



250

56















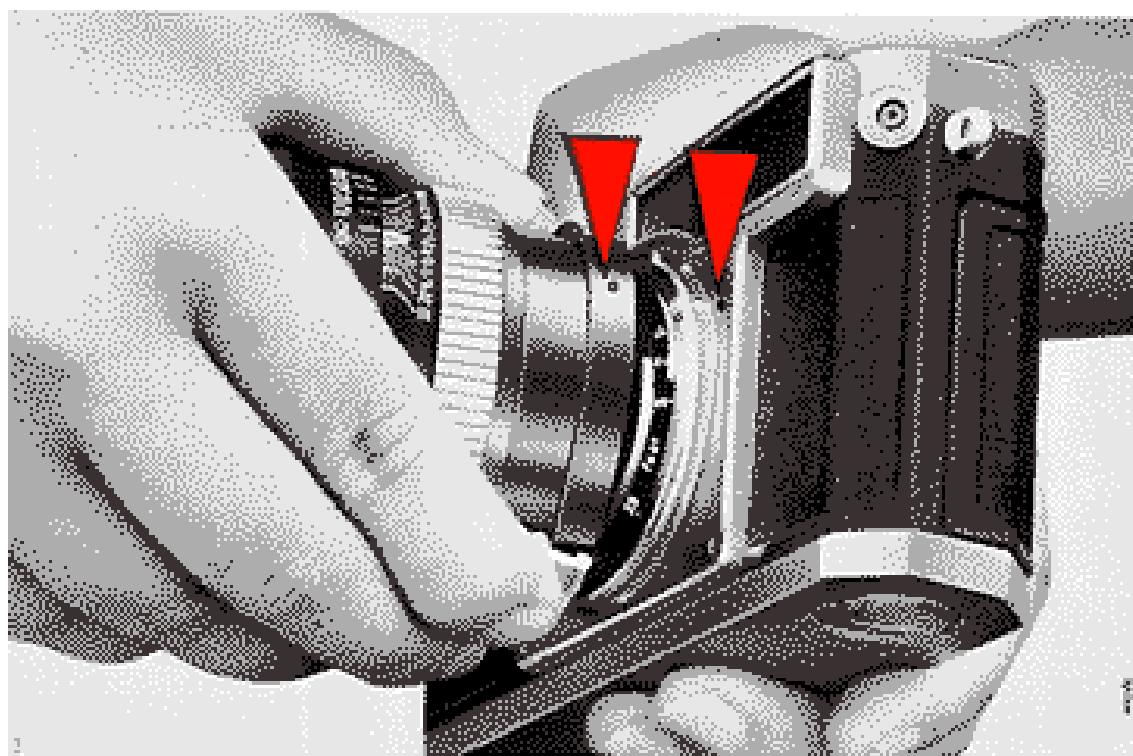
2. Line up the red dots on the camera and lens (figure 15), and place the lens over the focusing sleeve of the camera.
3. Turn the lens counter-clockwise till it clicks into position and the safety catch on the lens sets in position.

To remove a wide angle or telephoto lens :

Depressing the safety catch, turn the lens barrel clockwise until the 2 red dots meet.

Then gently lift the lens from the camera body.

Note that telephoto lenses should be focused by turning the



knurled ring on the lens barrel rather than by the focusing wheel on the camera.

When a lens is removed the opening in the camera body should not be exposed to bright light—especially if the camera is loaded. Caution should be taken to keep out dust. A camera body cap is available on order which can be used to protect the inside of the camera, when carried with the lens removed.

To protect the standard Nikkor lens from damage and dust when it is carried separately from the camera, a case and a rear lens cap should be used. Both case and cap are available on order.

Loading the Camera

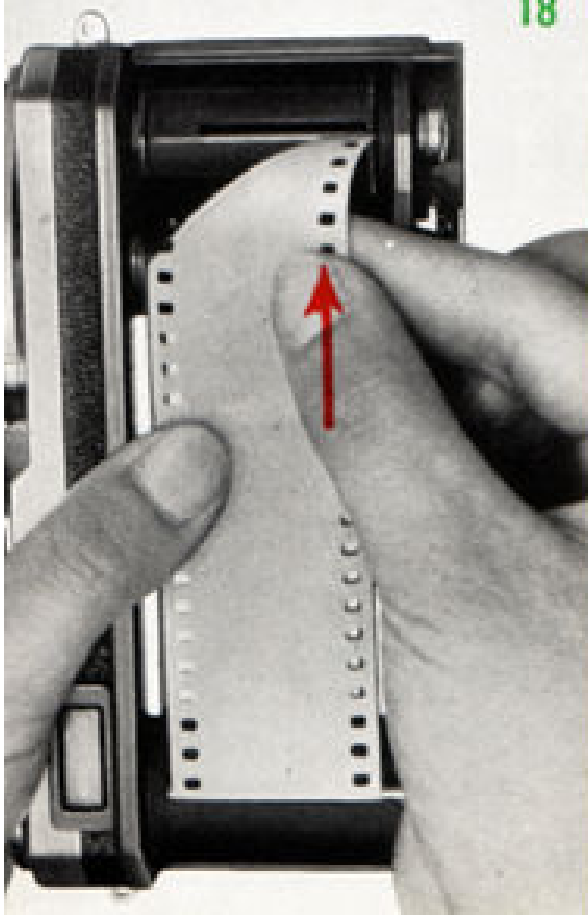
16



17



18



19



Loading the Camera

Turn the semi-circular lock on the camera bottom to the "Open" position (figure 16). The camera back is then unlocked and may be completely removed by sliding it off with the thumb (figure 17).

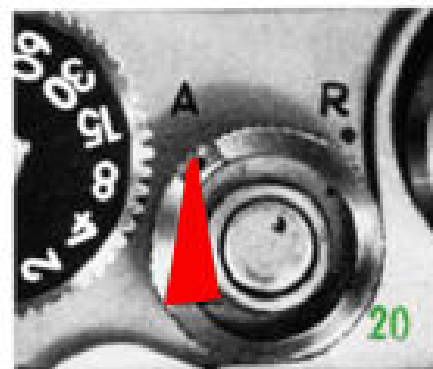
You will notice that the take-up spool is fixed, assuring more uniform film take-up.

Place a film cartridge or loaded cassette in the left chamber, so that the projection of the cassette fits into the guide notch.

Insert the end of the leader of the film into the slot on the take-up spool (figure 18) so that the projection in the take-up slot catches the perforation of the film (figure 19).

Rotate the spool in the direction of the film cartridge so that the film passes under the spool and the emulsion side is wound face out.

Replace the camera back and lock it. Turn the AR ring (figure 20) on the shutter release button to "A" (Advance) position*, and shoot two or three "blank" exposures which will dispose of the portion of the film

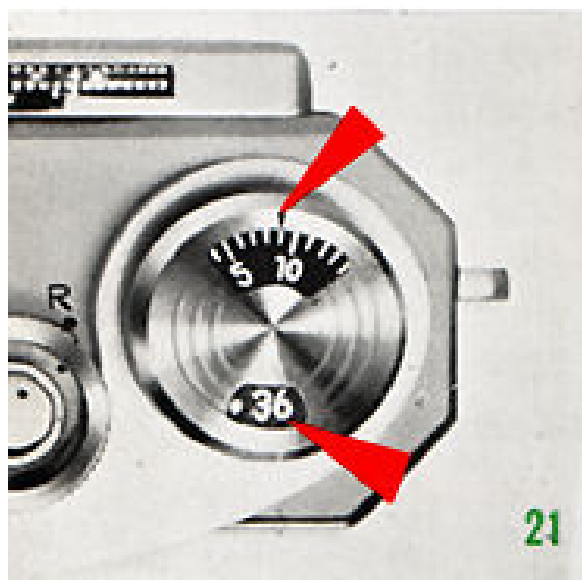


exposed during loading procedure. While doing this, note that the Rewinding Knob rotates in the direction opposite the arrow on the knob, indicating that the film is correctly loaded and is being advanced. If it does not move as indicated after the first blank exposure, gently wind in the direction of the arrow to take up the film slack in the cartridge.

*It is important that the AR ring on the shutter release button be turned to "A" before the "blank" shots are made.

Automatic Exposure Counter

The Exposure Counter on the Nikon SP (figure 21) always returns to one or two spaces before zero automatically when the camera back is removed. After loading the camera, shoot two or three "blank" shots (described under "Loading the Camera" p. 17), until the counter registers 1. The camera is now ready for the first shot. Thereafter, the counter will advance consecutively up to 36.



Film Load Reminder

This feature indicates whether you have loaded a 20 or 36 exposure magazine. Move the indicator pin to change the figures (figure 21).

Film-Type Reminder Dial

The Film-Type Reminder Dial (figure 22) on the bottom of the camera serves as a reminder of the type of film (expressed in ASA speed) with which the camera is loaded. It can be set for either color or black and white film. "E" represents "Empty" and may be used to indicate that the camera has been unloaded.

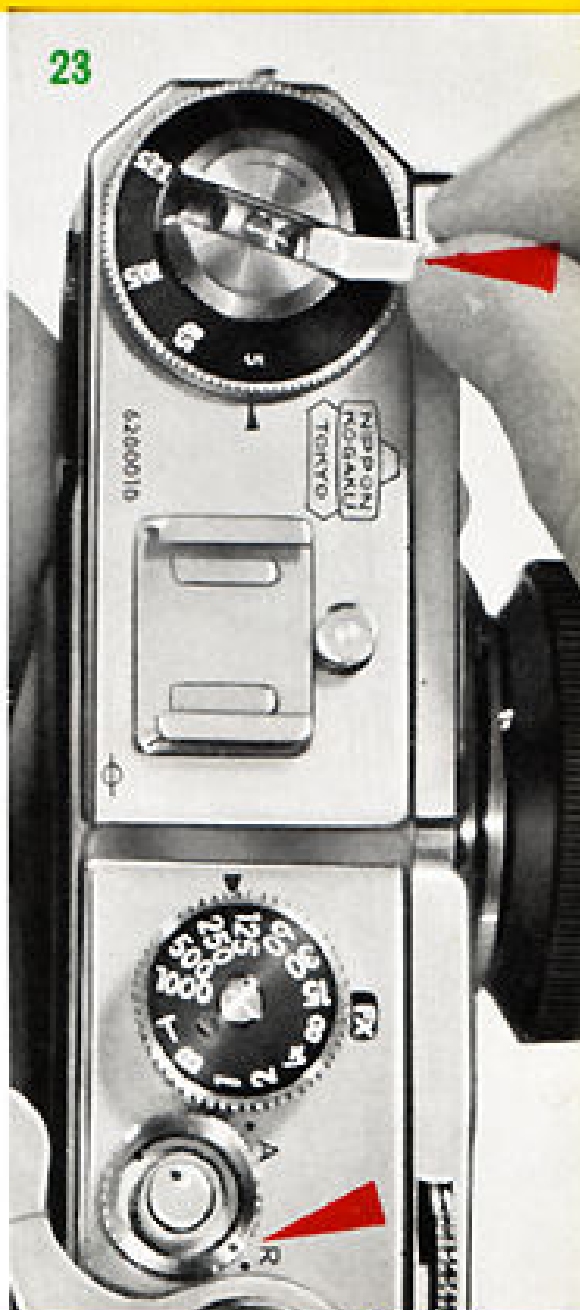


Unloading the Camera

The exposed film must be rewound back into its original cartridge or film magazine. To rewind the film, turn the AR ring on the shutter release button to the "R" (rewind) position, lift up the rapid rewind crank (figure 23) from its position on the rewinding knob and turn it in the direction of the arrow.

As the film is being rewound, a slight resistance will be felt, and the red dot on the shutter release button will revolve.

Keep on winding it until the resistance stops and the dot stops its motion. The film is now completely in the magazine and the camera back may be opened to remove the film from the camera.



Double Exposure

When a double exposure is intentionally desired, after making the first exposure, set the AR ring around the shutter button to "R". Turn the rewinding knob in the direction of the arrow, until the shutter release button makes one complete rotation or slightly over, which can be seen by the travel of the red dot.

Then set the ring back to "A" and wind the shutter for the second exposure. It is not necessary to use the same shutter speed as before.

Note: The double exposure also operates the automatic exposure counter, so the result is that the indication number will become one in excess compared with the actual frame number exposed.

Flash Synchronization

Flash Bulb					Shutter Speed										
Class	Make				100	80	60	45	30	15	8	4	2	1	8
	G. E. Westing-house	Sylvania	Mazda	West											
FP	PH/6	Type FP/26	No. 6 No. 6Z	No. 6 No. 6Z		●			●			●		F	
F	PH/SM	Type SF	F 1 F 2 F 3	SM SF SS	—	—	—	—	●	F		F	X		
M			Press	M 5	—	●			●			●		F	
	PH/5 PH/8 M 5	Press 25 M 25	No. 3 No. 5 Z 5	No. 3 Z-Press	—	—	—	●	●			●		F	
	PH/M2	Type M2	No. 0 2-M	No. 0 MX-0	—	—	—	—	—			●		F	
X	Electronic, instantaneous firing				—	—	—	—				F	X		
	Electronic, with firing delay				—	—	—	—	—			F	X		

Small FP or F class bulbs are recommended for use with the Nikon.

When the small FP bulb is used, select the dot of the color that matches the colored numbers on the shutter speed dial. For example, a shutter speed shown in a white color will match with OF.

When using F class bulbs, the color of the "F" figure must coincide with the color of the shutter speed being used.

For setting the correct lens aperture, look up the "Guide-numbers" which will be found in the instructions furnished with your flash unit.

Electronic Flash

Most electronic flash units are instantaneous, and have no firing delay. With electronic flash units of this type, set the speed dial at 60 (or slower) and the synchro-selector at FX, as shown on the above table. For units which have a firing delay, the shutter should be set at 30 or slower, according to the characteristics of the flash unit used.



Making the Picture

First, determine and then set the combination of shutter speed and lens aperture you want. Use the lens previewer to select the focal length lens best suited to your needs.

With your left hand, hold and balance the camera. Now, using your right hand, place your thumb along side of the film advance lever; middle finger on the focusing wheel and the forefinger on the shutter release button (see figure 27 and 28).

To remove the cap, depress the buttons protruded on either side of it.

**DON'T
FORGET TO
REMOVE
LENS CAP!**





With a single stroke of the advance lever (figure 29), the film is advanced, the shutter is wound, and the film counter operates.

Now, focus by rotating the focusing wheel with your middle finger and then shoot by gently depressing the shutter release.

For speeds slower than 1/30 second a tripod or some other support and a cable release should be used.

When the advance lever is released it will not swing back completely into position but will leave a small clearance for greater convenience in advancing the film for the next exposure.

Note: There is a black dot in the center of the shutter speed dial. When the shutter is wound this dot lines up with the arrow on the outside of the dial (see figure 29). This serves as a convenient indicator to show whether the shutter is wound.

Note: An automatic shutter release lock prevents accidental firing of flash before the shutter is wound. Once the film has been advanced and the shutter release fired, the shutter release cannot be depressed again until the film has been advanced and the shutter wound.

Film Cassette

The Nikon camera will accept any standard daylight loading cartridge containing a ready-cut length of 35mm film. The Nikon cassette (or magazine) can be loaded with a ready-cut film length or fed from a stock of 35mm.

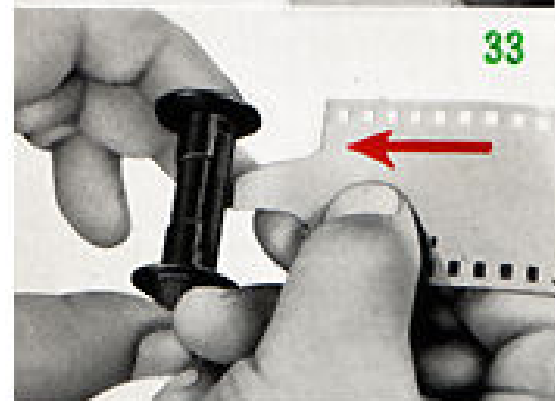
The cassette (figure 30) consists of outer and inner shells and a spool. The figures on the bottom of the outer shell are ASA speed and are used as an indicator of the speed of the film in the cassette. The white dot on the edge is the index. The black figures are for black and white film, and the red



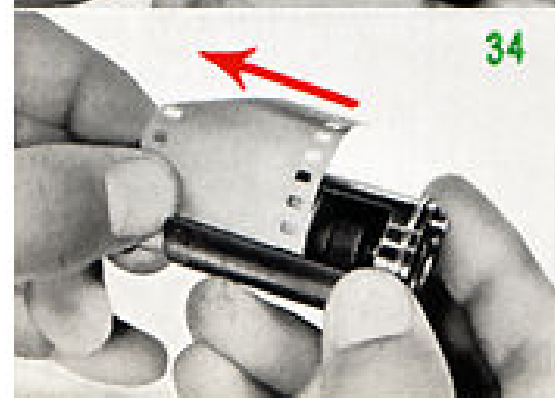
31



32



33



34



30

INNER
SHELL

SPOOL

OUTER
SHELL

for color film. When the film has been exposed, the red dot index should replace the white.

To Open the Cassette

Hold the cassette in your left hand, with bottom showing the ASA speeds, away from you. Depress small button with a right hand finger, and turn the inner shell of the cassette clockwise (figure 31) until the side openings of both the shells meet and the inner shell simultaneously pops out slightly, ready to be pulled out (figure 32).

Film Cassette

To Load the Cassette

(In the dark room)

Trim the end of the film so as to form a tongue to be fed into the spool. This must not be made too wide for it has to be pulled out at the other side of the spool slit when the film has been exposed and cut away. To load the spool, first hold it in your left hand with the projecting end toward you. Thread the film tongue with the right hand (figure 33), emulsion surface downward, through the larger opening of the slot in the spool. When the teeth inside grip the film, wind the film on the spool (emulsion surface in).

Insert the loaded spool into the inner shell, so that the projecting end fits the opening at the opposite end. Then hold the outer shell in your left hand and slide it over the inner shell. Be sure the film end extends out of the outer shell (figure 34).

Push the top of the inner shell until it seats. Then, turn it counter-clockwise within the outer shell until you hear two clicks. The cassette has now been loaded, and is perfectly light tight, and is ready to be placed in the film chamber of the camera.

To Unload the Cassette

(In the dark room)

The loaded cassette should be opened as described above, the spool taken out, the film unrolled and cut off at the spool (figure 35).

The film end remaining in the slot should be pulled out in the opposite direction from which it was inserted.



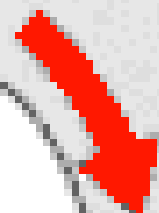


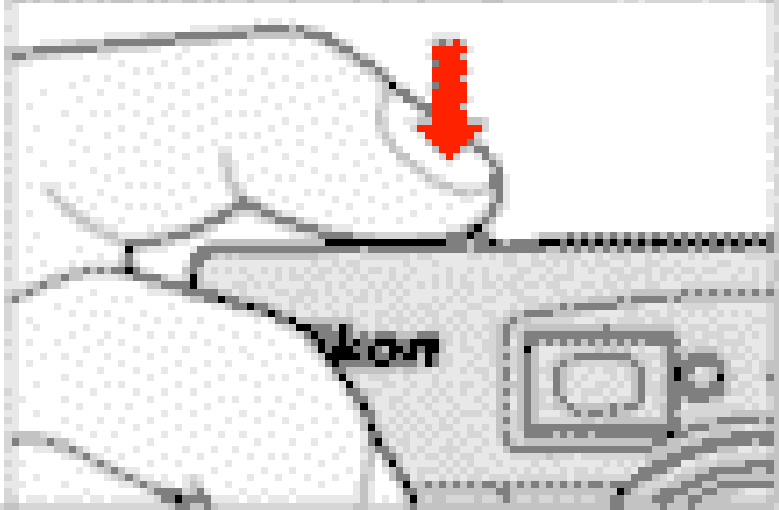
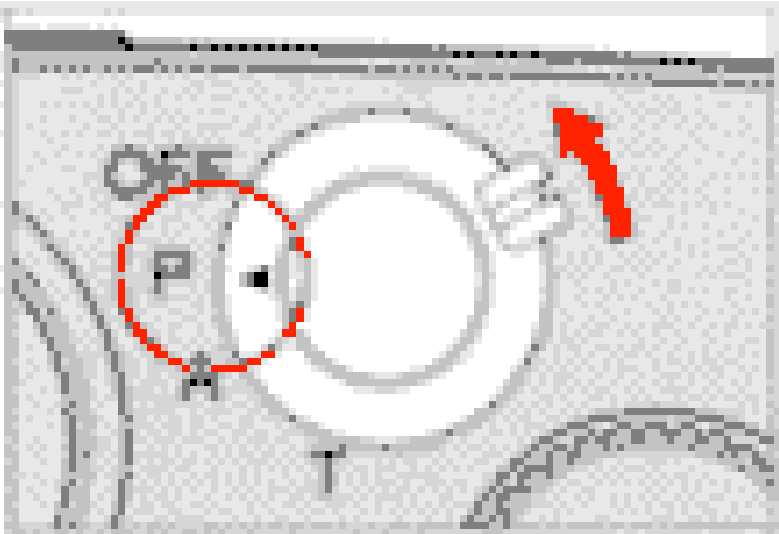
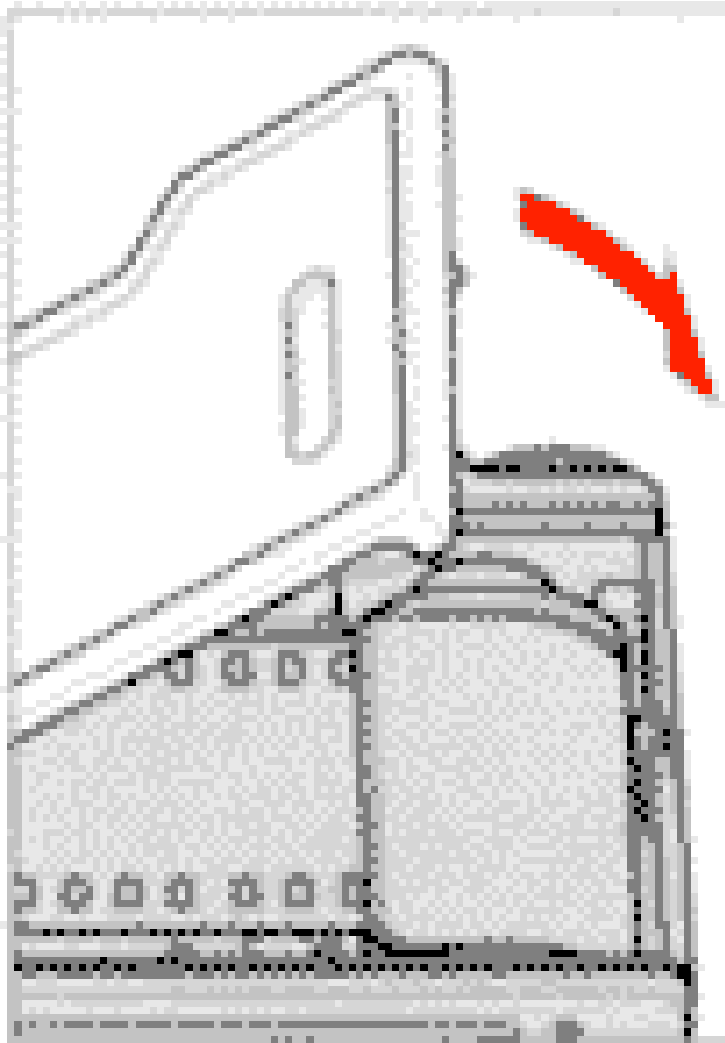
OFF

P

A

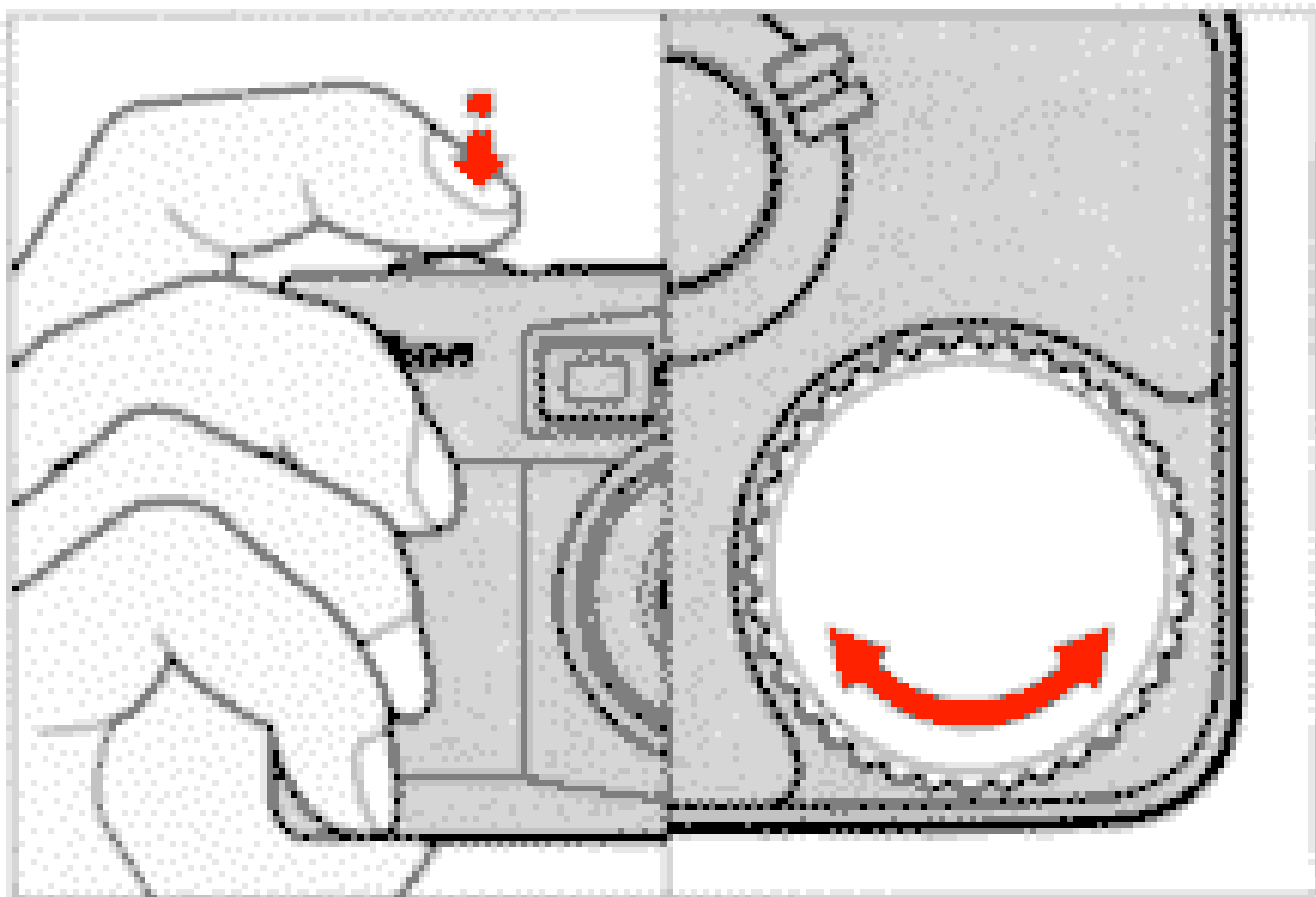
T

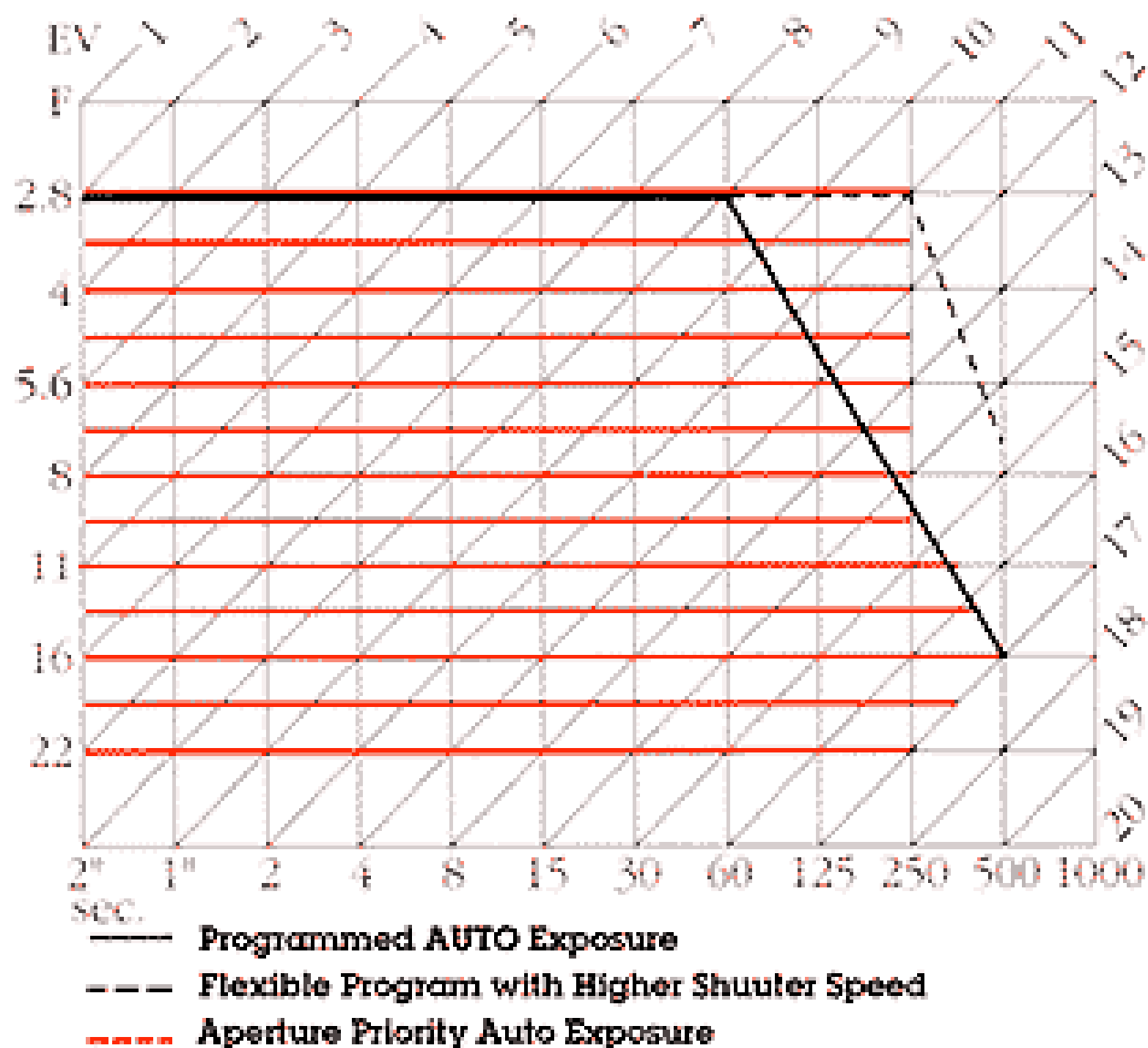






125





Exposure Meter

Coupled with the Shutter Speed Selector of the Nikon SP

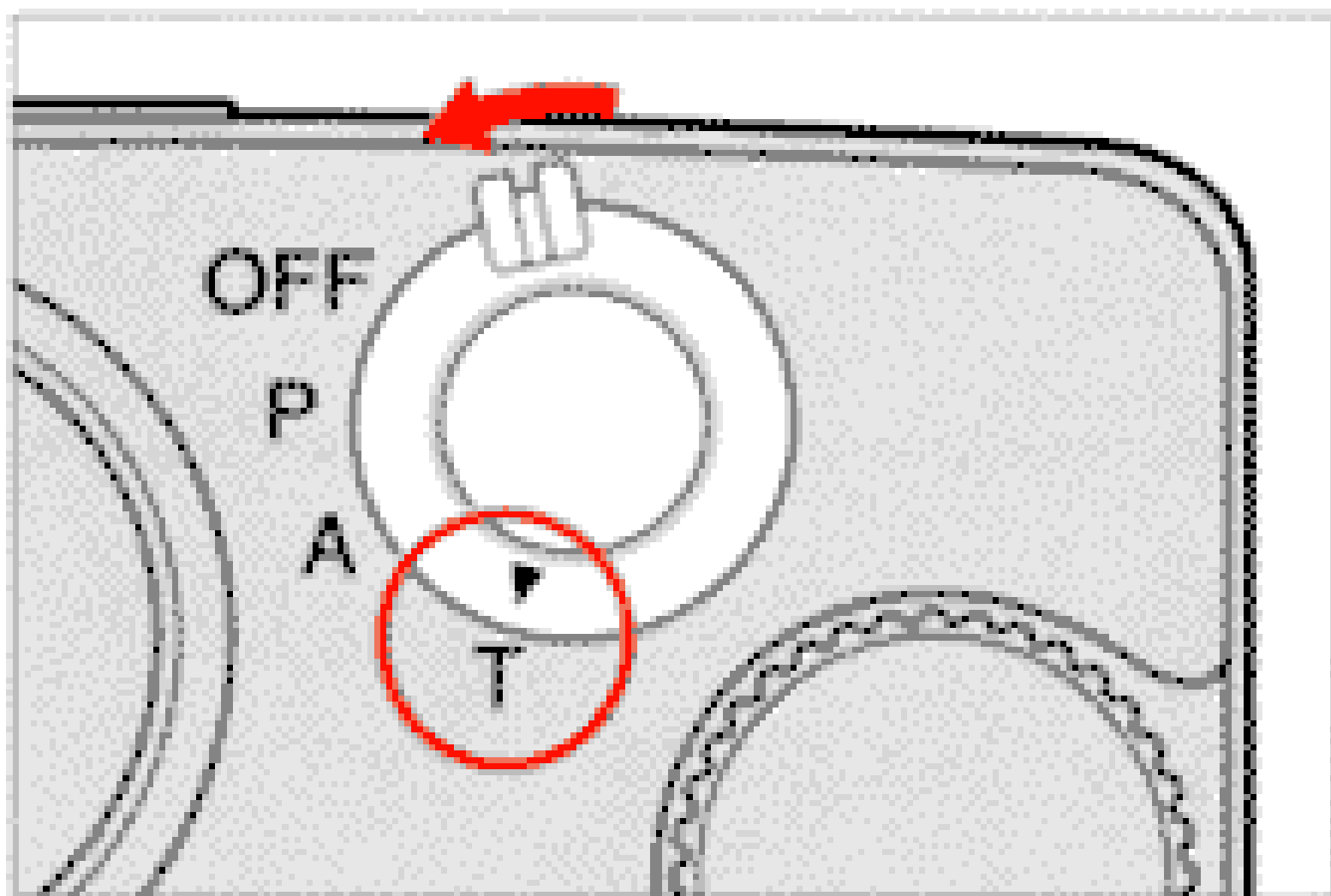
A photoelectric exposure meter is available which couples with the shutter speed selector dial of the Nikon SP and permits instant setting of the correct time of exposure, when the meter is adjusted for the prevailing light conditions and for the aperture setting of the lens.

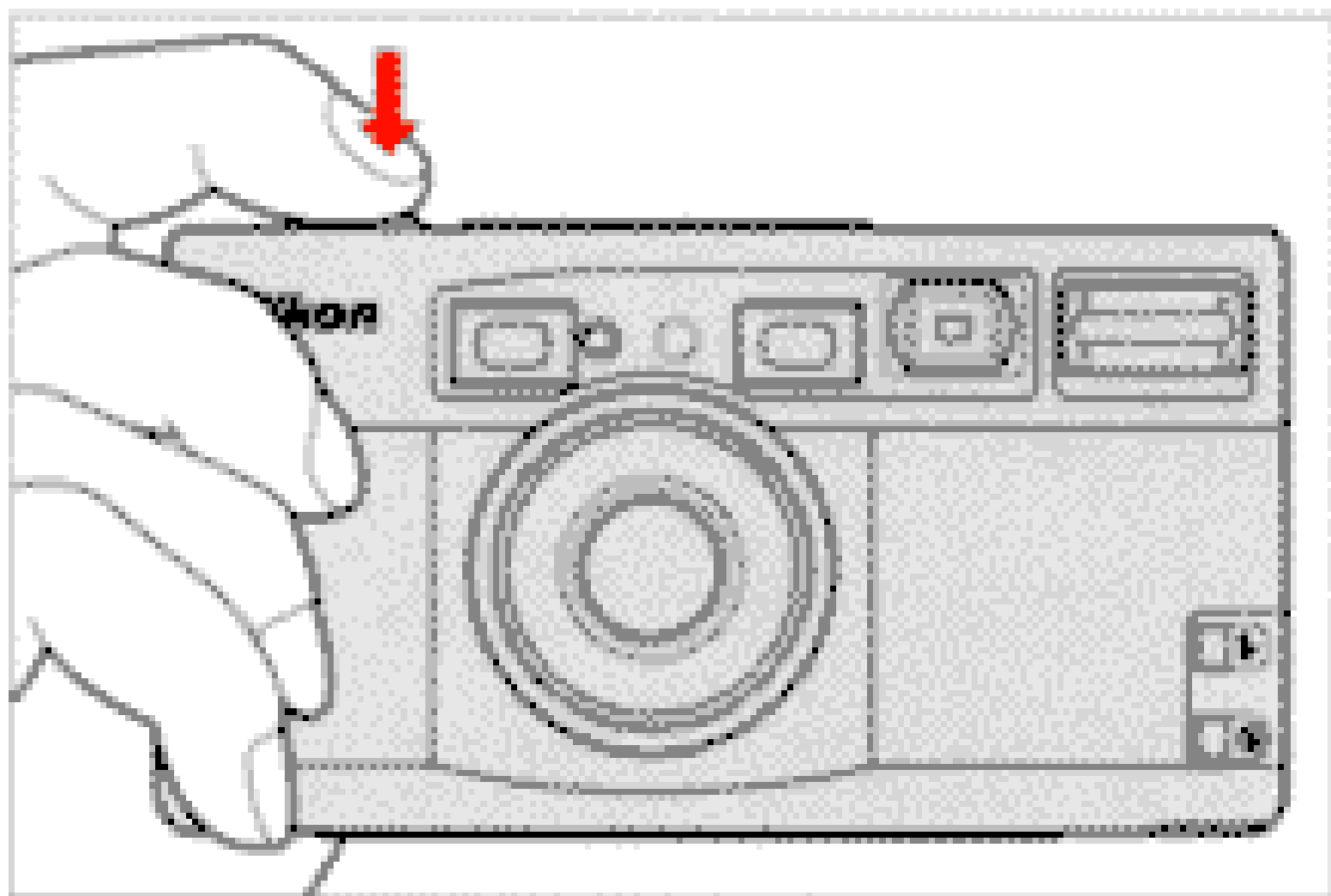


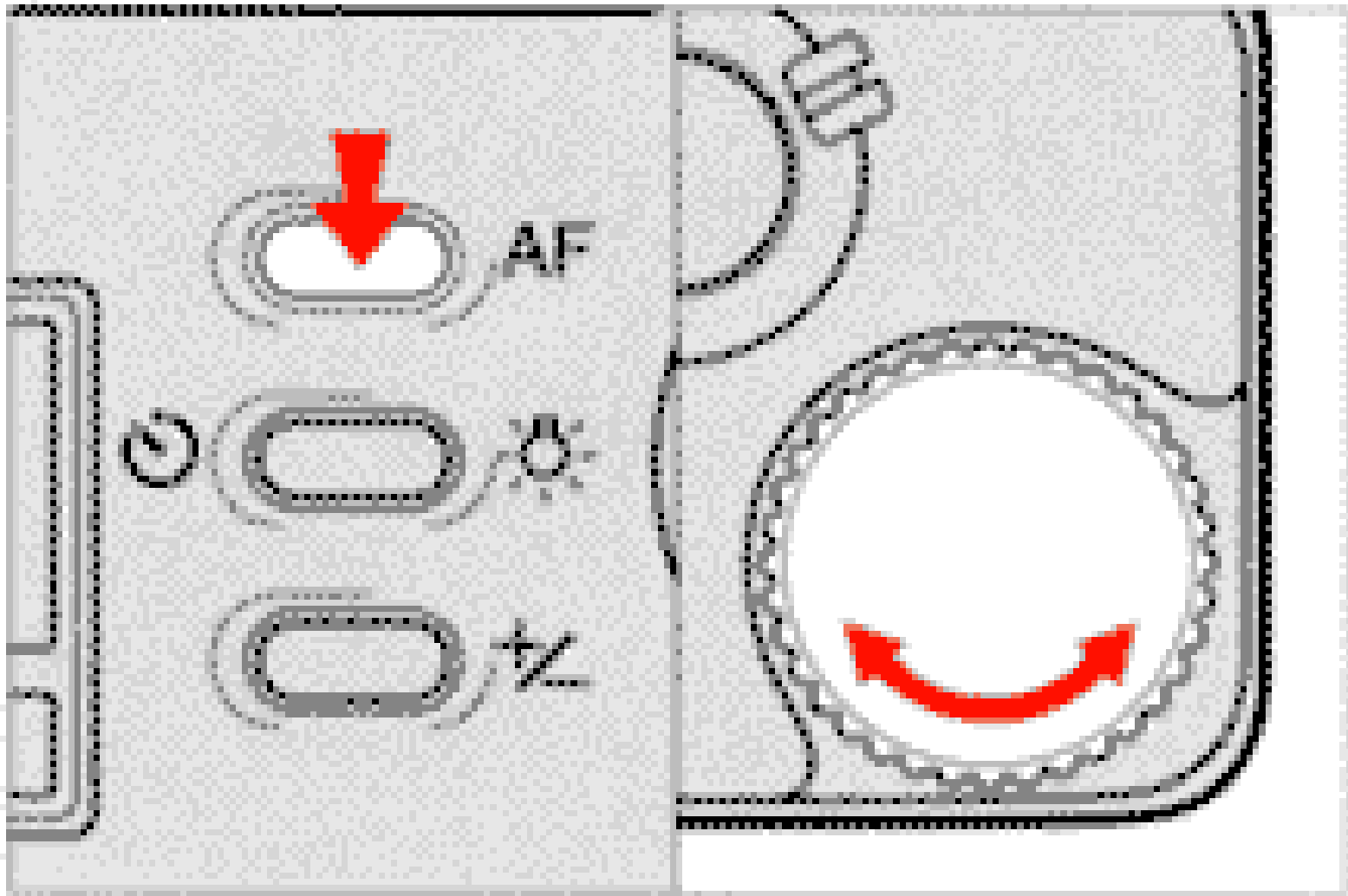
Insert the Nikon exposure meter into the camera accessory shoe from the front and slide it in as far as it will go. Once in position, push the exposure meter slightly to the left (figure 36), so that it disengages from the gear around the shutter speed selector. Hold it in this position and set the speed dial of the meter at 1000, and turn the camera shutter selector until the same shutter speed (in this case 1000) is brought opposite the index mark, found above the toothed wheel on the side of the meter. In this position, put the selector into gear with the wheel.

Set the type (speed) of the film being used by turning the ASA disc on the top of the exposure meter.

Turn your camera towards the subject to be photographed and by revolving the camera shutter speed selector (figure 37) set the f-number scale on the meter to the needle pointer according to the lens aperture selected. The shutter speed







When select dial is set to P:

ISO film speed		Flash shooting distance range
Print film	1600	0.4 to 20 (1.3 to 65.6)
	800	0.4 to 14 (1.3 to 45.9)
	400	0.4 to 10 (1.3 to 32.8)
	200	0.4 to 7.1 (1.3 to 23.3)
	100	0.4 to 5 (1.3 to 16.4)
	50	0.4 to 3.5 (1.3 to 11.5)
	25	0.4 to 2.5 (1.3 to 8.2)
Colour slide film	100	0.4 to 3.8 (1.3 to 12.5)
	64	0.4 to 3.1 (1.3 to 10.2)

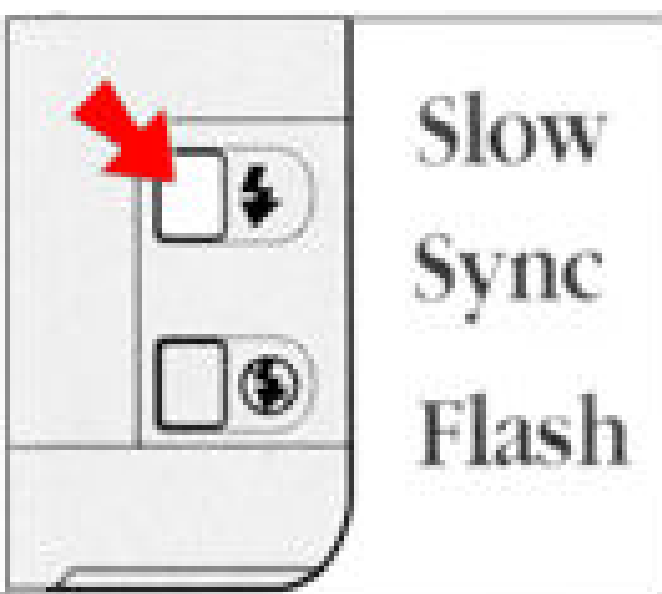
For colour slide film when select dial is set to A:

ISO 100 colour slide film		Flash shooting distance range
Aperture	2.8	0.4 to 3.8 (1.3 to 12.5)
	4	0.4 to 2.7 (1.3 to 8.9)
	5.6	0.4 to 1.9 (1.3 to 6.2)
	8	0.4 to 1.3 (1.3 to 4.3)
	11	0.4 to 1.0 (1.3 to 3.3)
	16	0.4 to 0.7 (1.3 to 2.3)
	22	0.4 to 0.5 (1.3 to 1.6)

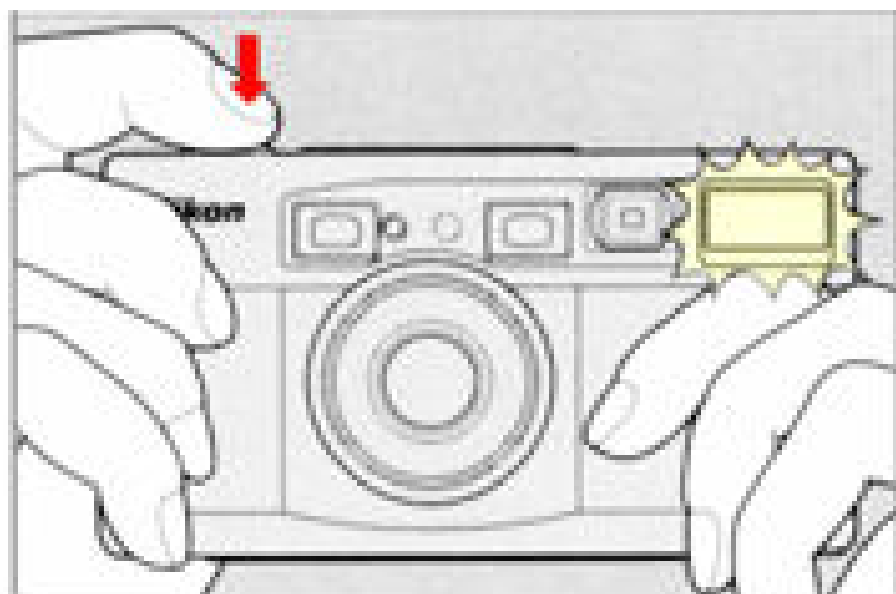
ISO 64 colour slide film		Flash shooting distance range
Aperture	2.8	0.4 to 3.1 (1.3 to 10.2)
	4	0.4 to 2.1 (1.3 to 6.9)
	5.6	0.4 to 1.5 (1.3 to 4.9)
	8	0.4 to 1.1 (1.3 to 3.6)
	11	0.4 to 0.8 (1.3 to 2.6)
	16	0.4 to 0.5 (1.3 to 1.6)

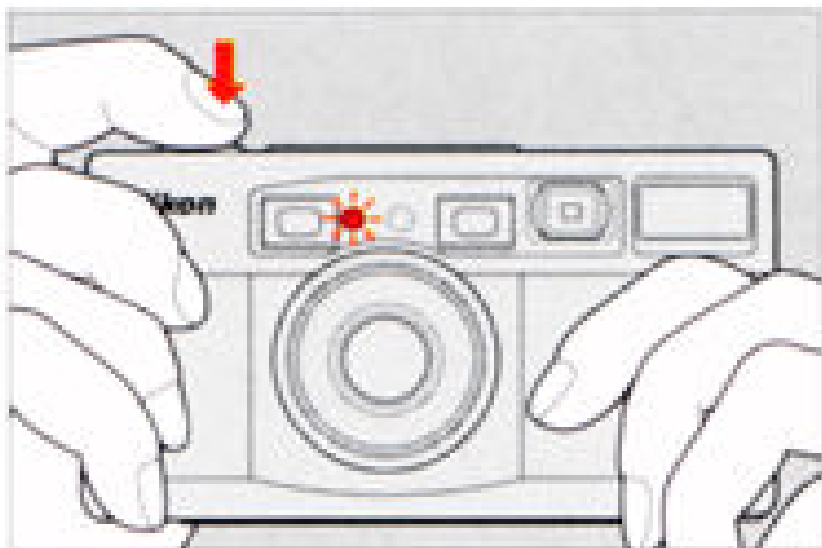
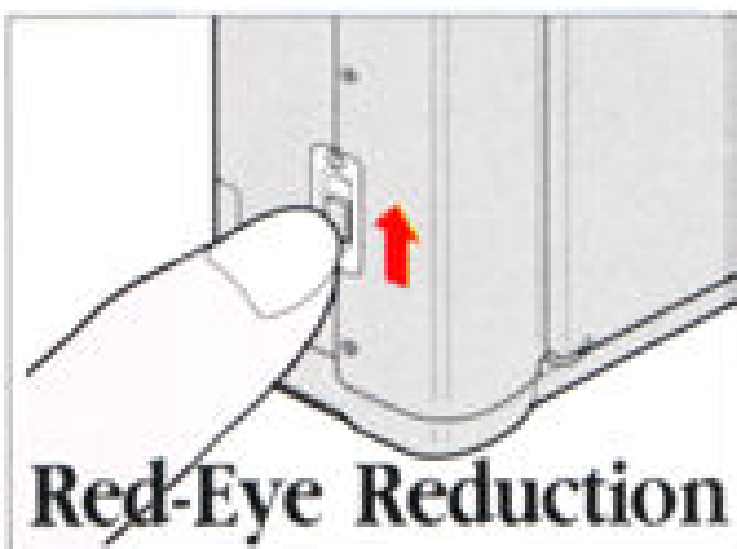
For print film when select dial is set to A:

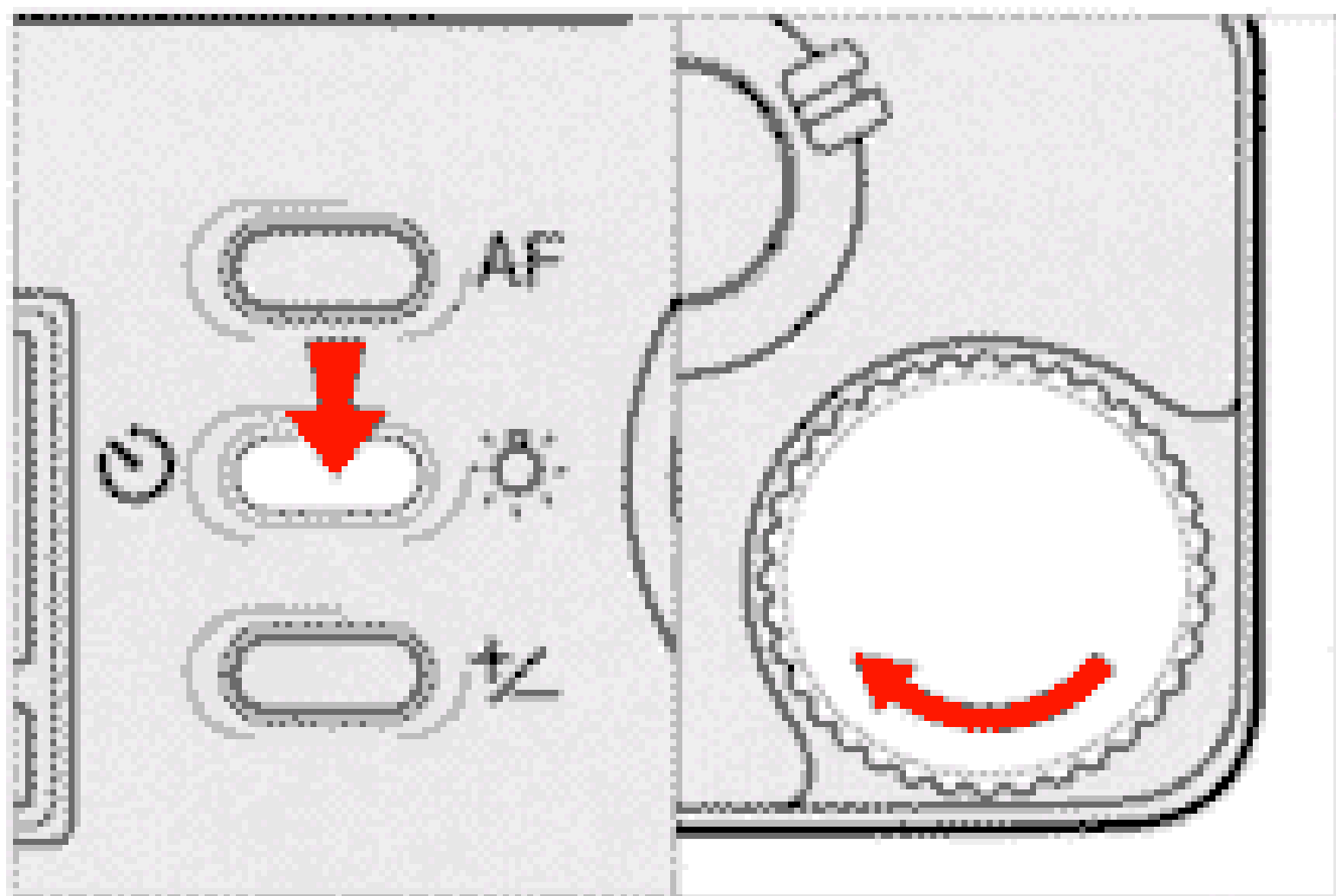
	ISO film speed for print film							Flash shooting distance range
	1600	800	400	200	100	50	25	
Aperture	2.8							0.4 to 20 (1.3 to 65.6)
	4	2.8						0.4 to 14 (1.3 to 45.9)
	5.6	4	2.8					0.4 to 10 (1.3 to 32.8)
	8	5.6	4	2.8				0.4 to 7.1 (1.3 to 23.3)
	11	8	5.6	4	2.8			0.4 to 5 (1.3 to 16.4)
	16	11	8	5.6	4	2.8		0.4 to 3.5 (1.3 to 11.5)
	22	16	11	8	5.6	4	2.8	0.4 to 2.5 (1.3 to 8.2)
		22	16	11	8	5.6	4	0.4 to 1.8 (1.3 to 5.9)
			22	16	11	8	5.6	0.4 to 1.25 (1.3 to 4.1)
				22	16	11	8	0.4 to 0.9 (1.3 to 3.0)
					22	16	11	0.4 to 0.6 (1.3 to 2.0)

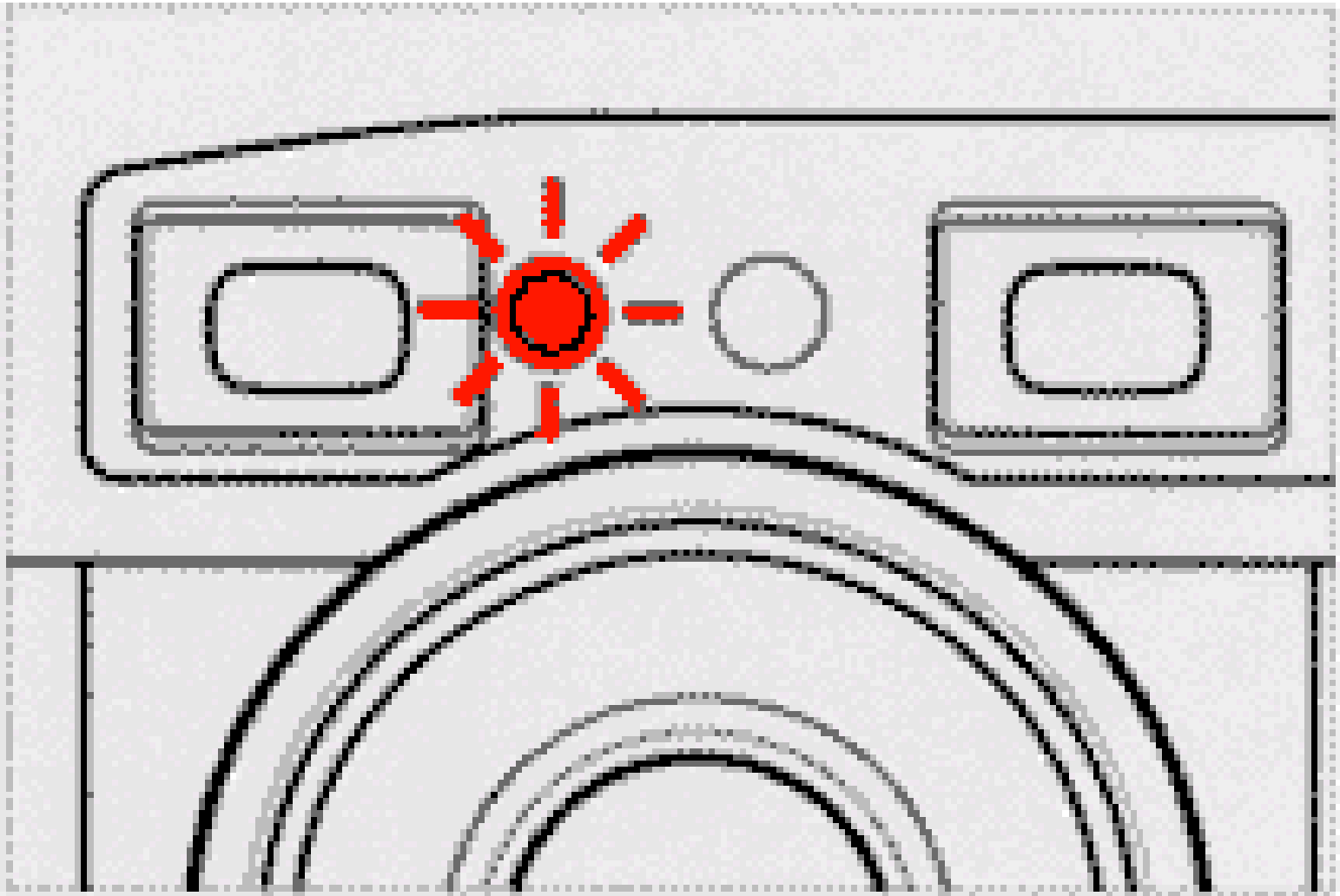


Slow
Sync
Flash







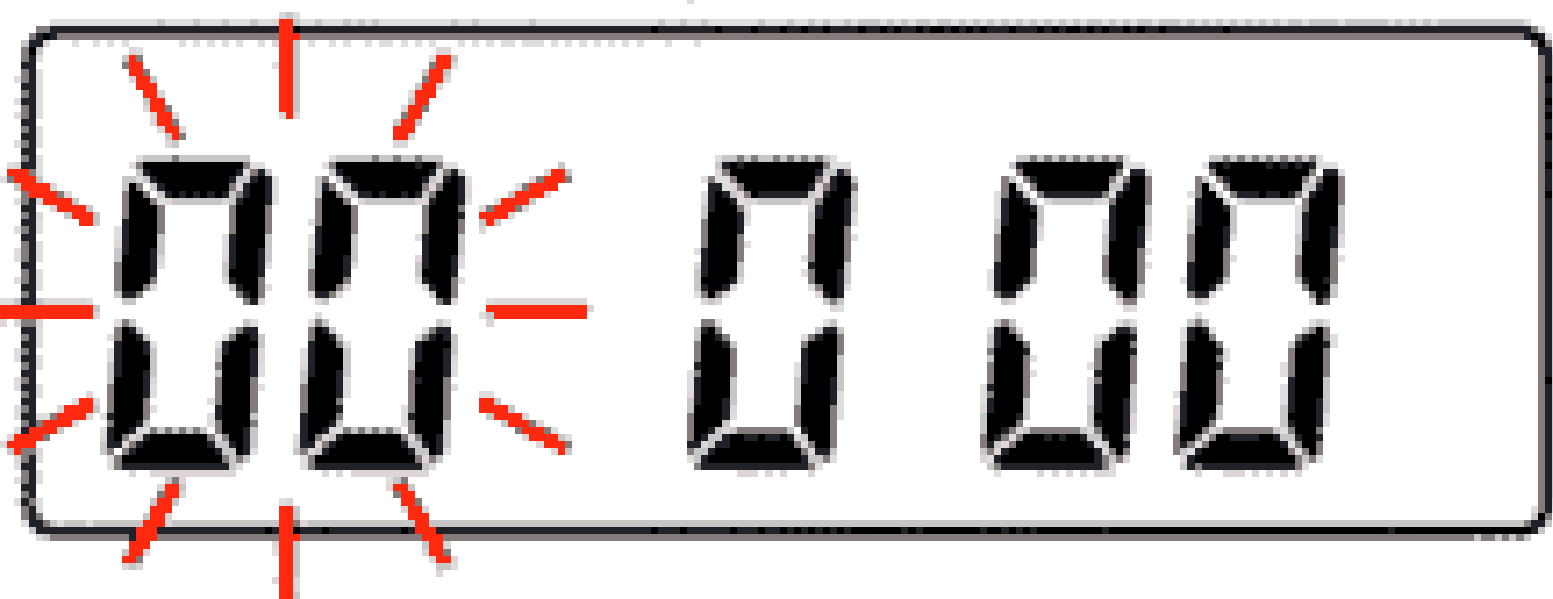
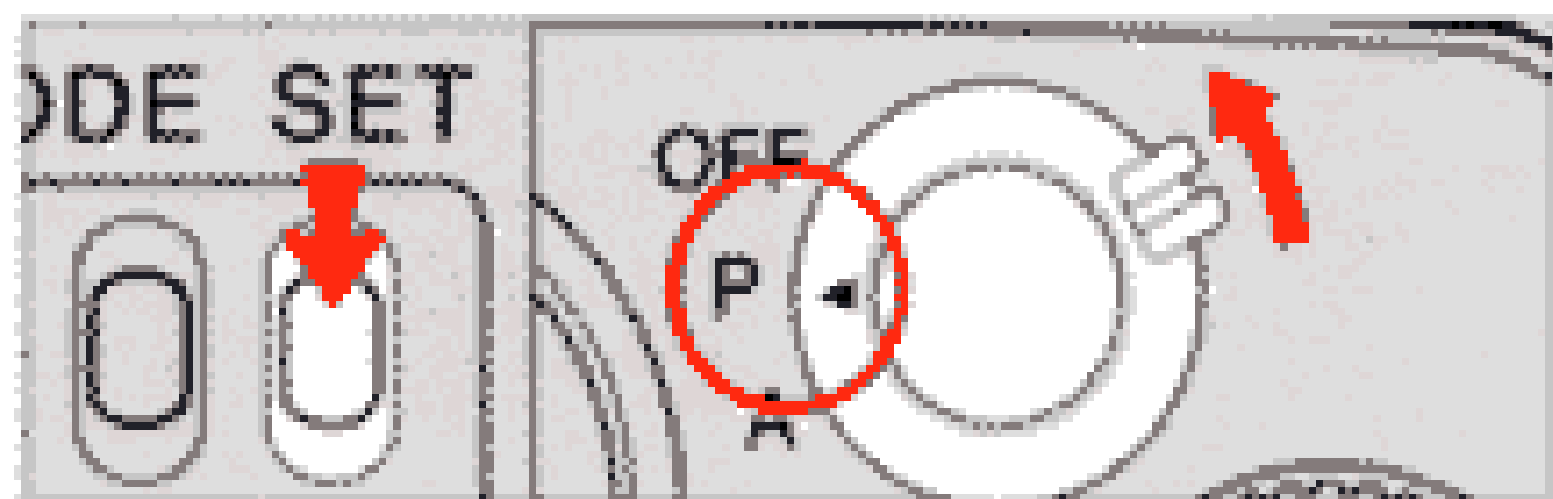


A black and white photograph of a Nikon rangefinder camera, likely a Nikon S series model, shown from a front-three-quarter view. The camera has a dark body with a prominent silver-colored lens mount and a large lens attached. The Nikon logo is visible on the top of the camera body. The background is dark and textured.

Nikon

1. *Journal of the American Medical Association*, 1997; 278: 1039-1044.

100









MALAYSIA

Discover The World



SIPADAN

BERSEKUT SAMA MELAKSANAKAN TRANSFORMASI

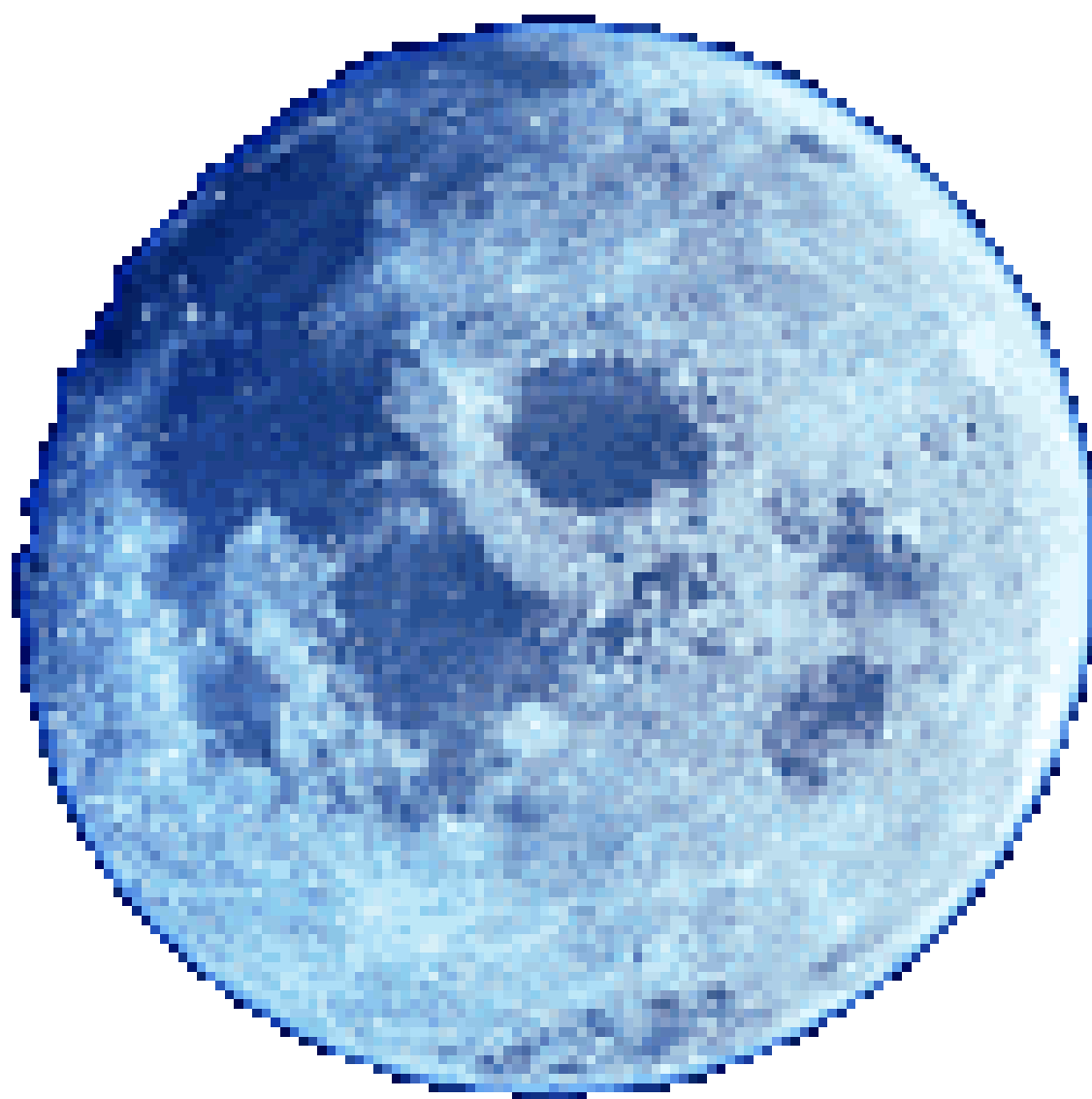




INTERNATIONAL AWARD
WINNER

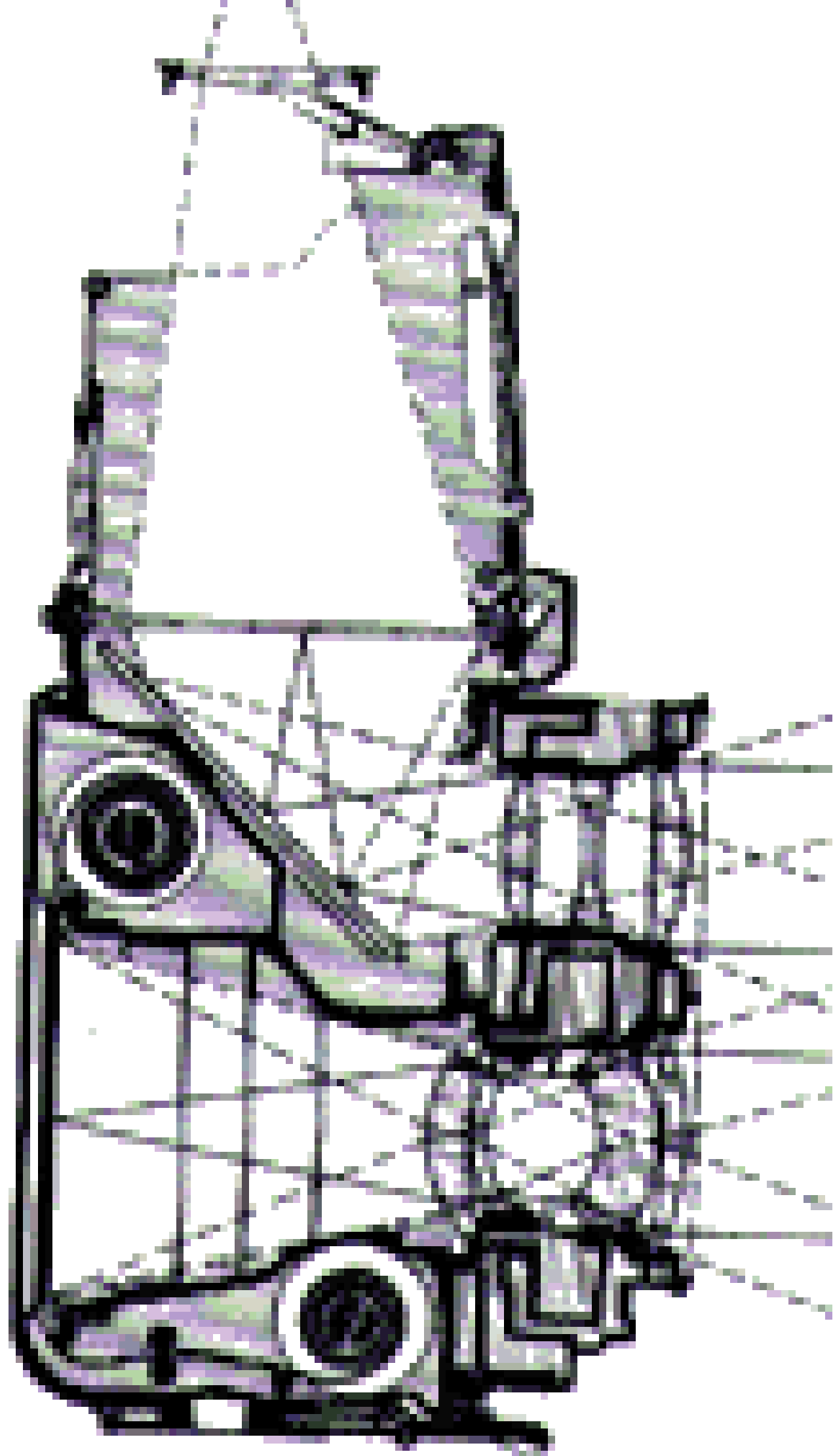
Prix Mondial Du Livre
d'Orange Sous-Marin 1992
Sous-Underwater Book
in the World 1992
1992 Festival Mondial
du L'Orange Sous-Marin
Amsterdam - June - 1992 - 1992
1992



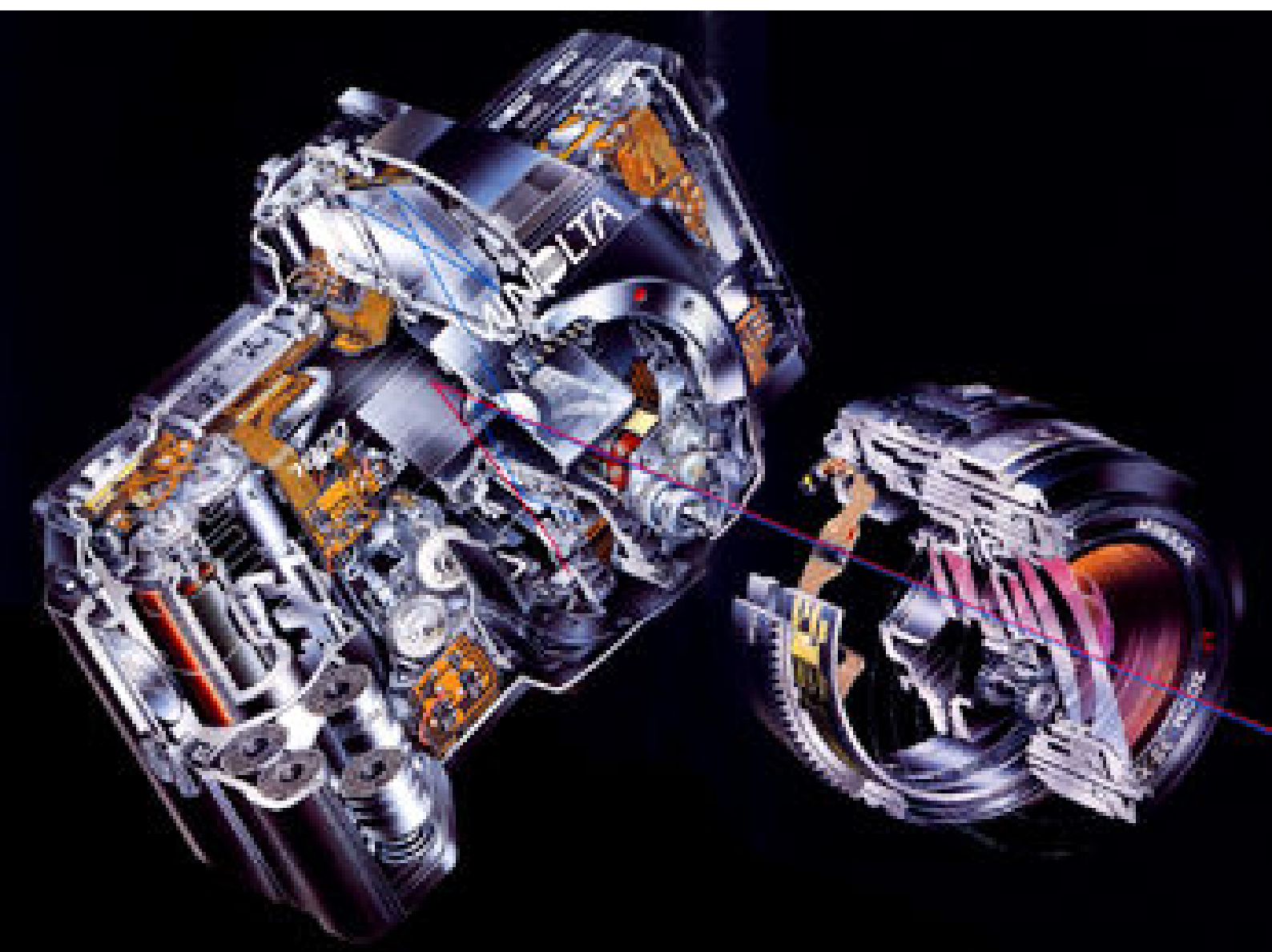


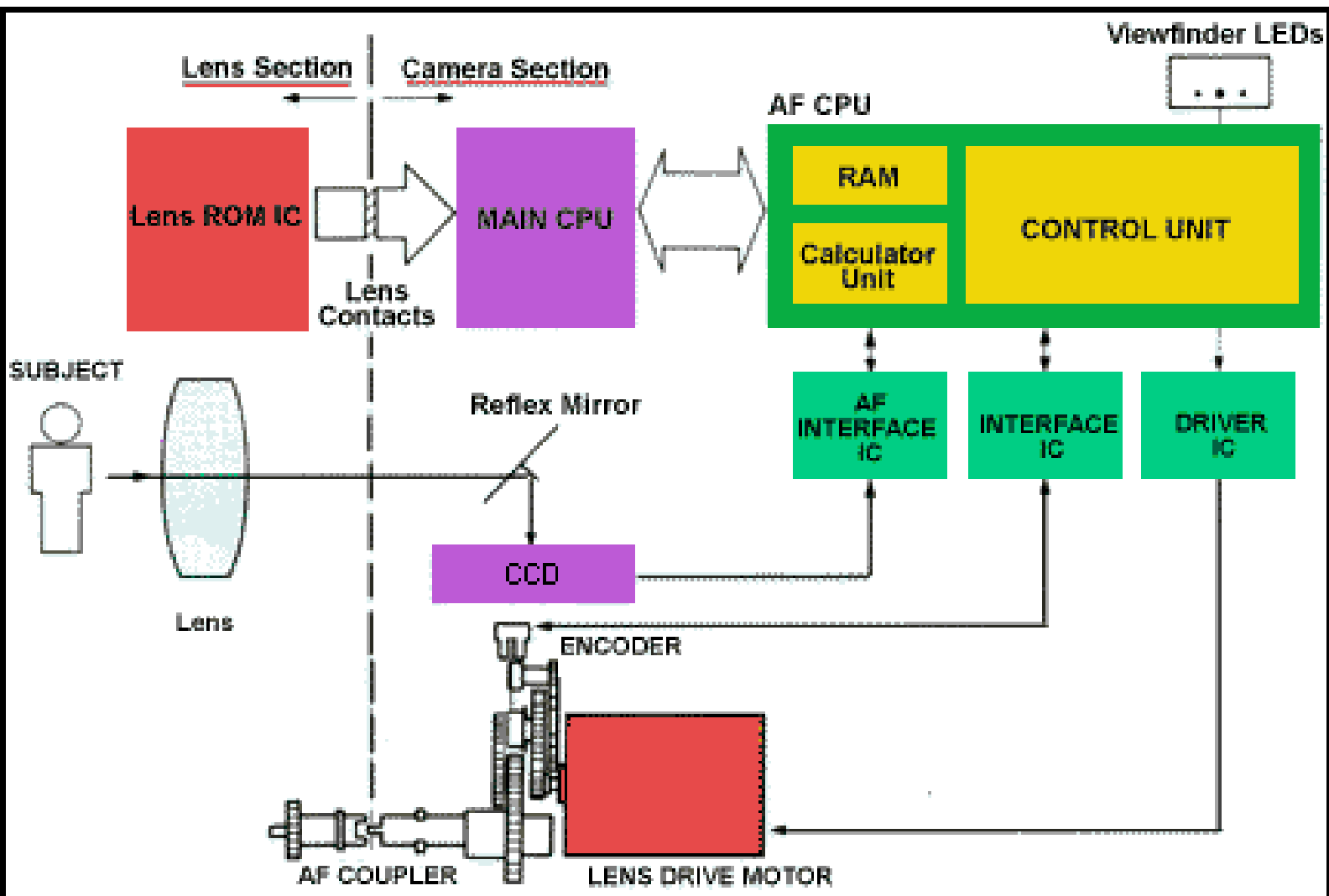


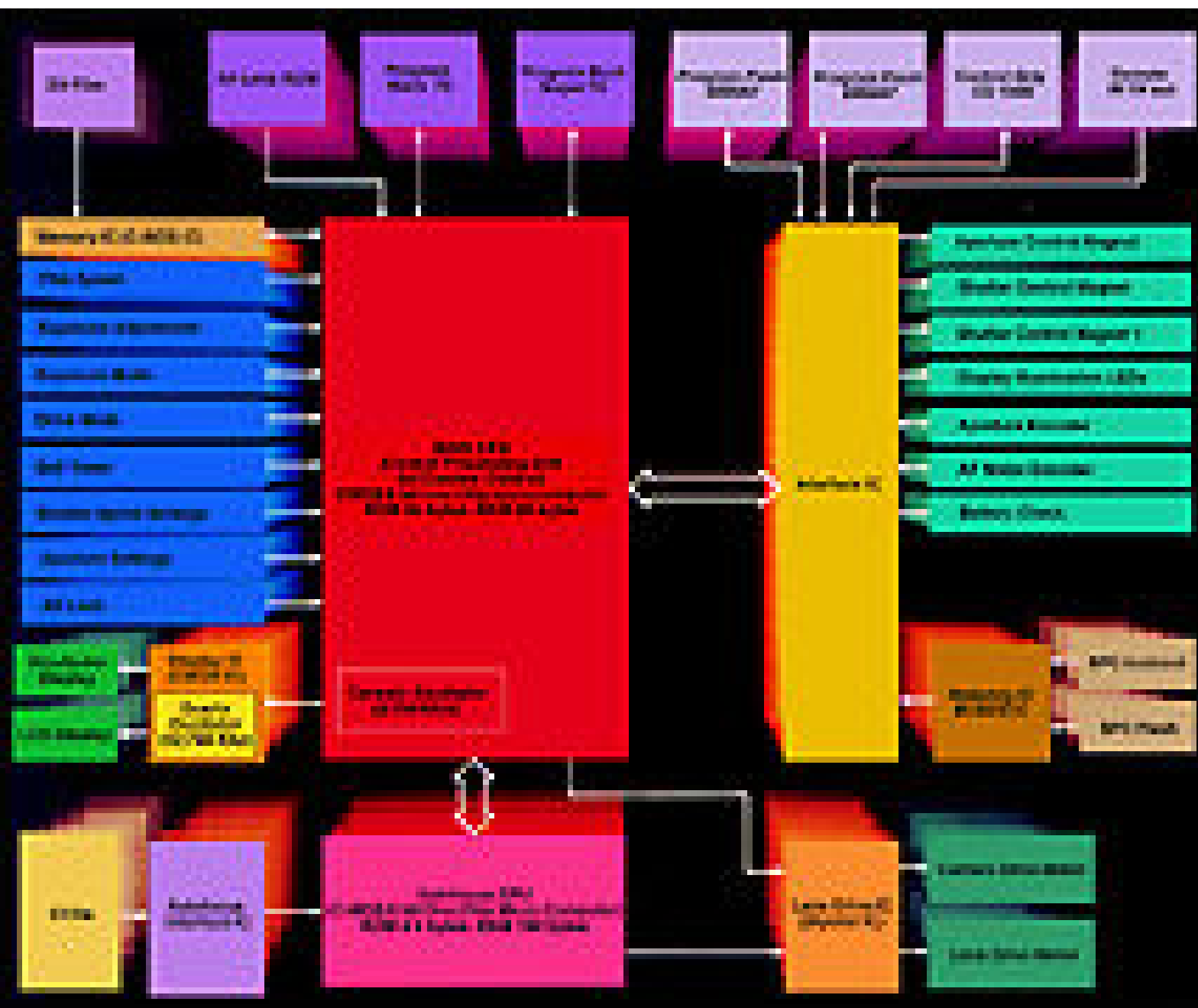


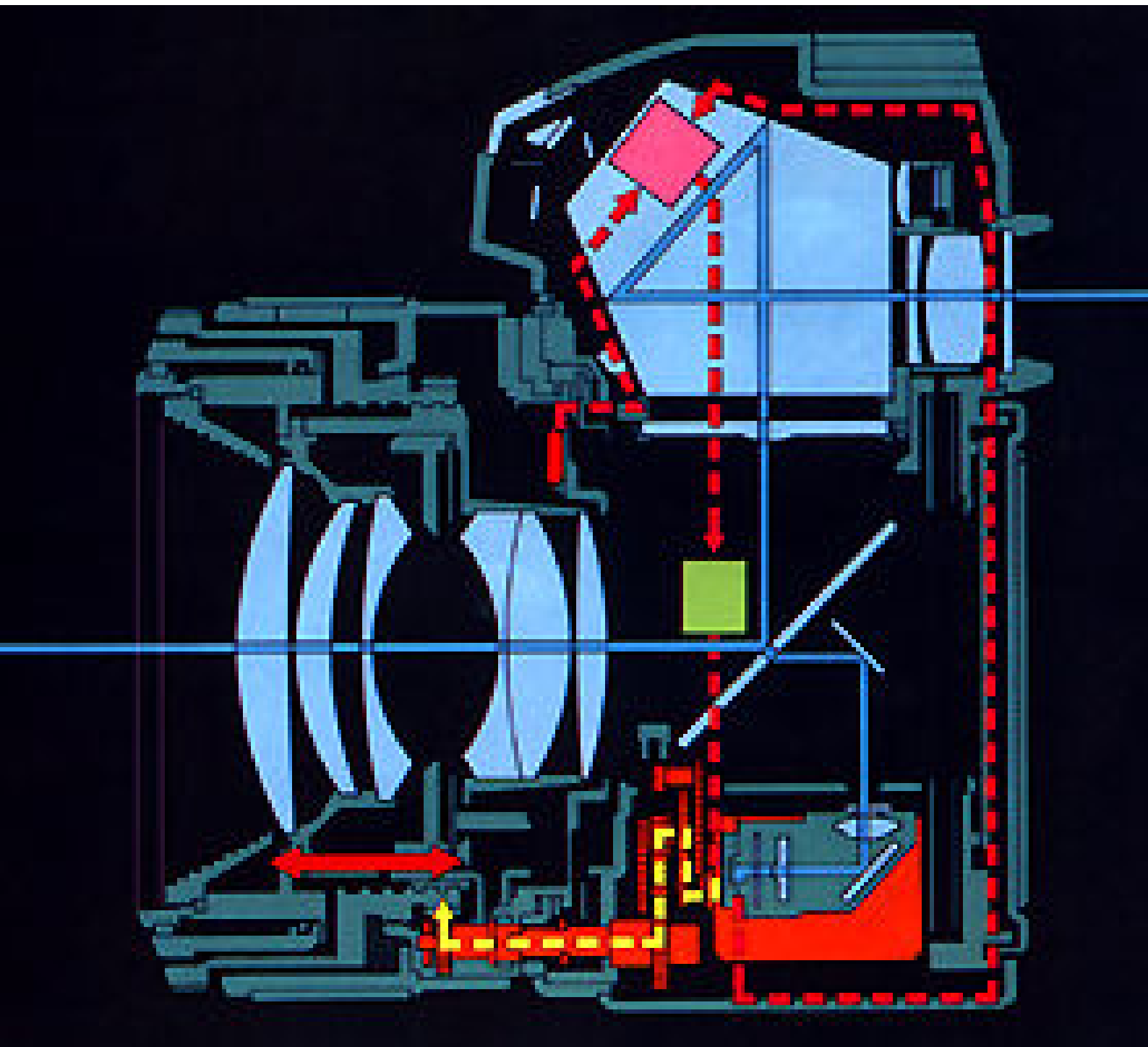




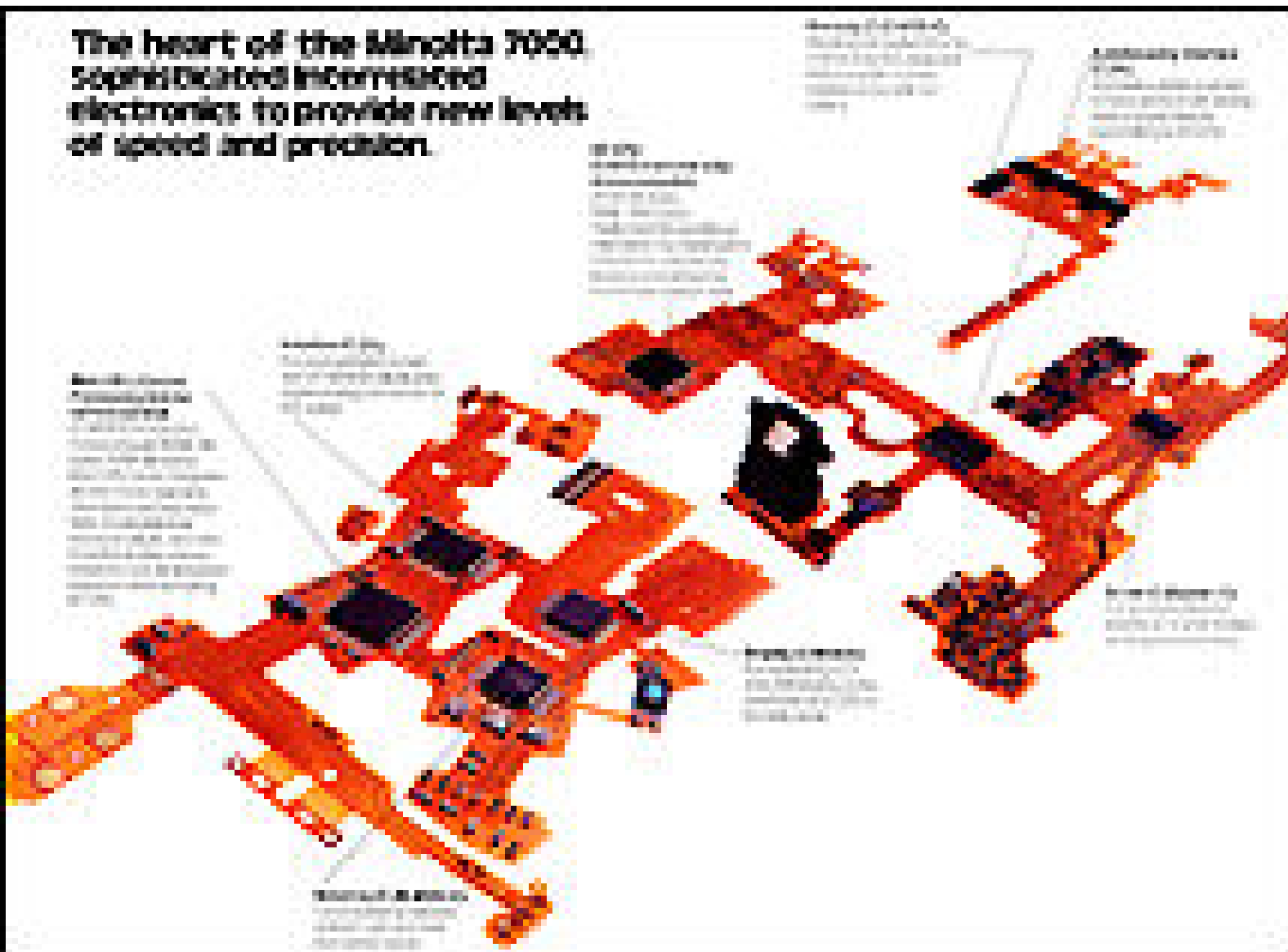


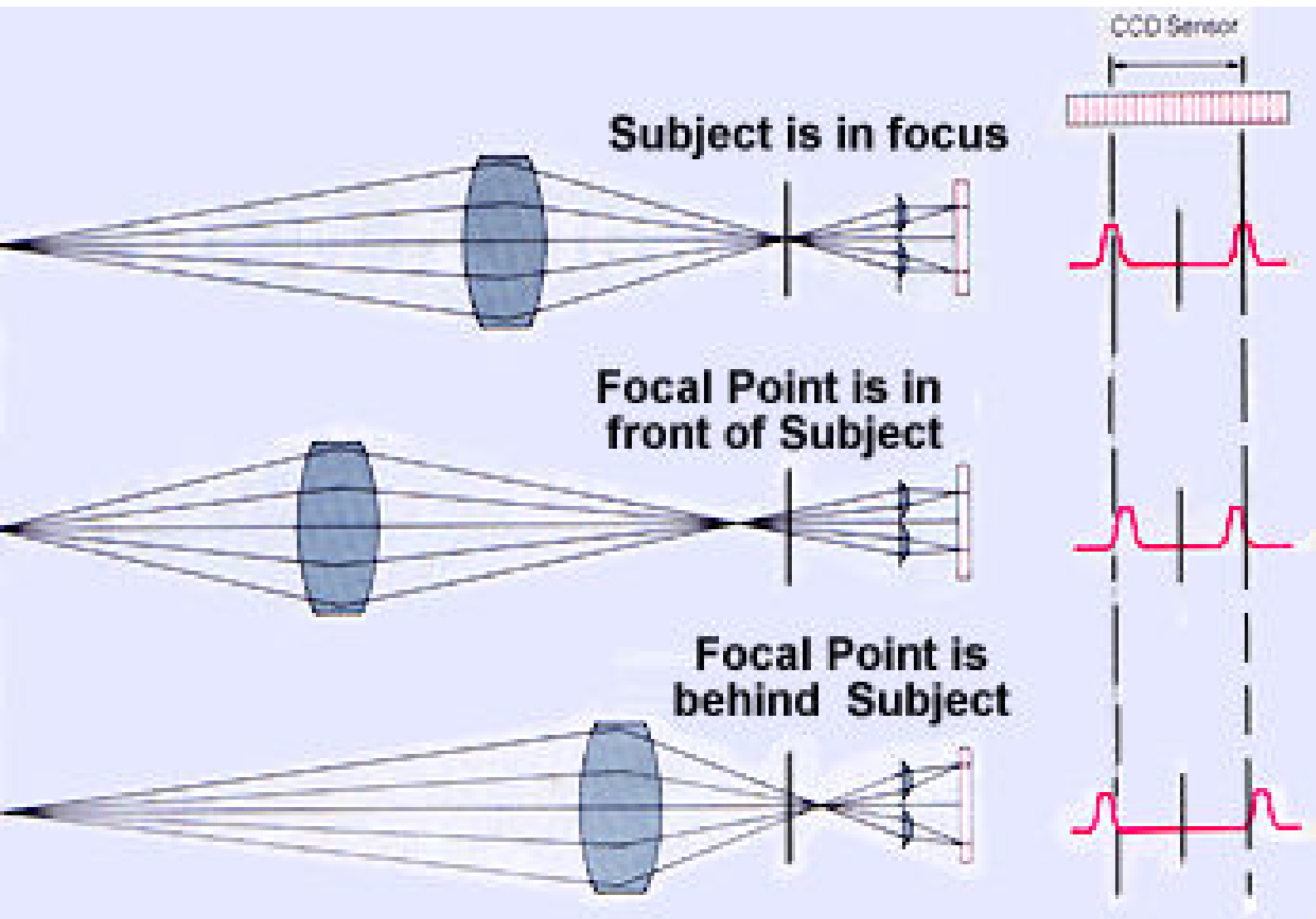






The heart of the Minolta 7000.
 Sophisticated integrated
 electronics to provide new levels
 of speed and precision.





PROGRAM

125
125

35

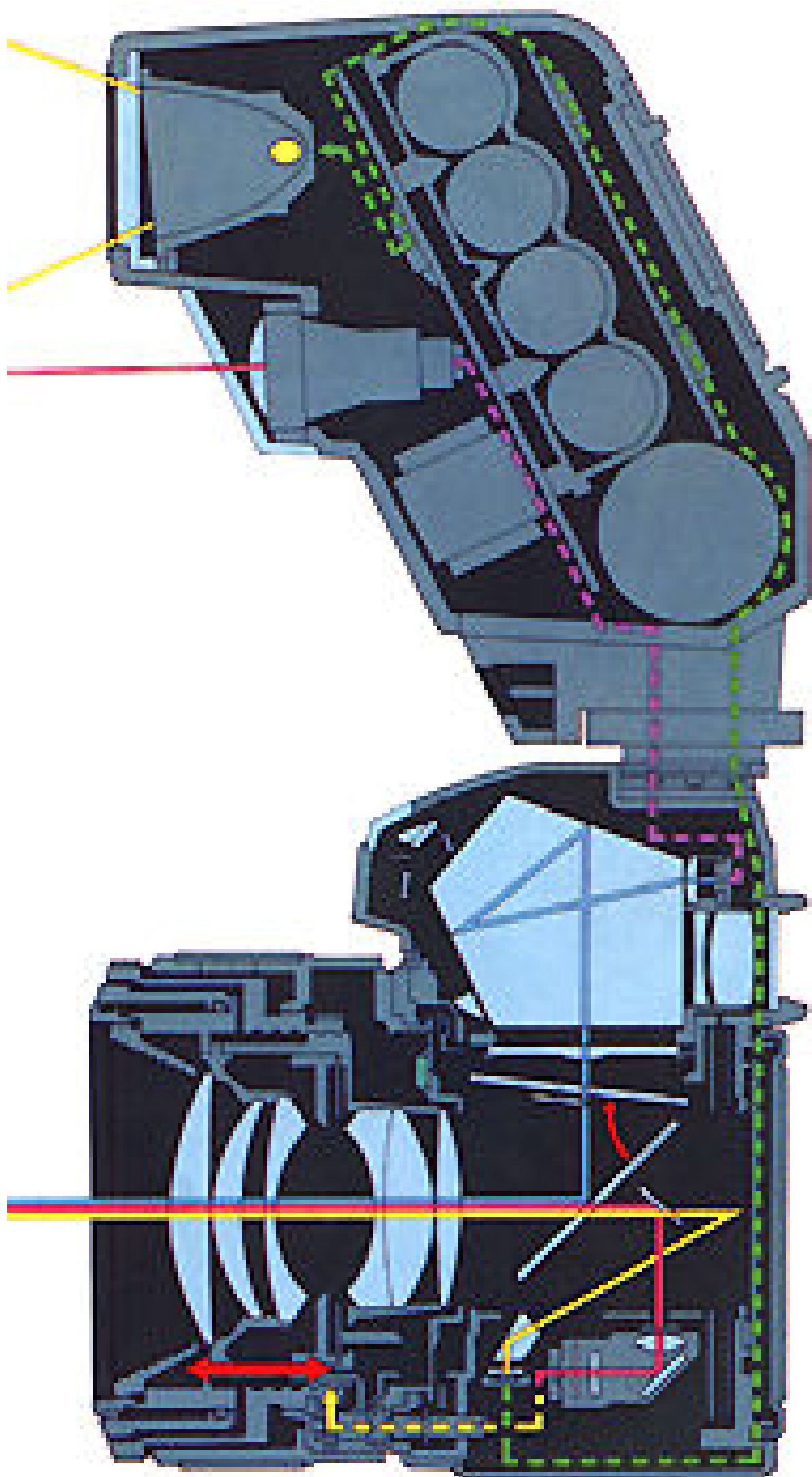
FILM

22
22

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M

1254

154

FILM

23

—

S C S.I.



PROGRAM

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11

FILM

10

S C S.T.

P

LOCK ON





P 60 2.8

PROGRAM

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500

111

FILM

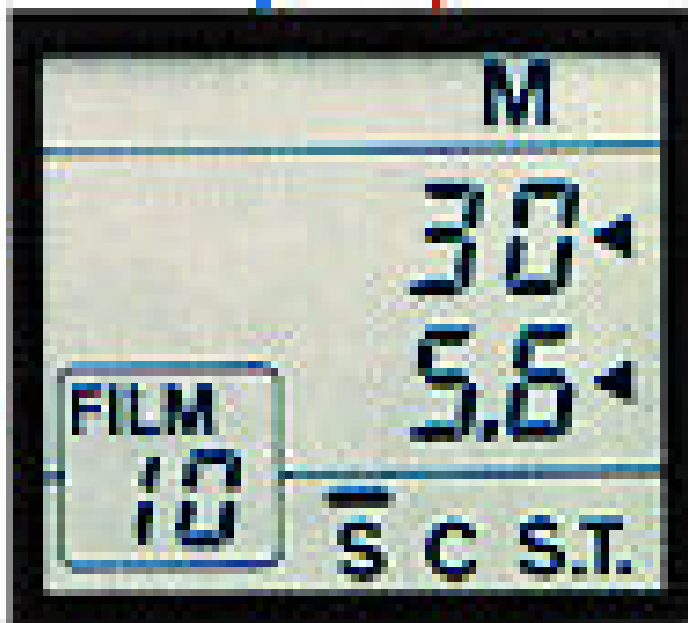
10
10

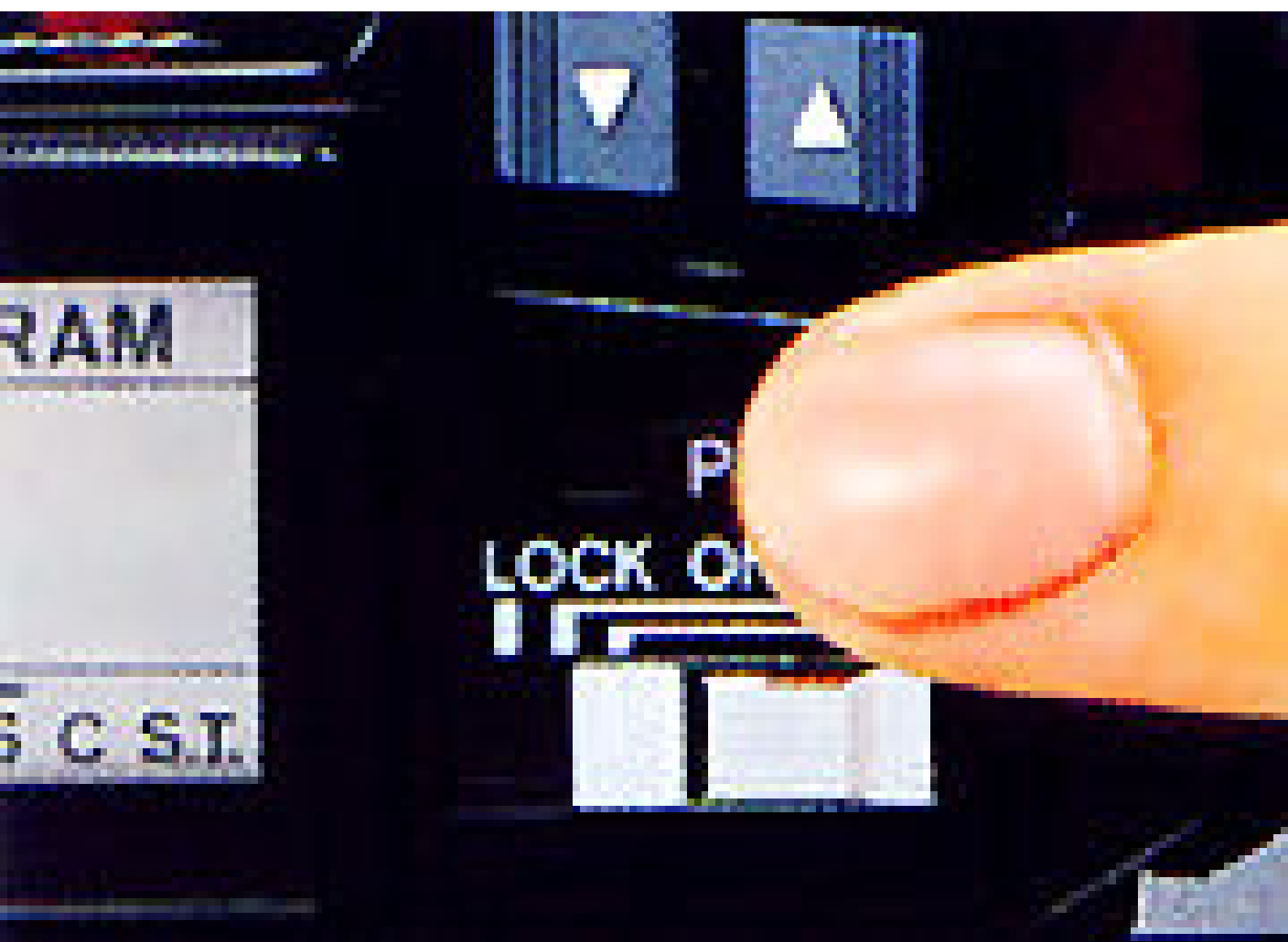
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PROGRAM

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+/-

ISO



DRIVE





ISO

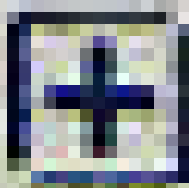
1000000
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FILM

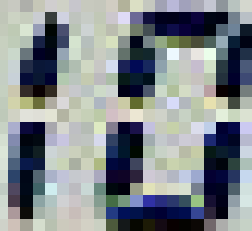
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S C S.T.





FILM



S C S.T.



M

0.001 0.001

5.001 5.001

90"

S C S.T.



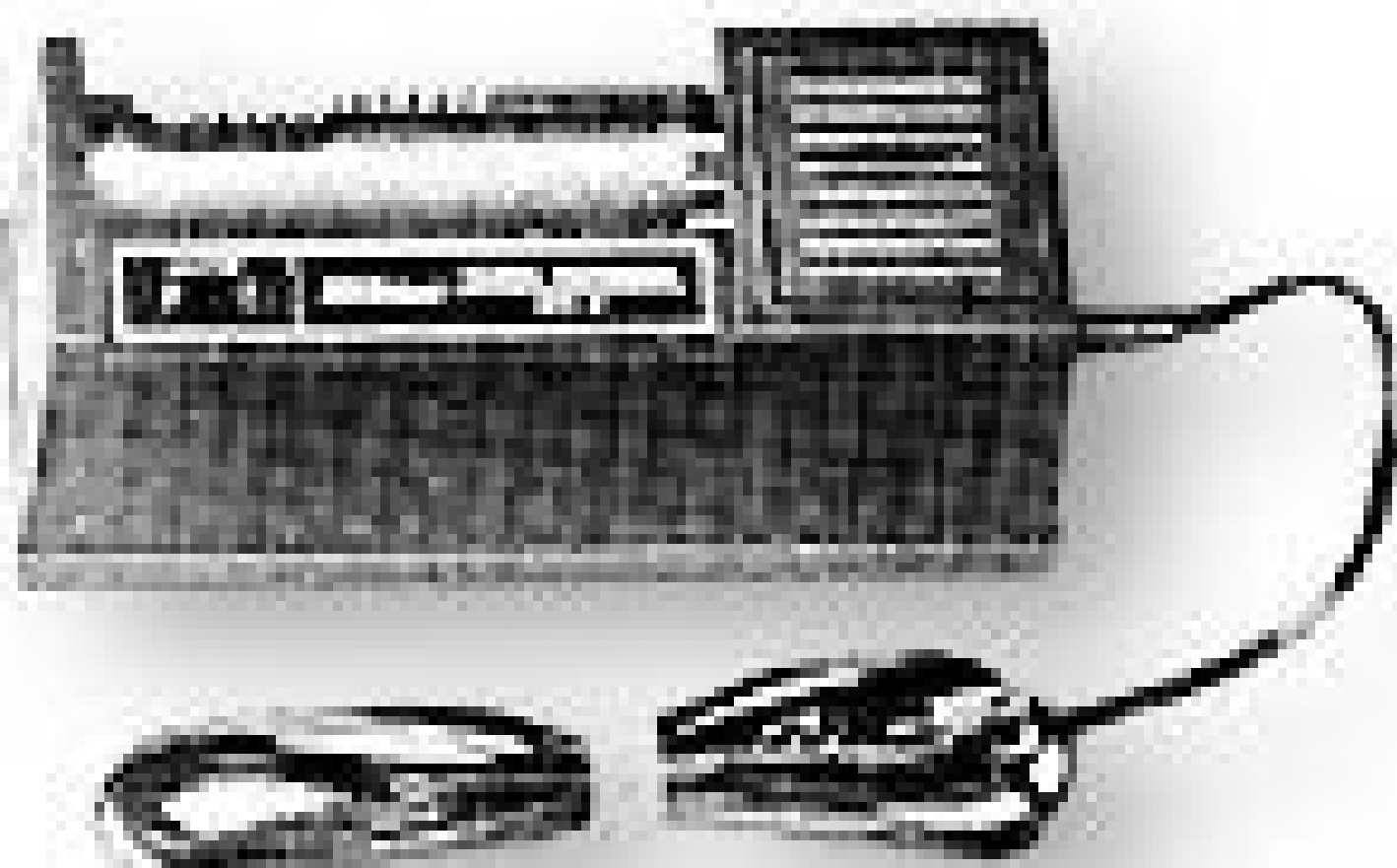






















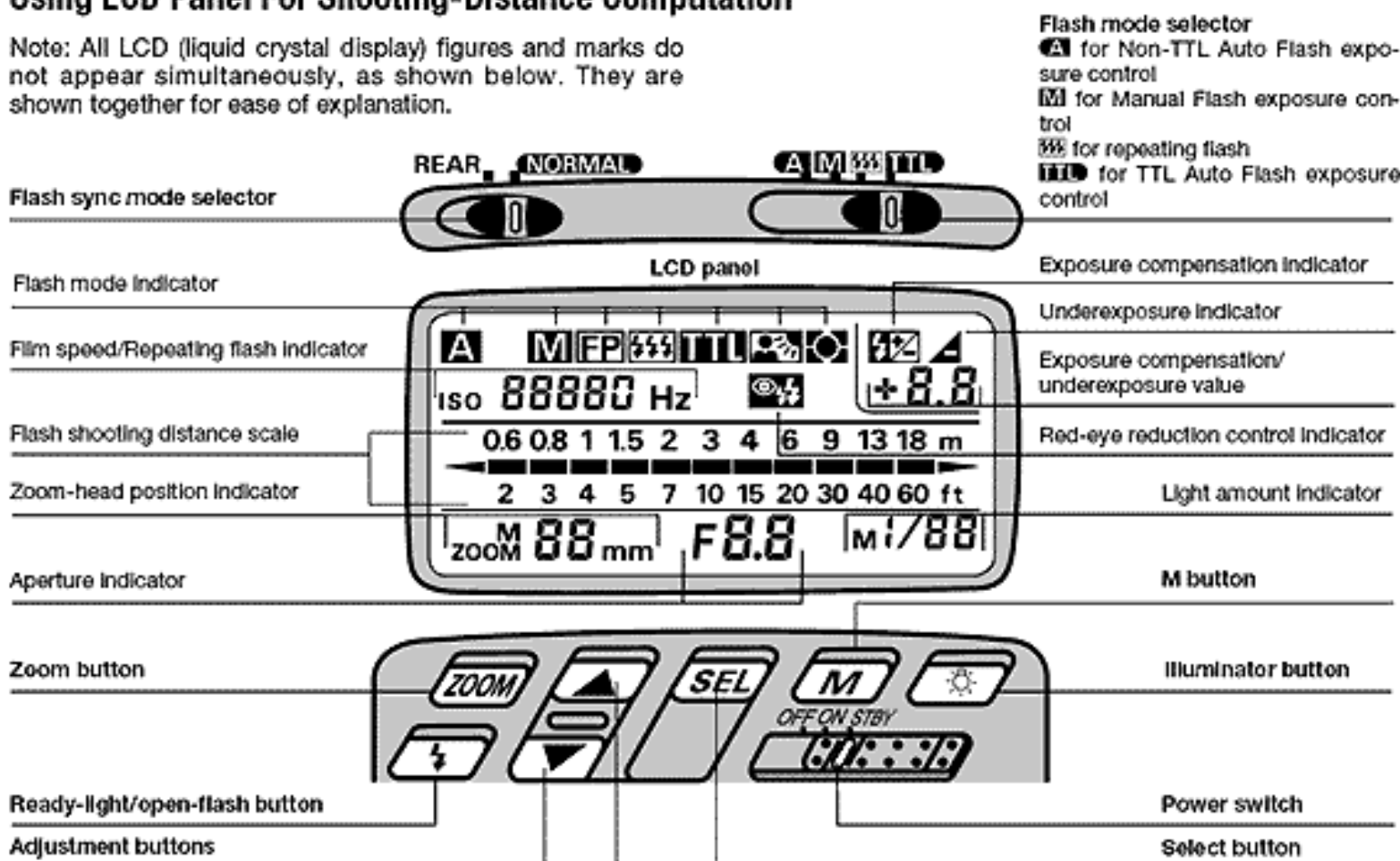


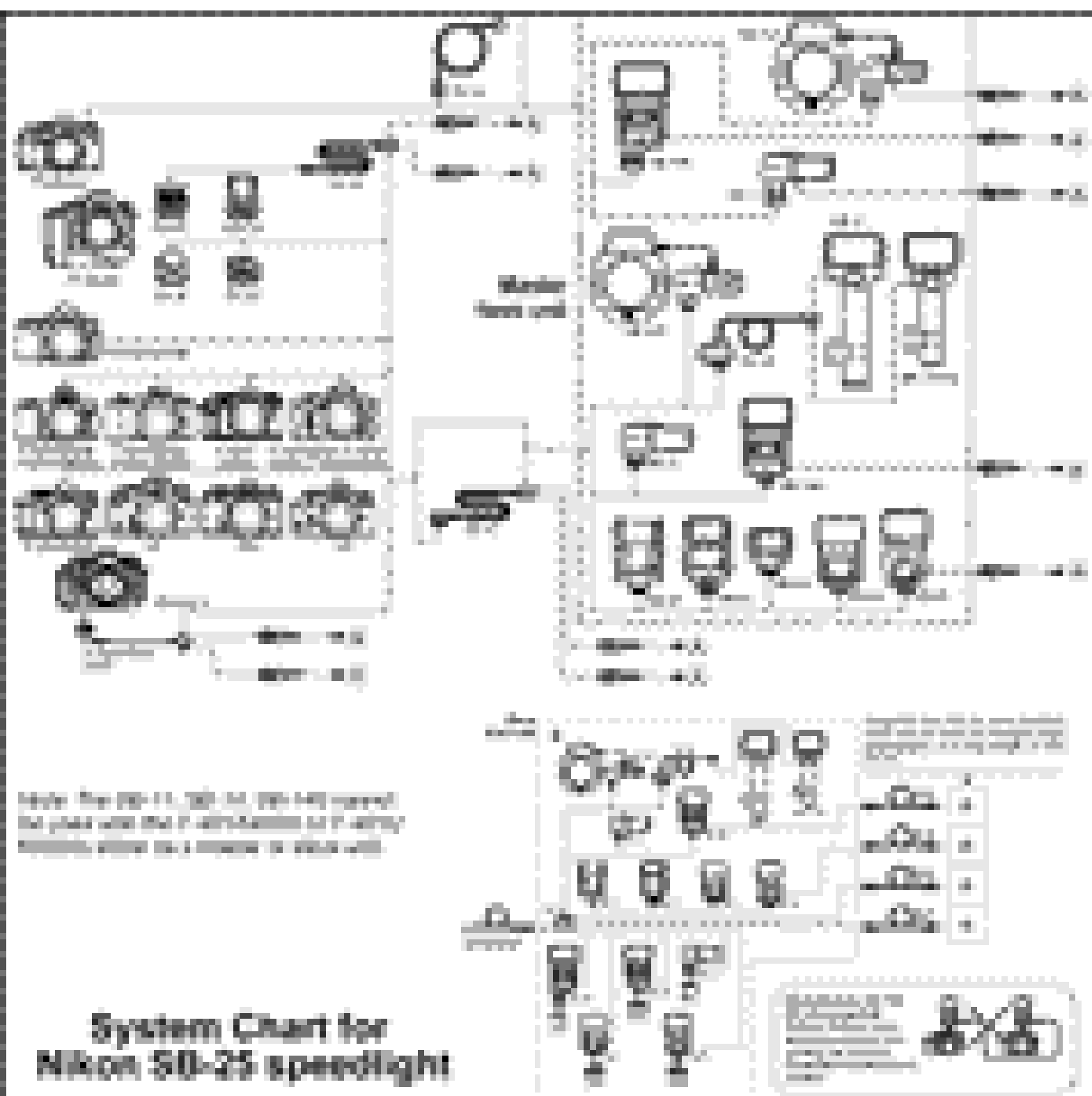
PLAN. **28mm** 27.5mm



Using LCD Panel For Shooting-Distance Computation

Note: All LCD (liquid crystal display) figures and marks do not appear simultaneously, as shown below. They are shown together for ease of explanation.



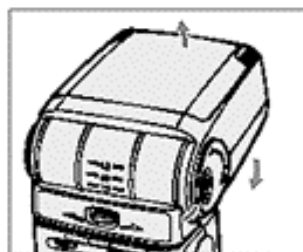


Tilting/Rotating flash head

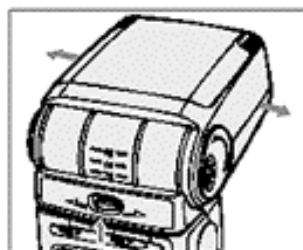
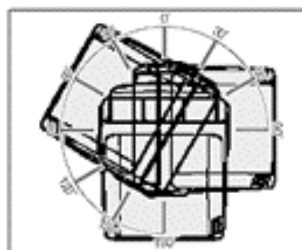
- The SB-25's flash head tilts and rotates as shown at right.
- The flash head locks at the front/horizontal and vertical (90° upward) positions. To release, use the tilting or rotating lock release lever.

LCD panel

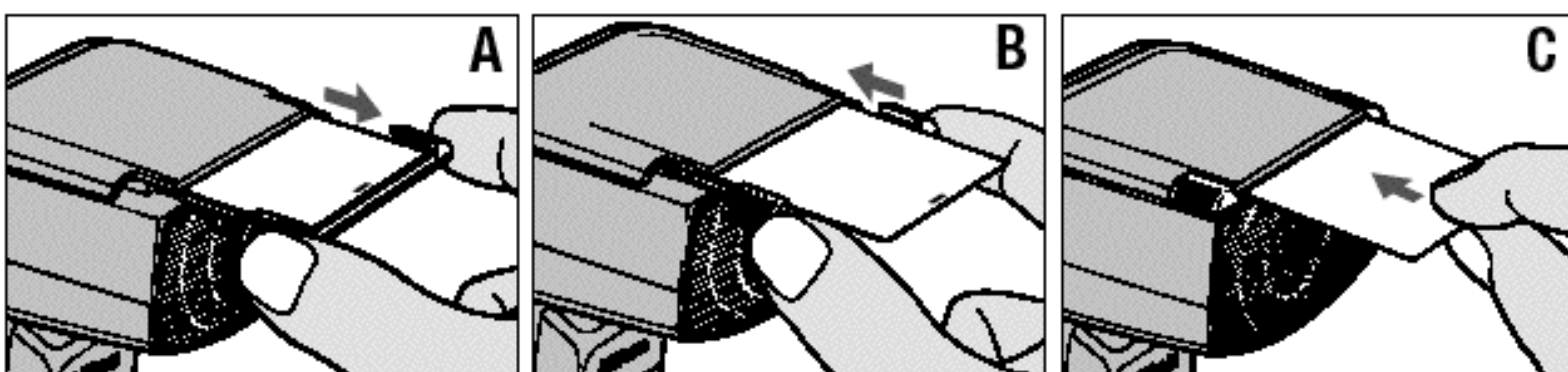
- The LCD panel cannot be used to compute flash shooting distance when the flash head is tilted upward or rotated away from the horizontal/front position. In these cases, the shooting distance indicator bars  do not appear in the LCD panel.
- The shooting distance indicator bars blink when the flash head is tilted downward to the -7° position. This position is used to shoot a subject within 1.5m (approx. 5 ft.).



Tilting: up to 90° — front — down to -7°



Rotation: to right 90° — front — to left 180°



Built-in diffuser card for bounce flash photography

- Use the diffuser card to create a catchlight for the subject's eyes, an effect that is not always available in bounce flash photography.

- The diffuser can be used to provide supplemental light to the face or front of the subject, thereby brightening shadows created by top-lighting or bounced flash from the ceiling.

Maximum consecutive firing

SB-25 Flash mode	Maximum number of flash	
	SD-8	SD-7
TTL Auto Flash 	15	15
Non-TTL Auto Flash 	15	15
Manual Flash 	15 (at full or 1/2 power) 40 (at 1/4 power or less)	15 (at full or 1/2 power) 40 (at 1/4 power or less)
Repeating Flash 	15	15

Number of flash and recycling time at manual full light output:

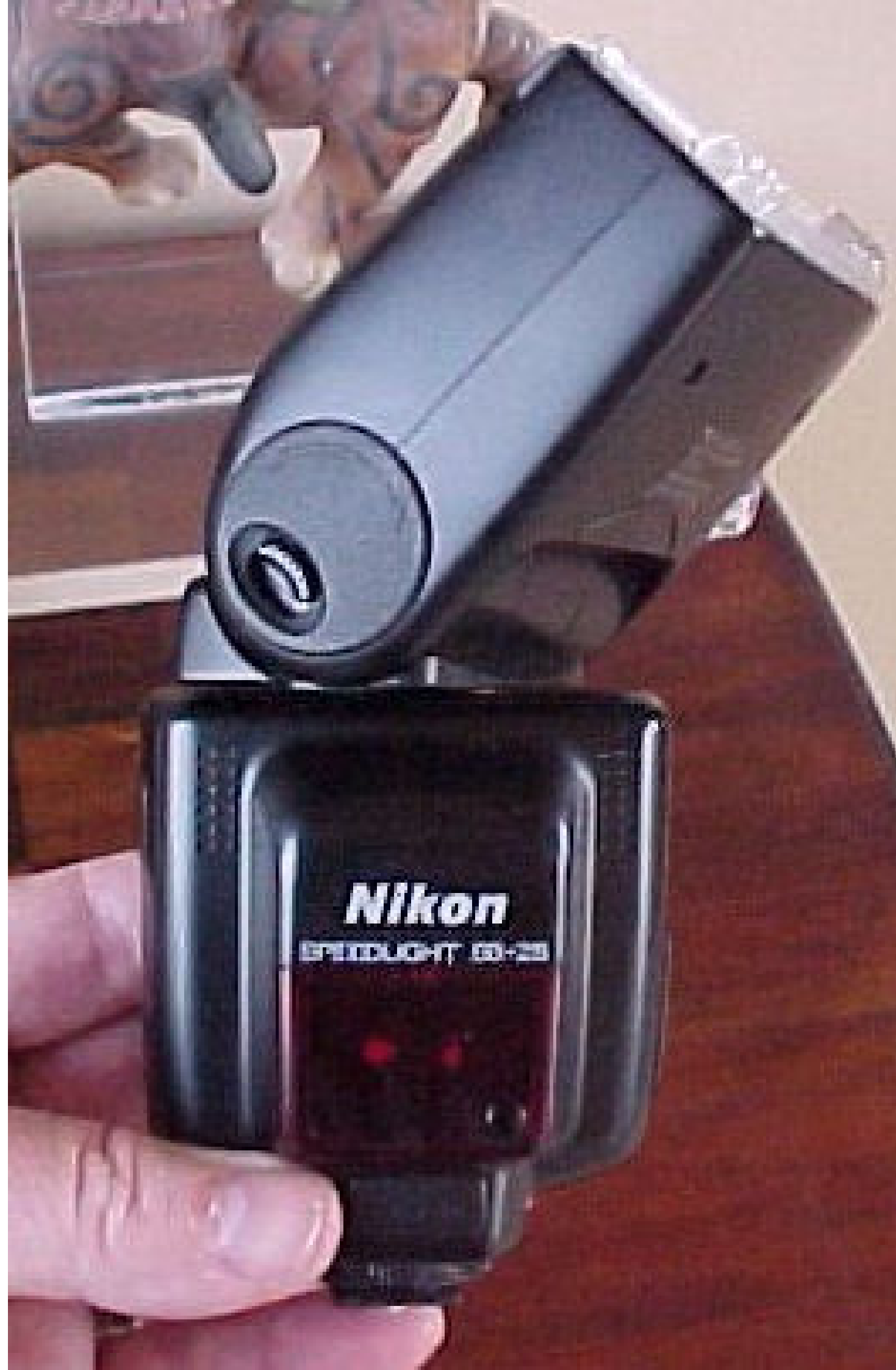
Batteries		Number of flash (approx.)	Minimum recycling time** (approx.)	Recycling time (approx.)
AA-type alkaline-manganese		100 times	7 sec.	7—30 sec.
External power source SD-7*	C-type alkaline-manganese	200 times 300 times 400 times	6 sec.	6 sec. 6—10 sec. 6—30 sec.
External power source SD-8*	AA-type alkaline-manganese	100 times 200 times 250 times	3 sec.	3—5 sec. 3—9 sec. 3—30 sec.
AA-type NiCd		40 times	5 sec.	5—30 sec.
External power source SD-7*	C-type NiCd	140 times	1.6 sec.	1.6—30 sec.
External power source SD-8*	AA-type NiCd	100 times	1.6 sec.	2—30 sec.

* With either alkaline-manganese or NiCd batteries installed in the SB-25.

**Data measured with fresh batteries.

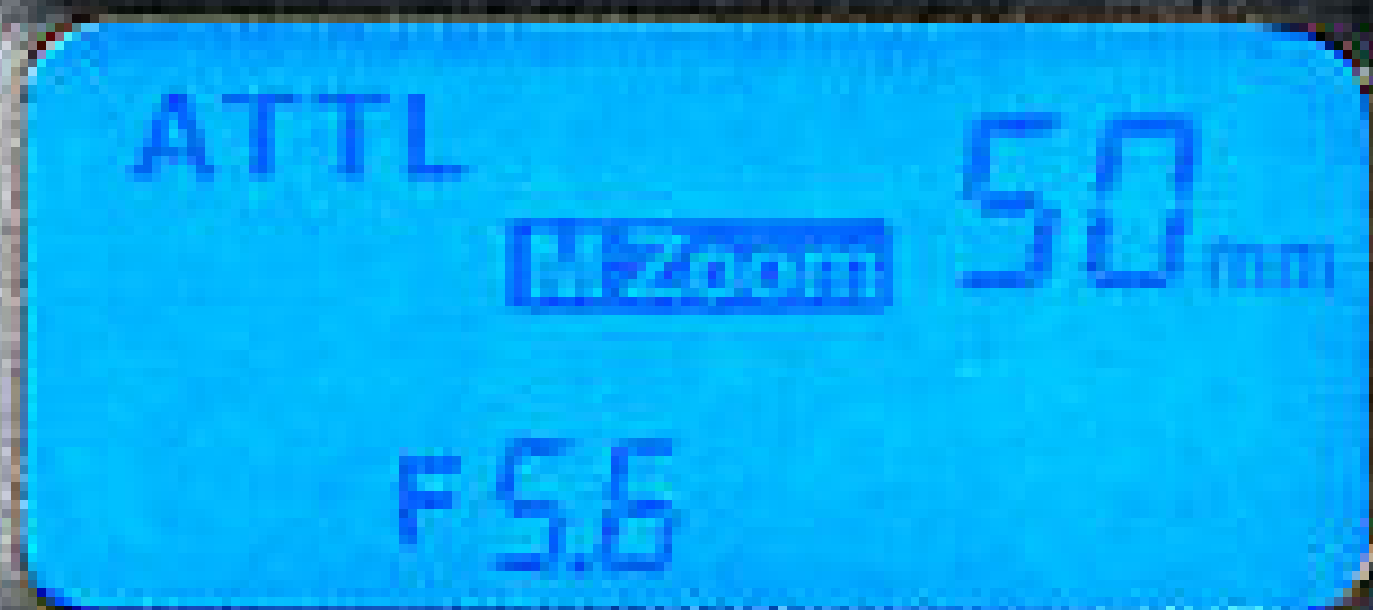
Note: Data for light output at 1/1 (full), no use of AF assist LED and LCD panel illuminator.





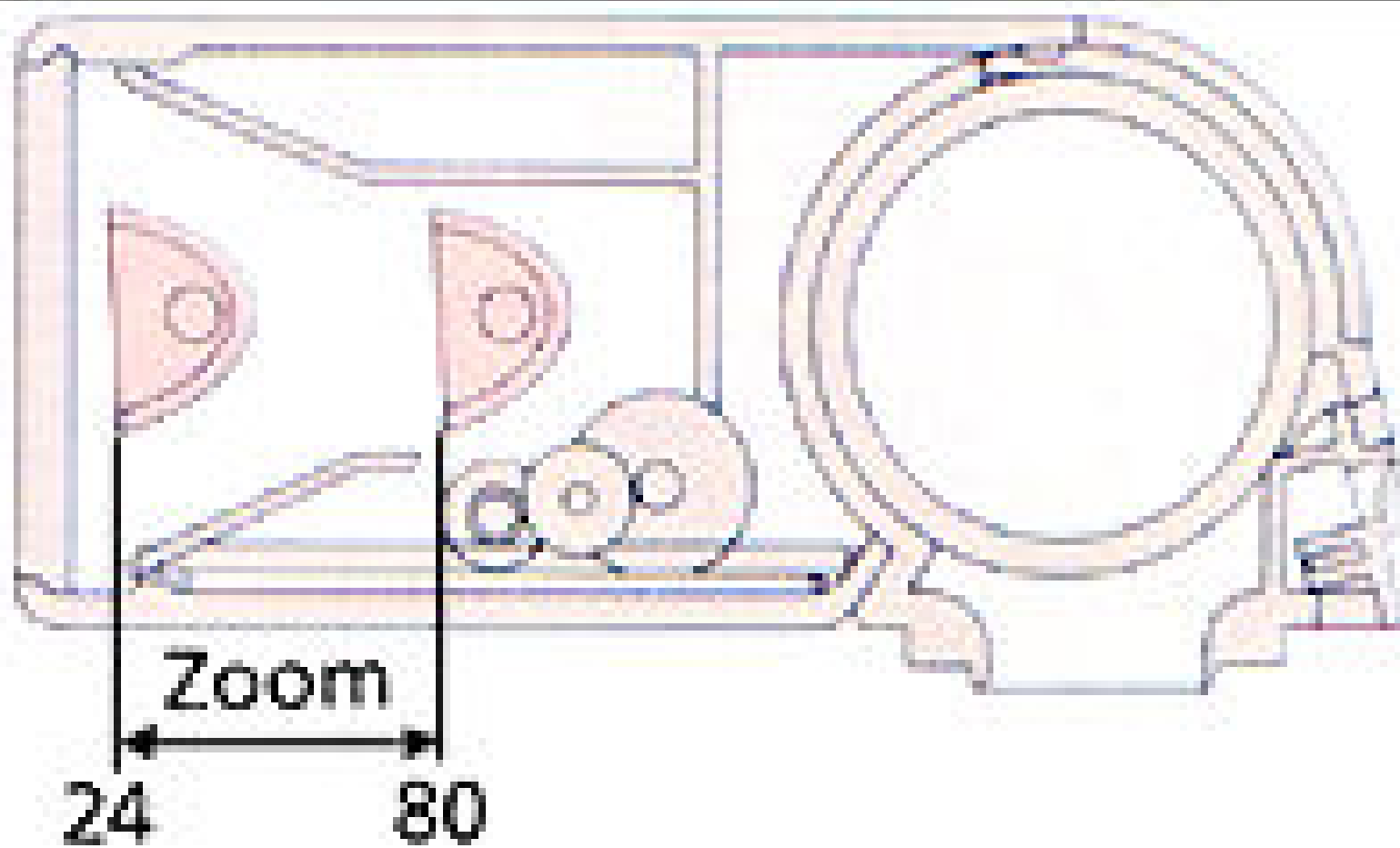


420EZ



EL (Electro-Luminescence) Illumination

AUTO INTERNAL ZOOM MECHANISM



	Alkaline	Ni-Cd
Normal flash	approx. 0.2 to 13 secs	approx. 0.2 to 6.5 secs
Rapid-fire flash	approx. 0.2 to 1.5 secs	approx. 0.2 to 1.5 secs