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JOYALENS JL210, JL115A

JOYALENS JL210 10.1" Digital Microscope and JL115A Flex Boom Arm Stand User Manual

Model: JL210, JL115A

1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, and maintenance of your JOYALENS JL210 10.1" Digital Microscope and JL115A Flex Boom Arm Stand. The JL210 microscope features a 10.1-inch IPS screen, 1080P HD video recording, and a 12MP camera sensor, making it suitable for various applications including coin observation, PCB soldering, watch repair, electronics, and DIY projects. The JL115A Flex Boom Arm Stand offers enhanced flexibility and working space for intricate tasks.

2. PACKAGE CONTENTS

Please verify that all items listed below are present in your package:

- JOYALENS JL210 Digital Microscope with 10.1-inch IPS Screen
- JOYALENS JL115A Flex Boom Arm Stand
- Standard Metal Stand (for JL210)
- Bottom Light Stage and Slides Kit
- USB-C Cable
- Power Adapter
- User Manual (this document)

3. SETUP INSTRUCTIONS

3.1. JL210 Digital Microscope with Standard Metal Stand

1. **Assemble the Standard Metal Stand:** Ensure the base and vertical rod are securely connected.
2. **Attach the JL210 Microscope:** Slide the microscope body into the holder on the stand. Tighten the securing screw to hold it in place.
3. **Connect Power:** Plug the USB-C cable into the microscope and connect the other end to the power adapter, then into a wall outlet.
4. **Adjust Height for Observation:** For viewing entire coins, position the lens at the very bottom of the stand's

travel. The 12.6-inch high stand provides a maximum working distance of 10.2 inches.

Upgraded 12.6" Stand

For larger workspace, easily see entire coins



Figure 3.1: The JL210 Digital Microscope mounted on its 12.6-inch standard metal stand, demonstrating its capability for full coin observation. The image highlights the working distance required for viewing larger objects like a silver dollar.

Solid Metal Frame and Large Metal Workbench for Soldering



Figure 3.2: The JL210 Digital Microscope set up on its large metal base, providing a stable and spacious workbench for soldering and electronic repair tasks. The image shows the microscope positioned over a circuit board with a soldering iron in use.

3.2. JL115A Flex Boom Arm Stand

- 1. Attach the Clamp:** Securely fasten the C-clamp of the boom arm to a sturdy desk or workbench edge.
- 2. Mount the Boom Arm:** Insert the boom arm into the clamp and tighten the securing knob.
- 3. Attach the JL115A Microscope:** Connect the JL115A microscope to the end of the boom arm. Ensure it is firmly attached.
- 4. Adjust Arm Position:** Loosen the adjustment knobs on the boom arm to position the microscope over your desired working area. Tighten all knobs once the desired position is achieved.

Fully Adjustable Bracket



Figure 3.3: The JL115A Digital Microscope mounted on the flexible boom arm bracket, providing ample working space and flexibility for soldering and other detailed tasks. The setup allows for easy repositioning of the microscope.

Rechargeable Battery for Exploration Anytime Anywhere



Figure 3.4: An illustration of the fully adjustable JL115A flex arm bracket, demonstrating its range of motion and how it can be positioned for various applications. The image highlights the 360-degree rotation and extendable segments.

4. OPERATING INSTRUCTIONS

4.1. Power On/Off

Locate the power button on the microscope unit. Press and hold for a few seconds to power on or off the device. The 10.1-inch IPS screen will illuminate upon startup.

4.2. Focus Adjustment

- **For Stand-Mounted Use:** Rotate the focus wheel on the microscope body until the image on the screen is

clear and sharp.

- **For JL115A Handheld Use:** Utilize the built-in distance adjustment ring on the JL115A to reduce hand shake and achieve a clearer view. Rotating the ring increases the working distance and expands the field of view.

4.3. Magnification

Magnification is primarily adjusted by changing the working distance between the microscope lens and the object. Moving the microscope closer to the object increases magnification, while moving it further away decreases it. Fine-tune focus after each adjustment.

4.4. Lighting Control

The microscope is equipped with multiple lighting options to ensure optimal illumination for various specimens:

- **Built-in LED Lights:** These are typically located around the lens. Use the dedicated buttons or controls on the microscope to adjust their brightness.
- **Side LED Lights:** The standard metal stand includes adjustable side LED lights. Position them to eliminate shadows and provide even illumination.
- **Bottom Light Stage:** For transparent or translucent specimens (e.g., biological slides), place them on the bottom light stage. Activate the bottom light for transmitted illumination.



Figure 4.1: An illustration detailing the LED light adjustment features of the JL210 Digital Microscope, showing controls for

brightness and direction of illumination from various light sources.

4.5. Recording and Capturing Images

The JL210 features 1080P HD video recording and a 12MP camera sensor for high-quality image capture.

- **Photo Button:** Press the designated photo button to capture still images.
- **Record Button:** Press the record button once to start video recording and again to stop.
- **Storage:** Captured photos and videos are saved to an inserted memory card (not included, typically microSD).

4.6. Connecting to a PC

Connect the microscope to a computer via the provided USB-C cable for real-time viewing on a larger screen and easy sharing of observations.

1. **Connect Cable:** Plug one end of the USB-C cable into the microscope and the other end into an available USB port on your computer.
2. **Select PC Mode:** On the microscope screen, select 'PC Camera' or 'Mass Storage' mode as prompted. For real-time viewing, select 'PC Camera'.
3. **Software:** Open a compatible camera application or microscope software on your computer to view the live feed.

Connect to PC for Real-Time Larger View and Easy Sharing



Figure 4.2: The JL115A Digital Microscope connected to a laptop via a USB-C cable, enabling real-time viewing on a larger screen and facilitating easy sharing of microscopic observations.

4.7. Handheld Use (JL115A)

The JL115A can be used as a handheld digital microscope. Its built-in distance adjustment ring helps stabilize the view and reduce hand shake. Rotate the ring to adjust the working distance and field of view for clearer observation.

Soldering Microscope with Flex Arm Bracket

No space constraints, more flexibility



Figure 4.3: The JL115A Digital Microscope being used in handheld mode, illustrating its portability and the convenience of its rechargeable battery. Battery charging and usage times are also displayed.

5. MAINTENANCE

- **Cleaning the Lens and Screen:** Use a soft, lint-free cloth specifically designed for optical surfaces to gently wipe the lens and screen. Avoid abrasive materials or harsh chemicals.
- **Storage:** When not in use, store the microscope and its components in a clean, dry, and dust-free environment. Use protective covers if available.
- **Battery Care:** The JL115A features a rechargeable battery. For optimal battery life, avoid fully discharging the battery frequently. Charge the battery using the provided USB-C cable and power adapter. Charging time is approximately 3.0 hours, providing about 2.5 hours of usage time.

6. TROUBLESHOOTING

If you encounter issues with your JOYALENS microscope, please refer to the following common problems and solutions:

Troubleshooting Guide

Problem	Possible Cause	Solution
Microscope does not power on	Low battery or power connection issue	Ensure the device is fully charged or connected to a power source. Check the power adapter and cable.
Image is blurry or out of focus	Incorrect focus adjustment or working distance	Adjust the focus wheel or distance adjustment ring. Ensure the working distance is appropriate for the desired magnification.
Screen is too dark or too bright	Improper lighting settings	Adjust the brightness of the built-in LEDs, side lights, or bottom light as needed.
Cannot connect to PC	Incorrect USB mode or driver issue	Ensure 'PC Camera' mode is selected on the microscope. Try a different USB port or cable. Install necessary drivers if prompted by your operating system.
No image on screen	Lens cap still on or sensor obstruction	Remove the lens cap. Check for any obstructions blocking the lens or sensor.

7. SPECIFICATIONS

Product Specifications

Feature	Description
Model	JL210, JL115A
Screen Size	10.1-inch IPS
Video Resolution	1080P HD
Camera Sensor	12 Megapixels
JL210 Standard Stand Height	12.6 inches
JL210 Max Working Distance	10.2 inches
JL210 Metal Bracket Size	7.1 x 7.9 x 12.6 inches (Base x Depth x Height)
Battery Type	Rechargeable (for JL115A handheld use)
Battery Usage Time	Approx. 2.5 hours
Battery Charging Time	Approx. 3.0 hours
Connectivity	USB-C

8. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the documentation included with your product or visit the official JOYALENS website. You can also visit the [JOYALENS Store on Amazon](#) for additional resources and contact options.

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Related Documents - JL210, JL115A

	<p>JOYALENS Microscope Assembly Guide A step-by-step guide for assembling the JOYALENS digital microscope, including component identification and assembly instructions.</p>
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