

I. STANDARD EQUIPMENT

Component	Model	BH2-DO-	
		1	3
Dual viewing body, with 6V10WGE bulbs (3 pcs.), dust proof caps AA5979 (2 pcs.), AA8379 (1 pc.) and light shielding cap AB 1062 (1 pc.)	BH2-DO-B	1	1
Binocular tube, with eye-tube caps AA7916 (2 pcs.)	BH2-BI-30	1	1
Transformer (for pointer)	T-DO	1	1
LB eyepieces	WHK 10X	1	0
	WHK 10X-H (focusable)	1	0
	WK 10X	0	1
	WK 10X-H (focusable)	0	1
Heat shielding plate	BH2-DO-HPS	1	1

II. IDENTIFICATION OF VARIOUS COMPONENTS

A. Dual viewing body BH2-DO

Filter selector knob

Demonstrator can select pointer color, green or orange, by means of this knob.

Lamp socket

Pointer manipulator lever

Demonstrator can bring the pointer to any particular structure of a specimen in the field of view.

Observation tube mounting dovetails

Supporter

Partner's manipulator lever

Observation tube clamping screw

Observation tube clamping screw

Heat shielding plate

This plate is attached here when the BH2-DO is used with the BHS microscope to protect the partner from the heat of the lamp housing.

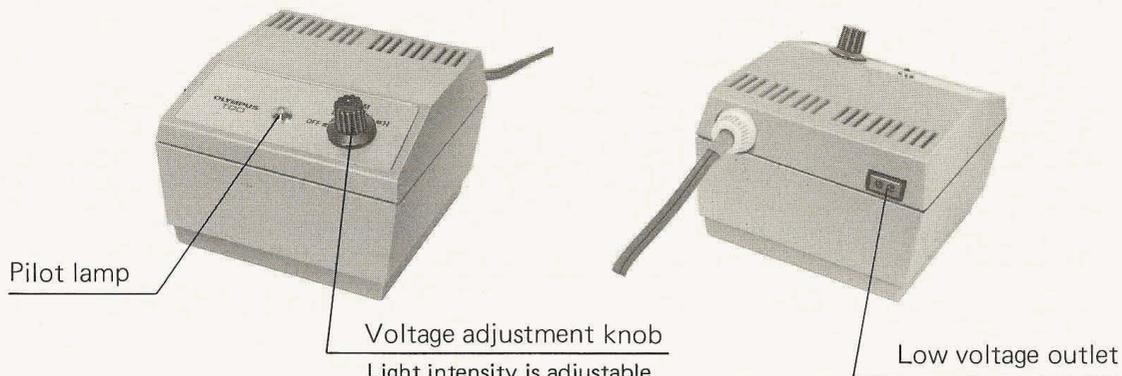
B. Tranformer (for pointer) T-DO

Pilot lamp

Voltage adjustment knob

Light intensity is adjustable in 3 settings: L-M-H.

Low voltage outlet



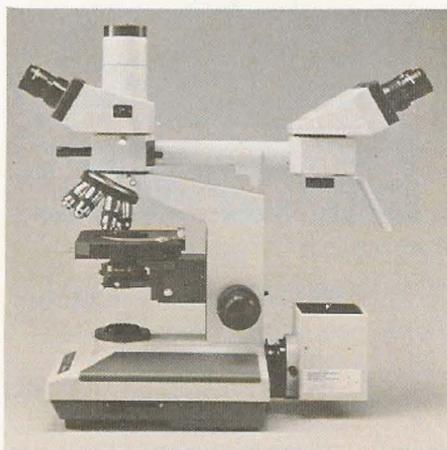
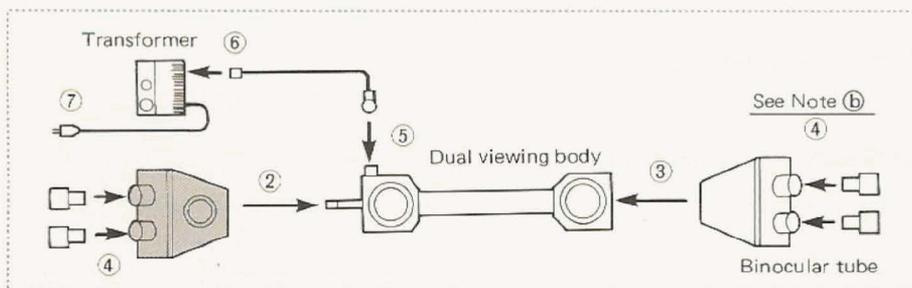
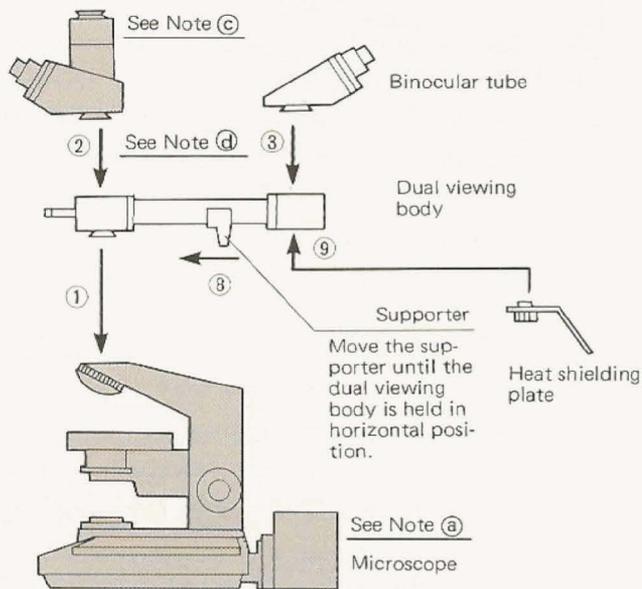
III. ASSEMBLY

The diagrams below illustrate the sequential procedure of assembly. The numbers in circle indicate the assembly order of various components.

- ★ Remove dust caps before mounting components. Take care to keep all glass surfaces clean, and avoid scratching the surfaces.

REMARKS:

- ① In case demonstrator and partner are positioned opposite to each other, they can observe the identical image of a specimen
- ② If the BH2-DO is used in conjunction with a metallurgical microscope (i.e. BHM-2), set a vertical illuminator at a right angle to the dual viewing body.



Notes:

- ① Microscopes compatible:
 - BH2 series (BHS, BHT, and BHTU)
 - BH series (provided with LB series optical elements)
- ② Insert the eyepiece WHK10X-H (or WK10X-H) into the right eyepiece tube, and WHK10X (or WK10X) into the left eyepiece tube.
- ③ Photo eyepiece NFK2.5X is incompatible.
- ④ Super widefield observation tube is incompatible.

IV. OPERATION

A. Focusing

A demonstrator is required to make the following procedure:

- 1) Turn the voltage adjustment knob to position M, and the pointer lights up.
 - ★ If the pointer is not visible within the field of view, bring it back to the center of the field with the manipulator lever.
- 2) Rotate the lamp socket until the pointer illuminates most brightly.
- 3) Focus on the pointer in the following steps:
 - a) In case of BH2 series microscope (with a helicoid ring on the left eyepiece tube):
 - Rotate the helicoid ring of the right eyepiece until the pointer is brought into focus.
 - After focusing with the right eyepiece, rotate the diopter ring of the left eyepiece tube to make focus.
 - b) In case of BH series microscope, incorporating LB series optical elements (with a helicoid ring on each eyepiece tube):
 - Adjust interpupillary distance.
 - Rotate the helicoid ring of the right eyepiece tube to focus on the pointer.
 - Rotate the helicoid ring of the left eyepiece tube to focus on the pointer.
- 4) Focus on the specimen with the coarse and fine adjustment knobs. A partner follows step 3) so that the specimen image can be focused simultaneously with the pointer image.

B. Use of the Pointer

The pointer can be manipulated by either of the demonstrator or partner.

1. In case of the demonstrator

- 1) Adjust intensity of the pointer with the voltage adjustment knob in 3 setting positions L-M-H.

H for highly bright field of view.

M for normally bright field of view.

L for dim objects in darkfield, fluorescence, etc.

- 2) Handle the manipulator lever ① to guide the pointer to any position in the field of view (field number 20*). (Fig. 1)

* Field number represents the diameter in mm of the image of the field diaphragm that is formed by the lens in front of it.

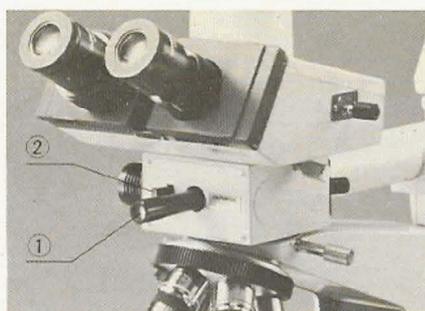


Fig. 1

Note: It makes easier to touch up the manipulator lever with the thumb of your hand, while putting the other fingers on any other part of the viewing body.

- 3) Choose the filter color, green or orange, by means of the filter selector lever ② according to the specimen tint. (Fig. 1)
- 4) If no partner is engaged in observation, cover the unemployed observation tube with the light shielding cap provided.

2. In case of the partner

- 1) As the Model BH2-DO is designed to permit the partner to share the identical image of a specimen with the demonstrator from the opposite direction, the partner is also able to handle the pointer as well as the mechanical stage and focus adjustment knobs.
- 2) The partner is conveniently provided with a manipulator lever ① to control the pointer from the opposite position to the demonstrator. (Fig. 2)

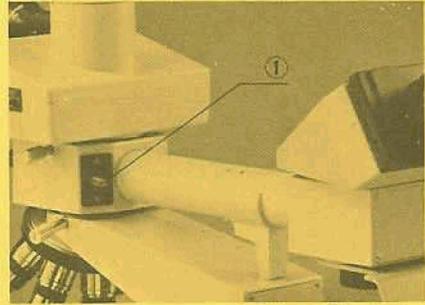


Fig. 2

C. Photomicrography

Read the instructions provided with each photomicrographic equipment in use and observe the following points:

- 1) The pointer can be photomicrographed in conjunction with a trinocular tube. If the Model BH2-DO is used with Olympus trinocular tube (BH2-TR30, BH-TR45 or BH-TR30), NFK photo eyepieces and photomicrographic system PM-10M or PM-10AD, a sharply-focused image of the pointer can be always assured on the film plane without any particular focusing adjustment.
- 2) Photo eyepieces compatible with the Model BH2-DO are NFK3.3X and NFK5X.
Notes: ① NFK2.5X is incompatible since the periphery of the field of view is cut off.
② NFK6.7X is not recommended since the image of the pointer is magnified excessively, and in automatic exposure, a specimen is sometimes underexposed owing to the influence of the pointer intensity.
- 3) The pointer is designed to be brighter than the specimen so that the pointer can be photographed with contrast. This contrast results differently between photomicrography and observation as follows:
 - a) When a specimen is correctly exposed, the pointer is always overexposed. In color photography, this makes the pointer whitish, decoloring itself.
 - b) On automatic exposure mode with the PM-10AD, a specimen is sometimes underexposed because of pointer intensity. In such a case, turn the exposure compensation dial to the left.
 - c) In case of prolonged exposures for dim objects, the pointer tends to affect the exposures. To avoid this phenomenon, switch the pointer off and measure the brightness of a specimen; then light up the pointer again, and expose on manual mode.
 - d) No need to multiply the image magnification with any particular factor for observation and photomicrography in conjunction with the Model BH2-DO, since it has been compensated with magnification factor 1X.
 - e) In principle the demonstrator is recommended to take charge of photographing.