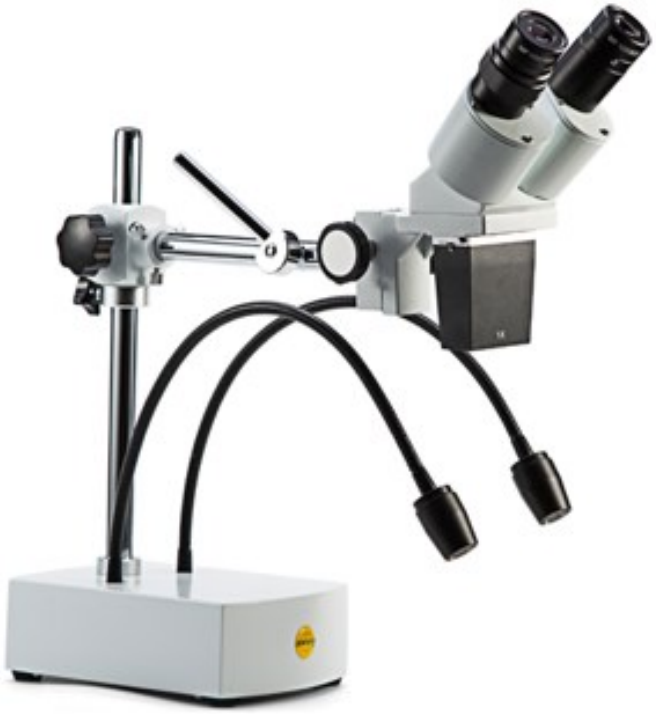
User Guide: the Swift S41-20 Stereo Microscope



Welcome to your Swift S41-20 microscope! Whether you are a seasoned professional or a beginner hobbyist, Swift has the perfect microscope for you.

This guide will introduce you to the components of your new microscope and help you begin using it. For more information about our microscopes, software downloads, product manuals, or customer service requests, please visit www.swiftoptical.com.

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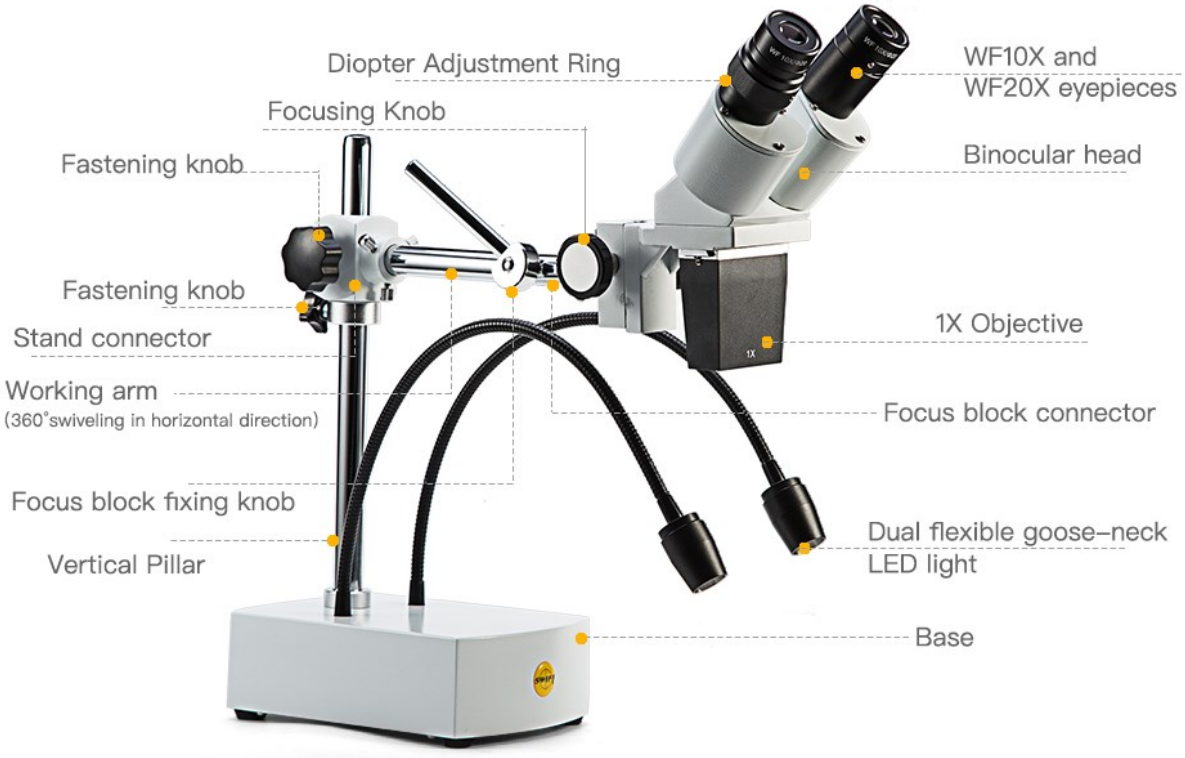
I. Specifications

Model	S41-20
Observation tube	Binocular
Inclination	45° inclined
Interpupillary distance	55-75 mm
Eyepieces	WF10X, WF20X
Objective	1X
Total magnifications	10x, 20x
Working distance	230mm
Focusing	Focus travel range 41mm
Max. specimen thickness	67mm
Stand	Single-arm stand, φ18mm vertical pillar, vertical pillar height 280mm, stand dimension 187 x 132 x 56mm
Illumination	Two flexible gooseneck 1W LED lights
Power supply	110-240V

II. Parts of the microscope



III. Assembling the microscope

The components for the S41-20 microscope are shipped detached for protection. Open the styrofoam packing with care and do not leave any components attached to the packing being removed. Do not discard any of the packing materials until all of the components have been identified. Remove the plastic covers from the microscope's head and the two gooseneck LED lights.

Assemble the stand connector and its supporting pillar on the vertical pillar, tightening the fastening knobs. Attach the working arm to the stand connector, the focus block connector to the microscope head, and then connect the working arm and focus block connector via the focus block fixing knob.

Locate the power cord, attach it to the microscope, and then plug it in. Turn on the power switch found on the back of the microscope stand.

IV. Using the microscope

Interpupillary adjustment

Adjust the two eyepiece tubes until only one circular field can be seen through the two eyepieces. If two separate circles appear, the interpupillary distance is too large; if two overlapping circles appear, the interpupillary distance is too small. The eyepiece tube allows a flexible adjustment of the interpupillary distance between 54 and 76mm.

Focusing the microscope

To focus the sample, use the focusing knobs located on both sides of the head holder. By turning these knobs, the microscope can be moved up or down a certain distance. This movement is enabled by a “rack and pinion” mechanism.

Using the focusing knob, focus the sample until the image is clear. If the sample cannot be brought into focus within the travel range of the S303/S304 pole arm and stand, adjust the microscope head height along the vertical pillar to a working distance of 230mm from the sample. Remember to tighten the locking screw and support collar after adjusting the height of the microscope.

Magnification and working distance

Change the optional eyepieces to increase or decrease magnification range.

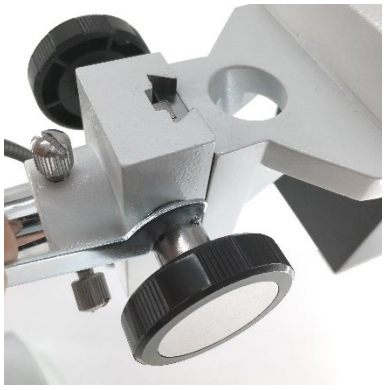
Total magnification used can be calculated by multiplying the eyepiece magnification by the objective lens magnification.

Increasing the working surface

The two gooseneck lights on this S41-20 microscope are flexible and can be directed in many directions as needed to maximize the surface area covered by the microscope. Likewise, the working arm can swing a full 360° to cover larger surface areas.

Adjusting the tension of focusing knob

A spanner is included in the packaging of SL41-20 for the focusing knob tension adjustment. If necessary, use the spanner to adjust the tension.



V. Maintenance and repair

Cleaning
Keep all lenses clean. Fine dust on the surface of the lens should be gently blown off with an air canister or wiped off with a soft lens cloth or lens tissue. Stubborn fingerprint smudges or oil marks can be wiped off with lens tissue moistened with a small amount of xylene or a 3:7 mixture of alcohol and ether. Never use organic solutions to clean any other surface (especially the plastic surfaces). If necessary, please choose a mild detergent.

Storage
After use, cover the microscope with the dust cover provided and store it in a dry and clean place free from moisture to prevent rust. Remove the eyepieces when not in use, and place covers on the eyepiece holders.

Repair
Do not attempt repairs on your own, particularly on the optical parts. Contact a Swift Optical representative through our customer service email or phone line with any issues.

VI. Troubleshooting

If you have a problem, you may be able to correct it yourself. Here are some common issues and easy solutions you can try before calling customer support for service.

*Caution: Never disassemble the electrical, mechanical, or optical components. This servicing should only be done by a Swift technician.

Issue	Possible cause	Solution
Double images	Interpupillary distance is not correct	Readjust the eyepieces
	Diopter adjustment is not correct	Readjust the diopter rings
	Magnification of each eyepiece is not the same	Mount eyepieces of the same magnification
Dirt appears in the field of view	Dirt on the specimen	Clean the specimen
	Dirt on the surfaces of eyepiece	Clean the surfaces
Image is blurry	Objective surfaces are dirty	Clean the objective
	Diopter adjustment is not correct	Readjust the diopter
	Focus is incorrect	Readjust the focus
The focusing knob is not smooth	The focusing knob is too tight	Loosen it to a suitable position
Head keeps slipping down	The focusing knob is too loose	Tighten it to a suitable position
Eyes fatigue easily	Diopter adjustment is not correct	Adjust the diopter rings
Illumination does not work when the switch is on	No power supply	Check the connection with the power supply

VII. Warranty information and customer support

Our microscopes are manufactured to meet ISO 9001 standards. Swift warranties are as follows:

- Five (5) Year Warranty for Microscopes: Microscopes come with a five (5) year warranty against manufacturing defects. Does not cover normal wear, routine maintenance, add-on accessories, damage resulting from repair by unauthorized parties, accident, alteration, shipping, misuse or abuse is not covered.
- One (1) Year Warranty for Electrical and Video components. Does not cover light bulbs, batteries, fuses, or electrical cords.

All warranties start from the original date of purchase. Swift provides the repair or replacement of warrantied parts for free, including labor, during the warranty period. Proof of original purchase is required. Buyers are responsible for shipping to and from our warehouse for warranty services. The warranty does not cover damages resulting from normal wear and tear, abuse, or unauthorized repairs.

*For customers living outside the United States, Swift Optical Instruments, Inc. will provide standard warranty service. Both inbound and outbound shipping costs (including duties and taxes) is the responsibility of the consumer.

For more information or to submit a repair request, please contact our Customer Support department:

North America
Tel: (+1) 877-967-9438, option 1 (USA)
Email: customersupport@swiftoptical.com

Europe
Tel: (+44) 208-638-8819 (UK)
Email: customersupport@swiftoptical.com
*In order to serve Europe customers efficiently, we recommend to call the hotline during working hours 8 AM – 4 PM (London Time).

VIII. Manual and software downloads

Please visit www.swiftoptical.com for online download of instruction manuals and relevant software (Manuals are downloadable in the product details page under “Swift Basics” products and Software are downloadable under “Support” menu).

Disclaimer: We are constantly working to improve our instruments and to adapt them in response to customer feedback. These improvements occasionally involve small modifications to the mechanical structure and optical design of our microscopes. Therefore, some descriptions, illustrations, and specifications in this instruction manual may vary slightly from the microscope you receive.

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