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CONTAX



S.V.

English • Deutsch

Instruction Manual • Bedienungsanleitung

645

Thank you for your purchase of the CONTAX 645 camera.

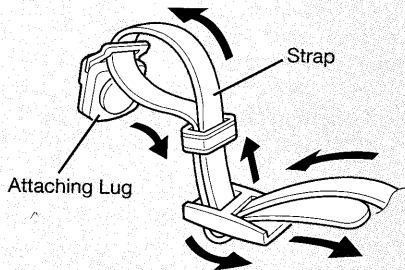
This CONTAX camera is an Auto Focus 6 x 4.5cm SLR camera. In combination with the legendary Carl Zeiss T* Lens, the 645 becomes a tool for production of photographic art. In addition to the features mentioned above, the following features are also available on the CONTAX 645.

Before using this camera, please read the instruction manual carefully for proper operation.

- ① The 645 allows full control over both Auto Focus and Manual Focus.
- ② Built-in high-speed shutter provides a wide range of exposure control enhancing the performance of the legendary Carl Zeiss T* lens.
- ③ The Real Time 220 Vacuum System (optional) makes remarkable progress in film flatness.
- ④ The 'Pre-Flash TTL Automatic Flash Meter' meters any flash before exposure.
- ⑤ Photographic data recording function

Although the description in this manual assumes the use of the AE Prism Finder, 120/220 Film Insert, Planar T* 80mm F2 lens and CONTAX 645 body, the operating procedures for other Carl Zeiss interchangeable lenses designed for use with CONTAX 645 SLR cameras are the same unless otherwise specified.

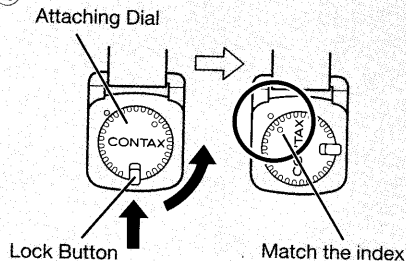
①



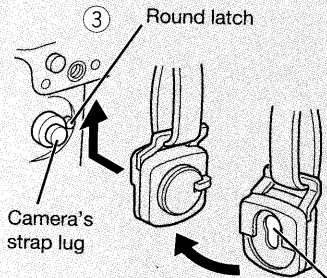
- ① Put the strap through the attaching lug as shown in the illustration.
- ② Match the index and turn the attaching dial toward arrows while pressing lock button of the attaching lug.
- ③ Insert the attaching hole of attaching lug into camera's strap lug and slide it to arrows.
- ④ Return the attaching dial to arrows and tighten.
- ⑤ Removal of the strap has to take step ② and take the opposite of step ③ for removal.

- Adjust the length of strap with latch.
- After attachment of the strap to the camera, pull the strap to insure that the strap is securely fastened.

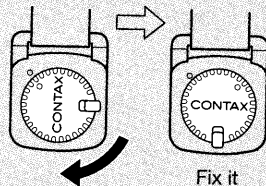
②



③



④



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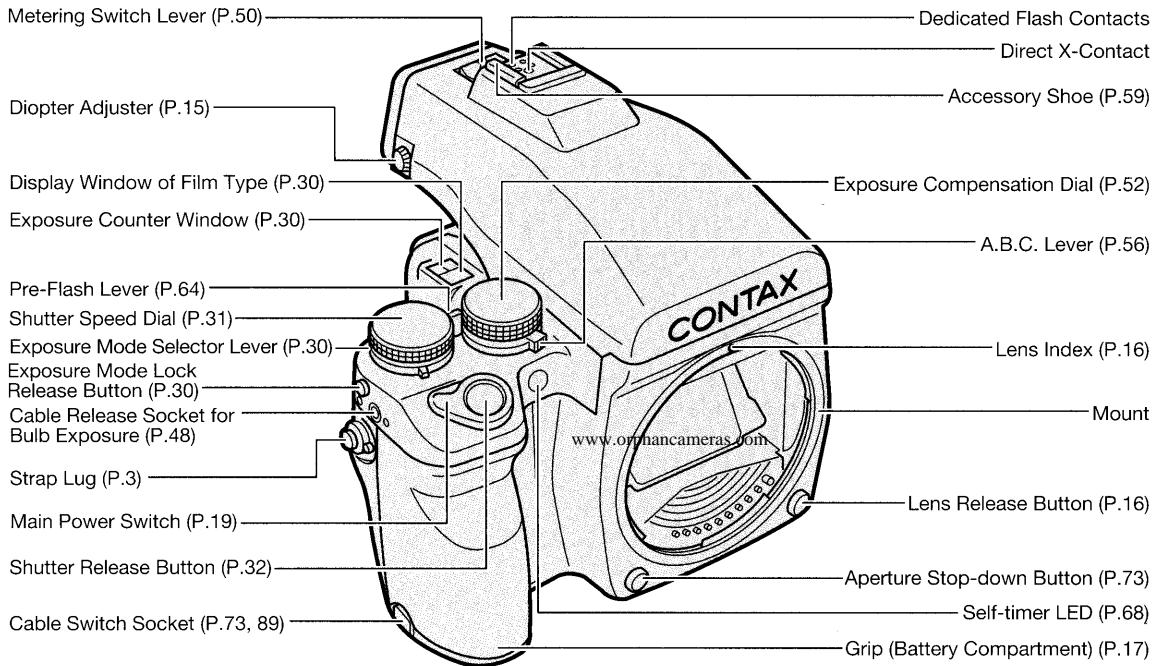
Others

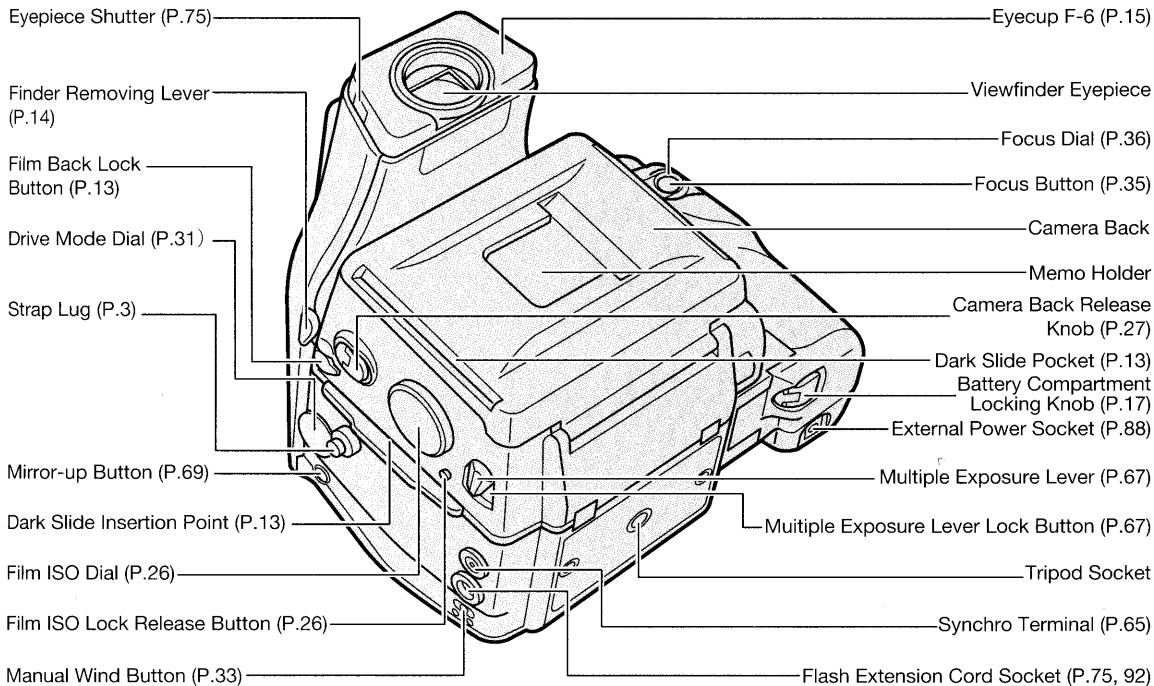
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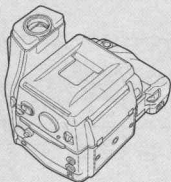
Name of Parts



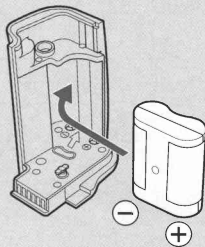


Quick Guide to Shooting (Automatic Exposure)

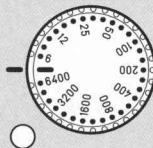
1 Attaching the viewfinder, film back and the lens to the body (Pages 12, 14, 16).



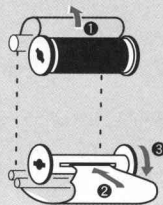
2 Loading the battery (Page 17).



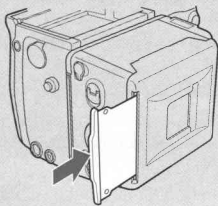
3 Setting the film speed (Page 26).



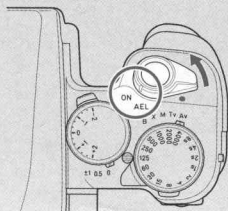
4 Match the pressure plate index with the type of film and load a roll of film (Pages 27~29).



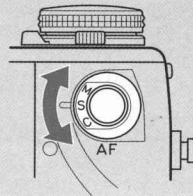
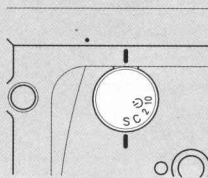
5 Draw out dark slide and insert into dark slide pocket.



6 Turn the main power switch on and press the shutter release button to advance the film to the first frame (Page 29).

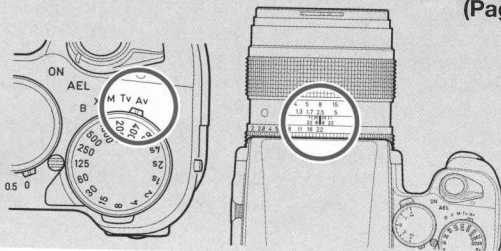


7 Set the drive mode and the focus dial to "S" (Pages 31, 36).



8 Set the exposure mode to “Av” and set the aperture. (Page 43)

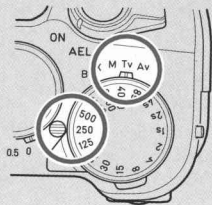
9 Focus, compose the picture and shoot. (Pages 34~40)



Aperture-priority Auto Exposure [Av] (Page 43)

8 Set the exposure mode to “Tv” and set the shutter speed. (Page 44).

9 Focus, compose the picture and shoot. (Pages 34~40)



Shutter-speed-priority Auto Exposure [Tv] (Page 44)

- To remove dust and dirt on the lens and viewfinder glass, blow off with an air blower or wipe gently with a soft lens brush. If they are soiled with fingerprints, wipe off lightly with lens tissue. That is enough. Never use a bomb type blower.
With its air pressure dust and dirt may get farther into the camera interior. Wipe off dust and dirt on the mirror lightly with a lens brush.
- To clean the camera exterior, wipe with the soft cloth. Never use benzene, thinner or other solvents.
- After taking pictures in a dusty place such as at the seaside or on mountains, clean the camera thoroughly. Salt air will cause corrosion and sand and dust will adversely affect the internal precision parts of the camera.
- Do not leave the camera in hot places (on an ocean beach in summer, in a parked car under direct sunlight, etc.) for a long time, because the camera, film and battery may be adversely affected.
- The lens and viewfinder may be clouded if the camera is brought into a warm room from outside where it is cold. This cloudiness will disappear soon, but it is always advisable to avoid sudden temperature changes because water droplets will cause internal corrosion.
- If you are going to use the camera for important events such as an overseas trip or wedding ceremony, be sure to test it beforehand to make sure it functions properly. It is also advisable to bring a spare battery with you.
- Because the camera is a precision device, do not expose it to excessive shock such as by dropping, etc.

Note on the Shutter Curtain:

The shutter curtain is made of a very thin material. Never push it with a finger, or touch or wipe it. When changing film, take care that film edge does not touch the shutter curtain. When using an air blower, do not blow air strongly on the curtain because it may be damaged or deformed. Never use a pressurized blower.

When camera fail to function suddenly:

Though rarely, it may fail to function because of strong external static electricity. In this case, set the main switch to OFF, remove the battery, reload it and use the camera again.

<Camera Storage>

- Keep the camera away from heat, moisture and dust. Do not store it in a wardrobe drawer containing mothballs or in a laboratory where there are chemicals that will cause damage to it.
- If you are not likely to use the camera for an extended period of time, remove the battery to prevent possible damage by battery leakage.

<Caution on Use of Accessories>

- When shooting with a Polarizing Filter, use a circular-polarizing filter.

Basic Operations before Shooting

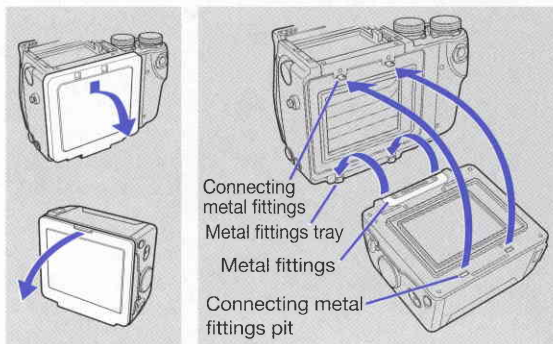
The Film Back is the film compartment. Load film onto a 120/220-film insert or 220 vacuum film insert and snap it into the Film Back for usage. You can attach or remove the film back from the camera body easily during shooting. If you have a spare film back, you can:

- ① Take color or black & white photographs, or use different film ISOs interchangeably.
- ② Change to spare film back quickly and can take photograph without stopping to reload.

Shutter curtain:

The shutter curtain is a precision component, please do not touch it with your finger, film or any foreign object. When removing the film back from camera body, place the rear cap on the body to protect shutter curtain.

By placing the cover of the film box into film back memo holder you can distinguish the film type. It is recommended to follow this procedure, particularly, when you use more than one film back.

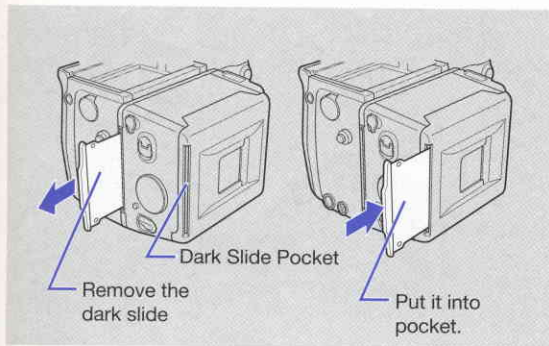


<Attaching the Film Back>

Remove the rear cap of the camera body and the front cap of the film back before attachment together.

1 Insert the attaching metal fittings located on the camera body precisely, into the attaching metal fittings tray, of the film back.

2 Insert connecting metal fittings pit, located near the top of the film back into connecting metal fittings of the camera body until the film back locks with a click.

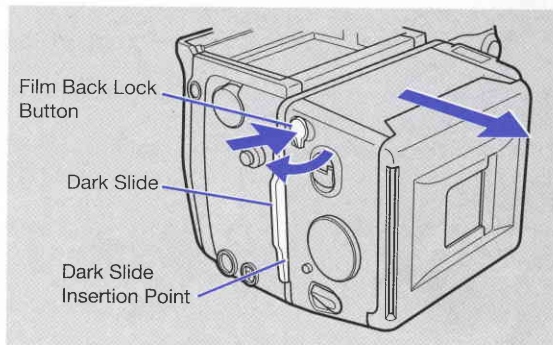


3 Remove dark slide and insert it into dark slide pocket of film back.

You can insert it into the dark slide pocket of film back from either side.

- Insert the dark slide into the dark slide pocket completely until it locks in place to avoid loss of dark slide.
- The dark slide cannot be removed if the film back is separated from the camera body.

The CONTAX 645 is constructed such that if the dark slide is not removed, you can not trip shutter release button.



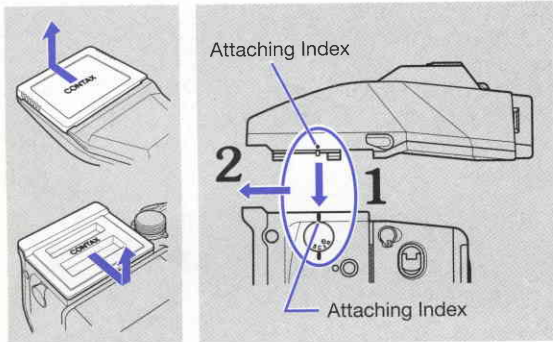
<Removal of Film Back>

1 Insert the dark slide into the gray dark slide insertion point deeply until the dark slide locks in place.

- If the dark slide is not inserted fully into the dark slide insertion point, the safety lock will prevent removal of the film back from the camera body.

2 Turn the film back lock button toward arrow mark and press the film back lock button all the way through, then remove the film back.

Attaching and Removing the AE Prism Finder

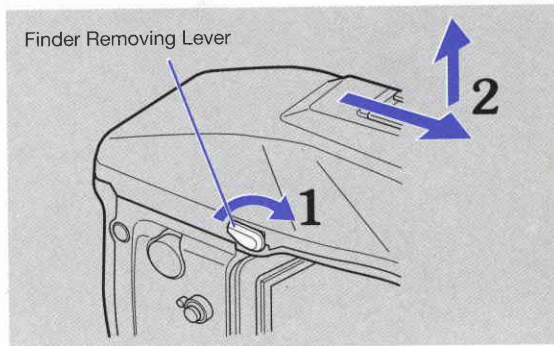


<Attaching the AE Prism Finder>

Remove protective cap from prism bottom and viewfinder part of camera body.

1 Match attaching index of AE Prism Finder “●” with attaching index of camera body “|” and put the finder into camera body.

2 Slide the finder forward until the rear latch locks securely in place with a click.



<Removing the AE Prism Finder>

1 Lift the Finder Removing Lever toward the arrow mark and slide AE Prism Finder backward.

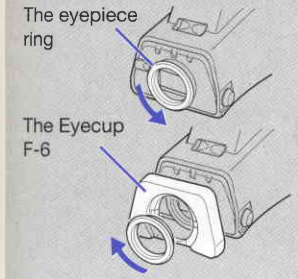
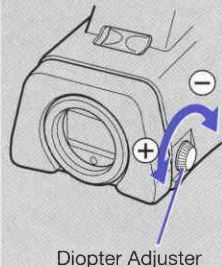
2 Match attaching index of AE Prism Finder “●” with attaching index of camera body “|” and lift the finder upward to remove it.

- Finder Removing Lever will return to original position automatically.
- Put the protective cap on both camera body and the finder after removal.

<Attaching the eyecup>

The eyepiece ring

The Eyecup F-6

**<Diopter adjustment>****<Attaching Eyecup F-6>**

1 Remove the eyepiece ring by rotating as in the illustration.

2 Set the Eyecup F-6 into the eyepiece socket and screw the eyepiece ring over the eyecup F-6 to attach it.

<Diopter Adjustment>

This camera has a built-in diopter adjustment system.

To adjust the viewfinder eyepiece to your eyesight, turn the diopter adjuster until the circle in the center of the viewfinder appears sharp and clear.

The adjustable range is from $-2.0D$ to $+1.0D$ (diopters).

- If you cannot adjust the eyepiece to your eyesight within diopter adjusting range of prism finder, acquire an optional FM type diopter lens.

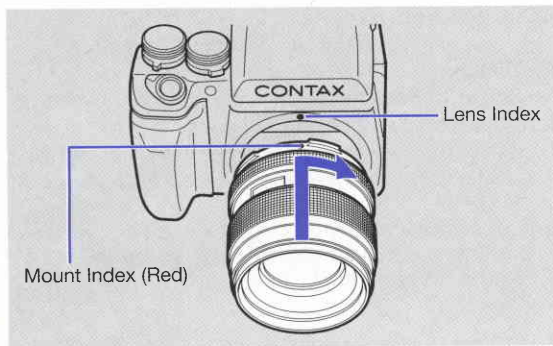
The range of diopter adjustment is given as follows:

Diopter Adjustment Lens	Adjusting Range
None	$-2.0D \sim +1.0D$
FM (-3)	$-5.0D \sim -2.0D$
FM (+2)	$0D \sim +3.0D$

Mounting the Diopter Adjustment Lens:

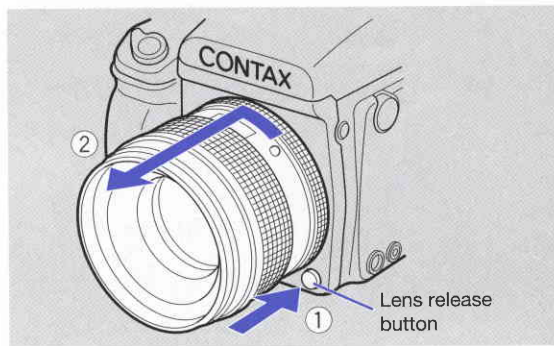
Remove the camera's eyepiece ring and attach by screwing in the diopter adjustment lens.

- Be sure to retain the eyepiece ring that has been removed.



<Attaching the Lens>

Remove the camera body cap and lens rear cap by turning them counter-clockwise. Align the red dot on the lens with the lens index on the camera. Set the lens in place and turn it clockwise until it locks with a click.



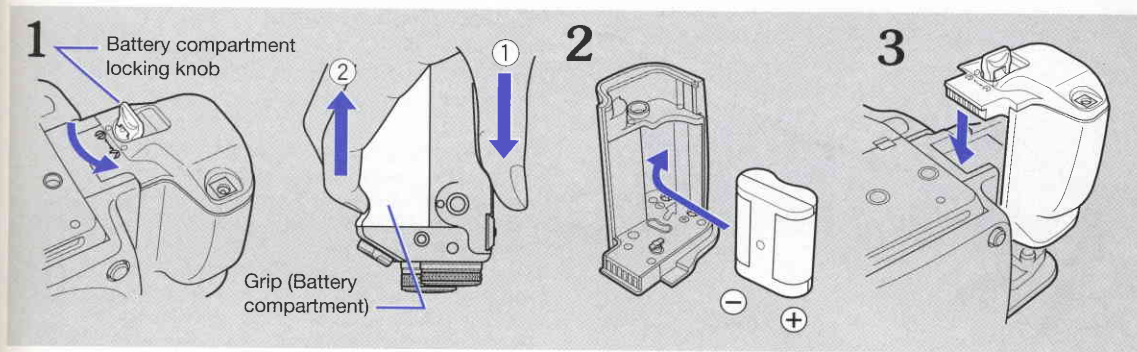
<Removing the Lens>

While pressing the lens release button, turn the lens counter-clockwise as far as it will go then pull it outward away from the camera.

- Do not touch the lens elements or inside the camera/lens when attaching and detaching the lens.
- With film loaded in the camera, avoid direct sunlight when changing lenses.
- Place the lens caps on the lens after removal from the camera. Also, do not forget to attach the body cap to the camera body.

Loading the Battery

All of the camera's functions, including the shutter, film winding and rewinding are battery-operated. This camera does not operate without a battery.



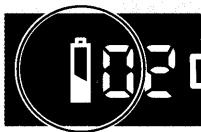
1 Lift the battery compartment locking knob on the bottom of the camera, set the mark “•” to “☺” (☹ → ☺) and remove the grip.

While pushing the rear of the grip by the thumb towards the arrow marked ①, draw the front part of grip by the index finger towards arrow marked ②.

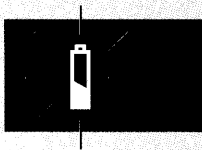
2 Insert a 6V lithium battery (2CR5) with the plus “+” and minus “-” ends correctly located, as illustrated in the battery compartment inside the grip.

3 Match the grip with camera's attaching points and attach it. Then, move the mark “•” on the locking knob to “☹” by twisting the locking knob to lock.

<Battery Check>




<Time to replace the battery>









Replace the battery

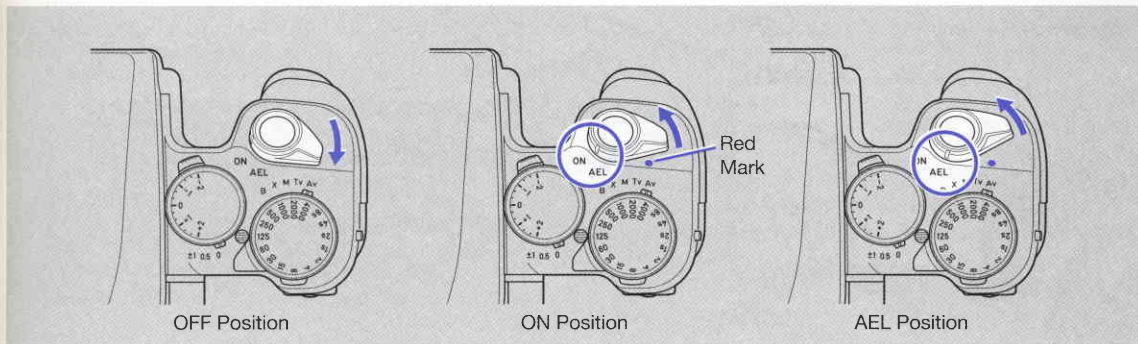
<Battery Check>

After the battery is loaded, turn the camera on. The battery voltage is normal if “” (Battery warning mark) does not appear in viewfinder.

<Battery Replacement>

You should replace the battery when “” appears in viewfinder. Turn the main switch off and replace the battery with new one.

- Although you can take pictures after the “” appears, replace the battery as soon as possible. If the battery voltage drops below the effective limit, the “” blinks or all viewfinder indicators disappear and the camera will no longer operate.
- The voltage of some batteries may temporarily decrease causing the “” to appear when they are first loaded into the camera. If “” appears soon after new battery is loaded, turn the main switch off and then back on again. If the “” does not reappear, the battery is good.



The main power switch turns the camera on or off and sets or releases the AE lock.

- The main power switch should be locked at a click position when shooting to prevent it from being shifted by mistake.

OFF: Red mark is not visible

When the red mark is not visible, the main switch is off. If you are not using the camera, turn off the main power switch to prevent the shutter from being inadvertently tripped.

“ON” mark

The camera is turned on.

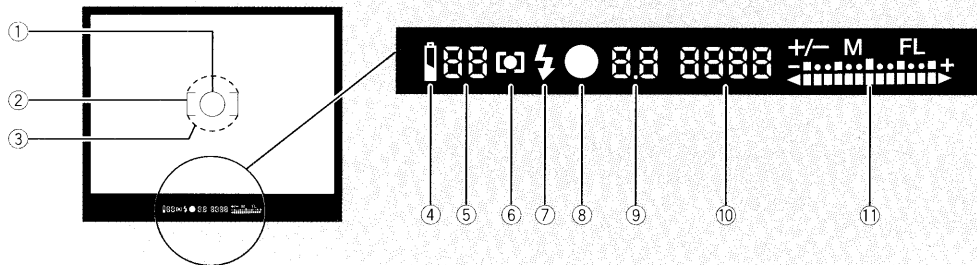
“AEL” mark

The AE Lock is useful for shooting with backlighting or continuous shooting of a moving subject at a fixed exposure.

- For details on the AE lock, see page 54.

Viewfinder Display

<Viewfinder Display> (For purposes of explanation, the viewfinder display is shown here with all information displayed; not all items are displayed simultaneously under actual conditions of use.)



The display in the viewfinder will illuminate under the following conditions, then turn off automatically after 16 seconds.

1. When the main switch is turned on.
2. When the main switch is turned on, the display is on with shutter release button half-way in. Switching a button, dial, etc. while the display is on, will cause the display to remain on for another 16 seconds.

<Viewfinder Display>

The viewfinder display is an information intensive finder, which displays exposure Indicators such as aperture, shutter speed, exposure meter type, exposure counter, etc.

① **Spot Metering Range**

② **Focus Frame**

The focusing area when in auto focus mode.

③ **Flash Metering Range**

The dotted line in the illustration indicates the flash metering range.

④ **Battery Warning Mark** “”

Indicates the time to replace the battery.


5 Exposure Counter


The exposure counter shows the frame number in position for exposure. It also provides the following functions.

- “- -” lighted: the film back is not attached
- “00” lighted: film is not loaded.
- “- E” blinks: complete film winding or failure of winding a reel of film forward rapidly.
- Displays the remaining time while the self-timer is operating
- Displays the operation order in the A.B.C. Mode


6 Metering Mark “ This mark indicates the following display.


Center-weighted average light metering mode:

The “


Spot-metering mode: The “

Center-weighted average light metering and AE

locked mode: The “

Spot metering and AE locked mode: The “

7 Flash Mark

When using the TLA flash system, the flash mark “

8 Focusing Mark “ “ “9 Aperture Value

Aperture value shown is within 1/2 step of actual aperture.

However, if it is within 1/2 step, the nearest value to the actual value is shown. (For example, if the actual value is f/3.3, it is indicated as f/3.5.) In the aperture-priority auto exposure (Av) and manual exposure (M) modes, the aperture you have selected is displayed in the viewfinder.

In the shutter speed-priority (Tv), the displayed aperture is the aperture selected by the camera in accordance with the shutter speed you have selected.

Also, in the shutter speed-priority (Tv) mode, the display warns of under-exposure (blinking full-open aperture) and over-exposure (blinking minimum aperture).

※ If “- -” is lighted, the lens is not installed.

※ When the aperture except full opened aperture or minimum aperture in spot metering blinks, it is out of metering range.

⑩ Shutter Speed

Shutter Speed and aperture value are displayed as follows:

The camera displays the shutter speeds from 1/4000 sec., to 32 sec.

“4000” means 1/4000 sec. and “125” means 1/125 sec. “8” means 8 sec.

If the exposure mode is set to Av, the displayed aperture will be within 1/2 step of the actual value. In Tv and M modes the actual value will be shown. When you set the “X”, shutter speed “90” will illuminate. When “B” is selected “buLb” will illuminate.

Also, in the aperture priority mode (Av), the 645 displays an under-exposure warning (blinking “32”) and an over-exposure warning (blinking “4000”).

※ When the shutter speed except “32” or “4000” blinks in spot metering, it is out of metering range.

⑪ Exposure Meter

The meter indicates the following depending on exposure mode:

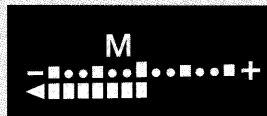
1. Auto exposure modes (“Tv”, “Av” modes)

Displays the amount of exposure compensation.
Example: +1.0EV compensation



2. Manual exposure “M” (M mode)

Displays the difference between manual exposure value and metering value.
Example: 2EV or more Under-exposure

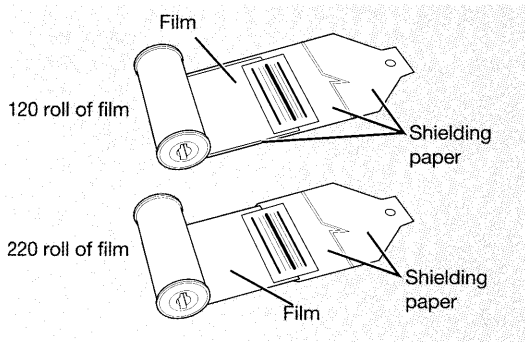


3. When the pre-flash is fired

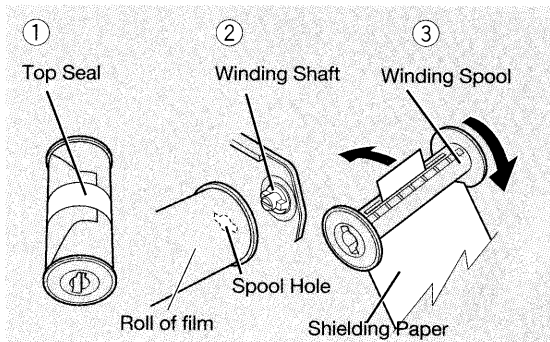
Flashmeter is displayed.
Example: 0.7EV Over-exposure



Concerning 120/220 film (For the first time 120/220 film user).

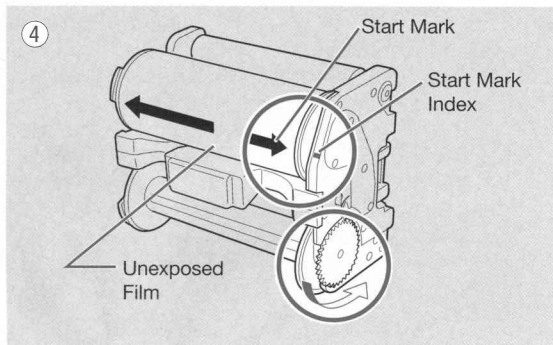


The film used in 35mm cameras is cartridge type film. One-twenty roll film is constructed as a spool of film backed the entire length by shielding paper while 220 roll film is constructed with film wound tightly on a spool, where the leader and trailing section only are made with shielding paper. Also, film winding must be handled by winding the film forward to another (empty) spool. **Be aware that 120/220 film is very different from 35mm film with regard to camera care and film loading.**



<Precautions during film loading>

- ① Remove the top seal completely from the fresh roll.
- ② The holes located in the axle ends of both spools must be inserted properly into their winding shafts. Improper placement of the either spool can cause light leakage, and/or winding problems.
- ③ Insert the tip of the shielding paper into the slot of the take-up spool shaft. Wind the take-up spool until a large arrow (the start arrow) is visible on the supply roll.



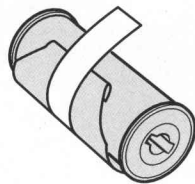
- ④ Match the arrow (start mark) with start mark index on film insert.

If you pass the start mark index by any appreciable amount, it may cause the loss of the last frame of the roll.

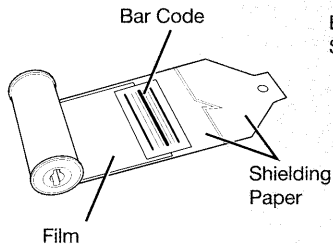
There are some films that approach the start mark with dots. Do not try to match these dots, but wait for the start mark (arrow).

<Film Removal Precautions>

1. When removing the film after the last frame, makes sure to grasp the roll firmly to avoid loosening the tightly wound film.
2. Fold the tip of the shielding paper under, then moisten and seal the film leader tape.



Bar Code Film System



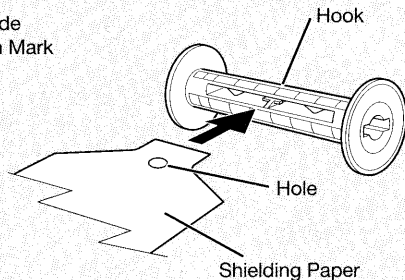
Easy Loading
System Mark



Bar Code
System Mark

Above are the marks that signify 'Bar Code System' and 'Easy Loading'. These marks are printed on the display box of film.

Easy Loading System



< Use of Bar Code System Film >

When using the bar code system, film loading is easy.

- ① Set ISO Dial to “ — ” before loading film, the bar code will be read during film loading, automatically.
- ② It is not necessary to match start mark when loading the film.

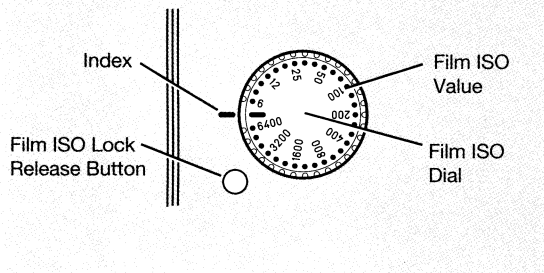
Easy Loading System:

The easy loading System only requires insertion of the shielding paper into the slot of the take-up spool. It is constructed to catch the hole at the tip of shielding paper on the hook of the spool.

Display of Film Speed Set Automatically:

If aperture stop-down button is pressed with mirror-up position when installing AE prism finder, it displays film speed set automatically in viewfinder display.

Setting the Film Speed



While pressing the Film ISO Lock Release Button, turn Film ISO dial to set.

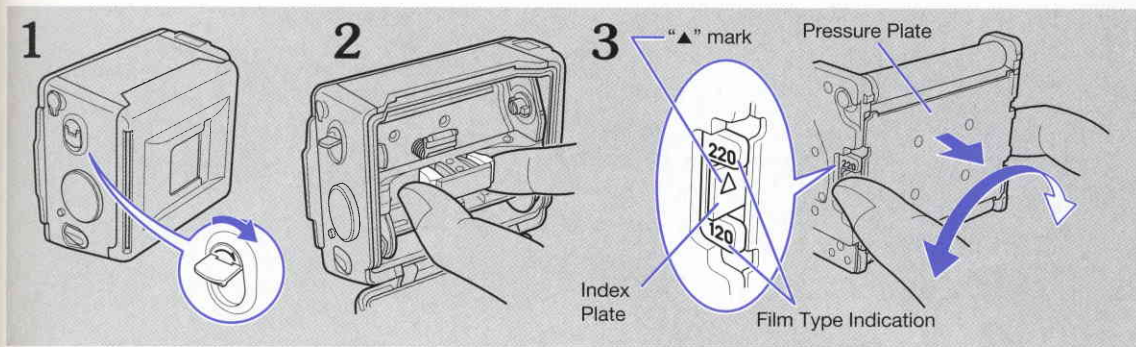
The film speed may be set in 1/3-step increments over the range from ISO 6–6400.

※ When the Bar Code System is used (page 25), set the index to “—”, colored orange.

- The film speed is automatically set to ISO 100 when film other than bar coded system film is loaded with setting the index to “—”.

Film Dial Display and ISO value (* indicates automatic setting.)

Film Dial display	-	6	●	●	12	●	●	25	●	●	50	●	●	100	●	●	200	●	●	400	●	●	800	●	●	1600	●	●	3200	●	●	6400
ISO value	*	8	10	16	20	32	40	64	80	125	160	250	320	500	640	1000	1250	2000	2500	4000	5000											



1 Raise the Camera Back Release Knob on film back and turn toward arrow to open the Camera Back.

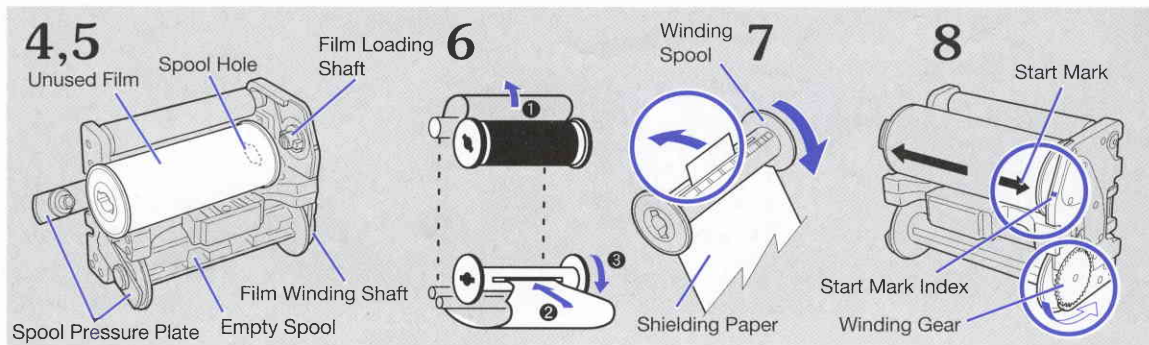
2 Remove 120/220 Film Insert. Squeeze the release handle of the film insert as shown in the illustration to release the lock. Then remove.

3 Hold index plate located to the rear of the pressure plate, pull out pressure plate and rotate as required. Match the "▲" mark with the type of film (120/220) being used.

120 roll film has shielding paper throughout the entire roll while 220 roll film has shielding paper at the head and tail ends only. Proper focusing can only be obtained by changing the position of the pressure plate for either film type. **Set the position of the pressure plate properly according to the film type being used.**

4 Move the spool pressure plate outward to release the empty spool. Insert the empty spool onto the lower film-winding shaft and close the spool pressure plate.

- Be sure that the empty spool is engaged in the spline "♣" and the spool pressure plate is closed completely.



5 Insert the new roll of film onto film loading shaft at the top of the film insert and close the spool pressure plate.

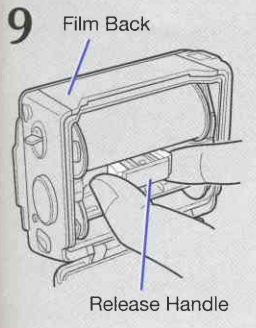
6 Draw out the shielding paper approx. 12cm (4 1/2 inches) and loop it around the outside of the pressure plate as in the illustration. Insert the tip of the shielding paper into the lower spool slot.

- Do not draw more shielding paper than required. If, by accident, too much shielding paper is drawn, open the spool pressure plate, remove the film from the take-up spool and rewind it. Light leaking may occur if the film is not kept tightly wound.

7 Draw the tip of the shielding paper through the slot of the take-up spool and bend it toward the arrows and rotate the take-up spool once. Wind the film tightly from supply roll to take-up spool tightly.

* If you use the Bar Code System, skip number 8 and proceed to item 9.

8 While pressing the center of the supply roll lightly, turn the winding gear and wind until the start mark appears and aligns with the start mark index.



9 Hold the Release Handle of the Film insert and replace it into the film back.

After inserting the film insert, push the release handle forward until it locks with a click. Close the camera back and latch.

- Set position of pressure plate is displayed at display window of film type.
- Put the camera back release knob down and put it away in original position.

10 Turn the main power switch on and press the shutter release button, the film is automatically advanced into position for the first shot. The exposure counter will show "01".

The exposure counter displays in both the exposure counter window and in the viewfinder.

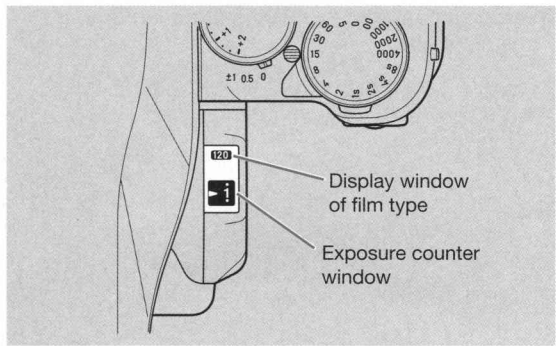
- If the exposure counter in the viewfinder blinks and does not move from "00" or if the exposure counter window stays on "S", the film is not advancing properly. Reload the film again.

■ Important : Set the pressure plate according to the film type.

Pressure Plate Set Position	Loading Film	
120	220 type	<ul style="list-style-type: none"> ● Out of focus ● Wind the film after 16 exposures ● With Bar Code System films, the camera will not operate after reading the bar code and 120 and 220 alternately illuminates.
220	120 type	<ul style="list-style-type: none"> ● Out of focus ● Release the shutter several times after 16 exposures and wind the film when the end of shielding paper reaches pressure plate. ● With Bar Code System films, the camera will not operate after reading the bar code and 120 and 220 alternately illuminates.

- If the pressure plate is not set properly, advance the film through the camera and re-load a new roll.

Exposure Counter and Display Window of Film Type



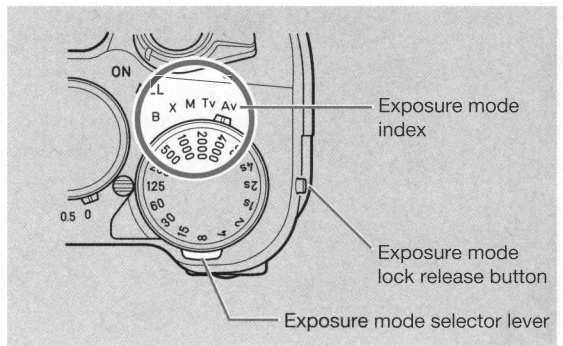
<Exposure counter window>

The exposure counter is displayed both inside the viewfinder and the exposure counter window. The counter display starts at 'S' (start) and continues to 16 (from 1 to 16) for 120 film. It begins at "S" and continues to 32 (from 1 to 32) for 220 film. The counter display is of the additive type.

<Display window of film type>

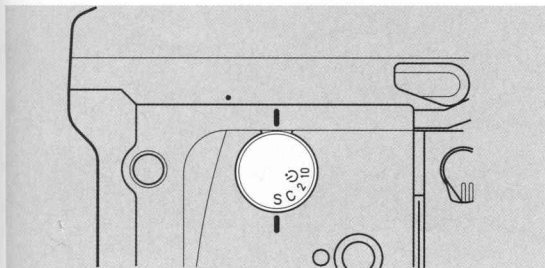
The display window shows the position of the pressure plate .

Exposure Mode Selector Lever



Use this lever to change exposure modes. **Press in the exposure mode lock release button and turn the exposure mode selector lever to set the exposure mode index to desired position.**

- For details on exposure modes, see pages 42-48.



The drive mode dial allows you to select one of the following modes.

“S”: Single-frame shooting mode

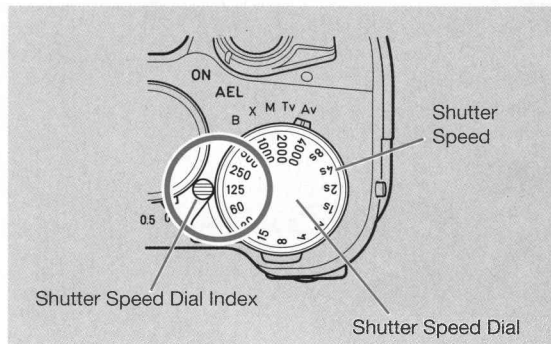
Each time the shutter release is depressed, one frame is exposed and the film is advanced to the next photo.

“C”: Continuous shooting mode

While the shutter release is depressed, the camera continues to take pictures at a maximum speed of about 1.6 frames per second. (The shooting speed changes according to the shutter speed, film speed, and whether or not dates are imprinted between frames, battery condition, etc.)

“2”, “10”: Self-timer shooting mode

Use this mode for self-timer shooting. For details, see page 68.



Use the shutter speed dial to adjust the shutter speed. It can be used in the shutter-speed priority auto exposure (“Tv”) and manual exposure (“M”) modes. Shutter speeds can be set in 1 step increments from 8 (8 sec.) to 4000 (1/4000 sec.)

- The shutter speed must be set at a click position for shooting.