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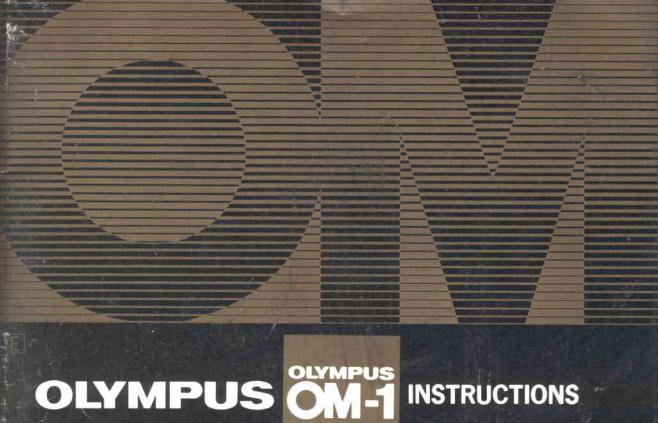
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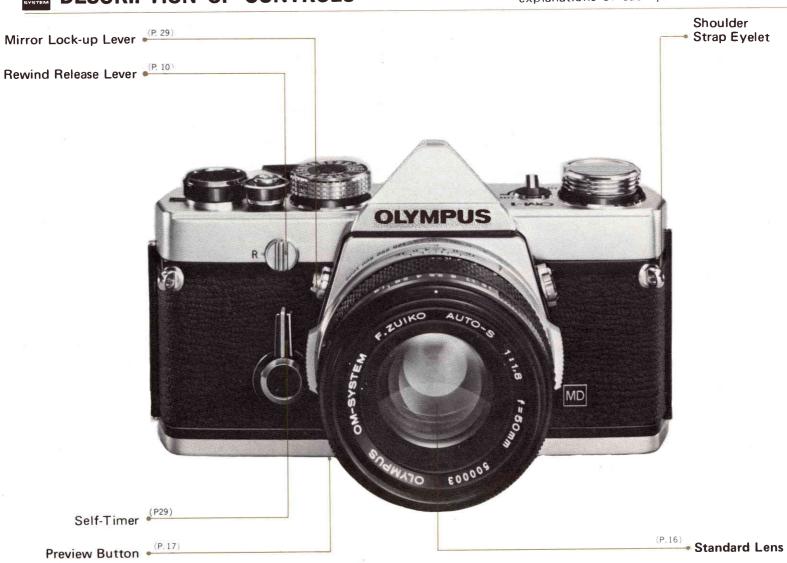
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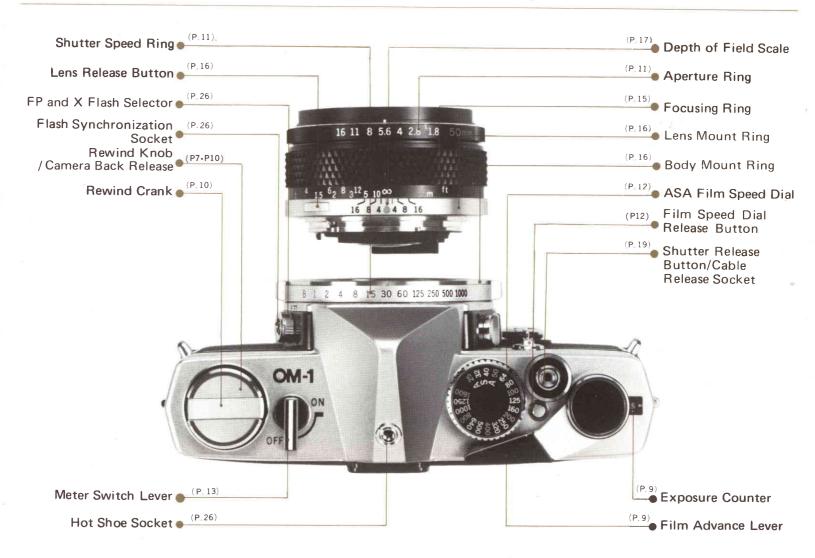
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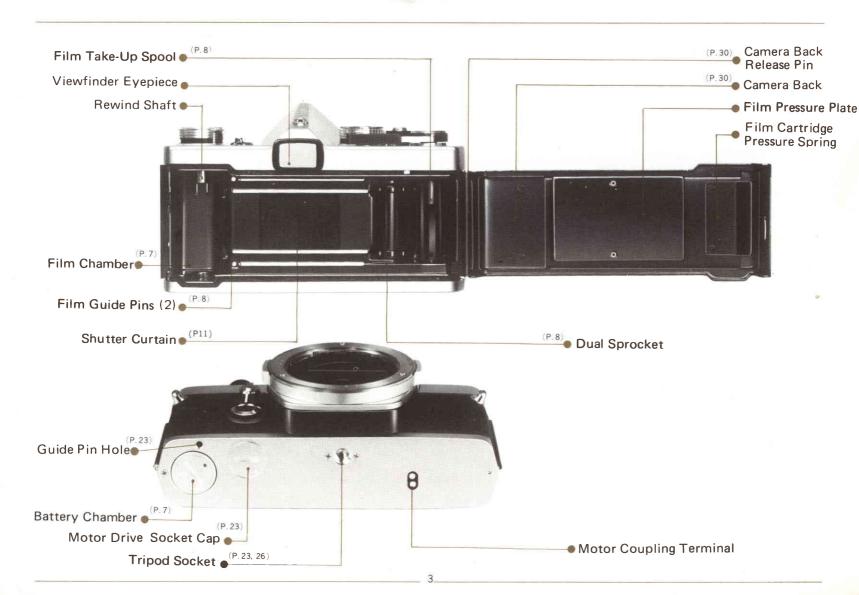
Refer to pages in parentheses for detailed explanations of each part.



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The design of the OLYMPUS OM-1 lets you see every camera control from the top.







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System:

Camera Type:

OLYMPUS OM SYSTEM.

35mm Single Lens Reflex with focal plane shutter.

Film Format: 24mm x 36mm. Standard Lenses:

50mm F1.8 F Zuiko Auto-S 6 elements in 5 groups. 50mm F1.4 G Zuiko Auto-S 7 elements in 6 groups. 55mm F1.2 G Zuiko Auto-S 7 elements in 6 groups.

Lens Mount:

OLYMPUS OM Mount, bayonet type, rotation angle 70°, flange back 46mm.

Minimum Focusing Distance: 45cm (17.3/4") with all standard lenses.

49mm threaded for F1.8 and F1.4 lenses; 55mm threaded for F1.2 lens. Lens Accessory Size:

Shutter: Self-Timer: Focal plane shutter, ring mounted control, with speeds from 1 to 1/1000 second plus B.

Exposure Measurement:

4-12 second delay lever type; can be stopped and reset after actuation.

Two highly sensitive CdS cells located on either side of the eyepiece provide through-the-lens open aperture light measurement. Zero-method with needle visible in viewfinder. On-Öff Switch

located atop camera.

Exposure Range:

EV 2-17 (ASA 100 with F1.4 standard lens).

Battery: Film Speed Range: 1.35 volt mercury battery (Eveready or UCAR EPX625, Mallory PX625, or equivalent) ASA 25-1600.

Viewfinder:

Pentaprism type wide-vision finder shows 97% of actual picture field; Interchangeable focusing

screens; Visible exposure meter needle. Viewfinder Magnification: 0.92X at infinity with standard 50mm lens.

Viewfinder Apparent Field View: 23°30' & 35°

Focusing Screens:

1-13 Microprism/split image-matte type provided. Interchangeable with any of 11 additional screens.

Reflex Mirror: Flash Contacts: Oversize, quick return type with mirror lock-up control. FP·X switch type contact. With electronic flash (X) 1 to 1/60 sec.

Flash Synchronization:

With class "M" bulbs (X) 1 to 1/15 sec. With class "F" bulbs (X) 1 to 1/15 sec. With focal plane bulbs (FP) 1/60 to 1/1000 sec. Built-in, Easy to attach Accessory Shoe 1 available.

Hot Shoe Socket: Film Advance: (Manual)

Ratchet type film advance. May be advanced in one stroke or several short strokes for a total of 150° rotation, pre-advance angle 30°. Built-in prevention against double advance with double

exposure override capability.

(Motor Drive)

With Motor Drive 1 unit attached single-frame and continuous advance at speed of 5 frames per second (at exposures above 1/500 sec., with fresh batteries and at normal temperature and

humidity).

Progressive type from "S" (Start) to 36 and "E" (End). Counter automatically resets to "S" when camera back is opened.

Exposure Counter:

Rewind crank with automatic-resetting rewind release lever.

5

Film Rewinding: Camera Back:

Removable hinge type. Interchangeable with Recordata Back 1 and 250 Film Back 1.

Dimensions & Weights:

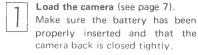
680 gr. (24.0 oz.) With F1.8 lens: 136mm x 83mm x 81mm (5-3/8" x 3-1/4" x 3-3/16") : With F1.4 lens: 136mm x 83mm x 86mm (5-3/8" x 3-1/4" x 3-3/8") : With F1.2 lens: 136mm x 83mm x 97mm (5-3/8" x 3-1/4" x 3-3/8") : 740 gr. (26.1 oz.) 820 gr. (28.9 oz.) 510 gr. (18.0 oz.)

Body only: 136mm x 83mm x 50mm (5-3/8" x 3-1/4" x 2")



SHORT COURSE OF INSTRUCTIONS (Refer to each page for detailed operating instructions.)







Set ASA Film Speed (see page 12).



Advance the film until the figure "1" appears in the exposure counter window (see page 9).

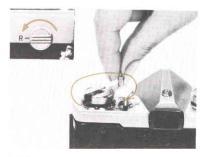


Look through the viewfinder. Compose and focus. Set the proper exposure (see pages 13, 14, 15).



Take the picture (see page 19). Hold the camera steady and release the shutter with a slow,

steady pressure. www.orphancameras.com



After the entire film has been exposed, rewind the film back into the cartridge (see page 10).

INSERTING THE BATTERY ON LOADING THE FILM ON FRONT LENS CAP



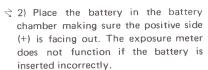
The OLYMPUS OM-1 is supplied with a 1,35V mercury battery (JIS H-D type) to power its through-the-lens exposure metering system. It will last approximately one year depending upon use and must be replaced with an Eveready (UCAR) EPX625, Mallory PX625 or equivalent. Substitutes must not be used. (NOTE; The exposure meter stops functioning when the battery runs out. To prolong battery life, make sure the Meter Switch Lever is in the "OFF" position when the camera is not in use.) To insert the battery:

1) Insert the edge of a coin into the cap of the battery chamber and turn counter-clockwise until the cap has been removed. <



1. Open the camera back.

Pull up on the rewind knob. A slight resistance may be felt before the camera back snaps partially open.



3) Replace the cap tightly.



2. Load the camera.

Insert a film cartridge in the film chamber and push the rewind knob back into its original position. It may be necessary to turn the rewind knob slightly before it will lock securely in place.





3. Attach the film end to the take-up spool.

Draw out the film leader and insert it into one of the slots in the film take-up spool. Make sure the film is evenly placed between the film guide pins.

To attach or remove the front lens cap, press the spring-loaded lens cap retaining clips on either side of the cap. The cap then fits easily over the accessory thread of the lens.



4. Advance the film.

Advance the film using the film advance lever. Make sure that the film perforations engage on the sprockets on both sides.

5. Close the camera back.

Close the camera back until it clicks into place.

6. Tighten the film.

After closing the cover, fold out the rewind crank and turn it slowly in a clockwise direction until a slight resistance is felt. This will take up any slack in the film.



7. Check the exposure counter window.

Advance the film and depress the shutter release button. Advance the film once more until "1" appears in the exposure counter window. The rewind knob will rotate in a counterclockwise direction indicating that the film is advancing properly.

OPERATING THE FILM ADVANCE LEVER

THE EXPOSURE COUNTER



In one stroke the film advance lever: 1) advances the film one full frame. 2) advances the exposure counter, 3) cocks the shutter, 4) sets the instant return mirror, 5) activates the automatic diaphragm mechanism and 6) activates double advance and double exposure prevention mechanism

To advance the film:

- 1) Gently pull the film advance lever away from the camera body.
- 2) Advance the lever to the right as far as it will go. This can be accomplished in a single stroke or in multiple short strokes.



The exposure counter is designed to indicate the total number of frames exposed on the film. Each time the film is advanced by the film advance lever, the exposure counter automatically adds one frame to the total. The counter is indexed in even numbers up to 36 plus "S" (start) and "E" (end). For easy reference, "S", "E", and numbers 12, 20 and 36 are indicated in gold.

Whenever the camera back is opened, the exposure counter automatically returns to "S".

Refer to page 21 for Motor Drive Photography.

UNLOADING THE FILM



When the entire roll of film has been exposed (indicated by numbers 12, 20 or 36 on the exposure counter depending on film length), rewind the film.

1) Turn the rewind release lever counter-clockwise until the red line is opposite the "R".



2) Fold out the rewind crank and wind it in the direction of the arrow. During the rewind procedure you will feel tension on the crank. When it turns free the film has been completely rewound back into the cartridge.



3) Open the camera back by pulling up on the rewind crank and remove the film cartridge. Keep camera and film out of direct sunlight.

IMPORTANT: Do not force the film advance lever if the film has been fully exposed. If there is some resistance, rewind the film to prevent tearing.

MAKING DOUBLE EXPOSURES

Should you wish to make more than one exposure on the same frame:

- 1) After taking the first exposure, turn the rewind knob slowly in a clockwise direction until it stops to take off any slack in the film.
- 2) Turn the rewind release lever counter-clockwise until the red line is opposite the "R".
- 3) Hold both the rewind knob and rewind release lever firmly to prevent them from turning and advance the film advance lever. The shutter will then be cocked for the next exposure of the frame, without the film being advanced.
- 4) Depress the shutter release button with a slow, steady pressure.
- 5) www.orphaneameralsidom

posure, cover the lens with a lens cap, advance the film and shoot a blank frame to avoid overlapping.

You can make as many multiple exposures as you like by repeating the above procedure. With each exposure on the same frame (the exposure counter adds one), the likelihood of slippage is increased. Practice is required in order to obtain good results.

SETTING THE SHUTTER SPEED RING



The length of time that light is allowed to strike the film is controlled by the focal plane shutter. The shutter consists of two opaque "curtains" which travel across the opening and allow light to reach the film. The speed and coordinated movement of these curtains determine in fractions of a second the exposure time for your picture. For example, 1000 on the shutter speed ring indicates 1/1000 of a second and 60 indicates 1/60 of a second. The figure 1 indicates one full second. The B (Bulb) setting is used for longer time exposures. At this setting the shutter will remain open as long as the shutter release button is held down. For exposures less than 1/30 of a second, it is advisable to use a cable release, tripod or other steadying devices to avoid camera movement which can result in blurred or fuzzy pictures.

To set the shutter speed turn the shutter speed ring in either direction until the desired number clicks into place opposite the reference dot on the lens barrel. Set the ring only at clickstop positions as no in-between settings can be used. Shutter speeds may be set before or after advancing the film.

NOTE: Speeds from "B" to "60" are indicated on the ring in blue as an easy reference to "X" flash synchronization.



The amount of light allowed to strike the film is represented by "F" numbers or "F" stops engraved on the aperture ring. The higher the F number, the smaller the lens opening (less light); the lower the number, the larger the lens opening (more light). When setting the aperture ring you can use either the click-stop positions or any in-between settings to obtain precise exposure.

All lenses in the OLYMPUS OM SYS-TEM (other than specialized lenses) provide fully automatic diaphragm control allowing you to focus and compose your picture with the lens at maximum aperture or "wide open." The diaphragm will automatically stop down to the preselected F stop at the moment of exposure and immediately re-open when exposure is completed.

SETTING THE ASA FILM SPEED DIAL

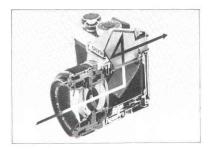
THE METERING SYSTEM



Setting the correct ASA film speed on the camera is one of the most important factors in determining exposure. In order to obtain properly exposed pictures, the correct ASA film speed must be set on the ASA film speed dial. To set the dial:



- 1) Pull the film advance lever slightly away from the camera body.
- 2) Press the film speed dial release button and turn the film speed dial until the ASA rating for the film being used is opposite the black line engraved on the outer ring of the shutter release button.
- 3) Release the button making sure that the dial is securely in place and does not move.



The OLYMPUS OM-1 incroporates a built-in, wide-open exposure metering system which uses two highly sensitive CdS cells with one postioned on each side of the eyepiece. These cells measure the actual amount of light entering the lens, placing the greatest emphasis at the center of the picture area. Measurements are taken with the lens diaphragm at maximum aperture (wide open) allowing you to take full advantage of a brighter viewfinder when focusing and composing your picture. The OM-1 metering system operates as above with all OM System camera lenses (except a few special lenses) regardless of the focal length, filters, etc.





Activating the Meter

The OLYMPUS OM-1 metering system is directly coupled to the shutter speed ring, aperture ring and ASA film speed dial.

To activate the meter, move the meter switch lever at the top of the camera to the "ON" position. To prolong battery life, it's a good idea to return the lever to the "OFF" position when the camera is not in use.



Preselecting the Shutter Speed

Should you wish to select a shutter speed to meet a specific photographic situation (for example, to stop fast action, eliminate camera shake, etc.):

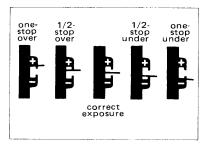
- 1) Turn the shutter speed ring until the desired speed is opposite the red reference dot on the camera lens.
- 2) Look through the viewfinder and turn the aperture ring until the needle lines up in the center of the index. For fine exposure adjustment you can use any intermediate F stop position on the aperture ring.
- 3) If the needle will not align properly, select a new shutter speed. To correct over-exposure (+), try a faster speed; to correct under-exposure (-), try a slower speed.



Preselecting the F Stop

Should you wish to preselect the F stop (for example, to control depth of field for greater creative impact):

- 1) Turn the aperture ring until the desired F stop is opposite the white index mark at the front of the lens barrel.
- 2) Look through the viewfinder and rotate the shutter speed ring until the needle lines up as close as possible to the center of the index. Make sure that shutter speed meets the other requirements of the situation.
- 3) Make the final exposure adjustment by turning the aperture ring slightly until the needle aligns exactly in the center of the index.



■ Making Intentional Over- or Underexposures

You can make intentional over- or under-exposures to meet special lighting requirements (such as backlighting, sidelighting, etc.) by using the central index in the viewfinder as a guide. When the needle swings towards the (+) position, it indicates over-exposure. When it swings towards (-), it indicates under-exposure. The exact F stop-needle relationship is shown in the

■ Caution in Low-light Exposure Metering

above diagrams.

The meter's exposure range is EV2-17 (ASA 100 with F1.4.) The combinations listed below indicate the lowest measurable limit in dealing with dark subjects.

Below this limit or with the meter switch at OFF, when the aperture ring or shutter speed ring is rotated, 'the needle might sometimes swing but the meter will not work.

Lens	F/Stop	Shutter Speed				
50mm F1.8	Fully open	1/2 sec				
50mm F1.4	Fully open	1/2 sec				
55mm F1.2	Fully open	1/2 sec				

■ Stop-down Exposure Readings

When using the OM-1 in conjunction with the extension tubes, bellows or the Zuiko Shift Lens (under development) it is necessary to take meter readings with the lens stopped-down. After setting the desired aperture on the aperture ring, stop the lens diaphragm down and look through the viewfinder. Rotate the shutter speed ring until the needle aligns within the center of the index. (See the instructions on Preselecting the F Stop, page 13.)

■ Special Exposure Techniques

1) Backlighting and Sidelighting
When the most important area of the
picture is much darker than the general
picture area (strong light hitting the
main subject from behind or from the
side) the meter will have a tendency to

leaving the main subject under-exposed. To compensate for this, move in towards the subject until most of the subject image appears in the viewfinder and take your meter reading. After setting the exposure, return to your original position to take the picture. If this procedure cannot be followed, you can obtain approximately the same results by simply opening your lens one full F stop over the indicated meter reading. (NOTE: With backlighting or sidelighting, it's always a good idea to use a lens hood to

read the brightest part of the picture

eliminate unwanted glare.)

2) Strong Frontlighting and Deep Shadows

When taking a picture of a bright

subject against a dark background (spotlights, deep shadow areas, etc.) the meter has a tendency to read the darkest part of the picture leaving the main subject over-exposed. To compensate for this use the same procedure for setting exposure as outlined for backlighting. You can also approxi-

mate the proper exposure by holding

your position and closing the lens

down one full F stop from the indi-

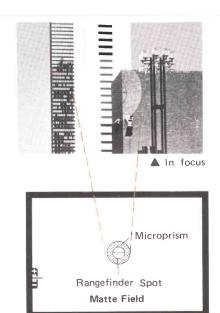
cated meter reading.

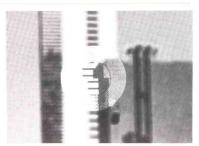
om FOCUSING



The OLYMPUS OM-1 comes equipped with the standard Focusing Screen 1-13 (microprism/split image-matte type) which is designed to make focusing quick and easy. To focus, look through the camera viewfinder and turn the focusing ring in either direction until split vertical lines of the subject image in the rangefinder are aligned or the "shimmering effect" of the microprisms disappears. If you are focusing on the matte area, the subject is in focus when the image is sharp.

* You can determine the distance between the subject and the film plane by reading the distance scale on the focusing ring after you achieve critical focusing. The actual distance is indicated opposite the red central index mark on the lens mount ring; the white scale indicates this distance in meters

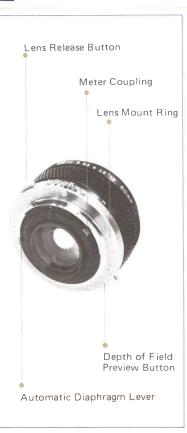




Out of focus

The OM-1 viewfinder takes in 97% of the actual picture area for added convenience when composing your pictures.

and the orange scale indicates this distance in feet.





To mount the lens, grasp the lens firmly and align the red dots on the lens flange and the camera mount ring. Turn the lens clockwise until it locks in place. The lens release button will spring up and you will hear a positive "click" when the lens has been fully engaged. Do not apply pressure to the lens release button during the mounting procedure. This will assure proper coupling between the lens and the meter.



The bayonet mount of the OLYMPUS OM-1 allows you to change lenses quickly and easily.

To detach the lens, press down on the lens release button and turn the lens counter-clockwise. Grasp the lens firmly and remove it from the camera body.

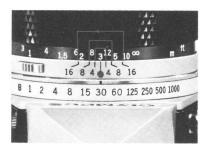
Protect your lens and camera! Always attach the front and rear lens caps when the lens is removed from the camera to prevent any possibility of damage. Never leave the camera body in direct sunlight with the lens removed and, if you plan to store the camera without the lens, the use of a body cap is recommended.

OM-1

INFRARED PHOTOGRAPHY / DEPTH OF FIELD SCALE / PREVIEW BUTTON



The OM System lenses are provided with an infrared index mark engraved in red on the depth of field scale to the right of the reference dot. When shooting with infrared film, focus normally on your subject without the red filter on and read the subject distance on the distance scale. Then, turn the focusing ring to the right until the distance reading is opposite the infrared index mark. Your lens will then be in focus for average infrared photography. Shoot with the red filter on. In the above picture the red index is set at infinity.



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). The depth of field can be visually verified by pressing the depth of field preview button.



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 camera viewfinder.

* If you jerk the preview button while depressing the shutter button half-way down, the shutter might get released. Gently push and release the preview button to avoid accidentally releasing the shutter.

OM-1 DEPTH OF FIELD

Depth of field is the area of acceptable sharpness in front of and behind the subject in focus. This depth is determined by the F stop you have selected and the distance from the subject in focus to the film plane. As you get closer to your subject or as you open your lens (e.g. from F22 to F2.8) the depth of field becomes shallower. By stopping your lens down (e.g. from F2.8 to F22) or getting farther away from your subject this depth of field or zone of acceptable sharpness can be increased.

Another factor in determining depth of field is the focal length of your lens. As a rule the shorter the focal length, the greater the zone of acceptable sharpness. The longer the focal length, the shallower this zone becomes.

The table above shows that when the camera-to-subject distance is 3m (10ft), the depth of field at F16 ranges from 1.93m (6ft) to 6.93m (23ft).



F1.8 (1/1000 sec.) F16 (1/30 sec.)

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

Scale	Camor	a to Subi	act Dista	ace (m) I	Figures	ith ware	oparavad	on the di	istance sc	ale
F	Camer	a-to-Subj	ect Distai	ice (m),	r igures w	ıın * are			istalice sc	
Stop	*0.45	* 0.5	* 0.7	* 1	* 1.5	* 2	* 3	* 5	* 10	* 00
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	4.61 ~5.46	8.55 ~12.05	57.78 ~∞
1.8	0.45 ~0.45	0.50 ~0.50	0.69	0.98 ~1.02	1.46 ~1.55	1.92	2.82	4.52 ~5.60	8.21 ~12.79	45.05 ~∞
2	0.45 ~0.45	0.50 ~0.50	0.69	0.98	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	0.69	0.97 ~1.03	1.43 ~1.57	1.88	2.73 ~3.33	4.28 ~6.01	7.47 ~15.15	29.02 ~~
4	0.44	0.49	0.68 ~0.72	0.96 ~1.04	1.41	.1.83 ~2.20	2.63	4.04 ~6.57	6.74 ~19.44	20.35 ~~
5.6	0.44 ~0.46	0.49	0.67 ~0.73	0.94	1.37 ~1.66	1.77 ~2.29	2.51	3.75 ~7.52	5.96 ~31.31	14.55 ~ ∞
8	0.44	0.48	0.66	0.92	1.32 ~1.73	1.69 ~2.45	2.34	3.39 ~9.61	5.09~ 378.10	10.21 ~∞
11	0.43	0.48 ~ 0.53	0.65 ~0.76	0.90 ~1.13	1.27 ~1.84	1.60 ~2.68	2.17,	3.02	4.30 ~∞	7.44 ~ ∞
16	0.43	0.47	0.63	0.86	1.19	1.47	1.93	2.57~	3.42 ~ ∞	5.13 ~ ∞

Scale	Camera-t	o-Subject D	istance (ft) .Figures w	ith *are en	graved on th	ne distance	scale.
Stop	* 2	* 3	* 4	* 6	* 8	* 12	30	* ∞
1.4		2.96 ~3.04				11.31 ~12.78		
1.8						11.1¦3 ~ 3.01		
2						11. ₫5 ~ ķ3. 14		
2.8						10.71 ~ 3.66		
4		2.89 ~3.12				10.23 ~ 1,4.51		
5 . 6						9.67 ~ I;5.85		
8		2.79 ~3.25				8.93 ~ I,8.38		
11						8.15, ~33.00		
ww	w.orpha	ancame	ras co	71.52 ~9.02	5.53_	7:12 - 39:68	10.89 ~∞	16.80 ~∞

HOLDING THE CAMERA



Proper camera holding is important in assuring the sharpest possible pictures. Even slight camera movement can result in "blurred" photographs. To hold the camera properly, support the camera/lens combination with most of the weight resting in the palm of your left hand, while applying your right hand to the camera's side. Transport the film advance lever with your right thumb and squeeze the release button smoothly using the cushion, not the tip, of your index finger. The aperture ring, focusing ring and shutter speed ring are so arranged as to enable you one hand operation with left fingers right up to the moment the shutter is released.

Hold your breath at the moment of shutter release.



- * When holding the camera horizontally, keep both elbows close to the body.
- * For vertical shooting, keep one elbow close to your body and press the camera tightly against your forehead.



* Steady yourself against any nearby support (such as a tree, fence, or wall) whenever possible.



- * When hand-holding a telephoto lens, camera shake is magnified as the focal length increases. Always try to use the fastest possible shutter speed lighting conditions will allow.
- * For telephotography, or slow shutter speed photography, it is recommended to use a tripod and hold the camera steady with your hands.

(Handle with extreme care.)

List of Optional Focusing Screens



The OM System interchangeable focusing screens provide you with the ultimate in focusing versatility. Optional screens are available to suit virtually every picture-taking situation. The focusing screens come with a special tool. To remove the focusing screen:

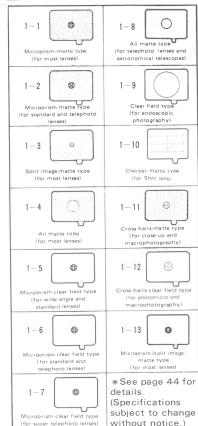
- a) Detach the camera lens from the camera body (see p. 16).
- b) Use the special tool provided to push up on the release catch underneath the top ledge of the mirror box (see the photo above). This allows the screen and screen frame to drop down.
- c) Remove the screen from inside the camera by gripping the tip of the screen with the tool as shown.
- d) To install the screen, fit it in the



frame and push the frame upward gently until it clicks into place. Gently shake the camera body to make sure the screen is held securely in place.

IMPORTANT: Although the above procedure could be done with fingers, it is recommended that you use the special tool supplied. Changing focusing screens is a procedure to be handled with great care. Trying to change screen with your fingers can result in fingerprints and costly damage to the surface of the screen, the prism, or the mirror. Should this occur, cleaning or repair MUST be handled by an authorized service center. Such damage is not covered by the product warranty.





Motor Drive has many exciting recreational, professional and scientific applications including sports photography, action portraits, copying literature, wildlife photography and timelapse photography.

By automatically advancing the film and cocking the shutter, the motor drive not only frees the photographer from the burden of manually advancing the film, but also allows him to shoot a series of pictures that might otherwise be lost through the timeconsuming manual method.

The Motor Drive package is specifically

tailored to the compact size of the Olympus OM-1. Extremely small and lightweight, the Motor Drive 1 mounts directly to the camera base creating one of the most compact and maneuverable motor drive systems available. Although reduced in size and weight, the OM System Motor Drive Group excels in performance. The basic Motor Drive package can provide operation up to 5 frames per second in optimum conditions*, has single release capability and offers motor drive sequence applications over a wide range of shutter speeds.

The following instructions (pp. 23–25) are for the basic motor drive system consisting of the Olympus OM-1, Motor Drive 1, and M.18V Control Grip 1 or M.15V Ni-Cd Control Pack 1.

*Optimum conditions: Maximum framing rate varies with temperatures, types of films and batteries, etc. The word optimum implies such conditions in which sequence filming is made at normal temperatures at shutter speeds of 1/500 of a second and faster, using the M. 18V Control Grip 1 containing fresh superpower manganese batteries. Cartridges with smooth film moving must also be used.

OPERATION OF WINDER 1



Attaching the Winder 1

Remove the motor drive socket cap. Remove the motor drive socket cap from the camera base plate by rotating it counter-clockwise with a coin until the index dot on the cap is aligned with the index dot on the camera.

To replace the cap, align the index dot on the cap with the index dot on the camera, and turn the cap clockwise with a coin until the index dot on the camera is aligned with the groove on the cap.

(The removed motor drive cap can be stored in the socket cap storage positioned on the underside of the battery holder compartment.)

2 Pull up and rotate the switch dial to the "OFF" position.



- 3 Attach the Winder 1
- ① Remove the M.6V Battery Holder 1 from inside the winder, insert four 1.5 V penlight (AA) size batteries into the battery holder, and put it back into the compartment.
- ② Insert the motor drive guide pin into the guide pin hole on the camera base plate. To assure proper connection, adjust the position of the Winder 1 until it is flush with the camera. Turn the clamping screw clockwise until the Winder 1 is securely attached to the camera base plate.



- Taking the pictures
- 1 Pull up and rotate the switch dial to the "SINGLE" position.
- 2 Press the shutter release.

The Winder 1, designed primarily for single-frame shooting, operates on four self-contained AA batteries and is extremely compact and light. The unit advances the film and cocks the

shutter as soon as exposure is made (wind-on time—0.3 sec.), so that the photographer can always be ready to freeze the subject at the right moments.

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Attaching the Motor Drive 1

Remove the motor drive socket cap.
 (See page 22, left column.)



Attach the Motor Drive 1 in the same manner as with the Winder 1. (See page 22, middle column.)



Attaching the M. 18V Control Grip

- The move the M. 18V Battery Holder 1, insert twelve 1.5V penlight (AA) size batteries into the battery holder, and re-insert the battery holder into the Control Grip.
- Align the red index line on the rear of the control grip with the red index line on the rear frame of the motor drive unit until the mounting catch is engaged.
- 3 Carefully push the control grip forward until it snaps into the front of the motor drive.
- * Voltage Requirement: DC 18V with "AA" (penlight) size batteries, or DC 12V-16V with external power sources of large potentiality in conjunction with relay cords.

■ IMPORTANT:

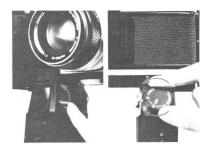
- * Always store the socket cap in the same place to avoid loss.
- * After removing the motor drive from the camera, be sure to replace the socket cap to keep the camera free of dust and
- dirt, and to prevent the possibility of stray light entering the socket and fogging the film.
- * Do not remove the socket cap when you do not use the motor drive.



Attaching the M. 15V Ni-Cd Control Pack 1

Prior to use, the Control Pack should be checked to insure that it has been adequately charged. If its charge is inadequate, use the M. 15V Ni-Cd Charger.

Aligning the red index lines of the Motor Drive 1 and the Control Pack, engage the mount catch. Then push the Control Pack forward and upward until it snaps on the motor drive, then clamp securely.



■ Photography with the Motor Drive Units

Using the M. 18V Control Grip 1

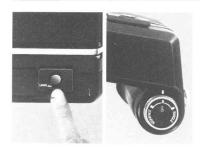
- ① Unlock the shutter release lock lever on the Control Grip by moving it forward and upward.
- * The lever is provided to lock the shutter release on the Control Grip for safety sake in general or when a relay cord is used.
- In Turn the mode selector on the Control Grip to either "SINGLE" or "SEQUENCE". Set the mode selector to the "OFF" position when the Motor Drive 1 is not in use.
- * At "SINGLE", exposure is possible at all shutter speeds from 1sec. to 1/1000 sec.

At "SEQUENCE", exposure is possible at all shutter speeds except B, and 1sec.

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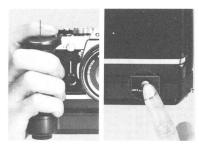
3 You may use either the shutter release on the Control Grip 1 or the shutter release on the Motor Drive 1 to trigger the shutter. It is generally more convenient to use the shutter release on the Control Grip when the camera is held in the horizontal position and the shutter release on the Motor Drive 1 when the camera is held in the vertical position.



Using the M. 15V Ni-Cd Control Pack 1

- Slide the shutter release lock button on the Control Pack to the unlock position.
- * The button is provided to lock the shutter release on the Control Pack for safety sake in general or when a relay cord is used, etc.
- Pull and turn the mode selector until it clicks to either "SINGLE" or "SE-QUENCE".

In either mode, available shutter speeds are the same as those with the Control Grip. (See page 24, middle column.)



③ You may use either the shutter release on the Control Pack 1 or the shutter release on the Motor Drive 1 to trigger the shutter. It is generally convenient to use the shutter release on the Motor Drive 1 and the shutter release on the Control Pack 1 for use with the 250 Film Back 1.



■ Loading the Film

Always try to load your camera after the motor drive has been attached. This eliminates even the remotest possibility of light leak through the motor drive socket. If this is not possible, attach the Motor Drive unit in a dimly-lit area.

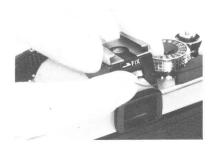
FLASH PHOTOGRAPHY

Electronic flash or bulbs may be used to soften shadows in daylight conditions as well as to provide artificial illumination when available light is inadequate for proper exposure.

Your choice of a flash unit will depend upon your individual photographic needs, and may include the Olympus Quick Auto 310, PS 200 Quick or PS 200.

The Accessory Shoe 1 is screwed into the hot shoe socket on the OM-1 pentaprism housing to provide direct contact with the clip-on type electronic flash,

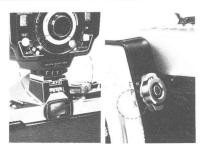
(For the selection of units, see page 45.)



■ Use of Electronic Flash Units

Attach the Accessory Shoe 1 to the OM-1.

* Detach the acessory shoe when a flash is not mounted on the camera (because the shoe may come in the way during photography), or when a side-mounting bracket is used to support the flash unit (because you may feel a small eclectrical shock when touching the terminal contact of the accessory shoe).



- 2 Mount the flash unit on the camera. Slide the flash unit into the camera's accessory shoe as far as it will go.
- * If your electronic flash unit does not have a direct contact "hot shoe", connect its synchro cord to the flash synchro socket on the camera.
- $\ensuremath{\mathfrak{I}}$ Set the camera's synchro terminal switch (FP and X flash selector) to "X".



A Set the shutter speed ring to a shutter speed of 1/60 second or slower (all shutter speeds indicated in blue on the shutter speed ring).



- 5 Set the Fistop on the aperture ring.
- ① Auto Flash Exposure Control Follow your flash equipment instructions for the selection of F stop for automatic flash exposure control (in case of the Quick Auto 310, one of F4, F5.6, F8; ASA 100).
- * The TTL AUTO setting on the Quick Auto 310 is exclusively for use with the OM-2 and cannot be used with the OM-1
- ② Manual Flash Exposure Control
 Determine the correct F stop for proper
 flash exposure by using the calculator
 dial or exposure table provided with
 your flash equipment. You may also
 determine the correct F stop by using
 the following formula:

F stop = flash guide number flash-to-subject distance

■ DAYLIGHT FILL-IN FLASH

- Manual Flash Exposure ControlIf your electronic flash unit has
- ① If your electronic flash unit has manual/auto flash exposure control, set it for manual operation.
- ② Focus on your subject to determine the camera-to-subject distance.
- ③ Using the calculator dial, exposure table, or guide number formula, determine the correct F stop for proper flash exposure at the distance you found in Step 2. Set this F stop with the camera aperture ring. In case of the Quick Auto 310, after setting the auto/manual switch dial to the "HI" position, read the F number corresponding with the planned flash-to-subject distance, using the distance scale provided.
- ① Turn the shutter speed ring until the meter needle centers between the overand under-exposure index marks in the camera viewfinder.
- § If the shutter speed is 1/60 second or slower, you are ready to take the picture.

If the shutter speed is faster than 1/60 second, the flash will not fire if you attempt to take the picture. Therefore, you must readjust the exposure settings

as follows:

- a. Reset the shutter speed to 1/60 second.
- b. Turn the aperture ring until the meter needle centers between the over- and under-exposure index marks in the camera viewfinder.
- c. Using the flash calculator dial, exposure tables, or guide number formula, determine the correct flash-to-subject distance for the F stop now set on the camera's aperture ring.
- d. Move to this distance from the subject and re-focus *or* remove the flash unit from the camera and move it only to this distance from the subject using a synchro cord extension to maintain flash synchronization with the camera.
- 2 Automatic Flash Exposure Control
- ① If your electronic flash unit has manual/auto flash exposure control, set it for auto operation.
- 2 Set the camera's shutter speed ring to 1/60 second.
- 3 Turn the aperture ring until the meter needle centers between the over- and under-exposure index marks in the camera's viewfinder.
- Focus on your subject to determine the camera-to-subject distance.
- (5) If your electronic flash unit has an

"AUTO F STOP" that corresponds with the F stop set on your camera and if that "AUTO F STOP" will provide automatic flash control within the distance range you found in Step 5, you may take the picture using this "AUTO F STOP" setting on your electronic flash unit. If these conditions are not met, use the procedures for Manual Flash Exposure Control. (In case of the Quick Auto 310, determine the F number and set the auto/manual switch dial to one of F4, F5.6 or F8; ASA 100).

■ FLASHBULB PHOTOGRAPHY

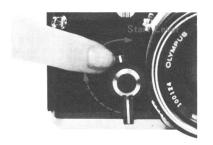
- 1 Mount the Accessory Shoe 1 to the camera and insert the shoe mount of the flash unit into the accessory shoe.
- * If your flash unit does not have a "hot shoe" contact, plug the flash unit's synchro cord into the synchronizing socket.
- Select the proper shutter speed and synchro setting from the table below according to the type of bulb being used and make these settings on the camera.
- 3 Determine the correct F stop for flash exposure by using the guide number formula. (See page 27.)
- * The guide number for any flashbulb/film combination may be found on the flashbulb packaging.
- 4 Set the correct F stop with the camera's aperture ring.

■ The table indicates proper synchronization speeds for most flash equipment.

			Shutter Speed										
Terminal	Flash Lamp	1000	500	250	125	60	30	15	8	4	2	1	
FP	FP	\bigcirc	0	\bigcirc	\bigcirc	0	*	*	*	*	*	*	
	Electronic Flash					\circ	0			0	0	\bigcirc	
×	MF						*	\bigcirc		0		0	
	M·FP							0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	

www.orphancamerage.as.comended we to bulb quality.





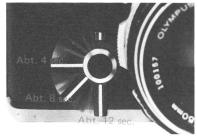
The self-timer provides a method of taking delayed action pictures allowing you to get into your own photographs. It is also ideal for macrophotography when a cable release is not available.

To set the self-timer:

 Rotate the self-timer lever counterclockwise until it stops (approximately 180°). Make sure the film has been advanced properly.

2) Turn the start lever clockwise to the vertical position to activate the self-timer lever. The shutter will then be released in approximately 12 seconds. You can adjust the delay time between four and twelve seconds by adjusting the lever as shown above.

If the film has not been advanced properly, the timer lever will stop halfway and the shutter will not fire. To re-activate the timer, move the start



lever counter-clockwise to stop the timer lever, return the timer lever to the starting position, and advance the film. Then, turn the start lever again. NOTE: If you do not reset the self-timer, the timer lever will begin moving immediately after advancing the film and the shutter will be released earlier than expected.

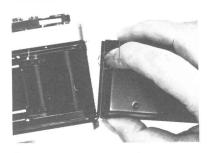
You may set the self-timer lever either before or after advancing the film. Even after setting the lever, you can release the shutter by pressing the shutter release button. To stop the self-timer during its operation, turn the start lever counter-clockwise.



To minimize camera vibration in closeups, reproduction work, macrophotography and photomicrography, you can lock the instant return mirror in the up position to eliminate mirror shock. This is also handy in rapid sequence shooting. To lock up the mirror, compose and focus on your subject and then turn the mirror lockup lever counter-clockwise until it stops (approximately 90°). After shooting, always return the lock-up lever to its original position.

NOTE: You can lock up the mirror at any photographing stage — before or after advancing the film. However, do not carry the camera in direct sunlight with the mirror locked up. This can result in damage to the shutter curtains.

CHANGING THE CAMERA BACK



The camera back of the OM-1 is fully interchangeable with the Recordata Back 1 and 250 Film Back 1. To remove the camera back, push down on the release pin as shown. Do not remove the back unless necessary.



■ Recordata Back 1

The Recordata Back 1 registers data such as date, number, alphabetical code, etc. directly on the picture.

■ 250 Film Back 1

The 250 Film Back 1 is designed for winder or motor drive shooting; it accepts a bulk loaded magazine of 250 frames. (See page 42.)

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the rewind knob doesn't rotate when I advance the film advance lever. Why?

A: The film leader may not be inserted in the film take-up spool and the film is not advancing properly. See pages 7

& 8.

Q: My camera is loaded with film but

Q: The film is not advancing. Why?
A: The shutter may be cocked and ready to fire. Try pressing the shutter release button. If this is not the case, your 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. See pages 9 & 10.

Q: The shutter release button will not move and I can't take the picture. Why?

A: The film advance lever may not have been fully advanced. See page 9. Q: The rewind crank will not turn when I try to rewind the film. Why?

A: The rewind release lever may not be set properly. Make sure the lever is rotated until the red line is opposite the "R." See page 10.

Q: Why can't I turn the ASA film speed dial?

A: The film speed dial release button must be pressed before the dial can be turned. Once the dial had been set, release the button and make sure the dial has locked into place. See page 12.

Q: Why isn't the needle in the view-finder moving?

A: First, make sure the meter switch lever is set to the "ON" position. If the meter is on, turn the camera towards a bright light source. If the needle still will not move, the battery may not be inserted, may be inserted improperly

or may be drained. Replace the battery

or insert it properly. See page 7.

Q: I cannot center the exposure needle on the index. Why?

A: If the exposure needle will not center on the index, adjust the shutter speed or F stop until the needle is centered.

To obtain proper exposure, you may

use an ND (neutral density) filter when the subject is too bright, or an electronic flash or flash bulb when the subject is too dark.

Q: How do I take meter readings when a bellows or extension tubes are mounted to my camera?

A: Since lens extension devices disconnect the automatic diaphragm mechanism between camera and lens, readings must be taken with the lens stopped-down. Take an exposure reading using the procedure outlined on page 14.

Q: How can I remove dust from inside the viewfinder?

A: After detaching the focusing screen, blow away any dust with an air blower. (See page 20.) Never wipe the surfaces of the screens, prisms, or mirror with cloth or paper.

Q: The microprism in the center of the

viewfinder "shimmers" and darkens.

Is that normal?

A: Yes, this is a natural phenomenon that occurs when a lens with a maxi-

mum aperture smaller than F5 is mounted on the camera. It also happens with a standard lens when the depth of field preview button is pressed. The microprism is not faulty.

Q: The viewfinder is totally dark and I

can't see anything. Why?
A: Make sure you have removed the lens cap. If the cap has been removed, the mirror lock-up lever may be in the up position. Return the mirror to its operational position. See page 29.

Q: When I touch the terminal contact of the Accessory Shoe 1 I feel current. Why?

A: This is normal when a sidemounting type flash unit connected to the camera is being turned on. At this point you are not using the accessory shoe so it should be detatched. See page 26.

Q: The self-timer lever stopped halfway and plays idly. Why?

A: The self-timer lever stopped half way because the film advance lever has not been transported fully and hence the shutter cannot be released. Turn the start lever counter-clockwise, reset the self-timer lever to the desired time, advance the film fully and turn the start lever clockwise to activate. The self-timer lever plays because you forgot to turn the start lever to release the shutter after you have set the self-timer lever. See page 29.

Q: Can I take the pictures without the motor drive socket cap in place?

A: No, you must replace the cap whenever the motor drive or winder is not attached to the camera's baseplate because dust and dirt may get into the socket causing malfunction and light may enter and fog the film. See page 23.

1. When you do not use the camera for a long period of time, store it with the shutter uncocked and turn off the self-timer and exposure meter. Keep it free from dust and moisture, and remove it from the case.

2. When storing the camera for a long

- 2. When storing the camera for a long period of time, remove the battery. Wipe battery surfaces with a dry cotton cloth before re-inserting into the camera.
- 3. Avoid dropping or hitting the camera.4. Never store the camera where tem-
- peratures exceed 50° C (122° F). When you use the camera in temperatures under -20° C (-4° F), it may sometimes fail to operate properly. To avoid this, warm the camera before use. Protect against excess moisture by using silica

gel or other desiccant.

- 5. After use near the ocean, wipe the camera surfaces clean with a soft cloth; never leave salt on the camera. (Salt may be airborne near the ocean and collect on the camera even though it has not been in direct contact with water.)
- 6. Avoid excessive force when mounting on a tripod.
- 7. Never expose the camera to direct sunlight. Avoid areas exposed to salt www.orphancameras.com

- water, radios, TV sets, or magnets.
- 8. Have all repairs performed by an authorized OLYMPUS Service Center. You may send it directly or through the store where you bought your camera.

9. Avoid touching the surfaces of the

- lens. Clean only with an air brush, antistatic brush, or wipe it lightly with a camel hair brush or lens tissue. In EX-TREME cases, use a clean, soft cotton cloth moistened with denatured alco-
- hol. NEVER rub the lens surfaces with your finger, clothing, or other abrasive material.

 10. If dust or fingerprints collect on the mirror, focusing screen, or prism, take the camera to an authorized OLYMPUS
- Service Center. It needs professional attention.

 11. Do not press the release lever at random.
- 12. Do not touch any part that moves at high speed such as the shutter, instant return mirror, diaphragm, etc.



ZUIKO INTERCHANGEABLE LENS GROUP

One of many advantages of the single lens reflex type of camera is the large variety of interchangeable lenses available. The Zuiko Interchangeable Lens Group (designed and manufactured by Olympus) comprises 32 lenses including those now in the course of development. Zuiko lenses have always enjoyed a high reputation in photographic circles - new design technology has made possible a new series of innovative, high performance lenses. These lenses have a host of special features including a new construction that compensates for close focus aberrations, increased aperture ratio in the wide angle lenses, and reduction in telephoto lens size and weight. The OM System adopts 49mm filters for most lenses from 21mm to 200ram. As part of the OM System design all the lenses now offer higher performance in small configurations. Olympus has produced lenses for microscopes for many years and the new Zuiko lenses benefit from this scientific experience. See the "OM System Zuiko Interchangeable Lenses" instructions for further information.



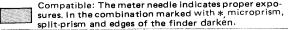




TABLE OF INTERCHANGEABLE LENSES

(Specifications subject to change without notice.)

							notice	
TYPE	INTERCHANGEA	BLE LENSES	ANGLE OF VIEW	OPTICAL CONSTRUCTION ELEMENT-GROUP	DIA- PHRAGM	F-STOP RANGE	MIN. FOCUS (ft.)	MIN. PHOTO- GRAPHIC RANGE
FISHEYE	ZUIKO AUTO-FISHEY	E 8mm F2.8	180°(circle)	11-7	AUTO.	2.8-22	0.2 m (0.7)	
TISHETE	ZUIKO AUTO-FISHEY	E 16mm F3.5	180°	11-8	AUTO.	3.5-22	0.2 m (0.7)	
	K ZUIKO AUTO-W	18mm F3.5	100°	11-9	AUTO.	3.5-16	0.25m(0.8)©	30×20cm
SUPER WIDE	G ZUIKO AUTO-W	21mm F3.5	92°	7-7	AUTO.	3.5-16	0.2 m (0.7)	21×14cm
SOFER WIDE	J ZUIKO AUTO-W	24mm F2	84°	10-8	AUTO.	2-16	0.25m (0.8)©	23×15cm
	H ZUIKO AUTO-W	24mm F2.8	84°	8-7	AUTO.	2.8-16	0.25m (0.8)	23×15cm
	I ZUIKO AUTO-W	28mm F2	75°	9-8	AUTO.	2-16	0.3 m(1.0)©	27×18cm
	G ZUIKO AUTO-W	28mm F3.5	75°	7-7	AUTO.	3.5-16	0.3 m (1.0)	27×18cm
WIDE	H ZUIKO AUTO-W	35mm F2	63°	8-7	AUTO.	2-16	0.3 m (1.0)	21×14cm
	G ZUIKO AUTO-W	35mm F2.8	63°	7-6	AUTO.	2.8-16	0.3 m (1.0)	21×14cm
	ZUIKO SHIFT	35mm F2.8	63° (83° at max. shift)	8-7	MANUAL	2.8-22	0.3 m (1.0)	21×14cm
STANDARD	G ZUIKO AUTO-S	55mm F1.2	43°	7-6	AUTO.	1.2-16	0.45m (1.5)	23×15cm
	G ZUIKO AUTO-S	50mm F1.4	47°	7-6	AUTO.	1.4-16	0.45m (1.5)	24×16cm
STANDARD	F ZUIKO AUTO-S	50mm F1.8	47°	6-5	AUTO.	1.8-16	0.45m (1.5)	24×16cm
	ZUIKO AUTO-MACRO	50mm F3.5	47°	5-4	AUTO.	3.5-22	0.23m (0.8)	72×48mm
ZOOM	ZUIKO-AUTO-ZOOM	75-150mm F4	32°-16°	15-11	AUTO.	4-22	1.6 m (5.2)	64 ×42cm 32 ×21cm
	F ZUIKO AUTO-T	85mm F2 _.	29°	6-4	AUTO.	2-16	0.85m (2.8)©	25×17cm
	E ZUIKO AUTO-T	100mm F2.8	24°	5-5	AUTO.	2.8-22	1 m (3.3)	29×19cm
TELEPHOTO	E ZUIKO AUTO-T	135mm F2.8	18°	5 - 5	AUTO.	2.8-22	1.5 m (4.9)	32×21cm
TEEEI HOTO	E ZUIKO AUTO-T	135mm F3.5	18°	5 - 4	AUTO.	3.5-22	1.5 m (4.9)	32×21cm
	E ZUIKO AUTO-T	200mm F4	12°	5 -4	AUTO.	4-32	2.5 m (8.2)	36×24cm
	F ZUIKO AUTO-T	200mm F5	12°	6-5	AUTO.	5-32	2.5 m (8.2)	36×24cm
	F ZUIKO AUTO-T	300mm F4.5	8°	6-4	AUTO.	4.5-32	3.5 m(11.5)	33×22cm
SUPER	E ZUIKO AUTO-T	400mm F6.3	6°	5-5	AUTO.	6.3-32	5 m(16.4)	36×24cm
TELEPHOTO	F ZUIKO AUTO-T	600mm F6.5	4°	6-4	AUTO.	6.5-32	11 m(36.1)	55×37cm
	E ZUIKO AUTO-T	1000mm F11	2.5°	5-5	AUTO.	11-45	30 m(98.4)	98×65cm
	ZUIKO MACRO	20mm F3.5	9° at highest mag.	4 - 3	MANUAL	3.5-16	W/Auto Bellows & PM-MT ob	max. 8 × 5mm min. 3 × 2mm
SPECIAL USE	ZUIKO MACRO	38mm F3.5	9° at highest mag.	5 — 4	MANUAL	3.5-16	W/Auto Bellows & PM-MT ob	max. 20 × 13mm min. 6 × 4mm
	ZUIKO 1:1 MACRO	80mm F4	9° at highest mag.	6 -4	MANUAL	4-22	W/Auto Bellows	max. 72 × 48mm min. 18 × 12mm





Compatible: The meter needle does not give correct light readings.

	, <u>, , , , , , , , , , , , , , , , , , </u>			of the finder dar	***************************************													
WEIGHT /		LENGTH	MAX.	HOOD	FILTER	1-1	1-2	1-3 Split-	1-4	1.5	1-6	1-7 Micro	1-8	1-9	1-10 Checker	1-11 Cross	1-12 Cross	1-13
WEIGHT (oz.)	LENGTH	DIAMETER	HOOD	FILIER	matte type	Micro- matte type	matte type	matte type	clear field type	clear field type	clear field type	matte type	Clear field type	matte type	hairs-matte type		Split image matte type
640g (22	2.6)	82mm	102mm		Built-in		*											
180g (6	5.3)	31mm	59mm	_	Built-in		*						ROPHOTOGRAPHY		10	СКОРНОТОВКАРНУ	PHOTOMICROGRAPHY	
250g (8	8.8)	42mm	62mm	49→72mm Screw-in	72mm		*						 GR/−	PHOTOGRA		-8- -8-	-8-	
180g (6	5.3)	31mm	59mm	49mm Screw-in	49mm		*	-					_t_	<u>−</u> 6−	ENS	Lg-	<u> </u>	
280g (9	9.9)	48mm	60mm	55mm Screwin	55mm		*								<u> </u>	<u></u> ¥-	— <u>₹</u> –	
180g (6	5.3)	31mm	59mm	49mm Screw-in	49mm		*						_8		<u> </u>	₩ <u>₽</u>	<u> </u>	
250g (8	8.8)	43mm	60mm	49mm Screw-in	49mm	2.75	*						_s_	ENDOSCOPIC	SHIF	MAC	<u> </u>	
180g (6	5.3)	31mm	59mm	49mm Screw-in	49mm	100	*			WWW.XX			_ ⊗_		F0.000 1 4 700 00	- <u>≈</u> -	~w	
240g (8	3.5)	42mm	60mm	55mm Screw-in	55mm									<u></u> – ⋛ –	<u>6</u>	- ₽-	— <u></u> -	
180g (6	5.3-)	33mm	59mm	51mm Slide-on	49mm		7		12.00				ЕРНОТОВКАРНУ	. –	•••	— ш́ —	₩-	
310g-(10	0.9)	58mm	68mm	49mm Slide-on	49mm	*	*	*					g	FOR	10.00	Lo-	g	*
310g (10	0.9)	47mm	65mm	57mm Slide-on	55mm				200				_P_		300	CLO.	<u> </u>	
230g (8	3.1)	36mm	60mm	51mm Slide-on	49mm								_유_			F.G.	<u> </u>	1
170g (6	5.0)	31mm	59mm	51mm Slide-on	49mm								_===			1 "		100
200g (7	7.1)	40mm	60mm		49mm							<u> </u>	_==				MACROPHOTOGRA	
440g (15	5.5)	115mm	63mm	Built-in	49mm								FOR				F0R -	
260g (9	9.5)	46mm	60mm	49mm Screw-in	49mm			100	2.7			ļ					<u> </u>	
230g (8	3.1)	48mm	60mm	49mm Screw-in	49mm												ļ	
360g (12	2.7)	80mm	61mm	Built-in	55mm										1		ļ	
290g (10	0.2)	73mm	60mm	Built-in	49mm					***								
510g (18	3.0)	127mm	67mm	Built-in	55mm									1				1000
380g (13	3.4)	105mm	62mm	Built-in	49mm													
1100g (38	3.8)	181mm	80mm	Built-in	72mm		4.00										-	-
1300g (46	6.0)	255mm	80mm	Built-in	72mm	*		*		<u> </u>					1000		-	*
2800g (98	8.8)	377mm	110mm	Built-in	100mm	*		*						<u> </u>				*
4000g(14	1.0)	662mm	110mm	Built-in	100mm	*	*	*										*
70g (2	2.5)	20mm	32mm		21mm Slide-on	*	*	*	*		ļ		ļ	-	*			*
90g (3	3.2)	28mm	43mm		32mm Slide-on	*	*	*										*
200g (7.i)	46mm	59mm	-	49mm	*	*	* can										*

INTERCHANGEABLE LENS GROUP UNITS

■ Filters

In general or many specialized photographic fields, filters are essential to the effective rendition of photographic subjects. Whether in black and white or color, filters are necessary additions to most camera systems. In controlling contrast and eliminating unwanted haze in black and white photography, the use of the correct filter often means the difference between a good photograph and a great one. In color, where the balancing of the light with the film emulsion is absolutely necessary for correct color, conversion and light balancing filters are the only effective way of achieving the desired results.

* Be careful not to use two filters simultaneously in order to avoid unintentional cut in the periphery of a photograph.

■ Lens Hoods

Lens hoods protect against extraneous light striking the lens and causing unwanted glare. Hoods for standard lenses are cover types and can be reversed to provide easy storage even when the camera is in the case.

- Camera Body Cap
- Rear Lens Cap
- Front Lens Caps

(49mm, 55mm, 72mm and 100mm in diameter)

■ Adapter Ring 49 → 72 mm

A lens hood/filter mount for the 18 mm F3.5 lens.

OM System filters are ideal for use with OM System lenses. The use of two filters or other hrand may cause vignesting

				Diameter					
Application	Name	Color	Description	49mm	55mm	72mm	100mm		
	Skylight (1A)	Colorless	Similar to UV filter. Eliminates ultraviolet rays. Reduces haze and bluish tones in daylight photography. Effective with color film only. May be used at all times to protect the lens.	0	0	0	0		
B. & W. and	L39 (UV)	Colorless	Eliminates undesirable ultraviolet rays which cause dull, flat pictures. Renders subject in clear, detailed brillance. May be used at all times to protect the lens.	0	0	0	0		
Color	Color ND2 ND4	Grey Grey	Reduces the quantity of light entering the lens to 1/2 or 1/4 of the original intensity. For use in extremely bright conditions when you wish to maintain a wide aperture.	0	0	_	_		
	Polariz- ing filter POL	_	Enables you to take pictures through glass or water without reflections. Will darken the sky in black-and-white photographs without altering other color values in the picture, and renders blue skies darker when used with color film. Reflections are reduced to provide better texture surface detail.	0	0				
	Y48 (Y2)	Yellow	Accentuates contrast, darkens blue skies. Very effective in daylight scenes where the sky is part of subject matter. Heightens the effect of white clouds. Useful in copying documents where line copy is blue or black on light background.	0	0	0	0		
B. & W.	056 (02)	Orange	Absorbs a wider range of wavelengths from UV to dark green than the Y2. Makes a superb rendition of the texture of outdoors subjects, and indoors. It brings out detail in objects yellow, brown. Used with infrared film.	0	0	0	0		
	R60 (R1)	Red	Used as contrast filter to create darkened sky or in copying. Also used to penetrate haze in landscape photography for stronger contrast than an O2 filter. Used with infrared film.	0	0	0	0		
	A4 (81C)	Amber	For use when taking color pictures in cloudy or rainy weather, Reduces bluish tone.	Ō	0				
Color	B4 (82C)	Blue	Designed for use when taking color pictures in early morning or late evening hours when red rays are predominant.	0	0				