



MANUAL



3075 STEREO MICROSCOPE SERIES

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SAFETY NOTES

1. Open the shipping carton carefully to prevent any accessory, i.e. auxiliary 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.
4.  **LAMP REPLACEMENT -- CAUTION:** the glass envelope of the lamp may be extremely hot. DO NOT attempt to change the lamp before it is completely cooled or without wearing adequate skin protection.
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 stereomicroscope power cord into a suitable grounded electrical outlet. A grounded 3-wire cord is provided.

CARE AND MAINTENANCE

1. Do not attempt to disassemble any component including the eyepieces, objectives or 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 stream from 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 personnel is highly recommended. Your authorized ACCU-SCOPE® distributor can arrange for this service.

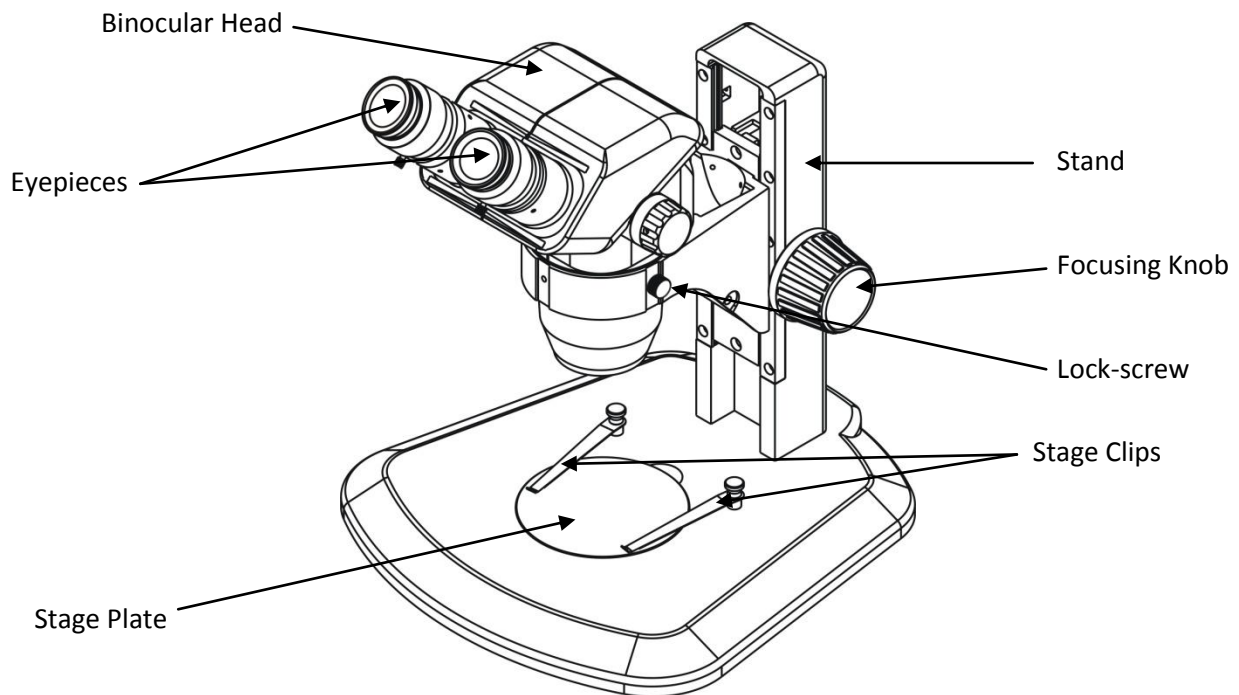
INTRODUCTION

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

UNPACKING AND COMPONENTS

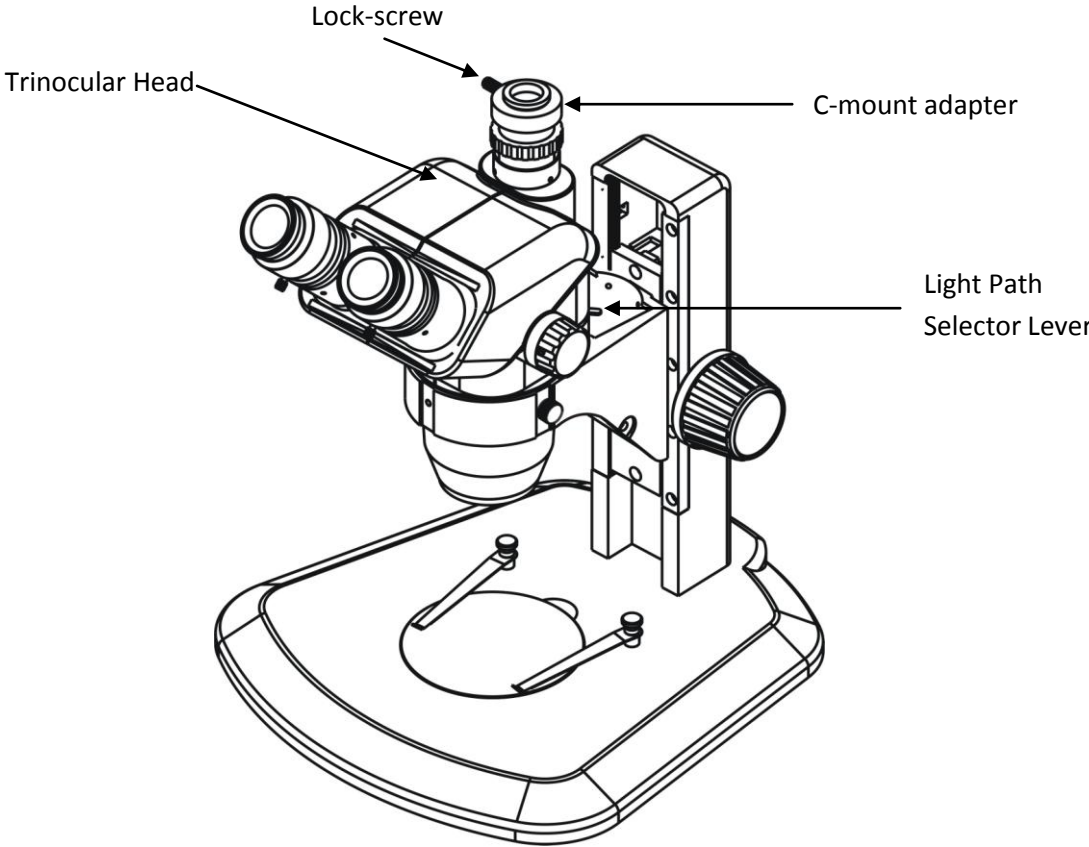
Your microscope arrived packed in a molded shipping carton. ***Do not discard the carton:*** the shipping carton should be retained for reshipment of your microscope if needed. Avoid placing the microscope in dusty surroundings or in high temperature or humid areas as mold and mildew can form. Carefully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

COMPONENTS DIAGRAM



NOTE: Stand ordered may not be as pictured above.

COMPONENTS DIAGRAM (continued)



OTHER AVAILABLE CONFIGURATIONS



Binocular on E-LED Stand



Binocular on LED Stand



Trinocular on Pole Stand



Binocular on Boom Stand



Binocular on Ball Bearing Boom Stand

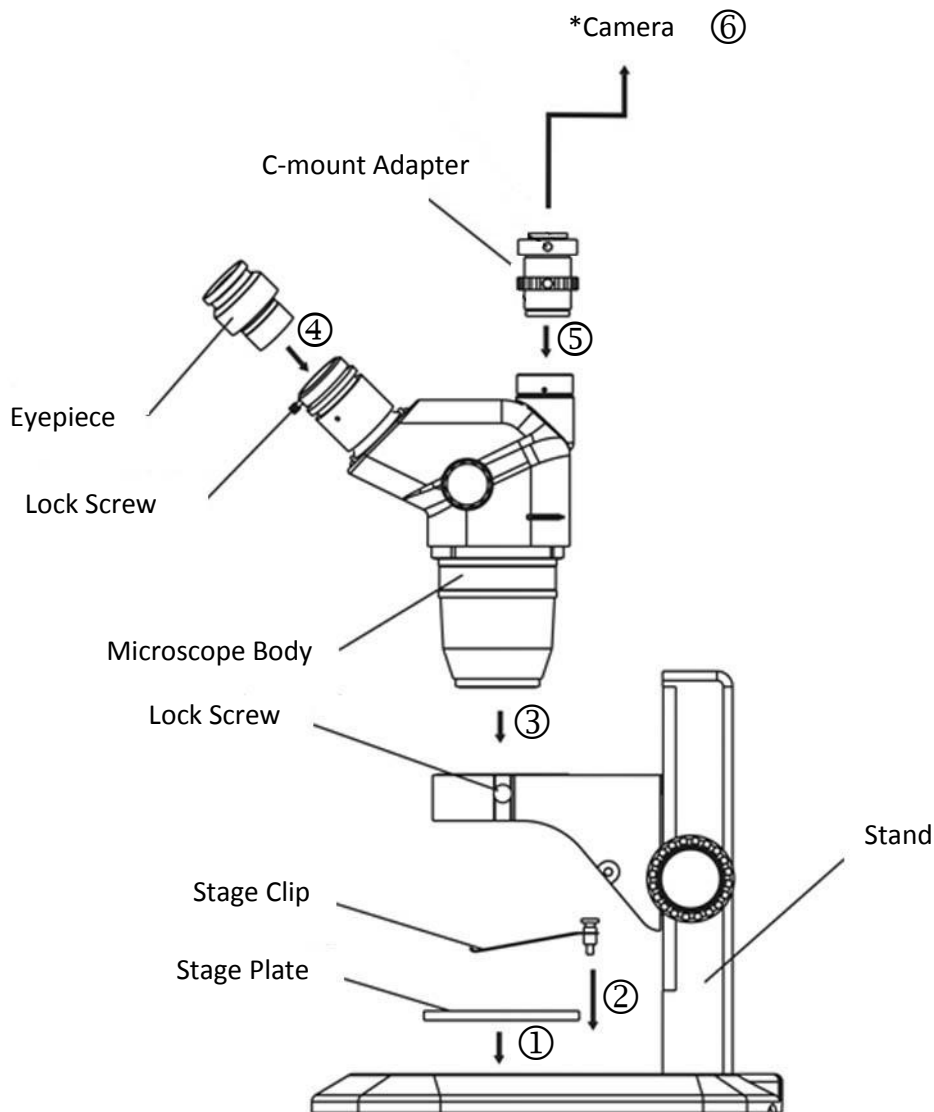


Binocular on Articulating (Flex Arm) Stand

ASSEMBLY

The diagram below shows how to assemble the various modules. The numbers indicate the order of assembly.

When assembling the microscope, make sure that all parts are free of dust and dirt, and avoid scratching any parts or touching glass surfaces.



**Mount the C-mount adapter to camera first, then mount the camera to the microscope*

ADJUSTMENT AND OPERATION

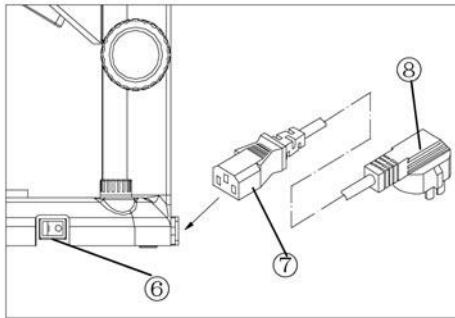


Fig. 1

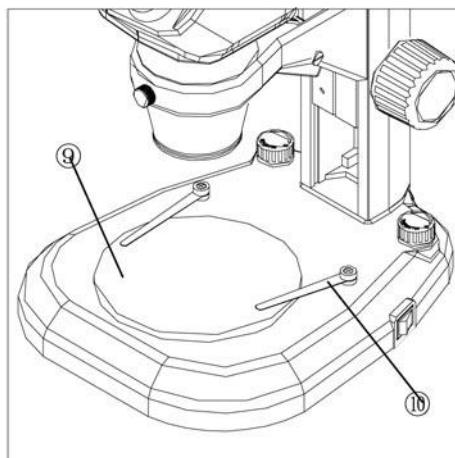


Fig. 2

For Microscopes Purchased With Illuminated Stands

VOLTAGE CHECK

Confirm that the input voltage indicated on the rear label of the microscope corresponds to your line voltage. The use of a different input voltage than indicated will cause severe damage to your microscope.

Connecting the Power Cord (Fig. 1)

Turn the power switch ⑥ to the off position (O) before connecting the power cord ⑦.

Insert the power cord plug ⑦ into the power jack of the microscope; make sure the connection is snug.

Plug the power cord ⑧ into the power supply receptacle.

Using the Black & White Stage Plate & Setting the Specimen (Fig. 2)

The White side of the stage plate is generally used when viewing specimens. If the specimen is white or bright in color, the Black side of the stage plate can be used to make the image appear clearer.

Set the glass stage plate ⑨ on the center of the base, and secure the slide with the two stage clips ⑩.

Using the Glass Stage Plate

For examination of specimens requiring transmitted illumination, use the frosted/glass stage plate.

ADJUSTMENT AND OPERATION *(continued)*

Adjusting Binocular Viewing Head

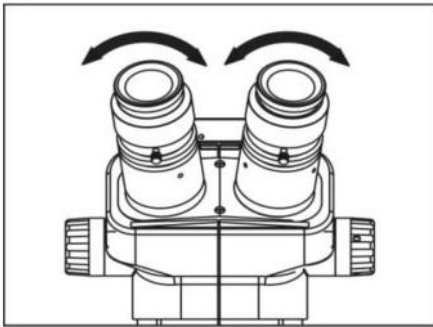


Fig. 3

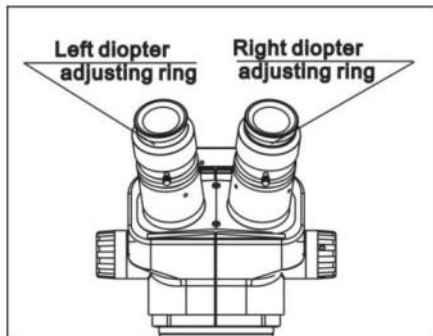


Fig. 4

Adjusting Interpupillary Distance (Fig. 3)

Different users have different interpupillary distances (this distance is between the centers of the pupils of each eye). When the operator changes, it will be necessary to adjust the interpupillary distance.

While looking through the eyepieces, hold the left and right eyetubes of the viewing head and adjust the eyetubes by opening or closing them until the left and right fields of view coincide completely and you are able to see a complete circle.

Adjusting Diopter Ring (Fig. 4)

Set the diopter rings of both eyepieces to “0” position. (Do this when users change, because different users will have different diopter settings.)

Place an easy-to-observe specimen on the stage plate, i.e., a coin.

Rotate the zoom knob to the highest magnification, then turn the focusing knob to focus the specimen.

Rotate the zoom knob to the lowest magnification, looking only into the left eyepiece, adjust the diopter ring on left eyepiece to focus the specimen. Then repeat procedure for the right eyepiece.

NOTE: The working distance (the distance between the microscope objective to the top of the specimen) of the microscope is 100mm, the binocular head focus mount can be mounted onto higher or lower positions according to your needs by removing the clamping bolt with the Allen wrench provided.

ADJUSTMENT AND OPERATION *(continued)*

Focus Adjustment

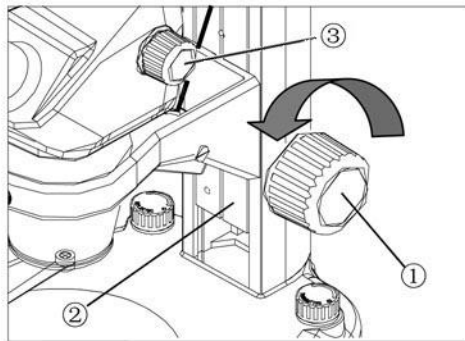


Fig. 5

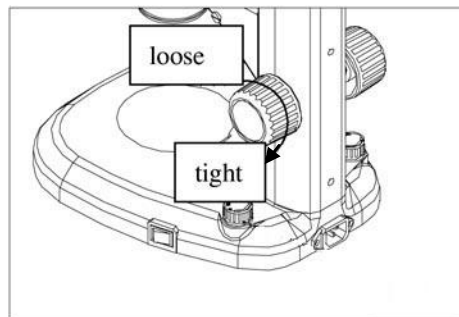


Fig. 6

Adjusting the Rotation Tension of the Focus Adjustment Knob (Fig. 5, Fig. 6)

To adjust tension, hold both left and right focus adjustment knobs ① with both hands, hold the left knob (to prevent it from turning), and rotate the right knob clockwise to increase (tighten) or counterclockwise to decrease (loosen) the focus knob tension.

After tension adjustment has been completed, always rotate both adjustment knobs in the same direction.

Changing the Magnification (Fig. 5)

The zooming knobs ③ located on both sides of the zooming body will change the magnification of the specimen image.

Total Magnification = Magnification of zoom body x magnification of eyepiece
(i.e., $4.5 \times 10 = 45x$)

NOTE: *If using any of the optional auxiliary objectives, then the above magnification would be multiplied by auxiliary objective magnification. (i.e., auxiliary $0.5 \times 45 = 22.5x$)*

Moving the Microscope

Before moving the microscope, be sure to remove any slide/samples. When moving the microscope, hold the stand and base to keep it level.

ADJUSTMENT AND OPERATION *(continued)*

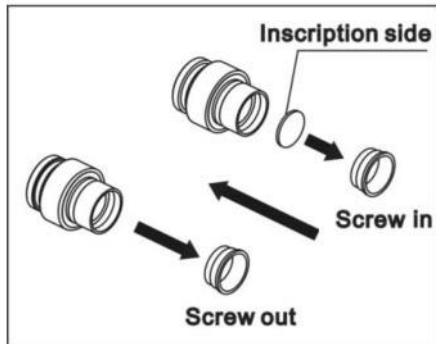


Fig. 7

Mounting & Removing the Reticle (Fig. 7)

Unscrew the mounting ring from the eyepiece. Clean the reticle and insert it into the mounting ring with the inscription side up. Screw the mounting ring back onto the eyepiece.

To remove the reticle, unscrew the mounting ring from the eyepiece, then carefully take out the reticle and wrap it in clean soft paper for storage. Screw the mounting ring back onto the eyepiece.

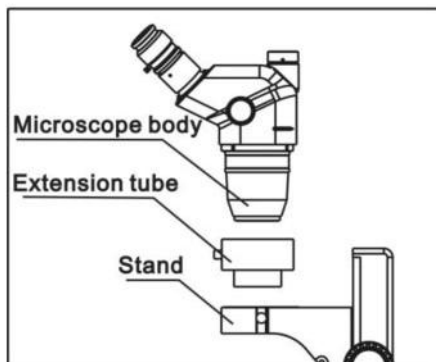


Fig. 8

Using an Auxiliary Lens (Fig. 8)

The auxiliary lens can be threaded onto the bottom of the microscope body.

The 0.5x auxiliary lens can be used with most stands if purchased along with the extension tube.

The 0.3x and 0.4x auxiliary lenses can only be used with boom stands, ball bearing stands, or the flex arm stand.

ADJUSTMENT AND OPERATION *(continued)*

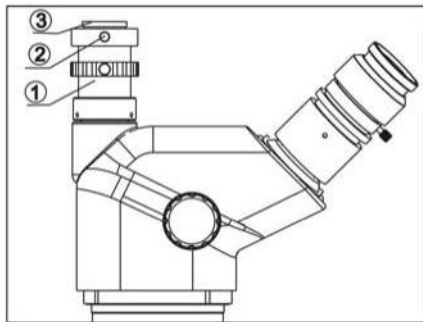


Fig. 9

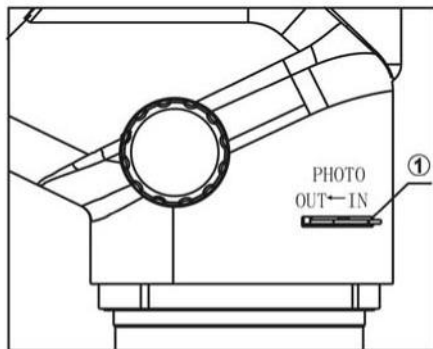


Fig. 10

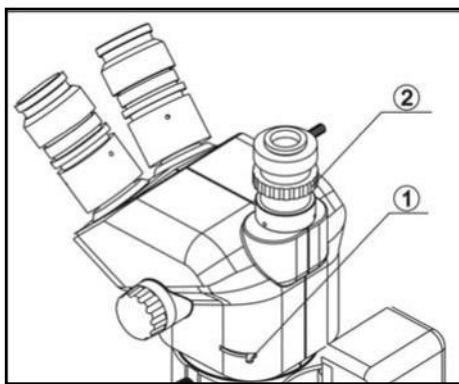


Fig. 11

Trinocular Viewing Head

Mounting the Camera (Fig. 9)

The c-mount adapter is shipped assembled and separate from the microscope.

Mount the camera by screwing the threaded end ③ of the c-mount adapter into the camera first. Insert the camera and adapter into the hole in the top of the viewing head and tighten the lock screw ②.

Selecting the Light Path (Fig. 10)

To view through the binocular head only, slide the light path selection lever ① to "OUT".

To view through the binocular/trinocular head, slide the light path selection lever ① to "IN."

Make sure to move the lever all the way to the "OUT" or "IN" position.

Adjusting the Image (Fig. 10 & 11)

Slide the light path selector level ① to the "IN" position. Turn the zoom knob to the maximum magnification, observe through the camera and adjust the focusing knob to make the image clear. Turn the zoom adjustment knob to the minimum magnification. If the image is not clear, turn the adjustment ring ② on the c-mount adapter until it is clear.

Repeat the process until the image is clear within the entire zoom range.

OPTICAL DATA

Objective	0.3X	0.4X	0.5X	0.75X	1X	1.5X	2X	
Working Distance	287mm	217mm	177mm	117mm	100mm	47mm	26mm	
10X	Magnification	2.0x-13.5x	2.7x-18.0x	3.4x-22.5x	5.0x-33.8x	6.7x-45.0x	10.1x-67.5x	13.4x-90.0x
	View Field (mm)	109.5-16.3	82.1-12.2	65.7-9.8	43.8-6.5	32.8-4.9	21.9-3.3	16.4-2.4
15X	Magnification	3.0x-20.3	4.0x-27.0	5.0x-33.8x	7.5x-50.6x	10.1x-67.5x	15.1x-101.3x	20.1x-135x
	View Field (mm)	79.6-11.9	59.7-8.9	47.8-7.1	31.8-4.7	23.9-3.6	15.9-2.4	11.9-1.8
20X	Magnification	4.0x-27.0x	5.4x-36.0x	6.7x-45.0x	10.1x-67.5x	13.4x-90.0x	20.1x-135.0x	26.8x-180x
	View Field (mm)	59.7-8.9	44.8-6.7	35.8-5.3	23.9-3.6	17.9-2.7	11.9-1.8	9-1.3
25X	Magnification	5.0x-33.8x	6.7x-45.0x	8.4x-56.3x	12.6x-84.4x	16.8x-112.5x	25.1x-168.8x	33.5x-225x
	View Field (mm)	44.8-6.7	33.6-5.0	26.9-4.0	17.9-2.7	13.4-2.0	9.0-1.3	6.7-1.0
30X	Magnification	6x-40.5x	8x-54x	10x-67.5x	15x-101x	20x-135x	30x-202x	40x-270x
	View Field (mm)	34.8x-5.1	26.1-3.87	20.9-3.1	13.9-2.1	10.4-1.55	6.9-1	5.2-7.5

TROUBLESHOOTING

Under certain conditions, performance of this unit may be adversely affected by factors other than defects. If a problem occurs, please review the following list and take remedial action as needed. If you cannot solve the problem after checking the entire list, please contact your local dealer for assistance.

Trouble	Cause	Remedy
Double images	Interpupillary distance is not correct	Readjust it
	Diopter adjustment is not correct	Readjust it
Dirt appears in the view field	Dirt on the specimen	Clean specimen
	Dirt on the surfaces of eyepieces	Clean eyepieces
	Dirt on surface of objective	Clean objective
	Dirt on stage	Clean stage
Image is not clear	Dirt on the surface of objectives	Clear objectives
Image is not clear while focusing	Diopter adjustment is not correct	Readjust diopter
	Focusing is not correct	Readjust it
The focusing knob is not smooth	The focusing knob is too tight	Loosen it to a suitable position
The image is obscure because of the head slipping down during observation	The focusing knob is too loose	Tighten it to a suitable position
A line appears when observing through eyepiece or video device	Light path selection lever is not at the correct position	Turn it to the correct position
Lamp does not work	Wrong setting of bulb	Set the bulb correctly
	Bulb has burned out	Replace the bulb
	Fuse has burned out	Replace the fuse
	Dirt on the stage obstructed the path of light	Clean the stage
Lamp burns out frequently	Voltage from power supply is too high	Use a transformer to decrease the voltage
	The bulb is not standard	Use the recommended bulb
Fuse burns out frequently	Voltage from power supply is too high	Use a transformer to decrease the voltage
Light flickers	Bulb needs replacement	Replace bulb
	The wires are not connected correctly	Correctly connect the wires

MAINTENANCE

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.

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 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 two years 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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