

Kowa

SE

CAMERA

KOWA LENS F 1.9 50mm

SE

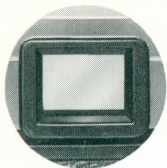
KOWA COMPANY LTD. JAPAN

YOUR NEW CAMERA

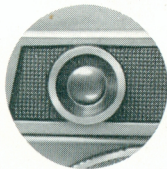
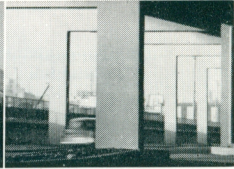
Kowa **SE**



Three Outstanding Features



Single-Lens
Reflex Finder



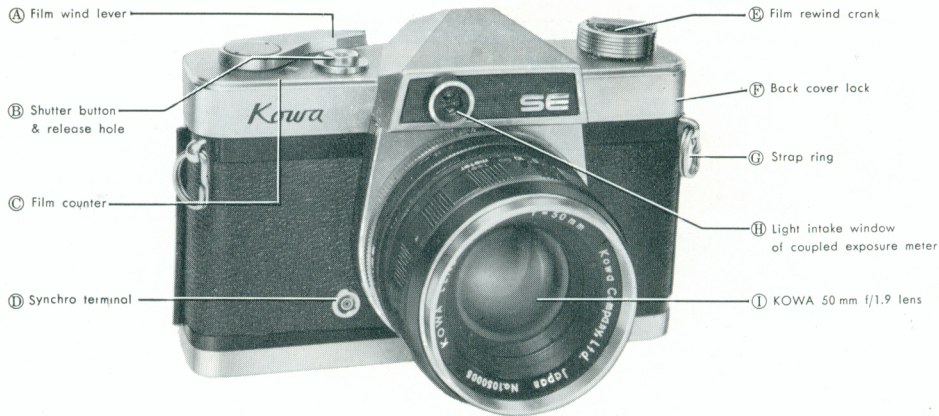
Fully-Coupled
CdS Meter



Built for
Rapid-Action
Photography.



NAMES OF PARTS

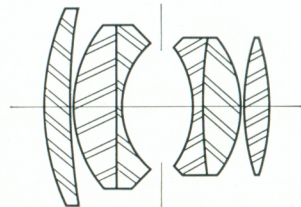


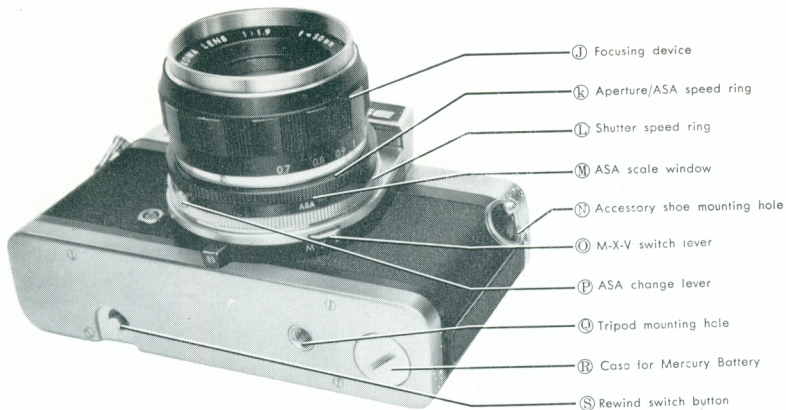
Lens: KOWA 50 mm f/1.9 (filter diameter 49 mm), fully automatic diaphragm, minimum stop f/16. Conversion lenses available—telephoto lens 88 mm f/4, wide-angle lens 37 mm f/4.

Shutter: Seikosha SLV, 1 to 1/500 sec plus B, with self-timer, M and X flash synchro terminals.

Exposure Meter: Built-in CdS exposure meter, fully coupled, with needle in finder, zero-method type, film sensitivity scale ASA 10—800. Meter range LV 3 to 17 with ASA 100 film.

Viewfinder: Pentaprism type, eye-level, single-lens reflex viewfinder, with plano-convex and fresnel lens.





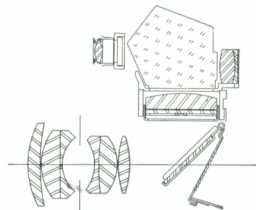
Focusing: Helical forward and backward movement, minimum close-up distance 70 cm, split-image, with ground glass.

Film Advance, Rewind: Film advance by lever action, 180° stroke, lever provided with trigger, self-cocking for preventing double exposure, film rewound by pressing R button once and turning crank.

Dimensions: 140 × 92 × 83 mm.

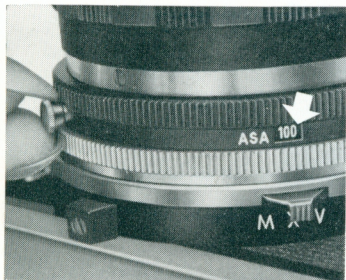
Weight: 870 grams.

Other Features: Quick-return mirror, self-resetting film counter, accessory shoe mounting hole, various accessories.



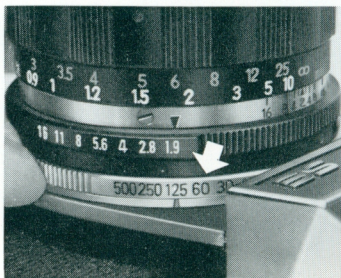
HOW TO USE THE KOWA-SE

1 Load Film in Camera



Set Camera to ASA Film Speed. Make sure that film is loaded properly and precisely. Set ASA Speed Lever to film speed, this couples Exposure Meter to sensitivity speed of film used in camera. (See pages 8, 9)

2 Set Shutter Speed



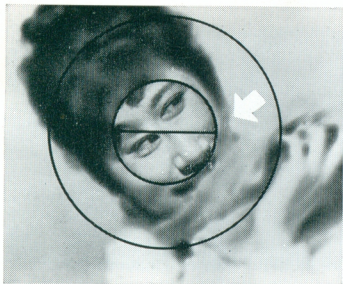
Estimate what shutter speed is most suitable for your subject, set shutter to desired shutter speed. (See pages 12, 13)

3 Exposure is Automatically Determined



Train exposure meter light intake window accurately at your subject. Look into viewfinder and turn Aperture Ring so that Exposure Meter Needle is brought in line with Correct Exposure Index Mark. Exposure is automatically set when Needle is aligned with Index Mark. (See pages 10, 11)

4 Focusing



Turn Lens Barrel Helicoid and focus lens while looking at your subject through Viewfinder. For focusing, you can align sprit-image in center of Viewfinder or bring into clear focus blurred image around edges. (See page 14)

5 Automatic Operation

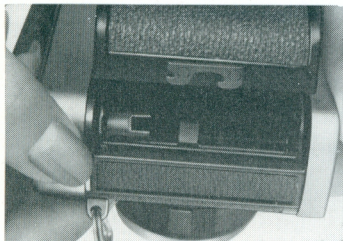


Foregoing steps are all that is necessary for taking pictures. After these steps are taken, depress Shutter for photographing your subject and then advance film one frame. Make sure that film is wound properly after each frame is exposed, so that you are ready for any possible shutter chance.

Let's Take Pictures

You will sure to like the KOWA-SE as you use it to take pictures and to treasure with pleasure the pictures and fun-in-photography you will have with it. The operation of the KOWA-SE is fully described by component in the succeeding pages. Let the camera take care of what is not actually explained in this booklet.

FILM LOADING



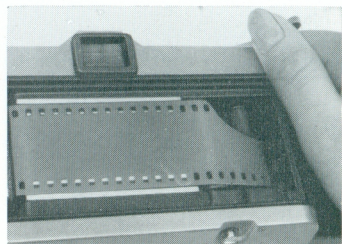
1 Open Back Cover

Pull Metal Lock and Back Cover will automatically open. Special care must be exercised so that camera does not accidentally slip out of the hands.



2 Load Film

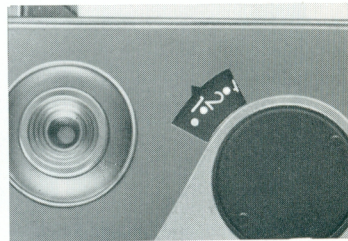
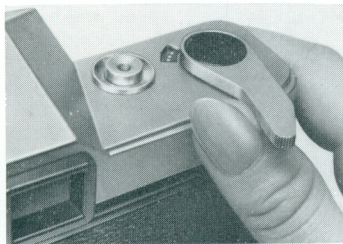
Pull Film Rewind Shaft Knob so that there is room enough for loading film cassette into loading chamber. Pull film leader out of cassette.



3 Checking Film Loading

Insert film leader tip into groove of Take-up Spindle and turn Spindle until both sprockets engage perforations on both sides of film strip.

- * Use 35 mm roll film supplied in cassette ready for loading into camera.
- * Ascertain that exposed film in camera is completely wound, before you open Back Cover for film replacing.
- * Avoid, if possible, changing film in broad daylight. A comparatively dim place is preferable for changing film.



4 Close Back Cover and Tighten Film

Press Back Cover and it will automatically lock into position. Slowly turn Film Rewind Crank along arrow mark to tighten film slackened in cassette.

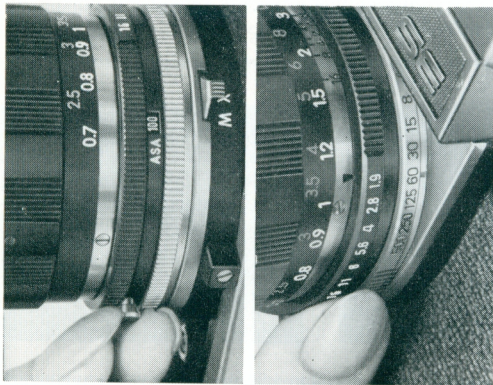
5 Advance Film Two Frames

Advance film two frames through leader section and bring first frame of film into position behind lens. To make sure film is loaded properly, check to see if Take-up Spindle Knob revolves when film is advanced.

6 " 1 " Appears in Film Counter Window

When Back Cover is closed, " S " appears in Film Counter Window. When film is subsequently advanced two frames, " 1 " automatically appears in Film Counter Window, showing completion of film loading process.

SETTING EXPOSURE



In automatic setting of the exposure, the exposure meter must be fully coupled to the film speed, shutter speed and lens aperture. The KOWA-SE automatically determines exposure with its high-performance CdS exposure meter coupled to film speed, shutter speed and lens aperture. Its CdS meter is coupled to the wide range of LV 3 to 17 with ASA 100 film.

1. Set ASA Film Speed

Pull ASA Speed Change Button on Lens Barrel and turn ASA Speed Ring so that desired film speed appears in ASA window. Release ASA Speed Change Button. It clicks back into position.

2. Set Shutter Speed

Turn Shutter Speed Ring and set it at speed best suited for your subject. (See pages 12, 13)

Notes:

- * If desired ASA speed reading does not appear in ASA speed window, turn Shutter Speed Ring.
- * Exposure Meter Needle will not center if your shutter speed is too slow or fast. Change shutter speed.
- * You can set lens aperture first and then set camera to correct exposure by changing shutter speed.
- * Green mark appears on left side of Viewfinder to indicate film is completely wound or that CdS Meter is operating.

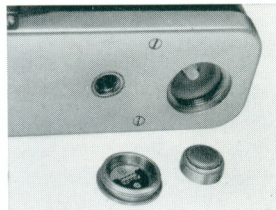
3. Bring Exposure Meter Needle into Line with Index Mark Visible in Viewfinder

Train Exposure Meter Light Intake Window accurately at your subject. Turn Aperture Ring while looking at Exposure Meter Needle in Viewfinder. Correct exposure is set when Needle is aligned with Index Mark. Lens aperture calibration at time of correct exposure appears on Aperture Ring.



Mercury Battery for CdS Meter

Mercury battery for CdS Meter is in lower section of camera. Normal battery life is more than two years. Meter is designed so that battery current flows only when film is advanced for longer battery life.



SETTING SHUTTER SPEED FOR

ASA 100 FILM

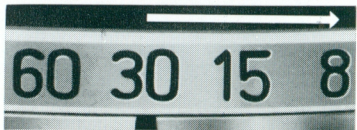
A



B



C

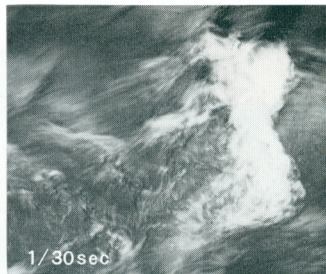
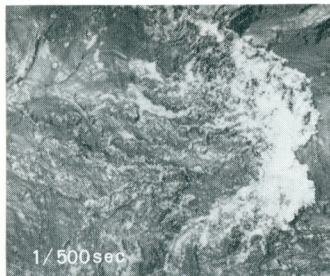
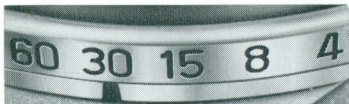


Since the KOWA-SE has a fully-coupled CdS exposure meter, the lens aperture can be set first, and the correct exposure then determined by changing the shutter speed. It is advisable, however, to set the shutter speed first.

Note: When ASA 50 film is used, select shutter speed one click slower than ASA 100 film shown in above table, and one click faster for ASA 200 film.

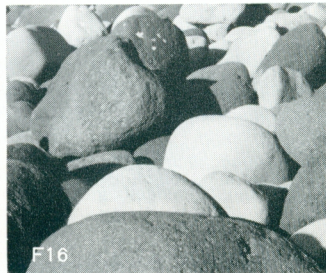
Changes in Shutter Speeds Produce Superb Moving Effects

It is to be noted, however, that only the proper combination of shutter speed and lens aperture can lead to correct exposure. If you take picture hand-held, the shutter speed should be at less than 1/15 second.



Aperture Affects Depth of Field

Depth-of-field calibrations are given on Depth-of-focus Ring at base of Lens Barrel. (See pages 26, 27)

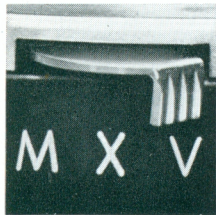


FOCUSING



In taking pictures with the single-lens-reflex the KOWA-SE, image is focused by turning the lens barrel helicoid and looking in the focusing screen. For more precise and easier focusing, a split-image is provided in the center of the focusing screen. The lens is focused accurately when the two halves of the split-image are aligned. A ground glass around the split-image makes focusing easier. The viewfinder also has a fresnel lens for all corners brightness and a concave-convex lens for greater overall brightness.

SELF-TIMER



A Self-timer is built into the KOWA-SE's Seikosha SLV Shutter and is operated by the Synchro Change Lever. The Self-Timer begins to move when the Lever is set to "V" and the Shutter Button is depressed. It has a delayed-action shutter release time of about eight seconds. When the self-timer is not in use or when the camera is not used for flash photography, Lever must be set at "X".

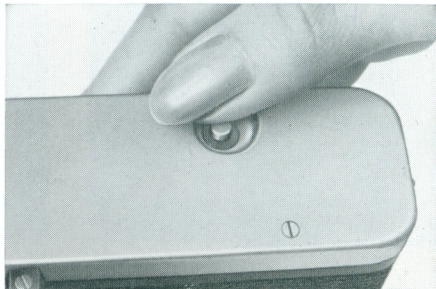


FILM REWIND

- 1 Check completion of film exposure against Film Counter.



- 2 Depress Rewind Switch Button.



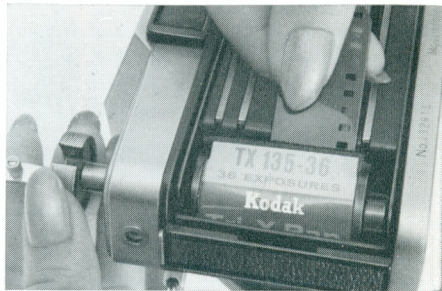
After a roll of film has been completely exposed and can no longer be advanced, you must of course rewind the roll before replacing it with a fresh load of film.

1. Film has been completely exposed.
2. Depress $\frac{1}{2}$ Film Rewind Button on bottom cover of camera body. Film is ready for rewinding. (Sprocket is also automatically reset for film advance when you begin to wind fresh film).

3 Slowly turn Rewind Crank.



4 Take exposed film out of loading chamber.



3. Unfold Rewind Crank and rewind film back into cassette.

4. Open Back Cover only after you make sure that film has been completely rewound.

Notes:

- * Do not rewind film completely back into the cassette—leave the tip protruding—to guard against any light accidentally getting into the cassette.
- * After the film is completely rewound, the Film Rewind Crank will not turn in the opposite direction. After the exposed film is taken out of the camera, fold the film tip in. This makes it easier to distinguish between exposed and fresh film.

FOR CORRECT EXPOSURE

The KOWA-SE has a built-in CdS exposure meter that covers a wide range of exposure. The meter's sensitivity dispenses with any additional device for two-stage high-low light intensity. The light intake window of the exposure meter has almost the same angle as that of the taking lens. The meter is therefore not affected by light falling on or reflected into the intake window from outside the picture area.

The KOWA-SE's high-performance exposure meter, like all other meters, measures the average amount of light falling on its intake window. Under special photographing conditions, it is necessary to familiarize yourself with the use of the exposure meter. You must make allowances to cope with the exposure differences between a built-in exposure meter which measures only the average amount of light falling on its window and a camera whose lens takes in virtually all the light falling on it.



Measure Exposure Where Subject is Situated

The intake angle of the CdS meter is almost the same as the photographing angle of the lens. You can therefore measure for exposure at where you have your camera. For accurate measurement, however, it is advisable to move to the position of your subject and measure light falling on it.



Lighting from Behind

There is sharp contrast between the bright and dark areas of a single given scene. Pictures taken under such light conditions tend to be under-exposed if exposure value is measured by the camera position. You must set exposure two to four times, or measure accurately the light intensity of the area you want to photograph.



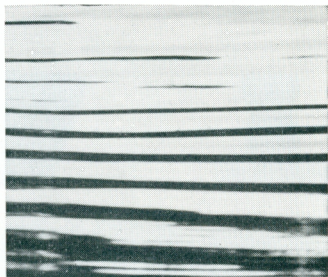
Subject at Window

Photographically, a subject at a window is in the same lighting condition as a subject lighted from behind. In any event, the light reflected from the subject is the criterion for determining exposure. Move intake window close to the subject to measure the light.



Sky and Landscape

Landscape rather than sky is what you want to photograph. Do not point exposure meter straight at a bright sky but train the intake window a little downward. If you notice that strong rays of light are reflected into the intake window, shield the light off by hand.



Strong Contrast

If there is excessively strong contrast between bright and dark areas of the subject, it is impossible to produce both accurately in pictures. It is advisable to forget about either of two tones in measuring light.

FOR TELEPHOTO AND WIDE-ANGLE PICTURES

WIDE-ANGLE

You can take wide-angle or telephoto picture by mounting the proper conversion lens over the taking lens. The lens can be focused and the taking angle adjusted while looking through the viewfinder. This is a distinctive feature of the KOWA-SE.

KOWA-SE Conversion Lenses

Type	Aperture	Compound Focal Length	Construction	Angle of View
Telephoto	f/4	88 mm	4-group 6-element	28°
Wide-Angle	f/4	37 mm	2-group 4-element	60°

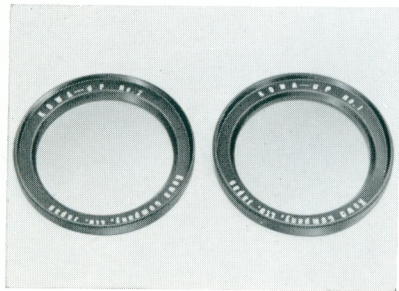


STANDARD

TELEPHOTO



CLOSE-UP AND COPYING



Two types of close-up lenses—No. 1 (for photographing distances of 46 to 100 cm) and No. 2 (36 to 58 cm) are available as accessories (No. 1+No. 2=30~41 cm). Close-up and copying work can be done simply by screwing in the close-up lens on the taking lens. Since the KOWA-SE is an SLR, the field of view of focusing offers no problems. The image appears in the picture as it is seen through the viewfinder.

FLASH PHOTOGRAPHY

* Exposure and Synchronization

Determination of correct exposure for flash photography is explained in instruction booklets for flash bulbs and electronic flash. Exposure factor can be calculated by equation:



* High-speed Synchronization

Flash must be fully synchronized with the movement of the shutter at high speed. The KOWA-SE's Seikosha SLV Shutter has M and X synchronization. The M terminal is for Class M bulbs and X for electronic flash.

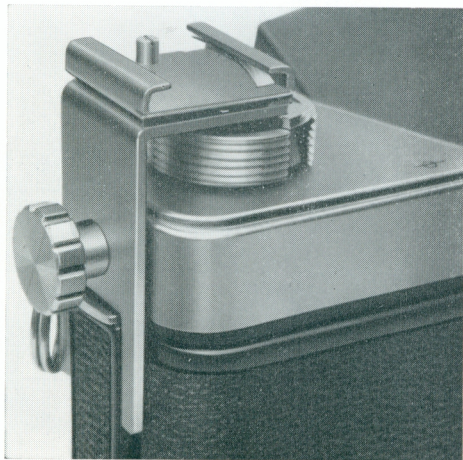
$$\frac{\text{Guide Number}}{\text{Flash Distance}} = \text{Aperture for Correct Exposure}$$

$$\frac{\text{Guide Number}}{\text{Desired Aperture}} = \text{Distance for Correct Exposure}$$



Synchro	M Synchro	X Synchro
Class	 M X V	 M X V
Class M	Fully coupled to all speeds	Coupled to 1/30 sec or slower speeds
Electronic Flash	Not coupled	Fully coupled to all speeds

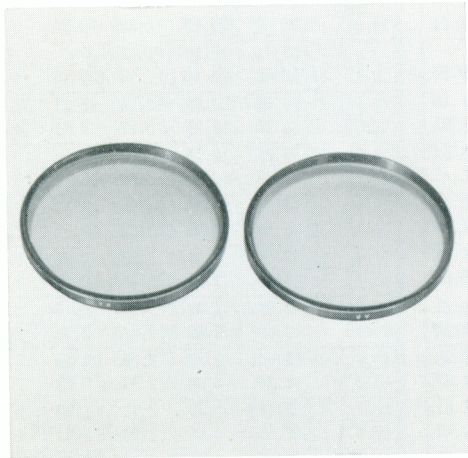
WIDE VARIETY OF ACCESSORIES





Detachable Accessory Shoe

The Detachable Accessory Shoe is set into position on top of the Film Rewind Crank by tightening the side screw. It is used for synchro flash gun. (Viewfinder eyepiece also has groove for viewfinder accessory).



Lens Hoods

The Lens Hood is used to prevent rays of light from outside the picture area from falling on the taking lens and weakening the contrast in the negative. It is indispensable for taking pictures at the seaside, mountains or under artificial light.

Filters and Close-up Lenses

A wide variety of integrated filters are available as accessories for the KOWA-SE—filters to take out ultra-violet rays, contrast filters, compensation and color temperature change filters for color photography.

THE TABLE OF THE DEPTH OF FIELD

STANDARD (50 mm F1.9)

Aperture Dist.(ft.)	Aperture							
	F 1.9	F 2	F 2.8	F 4	F 5.6	F 8	F 11	F 16
∞	∞	∞	∞	∞	∞	∞	∞	∞
	134.78	128.05	91.52	64.02	45.73	32.01	23.28	16.01
25	30.61	30.98	34.26	40.74	54.51	90.68	∞	∞
	21.14	20.97	19.70	18.06	16.26	14.56	12.18	9.90
12	13.16	13.22	13.79	14.73	16.21	19.10	24.59	47.45
	11.03	10.99	10.63	10.13	9.54	8.77	7.98	6.93
8	8.48	8.51	8.73	9.09	9.62	10.54	11.97	15.51
	7.57	7.55	7.39	7.15	6.85	6.46	6.03	5.43
6	6.26	6.28	6.40	6.58	6.85	7.30	7.96	9.35
	5.76	5.75	5.65	5.51	5.34	5.10	4.83	4.44
5	5.18	5.19	5.27	5.39	5.57	5.86	6.27	7.09
	4.83	4.82	4.76	4.66	4.54	4.37	4.17	3.88
4	4.11	4.12	4.17	4.24	4.35	4.52	4.76	5.21
	3.89	3.89	3.85	3.78	3.70	3.59	3.46	3.26
3.5	3.58	3.59	3.63	3.68	3.76	3.89	4.06	4.38
	3.42	3.42	3.38	3.34	3.27	3.19	3.08	2.93
3	3.06	3.06	3.09	3.13	3.19	3.28	3.39	3.61
	2.94	2.94	2.91	2.88	2.83	2.77	2.69	2.57
2.5	2.54	2.54	2.56	2.59	2.63	2.68	2.76	2.90
	2.46	2.46	2.44	2.42	2.39	2.34	2.29	2.20

WIDE-ANGLE (37 mm F4)

Aperture Dist.(ft.)	Aperture				
	4	5.6	8	11	16
∞	∞	∞	∞	∞	∞
	36.31	25.93	18.15	13.20	9.08
25	22.14	29.19	56.05	∞	∞
	10.08	9.10	7.94	6.85	5.59
12	9.08	10.05	12.00	15.87	34.49
	6.12	5.75	5.27	4.78	4.13
8	5.81	6.19	6.86	7.95	10.84
	4.45	4.26	3.99	3.71	3.31
6	4.35	4.55	4.90	5.43	6.61
	3.55	3.43	3.26	3.07	2.80
5	3.65	3.80	4.03	4.38	5.11
	3.08	2.99	2.86	2.71	2.50
4	2.98	3.08	3.23	3.44	3.87
	2.60	2.53	2.44	2.33	2.18
3.5	2.66	2.73	2.85	3.13	3.33
	2.35	2.30	2.22	2.08	2.00
3	2.34	2.39	2.48	2.60	2.83
	2.10	2.06	2.00	1.93	1.82
2.5	2.02	2.06	2.13	2.21	2.38
	1.84	1.81	1.77	1.71	1.63

TELEPHOTO (88 mm F4)

Aper ture Dist. (ft.)	F 4	F 5.6	F 8	F 11	F 16
∞	∞	∞	∞	∞	∞
	186.57	133.27	93.29	67.84	46.64
25	172.35	818.81	∞	∞	∞
	50.58	45.68	39.90	34.46	28.09
12	43.78	48.25	57.00	73.75	144.97
	29.95	28.17	25.88	24.97	20.37
8	28.05	29.71	32.63	37.23	48.83
	21.98	21.07	19.86	18.53	16.69
6	19.94	20.80	22.25	24.38	29.02
	16.52	15.97	15.22	14.37	13.16
5	16.43	17.01	17.97	19.32	22.10
	14.05	13.66	13.11	12.48	11.56
4	13.05	13.41	13.99	14.78	16.34
	11.51	11.25	10.87	10.44	9.79
3.5	11.40	11.67	12.10	12.69	13.81
	10.21	10.01	9.71	9.37	8.85
3	9.77	9.97	10.28	10.70	11.48
	8.89	8.74	8.51	7.93	7.85
2.5	8.17	8.30	8.52	8.80	9.31
	7.55	7.44	7.28	7.09	6.79



Kowa **SE** CAMERA



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