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Konica FS-1



INSTRUCTIONS

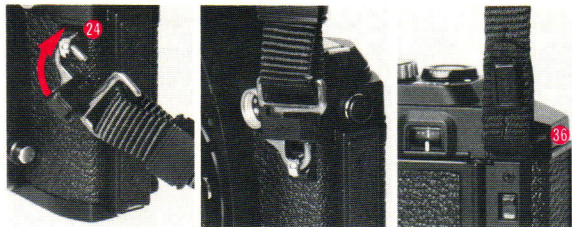
Thank you for your purchase of the Konica FS-1. The Konica FS-1 is a lightweight, compact, Shutter speed Priority (SP) Through-The-Lens (TTL) Automatic Exposure (AE) Single Lens Reflex (SLR) camera. It is the world's first, highly sophisticated 35mm camera with auto film loading, autostart, autoadvance, autoexposure and autoflash systems. The Central Processing Unit (CPU) is the "brain" of the Konica FS-1 camera and has the largest capacity and most functions of any CPU used in a camera to date providing the user with a most versatile and highly reliable system.

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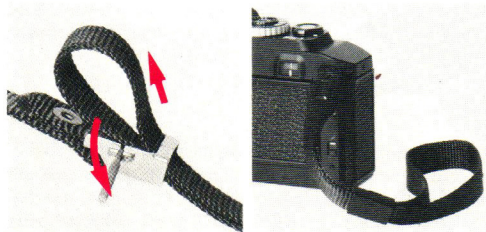
Use of the Strap

The strap for the Konica FS-1 is constructed of wide, very durable nylon which can be used either as an adjustable neck strap or functional hand strap.



To Use as Neck Strap

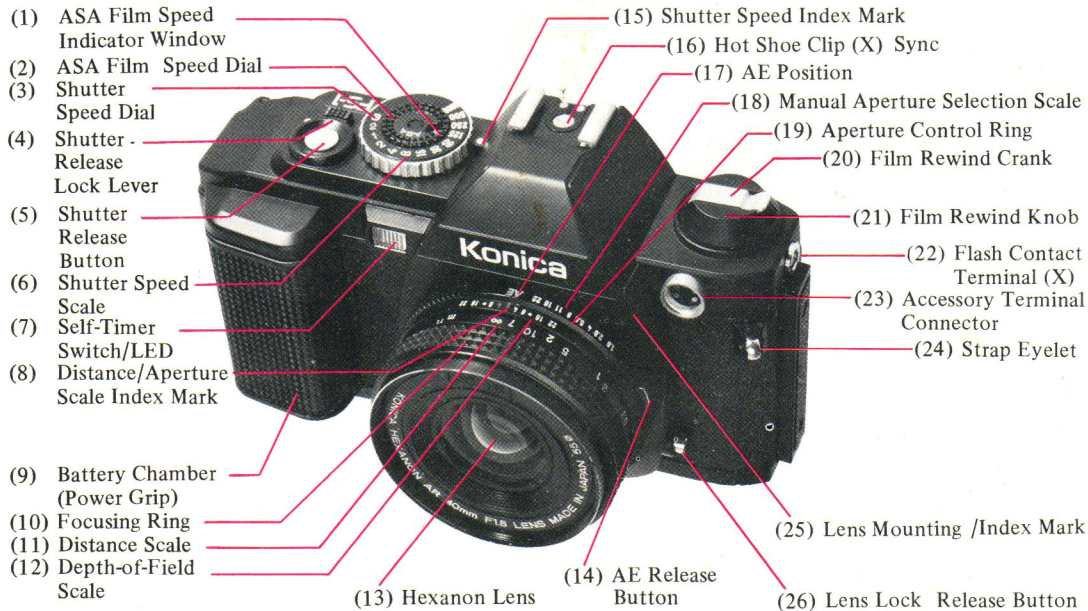
- 1) Open the lock at the tip of the suspension ring.
- 2) Insert the lock through the Strap Eyelet (24) on the front of the camera body and close it. Make sure that the side bearing a Konica mark faces outside.
- 3) Insert the other end of the strap through the eyelet (36) on the back of the camera body and fasten the drum-shaped button into the long cut of the strap.
- 4) The length of the neck strap can be adjusted by flipping up the lever at the mid point of the strap.

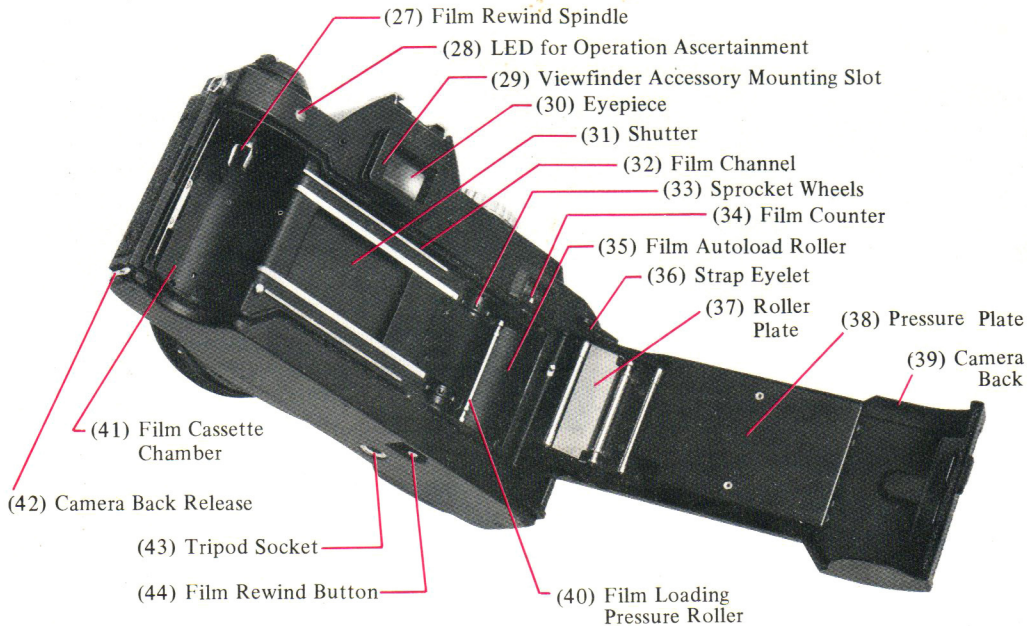


To Use as a Hand Strap

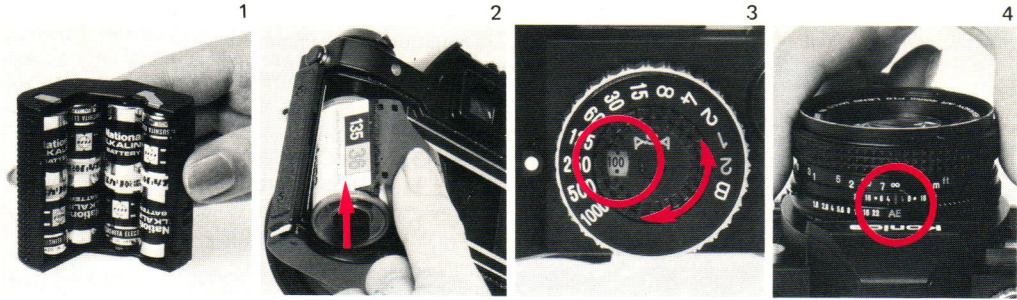
- 1) The shorter strap fitted to the back is for use as a hand strap. Hold the base of the metal connector with finger tips.
- 2) Insert the hand strap about 3 cm (1.2 in.), and push down the stopper pin outward.
- 3) Pull out the straps and separate them. Detach the longer one from the camera.
- 4) The adjustment ring fitted to the hand strap may be used in tightening the wrist with the strap or preventing light from straying into the eyepiece.

Nomenclature of Parts

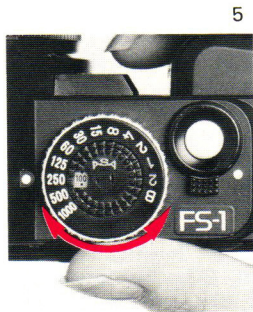




Operating Instructions



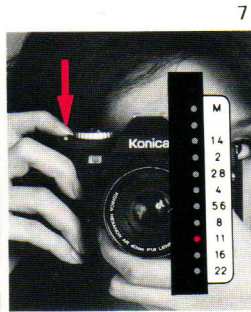
1. Insert batteries. (P. 9)
2. Load film. (P. 10)
3. Set film speed (ASA). (P. 14)
4. Set lens to AE position. (P. 14)



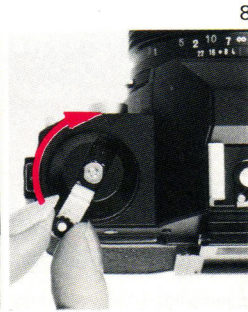
5. Select shutter speed.
(P. 14)



6. Focus the lens and
frame the subject.
(P. 17)

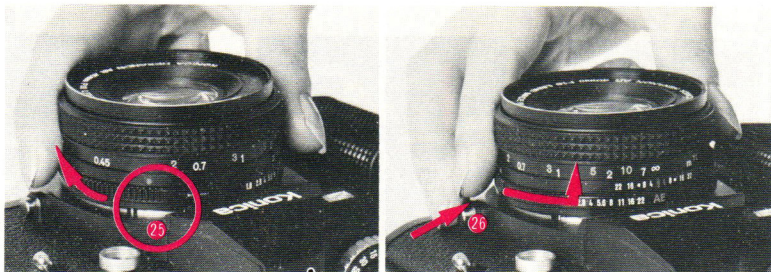


7. Slightly depress the
shutter release but-
ton to view the cor-
rect exposure and
release the shutter.
(P. 15)



8. Rewind the film
after it is completely
exposed. (P. 18)

Mounting and Dismounting of Lens



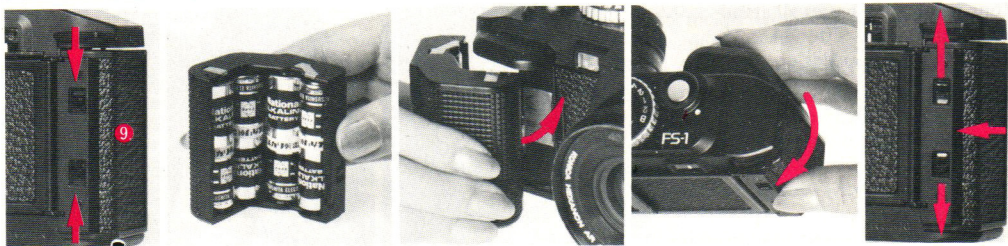
To attach the lens, align the red dot of the lens with the Lens Mounting Index Mark (25) (red dot) of the camera body and lightly sink the lens into the camera body. Hold the lens and turn it clockwise until it stops with a clicking sound.

To remove the lens, hold the base of the lens and turn it counterclockwise, while the Lens Lock Release Button (26) is kept depressed. Remove the lens when the red dot of the lens comes in line with the red dot on the camera body.

- When the lens is removed from the camera body the front and rear caps should be placed on the lens to prevent accumulation of dust or scratching of lens elements. The body cap should also be placed on the camera body to prevent damage to internal camera parts. Internal camera parts should not be touched under any circumstances.

Inserting Batteries

- *Nickel cadmium batteries for recharging are not usable.*



1) Remove the Battery Chamber (9), while the two lock knobs located at the back of the battery chamber are pulled inward.

2) Use four AA Alkaline batteries available from your photo dealer and load the battery chamber. Be sure to follow the “+” and “-” signs as shown on the diagram inside the battery chamber.

3) Attach the battery chamber to the Konica FS-1 body by first inserting the guide claw (in orange color) to the body and sliding the lock knobs apart, with the guide claw depressed, until the green safety mark is seen.

- Take out the batteries if you do not intend to use the model for a prolonged period of time.

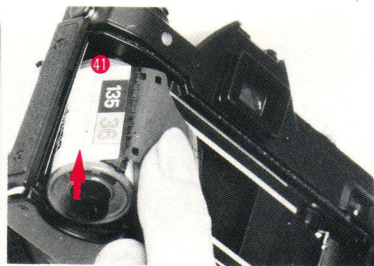
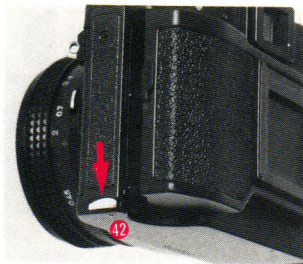
Battery Check

Slightly depress the shutter release button while looking through the view finder. The aperture indicator LED on the left-hand side should be on indicating good batteries.

Should the LED at the intermediate point between M and f/1.4 and the f/22 LED alternately blink you should replace the batteries. See page 20 Low Battery Power Warning.

Film Loading – Autoload System

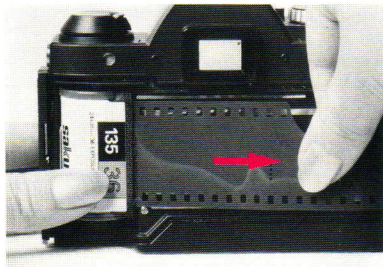
Your Konica FS-1 uses all standard 35mm 12-, 20-, 24-, 36-exposure film cassettes.



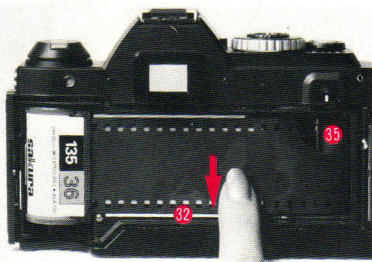
The Konica FS-1's autoload system is so designed that once the film is set to a prescribed position and the back cover closed, the film will be automatically transported by one frame. Film loading has been somewhat troublesome in the past, but your Konica FS-1 enables you to do it safely and surely.

1) Release the Lock Claw (42) of the back cover to open the back cover.
Do not forcibly try to open the back cover further when it has stopped.

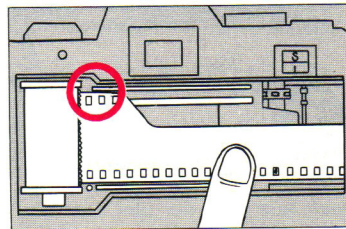
2) Insert the 35mm film cassette into the Film Cassette Chamber (41) from the cutout lower section.



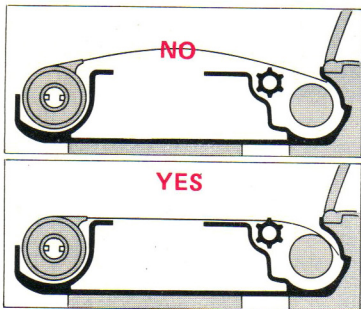
3) While lightly holding down the film cassette, slowly put on the film.



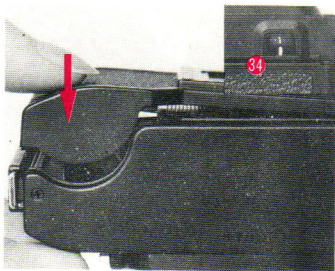
4) While lightly holding down the film cassette, pull out the film and place it on to the Film Loading Roller (35). Place the film leader on to the lower Film Channel (32).



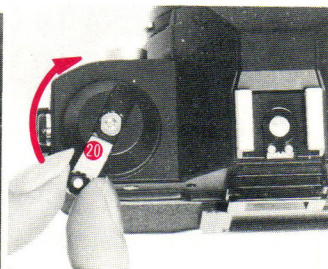
For films with longer leaders, pull out the film until the first two or three perforations on the upper portion of the film appear.



Make sure that the film does not warp and that the film outlet of the cassette is not lifted out.



5) Snap down the back cover, and it will be closed without fail. At the same time, the autoload system will be put into operation, automatically winding up the film until the film frame number "1" appears in the Counter (34). You can ascertain the auto-loading with a revolution of the film rewind knob.

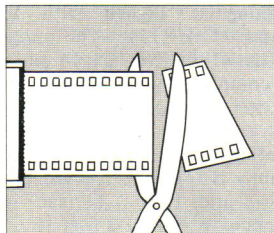


6) Flip up the Film Rewind Crank (20), and slowly turn it in the arrow-marked direction 360 degrees to eliminate the film slack in the cassette.

If the auto-loading has properly been conducted, the perforations come in gear with the sprockets and a change in the pressure on the finger may be felt. Adapt yourself to this pressure change and make it a practice to take pictures after this ascertainment at all times.

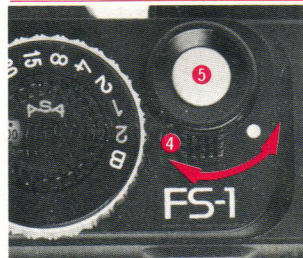


Insert the end portion of the film box into the film memo holder located on the back cover to remind you of the film type in the camera.



Should you wish to load a film cassette with a torn leader simply cut the leader at a right angle to the film and follow the previous loading instructions.

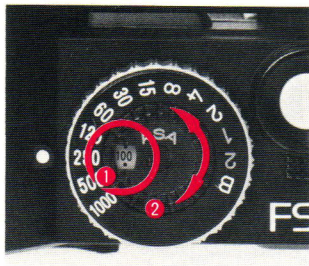
Shutter Release Lock Lever



Move the Shutter Release Lock Lever (4) around the Shutter Release Button (5) till the white dot visible, and the shutter will be released. When the lever is alignment with the red dot, the shutter will be locked and the safety device to prevent an unnecessary depression of the shutter release button will be activated.

- Be sure to move the lever until a click is felt at the on/off position.

AE (Automatic Exposure) Photography



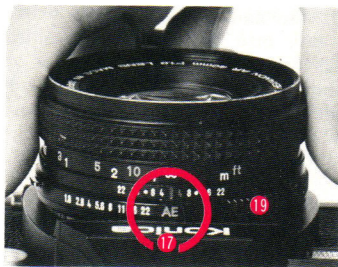
Setting of Film Speed (ASA)

Turn the ASA Film Speed Dial (2) on top of the shutter speed dial with a finger tip so that the speed of the film loaded in your camera may appear in the ASA Film Speed Indicator Window (1).

Use the chart below to set film speeds not shown on the shutter dial.

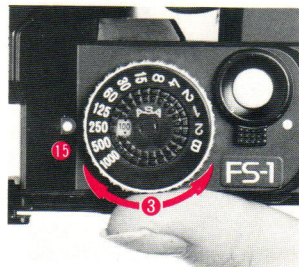
Actual ASA Dial Intermediate Settings

25	•	•	50	•	•	100	•	•	200	•	•	400	•	•	800	•	•	1600	•	•	3200
(32)	(40)	(64)	(80)	(125)	(160)	(250)	(320)	(500)	(640)	(1000)	(1250)	(2000)	(2500)								



Setting Lens to AE Position

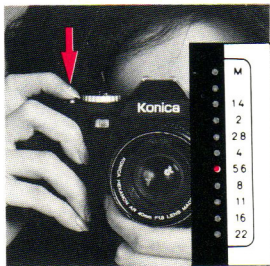
For AE (Automatic Exposure) photography turn the lens Aperture Control Ring (19) to the AE Position (17). A safety lock will prevent accidental change.



Setting Shutter Speed

Turn the Shutter Speed Dial (3) until the desired shutter speed reading is aligned with the Index Mark (15). The unique design of the Konica FS-1 allows a complete revolution of the shutter speed dial.

As a general rule the proper shutter speed for AE photography is 1/125–1/250 sec. outdoors and 1/30–1/60 sec. indoors with ASA 100 film.



Ascertain the Correct Exposure
Slightly depress the shutter release button and the LED aperture indicator located on the left hand side in the viewfinder will light up.

If the LED lights up at any aperture reading between $f/22$ and the maximum aperture of the lens in use (for example $f/2$ when using the Konica 40mm $f/1.8$ Lens) the lens will be stopped down during the time of exposure to the indicated aperture for correctly exposed photographs. In actuality, the lens may stop down to any one of an infinite number of apertures between those shown in the viewfinder.

– When priority is to be given to the selection of a lens aperture delightly depress the shutter button while look through the viewfinder and turn the shutter speed dial until the LED of the desired aperture lights up.

Single-Frame Shooting – A single frame may be exposed by depressing the shutter release button. Detach the finger from the button at once.

Continuous Shooting – When you keep your finger on the shutter release button, you will shoot pictures in continuous sequence at the rate of 1.5 f.p.s. The Konica FS-1 metering system determines and adjusts for correct exposure at every frame in continuous shooting mode.

Ascertainment of Film Transport – You will see the Film Rewind Knob (21) turning, assuring you of proper film transport.

Holding the Camera



To take sharp, clear pictures, it is important to accustom yourself to the proper grip of your camera so that it will not be jarred when a picture is taken.

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 knob or button.
- For picture-taking at speeds slower than 1/30 sec., it is advisable to use a Konica Cable Switch (optionally available) and a tripod to prevent the camera from movement.

Focusing



Micro Diaprism

Split Image

Ground Glass



Out of Focus



In Focus

When looking through the viewfinder you will see three different focusing areas. A split image is provided at the center of the field of view. Around the split image is a micro-diaprism and remaining portion is a ground glass screen.

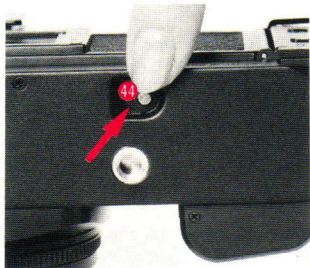
Split Image – turn the focusing ring until the upper half of the subject is in line with the lower half.

Micro-Diaprism – turn the focusing ring until the image stops flickering and is clearly visible.

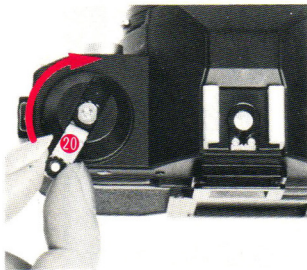
Ground Glass – should be used for focusing of close-up or telephoto lenses.

Film Rewind

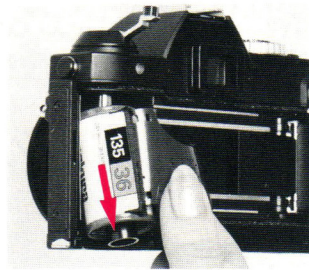
- When the whole film has been exposed, the LED for the ascertainment of film transport will be instantly lit and the auto-winding system will simultaneously stop operating.
- If you keep shooting pictures beyond the pre-



1) Press in the Film Rewind Button (44) at the base of your Konica FS-1 camera.



2) Flip up the Film Rewind Crank (20) and turn it in the direction of the arrow mark, and the film will be rewound on the film cassette spindle. Here, the film counter will move in reverse, but this reverse count does not correspond to the film length rewind.

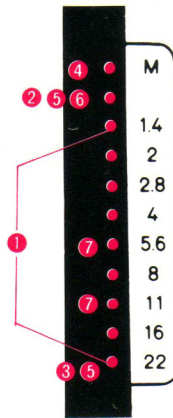


3) When there is a sudden drop in the pressure on the fingers, the film rewind is completed. Open the camera back, remove the exposed 35mm cassette.

LED Information in Viewfinder

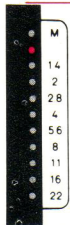
The viewfinder of the Konica FS-1 contains a bank of LED's which are so arranged as to instantly provide you with all the data needed to assure perfectly exposed photographs.

- ① **Indication of the correct aperture** – The LED for one of the aperture values from f/1.4 to f/22 will be turned on, indicating the correct aperture for AE photography.
- ② **Warning against an under-exposure** – The LED for f/1.0 (intermediate point between M and f/1.4) will blink.
- ③ **Warning against an over-exposure** – The LED for f/22 will blink.
- ④ **Manual indication** – The LED for M will blink and the LED for the correct aperture between f/1.4 and f/22 will be turned on indicating the correct exposure (with the use of a Hexanon AR lens).
- ⑤ **Warning against low battery power** – The LEDs for f/1.0 and f/22 will alternately blink.
- ⑥ **Indication for stopped-down metering** – The LED of f/1.0 is the fixed-point mark, and the correct exposure will be assured when the mark is turned on. The LED at M will also blink.
- ⑦ **Indication for completed recharge of the electronic flash unit** – When the recharge of the Konica X-24 electronic flash is completed, the LED either for f/5.6 or f/11 will blink.



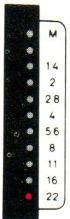
- In AE photography under fluorescent lights, there are times at which two LEDs indicating correct aperture will be seen instead of one. This is caused the flickering of the fluorescent light. The Konica FS-1 will however select the correct aperture at the instant the picture is taken.

Under- and Over-Exposure Warnings



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. Any picture taken in this situation will be under-exposed. Select a slower shutter speed.

Blinking



Over-exposure warning — When the shutter release button is depressed, the LED at f/22 will blink, indicating an over-exposure. Select a faster shutter speed.

Blinking

Low Battery Power Warning



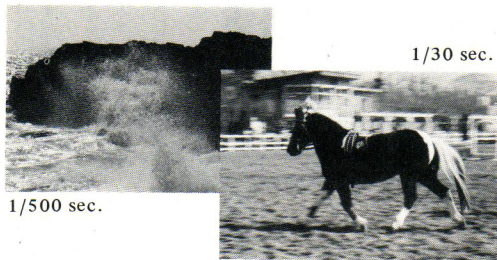
Blinking

In case new AA alkaline batteries are in use, 15 rolls of 36-exposure film may be taken before a warning appears for a drop in voltage. When the AA batteries become weak, the under/over exposure warning LED will light in an alternating sequence, signaling “low battery power”. You might as well replace the batteries with new ones as soon as possible. The batteries may be exchanged during the course of the shooting of one roll of film.

There is still enough power to shoot approximately five more rolls of film, after which all system will automatically turn off until replacement batteries are installed.

- When the batteries are to be exchanged with new ones during the course of the shooting of one roll of film, put the lens cap, set the reloaded battery compartment to the camera body and depress the shutter release button. One frame will not be exposed, preventing the overlapping of pictures.
- Avoid continuous shooting when the warning LED for the battery voltage is turned on.
- During low battery power condition, the correct exposure LED will light, and the under and over exposure warning LED's will cycle (pulse) at a faster rate.
- For stopped-down metering with a warning for a drop in voltage, the correct exposure will be assured the LED of f/1.0 (in between M and f/1.4) will stop blink and will be turned on.

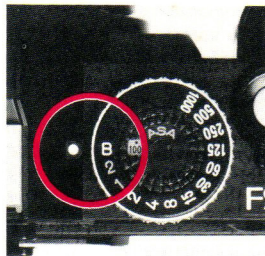
Selection of Shutter Speed



The shutter speed range of your Konica FS-1 is from B, 2, 1 to 1/1000 second. Intermediate shutter speeds should not be set.

How to Select the Proper Shutter Speed — your Konica FS-1 uses a shutter priority exposure system allowing you, not the camera, to select the most suitable shutter speed. Recommended shutter speeds for outdoor photography are 1/125 to 1/250. sec, and 1/30 to 1/60 sec, for indoor shooting. For a moving subject, determine to shutter speed in the following manner: 1) If you want a moving subject to look still in a finished picture, select a fast speed from a range of 1/250 to 1/1000 second. 2) If you want to stress the movement of amoving subject, select a slow

B (Bulb) Exposure

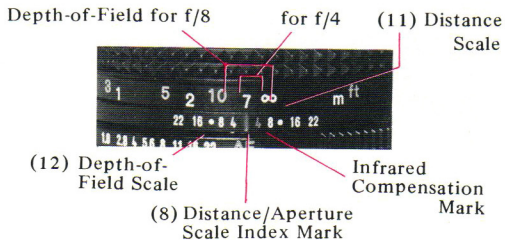


speed from a range of 1/30 to 1/60 second.

The B (bulb) exposure setting is used for an exposure of more than three seconds. Set the shutter speed dial to B and depress the shutter release button. The shutter will remain open as long as the shutter release button is depressed.

- For a time (B) exposure, it is advisable to use a tripod and a Konica Cable Switch or Remote Control Switch which are available from your photo dealer.
- Fit the cable switch into the accessory terminal connector. The accessory terminal connector is also the attachment point for a Radio Control Set, Interval Timer and Left Hand Release Switch.

Aperture vs Depth-of-Field



When the lens is focused on a subject, there is a range around the subject which will be clearly delineated in a finished picture. This range is known as a depth-of-field.

1) The larger the aperture value (i.e., the smaller the lens aperture), 2) the longer the camera-to-subject distance, 3) the shorter the focal length, the greater the depth-of-field. The depth-of-field is shallow for the area in front of the focal point and deep for the area behind. The actual depth may be known by checking the Depth-of-Field Scale (12).

Reading of Depth-of-Field Scale

For a Depth-of-Field Scale (12), identical aperture readings are calibrated in parallel on both sides of



for $f/2$



for $f/16$

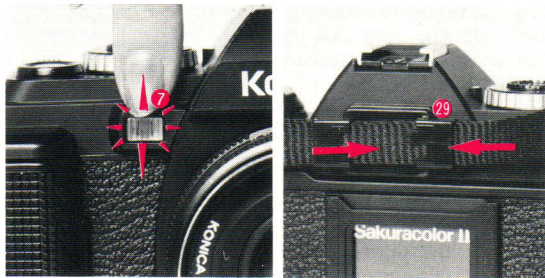
the Distance Index Mark (8). The range which is sandwiched between a pair of identical aperture readings is a depth-of-field in which the image will be clearly delineated in a finished picture.

For example, when the camera-to-subject distance is 7 m (23 ft) with a 40 mm standard lens, the depth-of-field will be about 5 ~ 15 m (16 ~ 50 ft) for $f/4$ and about 3.5 m (11 ft) to infinity for $f/8$.

Infrared Compensation Mark

The red-colored "4" on the depth-of-field scale is an infrared compensation mark, which is used for a compensation of the focal point with the use of infrared film. *For example*, if the camera-to-subject distance is infinity, the infinity mark will be brought in line with the infrared compensation mark.

Photographing with Self-Timer



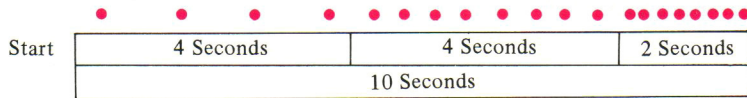
Push down the self-timer LED (7) and the self-timer will be put into operation. The LED will blink at a continuously faster rate advising the subject as to when the shutter will be released. Self-timer duration is approximately 10 seconds.

To obtain better exposures when using the self-timer —

When the self-timer is in used or when a picture is to be taken with the eye detached from the Eyepiece (30), shield the eyepiece with the adjusting ring of the handstrap to prevent light from inversely straying into the eyepiece. The correct exposure may not be assured, if light inversely strays into the eyepiece.

- 1) Divide the adjusting ring of the strap into two. It will be readily detachable if you try to bend the ring at the center.
- 2) Insert each part into the Viewfinder Accessory Mounting Slot (29) and cover the viewfinder windows with the camera strap.

- Set shutter speed anywhere from 1 to 1/1000 second for taking self-timer exposures.



Electronic Flash Photography

At night or in a dimly lit room where AE photography is unsuitable, the use of the Konica X-24 Auto electronic flash is recommended. The X-24 flash was especially designed for use with the Konica FS-1 camera to eliminate complicated exposure calculations.



- With flash photography using the self-timer, check that the charge is complete before depressing the self-timer switch.

To Use the Konica X-24 Auto Flash

1) Use four AA Alkaline or nickel cadmium rechargeable batteries to power the Konica X-24 Auto flash.

2) Attach the X-24 Auto flash to the Hot Shoe Clip (16) at the top of the Konica FS-1 camera and set the F scale to distance green (f/5.6) or close range red (f/11).

3) When the X-24 Auto flash is charged – ready to shoot;

- the shutter speed will automatically change to 1/100th second flash sync speed.
- the aperture will automatically change to f/5.6 or f/11 as preselected on the X-24 scale.
- the LED in the viewfinder at f/5.6 or f/11 will pulse indicating that the flash is ready.
- the ASA information will be automatically transferred from the camera to the X-24.

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. The range for automatic flash is:

	ASA 25	64	80-100	160-200	400	
	MIN. DIST. (ft.)					
	MAXIMUM DISTANCE (ft.)					
f/11	2.3	3.3	4.9	6.9	9.8	14.1
f/5.6	2.3	6.9	9.8	14.1	19.7	28.2

Use of Other Types of Electronic Flash Units

An electronic flash with a hot shoe, such as the Konica X-28, X-20 and X-14, 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 X Flash Contact Terminal (22) taphole of the camera body.

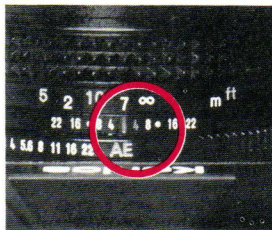
1) set the shutter speed to 1/60 sec. for all types electronic flash except Konica X-24 Auto flash.
2) set the lens aperture manually per the instructions of the electronic flash unit.

3) when using automatic flash units such as the Konica X-28, set the lens aperture as indicated by the auto flash.

4) for manual flash units, determine the correct aperture to set by dividing the guide number by the camera to subject distance. *Example:* Using ASA 100 film with a Konica X-20 flash, you will get a guide number (GN) of 64 (ft.), divided by the distance (16 feet) results in a lens aperture of f/4 ($64 \div 16 = 4$).

- Synchronized with M, FP and MF bulbs at 1/30 sec. and slower shutter speeds.

Manual Photography

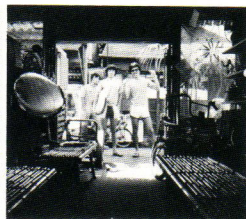


To manually set the exposure with your Konica FS-1, merely set the lens to any aperture other than the AE position. A red LED will continuously blink at the "M" mark in the viewfinder to signify manual operation.

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

- Be sure to reset your lens to AE position.

Exposure Compensation for Backlight Photography



When used in normal AE settings your Konica FS-1 will give you correctly exposed photographs. However, in a situation where the subject is in front of a bright background or when you wish to produce special effects the exposure may be compensated to achieve the desired results.

In a situation where the subject is dark against a bright background scene

The AE responds to the overall bright background and in some cases the subject may appear dark (under-exposed). For such situations:

1) You may change the ASA scale by half to compensate for the backlight situation and shoot in AE mode.

Example: ASA of film 100, change ASA scale to 50, or 2) You may note the aperture LED in the viewfinder and manually set the aperture ring on the lens under by one stop. *For example:* meter reading AE=f/11, set lens manually to f/8.

In a situation where the subject is bright and background dark, reverse the above instructions

1) Double the ASA number. *Example:* 100 to 200 or 2) You may read the aperture in the viewfinder and set the lens manually to the next f stop. *Example:* meter reading f/5.6 – set lens manually to f/8.

• After special exposure photography, be sure to reset the AE position, and/or reset the ASA speed dial to the correct ASA of the film in use.

Stopped-down Metering Method

The stopped-down Metering Method should be used under the following conditions.

1) When a manual pre-set aperture Hexanon ARP lens or a manual pre-set ARM lens in used.

2) When you are using a Hexanon AR automatic lens with a manual bellows or extension ring set.

3) When you are using a brand of lens other than Hexanon via a lens mount adapter.



Exposure Determination

For stopped-down metering, look through the finder and turn the aperture control ring or the shutter speed dial, while the shutter release button is lightly depressed.

When the LED positioned between the "M" and "f/1.4" mark glows, you have set the correct exposure. The LED will blink at M when pictures are to be taken in a stopped-down metering system.

- Stopped-down metering tends to be affected by the rays inversely straying into the eyepiece. Prevent these rays with an eyecup or some other device.
- Stopped-down metering is also used in microscopic photography. Adjust the shutter speed according to the brightness of the light source.

Precautions for Use

- At cold places where the temperature is below 0°C (32°F), the batteries will run down. Warm your camera before you use it.
- When the batteries are to be exchanged, use AA alkaline batteries. All the four batteries must be replaced.
- When you know you will use the camera at a cold place, make sure that you will have spare batteries and keep them warm with your body or

in some other means to prevent a drop in the battery performance.

- Do not touch or otherwise dirty the lenses. If the lenses do get dirty, use a blower or brush to remove the dirt and then wipe lightly with a soft cloth. When you do not intend to use the lenses, attach the lens cap and store.
- Use a soft brush or a blower to clean away dirt on the surface of the mirror or inside the film compartment, and take care not to touch the mirror or shutter directly.
- If you leave the camera on a beach in 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 mechanisms may be adversely affected. Avoid, therefore, such locations.
- 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.
- Get into the habit of inspecting your camera before using it.

Specifications of the Konica FS-1

Type: 35mm focal plane shutter TTL-AE single-lens reflex camera with built-in auto-winder

Film: 35mm film in cassette

Picture size: 24 × 36mm

Standard lenses: Konica Hexanon AR 40mm f/1.8
Konica Hexanon AR 50mm f/1.7
Konica Hexanon AR 50mm f/1.4
Konica Hexanon AR 57mm f/1.2

Mount: Bayonet-type Konica mount II

Aperture mechanism: AE-type fully automatic aperture with smallest aperture at f/22.

Shutter: Digital-controlled, vertically travel electronic metal focal plane shutter

Shutter speeds: B, 2, 1 ~ 1/1000 sec.

Synchro: Hot shoe and X contact with synchro socket, automatically set to 1/100 sec. with exclusive Konica X-24 Automatic Electronic Flash. Manually set to 2 ~ 1/60 sec. with electronic flash other than X-24. Synchronized with M, FP and MF bulbs at 1/30 sec. and slower shutter speeds.

Self-timer: Digital-controlled electronic self-timer (use of 1 ~ 1/1000 sec.)

Finder: Pentaprism eye-level finder, magnification X0.67 (at infinity with 40mm standard lens), field-of-view ratio 90%, real-image alignment system with split-image, micro-diaphragm and ground glass

View finder information: LED indicator for aperture in use from f1.4 ~ f22 advises correct exposure in AE photography.

LED at f/1.0 (intermediate point between M and f/1.4) will blink indicating underexposure. LED at f/22 will blink indicating over exposure.

LED at M will blink indicating lens placed on manual apertures.

LEDs at f/1.0 and f/22 will alternately blink indicating low battery voltage.

LED at f/1.0 will light for stopped-down metering.

LED at f/5.6 or f/11 will blink indicating X-24 electronic flash at full charge.

Exposure adjustment: TTL metering at full apertures, shutter-speed priority control system with gallium-arsenide-phosphorus compound photocell.

- Automatic aperture control system with priority given to shutter speed selection for AE photography reading of correct aperture value coupled to film speed, shutter speed and f-value at full lens opening.

- Manual aperture lens (stopped-down metering): System of alignment with fixed point coupled to film speed, shutter speed and lens aperture

AE coupling range: With ASA 100 film and f/1.4 lens EV0 (at 2 sec. with f/1.4) ~ EV19 (at 1/1000 sec. with f/22). With f/1.8 lens, EV 0.7 (at 2 sec. with f/1.8) to EV19.

Film speed range: ASA 25 ~ 3200

Film loading: Konica Autoload system

Film wind: Autoadvance with motor inside take-up roller

Film rewind: Crank type with film rewind button automatically returning to original position.

Film counter: Positive type. Resets to start with opening of back cover.

Batteries: Four 1.5V AA alkaline batteries

Others: Exclusive electronic flash Konica X-24 Auto-

matic Electronic Flash. Camera is automatically switched to electronic flash photography with mounting of X-24.

Dimensions and weight: 146 × 90 × 73mm, 700g (minus batteries) with 40mm standard lens, 146 × 90 × 46mm, 560g (minus batteries) body only.

- The descriptions in "Low Battery Power Warning" starting that continuous shooting may be done at a speed of 1.5 frames per second and that the use of new AA alkaline batteries makes it possible to expose 15 rolls of 36-exposure film until the appearance of a battery roundup signal is based on Konishiroku'su's own specifications.

- *The specifications and design are subject to change without notice.*

Accessories

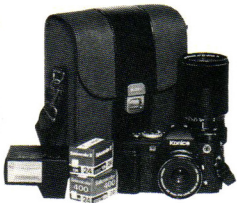
○ Designer Case

This smartly designed case in two tone brown/beige simulated suede, provides superb flexibility for use as a shoulder case or belt case. It is "designer styled" to match the Konica FS-1 future design.



○ Carrying Bag

"Designer styled" in two tone beige/brown simulated suede, this functional bag holds the Konica FS-1 camera plus standard lens, Konica X-24 Auto flash, accessory lenses and several rolls of film — supplied with wide shoulder strap.



○ Konica X-24 Automatic Electronic Flash

When mounted stop the Konica FS-1 camera, you only set the automatic distance control (green f/5.6, or red f/11). When the X-24 is turned on and reaches 95% of flash power, it automatically signals the Konica FS-1 camera to change shutter speed to a fast 1/100th second, to change the lens aperture to f/5.6 or f/11 and displays a blinking LED signal in the viewfinder that the flash is ready.

The film speed (ASA) is automatically set into the X-24 flash by the FS-1 CPU. There are no cables or cords to connect.

Guide Number: 80 (ft.) with ASA 100 film.

Range for Automatic:

	ASA 25		64		80-100		160-200		400		
	MIN. DIST. (ft.)			MAXIMUM DISTANCE (ft.)							
f/11	2.3	3.3	4.9	6.9	9.8	14.1	19.7	28.2			
f/5.6	2.3	6.9	9.8	14.1	19.7	28.2					

○ Radio Control Set

This switch is made up of a receiver, which will be fitted to the camera, and a transmitter, which will be used at your side. The electric wave sent by the transmitter will be intercepted by the receiver, making it possible to operate the shutter with electric signals.



○ 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 pre-set time intervals.



○ Remote Battery Pack

As the battery case may be stored separately, it may be used even in a cold area by warming it in your pocket to prevent the lowering in battery performance (cord length 1.5m).



○ Left Hand Release Switch

This unique device attaches to the accessory terminal of the Konica FS-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 bulb exposure and also close-ups, telephoto shots, and also helps cancel out camera shake when using slow shutter speeds.

○ Remote Control Switch



Allows you to release the shutter of the Konica FS-1 from a distance of up to 15 feet.

○ **Eyesight Correction Lens 2**

Corrects viewfinder optics to prescription requirements; vastly aids viewing/focusing comfort, accuracy. +1, +2, and +3 diopter lenses for farsighted persons; -1, -2, and -3 for nearsighted persons.



○ **Eyecup 2**

Large, soft rubber eyecup shields meter, eye from extraneous light, aids concentration. Prevents metal-to-skin contact in cold weather. Eyecup folds down for eyeglass wearers.



○ **Angle-Magnifier**

This helpful accessory makes it possible to look into the viewfinder from above the camera and it comes in handy when pictures are to be taken at a low level such as in copying, close-ups and micro-photography. Furthermore, when the lever is rotated, the image in



the center of the viewfinder is enlarged two-fold for accurate close-ups, copying, telephoto photography and micro-photography.

○ **Close-up Lens**

This lens permits AE close-ups simply by screwing it onto the front of the lens and mounting it in place. This makes close-up photographs of plants and flowers as well as copies of documents and pictures easy work. This is a standard 40mm lens and it allows close-ups ranging from about 45cm (18 in.) down to 27cm (10.8 in.)

○ **Konica Filters**

It is advisable to use a UV or Skylight filter for the protection of your camera's lens.

○ **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.

○ **Focusing Rail Assembly**

Allows Standard Bellows 3 to be used with Macro Stand.

- **Auto Bellows 2**

Auto Bellows with Double Cable Switch. Allows magnification to 3.6X life size with standard lens. Double cable switch system allows automatic diaphragm operation. Includes built-in depth-of-field preview, tripod sockets for both U.S. and European sizes. Ideal for use with Slide Copier 2 and Macro Stand.

- **Standard Bellows 3**

For precision close-ups with manual diaphragm control. Magnifies to 3.6X life size with standard lens.

- **Slide Copier 2**

Attaches to Auto Bellows or Standard Bellows 3, allows same-size or cropped duplicates of standard 24 × 36mm or smaller transparencies. Accepts mounted slides or uncut strips, rolls. 18mm horizontal, 12mm vertical shift. Lens reversal ring and Slide Copier adapter required for lens reversal.

- **Macro Stand**

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

- **Reverse Adapter**

Permits reversing all 55mm-thread lenses without reversing front standard of Auto Bellows and Standard Bellows 3. Required for reverse mounting of lens with Slide Copier 2, 5mm depth.

- **Slide Copier Adapter**

This adapter is required for reverse photography with slide copier and used together with a reverse adapter. The Slide Copier Adapter is usable at the magnification factors of 1.5X to 4X.

- **57mm f/1.2 Bellows Adapter**

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

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'')
	21mm	f/4.0 - f/16	11/7	90°	0.2m (8.0'')	59mm (2.3'')	80mm (3.2'')
	24mm	f/2.8 - f/16	8/8	84°	0.25m (10.0'')	54mm (2.1'')	63mm (2.5'')
	28mm UC	f/1.8 - f/16	8/8	75°	0.18m (7.0'')	63mm (2.5'')	66mm (2.6'')
Wide	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/16	6/5	63°	0.3m (12.0'')	57mm (2.2'')	63mm (2.5'')
	40mm	f/1.8 - f/22	6/5	56°	0.45m (18.0'')	27mm (1.1'')	63mm (2.5'')
Standard	50mm	f/1.7 - f/16	6/5	46°	0.55m (22.0'')	40mm (1.6'')	63mm (2.5'')
	50mm	f/1.4 - f/22	7/6	46°	0.45m (18.0'')	45mm (1.8'')	63mm (2.5'')
	57mm	f/1.2 - f/16	7/6	42°	0.45m (18.0'')	50mm (2.0'')	72mm (2.8'')
	85mm	f/1.8 - f/16	6/5	28.5°	1m (40.0'')	67mm (2.6'')	65mm (2.6'')
Telephoto	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	f/6.3 - f/22	9/5	8°	4.5m (15.0')	146mm (5.8'')	65mm (2.6'')
	400mm UC	f/5.6 - f/45	9/5	6°	4m (13.0')	217mm (8.6'')	83mm (3.3'')
Ultra Telephoto	800mm*	f/8.0 - f/45	2/1	3°	20m (65.0')	775mm (31.0'')	134mm (5.3'')
	1000mm*	f/8.0 - f/22	7/6	2.5°	25m (82.0')	455mm (18.2'')	200mm (8.0'')
	35-70mm	f/3.5 - f/22	9/9	63-34°	0.35m (14.0'')	96.5mm (3.9'')	67mm (2.6'')
Zoom	45-100mm UC	f/3.5 - f/16	11/10	52-24°	0.35m (14.0'')	85mm (3.4'')	70mm (2.8'')
	80-200mm UC	f/4.0 - f/16	14/10	30-12°	0.7m (28.0'')	157mm (6.2'')	68mm (2.7'')
Macro	55mm	f/3.5 - f/22	4/3	43°	0.25m (10.0'')	60mm (2.4'')	64mm (2.5'')
	105mm	f/4.0 - f/22	5/3	23°	*	47mm (1.9'')	63mm (2.5'')
Other	Teleconverter AR2X		6/5	—	—	43.5mm (1.7'')	63mm (2.5'')

* All lenses fully automatic except as indicated.

* Depending on bellows extension length.

Weight	Filter	Lens Hood
395g (13.9 oz.)	Built-in	Built-in
215g (7.6 oz.)	55mm	Incl.
340g (12.0 oz.)	77mm	Incl.
280g (9.9 oz.)	55mm	Incl.
380g (13.4 oz.)	55mm	Incl.
175g (6.2 oz.)	55mm	Incl.
320g (11.3 oz.)	55mm	Incl.
240g (8.5 oz.)	55mm	Incl.
140g (4.9 oz.)	55mm	Avail.
210g (7.4 oz.)	55mm	Avail.
265g (9.3 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
1,600g (3.5 lbs.)	77mm	Built-in
5,600g (12.3 lbs.)	55mm	Built-in
8,500g (18.7 lbs.)	55mm	—
470g (16.6 oz.)	62mm	Incl.
570g (20.1 oz.)	55mm	Built-in
830g (29.3 oz.)	62mm	Built-in
290g (10.2 oz.)	55mm	Avail.
230g (8.1 oz.)	55mm	Avail.
230g (8.1 oz.)	—	—

Depth-of-Field Table (40mm f/1.8)

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

Dis- tances Aperture	2.0	3.0	5.0	10.0	∞
	f/1.8	1.97~2.03	2.92~3.08	4.77~5.25	9.08~11.13
f/2.8	1.95~2.05	2.88~3.13	4.66~5.40	8.67~11.83	61.62~∞
f/4	1.93~2.07	2.84~3.19	4.53~5.59	8.20~12.85	43.21~∞
f/5.6	1.91~2.10	2.79~3.27	4.37~5.86	7.66~14.52	30.94~∞
f/8	1.87~2.15	2.69~3.40	4.15~6.34	6.97~18.06	21.74~∞
f/11	1.83~2.21	2.60~3.58	3.90~7.05	6.26~26.09	15.88~∞
f/16	1.76~2.33	2.45~3.93	3.55~8.72	5.37~104.15	11.00~∞
f/22	1.69~2.49	2.30~4.46	3.22~12.26	4.60~∞	8.08~∞

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

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

Aper- ture	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~∞

