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## AmScope M162C-2L-PB10

# AmScope M162C-2L-PB10 Student Microscope Instruction Manual

Model: M162C-2L-PB10

Brand: AmScope

## INTRODUCTION

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This manual provides detailed instructions for the proper setup, operation, maintenance, and troubleshooting of your AmScope M162C-2L-PB10 Student Microscope. This optical glass monocular microscope features both top and bottom LED lights, offering versatile illumination for various specimens. It provides five wide-field magnification settings: 40X, 100X, 250X, 400X, and 1000X, making it suitable for a range of educational and observational needs. The sturdy metal frame ensures durability, while coaxial coarse and fine focusing mechanisms allow for precise adjustments.



Figure 1: AmScope M162C-2L-PB10 Student Microscope, showcasing its robust design and key components.

## WHAT'S IN THE BOX

Upon unpacking, ensure all the following components are present:

- AmScope M162C-2L-PB10 Monocular Microscope
- Eyepieces (typically 10X and 25X for varied magnification)
- Objective Lenses (4X, 10X, 40X)
- AC Power Adapter
- 3 AA Batteries (for portable use)
- 5 Prepared Glass Slides
- 5 Blank Glass Slides
- 1 Plastic Slide Case
- Dust Cover

- Accessory Kit (may include tweezers, dropper, etc.)
- User Manual

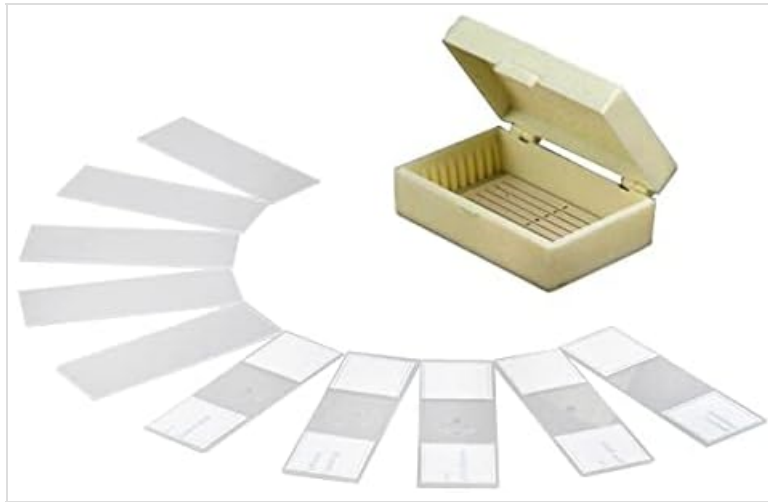


Figure 2: Included prepared and blank slides, along with a protective plastic case.

## SETUP

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1. **Unpacking:** Carefully remove all components from the packaging. Retain the packaging for future storage or transport.
2. **Placement:** Place the microscope on a stable, flat surface away from direct sunlight, high temperatures, dust, and vibrations.
3. **Power Connection:**
  - **AC Power:** Connect the AC power adapter to the microscope's power input jack and then plug it into a standard electrical outlet.
  - **Battery Power:** Open the battery compartment (usually located at the base) and insert 3 AA batteries, ensuring correct polarity. This allows for portable use.
4. **Eyepiece Installation:** Insert the desired eyepiece (e.g., 10X or 25X) into the top of the monocular head.
5. **Dust Cover:** When not in use, cover the microscope with the provided dust cover to protect it from dust and debris.

## OPERATING INSTRUCTIONS

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1. **Power On:** Flip the power switch (usually located at the base) to turn on the illumination.
2. **Illumination Selection:**
  - **Bottom Light:** Use for transparent specimens (e.g., prepared slides). Adjust the intensity using the dimmer control.
  - **Top Light:** Use for opaque specimens (e.g., leaves, insects). Adjust the intensity using the dimmer control.
3. **Placing a Specimen:** Place a prepared slide or your own specimen on the stage. Secure it with the stage clips.
4. **Selecting Magnification:** Rotate the revolving nosepiece to select the lowest power objective lens (e.g., 4X). This provides the widest field of view and makes initial focusing easier.
5. **Focusing:**
  - Look through the eyepiece.
  - Use the **coarse focus knob** (larger knob) to bring the specimen into approximate focus. Turn it slowly to raise or lower the stage.
  - Once roughly focused, use the **fine focus knob** (smaller knob) for precise, sharp focusing.

- 6. Adjusting Diaphragm:** The single lens condenser with a 6-hole disc diaphragm controls the amount of light passing through the specimen. Rotate the disc to adjust the aperture size, optimizing contrast and resolution for your specimen.
- 7. Increasing Magnification:** Once focused at low power, rotate the revolving nosepiece to a higher power objective lens (e.g., 10X, 40X). Re-adjust focus using only the fine focus knob. For 1000X magnification, use the 100X objective with the 10X eyepiece, or 40X objective with 25X eyepiece.



Figure 3: Demonstrating the use of focus knobs for clear specimen viewing.

## Official Product Video

Your browser does not support the video tag.

Video 1: An overview of the AmScope M162C-2L-PB10 microscope, highlighting its features and ease of use.

## MAINTENANCE

- **Cleaning Lenses:** Use only specialized lens cleaning paper and lens cleaning solution. Gently wipe the lens surfaces. Avoid touching lenses with bare fingers.

- **Cleaning Body:** Wipe the microscope body with a soft, damp cloth. Do not use harsh chemicals or abrasive cleaners.
- **Storage:** Always cover the microscope with the dust cover when not in use. Store in a dry, cool place.
- **Battery Replacement:** If using battery power, replace all 3 AA batteries when the illumination dims significantly. Ensure correct polarity.

## TROUBLESHOOTING

Problem	Possible Cause	Solution
No illumination	Power switch off, batteries depleted/incorrectly inserted, AC adapter disconnected.	Turn on power switch, replace/reinsert batteries, check AC adapter connection.
Image blurry/out of focus	Incorrect focusing, objective lens not fully clicked into place, dirty lens.	Adjust coarse and fine focus knobs, rotate nosepiece until objective clicks, clean objective/eyepiece lenses.
Dark field of view	Diaphragm closed too much, light intensity too low, wrong illumination source for specimen.	Adjust diaphragm, increase light intensity, switch between top/bottom light as appropriate.
Dust/spots visible in view	Dust on eyepiece or objective lens.	Clean eyepiece and objective lenses carefully.

## SPECIFICATIONS

- **Model:** M162C-2L-PB10
- **Magnification:** 40X, 100X, 250X, 400X, 1000X
- **Eyepieces:** 10X, 25X
- **Objective Lenses:** 4X, 10X, 40X (Achromatic)
- **Head:** Monocular, 45-degree inclined, 360-degree rotatable
- **Illumination:** Dual LED (Top and Bottom)
- **Focusing:** Coaxial Coarse and Fine Focus
- **Stage:** Plain Stage with Stage Clips
- **Condenser:** Single Lens with 6-hole Disc Diaphragm
- **Power Source:** AC Adapter (240 Volts) or 3 AA Batteries
- **Material:** Metal Frame, Polycarbonate components
- **Item Weight:** 6 Pounds

## WARRANTY

The AmScope M162C-2L-PB10 Student Microscope is covered by a **5-Year Warranty**. This warranty covers manufacturing defects and ensures the quality and durability of your product. Please retain your proof of purchase for warranty claims.

## SUPPORT

For technical assistance, replacement parts, or further inquiries regarding your AmScope M162C-2L-PB10 microscope, please visit the official AmScope website or contact their customer support. Detailed contact information can typically be found on the product packaging or the AmScope brand store on Amazon.

**AmScope Store Link:** Visit the AmScope Store

