



# MANUAL


**OIC Oblique Illumination  
Contrast Stand  
(CAT# 113-13-29)**



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## SAFETY NOTES

1. Open the shipping carton carefully to prevent any accessory, i.e. objectives or eyepieces, from dropping and being damaged.
2. Keep the instrument out of direct sunlight, high temperature or humidity, and dusty environments.
3. If any specimen solutions or other liquids splash onto the stage, objective or any other component, disconnect the power cord immediately and wipe up the spillage. Otherwise, the instrument may be damaged.
5. All electrical connectors (power cord) should be inserted into an electrical surge protector to prevent damage due to voltage fluctuations.
6.  **FUSE REPLACEMENT -- For safety when replacing the fuse (ONLY replace with the same size, type and rating of original fuse), be sure the main switch is in the off position, disconnect the power cord from outlet, and replace the fuse.**  
Reconnect the power cord and turn unit on.
7. Confirm that the input voltage indicated on your microscope corresponds to your line voltage. The use of a different input voltage other than indicated will cause severe damage to the microscope.  
NOTE: Always plug the microscope power cord into a suitable grounded electrical outlet.

## CARE AND MAINTENANCE

1. Do not attempt to disassemble any component including eyepieces, objectives or the 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 bulb. If dirt remains on the optical surface, use a soft, lint free 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.
5. ACCU-SCOPE® microscopes are precision instruments which require periodic servicing to maintain proper performance and to compensate for normal wear. A regular schedule of preventative maintenance by qualified service personnel is highly recommended. Your authorized ACCU-SCOPE distributor can arrange for this service.

# INTRODUCTION

Congratulations on the purchase of your new ACCU-SCOPE microscope stand. ACCU-SCOPE microscopes and accessories are engineered and manufactured to the highest quality standards. Your microscope and accessories will last a lifetime if used and maintained properly. ACCU-SCOPE products are carefully assembled, inspected and tested by our staff of trained technicians in our New York facility. Careful quality control procedures ensure each microscope is of the highest quality prior to shipment.

## UNPACKING AND COMPONENTS

Your microscope and accessories arrived packed in a molded shipping carton. **Do not discard the carton:** the shipping carton should be retained for reshipment of your microscope or accessory if needed. Avoid placing the microscope product in dusty surroundings or in high temperature or humid areas as mold and mildew can form. Carefully remove the microscope and accessories from the shipping carton and place the microscope on a flat, vibration-free surface. Note that the shipping carton may contain tools and other accessories necessary for the assembly and operation of the product.

## COMPONENTS DIAGRAM

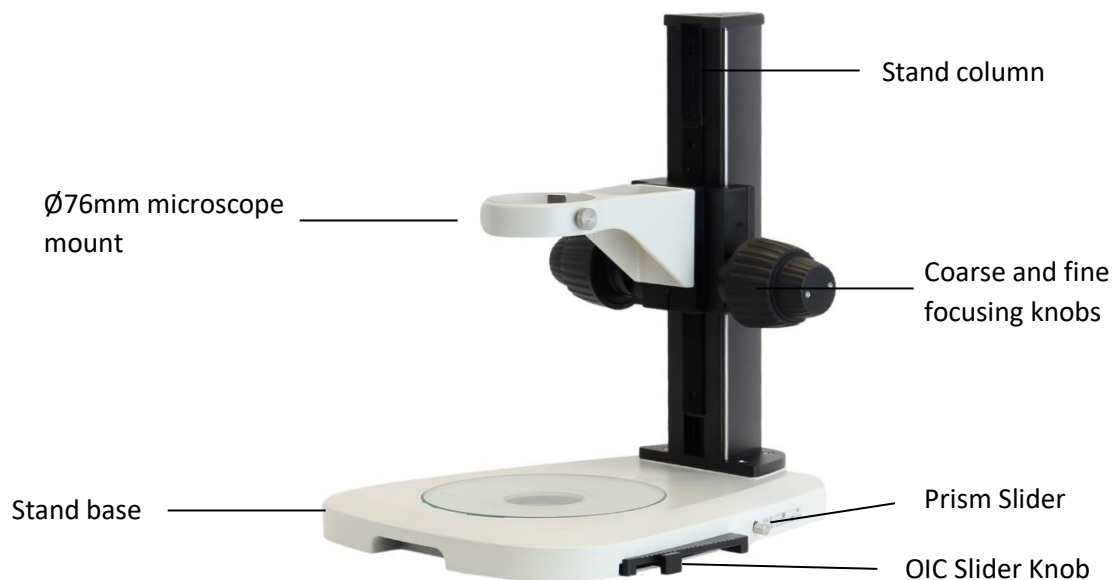


Fig. 1

## PURPOSE

The OIC Oblique Illumination Contrast stereo microscope stand is mainly used in the field of life science, education, medical field, and particularly in embryology and developmental biology applications where the adjustable oblique contrast enables detecting and analyzing various target structures and shapes. The Oblique Illumination Contrast method is most effective at zoom magnifications above 45x.

# ASSEMBLY

1. Remove the stand and all parts and accessories from the packaging. Retain all packaging in case the stand needs to be returned and to confirm that nothing is missing during assembly (after unpacking, parts may be left in the packaging material). The package includes the stand base, stand column, glass insert plate, power adapter.
2. Place the stand base flat on the workbench.
3. Align the connecting plate of the stand column with the installation table of the stand base.
4. Use the hex screw M5X16 to connect the stand column securely to the base.

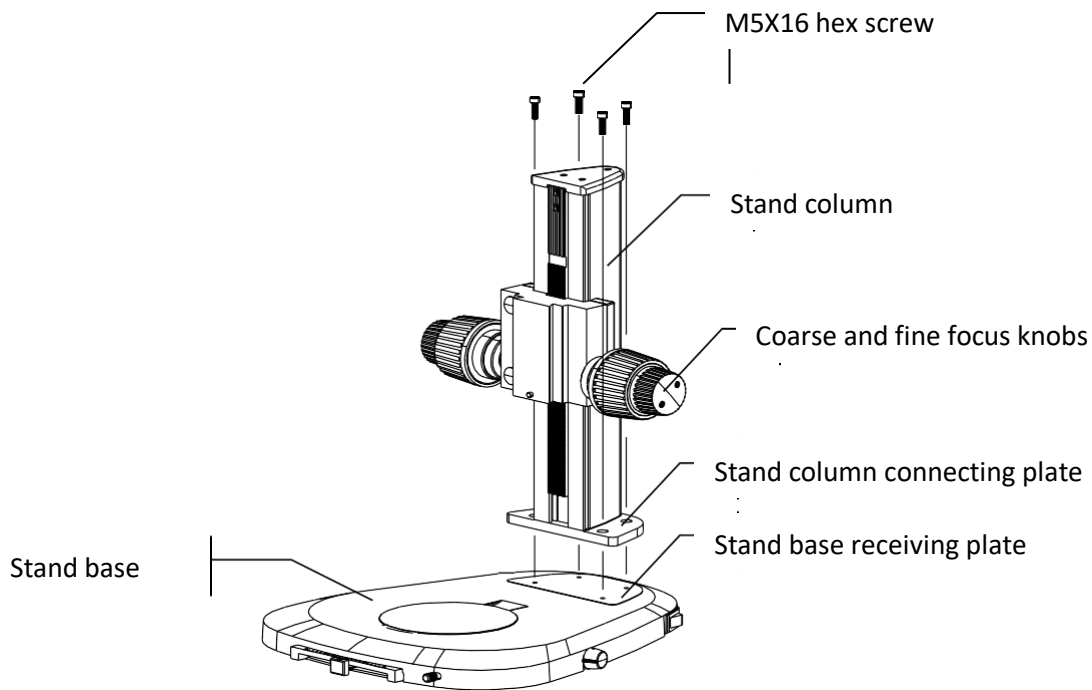


Fig. 2

5. Mount the microscope by sliding the microscope body into the yoke of the focus mount. Secure the microscope by gently tightening the thumbscrew on the yoke.

# OPERATION

## Light Source

Plug the power adapter into the stand and the other end of the power supply into the socket. Turn on the power on the left side of the stand and turn the brightness adjustment knob until the needed brightness is reached. Under normal circumstances, the highest brightness is not needed and will shorten the lamp life.

## Focusing

### **Working Distance**

Check that working distance between the sample and the bottom of the microscope lens is sufficient. The working distance varies with different objective or auxiliary lenses.

### **Focus on the specimen**

Turn the focus knob to move the raise and lower the microscope to focus on the specimen.

## Microscope Operation

Refer to the instruction manual from your microscope manufacturer for proper operation of the microscope.

## Oblique Illumination Contrast

The OIC Oblique Illumination Contrast base enables high-contrast observation of transparent samples. The method is to use a sliding light shield to direct light from the base in a low angle to the sample thereby exaggerating phase differences in the specimen. The resulting image provides contrast and relief (3-dimensionality) to the specimen.

### **OIC Slider**

While observing a sample on the stand, slowly slide the OIC slider knob forward and backward until the optimal contrast level is achieved. The forward and backward positions also allow two directions of OIC contrast on the sample.

The scale on the OIC slider allows reproducibility of the OIC contrast effect. To achieve greater reproducibility, make a note of the OIC slider position when the optimal contrast is achieved.

For traditional diascope observation, move the OIC slider knob completely forward or backward so that the light shield does not obscure the transmitted light to the sample.

### **Prism Slider**

The Prism Slider can reduce shading of the sample under certain conditions. When using an auxiliary objective above 1x on your microscope, push the Prism Slider knob in. When using auxiliary objectives of 1x and lower, it is recommended to pull the Prism Slider knob out to remove the prism from the light path.

# TECHNICAL SPECIFICATIONS

Focus	Manual
Focus mount	76mm diameter
Focusing device(stroke)	60+99mm
adapter	DC12V 2A
Base	LED three-dimensional lighting base (OIC built-in illuminator)
Observation method	Bright field, oblique illumination, dark field
Weight (approx.)	10Kg
Power consumption (approx. )	10W
Operating environment	<ul style="list-style-type: none"> <li>• Indoor use</li> <li>• Altitude: up to 2000 meters</li> <li>• Ambient temperature: 5°C~40°C (41°F~109°F)</li> <li>• Maximum relative humidity 80%</li> <li>• Pollution degree: Level 2</li> <li>• Atmospheric pressure: 80kPa~106kPa</li> <li>• Overvoltage category: Class II</li> </ul>

# TROUBLESHOOTING

Under certain conditions, the performance of the device may be affected by non-defective factors. Refer to the table below for possible causes and remedies. If further assistance is required, please contact your ACCU-SCOPE dealer or the ACCU-SCOPE technical service team.

Problem	Reason	Solution
The field of view is dark.	The socket pins are not connected to the lighting device.	Reconnect the power cord to the base and the outlet.
	The light intensity is adjusted too low.	
There is dirt in the field of view.	There is dirt/dust on the sample.	Clean the sample or sample holder. First try puffs of air using puffer or compressed air.
	There is dirt/dust on the eyepiece.	Clean the eyepiece with lens tissue and lens cleaner.
The images from both eyepieces do not match.	Interpupillary distance is not set properly.	Adjust interpupillary distance until vision is comfortable and images seen in both eyepieces merge.
	Improper diopter adjustment.	Reset diopter settings on eyepieces to the center marking (witness mark). Focus the microscope so that the view through the eyepiece without a diopter is sharp. Adjust the diopter of the other eyepiece until the image is sharp as seen through that eyepiece.
	Left and right eyepieces do not match.	Confirm you have the correct eyepieces. Consult with the manual for your microscope or ask your microscope manufacturer.
The image is not in focus.	Incorrect focus.	Adjust the focus until the image is sharp. If the sample is too tall, it may be impossible to move the microscope high enough with the focus knob in order to achieve focus.



# MAINTENANCE

To clean and maintain your microscope, refer to the instruction manual for your microscope.

Please remember to never leave the microscope with any of the objectives or eyepieces removed and always protect the microscope with the dust cover when not in use.

When necessary, wipe the microscope stand with a soft dry cloth. If dirt persists, wipe with a clean, soft cloth slightly dampened with a mild detergent. Wipe again with a clean, soft cloth dampened with clean water to remove the detergent. A small amount of 70% alcohol (ethanol or isopropanol) may also be used to clean the surface of the base. Do not saturate the stand.

# SERVICE

ACCU-SCOPE microscopes are precision instruments which require periodic servicing to keep them performing properly and to compensate for normal wear. A regular schedule of preventative maintenance by qualified personnel is highly recommended. Your authorized ACCU-SCOPE distributor can arrange for this service. Should unexpected problems be experienced with your instrument, proceed as follows:

1. Contact the ACCU-SCOPE distributor from whom you purchased the microscope. Some problems can be resolved simply over the telephone.
2. If it is determined that the microscope should be returned to your ACCU-SCOPE distributor or to ACCU-SCOPE for warranty repair, pack the instrument in its original Styrofoam shipping carton. If you no longer have this carton, pack the microscope in a crush-resistant carton with a minimum of three inches of a shock absorbing material surrounding it to prevent in-transit damage. The microscope should be wrapped in a plastic bag to prevent Styrofoam dust from damaging the microscope. Always ship the microscope in an upright position; **NEVER SHIP A MICROSCOPE ON ITS SIDE**. The microscope or component should be shipped prepaid and insured.

## LIMITED MICROSCOPE WARRANTY

This microscope stand and its electronic components are warranted to be free from defects in material and workmanship for a period of five years from the date of invoice to the original (end user) purchaser. The LED lamp is warranted for a period of one year from the date of invoice to the original (end user) purchaser. This warranty does not cover damage caused in-transit, misuse, neglect, abuse or damage resulting from improper servicing or modification by other than ACCU-SCOPE approved service personnel. This warranty does not cover any routine maintenance work or any other work, which is reasonably expected to be performed by the purchaser. Normal wear is excluded from this warranty. No responsibility is assumed for unsatisfactory operating performance due to environmental conditions such as humidity, dust, corrosive chemicals, deposition of oil or other foreign matter, spillage or other conditions beyond the control of ACCU-SCOPE INC. This warranty expressly excludes any liability by ACCU-SCOPE INC. for consequential loss or damage on any grounds, such as (but not limited to) the non-availability to the End User of the product(s) under warranty or the need to repair work processes. Should any defect in material, workmanship or electronic component occur under this warranty contact your ACCU-SCOPE distributor or ACCU-SCOPE at (631) 864-1000. This warranty is limited to the continental United States of America. All items returned for warranty repair must be sent freight prepaid and insured to ACCU-SCOPE INC., 73 Mall Drive, Commack, NY 11725 – USA. All warranty repairs will be returned freight prepaid to any destination within the continental United States of America, for all foreign warranty repairs return freight charges are the responsibility of the individual/company who returned the merchandise for repair.

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