

User Manual

Binocular Stereo Microscope

Model G322B



MicroscopeNet.com

Table of Contents

i. Caution.....	1
ii. Care and Maintenance.....	1
1. Component Illustration.....	2
2. Operation	3
3. Specifications.....	4
4. Troubleshooting Guide.....	5

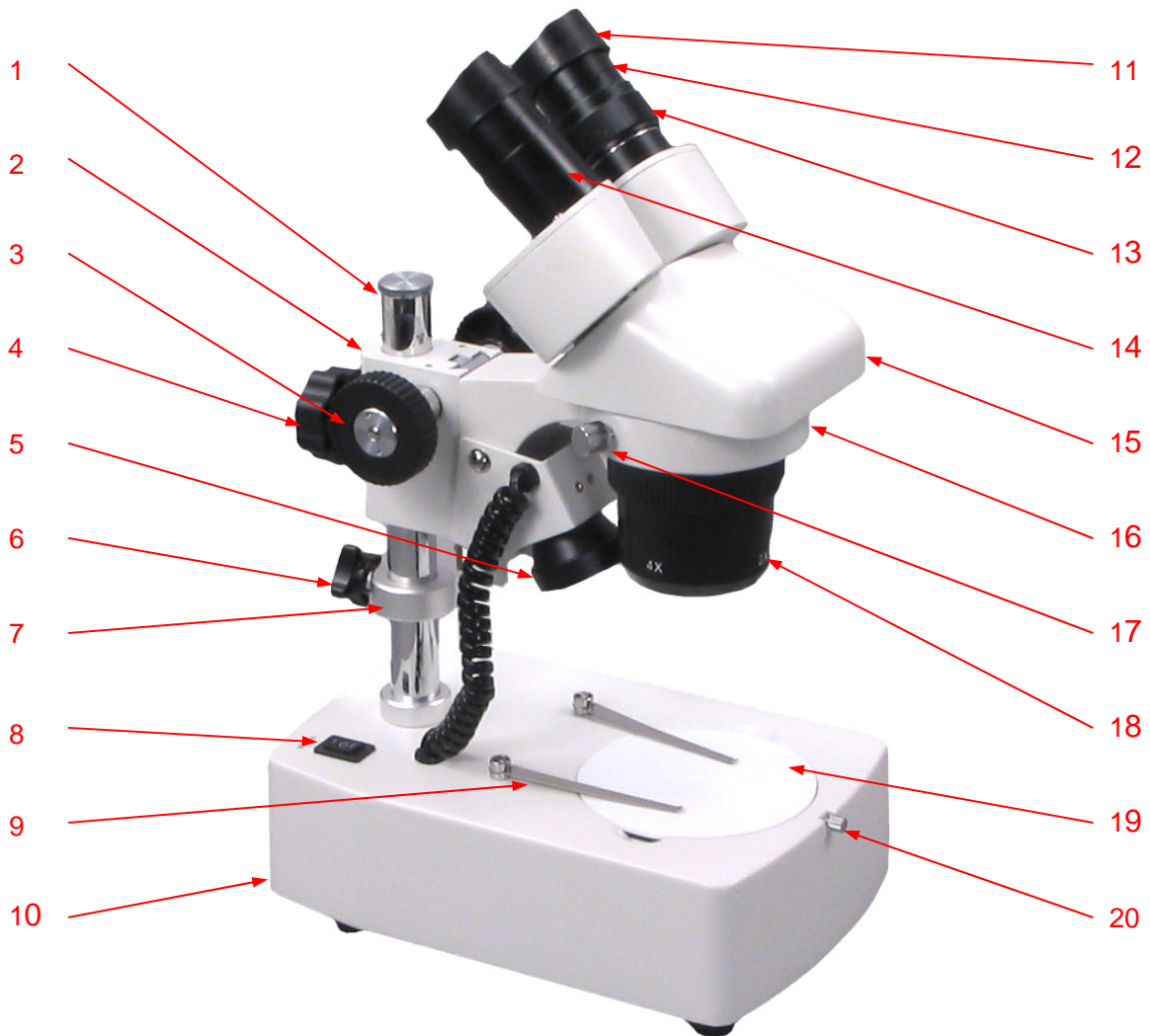
i. Caution

1. Find the “UP” sign and place the Styrofoam container on your table or bench so that the arrow is pointing upward. Open the shipping carton carefully to prevent any accessory, like eyepieces, from dropping and being damaged.
2. Do not discard the molded Styrofoam container. The container should be retained should the microscope ever requires reshipment.
3. Keep the instrument out of direct sunlight, high temperature or humidity, and dusty environments. Ensure that the microscope is located on a smooth, level and firm surface.

ii. Care and Maintenance

1. Do not attempt to disassemble any component including eyepieces, objectives or focusing mechanism.
2. Keep the instrument clean; remove dirt and debris regularly. Accumulated dirt on metal surfaces should be cleaned with a damp cloth. More persistent dirt should be removed using a mild soap solution. **Do not use organic solvents for cleansing.**
3. The outer surface of the optics should be inspected and cleaned periodically using an air stream from an air bulb. If dirt remains on the optical surface, use a soft cloth or cotton swab dampened with a lens cleaning solution (available at camera stores). All optical lenses should be swabbed using a circular motion. A small amount of absorbent cotton wound on the end of a tapered stick makes a useful tool for cleaning recessed optical surfaces. Avoid using an excessive amount of solvents as this may cause problems with optical coatings or cemented optics or the flowing solvent may pick up grease making cleaning more difficult.
4. Store the instrument in a cool, dry environment. Cover the microscope with the dust cover when not in use.

1 Components Illustration



- | | | | | | |
|---|--------------------|----|-----------------|----|--------------|
| 1 | Stand Post | 9 | Stage Clip | 17 | Holding Lock |
| 2 | Focusing Mechanism | 10 | Microscope Base | 18 | Objectives |
| 3 | Focusing Knob | 11 | Eyepiece Shield | 19 | Stage Plate |
| 4 | Lock Knob | 12 | Eyepiece | 20 | Stage Lock |
| 5 | Upper Light | 13 | Diopter Ring | | |
| 6 | Position Lock | 14 | Eyepiece Tube | | |
| 7 | Position Collar | 15 | Viewing Head | | |
| 8 | Power/Light Switch | 16 | Holding Ring | | |

2 Operation

2.1 Change the stage plate

- 1) Loosen the stage lock screw (20) at the front of base.
- 2) Take off the glass plate and put on the white/black plate (or vice versa).
- 3) Tighten the set screw.

2.2 Choose the light

- 1) Plug in the power cord to a power outlet.
- 2) Press the power/light switch button (8) to the desired position:
I – Lower light
II – Upper light
- 3) Turn the switch to the “O” position to turn off the light.



Fig.1

2.3 Tension adjustment of focusing knobs

The tension adjustment ring is indicated in the Fig. 2.
Set the knob tension at the level that ensure no unintentional movement and easy to operate.



Fig.2

2.4 Place the specimen

- 1) Put the specimen in the center of the stage plate (19), and hold the specimen with the stage clips (9) if necessary.
- 2) Turn on the upper or lower light.

2.5 Focusing

- 1) Turn the rotating objectives (18) to put the desired objectives (2X or 4X) in the light path.
- 2) Turn the focusing knob (3) until the specimen is in focus.

2.6 Adjusting interpupillary distance

While observing with both eyes, hold the left and right eyepiece tubes (14) and swing inwards or outwards. The interpupillary distance is correct when the left and right fields of view converge completely into one image.



Fig.3

2.7 Adjusting eyepiece diopter

- 1) Using your right eye only, observe your specimen through the right eyepiece and bring it into focus by adjusting the focus knob.
- 2) Then observe the specimen with your left eye only through the left eyepiece. If the specimen is not in focus, rotate the diopter ring until a sharp image is obtained.

3 Specifications

Model	G322B
Total Magnification	20X, 40X, 80X
Viewing Head	Binocular, inclined 45°, swiveling 360° Adjustable Interpupillary distance 55 ~ 75mm (2-3/16" ~ 2-15/16") Adjustable diopter on left eyepiece tube ±5dp
Eyepieces	Locked in 1 pair of WF10X, 1 pair of WF20X
Objectives	Rotational 2X & 4X
Focusing Mechanism	Rack and pinion, focusing knobs on both sides Tension adjustable (tool free)
Working Distance	80 mm (3-5/32")
Field of View	10mm with WF10X eyepieces and 2X objectives
Stage Plate	Frosted glass plate: 95mm (3-3/4") in diameter White/black plastic plate: 95mm (3-3/4") in diameter
Illumination	Incident (upper): LED light Transmitted (lower): LED light LED light lifetime: 100,000 hours Switch: upper only, Off, lower only
Power Supply	A/C power adapter, input 110V, 50/60Hz, output 5V/300mA
Dimension	24cm x 15cm x 36cm (9-7/16" x 5-7/8" x 14-1/8")
Net weight	3.6 kg (8 lb)

4 Troubleshooting Guide

Symptom	Cause	Remedy
Totally dark in the view field	The cover of objectives is still on	Take off the cover of objectives
Darkness at the periphery or uneven brightness in the field of view	Rotating objectives are not in click stop position	Turn the objectives to click-stop position
Stains or dust on the field of view	Stains or dust on the eyepieces or objectives	Clean the lens with a camera cleaning kit
	Stains or dust on the specimen	Clean the specimen
Can not focus	The focus block/objectives is too far away or too close to the specimen and out of the range of focus stroke	Adjust the height of the focusing mechanism so that the distance between the objectives and specimen is about 80mm.
Image moves while focusing	Specimen rises from stage surface	Secure the specimen
	Rotating objectives are not in the click-stop position	Turn the objectives to the click-stop position
Slippage of focus when using the focusing knob	The focusing knob tension is too loose	Tighten appropriately
Lamp does not light when switched on	No electrical power	Check power cord connection
	Lamp bulb burnt out	Replace bulb
	Fuse blown out	Replace fuse