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OLYMPUS OM-4

For Your Creative Photography [B]


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WHAT IS "CREATIVE EXPOSURE"?

By Akio Kojima

Have you always been satisfied with your image when you determined the exposure as indicated by the camera's manual exposure meter or on an Automatic Exposure (AE) system?

We guess you have probably been satisfied to a certain degree, but you may have sometimes had experiences of being disappointed because the image on your picture did not come out as you imagined, especially when you took pictures with backlighting or other special lighting conditions, or when you photographed to express your individual or specific feelings.

Color reversal films, in particular, allow for only a narrow latitude of exposure so that in many cases satisfactory results are not obtained with a simple automatic exposure. Generally speaking, the results of a camera's light meter represent exposure values obtained by a metering system that has been specifically adopted for that camera. They do not always represent data as the result of analytical measurement of various conditions such as the subject's brightness range and distribution as well as contrast. In actual shooting conditions, however, there is often a very wide brightness range (luminance range) from the brightest spot to the darkest spot in a picture. In some landscapes, for

example, there is sometimes a difference of 8 Exposure Values (EV) in the brightness range of a picture, representing a brightness/darkness ratio of more than 1 : 200. The subject brightness range that a film can reproduce (or an effective exposure range of a film) is limited to about 4—5 EV. Therefore, it is in many cases impossible to reproduce the subject in its entire range exactly on the film. The Automatic Exposure (AE) system on ordinary cameras generally consists of metering an exposure value through a simple operation of the exposure meter in combination with the film speed. If we speak in terms of photography as a means of communication, however, you must control the tone of the picture according to the subject motive and expression you want to portray in your picture. For this purpose, it will be necessary to choose the exact spot on which you want to emphasize the desired tone and match this spot to the effective exposure range of a film.

To meet such exposure requirements, there are the following three types of exposure available.

The center-based exposure is the most standard type of exposure. By matching the center of the subject's brightness range to the center of the film's effective exposure range, the subject is reproduced with greater emphasis on that center measured tone. If the brightness range is greater than the range of the film, the extremes will be ignored.

The shadow-based exposure gives the highest priority to the shadow area in the subject brightness range. The tone in the highlight area that is not covered may be ignored. The highlight-based exposure, on the contrary, gives the highest priority to the highlight area. This exposure allows the shadow area to come out somewhat darker.

Advanced photographers oriented for creative photography have so far selected their exposure using such way of thinking. Measuring the values on several important spots of the image with a hand-held spot meter, they have usually had to take the troublesome and timeconsuming steps necessary to calculate the exposure mentally. Hopefully if they did everything right, the image would be exposed properly.

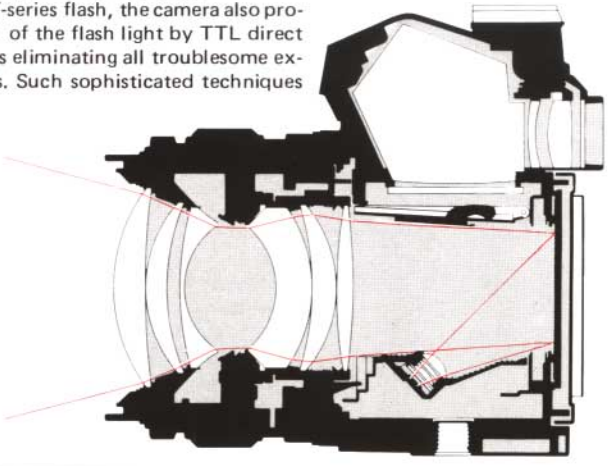
Equipped with a newly developed spot metering system and built-in computer, the OM-4 calculates the correct exposure value automatically to free the photographer from these troublesome exposure calculations. With this camera, anyone can now get high-precision, "creative" exposure control with ease.

TTL DIRECT LIGHT METERING (Center-weighted, averaged light metering)

Exposure is controlled by directly measuring the brightness of the subject just on the film plane. This is the world's first TTL direct light metering system developed by Olympus, which can even respond to sudden changes in light during exposure. It is very convenient for ordinary photography and shooting requiring high maneuverability.

Combined with a T-series flash, the camera also provides a full control of the flash light by TTL direct light metering, thus eliminating all troublesome exposure calculations. Such sophisticated techniques as multi-lamp and bounce flash can be used in a full-automatic mode. The direct light metering system also solves difficult exposure problems in macrophotography.

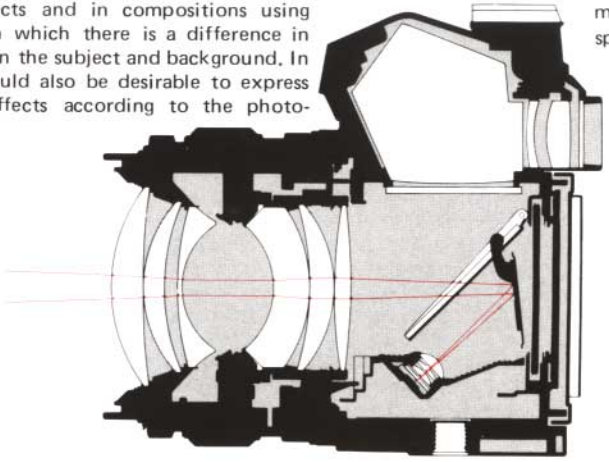
The OM-4 is based on the TTL direct light metering system which covers a wide range of shooting conditions.



SPOT METERING (1)

This spot metering system measures the brightness of the central spot of the picture frame (2% of the entire frame).

The direct light metering provides correct exposure for subjects in follow light and in pictures having a nearly uniform brightness on the entire frame. Exposure compensation is necessary, however, for backlighted subjects and in compositions using special lighting in which there is a difference in brightness between the subject and background. In some cases, it would also be desirable to express subtle lighting effects according to the photographer's subject motive. To realize such sophisticated expressions, fine metering of various spots on the subject is required. If the "Spot" button of the OM-4 is pressed, the metering mode switches to spot metering in which the brightness of the area (corresponding to the microprism section in the center of the viewfinder) is metered and stored in memory. By using this spot metering, photographers can control exposure as desired to realize creative lighting compositions.



AE LOCK

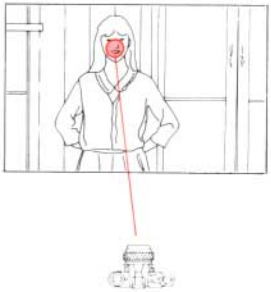
Spot metering

Framing

With the AE lock, the spot-metered value is stored in the camera memory until the shutter is released. As soon as the "Spot" button is pressed, the brightness of the metered spot is locked by the AE lock. Because the AE-locked value remains in memory for 120 seconds, the shutter is released with the spot-metered value if you frame your picture and shoot during this period. Even if the aperture is changed after the AE lock is activated, the exposure level remains fixed because the shutter speed changes accordingly. Exposure compensation (±) for the metered value is also possible. After shooting, the AE lock is automatically released and the camera returns to TTL direct light metering.

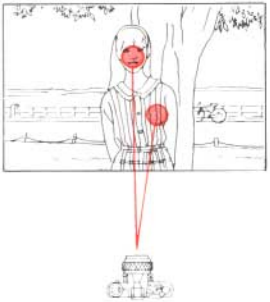
To cancel an inputted value, operate the clear lever and make a spot input again.

SHOOTING ON ONE-POINT SPOT METERING (AUTO)



This is a partial metering of only one point on the picture frame. You can get correct exposure of the subject by simply pressing the "Spot" button.
We will give a simple example to explain when one-point spot metering is used. If a backlighted girl is exposed on averaged light metering, the expressions in her face will not be clear because it comes out entirely underexposed under the effect of sunlight. For correct exposure of her face, it is recommended to make a one-point spot metering on it. Conventional exposure operations based on the photographer's experiences and guesswork have thus been completely eliminated to facilitate exposure compensation in backlight. As soon as the shutter is released, the camera returns to TTL direct light metering.
Framing is also facilitated because the AE lock is activated as soon as the "Spot" button is pressed. To clear the AE-locked value, operate the clear lever and make spot metering again.

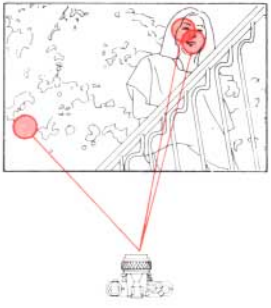
SHOOTING ON MULTI-SPOT METERING (AUTO)



This is a partial metering of two or more spots on the picture frame. It can be used to determine exposure by taking into account various spots that differ in brightness. The picture above shows an example in which the exposure of the background should also be considered while taking care to prevent underexposure of a girl. The first spot metering is made on her face by bringing it in the microprism section. Then the second spot metering is made on her dress by directing the camera. Exposure is determined from the average of the two metered values to meet the photographer's requirement.

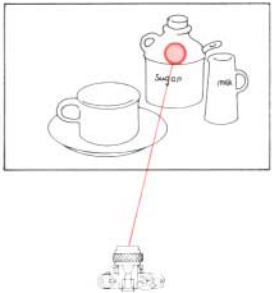
It is also possible to input more than two points in the same procedure. Metering is possible as many times as you want, but the camera's AE lock allows only up to eight points to be stored in memory. If more than eight points are inputted, the last eight points are stored as a basis for determining the exposure value.

SOPHISTICATED MULTI-SPOT METERING



The OM-4's multi-spot metering system provide highly sophisticated light measurements. Let us take an example in the picture above. If you want to place emphasis on the exposure of the girl, taking the background brightness into consideration, too, you can take two spot meterings on her face and one spot metering on the background, for instance. Exposure is determined from the average of these three values, with greater emphasis on the girl (a 2 : 1 lighting ratio).
With this system, photographers can weight their exposures so as to make sure the prime subject is exposed properly and the secondary subject is considered. This is now done without guesswork, in a straightforward easy to understand manner.

HIGHLIGHT BUTTON



The Highlight button enables white objects to come out white. It is very useful for copy work and shooting light or white subjects on the whole. After spot metering is made on the white subject, then press the Highlight button. The exposure value needed for rendering it in true white will be automatically calculated and set.

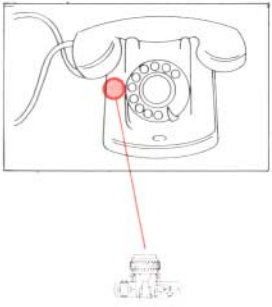
In the example picture, the brightest spot of the tableware has been metered on spot metering. Pressing the Highlight button increases exposure and provides the correct overall exposure to make the tableware white and not a dullish gray.

If the Highlight button is pressed again after the "highlight control" is once set up, only the "highlight control"released and the camera returns to spot metering. To reset TTL direct light metering, operate the Clear lever.

* If the Highlight button is pressed after several spots have been measured the exposure value for the brightest spot only will be adjusted.


sugar
milk

SHADOW BUTTON



The Shadow button enables black objects to accurately come out black. It is very useful for shooting dark or blackish subjects on the whole.

After a spot metering is made on the black subject, then press the Shadow button. The exposure value needed for rendering it in a rich black will thus be automatically calculated.

In the example picture, the deep shadow area beside the dial has been imputted. As a result, the black portion comes out "black" without being grayish. By using this function, it is possible to express subtle tone variations on the dark area which would be ignored in ordinary photography because they would appear as a dark gray without detail.

If the Shadow button is pressed again after the "shadow control" is already activated, only the "shadow control" is released and the camera returns to spot metering. To reset TTL direct light metering, operate the Clear lever.

* If the Shadow button is pressed after several spot inputs, the exposure value for the darkest spot only will be adjusted.


4 3 2 1
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MEMORY FUNCTION

This function enables the camera to store in memory the exposure level at which a picture was actually taken. It can be used on either Direct Light Metering or Multi-Spot Metering.

It is very convenient for shooting a series of pictures at an exposure level determiend by the photographer.

Even in photographs of a subject taken under the same illumination, the exposure level of her face may vary significantly if she is taken in different dresses because it is influenced by the brightness of the dress. However, this camera can keep the exposure level of her face in memory once it has been inputted, so a number of pictures can be taken at a fixed exposure level even if there are substantial changes in dress and the background. This function can be used for panorama photography, too. The memory function also allows you to choose your desired aperture or shutter speed without changing the exposure level in memory. In portraits and macrophotographs which utilize the depth of field effect, it is also possible to change the depth of field continuously with the exposure level fixed. In addition, this function is indispensable in motor

drive shooting in spot metering mode.
The memory is automatically released about 60 minutes after shooting. To release it earlier, operate the Clear lever.

MANUAL OPERATION

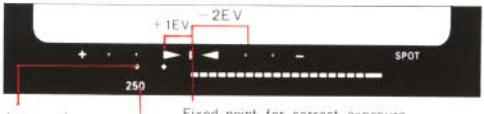
The OM-4 permits manual operation on both center-weighted average light metering and multi-spot metering.

If the mode selector is set to MANUAL, the following display appears in the viewfinder.

When the aperture or shutter speed is changed, the bar graph shifts. Set the bar graph tip to the fixed point for correct exposure. At this time, exposure compensation (±) is easily effected by using the scale in the viewfinder as a guide. In the case of spot metering, shift the bar graph after the spot input.

The shutter speed displayed in the viewfinder represents the value set on the shutter speed dial. It does not mean that the bar graph should be set to this point.

<Viewfinder display on multi-spot metering (MANUAL)>



Dot showing the spot metering value

Fixed point for correct exposure

Shutter speed set on the shutter speed dial

EXPOSURE COMPENSATION

The OM-4 also permits exposure compensation with an Exposure Compensation Dial. If the background is brighter than the subject, turn the dial and set it to a (+) side position. The amount of exposure is double on (+1) position, and four times on (+2) position.

If the background is darker than the subject, turn the dial and set it to a (−) position.

If the compensation dial is turned, the +/− display in the viewfinder blinks. The bar graph display shifts according to the amount of compensation.

* Compensation dial operated after spot metering: Only the bar graph shifts.
  Compensation dial operated in memory condition: Both the bar graph and dot shift to make compensation, based on the exposure level stored in memory.

DEPTH OF FIELD

Depth of field is the area of acceptable sharpness in front of and behind the subject in focus. As you get closer to your subject or as you open your lens (e.g. from F16 to F2.8) the depth of field becomes shallower. By stopping your lens down (e.g. from F2.8 to F16) or getting farther away from your subject this depth of field can be increased.

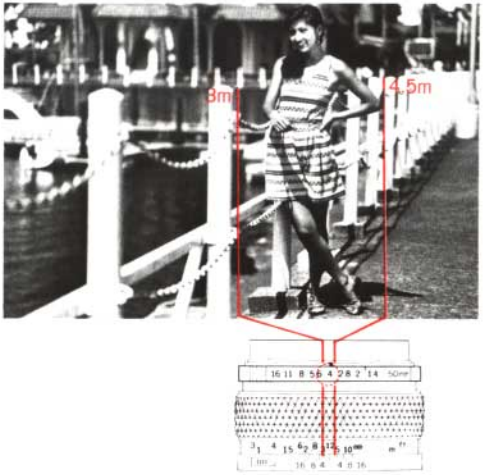
The table below shows that when the camera-to-subject distance is 3m, the depth of field at F16 ranges from 1.93m to 6.93m.

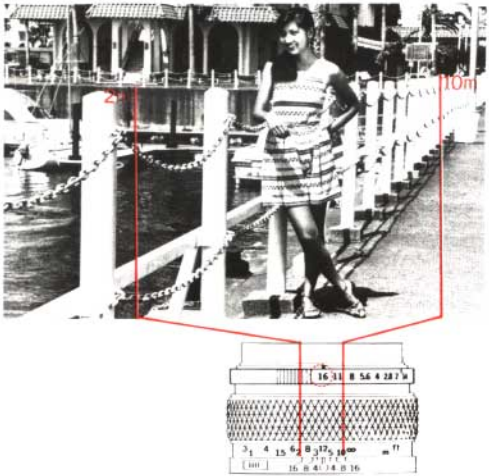
As you press the preview button, looking through the viewfinder, you can ascertain the actual depth of field.

Depth of Field Table (F1.8 & F1.4 50mm Lenses)
Circle of least confusion 1/30mm

Scale / F Stop	Camera-to-Subject Distance (m)									
	0.45	0.5	0.7	1	1.5	2	3	5	10	∞
1.4	0.45 ~0.45	0.50 ~0.50	0.69 ~0.71	0.99 ~1.02	1.47 ~1.54	1.94 ~2.07	2.86 ~3.16	4.61 ~5.46	8.55 ~12.05	57.78 ~∞
1.8	0.45 ~0.45	0.50 ~0.50	0.69 ~0.71	0.98 ~1.02	1.46 ~1.55	1.92 ~2.09	2.82 ~3.20	4.56 ~5.60	8.21 ~12.79	45.05 ~∞
2	0.45 ~0.45	0.50 ~0.50	0.69 ~0.71	0.98 ~1.02	1.45 ~1.55	1.91 ~2.10	2.80 ~3.23	4.47 ~5.68	8.05 ~13.20	40.57 ~∞
2.8	0.45 ~0.45	0.49 ~0.51	0.69 ~0.71	0.97 ~1.03	1.43 ~1.57	1.88 ~2.14	2.73 ~3.33	4.28 ~6.01	7.47 ~15.15	29.02 ~∞
4	0.44 ~0.46	0.49 ~0.51	0.68 ~0.72	0.96 ~1.04	1.41 ~1.61	1.83 ~2.20	2.63 ~3.49	4.04 ~6.57	6.74 ~19.44	20.35 ~∞
5.6	0.44 ~0.46	0.49 ~0.51	0.67 ~0.73	0.94 ~1.06	1.37 ~1.66	1.77 ~2.29	2.51 ~3.74	3.75 ~7.52	5.96 ~31.31	14.55 ~∞
8	0.44 ~0.46	0.48 ~0.52	0.66 ~0.74	0.92 ~1.09	1.32 ~1.73	1.69 ~2.45	2.34 ~4.18	3.39 ~9.61	5.09 378.10	10.21 ~∞
11	0.43 ~0.47	0.48 ~0.53	0.65 ~0.76	0.90 ~1.13	1.27 ~1.84	1.60 ~2.68	2.1[illegible] ~4.91	3.02 ~14.74	4.30 ~∞	7.44 ~∞
16	0.43 ~0.48	0.47 ~0.54	0.63 ~0.79	0.86 ~1.20	1.19 ~2.05	1.47 ~3.17	1.93 ~6.93	2.57 ~38.43	3.42 ~∞	5.13 ~∞

DEPTH OF FIELD SCALE

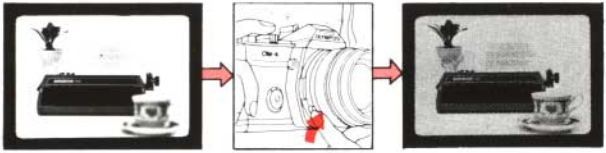




The double series of numbers engraved on the depth of field scale represents F stops: F4, F8, and F16. Once you have focused on your subject, all objects within the distance range indicated on the lens distance scale between the marks for the F stop you have selected will have acceptable sharpness. For example, in the above picture, the camera-to-subject distance is 3m (10ft.) and the lens is set at F16. If you read the distance scale at the points opposite the engraved "16" on both sides of the reference dot, you will find that the depth of field is from 1.9m (6ft.) to 7m (23ft.).

When you wish to see which objects fall within the acceptable zone of sharpness (depth of field), press the preview button on your lens. The diaphragm of the lens will stop down to the preset F stop enabling you to see the depth of field in the viewfinder.

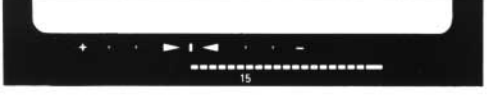
CAUTION: If you jerk the preview button while depressing the shutter release button halfway down the shutter might be released.



SHUTTER SPEEDS

This camera offers various possibilities for visual expression by changing the shutter speed.
High shutter speeds can be used to "freeze" a moving subject to give sharp definition of the image. Shutter speeds of 1/1000 to 1/2000 sec. can "stop" the movement of a considerably fast moving subject. A shutter speed of about 1/250 sec. will be enough to shoot a child at play, if he is not moving too quickly.
There are two methods for giving dynamic expressions. The first one is to blur out the movement of the subject itself, thereby creating a moving image. The second one is to pan the camera according to the movement of the subject. While the background is blurred, the subject is sharply defined to create a moving image.

* In using slow shutter speeds, it is necessary to guard against camera shake. We will suggest a very practical method for choosing shutter speeds. Generally, shutter speeds of which denominator value is larger than the focal length value of the lens used are good for prevenitng camera shake. If you are using a 50mm lens, for example, shutter speeds of 1/60 sec. or higher are good; and if you are using a 200mm lens, shutter speeds of 1/250 sec. or higher are good.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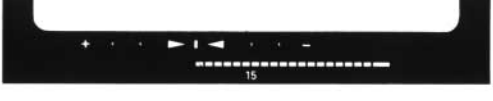
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BULB SETTING

To take night pictures and other subjects requiring long exposure, use a tripod and cable release and shoot at B (bulb) to prevent camera shake.
Set the Manual Shutter Speed Ring to B (bulb) and press the shutter release.

* At "B", the mechanical shutter can be actuated without battery consumption.

MULTIPLE EXPOSURE

By tripping the shutter several times on the same frame, multiple images are produced on the same frame.

This is how to do:

1. After the first exposure is ended, erect the rewind crank and turn it to the left as far as it will go to take up film slack.
2. While holding both the rewind knob and rewind button with your fingers to prevent them from moving, wind the film advance lever.
   In fact, the film is not wound and the shutter is cocked by this operation.
3. Press the shutter release as you would do normally, and double exposure will occur.
4. By repeating the steps (2) and (3), the frame will be exposed as many times as you want. However, the frame counter advances each time the shutter release is pressed.
5. After ending the multiple exposure, put the front lens cap on and make a blind shot.
   Note: The frame may shift slightly.

INFRARED PHOTOGRAPHY

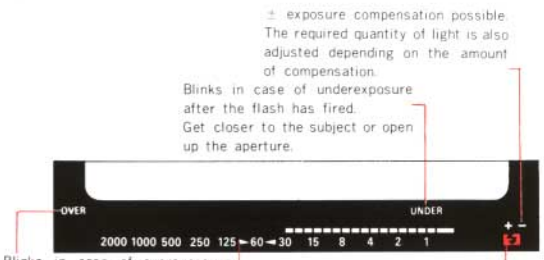
When shooting infrared pictures with infrared film and a red filter, the point of focus will slightly differ if you focus visually. The amount of shift varies with the lens and a red line or red dot is marked on the lens' depth of field scale to compensate for it. First, focus the lens without a red filter on as you would do normally. Next, read that distance on the distance scale and shift it opposite the infrared mark, then put on a red filter and shoot. (The above picture was taken with the distance at infinity.)

Note: It is impossible to shoot on Auto.

FLASH PHOTOGRAPHY (Viewfinder display) WITH T-SERIES FLASHES

The camera's computer provides perfect control of the OM system T-series flash to adjust the required quantity of light for correct exposure in a fraction of a second. With this new system flash, even such sophisticated techniques as multi-lamp flash, bounce flash and diffusing which have been considered as professional ones can be used in the AUTO mode. Both the AUTO and MANUAL modes are available.

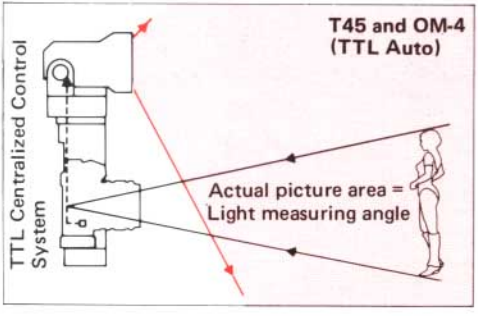
Mount the T-series flash and turn on the power switch. Set the mode lever to AUTO. The OM-4 is now set in the flash mode and the viewfinder display is as follows:

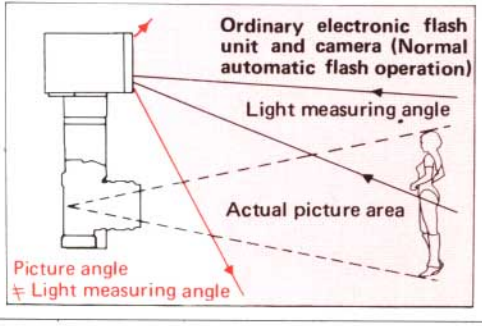


(1) With shutter speeds set to 1/60 sec. or slower, the flash automatically fires at the flash synchronizing speed of 1/60 sec.

(2) With shutter speeds faster than 1/60 sec., the flash does not fire and exposure is effected on TTL direct light metering.

TTL AUTO FLASH





- To take flash pictures with T-series flash T32 (T45) on OM-4, simply turn on the flash switch. The camera takes care of all other operations such as film speed setting, aperture setting, flash mode switching and exposure compensation.
- Because other auto flashes have a light receptor located on the flash, the light measuring angle does not always correspond with the actual picture area. With the OM-4's TTL centralized control system, however, the light that reaches the film can be measured to prevent exposure error.
- As soon as the flash fires, the shutter curtain closes at the instant the flash exposure has been completed. Correct exposure can be confirmed without taking your eyes off the viewfinder.
- Such special techniques as bounce flash, light diffusing, extreme close-ups and multi-lamp flash which even professionals bother their brain about can be easily used in this full-automatic flash operation.
- The light measuring angle differs with the lens used.

* The OM-4 can take flash pictures on Normal Auto and Manual mode. On Normal Auto the light quantity controlled by the T-series flash; on Manual, flash emission is fixed.

BOUNCE FLASH

The T32/T45 flash surface can be tilted upward through an angle of 90°, providing easy bounce TTL Auto flash.

- Point the flash surface at the ceiling so that the subject is illuminated by soft reflected light.

Close-up in TTL Auto flash can be achieved simply by tilting the flash surface downward (up to 15°).

Read the instruction manual for the T-Series Flashes for furhter detail.

T45 (Description of Controls)


OLYMPUS
OM-4

ELECTRONIC FLASHES OTHER THAN THE T-SERIES FLASH UNITS

1. Mount the flash on the acoessory shoe.
   If you are using a flash that has no direct contact, connect the flash synchro cord to the synchro terminal.
2. Switch the camera's Mode Selector Lever to MANUAL.
3. Set the film speed on the flash.
4. Set the Manual Shutter Speed Ring to 1/30 sec.
5. If the flash has an AUTO/MANUAL switching device, set it to either AUTO or MANUAL.
6. Determine the aperture and set it on the camera.
   If you are using an auto flash, set the desired F stop on the flash unit and then set the aperture ring to this F stop.
   If you are using a manual flash, calculate the aperture by the following formula or using the flash's calculator panel and set it with the camera's aperture ring. (ASA 100 m/ft.)

$$\text{Aperture} = \frac{\text{Flash guide number}}{\text{Flash-subject distance}}$$

RECORDATA BACK 4

Interchangeable camera back for data imprinting. Data imprinting is possible in the following forms: (1) Year–month–day (Japanese date description), (2) Month–day–year (American date description), (3) Day–month–year (European date description), (4) Hour–minute, (5) Counter (additive type), (6) Classification number up to 6 digits. Provided with an imprint clear switch to be used when data imprinting is unnecessary. This Recordata Back can also be used as a clock which indicates the hour, minute and second via a Time Button.

SHOOTING WITH MOTOR DRIVE

Shooting with motor drive is very exciting because it enables you to capture your subject in a critical moment by making several shots in a second.

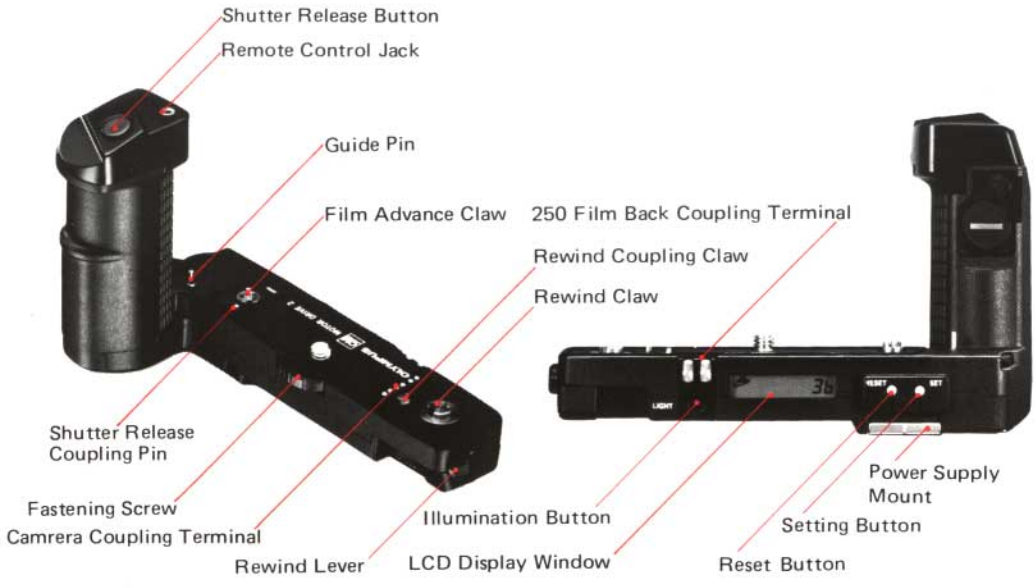
The high speed OM system motor drive has achieved an extremely compact and lightweight design to take full advantage of its ease of operation and high maneuverability. Motor Drive 2 – the world's first 5-frames-per-second high speed motor drive with a built-in computer. It is equipped with an LCD display of the number of frames and the operating procedure and also permits motorized rewind when it is attached to the OM-4.

In addition, the Winder 2 is also available, which offers both single-frame exposures and sequential exposures on dial switching.

The OM system's outstanding maneuverability and operability are ideal for shooting dynamic sports photos and documentary press photos. Various accessories can be connected by a direct contact.

* The Motor Drive 1 can also be used, but motorized rewind is impossible.

MOTOR DRIVE 2 (Descirption of Controls)



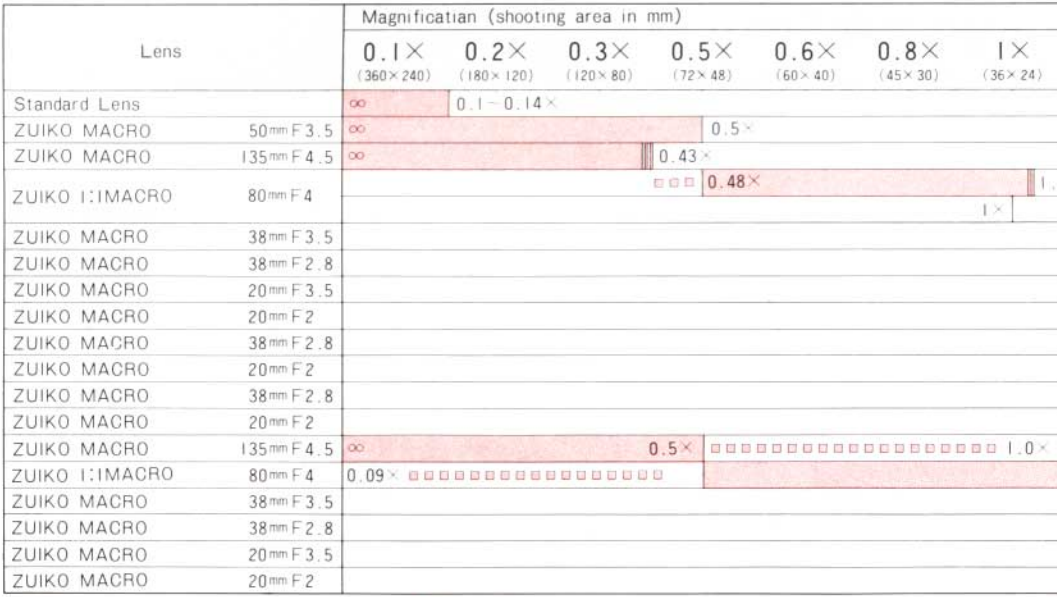

OLYMPUS

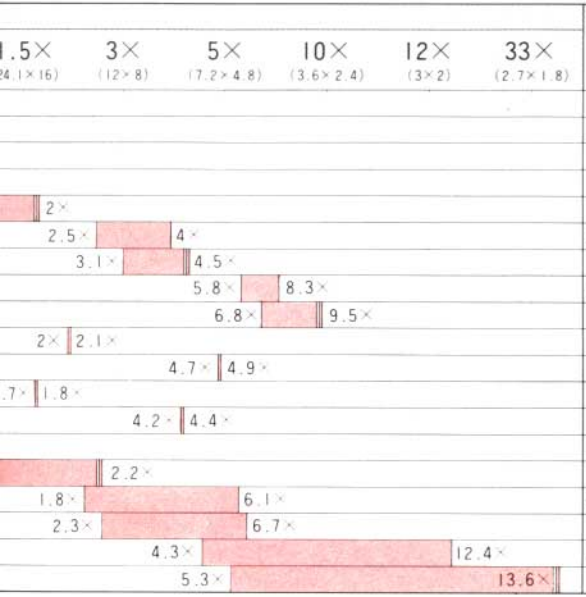
MACROPHOTOGRAPHY

The world of macrophotography is filled with marvelous discoveries. However, macrophotography has been generally considered difficult; calculations of correct exposure, in particular, have been a difficult job even for professionals.

Equipped with a TTL direct light metering, the OM-4 has solved this problem to always provide correct exposure, regardless of the magnification and aperture. All complicated exposure calculations for multi-lamp flashing are now quite unnecessary. The OM-4 also provides a complete macro system including a wide choice of marco lenses that offer excellent life-size and magnified pictures as well as extension units that enable you to take handheld macro pictures.

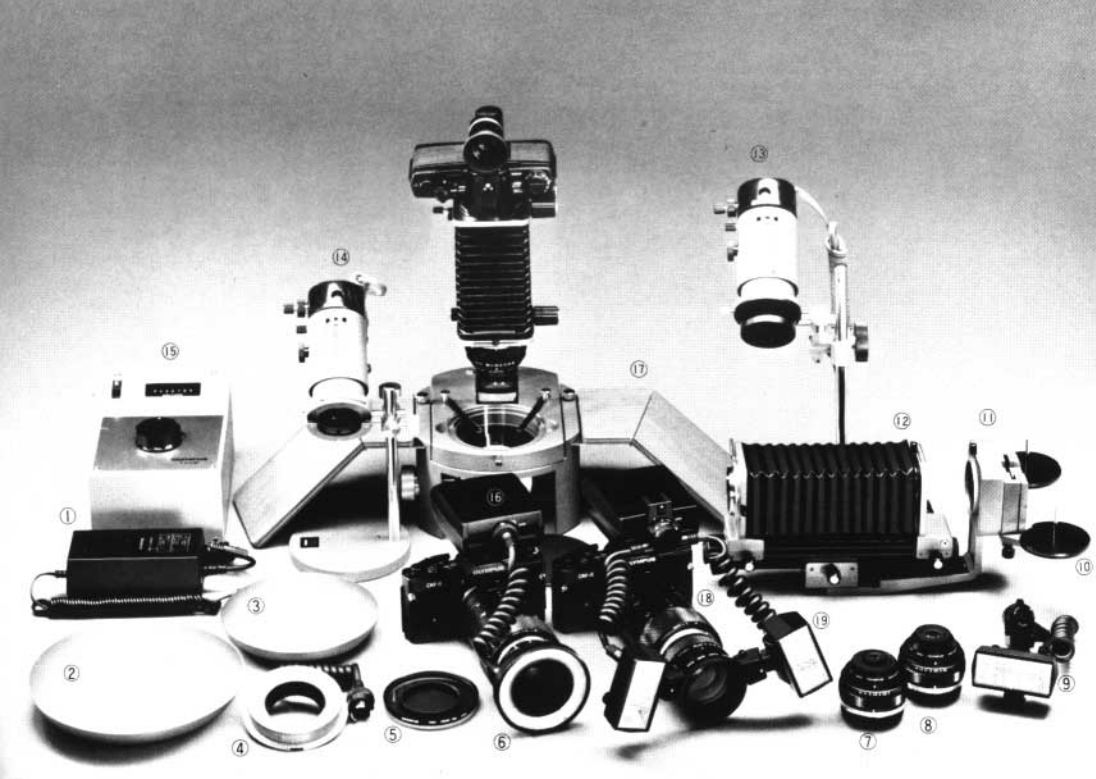
COMBINATION OF SYSTEM UNITS FOR CHOICE IN TERMS OF MAGNIF





Extention Units	
Close-up Lens 80mm Macro	Telescopic Auto Extension Tube 65~116
Used with Objective lens mount	
Used with Objective lens mount	
	Auto Extension Tube 25
	Auto Extension Tube 14
Used with Objective lens mount	Auto Bellows
Used with Objective lens mount	

① AC Adapter 3
② Reflector 1
③ Reflector 2
④ T8 Ring Flash 2
⑤ Ring Cross Filter POL
⑥ T10 Ring Flash 1
⑦ Zuiko Auto Macro 20mm F2
⑧ Zuiko Auto Macro 38mm F2.8
⑨ T28 Macro Single Flash 1
⑩ Roll Film Stage
⑪ Slide Copier
⑫ Auto Bellows
⑬ Epi-Illuminator PM-LSD 2
⑭ Trans-Illuminator LSD
⑮ Transformer TGHM
⑯ Electronic Flash T Power Control 1
⑰ Trans-Illuminator Base X-DE
⑱ Telescopic Auto Extension Tube 65~116
⑲ T28 Macro Twin Flash 1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FINDER GROUP UNITS

TYPE	SCREEN	FEATURES
1-1 **Microprism-matte type** (for most lenses)		Standard type, suitable for general photography. Fast and accurate focusing is done on the central microprism spot as well as on the surrounding matte area. When a lens with a maximum speed of F5.6 or slower is used, the microprism darkens and focusing must be made on the matte area.
1-2 **Microprism-matte type** (for standard & telephoto lenses)		Suitable for general photography in conjunction with a standard or telephoto lens. Focusing is done on the microprism spot as well as on the matte area. When a lens with a maximum speed of F8 or slower is used, the microprism spot darkens.
1-3 **Split image-matte type** (for most lenses)		Suitable for general photography ensuring critical focusing, and ideal for photographers who prefer the split-field and coincidence type focusing. When a lens with a maximum speed of F5.6 or slower is used, the split prism darkens.
1-4 **All matte type** (for most lenses)		Suitable for general photography and ideal for photographers who prefer a view field free from microprism or split prism and for those who are accustomed to focus using matte area. Also suitable for super telephoto photography and close-up photography in conjunction with macro lenses and Auto Bellows.
1-5 **Microprism-clear field type** (for wide angle & standard lenses)		This transparent screen provides an exceptionally bright finder image. Highly suitable for snapshots using wide angle lenses. The lack of matte surface means depth-of-field effects cannot be ascertained.
1-6 **Microprism-clear field type** (for standard & telephoto lenses)		This screen provides an extremely bright finder image. Focusing is done on the microprism spot. The lack of matte surface means depth-of-field effects cannot be ascertained.
1-7 **Microprism-clear field type** (for super telephoto lenses)		Developed primarily for use with super telephoto lenses, this clear field screen provides an extremely bright finder image. The microprism spot remains bright even with a lens whose maximum speed is F11. The lack of matte surface means depth-of-field effects cannot be ascertained.

TYPE	SCREEN	FEATURES
1-8 **All matte type** (for telephoto lenses & astronomical telescopes)		This screen is ideal for use with super telephoto lenses of 300mm or more in focal length, or for astrophotography. The extreme fineness of the matte surface permits outstanding field definition. More accurate focusing may be achieved by the use of the Varimagni Finder.
1-9 **Clear field type** (for endoscopic photography)		Designed for use with OLYMPUS fiberoptic endoscopes. This condenser type screen without fresnel lens requires no focusing when a special adapter couples the camera with the fiberscope. Exposure is made automatically by the light supply.
1-10 **Checker-matte type** (for shift lens)		The grid lines engraved on the all-matte surface are used for vertical and horizontal picture alignment. Though originally designed for architectural photography with the shift lens, it is also suitable for general and super-telephotography, and close-up/macrophotography with macro lenses and Auto Bellows.
1-11 **Cross hairs-matte type** (for close-up & macro-photography)		Highly advantageous for close-up and macrophotography with Auto Bellows and extension tubes. For focusing in low magnification close-up photography, use the matte area and in macrophotography greater than life size, use the double cross hairs the same way as with the1-12.
1-12 **Cross hairs-clear field type** (for photomicrography & macrophotography greater than life size)		The transparent screen offers the photographer focusing with an unusually bright finder image. To focus, first correct your diopter using a dioptric correction lens or Varimagni Finder so that each line of the double cross hairs can be seen clearly and separately. Then bring the specimen into focus.
1-13 **Microprism/split image-matte type** (for most lenses)		Most suitable for normal photography, this screen assures pinpoint focusing. The central split-image rangefinder is encircled by a microprism collar. Since the outer area has a matte surface, the screen can be used in the same way as the standard 1-1 and 1-3 Screens. When a lens with a maximum speed of F5.6 or slower is used, the prisms darken and the focusing must be made on the matte area.
1-14 **Microprism/split image-matte type** (for most lenses)		Most suitable for normal photography. The central split-image range finder, encircled by a microprism collar, is inclined 45 degrees to allow easy focusing on subjects with vertical or horizontal lines. When a lens with a maximum speed of F5.6 or slower is used, the prisms darken and focusing must be made on the matte area. The meter needle gives correct light readings.

Q: On spot inputs, the dot and bar graph tip shift.

A: This may happen because the bar graph is based on digital display. It does not mean that anything is wrong, and you can get correct exposure. It is for the same reason that the bar display shifts at the time of highlight control or shadow control.

Q: The tip of the shutter speed display bar blinks frequently during light metering.

A: This occurs mostly in the case of metering under a fluorescent lamp. Though the fluorescent lamp appears to the human eye as it were lighting continuously, it is in fact blinking repeatedly at a frequency of 50–60 cycles a second. Each particle of the shutter speed bar display represents 1/3 EV. Therefore, if the luminosity is unstable or in the case of a luminance mediated between the bar tip and the adjacent particle, the bar tip will blink.

In actual exposure determinations, however, variations of light are averaged, causing no problem.

Q: The shutter remains open and does not close.

A: If you shoot on spot metering with the lens cap on, the shutter will remain open for about 4 minutes. In this case, switch the mode lever to the battery check mode. The shutter will immediately close. (To shoot, return the mode lever to AUTO or MANUAL.)

Q: After operating the highlight (or shadow) button, I have pressed the spot button by error.

A: If the new spot exceeds the highest value (or falling below the lowest value)that was already inputted comes to be inputted after the highlight (or shadow) button has been operated, exposure is changed according to that value. The bar display shows the highest (or lowest) value again, and then the result of calculation. If the new spot is below the highest value (or above the lowest value), it is not affected.

Q: After operating the highlight button, I have pressed the shadow button by error.

A: The highlight control status switches to the shadow control status. On the contrary, if you have pressed the highlight button after operating the shadow button, the shadow control switches to the highlight control status.

Q: In what cases will the AE lock be released except when the shutter is released?

A: The AE lock will be released in the following cases:

(1) Switching of the mode lever, (2) changing

the lens, (3) operation of the clear lever, (4) turning on the power switch of a T-series flash, and (5) setting the shutter speed dial to "Bulb" or the red 1/60 sec. (mechanical shutter).

Q: In what cases will the memory be cleared except when the clear lever is operated?

A: The memory will be cleared in the following cases: (1) Switching of the mode lever, (2) changing the lens, (3) more than 60 minutes have elapsed after shooting, (4) turning on the power switch of a T-series flash, and (5) setting the shutter speed dial to "Bulb" or the red 1/60 sec. (mechanical shutter).

Q: The memory is not cleared even by operating the clear lever.

A: It is not cleared by operating the lever unless there is 'MEMO' display in the viewfinder.

Q: In flash photography, the auto check lamp (correct flash exposure confirmation lamp) of the flash is blinking while OVER is on display in the camera's viewfinder. Why?

A: The auto check lamp of the flash will blink not only at the time of correct exposure, but also at the time of overexposure. On the OM-4, however the display of correct, over and underexposure will appear separately in the viewfinder, so be sure to check exposure in the camera's viewfinder.

Q: Can the conventional TTL auto cord be used in the TTL Auto Cord Socket?

A: Yes, but it will not lock.

Q: Is spot metering possible in the flash mode?

A: No, spot metering is not possible.

Q: I want to use a flash that is not of the T-series.

A: You can use any flash, but you should take the following points into account: The flash will not fire with Mode Selector Lever on AUTO. On auto spot metering or in the manual mode, it will fire with shutter speeds faster than 1/60 sec., but it will not cover the entire picture frame because the camera has a focal-plane shutter. The shutter speed should be set to 1/60 sec. or slower. The flash ready signal and correct exposure confirmation lamp will not turn on in the viewfinder. Flashes with opposite polarity won't fire at all.

Q: The flash does not fire.

A: There are two possible reasons. (1) On AUTO mode, flash firing is automatically inhibited at shutter speeds faster than 1/60 sec. (2) Are the camera batteries exhausted? In this case, the flash will not fire even at a mechanical

shutter speed of 1/60 sec. or "B".

Q: I want to take pictures with the motor cover detached even when I am not shooting with the motor drive, because attaching and detaching it is quite troublesome.

A: The motor cover should always be attached if you are not shooting with the motor drive. It will prevent entry of dust and exposure by direct light.

Q: Is it possible to use "B" and 1/60 sec. (mechanical shutter) with the motor drive?

A: No, it is not possible. To shoot at "B" or 1/60 sec., use the camera's release button.

Q: Why won't the shutter release button move when I press it?

A: The film advance lever may not have been fully advanced.

Q: My camera is loaded with film. Why doesn't the rewind knob rotate when I advance the film?

A: The film leader may not be inserted in the film take-up spool and the film is not advancing.

Q: Is it normal for the microprism in the center of the viewfinder to "shimmer" and darken?

A: Yes, when a lens with a maximum aperture smaller than F5.6 is mounted on the camera. It also happens with other lenses when the depth of field preview button is pressed.

Q: The display in the viewfinder has disappeared while the camera is operating.

A: As the OM-4 has an energy-saving design, the display will automatically disappear in 120 seconds. To turn it on again, touch the shutter release lightly.

Q: What will happen if I return the self-timer lever to its original position while it is operating?

A: The shutter will trip. After using the self-timer, be sure to return the lever to its original position.

Q: Why is the automatic exposure shutter speed much longer than indicated by the meter in the viewfinder?

A: If film is not loaded, the shutter speed is much longer than that indicated. If it is necessary to obtain a correct reading without actually taking a picture, insert a waste, undeveloped film or the paper you find behind the camera back at the purchase of your OM-4 into the film position in the camera.

Q: The rewind crank does not turn.

A: Press in the rewind button.

Q: Why can't I advance the film?

A: The shutter may be cocked and ready to fire. Try pressing the shutter release button. Or, the film may be fully exposed. Check the exposure counter. If you feel tension on the film advance lever, DO NOT FORCE IT. Rewind the film. Or the self-timer lever is not securely in its upright position, reset and release the self-timer.

Q: The film advance lever does not operate and I see nothing in the viewfinder.

A: Are there batteries in the camera? Are they exhausted? Check with the battery checker to see if they are operating properly. If the audible and visual signals do not turn on, they are not. The mirror will spring back if you replace the batteries or set the shutter speed dial to the red 1/60 sec. (mechanical shutter) or "B".

Q: When should I check the batteries?

A: (1) When new batteries are inserted. (2) After the camera hasn't been used for a long time. (3) Before beginning a prolonged period of use. (4) When the temperature is very cold.

Q: What batteries should I use?

A: Use two 1.5V silver oxide batteries SR44 (Eveready EPX-76 or equivalents). Never use 1.3V mercury batteries (though they are the same size).

Q: How long do the batteries last?

A: Generally, SR44 batteries will last about one year, LR44 batteries about six months.

Q: The batteries have worn out while I was shooting in cold weather. What can I do to take pictures?

A: Use a mechaincal shutter speed of 1/60 sec.

Q: Why can't I set the ISO film speed I need?

A: At the most, 3 stops can be advanced in a single stroke of the dial. If this is not enough stops, lift up and rotate the outer collar of the dial until it stops; then release the collar and rotate the collar and dial together until the white line is aligned with the black index on the pentaprism. Repeat this procedure until you reach the ISO speed you need.

Q: I took pictures with the aperture ring set at a halfway position between the f/stop numbers. Was the film properly exposed?

A: Yes, you can use any in-between settings on the

aperture ring to obtain precise exposure.

Q: How about in-between settings of the shutter speed dial in the manual mode? For example, between "125" and "250".

A: In this case the film was still properly exposed but at either 1/125 sec. or 1/250 sec. It is recommended that you set the shutter speed ring at a shutter speed index engraved on the camera, not in between.

Q: In the finished print, a peripheral portion of the picture is cut, though I framed it inside the viewfinder.

A: In some color prints and color slides, a peripheral portion of the picture may be eliminated in the laboratory. It is recommended, therefore, to leave some margin in composing your picture.

Q: How do I clean the camera and lens?

A: Clean the camera using a clean, soft lintless cotton cloth. Clean the lens only with a hand powered air blower, antistatic brush or lens tissue. NEVER rub the lens surfaces with your finger, clothing or other abrasive material.

Take care not to permit water to enter the camera when taking pictures in the rain or snow, especially near seawater spray. After use near the ocean, wipe the camera surfaces clean and never leave salt residue on the camera.

Q: There are sometimes scratches on the film.

A: The cause may be a soiled film passage. The film compartment may be soiled by film debris during long use of the camera. Be sure to dust off the camera periodically.

Q: How do I store the camera?

A: Remove the camera from its case and store it in a dry, well ventilated place. Protect against excess moisture by using packs of silica gel or other desiccant in the storage area. Do not store the units near moth balls or similar volatile chemical materials to avoid the possibility of damage to metal surfaces.

Other cautions

- The exposure value will shift on spot metering with a linary polarizing filter.
- The Recordata Backs 1 and 2 cannot be used.
- The original 250 Film Back 1 cannot be used. It can be altered for use on the OM-4. Contact Olympus Service Station.
- The Motor Drive Socket Cap on the camera side cannot be stored in the Motor Drive 1 or Winders 1 and 2.

OM SYSTEM

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