

1. Setting up the Motic SMZ-168 microscope:

1. Carefully unpack the microscope and place it onto a level and stable surface.
2. Before connecting the microscope to a power source, adjust the light intensity to its minimum level using the light intensity control **(22)**. This step is to be repeated every time the microscope is turned on and off to prolong the life of the bulb.
3. Plug the microscope into the surge protector (supplied by KT) which then connects to the mains electricity.
4. To change a stage, use your fingers to remove the stage. To insert the glass stage, place the blue filter into the centre of the filter receptacle (frosted surface facing down) and replace the glass stage.
5. Turn on the main switch **(19)**.
6. Turn on the incident illumination or transmitted illumination **(20 or 21)** or both at the same time depending on the specimen being observed.

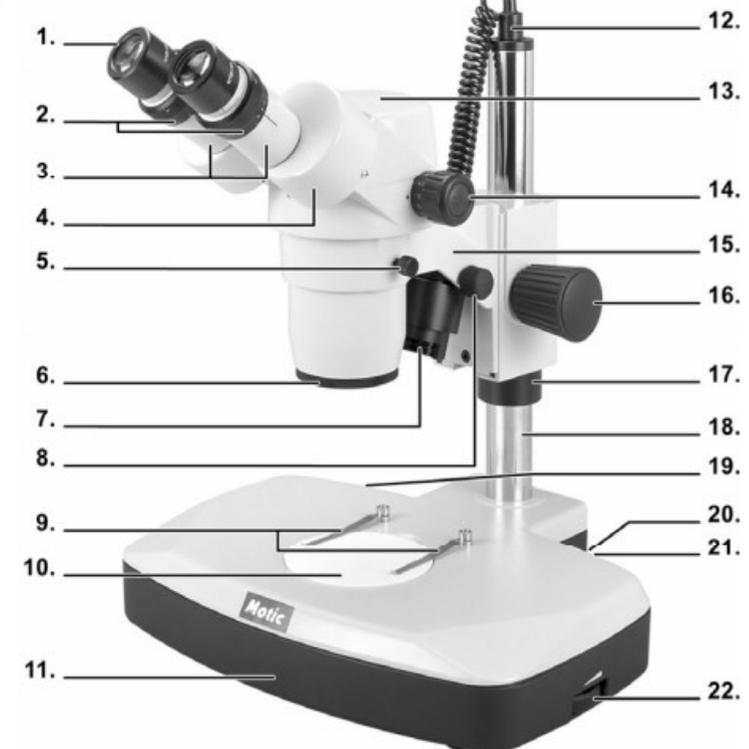
WARNING:

Transmitted illumination can ONLY be used with the frosted glass stage.

The heated generated by the transmitted illumination can melt or damage the black and white stage.

7. The angle of incident illumination is adjusted using the adjustment screw **(8)** which also varies the orientation of the lens.
8. Make sure that the inter-pupillary distance is adjusted for each microscope user. Look through the eye pieces and move the prism housing outwards or inwards. Do this until the two fields of view are as one through both eye pieces.

Components



SMZ-168-BL

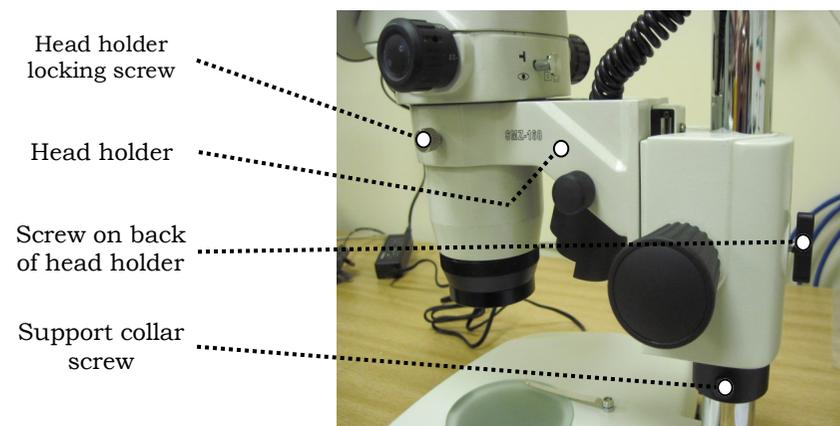
1. Eyepieces	9. Slide stage clips	17. Support collar
2. Diopter adjuster	10. Stage	18. Column
3. Eyepiece tubes	11. Base	19. On/Off switch
4. Prism housing	12. Power cord for incident illumination	20. Incident illumination switch (I)
5. Head holder locking screw	13. Head	21. Transmitted illumination switch (T)
6. Objectives	14. Zoom knob	22. Light intensity control
7. Incident illumination	15. Head holder	
8. Incident light adjustment screw	16. Focus knob	

2. Viewing a specimen:

1. Turn the zoom control **(14)** to the lowest magnification of 0.75x.
2. Place the specimen onto the centre of the microscope stage and secure in place using the slide stage clips.
3. Turn the focusing control **(16)** to mid-focus range.
4. The head holder **(15)** is mounted on a column **(18)** which can be moved up and down depending on the size of the object being focused.
5. To change magnification, turn the zoom control **(14)** to the lowest magnification and focus the image, then switch to the highest magnification and focus the image. The stereo microscope is now “parfocal”.
6. To compensate for the differences in vision between the left and right eyes, the diopter must be adjusted. Using the right eye, look through the right-hand eyepiece, and then adjust the focus. Using your left eye, look through the left-hand eyepiece and adjust the focus by turning the diopter adjuster on the left-hand tube until the image appears sharp.
7. If depth of field is required to work with a sample e.g. single spore isolation from a fungal culture, the 2X objective should be unscrewed—this leaves the 1X objective in place. Replace the 10X eyepieces with 15X eyepieces.

3. Changing the height of head holder:

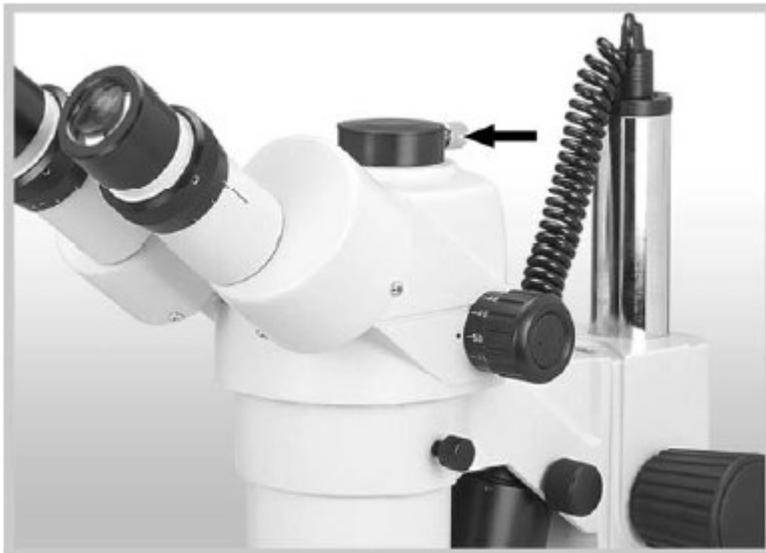
1. Support the head holder **(15)** with one hand (without touching any lenses) and the other loosen the screw on the support collar **(17)**. The head holder can now be moved down to the base **(11)**.
2. Supporting the head, loosen the head holder locking screw.



3. Looking through the eyepieces, move the head holder up or down until the specimen comes into focus. Tighten the head holder locking screw and do not let go of the head.
4. Slide the security collar up to the head holder and tighten the support collar screw and the screw on the back of the head holder. Now the head can be released. It is not necessary to adjust the head every time the specimen is changed, only when unable to bring the image into focus.
5. Adjust the focus control **(16)** until the image appears sharp.

4. *Attaching a camera:*

1. The SMZ-168-TL model microscope comes with an image port on the head, (pictured below) to which a camera may be attached using a C mount adapter.
2. To connect the camera to the microscope, remove the front lens of the camera and replace with the adapter; see the camera's instruction manual.
3. Loosen the knurled screw (see the arrow on the figure below) and remove the protective cover.
4. Insert the adapter with the camera attached to the vertical port. It should insert easily but if it does not, unscrew the knurled screw until it fits.
5. Re-tighten the knurled screw until the camera is securely in place.



For a video with instructions for attaching a camera, go to Motic's website:

http://www.motic.com/As_Moticam_CMOS/product_459.html