR CAMERA

CAMERA NUMBER _____

LENS NUMBER _____

MIRANDA

