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I have no connection with any camera company

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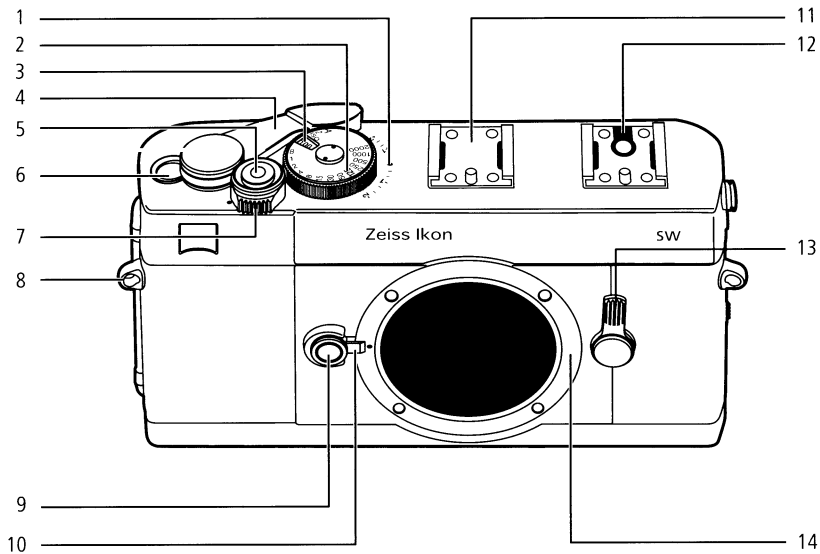
Zeiss Ikon SW Camera

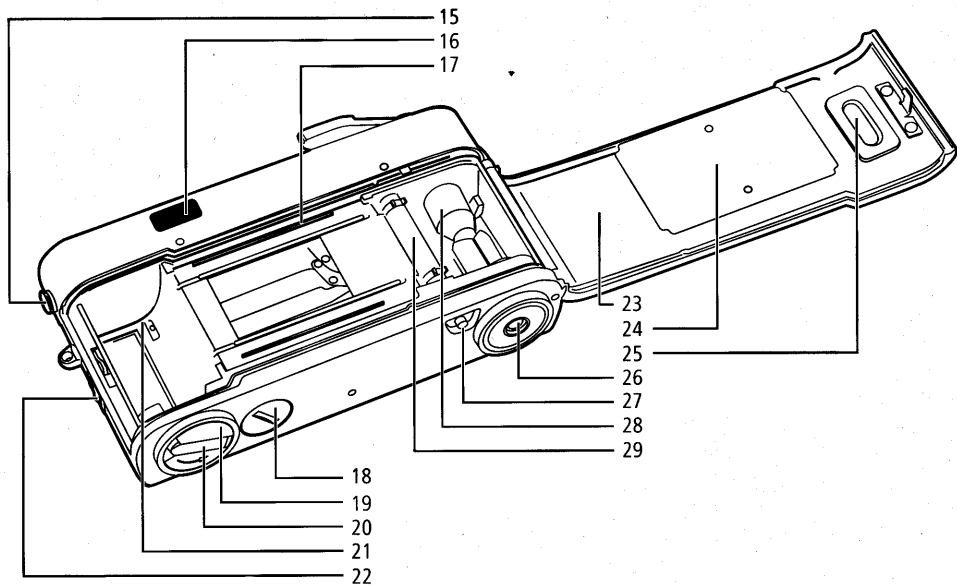


Gebrauchsanweisung
Instruction Manual
Instructions d'emploi
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We make it visible.





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Electronic devices shall not be treated as household waste. They must be disposed in an environmentally friendly manner. Hand in the camera to the manufacturer or to your specialist store for recycling.

The camera meets the restrictions for certain hazardous substances in electrical and electronic equipment. (RoHs)

www.orphancameras.com

Proper care of your camera

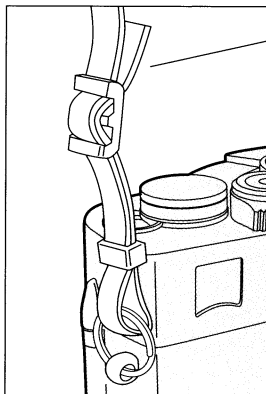
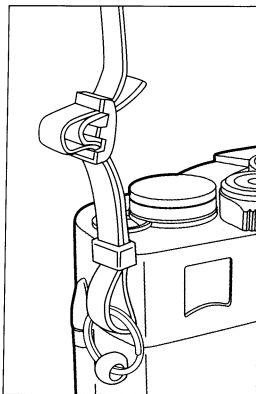
- Do not use any organic solvent such as benzene or alcohol to wipe the camera body.
- Do not leave the camera in a place of high humidity and temperature. In particular, do not leave the camera in your car.
- Keep the camera away from chemicals (adhesives, cleansing agents etc.). Store the camera in ventilated place and not in a case or pouch.
- This camera is not waterproof. Do not use the camera in heavy rain, do not expose it to splashing water.
- Shock, impact or other abnormal conditions can cause the camera to malfunction.
- Never attempt to wipe dust or dirt from lens or camera finder windows with your fingers. Always use a blower to blow the dust away, or wipe the surface gently with lens brush or a soft cloth.
- Check the camera after it has been stored for a long period. Make some trial exposures with it, especially before taking important pictures.
- Take care not to expose the camera to sudden changes in temperature which could cause condensation inside the body. Keep the camera in a bag or case for a while to adjust the temperature slowly.
- At temperatures below 0° C, the performance of the battery is reduced. When using the camera in a cold place, prepare spare batteries and keep them in a warm place.
- After using the camera in areas subjected to salt spray, dust, sand, chemical or water splash, wipe it carefully with a soft cloth. When storing the camera without a lens, protect the delicate internal areas with a body cap and keep it away from direct sunlight during storage.

Description of parts

- | | | | |
|------|-----------------------------------|------|--------------------------|
| (1) | Shutter speed index | (15) | Synchro contact |
| (2) | Shutter speed ISO/film speed ring | (16) | Exposure control LED's |
| (3) | Film speed window | (17) | Film guide rails |
| (4) | Film advance lever | (18) | Battery chamber lid |
| (5) | Shutter release button | (19) | Film rewind knob |
| (6) | Film counter | (20) | Film rewind crank |
| (7) | Main switch | (21) | Film cartridge chamber |
| (8) | Neck strap eyelet | (22) | Camera back lock button |
| (9) | Lens release button | (23) | Camera back |
| (10) | Mount index | (24) | Film pressure plate |
| (11) | Accessory shoe {A} | (25) | Film confirmation window |
| (12) | Accessory shoe {B} | (26) | Tripod socket |
| (13) | AE lock lever | (27) | Film rewind button |
| (14) | ZM lens mount | (28) | Film take-up spool |
| | | (29) | Film sprocket wheel |

Attaching the neck strap

Attach the neck strap to the camera as illustrated below.

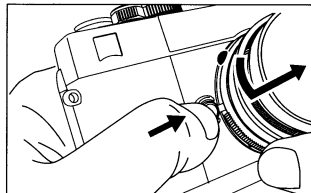
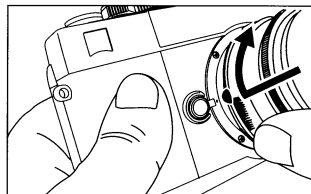


Be sure the protective end of the strap is on the inside.

Mounting/removing

Mounting/removing lens

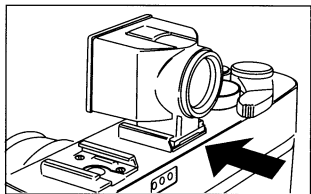
1. To mount the lens, match the blue mark (10) on the camera body with the blue mark on the lens barrel, then insert the lens in the camera body and turn the lens clockwise until it locks with an audible click.
2. To remove the lens from the camera body, press the lens release button (9) and turn the lens all the way counterclockwise, then lift it straight out of the mount.



Mounting/removing of an external viewfinder

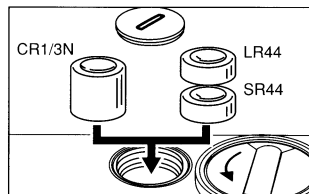
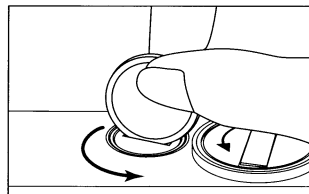
Select the viewfinder corresponding to the focal length of the lens used on the camera.

1. Attach the viewfinder by inserting it until it firmly locks on the accessory shoe {A} (11). Hold the viewfinder housing with your fingers close to the bottom plate and slide it parallel to the rails of the accessory shoe to avoid jamming.
2. To remove the viewfinder from the camera, hold the viewfinder housing close to the bottom plate and slide it backwards, parallel to the rails of the accessory shoe. Do not twist the viewfinder housing to avoid jamming.



Inserting batteries

1. Turn the battery chamber lid (18) counter-clockwise using a coin or a suitable screwdriver blade.
2. One CR-1/3N lithium battery or two LR44 type alkaline or two SR44 type silver batteries may be used to power the camera.
3. Insert batteries into battery chamber positive end (+) first.
4. Turn the battery chamber lid (18) clockwise until it is firmly closed.



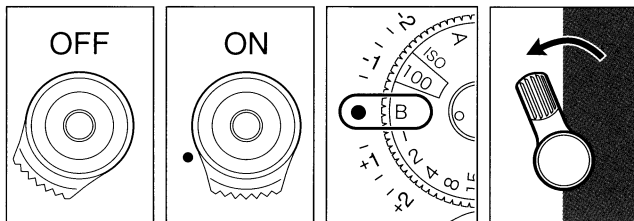
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Battery check

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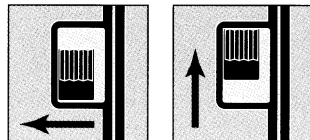
1. Turn the main switch (7) to the ON position.
2. Wind the film advance lever (4).
3. Set the shutter speed ring (2) to the "B" (bulb) position.
4. Press the AE lock lever (13) to the mount side.
 - If the green LED is lit, the battery charge is satisfactory.
 - If the red LED is lit, then the batteries are running out of power and need to be replaced.
 - If no LED is lit, then the batteries need to be replaced or have been loaded incorrectly.

Note: In order to avoid draining the batteries, turn the main switch (7) to the OFF position while the camera is not in use.

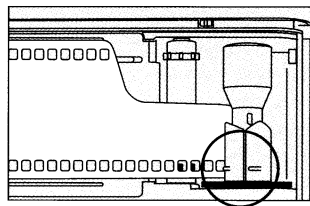
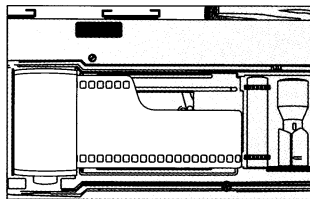
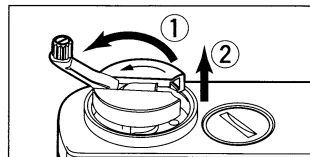


Loading film

1. To open the camera back (23), slide the back lock button (22) in the direction of the blue arrow, first to the front of the camera, then upward.
When the back is opened, the film counter (6) automatically resets to "S."
2. Unfold and lift the film rewind crank (20), then pull up the film rewind knob (19).
3. Insert the film cartridge into the film cartridge chamber (21) so that the protruding end of the film cartridge faces downward. Protect the film cartridge against direct sunlight.
4. Rotate the film rewind crank (20) slowly while pushing down the film rewind knob (19) lightly until the film locks on the film rewind fork at the inner side of the film rewind knob.
5. Insert the film (leader) into the grooves of the film take-up spool (28) and place it so that the spool teeth engage the film edge perforations.
6. Check that the film perforations are properly engaged by the teeth of the film sprocket wheel (29) and that the film slides smoothly along the film guide rails (17) while turning the film advance lever (4) lightly in order to advance the film.

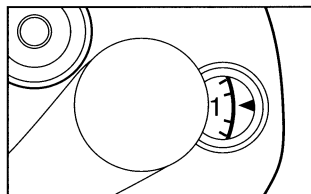
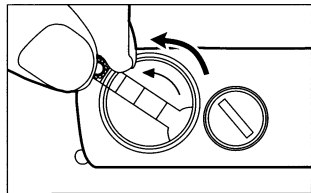
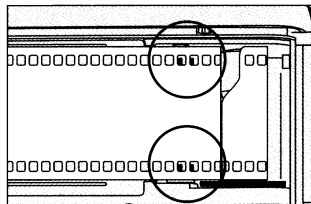


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Caution: Do not touch the shutter curtains!

7. Gently close the back door (23) and push it until it locks with an audible click.
8. Tension the film by turning the film rewind crank (20) gently in the direction of the arrow until increased resistance is noticeable. Then return the crank to its original rest position.
9. Advance the film a couple of frames, by depressing the shutter release button a few times and operating the film advance lever (4) until the film counter (6) indicates "1". Make sure that the film rewind knob (19) is rotating each time the film is advanced, which will tell you that the film is advancing properly.
10. When advancing the film, wind the film advance lever (4) slowly and securely until the film is fully transported to the next frame.



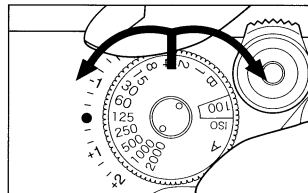
Film speed setting

1. Film speed is indicated on the outside of the film package, on the film cartridge or in the film instructions.
2. To set the film speed: while lifting the film speed set ring (2), turn it until the arrow indicator on the inner ring points to the corresponding film speed (ASA/ISO) value which can be seen through the film speed window (3).

Caution: Make sure to set film speed exactly at a notch position, not in between; otherwise a proper exposure value will not be indicated.

Film confirmation window

Through the film confirmation window (25), you can check the type, the number of exposures, and the ISO speed of the film.



Automatic exposure setting

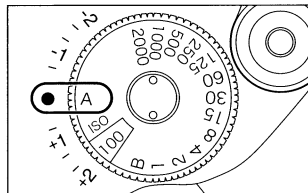
Aperture priority mode (auto exposure mode or "AE")

In aperture priority (AE) mode, the camera will automatically select the proper shutter speed based on the lens aperture value and the brightness of the subject. You may select the lens aperture value taking into account the film speed, the required depth-of-field, the brightness of the subject, motion of the subject, and so forth.

Recommended aperture values with ISO 100/21° film under typical situations are shown in the list:

(Shutter speed will be automatically set between 1/2000 and 8 seconds.)

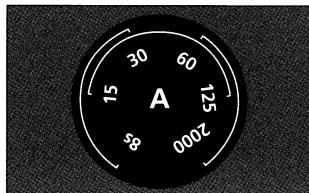
1. Turn the main switch (7) to the ON position.
2. Set the shutter speed ring (2) to align the "A" mark with the shutter speed index (1).
3. Turn the aperture ring on the lens to the desired aperture.
4. Advance the film and press the shutter release button (5) half way. Combinations of the three exposure control LED's (16) will indicate the proper shutter speed as shown in the list.
5. Gently press the shutter release button (5) to release the shutter.



Condition	Aperture (F value)
At night, for handheld shooting	Maximum aperture
When you want a shallow depth-of-field	Maximum aperture
Indoors in normal conditions	F2 – F4
Outdoors on a cloudy day	F4 – F8
Outdoors on a fine day	F8 – F11
Seaside in midsummer	F11 – smallest aperture
Mountain area with snow	F11 – smallest aperture

Red	Orange	Green		
○	○	☀	Green LED blinks fast	Overexposure warning
○	○	●	Green LED lit	1/125 ~ 1/2000
○	●	●	Green & Orange LED lit	1/60 ~ 1/125
○	●	○	Orange LED lit	1/30 ~ 1/60
●	●	○	Red & Orange LED lit	1/15 ~ 1/30
●	○	○	Red LED lit	1/8 ~ 1/15
☀	○	○	Red LED blinks fast	Underexposure warning

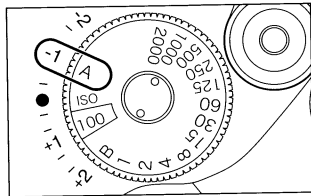
- The LED will remain on for about 8 seconds after you stop pressing the shutter release button (5). If the LED goes off while you are composing your shot, press the shutter release button again half way to reactivate the meter indicator.
- The LED is switched off as long as the film is not advanced.
- There is a shutter speed indicator table on the camera back (23).



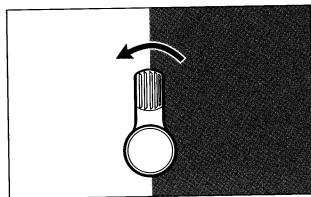
Exposure compensation

Exposure metering by measurement of subject brightness is based on the assumption of a subject with average reflectance. When the nature of the subject deviates considerably from this normal situation, compensation of the measured exposure becomes necessary. For example: when large parts of the subject are very bright, a (+) compensation is required; when large parts of the subject are dominated by dark tones, a (-) compensation is required for a correctly exposed image. When using slide (reversal) film the technically correct exposure is not necessarily the best exposure. To accommodate the taste of each photographer in various conditions, this camera is equipped with an exposure compensation mode. With help of the exposure compensation mode you can use a different exposure value than the one that aperture priority has determined automatically. You can change the value to either brighter ((+) compensation) or darker ((-) compensation).

The amount you can compensate for is +/-2 stops, in $\frac{1}{3}$ stop increments. Set the "A" indicator on the shutter speed ring (2) to the desired value of compensation. When the exposure compensation mode is active, the indicator LED of the compensated shutter speed will blink slowly.



Example: Compensate by -1 step.



AE lock function

With all kinds of subjects where bright parts and dark parts are not mixed and homogeneously distributed but clearly separated, the result of exposure metering will depend on the image composition. For example: when a wide angle lens is used, a bright sky will contribute a lot to the metering result when the horizon is in the lower part of the frame. This will probably lead to an underexposure of the main subject. However, when the camera looks downward and the horizon is close to the upper edge of the frame, the bright sky will contribute less to the exposure metering.

Therefore, the camera is equipped with an AE lock function as a convenient way to make exposure metering independent of image composition. Use the AE lock function with aperture priority mode or exposure compensation mode. The shutter speed will be locked at the moment when the AE lock lever (13) is pressed and held. Also, the exposure control LED indication will be locked. As long as the AE lock lever is pressed the locked shutter speed will be used for a single shot or consecutive shots. The camera switches back to normal AE metering when the AE lock lever is released.

1. Advance the film, press the shutter release button (5) halfway and check the LED indicator.
2. Alternately, you may press and hold the AE lock lever (13) to switch on the meter circuit and the LED indicator. Then the measured shutter speed is locked.
3. Direct the camera to a part of the subject with average brightness. Keep in mind that the metering sensitivity is highest in the center of the frame. Keep the bright sources or large bright parts of the subject away from this area. If necessary, go closer to the main subject.
 - As long as the AE lock lever is pressed towards the bayonet, the shutter speed and its indication on LED will be locked.

4. Create your composition and release the shutter.

- When you change the exposure compensation value while AE is locked, the effective shutter speed will be adjusted on the basis of the compensation value.
- If you turn the aperture ring of the lens while the AE lock lever is pressed, the effective exposure value is changed since the shutter speed remains constant.
- The camera switches back to normal AE metering when you release the AE lock lever.
The LED will remain on for about 8 seconds after you release the AE lock lever.

Manual exposure setting

In the manual exposure mode any desired combination of aperture value and exposure time can be selected.

- Indications on the shutter speed ring (2)

"2000" means 1/2000th of a second.

"1" means 1 second.

"B" means bulb.

- With bright and/or fast moving subjects, the use of a higher shutter speed is recommended to avoid blurring.

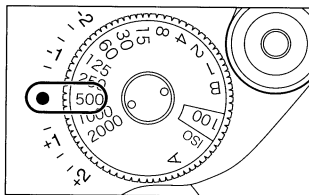
1. Turn the main switch (7) to the ON position.
2. Set the shutter speed ring (2) to the desired shutter speed setting.
3. Adjust your focus and press the shutter release button (5) halfway.

- If the LED in the center is lit green, it means the exposure was taken correctly.

- If the LED on the right hand side is lit red, it means an overexposure has occurred. Turn the aperture ring on the lens to a higher setting or select a shorter shutter time to correct this.

- If the LED on the left hand side is lit red, it means an underexposure has occurred. Turn the aperture ring on the lens to a lower setting or select a longer shutter time to correct this.

- The LED will remain on for about 8 seconds after you stop pressing the shutter release button (5) or stop turning the shutter speed ring (2).

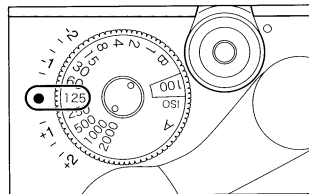
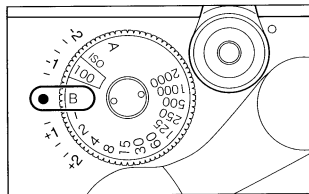


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	Red	Green	Red
Overexposure by more than 1 step	○	○	●
Overexposure by within 1 step	○	●	●
Correct exposure	○	●	○
Underexposure by within 1 step	●	●	○
Underexposure by more than 1 step	●	○	○

"B" (bulb) setting

1. With the shutter speed ring (2) set at "B" position, the shutter will remain open for as long as the shutter release button (5) is held down.
2. This setting is useful when an exposure longer than one second is required, such as photography at night.
3. Be sure to use a tripod and/or cable release when using long shutter times to avoid camera movement.

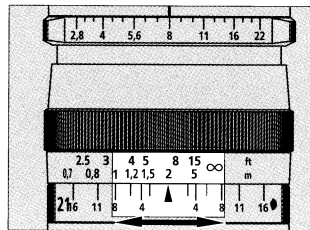
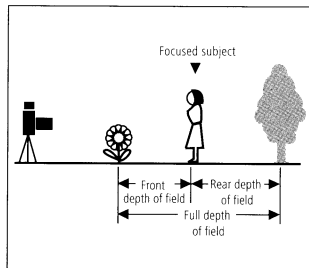


Focusing

This camera is intended to be used with wide angle lenses offering a greater depth of field. Thus the focusing is accurate enough by setting the distance scale to an estimated distance value.

Depth of field

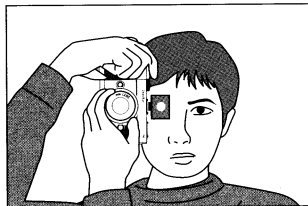
1. When you are focusing on a given subject, objects in the foreground and background may also appear (acceptably) sharp in the picture. The range in which all objects appear (acceptably) sharp in the picture is called "depth of field" and depends on the focal length of the lens in use, the selected aperture and the distance of the actual plane of focus.
2. To estimate the depth of field range at different aperture settings, the depth of field scale on the lens is used. The distance covered by the range between pairs of the same f /stops on the depth of field scale is the range of acceptable sharpness. The actual maximum and minimum distances giving adequate depth of field will be indicated by the values marked on the focusing scale.
3. For instance, when the lens is focused on a subject at a distance of 2 m with the aperture set at $f/8$, the depth of field extends from approximately 1 m to infinity. Thus all objects within the range between 1 m and infinity will be reproduced acceptably sharp in the picture with the aperture set at $f/8$.



Holding the camera

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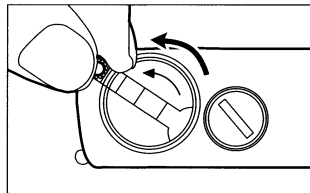
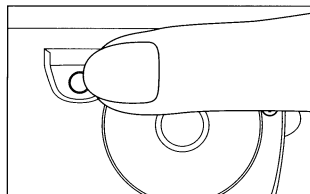
1. Hold the camera in the palm of the left hand so as to turn the lens focusing ring easily with the fingers of your left hand.
 2. Hold the camera body steady and place your right index finger lightly on the shutter release button (5).
 3. Press your left elbow lightly against your body and then look through the viewfinder to steady the camera against your face. Then relax your right arm holding the camera.
- With slower shutter speeds, it is recommended to use a tripod and/or cable release to avoid camera movement and image blur.



Rewinding the film

1. When the roll of film ends, the advance lever will be blocked, sometimes in mid-stroke. When this happens, do not force the lever past the point of resistance, or you will tear the film sprockets. Check the film counter (6) display. If the film counter shows that all of the frames of the loaded film have been exposed, then the film needs to be rewound.
2. Press the film rewind button (27) on the bottom of the camera.
3. Unfold the film rewind crank (20) and turn it clockwise in the direction of the arrow.
4. Once the winding tension eases, continue turning the film rewind crank a few more turns to be sure the film is completely wound into the cartridge.
5. Open the camera back (23), pull out the film rewind knob (19) and remove the film cartridge.
6. Take care to protect the film cartridge against direct sunlight while you remove it.

Note: If the film reaches the end of the roll during film advance, the film advance lever (4) will lock. Rewind the entire roll, then complete the movement of the film advance Lever after removing the cartridge.



Flash photography

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1. Simply slide the flash unit into the accessory shoe {B} (12).
With a grip (bracket) type flash, connect it to the synchro contact (15) by cable.
2. Set the shutter speed ring (2) at 1/125 second or slower.
Flash can be synchronized with shutter speeds slower than 1/125 second but be careful to avoid camera or subject movement.
3. Set a suitable aperture value according to the guide number of your flash unit and the distance to the subject. Follow the instruction given in the manual of your flash unit.
4. Make sure that the ready lamp on the flash unit is lit and release the shutter.

Specifications

Camera type:	35 mm camera with focal plane shutter and TTL light metering
Film format:	24 x 36 mm on 35 mm film
Lenses:	Intended to be used with short focal length types of the Carl Zeiss T* ZM-mount lens family in combination with an external viewfinder. Other M-mount lenses, including M39 screw mount lenses with an M-mount adapter can be used
Exposure metering:	TTL center-weighted metering at working aperture Metering range at ISO 100 and f/2: EV0—EV19 (f/2—4 sec., f/16—1/2000 sec.)
Film speed range:	ISO 25—3200 manually set in 1/3 f-stop increments
Exposure modes:	AE with aperture priority or manual; AE lock option for a single exposure or for a sequence of exposures; exposure compensation +/-2 f-stops in 1/3 stops set at shutter speed dial
LED display:	Combination of 3 LED indicates shutter speed setting situation
Shutter and shutter speed:	Vertical-travel metal focal-plane shutter with electronically controlled speeds accurate to 1/12 f-stop
Range in automatic mode:	8 sec. to 1/2000 sec.
Range in manual mode:	1 sec. to 1/2000 sec. in 1-stop increments; B
Flash synch:	Synchronization at 1/125 sec. and longer shutter speeds
Film transport:	Rapid-wind manual advance lever, with ratcheted partial advance
Camera body:	One-piece aluminum base structure, external magnesium covers, tripod thread 1/4 inch in base, two accessory shoes for external viewfinder and flash
Batteries:	One CR-1/3N Lithium or two 1.5 V cells type LR44 or SR44
Dimensions:	138 mm W x 72.5 mm H x 32 mm D (5.4" W x 2.9" H x 1.3" D)
Weight:	395 g (13.9 oz.)

Specifications subject to change without prior notice in the course of further development.

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