

User Manual

Boom Stand

Binocular Stereo Microscope

Model G22C



MicroscopeNet.com

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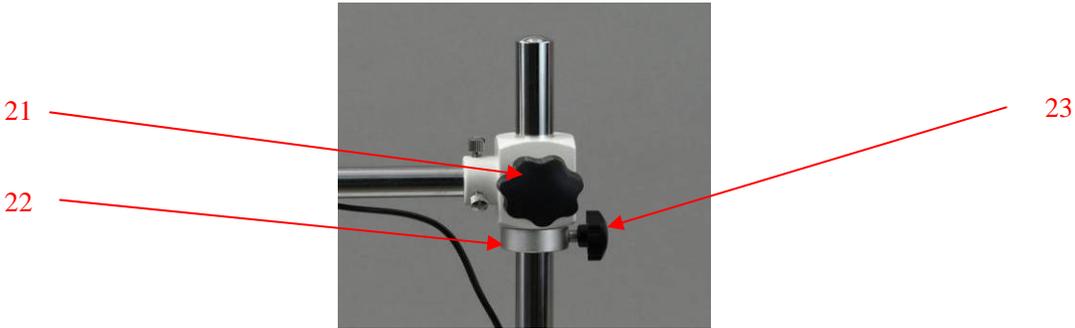
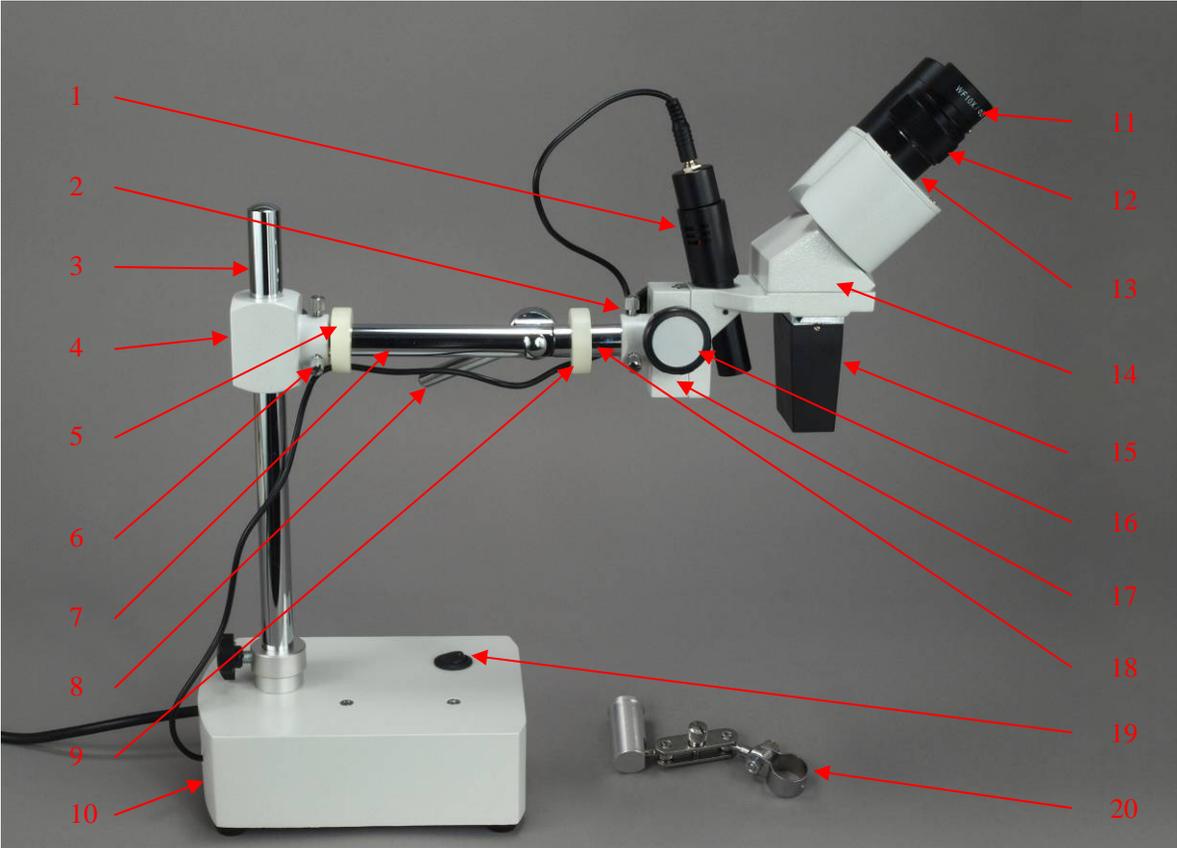
i. Caution

1. Find the “UP” sign and place the Styrofoam container on the side that makes the arrow upward. Open the shipping carton carefully to prevent any accessory, i.e. objectives or 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.
4. The boom stand is heavy. Put it on a sturdy and level surface. Be careful during assembly, operating, or moving it.
5. If any specimen solutions or other liquids splash onto the stage, objective or any other component, turn off the power and disconnect the power cord immediately and wipe up the spillage. Otherwise, the instrument may be damaged.

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

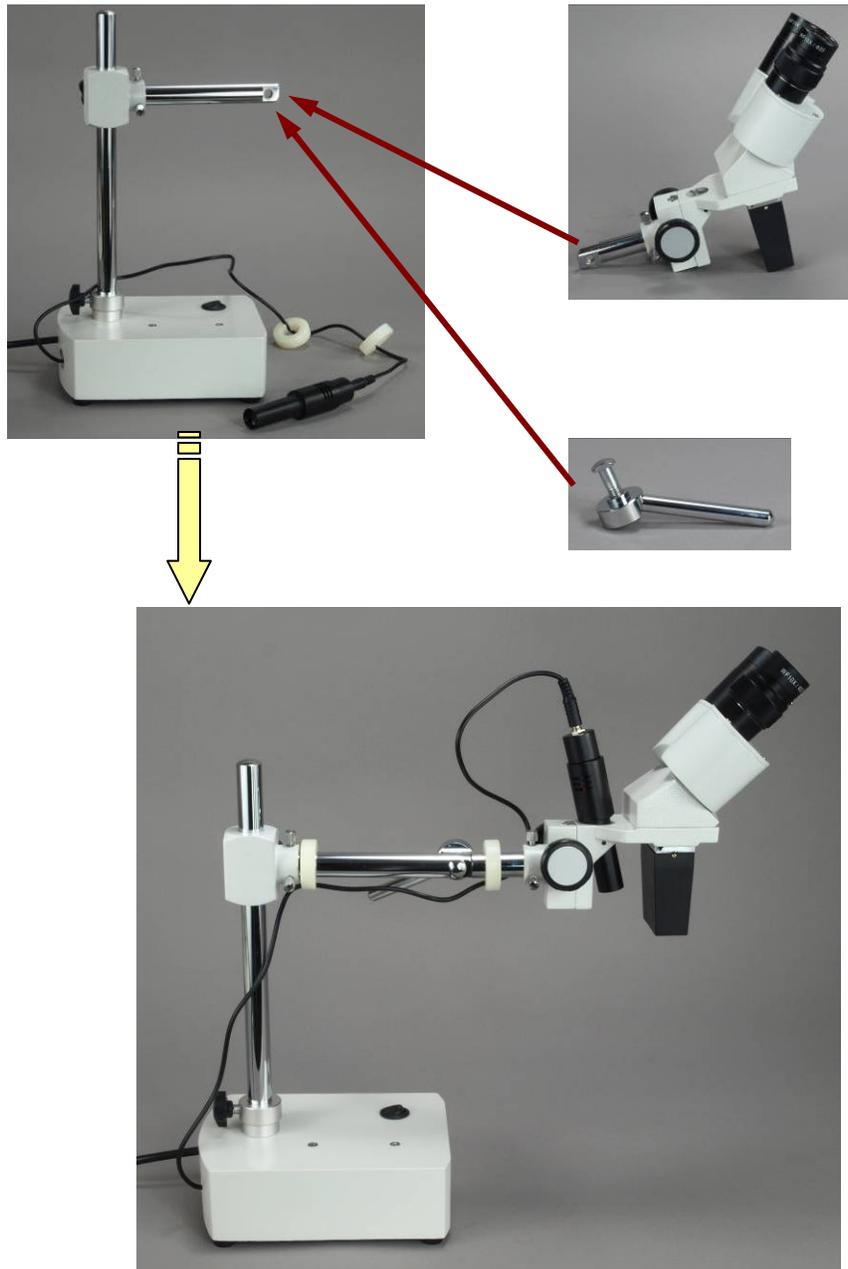


- | | |
|---------------------------------|-------------------------------------------|
| 1. LED Lamp | 13. Eyepiece Tube |
| 2. Focusing Assembly Lock Screw | 14. Binocular Head |
| 3. Stand Post | 15. Objective Housing (objectives inside) |
| 4. Vertical Position Block | 16. Focus Knob |
| 5. Cord Holder 1 | 17. Focusing Assembly |
| 6. Horizontal Arm Lock | 18. Horizontal Extension Bar |
| 7. Horizontal Arm | 19. Power Switch |
| 8. Connecting Lever | 20. Alternative Flexible Lamp Holder |
| 9. Cord Holder 2 | 21. Vertical Position Block Lock Knob |
| 10. Base | 22. Position Collar |
| 11. Eyepiece | 23. Position Collar Knob |
| 12. Diopter Adjusting Ring | |

2 Installation

2.1 Mount the Binocular Head onto the Boom Stand

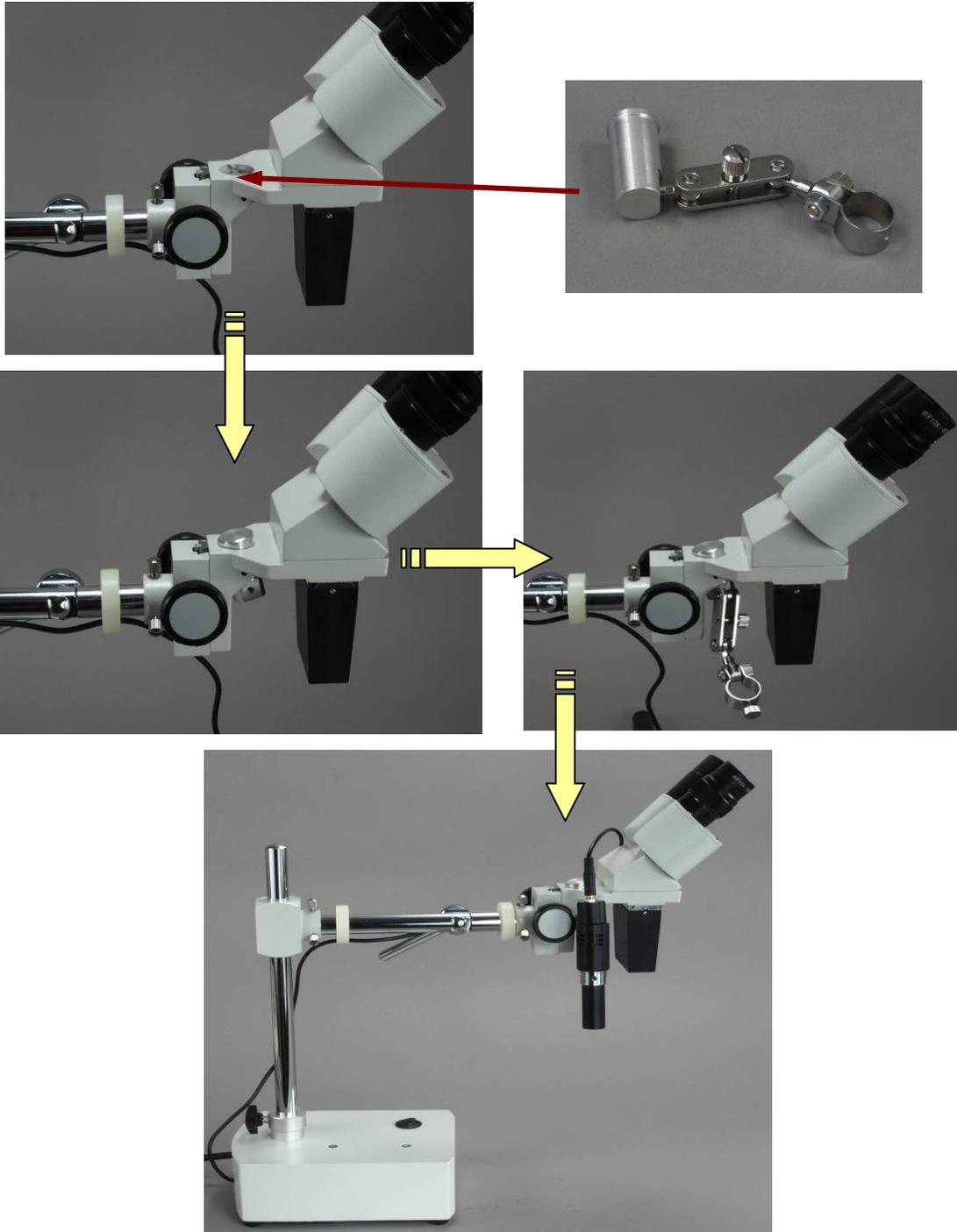
- 1) Loosen the bolt of the **connecting lever**.
- 2) Put **cord holder 1** on the **horizontal arm** and **cord holder 2** on the **focusing assembly arm**.
- 3) Put the **horizontal arm** and the **focusing assembly arm together**, insert the bolt, and screw the **connecting lever on and turn until the connection is firm**.
- 4) Insert the **LED light** into the **binocular head**.



2.2 Installation of Alternative Flexible Lamp Holder

If you want various lighting angles, you can use the **alternative flexible lamp holder**.

- 1) Loosen the cylinder of the **alternative flexible lamp holder**.
- 2) Insert the cylinder into the **binocular head**.
- 3) Screw the connector of the **alternative flexible lamp holder** on.
- 4) Insert the **LED light** into the **alternative flexible lamp holder**.
- 5) Use the screw driver to adjust the screw tension.



2.3 Installation of the Rubber Eyeguards

Put the rubber eyeguards on both top of the eyepieces shown in *Fig. 1*.



Fig.1

2.4 Change of the Eyepieces

- 1) Loosen the small set screw on each eyepiece tube.
- 2) Take off the eyepieces.
- 3) Insert the desired eyepieces into the eyepiece tube. Tighten the set screws on eyepiece tubes.

3 Operation

3.1 Adjusting the Position of the Microscope Body and Focusing

- 1) Adjust the horizontal arm to the desired height then tighten the vertical position block lock knob.
- 2) Adjust the position collar on the stand post to the desired height then tighten the position collar knob.
- 3) Adjust the binocular head to the desired angle then tighten the connecting lever.
- 4) Turn the focus knob until the specimen is in focus.



Fig.2

3.2 Tension Adjustment of Focusing Knobs

- 1) Put the wrench supplied at the position shown in *Fig. 2*.
- 2) You can tighten the tension in either direction shown in *Fig.3*. Turning in one direction will tighten the tension; turning back will loosen the tension. If you continue turning, you will tighten the tension again.
- 3) Set the knob tension at the level that ensure no unintentional movement and easy to operate.

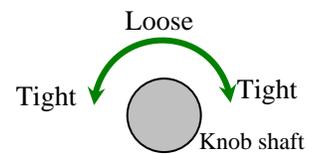


Fig.3

3.3 Adjusting Interpupillary Distance

While observing with both eyes, hold the left and right eyepiece tubes, swing inwards or outwards shown in *Fig. 4*. The interpupillary distance is correct when the left and right fields of view coincide completely with one image.



Fig.4

3.4 Adjusting Eyepiece Diopter

- 1) Using your right eye only, observe your specimen through the 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 shown in *Fig. 5* until a sharp image is obtained.



Fig.5

4 Specifications

General	
Model	G22C
Total Magnifications	10X, 20X
Viewing Head	Binocular, inclined 45°
Eyepieces	Wide field WF10X/20, WF20X/10
Objectives	1X
Field of View	Max 3/4" (20mm)
Diopter Adjustment	On left eyepiece tube, ± 5dp
Interpupillary Distance	Adjustable, 2-3/16" ~ 2-15/16" (55mm – 75mm)
Working distance	9" (230mm)
Illumination	Low heat LED light
Power Supply	110V/60Hz
Focusing	Adjusting knobs on both sides, tension adjustable Focusing stroke: 1-3/4" (43mm)
Boom Stand	Horizontal arm length: 300mm Vertical range: 200mm
Boom Stand Base	130mm x 188mm x 63mm (5-1/8" x 7-3/16" x 2-1/2")
Dimension	LxWxH 18" x 5-1/8" x 15" (46cm x 13cm x 38cm)
Net Weight	14 lb 12 oz (6.7 kg)
Package weight	17 lb (8 kg)

5 Troubleshooting

Symptom	Cause	Remedy
Dark in the view field	Power switch is off	Turn the switch on
Incomplete binocular vision	The interpupillary distance is not correct	Adjust the interpupillary distance
	Diopter is not correct	Adjust the diopter
	The right and left eyepiece are not same	Check and mount the same eyepieces
Stains or dust on the field of view	Stains or dust on the eyepieces lens or objectives lens	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 viewing head so that the distance between the objectives and specimen is about 230mm.
Image moves while focusing	Horizontal arm is not connected firmly.	Tighten the horizontal arm lock
Slippage of focus when using the focusing knob	The focusing knob tension is too loose	Tighten appropriately
The focusing knob is stiff	The focusing knob tension is too tight	Loosen the knob tension
Lamp does not light when switched on	No electrical power	Check AC power outlet Check power cord
	LED dead or circuit board malfunction	Need to service