

E

OLYMPUS



T Power Control 1

T10 Ring Flash 1

■ OPERATING INSTRUCTIONS

TABLE OF CONTENTS

The T Power-Control 1/T10 Ring Flash 1 combination is specially designed for short working distances where conventional flash units cannot be used. With the OM-2 it extends the advantages of TTL "OTF" Auto flash to the fields of shadowless close-up, medical, scientific and outdoor "action" macrophotography. Manual flash with the OM-1, OM-10 and cameras other than OM can also be achieved more easily than ever before.

● Description of Controls	2
● Loading and Checking the Batteries	3
● Attaching the T10 Ring Flash 1	4
● Mounting the T Power-Control 1	5
● Positioning the Calculator Panel/Switching ON the Illuminator	6
● TTL AUTO Flash with the OM-2N (OM-2)	7 ~ 12
● Manual Flash with the OM-1N (OM-1), OM-10 (& Cameras other than OM)	13 ~ 16
● Flash Photography System Chart	17 ~ 18
● Main Specifications	19 ~ 20
● Handling Care	21 ~ 22
● Medical ZUIKO	23 ~ 24

DESCRIPTION OF CONTROLS



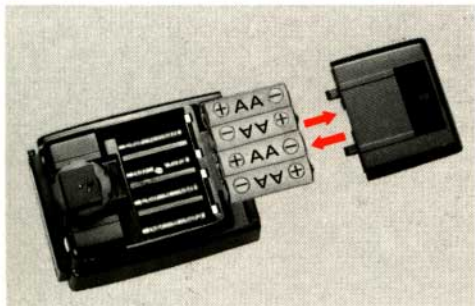
T Power-Control 1



T10 Ring Flash 1



LOADING THE BATTERIES (T Power-Control 1)



Insert four 1.5V AA size batteries properly.

There are available UM-3 type manganese batteries, AM-3 type alkaline batteries, and NR-AA type Ni-Cd batteries. Alkaline batteries last about 4 times longer than manganese batteries.

CHECKING THE BATTERIES



Switch the Power-Control ON. Wait until the charge signal lights on.
After confirmation, switch the Power-Control OFF.

ATTACHING THE T10 RING FLASH 1



Screw the T10 Ring Flash 1 into the front of the lens.



Connecting to the T Power-Control 1



Align red index marks, press and rotate the connecting plug until it stops.



How to remove the plug.

MOUNTING THE T POWER-CONTROL 1



Slide the Power-Control into the accessory shoe and turn the lock knob in the direction of the arrow to lock the Power-Control in position.



Put the spiral cord away from the flash surface and the aperture scale on the lens.



POSITIONING THE CALCULATOR PANEL



With the calculator panel in the 'full automatic control by OM-2' position, the guide number is set automatically to 10 (ASA 100, meters) or 33 (ASA 100, feet).

SWITCHING ON THE ILLUMINATOR



Insert the output plug of the power source and switch on the illuminator.



For composition and focusing with dark subjects.



Two optional power sources are available.

TTL CENTRALIZED CONTROL FLASH USING THE RING FLASH AND THE OM-2N (OM-2)

If the identification mark engraved on the top plate of your camera is "OM-2" (and not "OM-2N"), set the synchro terminal to "X" by aligning the red dot on the X and FP selector lever with the "X" indication on the flash socket. Your camera performs TTL Centralized Control Flash with Shoe 3 as described in the following pages, but the charge/auto check indication is not seen in the viewfinder.



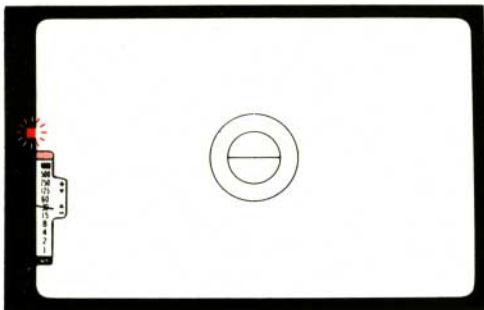
PREPARATION



With the calculator panel in the 'full automatic control by OM-2' position, turn the power switch to the "ON" position.



Set the camera's selector lever to "AUTO".



Wait until the charge signal lights on.



The charge signal can be seen both in the viewfinder and on the back of the Power-Control.



Any aperture can be used for TTL AUTO Flash photography with the OM-2, within the TTL AUTO range. Determine the F stop according to your photographic purpose.

For guidance (ASA 100)

Lens	Magnification	F stop
135mm Macro*	0.1 x – 0.5 x	F 8
80mm Macro*	0.5 x – 2 x	F32
50mm Macro	0.1 x – 0.5 x	F16

* with Telescopic Auto Tube 65-116 or Auto Bellows

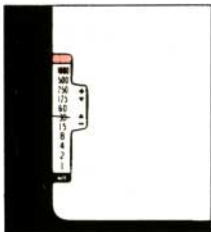
By positioning the calculator panel in reverse and setting it to 'G. No. 10' you can read effective aperture range at a glance. See page 14.

TAKING THE PICTURES

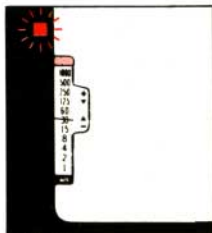


Focus and press the shutter release.

Turn the aperture ring until the meter needle points to 1/30 sec. or slower, and shoot.



CHECKING CORRECT AUTO FLASH



OM-2N

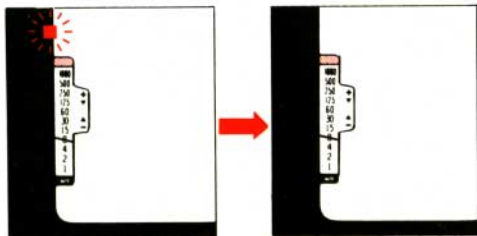


If the signal light blinks repeatedly, the picture was properly exposed by flash.

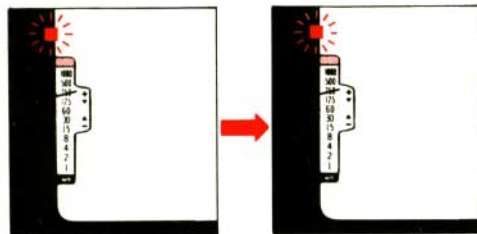
*The signal light blinks repeatedly also at over-exposure, so be sure the subject distance is within the TTL AUTO range shown on the exposure table.



The correct auto flash signal can be seen both in the viewfinder and on the back of the Power-Control.



If the signal light goes out, the picture will turn out under-exposed. Choose a larger aperture.



If the signal stays lit (the ring flash did not fire): The subject is bright enough and the picture was taken properly by existing light. The flash light was not needed.



If you want to take pictures with existing light, turn the Control-Power off; the charge lamp goes out and the ring flash will not fire even when the capacitor is fully charged.

ADVANCED TECHNIQUES

Controlling Depth of Field



at F22

at maximum aperture

By stopping your lens down, the zone of acceptable sharpness can be increased.

Flash Exposure Compensation



To compensate dark background



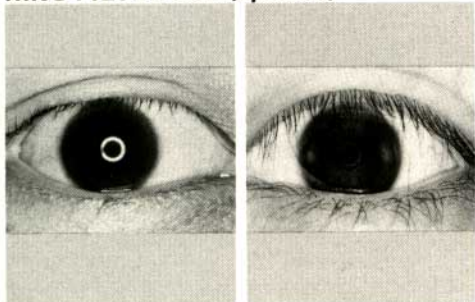
Turn the dial to the ⊖ side.



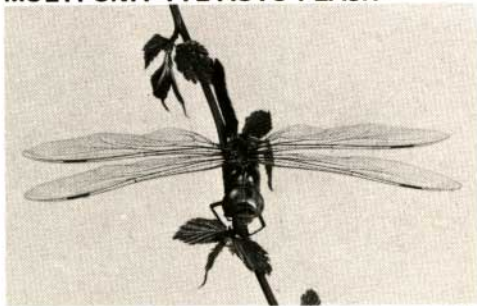
To compensate bright background



Turn the dial to the ⊕ side.

RING FILTER POL (optional)**Iridology without POL****with POL**

Reflection-reduced flash photography is possible with the cross polarizing filter on TTL AUTO mode.

**Screw into the T10.****MULTI-UNIT TTL AUTO FLASH**

The ring flash unit can be used on TTL AUTO mode together with other T-series flash units for multiple flash effects.



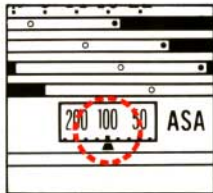
MANUAL FLASH WITH OM-1N (OM-1), OM-10 (& CAMERAS OTHER THAN OM)

1. Normally, ultra close-up and macrophotography with manual flash requires complicated calculations for exposure compensation. However, with the use of the calculator panel designed for each macro lens it can be performed with ease.
2. Set the camera for flash photography according to the instruction manuals supplied with your camera and Electronic Flash T32 (or T20).

PREPARATION



Press the button and remove the calculator panel.



* Calculator panels for MC Auto Macro 135 mm F4.5 or MC Auto 1:1 Macro 80 mm F4 are available optionally.

Set the ASA film speed. Slide the calculator panel to the left as far as it will go, until it clicks into place.

CALCULATOR PANEL

The standard type (for 50mm lenses) comes equipped with the T Power-Control 1.



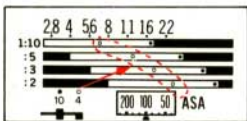
Aperture Scale

Working Distance (ft., cm)
Flash-to-subject distance.

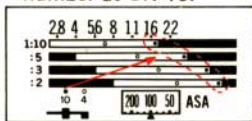
MANUAL Guide Number Index

Guide Number
Switching Index

○ mark indicates correct F number at GN 4.



● mark indicates correct F number at GN 10.



ASA Switching Knob

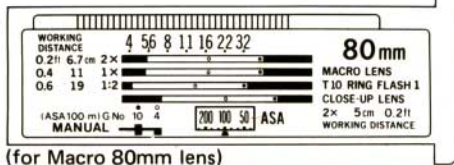
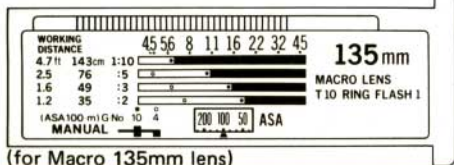
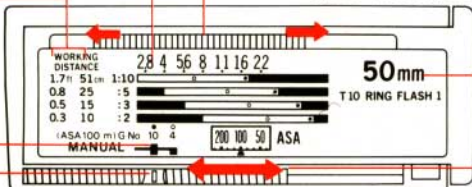
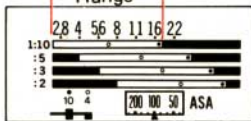
To set film speed, remove calculator panel and slide the knob in one direction or the other until index mark ▲ aligns with the rating of your film. Once the ASA film speed is set you can read off the aperture corresponding to each working distance and magnification factor at a glance.

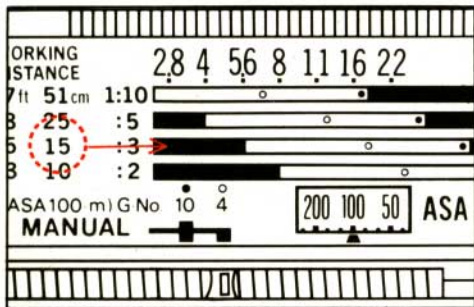
Applicable lens

GN Switching Knob

* On TTL Auto mode with the OM-2 all F numbers indicated by the white segment can be used. It is recommended to use a greater F number.

TTL AUTO Range*





- ① Determine the working distance (flash-to-subject) or magnification factor.
- ② Find the working distance or magnification factor (on the exposure table) which is nearest to the value you have determined.
- ③ Read the F number (any in-between value) off the aperture scale positioned at the right of the W.D. or magnification factor, indicated by ● or ○.
- ④ Set the lens aperture at the F number.
- ⑤ Switch ON the Power-Control unit.
- ⑥ Fine-focus and press the shutter release after the charge signal begins to glow.

[Example]

Lens: MC Macro 50mm F3.5
W.D.: 17 cm (ASA 100)

- The aperture scale (3rd from above) corresponding to 'W.D. 15 cm' is applicable.
- GN 10 setting cannot be used as ● mark indicates beyond 'F22' which is not available on the lens.
- The correct F number is '16' indicated by ○.
- Set the GN switching knob to '4' and the lens aperture to "16".

- * At the GN 4 setting the signal light blinks repeatedly to show that low power output has been emitted.
- * For more detailed exposure table, refer to the "MANUAL FOR MACROPHOTOGRAPHY" booklet.



Set the selected F number on the camera lens and the shutter speed to 1/30 sec.

COMBINATION EXAMPLES

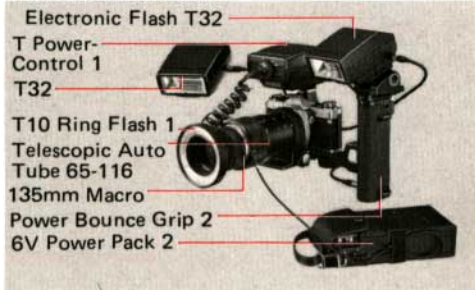
With 50mm Macro



Fine-focusing



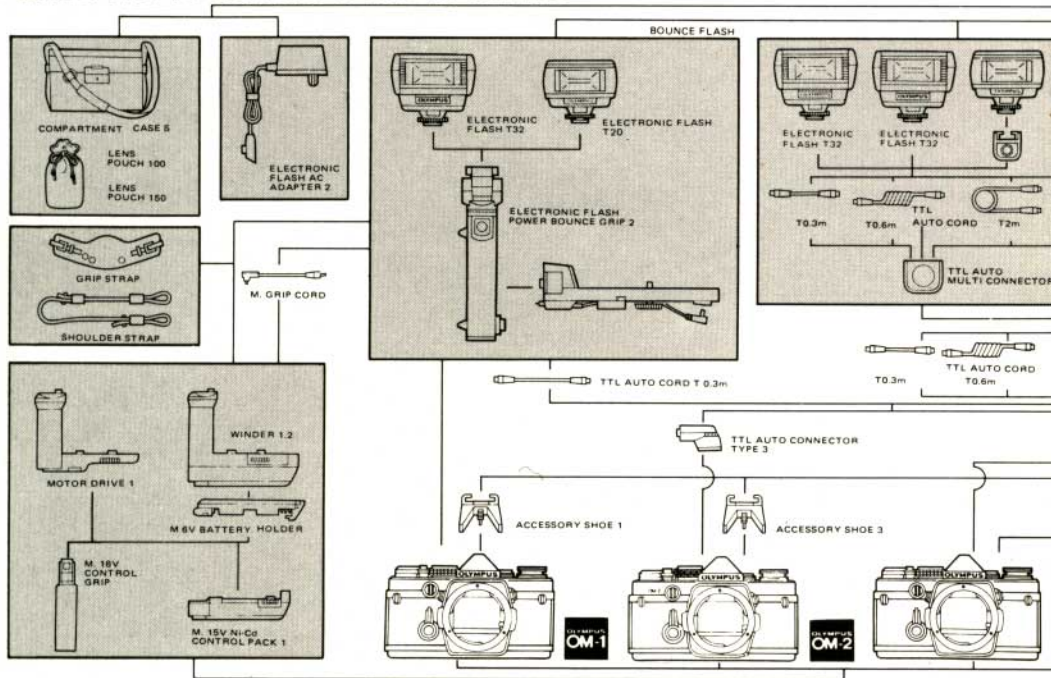
Multi-unit Flash (1)



Multi-unit Flash (2)



FLASH PHOTOGRAPHY SYSTEM CHART



MULTI-UNIT FLASH

ELECTRONIC FLASH T20

TTL AUTO CONNECTOR T20



T5m

REMOTE CONTROL



ELECTRONIC FLASH T32



ELECTRONIC FLASH T20



TTL AUTO CONNECTOR T20

CLIP-ON FLASH



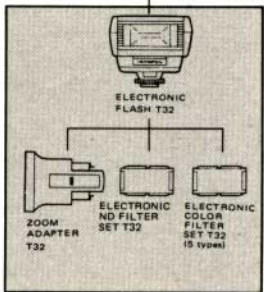
ELECTRONIC FLASH T32



ELECTRONIC FLASH T20



PS200



T2m

T5m



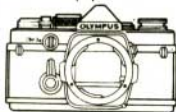
TTL AUTO CONNECTOR TYPE 4



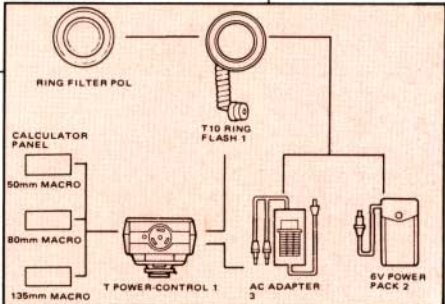
ACCESSORY SHOE 4



OM-1N
OLYMPUS
OM-1



OM-2N
OLYMPUS
OM-2



MAIN SPECIFICATIONS (T Power-Control 1 + T10 Ring Flash 1)

Type: Energy-saving series-circuit type TTL Centralized Control (TTL "OTF" AUTO) (with manual capability).

Guide Number: 10 (ASA 100, meters) or 33 (ASA 100, feet) at 1m flash-to-subject distance and full power flash.

Coverage Angle: 80°

Recycling Time: 0.2 ~ 10 sec. with AA Alkaline batteries on TTL AUTO (varies depending on flash-to-subject distance).

Number of Flashes: 100 ~ 500 with AA Alkaline batteries on TTL AUTO (varies depending on flash-to-subject distance).

Color Temperature: 5,800° K.

Mounting on Lens: 49mm/55mm filter thread mount provided on T10. T10 connects to power-control unit by bayonet mount via spiral cord.

Electrical Contact with Camera: ① Clip-on type with hot shoe and lock. ② Bracket type with Power Bounce Grip 2, TTL Auto Cord and TTL Auto Connector. ③ Free type with TTL Auto Cord and TTL Auto Connector.

Exposure Calculator: Reversible plate type — blank for OM-2N (OM-2) for TTL Auto/Manual flash; calculator for OM-1N (OM-1), OM-10 and non-OM cameras for Manual flash.

TTL "OTF" AUTO (with OM-2N or OM-2):
Aperture Setting: Continuous, couples with aperture ring setting of camera lens.

SBC Sensor Acceptance Angle: Matches view of camera lens.

TTL AUTO Check: Neon-flicker indication. Viewfinder indication contact provided.

Ready Light Check: Charge lamp and viewfinder indication contact.

MANUAL:

Guide Number: 10 (ASA 100, meters) or 33 (ASA 100, feet) on full power flash. Low — 4 (ASA 100, meters).

Aperture Setting: In reference to calculator plate on which F numbers and magnification factors are graduated in accordance with ASA film speed.

TTL Auto Cord Socket: Plug-in type with automatic lock.

External Power Socket: Plug-in type.

Termination of flash emission: Instantaneous. With power switch off, the ring flash will not fire even when fully charged.

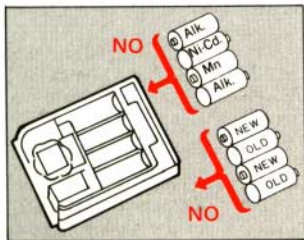
Power Source: ① 1.5V "AA" battery x 4 (incl. Ni-Cd) inside T Power-Control 1. ② 1.5V "C" battery x 4 (incl. Ni-Cd) inside Power Bounce Grip 2. ③ AC house current via Electronic Flash AC Adapter 3. ② and ③ are activated by on/off switch of power-control unit.

Illuminators: Eight electric bulbs are built into the front of ring flash unit. (Power source: 6V Power Pack 2 or AC Adapter 3).

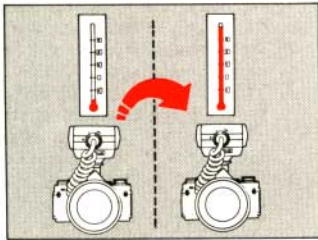
Dimensions & Weight:

T Power-Control 1 – 81 x 70 x 104 mm, 320 gr. (less batteries)
(3.2 x 2.8 x 4.1 in., 11.3 oz.)
T10 Ring Flash 1 – 86 ϕ x 18mm, 95gr.
(3.1 ϕ x 0.7 in., 3.4 oz.)

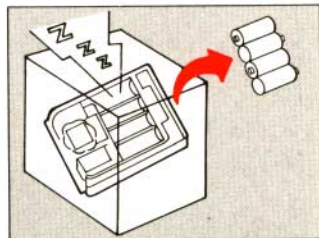
HANDLING CARE



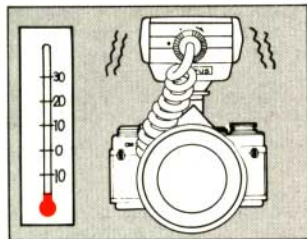
Replace all four batteries at the same time with new batteries.



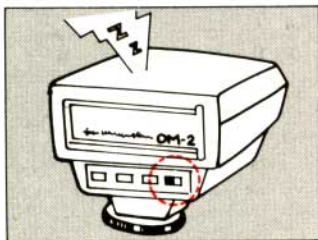
Condensation due to sudden movement from a low to a high temperature area will not allow the flash to function.



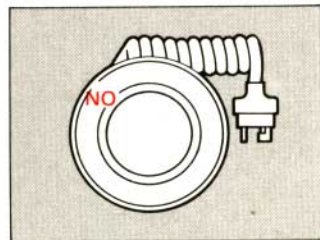
When the flash is not to be used for a long period of time, remove the batteries to prevent leakage.



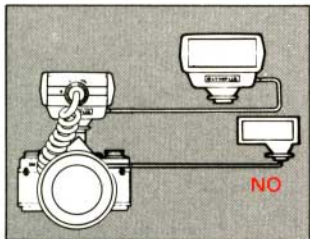
At sub-zero temperature, the batteries will not function normally. So warm them sufficiently before use.



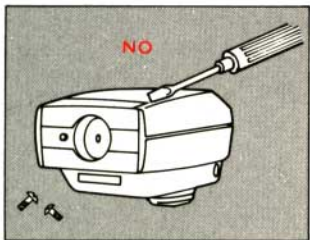
Leaving the switch ON shortens battery life.



If illuminating bulbs burn out, have them replaced by an authorized Olympus service center. NEVER try to do it by yourself.



Do not use with flash units other than the T32 (or T20).



Have repairs performed by an authorized Olympus service center. Dismantling a flash unit involves a hazard.

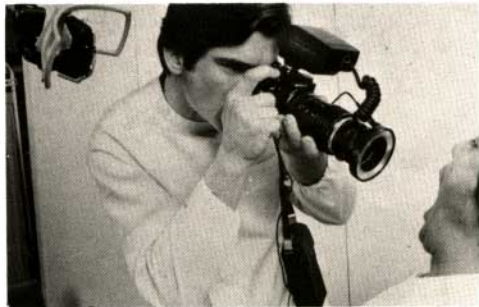
- ① As the color temperature of the ring flash is similar to that of daylight, use daylight color films.
- ② At the working distance of over 2 m (0.7 ft.) the picture edges may darken (with MC Auto Macro 135mm F4.5 and 50mm F3.5).
- ③ The ring flash can be used with ZUIKO 35mm F2.8, 50mm F1.8, 50mm F1.4, 85mm F2, 100mm F2.8, 135mm F3.5 and 135mm F2.8 lenses. The picture edges may darken if the working distance exceeds the closeup range.
- ④ In TTL AUTO flash operation, use Accessory Shoe 3 when combining the Power-Control with the OM-2 (not OM-2N). In MANUAL with the same combination, set the shutter speed at 1/30 sec. or slower.
- ⑤ In the MANUAL GN 4 setting, the charge lamp flickers to indicate that LOW power output has been emitted.
- ⑥ Do not exert stronger force upon the Power-Control than it needs, when it is attached to or detached from the camera.
- ⑦ Do not hit the flash unit and do not let it strike any hard object.
- ⑧ Do not leave the unit in places with temperature over 122° F (50° C), or high humidity.
- ⑨ The ring flash may cause "red eye" effect to occur in portraits.
- ⑩ For multiple manual flash, set each G.N switching knob to '10'.
- ⑪ If cleaning is necessary, wipe the units with a soft cloth only. Do not use cleaning solvents or other harsh chemicals.
- ⑫ The Lens Pouch 150 can accommodate the T Power-Control 1.
- ⑬ Do not overtighten the POL when a filter has been mounted on the lens.
- ⑭ Do not overtighten the T10 when the Close-up Lens 80mm Macro has been mounted on the lens.

MEDICAL ZUIKO

Medical close-up and macrophotography conventionally require sophisticated and complicated techniques involving difficult exposure calculations, unwieldy equipment and undesirable directly reflected light. However, this form of photography can now be accomplished in the TTL "OTF" AUTO mode accurately and easily merely by pressing the shutter release, when Olympus ring flash equipment is used.



Main Features of Medical Zuiko



- 1. Accurate and easy autoflash exposure**
The OM-2's electronic brain centrally controls all exposure data to do away with complicated calculations. It automatically shuts off the ring flash emission when the correct amount of light has reached the film surface.
- 2. Continuously variable magnification**
By sliding the Telescopic Auto Tube 65-116, changes in magnification can be monitored continuously in the viewfinder.
- 3. Convenient working distance even for high image magnifications**
The MC Auto Macro 135 mm lens features long working distances (37 cm - ∞), enabling the photographer to take enlarged images of a lesion without interrupting surgical procedures. The MC

Auto 1:1 80 mm Macro is designed to provide optimum resolution at life size.

4. Although the Macro 135 mm has a maximum speed of F4.5, it allows full-open aperture viewing as bright as F4 to facilitate focusing and composition.

5. Ring Filter POL

With the aid of the cross polarizing filter POL, the ring flash reproduces glossy surface objects, reducing undesirable annular light reflection.

6. Hand-held functionality

The compact and convenient design of the equipment ensures mobility not only for medical, but also for outdoor action photography.

7. Choice of power sources

The ring flash operates off batteries (inside the T Power-Control 1 which is mounted to the camera, or a 6 V Power Pack attached to the waist) or the AC Adapter 3.

8. Wide range of applications

Together with other modular OM System components, ring flash is useful in a wide variety of photographic situations (Recordata Back, Winder, etc.).

Cautions

- ① The ring flash equipment does not feature explosion-free construction. NEVER use it in the presence of flammable gas.
- ② To prevent overheating, do not cover the AC Adapter 3 with a cloth, etc.
- ③ Depending on the film used, the Ring Filter POL can cause a slight change in coloration (gold tends to turn out bluish; and red, bright red).
- ④ The POL cuts down light by 3 – 6 stops, so open up the lens aperture accordingly to compensate for the light loss.



OLYMPUS®

OLYMPUS OPTICAL CO., LTD.

San-Ei Building, 22-2, Nishi Shinjuku 1-chōme, Shinjuku-ku, Tokyo, Japan Tel. 03-340-2211

OLYMPUS CAMERA CORPORATION

Crossways Park, Woodbury, New York 11797, U.S.A. Tel. 516-364-3000

OLYMPUS OPTICAL CO. (EUROPA) GMBH.

2 Hamburg 1, Steindamm 105, West Germany Tel. 040-248021

OLYMPUS OPTICAL CO. (U.K.) LTD.

2-8 Honduras Street, London EC1Y 0TX, England Tel. 01-253-2772