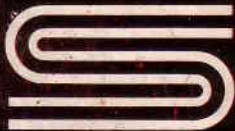


TOPCON
WINK MIRROR



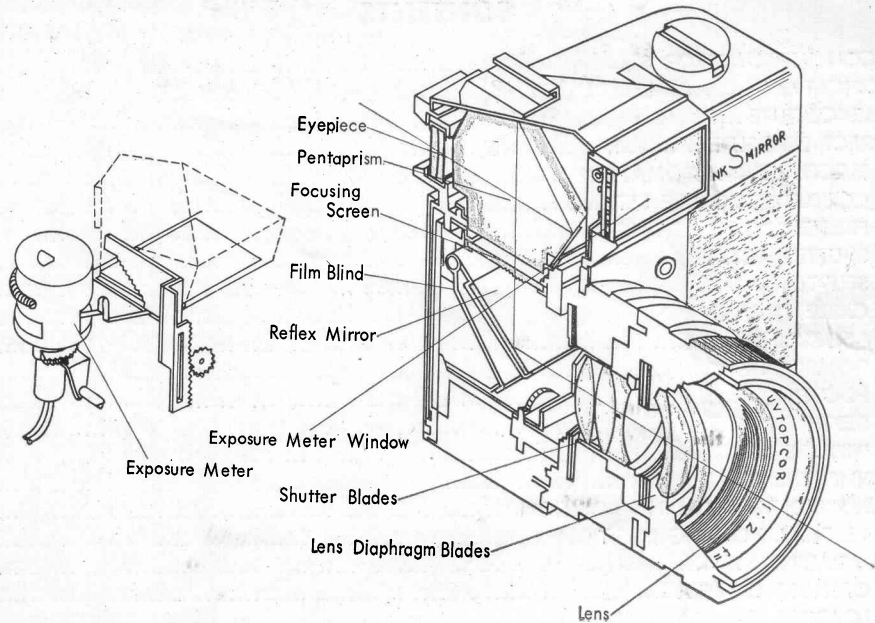
ELECTRIC-EYE PICTURE-TAKING

- 1. Set film speed (ASA 10 to 400 or DIN 11 to 27).**
- 2. Set shutter speed (1/30 to 1/500 sec.) or weather legend.**
- 3. Set aperture ring to AUTO.**
- 4. Advance film winding lever.**
- 5. View-focus through the lens.**
- 6. Press shutter release button.**

IMPORTANT

- 1. Don't touch the surface of the lens, mirror, eyepiece, as well as exposure window.**
- 2. Stroke the film winding lever all the way - until it stops.**
- 3. Wait until the shutter action is completed before stroking the film winding lever.**
- 4. Cover the lens when not in use.**
- 5. Don't force movements but re-read instructions once more.**
- 6. If your TOPCON WINK MIRROR S needs repair, don't do it yourself but contact the nearest authorized dealer.**

3649233 www.orphancameras.com



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TOPCON WINK MIRROR S

Congratulations on your choice of the TOPCON WINK MIRROR S, which has been designed by our engineers and optical scientists to give an ideal camera fulfilling the following basic requirements:—

1. Single lens reflex—for viewing and focusing of the exact subject image as it will be captured on the film.
2. Electric-Eye automation—for automatically setting the correct exposure to the camera simply by pointing it at the subject.
3. Complete lens interchangeability—for changing from the standard to the wide-angle or telephoto as the requirements of the picture may demand.
4. Superior UV lens coating—for producing crisper black-and-white shots and true-to-life color pictures.

But, besides these basic requirements, the camera also incorporates all the complicated mechanism that make picture-taking completely automatic, such as:—

1. Fully automatic instant re-opening lens diaphragm action—for holding the lens at wide aperture, for view-focusing ease, but stopping it down automatically to the selected aperture for the shutter action and then re-opening it once more to wide aperture.
2. Quick-as-a-wink mirror action—which, in coupled action with the automatic lens diaphragm action, swings the mirror up and out of the way for shooting and then snaps it down once more, quick-as-a-wink, for view-focusing.
3. Single stroke film winding lever action—not only advances the film one frame, but advances the exposure counter, charges the shutter and sets up the automatic lens diaphragm action.

4. Automatic re-setting additive exposure counter.
5. Automatic pop-up rewind button.

And, as an additional bonus, the camera also has :—

1. Complete electric-eye automation with all interchangeable lenses.
2. Special UV coating on all interchangeable lenses.
3. Aperture scale visible in finder, even with electric-eye automation.
4. Manual over-ride of electric-eye automation for shutter coupled exposure settings or complete freedom in exposure settings.

In other words, the camera is the ideal family camera because it can be used by every member of the family, from the person who only wants an automatic camera to take care of all exposure setting problems, the person who wants a built-in exposure meter coupled

to the camera for some freedom to adjust exposures, the person who wants a camera with a choice of wide-angle or telephoto lenses, which are not auxiliary lenses or which leave behind some component and merely exchange the front elements, to the person who would just rather set exposures according to experience,—because the camera is not a simple automatic camera but a well-built and designed camera which will satisfy even the demands of the advanced amateur.

While operation is very simple, may we suggest that you read the instructions through carefully so that you familiarize yourself with its working parts before you even load film in the camera. Then, if you would still rather work with electric-eye automation, you will have the pleasure of knowing that should difficult situations arise you will be able to take care of them by manual over-riding.

SPECIFICATION

Lens :

UV Topcor 1 : 2 f-53mm 6 element standard lens. Fully automatic instant re-opening lens diaphragm. Straight helicoid focusing from 70cm to infinity. Bayonet mount lens interchangeability of complete lens.

Apertures : f/2, 2.8, 4, 5.6, 8, 11, 16 and 22.

Shutter :

SEIKOSHA SLV behind-lens type.

Speeds : B, 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250 & 1/500 sec.

MXV-switch (for M and X settings flash synchronization and self-timer).

Finder :

Fixed eye-level Pentaprism finder, with $0.75 \times$ image (standard lens), and 34.5×23 mm finder screen.

With TOKOBRITE fresnel lens plate and micro-prism focusing spot.

Meter needle and aperture scale, indicates aperture readings.

Exposure :

AUTO—Electric-eye automation.

Range : EV 7 to EV 18, with ASA 100 film.

Film speeds: ASA 10 to 400 (DIN 11 to 27).

Shutter speeds: 1/30 to 1/500 sec.

COUPLED—Shutter coupled exposure setting.

Range: EV 7 to EV 18, with ASA 100 film.

Film speeds: ASA 10 to 400 (DIN 11 to 27).

Shutter speeds: 1/30 to 1/500 sec.

MANUAL—Complete freedom in apertures/shutter speeds.

Range: EV 2 to EV 18, with ASA 100 film.

Film speeds: ASA 10 to 400 (DIN 11 to 27).

Shutter speeds: B, 1 to 1/500 sec.

Film Winding:

180° single stroke; 20° play.

Other Features:

Red warning area indicating automatic exposure is not possible (shutter may be released).

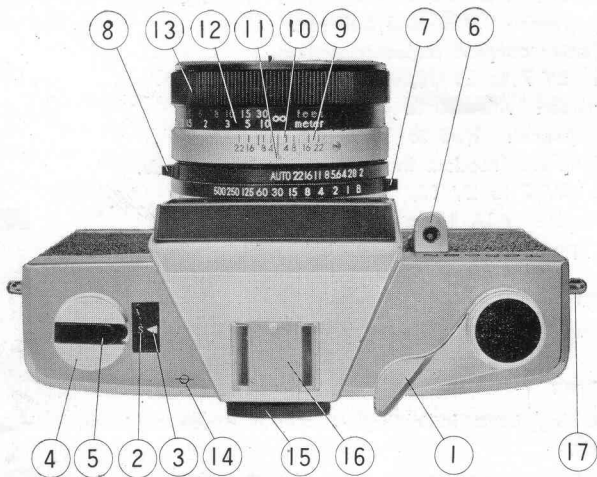
Wink mirror system (instant return mirror action).

Automatic pop-up rewind button.

Fixed accessory shoe.

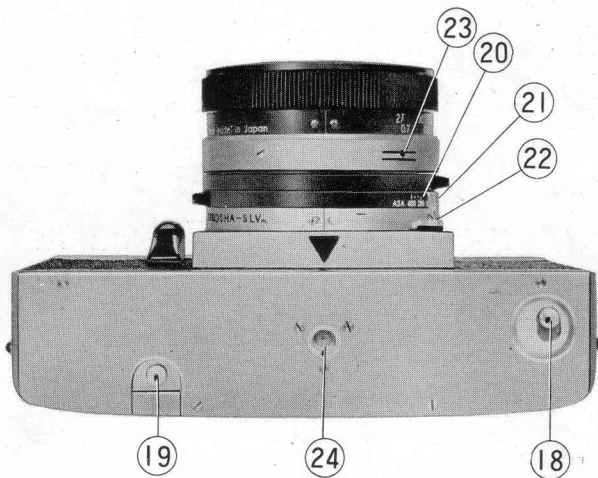
Size & Weight:

With standard lens: 135mm × 92mm × 84mm; 800 grams.



NOMENCLATURE

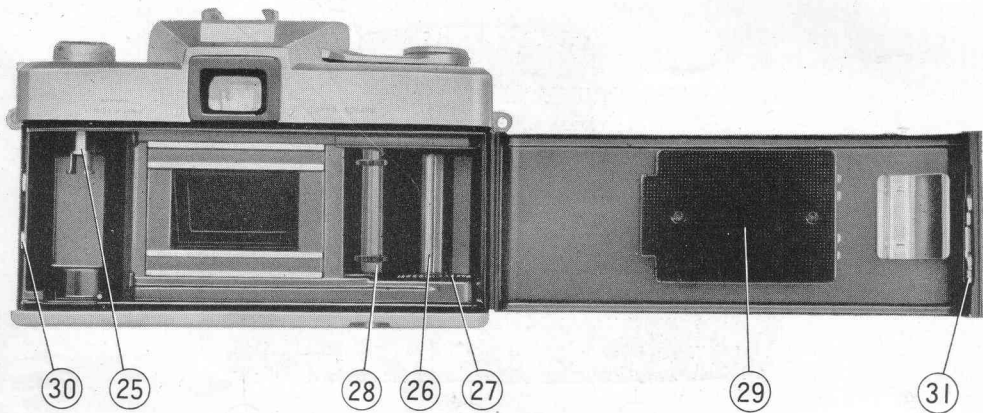
- | | | |
|--------------------------|--------------------------|------------------------|
| ① Film winding lever | ④ Rewind knob | ⑦ Shutter speed ring |
| ② Exposure counter scale | ⑤ Rewind crank | ⑧ Aperture ring |
| ③ Exposure counter index | ⑥ Shutter release button | ⑨ Depth of field scale |



- ⑩ Infrared index
- ⑪ Distance (aperture) index
- ⑫ Distance scale

- ⑬ Distance focusing ring
- ⑭ Film plane indicator
- ⑮ Eyepiece

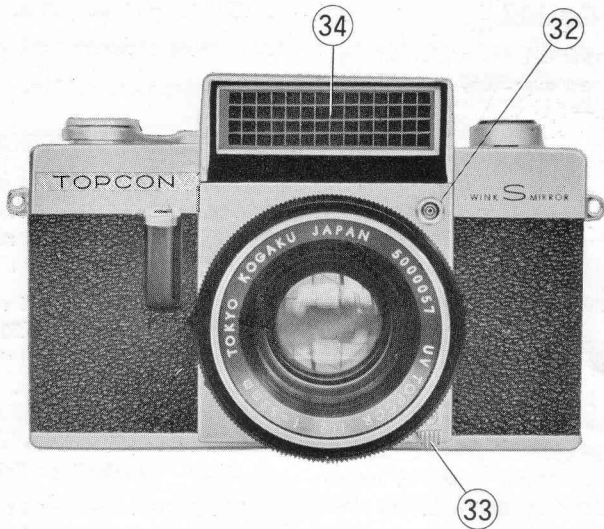
- ⑯ Accessory shoe
- ⑰ Shoulder strap lug
- ⑱ Back cover lock



- ①9 Rewind button
- ②0 Film speed scale
- ②1 Film speed indicator

- ②2 Weather legends
- ②3 Lens locking lever
- ②4 Tripod socket

- ②5 Film cartridge shaft
- ②6 Film take-up spool slit
- ②7 Film take-up spool serrated



flange

- ②8 Film transport sprocket
- ②9 Film pressure plate

- ③0 Back cover lock
- ③1 Back cover catch
- ③2 Flash socket

- ③3 MXV-switch
- ③4 Exposure window

CORRECT EXPOSURE

One of the most important factor for taking better pictures is correct exposure, which is the relationship between—

1. The shutter speed, and
2. The aperture (lens opening), as decided by
3. The brightness of the subject, and dependent on
4. The sensitivity (speed) of the film loaded in the camera.

In other words, it is important to be able to correctly judge the brightness of the subject, in order to determine the correct aperture to be used, because film speed is pre-determined by the film used and shutter speed is, more often than not, decided by the action of the subject.

In the TOPCON Wink Mirror S, three methods of setting the correct exposure adjustments to the lens and shutter are possible—

1. Electric-eye automation.
2. Coupled exposure setting.
3. Free exposure setting.

ELECTRIC-EYE AUTOMATION:

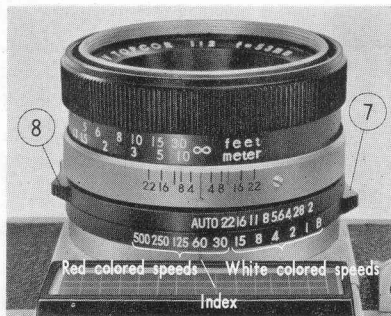
Presuming that the film is already loaded in the camera and the film speed set to the camera, the only actions required for taking pictures are :—

1. Set the shutter speed ring (7) to one of red-colored speeds 1/500 to 1/30 sec., by revolving the ring until the required speed is opposite the index. Or, revolve the same ring (7) to place the index (21) opposite the suitable weather legend (22), either "sunshine" or "cloudy".

The shutter speeds will click-stop into place. The index (21) should not be press-moved because it will upset the film speed set to the camera.

Use the shutter speed guide on page 10

Lighting	Film Speed (ASA) (DIN)	10	16	32	50	100	200	400
		11/10	13/10	16/10	18/10	21/10	24/10	27/10
Bright Sun on Sand or Snow		1/60	1/60	1/125	1/250	1/500	1/1000	1/1000
Bright Sun Strong Shadows		1/60	1/60	1/125	1/125	1/250	1/250	1/500
Hazy Sun Weak Shadows		1/60	1/60	1/125	1/125	1/125	1/250	1/250
Cloudy Bright No Shadows		1/30	1/30	1/60	1/60	1/60	1/60	1/125
Open Shade Under Clear Blue Sky		1/30	1/30	1/60	1/60	1/60	1/60	1/125
Cloudy Rain		1/15	1/15	1/30	1/30	1/30	1/30	1/60



for choosing the most suitable speed for the lighting condition or action.

2. Set the aperture ring (8) to AUTO, which will set the electric-eye system into operation and lock the shutter speeds to the red-colored speeds.
3. Check the aperture scales seen on the left border of the finder and if the exposure needle is not in the red warning areas and is satisfactory, press the shutter

button (6), and the picture will be taken. If the exposure needle is in the top red area, the picture will be under-exposed, while, if in the bottom red area, the picture will be over-exposed. If the former, revolve the shutter speed ring to the left, and, if the later, to the right, which will have the effect of moving the exposure needle towards the middle area, in both cases, where the picture can be taken. The shutter can be released even when the needle is in the red areas so the position of the needle must always be checked.

Of course, it is taken for granted that the film winding lever is also advanced, as well as view-focusing being undertaken, before the shutter is released.

COUPLED EXPOSURE SETTING:

When the subject has too much contrast, or the back-light is brighter than the front-light, or if you want to take a close-up reading and then move back for the shot, or other-

wise want to adjust the aperture setting to take into account possible over- or under-exposure on electric-eye automation, try coupled exposure setting :—

1. Set the shutter speed to one of the red-colored shutter speeds, i.e., from 1/500 to 1/30 sec., the same as for electric-eye automation.
2. Take the aperture ring off AUTO, by revolving it to any other setting on the ring.
3. Point the camera (exposure window) at the subject and read the aperture setting indicated on the aperture scale in the finder.
4. Transfer the aperture reading to the aperture ring, i.e., revolve the aperture ring until the same aperture is opposite the index (11), or modify it and then transfer it, if this is preferred.
5. Press the shutter release button.

Incidentally, if the exposure needle is in the

red warning areas, revolve the shutter speed ring, in the same manner noted for electric-eye automation, but within the range 1/500 to 1/30 sec., and find the right combination of shutter speed and aperture.

Coupled exposure setting is suitable for those shots in which—

1. The background is very light and covers a greater area than the main subject of interest, which is also darker ; because the exposure reading will be dominated by the lighter background and the main interest will be under-exposed. For example, shots against distant scene, or against snow-scapes, etc.
2. The opposite of the above, such as in night clubs, circuses, etc., in which the reading will be dominated by the darker background and the main interest will be over-exposed.
3. The main subject is back-lighted, because the subject's face will not be illuminated

by the main light and will be under-exposed, if the reading is taken for the full subject area.

4. The main subject is in the shade, because the reading will again be dominated by the surrounding light and will thus be under-exposed.

For the above shots, as well as for other shots, the exposure reading should be taken as follows:—

1. Landscape: Shield the exposure meter window (34) from the light reflected by the sky and point it so that it will be taking a reading of an area having less sky than the general overall scene, because the sky is much brighter than the general scene and if too much sky is included the overall effect will be over-exposure.
2. Subject against the open sky: When shooting airplanes, flags, buildings, etc., against an open expanse of sky, take an exposure reading of a similar object with

the light striking it at the same angle as the subject and modify it by 1/2 stop less;

3. Contrasty subject: First decide what effect you are looking for in the final picture and take an exposure reading of the portion which interests you the most, letting the contrasty portion (lighter or darker portion) get lighter or darker, as the case may be.
4. Inaccessible subjects: If the subject is too far off, take an exposure reading of a similar subject (i.e., same texture and lighting condition) at close distance.
5. Back-lighted subject: The best method is to move in and take a close-up exposure reading of the front-lighted subject area only, using care to see that the back-light does not effect the reading. Otherwise, modify the exposure reading taken at the picture-taking position 3 or 4 times to take into account the excessive contrast between the back-light and the front-lighted area.

6. Portrait : Move in close and take a reading of the face area that should stand out in the final picture. If contrast is extreme, between the high-lights and shadows, take a reading of both portions and average it, if you want both portions, or otherwise take a reading of the interesting portion at about 4 inches or so. See that the camera's shadow is not cast on the area being read.

FREE EXPOSURE SETTING :

When exposure settings are not possible by electric-eye automation or coupled exposure setting, use free exposure setting because there is greater freedom in the choice of shutter speeds, thus permitting shots not possible by the former two methods.

While the former two methods are limited to the shutter speeds $1/500$ to $1/30$ sec., in free exposure setting, it is possible to set speeds from $1/500$ to 1 sec. plus Bulb (time exposure).

Although only full numbers are used on the ring, it should be remembered that 500 is $1/500$ sec., and 1 is a full 1 sec. and that, therefore, the larger number is the faster speed, meaning that the shutter remains open only for a $1/500$ sec. duration during which time the light passes only $1/2$ as long as the preceding larger number and vice versa ; thus if lighting conditions remain unchanged, decreasing the speed will mean that the aperture will have to be opened to compensate for less light.

The choice of shutter is dependent on the lighting condition, as well as the need for stopping action. The brighter the light, the faster the speed that may be used, and vice versa. On the other hand, for stopping action, it should be noted that (1) a faster speed is required for a speedier subject, (2) a faster speed is needed for movement nearer to the camera, (3) a faster speed is required for a subject moving parallel to the camera, while a slower speed may be used for move-

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ment towards or away from the camera, and (4) the degree of stopping required will also determine the speed to be used.

The aperture ring has apertures or openings, called f/numbers, with exposure ratios, as follows :—

Aperture	2	2.8	4	5.6	8	11	16	22
Exposure ratio	1/4	1/2	1	2	4	8	15	30

The aperture or lens opening controls the amount of light that enters the lens and passes through to the film plane, by adjusting the lens opening as required. It can be seen that the larger numbers are the smaller openings and vice versa and that each smaller aperture permits only 1/2 the amount of light of the preceding larger aperture and that, therefore, if lighting conditions remain unchanged, stopping down will require a corresponding increase in the shutter speed.

In other words, if the shutter speed is originally set to 1/60 sec. for f/8, then it must be increased to 1/125 if the aperture is opened

to f/5.6 or to 1/30 if the aperture is stopped down to f/11.

Exposure settings in this case will have to be decided by :

1. Using a suitable exposure meter, or,
2. Using an exposure chart, such as is usually included with the film, or,
3. Making your decision based on past experience.

SHUTTER ACTION :

Since all the UV TOPCOR lenses are equipped with the fully automatic lens diaphragm action, the lens opening is always opened at the widest aperture for view-focusing ease. This means that the lens diaphragm must automatically close down to the required opening when the shutter button is pressed, and then open immediately back to the widest aperture—but, besides this, there are various other related actions which all take place in less

than 1/10th of a second when the shutter is pressed, such as:—

1. The shutter blades close down completely.
2. The reflex mirror rises, the film blind opens fully and the lens diaphragm is stopped down.
3. The shutter blades open and close (for taking the picture).
4. The film blind opens, the mirror returns to reflex viewing position, and the lens diaphragm opens fully.
5. The shutter blades open fully.

The action of the lens diaphragm is the result of the "fully automatic instant re-opening lens diaphragm action", while that of the reflex mirror is the product of the "quick-as-a-wink mirror action", both of which are required to produce the fast action required for taking the picture without loss of image.

When using slow shutter speeds, always wait

until the shutter action is finished before advancing the film winding lever.

SELF-TIMER:

For the purpose of delaying the actual shutter release action for 10 sec., after the shutter release button is pressed, use the built-in self-timer. After all preparations for taking the exposure have been completed, shift the MXV-switch (33) until V is aligned with the index, and then press the shutter release button as usual.

By utilizing the self-timer, it will be possible to take your own photograph, or hold lighting equipment or reflector, or used it for minimizing camera vibration on the tripod.

Even when the self-timer is used, Electric-Eye automation takes place and the correct exposure for the lighting condition when the shutter is released is set to the camera.

Always return the MXV-switch to X-setting when not in use.

CABLE RELEASE :

When using the camera on the tripod, etc., use a cable release screwed into the shutter release socket, instead of pressing the shutter button, as it will eliminate camera vibration.

VIEW-FOCUSING

Two other important factors for getting better pictures are :—

1. Correct composition of the subject within the film negative area, and
2. Accurate focusing of the image on the film plane.

In the TOPCON WINK MIRROR S, both these factors are taken care of by a single system, i.e., view-focusing through the camera lens.

COMPOSITION :

Since the reflected light from the subject, which passes through the camera lens to the film plane for taking the picture, is intercepted by the reflex mirror, which is placed in the light path, and reflected upwards to the finder's focusing screen :—

1. Parallax is completely eliminated, because the viewing and taking lens are the same, and you can compose exactly as it will

be taken in the picture, and

2. The same area seen in the finder will be covered in the final picture.

Furthermore, the eye-level Pentaprism finder, which reverses the laterally reversed image reflected upwards by the reflex mirror, gives the following advantages:—

1. A right side up laterally correct image, moving in the same direction as the actual subject, is especially valuable for moving subjects.
2. Because of the erect laterally correct image, both eyes can be used, one for looking through the finder and one for viewing the general scene.
3. Eye-level viewing also means correctly lateral and erect images in vertical formats.

FOCUSING:

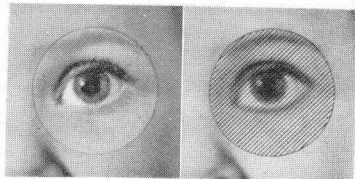
Since view-focusing is through the camera

lens, all focusing adjustments are made directly on the lens itself by revolving the distance focusing ring (13), and checking the effect on the focusing screen in the finder.

The focusing screen has:—

1. A micro-prism focusing spot.
2. A fine focus ring, around the spot.
3. A full-area ground glass, boosted by fresnel lens.

Micro-Prism Focusing Spot: The focusing spot in the center is made up of numerous microscopic prisms which break up the image



In Focus

Not in Focus

when it is not in focus so that the image is seen indistinct and blurred. When the distance focusing ring is revolved and the subject is accurately focused, the image in the focusing spot will be seen distinctly and sharply.

Subjects with linear features will be particularly effective for focusing because the straight lines will look ragged and broken up when out of focus but will be seen straight when in focus.

When in doubt, revolve the distance focusing ring either ways from what is considered optimum focusing and check the effect.

Fine Focus Ring: Around the micro-prism focusing spot can be seen a clear ring which is made of extra-fine ground glass only. This ring made also be used, either singly or in combination with the focusing spot, for focusing of subjects without linear features.

When the distance ring is revolved and the subject is correctly focused, the finder image will be seen distinctly and sharply, while, if

focusing is not correct, the subject will be seen blurred and indistinctly. As with the focusing spot, revolve either ways of the optimum focus to check whether focusing is correct or not.

Full-Area Ground Glass: The full-area of the focusing screen, except for the focusing spot and fine focus ring, is fine ground glass backed by a fresnel plate lens for obtaining a brilliant illuminated subject field from edge-to-edge, without dark corners. In other words, the whole subject area is always distinctly seen and may be focused on the full ground glass area.

Focusing is done in the same manner as for the fine focus ring and focusing spot.

For speedier focusing, use the full focusing screen, combining all the focusing means, i.e., focusing spot plus fine focus ring plus full ground glass, because it will also mean that composition and focusing can be undertaken at the same time.

The distance actually focused can be checked by reading the distance scale (12) opposite the distance index (11).

DEPTH OF FIELD:

When you have focused on a certain subject (plane), it will be seen that not only that subject but other subjects, both in front and behind the main interest, will also be seen sharply, although this will not be true for everything before or behind the main interest.



In other words, when a subject has been focused at a certain distance, the lens presents an apparently sharp image not only at the focused distance but also at somewhat farther and nearer distances. This zone of apparent sharpness is known as the depth of field and the rules governing the extent of the depth of field are:—

1. The depth of field is greater as the diaphragm (aperture) is closed down, and least as the diaphragm is opened up. In other words, the wide-open aperture of the fully automatic lens always shows the least depth of field and is valuable for precise focusing.
2. The depth of field is greater as the focused distance increases and least as the camera-to-subject distance decreases.
3. The depth of field is greater behind the focused subject (in the background) and shallower before the focused subject (in the foreground) but grows progressively

equal as the focusing distance gets shorter.

4. The depth of field increases when the UV TOPCOR 35 mm wide-angle lens is attached and decreases when the UV TOPCOR 100 mm telephoto lens is used, both in comparison to the standard UV TOPCOR 53 mm lens.

The depth of field of the lens can be utilized for getting pictures with backgrounds or foregrounds out of focus, or for getting subjects in the foreground and background sharply, or for covering the deepest possible range in action shots, etc.

Depth of Field Scale: The depth of field scale (9), on the lens barrel, is utilized for checking the scope of the depth of field because it shows at a glance the zone of apparent sharpness at any lens opening or distance.

The depth of field scale is next to the distance scale (12) and is made up of identical

pairs of apertures on both sides of the distance index (11), which also represents the widest aperture of $f/2$. These identical pairs of apertures indicate the distance that will be in focus at these lens opening.

1. **Finding the depth of field:** For example, if the lens opening is $f/11$ and the distance focused is 10 meter (as in the illustration), read the distances opposite the aperture $f/11$ (the line between 8 and 16) on both sides of the depth of field scale which will show that the depth of field extends from approximately 4.5 meters to infinity. On the other hand, if greater depth of field is required, see which lens opening will cover the required field. If, for example, the zone should extend from 3 meters, it will be seen that $f/22$ will give the required depth of field which will be from about 3 meters to infinity. Of course, shutter speed will have to be decreased to compensate for the reduc-

tion in the effective amount of light.

- 2. Zone focusing:** When it is required to cover two subjects at different distances from the camera, first focus on the nearest subject, for example, 2 meters, and then the farther subject, say, 5 meters, both found with the distance scale. Next, revolve the distance focusing ring until these distances are opposite identical apertures (approx. $f/16$, in this case) and use this lens opening for the shot.
- 3. Fast zone focusing:** When there is not enough time for finding the two limits for the above zone focusing method, focus on a subject about two-fifths of the way into the required zone of sharpness and choose an aperture which will give sufficient sharpness over the whole field.

Increase the depth of field, whenever possible, by stopping down the lens opening rather

than by increasing the focusing distance, or by using the UV TOPCOR 35 mm lens.

Depth of Field Table: For greater accuracy in the depth of field, because the depth of field scale figures are in round sums, use the depth of field tables on pages 23 to 28.

In all instances, measure the distances from the focal or film plane (indicated by the marking (14) on the camera's top deck) to the main subject.

For critical pin-point sharpness, always use wide aperture and focus on the main plane, because everything within the depth of field is not of equal sharpness but, on the contrary, grows less sharp as it gets farther from the plane of focus.