

User Manual

Binocular Stereo Microscope

Model G322A



MicroscopeNet.com

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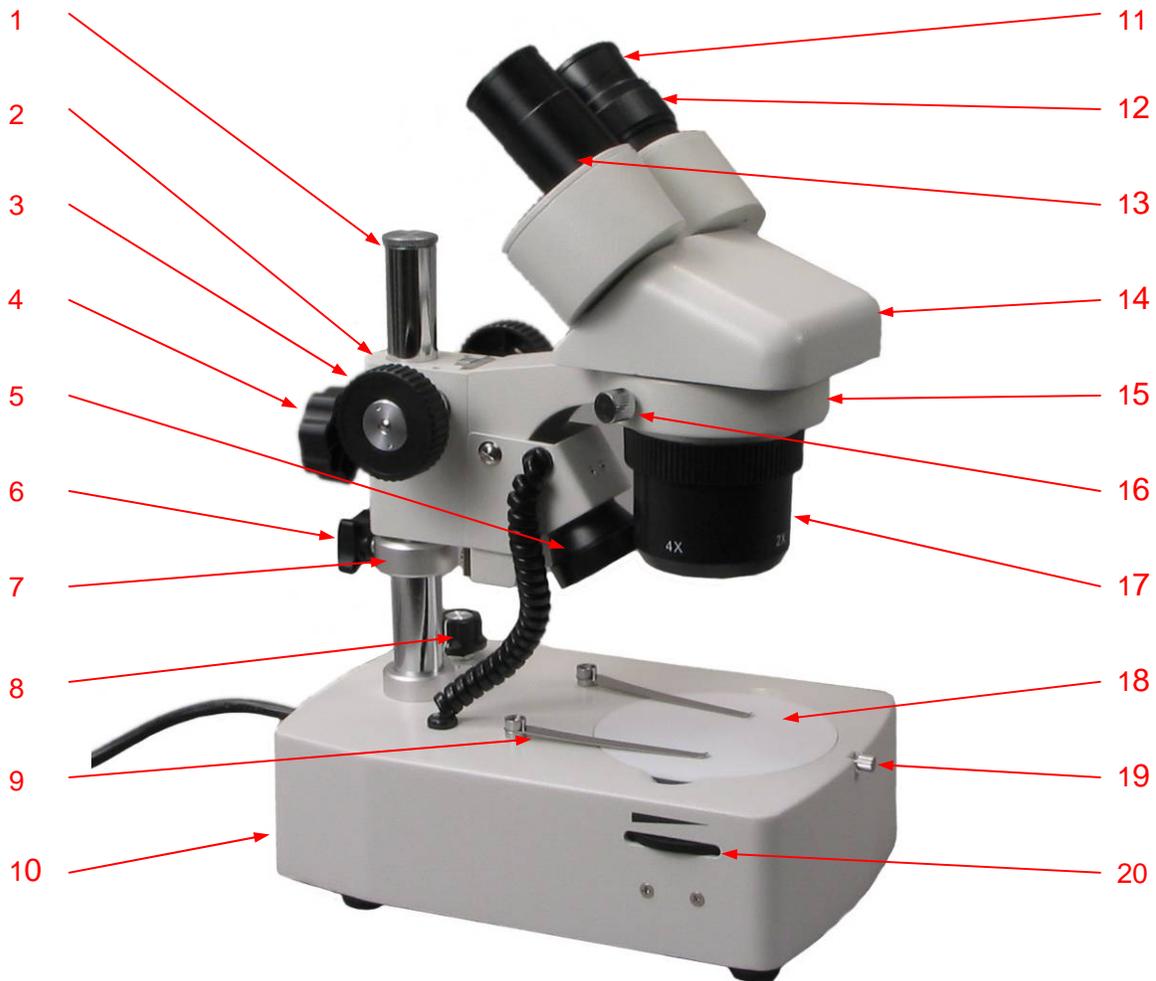
i. Caution

1. Find the “UP” sign and place the Styrofoam container on your table and 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 assembly.
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 | Objectives |
| 2 | Focusing Mechanism | 10 | Microscope Base | 18 | Stage Plate |
| 3 | Focusing Knob | 11 | Eyepiece | 19 | Stage Lock |
| 4 | Lock Knob | 12 | Diopter Ring | 20 | Light Intensity Dial |
| 5 | Upper Light | 13 | Eyepiece Tube | | |
| 6 | Position Lock | 14 | Viewing Head | | |
| 7 | Position Collar | 15 | Holding Ring | | |
| 8 | Power Switch | 16 | Holding Lock | | |

2 Operation

2.1 Change the stage plate

- 1) Loosen the stage lock screw (19) 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) Turn the power switch dial (8) to the desired position:
 - I – Upper light
 - II – Lower light
 - III – Both light
- 3) Turn the switch to the OFF 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 (18), and hold the specimen with the stage clips (9) if necessary.
- 2) Turn on the upper or bottom light.

2.5 Focusing

- 1) Turn the rotating objectives (17) 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 (13) 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 | G322A |
| 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 ± 5 dp |
| Eyepieces | 1 pair of WF10X 1 pair of WF20X |
| Objectives | Rotational 2X & 4X |
| Focusing Mechanism | Rack and pinion, focusing knobs on both sides Tension adjustable |
| 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 | Variable intensity Incident (upper): 12V/10W halogen Transmitted (lower): 12V/10W halogen |
| Power Supply | 110V/60Hz |
| Dimension | 24cm x 15cm x 36cm (9-7/16" x 5-7/8" x 14-1/8") |
| Net weight | 4.4kg (9lb 10oz) |

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 focusing mechanism (2) 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 |