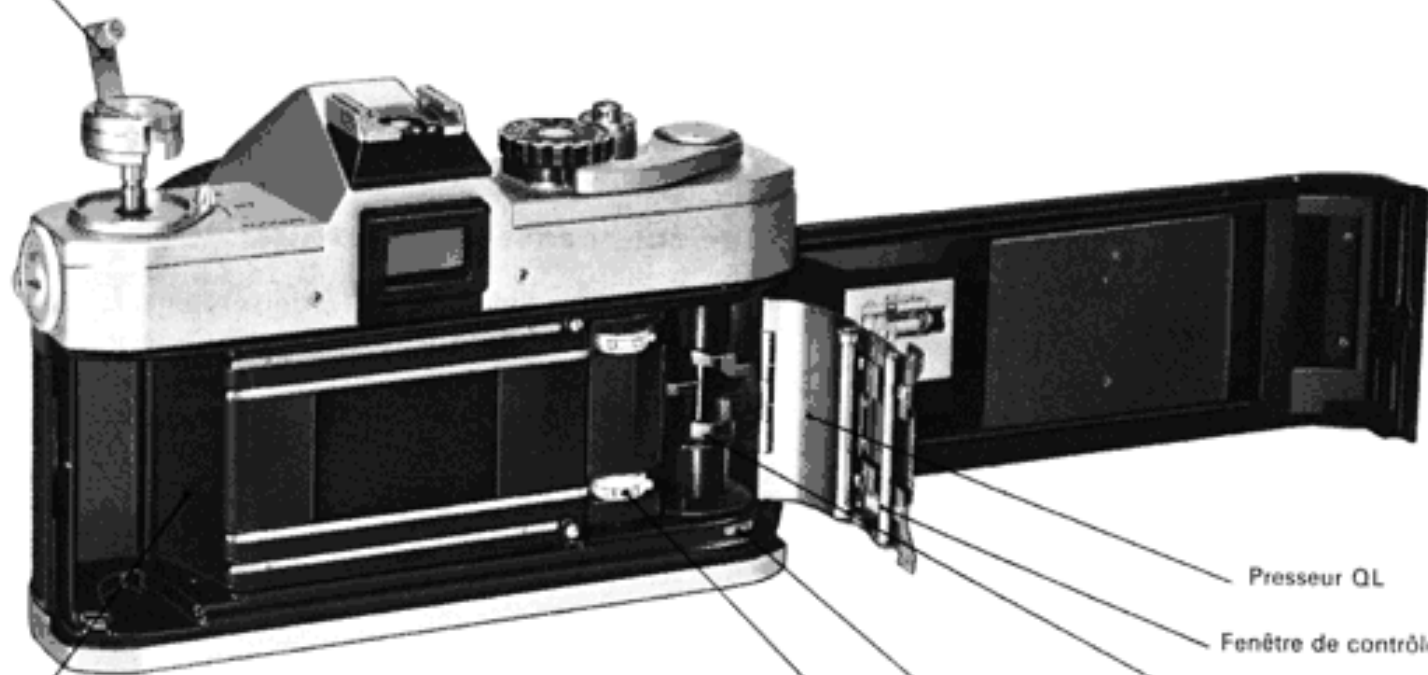


Manivelle de rebobinage du film



Presseur QL

Fenêtre de contrôle

Axe QL

Repère de positionnement
de l'amorce

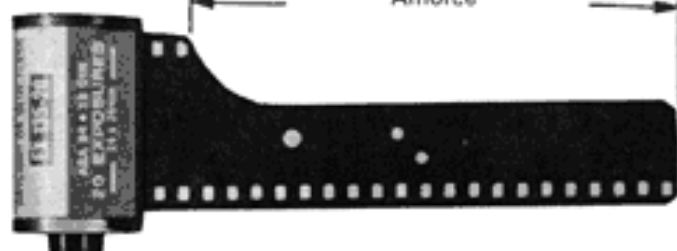
Roue d'entraînement du film

Compartiment de la cartouche du film



Sens dans lequel le film doit être placé
(surface sensible tournée contre l'objectif)

Amorce



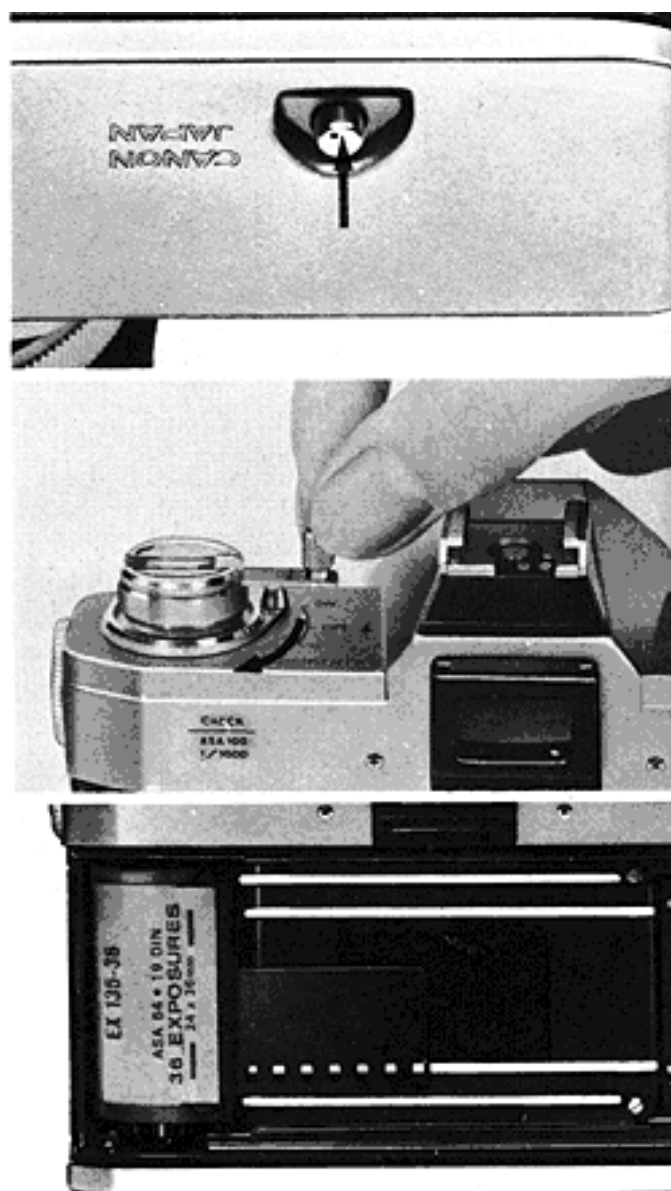
Film Rewinding

When the film reaches the end and the film advance lever stops, rewind the film into the cartridge as soon as possible. Be sure not to open the back cover before rewinding. Otherwise, the entire roll will be exposed and ruined as the exposed film is naked within the camera.

- 1 Press in the film rewind button.
- 2 Raise the film rewind crank, turn it in the direction of the arrow, and rewind the film into the cartridge. When the film rewind button stops revolving and rewinding resistance becomes light, stop rewinding immediately in order to keep the leader part of the film outside the cartridge.
- 3 Open the back cover.
- 4 Pull up the rewind knob fully and remove the cartridge.

■ Once the film rewind button has been pressed, the finger may be removed. The button will pop out automatically when the film advance lever is wound.

■ If you force the film advance lever after the film reaches its end, the film will become detached from the cartridge spool or tear, and rewinding will become impossible. If this happens, open the back cover and remove the film only in a darkroom.





Chargement du film

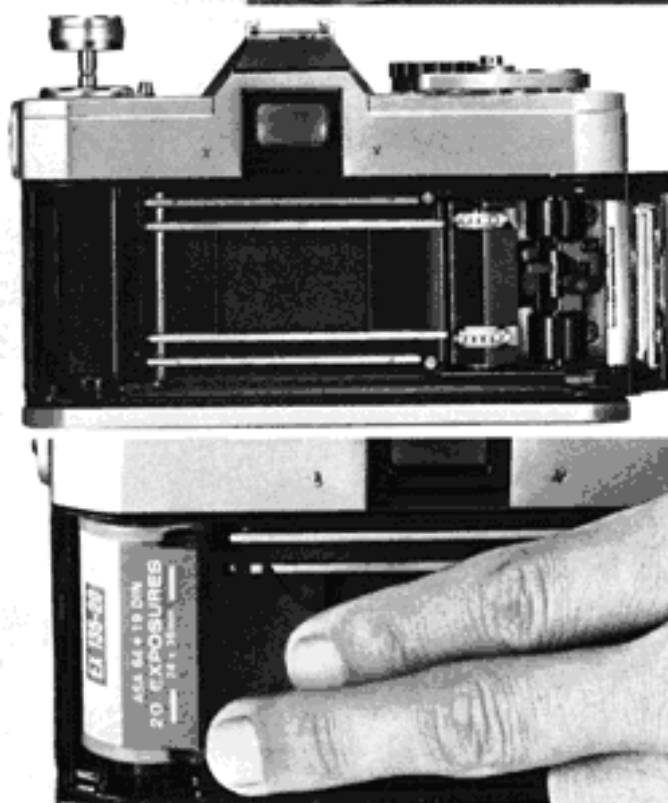
Le Canon FTb reçoit les cartouches standard 35 mm qui peuvent être chargées au jour, mais en lumière atténuée.

1 Soulever à fond le bouton de la manivelle de rebobinage. Le dos s'écarte légèrement.

2 Ouvrir complètement le couvercle; le presseur QL s'ouvre simultanément.

• Ne pas toucher au presseur QL qui s'ouvre et se ferme automatiquement en même temps que le dos du boîtier.

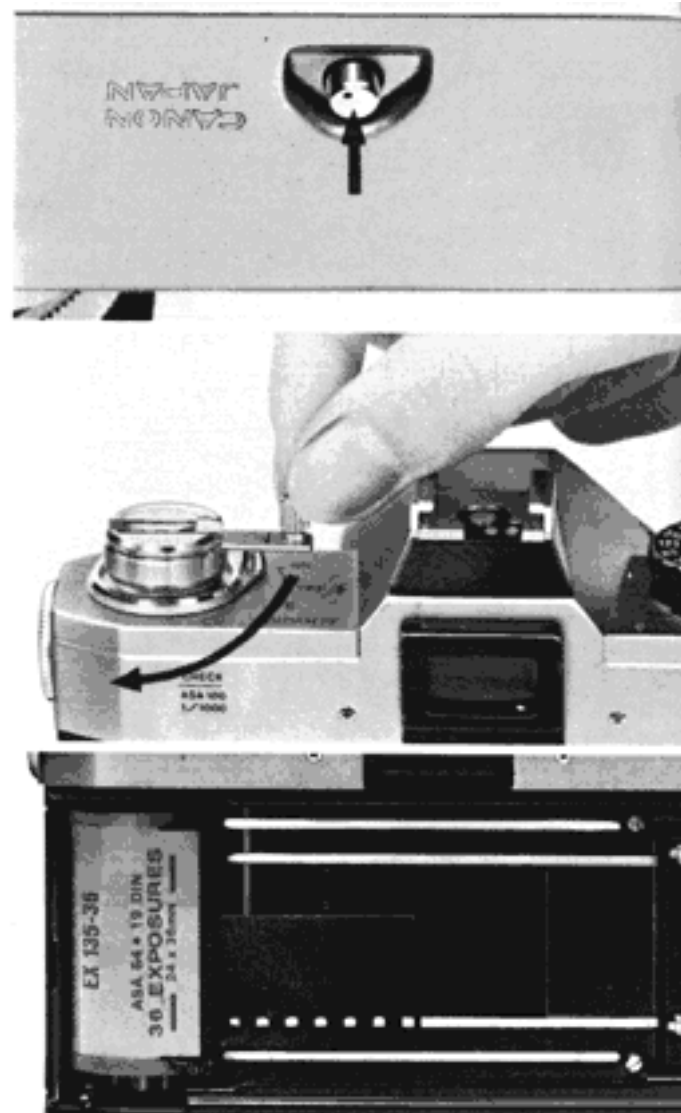
3 Présenter la cartouche, comme sur la photo ci-contre, et l'introduire dans le compartiment. Repousser ensuite le bouton de la manivelle de rebobinage à sa position initiale. La fourchette de la manivelle s'engage alors dans l'axe de la cartouche. Si le bouton de la manivelle de rebobinage ne revient pas totalement à sa place, le tourner légèrement vers la droite ou vers la gauche.



Rebobinage et déchargement du film

Lorsque le film arrive à la fin et qu'il n'est plus possible de faire fonctionner le levier d'armement, il convient de rebobiner aussitôt le film dans sa cartouche. Veiller à ne pas ouvrir le dos du boîtier avant le rebobinage pour ne pas risquer d'exposer et de voiler le rouleau tout entier, car le film, une fois les vues prises, n'est pas protégé à l'intérieur de l'appareil.

- 1 Appuyer sur le bouton de débrayage.
 - 2 Soulever la manivelle de rebobinage et la tourner dans le sens de la flèche pour rebobiner le film dans sa cartouche. Lorsque le bouton de débrayage s'arrête de tourner et que la résistance au rebobinage diminue, s'arrêter immédiatement de rebobiner de façon à ne pas entraîner l'amorce à l'intérieur de la cartouche.
 - 3 Ouvrir le dos du boîtier.
 - 4 Soulever entièrement le bouton portant la manivelle de rebobinage et retirer la cartouche de l'appareil.
- Une fois le bouton de débrayage enfoncé, on peut relâcher la pression du doigt; le bouton ressortira lorsqu'on actionnera le levier d'armement.
 - Si l'on force le levier d'armement, à la fin du film, on risque de déchirer l'amorce ou de l'arracher de la bobine débitrice, rendant le rebobinage impossible. Si, cependant, cet incident se produit, ouvrir le dos du boîtier en chambre noire et retirer le film.





Synchronisation du flash

Le Canon FTb est conçu pour permettre l'utilisation de deux procédés de photographie au flash: le Système automatique CAT (Réglage automatique Canon) à coïncidence d'aiguilles, avec flash Speedlite 133D (modèle exclusif, prochainement mis en vente), et le système ordinaire de synchronisation.

Type		Vitesse d'obturation synchronisée
Flash	ampoules classe FP (#6, Press 26)	1/125 ou plus rapide 1/30 ou plus lente
	ampoules classe M (M3, #5, Press 25)	1/30 ou plus lente
	ampoules classe MF (AG-1, AG-3 M2, Flashcube)	1/30 ou plus lente
Flash électronique	Speedlite 133D	1/60 ou plus lente

1 Le système CAT se branche exclusivement sur les objectifs FD 50 mm F 1,4 FD 50 mm F 1,8 et FD 35 mm F 2 et FD 35 mm F3,5 qui sont munis d'un ergot de couplage pour adaptateur de flash. Fixer le coupleur de Flash A2 ou B2 sur l'objectif qui transmet la distance de mise au point au circuit photométrique de l'appareil. Avec le système CAT, le signal de recharge du flash Speedlite est constamment transmis au circuit du posemètre. L'exposition adéquate peut donc être choisie de la manière suivante: Mettre d'abord le commutateur de posemètre sur la position «OFF» (arrêt) et le cadran des vitesses sur «60». Régler la distance de façon à déplacer l'aiguille du posemètre dans le viseur. Tourner ensuite la bague de présélection du diaphragme jusqu'à ce que l'aiguille du diaphragme vienne se superposer à celle du posemètre.



Synchronizing Flash Unit

Canon FTb is designed so that two systems of flash photography can be connected to it—the match needle type automatic flash photography which is called the Canon Auto-Tuning (CAT) System, using the Speedlite 133D (exclusive type), and ordinary synchronizing flash photography.

Type		Synchronized Shutter Speed
Flash	FP class (#6, Press 26)	1/125 or faster 1/30 or slower
	M class (M3, #5, Press 25)	1/30 or slower
	MF class (AG-1, AG-3, M2, Flashcube)	1/30 or slower
Electronic Flash Unit	Speedlite 133D	1/60 or slower

1 The CAT System is connected exclusively to the FD 50mm F 1.4 S.S.C., FD 50mm F 1.8 S.S.C., FD 35mm F 2 S.S.C. and FD 35mm F 3.5 S.C. lenses which have the flash adapter coupling pin. Attach the Flash Coupler A₂ or B₂ to the lens which transmits the focusing distance to the meter circuit of the camera. In the case of the CAT System, the charging power level of the Speedlite is continuously transmitted to the meter circuit of the camera. Thus, the correct exposure can be decided as follows: First set

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the meter switch at "OFF" and the shutter speed dial at "60". And set the distance so that the meter needle in the viewfinder moves. Then turn the preset aperture ring until the aperture needle aligns with the meter needle.

2 When using an ordinary electronic flash unit or flash bulb unit, connect the cord of the unit to the flash socket of the camera.

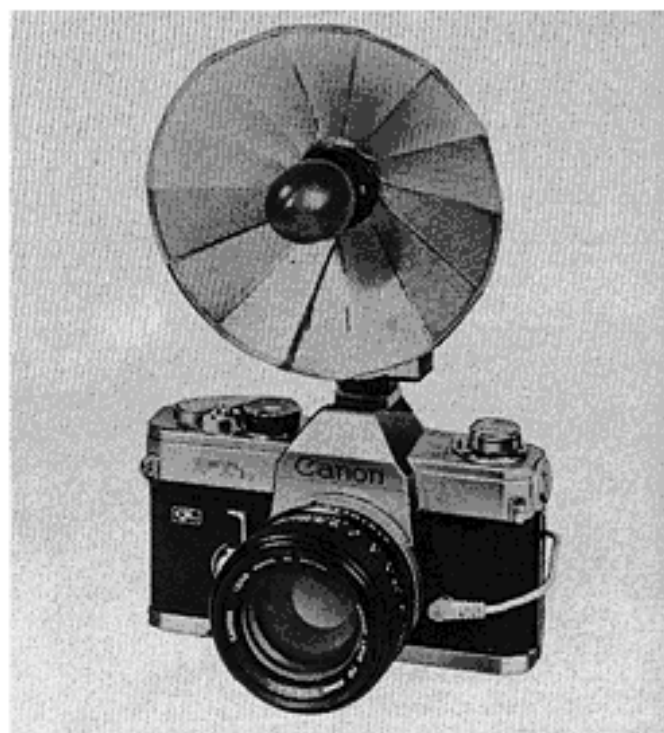
The exposure is decided by dividing the guide number of the unit with the focusing distance and obtaining the proper f/stop.

■ Some tripods make the focusing ring of the FD 55mm F 1.2 S.S.C. lens inoperable. In this case, attach the camera on the tripod with Canon Camera Holder F.

■ When using the flash socket by not attaching a flash unit onto the accessory shoe, be sure to cover it with the accessory shoe cover.

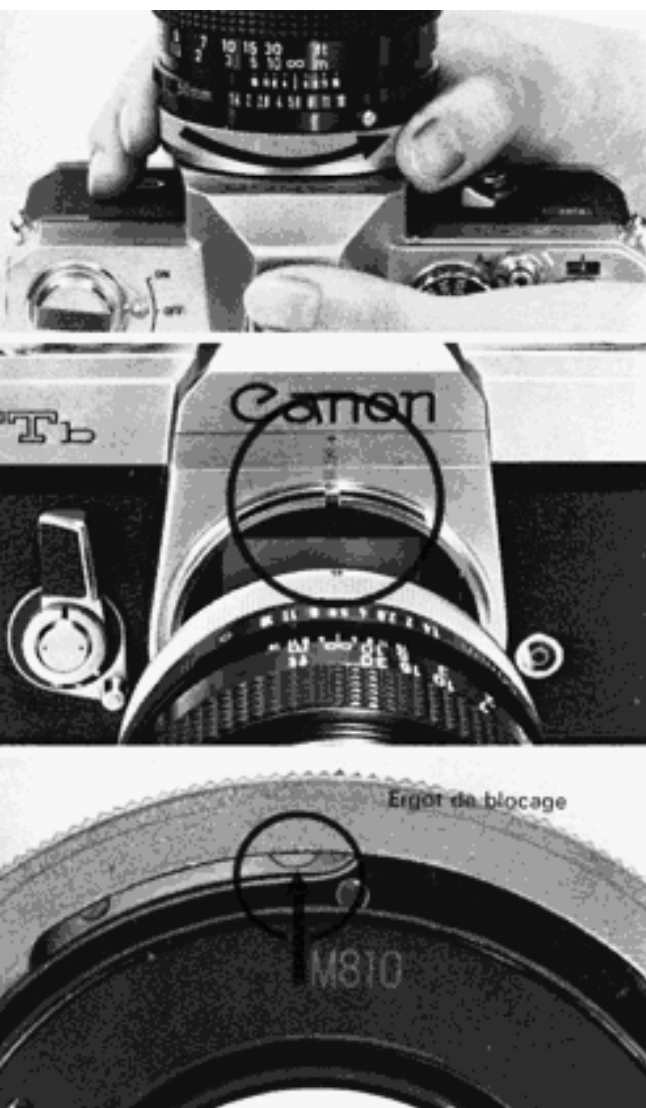
■ The X contact of Canon FTb is 1/60 sec.

■ A lens hood should be attached when taking pictures with a flash unit.



- 2** Lorsqu'on utilise un flash électronique ordinaire ou un flash à ampoules, brancher le câble du dispositif à la prise de flash située sur le boîtier de l'appareil. L'exposition est déterminée en divisant le nombre-guide du flash par la distance de mise au point, pour obtenir l'ouverture souhaitable.
- Certains trépieds rendent inopérante la bague de mise au point de l'objectif FD 50 mm F 1,2. Dans ce cas, fixer l'appareil sur le pied à l'aide du Support modèle F.
 - Lorsqu'on utilise la prise pour le flash, sans fixer son dispositif sur la griffe porte-accessoires, veiller à recouvrir celle-ci de son capot.
 - Le contact X du Canon FTb est à 1/60^e de sec.
 - Il convient de se servir d'un parasoleil pour la photographie au flash.





Utilisation des objectifs

Changement d'objectif

1 S'assurer que le verrou de fermeture du levier du diaphragme est desserré. Si le levier est pressé ou verrouillé, le point-repère rouge apparaît à l'intérieur de la monture de l'appareil. Le levier de commande automatique/manuelle du diaphragme, sur l'arrière de l'objectif, ne pourra pas être couplé, et le présélecteur d'ouverture du diaphragme ne fonctionnera pas.

- Pour enlever le capuchon anti-poussière de l'objectif, tourner la bague à baïonnette à fond vers la gauche. Dans ce cas, monter l'objectif sur l'appareil, tel qu'il est.

2 Retirer l'objectif de l'appareil en tournant la bague à baïonnette vers la gauche jusqu'à faire coïncider les points-repères rouges sur l'objectif et sur la monture.

3 Régler la bague de présélection du diaphragme de l'objectif à utiliser sur une position à l'intérieur de l'échelle des valeurs de l'ouverture. Si la bague est réglée sur l'anneau-repère vert, il ne sera pas possible de monter correctement l'objectif sur l'appareil.

4 Monter l'objectif en faisant coïncider les points-repères rouges de l'objectif et de la monture. Tourner la bague à baïonnette vers la droite et bloquer.

- Fixer l'objectif rapidement et à l'ombre. Le film risque de se voiler si l'appareil reste sans objectif.

- Chaque fois qu'on enlève un objectif, veiller à le coiffer d'un capuchon anti-poussière pour protéger les divers leviers et poussoirs.

- Protéger le miroir avec le capuchon de boîtier lorsque l'appareil reste longtemps inutilisé.

Indications transmises par l'objectif

Levier commandant l'aiguille du diaphragme dans le viseur: Transmet la valeur présélectionnée de l'ouverture automatique du diaphragme. Synchronisation avec l'ouverture présélectionnée par la manœuvre du levier. Le levier ne peut être actionné que lorsque la bague de la monture à baïonnette est mise à la position de montage.

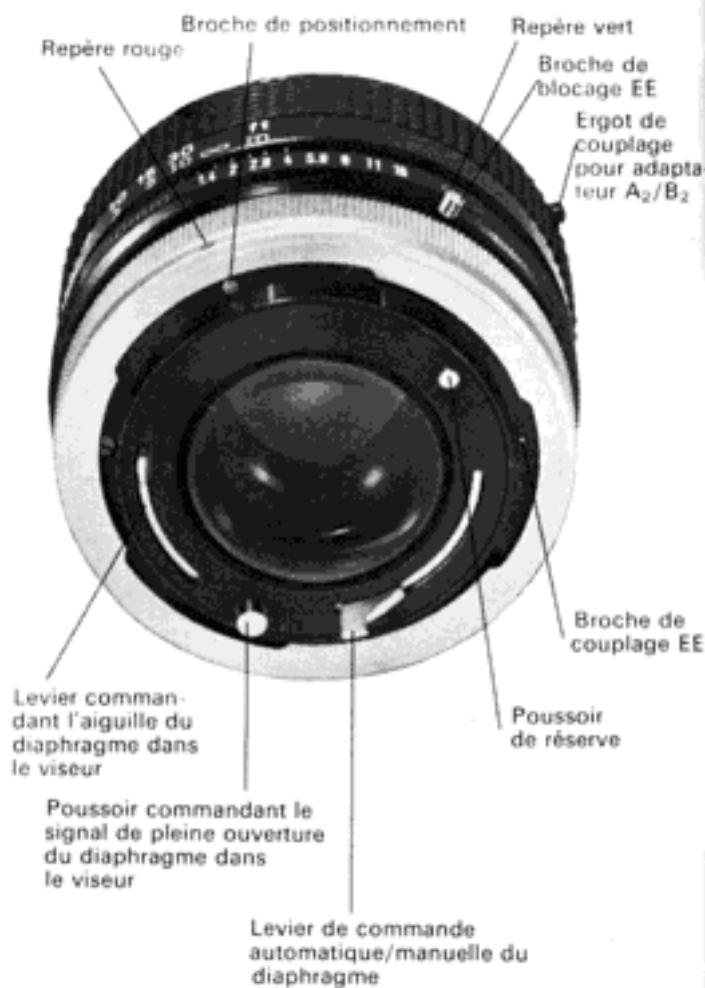
Poussoir commandant le signal de pleine ouverture du diaphragme dans le viseur: Transmet la pleine ouverture lorsqu'un objectif d'une valeur de pleine ouverture différente est mis en place. Il permet également de compenser l'erreur de la mesure à pleine ouverture.

Levier de commande automatique/manuelle du diaphragme: Règle l'ouverture à la valeur présélectionnée. Le serrer à droite pour passer sur la commande manuelle du diaphragme.

Broche de blocage de l'œil électrique (EE): Il s'agit d'un dispositif de sécurité destiné à empêcher le réglage de l'ouverture de se placer sur le repère vert. Pour effectuer le réglage sur le repère vert, tourner la bague du diaphragme tout en appuyant sur cette broche. Faire de même pour le déblocage.

Broche de couplage de l'œil électrique (EE): Lorsque la bague de présélection de l'ouverture du diaphragme est réglée sur le repère vert, pour l'œil électrique, l'objectif ne peut être mis en place que sur le Canon F-1. Sur le FTb, le réglage sur le repère vert est, dans ce cas, impossible.

Poussoir: De réserve.





Uses of Lenses

Changing Lenses

1 Be sure to unlock the stopped-down functioning lever lock. If the lever is pressed or is locked, the red dot appears inside the camera mount. The automatic/manual aperture lever, at the back end of the lens, cannot be connected to the coupling part on the camera body and the preset aperture will not function.

■ To remove the dust cap of the lens, turn the bayonet ring fully to the left. In this case, mount the lens onto the camera body as is.

2 Remove the lens from the camera body by turning the bayonet ring of the lens to the left until the red dot on the lens coincides with the red dot on the camera mount.

3 To confirm the operation or for reverse-lens shooting, first remove the lens from the camera body.

Then, press the lock pin which is located just above the positioning pin of the bayonet ring with a pointed object and turn the bayonet ring.

■ When the preset aperture ring is set at the green mark (circle), the lens cannot be attached to the FTb body.

4 Mount the lens by matching the red dot of the lens to the red dot on the camera mount. Turn the bayonet ring to the right and fasten.

■ Attach the lens quickly in the shade. The film will sometimes become foggy if the lens is left unattached.

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■ Whenever a lens is removed, be sure to put on the dust cap to protect the various signal levers and pins. ■ When not in use for a long time, protect the mirror with a flange cap.

Lens Signal

Aperture Signal Lever: Transmits the preset f/stop of the automatic aperture to the camera body. It is on a 1 to 1 movement basis with the preset aperture through lever manipulation. The aperture signal lever is operable only when the bayonet mount ring is turned to the attachment position.

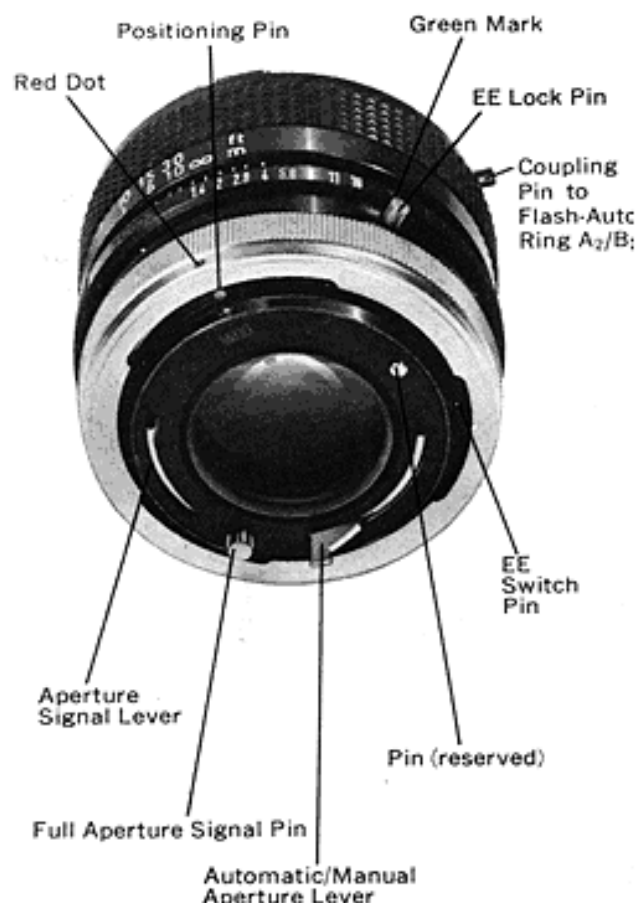
Full Aperture Signal Pin: Transmits the full aperture stop when a lens with a different full aperture number is mounted. It also performs error compensation of the full aperture metering.

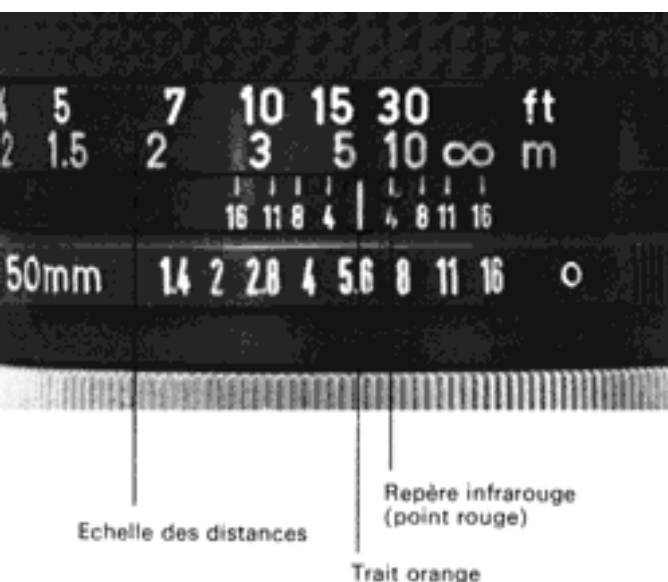
Automatic/Manual Aperture Lever: Stops down the aperture to the preset position. Clamp it to the right side for manually operated aperture.

EE Lock Pin: This is a protective pin to prevent the aperture of the lens from moving to the green mark unintentionally. In order to set at the green mark, turn the aperture ring while pushing down the EE lock pin. When withdrawing from the green mark, turn the aperture ring again pushing down the EE lock pin.

EE Switch Pin: When the preset aperture ring is set at the green mark for EE use, the lens can be attached only to the Canon F-1. If the lens is attached to the FTb, it cannot be set at the green mark.

Pin: Reserved.





Echelle des distances

Cette échelle indique la distance séparant le sujet visé du plan du film. Elle est nécessaire pour contrôler la profondeur de champ, dans la photographie en infrarouge ou au flash.

- La distance doit être lue au centre de la valeur indiquée sur l'échelle. Pour un nombre de dizaines, par exemple, la position correcte se trouve entre les deux chiffres.

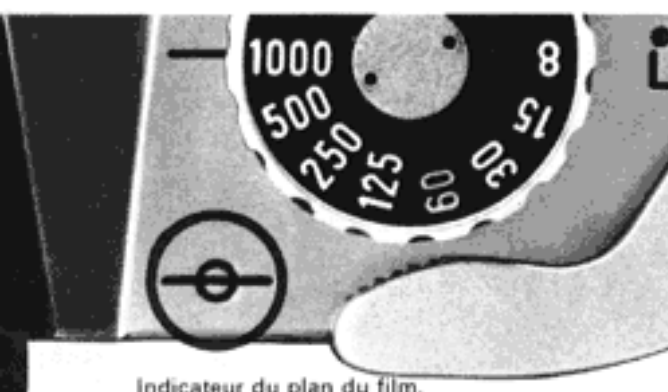
Repère infrarouge

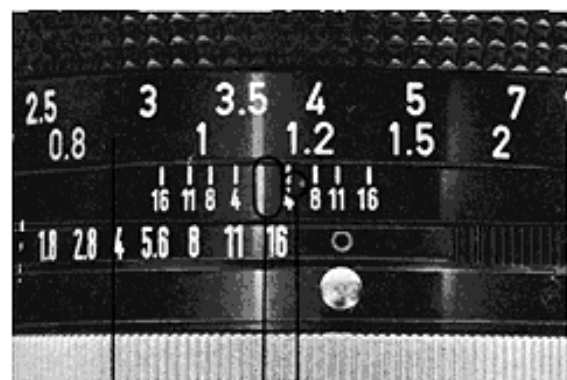
Pour la photographie en infrarouge, il y a lieu d'apporter une correction à la mise au point du fait que le foyer est légèrement décalé par rapport à la photographie courante. Effectuer la mise au point normale. Régler ensuite l'échelle des distances sur le point rouge – repère infrarouge (« R » dans le cas des objectifs FL). Par exemple, si l'échelle des distances donne 10 mètres, après mise au point, il suffit de placer la valeur « 10 » au regard du repère ponctuel. Ce « point », sur le FTb, correspond à un film sensible aux rayons infrarouges de 800 mμ, tel que le film Kodak IR 135, avec filtre Wratten 87.

Repère de plan du film

Lorsque la mise au point s'effectue en fonction d'une mesure effective de la distance, celle-ci doit se faire entre le sujet et le repère de plan. Il convient ensuite de reporter cette distance sur l'échelle.

Pour les gros plans, la photomacrographie ou les travaux de reproduction, choisir l'éloignement du sujet à partir de ce repère.

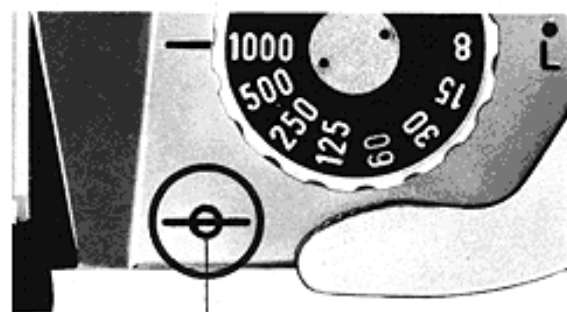




Distance Scale

Infrared Index
(red dot)

Index (orange line)



Film Plane Indicator

Depth-of-Field Scale

The depth-of-field scale indicates the range of subjects which will be in sharp focus on the film. In this case, the depth-of-field behind the subject is deeper than in front of subject. This range will vary with the following factors: The depth-of-field will be deeper, the larger the f/stop number, the further the distance of the subject, and/or the shorter the focal length of the lens. The depth-of-field will be shallower, the smaller the f/stop number, the nearer the distance of the subject, and/or the longer the focal length of the lens.

For example, if the lens is 50mm and the subject has been focused at a distance of 3m (10'), with an f/8 aperture opening read off from both indexes on either side of the indicator (orange line), the approximate depth-of-field is from 2.3m (8') to 4.3m (14').

If the aperture is closed down to f/16, the picture will become sharp when the subject is between 1.9m (6') to 7.6m (25') from the camera. This range will vary with the selected f/stop.

■ In the case of Canon FD lenses, you can see the actual sharpness through the viewfinder by pressing the stopped-down functioning lever.

■ Although air bubbles may sometimes be seen in a lens, they do not affect the resolution power or the sharpness of the picture.

Distance Scale

The distance scale indicates the distance between the focused subject and the film plane. The scale is necessary for checking the depth-of-field, for flash and infrared photographs.

■ The correct position of the scale is in the center of each value. For example, the correct position of a two-digit value is the center of the two figures.

Infrared Index

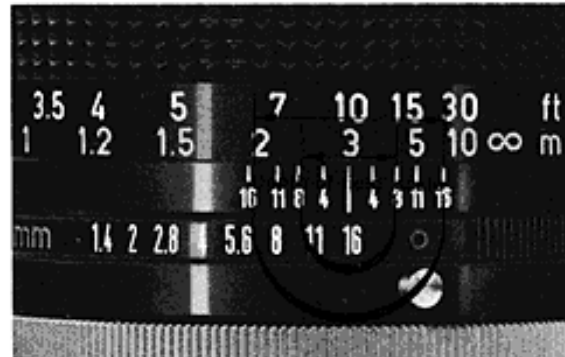
For infrared photography, correction of the distance scale is necessary because the focal point slightly deviates from ordinary photography. Focus first in the ordinary manner, then adjust the distance scale to the infrared mark "·" ("R" in the case of FL lenses) in red. For instance, if the distance scale reads 10m after focusing, merely shift the 10 scale to "·" position. The position of "·" on the FTb is based on using film with the highest wave-length sensitivity figure of 800m μ , such as Kodak IR 135 film and Wratten 87 filter.

Film Plane Indicator

When focusing is done by actual measurement, measure the distance from the film plane indicator and interpret the measured distance on the distance scale.

When performing close-ups, macrophotography or copy work, decide the distance of the camera from the subject with this indicator.

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Echelle des profondeurs de champ

L'échelle des profondeurs de champ indique la distance sur laquelle s'étend la netteté de l'image en avant et en arrière de la mise au point. Cette profondeur de champ varie en fonction de plusieurs facteurs: Elle sera d'autant plus importante que l'ouverture du diaphragme sera plus petite, le sujet plus éloigné, ou la focale de l'objectif plus courte. Au contraire, elle sera d'autant plus réduite que l'ouverture du diaphragme sera plus grande, le sujet plus rapproché, ou la focale de l'objectif plus longue.

Par exemple, pour un objectif 50 mm, si la mise au point a été effectuée sur un sujet à 3 m, avec une ouverture F 8 lue sur les deux repères, de part et d'autre de l'indicateur (trait orange), la profondeur de champ s'étendra approximativement de 2,3 m à 4,3 m. Avec une ouverture F 16, l'image sera nette pour un sujet se trouvant entre 1,9 m et 7,6 m de l'appareil. Cette profondeur variera en fonction de l'ouverture choisie.

- Les objectifs Canon FD permettent de vérifier dans le viseur l'image avec sa netteté réelle lorsqu'on appuie sur le levier de commande de fermeture du diaphragme.
- Il peut arriver que de minuscules bulles d'air soient perceptibles sur les lentilles: elles n'affectent en rien le pouvoir de résolution ou la finesse de l'image.



Objectif 50 mm F 8
Profondeur de champ 2,3-4,3 m
Pour une mise au point sur 3 m



Objectif 50 mm F 16
Profondeur de champ 1,9-7,6 m
Pour une mise au point sur 3 m





Lens Hood

When attaching the lens hood on the lens, align it to the bayonet ring on the lens and turn it clockwise.

With some exceptions of standard and wide-angle lenses, a lens hood can be stored in the camera case. When doing this, attach the lens hood onto the lens in inversed order and align it to the bayonet ring and turn counterclockwise.



FD Lens Mount (FL and R Series Lenses)

All Canon FD and FL lenses, which have FD and FL mounts, can be used with the Canon FTb, except the FLP 38mm F 2.8.

■ It is also possible to attach and use all Canon R lenses for Canonflex use. However, as the preset aperture mechanism differs, pictures must be taken by controlling the aperture manually.

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Fixing Mirror Upwards

In performing photomicrography, the Canon FTb can be operated with the mirror locked in an upward position after the picture has been composed in the viewfinder, in order to eliminate mirror vibration.

To lock the mirror in an upward position, push down the stopped-down functioning lever and the lever lock to "M". The aperture is now stopped-down and controlled manually. The mirror can be locked independently from film advance and shutter speed operations.

When the mirror is locked in an upward position, SLR viewing is not possible, and distance must be estimated by eye. When the mirror is locked, always keep the lens covered. The film will sometimes become foggy if the lens cap is not attached.

■ After the mirror lock device has been used, be sure to return the mirror lock lever to its original position. Failure to do this will result in inaccurate focusing.

■ When Canon Lens FL 19mm F 3.5 is used, the mirror should be fixed, and combined usage of the exclusive viewfinder to this lens becomes necessary.

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Parasoleil

Pour monter le parasoleil sur l'objectif, le présenter face à la bague à baïonnette et tourner dans le sens des aiguilles d'une montre.

A l'exception de quelques objectifs standards et de grands angulaires, un parasoleil peut se loger dans le sac de l'appareil. Monter alors le parasoleil sur l'objectif dans l'ordre inverse, le présenter face à la bague à baïonnette et tourner dans le sens contraire des aiguilles d'une montre.

Monture d'objectif FD (objectifs des séries FL et R)

Tous les objectifs Canon FD et FL munis des montures qui leur correspondent, à l'exception du FLP 38 mm F 2,8, peuvent être utilisés avec le Canon FTb.

- En outre, tous les objectifs de la série R des Canonflex s'adaptent parfaitement sur le Canon FTb. Toutefois, du fait que le mécanisme de présélection automatique du diaphragme est différent, les photos doivent être prises en réglant le diaphragme manuellement.



Using Self-Timer

- 1** Wind the film advance lever.
- 2** Turn the self-timer lever counterclockwise all the way down until it stops.
- 3** Depress the shutter release button. The shutter will be actuated approximately 10 seconds later.
 - Be sure to wind the film advance lever. Otherwise, the self-timer will act but the shutter will not be actuated.
 - The self-timer lever can be used as a stopped-down functioning lever as soon as the self-timer is charged.
 - If the self-timer lever is set while the mirror is in an upward position, the mirror-up position is released. Therefore, always set the mirror in an upward position after setting the self-timer.

Immobilisation du miroir en position relevée

En photomicrographie, une fois que l'image a été cadrée dans le viseur, on peut faire fonctionner le Canon FTb avec le miroir en position relevée, pour éliminer les vibrations du miroir.

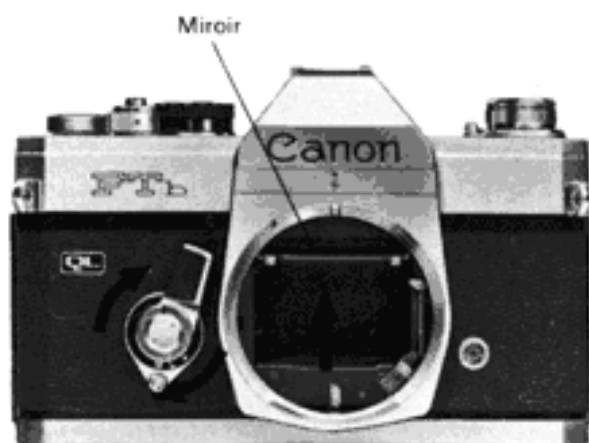
Pour immobiliser le miroir en position relevée, pousser le levier de commande de fermeture du diaphragme et amener le levier de verrouillage sur la position « M ». Le diaphragme sera alors fermé et passera en commande manuelle. Le miroir peut être verrouillé avant ou après armement de l'obturateur et à n'importe quel réglage des vitesses d'obturation.

Lorsque le miroir est relevé, l'appareil devient non réflex si bien que la distance doit être appréciée à vue.

Avec le miroir relevé, le capuchon d'objectif doit toujours être mis en place, sinon le film risque de se voiler.

- Après usage du dispositif de verrouillage du miroir, veiller à le ramener à sa position initiale. Sinon la mise au point sera défectueuse.

- Avec l'objectif très grand angulaire Canon FL 19 mm F 3,5, le miroir doit être immobilisé. En outre, un viseur spécialement conçu pour cet objectif doit être utilisé.





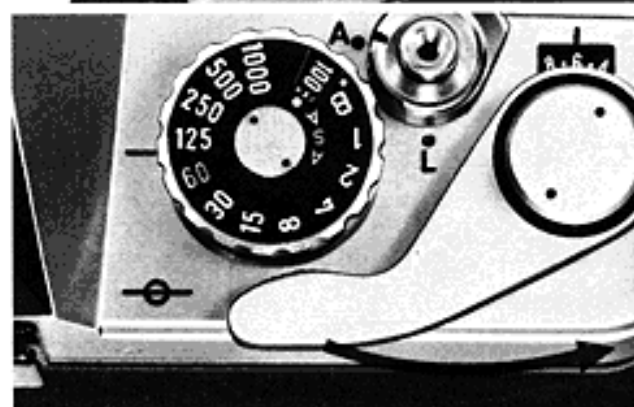
Emploi du dispositif de retardement

- 1 Actionner le levier d'avancement du film.
 - 2 Faire pivoter à fond le levier du retardateur dans le sens contraire des aiguilles d'une montre.
 - 3 Presser sur le bouton de déclenchement. L'obturateur fonctionnera environ 10 sec. plus tard.
- Veiller à bien armer l'appareil. En cas d'oubli, le retardateur fonctionnera sans que le déclenchement puisse s'effectuer.
 - Le levier du retardateur peut également servir de levier de fermeture du diaphragme dès que le retardateur a été armé.
 - Si le retardateur est armé pendant que le miroir est relevé, le verrouillage de celui-ci est libéré. Il convient donc de mettre le miroir en position relevée après armement du retardateur.

Double Exposures

Although the Canon FTb is designed to prevent double exposures being made by mistake, a double exposure can be made by the following steps:

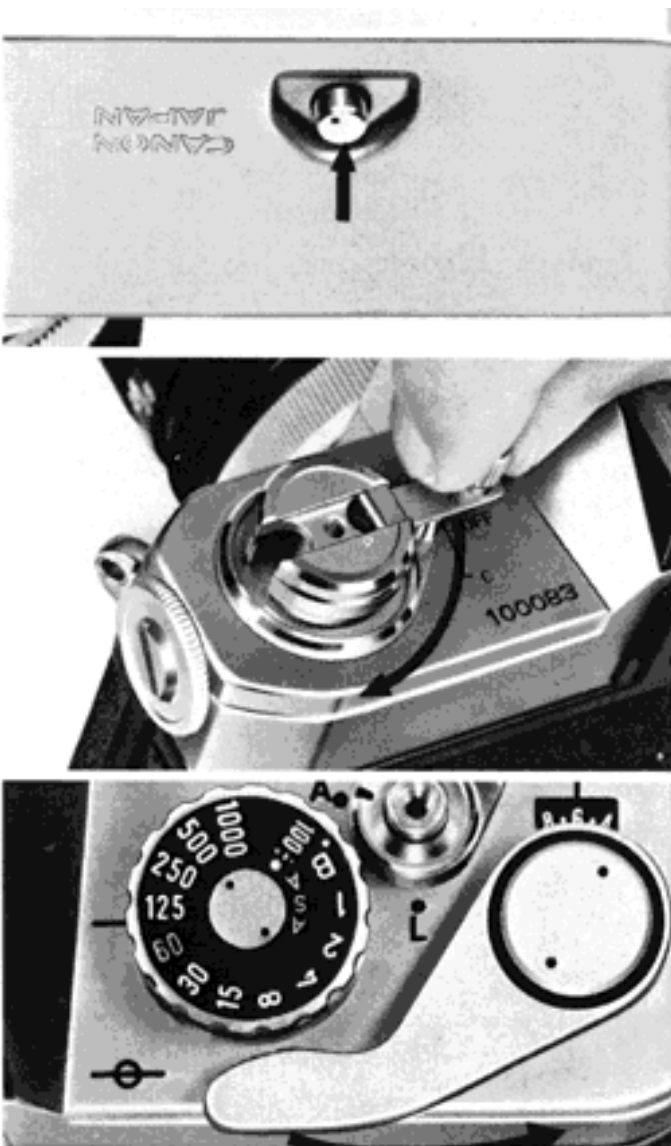
- 1** When the first exposure has been made, depress the film rewind button.
 - 2** Rewind the film with the film rewind crank while watching the mark on the film rewind button carefully.
 - 3** Stop rewinding when the mark has made a $7/8$ turn, i.e., 315° .
 - 4** Next, wind the film advance lever while lightly holding the rewinding crank. When resistance is felt on the film rewind crank, stop winding.
 - 5** Wind the film advance lever once more. The camera is ready for another exposure.
- By repeating the above process, any number of exposures on the same frame can be made. However the frame counter will continue to advance with each exposure.

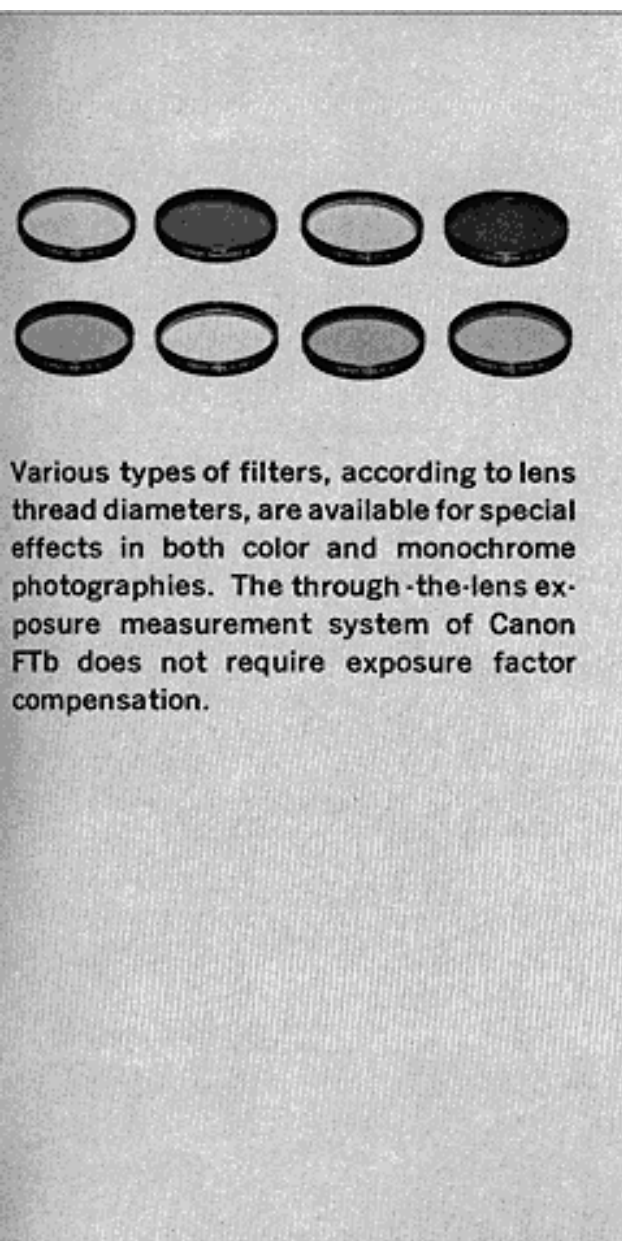


Surimpression

Une double exposition accidentelle, est impossible avec le Canon FTb, grâce à son dispositif de sécurité. Par contre, les surimpressions volontaires peuvent être réalisées, en opérant de la manière suivante:

- 1 Après la première exposition, appuyer sur le bouton de débrayage.
 - 2 Rebobiner le film à l'aide de la manivelle, en surveillant le repère rouge du bouton de débrayage.
 - 3 Arrêter le rebobinage lorsque le repère aura effectué 7/8 de tour (315°).
 - 4 Actionner le levier d'armement tout en retenant légèrement la manivelle de rebobinage. Lâcher celle-ci dès que l'on sent une résistance.
 - 5 Actionner encore une fois le levier d'armement. L'appareil est alors prêt pour la deuxième exposition.
- En répétant cette manœuvre, on peut faire autant de surimpressions que l'on veut. Se rappeler que le compteur d'images avance à chaque déclenchement.



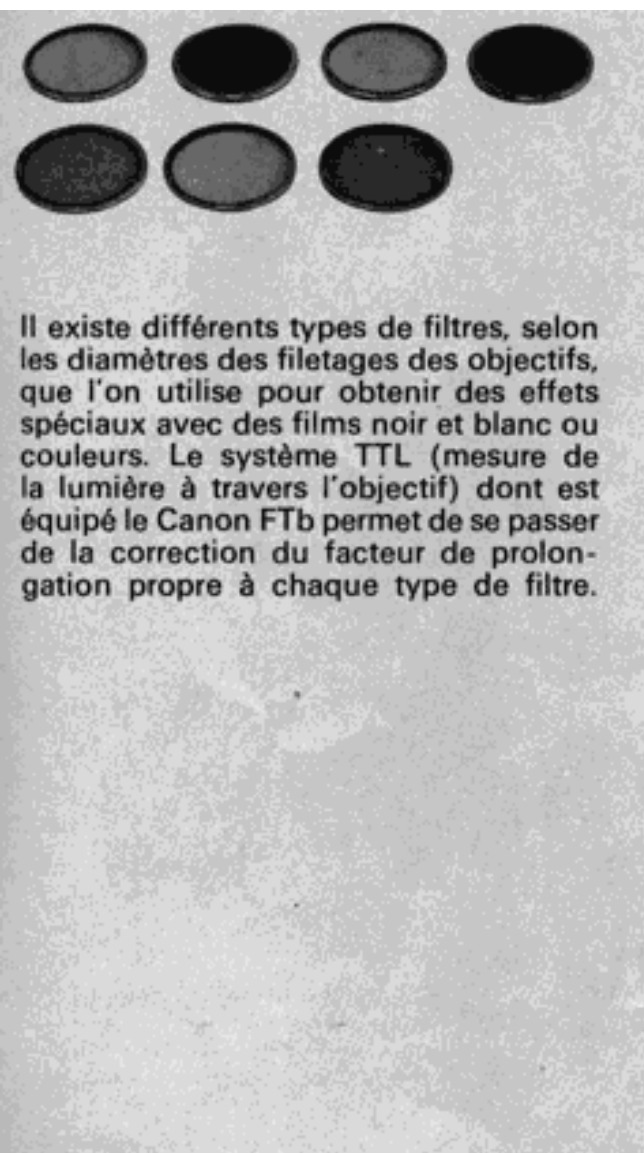


Various types of filters, according to lens thread diameters, are available for special effects in both color and monochrome photographs. The through-the-lens exposure measurement system of Canon FTb does not require exposure factor compensation.

Filters

Type	Effectiveness of Filters
○● UV	Absorbs only ultra-violet rays. Especially effective at seaside, and on high mountains. Recommended for use in color photography.
○ Y1 Y3	Increases contrast of black and white film. Enhances clouds, darkens the blue sky. Brightens red and yellow.
○ O1	Darkens blue, increases yellow and red perceptibly. Good for contrasts especially in distant landscapes.
○ R1	Makes strong contrasts. May also be used with infrared film.
○ G1	Prevents red from turning radically into white. Lightens sky and face appropriately, and reflects the lightness of fresh greenery.
○● ND4 ND8	ND4 reduces light values by 1/4, ND8 by 1/8. No effect on the reproduction of colors.
● SKYLIGHT	Acts to harmonize the blue sky and shade.
● CCA4	For use with daylight type film under cloudy conditions.
● CCA8	For use with universal type (color negative) film under cloudy conditions or with tungsten type film in the morning sun or sunset.
● CCA (12)	For use with tungsten type film under sunlight.
● CCB4	For use with daylight type film in the morning sun or sunset.
● CCB8	For use with daylight type film and clear flash bulb.
● CCB (12)	For use with daylight type film under tungsten light.

○ For black and white film. ● For color film.



Filtres

Type	Caractéristiques des divers filtres
○ ● UV	N'absorbe que les ultra-violets. Spécialement efficace au bord de la mer et en montagne. Recommandé pour la photographie en couleur.
○ Y1 Y3	Donne plus de contrastes aux photos noir et blanc. Fait ressortir les nuages. Fonce le ciel bleu. Accentue le rouge et le jaune.
○ O1	Fonce le bleu, fait ressortir sensiblement le jaune et le rouge. Excellent pour les contrastes, surtout dans les paysages lointains.
○ R1	Donne des contrastes vigoureux. Peut être également utilisé avec film infrarouge.
○ G1	Empêche les couleurs rouges de tourner radicalement au blanc. Illumine les teintes du ciel et du visage. Traduit la fraîcheur de la verdure avec une luminosité semblable à celle perçue par l'œil nu.
○ ● ND4 ND8	ND4 réduit le volume de lumière de 4 fois; ND8 de 8 fois. N'affecte pas la reproduction des couleurs.
● Skylight	Harmonise le bleu du ciel et les ombres.
● CCA4	Emploi avec un film « lumière du jour », par temps couvert.
● CCA8	Emploi avec un film universel (négatif couleurs), par temps couvert, ou avec film lumière artificielle pour lever et coucher du soleil.
● CCA(12)	Emploi avec un film lumière artificielle à la lumière du jour.
● CCB4	Utilisé avec un film « lumière du jour » au lever et coucher du soleil.
● CCB8	Utilisé avec un film « lumière du jour » avec des ampoules flash blanches.
● CCB(12)	Utilisé avec un film « lumière du jour » à la lumière artificielle.

○ Pour film noir et blanc ● Pour film couleurs

Objectifs interchangeables et accessoires

Une vaste gamme d'objectifs interchangeables allant de 7,5 à 1200 mm et des accessoires divers sont à votre disposition pour améliorer encore les performances de votre Canon FTb.

Objectifs interchangeables Canon

- | | |
|---------------------------------|----------------------------|
| 1. Fisheye 7,5mm
F 5.6 SSC | 14. FD 55mm
F 1,2AL SSC |
| 2. Fisheye FD 15mm
F 2,8 SSC | 15. FD 100mm
F 2,8 SSC |
| 3. FD 17mm F 4 SSC | 16. FD 135mm F 3,5 SC |
| 4. FD 20mm F 2,8 SSC | 17. FD 135mm F 2,5 SC |
| 5. FD 24mm F 2,8 SSC | 18. FD 200mm F 4 SSC |
| 6. FD 28mm F 3,5 SC | 19. FD 300mm F 5,6 SC |
| 7. FD 35mm F 3,5 SC | 20. FD 100-200mm F 5,6 SC |
| 8. TS 35mm F 2,8 SSC | 21. FL-F 300mm F 5,6 |
| 9. FD 35mm F 2 SSC | 22. FL-F 500 mm F 5,6 |
| 10. FL 50mm F 3,5 | 23. FL 400mm F 5,6 |
| 11. FD 50mm F 1,8 SC | 24. FL 600mm F 5,6 |
| 12. FD 50mm F 1,4 SSC | 25. FL 800mm F 8 |
| 13. FD 55mm F 1,2 SSC | 26. FL 1200mm F 11 |

N.B.: Certains de ces objectifs seront prochainement mis sur le marché.

Tous les objectifs Canon FL et R, à l'exception du FLP 38 mm F 2,8, peuvent être montés sur le FTb.



Interchangeable Lenses and Accessories

A wide range of interchangeable lenses from 7.5mm to 1200mm and various accessories are available to further enhance your Canon FTb.

Canon Interchangeable Lenses

- | | |
|------------------------------------|-------------------------------|
| 1. Fisheye 7.5mm
F 5.6 S.S.C. | 14. FD 55mm
F 1.2AL S.S.C. |
| 2. Fisheye FD 15mm
F 2.8 S.S.C. | 15. FD 100mm
F 2.8 S.S.C. |
| 3. FD 17mm F 4 S.S.C. | 16. FD 135mm F 3.5 S.S.C. |
| 4. FD 20mm F 2.8 S.S.C. | 17. FD 135mm F 2.5 S.S.C. |
| 5. FD 24mm F 2.8 S.S.C. | 18. FD 200mm F 4 S.S.C. |
| 6. FD 28mm F 3.5 S.S.C. | 19. FD 300mm F 5.6 S.S.C. |
| 7. FD 35mm F 3.5 S.S.C. | 20. FD 100-200mm F 5.6 S.S.C. |
| 8. TS 35mm F 2.8 S.S.C. | 21. FL-F 300mm F 5.6 |
| 9. FD 35mm F 2 S.S.C. | 22. FL-F 500mm F 5.6 |
| 10. FL 50mm F 3.5 | 23. FL 400mm F 5.6 |
| 11. FD 50mm F 1.8 S.S.C. | 24. FL 600mm F 5.6 |
| 12. FD 50mm F 1.4 S.S.C. | 25. FL 800mm F 8 |
| 13. FD 55mm F 1.2 S.S.C. | 26. FL 1200mm F 11 S.S.C. |

Note: Some lenses are not available but will be marketed soon.

All Canon FL and R Lenses can be used with the FTb, except the FLP 38mm F 2.8.



Canon Booster

An optional Canon Booster is an auxiliary meter that is attached to the FTb for measuring the subjects under dim lighting conditions.

Light Measuring Range: With ASA 100 film, EV 10 (f/22 at 1/2 sec.)-EV -3.5 (f/1.2 at 15 sec.).

Measuring Method: Zero-method direct reading type.

Photocell: Utilizes CdS photocell of the camera.

Exposure Time Dial: In the case of FTb: 30, 15, 8, 4, 2, 1, 1/2, 1/4, 1/8, 1/15, 1/30 sec. The camera type indicator window is set at "P-Fb".

Power Sources: For operating meter, use two 1.3 v M20 (#625) mercury batteries.

For illumination of meter indicator window, use one 1.3 v M20 mercury battery (use the battery removed from the camera).

Battery Check: Can be checked by the switch.

Size: 65 x 54 x 39mm (2 1/2" x 2 1/8" x 1 1/2").

Weight: 180 grams (6 3/8 oz.).



L'amplificateur Canon (Booster)

L'amplificateur Canon est un posemètre auxiliaire qui se monte sur le FTb pour prendre la mesure de la lumière sous un éclairage extrêmement faible.

Caractéristiques Sensibilité de l'Amplificateur avec un film de 100 ASA: Il 10 (f 22 à une demi-seconde) Il 3.5 (f 1.2 à 15 secondes).

Mesure: Méthode 0 à lecture directe.

Cellule: Utilise la cellule CdS de l'appareil.

Cadran de temps de pose: dans le cas du FTb: 30, 15, 8, 4, 2, 1, 1/2, 1/4, 1/8, 1/15, 1/30, de sec.

Le fenêtre indicatrice du modèle de l'appareil est réglée sur «P Fb».

Source de l'alimentation de l'amplificateur: deux piles au mercure de 1.3 V type M 20 (# 625).

Pour l'éclairage de la fenêtre: une pile au mercure de 1,3 V, type M 20 (utiliser la pile retirée de l'appareil).

Contrôle des piles: Par l'interrupteur.

Dimensions: 65 x 54 x 39 mm.

Poids: 180 grammes.



Camera Body Number _____
Lens Number _____
Date of Purchase _____
Dealer's Name _____

Proper Care of the Camera

Moisture and dust are harmful to your camera. If your camera is to be stored for a long time, it should be removed from its case and also remove the mercury battery, and silica gel or another drying agent should be placed alongside it.

When you use your camera on a rainy day, or at the beach, moisture and salt air adhere to it, which can result in stains, rust, and corrosion. Use a soft brush to get rid of dust and a soft dry cloth for wiping.

- In extremely cold areas, expose the camera to the outer air only when in use. When using, expose the camera gradually to the outer air to prevent the lens from clouding.
- Do not keep the camera in a hot place such as a globe compartment or the rear window shelf. It will cause trouble with the camera.
- Do not expose the camera leaving it without the lens cap directly to the sun. It will cause a fog on the film and a pin-hole on the shutter curtain.

Cleaning the Lens

Use a blower or a brush to remove dust on the lens. If you should get a fingerprint on the lens, soak a little pure alcohol or ether on lens cleaning tissue. Then wrap the tissue around a matchstick and wipe the lens lightly in a circular motion.



Entretien et nettoyage du Canon FTb

L'humidité et la poussière nuisent au bon état de l'appareil. S'il doit rester longtemps inutilisé, sortir l'appareil de son sac et l'entourer de gel de silice ou d'un autre siccatif.

Lorsqu'on se sert de l'appareil un jour de pluie ou à la plage, l'humidité ou l'air de la mer risquent de causer des taches et de le rouiller. Utiliser une brosse douce pour enlever la poussière et un chiffon sec pour l'essuyer.

- Dans les régions soumises aux grands froids, ne sortir l'appareil qu'au moment de son utilisation. Exposer alors progressivement l'appareil à l'air extérieur, afin d'éviter que l'objectif ne se couvre de buée.
- Dans les pays chauds, s'abstenir de laisser l'appareil à l'intérieur d'une automobile, pendant la journée ou sous l'effet direct du soleil. La cellule CdS risque d'être endommagée.

Nettoyage de l'objectif

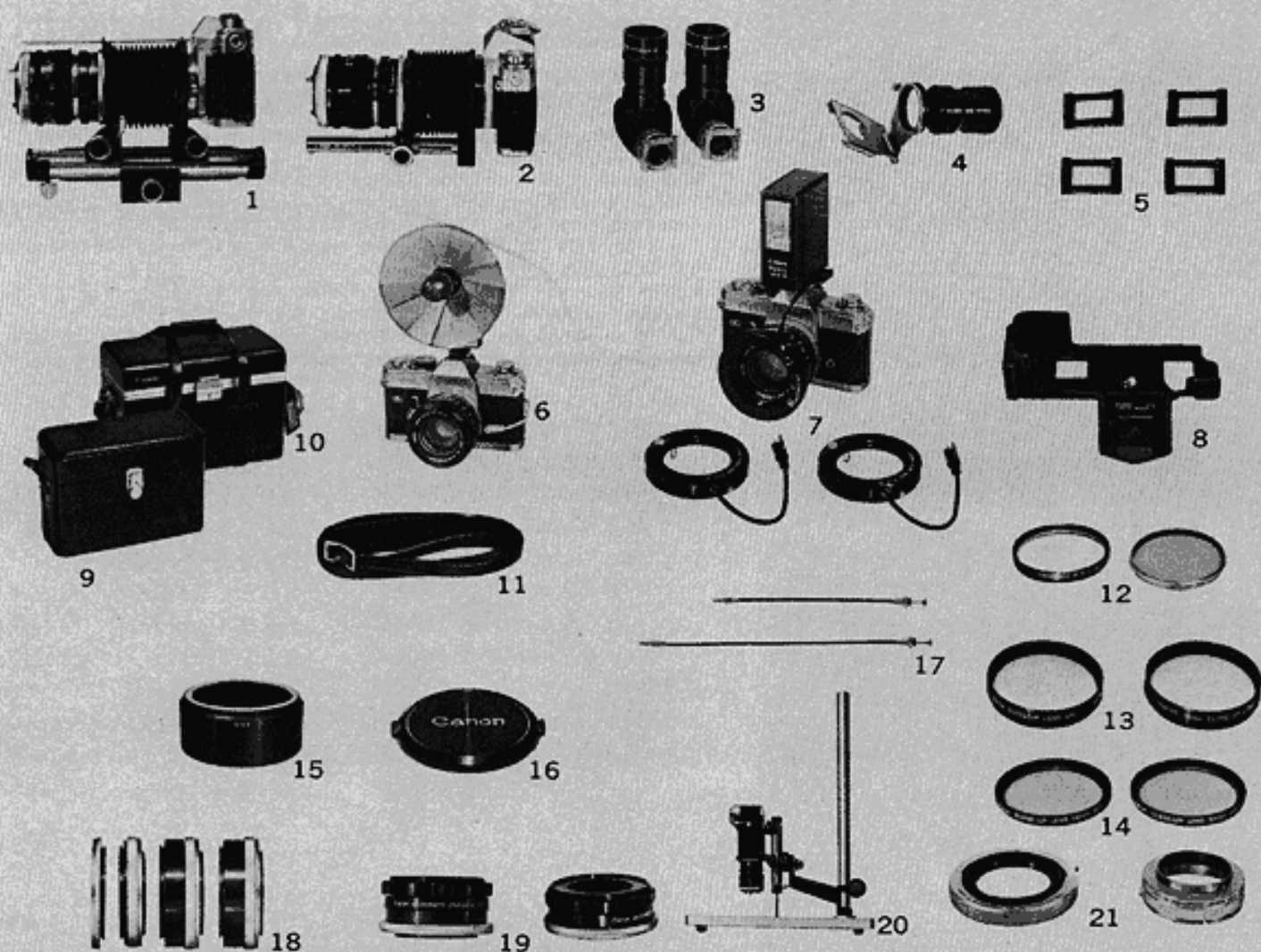
Prendre un soufflet pour enlever la poussière sur l'objectif ou l'épousseter avec une brosse douce. Si, par mégarde, on laisse une trace de doigt sur l'objectif, prendre un chiffon légèrement imbibé d'alcool ou d'éther, l'entourer autour d'un bâtonnet et balayer légèrement la lentille en un mouvement circulaire.

Numéro du boîtier _____

Numéro de l'objectif _____

Date de l'achat _____

Nom du vendeur _____



Accessories

1. Bellows FL
2. Bellows M
3. Angle Finder A2, B
4. Magnifier S and Magnifier Adapter S
5. Dioptic Adjustment Lenses (S type)
6. Flash V-3
7. Speedlite 133D/Flash-Auto Ring A2/B2
8. Camera Holder F
9. Gadget Bag 4
10. Gadget Bag G-1
11. Neck Strap 4
12. Filter 55mm/58mm
13. 55mm Close-up Lens 240, 450
14. 58mm Close-up Lens 240, 450, 1800
15. Lens Hood BW-55-A, BW-55-B, BS-55, BT-55, BS-58
16. Lens Cap C 55, C 58
17. Release 30, 50
18. Extension Tubes M 5,10,20
19. Macrophoto Coupler FL 55, 58
20. Copy Stand 4
21. Lens Mount Converter A, B
22. Slide Duplicator
23. Microphoto Hood
24. Photomicro Unit F
25. Handy Stand F
26. FTb Case 1.4, 1.2
27. SLR Eyecup S

**Canon
F-1**

The Supreme SLR System provides a New Dimension in professional photography

Canon takes pride in introducing the world's finest single-lens reflex camera, the Canon F-1, featuring a high-precision, high-performance mechanical system whose versatility embraces all conceivable photographic techniques even at the most specialized levels.

The F-1 is an entirely new concept in Canon's line of SLR cameras, in addition to the world-renowned Canon FT QL, whose reputation for superior performance as an SLR system camera has long been recognized.

Standard Lenses: Canon Lens FD 55mm F 1.2 S.S.C., FD 50mm F1.4 S.S.C., FD 50mm F 1.8 S.C.

Lens Mount: Bayonet lock FD mount. FL and R series of lenses mountable.

Viewfinder: Detachable pentagonal prism finder. Interchangeable with Servo EE Finder, Booster T Finder, Speed Finder, Waist-Level Finder.

Finder Attachments: Angle Finder B, Magnifier R, Dioptic Adjustment Lenses (7 kinds), Eyecup R.

Focusing Screen: Using Fresnel lens. A standard microprism screen, and three types, including split-image, all-mat, and section type.

Shutter: Focal plane shutter using super thin titanium screen B, 1-1/2000. X contact at 60.

Film Speed Scale: ASA 25-2000.

Exposure Meter Coupling Range: With ASA 100 film, EV2.5 (f/1.2 at 1/4 sec.)-EV 18 (f/11 at 1/2000 sec.).

Exposure Adjusting Mechanism: Match needle type TTL full aperture measuring mechanism. Central area metering system. Stopped-down metering possible. Fixed dot type metering using stopped-down functioning lever.

TTL Full Aperture Metering System EE: Uses exclusive Servo EE Finder and Battery Case in combination. Shutter priority type EE.

Ultra-low Illumination Metering: Metering possible between ASA 100 film EV 1.5 (f/1.2 at 1/2 sec.) and EV-3.5 (f/1.2 at 15 sec.) with use of exclusive Booster T Finder.

Flash Socket: On front side of body. Two contacts on film rewind knob for flash circuit for directly connected adapter, and meter circuit.

Canon Auto Tuning (CAT) System: Diaphragm control by recharge completion signal and rangefinder signal. Proper aperture is established by the meter matching needle system through the connection of the Speedlite 133D, Flash Coupler L, Flash Auto Ring A₂/B₂ and FD 50mm F 1.4 S.S.C., FD 50mm F 1.8 S.C., FD 35mm F 3.5 S.C., or FD 35mm F 2 S.S.C. lens.

Back Cover: Crank pull-up type.

Bottom Cover: Motor Drive Unit can be attached after removing bottom cover.

Size: 98.7 x 146.7 x 43mm (3 ⁷/₁₆" x 5 ³/₁₆" x 1 ¹¹/₁₆").

Weight: Body; 820g (1.80 lbs.). (with F 1.4 Lens) 1,180g (2.69 lbs.).

Subject to alterations.

Canon
TLb



Popular SLR camera with high precision mechanism

The Canon TLb is a newly developed popular type high-precision SLR camera. It is a sister model of the Canon FTb, which was developed on the basis of know-how acquired through the Canon FT QL, highly reputed in today's market. Exactly like the F-1 and the FTb, it accepts the complete FD and FL series of lenses as well as virtually all the usual accessories.

Interchangeable Lenses: Canon FD series lenses for full-aperture metering and FL series lenses for stopped-down metering.

Lens Mount: Bayonet type FD mount. FL and R series of lenses mountable.

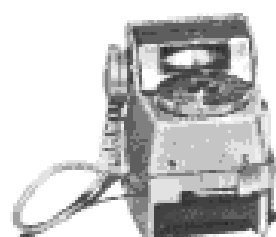
Shutter: Focal plane shutter with speed from 1/500 to 1 sec. and B.

Exposure Meter: Matching needle type. Central area metering system using CdS photocell.

Size: 144 x 93 x 43mm (5-5/8" x 3-5/8" x 1-3/4")

Weight: 680g. (1.32 lbs.)—body only.

Canon FTb



Discover new light with superior full-aperture metering

One of the best SLR cameras available. It incorporates the same precise full aperture metering system used in the Canon F-1, with the Canon FD lenses. The entire group of the FD and FL series of interchangeable lenses and system accessories has been designed to meet all photographic demands and can be mounted on the FTb. Besides, it accepts the Canon Booster, a powerful aid to the CdS photocell to register the faintest light in dark surroundings. The FTb is also equipped with an automatic flash control utilizing the Canon Auto Tuning System.

Lens Mount: Bayonet type FD mount. FL and R series of lenses mountable.

Size: 144 x 93 x 43mm (5-5/8" x 3-5/8" x 1-3/4").

Weight: 740g (1.48 lbs.)—body only.

Canon
FT



SLR camera of the highest precision

This high performance SLR camera has a quick-return mirror and its easy-to-hold compact body is capable of practically all the most advanced functions to meet any technical requirement. Its center-weighted through-the-lens metering system is the most accurate method for measuring light intensity.

The Booster, available separately can give precise readings in almost total darkness. A wide choice of interchangeable lenses and system equipment enable the photographer to cope with any photographic situation.

Mirror: Shock-proof, vibration-less, quick return system. Can be fixed upwards.

Size: 144 x 93 x 43mm (5-5/8" x 3-5/8" x 1-3/4")

Weight: 740g (1 lb. 10-1/8 oz.) body only.



MOTOR DRIVE UNIT

The Canon Motor Drive Unit is a precision built, electrically powered film advance apparatus that is attachable to any F-1 and usable with all related accessories and system equipment. Through the adoption of electronics, not only is a wide range of photography with the timer possible, but also short interval photography up to three exposures per second are possible. It also enables unmanned EE (automatic exposure control) photography when used jointly with the Film Chamber 250 and the Servo EE Finder.

Canon
EX AUTO



Electric Eye SLR camera with the CAT System

The EX Auto is a fully automatic single lens reflex camera developed as an improvement of the EX EE whose excellent reputation has already been thoroughly established. It is, however, easier to handle, and has quite a number of unique new mechanisms such as the Canon Auto Tuning System (CAT), a focal plane shutter of extreme precision, a "QL" (Quick Loading) mechanism and a lens system with four convertible front components, the EX 50mm F1.8, the EX 35mm F3.5, the EX 95mm F3.5, and the EX 125mm F3.5.

EE Mechanism: TTL type EE with shutter priority.

Flash Photography: CAT System operates with the use of Canolite D whenever the EX 50mm F1.8 lens is attached.

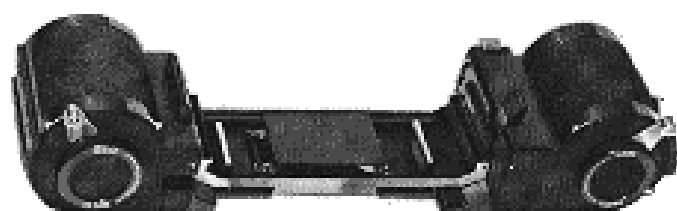
Size: 143 x 92 x 84mm. (5-5/8" x 3-5/8" x 3-5/16")

Weight: 900 gr. (2 lb.) with the standard lens.



FILM CHAMBER 250

The **Film Chamber 250** was developed simultaneously with the Motor Drive Unit to support its continuous shooting functions. It uses the F-1's special long-roll film magazine, for any number of exposures up to 250. Shooting is driven by the Motor Drive Unit, and filming speed can be set by a timer at seven different speeds from three exposures per minute up to one exposure per minute. Single-frame exposures are also possible.





SERVO EE FINDER

The Canon Servo EE Finder is interchanged with the pentaprism section of the Canon F-1, coupled to the full aperture metering mechanism, to preset the proper f-stop automatically with shutter speed priority. It is vibration-less, shock-proof, and quickly responds to light intensity because of the use of a servo-motor. Metering information can be read at a glance inside the viewfinder. Since the central area metering system is used, a most satisfactory exposure can be obtained when shooting scenery that includes the sky.

When used jointly with the Motor Drive Unit, unmanned continuous shooting, such as needed for recording for ecological and other experiments, is possible.



BOOSTER T FINDER

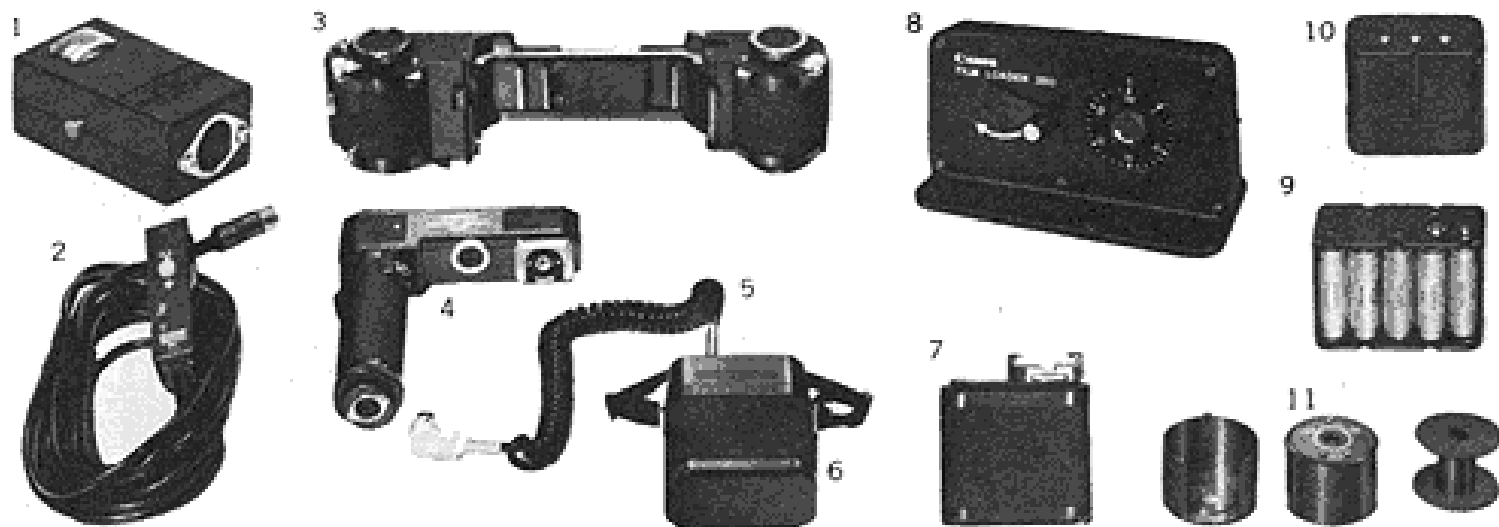
The Canon Booster T Finder is interchangeable with the F-1 eye-level pentaprism, and has an electronic timer to obtain the proper exposure settings even in long-time exposures of 3 seconds or more, under extremely dim light conditions. It is effective for photomicrography, macrophotography, indoor photography, and when shooting night scenes.

Viewfinder System



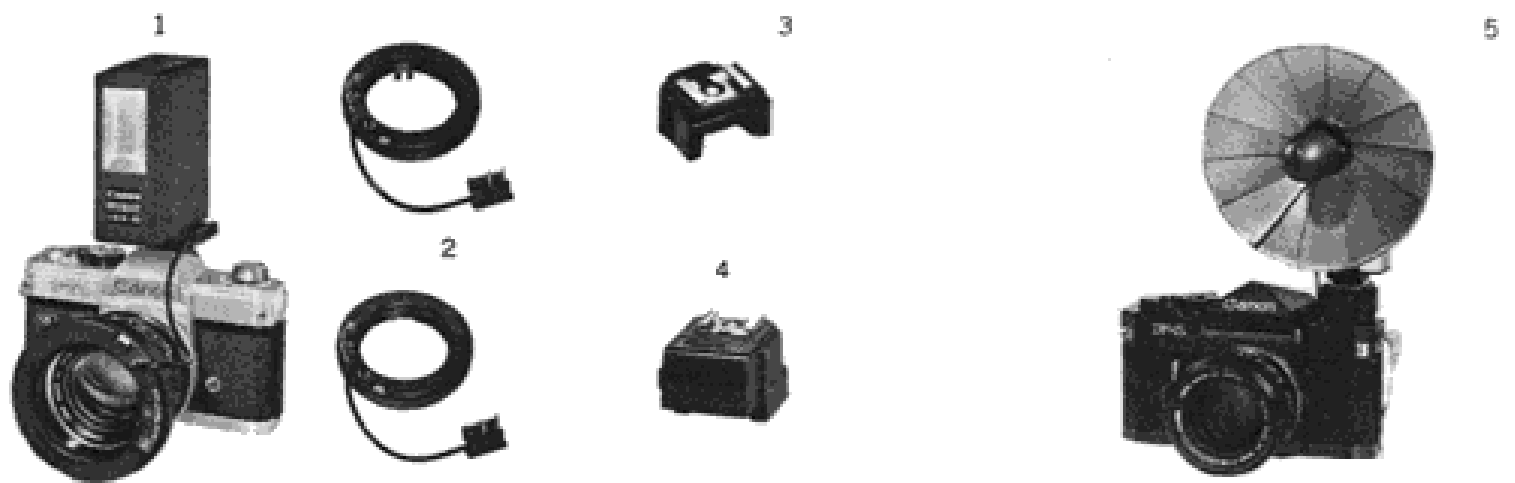
- | | |
|-------------------------------|--------------------------|
| 1. Angle Finder B | 8. Magnifier R |
| 2. Booster T Finder | 9.10. Magnifier Adapters |
| 3. Cord 6V 2B | 11. Eyecup R |
| 4. Speed Finder | 12. Focusing Screens |
| 5. Waist-Level Finder | 13. Cord 12V 2E |
| 6. Eye-Level Finder | 14. Servo EE Finder |
| 7. Dioptric Adjustment Lenses | 15. EE Coupler |

Electronic Film Drive and Unmanned Photography



- | | |
|-------------------------|--------------------------|
| 1. Battery Checker MD | 8. Film Loader 250 |
| 2. Remote Switch MD | 9. Battery Magazine 15V |
| 3. Film Chamber 250 | 10. Battery Magazine 12V |
| 4. Motor Drive Unit | 11. Film Magazine 250 |
| 5. Battery Connector MD | |
| 6. Battery Case | |
| 7. Battery Case D | |

Flash Photography...CAT System



1. Speedlite 133D
2. Flash-Auto Ring A₂/B₂
3. Flash Coupler D
4. Flash Coupler L
5. Flash V-3

COPYING EQUIPMENT



CANON COPY STAND 4

The Canon Copy Stand 4 is used to photograph printed matter, documents, diagrams, photographs, drawings, charts, etc. with a Canon single lens reflex camera. It can also be used for photographing titles for 8mm films.



CANON HANDY STAND F

The Canon Handy Stand F is a simple copy stand for Canon single lens reflex cameras. It can be placed on a table for regular use. It is very easy to assemble and operate, and also very lightweight which makes it convenient for carrying around.



ATTACHMENT LENSES FOR COPYING

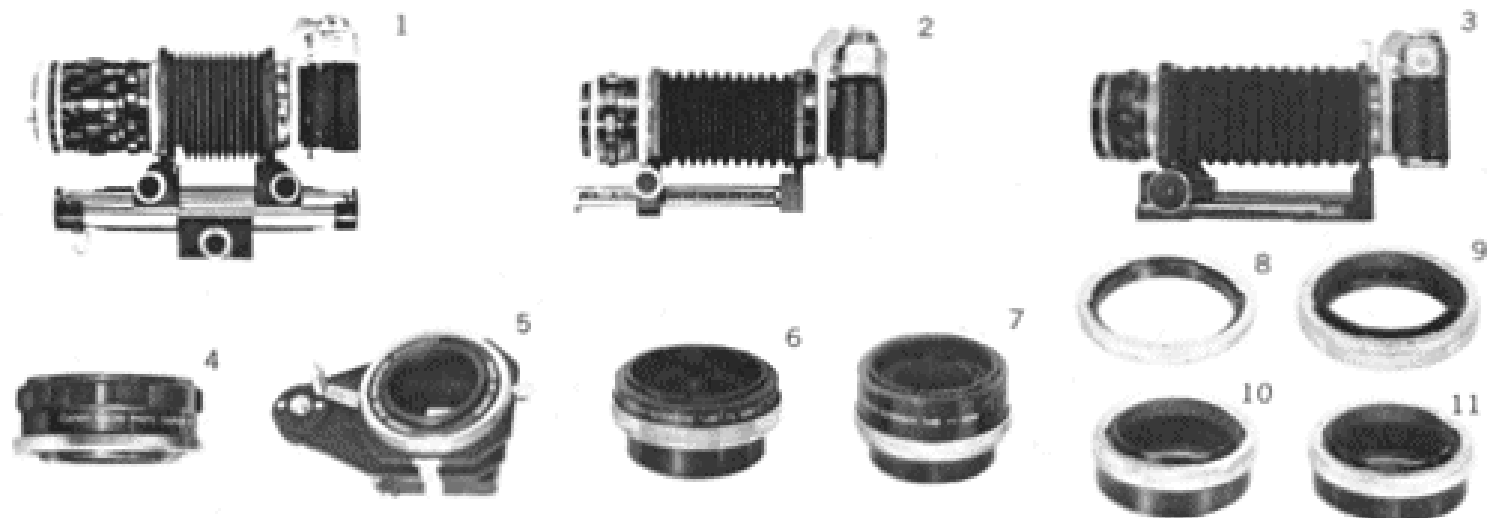
The uses of the copy stands can cover a wider range by adding these attachment lenses. (No. 1, No. 2 sets)
For 50mm F2.8, 2.2, 1.8, 1.5
For 50mm F1.4
For 50mm lens

Close-Up, Macrophotography and Photomicrography

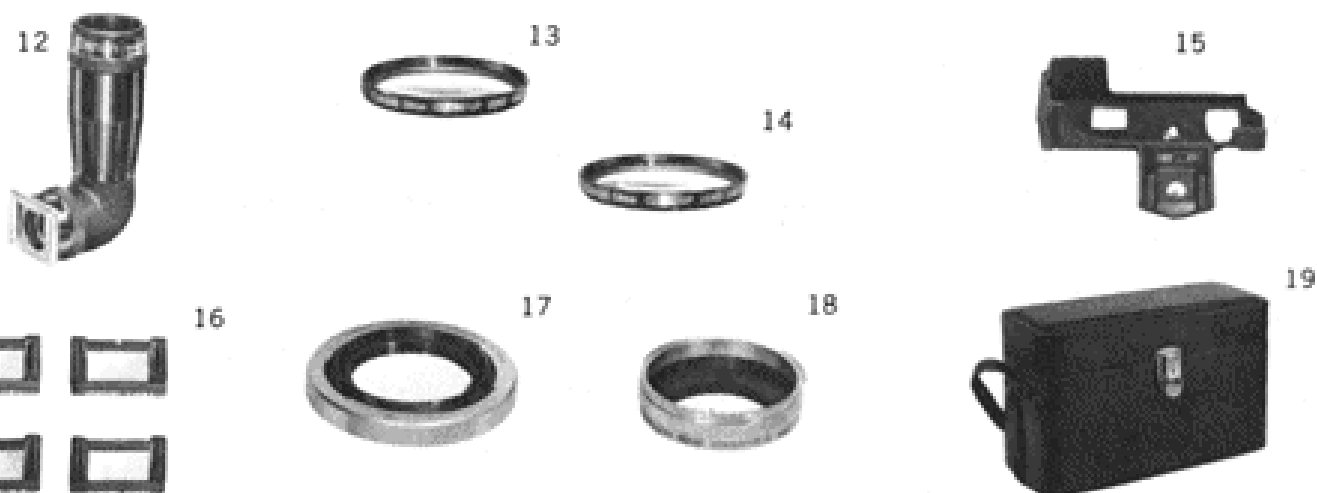


- | | | |
|---------------------------|-----------------------------|------------------------------|
| 1. Slide Duplicator FL | 8. Lens Mount Converter B | 15. Handy Stand F |
| 2. Close-Up Lens | 9. Extension Tube 6mm-200mm | 16. F-Ring 55mm |
| 3. Extension Tube M5 | 10. Bellows FL | 17. Photomicro Unit F |
| 4. Extension Tube M10 | 11. Bellows M | 18. Lens Cap C-55, C-58 |
| 5. Extension Tube M20 | 12. Microphoto Hood | 19. Lens Hood (Bayonet type) |
| 6. Macrophoto Coupler FL | 13. Canon Releases 30/50 | 20. Copy Stand 4 |
| 7. Lens Mount Converter A | 14. Camera Holder F | 21. Gadget Bag G-1 |
| | | 22. Neck Strap 5 |

ACCESSORIES FOR CANON FT QL

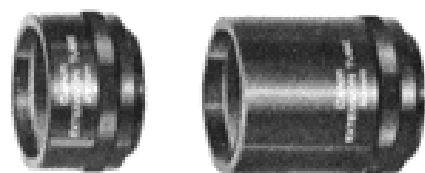


- | | |
|-----------------------------|---------------------------|
| 1. Bellows FL | 7. Extension Tube FL 25 |
| 2. Bellows M | 8. Extension Tube M5 |
| 3. Bellows R | 9. Extension Tube M10 |
| 4. Macrophoto Coupler FL 48 | 10.11. Extension Tube M20 |
| Macrophoto Coupler FL 58 | |
| 5. Slide Duplicator | |
| 6. Extension Tube FL 15 | |



- | | |
|---|----------------------------|
| 12. Angle Finder A | 18. Lens Mount Converter B |
| 13. 48mm Close-up Lens | 19. Gadget Bag 4 |
| 14. 58mm Close-up Lens | |
| 15. Camera Holder F | |
| 16. Dioptic Adjustment Lenses
(Clip-on type) | |
| 17. Lens Mount Converter A | |

ACCESSORIES FOR COPYING EQUIPMENT



EXTENSION TUBE



MACROPHOTO COUPLER

EXTENSION TUBES

A (6mm)

B (9mm)

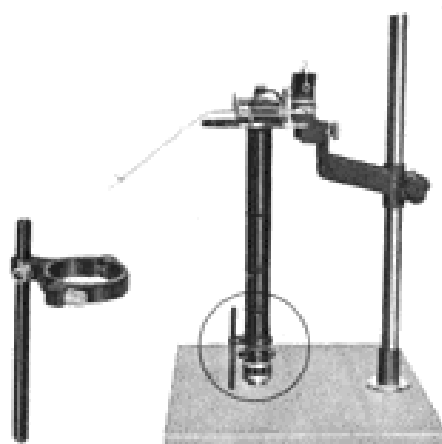
C (12mm)

EXTENSION TUBES

25mm 100mm

50mm 150mm

75mm 200mm



MACROPHOTO STRUT

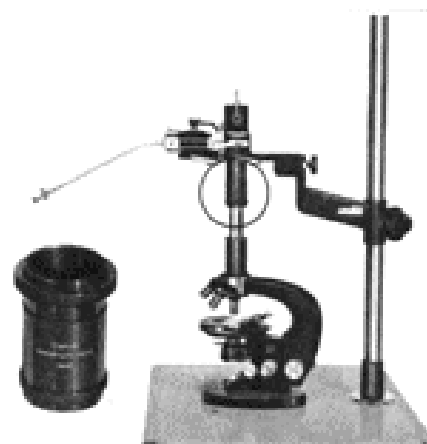
MACROPHOTO COUPLER

40mm For 50mm F1.5, 1.8, 2.2, 2.8

48mm For 50mm F1.4 FL50 mm F1.8

55mm For 50mm F1.2

58mm For FL58mm F1.2, R 50 mm F1.8, FL50mm F1.4, R 58mm F1.2



MICROPHOTO HOOD

MACROPHOTO STRUT

To hold the taking lens absolutely steady in high-magnification photography.

MICROPHOTO HOOD

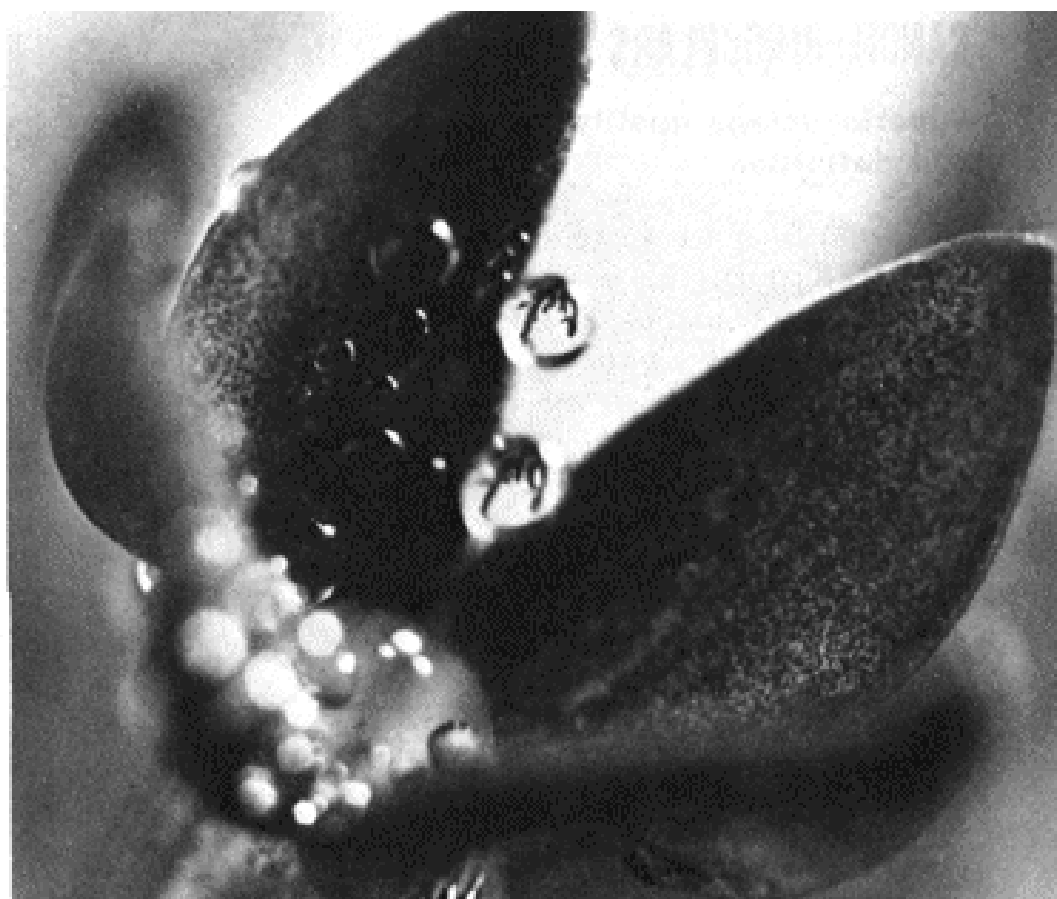
The microphoto hood is used jointly with the copying apparatus and microscope in micro-photography.

PHOTOMICROGRAPHY



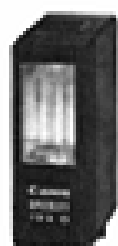
PHOTOMICRO UNIT F

The Canon Photomicro Unit F is a device for performing photomicrography easily and conveniently using Canon SLR cameras such as the F-1 and FTb. It is composed of outer and inner hood barrels, shade barrel and tightening clamp ring.

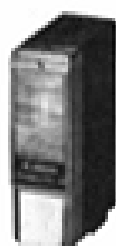


CANON ELECTRONIC FLASH UNITS/CANON FLASH UNITS

1



2



3



4



1. Canon Speedlite 133D
2. Canolite D
3. Canon Cube Flash D
4. Canon Flash V3

Super Wide-Angle Lenses



Canon Lens FD 17mm F4 S.S.C.

The widest super wide angle lens in the FD series, this lens takes in an angle of view of 104°. It was designed to prevent curvature of field and astigmatism aberrations and, therefore, images are perfectly delineated even up to the corner areas. It covers 84°.



Canon Lens FD 20mm F2.8 S.S.C.

Despite its short focal length of 20mm, this super wide-angle lens has the world's fastest lens speed of F2.8. Canon's original and unique aberration compensation mechanism (Canon Floating System) was adopted in this lens in order to obtain sharp images throughout the entire close-up to infinity range.



Canon Lens FD 24mm F2.8 S.S.C.

Noted for having a very fast speed for a super wide angle lens, an aberration free system provides high contrast and high resolving power even at full aperture opening. It eliminates coma and astigmatism, and completely eliminates distortion to make shooting at minimum distance aberration free.



Canon Lens FD 28mm F3.5 S.C.

It is a compact, lightweight lens of the inverted telephoto type. It is 43mm long but it guarantees clear and sharp pictures and makes wide angle photography possible with its 75° angle of view.

Special Lenses



**Canon Lens Fisheye 7.5mm
F 5.6 S.S.C.**



**Canon Lens Fisheye FD 15mm
F 2.8 S.S.C.**



**Canon Lens TS 35mm F 2.8
S.S.C.**

This is a special fisheye lens with 11 elements, 8 components, and 6 built-in filters. Its projected image is 23mm in diameter and covers an angle of view of 180°. All pictures come out sharp and clear at any distance because of its equidistant projection. Fixing the mirror is not necessary to see through the viewfinder.

This is a fisheye lens for ordinary photography. It covers an angle-of-view of 180°. Its lens speed of F2.8 ranks among the fastest. This lens can be used without fixing the mirror upward because it is the retrofocus type.

Simultaneous tilting and shifting are a key feature of this lens. Perspective correction can be performed by shifting, while at the same time, depth of field can be controlled by tilting the lens. This unique lens has been highly praised for its remarkable performance.

Wide-Angle Lenses



**Canon Lens FD 35mm F3.5
S.C.**

Compact and easy to use, this lens is specially suited for taking snapshots. It has high contrast and high resolving power. Even at full aperture opening, it takes sharp images throughout the entire picture. It has a distance coupling pin for the Speedlite 133D and the CAT System.



**Canon Lens FD 35mm F2
S.S.C.**

Specially designed so that it can be also used as a standard lens, it features a minimum of flare and excellent color balance. It is completely aberration free even at a photographic distance of 30 centimeters. This lens, too, has a coupling pin for the CAT System.



**Canon Lens FD 55mm F1.2 AL
S.S.C.**

The perfect large aperture standard lens with an aspherical surface, its resolving power never decreases no matter the aperture opening. A unique focusing system fully corrects close-up photography's aberrations. Even under dim light conditions, it gives the highest possible image delineation.



**Macro Canon Lens FD 50mm
F3.5 S.S.C.**

Close-up photography of up to 0.5-time is possible without any accessories. 1:1 size photography is possible with the use of the life-size adapter. The exposure is automatically corrected. This lens is indispensable for close-up photography and copy-work.

Standard Lenses



Canon Lens FD 50mm F1.8 S.C.

This is a lens for all purposes with an extremely advanced optical system. Its superior contrast and high image delineation extend even to the outer edges. It also has good delineation power even during close-up photography. Equipped with a coupling pin for the CAT System.



Canon Lens FD 50mm F1.4 S.S.C.

The optical system of the highly reputed FL 50mm F1.4 standard lens was further improved in this lens. Its high resolving power and high contrast delineation are admirable when stopped down and with full aperture. Equipped with a coupling pin for the CAT System.



Canon Lens FD 55mm F1.2 S.S.C.

Faster than its predecessor, the FD 50mm F1.2, this lens has a specially high contrast and image stability at full aperture opening. Its F1.2 speed provides excellent image delineation in dim light.

Telephoto Lenses



Canon Lens FD 100mm F2.8 S.S.C.

This telephoto lens is ideal for clear natural snapshots and portrait photography. Its telephoto ratio is very small and has an overall length of 57mm but its high contrast power and image delineation are superb.



Canon Lens FD 135mm F 3.5 S.C.

Though its focal length is 135mm, its total length is only 83mm which makes it very handy to carry around. It has an established reputation as specially suited for shooting sport events, portraits and mountain scenery because of its high resolving power.



Canon Lens FD 135mm F 2.5 S.C.

It is the fastest of the FD telephoto lenses and is noted for its ability to prevent flares and reduce chromatic aberration, as well as others arising from the photographic distance. Curvature of field has been brought to the minimum.



Canon Lens FD 200mm F 4 S.S.C.

Its high contrast and high resolving power make it particularly suited for sports and news photography, portrait and snapshot photography, and for taking pictures of animal life. In it, aberrations have been solved to obtain fine pictures through the entire focusing range.



Canon Lens FD 300mm F 5.6 S.C.

This is a high performance, compact lens with a long focal length of 300mm. Its telephoto ratio is 1:0.72, and offers a remarkable degree of aberration correction. A tripod attachment and a lens hood are built in and make it ideal for macrophotography.



Canon Zoom Lens FD 100 - 200mm F 5.6 S.C.

Small and lightweight, this zoom lens is ideal for shooting scenery and snapshots. Distortions and aberration are splendidly compensated. Its zoom ratio has been adjusted to 1:2 to make it easier to operate and more convenient.



WIDE ANGLE LENSES



FL 19mm F3.5R FL 28mm F3.5 FL 35mm F2.5 FL 35mm F3.5 FLP 38mm F2.8

Wide-angle lenses permit the coverage of expansive scenery, close-ups, group of people, street scenes, as well as buildings and inside small rooms with little room for free movement of the camera. The depth-of-field resulting from their short focal length increases the realism of the average photograph.

Because of this quality, wide-angle lenses are extensively used by professionals and advanced amateurs who prefer to take pictures of a new type.

The newest edition of FL 35mm F3.5 Lens completely systematize Canon FL lens series.

STANDARD OR NORMAL FOCUS LENSES



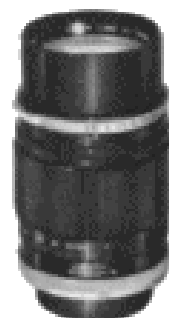
FL 50mm F1.8 FL 50mm F1.4 FL 55mm F1.2

**Macro Canon Lens FL 50mm F3.5
(With Lifesize Adapter)**

The view through these lenses is the closest in proportion to the human eye. Canon 50mm standard lenses F1.2, F1.4, and F1.8 are extremely versatile in color as well as black and white photography. The 50mm F1.4 and F1.8 lenses are also ideal for close-ups, copy work and many other uses besides general photography.

Macro Canon Lens FL 50mm F3.5 is an extremely versatile lens with high resolution power. It can be used in any situation from general to ultra close-up photograph ...used as a regular camera lens and also used for special situation photography such as photo copying or for life-size or greater than life-size images of minute subjects. Made lightweight—for easy handling.

LONG FOCUS LENSES OR TELEPHOTO LENSES



FL 85mm F1.8 FL 100mm F3.5 FL 135mm F2.5 FL 200mm F3.5

**FL 135mm F3.5
(compact)**

Long focus lens, FL 85mm F1.8, produces so natural a perspective that they are most suitable for portraiture as well as for news pictures events, commercial photography, and taking pictures of stage shows. Canon telephoto lenses are ideally suited for vivid shots of distant scenes and hard-

to-reach subjects, as well as mountain scenes and sporting events. Because of the natural perspective even at a short range, Canon telephoto lenses are also suited for portraiture. They weigh much less than expected from their focal lengths.



**FL 200mm F4.5
(compact)**



**FL 100~200mm
(compact)**

FL-F LENSES

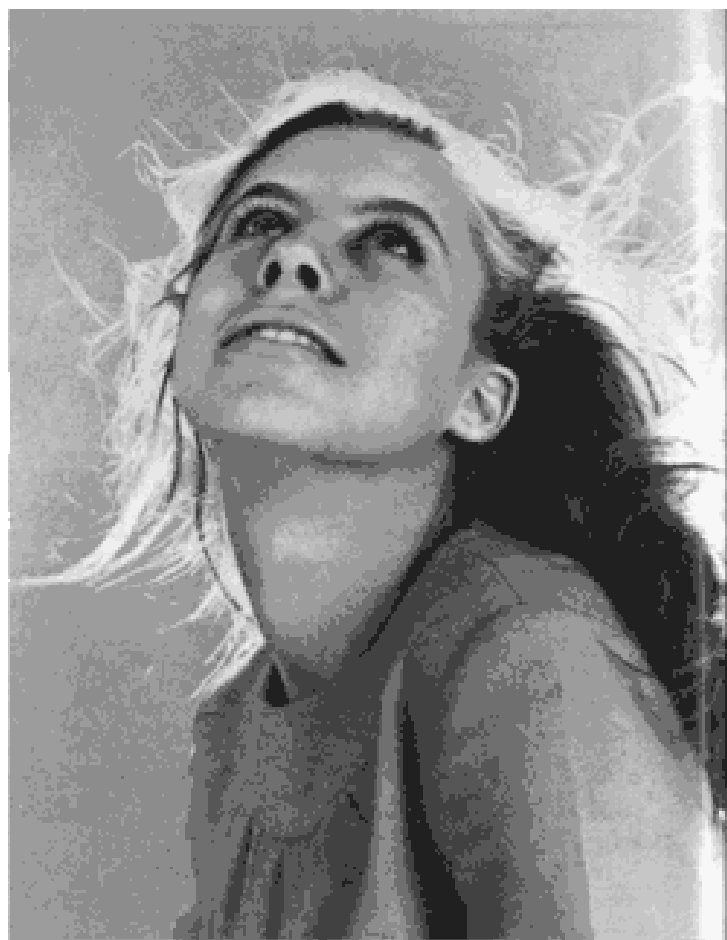


**Canon Lens FL-F 300mm
F5.6**

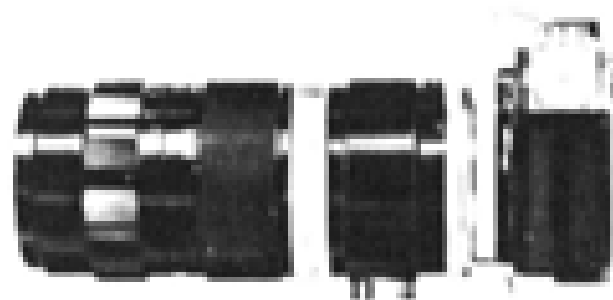


**Canon Lens FL-F 500mm
F5.6**

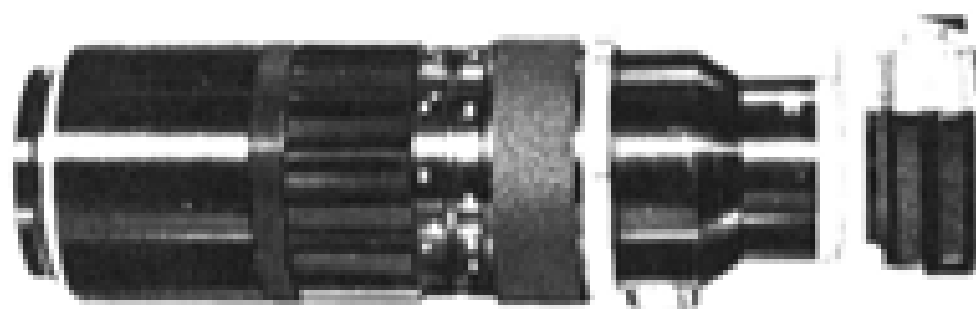
These two Canon FL-F lenses, the FL-F 300mm F5.6 and the FL-F 500mm F5.6, use artificial fluorite single crystal in their optical systems. This lens material makes it possible to completely eliminate secondary spectrum. Additionally, the telephoto ratio of these lenses has been markedly reduced, which greatly increases their portability and ease of operation.



FL ZOOM LENSES



Canon Zoom Lens FL 55~135mm F3.5



Canon Zoom Lens FL 85~300mm F5

Canon zoom lenses FL 55mm-135mm F3.5 and FL 85mm-300mm F5 are high performance zoom lenses with fully automatic diaphragms designed for FT QL, PELLIX, FX and FP use.

CANON SUPER-TELEPHOTO FL LENSES

Canon Lens FL 400mm F 5.6

Canon Lens FL 600mm F 5.6

Canon Lens FL 800mm F 8

Canon Lens FL 1200mm F 11 S.S.C.



Focusing Unit

These Canon super-telephoto FL lenses from 400mm to 1200mm are extremely powerful in magnification and are best suited for photographing close-ups of wild-life and small details of distant subjects.

Canon Canodate E



"Datronic" shooting - imprint dates on your pictures

This camera has a special electronic device to imprint dates or serial numbers on photographs so they can always be traced back and identified. Very easy to handle, it has a durable electronic shutter with speeds 1/800 to 4 seconds, a unique automatic flash mechanism—called "CAT System", and complete information in the viewfinder. With the Canodate E, anyone can take wonderful photographs.

Lens: Canon Lens 40mm F2.8.

EE Mechanism: Programmed with CdS photo-cell. With ASA 100 film, EV 1 (F2.8 at 4 sec.)—EV 17 (F 13.5 at 1/800 sec.).

Date Imprinting Mechanism: Superimposing system by exterior dial setting. ON-OFF switch.

Size: 133 x 76 x 59mm (5-1/4" x 2-15/16" x 2-3/16").

Weight: 580 grams (1 lb 4-7/16 oz.)

Canonet **G-III 17/19**



More efficiency and compactness with day and night Electric Eye

The new Canonets G-III 17 and 19 are high performance 35mm lens shutter type compact cameras that feature Electric Eye shooting capability at night as well as in daytime when using the optional Canolite D electronic flash unit. In addition to a newly developed battery checking system, with fully automatic exposure control, QL mechanism, and complete viewfinder information. Both are "round-the-clock" cameras that just won't let you make mistakes.

Lens: Canon Lens 40mm F1.7 (G-III 17)/Canon Lens 45mm F1.9 (G-III 19).

Built-in selftimer: (G-III 17/19)

Built-in battery checker: (G-III 17/19)

Built-in film-wound-up indicator: G-III 17 only.

Size: 120 x 75 x 60mm (4-3/4" x 3" x 2-3/8").

Weight: 620 grams (1 lb. 5-7/8 oz.).

NEW
Canonet
28



Snapshots when and where you want them

Photography can be an enjoyable hobby for anybody now with two outstanding features of the New Canonet 28. Programmed exposure control by the Electric Eye and automatic control of flash photography with Canon's exclusive electronic flash, the Canolite D, allow even the least endowed beginner to take good photos. Equipped with a viewfinder which acts as a data center of information on exposure and focusing, there is no room for mistake.

Lens: Canon Lens 40mm F2.8.

EE Mechanism: Programmed. ASA 25-400

Flash Synchronization: X contact. Automatic flash control in which shooting distance and aperture setting are automatically coupled.

Size: 120x75x61mm (4-15/16" x 2-15/16" x 2-3/8").

Weight: 540 grams (19-3/8 oz.).

NEW
Canonet
QL17/19



Day and night Electric Eye compact

These are two compact cameras in Canon's reputed Canonet series, smaller, yet more efficient, featuring the newly developed F1.7 lens, with day and night Electric Eye system when using the Canolite D. Both have a quick film loading mechanism, film transport indicator and many other useful innovations. The Canonet QL models are the QL 17 with an F1.7 lens, and the QL 19 with an F1.9 lens, both of which combine simple operation with exceptional results.

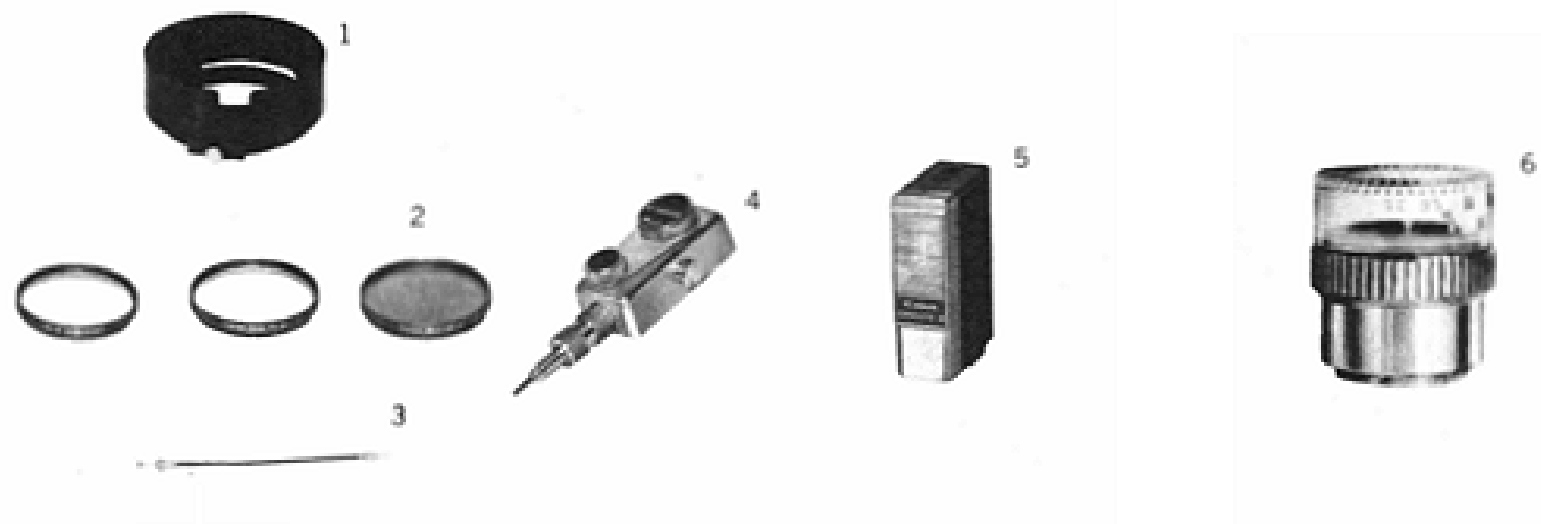
Flash Contact: Accessory shoe with center contact for exclusive Canolite D and conventional flash socket.

Film Loading: QL mechanism. Accepts any standard 35mm film in cartridge.

Size: 120 x 75 x 60mm (4-3/4" x 3" x 2-3/8").

Weight: 620 grams (1 lb. 5-7/8 oz.).

ACCESSORIES FOR 35mm ELECTRIC EYE CAMERAS



1. Lens Hood
2. 48mm Filters
3. Canon Release 30
4. Selftimer 8
5. Canonlite D
6. Canon Lens E 50mm F3.5

Canon M70 **Canomatic**



Action and fun with Canon's 126-size camera

The Canomatic M70 is an instant loading camera with programmed Electric Eye using 126-size film cartridges. Film winding is performed by electric motor. Its automatic exposure control, composed of a programmed EE and a flash-auto mechanism, can be used for both day and night photography. A "FLASH READY" mark prevents mistakes in flash synchronization.

A sharp F2.8 Canon lens brings out the best of the 126-size cartridge film. The Canomarine, an under-water housing device, is available for the Canomatic M70.



INSTRUCTIONS

Canon
EF



English Edition

INTRODUCTION

Congratulations! You have purchased one of the finest automatic 35mm SLR cameras available today. The Canon EF is a complex instrument having a multitude of advanced features, yet it is incredibly simple to use. Just select a shutter speed and the camera adjusts its own diaphragm for you automatically under all kinds of lighting situations, from bright sunlight at the beach to dim candle-light. You are assured of perfect exposures every time. Now you can concentrate on picture taking and stop worrying about mechanics. But before you actually load any

film into your new camera, familiarize yourself thoroughly with the Canon EF and this instruction manual. Handle the camera, practice focusing, and use the winding lever. And, by all means, refer to the instructions often during this orientation period. When used correctly, the Canon EF will provide you with perfectly exposed photographs for years to come. We at Canon hope you receive as much enjoyment in using the EF as we had in designing it. And we hope your involvement in photography continues to grow.

NOMENCLATURE

1. Frame Counter
2. Shutter Button
3. Shutter Speed Dial
4. Shutter Speed Index Mark
5. Winding Lever
6. Flash Hot Shoe
7. Eye-Level Pentaprism
8. Film Plane Indicator
9. AE Memory Lock Button
10. Light Emitting Diode (LED)
11. Film Rewind Knob with Crank
12. ASA Ring
13. Sync Terminal with Cover
14. Self-Timer Lock Button
15. Multi-Purpose Lever (Self-Timer/Depth-of-Field Preview/Stopped-down Metering Lever)
16. L-M Lock Lever
17. CAT System Pin
18. AE Lock Pin and 'A' mark
19. Focusing Index Mark with Depth-of-Field Scale
20. Distance Scale (in feet and meters)
21. Aperture Ring
22. Front Bayonet
23. Focusing Ring
24. Canon Breech-Lock Ring
25. Neckstrap Eyelet



NOMENCLATURE

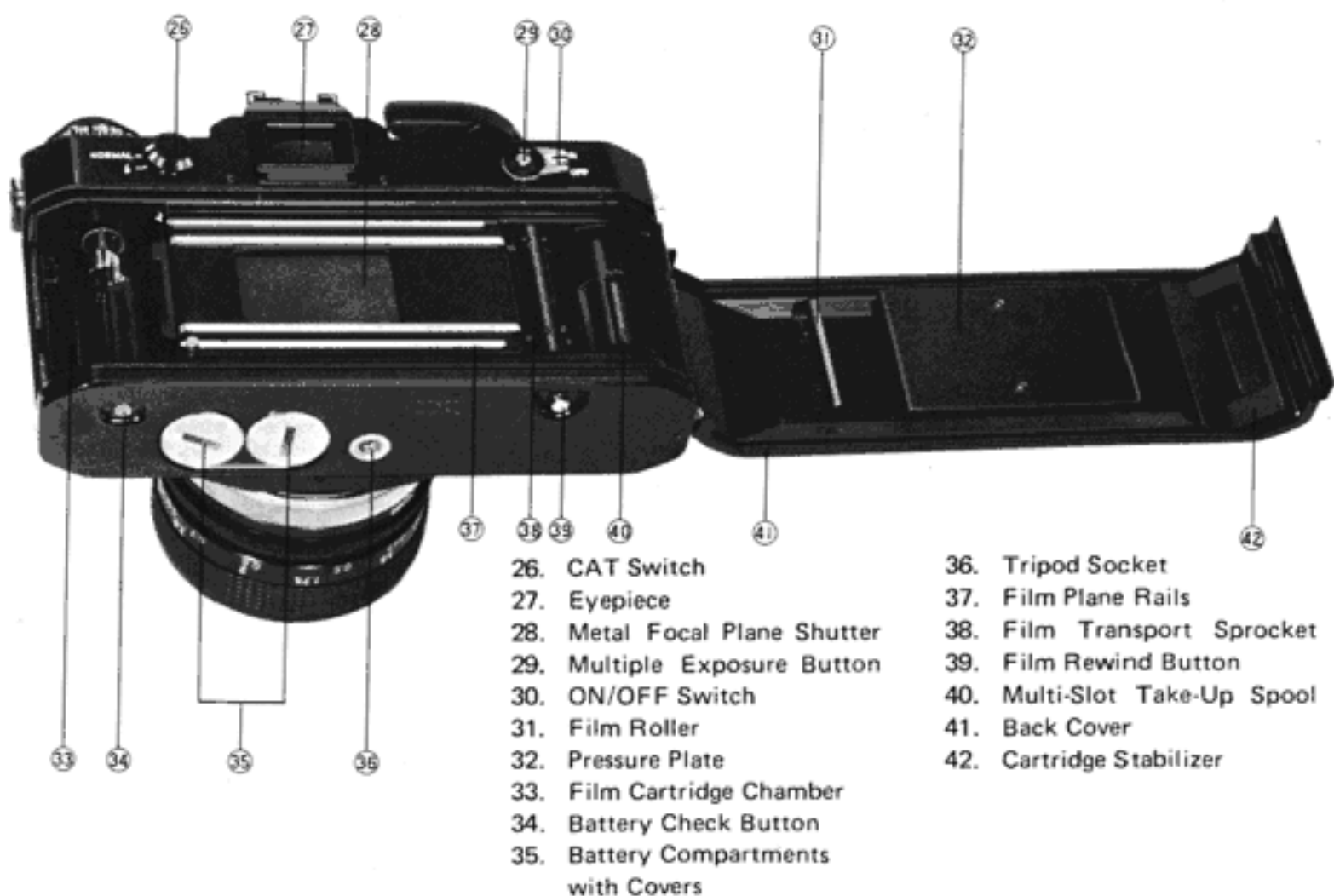
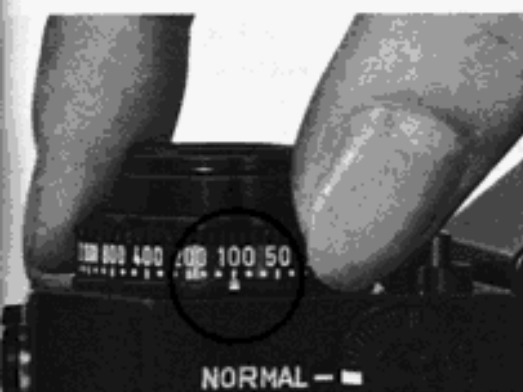


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← Fold out both front and back nomenclature pages for easy reference when reading the instructions.

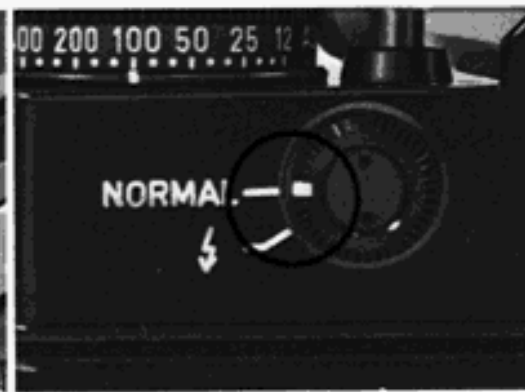
D Set the ASA film speed.



E Set the aperture ring of the lens to the 'A' mark.



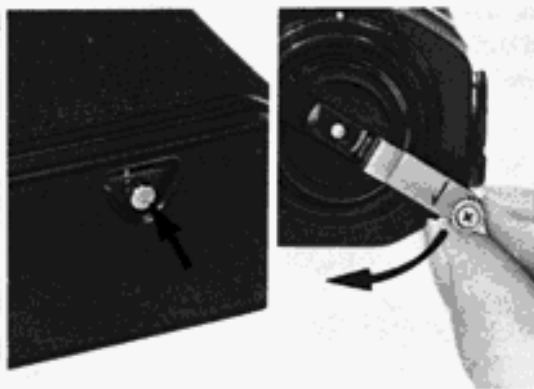
F Set the CAT switch to "NORMAL."



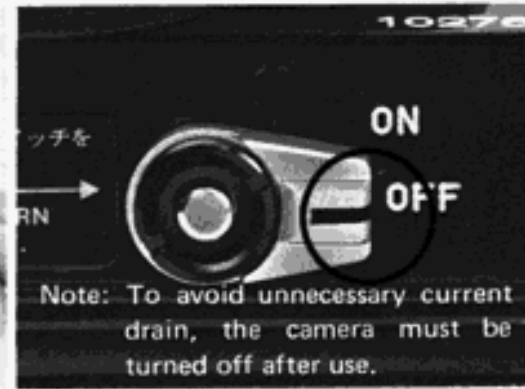
J Advance the film to the next frame.



K Rewind the film after all frames are exposed.



L Turn the camera off.



II MAIN FEATURES

A Variable Aperture AE (Automatic Exposure). Simply select a shutter speed and the aperture is set for you automatically.

B Extremely wide range of shutter speeds using an Electro-Mechanical Shutter. Accurate electronic control from one second down to a full 30 seconds; foolproof mechanical control from one-half second to 1/1000 second (including B) even if the batteries fail.

C Incredible meter sensitivity and rapid response to changing light levels by using a Silicon Photocell. At ASA 100, EV - 2 (8 sec. at f/1.4) to EV 18 (1/1000 sec. at f/16)

D Wide range of FD lenses from 15mm full-frame fish-eye to 300mm telephoto for AE photography. Other Canon lenses available from 7.5mm circular fish-eye to 1200mm super-telephoto. 2000mm and 5200mm mirror lenses available by special order.

E Multiple exposures possible simply by pushing a button while operating the winding lever. Exact registration is possible, and the frame counter does not advance during the procedure.

F Full-information viewfinder displaying large scales for both shutter speeds and f/stops.

G Automatic electronic flash. When using the Canon Speedlite 133D and a Flash-Auto Ring, the aperture is set automatically according to the focused distance of the lens with synchronization at 1/125 sec.

H AE memory lock for locking-in exposure readings.

I Wide film speed range from ASA 12 to ASA 3200.

J Fast-action winding lever with a short 120° throw and comfortable plastic tip.

K Short-stroke, feather-touch shutter button.

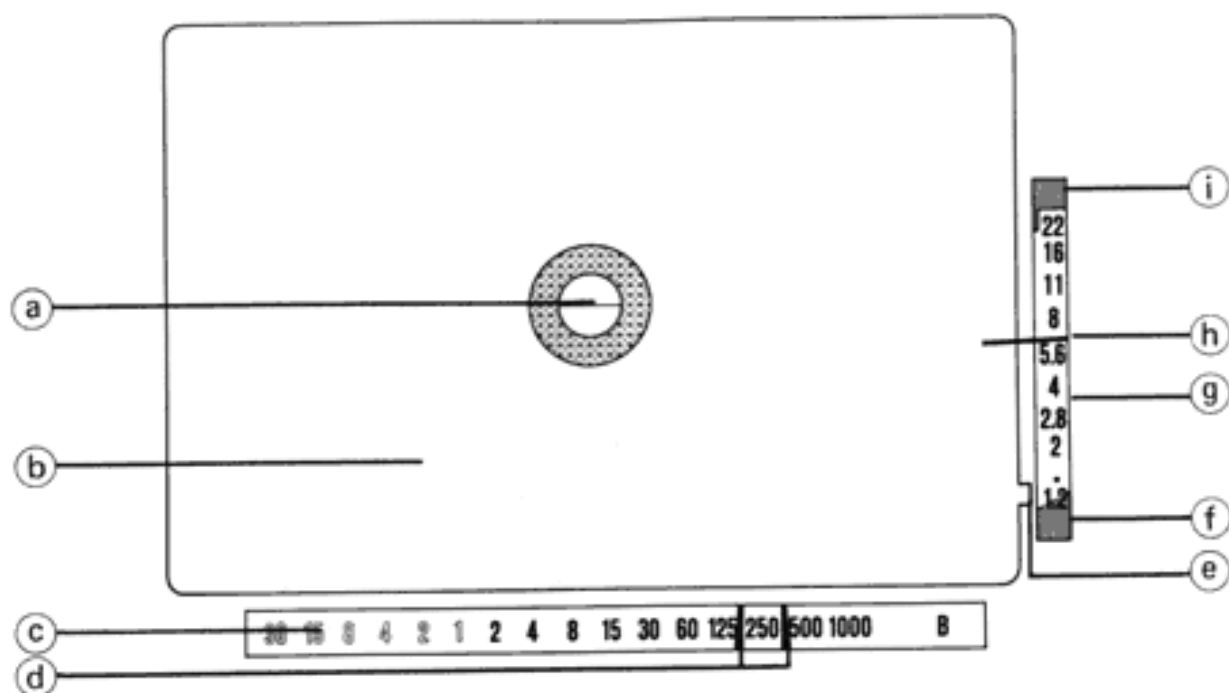
L Huge shutter speed dial overhangs the front edge of the camera making a change of shutter speeds quicker than ever.

M Automatic blank shot mechanism. Advancing film to frame one is possible without using the shutter button.

N Cold weather performance assured down to -20 degrees C. (-4 degrees F.)

O Easy battery replacement using two readily available, inexpensive 1.3 volt mercury batteries.

III VIEWFINDER INFORMATION



- a. Center Split-Image/Micropism Rangefinder
- b. Ground Glass with Fresnel Screen
- c. Shutter Speed Scale
- d. Shutter Speed Indicator
- e. Stopped-Down Metering Index Mark

- f. Underexposure Warning Mark (maximum lens aperture is automatically set)
- g. Aperture Scale
- h. Meter Needle
- i. Overexposure Warning Mark

camera over a wide range of shutter speeds even if the batteries fail. Another benefit of using mechanical control for the majority of speeds is that the Canon EF uses only two inexpensive 1.3 volt mercury batteries which are available almost anywhere in the world.



Canon FD 300mm f/5.6 S.C., 30 sec., AE, ASA 400.

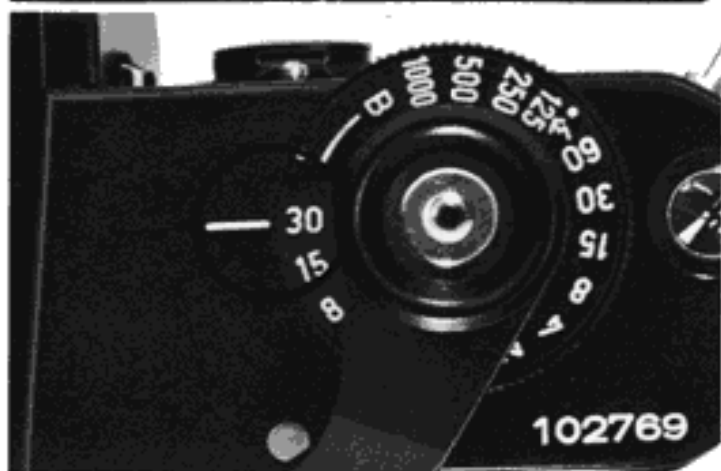
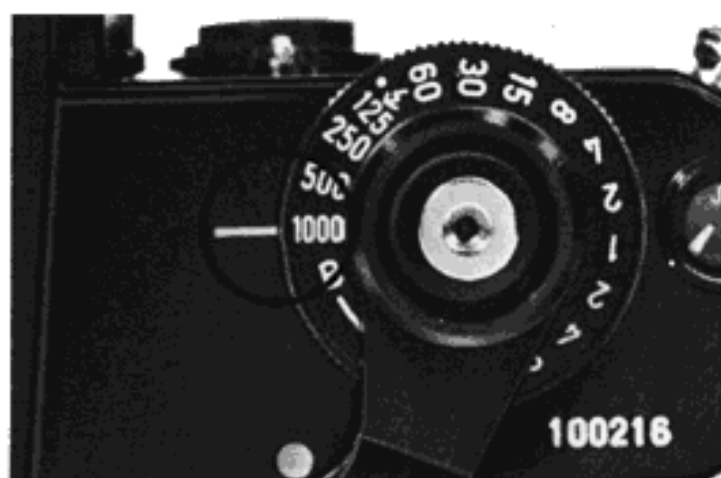


IV TECHNICAL EXPLANATION OF THE CAMERA

The Canon EF is a 35mm single-lens-reflex AE (automatic exposure) camera which is designed for fast handling and precise exposure control. Being modularly constructed, it contains many advanced electronic circuits to make picture-taking easier than ever before.

A Electro-Mechanical Shutter

The vertically moving metal focal plane shutter in the EF has speeds from 1/1000 sec. down to a full 30 seconds, plus a "B" (Bulb) setting for manual time exposures. The shutter is electronically controlled in its slow range from 1–30 sec. in six discrete steps (1, 2, 4, 8, 15, and 30). The red Light Emitting Diode (LED), just to the left of the pentaprism, blinks on and off to indicate when the shutter is open. In the normal range in which most photography will be performed, the shutter is mechanically controlled from 1/2–1/1000 sec., plus B, in eleven steps (1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, 1/1000, and B). Electronic control of the shutter in the slow range insures high accuracy for long shutter speeds, whereas mechanical control in the normal range permits manual operation of the





22
16
11
8
5.6
4
2.8
2
1.2

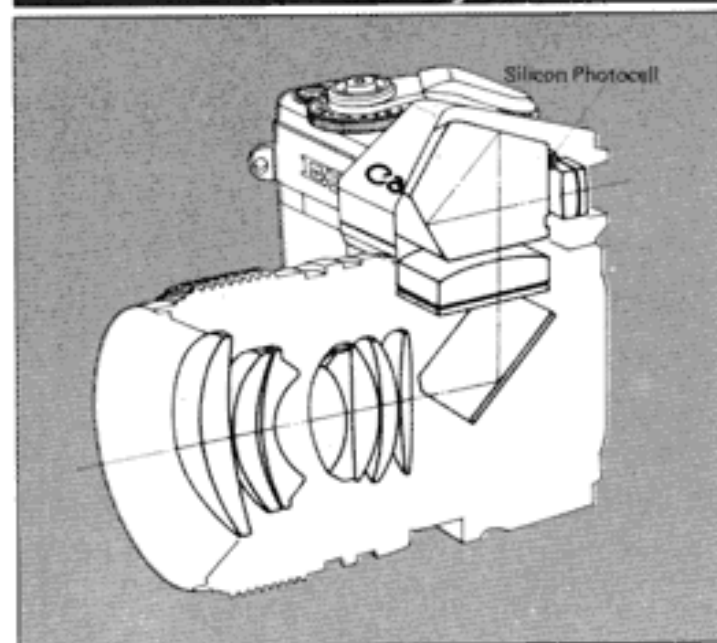
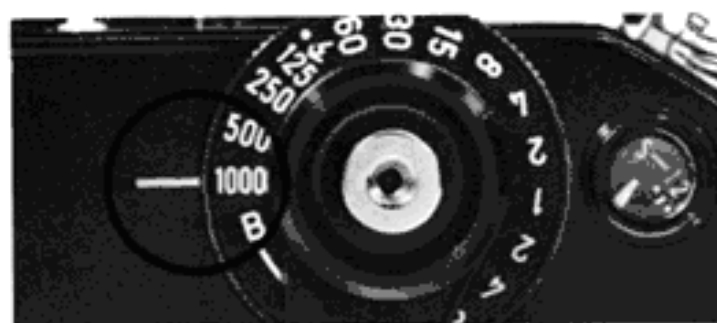
30 15 8 4 2 1 2 4 8 15 30 60 125 250 500 1000 B

B Variable Aperture AE Control Method

Commonly known as "shutter priority EE," the Variable Aperture AE control method gives the photographer absolute control over the shutter speed to prevent camera shake. You select a shutter speed appropriate to the action and/or the lens you are using, and the camera automatically adjusts the aperture of the lens to precisely the proper f/stop or fraction thereof.

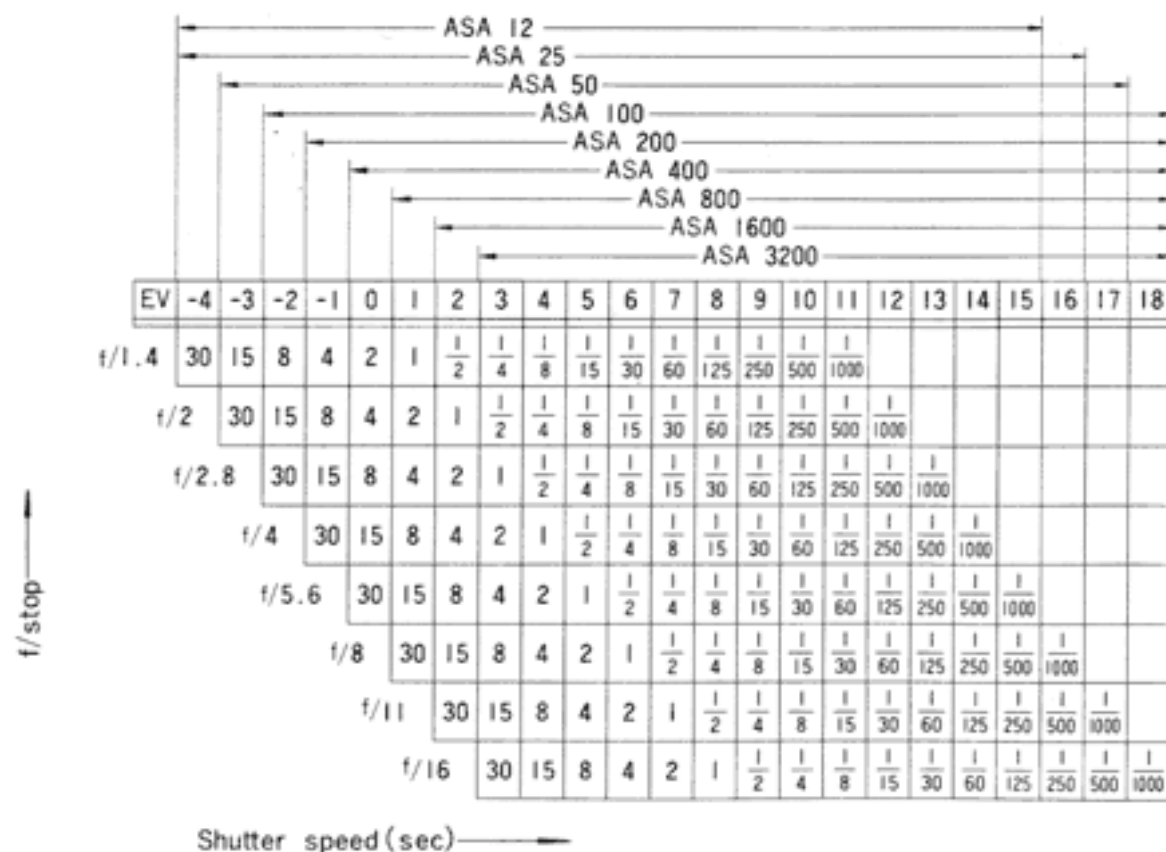
C Silicon Photocell

The Silicon Photocell is a highly accurate and extremely stable light measuring cell having a wider range of sensitivity and much faster response to rapidly changing light levels than the conventional CdS cell. At ASA 100, the metering range of the Silicon Photocell is from EV 18 (1/1000 sec. at f/16) down to EV -2 (8 sec. at f/1.4), which is five f/stops more sensitive than the normal CdS cell. At ASA 25, the range is from 1/1000 sec. at f/8 down to 30 sec. at f/1.4. This increased sensitivity range is made possible by the development of a special logarithmic amplifier to intensify the low amount of current generated by the photocell in very dim light conditions.



TECHNICAL EXPLANATION OF THE CAMERA

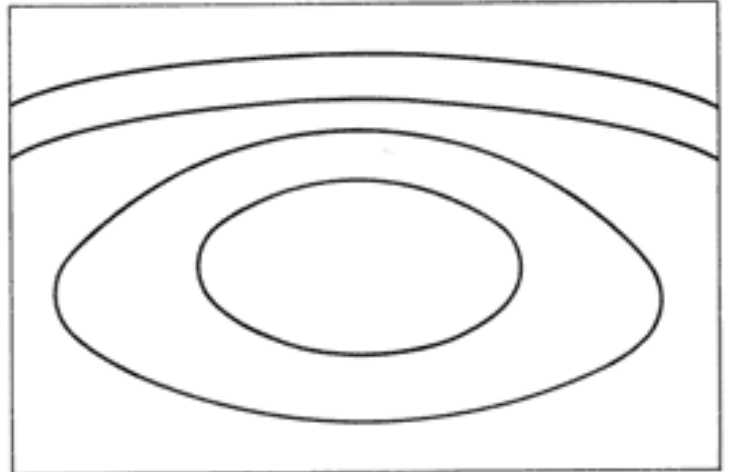
AE RANGE OF SILICON PHOTOCELL AT VARIOUS ASAs FD 50mm f/1.4 S.S.C. LENS



ASA	EV RANGE
12	-4 ~ 15
25	-4 ~ 16
50	-3 ~ 17
100	-2 ~ 18
200	-1 ~ 18
400	0 ~ 18
800	1 ~ 18
1600	2 ~ 18
3200	3 ~ 18

D Central Emphasis Metering

After extensive experimentation, it was determined that the Central Emphasis Metering method of exposure measurement used in the Canon EF is the most reliable way of obtaining proper exposures in fast moving AE photography. The entire viewfinder screen is read by the Silicon Photocell with more emphasis given to the center portion, where the main subject is likely to be located. In a typical landscape, even a normal center-weighted system can produce underexposure because of the influence of the bright sky in the upper part of the picture area. The following is a diagram of Canon EF's Central Emphasis Metering method which also minimizes the effect of skylight when the camera is used horizontally.

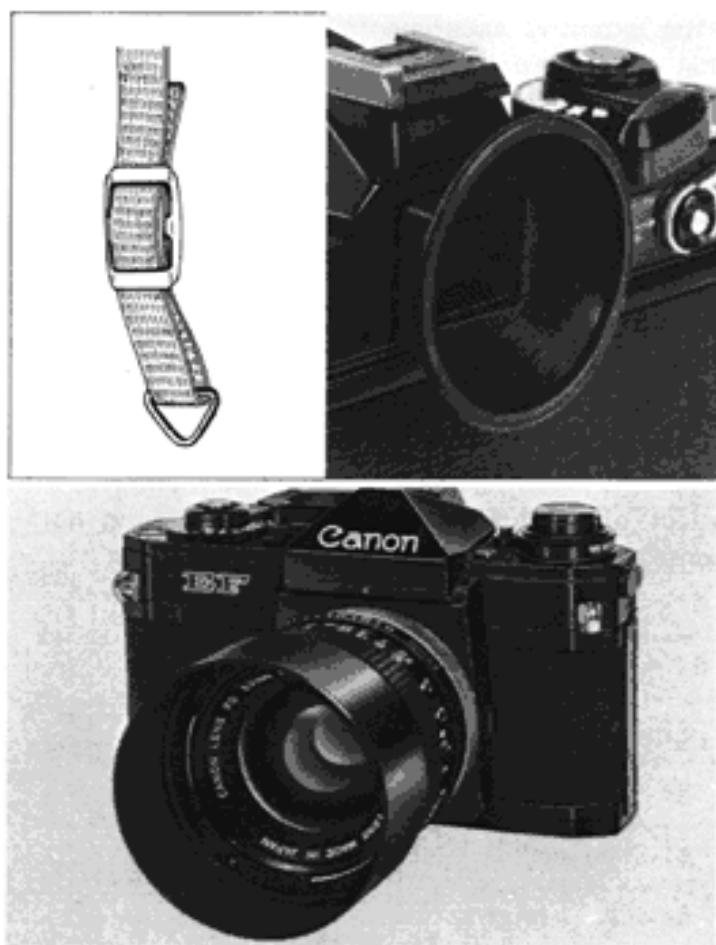


V CAMERA HANDLING

Proper handling of your Canon EF is a very important technique in picture taking. Probably more pictures are lost through poor handling than for any other reason. To take full advantage of the EF's fast operation, you must learn where each control is instinctively. Before loading film into the camera, practice focusing, releasing the shutter and using the winding lever. A few minutes of practice now will pay off later in fewer missed shots.

A Carrying the Camera

Attach the Canon EF's neckstrap and adjust it to a length which feels "right" to you when the camera is around your neck. To avoid dropping the camera accidentally, you should always carry the camera by its strap. Carry the EF around your neck, hang it over your shoulder, or wrap the neckstrap around your hand. For comfortable viewing and to keep extraneous light from the viewfinder, the rubber eyecup should be attached and kept on the eyepiece permanently. Use a lens hood at all times to prevent ghost images and flare. Also, you can protect the front surface of the lens from dust or fingerprints by attaching a UV (Ultraviolet) filter. When you are taking pictures, it is a good idea to take the camera





out of its case, so that it will always be ready to use. Between shooting sessions, the camera should be put back into its case to protect it from dust.

B Holding the Camera

The suggested procedure for holding the camera horizontally is as follows: Place the camera across your left palm and grasp the underside of the lens focusing ring between your thumb and first one or two fingers. Hold the right end of the camera firmly, so that your right thumb is behind the tip of the winding lever and your forefinger is on the shutter



CAMERA HANDLING

button. Press the camera to your forehead while sighting with either your right or left eye. To hold the camera vertically, rotate the camera 90° so that the shutter button is near the top, place the left end of the camera in your left palm and grasp the focusing ring of the lens from the underside. Hold the camera with your right hand in exactly the same manner as in horizontal shooting. The advantage of this method is that it permits rapid changing of positions from horizontal to vertical with a minimum of fumbling.

C Bracing Yourself and the Camera

To reduce camera shake, brace your elbows against your body and stand flat on your feet. Spread them apart with one foot a little bit in front of the other, and bend your knees slightly. If there is a sturdy support near by, such as a telephone pole, a tree, a door jamb, or wall, lean against it. This is particularly necessary, when you are using shutter speeds of 1/30 sec. and below with the standard 50mm lens on the camera. At shutter speeds of 1/15 sec. and below, it is almost impossible to produce shots free of camera movement without the use of a tripod or some other camera supporting device. When you

change to a lens of different focal length, the above suggestions are not necessarily valid. A good rule of thumb in determining the slowest shutter speed you can safely hand-hold the camera with a particular lens is to make a fraction representing this "safe" shutter speed by putting a "one" over the focal length of the lens. For example, when a 135mm telephoto lens is mounted on the camera, the slowest hand-holdable shutter speed you can use to achieve sharp photographs is 1/135 sec. ($135\text{mm} = 1/135 \text{ sec.}$). Set the shutter speed dial at 1/125 sec., which is closest to 1/135 sec. This rule can be applied to all lenses, from moderate wide-angle to super-telephoto.

D Releasing the Shutter

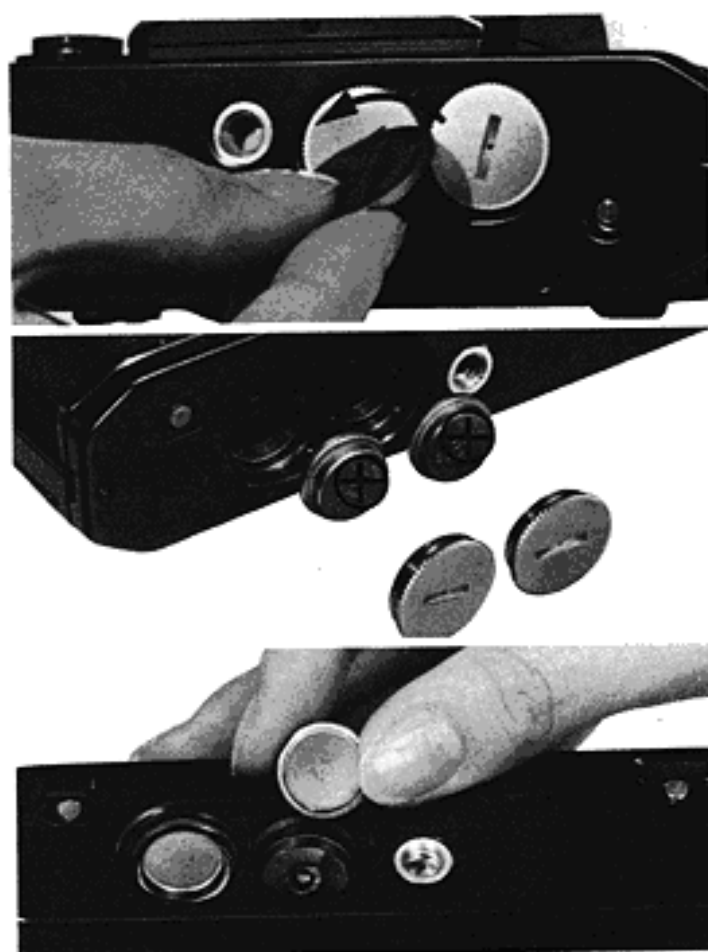
Squeeze the shutter button gently, instead of punching it. Also, try to coordinate your breathing with the release of the shutter. A good time is the instant between exhaling and inhaling (or vice versa) when your diaphragm is at rest. Of course, when shooting fast action, this coordination is not always possible or even desirable. It is more important to concentrate on capturing the action rather than on the position of your diaphragm.

VI BASIC OPERATION

A Loading the Mercury Batteries

Since the Canon EF's Variable Aperture AE control and the electronic control of slow shutter speeds depend on battery power for their operation, two 1.3 volt mercury batteries (Mallory PX 625 or Eveready EPX 625) must be loaded into the battery compartments located in the bottom of the camera. Turn the camera upside down and unscrew both battery compartment covers with a coin. Load one battery into each compartment making certain that the "+" side of the battery is up. Then replace both covers and screw them back on tightly.

- To insure good electrical contact, clean both surfaces of each mercury battery with a clean dry cloth and handle each by its edges only.
- Be careful to load the batteries properly. Improper loading (with the "-" side up) might cause damage to the camera's electrical circuits.
- If the camera will not be used for a long period of time, the batteries should be taken out of the battery compartments to prevent possible damage to the terminals from battery corrosion.
- PX-13 type mercury batteries are not recommended because of their low temperature characteristics.



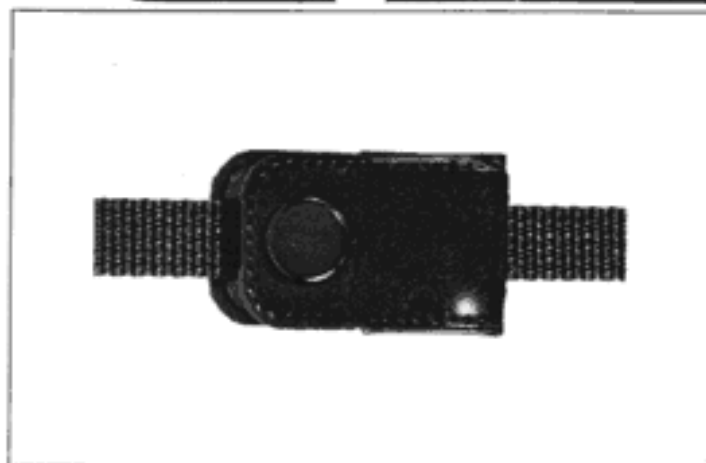
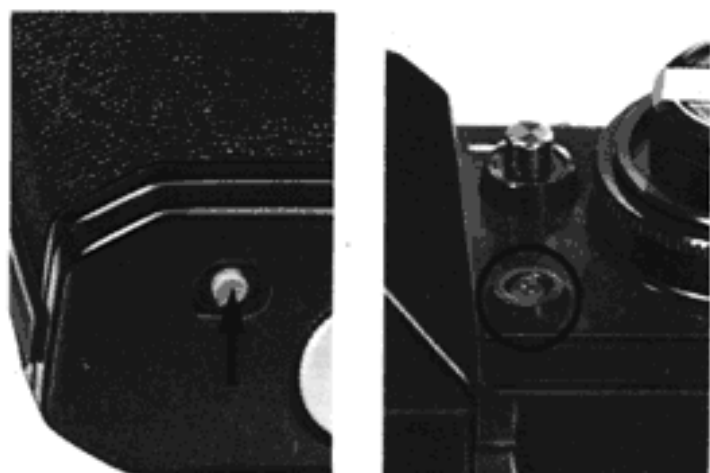
BASIC OPERATION

B Checking the Batteries

After loading the batteries, you should check their power level. This is a simple procedure on the EF. Just hold the red battery check button on the bottom of the camera in for two or three seconds. Watch the LED on the top of the camera. If the LED blinks on and off rapidly, then the power level of the batteries is sufficient. If the LED blinks only once or does not blink at all, then the power level is insufficient. If this is the case, replace **both** batteries with two new ones of the same type.

- Since the Canon EF relies heavily on battery power for its operation, check the batteries each time you plan to use the camera and carry spare batteries with you at all times in case of battery failure. Attach the small battery case to the camera strap and carry extra batteries in it.

- If the batteries do fail, the EF can still be used manually from 1/2–1/1000 sec. The Variable Aperture AE control will not operate, but you can manually adjust the aperture ring of the lens. A basic exposure guide to follow for bright sunlight (with distinct shadows) is to make a fraction representing the shutter speed needed at f/16 by putting a "one" over the film's ASA rating. With a film of ASA 100, use 1/100 sec. at f/16. Choose the nearest click-stop



setting, in this case, 1/125 sec. For hazy sunlight (with weak shadows), use f/11. In cloudy bright conditions (with no shadows), try f/8. On heavily overcast days or in open shade, f/5.6 is required.

C Turning the Camera On and Advancing the Film

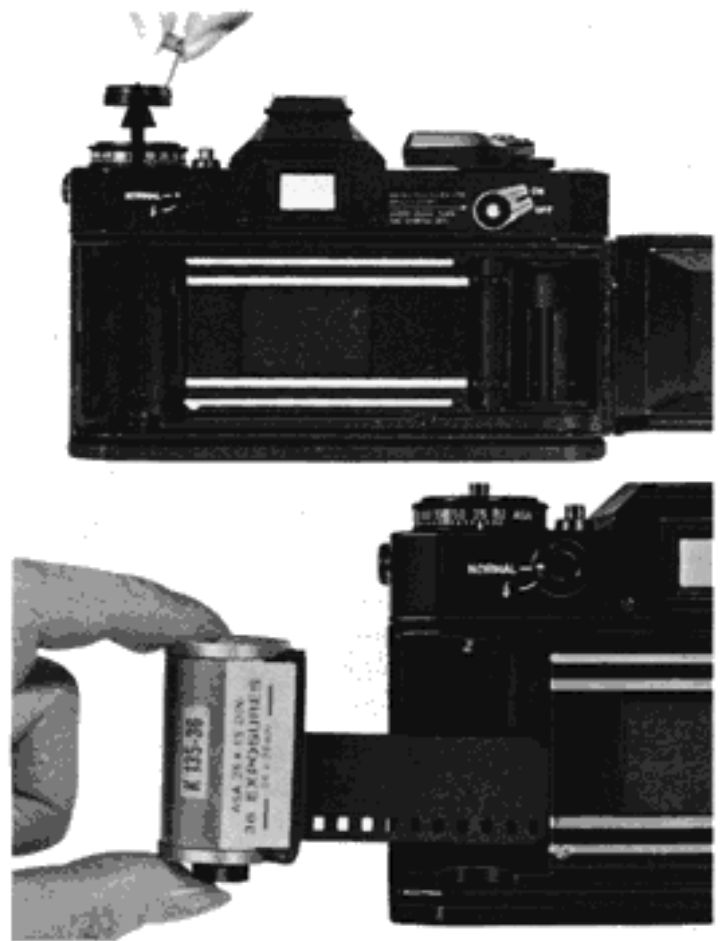
The ON/OFF switch, located on the back of the camera just below the winding lever, controls the operation of the Variable Aperture AE control, the electronically controlled portion of the Electro-Mechanical Shutter (from 1—30 sec.), the winding lever, and shutter button. To turn the camera on, push the switch up. This activates the camera's electric circuit and makes the winding lever spring out to its stand-off position 15° away from the camera body. Now the winding lever can be operated easily with the tip of your thumb. Advancing the film and recocking the shutter for the next shot are accomplished in a single, short 120° throw to the right.

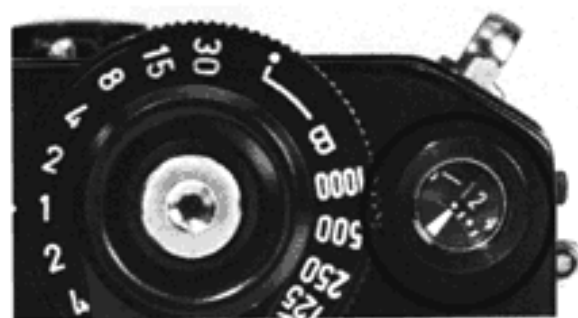
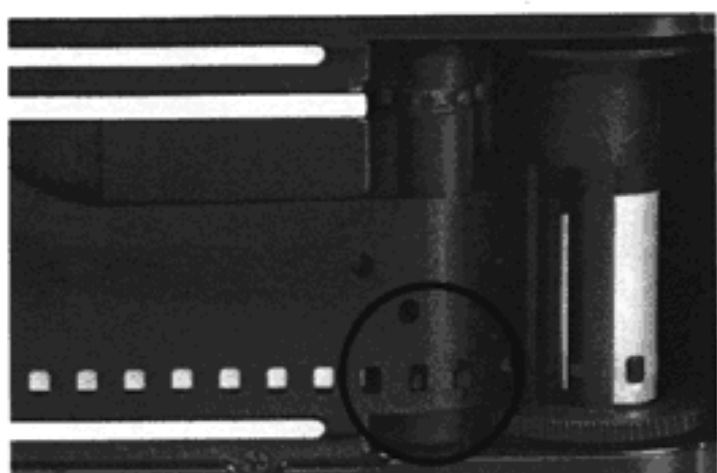


BASIC OPERATION

D Loading the Film

The Canon EF uses color or black and white film in standard 35mm cartridges. To load a cartridge into the camera, first open the camera's back cover. Fold out the rewind crank, grasp it and pull the rewind knob up sharply. The back cover will pop open. Put the cartridge into the film cartridge chamber, push down and rotate the rewind knob until it drops into its fully-seated position. Pull the film leader across the camera and push the tip into one slot of the multi-slot take-up spool. Advance the film once, making certain the sprocket holes of the film are engaged in the teeth of the film transport sprocket. Close the back cover until it snaps shut. Gently turn the rewind crank clockwise to take up the slack in the film and then fold the rewind crank back in. Operate the winding lever two more times while watching the rewind knob. If it rotates, the film is loaded properly. If the knob fails to rotate, then open the back cover and reload the film.





BASIC OPERATION

- The Canon EF has an Automatic Blank Shot Mechanism which frees the photographer from using the shutter button during film loading. The winding lever works independently of the shutter button until frame number one is reached.
- Avoid direct sunlight when loading or unloading the film. If no other shade is available, then turn your back on the sun and use the shadow of your body to shield the camera while loading.
- Commercially available cartridges come in 12, 20 and 36 exposure rolls. One way to save money on the cost of film is to bulk load your own cassettes. Bulk film in 50 or 100-foot rolls, a bulk film loader and some reloadable cassettes are all you need. A darkroom is not necessary. For more information, contact your local camera dealer.

Canon FD 17mm f/4 S.S.C., 1/500 sec., AE,
ASA 400



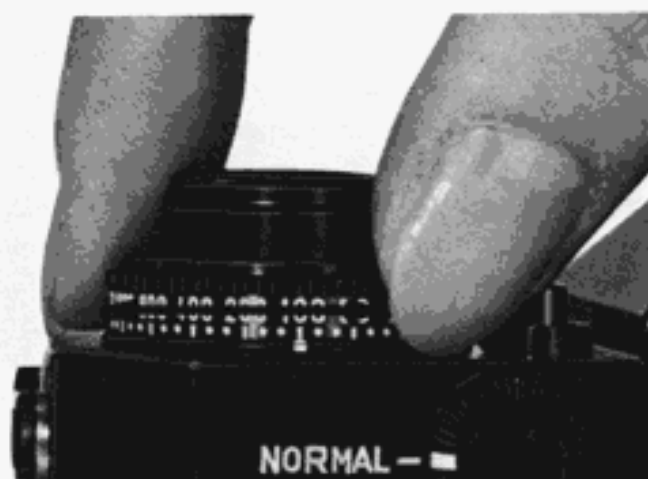
E Setting the ASA

The ASA is a numerical rating of a film's sensitivity to light. A higher ASA number indicates a faster film which is more sensitive to a given amount of light; a lower ASA number indicates a slower film which is less sensitive to the same amount of light. The relationship between ASA numbers is such that a film of ASA 100 is twice as fast as one rated at ASA 50. The film manufacturer's recommended ASA rating can be found in the data sheet packed with the film or printed directly on the cartridge itself. To set the ASA, lift up the ASA ring, located underneath the rewind knob, and rotate it in either direction until the proper number is aligned with the white index mark. When the ring is released, it automatically locks into position. The table below indicates the ASA and their corresponding DIN numbers.

● Setting the correct ASA is essential to the proper operation of the camera, since the ASA is one of the three bits of information (the other two are the

shutter speed setting and the brightness of the scene) which helps the Variable Aperture AE control determine the proper exposure.

● When changing to a film of a different ASA, do not forget to reset the ASA ring. Otherwise, your film will be improperly exposed.

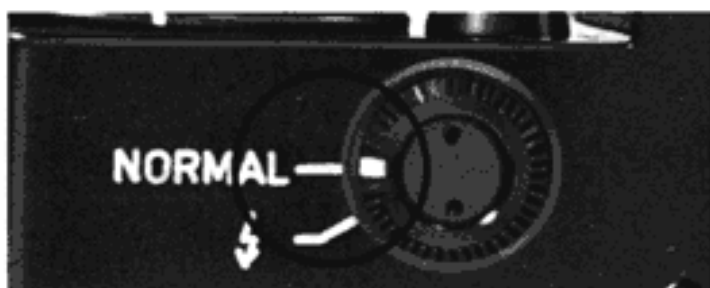


ASA	12	•	•	25	•	•	50	•	•	100	•	•	200	•	•	400	•	•	800	•	•	1600	•	•	3200
	(16)	(20)	(32)	(40)	(64)	(80)	(123)	(160)	(250)	(320)	(500)	(650)	(1000)	(1250)	(2000)	(2500)									
DIN	12	•	•	15	•	•	18	•	•	21	•	•	24	•	•	27	•	•	30	•	•	33	•	•	36
	(13)	(14)	(16)	(17)	(18)	(20)	(22)	(23)	(25)	(26)	(28)	(29)	(31)	(32)	(34)	(33)									

BASIC OPERATION

F Setting the Aperture Ring and the CAT Switch

The amount of light that is allowed to strike the film is determined by the lens diaphragm. This amount of light is represented by "f" numbers or f/stops engraved on the aperture ring which clicks into place as it is rotated. The f/stop designations indicate the opening formed by the diaphragm, and this opening is called the aperture. On the standard 50mm lens, the engraved f/stops are 1.4, 2, 2.8, 4, 5.6, 8, 11, and 16. At f/1.4, the lens is at its maximum aperture with the diaphragm wide open. For this reason, f/1.4 is said to be a large f/stop even though it is small in numerical value. And conversely, f/16 is the minimum aperture of the lens and is a small f/stop. The relationship between successive f/stops is arithmetic: as you close down the diaphragm, each f/stop indicates half as much light as the preceeding one. When operating the aperture ring manually, you may use any aperture setting. For normal AE operation, the aperture ring must be set at the 'A' mark. Hold in the AE lock pin while turning the aperture ring from f/16 (or f/22 on some lenses) to the 'A' mark. At this special setting, the aperture ring is disengaged, allowing the camera to adjust the lens diaphragm automatically to any f/stop setting. Also, to make sure that the camera selects the proper f/stop, the CAT switch must be set



at the "NORMAL" position.

- If the preceding discussion seems complex, keep in mind the following definitions:

An *f*/stop is a number used to represent the amount of light which is allowed to pass through the lens.

The diaphragm is the mechanical iris inside the lens which is opened or closed according to the setting of the aperture ring.

The aperture is the hole or opening formed by the diaphragm blades.

G Selecting a Shutter Speed

The **amount** of light striking the film is controlled by the lens diaphragm, whereas the **length of time** that light is allowed to strike the film is controlled by the focal plane shutter. The shutter consists of two opaque "curtains" which travel over the opening and allow the light coming through the lens to reach the film. The length of time the curtains remain open determines the exposure time for your picture. On the shutter speed dial, shutter speeds from 1/1000 — 1 sec., and B, are marked in white (with the exception of the orange "125" for electronic flash synchronization), while the speeds from 2 — 30 seconds are marked in yellow. To set the shutter speed, rotate the dial in either direction until the

- The camera and its FD lenses are designed for automatic exposure with light measurement done at the maximum aperture. Manual stopped-down metering is not recommended with FD lenses. If you wish to set the aperture manually, take the meter reading before removing the aperture ring from the 'A' mark.



BASIC OPERATION

desired number clicks into place next to the white index mark. An in-between setting should not be used. When changing shutter speeds, there is no need to remove your eye from the eyepiece, because the selected shutter speed is automatically indicated on the large scale in the viewfinder. With a total of 17 click-stop settings to choose from, the question you might ask is: "How do I select the right shutter speed?" First of all, you must select a shutter speed which keeps the meter needle somewhere within the white portion of the aperture scale. If you take a picture when the needle is touching either of the red warning marks (underexposure at the bottom of the scale and overexposure at the top), then your photograph will be improperly exposed. Depending on the brightness of the scene, the film's ASA, and your photographic intentions, you can use the following general guidelines to help you select an appropriate shutter speed when using the standard 50mm lens: When you are shooting outdoors in the open or want to freeze action, choose fast shutter speeds (1/125 — 1/1000 sec.). When photographing in the shade or indoors without a flash, then select slower speeds (1/30 or 1/60 sec.). To take pictures at night (without a flash), use slow shutter speeds (30 — 1/15 sec.), with the camera mounted on a tripod.

- At the "B" setting, the shutter will remain open as long as the shutter button is depressed. A cable release is a handy device for holding the shutter button in for long periods of time. Also, it allows the shutter to be opened without the photographer touching the camera or button directly, and therefore keeps camera shake to a minimum, thus insuring a clear picture. At "B," the aperture ring must be set manually.

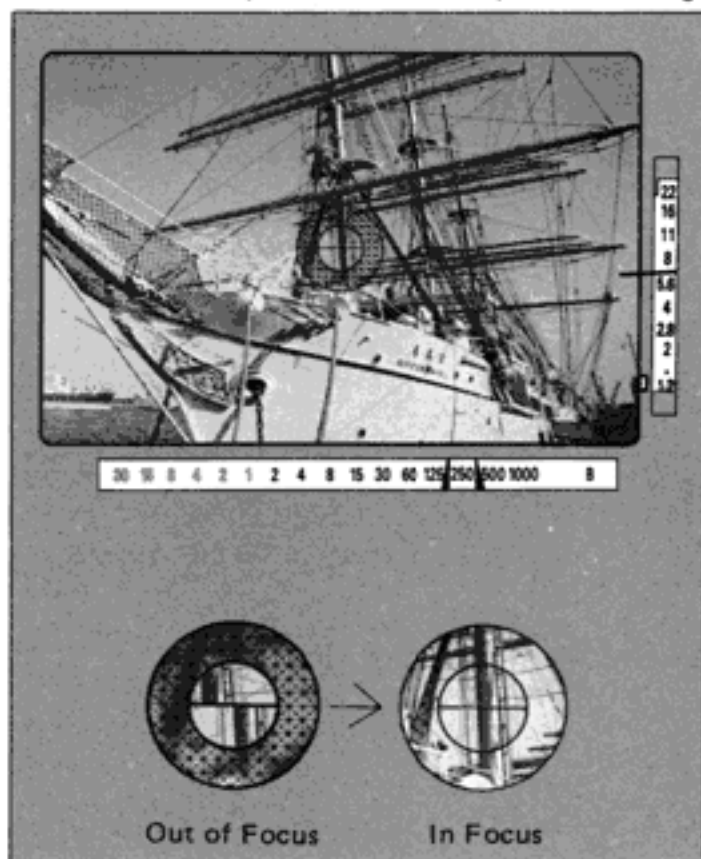
- Intentional blur oftentimes can give your photographs a convincing feeling of action. Two types of intentional blur are (1) subject blur and (2) background blur created by panning. Subject blur (1) is created by keeping the camera still while the subject moves across the field of view. The subject becomes blurred while the background remains sharp. Background blur (2) can be created by panning, or following the subject with the camera, keeping the subject basically at the same position in the viewfinder. The subject remains relatively sharp while the background blurs into a streaky effect. Experiment by using slow shutter speeds of 1 — 1/60 sec. A neutral density filter (ND4 or ND8) over the lens will permit using slow shutter speeds even with fast films.

BASIC OPERATION

H Viewing and Focusing

The Canon EF is a single-lens-reflex (SLR) camera. This means that you view the subject through the same lens as is used to take the photograph. Continuous viewing (except at the moment of exposure) is made possible by the use of an instant-return mirror located inside the body just below the pentaprism. Since the picture you see in the viewfinder is the same as the one recorded on the film, parallax is completely eliminated. The viewfinder remains bright during AE operation, because through-the-lens metering (TTL) is performed with the lens at maximum aperture. Focusing is made easier by a split-image/microprism rangefinder. You rotate the focusing ring while looking through the viewfinder until the point where the divided image of the subject on the split-image focusing screen can be seen correctly matched in the center of the viewfinder. The subject snaps into sharp alignment at proper focus. For a subject not having straight-line forms or with indistinct outlines, you have the choice of using the microprism ring around the split-image focusing screen. The microprism shatters out-of-focus images very well and snaps into sharpness at the precise point of focus. When using certain lenses (such as macro or super-telephoto), the

ground glass with the fine-lined Fresnel screen outside the microprism area will aid you in focusing.



BASIC OPERATION

I Locking-In an Exposure Reading

In the majority of cases, Canon EF's Central Emphasis Metering system will give correct exposure readings in AE photography. However, occasionally you will encounter picture-taking situations which require a departure from normal AE operation. For example:

- (1) Your subject is strongly backlit or contrasts sharply with the background and will not appear in the center of the picture.
- (2) The entire scene is either extremely light, such as a light colored subject in snow; or it is very dark, such as a dark colored subject in deep shade or against a dark background.

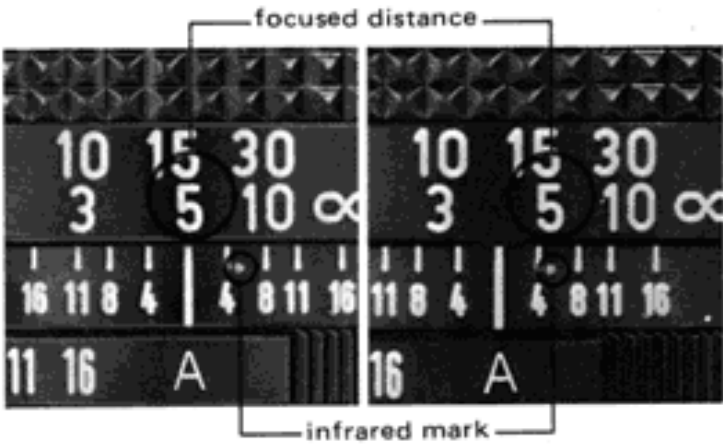
In the above cases, it is necessary to modify the automatic exposure reading which the camera normally sets by itself. The Canon EF provides a convenient way to do this by incorporating an AE memory lock button on the left side of the camera between the pentaprism and the ASA ring. By holding in this button, you can lock the meter needle of the camera at a particular f/stop while you change the position of the camera (and hence the view in the viewfinder). To produce a good exposure in the first situation (1) described above, focus on your main subject and center it in the viewfinder. If



- In fast-breaking situations, or in candid shooting, you can prefocus the lens by using the distance scale engraved on top of the lens barrel. Estimate the distance between you and the subject. Then turn the focusing ring until this distance (in feet or meters) is aligned with the focusing index mark. This method is especially useful when there is not enough time for through-the-lens focusing, or when you do not want to draw attention to yourself by lifting the camera to eye level.
- Film Plane Indicator—the $\oplus$ -mark engraved on the camera just to the left of the pentaprism indicates the exact position of the film plane. This is an aid when actually measuring the film-to-subject distance in macrophotography.
- Black and White Infrared Photography: Because infrared light rays focus on a plane slightly behind that of ordinary light rays, it is necessary to modify slightly the normal method of focusing the lens. First, focus on the main subject as usual. Next, take note of the focused distance (in feet or meters) which appears opposite the focusing index mark. Then, turn the focusing ring slightly, so that the focused distance is aligned with the tiny red dot engraved on the lens barrel just to the right of the

focusing index mark. Use a red filter (R1) over the lens and set the aperture ring manually following the film manufacture's suggestion for exposure settings.

- Color Infrared Photography: In color infrared film, two of the film's layers are sensitive only to visible light, while the third layer is sensitive only to infrared. Therefore, it is not necessary to readjust the focused distance. However, f/stops of f/5.6–16 are recommended to produce sharp pictures. Use either a dark yellow (Y3) or orange (O1) filter and set the aperture ring manually following the film data sheet.



the subject appears small, move in closer until it occupies about one-third of the total viewfinder area. Push the AE memory lock button and hold it in. Then you may step back and/or change the position of the subject in the viewfinder to suit your compositional taste, while the correct exposure reading is locked into the camera's Variable Aperture AE control. Releasing the shutter will produce a properly exposed photograph.

In the second situation (2) above, the scene cannot be metered directly. Most scenes are composed of both light and dark areas which usually average out to a medium gray. Because all TTL exposure meters are calibrated to give proper exposure when reading a neutral gray card (of 18% reflectance), they give correct exposure for most scenes. In extreme cases in which the scene is predominantly light or predominantly dark, the Variable Aperture AE control must be fooled into providing the correct exposure. One readily available alternate subject is the **palm** of your own hand held out a foot or so in front of the lens and placed in the same light as your original subject. Focus on your subject normally. Then fill the viewfinder with the out of focus image of your right palm making absolutely sure that it is in exactly the



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same light as your main subject. Push in and hold the AE memory lock button with your left thumb. Return your right hand to the camera body and release the shutter. The exposure you locked in will be close to the proper exposure needed for a very light or very dark subject.

- In practical terms, the exposure latitude of both black and white and color **negative** film (from which prints are made) is inherently large enough to overcome almost all AE maladjustments which occur in day-to-day shooting. Therefore, it is **not** mandatory to use the AE memory lock button at all. However, color **transparency** film has extremely small exposure latitude and requires near perfect exposure to produce good results. When taking color slides, the use of the AE memory lock button in the special situations previously described is strongly recommended.

- A standard 18% reflectance gray card is a much more accurate surface to meter than the palm of your hand. It may be purchased very inexpensively from your local camera dealer and carried with you for situations requiring nothing less than perfect exposure.



J Releasing the Shutter

The Canon EF's shutter button is conveniently located on the right side of the camera and is coaxial with the winding lever and shutter speed dial. The shutter button stroke is very light and short for a Variable Aperture AE camera. As a built-in safety feature, the shutter button is locked automatically when the camera is turned off.



BASIC OPERATION

K Making Multiple Exposures

Exposing the same frame of film with two or more images is an exciting technique used by many photographers to create dream-like scenes, abstract designs, motion studies, or humorous pictures. Your imagination is the only limiting factor in this creative process, because Canon has made multiple exposure photography so easy to perform with the EF camera. A multiple exposure button is located in the center of the ON/OFF switch. After making your first exposure, hold in this button with your left thumb while operating the winding lever in the normal way. The movement of the film transport sprocket is stopped, while the winding lever recocks the shutter. Now you are ready for your next shot which will be in perfect registration directly on top of the first shot. This process may be repeated any number of times, and the frame counter is stopped until the film is actually advanced to the next frame.

- The multiple exposure button need not be depressed during the entire winding operation, but only needs to be held in at the beginning of the stroke.
- In multiple exposure photography, exposures on the same frame of film are additive. In the AE mode of operation, the Canon EF automatically deter-

mines the proper exposure needed for a single frame. When making multiple exposures, less exposure must be given to each shot. One simple way to do this is to reset the ASA ring to a higher setting, which will fool the camera into decreasing the exposure reading. Multiply the normal ASA of the film by 2 for a double exposure, by 3 for a triple exposure, by 4 for a quadruple exposure, and so forth. However, when making multiple exposures of night lights or a subject against a black background, do not reset the ASA ring, because the black areas in the scene will become overexposed.

