

# Nikon

## Stereoscopic Microscope

# SMZ-2T

### INSTRUCTIONS

#### CAUTIONS

##### 1. Avoid sharp knocks!

When carrying the microscope, or manipulating, handle the microscope gently taking care to avoid sharp knocks.

##### 2. Locations of microscope

Avoid the following conditions: dust, vibration and exposure to high temperature, moisture or direct sunlight.

##### 3. Dirt on the lens

Do not leave dust, dirt or finger marks on the lens surfaces. They will prevent you from clear observation of the specimen image.

#### MAINTENANCE

##### 1. Cleaning the lenses

To clean the lens surfaces, remove dust using soft brush or gauze. Only for removing finger marks or grease, should soft cotton cloth, lens tissue or gauze lightly moistened with absolute alcohol (ethyl alcohol or methyl alcohol) be used. Observe sufficient caution in handling alcohol.

##### 2. Cleaning the plastic parts

Avoid the use of any organic solvent (for example, thinner, ether, alcohol, xylene etc.) for cleaning the plastic parts and painted surfaces of the instrument.

##### 3. Never attempt to dismantle!

Never attempt to dismantle the instrument so as to avoid the possibility of impairing the operational efficiency and accuracy.

##### 4. When not in use

When not in use, cover the instrument with the accessory vinyl cover, and store it in a place free from moisture and fungus.

##### 5. Periodical checking

To maintain the performance of the instrument, we recommend to check the instrument periodically. (For details for this check, contact your dealer.)

★ Please note as per your Nikon warranty, "Any defects or damage directly or indirectly caused by the use of unauthorized replacement parts and/or performed by unauthorized personnel" will void the warranty.

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## NOMENCLATURE AND USING

### Eyepieces

The eyepieces available as standard for the Microscope SMZ-2T are 10X and 15X. 20X and 33X are also available on order. Note that no regular (biological) microscope eyepiece can be used interchangeably.

### Diopter rings

Provided on both the righthand and lefthand eyepieces and adjustable to prevent out-of-focus during the time of zooming.

### Microscope body

### Microscope body clamp screw

For fastening firmly the main body of Microscope SMZ-2T onto the focus stand.

### Episcopic illuminator

Incorporates a halogen lamp 6V-10W, illumination angle is changeable. To achieve the most appropriate illumination for observation, adjust the position of the lamp.

### Clips

To hold the specimen in place securely.

### Stage plate

The black or opal surface is to be used according to the specimen to be observed. On the diascopic illuminator base, use the transparent glass plate.

### Vertical photo tube

Accepts photomicrographic attachment MICROFLEX or TV adapter.

### MICROFLEX body clamp screw

### Optical-path change-over ring

Turning the ring in the direction "BINO" brings the illumination light flux to the observation tube, and in the direction "PHOTO", to the vertical photo tube.

### Zooming knob

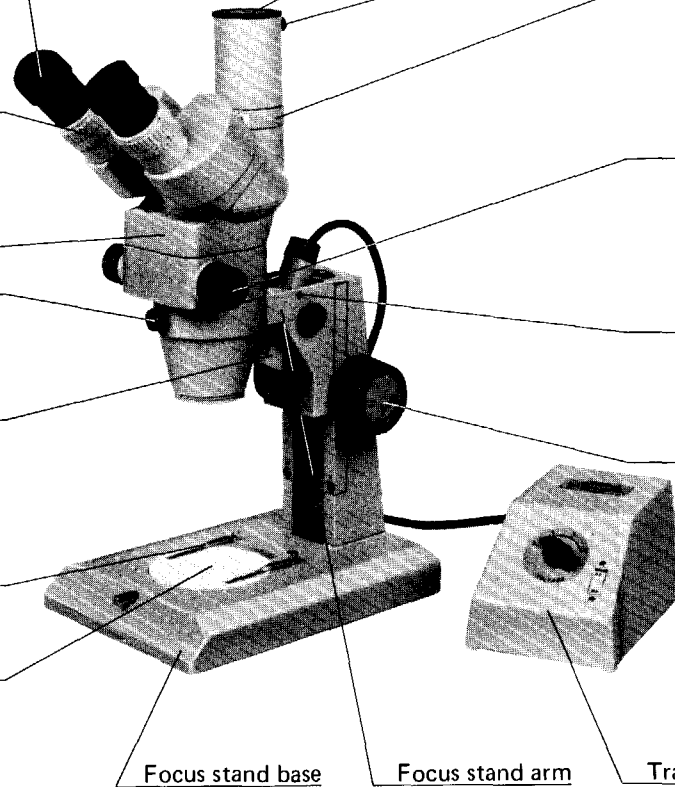
Rotation of the zooming knob changes the magnifying power of the objective continuously from 1X to 6.3X, the powers being indicated on the knob.

### Flexible arm attaching screws

Provided on both the right and left sides of the arm and used to attach the flexible arm.

### Focus knobs

Rotation of the knobs moves the main body of microscope up or down. For adjusting the rotation tightness of the knobs, twist both knobs each other, i.e. turning the knobs in the direction of arrow "TENSION" marked on each knob increases the tightness.



## MAGNIFICATION TABLE

Objective	Auxiliary objectives	Working distance (mm)	Eyepieces							
			10X Field number 23		15X Field number 14		20X Field Number 12		33X Field number 5	
			Total magnification	Real field (mm)	Total magnification	Real field (mm)	Total magnification	Real field (mm)	Total magnification	Real field (mm)
1~6.3X	—	100	10~63X	23~3.7	15~94.5X	14~2.2	20~126X	12~1.9	33~207.9X	5~0.8
	0.5X	181	5~31.5X	46~7.3	7.5~47.2X	28~4.4	10~63X	24~3.8	16.5~103.9X	10~1.6
	2X	32.7	20~126X	11.5~1.8	30~189X	7~1.1	40~252X	6~0.9	66~415.8X	2.5~0.4

## PHOTOMICROGRAPHY

For photomicrography, we recommend to use Nikon Photomicrographic attachment MICROFLEX FX series.

### 1. Attaching

Insert CF PL projection lens into the sleeve of the vertical photo tube. (Fig. 1)

2.5 $\times$ , 4 $\times$  and 5 $\times$  CF PL projection lenses are usable. (2 $\times$  lens cannot be used.)

Insert MICROFLEX main body straightly into the vertical photo tube, and clamp it firmly. (Fig. 2)

### 2. Illumination

Adjust the illuminator so as to obtain the uniform illumination.

### 3. Focusing

Be sure to use the ocular finder of the MICROFLEX for focusing.

Also use the focusing magnifier. (Fig. 3)

### 4. Others

For details, refer to the Instructions for MICROFLEX.

We recommend to use the vibration-proof table and fine focusing stage.

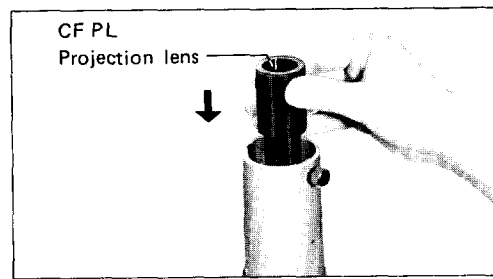


Fig. 1

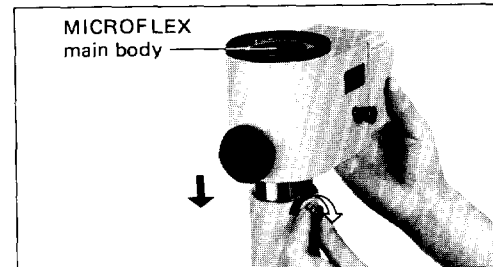


Fig. 2

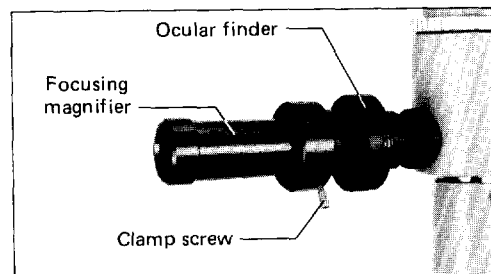


Fig. 3

## TV observation

Nikon TV equipment for Microscope is available for use. Attach the necessary adapter and lens the same way as attaching the MICROFLEX.

Refer to the System Diagram on Catalogue.

## ACCESSORIES

<b>Eyepieces:</b>	20× and 33×
<b>Auxiliary objectives:</b>	0.27×, 0.4×, 0.5×, 0.7×, 1.5× and 2.0× (with 0.5× objective, use Extension ring)
<b>Universal illuminator</b>	
<b>Fluorescent ring illuminator</b>	
<b>Fiber optics illuminators:</b>	Bifurcated and Ring illuminators
<b>Diascopic illuminator base</b>	
<b>Episcopic illuminator:</b>	Halogen lamp 6V–10W (G.E. No. 787)
<b>Flexible supporting arm</b>	
<b>Universal arm</b>	
<b>Universal stand:</b>	Table stand and Table clamp stand
<b>Fine focusing stage</b>	
<b>MICROFLEX FX series:</b>	UFX-DX, HFX-DX, AFX-DX, PFX
<b>TV Equipment for Microscope</b>	

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Printed in Japan

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