

Operation Manual

for Stereomaster[®] Zoom Microscopes

This manual covers catalog numbers:

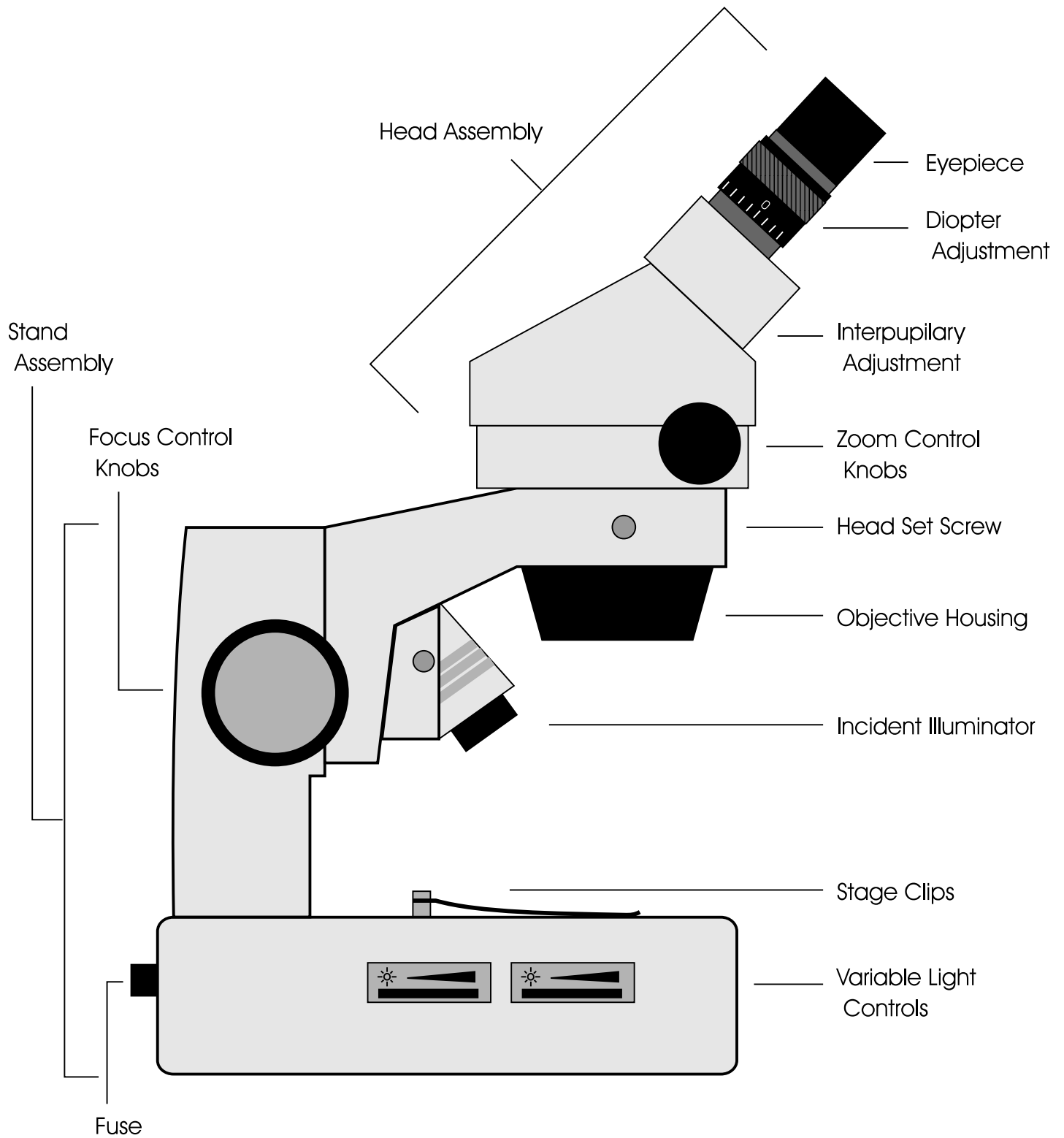
12-562-1 and 12-562-2



Fisher Scientific

Stereomaster Zoom Labeled Diagram

(figure 1)



Operating Instructions

Thank you for purchasing a Stereomaster Zoom microscope. Stereomaster Zoom microscopes have been designed and built for professional use. We recommend you read this entire manual carefully before beginning to use the instrument. Please be sure to record the pertinent information in the "registration" portion at the end of this manual.

Assembly: (reference figure #1)

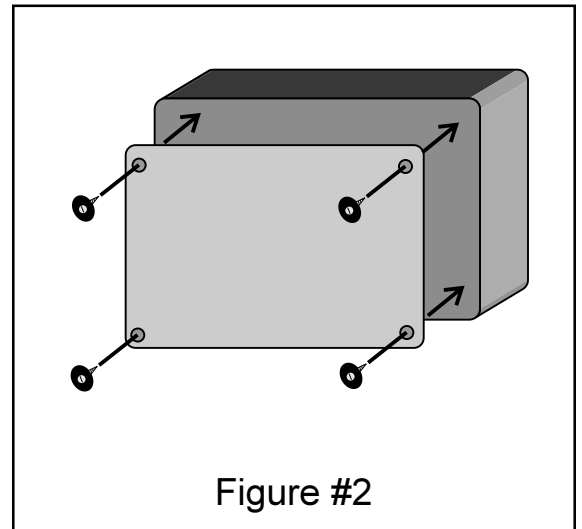
- 1) Before assembling, you should check over the packaging for all parts and accessories. Make sure you have all of the items on the list below, and any items you may have ordered as optional accessories. If you are missing any items, or would like additional accessories, please contact your sales representative immediately.

Standard items for all microscopes (refer to diagram at left): stand w/ frosted stage plate, head assembly, eyepieces, eyecups, dust cover.

- 2) Start by removing the stand its protective foam packaging and placing on a stable counter top. Remove head from packing and slide into the stand. Secure with the "head set screw".
- 3) Remove the caps which cover both eyepiece tubes and the objective turret. Remove eyepiece(s) from packaging and slide into the eyetubes.

Lighting and Power:

- 1) Connect the power cord to suitable 110 VAC power supply and turn both lights with the "on/off" switch. If either light does not come on, check to see that both variable controls are set to the "high" setting.
- 2) Once in operation, light intensity for either lamp (top or bottom) is adjusted with the "variable light control" by means of voltage regulation (reference figure #1).
- 3) If the lamp fails to light, replace it with one of the spares. Occasionally, these lamps are damaged in shipping. Before attempting to replace or remove the lamp, **UN-PLUG THE MICROSCOPE FOR ANY POWER SOURCE!** Lower lamp replacement is done by *gently* laying the microscope on its side and removing the four rubber feet which hold the cover plate onto the base. Once the plate is removed, the lamp can easily be removed simply by grasping the lamp and pulling it from its fixture. When replacing, insert the new lamp into the same fixture. When replacing the lamp, be careful **NOT TO TOUCH THE GLASS ENVELOPE WITH YOUR FINGERS**. Use a tissue or other medium to grasp the lamp. This will prevent oils from your hand from reducing lamp life (reference figure #2).



Replacing the upper lamp requires removal of the lamp housing. Remove the two screws which hold the housing in place. Observe the same warnings as shown above when handling the lamp. Replace the lamp and lamp housing.

Use / General Operation: (reference figure #1)

- 1) There are only a few basic adjustments you need to understand for use. First, you should familiarize yourself with the location and function of the variable light adjustments, zoom control knobs, focus control knobs, and interpupillary adjustment. All of these are clearly labeled on figure 1. Note that the interpupillary adjustment is simply the "folding" mechanism which moves the eyepieces together and apart to provide comfortable viewing. Once you have located each of the above. Move on to step 2.
- 2) In order for the zoom optics to function properly, you must adjust the diopter settings for your eyesight. The "diopter adjustment" is the part of the eyetube that turns to slightly raise and lower the eyepiece relative to the head assembly. Be careful that you are not simply turning the eyepiece in its tube. The diopter adjustment has a knurled surface for gripping. Each user should make this adjustment prior to use. Begin by setting a simple, flat specimen on the stage plate. If you don't have something flat, we suggest a piece of paper with some typing on it. Use the zoom control knob to lower the magnification to its lowest setting. Use the focus control knobs to bring the image into sharp focus. Now use the zoom control knob to increase the magnification to its highest setting, and refocus. Close your left eye and use the diopter on the right eyetube to "fine" focus the image seen in your right eye. Then close your right eye and repeat the process for your left eye. Once both eyetubes are independently in sharp fine focus, the diopter is properly set.
- 3) If you've purchased the trinocular version (cat. no. 12-562-2), there are several other things you must know. First, the system is equipped with a sliding prism. This is controlled by a sliding knob which pulls out from the side of the head. When slid in, the microscope will function as described above. When the knob is slid out, the light is directed up the vertical eyetube (to the camera). You cannot simultaneously observe the sample with both eyepieces *and* the vertical eyetube.
- 4) When setting up a camera system (video or photo), you will need to adjust the vertical tube to ensure that the system is parfocal (this means that when the image is in focus in the eyepieces it is also in focus to the camera. To perform this function with a video camera, simply focus on a sample while looking through the eyepieces at the highest magnification, and then slide out the prism. Now focus the image on the screen by adjusting the height of the vertical tube NOT by using the focusing knobs. The vertical tube is adjusted by loosening the set screw and sliding the tube up or down. Then tighten the set screw and you're ready. To set up the system for use with the photo adapter refer to the instruction which accompany the adapter.

Maintenance:

- 1) In general, the most important element of maintenance is to keep the instrument clean and dry. Dust, dirt, and moisture will greatly reduce the longevity of the optical coatings and cements which keep the instrument functioning properly. Always place the dust cover over the unit when not in use. Use a moisture removing chemical (ie: silica) if the instrument is to be stored in a humid environment.
- 2) At least once a year we recommend a Fisher Service Technician or some other qualified technician replace lubricants within the gearing mechanisms and clean all accessible optical components. This might also be a good time to replace lamps.

Statement of Limited Product Warranty:

Westover Scientific, Inc. certifies that this microscope is free from defects in workmanship or materials under normal use and maintenance. The period of warranty is 24 months from the date of purchase. If defects in workmanship or materials appear within 24 months of the date of initial purchase, and, the unit has been subjected *only* to normal use and properly maintained, Westover Scientific agrees to repair or replace, as its sole option, without charge to the purchaser any defective component part of the product. The remedies herein are the buyers sole and exclusive remedies. Westover Scientific, Inc. shall not be held liable for any direct, indirect, or consequential damage or decay to the product that results from improper use or maintenance.

Catalog Number: (found on back of microscope) _____

Serial Number: (found on back of microscope) _____

Date Purchased: _____