

OPTO-EDU A22.1201-C1

OPTO-EDU A22.1201-C1 Professional Binocular Stereo Microscope User Manual

Model: A22.1201-C1 | Brand: OPTO-EDU

1. PRODUCT OVERVIEW

The OPTO-EDU A22.1201-C1 is a professional binocular stereo microscope designed for detailed inspection and manipulation of large-scale specimens. It features interchangeable wide-field eyepieces, a 1X objective, and adjustable LED lighting mounted on a flexible gooseneck. The robust boom-arm stand provides a long working distance and allows for versatile positioning of the microscope head.



Figure 1: Overall view of the OPTO-EDU A22.1201-C1 Professional Binocular Stereo Microscope, showing the binocular head, boom arm, LED light, and base.

2. SAFETY PRECAUTIONS

- Always handle the microscope with care to prevent damage to optical components.
- Ensure the microscope is placed on a stable, level surface to prevent tipping, especially when extending the boom arm.
- Disconnect the power cord before cleaning or performing any maintenance.
- Do not expose the microscope to direct sunlight or high temperatures.
- Use only the specified voltage (110V-120V) for operation.

3. SETUP AND ASSEMBLY

Follow these steps to assemble your microscope:

1. **Unpacking:** Carefully remove all components from the packaging. Verify that all parts listed in the "What's in the Box" section are present.
2. **Base and Pillar Assembly:** Place the heavy base on a stable workbench. Insert the vertical pillar into the designated hole on the base and secure it firmly using the locking screw.
3. **Boom Arm Attachment:** Slide the boom arm onto the vertical pillar. Adjust its height and secure it with the large black knob on the pillar.
4. **Microscope Head Mounting:** Attach the binocular viewing head to the end of the boom arm. Ensure it is securely fastened.
5. **Eyepiece Installation:** Gently insert the WF10x and WF20x eyepieces into the eyepiece tubes of the binocular head. Ensure they are fully seated.
6. **LED Light Attachment:** Mount the flexible gooseneck LED light onto the boom arm or pillar, ensuring it can be positioned to illuminate the specimen area. Connect the power cable to the light and then to a suitable power outlet.



Figure 2: Side view illustrating the boom arm and pillar assembly, crucial for stable microscope positioning.



Figure 3: Close-up view of the binocular head with eyepieces installed, showing the 1X objective.

4. OPERATING INSTRUCTIONS

4.1 Powering On and Lighting

Connect the microscope's power cord to a 110V-120V AC outlet. Locate the power switch for the LED light, typically on the base or near the light source, and turn it on. Adjust the flexible gooseneck to direct the light onto your specimen for optimal illumination.

4.2 Placing a Specimen

Place the specimen directly under the objective lens on the working stage. Ensure it is stable and within the working distance of the microscope.

4.3 Adjusting Magnification

The microscope comes with interchangeable WF10x and WF20x eyepieces. The 1X objective provides a fixed magnification. To change the overall magnification, swap the eyepieces as needed. The WF10x eyepieces combined with the 1X objective provide 10X magnification, and the WF20x eyepieces provide 20X magnification.

4.4 Focusing

Use the bilateral focus knobs located on the boom arm to bring the specimen into sharp focus. Rotate the knobs slowly until the image appears clear. The long working distance allows for easy manipulation of the specimen while viewing.

4.5 Interpapillary Distance Adjustment

Adjust the distance between the two eyepiece tubes to match the distance between your eyes. This ensures a comfortable and clear binocular view. Look through both eyepieces and slide them closer or further apart until you see a single, circular field of view.

4.6 Dioptic Adjustment

If one of your eyes has a different strength, use the diopter adjustment ring on one of the eyepiece tubes (usually the left one) to compensate. Focus the microscope using only the non-adjustable eyepiece (right eye), then close your right eye and adjust the diopter ring on the left eyepiece until the image is sharp for your left eye.

5. MAINTENANCE AND CARE

- **Cleaning Lenses:** Use a soft, lint-free cloth or lens paper specifically designed for optical surfaces. For stubborn smudges, a small amount of lens cleaning solution can be applied to the cloth, not directly to the lens.
- **Cleaning Body:** Wipe the microscope body with a soft, damp cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Storage:** When not in use, cover the microscope with the provided dust cover to protect it from dust and debris. Store it in a cool, dry place away from direct sunlight and extreme temperatures.
- **Moving the Microscope:** Always lift the microscope by its base. Avoid lifting it by the head or boom arm.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
No illumination from LED light.	Power cord not connected; power switch off; LED bulb failure.	Check power connection and switch. If still no light, contact support for bulb replacement.
Image is blurry or out of focus.	Incorrect focus adjustment; eyepieces not fully seated; diopter not adjusted.	Adjust focus knobs slowly. Ensure eyepieces are fully inserted. Perform dioptic adjustment.
Only one eye sees the image.	Interpapillary distance not set correctly.	Adjust the distance between the eyepieces until a single circular field of view is observed.
Microscope feels unstable or tips easily.	Boom arm extended too far; not on a level surface.	Ensure the microscope is on a stable, level surface. Adjust the boom arm to maintain balance, especially when working with heavy specimens or accessories.
Missing components upon arrival.	Packaging error.	Refer to the "What's in the Box" section and contact customer support immediately.

7. SPECIFICATIONS

Feature	Detail
Model Name	Binocular Stereo Microscope
Item Model Number	A22.1201-C1
Brand	OPTO-EDU
Magnification (Maximum)	20X (with WF20x eyepieces)
Eyepieces	WF10x18mm and WF20x10mm (interchangeable pairs)
Objective Lens	1X Achromatic
Viewing Head	Binocular, 30-degree inclination
Interpapillary Range	50 to 77mm
Lighting	1W LED, flexible gooseneck
Stand Type	Boom-Arm Stand
Vertical Working Distance	9 inches (22.86 cm)
Boom Arm Working Distance	12 inches (30.48 cm)
Power Source	Corded Electric
Voltage	110V-120V
Material	Metal, Glass, Plastic
Package Dimensions	19 x 14.2 x 8.1 inches (48.26 x 36.07 x 20.57 cm)
Item Weight	14.85 Pounds (6.74 kg)
Manufacturer	Opto-Edu (Beijing) Co., Ltd.
Country of Origin	China

8. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the documentation provided with your purchase or contact OPTO-EDU directly. Protection plans may be available for extended coverage; please consult your retailer for details.

What's in the Box:

- Microscope body
- Eyepieces (WF10x and WF20x pairs)
- Eye guards

- Dust cover
- Instruction manual

9. OFFICIAL PRODUCT VIDEOS

No official product videos from the seller were found for this model at this time.
