

User Manual

Binocular Stereo Microscope

Model G321L8W



MicroscopeNet.com

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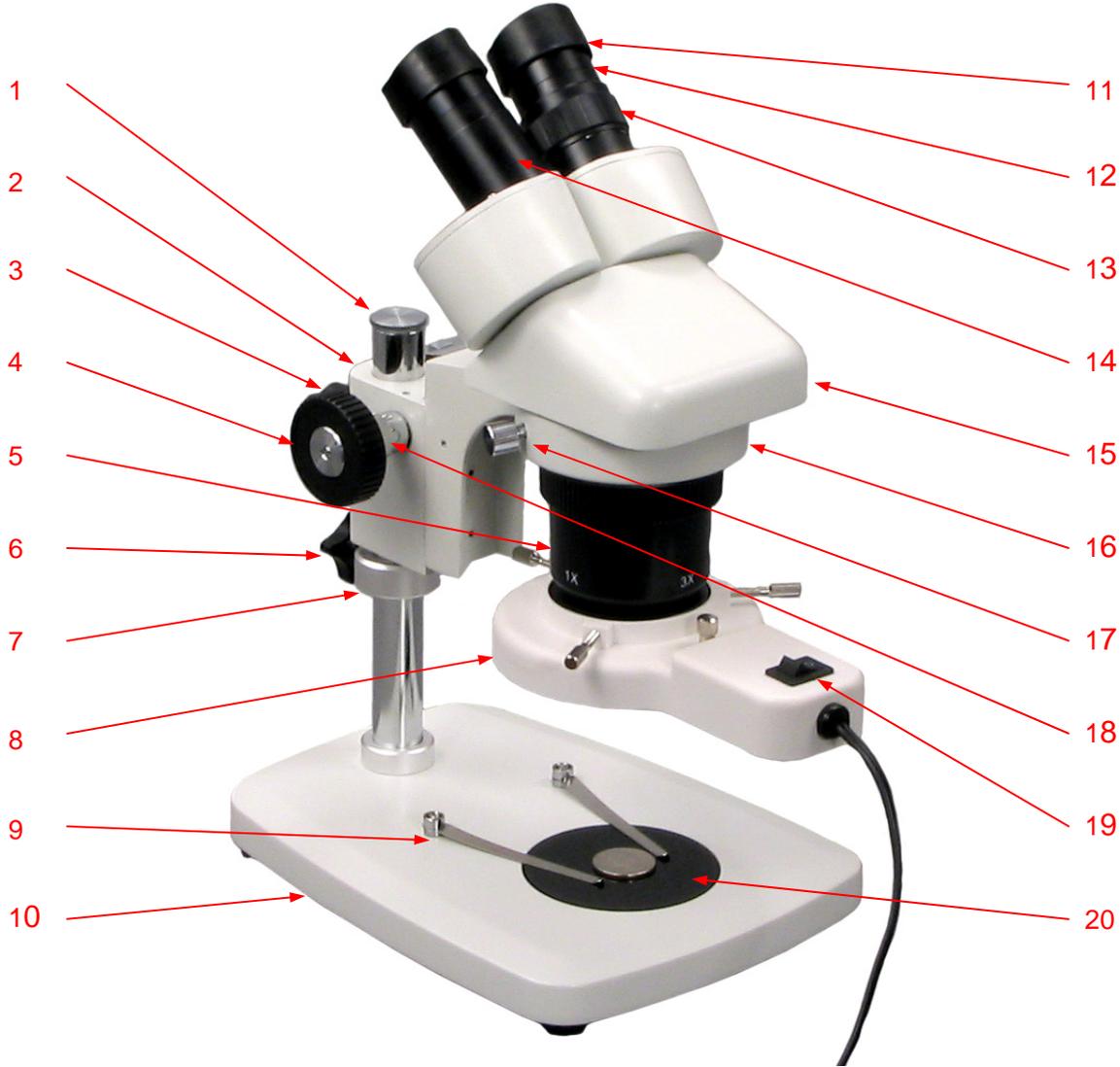
i. Caution

1. Find the “UP” sign and place the Styrofoam container on your table or bench so that the arrow upward. Open the shipping carton carefully to prevent any accessory items, like the 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 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 Tension Adjust Ring |
| 3 Lock Knob | 11 Eyepiece Shield | 19 Light Switch Button |
| 4 Focusing Knob | 12 Eyepiece | 20 Stage Plate |
| 5 Objectives | 13 Diopter Ring | |
| 6 Position Lock | 14 Eyepiece Tube | |
| 7 Position Collar | 15 Viewing Head | |
| 8 Fluorescent Ring Light | 16 Holding Ring | |

2 Assembly

2.1 Mount the 0.5X auxiliary objective

- 1) Take off the objective cover.
- 2) Turn the auxiliary lens on.

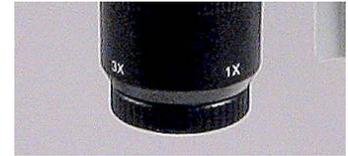


Fig.1

2.2 Mount the fluorescent ring light

- 1) Take off the objective cover.
- 2) Screw on the 48mm adapter or instead, screw on the 0.5X auxiliary objective lens if required.
- 3) Holding the ring light with the tube-side facing down, fit the auxiliary lens or ring light adapter into the hole of ring light.
- 4) Tighten the 3 screws.



Fig.2

3 Operation

3.1 Turn the light on

- 1) Mount the ring light (8) on the microscope.
- 2) Insert the ring light plug to a power outlet.
- 3) Press on the power switch button (19).

3.2 Tension adjustment of focusing knobs

Turn the tension ring (18) at the level that ensure no unintentional movement and easy to operate.

3.3 Place the specimen

- 1) Put the specimen in the center of the stage plate (20).
- 2) Hold the specimen with the stage clips (9) if necessary.

3.4 Focusing

- 1) Turn the rotating objectives (5) to put the desired objectives (1X or 3X) in the light path.
- 2) Turn the focusing knob (4) until the specimen is in focus.

3.5 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

3.6 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.

4 Specifications

Model	G321L8W
Total Magnification	5X, 10X, 15X, 20X, 30X, 60X
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 1X & 3X
Focusing Mechanism	Rack and pinion, focusing knobs on both sides Tension adjustable (tool free)
Working Distance	80 mm (3-5/32") 120 mm (4-3/4") with 0.5X objective lens
Field of View	3.5 mm ~ 37.5 mm
Stage Plate	White/black plastic plate: 75mm (2-15/16") in diameter
Illumination	Fluorescent ring light, 8W Color Temperature: 6500 K
Power Supply	110V/60Hz for ring light
Dimension	23cm x 17cm x 32cm (9" x 6-3/4" x 12-1/2")
Net weight	3.6 kg (8 lb)

5 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 focusing mechanism (2) so that the distance between the objectives and specimen is about 80mm or 120mm when 0.5X lens applied.
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
Light does not light when switched on	No electrical power	Check the power outlet Check the cord connection
	Light tube burnt out	Replace the light tube