BIOLOGICAL MICROSCOPE

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Instruction Manual

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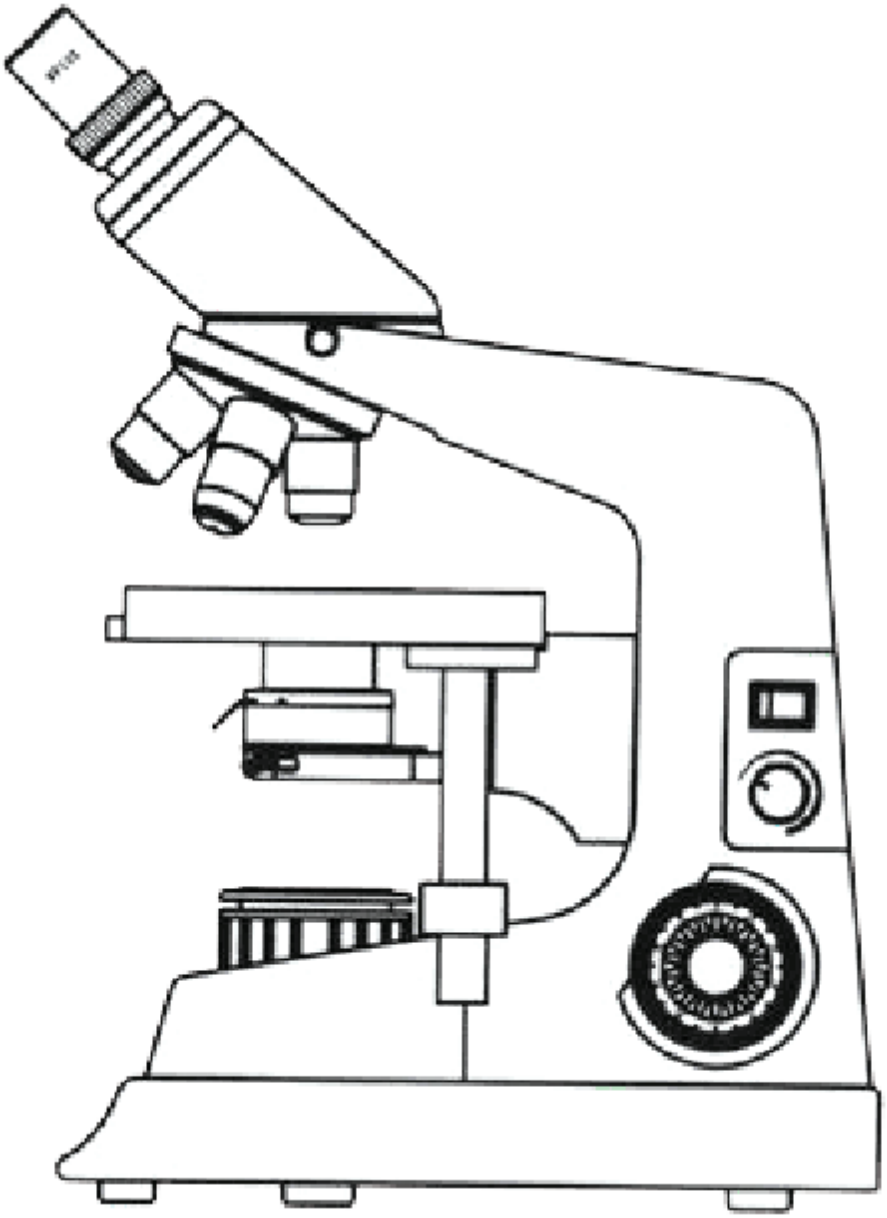
LBM-100 D

"Please read this manual carefully before using the instrument"

Labnics Equipment

This information manual will identify in a general way, the various parts and functions of 1000X Biological microscope. It is intended to familiarize the first time user with their instrument.

These microscope are ruggedly built for classroom and laboratory use. The instruments feature fully-coated achromatic optics and international standard DIN objectives and eyepieces. Optically, they are excellent systems with good resolution, centering, and paragon features. Mechanical movements are smooth and positive. Mechanical stage, and rack stop serve to minimize damage.



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CHAPTER 1. SPECIFICATIONS:-

- **Magnification:** 40X, 100X, 400X, 1000X.
- **Viewing Angle:** Compensation free binocular head inclined at 45°, 360°rotatable.
- **Eyepiece:** WF10X Φ18mm.
- **Interpupil Distance:** 55mm-75mm
- **Illumination:** Built-in 85V-230V, 6V/30W Halogen tungsten lamp and adjustable brightness.
- **Condenser:** Abbe N.A.1.25 condenser with iris diaphragm & filter.
- **Stage:** Double layer mechanical stage.
- **Stage Size:** 140mm X 140mm.
- **Moving Range:** 75mm X 50mm.
- **Objective:** 4X, 10X, 40X (S), 100X (S, Oil).
- **Focusing:** Coaxial coarse and fine focus adjustment.
- **Fine focusing scale value:** 0.002mm
- **Catalog No.:** 39480104

CHAPTER 2. SET-UP :-

2.1 Getting the Microscope Ready For Use:-

First, familiarize yourself both visually and physically with the mechanical parts of your microscope. Gently operate each part by hand (no tools required) to see how it behaves and what result it produces.

2.2 Mounting the Objective and Eyepiece:-

- To put the eyepiece in place simply slide it into the eyepiece tube. The objective lenses screw into the rotating nosepiece. If the four objectives are already mounted in the nosepiece, check to see if they are tightly held in their place. To do this, grip the knurled ring on the objectives with your fingers and turn it to the right. Do not tighten them with tools, they need only to be **"finger tight"**. With all four objectives mounted in the nosepiece the entire nosepiece can be rotated by hand. As you rotate the nosepiece you will notice that each objective lens has a "click stop" which stops and holds the objective lens being used in its proper position relative to the optical axis of the microscope.

2.3 Illumination:-

- In order to provide illumination for your new microscope, simple plug the power cord into an electrical socket and switch your microscope **"ON"**, and you are ready to begin your work.

CHAPTER 3. OPERATION:-

Once you have set up your microscope for use, follow the steps below to prepare the specimen to be studied for viewing:-

- Place the slide to be viewed onto the stage so that the stage clips hold it firmly in place.
- Position the slide so that the portion of the specimen that you wish to observe is below the 4X objective.
- Slowly rotate the coarse focus knob until the stage is approximately 1/8" from the objective, make sure not to let the slide come in contact with the objective, to avoid damage to the eight or both which may occur.
- When using the coarse focus knob, start with the objective as close to the stage as possible and focus from the bottom up. This will help you to prevent any contact between the objective and the stage .
- Adjust the iris diaphragm attached to the condenser to control the angle of light illumination on the specimen.
- To change the magnification, first draw the objective to the position furthest from the stage. Then turn the objective turret until the desired objective is in place. Return the objective to the point closest to the stage and focus once again backing away from the stage.
- To determine the total magnification, multiply the magnification of the objective with that of the eyepiece. (e.g., **10X objective X 10X eyepiece = 100X** magnification).
- When using the objective **100X** to observe, lift condenser to the highest position, then drop a little **cedar oil** on the surface of 100X objective and slide, so as to keep full of cedar oil between the objective and the slide.(clear the cedar oil with **xylene** after observing).

CHAPTER 4. MAINTENANCE:-

- Keep the instrument in dry and cool place and keep it away from acid or alkali.
- Put the dust cover over it, when not used.
- Keep lenses clean, remove the dust by soft brush.

CHAPTER 5. SERVICE REPORT

Customer's Address : _____ Tel.No.:

Fax No.:

Weekly Off.:

Contact Person / Designation : Dept.:

Date	Time		System Configuration	Model	Serial No.
	From	To			

Date : SR. No.

Status : OK ❑ Not OK ❑

Installation ❑ Warranty ❑

Demonstration ❑

Maintenance ❑ Contract ❑

Repairs ❑

Application ❑ Billable ❑

Calibration ❑

Validation ❑ Courtesy ❑

Nature of Problem :

Observation & Action Taken :

Customer's Remarks :

Parts Replaced :

Parts Recommended / Action Required : Yes ❑ No ❑ Requisition Number :

Service Engineer's Name & Signature	Customer's Name, Signature, Date & Stamp

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