

CONTAX



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.

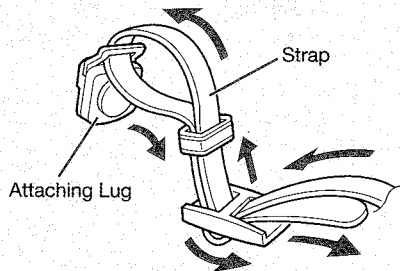
Before using this camera, please read the instruction manual carefully for proper operation.

- 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.

Attaching the Strap

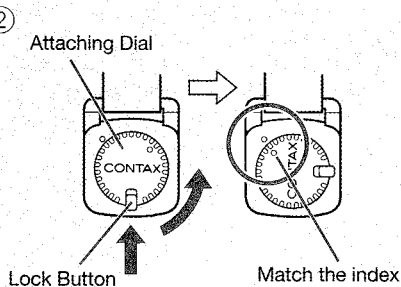
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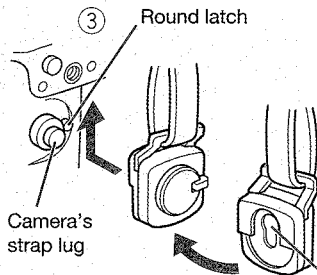
- ① Put the strap through the attaching lug as shown in the illustration.
- ② Match the index and turn the attaching dial toward arrows while pressing lock button of the attaching lug.
- ③ Insert the attaching hole of attaching lug into camera's strap lug and slide it to arrows.
- ④ Return the attaching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

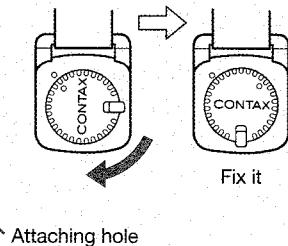
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④



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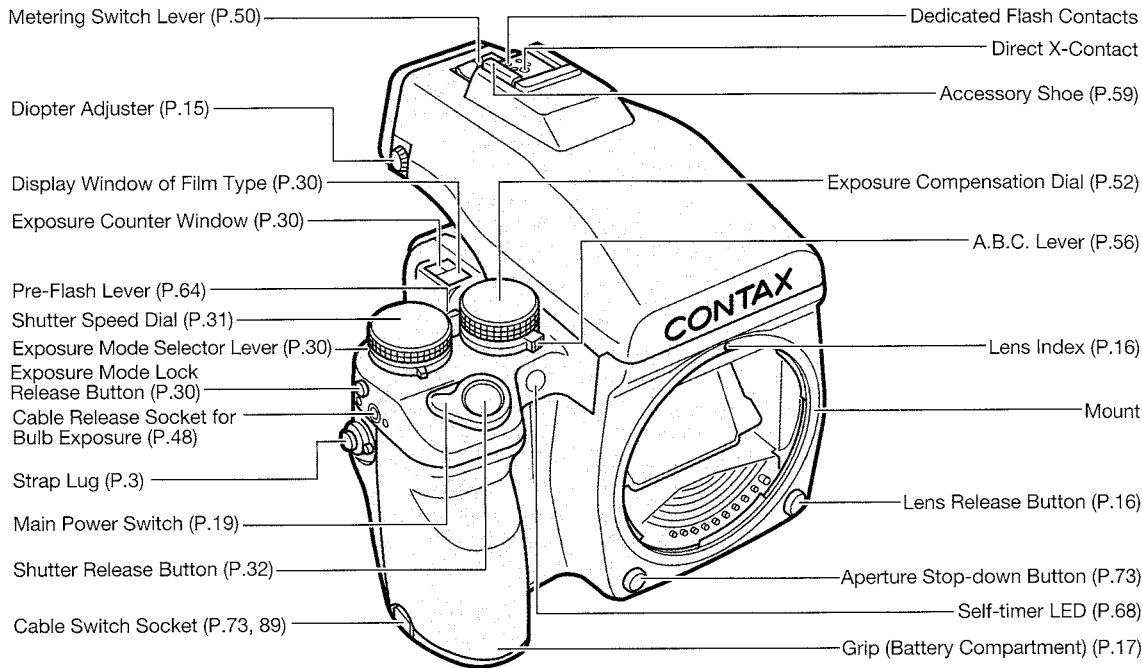
Others

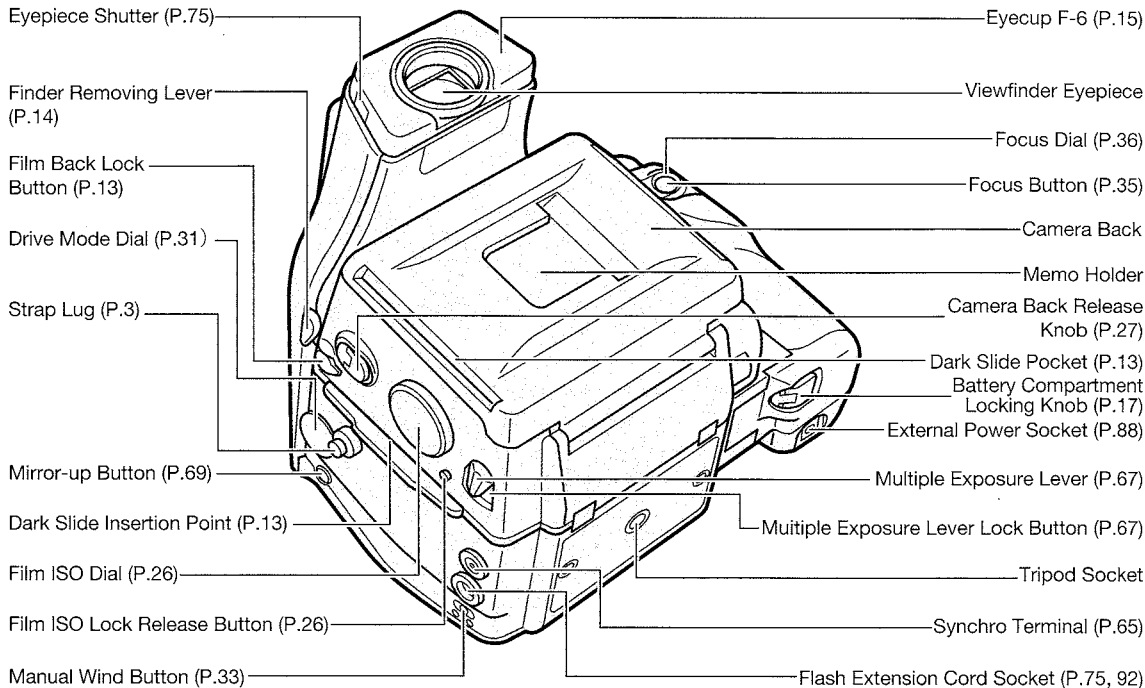
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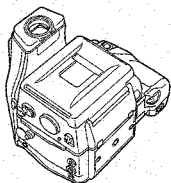
Name of Parts



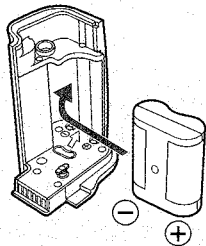


Quick Guide to Shooting (Automatic Exposure)

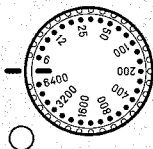
1 Attaching the viewfinder, film back and the lens to the body (Pages 12, 14, 16).



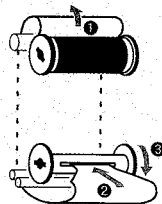
2 Loading the battery (Page 17).



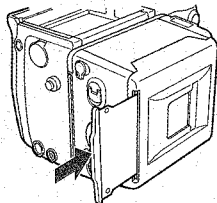
3 Setting the film speed (Page 26).



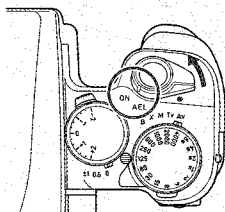
4 Match the pressure plate index with the type of film and load a roll of film (Pages 27~29).



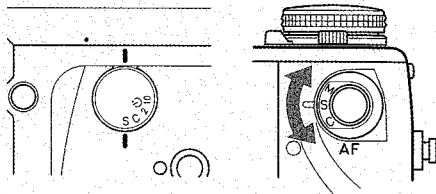
5 Draw out dark slide and insert into dark slide pocket.



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

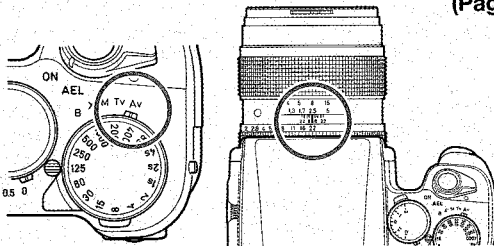


7 Set the drive mode and the focus dial to "S" (Pages 31, 36).



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

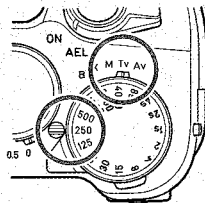
9 Focus, compose the picture and shoot. (Pages 34~40)



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)

Camera Care and Precautions

- 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.

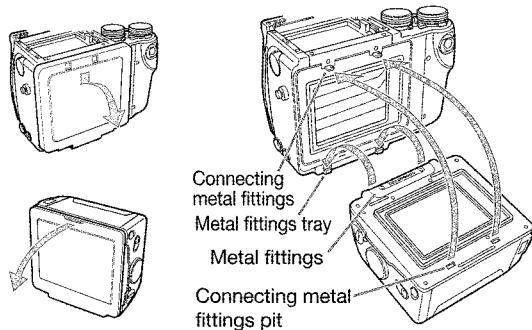
Basic Operations before Shooting

Attaching and Removing the Film Back

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.

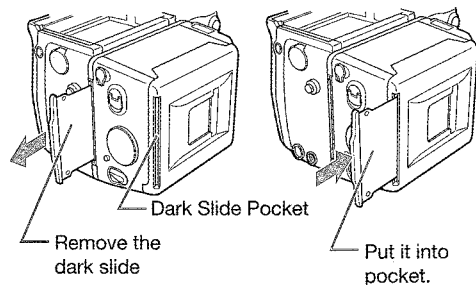
By placing the cover of the film box into film back memo holder you can distinguish the film type. It is recommended to follow this procedure, particularly, when you use more than one film back.

<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.

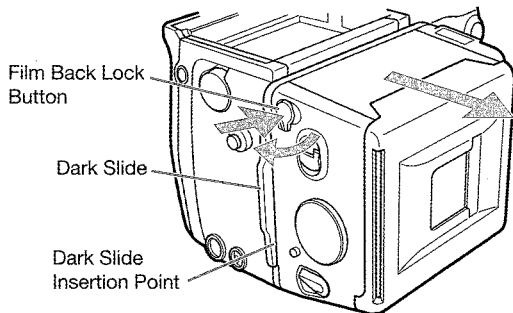


3 Remove dark slide and insert it into dark slide pocket of film back.

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.



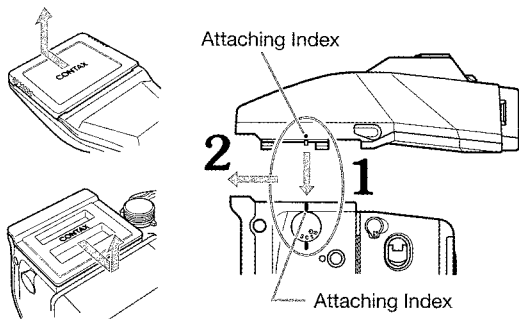
<Removal of Film Back>

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



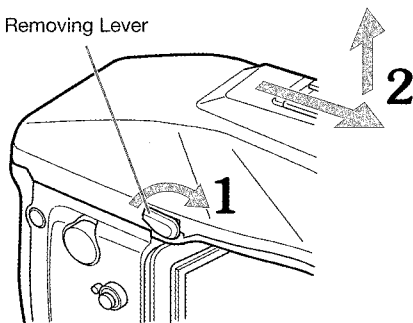
<Attaching the AE Prism Finder>

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.

Finder Removing Lever

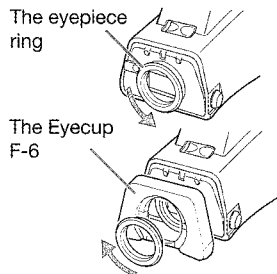
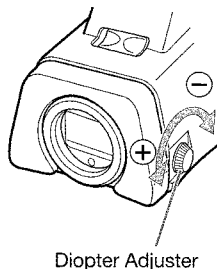


<Removing the AE Prism Finder>

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>**<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:

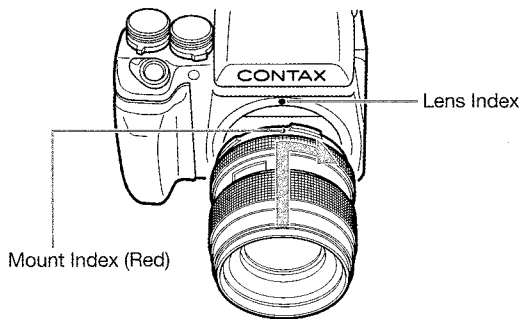
Diopter Adjustment Lens	Adjusting Range
None	$-2.0D \sim +1.0D$
FM (-3)	$-5.0D \sim -2.0D$
FM (+2)	$0D \sim +3.0D$

Mounting the Diopter Adjustment Lens:

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

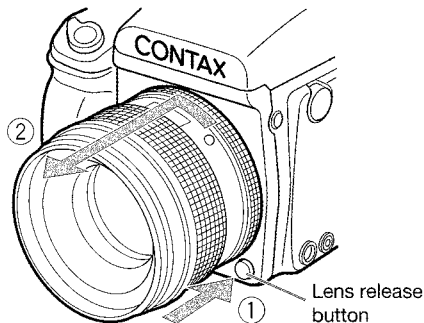
- Be sure to retain the eyepiece ring that has been removed.

Attaching and Removing Lenses



<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.



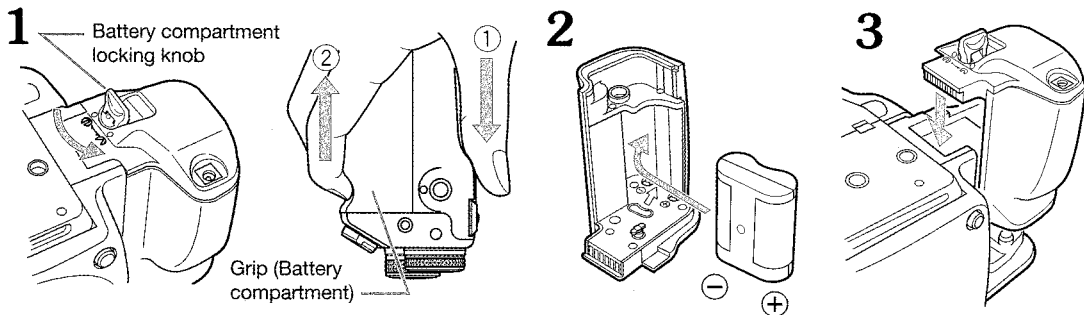
<Removing the Lens>

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 major functions of this camera, 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.

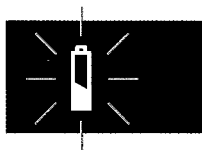
2 Insert a 6V lithium battery (2CR5) with the plus “+” and minus “-” ends correctly located, as illustrated in the battery compartment inside the grip.

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>

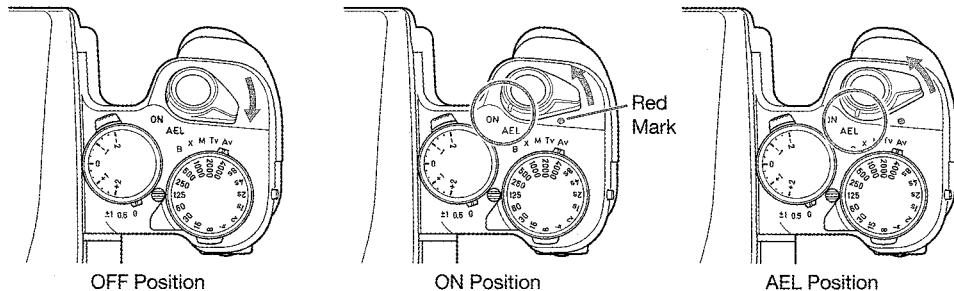
After the battery is loaded, turn the camera on. The battery voltage is normal if “” (Battery warning mark) does not appear in viewfinder.

<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.

Main Power Switch



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

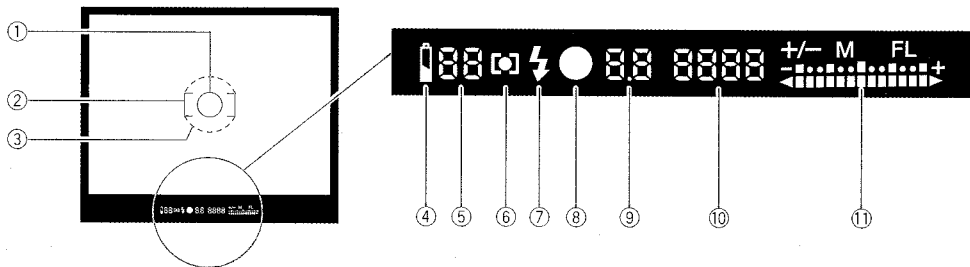
The camera is turned on.

“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> (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 “ [] ” mark lights.

Spot-metering mode: The “ [] ” mark lights.

Center-weighted average light metering and AE

locked mode: The “ [] ” mark blinks.

Spot metering and AE locked mode: The “ [] ” mark blinks.

⑦ Flash Mark

When using the TLA flash system, the flash mark “ ⚡ ” will appear as soon as the flash is fully charged. If your subject is correctly exposed, it will blink two seconds after the flash has fired (see page 60)

⑧ Focusing Mark “ ”

“ ” lights: The subject is in focus

“ ” blinks: Focusing not possible

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

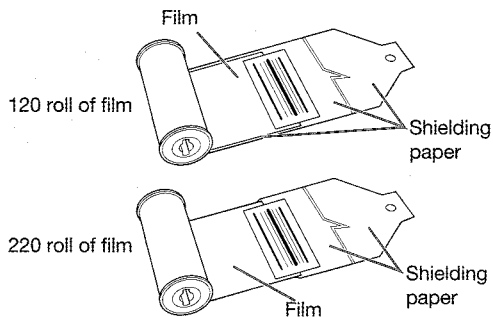


3. When the pre-flash is fired

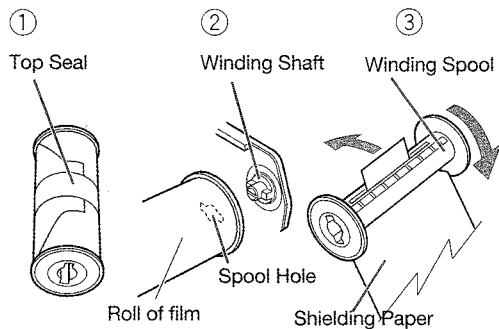
Flashmeter is displayed.
Example: 0.7EV Over-exposure



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

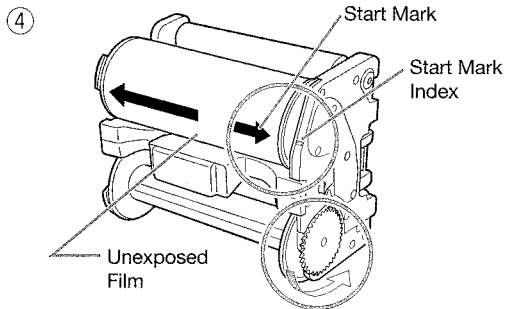


The film used in 35mm cameras is cartridge type film. One-twenty roll film is constructed as a spool of film backed the entire length by shielding paper while 220 roll film is constructed with film wound tightly on a spool, where the leader and trailing section only are made with shielding paper. Also, 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.



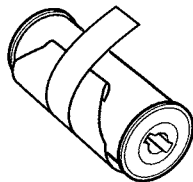
- ④ Match the arrow (start mark) with start mark index on film insert.

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

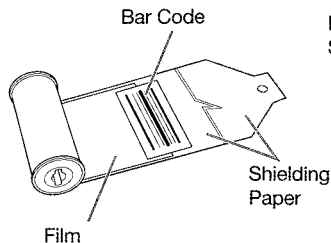
There are some films that approach the start mark with dots. Do not try to match these dots, but wait for the start mark (arrow).

<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



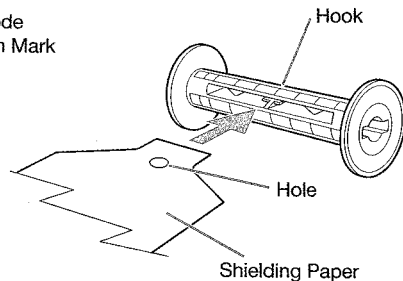
Easy Loading System Mark



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.

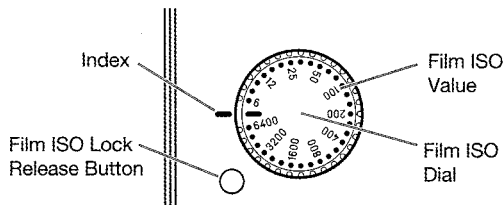
Easy Loading System:

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



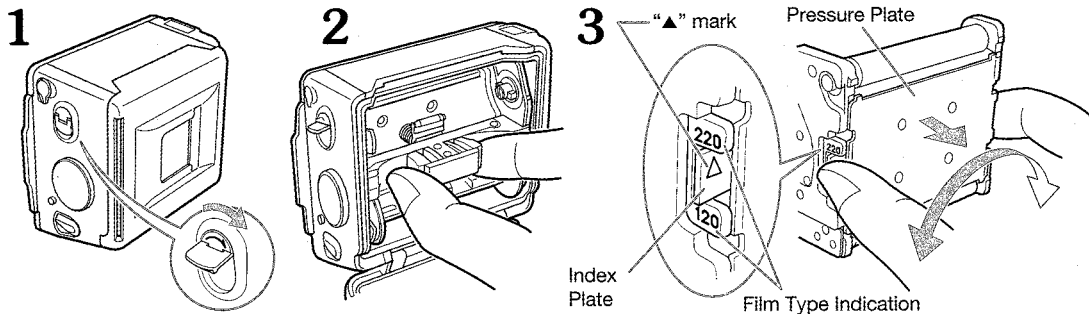
While pressing the Film ISO Lock Release Button, turn Film ISO dial to set.

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.

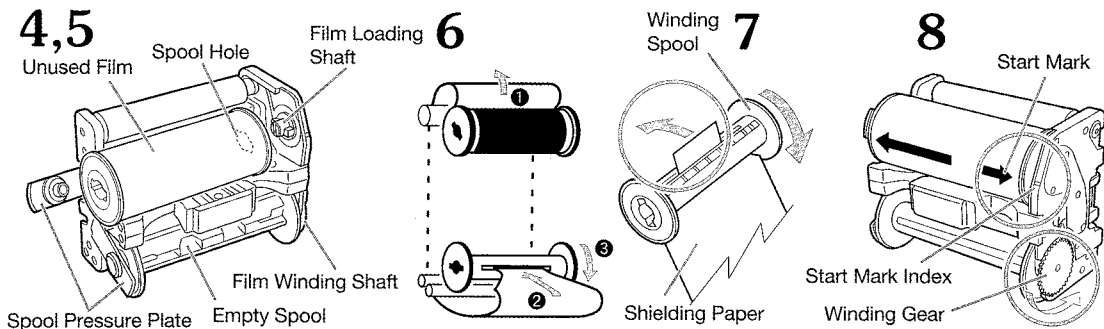
2 Remove 120/220 Film Insert. Squeeze the release handle of the film insert as shown in the illustration to release the lock. Then remove.

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.

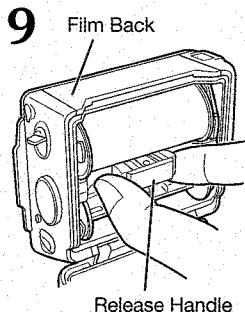
6 Draw out the shielding paper approx. 12cm (4 1/2 inches) and loop it around the outside of the pressure plate as in the illustration. Insert the tip of the shielding paper into the lower spool slot.

- 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.

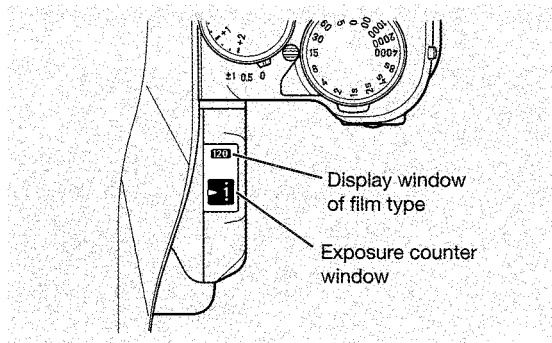
10 Turn the main power switch on and press the shutter release button, the film is automatically advanced into position for the first shot. The exposure counter will show "01".

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.
<ul style="list-style-type: none"> ● If the pressure plate is not set properly, advance the film through the camera and re-load a new roll. 		

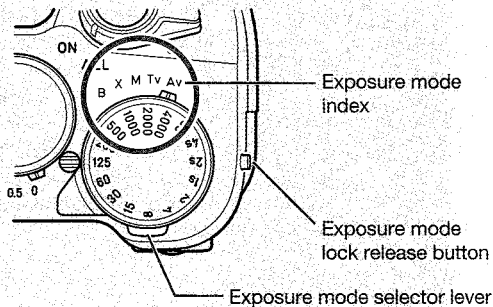


<Exposure counter window>

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.

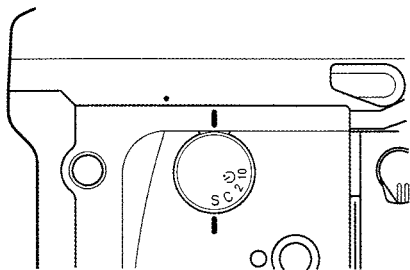
<Display window of film type>

The display window shows the position of the pressure plate .



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

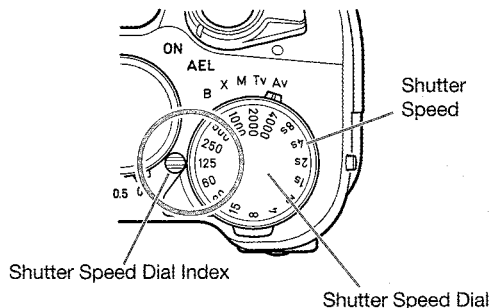
Each time the shutter release is depressed, one frame is exposed and the film is advanced to the next photo.

“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.)

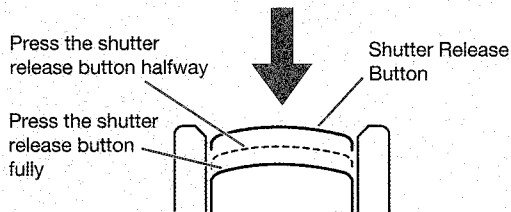
“2”, “10”: Self-timer shooting mode

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.



The operation of the shutter release button has two steps.

When the shutter release button is pressed halfway, the viewfinder display is lit. The auto focus and metering functions begin to operate. When the shutter release button is depressed fully the shutter release trips.

- Before loading film, practice by tripping the shutter release button several times.
- Press the shutter release button lightly with the pad of your index finger to prevent camera shake.

Eye Level



Horizontal Position

Keep your elbows tucked in to steady the camera



Vertical Position

Waist Level



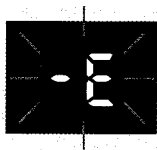
Adjust the length of the strap and press your arms against your body

To take sharp pictures, the camera must be held steadily. Blurred pictures are most often caused by camera shake. The camera can be held not only in the horizontal position, but also in the vertical position depending on the subject. In any case, find the camera holding techniques that suit you best. You can also use buildings and trees for support.

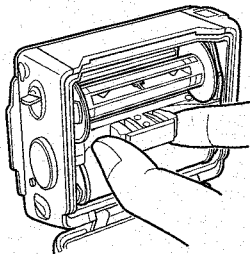
- A tripod and cable switch LA type are recommended for use with long shutter speeds, such as when shooting at night.

Unloading Exposed Film

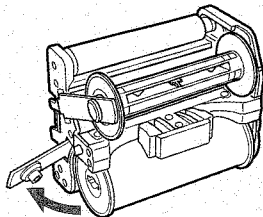
1



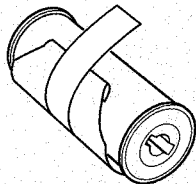
2



3



4 Secure the exposed roll of film by bending the tip of the shielding paper inside.



1 When the film is completely exposed, the camera will automatically advance the film through the camera. The exposure counter inside the viewfinder displays “-E”.

2 Open the Camera Back and remove the Film Insert.

3 Pull the Spool Pressure Plate on the film insert outward to remove the film.

4 Make sure that the film on the roll does not loosen, and seal immediately by moistening the glue tape on the film end.

- Remove the film from the camera in subdued lighting.
- Exposed films should be developed as soon as possible.
- Move the empty spool from the top to the lower (take-up) compartment, for loading of the next film roll.

To advance the film from midway through a roll, press the manual wind button on the side of the camera body (**do not use pins, needles or other sharply pointed objects.**)



Focusing the Lens

This camera can focus the lens automatically (AF = autofocus) or manually (MF = manual focusing). There are two auto focusing methods controlled by the focus dial: “S” (single autofocus) and “C” (continuous autofocus).

Furthermore, fine tuning of manual focusing at single autofocus (Page 36), one shot autofocus at manual focus (Page 40) can be made.

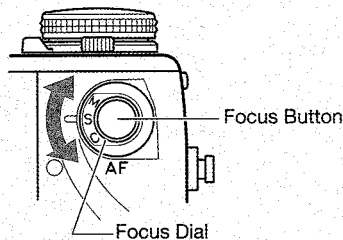
You can improve focusing by selection of the appropriate focusing mode for the subject.

Relation of Drive Modes and Focusing Modes, and Functions of Focus Button.

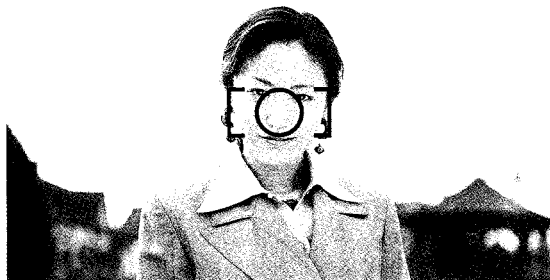
Focus Mode Drive Mode	“S” (Single Auto Focus)	“C” (Continuous Auto Focus)	“M” (Manual Focus)
“S” (Single Frame Shooting)	<p>Focusing operates when the shutter release is depressed halfway, and once the subject is in focus, the focus is locked at that distance.</p> <ul style="list-style-type: none">● When focus cannot be achieved, shutter does not operate.	<p>Focusing operates continuously while the shutter release is depressed halfway.</p> <ul style="list-style-type: none">● Shutter operates whenever pressed, regardless of whether focus is achieved.	<p>Focus is performed manually by turning focusing ring.</p>
“C” (Continuous Shooting)	<p>Focusing method is the same as Single Frame Shooting. During continuous shooting, focus for successive exposures is locked at the setting established for the first frame.</p>	<p>Focusing method is the same as Single Frame Shooting. During continuous shooting, focus is measured independently for each time.</p>	<p>Focusing method is the same as Single Frame Shooting.</p>
Function of Focus Button	<p>When the focus can not be achieved and shutter does not operate, it can be released the shutter by pressing the focus button.</p>	<p>When the focus button is pressed, focus lock is operated. Fine tuning of manual focusing can be made.</p>	<p>Focusing operates automatically when focus button is pressed. And once it is focused on your subject, the focus is locked at that distance. (One-shot autofocus)</p>

Focusing on Auto Focus

1



2



3 Depress the shutter release fully to take picture.

1 Turn focus dial to either "S" or "C".

2 Aim the focusing frame at your subject: and depress the shutter release half way.

As focusing is performed automatically, the focusing mark "●" will light in the viewfinder.

Fine Tuning of Manual Focusing

After the focusing mark "●" illuminates in the viewfinder, the lens can be adjusted by turning the focusing ring manually in focus mode of "S". Fine manual adjustments to the auto focusing system can be made very quickly.

■ When using “S” (Single Auto Focus);

It is recommended to use “S” for shooting of the general subject such as still subject.

When the shutter release is depressed halfway, focusing is performed automatically, and locked when focus is achieved.

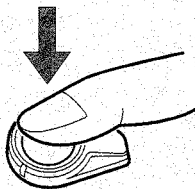
- Shutter can be released only when the focus is achieved.
- In continuous shooting mode (C), the focus is locked at the time of the first picture: subsequent pictures are made at the same lens focus setting.
- If a shifting or unstable subject makes it impossible for the camera to establish focus lock, the focusing mark will blink on the viewfinder’s focusing indicator to show that focus cannot be locked. In this condition, the shutter release will not operate. To photograph under this condition, establish focus lock by focusing on another subject at the same distance as the original subject, then re-compose to take the original composition.
- For shutter-priority photography when the focusing mark blinks on the viewfinder’s focusing indicator, press the shutter while holding the focus button depressed. The shutter will operate.

■ When Using “C” (Continuous Auto Focus):

It is recommended to use “C” for shooting the moving subject continuously.

The auto focus mechanism operates continuously as long as the shutter release is depressed halfway (focus is not locked). Make sure the subject is in sharp focus, then shoot.

- In the continuous shooting mode “C”, focus is measured and locked independently for each frame.
- Even when the “.” mark blinks in the viewfinder’s focusing indicator and focusing is impossible, the shutter can be tripped by depressing the shutter release.
- The camera’s autofocus system may not follow continuously depending on the movement or change of the subject.



<Focus Lock>

When taking pictures in the autofocus modes and the subject is not within the focus frames, lock the focus in the following manner and shoot.

■ Single Auto Focus “S”

1 Aim the focus frame at the subject you wish to focus, and depress the shutter release halfway.

Focusing is effected and, as soon as the subject is in sharp focus the mark “ ” in the viewfinder illuminates and the focus is locked.

2 With the shutter release depressed halfway, return to the original composition and take the picture by depressing the shutter release all the way.

- While depressing the shutter release halfway, the focus remains locked so that the focus point does not change even if you move the camera.
- The focus lock is cancelled when your finger is removed from the shutter release.

■ Continuous Auto Focus “C”

1 Aim the focus frame at the subject you want to focus. Press the shutter release button halfway.

Focusing is effected continuously while the shutter release button is depressed halfway.

2 Make sure the focusing mark “∞” is illuminated and press the focus button.

This will lock the focus when you press the focus button.

3 While pressing on the focus button, return to the composition you want and take your picture by depressing the shutter release all the way.

- While holding the focus button, the focus remains locked.

<Subjects not suited for auto focusing>

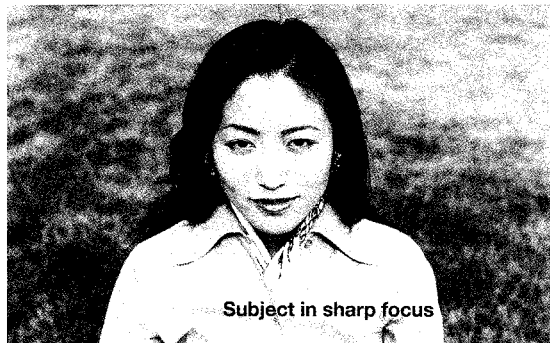
The following situations may cause the autofocusing system not to operate properly and the focusing mark “∞” may blink in the viewfinder. In such cases focus on a different subject located the same distance as the subject, lock the focus with the focus lock, then shoot. Otherwise, focus manually.

- ① Extremely bright or extremely dark subjects.
- ② Subjects with an extremely low contrast.
- ③ When there is a strong light source such as sunlight in the focusing frame or nearby.
- ④ There are two subjects at extremely different distances inside the focusing frame.
- ⑤ Subjects with a repeating pattern.
- ⑥ When the quantity of light from the subject is greatly reduced such as with an ND filter or polarizing filter.

<The movement of focusing ring>

In the auto focusing mode, focusing ring may be moved a little bit at the minimum focus distance or infinity (∞). But it is not effected on the performance of the camera at all.

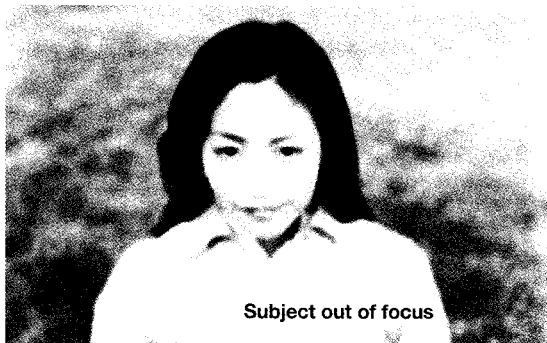
Focusing in Manual Focus



Set the focus dial to “M”. You can focus the lens manually by turning the focusing ring.

This camera is normally equipped with a focusing screen MFS-2 (Matte Screen with AF target). When the subject is focused, the image on the matte screen is clear. And if the subject is not in sharp focus, the image on the matte screen is blurred. If the subject is in sharp focus, the focusing mark in the viewfinder “:” is lit.

* Interchangeable focusing screens are also available.



<One-shot Autofocus>

You can use “one-shot AF” while shooting in manual focus mode.

Focusing is effected while the focus button is pressed and once in focus, it locks in that position.

Taking Pictures

Selecting the Exposure Mode

You can choose the following exposure modes depending on your shooting preference and application.

Av: Aperture-priority Auto Exposure

When choosing the desired aperture, the camera will automatically select the shutter speed suited to provide the correct exposure. This mode is useful for taking pictures where depth of field is important.

Tv: Shutter-speed-priority Auto Exposure

When choosing the desired shutter speed, the camera will automatically select the aperture suited to provide the correct exposure. This mode is useful for taking fast moving objects.

M: Manual Exposure

In this mode, you can choose the aperture and shutter speed as desired.
Intentional over-or-under-exposure is also easy.

X: Flash Photography

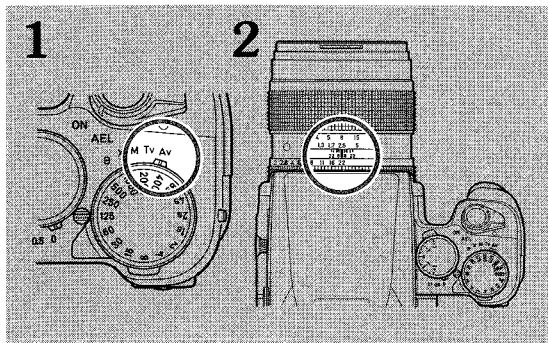
This mode is for use with an ordinary flash unit having only an X-contact but no dedicated flash contact. A shutter speed of 1/90 sec. is used.

For details, see "Taking Pictures Using X-contact Flash Units Other than TLA Flash Units" on page 66.

B. Bulb Exposure

This mode can be used for taking night scenes or pictures of the sky at night that require long exposure.

Aperture-priority Auto Exposure [Av]



1 Set the exposure mode selector lever to “Av”

2 Set the aperture and shoot.

When setting the aperture with the lens aperture ring, the camera will automatically set a suitable shutter speed. The set aperture and the automatically set shutter speed are displayed in the viewfinder. It does not matter where the shutter speed dial is set.



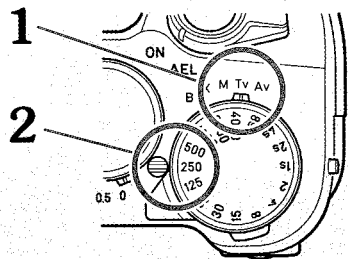
In case of opened aperture:
When a large aperture is used, depth of field (the “in-focus” area in front and back of the subject) decreases. This characteristic can be used to focus attention on the subject by blurring the background.



In case of stopped-down aperture:
Small apertures produce greater depth-of-field. This is ideal when you want both the subject and the background in focus.

Make aperture adjustments to suit the subject and your preference.
For more information on depth-of-field, see page 74.

Shutter-speed-priority Auto Exposure [Tv]



1 Set the exposure mode selector lever to “Tv”.

2 Set the shutter speed and shoot.

When setting the shutter speed dial, the camera will automatically set the aperture suited for it. The set shutter speed and the automatically selected aperture are shown in the viewfinder.

It can be set at any position of Aperture value.



Fast Shutter Speed:

Set a fast shutter speed to take pictures of rapidly moving of subjects.



Slow Shutter Speed:

Set a slow shutter speed to take pictures the flowing water

- To prevent camera shake with slow shutter speeds, use a tripod.

Exposure Warning on Auto Exposure

<Exposure Mode at "Av">

Warning Over Exposure



Shutter Speed
"4000" blinking

<Exposure Mode at "Tv">

Warning Over Exposure



Minimum Aperture Value
blinking

Warning Under-Exposure



Shutter Speed "32" blinking

Warning Under-Exposure



"Full Opened Aperture
Value" blinking

If the subject is out of range of the exposure control system in an auto-exposure mode, one of above-mentioned warnings is displayed inside viewfinder. Correct as follows:

<Over-exposure warning>

When "4000" blinks in the aperture priority auto-exposure mode or "the minimum aperture" blinks in shutter speed priority auto-exposure mode, over-exposure will occur. Because the subject is too bright, re-adjust the aperture or shutter speed so that "blinking" change to "lighted". It is also possible to reduce the light intensity with an optional ND filter.

<Underexposure warning>

When "32" blinks in aperture priority auto-exposure mode or the "full opened aperture" blinks in shutter speed priority auto-exposure mode, underexposure will occur. Because the subject is too dark, use additional light such as a dedicated flash to brighten up the subject.

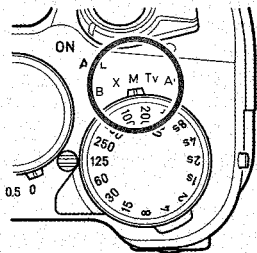
- Even though an over or under-exposure warning appears, exposures may still be made by depressing the shutter release.

<Out of metering range warning>

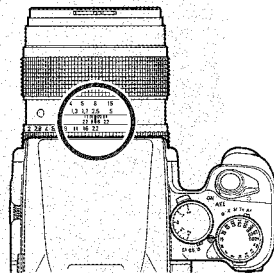
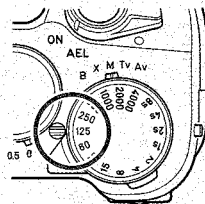
Shutter speed blinks in aperture priority auto-exposure mode when spot metering is set. And aperture blinks in shutter priority auto exposure mode when spot metering is set.

Manual Exposure [M]

1



2



1 Set the exposure mode selector lever to “M”

2 Set the shutter speed and the aperture and trip the shutter.

Set the shutter speed with the shutter speed dial and aperture with the aperture ring.

The selected shutter speed and aperture value is displayed in the viewfinder.

The exposure meter shows the difference between selected exposure and correct exposure value in the set metering mode.

Change the shutter speed dial or the aperture ring to obtain correct exposure.

Exposure Meter Example

1 EV Over-exposure



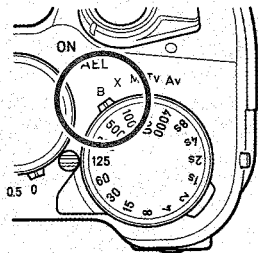
Correct Exposure



2 EV or Greater Under-exposure



Bulb Exposure [B]



1 Set the exposure mode selector lever to "B".

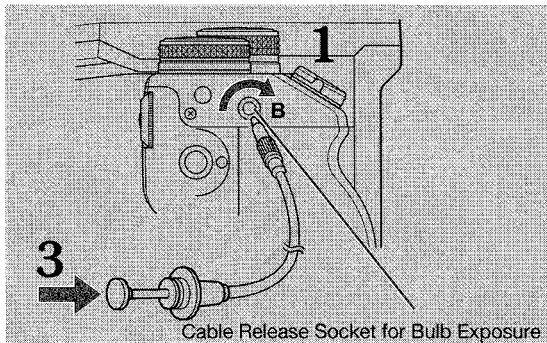
Shutter speed display in the viewfinder is indicated "buLb".

2 Set the aperture and trip the shutter.

As long as the shutter release is kept depressed, the shutter will remain open to expose the film.



- Mount the camera on a tripod or a stable base to prevent camera shake and trip the shutter with cable switch LA type (Optional accessory).
- During exposure all viewfinder indicators disappear.



<Cable Release Socket for Bulb Exposure>

The shutter can be held open for any desired period of time by connecting a commercially available mechanical cable release to this socket. This method is suited for taking long duration photographs of stars requiring long exposures. Batteries are not used during these mechanically actuated exposures in contrast with the bulb exposures mentioned above. The exposure counter does not show the accumulated exposure time.

1 Install the mechanical cable release as shown in the illustration.

2 Focus manually.

3 When the mechanical cable release is pressed, the shutter will open to expose the film after the aperture is stopped-down and mirror moves to the up position. The shutter remains open until terminated manually.

- Liquid crystal display is disappeared and went black in viewfinder at that time.
- No data printing can be made in this shooting.

4 You can expose the film for any desired period of time. The batteries are not used during this kind of exposure.

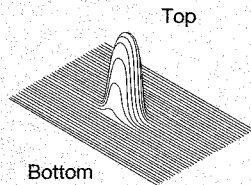
5 If you release the lock of the mechanical cable release, the shutter will close to terminate the exposure.

- A battery must be installed.
- Any shooting mode may be used.
- If you use a mechanical cable release which retracts slightly after locking, make a preliminary test before that it will keep the shutter open. If the lock will not keep the shutter open the shutter should be held open without the lock.

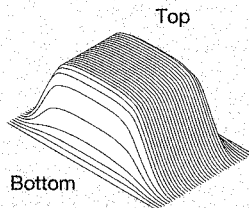
Miscellaneous Shooting Techniques



Metering System



Spot Metering
Metering Sensibility Chart

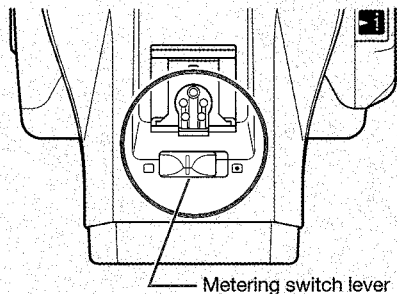


**Center-Weighted
Average Light Metering**
Metering Sensibility Chart

This camera is equipped with Spot Metering as standard. With the prism attached Center-weighted average metering is added. You can switch metering types by shifting the lever on the prism finder.

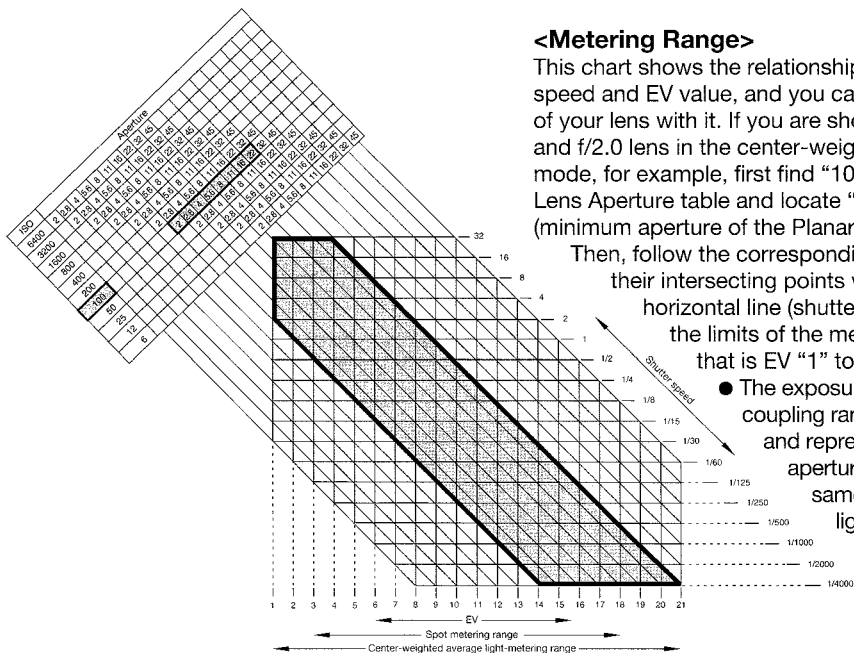
<Spot Metering> (☉ mark)

In spot metering, the camera measures only the subject brightness in the center of the viewfinder (microprism area) to determine the exposure value. Exact exposure value can be determined.



<Center-Weighted Average Light Metering> (☒ mark)

In center-weighted average light metering mode, the camera measures the light intensity with emphasis on the subject in the center of the viewfinder and also takes the brightness in the surrounding area into account to determine the exposure value. Subjects with large contrast ranges work well with this metering system.



The area marked by colored lines in the table represents the range of shutter speeds from 32 to 1/4000 second in which the camera can measure exposure in the auto exposure modes.

The range marked by thick lines represents the metering range in center-weight average light metering with 80mm f/2.0 lens and ISO 100 Film.

Exposure Compensation

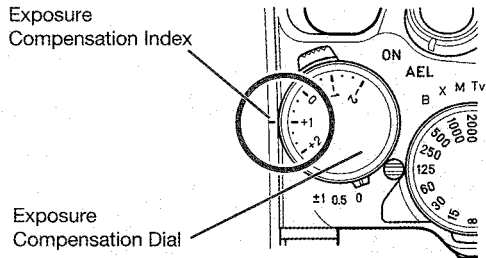
If there is a great difference in brightness between the subject and its background, the subject will not be correctly exposed. Use the exposure compensation dial to correct this situation. Exposure compensation can also be used for intentional over and under-exposure. There are three methods of compensating exposure:

<1. Using the Exposure Compensation Dial>

Normally, the exposure compensation dial is set to "0" in all exposure modes. To compensate the exposure, set the dial so that the desired compensating value aligns with the index mark. It can be set in 1/3 - EV increments within a range of +2 EV to -2 EV. When the exposure compensation dial is set anywhere except "0", the "+/-" mark will blink in the viewfinder, indicating that exposure compensation is in effect.



Compensate +1 EV at "Av" or "Tv" Exposure Mode



Exposure compensation is useful in both the aperture priority (Av) and shutter speed priority (Tv) auto mode at the exposure.

Exposure Mode

Aperture-priority auto exposure mode (Av)

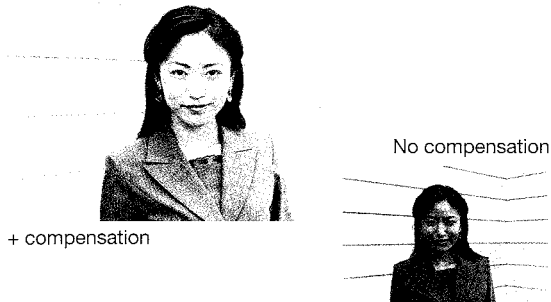
Shutter speed priority auto exposure mode (Tv)

Exposure Correction

Shutter Speed

Aperture

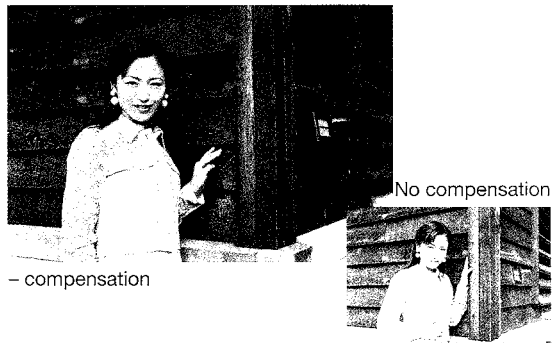
- In the manual exposure mode (M), exposure compensation cannot be made by exposure compensation dial. Inside viewfinder, "+/-" blinks. The exposure meter shows the difference between the set value and "appropriate" exposure basis of the setting value on exposure compensation dial.
- After taking pictures with exposure compensation, be sure to return the dial to "0".



Backlighting Subjects

Exposure compensation of “+1/3” to “+2”

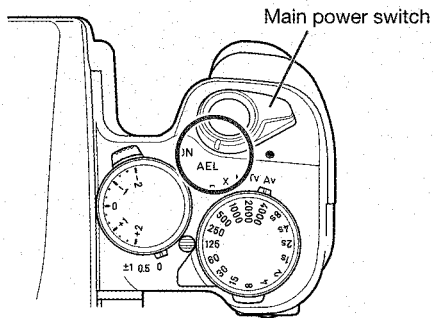
When shooting subjects against the light in center-weighted average light metering mode, such as under a bright sky, on an ocean beach, in front of a window etc, where the greater part of your picture is occupied by a bright background, the subject will likely be under-exposed as in a silhouette. Use exposure compensation of +1/3 to +2 to give more exposure to the subject.



Spotlighted Subjects

Exposure compensation of “-1/3” to “-2”

When shooting a spotlighted subject in the center-weighted average light metering mode where a dark background predominates, the subject will be overexposed and turn out too bright. Use an exposure compensation of -1/3 to -2 to reduce the amount of light on the subject.



1 Aim the central part of the viewfinder toward the subject then move the main switch from “ON” to “AEL”. The exposure will be locked.

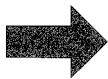
To measure exposure of a small area and lock it, set the metering mode selector lever to spot metering and move the main switch to “AEL”.

- The metering mark in the viewfinder blinks with AE lock engaged.
- Setting for AE lock must be done when viewfinder display is lighted.

<2. Using the AE lock>

The AE lock is used for storing the exposure value (combination of shutter speed and aperture) of the subject in memory in an auto exposure mode. It is used when shooting a backlit subject or when continuously shooting a moving subject at a fixed exposure. When the main switch is set to “AEL”, the exposure value will be stored in the camera's memory so that when the shutter is tripped the exposure will be unaffected by changes in background brightness.





2 Re-compose your subject and shoot.

- The exposure value will remain in memory while the AE lock is activated, but the display will turn off after 16 seconds to save battery power.
- In continuous-shooting mode (drive mode “C”), pictures may be taken in succession with the same exposure value, unaffected by changes in brightness in the background, if the AE lock is engaged.

- The camera stores the exposure value in memory in a combination of shutter speed and aperture. For example, if the aperture is changed in the “Av” mode after the AE lock is activated the camera will change the shutter speed to retain the same EV.
- When changing the exposure compensation value in AE lock mode, exposures are made as follows:

Exposure mode	Exposure Correction
Aperture-priority auto exposure mode (Av)	Shutter speed
Shutter-speed-priority auto exposure mode (Tv)	Aperture

<3.Using the A.B.C. Mode (Automatic Exposure Compensation for 3 Consecutive Frames)>

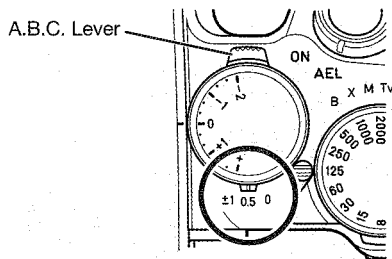
This mode allows you to take pictures automatically in three different steps of exposure: normal, over-exposure and under-exposure.

Even when taking pictures under fluctuating exposure conditions, pictures can easily be captured without worrying about exposure settings.

* A.B.C. is an acronym of "Automatic Bracketing Control" In the A.B.C. Mode, the shutter speed or aperture is adjusted for automatic exposure compensation.

Exposure Mode	Controlled Item
Aperture-Priority auto exposure mode (Av)	Shutter Speed
Shutter-speed-priority auto exposure mode (Tv)	Aperture
Manual (M)	Shutter Speed

- The shutter speed and aperture are controlled automatically when their controllable range are exceeded.



1 Move the A.B.C. lever to select the compensation value. Choose from two compensation values plus/minus 0.5 EV or plus minus 1 EV.

- When the exposure compensation dial is set to any position other than "0", the A.B.C. mode is engaged according to the value selected.
- Metering takes place during each exposure and the measured value is compensated for. When shooting under conditions unaffected by changes in ambient brightness, use the AE lock in the A.B.C. mode.

<3.Using the A.B.C. Mode (Automatic Exposure Compensation for 3 Consecutive Frames)>

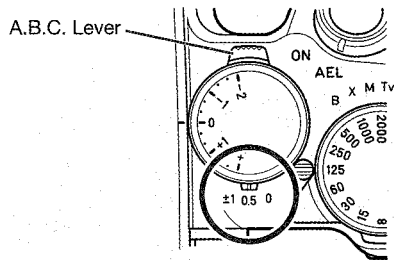
This mode allows you to take pictures automatically in three different steps of exposure: normal, over-exposure and under-exposure.

Even when taking pictures under fluctuating exposure conditions, pictures can easily be captured without worrying about exposure settings.

* A.B.C. is an acronym of "Automatic Bracketing Control" In the A.B.C. Mode, the shutter speed or aperture is adjusted for automatic exposure compensation.

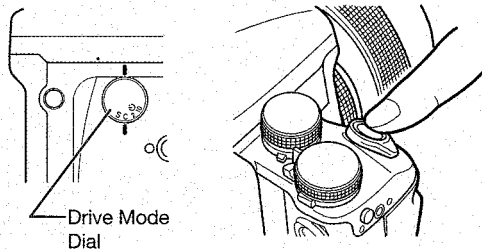
Exposure Mode	Controlled Item
Aperture-Priority auto exposure mode (Av)	Shutter Speed
Shutter-speed-priority auto exposure mode (Tv)	Aperture
Manual (M)	Shutter Speed

- The shutter speed and aperture are controlled automatically when their controllable range are exceeded.



1 Move the A.B.C. lever to select the compensation value. Choose from two compensation values plus/minus 0.5 EV or plus minus 1 EV.

- When the exposure compensation dial is set to any position other than "0", the A.B.C. mode is engaged according to the value selected.
- Metering takes place during each exposure and the measured value is compensated for. When shooting under conditions unaffected by changes in ambient brightness, use the AE lock in the A.B.C. mode.



- After taking pictures in the A.B.C. mode, be sure to return the A.B.C. lever to "0".
- Flash pictures cannot be taken in the A.B.C. mode.

2 Set the drive mode to "C" and hold down the shutter release. Depending on the compensation value that has been set, pictures will be taken in the order of "normal", "over" and "under". The camera stops when three frames have been exposed.

When the drive mode is set to "S", each frame is exposed singly in the A.B.C. mode.

When the drive mode is set to "2" or "10", pictures are taken continuously in the A.B.C. mode after two or ten seconds delay.

In the A.B.C. mode the exposure counter will change in the following order to show the order of shots.

Standard Exposure : Both left and right digits blink.
 Overexposure : Left digits blinks
 Underexposure : Right digit blinks



Exposure counter



Standard Exposure







Overexposure



Underexposure

Example: Pictures taken in the A.B.C. mode from frame No.8

	First Shot	Second Shot	Third Shot	(Repeated for Subsequent frames)
Compensation:	Standard	Over	Under	Standard
Counter:				
Display:	Left & Right blink	Left blinks	Right blinks	Left & Right blink

- When the camera control range is exceeded by the compensation value, the limiting compensation value will apply.
- To cancel the A.B.C. mode after it has been activated, set the A.B.C. lever to "0".
- When the main switch is turned off and then on again in the A.B.C. mode, three frames will be exposed again in the A.B.C. mode as described above.

When taking pictures indoors or at night where shutter speeds slower than 1/30 sec. are required, use an electronic flash. In combination with the CONTAX TLA Flash System, this camera is designed to provide "TTL direct light metering" with which the amount of flash can be automatically controlled by the TLA system. Pre-flash metering may be used with a CONTAX TLA flash unit or ordinary flash unit having only an X contact. When using the TLA360 Flash Unit, be sure to read the section, "CONTAX TLA360 Flash Unit" on page 78.

Precautions during use of TLA Flash

The description of TLA flash illumination angle (zooming scale) is explained according to 35mm camera lens usage. (35mm image plane size: 24 x 36mm). **Set the flash illumination angle by referring to the comparison chart on Page 76.**

<Taking Pictures in TTL Direct Light Metering>

1 Mount the TLA flash unit on the camera's accessory shoe and turn it on.

- In case of Zoom Flash, set illumination angle (zoom scale) according to the comparison chart on Page 76.

2 Set the flash unit to "TTL AUTO".

As soon as the flash is fully charged, the mark "⚡" will appear in the viewfinder and the shutter speed will automatically be set depending on the exposure mode.

■ Aperture-priority auto exposure mode (Av)

Measured value in ambient light	Automatically set shutter speed	Display
32 to 1/60 sec.	1/60 sec.	"60" lights
1/60 to 1/125 sec.	1/60 to 1/125 sec.	"60" lights ~ "125" lights
1/180 to 1/4000 sec.	1/125 sec.	"125" blinks *

- * If the display of shutter speed blinks at 1/125 sec. after the flash in fully charged, it must change to be lighted by stopping down the aperture and shoot.

■ Shutter-speed-priority auto exposure mode (Tv)

Shutter dial setting	Automatically set shutter speed	(Display)
8 to 1/125 sec.	8 to 1/125 sec. (Set value of shutter speed dial as is)	
1/250 to 1/4000 sec.	1/125 sec.	"125" lighted

■ Manual (M), flash (X), and bulb (B) exposure:

- When "M" is used, the shutter speed cannot be set automatically by the camera. Be sure to set the shutter speed manually to 1/125 sec. or slower.
- Because some large-size flash units do not synchronize at 1/125 sec., we recommended making preliminary test before.
- The set shutter speed will be indicated in the viewfinder.
- When "X" is used, the shutter speed is set to 1/90 sec. and "90" in the viewfinder will light.
- When "B" is used, "buLb" will light to indicate Bulb Exposure.

3 Set the aperture and shutter speed according to following chart.

Exposure Mode	Aperture or Shutter Speed
Av, M, X, B	Set the aperture. The set value is used when shooting.
Tv	Set the shutter speed to 1/125sec. or longer. The proper aperture is set automatically to match natural light.

- After the flash has fired, the mark "⚡" will blink for two seconds if the subject was correctly exposed.
- When the mark "⚡" does not blink after shooting, change the aperture or the shooting distance because your subject will be underexposed.
- For close-up shooting, even if the "⚡" mark blinks after shooting, overexposure may occur. Follow the instruction manual of the flash unit to get the desired shooting range.
- Be sure to set the A.B.C. lever to "0".
- With the drive mode is set to continuous shooting mode "C", consult your flash units instructions regarding flash intervals and light output during continuous shooting.
- The coupling range of film speeds is ISO 25 to 800 (without exposure compensation).
- Use a tripod when the shutter speed is slow to prevent camera shake.



<Slow-shutter Synchronization>

Slow-shutter synchronization at 1/30 sec. or slower is effective for taking nighttime pictures and twilight scenes with flash.

This camera facilitates slow-shutter synchronization in combination with a TLA flash unit.

■ In “Av” exposure mode:

Set the main switch to “AEL”. In this case, the shutter speed will be locked at the measured value in ambient light. Make sure the flash is fully charged and shoot.



With Normal Flash

■ In “Tv” exposure mode:

Set the main switch to “AEL”. In this case, the shutter speed will be locked at the measured value in ambient light. Make sure the flash is fully charged and shoot.

- Set the shutter speed 1/30 sec. or longer.

■ In “M” exposure mode:

Set the shutter speed at 1/30 sec. or slower. Adjust the aperture ring to the measured value in ambient light so that the exposure meter indicates “correct exposure” in the viewfinder. Make sure the flash is fully charged and shoot.

- When taking slow-shutter synchro flash pictures, use a tripod to prevent camera shake because the shutter speed will be long.



<Daylight Flash>

Subjects under direct sunlight or backlight will turn out dark without exposure compensation or fill-in flash. When using TLA flash in the TTL auto mode, both the subject and background will be beautifully exposed.

■ In “Av” exposure mode:

If “125” blinks after the flash is fully charged, adjust the aperture ring to make the aperture smaller until “125” illuminates steadily.



Flash is not used.

■ In “Tv” exposure mode:

In bright light, the exposure is automatically adjusted for daylight flash.

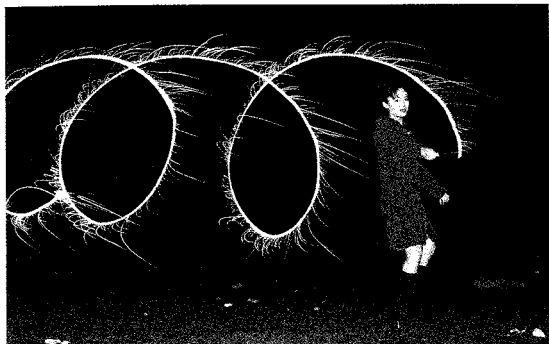
■ In “M” or “X” exposure mode:

In the “M” mode, set the shutter speed dial to 1/125 sec. or longer.

Adjust the aperture so that the exposure meter in the viewfinder indicates “correct exposure”

[Using the Exposure Compensation Dial]

In the TTL auto mode, the amount of flash couples with the camera’s exposure compensation dial. To change the mood by adjusting the amount of flash, use the exposure compensation dial.



Picture taken with second curtain synchronization

<Second Curtain Synchronization>

Second curtain synchronization is very useful for shooting moving subjects when using slow-shutter synchronization. In ordinary flash photography, the flash is fired immediately after the first curtain of the shutter has completed travelling (first curtain synchronization).

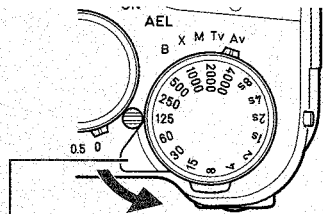
In combination with a CONTAX flash having a second curtain synchronization capability, the camera triggers the flash just before the second curtain starts to travel (second curtain synchronization). The ambient portion of the exposure occurs before the flash exposure,



Picture taken with first curtain synchronization

thus blur is seen following the flash illuminated subject. A more convincing effect is generated.

- The exposure is controlled in the same way as for ordinary flash photography (first curtain synchronization).



Pre-Flash lever

<Pre-flash TTL Automatic Flash>

Pre-flash can be memorized the amount of flash (adjusted flash duration) with a TLA flash unit.

1 Mount the TLA flash unit on the camera.

- Regarding the exposure mode, shutter speed and display, refer to "Taking Pictures in TTL Direct Light Metering".

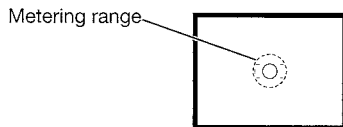
2 Turn the flash unit power switch on and insure sure that it has been fully charged.

- Additional flashes must also be fully charged.

3 Set the aperture, compose the scene for measurement of exposure, and turn the pre-flash lever in the direction of the arrow.

The camera will automatically stop down the aperture, move the mirror-up and fire the flash (but not trip the

shutter). An error relative to the correct value will be displayed in a range of plus or minus 2EV on the flashmeter indicator in the viewfinder. The amount of flash (adjusted flash duration) will be placed into memory simultaneously.



4 If the flashmeter indicates the correct value, insure that the flash is fully charged and shoot.

If it indicates incorrect exposure, adjust the aperture so that it indicates the correct value and shoot. If it is impossible to adjust with the aperture, or if the measured value blinks because the error exceeds ± 2 EV, re-adjust the aperture and use the pre-flash meter again.

- The adjusted flash duration (amount of flash) will be stored in memory until the pre-flash lever is returned to its original position. The flash duration will remain the same through as many shots as desired as long as the pre-flash lever is activated.
- If exposure compensation is added before the pre-flash is activated, a mis-adjustment will occur in a range of ± 2 EV around the compensated value.

<Pre-flash TTL Manual Flash>

The Pre-flash TTL manual flash mode may be used in TTL pre-flash metering on a TLA or any ordinary flash unit.

1 Mount the flash unit on the camera's accessory shoe or connect it to the shynchro terminal.

2 Set the camera's exposure mode to "M". Set the shutter speed to 1/125 sec. or longer and set the aperture.

3 Make sure that all connected flash units are fully charged. Compose the subject for measurement of exposure, and turn the pre-flash lever.

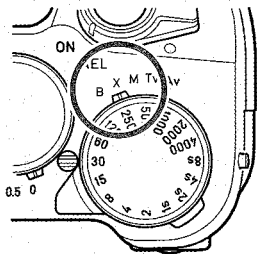
The camera will automatically stop down the aperture and fire the flash (but without tripping the shutter). An error relative to the correct value will be displayed in a range of ± 2 EV on the flashmeter indicator in the viewfinder.

4 If the flashmeter indicates a plus or minus value, adjust aperture so that it indicates the correct value and shoot.

If it is impossible to adjust the aperture, or if the measured value blinks because the error exceeds ± 2 EV, re-adjust the aperture and use the pre-flash again.

5 Take a photograph after making sure the flash in fully charged.

- Because some large-size flash units do not synchronize at 1/125sec., we recommended making preliminary tests before use.
- The pre-flash is designed to fire by means of an electronic switch. Some flash units do not enable light metering by pre-flash with the flashmeter.



<Taking Pictures Using X-contact Flash Units Other than TLA Flash Unit>

1 Mount the flash unit on the camera. Set the exposure mode selector lever to "X".
The shutter speed is set to 1/90 sec.

- It does not matter where the shutter speed dial is set.

2 Set the aperture and shoot.

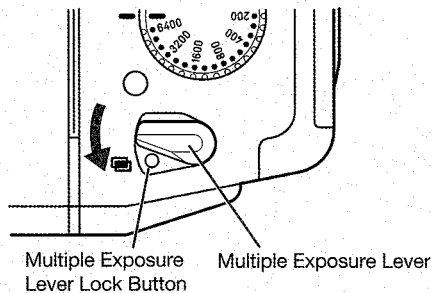
Set the aperture according to the instructions for the flash unit.

- When using a cord type flash that has no direct x contact, connect the cord to the sync terminal on the side of the camera.


<Flash Photography with Waist Level Finder>

Using the optional Flash Bracket MSB-1. See the details for Flash Bracket on page 92.

- 'Flash Auto Set Function' is not available with Flash Bracket MSB-1.



Multiple exposures create special effects through super-imposing subjects on the same frame.

1 Set “” by turning multiple exposure lever and pressing multiple exposure lever lock button.

- To release the multiple exposure effect after setting, return the multiple exposure lever to its original position before pressing the shutter release button.

2 Depress the shutter release.

Pressing the shutter release causes the first exposure, it then closes the shutter in preparation for the next exposure. (Film winding is not completed until the multiple exposure lever is returned to the normal position.) Continue shooting until one exposure before your desired multiple exposure photography.

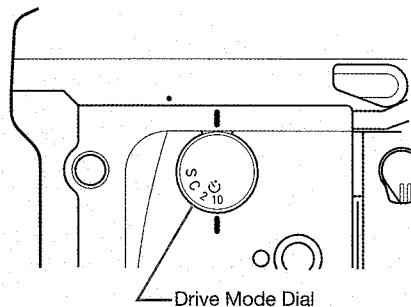
3 Return the multiple exposure lever to original position before releasing the shutter for the last frame of the multiple exposure.

For example, in a three-exposure photo, after finishing the second exposure, return the multiple exposure lever to its original position. And release the shutter release button for third exposure.

- Insure that the multiple exposure lever is returned to its original position.
Multiple exposure will continue until the lever is reset.

4 When the shutter button is released creating the last exposure, the film will wind to the next frame, Normally.

Using the Self-timer

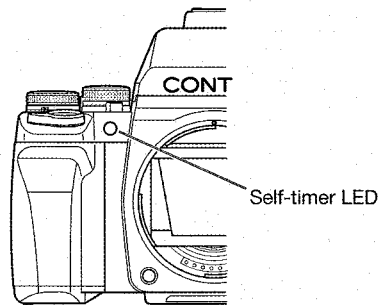


1 Turn the drive mode dial to select the self-timer mode “ $\odot 2$ ” or “ $\odot 10$ ”.

2 Focus the lens, compose and depress the shutter release.

The self-timer will start to operate and the shutter will be tripped after two seconds or ten seconds. When the self-timer is operating, the self-timer LED on the front of the camera blinks.

- When it is not possible to keep your eye at the viewfinder when using the self-timer, block the viewfinder eyepiece with the eyepiece shutter for shooting to prevent stray light

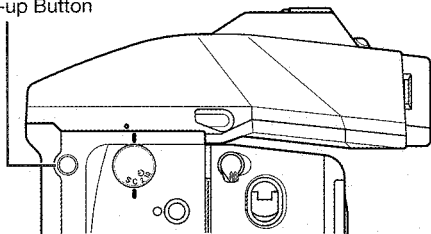


from entering through the eyepiece and adversely affecting exposure.

- The self-timer is running after Mirror moves to the up position in the self-timer mode “ $\odot 2$ ”.
- Mount the camera on a tripod when you are using the self-timer.
- The self-timer cannot be used in conjunction with bulb exposure.
- When the shutter release is depressed and while the self-timer is running, the counter will count down the time until the exposure is made then reset itself and restart as a exposure counter.
- To cancel the self-timer after starting, turn the main switch off or change the drive mode.

Mirror Lock-up Photography

Mirror-up Button



This photographic function moves the mirror-up in advance of the exposure to minimize vibration and preserve image resolution. It is especially useful when the tripod-mounted camera is used for long exposures, particularly with long telephoto lenses. It eliminates the possibility of even the slightest "mirror bounce" which could affect image resolution. This technique is also useful for close-up photography or copy photography where vibration may degrade performance. Effectiveness is enhanced with the addition of a cable switch LA type.

1 Focus on the subject, and compose your picture.

2 Press the mirror-up button.

The mirror moves to the up position the finder screen blacks out completely.

- Auto Focus and Exposure is locked when the mirror-up button is pressed.

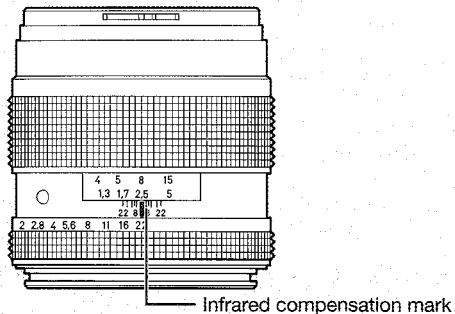
3 Press the shutter release button of the cable switch to take a photo.

- Use the CONTAX Cable Switch LA type. CONTAX Cable Switches L type cannot be used.

4 After the photo is taken, the mirror is returned to its normal position.

- If the main power switch is turned off during mirror-up operation or no operation of camera for 16 seconds, the mirror is returned to its normal position.
- Mirror-up is not possible without an installed lens.
- Do not face the lens to the sun during mirror-up photography.
The shutter could be damaged.

Infrared Photography



<How to take Infrared Photography>

1 First, focus the subject without a filter.

To focus, set the focusing mode to “M” and focus manually.

2 Attach the desired filter, shift the distance scale to the position of the compensation mark and shoot.

- When using color infrared film, follow the instructions in the sheet packed with it.

① Exposure

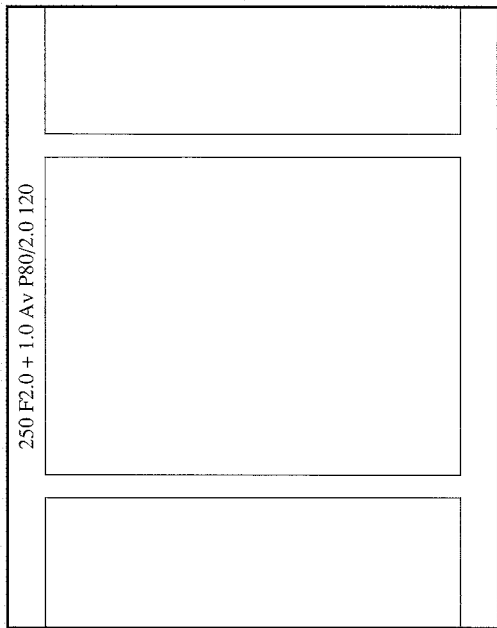
The camera's exposure meter cannot be used when taking pictures with infrared film. Determine the exposure in accordance with the instructions of the infrared film.

② Infrared compensation mark

When using infrared film (with an infrared filter), infrared compensation is necessary since the point of focus will shift slightly compared to visible light photography.

Lenses are provided with an infrared compensation mark for this purpose.

Others



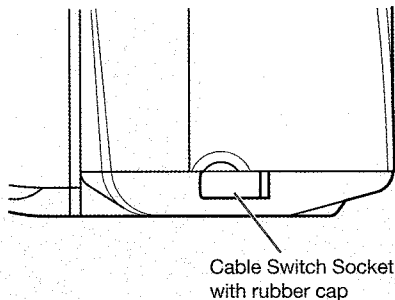
When you use the data back function, the following photographic data will be printed automatically.

This information may be utilized for record keeping or filing of photographs.

1. Shutter speed
2. Aperture value
3. Exposure compensation value
4. Exposure Mode
5. The type of lens
6. The type of film: 120 film or 220 film

- When bulb exposures are taken, "buLb" is displayed as the indication of shutter speed.
- The printing position is outside the frame as shown in the illustration above and it is not printed on the pictures.
- It is possible that some data may over-print other data due to limited printing space.
- When taking pictures on Multiple Exposure, printing exposure data must be the data that has exposed at the end.
- No data printing is executed for the photography using Cable Release Socket for Bulb Exposure.

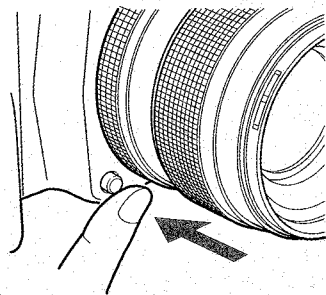
Cable Switch Socket



This socket is used for connecting the cable switch LA type to transmit electric signals for operation of the shutter.

- During shooting with the cable switch, stray light may enter the viewfinder eyepiece and affect exposure. (This problem might occur anytime that the eye is not at the eyepiece, i.e.; self-timer operations). To prevent this condition, close the eyepiece shutter or use the AE lock.
- CONTAX Cable Switch L type cannot be used.

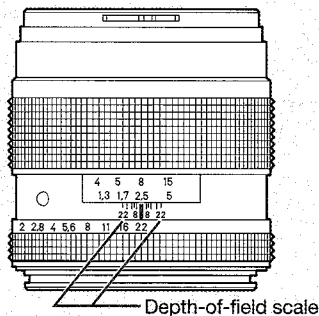
Aperture Stop-down Button



The lens will always remain at a wide-open aperture to provide a clear view through the viewfinder. However, it can be stopped down to your shooting aperture while depressing the aperture stop-down button (the image in the viewfinder will become darker). It is used to check the depth of field or the blur effect on the scene.

- When you release the button, it returns to full-opened aperture.
- Exposure is locked (AE lock) during the aperture stop-down button is being pressed.
- Aperture stopped-down operation cannot be done when the exposure mode is "Tv".

Depth of Field



When the lens is focused on a subject, not only the subject itself, but also a certain zone in front of and behind it will turn out sharp in the picture. This is called the depth of field of a lens and it varies as follows:

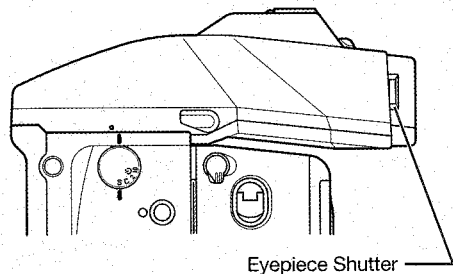
- ① The smaller the aperture, the wider the depth of field, and visa versa.
- ② The greater the subject distance, the wider the depth of field and vice versa.
- ③ The zone of sharpness behind the point on which the lens is focused is wider than that in front of it.

Lenses with a shorter focal length have a wider depth of field than those with a longer focal length.

The zone of sharpness can be checked on the depth-of-field scale of a lens.

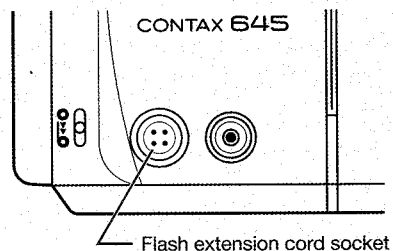
For example, if you use an $f/2.0$, 80mm lens and shoot a subject at 2.5m with an aperture of $f/22$, all objects within the range between the two "22s" on the scale, (that is, from approximately 1.7m to 4.1m), will be rendered sharp in your picture.

Eyepiece Shutter



A chance of exposure error exists if the photographer's eye is not at the eyepiece during exposure. This may happen during self-timer or cable switch operation due to light entering and affecting the metering cell. Whenever this condition might occur, lift the eyepiece shutter handle up to close the eyepiece.

Flash Extension Cord Socket



Use the Flash Bracket (Optional Accessory) for Flash Photography whenever the Waist Level Finder is used. This socket connects the TLA flash connector to the camera (Page 92). It can also be used as an additional flash extension cord socket with the AE prism finder.

Comparison of Lens Angle of View and Flash illumination Angle

The CONTAX 645 is different from 35mm camera with reference to length and breadth ratio as the following comparison chart shows. Also, the chart refers to the illumination angle of the zoom flash (zoom scale). Set the zoom scale of the flash one step wider in angle (one step shorter) than the focal length for even distribution of light. (The comparison chart shows one step wider angle.)

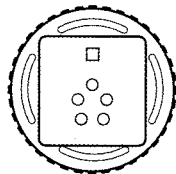
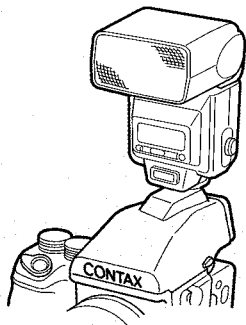
- With a fixed illumination angle for flash, use the comparison chart to find a lens that provides an angle of view within the angle of the flash. If you use narrow angle flash, relative illumination is decreased on the edges.

■ Comparison Chart of Lens Angle of View and Flash illumination angle.

Lens Focal Length of CONTAX 645	Lens Focal Length of 35mm camera	Setting Value of flash illumination angle (Equivalent to 35mm)
35mm	21mm	-
45mm	28mm	24mm
80mm	50mm	35mm
120mm	75mm	50mm
140mm	85mm	70mm
210mm	135mm	100mm

Dedicated Accessories (Optional)

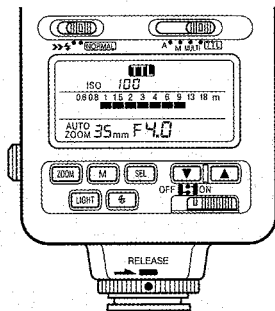
CONTAX TLA360 Flash



The TLA360 is a clip-on TTL direct metering auto-flash unit with power zoom and a guide number of 36 (with 35mm lens, square cover). Equipped with the automatic flash setting feature, the TLA360 can offer the following six functions in combination with the CONTAX 645.

- The flash illuminating angle shown on the TLA360 is used for 35mm camera lenses (35mm film size, image plane size: 24 x 36mm).

- These functions can be used when the flash unit is directly attached to the accessory shoe on the top of AE prism finder. The flash system is not automatically set when used off the accessory shoe through the TLA extension cord or TLA lighting system.
- CONTAX TLA flash units with auto flash setting feature five contacts on the foot of the unit.



<1. Auto Setting>

Function Flash Mode	Auto film speed setting	Auto aperture setting
TTL auto	O	O
Normal auto	O	X
Manual	O	O
Stroboscopic	O	O

O: The camera setting is automatically set on the flash unit.

X: Not automatically set

<2. Auto-Setting of Illumination Angle>

Illumination angle of flash is set automatically to match the focal length of the lens attached to the camera body.

■ How to set:

Attach the flash to the camera's accessory shoe and turn the power switch of the flash on. The illumination angle of the flash is automatically set to match the lens installed on the body.

The flash display panel displays the focal length as though it were a 35mm lens. (It will be correct for the installed lens.)

■ Display of TLA360

Installed Lens	The indication of TLA360 Flash
Distagon T* 35mm F3.5	AUTO ZOOM 24mm (Relative illumination is going down.)
Distagon T* 45mm F2.8	AUTO ZOOM 24mm
Planar T* 80mm F2	AUTO ZOOM 35mm
Apo-Macro Planar T* 120mm F4	AUTO ZOOM 50mm
Sonnar T* 140mm F2.8	AUTO ZOOM 70mm
Sonnar T* 210mm F4	AUTO ZOOM 85mm

If the lens is changed while the flash display is set to "AUTO ZOOM", the illumination angle will be reset to reflect the newly installed lens.

<3. How to set the illumination angle>

When you press the zooming button of flash, it will change to manual setting.

Whenever the zooming button is pressed, the zoom focal length will change.

- Note that the indicated focal length on the display panel will correspond to a 35mm camera. See the comparison chart on page 76 as a reference.

Caution: When setting TLA flash illumination angle

The TLA flash illumination angle (zooming scale) indicates the image angle (focal length) as a 35mm camera lens. The CONTAX 645 is different from 35mm-film size with reference to length and breadth ratio. **Set the illumination angle by referring to the comparison chart on page 76 for flash photography.**

<4. Flash Unit Light Compensation>

Flash compensation can only be used in the "TTL auto flash" mode.

- Compensation is activated in 1/3 steps in the range of -3EV to +1 EV.
- The compensation amount of the flash unit is determined by the value of the camera's exposure compensation. For example, if the camera's compensation is "+1" and the flash unit's compensation is "+1", the amount of light from the flash is set to +2 (EV).

1 Press the "SEL" button on the flash.

- The compensation scale appears on the display panel of the flash and the "+/-" mark begins to blink.

2 Press the “▲” and “▼” buttons of the flash to set the desired value.

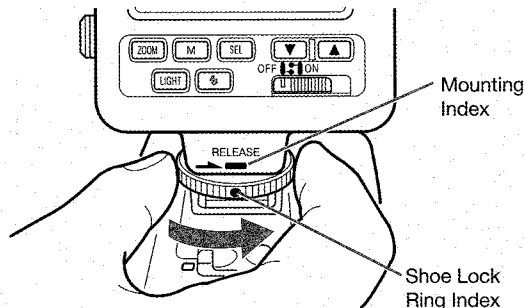
3 Press the “SEL” button again.

The “+/-” mark changes from blinking to steady and compensation has been completed.

- The compensation scale of the flash’s display panel indicates the compensation value.
- When the compensation amount on the flash is “0”(no compensation), the compensation scale will disappear after 8 seconds.

<5. Auto OFF and Auto ON>

When the power switch of the flash unit is set to “Auto OFF”, the flash unit is automatically powered down after approximately 80 seconds of camera power switch off. Switching on the camera power will activate “Auto ON” to start charging the flash. This power saving feature is useful during prolonged flash photography.



<6. Shoe Stopper>

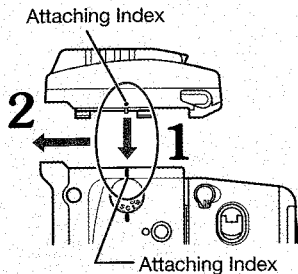
The “mounting foot” of the TLA360 has a shoe stopper (slip-off protector) to prevent the flash from slipping off the camera unintentionally. Before mounting or removing the flash, do not forget to line up the mark on the shoe lock ring index with the mark on the “mounting foot”.

The TLA360 has a great number of functions in addition to those mentioned above.

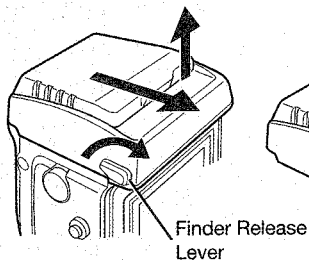
Refer to the TLA360 Instruction Manual to take advantage of all the functions it provides.

Waist Level Finder

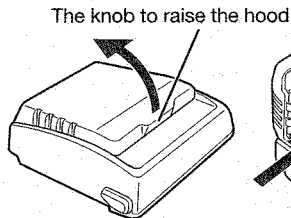
<Attaching>



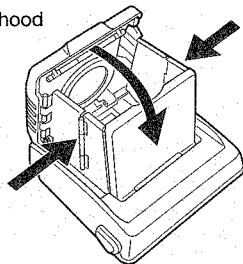
<Removing>



<How to raise the hood>



<How to fold the hood>



<Attaching the Waist Level Finder>

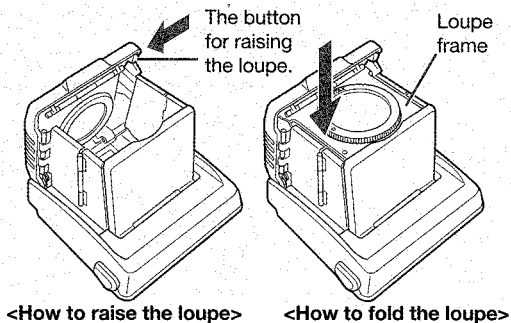
- 1 Match finder attaching index with attaching index of camera body and insert.
 - 2 Slide the finder toward the front until it latches securely in place with a click.
- Note that the image in the waist level finder is reversed compared to actual subjects.
 - Metering system switches to spot metering when attaching the Waist Level Finder.
 - Correct exposure may not be obtained if surrounding strong light is coming inside of Waist Level Finder.
 - Utilize dedicated optional flash bracket (Page 92) for flash photography.

<Removing Waist Level Finder>

- Lift the Finder Removing Lever toward the arrow mark and slide the Waist Level Finder backwards.
- Removing Lever returns to original position automatically.

<How to raise and fold the hood>

- ① Raise the hood toward the arrow mark, to open.
 - ② Press the plate on both sides of the hood in and push the front and rear down to close.
- The hood cannot be closed until the loupe is stored away.



<How to raise and fold the Loupe>

Press the button to raise the loupe automatically. Fold the loupe by pushing down the loupe frame toward arrow mark to lock it securely in a pace.

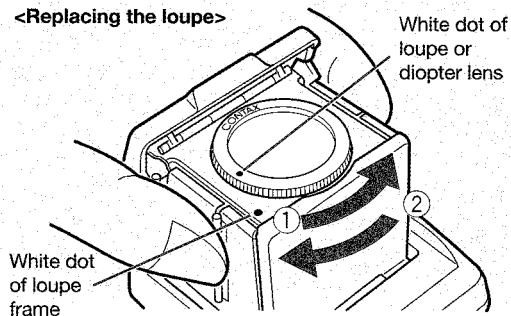
<Diopter adjustment>

Diopter adjustment can be made by replacing the loupe with optional loupe diopter adjustment lens.

- If an additional diopter adjustment is necessary, please use one of the optional Diopter Lens MFW Type (-3D, -2D, -1.5D, 0D, +1D, +2D).

The standard equipped diopter on the Waist Level Finder is -1.5D.

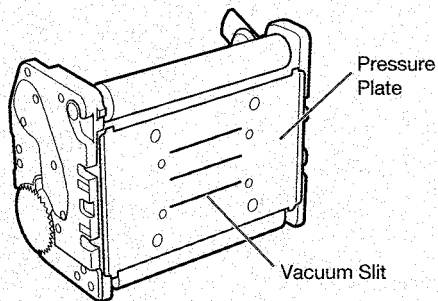
<Replacing the loupe>



<Replacing the loupe>

- ① Hold both sides of the hood to keep the loupe frame from falling and turn the diopter lens to arrow mark. Then, match its white dot with arrow mark. Then, match its white dot with white dot of loupe frame and remove the diopter lens.
- ② Match the white dot of diopter lens with the white dot of loupe frame. Set the diopter lens in place and turn it to the end of the stop toward the arrow mark to lock.

220 Vacuum Film Insert MFB-1B



- Vacuum Film Insert is exclusively for 220 film. The shielding paper on 120 film is located behind the film, and it can not attract the film itself.
- The Real Time Vacuum System does not operate in the bulb exposure ("B") mode.
- Film loading is the same as the 120/ 220 film insert. (see page 27)

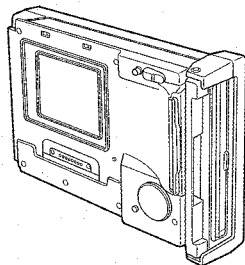
Flatness of film becomes more difficult to maintain as the area of film increases.

Particularly, with wide aperture lenses, the depth of focus is extremely shallow. Even slight unevenness has a negative effect on focusing. By adopting the Real Time Vacuum System film insert, a high quality, flat and stable film plane is created.

The Real Time Vacuum System can stabilize the film at the pressure plate just before the first curtain of the shutter travels and release it after the second curtain has traveled.

It operates in the "Av", "Tv", "M", "X" modes.

Polaroid Back MFB-2



Polaroid films can be instantly developed for color or black & white photography.

This is a confirmation tool for lighting or checking focus in advance. After checking with Polaroid pictures, the 120/220/Real Time Vacuum back can replace the Polaroid Back to make photographs. The Polaroid Back may be used for an emergency photography, also. See the instruction manual of Polaroid Back MFB-2 for details of handling.

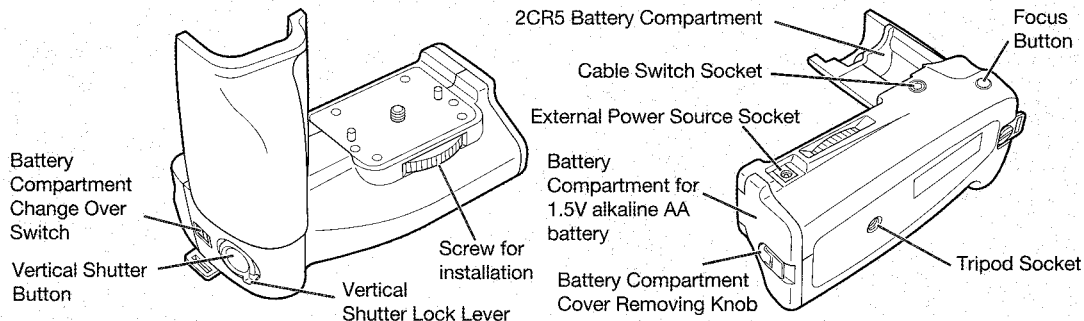
- If you can not install the camera and Polaroid Film Back on a tripod properly, use the Quick Shoe Adapter shown on page 94 also.

■ Main specifications

Film type	: Polaroid instant films 8.5 x 10.8cm (standard series) Polacolor Pro 100, Polapan Pro 100, Type 667, Type 669 and others
Picture size	: 41.5 x 56mm
Size	: 172.5 (W) x 118.5 (H) x 36.5 (D) mm
Weight	: 400g

* Specifications and design are subject to change without notice.

CONTAX Battery Holder MP-1 (with Grip Belt)



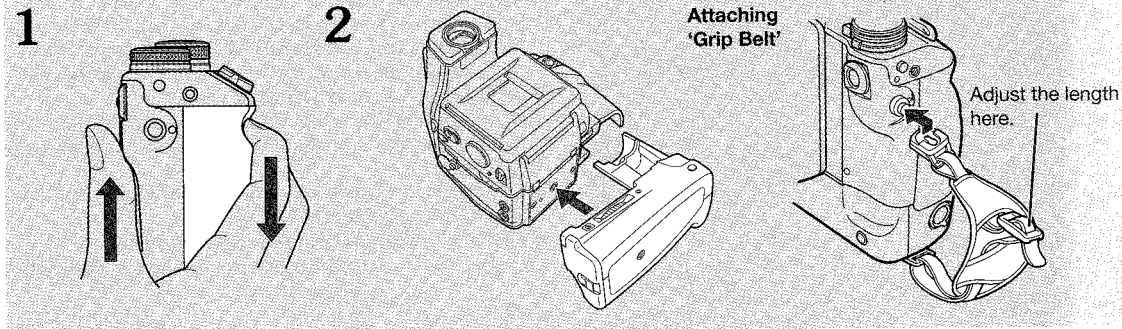
The grip of the CONTAX 645 can be replaced with the Battery Holder MP-1. After installation, it operates the CONTAX 645 with 1.5V alkaline AA batteries or 6V lithium batteries (2CR5). The Battery Holder MP-1 offers a larger battery reserve along with other important features.

<Features>

① This holder doubles as a vertical grip with a highly ergonomic finish.

- ② A shutter release button and focus button is integrated for vertical shooting. A locking mechanism is incorporated to prevent inadvertent shutter release.
- ③ Four 1.5V AA alkaline batteries or one 2CR5 6V lithium battery can be used. A switch allows selection of either battery type.

- When one battery voltage drops, a battery warning mark blinks. If it is happened, switch to another battery so as to continue the shooting.
- AA type batteries can be replaced without removing the battery holder from the camera.



<Installing>

1 Remove the camera grip battery holder.

2 Insert the grip portion of Battery Holder MP-1 into camera body at the battery holder and attach on bottom with tripod socket.

■ Main specifications

Power source: Four 1.5V AA alkaline batteries or one 6V 2CR5 (lithium battery)

(Battery source can be switched. Both battery types can be installed together.)

Dimensions : 141 (W) × 108 (H) × 59 (D) mm

Weight : 330g (without Grip Belt and Batteries)

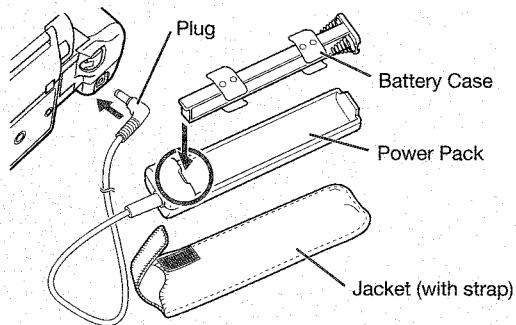
■ Battery capacity

(Number of rolls of 120 film that can be exposed with new batteries, in accordance with CONTAX testing standards.)

Battery type	Number of Rolls
Four AA-size alkaline batteries:	approx. 8
Four 1.2V AA-size Ni-Cd batteries	approx. 12
One 2CR5 6V lithium battery	approx. 30

- Use the Ni-Cd batteries fully charged.
- * Specifications and design are subject to change without notice.

CONTAX Power Pack P-8



The P-8 is an external power supply that uses four 1.5V AA size alkaline batteries or four 1.2V AA-size Ni-Cd batteries.

To prevent battery deterioration in cold weather, the power pack is used to supply the camera with power.

<How to use>

- ① **Insert four AA batteries into the battery case according to the markings and install the battery case in the Power Pack main unit.**
- Put the Power Pack into the jacket.
- ② **Insert the plug fitted to the tip of the Power Pack cord into the external power socket of the camera.**

- It is advisable to protect the Power Pack under your coat or jacket while shooting in a cold environment. When changing the batteries, do not mix battery types or used batteries with new ones. Replace all the four batteries with new ones of the same type at the same time.
- When not using the Power Pack for an extended time, remove the batteries from the battery case to prevent leakage.
- To remove the connection cord from the camera, pull the plug and not the cord itself.

■ CONTAX Power Pack P-8 Specification

- Components** : Power Pack main unit, battery case and jacket (with strap)
- Length of cord** : 1.5 meters
- Battery** : Four 1.5V alkaline batteries(AA size) or four 1.2V Ni-Cd batteries (AA size). <Manganese battery (AA)size can not be used.>

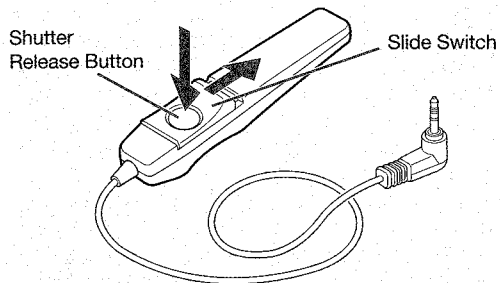
■ Batteries types and their capacities

(Number of rolls of 120 film that can be exposed with new batteries; according to CONTAX testing standard).

Type of Battery	Number of Rolls
Four 1.5V alkaline batteries (AA size)	Approx. 8
Four 1.2V Ni-Cd batteries (AA size)	Approx. 12

- Use the Ni-Cd batteries fully charged.
- * Specifications and design are subject to change without notice.

CONTAX Cable Switch LA Type



The CONTAX Cable Switch LA type can be used for close-up or telephoto photography using a tripod or to release the shutter remotely from the camera. Particularly, during close-up or telephoto photography, the Cable Switch LA can minimize camera shake. Cable Switch LA type is also important for long-time exposures or continuous shooting with slide switch.

<How to install>

Insert the plug of cable switch into camera cable switch socket.

<Photography>

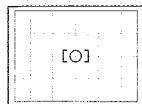
When you press cable switch shutter button, it works the same as the shutter release button on the camera body. Continuous shooting is accomplished by sliding the switch to the front for continuous shooting. (The 'red-index' is visible). When the slide switch is returned to cover the 'red-index', continuous shooting ends.



MFS-1



MFS-2



MFS-3

There are three interchangeable focusing screens for the CONTAX 645: MFS-1, MFS-2, and MFS-3. The screens show the autofocus area and spot metering range.

MFS-1 (horizontal split-image/microprism screen):

This screen enables focusing with a center split-image spot, microprism collar and a surrounding matte area making it suitable for a wide range of subjects.

Auto focusing area and spot metering range of MFS-1 are as follows.

Auto focusing area: within the focus frame ([])

Spot metering range:

within the circle of approx. $\varnothing 5.5\text{mm}$ (No display)

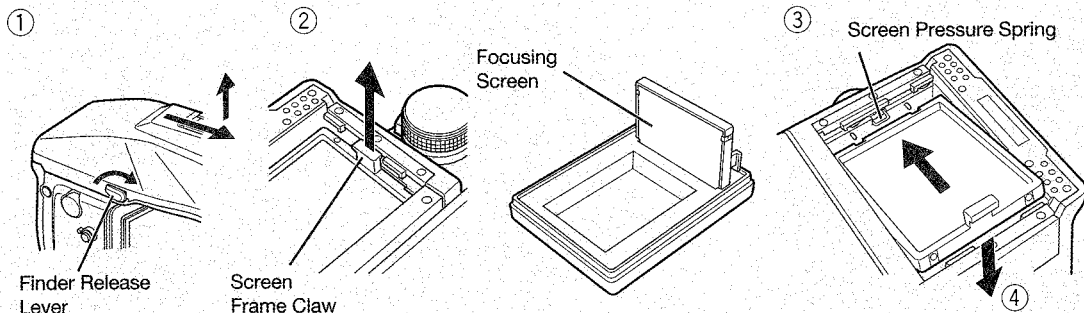
between outer and inner circles of microprism.

MFS-2 (matte screen):

This screen is provided standard on the CONTAX 645. It consists of a matte area all around and is suited for general photography.

MFS-3 (sectioned matte):

The MFS-3 Screen has ruled lines at 10mm intervals on a matte screen and is especially suited for photography using perspective control with Auto Bellows or when it is necessary to precisely determine a composition during copying work, etc.



<Replacing Focusing Screen>

1. Detaching the screen

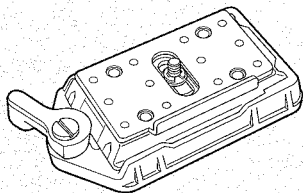
- ① Detach the finder. (Refer to page 14).
- ② Pick up the screen frame claw with finger tip, pull up gently and remove the focusing screen.
 - Store the removed screen in the case vacated by the installed screen to avoid dirt or scratches.

2. Mounting the focusing screen

- ③ Insert the edge of the focusing screen underneath the screen pressing spring.
 - Do not press or bend the screen pressing spring directly, it may damage the camera.

- ④ Press it down gently until it locks with a click.

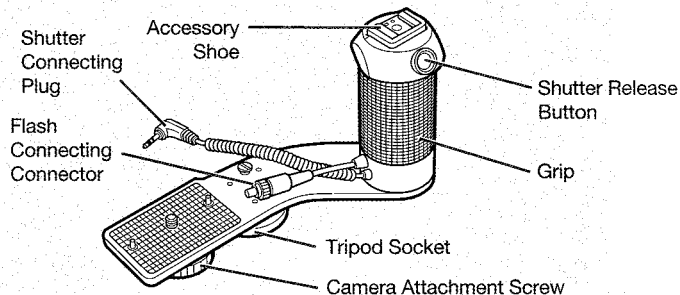
- When replacing the focusing screen, always use the supplied tweezers to prevent the mirror and screen against scratches and fingerprints.
- If the screen is dusty, use a blower or soft lens brush to remove.
- Unused focusing screens should be stored in the screen case according to the instructions on the case.



This adapter is for attaching and removing the camera from tripod quickly.

Also, it is convenient to use when you can not attach the camera with Polaroid Back to tripod.

See instruction manual of Quick Shoe Adapter for the details of handling.



When the Waist Level Finder is used, TTL auto flash is preserved and combined with CONTAX TLA Flash System. Also, you can use the Flash Bracket as a grip for the left hand.

<Attaching Flash Bracket>

- ① Screw Camera Attachment Screw of flash bracket into tripod socket and tighten.
 - ② Connect flash connector to flash extension cord socket of camera and connect shutter connecting plug to cable switch socket of camera.
 - ③ Attach TLA flash to accessory shoe.
- When using tripod, use tripod socket.

Specifications

Camera Type	: 6 x 4.5cm format focal-plane shutter AF SLR
Actual negative size	: 56mm x 41.5mm
Lens mount	: CONTAX 645 bayonet mount
Shutter	: Vertical-travel metal focal-plane shutter
Shutter Speeds	: Av (Auto): 32 sec.–1/4000 sec. Tv (Setting Value): 8 sec.–1/4000 sec. Manual: B, X (1/90 sec.), Mechanical Bulb, 8 sec.–1/4000 sec.
Synch Contacts	: Direct X contact (synchronizes at 1/125 sec. or slower) and sync terminal
Self-timer	: Electronic self-timer with 2 or 10-sec. delay
Shutter Release	: Electromagnetic release, dedicated release socket, and cable release socket for bulb exposure
Exposure Modes	: ① Aperture-priority auto exposure ② Shutter-speed-priority auto exposure ③ Manual exposure ④ TTL auto-flash ⑤ Pre-flash TTL automatic flash ⑥ Pre-flash TTL manual flash
Metering System	: TTL spot metering (standard equipped) Center-weighted average light metering (when prism finder is equipped.)
Metering Range	: EV3–EV18 on spot metering and EV1–EV21 on center-weighted average light metering (ISO 100/F2.0)

Film Speed Range	: ISO 25–5000 on Automatic setting with DX code, ISO 6–6400 on manual setting.
AE Lock	: The quantity of light on the image surface is stored in memory
Exposure compensation	: +2 EV - -2 EV (can be set in 1/3-step increments.)
A.B.C. Unit	: ±0.5 EV and ±1 EV exposure compensating values
Flash Light Control	: TTL direct light control
Flash Synchronization Control	: Automatic shutter speed setting when flashes charging is completed on dedicated flash units.
Automatic Flash Setting	: Possible in combination with dedicated flash capable of automatic flash setting.
Second Curtain Synchronization	: Possible in combination with dedicated flash capable of second curtain synchronization
Viewfinder	: Interchangeable TTL finder (AE Prism finder, Waist Level Finder) Field of view : 95% When AE Prism Finder is equipped: Magnification: 0.8X (With 80mm normal lens at infinity, -1D dip.)
Dioptr Adjustment:	When AE Prism Finder is equipped: Built-in diopter adjuster, -2D - +1D

Focusing screen : Sectioned Matte (Standard)
Interchangeable screens are available.

Display in Viewfinder
: Battery Warning Mark, Exposure Counter/self-timer remaining time/A.B.C. Mode/film end, exposure metering mark, flash mark, focusing mark, aperture value, shutter speed, exposure meter

Film Loading : Semi-automatic loading to match 'start position mark', film automatically advances to "01" on exposure counter

Film advance : Automatic winding with built-in motor.

Film Rewinding : Automatic rewinding with built-in motor, automatic stop and mid-roll rewinding possible.

Drive Modes : Single frame, continuous, self-timer (2 sec, 10 sec.)

Multi-exposure : Setting with Multi-Exposure Lever

Winding speed : Up to approx. 1.6 frames/sec. on continuous shooting ("C" mode) (with a new battery, at ordinary temperature, as tested according to CONTAX testing standard.)

Exposure counter : Automatically resetting, additive type.

Accessory shoe : Direct X-contact (provided with TLA flash contact)

Data recording function
: Record photographic data outside the frame.

The contents of recording:
F-stop, shutter speed, exposure compensation value, exposure mode, type of lens, film type

Power Source : One 2CR5 6V-lithium battery

Battery Check : Automatic check, Display in viewfinder

Battery Capacity : About 30 rolls of 120 film (with a new battery, at ordinary temperature, as tested according to CONTAX testing standard)

Other details : Aperture stop-down button
Mirror-up feature

Dimension, weight:

Camera body

: 141 (W) × 99 (H) × 73 (D) mm
645g (without battery)

Camera body with AE prism finder; film back holder;
120/220 film insert

: 141 (W) × 138.5 (H) × 145.5 (D) mm
1,370g (without battery)

* Specifications and design are subject to change without notice.

To make full use of the capabilities of this camera, it is recommended that CARL ZEISS T* interchangeable lenses and CONTAX accessories be used with it. CONTAX shall not be liable for any repair of damages arising from the use of third-party products made for use with CONTAX cameras.



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