

### 1. Setting up the Motic BA210 microscope:

1. Carefully unpack the microscope and place it onto a level surface.
2. Plug the microscope into the surge protector (supplied by KT) which then connects to the mains electricity.
3. On the lower right hand side of the microscope there is a knob which controls the amount of light, (the rheostat control **(1)**). Turn this fully anti-clockwise (low light setting).
4. It is essential, **before** turning on the microscope, to turn the rheostat control to the lowest level. Then, gradually increase the light to the level required to illuminate the specimen. Too much light can damage the specimen and blow the bulb.
5. Turn on by pressing the green light switch on the right hand side of the microscope **(2)**.



#### Key:

- |   |                             |   |                                  |
|---|-----------------------------|---|----------------------------------|
| 1 | Light control — Rheostat    | 5 | Diopter Adjustment Ring          |
| 2 | Power on button             | 6 | Control for fine focus (inner)   |
| 3 | Y-axis control              | 7 | X-axis control                   |
| 4 | Coarse focus height stopper | 8 | Control for coarse focus (outer) |

Note: model shown *without* trinocular camera port

### 2. Viewing a specimen:

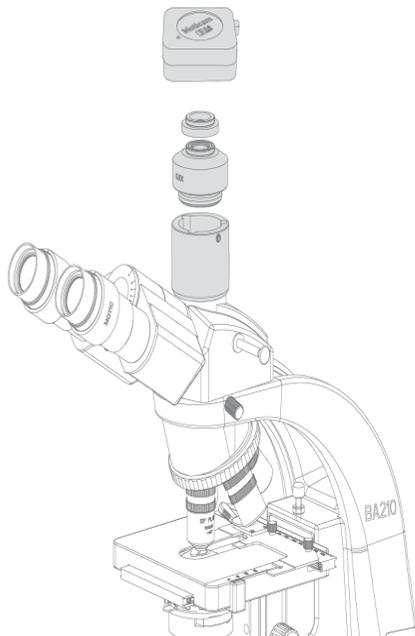
1. Make sure that the eye piece inter-pupillary distance is adjusted for each microscope user. Focus a specimen slide using the 10X objective. Adjust the inter-pupillary distance so that both the right and left field of view becomes one.
2. To compensate for the differences in vision between the left and right eyes, the diopter must be adjusted. Using the right eye and viewing through the right-hand eyepiece, adjust the focus with the fine or coarse adjustment until the image of the sample is sharp. Then use your left eye only and again view through the left-hand eyepiece with its independent diopter focusing ring, focus until the sample is sharp **(5)**.
3. The coarse focus height stopper marks the stage position at which the sample is in focus. When the sample is in focus, turn the coarse focus stopper screw **(4)** anti-clockwise until it reaches the stop. The stage is now locked and cannot be moved upward. The fine focus can move the stage but only lowers it.
5. Place the specimen onto the microscope stage and secure in place by using the clip.
6. Use either the x-axis or y-axis controls **(7 & 3 respectively)** to directly align the specimen so it is underneath the objective.
7. Focus the specimen with the 10X objective. Use the coarse and fine focus knobs **(6 & 8)** until the image of the specimen is sharp.
8. The 100X objective to view for bacteria etc., must be used with immersion oil to fill the space between the microscope cover slide and objective lens. After use clean the objective thoroughly.

### 3. Care of the microscope:

1. Care should be taken when removing the dust cover from the microscope in order to avoid dislodging an eyepiece; dropping an eyepiece can damage it beyond repair.
2. Eyepieces should be kept clean using lens wipes or lint free wipes. Fingerprints can blur images. A fresh piece of lens wipe should be used to clean each eyepiece. Gently 'fog' the eyepiece with your breath before wiping to remove fingerprints.
3. It is best not to wear mascara when using a microscope. When mascara drops onto the eyepiece lens, rubbing it off can etch the glass. Blow off as much of the mascara as possible before wiping the lens.
4. The light bulb is a 3W LED and can be replaced. Consult the Motic Instruction Manual for the BA210 found at: [www.kirkhoustrust.org](http://www.kirkhoustrust.org), go to Resources → Research Resources → Equipment Manuals.

### 4. Attaching a camera:

1. The BA-210 trinocular microscope models come with an image port on the head 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 and remove the protective cover from the trinocular port on the microscope.
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.



### 5. Dust hood

1. The KT dust hood with HEPA filter-fan, light and hinged sloping front can be used to provide a cleaner environment when using the microscope.
2. The microscope can be moved forward and the hinged door raised when viewing specimens or moved further back into the hood for sample preparation.

