

# OMÂNO

## *Zoom Stereo Microscope Manual*

**OM99 and OM99T**



**Please read this manual thoroughly before use.**

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## **SAFETY**

- Disassembling the microscope may cause electric shock or damage to the instrument. Do **not** disassemble any part of the microscope unless noted in this instruction manual. If you run into a problem, please contact the repairs department at The Microscope Store, LLC, at (877) 409-3556 or send an e-mail to support@microscope.com.
- The microscope should be kept at temperatures between 0°C-40°C/32°F-104°F, with a maximum humidity of 70 percent.
- Do not place the microscope in direct sunlight or under direct indoor light. Too much light can influence the image quality of the specimen.
- Do not place the instrument in a dusty environment. When not in use, cover the microscope with a dust cover.
- Keep the instrument on a level and sturdy surface.
- Carry the microscope with two hands, one hand underneath the base unit and the other grasping the vertical pole of the microscope.

## **PARTS LIST**

- OM99 or OM99T microscope body
- Two (2) eyepieces: Widefield 10x
- Eyecups
- Focusing Block
- Trinocular Adapter (OM99T only)

## **FEATURES**

The OM99 series zoom stereo microscopes are binocular stereo-microscopes that can magnify a tiny object to an emerging stereo image. They have a comparatively long working distance, widefield, high image quality and an instant zoom. The zoom range of 0.65x – 4.5x can be changed with the rotating knob. The microscope can be equipped with multifunctional illuminating devices, optional Barlow lenses, optional eyepieces, cameras, many base support systems and a TV camera according to users' needs.

The microscopes are easy to operate and convenient to use. They can be used for study, biological anatomy in medical and hygienic work, cultural education, scientific research, agriculture, forestry and geology. They can also be used for installing and repairing tiny precise parts in the electronics and instrument industries.

## **ASSEMBLY**

- 1 Remove microscope from packaging, and remove the eyepiece tube caps and dust protector from bottom of the microscope.
- 2 Place microscope body in supporting base and secure.
- 3 Place the eyepieces into the eyetubes.

## **OPERATION**

### **1) Adjusting the Interpupillary Distance**

Pull the right and left eyepiece tubes slightly with both hands to change the [interpupillary](#) distance so as to be suitable for observation with both eyes. (Fig. 1)

### **2) Diopter Adjustment**

Set the diopter of the left and right eyepieces by turning the diopter setting rings that are on the left and right eyepieces and setting them according to the myopia (hyperopia) degree of the user. (Fig.2)

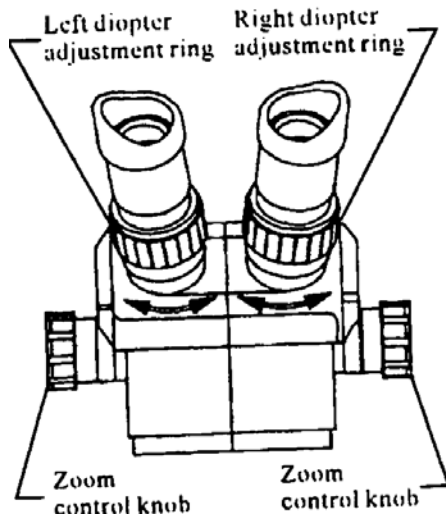


Figure 1

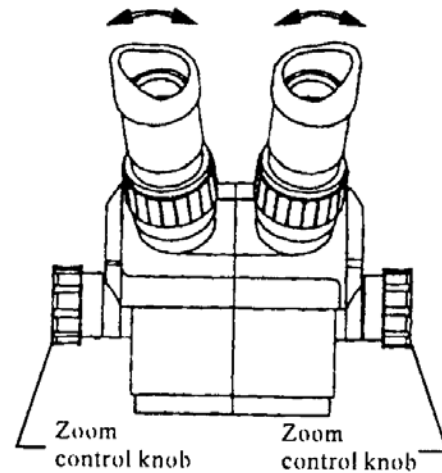


Figure 2

### 3) Adjust the Magnification

By turning the rotating knob for magnification an instant change of magnification can be made, with the ability to read the magnification of the zoom objective at the magnification marks. The user can change the eyepiece or add large auxiliary objectives, if the original eyepieces are not suitable.

### 4) Adjust the Light Source

A reflecting illumination from an up-light source, transmitted illumination from a down-light source, or illuminations from both light sources can be used. Turn the luminance-adjusting knob to adjust the intensity.

## STORAGE

1) Place the microscope in a cool, dry place that is free from dust, acid, alkali, steam, etc.

2) Put the eyepieces and auxiliary large objectives into the lens box. Cover the eyepiece tube and objectives with a dust-proof cover. Place the microscope into a cabinet or cover it when it is not being used.

3) Switch off the power for the lighting system after using the instrument. Pull out the plug when the instrument will not be in use for a long period of time.

### **Usage of the Trinocular (99T only)**

1) Remove the lens of the camera, and mount the photographic instrument main body onto the camera.

2) Select a suitable photographic eyepiece and put it into the intermediate tube, then secure the intermediate tube to the adjusted GL main body.

3) Mount the camera and photographic instrument main body onto the trinocular tube.

4) Select an appropriate magnification and push the porroprism-pulling pole in. Adjust the diopter setting ring to the intersection point, while viewing through the photographic eyepiece.

5) Place the part of the subject to be photographed on the intersection point and adjust the focus of the microscope to make the image clear.

6) Select the appropriate photographing parameters. The following shutter speed is recommended if our illuminator is used: with 210 film, the reflecting illumination time is about 1 to 2 seconds, and transmitting illumination time is about 1/30 second to 1/60 second. The user can amend the parameters after the test photograph.

7) When exposure time is from 1-1/1000 second, the shutter of the camera should be used. To do this open the shutter of photographic instrument main body and lock the shutter line.

8) It is best to use the shutter of the photographic unit main body when door B is being used. Open the shutter of the camera and lock the shutter line.

### **Usage of CCD and Digital Camera**

- 1) Mount the specially designed CCD connection or digital camera connection onto the CCD or digital camera.
- 2) Mount the CCD or digital camera onto the adjusted GL-99 main body.
- 3) Insert the plug into the electrical outlet and then push the porroprism- pulling pole in. If it is needed, the CCD, a digital camera with a television set, a video recorder or a computer can be connected.
- 4) Adjust the focus of the microscope to make the image clear.
- 5) The image of the subject can be seen on the screen. The luminance, contrast and color can be adjusted with the CCD or digital camera.

### **Adjustment and Operation of Support Base**

There are many support base assemblies for the OM99 and the OM99T. Please consult the support base instruction manual for their use and care.

## **MAINTENANCE**

The OM99 and the OM99T should not require any internal maintenance for the life of the unit.

- 1) When not in use:
  - a. Always cover the microscope with the dust cover.
  - b. Store in a dry place.
  - c. In humid or moist environments, it is advisable to store the microscope in a waterproof container with a drying agent.
- 2) Do not touch the optical lens with bare fingers.
- 3) Dust should be cleaned off with pressurized air or with a soft brush.
- 4) Clean smudges, fingerprints, oils, etc., from the lens with clean lens paper or a soft clean cloth moistened with a small amount of the following cleaning solution:
  - 8 oz. of Denatured Alcohol
  - 8 oz. of Distilled Water
  - 2 drops of dish washing liquid

## **SPECIFICATIONS**

- 1) This series of microscope is the zoom stereo-microscope with a magnification range of 0.65x to 4.5x.
- 2) The working distance is 100mm.
- 3) The object field diameters are as follows:

	0.65 <sup>x</sup>	1 <sup>x</sup>	2 <sup>x</sup>	3 <sup>x</sup>	4.5 <sup>x</sup>
10 <sup>x</sup>	34	22	11	7.3	4.9

4) The focus adjustment range is not smaller than 135mm.