

UNITRON®

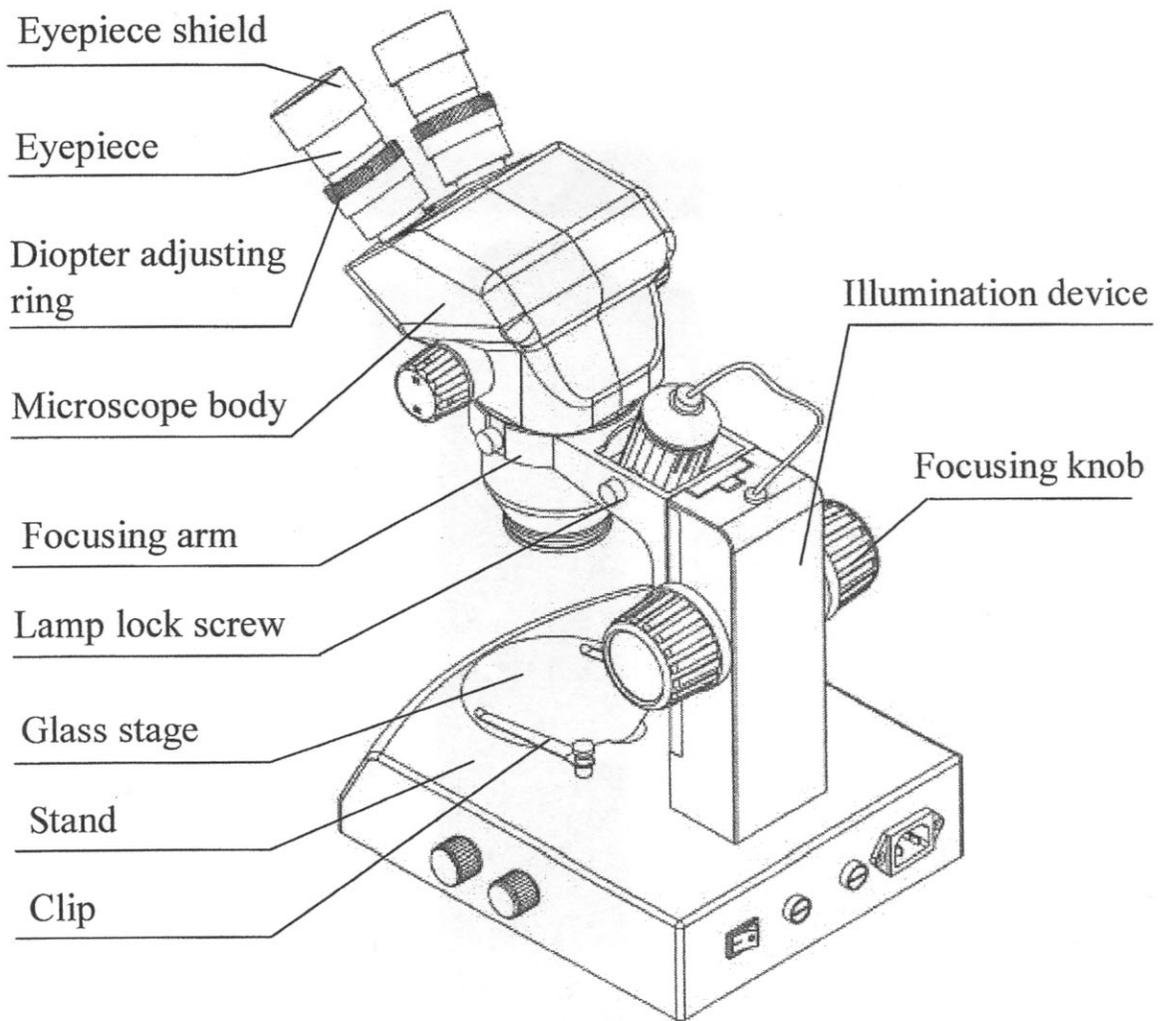
FS Series Stereo

Microscope

INSTRUCTION MANUAL

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The base electronic specification

Power supply		240V-50Hz	110V-50/60Hz
Transformer		Input: 240/110VAC Output: 12V DC/45W	
Illuminator	Top light	12V/15W halogen lamp	
	Bottom light	12V/15W halogen lamp	

1.0 INTRODUCTION

Congratulations on the purchase of your new Unitron® Stereo microscope! Unitron's FS Stereo Microscope Series incorporates the highest quality optical elements to produce high resolution, three-dimensional images at all magnifications. Versatile, multi-functional and built to withstand years of heavy use, the FS Stereo Microscope Series is ideal for electronics, industry, research, life science and educational applications.

2.0 IMPORTANT FEATURES

Unitron's Stereo microscopes have fixed magnification systems. Total magnification power is the product of the eyepiece magnification multiplied by the objective magnification:

Microscope	Eyepieces	x	Objective	=	Total Magnification
FS 10/20	10x		1x/2x		10x/20x
FS 20/40	10x		2x/4x		20x/40x
FS 10/30	10x		1x/3x		10x/30x

Inclined eyepiece tubes allow for interpupillary distance of 54mm to 75mm and diopter adjustment of ± 5 . Working distance is 110mm. Unitron's stereo microscopes feature a four-way illumination system which may be used to provide transmitted light, reflected light or a combination of both. Your stereo microscope comes completely assembled and ready to use. Simply follow the assembly diagram in the next section.

3.0 MAGNIFICATION SYSTEM

Each microscope in the FS Stereo microscope series has two objectives. The objectives may be switched back and forth by rotating the side mounted objective change knob. Additional magnification ranges can be obtained through the use of 15x or 20x eyepieces and/or the use of supplemental lenses (0.5x, 1.5x, or 2.0x). Information, product availability and pricing information are available from your authorized Unitron distributor.

4.0 ILLUMINATION SYSTEM

The FS Stereo microscope series is equipped with a built-in four-way illuminator system. The illumination system consists of a 12 volt 15 watt variable intensity dichroic halogen bulb for incident light from above and a 12 volt 15 watt halogen bi pin bulb for transmitted light from below.

5.0 OPERATING INSTRUCTIONS

Follow these simple instructions to begin using your stereo microscope:

1. Your stereomicroscope should always be used on a dry, hard, flat and stable surface.
2. Plug the 3-wire line cord into a grounded electrical outlet.
3. Select the appropriate light switch for the specimen. There are three types of illumination:
 - Incident Light (top) - to view opaque specimens.
 - Transmitted Light (bottom) - to observe translucent specimens.
 - Incident & Transmitted- to develop contrasting conditions on any variety of specimens.
4. Place a specimen on the stage plate area directly below the center of the stereo microscope body. While looking through the eyepieces with both eyes, slowly adjust the distance between the eyepiece tubes until you see a complete circle of light at the same time without moving your head. The eyepiece tubes are inclined at 45 degrees and rotatable 360 degrees to maximize your viewing comfort.
5. Focus the stereo microscope at the highest power by turning the focus control knob to the highest magnification power and then use the large focusing knob(s) to bring the specimen into focus. Rotate the control knob to the lower power.
6. To compensate for differences between your left eye and right eye, the microscope has diopter adjustments (eyepiece tube with knurled ring). First turn right side diopter ring to "(0) position, look at the specimen through the right eyepiece (with the left eye closed) and focus on the specimen using the large focusing knobs until sharp focus is obtained. Then repeat procedure by turning left side diopter to (0) position and look through the left eyepiece (with the other eye closed) and rotate the diopter ring until the specimen is in focus. Look at the specimen with both eyes; a slight turn of the focus knob may be needed to sharpen the focus.

6.0 CLEANING THE OPTICS

Do not attempt to disassemble the inclined binocular body or focusing mechanisms. These have been aligned and sealed for protection against dust, dirt, or other particles by our factory technicians. Only exposed surfaces should require cleaning. To clean the stereo microscope:

1. Blow dust particles from the lens surface with an ear syringe.
2. Using a lens cleaning solution (available from most camera stores) moisten a cotton swab, cover the swab with lens paper and, in a circular motion, carefully clean the lenses and eyepieces. This method may also be used to remove oily smears and fingerprints which detract from the image quality. Glass surfaces should be cleaned very carefully and only when necessary.

7.0 LAMP REPLACEMENT

If lamp replacement is necessary, follow these simple instructions:

DANGER!!! Do not attempt to change the lamp before allowing it to completely cool.

TRANSMITTED (BOTTOM) ILLUMINATION

1. Unplug the electrical cord.
2. Carefully lay the instrument on its back and unscrew the base assembly.
3. Remove the old lamp. You will need to cut the plastic tie which secured the fluorescent bulb into the socket during shipment. Insert the new lamp being careful to avoid leaving fingerprints on the lamp surface.
4. Reattach the base assembly. Do not operate the microscope unless the base is securely attached.

INCIDENT (TOP) ILLUMINATION

1. Unplug the electrical cord.
2. Raise the body to the highest position by turning the focusing knob and lay the microscope back on its arm.
3. Unscrew the front of the illuminator housing.
4. Remove the bulb from the lamp socket in the lamp housing.
5. Insert the new bulb into the lamp socket using care not to leave fingerprints on the bulb.
6. Re-screw the lamp housing, and return the microscope to the upright position.

Replacement bulbs: Top Halogen Illuminator – Call for Catalog#

Bottom Halogen Illuminator – Call for Catalog #

LIMITED MICROSCOPE WARRANTY

Unitron Microscopes are carefully assembled, inspected and tested by Unitron's trained technicians in our New York facility. Careful quality control procedures ensure each microscope is of the highest quality prior to shipment. This microscope is 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. This warranty does not cover damage caused in-transit, misuse, neglect, abuse, or damage resulting from either improper servicing or modification by other than Unitron 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 Unitron Ltd. This warranty expressly excludes any liability by Unitron Ltd. for consequential loss or damage on any grounds, such as (but not limited to) the non-availability to the End User of the Products under warranty or the need to repair, work processes. All items returned for warranty repair must be sent freight prepaid and insured to Unitron Ltd. 73 Mall Drive, Commack, New York 11725 – USA. All warranty repairs will be returned freight prepaid to any destination within the Continental United States of America. Charges for repairs shipped back outside this region are the responsibility of the individual/company returning the merchandise for repair.

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