











GREEN CIRCLE FOR AUTOMATIC-DIAPHRAGM CONTROL

DIAPHRAGM-SETTING RING

LED (LIGHT-EMITTING DIODE)

FLASHES DURING SLOW EXPOSURES AND WHEN YOU DEPRESS BATTERY-TEST BUTTON ON BOTTOM OF CAMERA

DIAPHRAGM-SETTING-RING LOCK BUTTON--DEPRESS TO SELECT AUTOMATIC SETTING

SHUTTER-SPEED DIAL

COUNTER WINDOW

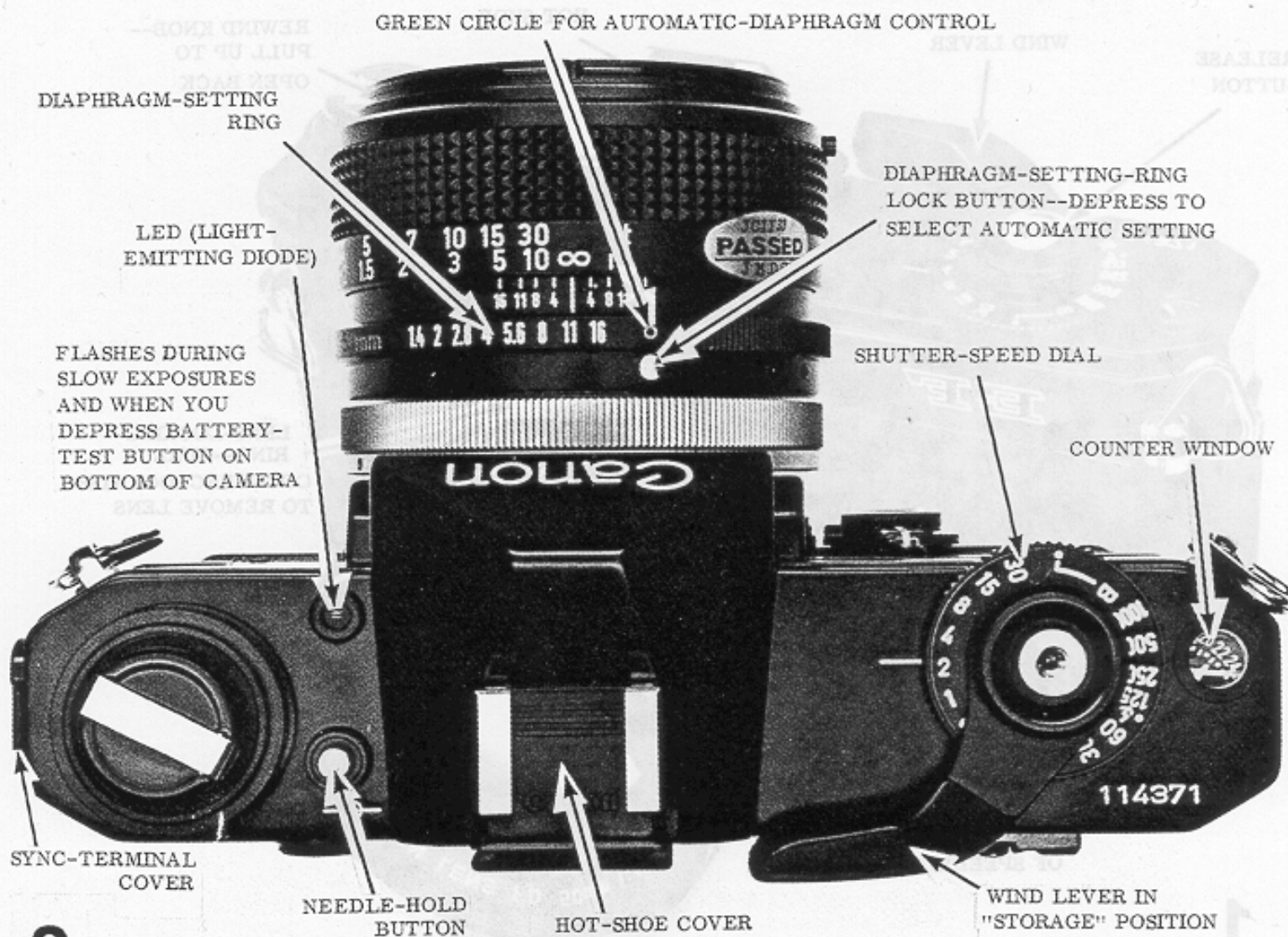
SYNC-TERMINAL COVER

NEEDLE-HOLD BUTTON

HOT-SHOE COVER

WIND LEVER IN "STORAGE" POSITION

2





Canon
E-F

FILM-SPEED KNOB -- LIFT AND TURN TO SET FILM SPEED

INTENTIONAL DOUBLE-
EXPOSURE BUTTON

NORMAL



CATS-NORMAL SELECTOR

撮影時以外はメイン
スイッチを OFF にして
ください。

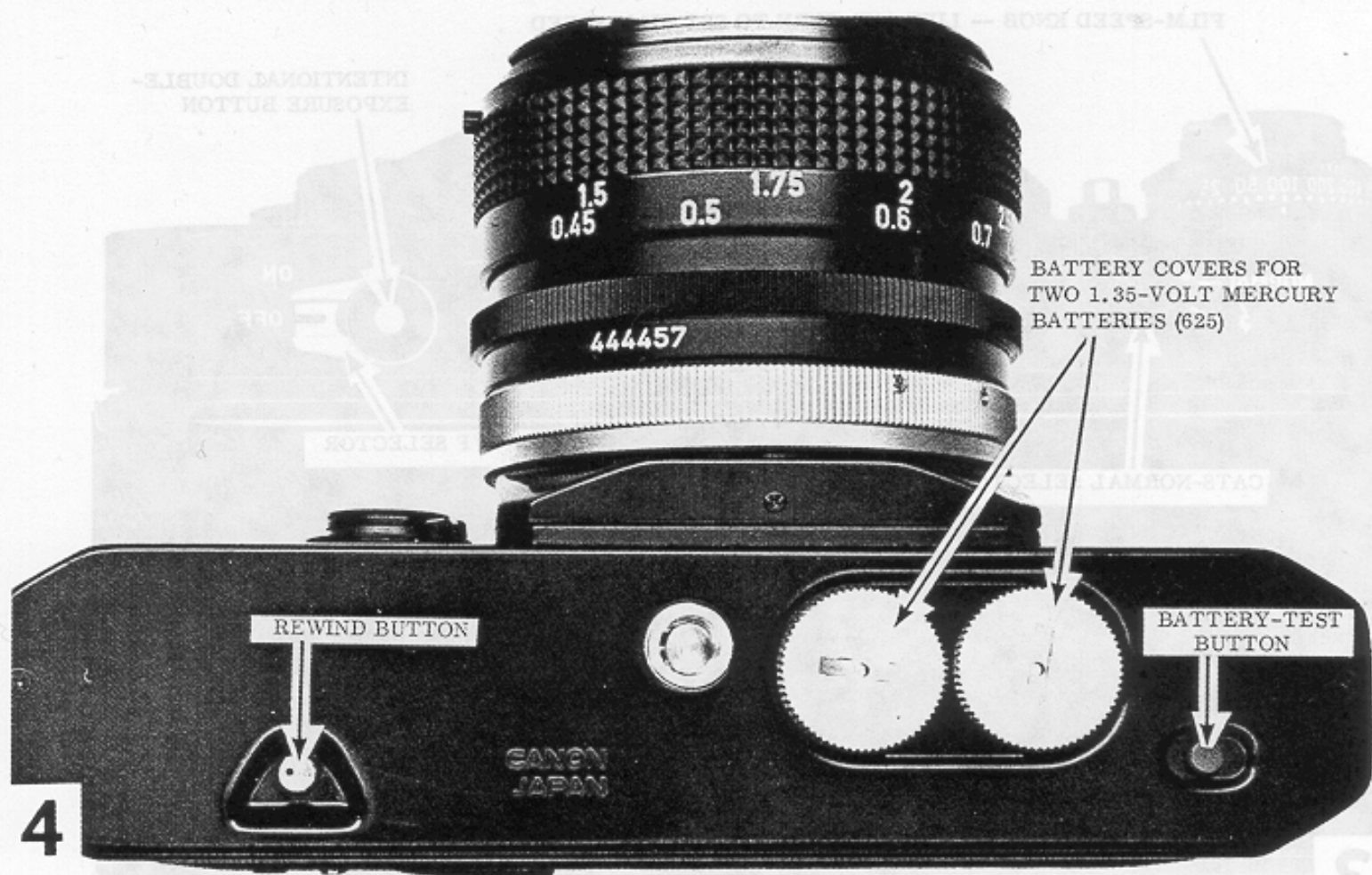
AFTER USING, TURN
THE CAMERA OFF.

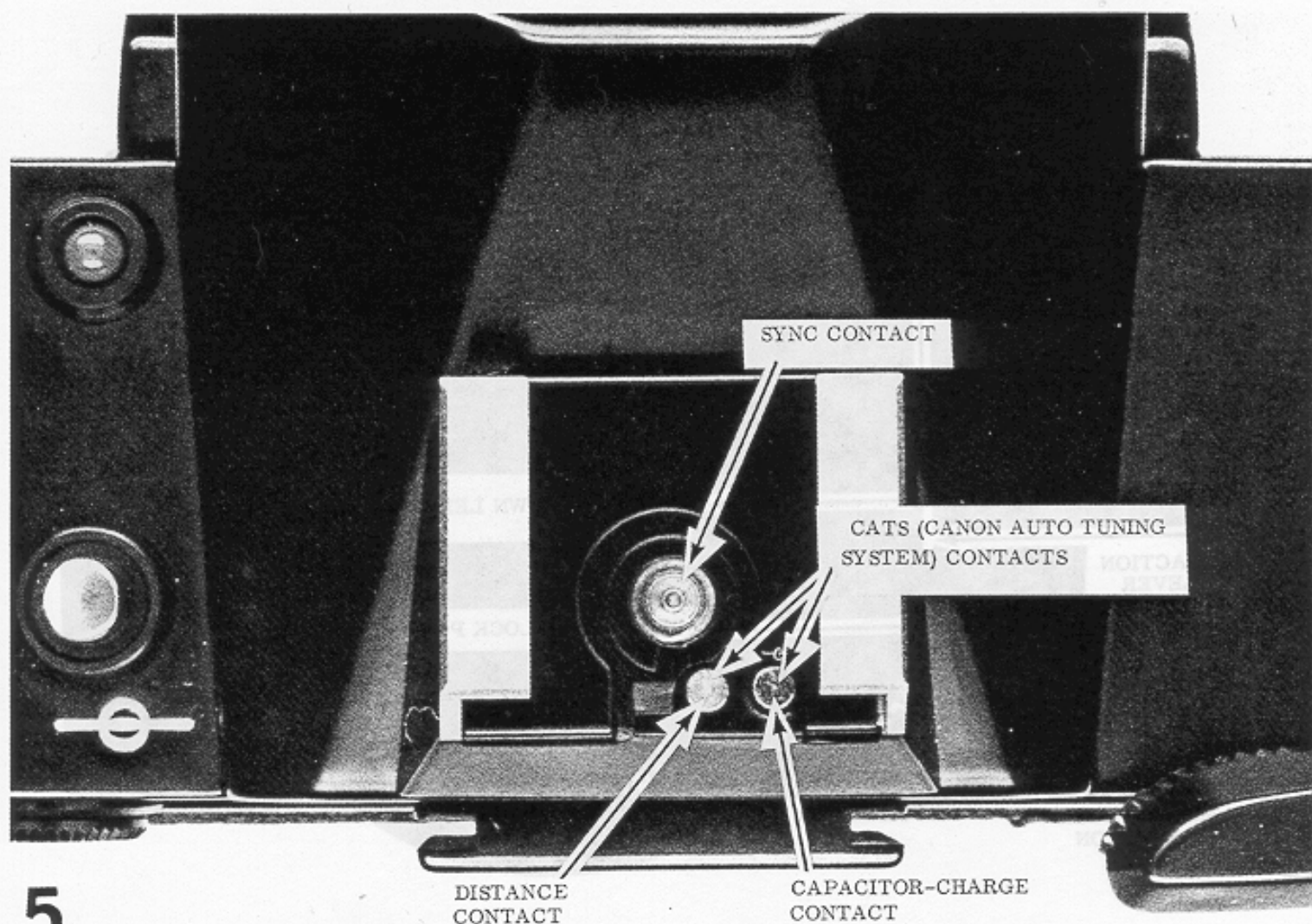
ON

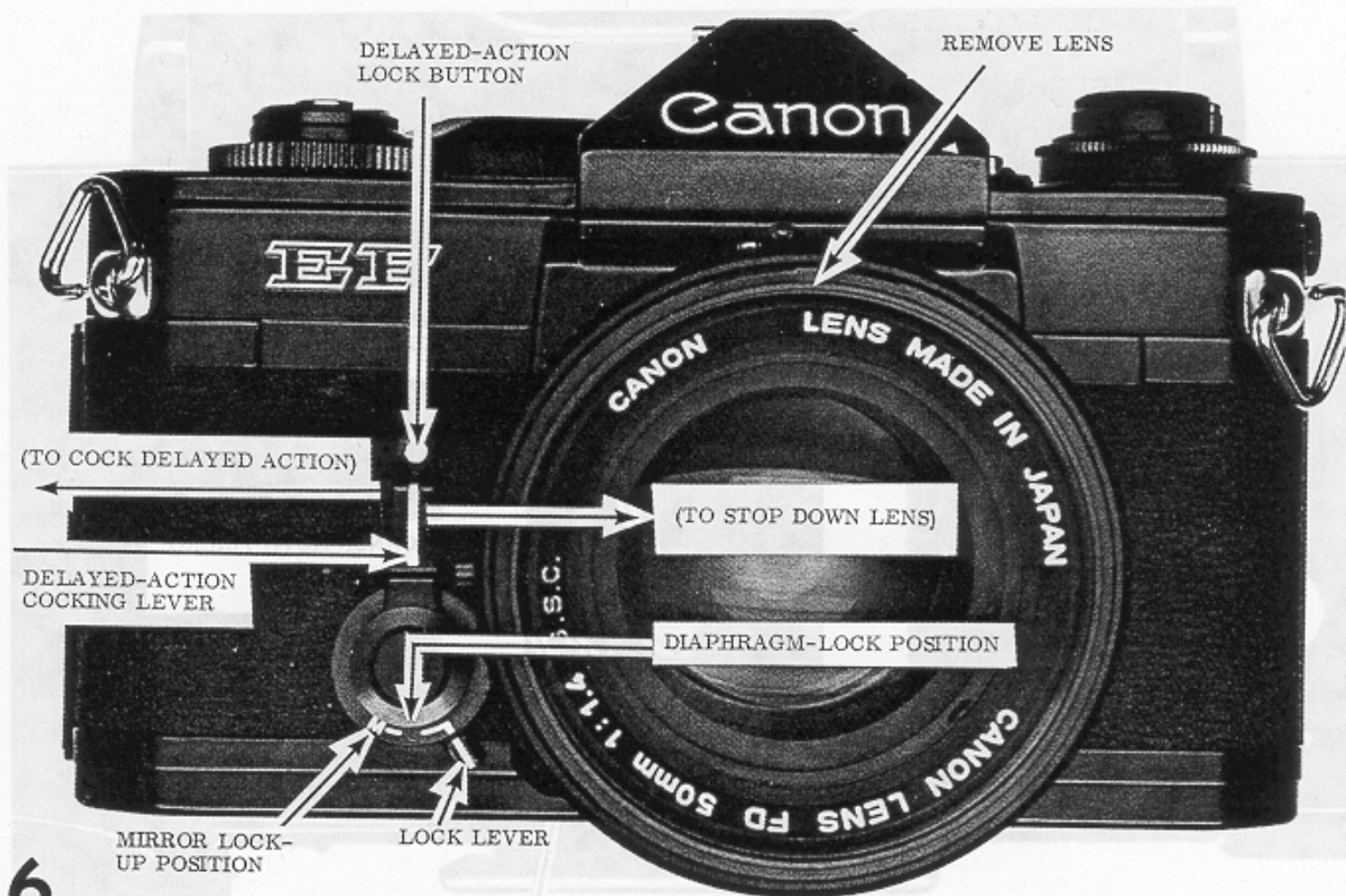
OFF

ON-OFF SELECTOR

3









TAB ON DIAPHRAGM-
COUPLING RING

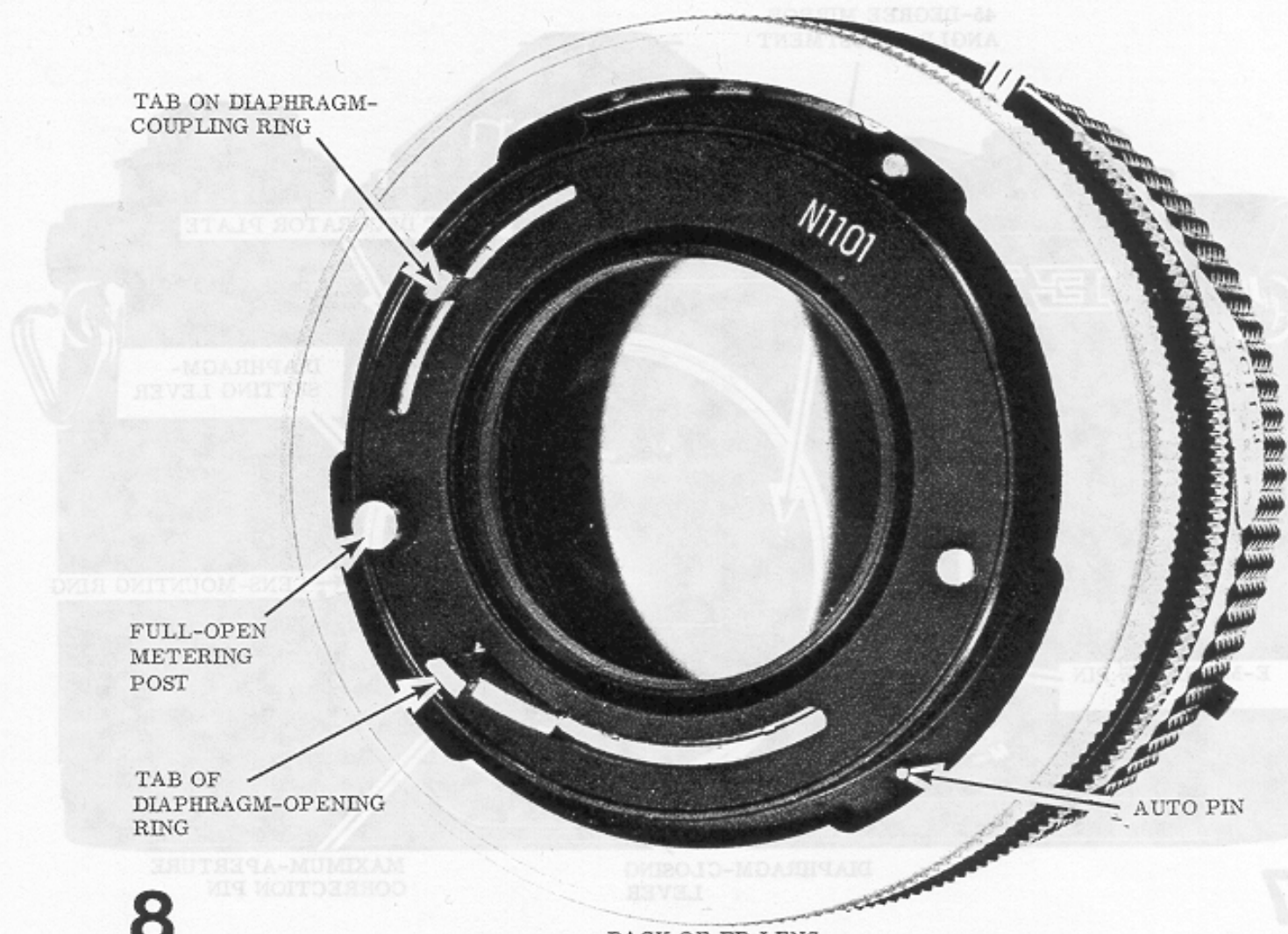
FULL-OPEN
METERING
POST

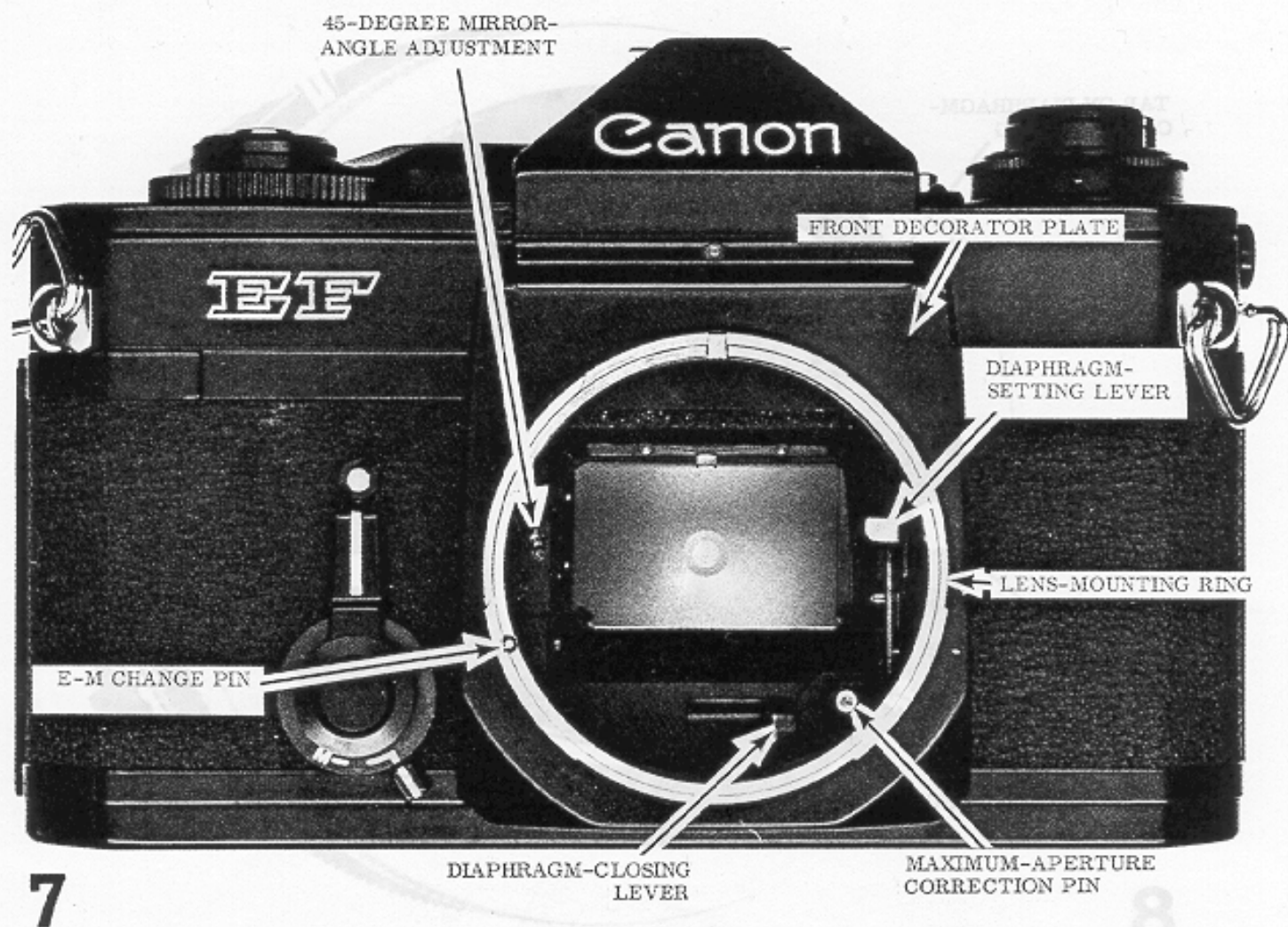
TAB OF
DIAPHRAGM-OPENING
RING

AUTO PIN

BACK OF FD LENS

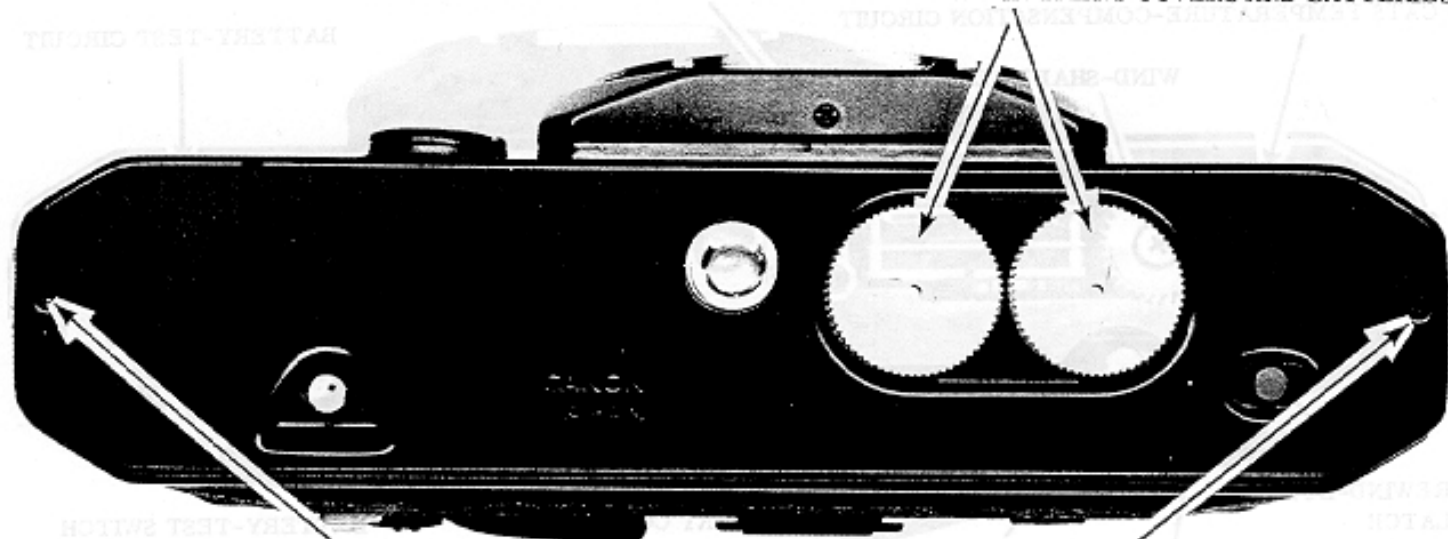
8





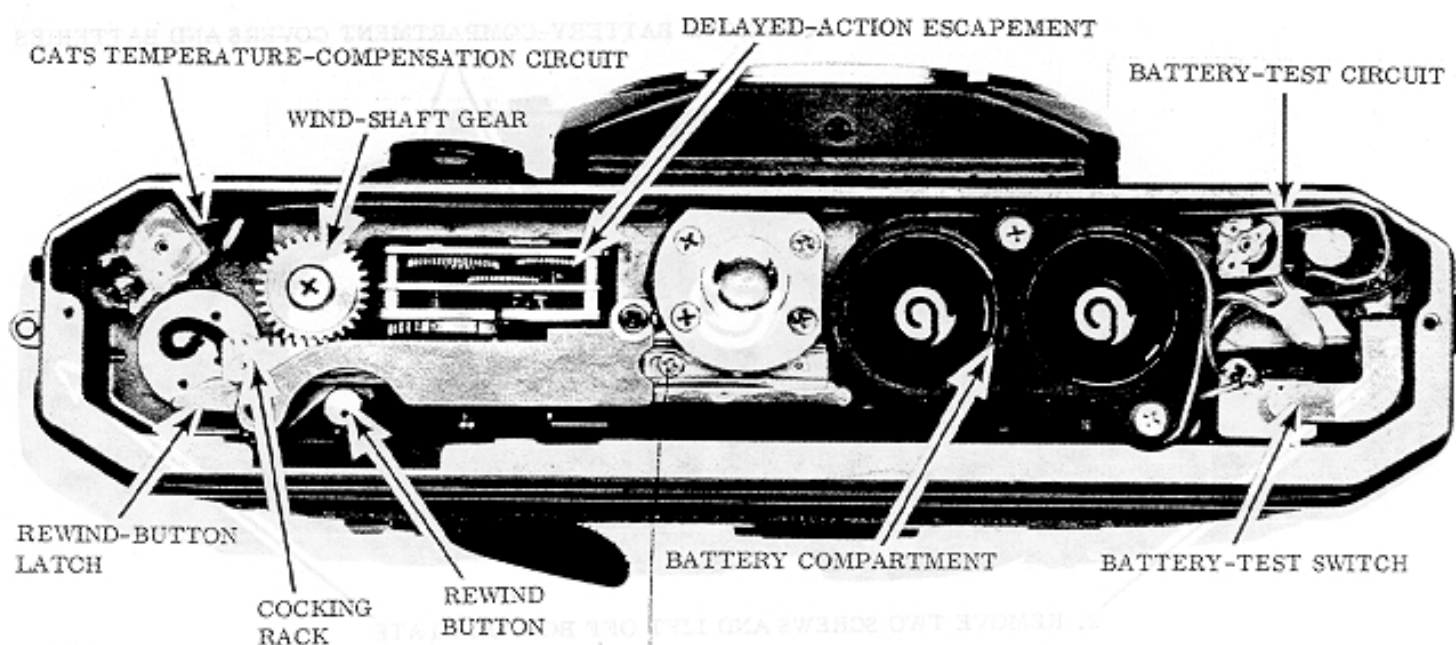
Check the flange-focal distance (42.14 mm) by measuring between the front surface of the lens-mounting ring and the film rails. To make an adjustment, first remove the screw at the bottom of the front decorator plate. Lift off the front decorator plate and remove the four screws holding the lens-mounting ring. You can now add or remove spacers to adjust the flange-focal distance and/or parallelism.

1. REMOVE BATTERY-COMPARTMENT COVERS AND BATTERIES



2. REMOVE TWO SCREWS AND LIFT OFF BOTTOM PLATE

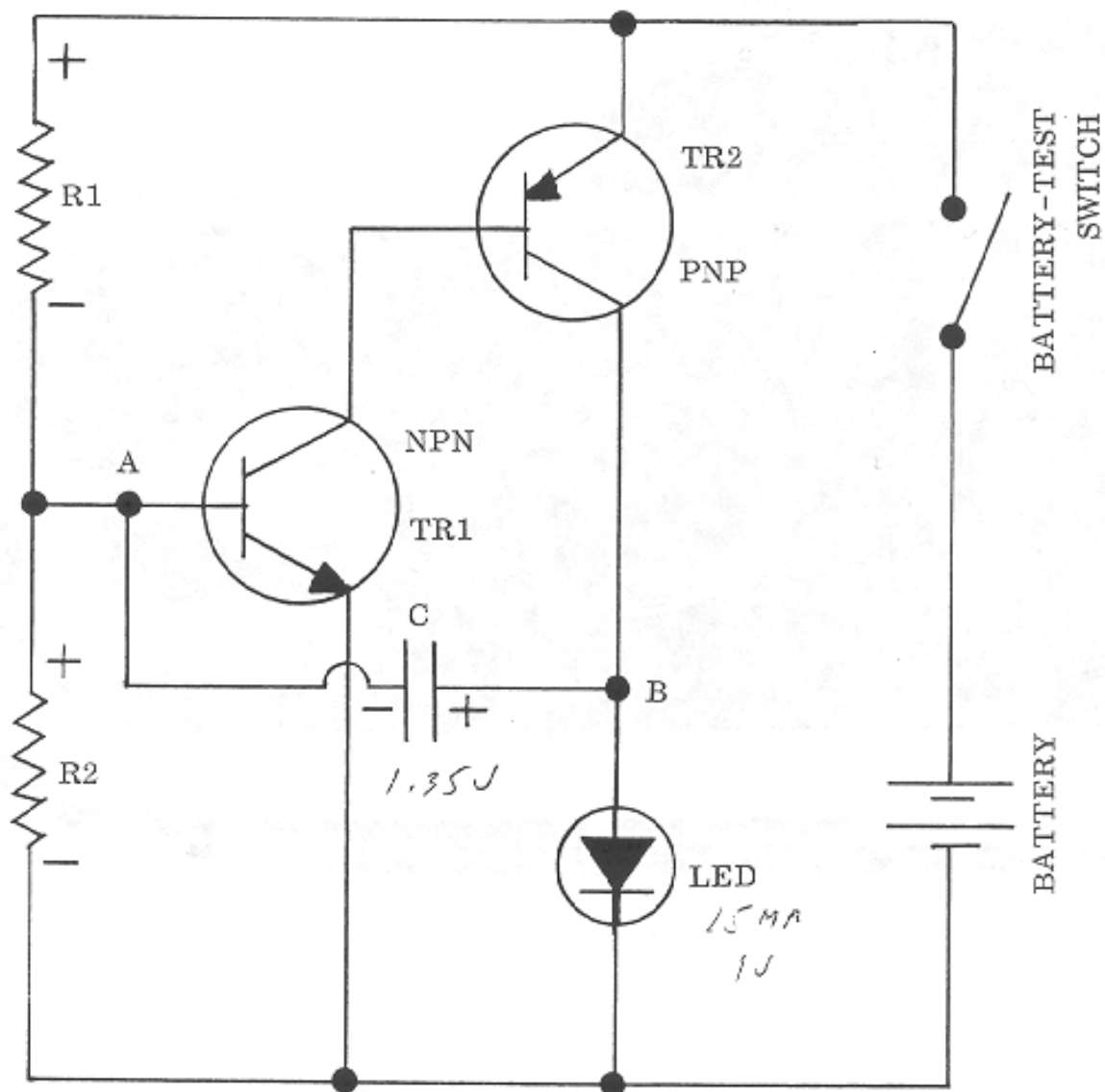
CAUTION: BATTERY-TEST BUTTON WILL BE LOOSE WHEN
YOU LIFT OFF BOTTOM PLATE



10

*adjustment for overtravel or undertravel
(cocking)*

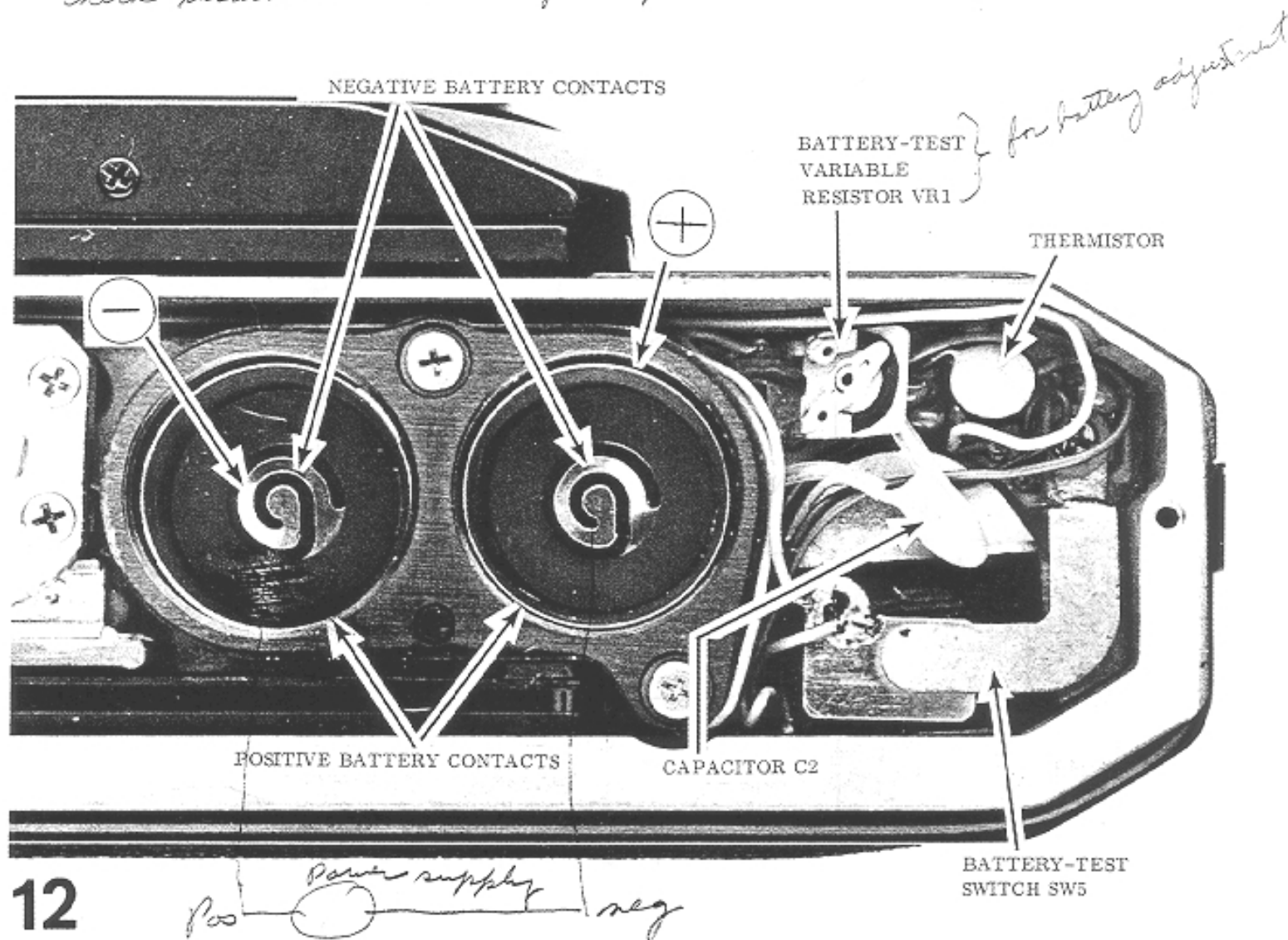
BASIC LED CIRCUIT



on-off Rates 8:1

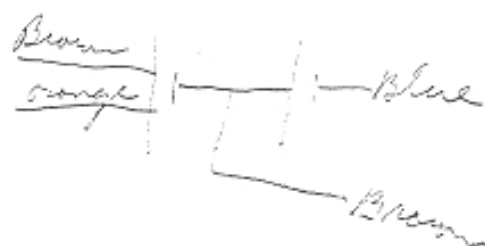
Current drawn - 1.9 MA

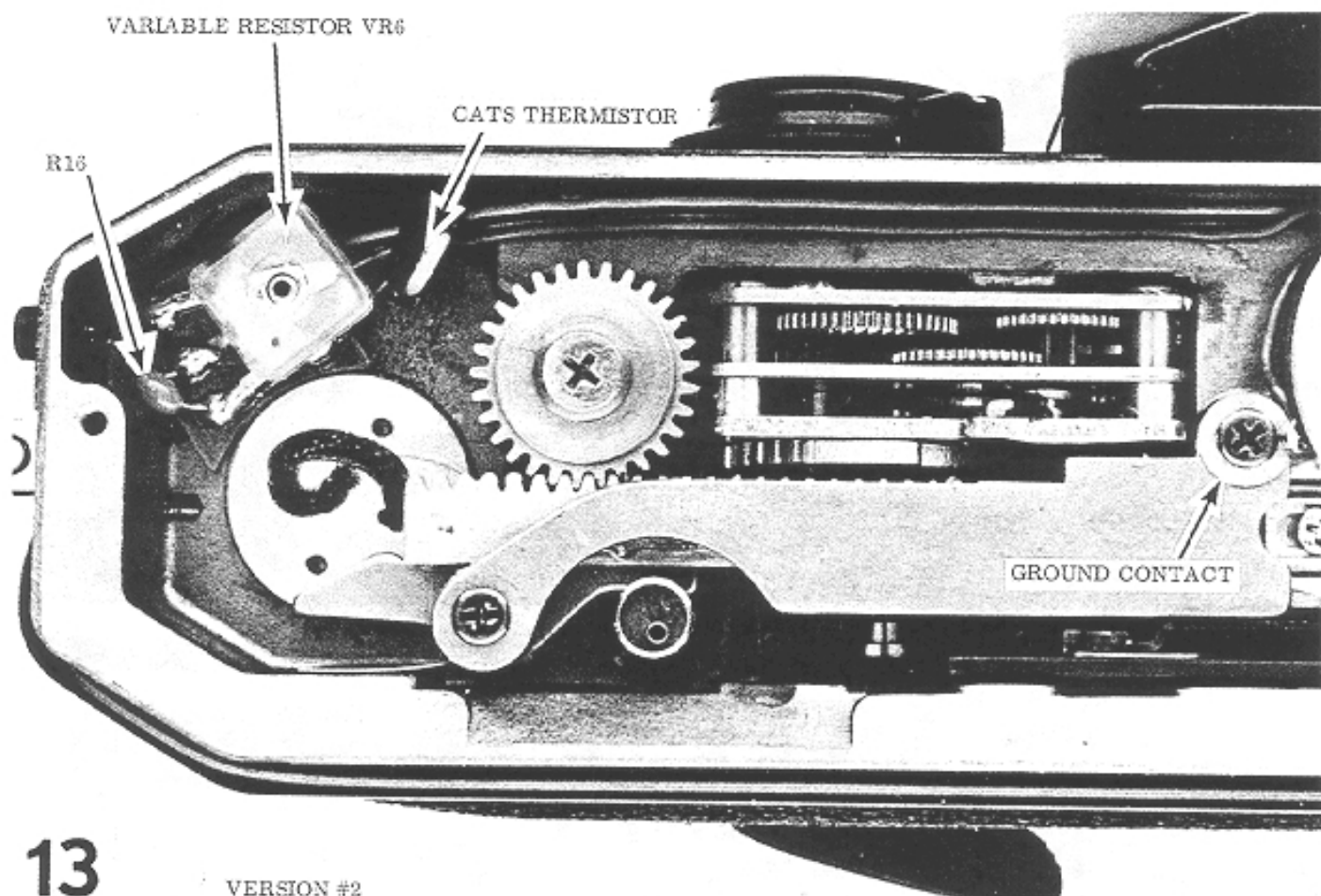
Check insulation on battery compartment



BATTERY-TEST-CIRCUIT ADJUSTMENT: Hook a DC power supply to the battery compartment as shown by the polarity indications. With the power supply set at 2.31 volts, the LED should operate when you close the battery-test switch; the LED should not operate at 2.26 volts. Make the adjustment with the battery-test variable resistor VR1.

If battery runs down fast = Take off battery holder & tape underside (maybe shorted)

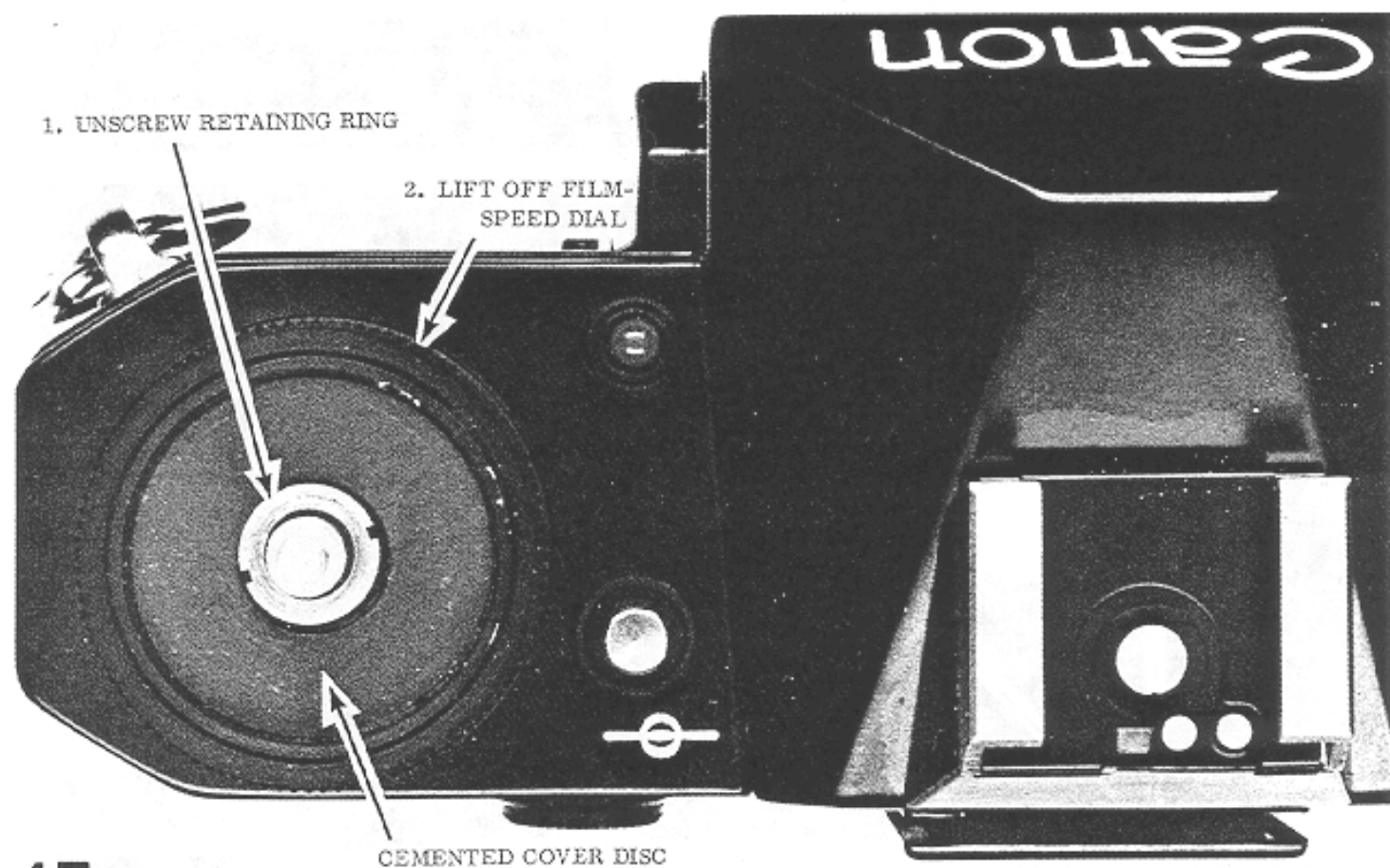


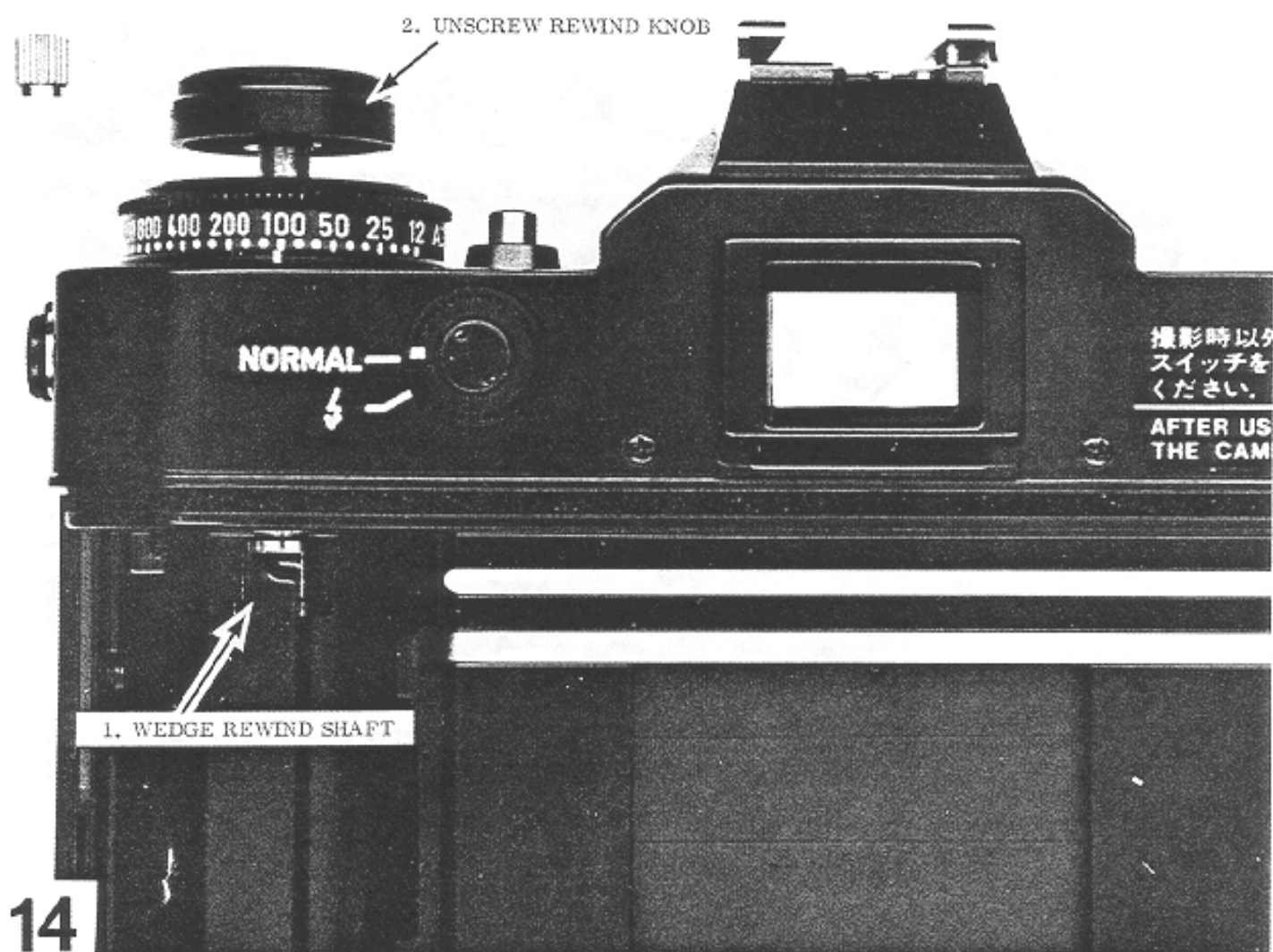


The original Canon EF (version #1) does not have the CATS temperature-compensation circuit. The temperature-compensation circuit was added as a modification to the model illustrated (version #2). Later models (versions #3 and #4) have the thermistor and the fixed resistor at the top of the camera; in these cameras, the only part on the circuit board shown is the variable resistor VR6.

The red wire connects resistor VR6 to ground in the model illustrated. Later models use a screw to hold the VR6 circuit board. So the screw acts as a ground connection and eliminates the need for the red wire.







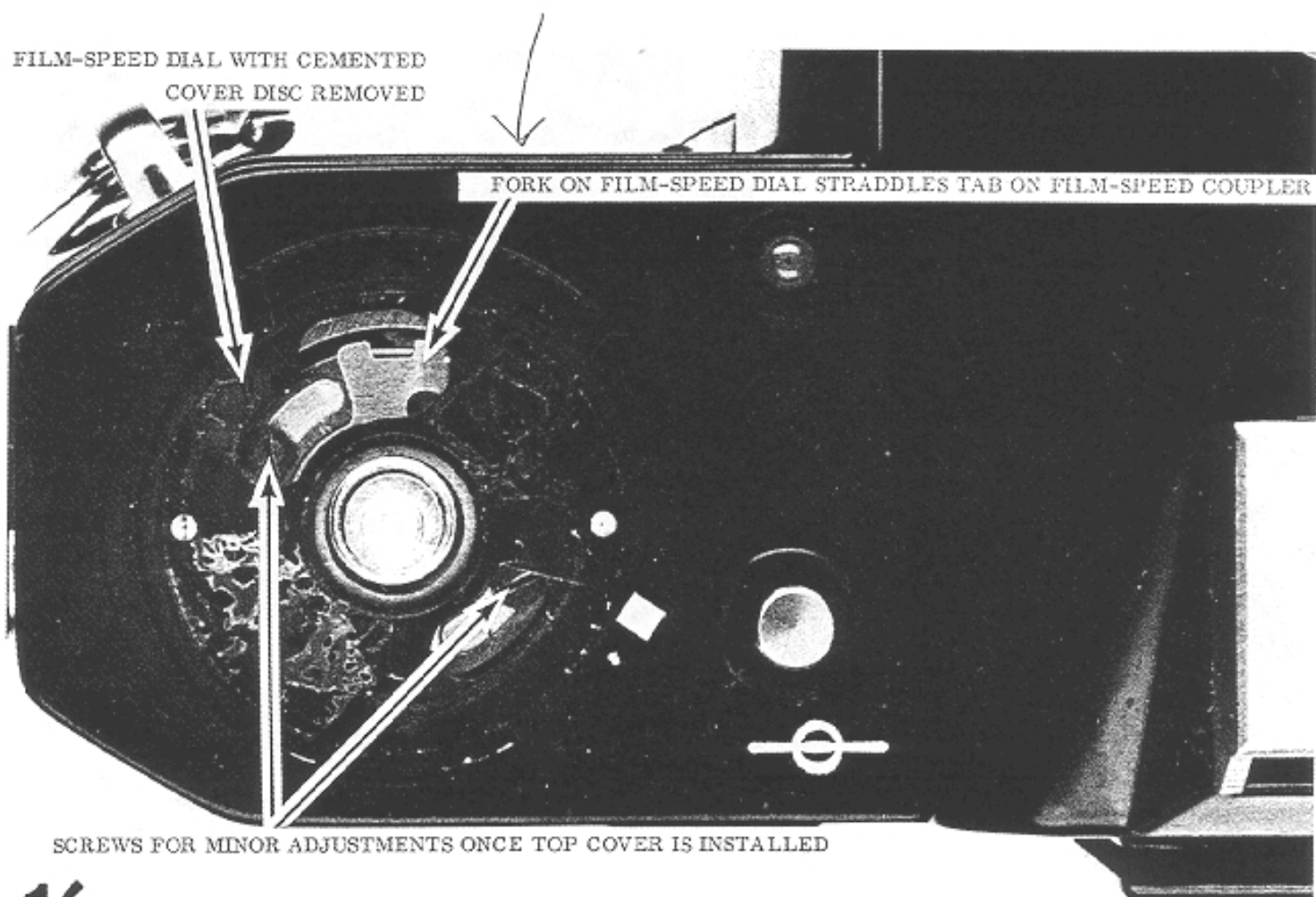
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Disassembly

ASA 100

BULB

on-off selector off

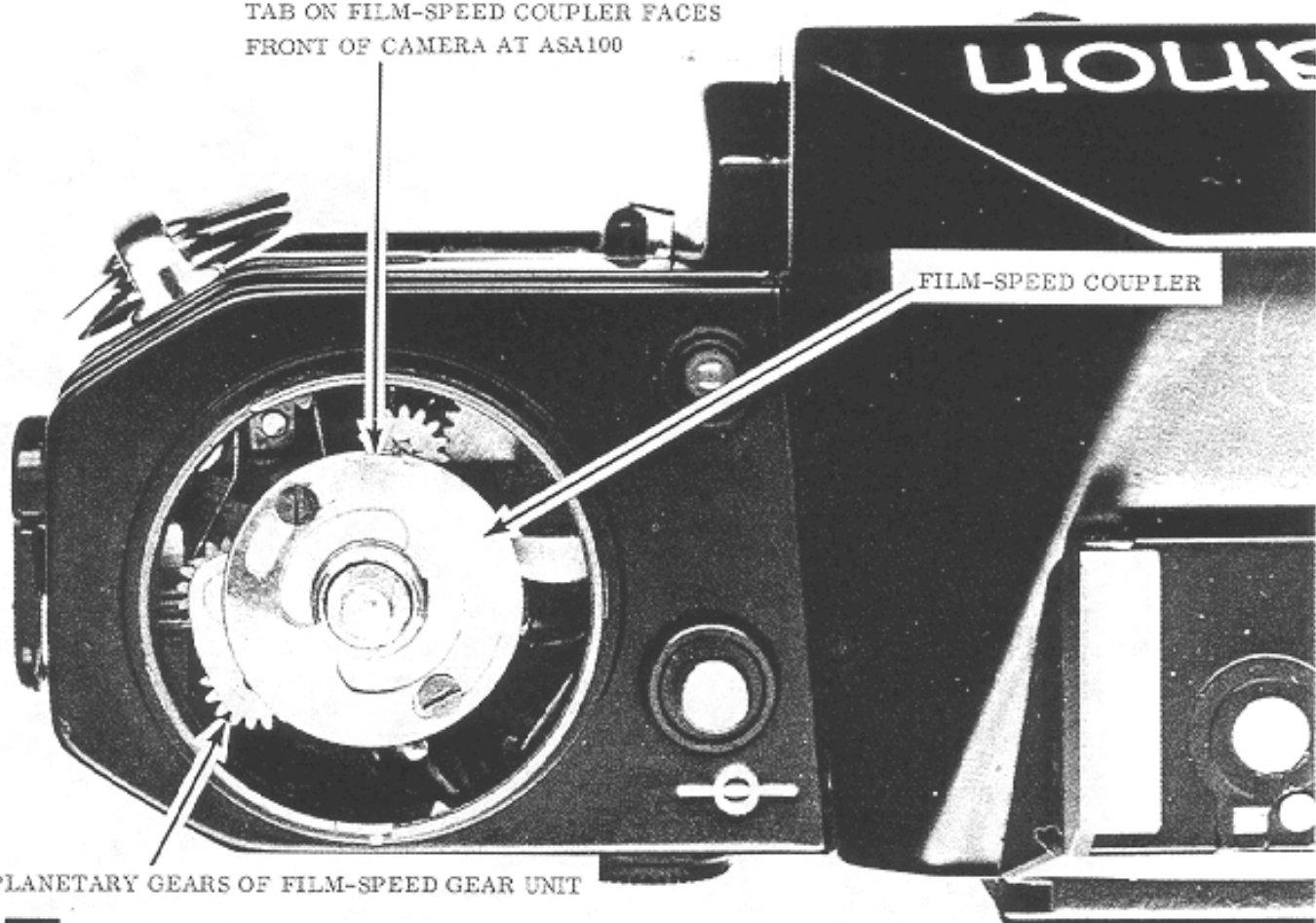




TAB ON FILM-SPEED COUPLER FACES
FRONT OF CAMERA AT ASA100

FILM-SPEED COUPLER

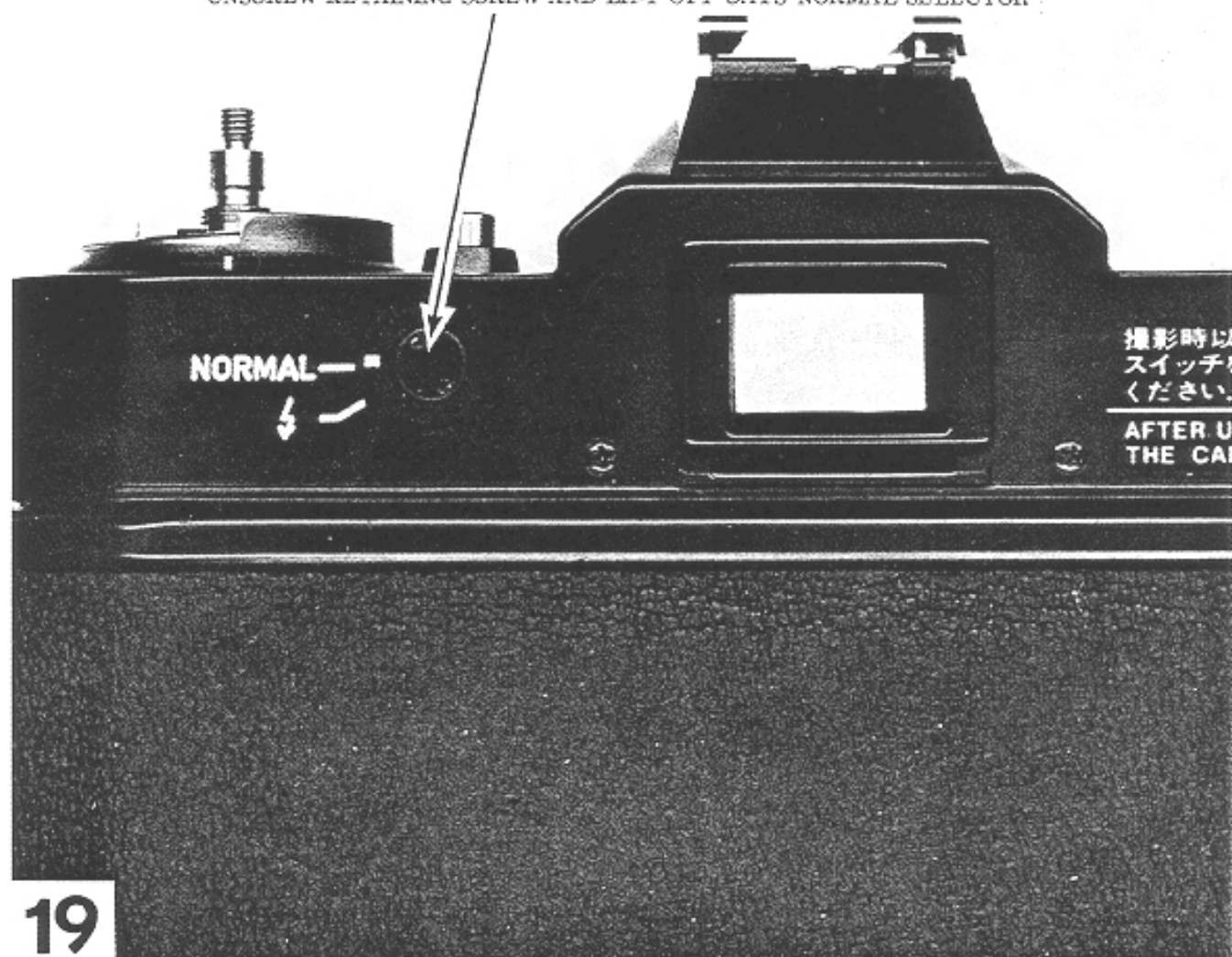
PLANETARY GEARS OF FILM-SPEED GEAR UNIT



SPECIAL TOOL MAY BE SCREWED ONTO
RETAINING-RING THREADS TO HOLD
PARTS IN ASA100 POSITION



UNSCREW RETAINING SCREW AND LIFT OFF CATS-NORMAL SELECTOR



Preface

This book chronicles a photographic legend. It is the story of a revolutionary camera and how it evolved from its conceptual beginning through to its technological fruition. It is also a human saga. Of the talented, innovative minds behind the camera's planning and development and of those for whom it is intended: professional photographers.

The New F-1 was introduced in 1981. Its introduction had long been awaited by the industry as the successor to the immensely successful F-1. Canon's top-of-the-line 35mm camera during the 70's, the F-1 by the end of the decade had become the mainstay system camera for professional photographers the world over. This legacy of experience and insight into the special requirements of the professional proved invaluable in developing a camera for the 80's: the New F-1.

The F-1 was renowned as an outstandingly rugged camera — the kind that pros knew they could rely on no matter how tough the assignment or conditions. The New F-1 combines these qualities with another vital attribute: complete flexibility. Attaching system accessories expands the camera's functions to a degree unprecedented in an SLR. The New F-1 owner can augment the camera's basic manual function with auto exposure modes, according to his or her requirements. Likewise, a choice is provided of three different metering sensitivity patterns by merely changing the focusing screen.

This then, is the New F-1. A unique concept in photography, built on a firmly established foundation. But how does the New F-1 actually perform in skilled hands? The answer is provided by the superb photographs in this book, taken by pros. They also comment on the equipment and techniques they used. The book, moreover, covers every facet of the New F-1 — the camera and its accessories, its features, functions and capabilities.

While aimed primarily as a guide for the professional, attempt has also been made to make this book understandable and enjoyable for the amateur as well.



The New F-1 World



Canon

The New F-1 System



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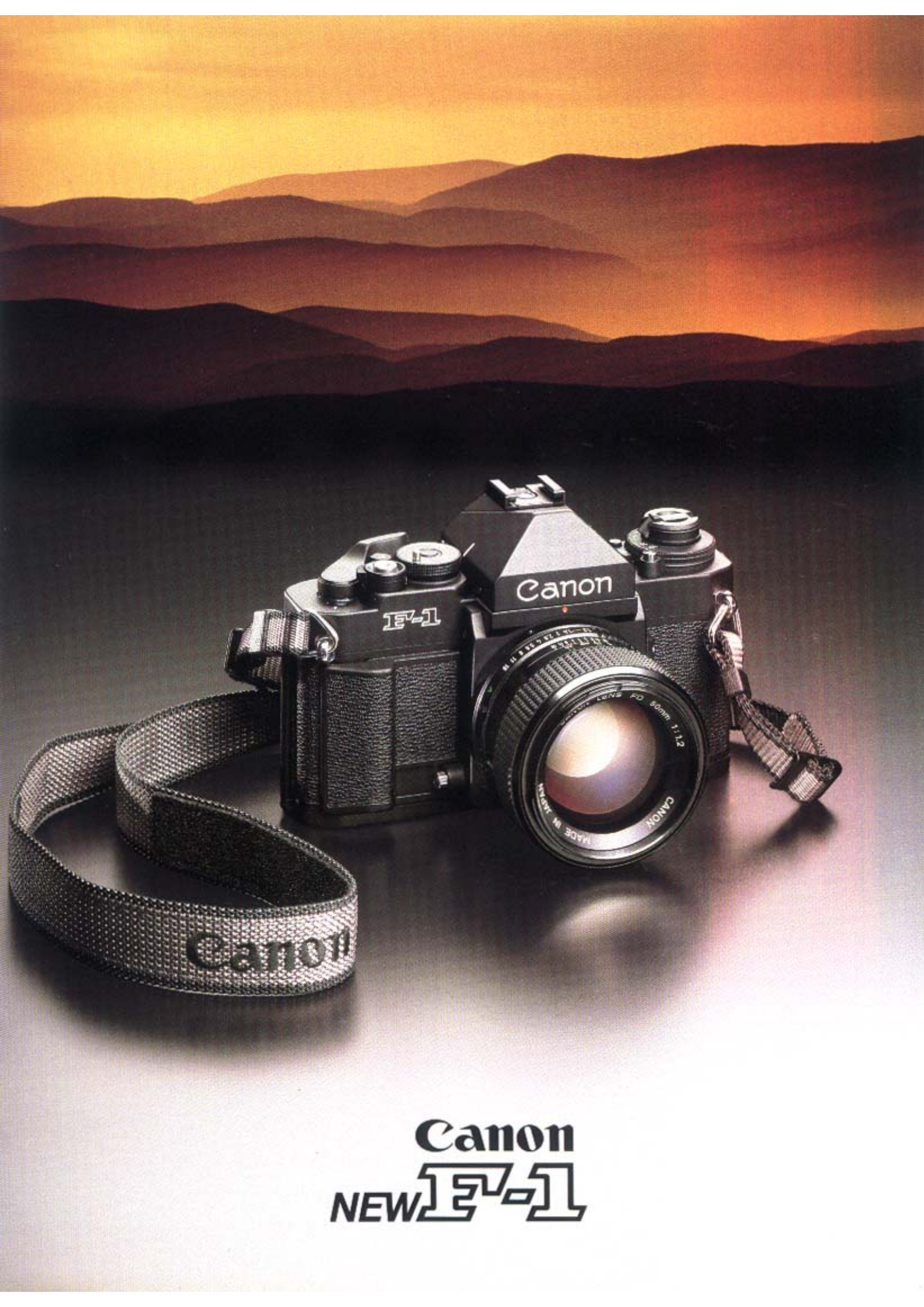
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Professional Gallery



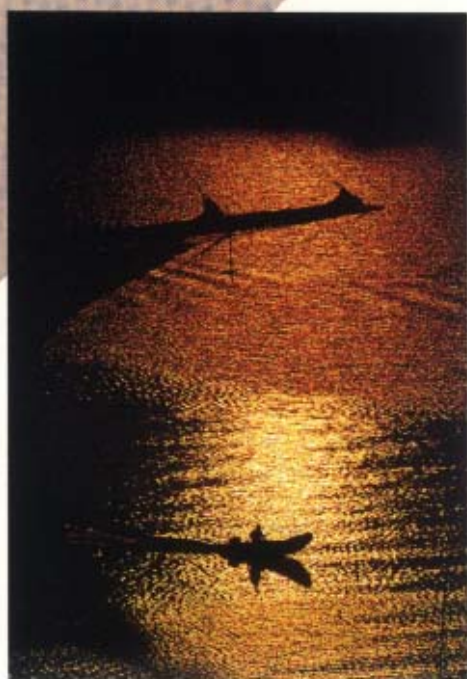
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A showcase of images taken by professional photographers with the New F-1 66—139



Canon
NEW F-1

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In this age of instant communication, photography plays a pivotal role. As any news editor knows, one dramatic shot of an accident or fire can have more impact than columns of copy. And it's not just news photographers who rely on the visual immediacy of pictures to get their message across. There has been a relentless expansion in the use of photography in all fields, from forensic science to the world of fashion and advertising.

Canon, for the past several decades, has been in the vanguard in photography's establishment as an all-embracing medium of communication. Canon engineers and scientists, ever since they succeeded in producing the first Japanese 35mm rangefinder camera in 1935, have devoted their talents to developing and perfecting countless technological advances in the field of optics and, more recently, electronics. This tradition of innovation, coupled with an uncompromising commitment to maintaining the highest standards of quality and craftsmanship in the industry, has paid off. The name Canon is now synonymous the world over with the very best in optical products.

No camera helped to affirm Canon's pre-eminence more in the eyes of professionals than the F-1. Introduced in 1971, following its announcement the previous year at the 1970 Photokina, it was Canon's intention from the outset that the F-1 would remain the definitive 35mm system

camera for the decade. So it was to be.

Every aspect of the F-1 was impressive. From the 10,000 parts that formed one of the best thought-out bodies ever designed to the over 180 accessories that comprised the system. The F-1 system itself with its interchangeable viewfinders and focusing screens, motor drive, 250-frame film chamber, three exposure meter systems, photomicrography and close-up equipment met the diverse requirements of photojournalist, studio photographer and scientist alike, whose only common ground otherwise was the desire to achieve perfection in their work.

The reliability of the equipment is every bit as important to the professional photographer as its versatility. Recognizing this, Canon took extraordinary measures to ensure the system's durability under all conceivable conditions.

In recognition of its outstanding reliability, the F-1 over the years was chosen as official 35mm camera for numerous international sports events.

Even as the F-1 was making SLR history, however, Canon was forging ahead with designing a successor. With the turn of the decade, Canon was ready to launch its system SLR for the 1980's: the New F-1.

It stands just under 97mm high and on its own without a lens weighs 795 grams. Just two of the myriad facts about

the New F-1, but important ones nonetheless. For they reveal a great deal not only about the camera itself but also the thinking behind the New F-1's development.

During the previous decade, camera technology advanced faster than at any other time in the history of photography. The advent of the microchip, the use of computers in both the design and manufacturing stages and the discovery of stronger, lighter materials were all to exert a major influence on the New F-1's design. The New F-1, in fact, is more compact and nearly 5% lighter than its predecessor.

In order to fully meet the requirements of professionals, Canon drew on its 10 years of experience with the F-1 and actively sought the opinions of professional photographers of all persuasions. Some inescapable conclusions emerged. While all pros require the maximum possible reliability, durability and mobility of their equipment, their requirements concerning its functional capabilities differ greatly. The needs of the sports photographer and biologist, for instance, are as different as night and day. The former is concerned with capturing split-second action shots, while for the latter technical considerations such as depth of field are more important.

With this in mind, Canon decided to make a clean break with the prevailing trend in the industry toward ever-greater miniaturization and automation. Instead of incorporating sev-

eral automatic functions in the camera, one or more of which might prove redundant to the user, Canon adopted a unique modular approach. The New F-1 would be a manual exposure camera. But one which would also offer the option of adding AE functions. The result is a system camera that can be adapted to meet any conceivable photographic situation. The New F-1 can be converted into a shutter-priority, aperture-priority or stopped-down automatic exposure camera simply by attaching accessories. Similarly, the interchangeable focusing screens are more than just focusing aids — they also give a choice of metering sensitivity patterns. Another advance is the electro-mechanical hybrid shutter. Fast shutter speeds are mechanically controlled, while electronics govern the slower speeds. And the New F-1 is built and tested to withstand the roughest handling. New manufacturing techniques such as laser welding of critical parts and numerical control machining assure precision unheard of in previous cameras.

The New F-1 was hailed as a "completely new concept in photography" when it was unveiled in the fall of 1981. Official recognition has been equally swift. It has been designated Official 35mm Camera for the 1984 Los Angeles Olympic Games.

The New F-1 System



Interchangeable Focusing Screens

The focusing screen system comprises 13 different interchangeable screens which, besides helping you focus accurately, permit you to change the metering sensitivity pattern. All 13 screens are available for center-weighted average metering and selective area metering and 6 for spot metering, giving a total of 32 focusing screen/metering system combinations. The system includes two Bright Laser Mattes which are nearly 20% brighter than the other laser mattes in the series. The Cross Split facilitates

focusing by dividing the subject in both horizontal and vertical directions and the standard New Split/Microprism solves the problem of prism darkening with slow lenses. Other screens are available for specialized uses. The A/B Size Laser Matte is useful for publishing and advertising, featuring engraved crosses in each corner for cropping. Changing screens is easy, requiring no special tool.



200mm f/4 bring even the smallest details into sharp focus and can be used for normal photography as well. Where moderate magnification will suffice, close-up lenses offer an economical alternative.

Electronic Speedlites

Flash photography is another field in which you have a wide range of options. Canon offers 8 Speedlites, plus a special unit designed for close-up photography. They feature the New Canon Auto Tuning System (New CATS) for simple, error-free operation. The Speedlite transmits a charge completion signal and sets the 1/90 sync speed. Moreover, when either power drive is installed the aperture is automatically set to the flash aperture. This series control system also allows special techniques such as slow speed synchronized photography.

Canon FD Lenses

The Canon FD Lens System gives you the means to fully express yourself as a photographer. With over 50 different lenses at your disposal, you have complete freedom to interpret the world as you see it. Covering a broad focal spectrum from 7.5mm to 800mm, the system includes all-seeing fish-eyes, convenient zoom lenses and amazingly powerful super-telephotos. Compact and light, their exclusive breech-lock mount makes them among the easiest and quickest to interchange. Optically, as well, FD lenses are unsurpassed. They have high resolving power, sharpness and color balance. And to cater to the special requirements of the professional, the FD range includes several "L" series lenses. Distinguished by a red line encircling the barrel, they incorporate aspherical elements to combat spherical aberration, particularly at wide apertures. Fluorite and UD Glass are also utilized in telephotos to minimize chromatic aberration.

Remote Control Operation

Several devices enable you to operate the New F-1 from a distance by remote control. They are used in conjunction with either the AE Motor Drive FN or AE Power Winder FN. The Wireless Controller LC-1 permits shooting by wireless from up to 60m away, making it ideal for wildlife photography. To take pictures at regularly timed intervals there is the Interval Timer TM-1 Quartz. Settable in 14 stages from one frame per second to one every 30 minutes, its applications range from industrial photography to recording scientific experiments.

Classifying Your Pictures

The Data Back FN is an eminently practical accessory which allows you to electronically imprint data on the film. It replaces the New F-1's back cover and has three dials for letters, Roman numerals and dates. Data may be recorded automatically upon shutter release or manually.

The most significant departure of the New F-1 is not its supèrlative styling and design, nor even its handling and performance, excellent though they are. Rather, it is the fact that it represents a radical breakthrough in design philosophy.

In drawing up its plans for a second-generation F-1, Canon knew that the time had come for a complete re-evaluation of the art of photography itself and what it means to the working professional. Canon's task force of engineers and designers, trained specialists in their own right, decided that existing systems tended to be aimed too much at "the average professional." They set out to devise a system SLR which would be not one, but many cameras. One which professionals of every description could freely adapt to suit their own individual requirements, without compromise or limitation.

To the sports photographer, speed is of the essence. Motor drive capability is therefore an essential requirement. Sports photography also calls for a fast shutter speed with shutter-priority AE. Now, for the first time, one can have both by attaching either the AE Motor Drive FN or AE Power Winder FN. While the pace is less frenetic for the landscape photographer, other considerations such as depth of field are equally exacting. A special viewfinder, the AE Finder FN, provides aperture-priority AE and stopped-down automation. With both a power drive and the AE Finder FN in place, the New F-1 becomes a superbly versatile, multi-mode SLR. Similar flexibility is provided by the interchangeable focusing screens. Besides acting as focusing aids, they allow you to change the metering sensitivity pattern as well.

The New F-1 has thus taken the concept of system photography far beyond its conventional definition. The system itself embraces an immense array of accessories designed for every facet of photography. A brief description follows of its chief components, including the interchangeable viewfinders, remote control and close-up accessories, Speedlites and FD lenses.

Choice of Shooting Modes

The New F-1 is a manual, match-needle SLR with TTL analog metering system. Metering is performed at full aperture with all Canon FD and New FD lenses or stopped down, when required. The New F-1 can also be easily converted to provide automatic exposure. Installing the AE Motor Drive FN or AE Power Winder FN gives the added option of shutter-priority AE, the best mode for action photography. Likewise, replacing the standard Eye-Level Finder FN with the AE Finder FN provides aperture-priority AE and stopped-down AE. To remind you of the current shooting mode, the viewfinder exposure read-out shifts position.

The New F-1 gives you a completely free hand to build a system that exactly fulfills your own special requirements, without superfluous functions and modes.

Motorized Film Advance

The New F-1 with its top shutter speed of 1/2000 sec. and the 5 frame-per-second AE Motor Drive FN give the action-oriented photographer the firepower needed to capture the speediest subject. And in the most suitable exposure mode: shutter-priority AE. Both the AE Motor Drive FN and AE Power Winder FN (2 fps) give the New F-1 this potential. The AE Motor Drive FN can also be set for 3.5 fps film advance. Single-frame shooting is possible with both units. Film rewind is automatic with the AE Motor Drive FN, which can be driven by any one of four optional power sources, including the High Power Ni-Cd Pack FN for extreme cold conditions. The power pack can also power the camera's internal metering and shutter release functions, using the Battery Cord FN.

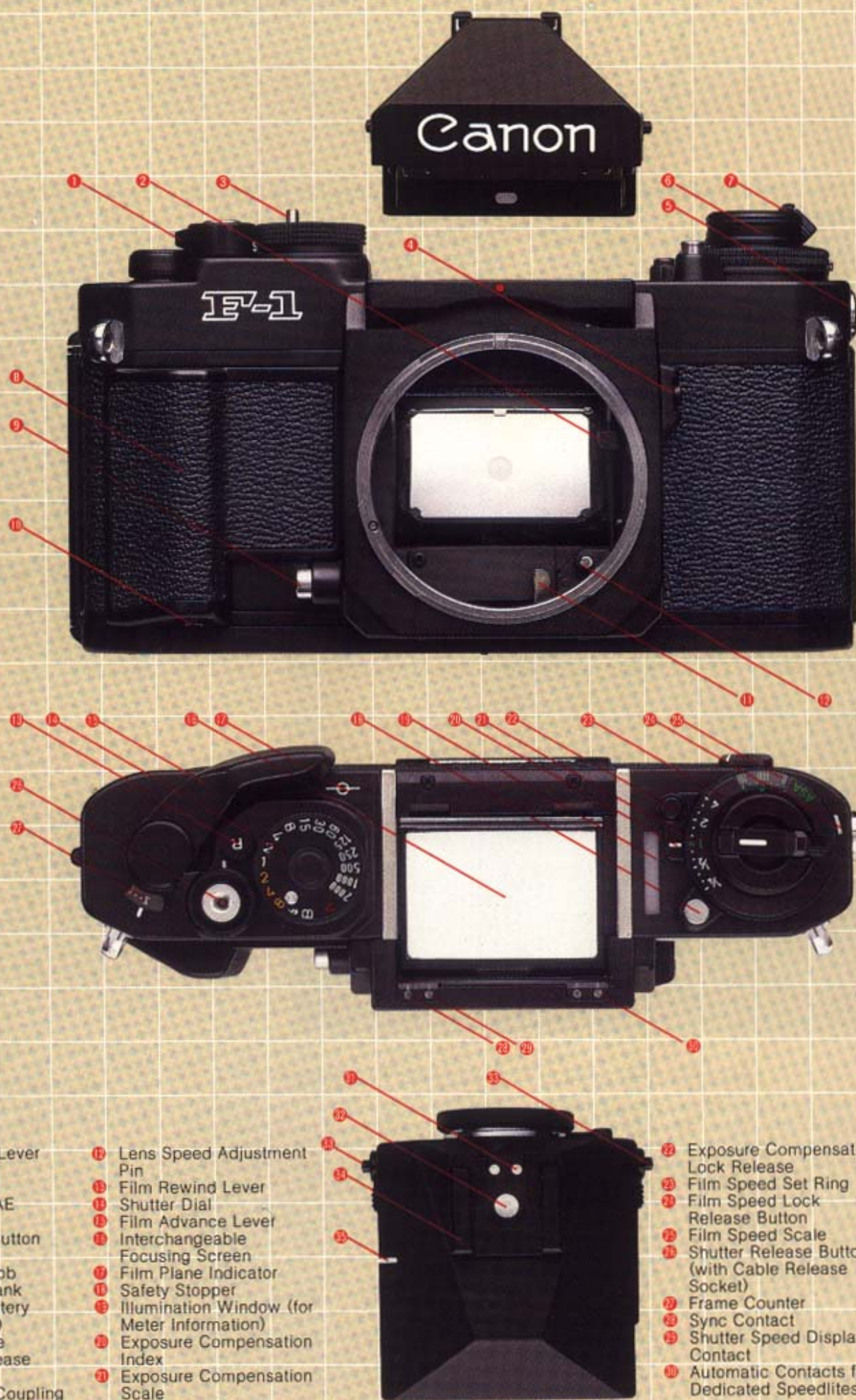
Interchangeable Viewfinders

The New F-1 system includes five interchangeable viewfinders: the Eye-Level Finder FN, AE Finder FN, Speed Finder FN and Waist-Level Finders FN-6X and FN. The AE Finder FN provides aperture-priority AE for greater control of depth of field. Shutter-priority AE is possible with all five finders if either of the two power drives is attached.



Close-up Equipment

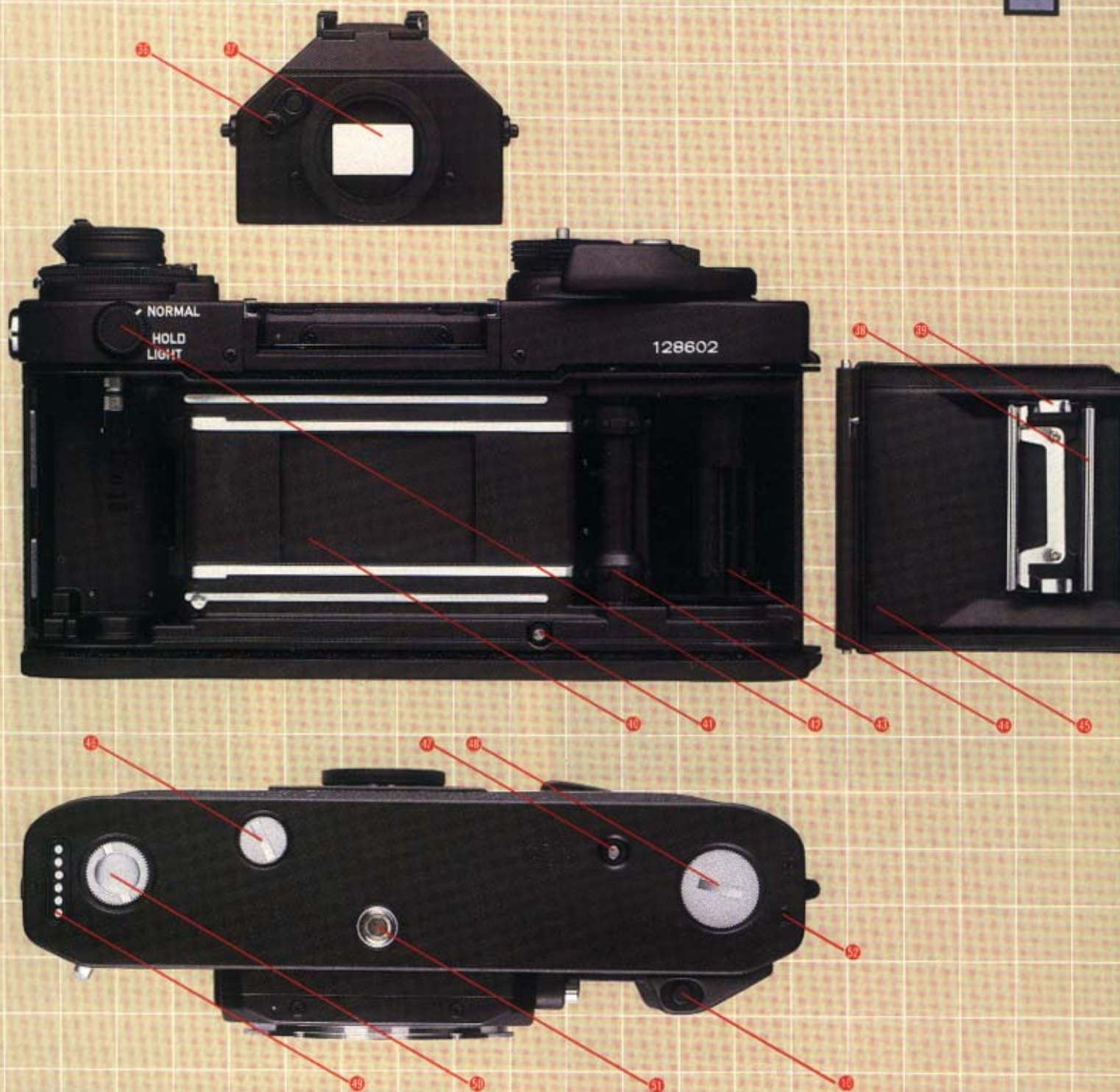
Many photographers nowadays are thinking small. So small, in fact, that they need special equipment to accomplish the task. The New F-1 is backed by a comprehensive array of precision accessories, capable of yielding images up to several times life-size of the minutest subjects. Key component of the system is the Auto Bellows. Used with the Double Cable Release, it affords automatic diaphragm control with FD and FL lenses. Several extension tube sets are available for close-up work. Macro lenses like the 50mm f/3.5 and



- 1 Self-timer/Lock Lever
- 2 Aperture Signal Coupling Lever
- 3 AE Set Pin (for AE Finder FN)
- 4 Battery Check Button
- 5 PC Socket
- 6 Film Rewind Knob
- 7 Film Rewind Crank
- 8 Action Grip (Battery Chamber Cover)
- 9 Stop-Down Slide
- 10 Action Grip Release Button
- 11 Stopped-down Coupling Lever

- 12 Lens Speed Adjustment Pin
- 13 Film Rewind Lever
- 14 Shutter Dial
- 15 Film Advance Lever
- 16 Interchangeable Focusing Screen
- 17 Film Plane Indicator
- 18 Safety Stopper
- 19 Illumination Window (for Meter Information)
- 20 Exposure Compensation Index
- 21 Exposure Compensation Scale

- 22 Exposure Compensation Lock Release
- 23 Film Speed Set Ring
- 24 Film Speed Lock Release Button
- 25 Film Speed Scale
- 26 Shutter Release Button (with Cable Release Socket)
- 27 Frame Counter
- 28 Sync Contact
- 29 Shutter Speed Display Contact
- 30 Automatic Contacts for Dedicated Speedlites



- | | |
|----------------------------|-----------------------------|
| 1 Automatic Flash | 31 Multi-slot Take-up Spool |
| 2 Contacts | 32 Camera Back |
| 3 Flash Sync Contact | 33 AE Coupler Cover |
| 4 Finder Release Buttons | 34 Film Rewind Pin (for |
| 5 Accessory Shoe | Winder and Motor Drive) |
| 6 Index | 35 Winding Coupler Cover |
| 7 Eyepiece Shutter Lever | 36 Winder and Motor Drive |
| 8 Eyepiece | 37 Terminal |
| 9 Film Guide Roller | 38 Rewind Coupler Cover |
| 10 Film Guide Plate | 39 Tripod Socket |
| 11 Titanium Focal-Plane | 40 Positioning Hole (for |
| Shutter Curtain | Winder and Motor Drive) |
| 12 Automatic Contact for | |
| Data Back FN | |
| 13 Meter Mode Selector | |
| 14 Film Transport Sprocket | |

Film Speed Range

One of the widest ranges of any 35mm SLR, the ASA 6-6400 film speed provides plenty of latitude for push-processing films. The ASA is clearly displayed in the window for easy reference.

**Film Advance Lever**

The film advance lever has a 30° stand-off angle for readiness in action photography. Contoured to fit the thumb for comfortable and efficient operation, the lever allows single or multiple stroke film advance.

Battery Check Button

Press this button to monitor the battery condition. Power is sufficient if the meter needle moves above the battery check mark in the viewfinder. The button also serves to cancel the self-timer, exposure meter and viewfinder illumination, as well as to release the second shutter curtain during long exposures.

**Exposure Compensation**

Exposure compensation up to ± 2 EV is possible for special creative effects. Calibrated in 1/3 EV increments, the dial is released by pressing the lock button.

Safety Stopper

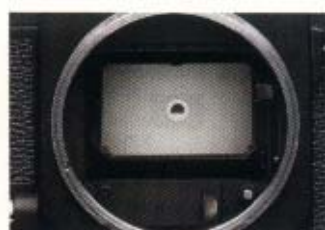
A safety lock eliminates all risk of accidentally opening the camera back and exposing the film. To open, simultaneously depress the stopper and lift the rewind knob.

**Stop-down Slide**

A convenient feature which allows you to check depth of field and perform stopped-down metering with FL or non-fully coupled close-up accessories.

Canon Breech-lock Mount

The breech-lock mount is an exclusive feature which assures total interchangeability of all Canon lenses and accessories. Lens change is effected in one swift motion.

**Eyepiece Shutter**

The eyepiece shutter shuts out all extraneous light. A useful safeguard when taking long exposures or with self-timed or remote-control photography.

SPECIFICATIONS

Type: 35mm single-lens reflex (SLR) camera

Format: 24 x 36mm

Interchangeable Lenses: Canon FD (for full-aperture metering) and Canon FL, R and non-FD (for stopped-down metering) series lenses.

Exposure Modes: Match-needle and stopped-down manual exposure. Shutter-priority, aperture-priority, stopped-down AE and flash AE by attaching main accessories.

Viewfinder: Standard interchangeable eye-level pentaprism: 97% coverage, 0.8x magnification at infinity with a standard lens. Aperture scale from f/1.2 to f/32, over- and underexposure warning marks, meter and aperture needles, battery check/stopped-down metering index, shutter speed displayed.

Viewfinder Illuminator: Lights display for 16 seconds when meter mode selector is set to LIGHT and shutter button pressed halfway.

Eyepiece Shutter: Built-in.

Dioptic Adjustment: Built-in eyepiece adjusted to standard -1 diopter.

Focusing Screens: Interchangeable. 13 types available.

Light Metering System: TTL metering by silicon photocell (SPC).

Center-weighted average, selective-area, spot metering available by changing focusing screens.

Meter Coupling Range: EV-1 to EV 20 with ISO 100 film, f/1.4 lens.

Exposure Preview: By turning meter mode selector to one of three modes and pressing shutter button halfway.

Meter Modes: NORMAL: meters as long as shutter button is pressed halfway. HOLD: meters for 16 sec. LIGHT: meters for 16 sec. and viewfinder information is illuminated. Cancellation possible.

Exposure Compensation Dial: ± 2 f/stop range in 1/3 f/stop increments.

Shutter: Horizontal-travel, titanium focal-plane shutter with four spindles. Electromechanical hybrid control. Mechanical control: 1/2000 to 1/125 sec., "A" (1/90 sec.), "B." Electronic control: 1/60 to 8 sec.

Mechanical Shutter Release: By removing battery from battery chamber. Only mechanically controlled speeds can be used.

ISO (ASA) Film Speed Scale: ISO 6-6400.

Shutter Dial: 1/2000 to 8 sec., "A," "B" (bulb) and "1/90" (1/90 sec.)

Shutter Button: Two-step with electromagnetic release. Mechanical when battery is removed from the camera. Set main switch to "L" to lock. With cable release socket.

Shutter Button/Self-timer

The multifunctional shutter button provides a meter reading when depressed gently and releases the shutter when fully depressed. To activate the self-timer, turn the outer ring to "S" and press the shutter. A beeping sound will issue for 10 secs. before the shutter releases itself. Set the ring to "A" for normal shutter release and "L" to lock the shutter.



Meter Mode Selector

An invaluable feature which helps you in more ways than one. At HOLD, the meter operates for 16 secs., freeing both hands to adjust the camera. The same happens on LIGHT, but in addition the viewfinder display is illuminated. At NORMAL, the meter functions only while the shutter button is depressed, to save power.



Shutter Speed Dial

Align the "A" mark with the index for aperture-priority AE. Full seconds (2, 4 and 8 sec.) are color-coded yellow for clear distinction with faster speeds (plus "1/2" and B) which are in white.



Contoured Action Grip

The specially shaped battery compartment cover provides a firm action grip for steadier shooting. Press the release button underneath to remove the cover and gain access to the battery.



Film Rewind/Multiple Exposure Lever

Traditionally located on the base, Canon has relocated the film rewind lever on top for easier access when using a tripod or other accessories. For film rewind, turn the lever clockwise and depress. Do the same thing before cocking the shutter to take multiple exposures. Rapid sequence multiple exposures are also possible using either of the power drives.

Accessory Shoe

Located on top of the pentaprism viewfinders for direct mounting of all Speedlites. Special contacts permit automatic setting of the 1/90 sec. flash sync speed and flash aperture when in shutter-priority AE mode.

Winder/Motor Drive Coupler

Remove the protective screw cap to connect either the AE Motor Drive FN or AE Power Winder FN. The power drives have a receptacle for storing the cap.

Winder/Motor Drive Terminals

The power drives link up with the camera's electronic circuitry via these terminals to give shutter-priority AE as well as automatic film advance.

Main Switch: Three positions: "A," "L" (shutter lock), "S" (self-timer).

Self-timer: Electronically controlled. Main switch set to "S." Activated by pressing shutter button. Ten-second delay with electronic "beep-beep" sound, which accelerates two secs. before shutter release. Cancellation possible.

Stop-down Slide: For depth-of-field preview (FD lens) or stopped-down metering (non-FD lens or close-up accessories).

Power Source: One 6V lithium, alkaline-manganese, or silver oxide battery. Battery lasts about one year under normal use.

Battery Check: By pressing battery check button. Battery power sufficient if meter needle registers above battery check index.

Multiple Exposure: By engaging rewind lever before recocking the shutter. Cancelled by lightly pressing shutter button.

Flash Synchronization: Speeds up to 1/90 sec. with electronic flash; FP- and M-sync at 1/30 sec. or slower. Direct contact at accessory shoe for hot-shoe flash. Threaded PC socket (JIS-B type) for cord-type or multiple flash photography. Accessory shoe has contact for normal auto flash and special contact for AE flash with specified Canon Speedlites.

Automatic Flash: With Canon Speedlites, shutter speed automatically set to 1/90 sec. with any shutter dial setting except "B." Auto

aperture control with AE Power Winder FN or AE Motor Drive FN attached.

Camera Back: Opened by pressing safety stopper while pulling up rewind knob. Removable for attaching Data Back FN or Film Chamber FN-100. With memo holder.

Film Loading: Via multi-slot take-up spool.

Film Advance Lever: Single-stroke 139° throw with 30° stand-off. Ratchet winding possible.

Frame Counter: Additive type. Automatically resets to "S" upon opening camera back. Advances during multiple exposures.

Film Rewinding: By releasing rewind lever ("R") and turning rewind crank. "R" automatically resets when camera back is opened or when shutter button is lightly pressed.

Dimensions: 146.7mm(W) x 48.3mm(D) x 96.6mm(H)

Weight: 795g body only; 1,030g with FD 50mm f/1.4 lens.

Subject to change without notice.



Speedlite
577G



Speedlite
533G



Speedlite
199A



Speedlite
188A

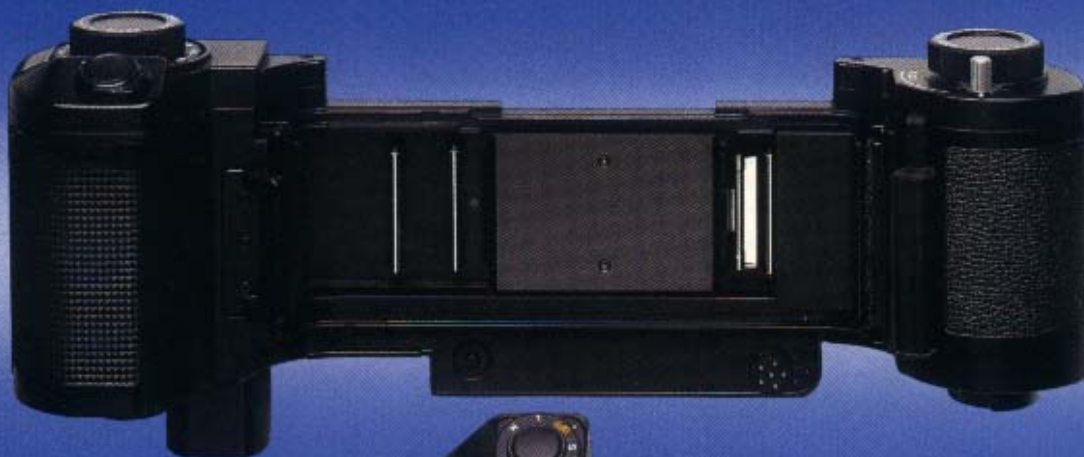


Waist-Level
Finder FN-6X

Focusing
Screens FN



Film Chamber
FN-100



AE Power Winder FN



AE Motor Drive FN



Battery Pack FN



Ni-Cd Pack FN





Speedlite 177A



Speedlite 166A



Speedlite 155A



Speedlite 011A



Waist-Level
Finder FN



Eye-Level
Finder FN



AE
Finder FN



Speed
Finder FN



New F-1



Data Back FN

New FD Lens



AC/DC Converter AD-10



High Power Ni-Cd Pack FN



Connecting Pack FN



Manual Exposure Control

It is easy to get carried away with the sophisticated electronics and automated functions of today's SLRs. In the final analysis, however, photographers must rely on their own experience and judgment to obtain the exact effect desired.

The New F-1 responds to this need by affording full manual control of all functions. The matchneedle system lets you fine-tune the exposure in case of subtle changes in light. And with a selective area or spot focusing screen installed, you can take readings of several areas of the subject.

What kinds of situations call for manual control? Backlighting, for one. Generally, this requires opening the aperture wider to avoid under-exposing the subject. Backlighting can also be turned to good advantage by doing the opposite — stopping down. The dramatic shot of the white stallion on the facing page is an excellent example. Here, the photographer has succeeded in eliminating virtually all of the surrounding detail in order to highlight the subject. The flowing mane, white back and forelocks of the horse form a stark contrast against the black background. Similar skill is required for silhouetted portraits which are fully or semi-backlit. Neon-lit streets and cityscapes provide other creative opportunities. Nature's own artwork, however, poses perhaps the ultimate challenge to one's resourcefulness. The delicate pink and turquoise tints at dawn and the awe-inspiring blood red of a sunset result in great photographs.

Eye-Level Finder FN
Focusing Screen FNSJ
New FD 115mm f/2.8
1/250 sec. or F5.6, ASA 200





AE Finder FN
Focusing Screen FN-AE
Extension Tube FD25-U
New FD 80-200mm f/4
1/500 sec. at f/5.6, ASA 200



Aperture-priority AE

Depth of field, and the ability to control it, are an important part of any professional's daily work. This is especially true of the more specialized disciplines such as close-up and photomicrography.

The New F-1's manual function can be supplemented with aperture-priority AE by attaching the optional AE Finder FN. It also allows stopped-down AE for close-up work involving the use of accessories between the lens and body and non-FD lenses. The viewfinder read-out is repositioned below the image to avoid confusion with manual and shutter-priority AE. In the process, it changes from aperture information to a shutter speed display.

Depth of field is increased by stopping down the aperture. Conversely, a larger aperture creates a shallower depth of field — an effect frequently employed to give a blurred background to portraits. Besides the aperture, the depth of field is governed by the focal length of the lens. Generally less critical with wide angle lenses or long-distance shots, it can be a vital factor in determining the sharpness of the image in close-up work or when using telephoto lenses over shorter ranges. Control of aperture is important, moreover, when shooting indoors with available light, or outside when the light is fading. In this case, the camera should be mounted on a tripod. Recommended metering method: center-weighted average metering.



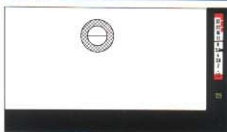
Shutter-priority AE

The spray of snow thrown up as the skier executes a sudden, sharp turn almost explodes out at us from the page. In one split instant, the photographer has captured the essence of this exhilarating sport.

The New F-1 is the only professional system SLR that provides shutter-priority AE — the ideal mode for fast-paced situations like this. It becomes possible by attaching either the AE Motor Drive FN or AE Power Winder FN. And the New F-1 offers a choice of no less than 15 shutter speeds, from 1/2000 sec. to 8 seconds.

Sports photographers stand to benefit most from such rapid-shooting potential. They can select a fast shutter speed and, shooting at the AE Motor Drive FN's maximum 5 fps, grab every action-packed moment of a soccer match or motor race. Faster even than the swiftest Olympic runner are animals such as the cheetah. Birds create a swirl of movement as they take off. Whatever the subject, and however fast, its movement can be frozen with a fast shutter speed. The sensation of speed can also be effectively conveyed by panning or even by selecting a slow speed to intentionally blur the subject's movement. Shutter-priority AE is by no means applicable only to sports. Children at play, busy street scenes and flowers and leaves blowing in the wind are usually best shot in this mode. Fully metered time exposures of up to 8 sec. can be used to portray the flow of a stream or traffic at night.

*Eye-Level Finder FN
Focusing Screen FN-PC
AE Motor Drive FN
New FD 400mm f/2.8L
1/500 sec. at f/16, ASA 64*





AE Finder FN
Focusing Screen FN-PE
AE Power Winder FN
New FD 100-200mm f/5.6,
1/250 sec. at f/5.6, ASA 64

AE Finder FN
 Focusing Screen FN-AF
 AE Power Winder FN
 New FD 135mm f/2.8,
 1/30 sec. at f/8, ASA 100



New FD 135mm f/2.8, 1/30 sec. at f/8, ASA 64

Multiple AE Modes Plus Manual

Focusing on the candidate on the podium, the press photographer fires off a series of medium-telephoto shots. Then, to capture the charged atmosphere of the political convention, he switches to a wide-angle lens and takes several pictures of the crowd. To bring as much of the scene as possible into sharp focus, he stops the lens down.

News photographers are among the most demanding of professionals. They must be able to respond instantly to each situation as it arises. And they expect the same versatility of their equipment. In the course of covering the assignment we just described, for example, the photographer would have switched between shutter- and aperture-priority AE repeatedly.

The New F-1 was designed to satisfy such stringent professional require-

ments. The basic camera is a match-needle manual operation SLR. Attach optional accessories, however, and it becomes a multi-AE mode SLR capable of aperture-priority, shutter-priority and stopped-down automatic exposure. Yet it also allows full manual control whenever necessary.

The New F-1 is many cameras to many people. From photojournalism to advertising and industrial applications, the multifaceted New F-1 provides unlimited versatility to meet your own individual needs.



For the first time in an SLR, one has a choice of several metering systems. The sensitivity pattern is changed by replacing the focusing screen. Three patterns are available.

Center-weighted average metering

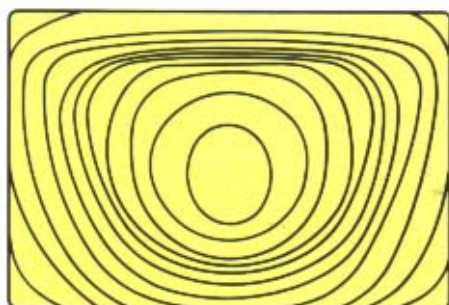
For normal shooting in either AE or manual mode. The sensitivity decreases progressively from the center to the edges. The pattern remains unchanged regardless of the lens focal length, and center-weighting in the horizontal direction is greatly accentuated to minimize difference in exposure between horizontal and vertical positions.

Selective-area metering

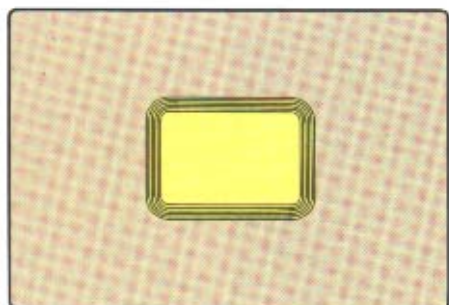
A pattern that is particularly effective for backlit or contrasty subjects since it provides a precise reading of the subject or certain area of the frame. It is effective, also, for AE photography and stopped-down AE in close-up applications. Metering sensitivity is restricted to 12% of the image area.

Spot metering

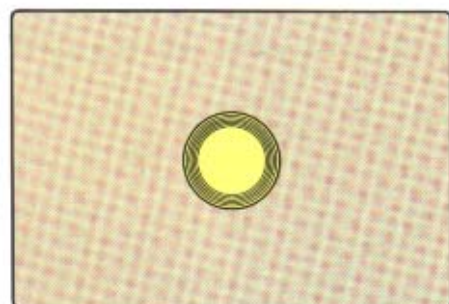
Functioning as a 3% spot meter, this pattern is advantageous in tricky exposure situations where extreme contrast exists between subject and background. Typical examples are a singer in the spotlight on stage and subjects with the sun or bright snow behind. It can be used to great effect with telephoto and super-telephoto lenses. Spot metering is also appropriate for close-up work and photomacrography when the subject is small in relation to the image area and/or when metering against the light. With a comparatively large subject, use of a selective-area screen is recommended.



New FD 35-105mm f/3.5, 1/250 sec. at f/8, ASA 25



New FD 80-200mm f/4, Extender FD2X-A, 1/2000 sec. at f/8, ASA 400



New FD 400mm f/4.5, 1/1000 sec. at f/4.5, ASA 64

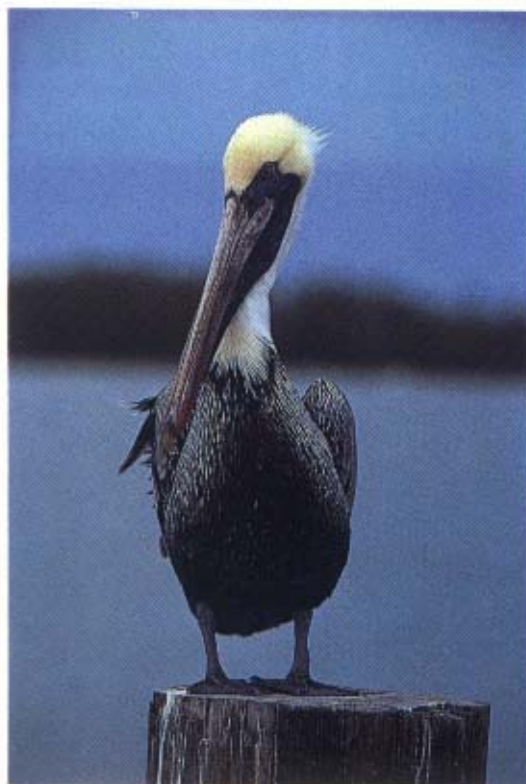
The New F-1 offers a full range of 13 individual focusing screens. Categorized by the three metering groups, there are 32 focusing screen/metering system combinations. The entire series is available for center-weighted average and selective-area metering. Six screens provide spot metering. The system includes two new Bright Laser Mattes which are nearly 20% brighter on average than the other laser matte screens of the series. In the standard to medium telephoto focal range (from 50mm to 200mm) they are 1.5 times as bright. The brightness is boosted 1.8 times with more powerful lenses such as the New FD 300mm f/5.6. This enhanced brightness pays dividends, especially when shooting street scenes in late evening or at night. Indoor situations such as figures on a darkened stage become easier to handle, even when you use a small aperture lens. Other newcomers are the Cross Split which facilitates vertical and horizontal format focusing by dividing the subject in both planes. The shape of the subject consequently is no longer a factor in achieving accurate focusing. The standard New Split/Micropism is available for all three metering patterns and does not incur darkening even with slow lenses. The photographer in the advertising and publishing fields is not forgotten, either. An A/B format laser matte is available with engraved corner markings to facilitate cropping.

This unique system of interchangeable focusing screens and metering patterns has added an entirely new dimension to photography. Now, instead of being limited to just one metering method, you can be ready for any conceivable exposure situation by slipping two or three screens into your gadget bag along with your lenses and film. You might, for instance, take along a center-weighted average screen such as the Standard Micropism on location for AE photography in daylight and a P type (selective area) or S type (spot) Cross-Split or Bright Laser Matte in case you have to take manual mode pictures at night.

Eye-Level Finder FN
Focusing Screen FN-PK
AE Power Winder FN
New FD 300mm f/4L
1/125 sec. at f/5.6, ASA 200



AE Finder FN
Focusing Screen FN-PL
AE Motor Drive FN
New FD 85-300mm f/4.5
1/250 sec. at f/5.6, ASA 64



Eye-Level Finder FN
Focusing Screen FN-PM
Speedlite 577G
New FD-85mm f/1.8
1/90 sec. at f/8, ASA 25





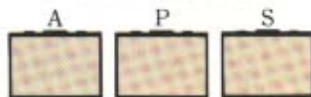
Standard Microprism



Suitable for general photography with all lenses. Fast and accurate focusing is achieved using the central microprism rangefinder set in a matte/fresnel field.



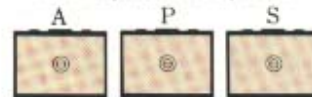
Overall Laser Matte



A plain screen with matte/fresnel field and clear matte. Suitable for those who are accustomed to focusing with the matte area. Particularly effective for macro and telephoto photography. All three metering patterns available.



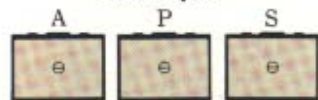
New Split/Microprism



The standard screen for the New F-1. Fast, accurate focusing is achieved with the split-image, microprism, or matte field depending on the subject or your own preference.



New Split



A highly versatile screen with a split-image center spot. Suitable for all lenses. The double echelette microprism eliminates darkening even when a slow lens is used.



Laser Matte with Grid



A special screen designed to aid horizontal and vertical picture alignment in architectural photography or copy work. Etched crosslines forming 7mm squares serve as guidelines for aligning the subject and for double exposures. Usable with all lenses, particularly the TS35mm (Tilt and Shift) Lens.



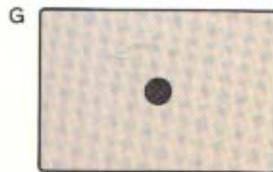
Microprism/Fast Lenses



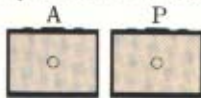
An excellent choice if your photography is mainly with shorter lenses. A sharper prism angle facilitates focusing with high speed ($f/1.2$ to $f/2.8$) lenses.



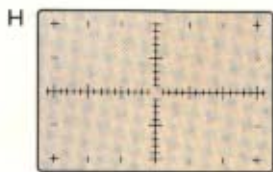
New FD 400mm $f/2.8L$,
1/500 sec. at $f/2.8$, ASA 64



Microprism/Slow Lenses



Similar to F, but for slower maximum apertures of about $f/3.5$ to $f/5.6$. Especially suited to long zooms and super-telephotos as it does not incur prism darkening.



Laser Matte with Scale



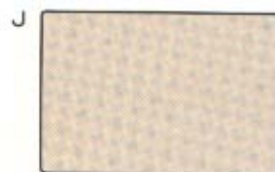
This screen was specially designed for high-magnification applications such as photomicrography and photomacrography when using bellows and extension tubes. Fine matte center in an overall matte field. Gradations on vertical/horizontal lines and around the edges help to determine the size of the subject. Usable with all lenses.



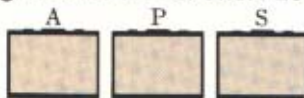
Laser Matte with Double Cross Hair Reticle



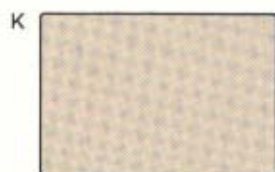
Well suited for applications requiring high magnifications such as photomicrography and astrophotography. The screen features a 5mm-diameter center spot with cross-hair reticle in a fine matte field. To focus, move your eye from left to right. Pinpoint focus is attained when the hairs remain in the same position on the subject.



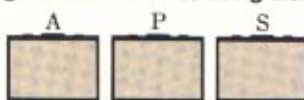
Bright Laser Matte/Short Lenses



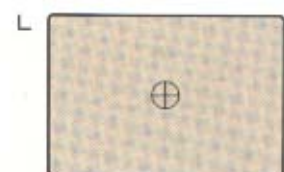
Together with the Bright Laser Matte K, the brightest screens of the system. The screen is especially effective with 50mm to 200mm lenses and dark subjects or when using small working apertures. Available in all three metering patterns.



Bright Laser Matte/Long Lenses



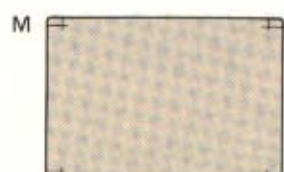
An extremely bright screen which offers the same unobstructed, sharp image as the Bright Laser Matte J. Recommended for 300mm telephoto lenses, or longer. Also suitable for photomacrography and close-up work. Darkening is absent even when the lens is stopped down.



Cross Split



A unique screen which divides the subject not only vertically, but also in the horizontal plane. The subject is in focus when the four quarters merge to become one unbroken image. For all lenses.



A/B Size Laser Matte



The screen for those in the publishing and advertising fields. Engraved 2mm crosses in the corners facilitate cropping and reproduction of A and B size materials.

Focusing Screen Indications



Stands for metering sensitivity pattern (A-P-S)

Stands for type of focusing screen (A-M)



The standard viewfinder with the New F-1 is the Eye-Level Finder FN. Different shooting situations, however, are often best tackled by employing different methods of viewing. The New F-1 system thus includes five fully interchangeable viewfinders to provide the optimum conditions for focusing.

The sports photographer intent on arresting the game's highlights will find the bright Eye-Level Finder FN and AE Motor Drive FN for rapid-fire, shutter-priority AE shooting the ideal combination. A versatile alternative for action photography, particularly when wearing a helmet and goggles, is the Speed Finder FN. It enables both waist and eye-level viewing.

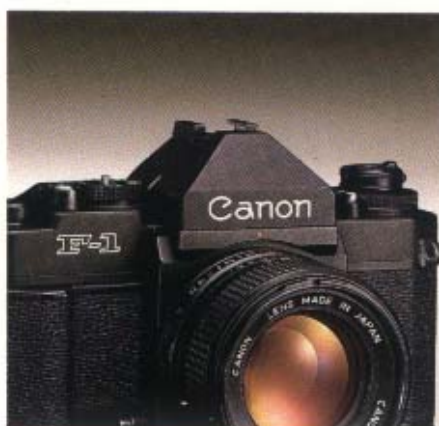
The overriding consideration in nature and commercial photography, on the other hand, is depth of field. The AE Finder FN adds another exposure mode — aperture-priority AE — to the New F-1's roster of functions.

Providing a convenient right-angled vantage point for close-up and other high-magnification applications are the Waist-Level Finder FN and Waist-Level Finder FN-6X. Both of these special finders afford a clear, sharp view of the image and display the exposure data in unreversed form.

Changing viewfinders is a simple operation. Press the two release buttons at the rear of the finder and withdraw it. Slide the replacement finder along the guide rails until it locks into place.



Eye-Level Finder FN
Focusing Screen FN-AA
AE Power Winder FN
New FD 100mm f/2,
1/250 sec. at f/4, ASA 64



Eye-Level Finder FN

The most compact of the series, the Eye-Level Finder FN is used in general photography when shooting in manual or shutter-priority AE modes. The finder provides 0.8x magnification with a 50mm lens set at infinity. An X-sync hot shoe permits AE flash photography with dedicated Speedlites. To prevent light from entering the viewfinder during self-timer and remote-control operations, it features a built-in eyepiece shutter.



*AE Finder FN
Focusing Screen FN-SE
New FD 50-135mm f/3.5,
1/125 sec. at f/5.6, ASA 64*



AE Finder FN

If you find you need to frequently switch modes in your work, then this is the finder for you. Used alone, the AE Finder FN gives aperture-priority AE, plus manual override. Install either power drive, however, and you have shutter-priority AE, as well. With other SLRs, it is easy to forget which mode you are in if you switch modes repeatedly. The AE Finder FN reminds you of the current mode by shifting the exposure read-out from the right to directly beneath the image. A window provides a direct reading of the aperture setting on the lens (New FD lenses only), next to the shutter speed scale. In manual or shutter-priority AE mode, the display remains on the right. A hot shoe and eyepiece shutter are built in.

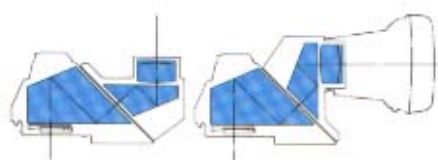


*Waist-Level Finder FN-6X
Focusing Screen FN-AH
New FD 200mm f/4,
1/30 sec. at f/4, ASA 200*

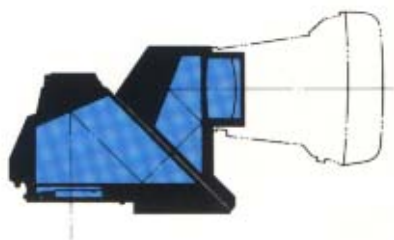


Waist-Level Finder FN-6X

The Waist-Level Finder FN-6X incorporates a 6X magnifying glass for critical focusing in close-up photography, copying work and photomacrography. The finder provides a clear, sharp image of the entire viewing area. The sophisticated optical system utilizes high refraction glass to eliminate spherical aberration, coma and astigmatism. Chromatic aberration does not occur even when you move your eye to one side. Stepless diopter adjustment from -5 to $+3$ is possible for individual eyesight correction. Metering is unimpaired. The exposure information is displayed on the left side and is easy to read, being on the same apparent visual plane as the image.



Speed Finder FN
Focusing Screen FN-AB
AE Motor Drive FN
New FD 200mm f/2.8,
1/250 sec. at f/8, ASA 64



Speed Finder FN

The Speed Finder FN is designed for situations where it is difficult or impossible to bring your eye right up to the camera. The entire image is visible up to 60mm away, making it perfect for action photography when wearing a helmet, goggles or other eye protection. Rock climbing, aerial photography, shooting from moving vehicles or underwater using a special housing — the possibilities are endless for the adventurous photographer. You'll find it a great help, too, if you wear glasses. The rear of the finder swivels a full 180° in a single swift motion, bringing the eyepiece to the horizontal position. The camera can be held above the head in a crowd or used to shoot from ground level with equal ease.



Waist-Level Finder FN
 Focusing Screen FN-PF
 New FD 85mm f/1.8,
 1/250 sec. at f/5.6, ASA 64



Waist-Level Finder FN

This finder proves its worth when you wish to use the camera at a low angle or view the subject at a right angle. This can include fields as diverse as photomacrography and astrophotography. The retractable barrel makes the finder even more compact. A built-in flip-up magnifier enlarges the image 4.6x for increased precision in focusing and composition. All exposure data are displayed unreversed and an adjustable rubber eye-piece hood blocks out stray light. Because of its light weight (approximately 1/3 that of the FN-6X), it is an ideal accessory for the naturalist who wants to photograph plants and insects on field trips.



AE Motor Drive FN

The AE Motor Drive FN's capacity to shoot up to five consecutive frames a second makes it perfect for sports and news coverage. But if that's too fast for your purpose, it can be set to operate at 3.5 fps. Single frame shooting is yet another option. Film rewind is automatic, too, taking just 8 seconds to wind back a 36-exposure roll. At film end, it stops automatically and a red LED lights up. The counter counts down the number of frames remaining. Two shutter buttons are installed in addition to the one on the camera body for convenient and comfortable operation in both horizontal and vertical positions. The AE Motor Drive FN forms a compact, lightweight whole with the camera, reducing fatigue in long shooting sessions. And the AE Motor Drive FN is ruggedly built. Special

measures have been taken to prevent entry of moisture and dust. This means that you can take pictures in as harsh an environment as a windswept mountain top or a humid jungle. Power sources for the AE Motor Drive FN are outlined below.



Choice of four power sources



Battery Pack FN

For the photographer who is always on the go, the Battery Pack FN accepts 12 commonly available penlight batteries. One set of batteries is sufficient to drive fifty 36-exposure rolls of film. A 3-step LED indicator keeps you informed of the battery condition. The versatile Battery Pack FN is recommended for all except low temperature conditions.



Ni-Cd Pack FN

The most compact and lightweight of all the power sources, the Ni-Cd Pack FN offers the added advantage of use in cold regions. It can power 30 rolls of film between recharges and is useful for studio work where AC power is available for recharging.



High Power Ni-Cd Pack FN

The temperature can drop to -20°C , yet this power pack will continue to function perfectly. There's no fear of the battery in the camera giving up either: the power pack can power the camera as well, using the Battery Cord FN. The High Power Ni-Cd Pack FN is the logical choice for the professional who regularly shoots a great deal of film, especially of wildlife or sports outdoors. The unit will drive up to 50 rolls at normal temperatures and approximately 20 in extreme cold. Recharging takes 5-1/2 to 7-1/2 hours with the Ni-Cd Charger FN.



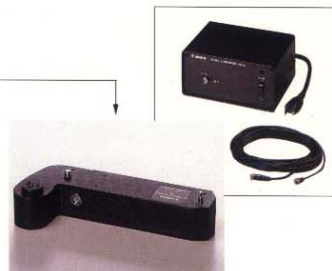
New FD 600mm f/4.5, 1/125 sec. at f/5.6, ASA 64



New FD 80-200mm f/4, 1/500 sec. at f/5.6, ASA 100



New FD 400mm f/2.8L, 1/500 sec. at f/5.6, ASA 64



AC/DC Converter AD-10

This unit enables you to operate the New F-1 and AE Motor Drive FN directly off the AC power supply. A generously sized cable affords maximum freedom of movement when using the camera in a studio or other place indoors. Constant film advance speed is maintained in continuous shooting. Ideal for high-volume shooting in the fashion and advertising fields.



New FD 70-210mm f/4, 1/30 sec. at f/11, ASA 200



Speed Finder FN
Focusing Screen FN-PK
AE Motor Drive FN
New F-1 40mm f/2.8L
1/500 sec. at f/4, ASA 64



We'll never know what caused this spectacular racing car pile-up. Let's speculate instead on how the photographer managed to record it all on film. It obviously called for sharp reflexes. Intuition, even, to anticipate that something dramatic could happen on that dangerous bend. Such talents would have netted him the first thrilling shot — the "decisive moment" in photo jargon — but he required something else to get the other, a split-second later.

That "something" was the AE Motor Drive FN. At its fastest speed it takes just 0.2 sec. to advance the film to the next frame — a speed that is humanly impossible to match manually. Shooting at 5 frames per second, you can take a whole series of action shots like these and never need to remove your eye from the viewfinder.

One other ingredient is important in

action photography. That is the ability to select a fast shutter speed yourself. The AE Motor Drive FN and the AE Power Winder FN provide this by linking up with the camera's internal circuitry to give shutter-priority AE. Dedicated compatibility with other New F-1 system accessories, including the Film Chamber FN-100, Data Back FN, Speedlites, remote control and interval timer units, opens up new horizons in your photography.

Several different power packs are available for the AE Motor Drive FN, depending on the type of photography and environmental conditions. The AE Power Winder FN takes four penlight batteries.



AE Finder FN
Focusing Screen FN-SC
New FD 28mm f/2.8
1/500 sec. at f/5.6, ASA 64

Eye-Level Finder FN
Focusing Screen FN-AD
AE Motor Drive FN
New FD 300mm f/2.8L
1/500 sec. at f/5.6, ASA 64



AE Power Winder FN

The AE Power Winder FN is a compact, lightweight unit which shares much of the sophistication of the motor drive. It gives shutter-priority AE and is compatible with many system accessories, including remote control equipment. For general photography, its prime advantage is in capturing candid shots and fleeting changes of expression in portraits. It operates at a maximum speed of 2 frames per second in continuous mode and provides instant readiness for follow-up shots. The provision of two shutter release buttons, one on the top of the grip and the other on the base, facilitates vertical and horizontal format shooting. The subtractive counter can be set for the desired number of exposures.

The AE Power Winder FN also lends itself to scientific applications. Record the various growth stages of plants and insects with an interval timer. Or trigger the camera by remote control and photograph animals and birds unawares.

*Eye-Level Finder FN
Focusing Screen FN-P4
AE Power Winder FN
New FD 200mm f/2.8
1/250 sec. at f/4, ASA 25*



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