



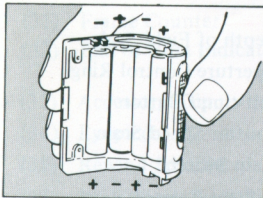
**Konica** **FT-1** INSTRUCTIONS  
MOTOR

Thank you for your purchase of the Konica FT-1. The Konica FT-1 is the result of a combination of state of the art electronic technology with Konica's 100 plus years of camera design innovation. The FT-1 combines numerous camera features pioneered by Konica like automatic loading, automatic winding, automatic exposure, and shutter priority into a sleek, lightweight SLR camera. Of course, the full range of Konica Hexanon lenses will fit the FT-1 like they have fit all Konica SLR cameras since 1967. In addition, the FT-1 is compatible with the complete line of electronic accessories developed specifically for the Konica F cameras, making the camera a versatile full system instrument. The addition of an X-24 dedicated flash will complete your Konica FT-1 camera outfit. For the correct use of your Konica FT-1, we hope that you will carefully read this instruction booklet and continue to enjoy taking pictures with your new Konica camera.

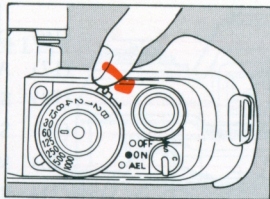
## Contents

Operating Instructions . . . . .	3
Nomenclature of Parts . . . . .	4
1. Attaching and Removing the Lens . . . . .	6
2. Loading the Batteries . . . . .	8
3. Film Loading (Auto-Loading) . . . . .	10
4. Setting the Film Speed . . . . .	14
5. Main Switch Functions. . . . .	14
6. Changing the Shutter Speed . . . . .	16
7. Focusing . . . . .	16
8. AE Photography (Checking Exposure) . . . . .	18
9. Releasing the Shutter . . . . .	20
10. Self-Timer . . . . .	22
11. Exposure Compensation . . . . .	24
① Taking Pictures with the AE Lock . . . . .	24
② Taking Pictures with Exposure Compensator Scale . . . . .	26
12. Manual Mode . . . . .	27
13. B (Bulb) Exposure (Manual Mode) . . . . .	28
14. Electronic Flash Mode . . . . .	30
15. Battery Power Warning . . . . .	36
16. Removing the Film . . . . .	38
Selection of Shutter Speed . . . . .	40
Selection of Aperture and Depth of Field . . . . .	41
Konica Hexanon Interchangeable Lenses . . . . .	42
Holding the Camera . . . . .	44
Precautions for Use . . . . .	44
Accessories . . . . .	46
Specifications of the Konica FT-1 . . . . .	50

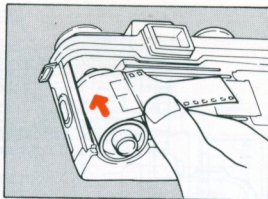
## Operating Instructions (AE photography)



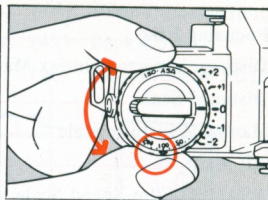
1. Insert 1.5V LRO3 (AAA) dry alkaline batteries in the power grip. (P. 8)



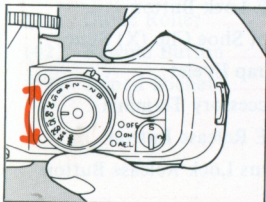
2. Turn the main switch to the "ON" position. (P. 15)



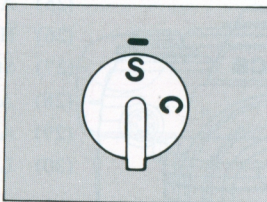
3. Open the back cover and insert a film magazine; Then close the back cover for auto loading. (P. 10)



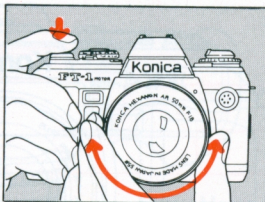
4. Set the film speed (ASA/ISO) dial to the speed of the film you are using. (P. 14)



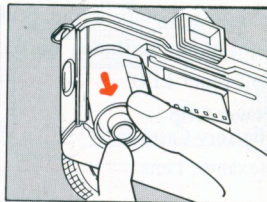
5. Turn the shutter speed dial to the desired shutter speed. (P. 16)



6. Turn the S/C switch to set the auto winder for single-frame advance or continuous action. (P. 20)

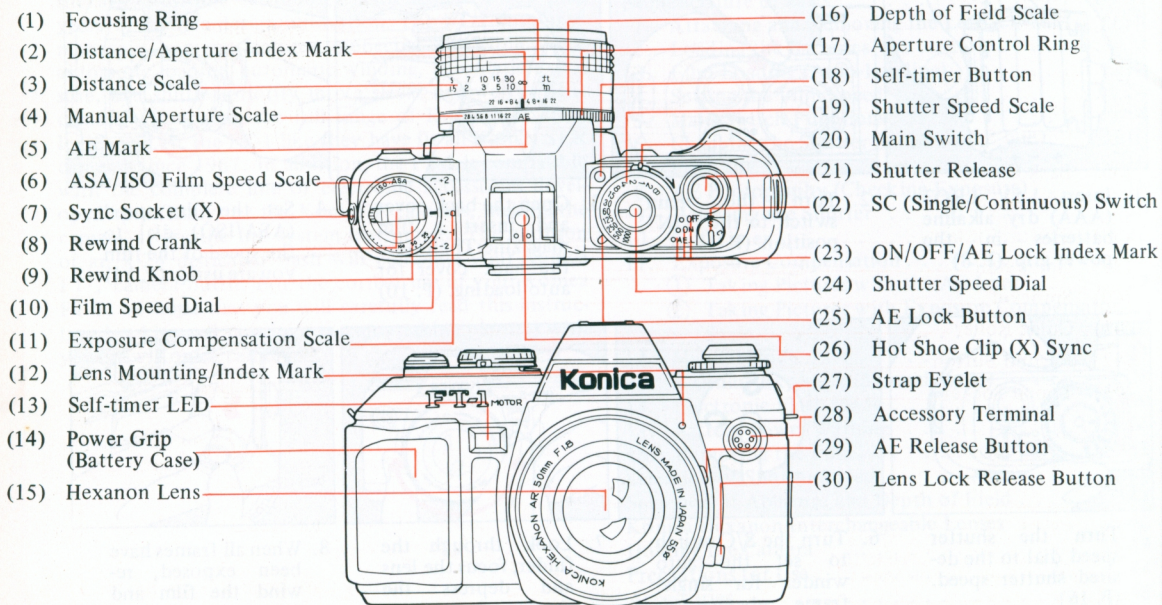


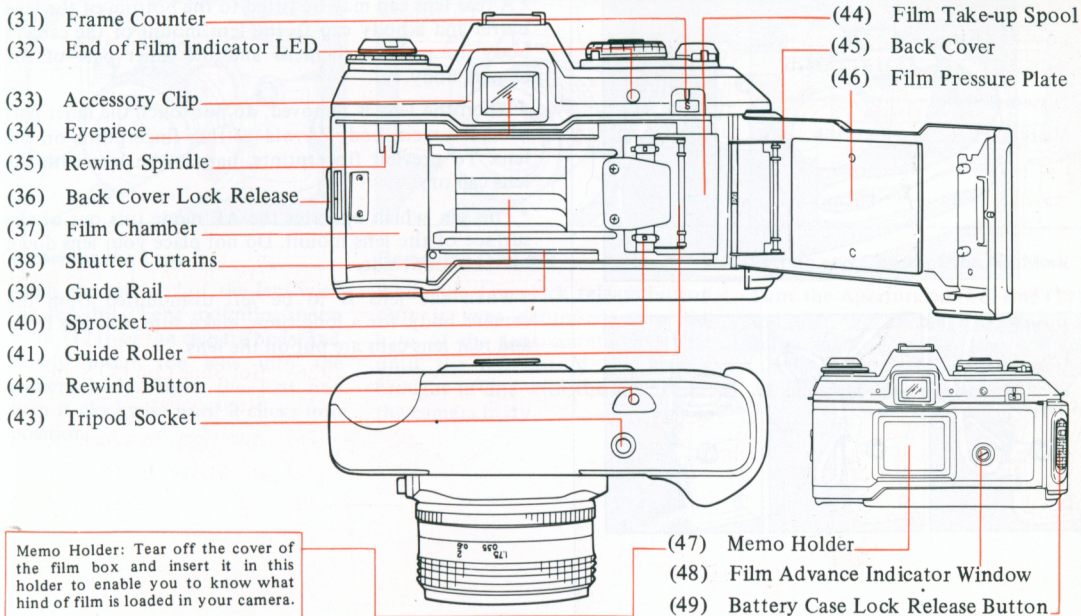
7. Look through the finder, focus the lens and depress the shutter release. (P. 16)



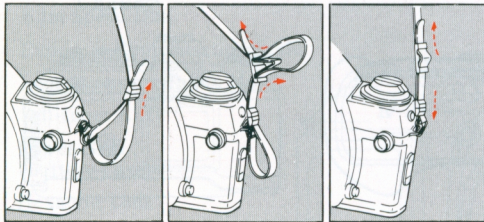
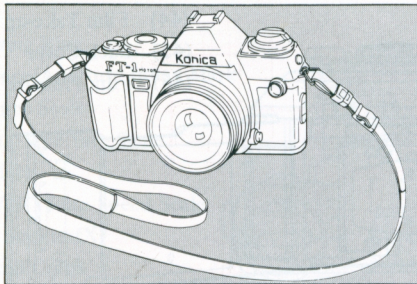
8. When all frames have been exposed, re-wind the film and take it out of your camera. (P. 38)

## Nomenclature of Parts





## Use of the Strap



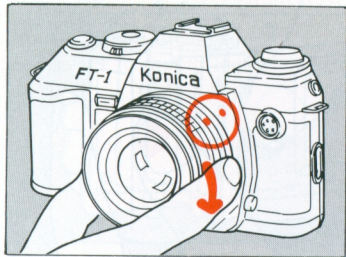
## 1. Attaching and Removing the Lens

\* A rear lens cap may be fitted to the bottom of the lens barrel and a body cap to the lens mount of the camera body to protect the lens and the inner part of the camera body.

\* When the lens is removed, do not touch the inner part of the camera body. Avoid getting fingerprints on the lens. To prevent fingerprints, handle the lens with the lens cap on.

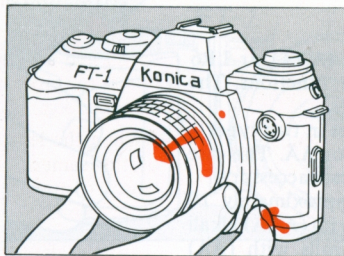
\* The pin which operates the AE mode juts out of the surface of the lens mount. Do not place your lens down on the mount side.

\* When the lens is to be left dismounted from the camera body for a long time, make sure that the front and rear lens caps are put on the lens.



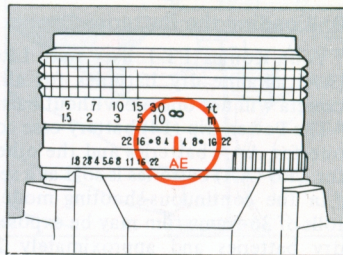
### Attaching the Lens

Align the red dot of the lens with the red dot [Lens mounting index mark (12)] of the camera body and slowly insert the lens into the camera body. Hold the lens and turn it clockwise until it clicks into position.



### Removing the Lens

While the Lens lock release button (30) is kept depressed, turn the base of the lens counterclockwise until the red dot of the lens is brought in line with the red dot on the camera body.



### Setting and Check of the AE Mark

Turn the Aperture control ring (17) and align the AE mark (5) with the index mark (2), the ring will be locked to set your camera to the AE picture-taking mode.

## 2. Loading the Batteries

\* Your Konica FT-1 uses four LRO3 (AAA) or LR6 (AA) alkaline dry batteries for all its functions. The camera will not operate without batteries.

\* The Power grip (14) battery case comes in two types – one for AAA batteries and the other for AA. The case for LR6 (AA) batteries is sold as a separate accessory.

\* In the continuous-shooting mode, approximately 10 rolls of 36-frame film may be exposed with (AAA) alkali dry batteries and approximately 20 rolls with (AA) alkali dry batteries (under Konica's test conditions).

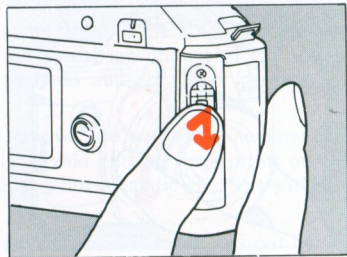
\* When the voltage of the batteries loaded in your camera has run down, a warning signal (LED) blinks in the finder, providing sufficient time to purchase new batteries before the old ones are completely exhausted.

\* The performance of the batteries will drop when the temperature is under 0°C. Keep your camera warm when pictures are to be taken at low temperature or use a Konica Remote Battery Pack (Accessory).

\* Pictures may be taken with ordinary manganese dry batteries, but approximately double the number of pictures may be taken with alkaline dry batteries.

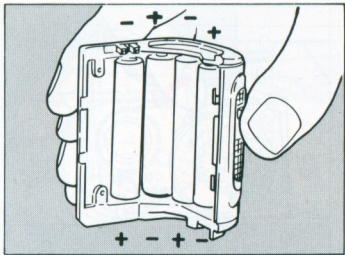
It is advisable to use alkaline dry batteries which are more powerful and have a greater capacity.

\* Nickel-cadmium (Ni-Cd) batteries must not be used because of their voltage rating.

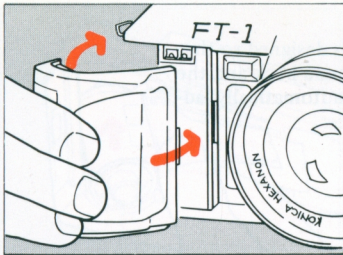


1) Depress the Battery case Lock release button and slide it down. Push toward the front and the Power grip (14) will be detached.

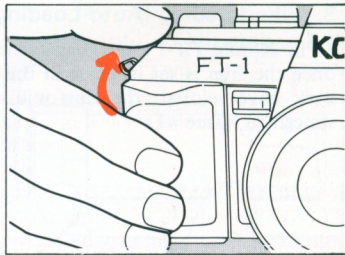




2) Insert four alkali dry cells, in the proper direction ( $\pm$  terminals are indicated on the inside of the Battery Case). Each battery may be easily inserted if the “-” side is inserted first.



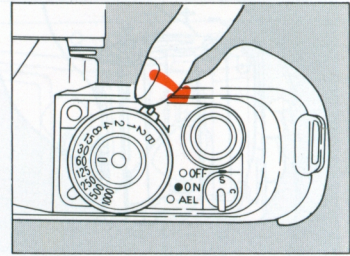
3) Put the guide claw (orange) of the Power grip into the groove on the camera body.



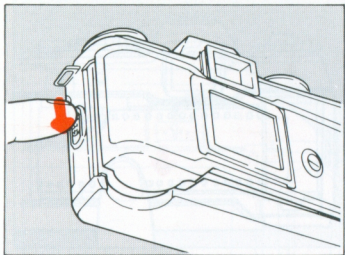
4) Rotate the Battery case around until it clicks into position.

### 3. Film Loading (Auto-Loading)

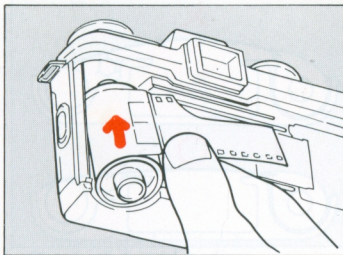
\* The Konica FT-1's autoloader system is designed so that once the film is set in place in the camera back and the back cover closed, the film will be automatically advanced to frame #1.



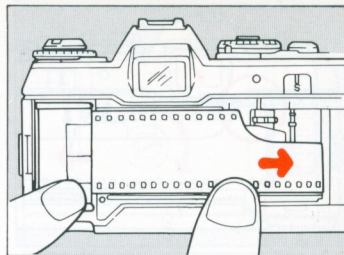
- 1) Turn the Main switch lever (20) to the "ON" position.



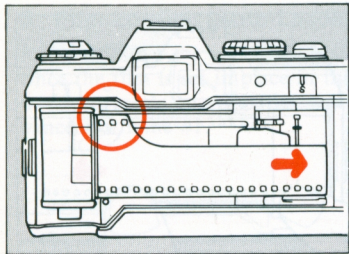
2) Slide down the Back cover rock release (36), and the Back cover (45) will open.



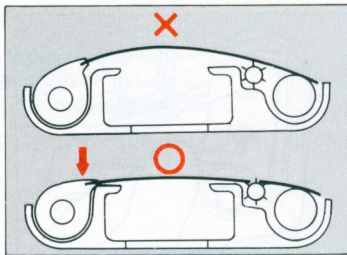
3) Slide a standard 35mm film magazine (37).



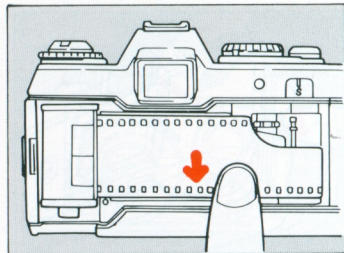
4) While holding the film magazine in place pull the tongue of the film and lay it on the Film take-up spool (44).



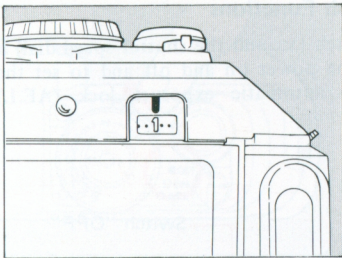
\* For films with longer leaders, pull out the film until the first two or three perforations on the upper portion of the film appear.



5) If the film magazine has moved out of its chamber, push it down to make sure that there is no film slack.



6) Bring the lower side of the film in line with the Guide rail (39). Unless the film is in parallel with the guide rail, the film will not be correctly loaded.



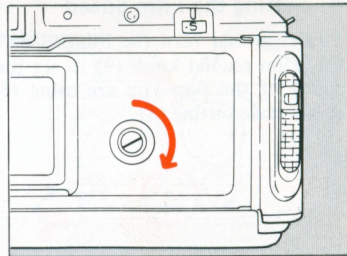
7) The moment the back cover is snapped closed, the film will be automatically advanced to the first frame with "1" appearing in the Frame counter (31).

\* The film may also be loaded with the main switch lever turned off; turn on the switch after the back cover is closed.

### Check of Auto-Loading

To verify proper film loading, check to see that the orange needle in the film advance indicator window (48) is rotating when the film is advancing.

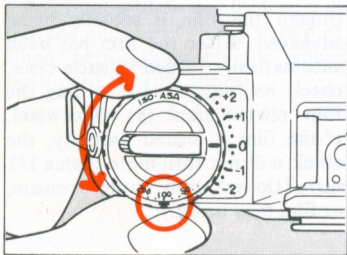
\* If certain types of film with extremely thin film base is used, there are cases in which the index mark in the film transport indicator window will not revolve even



though the film is actually being advanced. After the film has been automatically loaded in such cases, check its transport by turning the Film rewind/crank (8) (clockwise). If the film is loaded properly, the crank will not turn more than a 1/2 turn. (Do not apply strong pressure, or film may break.)

#### 4. Setting the Film Speed

\* Lift up and turn the Film speed dial (10) around the Film rewind knob (9) to set the ASA/ISO Film speed of the film you are using to match the film speed scale setting (6).

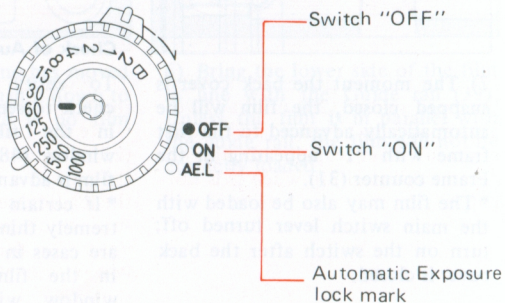


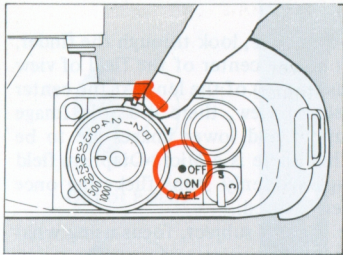
#### ASA/ISO film speed readings

25	— 32
·	— 40
50	· — 64
·	— 80
100	· — 125
·	— 165
200	· — 250
·	— 320
400	· — 500
·	— 640
800	· — 1000
·	— 1250
1600	· — 2000
·	— 2500
3200	

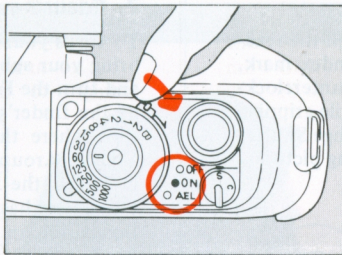
#### 5. Main Switch Functions

\* The Main switch (around the shutter speed dial) is used to turn the power on and off and to set the camera to the automatic exposure lock (AE.L) mode.

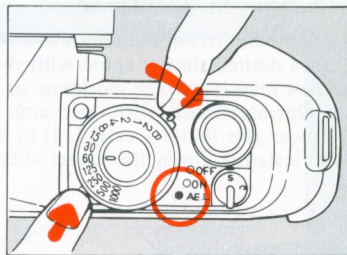




1) Shut off the power by moving the Main switch (20) until a white dot appears next to the “OFF” (23) position. Your camera should be kept in this position when it is not in use.



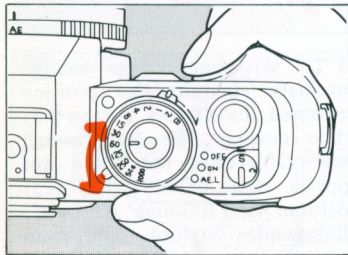
2) Power is turned on by moving the Main switch lever (20) until the white dot appears next to the “ON” (23) position, should you turn off the power when the camera is in the loading, self-timer or bulb exposure mode power will remain on until the function is completed. Power will then be automatically shut off.



3) To set your camera to the automatic exposure lock position depressed the AE lock button (25) while moving. The Main switch lever (20) until the white dot appears next to the AEL (23) position. After finishing “AE Lock” photography, return the main switch to either the “ON” or “OFF” position.

## 6. Changing the Shutter Speed

\* Turn the Shutter speed dial (24) to align the reading of a desired shutter speed with the index mark. The dial may be turned clockwise or counterclockwise. Operate the dial with the thumb while gripping the Power grip (battery case) (14) to change Shutter speeds instantly during the course of taking pictures.



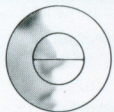
## 7. Focusing

To focus your Konica FT-1, look through the finder, bring your subject to the center of the field of view and turn the Focus ring (1) of the lens. At the center of the finder's field of view, there is a Split Image spot where the upper and lower images are to be aligned. Around this, there is a Micro-Diaphragm field in which the image suddenly stops flickering once the subject has been focused.

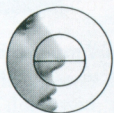
Depending on the type of subject, focus using whatever method is suitable.

\* If it is difficult to focus a subject with the split image assembly in the close-up or telephoto mode, use the peripheral Ground Glass.





Out of Focus



In Focus



Micro Diaphragm

Split Image

Ground Glass

## 8. AE Photography: LED Finder Display

\* Turn the lens Aperture control ring (17) to the AE mark (5) of the lens. Turn the Main switch (20) to "ON" and slightly depress the shutter release. An LED (red) will light up in the view finder, indicating the aperture value, automatically selected by the AE mechanism. Depress the Shutter Release (21) further to trigger the shutter. LED's will also light to indicate warnings and other data.

### Indication of Correct Exposure Value

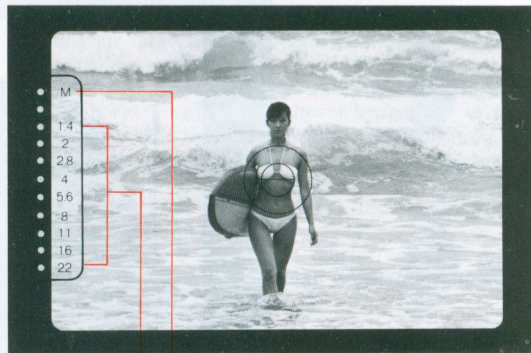
When the aperture value corresponding to a selected shutter speed is within the correct exposure range, one of the LEDs from f/1.4 to f/22 (f/2 to f/22 with an f/1.8 standard lens) will light up, indicating the correct aperture value in the AE mode.

\* In taking pictures under florescent lamps, there are cases were two LEDs indicating the correct aperture values flicker at the same time. This phenomenon is produced by the flickering of the fluorescent lamps and will not affect your pictures.

### Correct aperture indication in Manual Mode

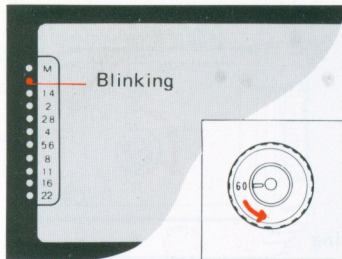
When your camera has been switched from the AE mode and set to the manual mode, the LED at the M mark blinks at the same time the LED of the correct aperture value lights up.

\* In the B (bulb) mode, the LED of the M mark blinks, indicating that your camera is set to the manual mode.



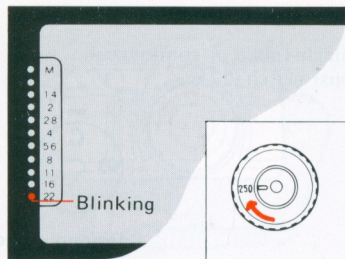
Manual Mode Signal  
(LED blinks)

Indication of Correct  
Exposure Value  
(LED "ON")



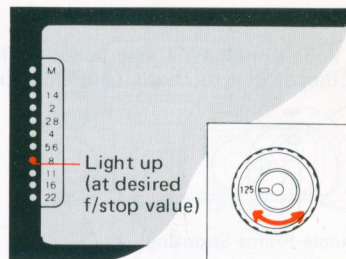
### Under-Exposure Warning

When the shutter release button is slightly depressed, the LED at f/1.0 (intermediate point between M and f/1.4) will blink if there is insufficient available light. A picture taken in this situation will be under-exposed. Select a slower shutter speed.



### Over-Exposure Warning

When the shutter release button is slightly depressed, the LED at f/22 will blink indicating over-exposure (too much light). Select a faster shutter speed.



### Aperture Priority Photography

While looking through the finder, depress the Shutter button (21) slightly, and turn the Shutter speed dial (24) until the LED of the desired aperture value is turned on.

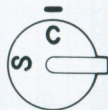
## 9. Releasing the Shutter

\* Your Konica FT-1 may be set to the single-frame or continuous-action mode with the SC (single/continuous) switch (22).



### Single-Frame Shooting

Turn the SC switch to bring the "S" in line with the index mark. Slowly depress the shutter button and the shutter will be released. The film will be advanced by one frame and the frame counter will advance by one number.

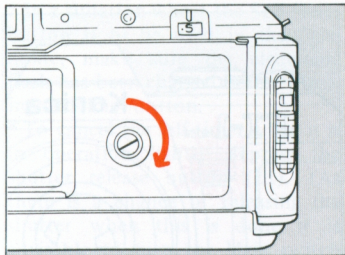


### Continuous Shooting

Turn the SC switch to bring the "C" in line with the index mark.

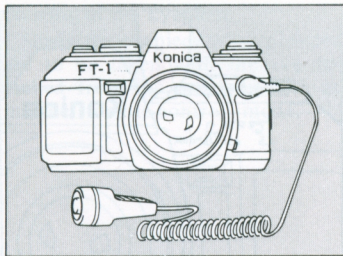
Press down the shutter release and keep it depressed; this will cause the shutter to fire continuously, while film is advanced at the rate of 2 frames per second, enabling you to take as many pictures in succession as you want.





\* When the film is being advanced properly by the Auto Winder, the index mark in the Film advance indicator window (48) will turn each time a picture has been taken.

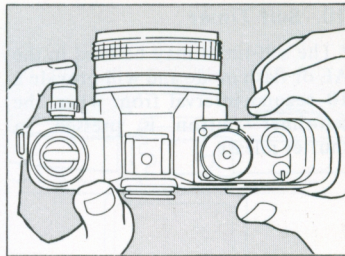
\* In the continuous shooting mode, one is apt to forget the number of pictures taken. Check the Frame counter (31).



#### Shutter Release with Cable Switch

In taking pictures at shutter speeds slower than  $1/30$  second, in the B (bulb) mode, and with ultra-telephoto or extreme close-ups it is advisable to use a tripod and a cable switch to prevent hand vibration from blurring exposures.

Remove the cover of the Accessory terminal (28) and screw in the cable switch. The shutter will be released each time the button on the cable switch is pressed.



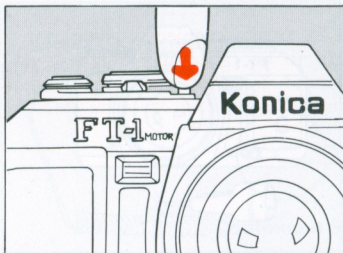
#### Left-Hand Release Switch

If you are left-handed, screw the left-hand release switch (separately sold) in the Accessory terminal, and you will be able to release the shutter with your left hand.

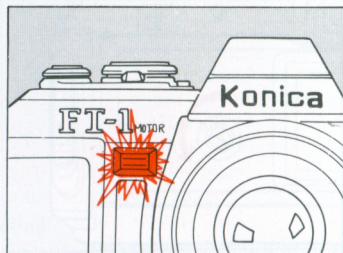
\* Before attaching the left-hand release switch, turn off the main switch to prevent the shutter from being accidentally released.

## 10. Self-Timer

\* The self-timer may be used in the AE or flash mode and will provide a 10 second interval from when the self-timer button is pressed to shutter release.



1) Mount your camera on a tripod, focus and depress the Self-timer button (18).



2) 10 seconds after the selftimer LED (13) starts blinking, the shutter will be released. The LED will blink at a continuously faster rate advising you when the shutter will be released.

\* In a situation where the Self-timer button is to be used in the flash mode, make sure the electronic flash has been charged before pressing self-timer button.

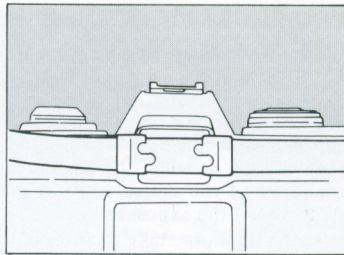
\* To cancel the self-timer when it is in operation lightly depress the shutter release button (21). (As there is a chance of releasing the shutter when this is done it is advisable to turn the Main switch lever (20) to the OFF position.)

\* The self-timer cannot be used at the B (bulb) setting.

\* The self-timer cannot be used when an accessory is attached to the accessory terminal (28).

### Shading of the Eyepiece

\* Shade the eyepiece when pictures are to be taken with the eye detached from the eyepiece, such as in the remote-control mode.



When the self-timer is used or when a picture is to be taken with your eye away from the eyepiece incorrect exposure may result from light entering through the finder eye piece. After a picture has been framed through the finder, shade the Eyepiece (34) with the finder cover attached to the neck strap.

① Twist the right- and left-hand sides of the (adjusting link) and divide it into two. ② Insert the divided halves into the Accessory clip grooves (33) of the eyepiece frame from the right- and left-hand sides to shade the eyepiece with the strap.

## 11. Exposure Compensation

### ① Taking Pictures in the AE Lock Mode

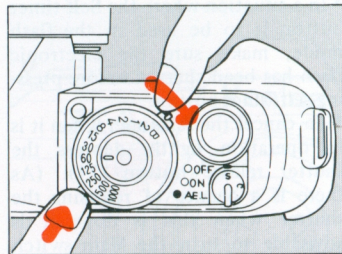
\* Konica's FT-1 AE system will always provide a proper exposure.

In a situation where pictures are to be taken with strong back-lighting or when there is much difference between brightness of the subject and the periphery, it is advisable to adjust the exposure.

In such situations, take pictures in the AE lock mode or use the exposure compensation scale.

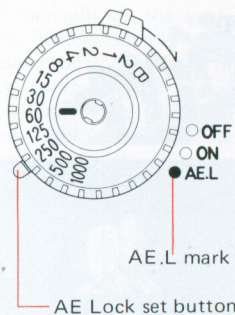
\* In the AE lock mode, note that there will be no warning for an under-exposure or over-exposure in the finder.

\* If the finger is released from the shutter button, the AE lock will be released.



1) While the AE lock button (25) is kept depressed, turn the Main switch (20) until the white dot appears next to the AE.L mark (23). While looking through the finder, depress the shutter slightly, and an LED will light up in the finder indicating the correct aperture value. As long as the shutter release is kept depressed, the aperture value will remain unchanged, even if your camera is pointed in a different direction. Depress the shutter release further to take a picture at the locked aperture value.





2) For example, in back light with the subject standing against the background of the sky, the subject will be underexposed as the exposure will be affected by the bright sky.

In this situation, point your camera downward, lightly depress and hold the shutter release. With the AE system locked, point your camera at the subject and release the shutter, and the subject will be properly exposed.



3) Conversely, in a situation where the subject is bright but the background is extremely dim, the subject would be over-exposed in the ordinary AE mode. In this situation, bring your camera close to the subject, and depress and hold the shutter release, locking in the correct exposure. Return to your original position and take the picture.

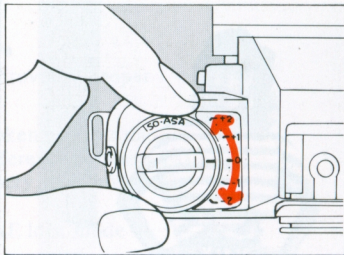
\* After you finish taking pictures in the AE Lock mode, return the Main switch (20) to the "ON" position (23).

## ② Picture-Taking with Exposure Compensation

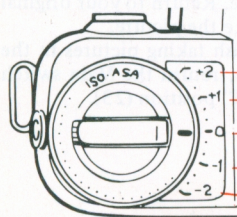
\* The Exposure compensation scale (11) may be used in each click stop (calibrated at 1/3 step). After pictures have been taken, return the scale to 0.

### Adjustment Range of the Exposure Compensation Scale by Film Speed

ASA(ISO) 3200	+2 ~ 0
ASA(ISO) 1600	+2 ~ -1
ASA(ISO) 100~800	+2 ~ -2
ASA(ISO) 50	+1 ~ -2
ASA(ISO) 25	0 ~ -2



1) Turn the Exposure compensation dial (ASA/ISO set dial) (10), which concurrently serves as the film speed dial and set desired Exposure compensation (+2 - -2 EV).



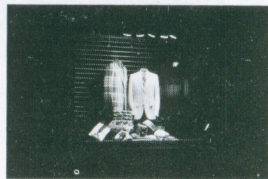
+2 represents 4× over-exposure.

+1 represents 2× over-exposure.

0 represents standard AE exposure.

-1 represents 1/2× under-exposure.

-2 represents 1/4× under-exposure.



2) Compensate the exposure by +1 in a situation where the background is bright and the subject dim. In a situation where the periphery is dim and the subject is bright, compensate the exposure by -1.

## 12. Manual Modes

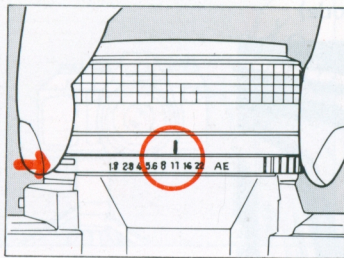
To manually set the exposure with your Konica merely press the AE Release button and set the lens to any aperture other than the AE position. A red LED will continuously blink at the "M" mark in the viewfinder to signify manual operation.

The Konica FT-1 Through-the-Lens (TTL) Automatic Exposure (AE) system operates at all times, even during manual operation displaying the correct exposure in the viewfinder even though you have set an aperture and shutter speed combination manually.

### Stopped-Down Metering Mode

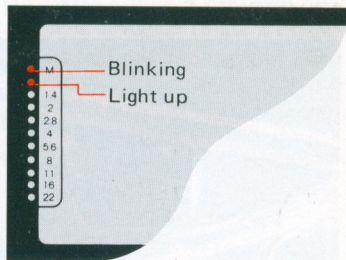
Picture Taking in the Stopped-Down Metering Mode with Konica Accessories Used on the Camera.

\* When using an extension ring or standard bellows or when your camera cannot be set to the AE mode because you are using a manual aperture lens, pictures may be taken in a stopped-down metering mode.



1) Press the AE release button (29) on the lens and set the lens to a manual aperture. The LED of the M mark will flicker in the finder.

\* To take microscopic pictures, the exposure is determined in the stopped-down metering mode. As no diaphragm is used, make an adjustment by changing the shutter speed or adjusting the brightness of the light source.



2) Point your camera at the subject, and look through the finder. While the shutter release is slightly depressed, turn the Aperture control ring (17) or the Shutter speed dial (24) until the LED at f/1.0 (intermediate point between M and f/1.4) lights up. With this done, the correct exposure will be assured.

\* Stopped-down metering tends to be affected by the light which strays into the Eyepiece (34). Use an eyecup (separately sold).

\* When all pictures have been taken in the manual mode, return the lens aperture ring to the AE mark.

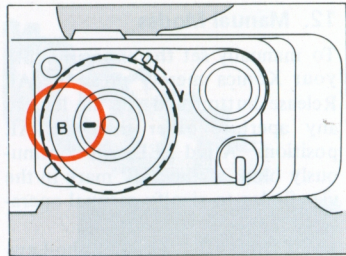
### 13. B (Bulb) Exposure (Manual Mode)



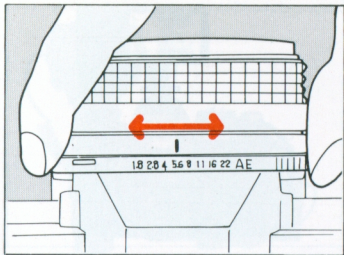
\* The “B” setting on the shutter speed dial will keep the shutter open for as long as the shutter release is depressed.

\* With your camera set to “B”, pictures can be taken in the manual mode, but not in the AE mode.

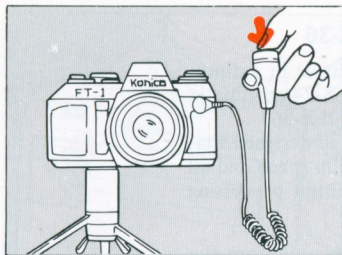
\* At the “B” setting, pictures cannot be taken with the self-timer.



1) Set the Shutter speed dial (24) to B.



2) Switch the lens aperture from the AE mode to the manual mode and set the desired aperture.



3) Depress the shutter and hold it down until desired exposure time has elapsed.

\* In taking pictures at the "B" setting, it is advisable to use a tripod and the Cable Switch (separately sold) to prevent jarring of the camera.

## 14. Electronic Flash Mode

### Taking Pictures with X-24 or X-36

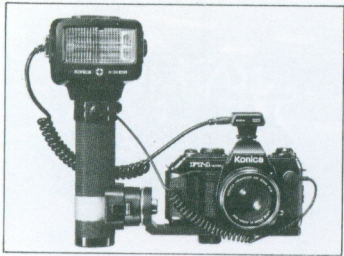
\* When pictures are to be taken at night or in a dimly lit room, take pictures with the Konica X-24 automatic electronic flash light or the more powerful X-36.

Both of these electronic flash units are so designed that lens aperture shutter speed, ASA/ISO film speed and all other settings are controlled by the central processing unit (CPU) of the camera.

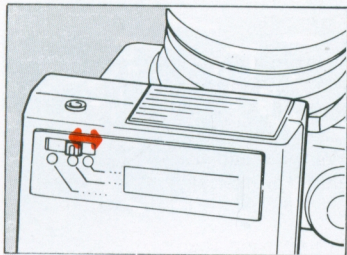
\* It is not necessary to remove the flash unit from the camera when it is not in use. However the flash must be turned off and the lens set to AE.



The Konica X-24 Automatic Electronic Flash is a compact, energy-saving electronic flash with a guide number of 80 (ASA/ISO 100)

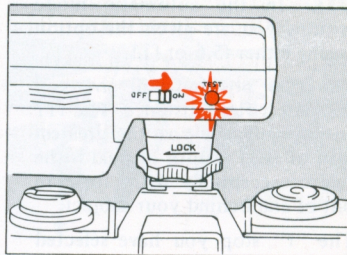


The Konica X-36 Automatic Electronic Flash is a powerful grip handle electronic flash, with a guide number of 120 (ASA/ISO 100).



#### Using the Automatic Mode

- 1) Set the power switch to the ON position.
- 2) Set the shutter speed dial of your Konica FT-1 to any speed except B.
- 3) Set the Auto/Manual Selector switch of the X-24 flash to the green



mark (f5.6) or to the red mark (f11).

- 4) When the shutter release on the Konica FT-1 is lightly depressed, the f5.6 or f11 LED in the viewfinder will blink when the flash is completely charged.
- 5) Take your flash picture.

NOTE: In the automatic mode positions you are given the option of using either f5.6 or f11.

\* The f5.6 position will give you the greatest flash distance. The f11 position will give you the greatest depth of field. Depth of field is the range of acceptably sharp focus in front of and behind your subject.

\* The "f" stop you have selected will remain fixed regardless of what ASA film speed you are using. Films with higher ASA speeds will give you longer flash working distances, lower ASA speeds, shorter flash distances. The flash distances for ASA film speeds 100 and 400 are provided on the scale located at the top of the Konica X-24 Autoflash.



**Flash Distance Range X-24**

f5.6	ASA 100	2.3'-14.1'	(0.7-4.3m)
f5.6	ASA 400	3.3'-28.2'	(1.0-8.6m)
f11	ASA 100	2.3'- 6.9'	(0.7-2.1m)
f11	ASA 400	2.3'-14.1'	(0.7-4.3m)

**Flash Distance Range X-36**

f5.6	ASA 100	2.3'-21.0'	(0.7-6.4m)
f5.6	ASA 400	6.6'-42.3'	(2.0-12.9m)
f5.6	ASA 800	9.0'-59.0'	(2.7-17.9m)
f11	ASA 100	2.3'-10.5'	(0.7-3.2m)
f11	ASA 400	6.6'-21.3'	(2.0-6.5m)
f11	ASA 800	9.0'-29.0'	(2.7-8.8m)





\*The shutter speed dial can be set at any speed except B. The shutter speed will automatically be changed to 1/100th second when the Konica X-24 or X-36 flash is fully charged. The lens will automatically close down to either f5.6 or f11 depending on which "f" stop you have selected. The correct exposure will be determined by the built-in light sensor of the flash unit.



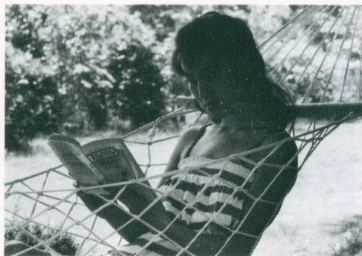
\*While your Konica X-24 flash is recycling, your Konica FT-1 will automatically be returned to the shutter speed and f stop you had previously selected for automatic non-flash pictures. There is no need to constantly change your shutter speed and f stop.



\*The flash unit is automatically set for the ASA speed of the film in your camera, by means of the camera's Central Processing Unit and "Hot Shoe".

If the picture is taken before the flash is ready, the picture will be exposed in AE mode. Be sure to observe the under/over exposure warning signals.

\*Under certain conditions (indoors at relatively close range) electronic flash pictures may be taken in rapid successions, at the speed of auto-winder (2 frames per second.)



non Flash



With Flash

### Fill-in Flash (Daylight Synchro)

#### Subject in Back Light or near a Window

When pictures are to be taken on a cloudy day or in the evening, it is often advisable to do so in the daylight synchro mode with the electronic flash used as an auxiliary light.

#### Picture-Taking in the Automatic Mode

When the Konica X-24 or X-36 is used for fill-in flash, note the camera-to-subject distances given in the following table and use the appropriate f stop:

		Subject in back light or near a window	Subject on a cloudy day or in the evening
X-24	f5.6	—	0.7 ~ 4.2 m
	f11	0.7 ~ 2.1 m	—
X-36	f5.6	—	0.7 ~ 6.4 m
	f11	0.7 ~ 2.2 m	—

**Picture-Taking in the Manual Mode****(1) Use of the Konica X-24**

Set the shutter speed at a reading slower than 1/60 second and calculate the correct aperture value for the background scene. With f/8, for example, the correct camera-to-subject distance may be computed in the equation of 24 (the guide number of the X-24 with ASA/ISO 100, in meters)  $\div$  8 = 3 m.

**(2) Use of the variable guide number dial with the Konica X-36**

Set the shutter speed at a reading smaller than 1/60 second and calculate the correct aperture value for the background scene. Multiply the value by the flash-to-subject distance (in meters) to calculate the correct guide number (GN). Adjust the guide number with the variable number dial and take pictures.

With the correct aperture value of f/8 and the flash-to-subject distance of 2 m, for example, the correct guide number will be  $8 \times 2 = 16$ .

The scale of the variable GN dial is calibrated with 36, 22, 16, 11, 8, 5.6 and 4.5 (with ASA/ISO 100, in meters).

**Picture-Taking with Non-Dedicated Electronic Flash**

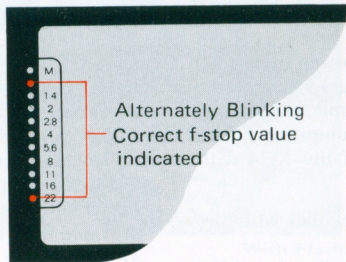
\* An electronic flash with a hot shoe may be electrically connected simply by fitting it to the hot shoe clip. With an electronic flash without a hot shoe connector, insert the plug of its cord into the Synchro socket (X) (7) of the camera body.

- 1) set the shutter speed to 1/60 sec. for all types non-dedicated electronic flash.
- 2) set the lens aperture manually per the instructions provided with the electronic flash unit.
- 3) when using automatic flash units set the lens aperture as indicated by the auto flash.
- 4) for manual flash units, determine the correct aperture to be set by dividing the guide number by the camera-to-subject distance.

## 15. Warning of Drop in Power Supply

\* When the voltage of the Konica FT-1's power source has dropped, a warning signal will appear in the finder when the shutter release is slightly depressed. When this warning appears, replace the batteries the next time a new roll of film is loaded.

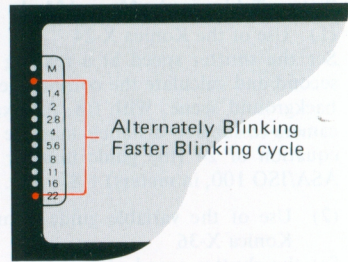
\* If batteries are left for a long time, the voltage will drop due even if the camera is not used. Make sure you check the voltage if you have not used the camera for a long time.



### With Correct Exposure

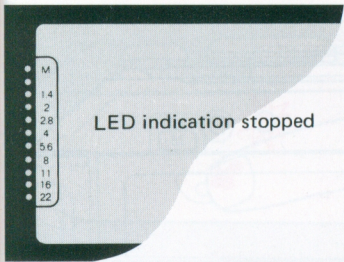
When there is a drop in the voltage of the power supply, the LED of f/1.0 (intermediate point between M and f/1.4) and that of f/22 will alternately blink.

In addition to the alternate blinking of the warning LEDs, another LED will light up to indicate the correct aperture value.

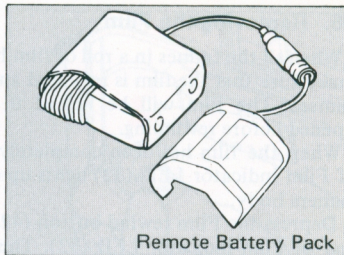
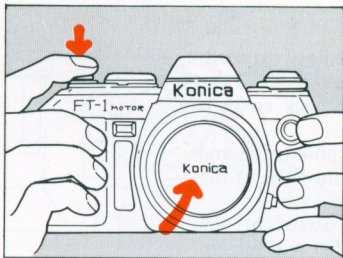


### With Warning for Under- or Over-Exposure

When pictures are taken while the low voltage signal on, the blinking interval between the LED of f/1.0 (intermediate point between M and f/1.4) and that of f/22 will become shorter to warn against under or over exposure.



LED indication stopped



Remote Battery Pack

### With Extreme Drop in Voltage

With a further drop in voltage the LEDs will stop blinking, and the camera will not operate until the batteries are changed.

\*When the low power warning signal appears, replace the batteries after finishing the roll of film in your camera.

Note: Even when the voltage has dropped too low for the LED's to light up, the auto-load mechanism may operate. If auto-load works but LED's do not light up, please change the batteries.

\* In case batteries must be replaced while a roll of film is in the camera, cover the lens with the lens cap after inserting new batteries and press the shutter twice (this is to prevent double-exposures.)

### Taking Pictures at Less Than 32° F

At low temperatures, batteries provide less voltage than at normal temperatures. Take the batteries out of the battery case and keep them warm. Load them in the chamber only when pictures are to be taken. Another way to keep batteries functioning is to carry a spare battery case (separately sold), using and warming the two battery cases on an alternate basis.

If a Konica Remote Battery Pack (sold separately) is used, pictures may be taken with the battery case kept warm in the pocket. This method is best suited for taking pictures for long hours at cold temperature.

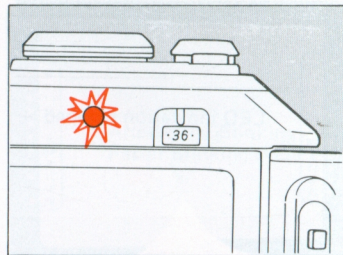
## 16. Removing the Film

\* When all the frames in a roll of film have been exposed, make sure that the film is rewound and taken out of the camera. The film will be ruined if the back cover is opened before rewinding.

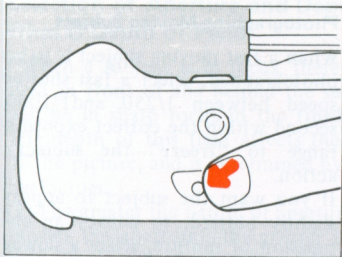
\* When the film has been completely exposed, the end of Film indicator LED (32) lights up on the back of the camera body.

\* Depress the Film rewind button (42) to switch off the end of Film indicator LED (32). This LED will remain on as a rewriter even if the power switch is turned off. If it is not turned off by pressing the rewind button battery drain will result.

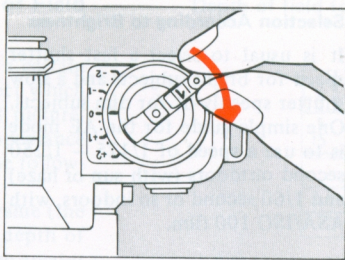
\* Depending on the type and condition of the film loaded in your camera, there are cases in which perforations of the film are snapped off at the end of the roll and the film advance sounds unusual. Even in such a situation, you can rewind the film in the usual manner.



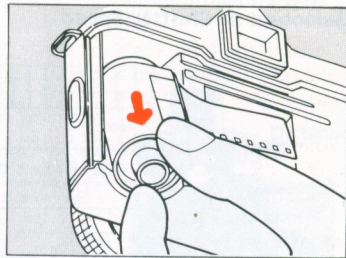
1) When the entire roll of film has been exposed and the film can no longer be wound the end of film indicator LED will go on. Turn OFF the Main switch (20). (This is to prevent the shutter from being accidentally released during the film rewind).



2) Push down the Film rewind button (42) on the bottom of the camera body. Once it is pushed down, it will remain so. You may hear a slight motor sound at this point. This means the position of the take-up spool is being adjusted.



3) Flip up the Film rewind crank (8) turn it in the direction of the arrow (clockwise), and the film will be rewound into the Film magazine. \*When the film rewind crank is turned, the needle in the Film advance indicator window (48) will turn, showing that the film is being properly rewound.



4) Rewind the film all the way into the magazine. You will know the film is completely rewound because the needle in the film advance indicator will stop turning and the rewind crank will turn freely. \* It is advisable to have the exposed film processed as soon as possible.

## Selection of Shutter Speed



1/30



1/500

## Selection According to Brightness

It is usual to select a fast shutter speed for bright subjects and a slow shutter speed for dim subjects. One simple guide for the AE mode is to use a speed of 1/125 – 1/250 second outdoors (with sun or haze) and 1/60 second or so indoors, with ASA/ISO 100 film.

## Reducing Camera Shake

When your camera is held in your hands, vibration from the hands may cause blurred pictures at slow shutter speeds. For hand-held shooting, shutter speeds of 1/30 sec. or faster are usually advisable.

With telephoto lenses, the effects of camera vibration are greater, so faster shutter speeds are required to prevent blurring.

## Photographing Moving Subject

When a fast moving subject is to be photographed, select a fast shutter speed between 1/250 and 1/1000 second within the correct exposure range to “freeze” the subject’s action.

If you want the subject to appear slightly blurred, to convey an impression of motion, select a slower shutter speed (eq., 1/30 or 1/60 sec.)



## Selection of Aperture and Depth of Field

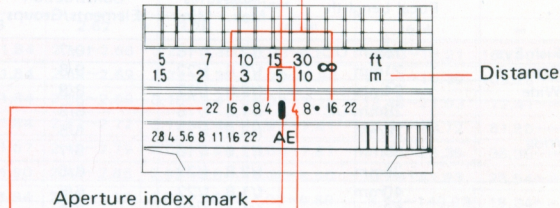
### What is Depth of Field

\* When a subject is in focus, there is a certain field in front of and behind the subject which will be in sharp focus in the finished picture. The depth of this field affects the appearance of the picture, and is determined by the following factors.

- (1) The greater the f-stop, or aperture value (the smaller the aperture), the greater the depth of field. The smaller the aperture value (the greater the aperture), the less the depth of field.
- (2) The farther the subject is from the camera, the greater the depth of field. The nearer the subject is to the camera, the less the depth of field.
- (3) The shorter the focal length of the lens, the greater the depth of field. The longer the focal length, the less the depth of field.
- (4) The field which is in sharp focus in front of the subject is shallower than the sharp focus area behind the subject.

Use the depth-of-field scale on your lens as a yardstick to calculate the depth of field. Effective use of this scale will make it possible to sharply focus the foreground of a scene or to blur the background of a subject.

Depth of field for f/4      Depth of field for f/16



#### Depth-of-field scale

The f-stop values calibrated on the lens' distance and the aperture index mark represent the depth-of-field scale. This scale will indicate the depth-of-field range for each aperture and a given focus point.

#### Infrared compensation mark

When using infrared film and lighting the real focal point will shift slightly closer to the camera. After the lens is focused, turn the distance scale and set it to the infrared compensation mark (red numeral or line) for infrared photography.

## Konica Hexanon Interchangeable Lenses

	Focal Length	Apertures Max. - Min.	Construction Elements/Groups	Angle of View	Min. Focus from Film Plane	Length	Max. Diameter
Fish-Eye	15mm UC	f/2.8 - f/16	10/7	180°	0.15m (6.0'')	60mm (2.4'')	70mm (2.8'')
Extreme Wide	21mm	f/2.8 - f/22	9/8	92°	0.2m (8.0'')	39mm (1.5'')	63mm (2.5'')
	24mm	f/2.8 - f/22	8/8	84°	0.25m (10.0'')	36mm (1.4'')	63mm (2.5'')
Wide	28mm UC	f/1.8 - f/16	8/8	75°	0.18m (7.0'')	63mm (2.5'')	66mm (2.6'')
	28mm	f/3.5 - f/22	5/5	75°	0.3m (12.0'')	36mm (1.4'')	63mm (2.5'')
	35mm	f/2.0 - f/16	9/7	63°	0.3m (12.0'')	57mm (2.2'')	65mm (2.6'')
	35mm	f/2.8 - f/22	6/5	63°	0.3m (12.0'')	38mm (1.5'')	63mm (2.5'')
Standard	40mm	f/1.8 - f/22	6/5	56°	0.45m (18.0'')	27mm (1.1'')	63mm (2.5'')
	50mm	f/1.4 - f/22	7/6	46°	0.45m (18.0'')	45mm (1.8'')	63mm (2.5'')
	50mm	f/1.7 - f/16	6/5	46°	0.55m (22.0'')	40mm (1.6'')	63mm (2.5'')
	50mm	f/1.8 - f/22	6/5	46°	0.55m (22.0'')	33mm (1.3'')	63mm (2.5'')
	57mm	f/1.2 - f/16	7/6	42°	0.45m (18.0'')	50mm (2.0'')	72mm (2.8'')
Telephoto	85mm	f/1.8 - f/16	6/5	28.5°	1m (40.0'')	67mm (2.6'')	65mm (2.6'')
	100mm	f/2.8 - f/16	5/4	24°	1m (40.0'')	62mm (2.4'')	63mm (2.5'')
	135mm	f/2.5 - f/16	4/4	18°	1.2m (48.0'')	96mm (3.8'')	69mm (2.7'')
	135mm	f/3.5 - f/22	4/4	18°	1.5m (60.0'')	82mm (3.3'')	63mm (2.5'')
	200mm	f/4.0 - f/22	5/5	12°	2.5m (10.0'')	121mm (4.8'')	65mm (2.6'')
	300mm	f/4.5 - f/16	8/5	8°	4m (13.0'')	168mm (6.7'')	80mm (3.2'')
	300mm FL	f/6.3 - f/22	9/5	8°	4.5m (15.0'')	146mm (5.8'')	65mm (2.6'')
Zoom	400mm UC	f/5.6 - f/45	9/5	6°	4m (13.0'')	217mm (8.6'')	83mm (3.3'')
	35-70mm	f/4.0 - f/22	8/7	63-35°	0.8m (32.0'')	69.5mm (2.7'')	67.5mm (2.6'')
	45-100mm UC	f/3.5 - f/16	11/10	52-24°	0.35m (14.0'')	85mm (3.4'')	70mm (2.8'')
	70-150mm	f/4.0 - f/22	15/12	34-16°	0.8m (32.0'')	102mm (4.0'')	67mm (2.6'')
	80-200mm	f/4.0 - f/22	12/9	30-12°	1.9m (76.0'')	138mm (5.5'')	65mm (2.6'')
Macro	80-200mm UC	f/4.0 - f/16	14/10	30-12°	0.7m (28.0'')	157mm (6.2'')	68mm (2.7'')
	55mm	f/3.5 - f/22	4/3	43°	0.25m (10.0'')	60mm (2.4'')	64mm (2.5'')
Other	105mm	f/4.0 - f/22	5/3	23°	*	47mm (1.9'')	63mm (2.5'')
	Teleconverter AR2X	—	6/5	—	—	43.5mm (1.7'')	63mm (2.5'')

\* Depending on bellows extension length.

### Depth-of-Field Table (50mm f/1.8)

Permissible aberrated circle diameter 3/100mm (Unit: Feet)

Aperture	Distances					
	1.8	2.62	3.28	6.56	16.4	∞
f/1.8	1.80~1.84	2.59~2.66	3.22~3.35	6.33~6.82	14.93~18.21	160.50~∞
f/2.8	1.77~1.84	2.59~2.69	3.22~3.38	6.20~6.96	14.24~19.39	103.28~∞
f/4	1.77~1.84	2.56~2.69	3.18~3.41	6.07~7.15	13.48~21.03	72.41~∞
f/5.6	1.77~1.84	2.53~2.72	3.12~3.48	5.91~7.41	12.57~23.72	51.80~∞
f/8	1.74~1.87	2.49~2.79	3.05~3.54	5.64~7.87	11.45~29.36	36.35~∞
f/11	1.74~1.90	2.43~2.85	2.99~3.64	5.38~8.50	10.36~41.93	26.54~∞
f/16	1.71~1.94	2.37~2.95	2.85~3.87	4.95~9.88	8.83~149.93	18.34~∞
f/22	1.67~2.00	2.30~3.12	2.76~4.13	4.56~12.24	7.55~∞	13.42~∞

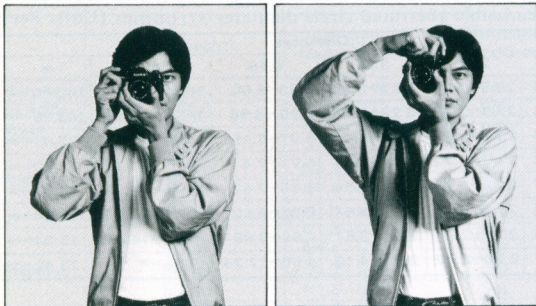
### Depth-of-Field Table (50mm f/1.7 · 50mm f/1.4)

Permissible aberrated circle diameter 3/100mm (Unit: Feet)

Aperture	Distances						
	1.5	2.0	3.0	5.0	10.0	30.0	∞
f/1.4	1.49~1.51	1.98~2.02	2.96~3.04	4.88~5.12	9.50~10.53	25.68~35.30	185.00~∞
f/1.7	1.49~1.51	1.98~2.02	2.95~3.05	4.85~5.15	9.41~10.65	25.09~37.10	152.18~∞
f/2	1.49~1.51	1.97~2.02	2.94~3.06	4.84~5.17	9.33~10.75	24.53~38.42	133.20~∞
f/2.8	1.48~1.52	1.97~2.03	2.92~3.08	4.77~5.24	9.09~11.09	22.88~43.36	95.23~∞
f/4	1.48~1.52	1.95~2.04	2.89~3.11	4.69~5.36	8.76~11.64	20.79~53.75	66.75~∞
f/5.6	1.47~1.53	1.94~2.06	2.85~3.16	4.57~5.51	8.35~12.47	18.54~79.10	47.77~∞
f/8	1.46~1.54	1.92~2.09	2.80~3.24	4.42~5.77	7.80~13.97	15.96~273.97	33.53~∞
f/11	1.44~1.56	1.89~2.13	2.73~3.34	4.23~6.13	7.22~16.46	13.61~∞	24.47~∞
f/16	1.42~1.59	1.84~2.19	2.62~3.52	3.96~6.84	6.42~23.52	10.95~∞	16.92~∞
f/22	1.39~1.63	1.79~2.28	2.50~3.28	3.68~7.99	5.67~49.52	8.88~∞	12.38~∞

Weight	Filter	Lens Hood
395g (13.9 oz.)	Built-in	Built-in
215g (7.6 oz.)	55mm	Incl.
205g (7.2 oz.)	55mm	Avail.
380g (13.4 oz.)	55mm	Incl.
175g (6.2 oz.)	55mm	Incl.
320g (11.3 oz.)	55mm	Incl.
200g (7.1 oz.)	55mm	Avail.
140g (4.9 oz.)	55mm	Avail.
265g (9.3 oz.)	55mm	Avail.
210g (7.4 oz.)	55mm	Avail.
175g (6.2 oz.)	55mm	Avail.
460g (16.2 oz.)	62mm	Avail.
390g (13.8 oz.)	55mm	Incl.
290g (10.2 oz.)	55mm	Incl.
650g (22.9 oz.)	62mm	Built-in
315g (11.1 oz.)	55mm	Built-in
515g (18.2 oz.)	55mm	Built-in
965g (34.0 oz.)	72mm	Built-in
560g (19.8 oz.)	55mm	Built-in
600g (3.5lbs.)	77mm	Built-in
390g (13.8 oz.)	62mm	Incl.
570g (20.1 oz.)	55mm	Built-in
500g (17.6 oz.)	55mm	Built-in
590g (20.9 oz.)	55mm	Incl.
830g (29.3 oz.)	62mm	Built-in
290g (10.2 oz.)	55mm	Avail.
230g (8.1 oz.)	55mm	Avail.
230g (8.1 oz.)	—	—

## Holding the Camera



To take sharp, clear pictures, it is important to accustom yourself to the proper grip of your camera so it will not shake when the shutter is released.

Hold your camera as illustrated pressing it firmly against your face. Keep the elbow of the arm which is supporting the camera tightly against your body.

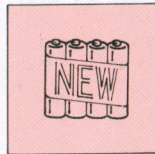
\* When shooting vertical pictures, be sure that you do not depress the film rewind button.

## Precautions for Use



### Checking the Camera

\* Before you go on a trip or when your camera has not been used for a long time, it is advisable to check your camera to be certain that it is working properly.



### Before Taking Pictures

\* For a protracted journey, carry spare batteries as a precaution.

\* When the voltage of the batteries has dropped, replace all four with new batteries.



### Taking Care of Camera

\* If you leave your camera on a beach in the summer, in a car exposed to direct sunlight, or in any hot and humid location for a long period of time, the performance of the film and batteries will deteriorate, and the camera's operation may be adversely affected.

\* If your camera gets wet, take it as soon as possible to the nearest Konica camera service station. If water has dripped onto the camera or if the camera has been exposed to a sea breeze, wipe it well with a dry cloth. Avoid getting moisture in your camera at all times.

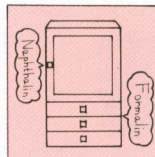
\* At a temperature of less than 0°C (32°F), there will be a drop in the battery performance. Keep the bat-

teries warm by placing them in your pocket and put them in your camera just prior to picture taking. Or use a Konica remote battery pack (sold separately).

\* Do not touch or otherwise dirty the lenses. If the lenses get dirty, use a blower or brush to remove the dirt and then wipe lightly with a soft cloth. When camera is not in use, attach the lens cap.

\* Use a soft brush or a blower to clean away dirt on the surface of the mirror of inside the film compartment, and take care not to touch the mirror or shutter directly.

\* A UV or skylight filter may be attached to the front of the lens and left on to protect the lens from damage.



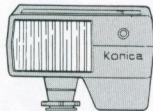
### When your Camera is not in Use

\* When your camera is not in use, take out the batteries and keep it in a place free from dust, moisture and drafts. When the camera is not in use, make sure that the lens cap is attached to the lens.

\* Use film while it is fresh. For storage, keep film in a refrigerator and take it out on the day before use.

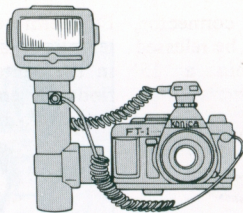
\* Naphthalene (mothballs) and formalin used in adhesives are harmful to cameras. Keep these chemicals away from your camera.

## Accessories



### Konica X-24 Auto Electronic Flash

The X-24 is a flat-type electronic flash unit powered by four AA alkaline or Ni-Cd rechargeable batteries two automatic modes and one manual mode may be selected. When the X-24 is fitted to a Konica FT-1 and the charging is completed, the shutter speed and aperture are automatically set. The data on the ASA film speed dial is automatically fed from the camera to the flash. The flash angle is designed to cover the picture width of a 35 mm wide-angle lens. The use of a Wide-angle Adapter makes it possible to cover the area of a 28 mm wide-angle lens.

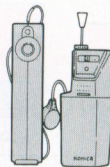


### Konica X-36 Auto Electronic Flash

The X-36 uses six AA alkaline or Ni-Cd rechargeable batteries. It is a powerful grip-type electronic flash unit. Like the X-24, it has the two automatic and one manual mode. When it is fitted to a Konica FT-1 and charging is completed, the X-36 will automatically set the shutter speed and aperture.

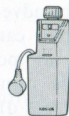
The flash interval is about 0.6 sec with AA alkaline batteries, about 0.4 sec with Ni-Cd rechargeable batteries. Thus making it possible to shoot flash pictures in succession. The use of a remote control facilitates bounced flash photography.

## Precautions for Use



### Radio Controller Set

This set is made up of a receiver, which is attached to the camera, and a transmitter, which is carried by the photographer. This wireless remote control unit makes it possible to operate the camera from as far away as 230 feet.



### Interval Timer

This device allows photographs to be taken repeatedly at fixed intervals of time. When it is mounted on the camera and the switch is turned on, the shutter is repeatedly tripped at the preset time intervals.



### Left Hand Release Switch

This unique device attaches to the accessory terminal of the Konica FT-1 allowing you to release the shutter with your left hand while focusing with your right hand.



### Cable Switch

When this switch is connected to the terminal of the camera, it is possible to trip the shutter by operating the hand-held switch. This switch is useful for closeups, telephoto shots.



### Remote Control Switch

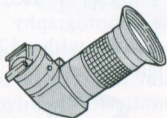
With a remote control switch fitted to the acces-

sory terminal connector, the shutter may be released anywhere within a 15' radius of the camera.



### Close-up Lens 55φ

Just screw this lens on to the front of a normal lens for AE close-up photographing. The close-up lens focal range is from 18" to 108".



### Angle-Magnifier

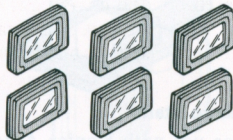
This accessory makes it possible to look into the viewfinder from above the camera it comes in handy when pictures are to be taken at a low angle.

Furthermore, when the lever is rotated, the image in the center of the viewfinder is enlarged twofold for fine focusing.



### Eyecup 2

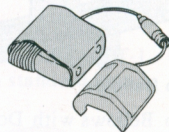
This large, soft rubber eyecup shields the exposure meter from extraneous light, aids concentration. Eyecup folds down for eyeglass wearers.



### Eyesight Correction Lens 2

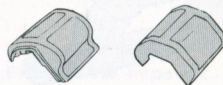
Corrects viewfinder optics to prescription requirements; vastly aids viewing/focusing comfort, accuracy. +1, +2, and +3

dioppter lenses for farsighted persons; -1, -2, and -3 for nearsighted persons.



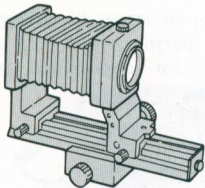
### Remote Battery Pack 2

The remote battery pack is used to keep batteries warm in cold weather. It is kept next to the photographer's body and attached to the camera via a 1.5m cord.



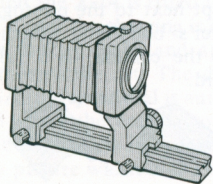
### Power Grip Battery Case

Available for either AA or AAA batteries.



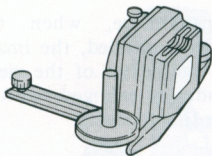
### Auto Bellows

Auto Bellows with Double Cable Switch. Allows magnification to 3.6x with standard lens. Double cable switch system allows automatic aperture control.



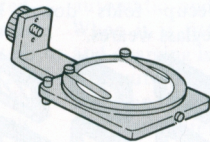
### Standard Bellows 3

For precision close-ups with manual aperture control. Magnifies up 3.6x with standard lens.



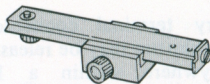
### Slide Copier 2

Attaches to Auto Bellows or Standard Bellows 3, allows same-size or cropped duplicates of standard 24 x 36mm or smaller transparencies.



### Macro Stand

For use with Konica Auto Bellows: positions subject absolutely parallel to camera and lens. Rotating (75mm diameter) specimen stage has clamps to secure subject in desired position.



### Focusing Rail Assembly

Allows Standard Bellows 3 to be used with Macro Stand.



### Reverse Adapter

Permits reversing all 55mm thread lenses on the Auto Bellows and Standard Bellows 3.

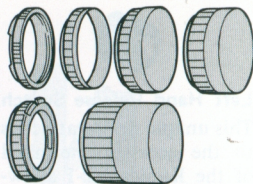
### 57mm f/1.2 Bellows Adapter

This adapter is used for reverse photography and slide copying with a 57mm f/1.2 lens.



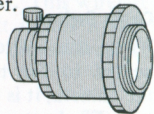
### Slide Copier Adapter

This adapter is required for reverse photography with slide copier and used together with a reverse adapter.



### Extension Ring 3

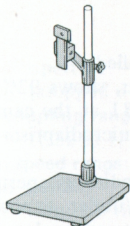
For close-up/macro photography. Consists of camera base ring, lens base ring, extension rings of 8, 16 and 24mm with reverse lens adapter.



### Microscope Adapter 2

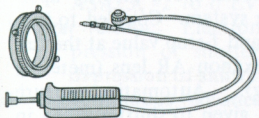
Uses optical system of microscope in place of camera lens; unlimited magnification capability. May be used with or without microscope ocular. Mounting clamp fits standard 25mm-diameter microscope ocular tubes.





### Copy Stand 2

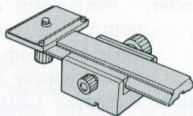
The copy stand is quite handy in copying illustrations and documents 10-5/8" × 13-3/4" or smaller in format.



### Auto Ring 2 Double Cable Switch

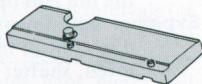
Focusing by Standard Bellows 3 may easily be done with the aperture opening lever of the Auto Ring 2. Used with the Double Cable Switch, the

Auto Ring will serve as a semi automatic aperture mechanism.



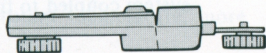
### Focusing Rail

For use with Standard Bellows 3 and macro stand or for close-up photographing with extension rings or close-up lens.



### Tripod Adapter

This adapter is required for copying illustrations with Copy Stand 2. (prearrange sale)

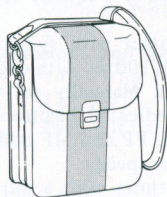


### Bracket

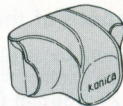
For Radio Controller or Interval Timer.



**Design Case** This smartly designed case in two tone brown / beige simulated suede, provides superb flexibility for use as a shoulder case or belt case.

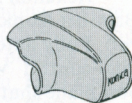


**Carrying Bag** This functional bag holds the Konica FT-1 camera plus standard lens. Konica X-24 Auto flash, accessory, lenses and several roll of film.

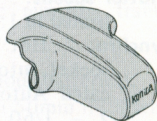


### Eveready Case

For Konica FT-1 body with standard lens.



### Type M2



### Type L2

### Front Cover Type M2

For 15, 24, 28, 35, 57, 85, 100mm, zoom 35-70mm.

### Front Cover Type L2


For 135, 200mm, zoom 45-100, 70-150mm.

## Konica Hexanon Interchangeable Lenses



# KONICA CORPORATION

25-20 Brooklyn-Queens Expressway Woodside, N.Y. 11377, U.S.A.  
3400 E, 70th Street, Long Beach, CA 90805, U.S.A.

 **KONISHIROKU**