

SHOWA OPTICAL WORKS, LTD.
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for use of the

Leotar model F

INSTRUCTIONS



We thank you for selecting this camera out of the many others. Please read this booklet carefully before making practical use of the "Leotax." This camera's high power and efficiency will give you full satisfaction and will become your favorite choice, if you become thoroughly familiar with its use.

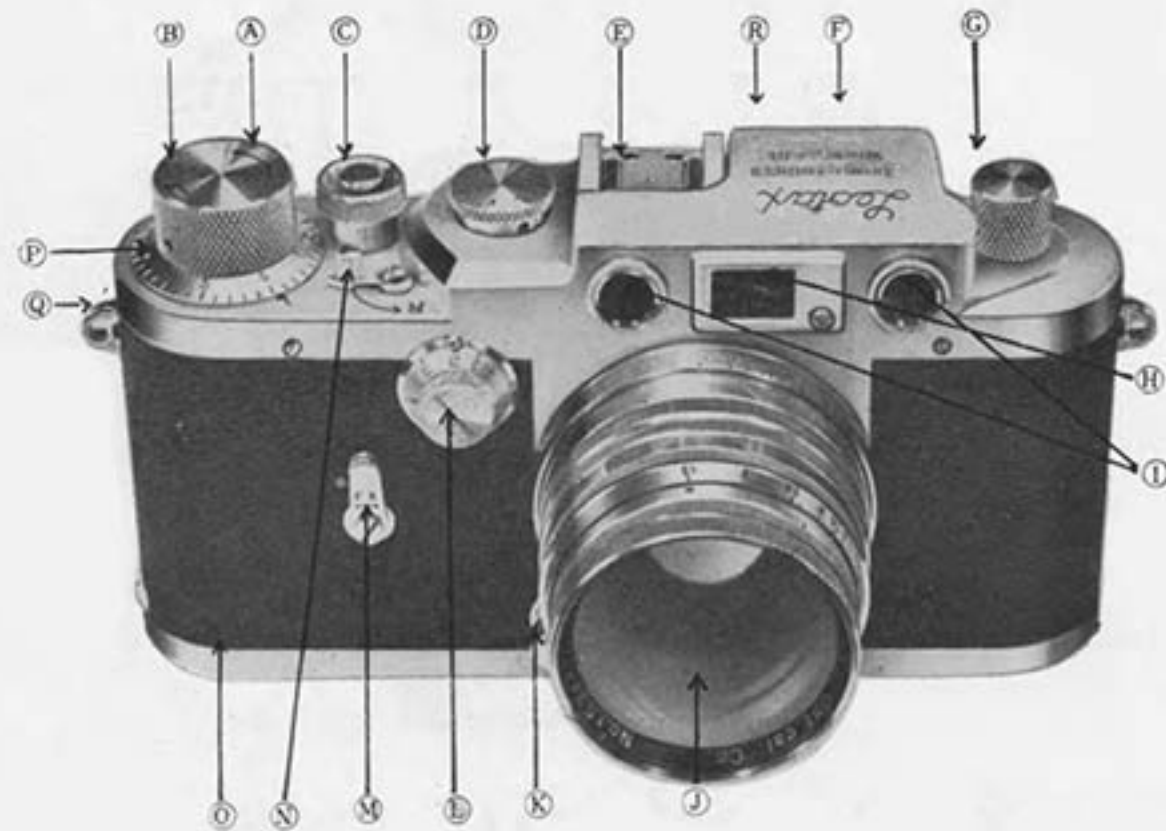
INSTRUCTIONS FOR USE OF THE

Leotax



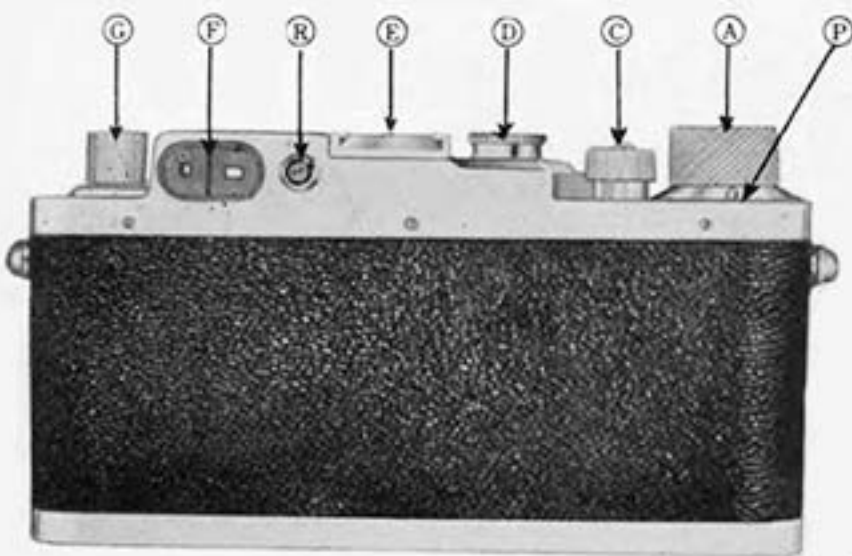
SHOWA OPTICAL WORKS, LTD.
T O K Y O

THE "LEOTAX" CAMERA OUTFITS



- | | |
|---|-------------------------------|
| Ⓐ Film Winding and Shutter Setting Knob | Ⓜ Synchro-Change Lever (X, F) |
| Ⓑ Film Indicator | Ⓝ Film Rewinding Lever |
| Ⓒ Shutter Release Button | Ⓞ Base Lid |
| Ⓓ Shutter Speed Dial (B, 1/25~1/500) | Ⓟ Exposure Counter |
| Ⓔ Accessory Mount | Ⓠ Ring |
| Ⓕ Eyepiece for the Range Finder & View Finder | Ⓡ Synchro-terminal |
| Ⓖ Film Rewinding Knob | |
| Ⓗ View Finder Window | |
| Ⓢ Range Finder Windows | |
| Ⓜ Lens | |
| Ⓚ Focusing Lever | |
| Ⓛ Low Speed Shutter Dial | |

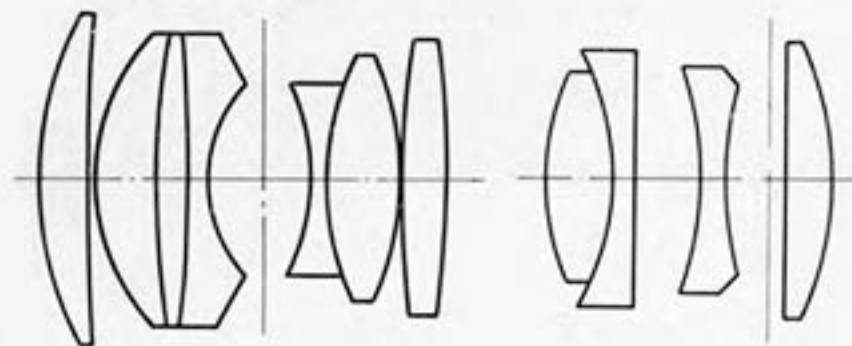
Lens



Topcor 1:3.5



Topcor 1:1.5



Loading the Camera

- 1.—Turn the camera face down, lift the clip on the base lid of the camera, and turn the arrow from the 'lock' to the 'open' position to remove the base lid. Remove the take-up spool from the camera.
- 2.—Pull out about 5 inches of the ready-cut end of the film which is sticking out at the slit of a film cartridge. (Fig. 1)

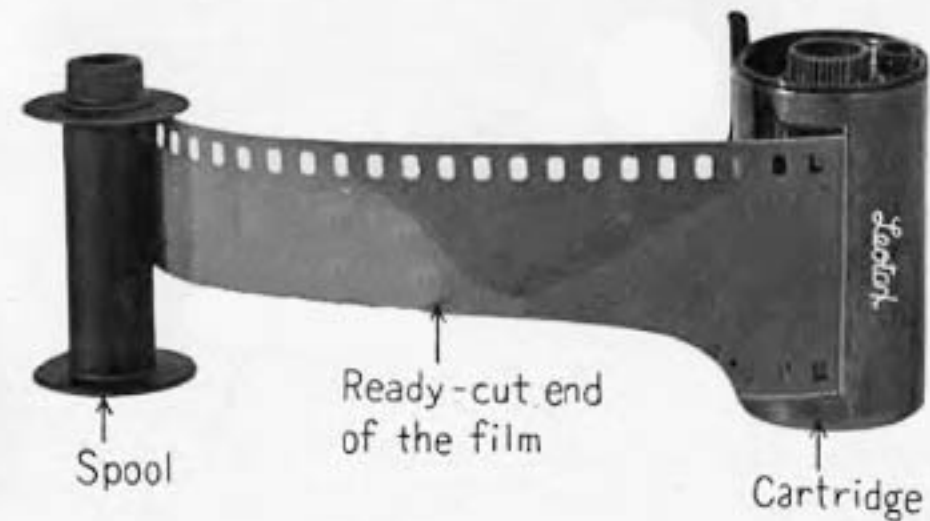


Fig. 1

- 3.—Insert the drawn out tail-end of the film deep into the slit of the take-up spool, and roll up the film turning the emulsified side or the dull side of the film outward.
- 4.—As illustrated in Fig. 2, facing the lens toward you, load the camera holding the cartridge in the left hand and the

take-up spool in the right. Let the emulsified side of the film face towards the lens. Put the take-up spool on the shaft. Set both the cartridge and the spool all the way down in position, and place the perforations of the film carefully in the sprockets.

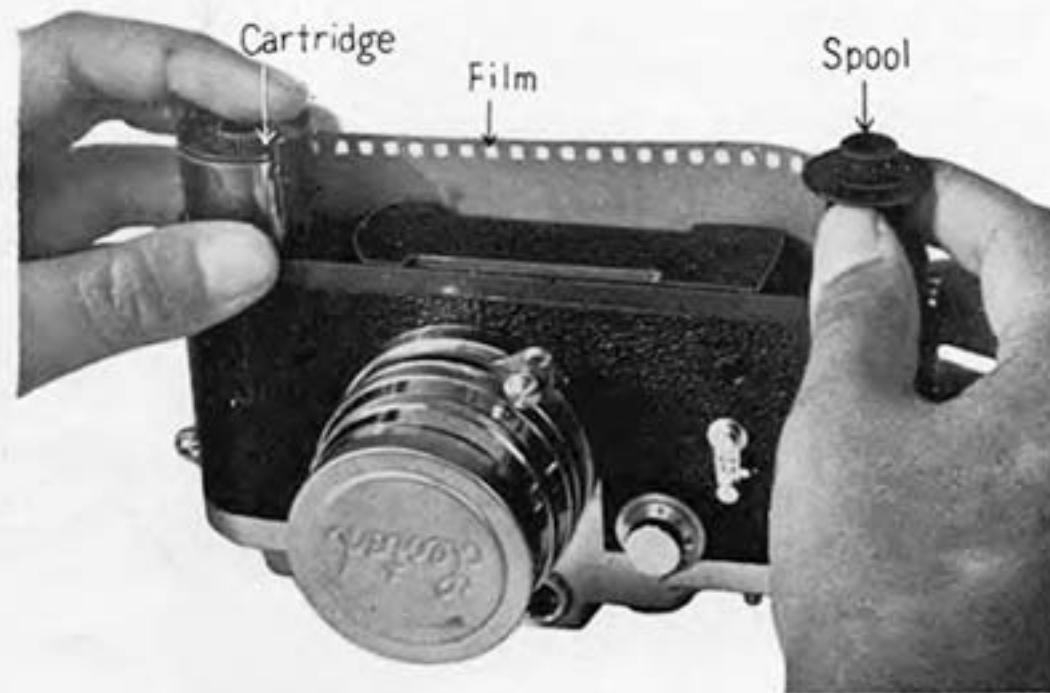


Fig. 2

5.—After checking that the cartridge, the spool, and the film are all set in position, put the base lid on the camera and turn the arrow from the 'open' to the 'lock' position. As the camera is closed, the cartridge opens inside

the camera, and the film becomes ready to use.

6.—In order to wind up the film lead, turn the film winding and shutter setting knob (A) in the direction of the arrow to the full extent, and press the shutter release button (C). Repeat this operation making two exposures with the lid over the lens.

7.—Set the exposure counter (P) so that the arrow points at the mark '0'. Now the camera is ready for taking the picture.



Focusing for the distance with the left hand, releasing the shutter with the right hand

How to Take the Picture

- 1.—Draw out the lens barrel to the full extent and turn it to the right so that it will go into the seated position, and the lens fixes itself in position to be ready for taking the picture.
- 2.—Adjust diaphragm to the proper stop.
- 3.—Turn the film winding and shutter setting knob (A) as far as it will go toward the direction of the arrow. This sets the shutter and brings the next frame of the film into position.
- 4.—Pull up the shutter speed dial (D) and set the shutter speed as desired. When the shutter is used either on "B" (Bulb) or at shutter speeds from $1/25$ second to $1/500$ second, it is necessary to adjust the low speed shutter dial (L) to the mark "25"
- 5.—Adjust the shutter speed dial (D) to the mark "25-1" before determining the shutter speed when the picture is taken at low speeds: $1/25$, T, $1/15$, $1/10$, $1/5$, $1/2$, 1 second.



Double images in the range finder

- 6.—After determining the aperture of the diaphragm and the shutter speed, get an accurate focus by moving the focusing lever (K) with the left hand as illustrated in the picture.
- 7.—To get the correct focus, look through the range finder moving the focusing lever (K) up and down until double images exactly lie one upon another. When the double images exactly lie one upon another, the lens which automatically and conjunctively acts with the distance scale is placed in the proper focusing position, and is ready for taking the picture.
- 8.—Then merely aim at the object through the view finder and gently press the shutter release button (C) until you hear the pleasant sound of the shutter released. Now the picture is taken.
- 9.—If picture-taking is to be continued under the same condition with the distance, the aperture of the diaphragm, and the shutter speed unchanged, mere turning of the winding knob (A) sets the shutter and bring the next frame of the film into position one after another.
- 10.—Always see to it that a new film is reloaded when the exposure counter (P) shows the number "36." If this rule is not observed, the film will come off the cartridge and may possibly not be rewound into the cartridge.

Reloading the Camera

- 1.—To take exposed film out of the camera, press the shutter release button (C) to make sure that the shutter is not set, move the rewinding lever (N) from the 'A' to the 'R' position, lift the film rewinding knob (G) revolving it in the direction of the arrow, and rewind the exposed film back into the cartridge. Rewinding becomes light when the film is completely off the take-up spool.
- 2.—After the film is entirely wound up into the cartridge, reverse the camera, set the clip on the base lid of the camera from the 'lock' to the 'open' and the cartridge is automatically closed inside the camera in a safety condition, ready for removing the cartridge.
- 3.—Return the rewinding lever (N) from the 'R' to the 'A' position, when the camera is loaded as described previously.

How to use :—

- 1) Double Exposure
In case you want Double Exposure, wind up the shutter dial anticlockwise until the shutter dial stops. The camera is ready for taking pictures.

- 2) Film Indicator
In case you want to keep your film (ASA-Sensitiveness), turn the film winding knob against the arrow to the mark which you need.
- 3) Infrared film
In case of using Infrared film and filter, adjust the focus by focusing lever. After determining the distance scale, turn the distance scale to the point-"R" (red mark).
- 4) A dot on the shutter release button
In case you push the shutter button without taking the lens cap off and wind up the film, move the rewinding lever from "A" to "R", lift the film rewinding knob, revolving it in the direction of the arrow until the dot has rotated once. By this operation, unexposed film moves back one space.
- 5) Flash
Leotax model F is provided with a flash synchronization plug at the side of the eyepiece of the finder and the change lever of F, X is found on the left side of the camera face.
In case of using focal plane shutter bulbs, set the change lever in the

vertical position and choose any speed higher than $1/25$ th of a second. (for strobe or speed class bulb, use X)

When lens shutter bulbs are used, the change lever down to horizontal position and set the shutter speeds lower than $1/25$ th of a second.

6) "B" (bulb)

In case of "B", adjust the low shutter speed dial to mark 25 and set the high speed shutter dial to mark B.

In this case, shutter is opened, while you are pushing the shutter release button.

7) T (Time)

In case of using T, adjust the high shutter speed to 25 and set the low speed shutter dial to mark "T". When you are pushing the shutter release button, the shutter stop in open.

In case of closing, turn the shutter dial toward mark "1" lightly.

8.—Click stop on the slow shutter dial.

In case of using low shutter speed less than $1/25$ th of a second, push the click.

Some Pieces of Suggestion for Picture-taking

- * Before putting on the camera lid, make sure the perforations of the film are properly set in the sprockets.
- * Before taking the picture, draw out the lens barrel all the way forward as far as it will go, and turn it to the right until the lens is firmly set in position. Otherwise, accuracy in focusing for the distance will probably fail.
- * It is urged that the aperture of the diaphragm be adjusted always before focusing for the distance for fear that the adjusting operation of the diaphragm gives rotary motion to the lens barrel, accidentally altering the focus.
- * See that the film winding and shutter setting knob (A) is wound as far as it will go in the direction of the arrow. Otherwise, some frames of the film may not be exposed properly or accurately when the shutter is released.
- * It is important that the following operation be strictly observed.
 - 1) Turn the film winding and shutter setting knob (A).
 - 2) Adjust the speed of the shutter.
 - 3) Regulate the low speed shutter dial (L).
 - 4) Set the low speed shutter dial (L) by the mark "25" when a shutter speed of either "B" (Bulb) or faster than $1/25$ second is called for in picture-taking.

- * To release the shutter, press the button as softly and gently as possible, as a jerky pressure on the button gives the camera a shock, making the exposure hazy.
- * The film rewinding knob (G) revolves simultaneously with the film winding and shutter setting knob (A) when the latter is turned. If not, the film is off the take-up spool.
- * Should the film winding knob (A) becomes heavier than usual before the exposure counter points to the number "36" either because the film is short or because you failed to set the exposure counter at the "0" immediately after loading the camera, do not wind up the film by force lest the end of the film comes off the cartridge and becomes impossible to rewind the film back into the cartridge.
- * Before rewinding the exposed film into the cartridge, check the shutter by trying the shutter release button (B).
- * It is recommended not to handle the film cartridge under direct rays of the sun or strong lights.
- * The camera is a precision instrument. Be careful not to drop it or bump it against any object, as the precision may be nullified, even though it is solidly and strongly made.

Good Focusing.

There is a varying range of sharpness in focusing an object. This is called the depth of focus as indicated by the dial. The depth of focus increases when a narrow aperture of the diaphragm is used. For example, when the center of the focus depth scale is placed at 9 feet and diaphragm opening of F3.5, focus is sharp from 8 to 10 feet. When the diaphragm is set at F8, a sharp focus is between 7 to 12 feet, as shown by the distance scale.

If the sharpness of near view of about 16 feet as well as of distant view ("∞" or infinity) is desired, it is necessary to place the center of the focus depth scale at the 30 feet mark with the diaphragm set at F 8.

This is the most effective method to get the sharpness of pictures when there is no time to estimate the range. If you wish to eliminate a certain point of focus in order to give pictures the tinge of distance, it is also advisable to use this focus depth scale to good advantage. For instance; in case you desire to place the rear of an object situated at the distance of 12 feet out of focus set the diaphragm at F 8 and the focus depth scale at "9 feet."

How to Take Accurate Pictures of Moving Objects

It is well known that the focal plane shutter which runs directly in front of

the film is needed to make a snapshot of the speedy movement of an object. As the "Leotax" camera has a shutter which runs horizontally it is capable of taking such pictures as moving airplanes, automobiles, and the like.

To take pictures of speedily moving objects it is necessary that the shutter runs in the opposite direction to the movement of the images reflected on the film. In other words, to take the picture of an object moving from the right to the left, it is all right to hold the camera in such position as it is usual. In this case, the shutter runs in the same direction as that of the moving object, because the image reflects itself reversely in the film.

For an object running from the left to the right, it is required to turn the camera up upside down (with a view finder down), and there is need of holding the camera lenthways with the shutter setting knob (A) up for photographing object moving downward such as diving. If this rule is observed, you will surely be able to take sharp and accurate pictures without any distortion.

SEMI-LEOTAX MODEL R

Lens : Toko
F=7.5 cm 1 : 35

Shutter : Copal B. 1, 1/2~1/300
sec. with self-timer,
flash-synchronizer.

Range Finder : not coupled to
Lens.

